Lower Duwamish Waterway NPDES Inspection Sampling Support

Technical Memorandum

Final

Prepared for

Toxics Cleanup Program
Northwest Regional Office
Washington State Department of Ecology
Bellevue, Washington

Prepared by

18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

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Appendix G
King County International Airport

Limitation of Use: Leidos' project activities were restricted to collection and analysis of a limited number of environmental samples and visual observations obtained during the physical site visit, and from records made available by Ecology or third parties during the project. In preparing this report, Leidos has relied on verbal and written information provided by secondary sources and interviews, including information provided by the customer. Leidos has made no independent investigations concerning the accuracy or completeness of the information relied upon. Because the project activities consisted of collecting and evaluating a limited supply of information, Leidos may not have identified all potential items of concern and, therefore, Leidos warrants only that the project activities under this contract have been performed within the parameters and scope communicated by Ecology and reflected in the contract. Maps presented in this report were accurate based on the information available to Leidos at the time that the facility inspections were conducted.

This report is intended to be used in its entirety. Taking or using in any way excerpts from this report are not permitted and any party doing so does so at its own risk.

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G-1 Introduction and Background

Facility Name	King County International Airport
Address	7277 Perimeter Road S Seattle, WA 98108
NPDES Permit Type	Industrial Stormwater General Permit
NPDES Permit No.	WAR000343
Permit Monitoring Requirements	Turbidity, pH, oil sheen, total copper, total zinc
Industry Specific requirements	Five day biochemical oxygen demand, chemical oxygen demand, nitrate/nitrite, ammonia
SIC Code	4581: Airports, Flying Fields, and Services
Inspection Date	May 30, 2013; May 31, 2013
Grab Samples	1 Water Sample; 4 Solids Samples
Sample ID(s)	KC-VT-1593-20130530-S KC-CB-01-20130530-S KC-DD-2009-20130530-S KC-IV-SPS-20130531-S KC-VT-1593-20130530-W
Water Sample Analytes	PCB Congeners, SVOCs (including phthalates and PAHs), pesticides, metals, mercury, pH, specific conductance, anions, alkalinity, TOC/DOC, TSS
Solids Sample Analytes	Dioxins/furans (VT-1593, IV-SPS), PCB Aroclors, SVOCs (including phthalates and PAHs), pesticides, TPH-Diesel and Motor Oil (VT-1593, IV-SPS), TPH-Gasoline (VT-1593, IV-SPS), metals, mercury, VOCs (VT-1593, IV-SPS), TOC, total solids, grain size
Split Samples with Facility	No

King County International Airport (KCIA) is located at 7277 Perimeter Road S. KCIA is a general aviation airport and is owned and operated by King County as a public utility. Approximately 435 acres of the 615 acres site are impervious surfaces covered by buildings and paved areas. The remaining 180 acres are made up of grass and landscape areas (King County 2012).

KCIA has permitted activities related to the KCIA Maintenance Shop and anti-icing of the airport's primary runway and taxiway & aircraft de-icing. The KCIA Maintenance Shop located at the northwest corner of the airport is approximately 1.69 acres. A portion of this area (0.4 acres) drains into the Washington State Department of Transportation (WSDOT) storm drain after passing through an oil water separator. The shop performs fueling of maintenance vehicles, maintenance of grounds equipment, conducts runway/taxiway anti-icing, provides de-icing pads/locations for general aviation, and stores bulk materials and equipment (King County 2012).

A variety of materials are stored at the maintenance facility including: potassium acetate for anti-icing, bulk construction materials, paint, landscaping material, coolant, fuels, oils, and grease. While the majority of the maintenance vehicles and equipment are stored inside buildings, fleet vehicles, large vehicles, and equipment are stored outside. Two 1,000-gallon above-ground fuel storage tanks (unleaded gasoline and diesel) are not covered. The tanks have a seven-gallon overfill containment feature for spill protection during filling operations and are double-lined with a monitoring tube to detect if the primary tank has leaked. Oil trap devices with downturned elbow pipes are placed in downstream catch basins to act as oil water separators (King County 2012).

Some activities such as aircraft testing and painting, aircraft maintenance/storage, aircraft fueling, aircraft de-icing and washing are primarily performed by the tenants along the eastern boundary of the KCIA property. KCIA provides leases to large aircraft companies such as Boeing, Galvin Flying, and Clay Lacy to operate at the airport. Tenants control operations and must comply with any federal, state and local requirements including airport policies, procedures, and maintenance provisions in accordance with lease requirements. All airport and tenant activities have the potential to release petroleum products, such as fuels, oil, and greases, deicing/anti-icing agents, suspended solids, and other chemical contaminants into the storm drain system (King County 2012). A facility map is presented in Figure G-1.

G-1.1 Stormwater Conveyance and Treatment System

The KCIA storm drainage system includes approximately 15 miles of drainage pipes. All of the stormwater drainage system connects to outfalls that discharge to the Lower Duwamish Waterway (LDW).

There are two pumping stations in Drainage Basins 1 and 2, which lift the water and pump it to two outfalls, Slip 4 (Discharge Point 1) and Slip 5 (Discharge Point 2) (Figure G-1). Gravity lines in Drainage Basins 3 and 4 at the southern end of KCIA that discharge to the LDW at Slip 6 (Discharge Point 3) and Discharge Point 4 (Figure G-1). Several off-site stormwater sources discharge into the KCIA drainage system, including The Boeing Company, Museum of Flight and City of Seattle; these convey stormwater into Drainage Basins 3 and 4. Some facilities at the north end of KCIA are connected to a storm system owned by WSDOT, which serves the I-5 freeway (King County 2012).

KCIA collects quarterly stormwater samples at downstream locations of the four major drainage basins at the facility. The discharge points include SP1 (CB-229), SP2 (CB Midfield), SP3 (CB 1060), SP4 (OWS SW), and SPM (CB 1075). KCIA exceeded benchmarks for turbidity at SP2 during the 3rd quarter 2012, triggering a Level One Corrective Action. A 2011 Level Three Corrective Action was being implemented during the 3rd and 4th quarters of 2012, which included repair of stormwater system pipes and installation of a water quality vault. KCIA exceeded benchmarks for copper at SPM during the 2nd and 3rd quarters of 2012, triggering a Level Two Corrective Action. KCIA replaced metalzorb bags and cleaned downgradient oil water separators to address copper exceedances (King County 2013).

G-2 Inspection and Sampling

G-2.1 May 2013 Stormwater Compliance Inspection

On May 30 and 31, 2013, Ecology conducted a stormwater compliance inspection at KCIA. Leidos assisted Ecology with the inspection and sampling of the facility's stormwater conveyance system. The inspection included investigating influent and effluent points at each selected drainage structure, written and photographic documentation, and assessing whether the drainage structure contained sufficient sampleable material. The coordinates of sample locations were measured with a survey-quality global positioning system and plotted on Figure G-2 using geographic information system software. An inspection photographic log and field documentation are presented in Attachments G-1 and G-2, respectively.

The field team inspected the following stormwater conveyance structures at KCIA (Figure G-2): south pump station (IV-SPS), oil water separator 1592 (OWS-1592), catch basin vault 1593 (VT-1593), catch basin 01 (CB-01), drainage ditch 2009 (DD-2009), oil water separator 2009 (OWS-2009), catch basin 229 (CB-229), and catch basin 229a (CB-229a), and unknown catch basin 27 (UNKCB27). Locations CB-229, CB-229a, and UNKCB27 did not contain sufficient material to collect a solids sample. Solids samples were collected from VT-1593, CB-01, DD-2009, and IV-SPS. A water sample was collected from VT-1593. Additional information for each sample location is provided below.

G-2.2 Stormwater Conveyance System Sampling

Ecology collected one water sample and four solids samples from the stormwater conveyance system at KCIA. Laboratory analyses for the water sample are listed on Table G-1. Analytical data for the water sample are presented in Tables G-2 through G-5. Laboratory analyses for the solids sample are listed on Table G-6. Analytical data are presented in Tables G-7 and G-8. Chain of custody forms and the laboratory reports are provided as Attachments G-3 and G-4, respectively.

G-2.2.1 Water Sample

Water sample KC-VT-1593-20130530-W was collected from VT-1593 located on the downstream portion of Drainage Basin 3 (Figure G-2, Attachment G-1). Stormwater enters on the upstream side of a weir at the center of the vault and is conveyed through VT-1593 to OWS-1592. After passing through OWS-1592, stormwater reenters VT-1593 on the downstream side of the weir and is conveyed west towards the LDW. The sample is representative of stormwater in Drainage Basin 3. Low flow was observed in the vault during sample collection. KCIA did not receive rainfall in the previous 24-hour period and the discharge was attributed to groundwater infiltration. The water sample was collected on the upstream side of the weir. The sample's turbidity was not measured during sample collection.

G-2.2.2 Solids Samples

Solids sample KC-VT-1593-20130530-S was collected from the upstream side of the weir located in VT-1593 (Figure G-2, Attachment G-1). The top layer of the initial solids grabs

contained primarily reddish-orange organic matter believed to be composed of iron bacteria precipitate. Following the initial grab attempts, an area in the center of the upstream vault was located that consisted of primarily solids. The sample is representative of storm drain solids in Drainage Basin 3.The reddish-orange organic material was not containerized for analysis. The sample consisted of dark brown and black coarse- to fine-grained sand, organic matter, and debris. No odor was detected during sample collection. After multiple solids grabs, sufficient sample volume was obtained for all analyses. Per discussion with Ecology, dioxin/furan analysis was requested for this sample.

Solids sample KC-CB-01-20130530-S was collected from a catch basin located in a grassy area along a fenceline adjacent to the Boeing Military Flight Center (MFC) facility (Figure G-2, Attachment G-1). The location has the potential to receive sheet flow from the Boeing MFC to the west. It was unclear where the catch basin connected to the drainage system at KCIA. The sample was collected from the center and corners of the catch basin. The sample consisted of brown and gray sand, gravel, and cobble. No odor was detected during sample collection. Due to the large grain size of the sample, volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) were not selected for analysis. Per discussion with Ecology, dioxins and furans were not selected for analysis. After multiple grab attempts, sufficient sample volume was obtained for all other analyses.

Solids sample KC-DD-2009-20130530-S was collected from drainage ditch DD-2009, which is located upstream of OWS-2009 (Figure G-2, Attachment G-1). The location is at the southwest corner of KCIA adjacent to the Boeing MFC. The location has the potential to receive sheet flow from the Boeing MFC to the west. Ecology requested that a sample be collected from this location to replicate a July 2012 solids sample that contained high concentrations of polychlorinated biphenyls (PCBs). Rocks approximately 4 inches in diameter were removed from the drainage ditch to expose solids below. The sample was collected from undisturbed solids in the ditch and consisted of brown medium- to fine-grained sand, organic matter, and woody debris. No odor was detected during sample collection. Per discussion with Ecology, dioxins/furans, VOCs, and TPH were not selected for analysis. Sufficient sample volume was obtained for all other analyses.

Solids sample KC-IV-SPS-20130531-S was collected from the influent vault of the south pump station. The pump station is located in Drainage Basin 2 and receives stormwater from the southern portion of KCIA (Figure G-2, Attachment G-1). The sample is representative of storm drain solids in Drainage Basin 2.The sample was collected from the upstream side of the pump station and consisted of brown and gray medium- and fine-grained sand, silt, and trace amounts of clay. A moderate hydrogen sulfide odor was detected during sample collection. After multiple solids grabs, sufficient sample volume was obtained for all analyses. Per discussion with Ecology, dioxin/furan analysis was requested for this sample.

G-3 Results

G-3.1 Chemical Analysis

Ecology collected one water sample and four solids samples during the May 2013 stormwater compliance inspection at KCIA. Analytical methods, chemical results and regulatory criteria are presented in Tables G-1 through G-8.

All chemical results were independently validated by EcoChem, Inc. of Seattle, WA. A summary-level, U.S. Environmental Protection Agency (EPA) Stage 2B data validation was performed on all chemistry results; a full-level, EPA Stage 4 data validation was performed on the dioxin/furan results. A compliance-level screening (EPA Stage 2A), including a comparison of detected results to sample concentrations, was performed on the rinse blank samples. Data validation was performed following EPA guidance (EPA 1994, 2008, 2009, 2010). The data validation report is available as Attachment 2 to the draft LDW NPDES Inspection Sampling Support Technical Memorandum (Leidos 2014).

G-3.2 Inspection Results and Permit Compliance Requirements

During the May 2013 inspection, Ecology identified the following compliance issues and requirements (Ecology 2013):

- KCIA must clean up petroleum leaks and spills immediately.
- Drip pains or equivalent containment measures and storm drain catch basin inlet covers must be used during all petroleum transfer operations.
- KCIA must store all liquids, fluids, and petroleum products in proper secondary containment. The facility must keep all containment structure drain valves in the closed position.
- KCIA must develop and implement written procedures for proper handling and disposal of accumulated stormwater from within uncovered containment structures.
- A spill log must be maintained for chemical and petroleum spills.
- KCIA must locate spill kits within 25 feet of all stationary fueling stations, fuel transfer stations, and mobile fueling units.

G-4 References

Ecology (Washington Department of Ecology). 2013. Stormwater Compliance Inspection, King County International Airport.

EPA (U.S. Environmental Protection Agency), Office of Emergency and Remedial Response. February 1994. *USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Data Review.* EPA 540/R-94/013. Washington, DC.

EPA, Office of Emergency and Remedial Response. June 2008. *USEPA Contract Laboratory Program, National Functional Guidelines for Organic Data Review*. EPA-540-R-08-01. Washington, DC.

EPA, Office of Emergency and Remedial Response. January 2009. *Guidance for labeling externally validated laboratory analytical data for Superfund use.* EPA-540-R-08-005. Washington, DC.

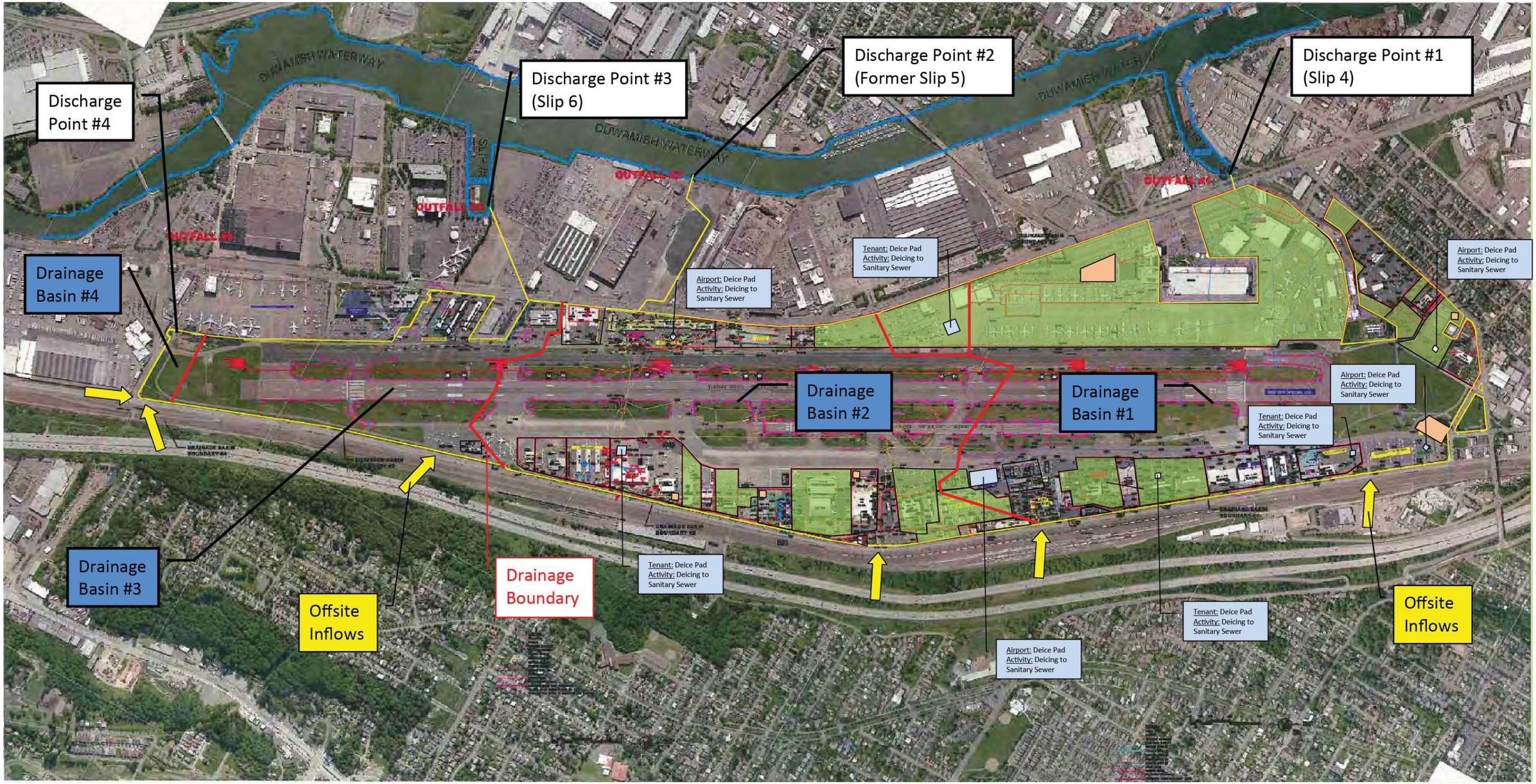
EPA, Office of Emergency and Remedial Response. January 2010. *USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Data Review*. EPA 540-R-10-011. Washington, DC.

King County. 2012. Stormwater Pollution Prevention Plan, King County International Airport, Seattle, Washington. May 2012.

King County. 2013. Industrial Stormwater General Permit, Annual Report 2012, Permit No. WAR-00343. May 13, 2013.

Leidos. 2014. LDW NPDES Inspection Sampling Support, Seattle, WA, Technical Memorandum. DRAFT. Prepared for Washington State Department of Ecology, Toxics Cleanup Program, Northwest Regional Office. In progress.

Figures



KCIA STORMWATER DRAINAGE

DEPARTMENT OF ECOLOGY
State of Washington

Source: KCIA 2012 [10458]

Figure G–1. King County International Airport Facility SWPPP Map

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CB-229a
UNKCB27
CB-229
ES-MH-1
ES-TS
ES-CB-1
ES-CB-2
ES-CB-4
ES-CB-5
KC-IV-SPS
KC-OWS-1592
KC-VT-1596
KC-CB-01
KC-DD-2009
KC-OWS-2009
Not Sure about this one
King County
PS
S GRAHAM ST
S BATEMAN ST
S EDDY ST
S MONTEREY PL
S MORGAN ST
S WARSAW ST
S HOLLY ST
S BRIGHTON ST
S HOLLY PL
S WILLOW ST
S FRONTENAC ST
S MYRTLE ST
S MYRTLE PL
S OTHELLO ST
S WEBSTER ST
S AUSTIN ST
S HOLDEN ST
S PORTLAND ST
S CHICAGO ST
S KENYON ST
S MONROE ST
S ROSE ST
S THISTLE ST
S SULLIVAN ST
S CLOVERDALE ST
S DONOVAN ST
S TRENTON ST
S 96TH ST
S 98TH ST
S 101ST ST
MILITARY RD S
SWIFT AVE S
BEACON AVE S
AIRPORT WAY S
CECIL AVE S
LEROY PL S
13TH AVE S
14TH AVE S
16TH AVE S
18TH AVE S
21ST AVE S
22ND AVE S
23RD AVE S
24TH AVE S
27TH AVE S
28TH AVE S
29TH AVE S
30TH AVE S
31ST AVE S
32ND AVE S
33RD AVE S
34TH AVE S
35TH AVE S
36TH AVE S
CORPORATE DR S
URSULA PL S
MARS AVE S
VISTA AVE S
AVON CREST PL
HOLLY PARK DR S
ELLIS AVE S
ALBRO PL
STANLEY AVE S
ELMGROVE ST
SOUTHERN ST
DELLA ST
PERIMETER RD S
SEATAC MARINA DR S
0 325 650 Feet
NORTH
1 inch = 800 feet
Seattle SD Information
Drain/Inlet
Plug
Catch Basin
Misc Structures
Downspout
Maintenance Hole
Outfall
Unknown Feature
Culvert
Ditch
SD Structures
Investigations
Sample
Inspection
Other Features
Facility Boundary
Private SD Information
Outfall
Catch Basin
Manhole
Oil/Water Separator
Pump
Cleanout
Downspout
Unknown
Misc. Structures
SD/Sewer Main Lines
Stormwater
Combined
Sanitary
Private SD/Sewer Lines
Stormwater
Sanitary
Combined
Trench Drain

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Figure G–2. King County International Airport Inspection and Sample Locations

DEPARTMENT OF ECOLOGY
State of Washington

Tables

Table G-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: King County International Airport

Location ID / Collection Date		KC-VT-1593
Analyte	**Units**	**5/30/2013**
Metals (Total)		
Antimony	µg/L	E200.8
Arsenic	µg/L	E200.8
Beryllium	µg/L	E200.8
Cadmium	µg/L	E200.8
Chromium	µg/L	E200.8
Copper	µg/L	E200.8
Lead	µg/L	E200.8
Mercury	µg/L	SW7470A
Nickel	µg/L	E200.8
Selenium	µg/L	E200.8
Silver	µg/L	E200.8
Thallium	µg/L	E200.8
Zinc	µg/L	E200.8
Metals (Dissolved)		
Antimony	µg/L	E200.8
Arsenic	µg/L	E200.8
Beryllium	µg/L	E200.8
Cadmium	µg/L	E200.8
Chromium	µg/L	E200.8
Copper	µg/L	E200.8
Lead	µg/L	E200.8
Mercury	µg/L	SW7470A
Nickel	µg/L	E200.8
Selenium	µg/L	E200.8
Silver	µg/L	E200.8
Thallium	µg/L	E200.8
Zinc	µg/L	E200.8
PAHs		
1-Methylnaphthalene	µg/L	SW8270DSIM
2-Chloronaphthalene	µg/L	SW8270D
2-Methylnaphthalene	µg/L	SW8270DSIM
Acenaphthene	µg/L	SW8270D
Acenaphthylene	µg/L	SW8270DSIM
Anthracene	µg/L	SW8270DSIM
Benzo(a)anthracene	µg/L	SW8270DSIM
Benzo(a)pyrene	µg/L	SW8270DSIM
Benzo(b)fluoranthene	µg/L	SW8270DSIM
Benzo(g,h,i)perylene	µg/L	SW8270DSIM
Benzo(k)fluoranthene	µg/L	SW8270DSIM
Chrysene	µg/L	SW8270DSIM
Dibenz(a,h)anthracene	µg/L	SW8270DSIM
Dibenzofuran	µg/L	SW8270D
Fluoranthene	µg/L	SW8270DSIM
Fluorene	µg/L	SW8270D

Table G-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: King County International Airport

Location ID / Collection Date		KC-VT-1593
Analyte	**Units**	**5/30/2013**
Indeno(1,2,3-cd)pyrene	µg/L	SW8270DSIM
Naphthalene	µg/L	SW8270DSIM
Phenanthrene	µg/L	SW8270DSIM
Pyrene	µg/L	SW8270DSIM
Total Benzofluoranthenes	µg/L	SW8270DSIM
Total HPAHs	µg/L	SW8270DSIM
Total LPAHs	µg/L	SW8270DSIM
Total PAHs	µg/L	SW8270DSIM
cPAHs, nd RL*0	µg/L	SW8270DSIM
cPAHs, nd RL*0.5	µg/L	SW8270DSIM
cPAHs, nd RL*1	µg/L	SW8270DSIM
Phthalates		
bis(2-Ethylhexyl)phthalate	µg/L	SW8270D
Butylbenzylphthalate	µg/L	SW8270D
Di-n-Butylphthalate	µg/L	SW8270D
Diethylphthalate	µg/L	SW8270D
Dimethylphthalate	µg/L	SW8270D
Di-n-Octyl phthalate	µg/L	SW8270D
Phenols		
2,3,4,6-Tetrachlorophenol	µg/L	SW8270D
2,4,5-Trichlorophenol	µg/L	SW8270D
2,4,6-Trichlorophenol	µg/L	SW8270D
2,4-Dichlorophenol	µg/L	SW8270D
2,4-Dimethylphenol	µg/L	SW8270D
2,4-Dinitrophenol	µg/L	SW8270D
2-Chlorophenol	µg/L	SW8270D
2-Methylphenol	µg/L	SW8270D
2-Nitrophenol	µg/L	SW8270D
4,6-Dinitro-2-Methylphenol	µg/L	SW8270D
4-Chloro-3-methylphenol	µg/L	SW8270D
4-Methylphenol	µg/L	SW8270D
4-Nitrophenol	µg/L	SW8270D
Pentachlorophenol	µg/L	SW8270D
Phenol	µg/L	SW8270D
Other SVOCs		
1,2,4-Trichlorobenzene	µg/L	SW8270D
1,2-Dichlorobenzene	µg/L	SW8270D
1,2-Diphenylhydrazine	µg/L	SW8270D
1,3-Dichlorobenzene	µg/L	SW8270D
1,4-Dichlorobenzene	µg/L	SW8270D
2,4-Dinitrotoluene	µg/L	SW8270D
2,6-Dinitrotoluene	µg/L	SW8270D
2-Nitroaniline	µg/L	SW8270D
3,3'-Dichlorobenzidine	µg/L	SW8270D
3-Nitroaniline	µg/L	SW8270D

Table G-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: King County International Airport

Location ID / Collection Date		KC-VT-1593
Analyte	**Units**	**5/30/2013**
4-Bromophenyl-phenylether	µg/L	SW8270D
4-Chloroaniline	µg/L	SW8270D
4-Chlorophenyl-phenylether	µg/L	SW8270D
4-Nitroaniline	µg/L	SW8270D
Aniline	µg/L	SW8270D
Azobenzene	µg/L	SW8270D
Benzoic Acid	µg/L	SW8270D
Benzyl Alcohol	µg/L	SW8270D
2,2'-Oxybis(1-Chloropropane)	µg/L	SW8270D
bis(2-Chloroethoxy) Methane	µg/L	SW8270D
Bis-(2-Chloroethyl) Ether	µg/L	SW8270D
Carbazole	µg/L	SW8270D
Hexachlorobenzene	µg/L	SW8081B
Hexachlorobutadiene	µg/L	SW8081B
Hexachlorocyclopentadiene	µg/L	SW8270D
Hexachloroethane	µg/L	SW8270D
Isophorone	µg/L	SW8270D
Nitrobenzene	µg/L	SW8270D
N-Nitrosodimethylamine	µg/L	SW8270D
N-Nitroso-Di-N-Propylamine	µg/L	SW8270D
N-Nitrosodiphenylamine	µg/L	SW8270D
N-Nitrosomethylethylamine	µg/L	na
PCB Aroclors		
PCB Aroclors	µg/L	na
PCB Congeners		
PCB Congeners	pg/L	1668C
Pesticides		
Pesticides	µg/L	SW8081B
Conventionals		
Alkalinity	mg/L CaCO3	SM2320
Bicarbonate	mg/L CaCO3	SM2320
Carbonate	mg/L CaCO3	SM2320
Chloride	mg/L	EPA300.0
Conductivity	µmhos/cm	EPA120.1
Dissolved Organic Carbon	mg/L	SW9060
Hydroxide	mg/L CaCO3	SM2320
Nitrate + Nitrite	mg-N/L	na
N-Nitrate	mg-N/L	EPA300.0
N-Nitrite	mg-N/L	na
pH	std units	EPA150.1
Sulfate	mg/L	EPA300.0
Total Organic Carbon	mg/L	SW9060
Total Suspended Solids	mg/L	SM2540D

a - This is a field duplicate of the sample directly preceding it.

Table G-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: King County International Airport

Location ID / Collection Date		KC-VT-1593
Analyte	Units	5/30/2013

µg/L - micrograms per liter
µmhos/cm - micromhos per centimeter
CaCO3 - calcium carbonate
cPAHs - carcinogenic polycyclic aromatic hydrocarbons
EPA - U.S. Environmental Protection Agency
HPAHs - high molecular weight polycyclic aromatic hydrocarbons
LPAHs - low molecular weight polycyclic aromatic hydrocarbons
mg/L - milligrams per liter
mg-N/L - milligrams per liter as nitrogen
na - not analyzed
nd - non-detect
NPDES - National Pollutant Discharge Elimination System
PAHs - polycyclic aromatic hydrocarbons
PCBs - polychlorinated biphenyls
pg/L - picograms per liter
R - Result rejected during data validation review.
RL - reporting limit
SIM - selected ion monitoring
std units - standard units
SVOCs - semivolatile organic compounds

Table G-2. Water Quality Data
NPDES Inspection Sampling Support: King County International Airport

Location ID			KC-VT-1593
Collection Date			5/30/2013
Analyte	**WA NPDES ISGP**	**Unit**	**Result**
Field Parameters			
Flow	--	Yes/No	Yes
pH	5.0 to 9.0	std units	7.07
Conductivity	--	mS/cm	388
Temperature	--	degrees C	15.5
Total Dissolved Solids	--	g/L	na
Turbidity	25	NTU	na
Oil & Grease	No visible sheen	Yes/No	No
Dissolved Oxygen	--	mg/L	na

a - This is a field duplicate of the sample directly preceding it.
b - Facility's turbidity meter result was 1.81 NTU.

Results in **bold** exceed the WA NPDES ISGP.
degrees C - degrees Celsius
g/L - grams per liter
ISGP - Industrial Stormwater General Permit
mS/cm - milliSiemens per centimeter
na - not analyzed
NPDES - National Pollutant Discharge Elimination System
NTU - Nephelometric Turbidity Units
std units - standard units

WA - Washington State
> - Result exceeds equipment calibration limit.

Table G-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: King County International Airport

Location ID						KC-VT-1593				
Collection Date						5/30/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total Metals (µg/L)										
Antimony	--	--	--	--	--	< 0.2 U				
Arsenic	150	36	69	--	--	0.7				
Beryllium	--	--	--	--	--	< 0.2 U				
Cadmium	2.1	9.4	42	--	--	< 0.1 U				
Chromium	--	--	--	--	--	2.0				
Copper	14	3.7	5.8	--	--	***27.8***	7.4	4.8		
Lead	81.6	8.5	221	--	--	0.2				
Mercury	1.4	0.025	2.1	--	--	< 0.02 U				
Nickel	--	8.3	75	--	--	7.9				
Selenium	5	71	291	--	--	< 0.5 U				
Silver	3.8	--	2.2	--	--	< 0.2 U				
Thallium	--	--	--	--	--	< 0.2 U				
Zinc	117	86	95	--	--	11				
Dissolved Metals (µg/L)										
Antimony		--	--	4,300	640	< 0.2 U				
Arsenic		36	69	--	--	0.6				
Beryllium		--	--	--	--	< 0.2 U				
Cadmium		9.3	42	--	--	< 0.1 U				
Chromium		--	--	--	--	1.0				
Copper		3.1	4.8	--	--	***26.1***	8.4	5.4		
Lead		8.1	210	--	--	0.1				
Mercury		0.025	1.8	0.15	--	< 0.02 U				
Nickel		8.2	74	4,600	4,600	7.8				
Selenium		71	290	--	4,200	< 0.5 U				
Silver		--	1.9	--	--	< 0.2 U				
Thallium		--	--	6.3	0.47	< 0.2 U				
Zinc		81	90	--	26,000	10				
PAHs (µg/L)										
1-Methylnaphthalene		--	--	--	--	0.088				
2-Chloronaphthalene		--	--	--	1,600	< 1.0 U				
2-Methylnaphthalene		--	--	--	--	0.018				
Acenaphthene		--	--	--	990	3.5				
Acenaphthylene		--	--	--	--	0.047				
Anthracene		--	--	110,000	40,000	0.074				
Benzo(a)anthracene		--	--	0.031	0.018	< 0.01 U				
Benzo(a)pyrene		--	--	0.031	0.018	< 0.01 U				
Benzo(b)fluoranthene		--	--	0.031	0.018	< 0.01 U				
Benzo(g,h,i)perylene		--	--	--	--	< 0.01 U				
Benzo(k)fluoranthene		--	--	0.031	0.018	< 0.01 U				
Chrysene		--	--	0.031	0.018	< 0.01 U				
Dibenz(a,h)anthracene		--	--	0.031	0.018	< 0.01 U				
Dibenzofuran		--	--	--	--	0.7 J				
Fluoranthene		--	--	370	140	0.28				
Fluorene		--	--	14,000	5,300	1.0				
Indeno(1,2,3-cd)pyrene		--	--	0.031	0.018	< 0.01 U				
Naphthalene		--	--	--	--	0.072				
Phenanthrene		--	--	--	--	0.083				
Pyrene		--	--	11,000	4,000	0.2				
Total Benzofluoranthenes		--	--	--	--	< 0.02 U				
Total HPAHs		--	--	--	--	0.48				
Total LPAHs		--	--	--	--	4.8				
Total PAHs		--	--	--	--	5.3				
cPAHs, nd RL*0		--	--	--	--	< 0 U				
cPAHs, nd RL*0.5		--	--	--	--	< 0.0076 U				
cPAHs, nd RL*1		--	--	--	--	< 0.015 U				
Phthalates (µg/L)										
bis(2-Ethylhexyl)phthalate		--	--	5.9	2.2	< 3.0 U				

Table G-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: King County International Airport

Location ID						KC-VT-1593				
Collection Date						5/30/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Butylbenzylphthalate		--	--	--	1,900	< 1.0 U				
Di-n-Butylphthalate		--	--	12,000	4,500	< 1.0 U				
Diethylphthalate		--	--	120,000	44,000	< 1.0 U				
Dimethylphthalate		--	--	2,900,000	1,100,000	< 1.0 U				
Di-n-Octyl phthalate		--	--	--	--	< 1.0 U				
Phenols (µg/L)										
2,3,4,6-Tetrachlorophenol		--	--	--	--	< 1.0 U				
2,4,5-Trichlorophenol		--	--	--	3,600	< 5.0 U				
2,4,6-Trichlorophenol		--	--	6.5	2.4	< 3.0 U				
2,4-Dichlorophenol		--	--	790	290	< 3.0 U				
2,4-Dimethylphenol		--	--	--	850	< 3.0 U				
2,4-Dinitrophenol		--	--	14,000	5,300	< 20 U				
2-Chlorophenol		--	--	--	150	< 1.0 U				
2-Methylphenol		--	--	--	--	< 1.0 U				
2-Nitrophenol		--	--	--	--	< 3.0 U				
4,6-Dinitro-2-Methylphenol		--	--	765	280	< 10 U				
4-Chloro-3-methylphenol		--	--	--	--	< 3.0 U				
4-Methylphenol		--	--	--	--	< 2.0 U				
4-Nitrophenol		--	--	--	--	< 10 U				
Pentachlorophenol		7.9	13	8.2	3	**< 10 U**				
Phenol		--	--	4,600,000	860,000	< 1.0 U				
Other SVOCs (µg/L)										
1,2,4-Trichlorobenzene		--	--	--	70	< 1.0 U				
1,2-Dichlorobenzene		--	--	17,000	1,300	< 1.0 U				
1,2-Diphenylhydrazine		--	--	0.54	0.2	**< 1.0 U**				
1,3-Dichlorobenzene		--	--	2,600	960	< 1.0 U				
1,4-Dichlorobenzene		--	--	2,600	190	< 1.0 U				
2,4-Dinitrotoluene		--	--	9.1	3.4	< 3.0 U				
2,6-Dinitrotoluene		--	--	--	--	< 3.0 U				
2-Nitroaniline		--	--	--	--	< 3.0 U				
3,3'-Dichlorobenzidine		--	--	0.077	0.028	**< 5.0 U**				
3-Nitroaniline		--	--	--	--	< 3.0 U				
4-Bromophenyl-phenylether		--	--	--	--	< 1.0 U				
4-Chloroaniline		--	--	--	--	< 5.0 U				
4-Chlorophenyl-phenylether		--	--	--	--	< 1.0 U				
4-Nitroaniline		--	--	--	--	< 3.0 U				
Aniline		--	--	--	--	< 1.0 U				
Azobenzene		--	--	--	--	< 1.0 U				
Benzoic Acid		--	--	--	--	< 20 U				
Benzyl Alcohol		--	--	--	--	< 2.0 U				
2,2'-Oxybis(1-Chloropropane)		--	--	170,000	65,000	< 1.0 U				
bis(2-Chloroethoxy) Methane		--	--	--	--	< 1.0 U				
Bis-(2-Chloroethyl) Ether		--	--	1.4	0.53	< 1.0 U				
Carbazole		--	--	--	--	< 1.0 U				
Hexachlorobenzene		--	--	0.00077	0.00029	**< 0.05 U**				
Hexachlorobutadiene		--	--	50	18	< 0.05 U				
Hexachlorocyclopentadiene		--	--	17,000	1,100	< 5.0 U				
Hexachloroethane		--	--	8.9	3.3	< 2.0 U				
Isophorone		--	--	600	960	< 1.0 U				
Nitrobenzene		--	--	1,900	690	< 1.0 U				
N-Nitrosodimethylamine		--	--	8.1	3	< 3.0 U				
N-Nitroso-Di-N-Propylamine		--	--	--	0.51	< 1.0 U				
N-Nitrosodiphenylamine		--	--	16	6	< 1.0 U				
PCB Aroclors (µg/L)										
Aroclor 1016		--	--	--	--	na				
Aroclor 1221		--	--	--	--	na				
Aroclor 1232		--	--	--	--	na				
Aroclor 1242		--	--	--	--	na				

Table G-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: King County International Airport

Location ID						KC-VT-1593				
Collection Date						5/30/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Aroclor 1248		--	--	--	--	na				
Aroclor 1254		--	--	--	--	na				
Aroclor 1260		--	--	--	--	na				
Aroclor 1262		--	--	--	--	na				
Aroclor 1268		--	--	--	--	na				
Total PCB Aroclors		0.03	10	0.00017	0.000064	na				
Pesticides (µg/L)										
4,4'-DDD		--	--	0.00084	0.00031	**< 0.1 U**				
4,4'-DDE		--	--	0.00059	0.00022	**< 0.1 U**				
4,4'-DDT		--	--	0.00059	0.00022	**< 0.1 U**				
Total DDTs		0.001	0.13	--	--	**< 0.1 U**				
Aldrin		--	--	0.00014	0.00005	**< 0.05 U**				
alpha-BHC		--	--	0.013	0.0049	**< 0.05 U**				
beta-BHC		--	--	0.046	0.017	**< 0.05 U**				
cis-Chlordane		--	--	--	--	< 0.05 U				
delta-BHC		--	--	--	--	< 0.05 U				
Dieldrin		--	--	0.00014	0.000054	**< 0.1 U**				
Endosulfan I		0.0087	0.034	2.0	89	**< *0.05* *U***				
Endosulfan II		0.0087	0.034	2.0	89	**< *0.1* *U***				
Endosulfan Sulfate		0.0087	0.034	2.0	89	**< *0.1* *U***				
Endrin		0.0023	0.037	0.81	0.06	**< *0.1* *U***				
Endrin Aldehyde		--	--	0.81	0.3	< 0.1 U				
Endrin Ketone		--	--	--	--	< 0.1 U				
Heptachlor		0.0036	0.053	0.00021	0.000079	**< 0.05 U**				
Heptachlor Epoxide		--	--	0.00011	0.000039	**< 0.05 U**				
gamma-BHC (Lindane)		--	0.16	0.063	1.8	< 0.05 U				
Methoxychlor		--	--	--	--	< 0.5 U				
Toxaphene		0.0002	0.21	0.00075	0.00028	**< *5.0* *U***				
trans-Chlordane		--	--	--	--	< 0.05 U				
Total aldrin/dieldrin		0.0019	0.71	--	--	**< 0.1 U**				
Total Chlordane		0.004	0.09	0.00059	0.00081	**< 0.05 U**				

a = This is a field duplicate of the sample directly preceding it.

Results in underline exceed the WA NPDES ISGP Benchmark for that parameter.
Results in **bold** exceed the WA WQC Marine Chronic.
Results in ***bold italics*** exceed the WA WQC Marine Acute.
Results that are shaded gray exceed the NTR HHO criteria.
Exceedance Factors (EFs) are presented for detected concentrations that exceed the WA, NTR, or NR WQC.
The EFs are calculated (result/criterion) and have no regulatory relevance. They provide an indication of concentration relative to the WA, NTR, or NR WQC.

< - not detected
µg/L - micrograms per liter
cPAHs - carcinogenic polycyclic aromatic hydrocarbons
EF - exceedance factor (sample result/criteria value)
HHO - Human Health - Consumption of Organisms Only
HPAHs - high molecular weight polycyclic aromatic hydrocarbons
ISGP - Industrial Stormwater General Permit
J - estimated concentration
JN - estimated concentration
LPAHs - low molecular weight polycyclic aromatic hydrocarbons
MA - Marine Acute
MC - Marine Chronic
na - not analyzed
nd - non-detect
NPDES - National Pollutant Discharge Elimination System
NR - National Recommended
NTR - National Toxics Rule
PAHs - polycyclic aromatic hydrocarbons
PCBs - polychlorinated biphenyls
RL - reporting limit
SVOCs - semivolatile organic compounds
U - not detected
WA - Washington State
WQC - Water Quality Criteria

Table G-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: King County International Airport

Location ID					KC-VT-1593				
Collection Date					5/30/2013				
Analyte	WA WQC Marine		NTR WQC Human Health	NR WQC Human Health	Result	EF			
	Chronic	Acute	Organism	Organism		WA MC	WA MA	NTR HHO	NR HHO
Total PCB Congeners (µg/L)[a]	0.03	10	0.00017	0.000064	0.0000587 CJ				
Total PCB Congeners (pg/L)[a]					58.7 CJ				
Estimated Total PCB Congeners (pg/L)[b]					156 CJ				
Total Monochlorobiphenyl (pg/L)[a]					< 2.37 U				
Estimated Total Monochlorobiphenyl (pg/L)[b]					< 2.37 U				
PCB-1					< 2.15 U				
PCB-2					< 2.48 U				
PCB-3					< 2.59 U				
Total Dichlorobiphenyl (pg/L)[a]					< 8.37 U				
Estimated Total Dichlorobiphenyl (pg/L)[b]					< 8.37 U				
PCB-4					< 7.16 U				
PCB-5					< 8.25 U				
PCB-6					< 8.20 U				
PCB-7					< 7.67 U				
PCB-8					< 7.86 U				
PCB-9					< 8.72 U				
PCB-10					< 4.53 U				
PCB-11					< 8.37 U				
PCB-12/13					< 7.87 CU				
PCB-14					< 6.80 U				
PCB-15					< 7.56 U				
Total Trichlorobiphenyl (pg/L)[a]					< 6.33 U				
Estimated Total Trichlorobiphenyl (pg/L)[b]					< 6.33 U				
PCB-16					< 7.94 U				
PCB-17					< 6.21 U				
PCB-18/30					< 5.35 CU				
PCB-19					< 7.09 U				
PCB-20/28					< 5.29 CU				
PCB-21/33					< 5.10 CU				
PCB-22					< 5.56 U				
PCB-23					< 5.29 U				
PCB-24					< 4.87 U				
PCB-25					< 5.13 U				
PCB-26/29					< 5.20 CU				
PCB-27					< 4.61 U				
PCB-31					< 4.95 U				
PCB-32					< 4.26 U				
PCB-34					< 5.38 U				
PCB-35					< 5.67 U				
PCB-36					< 5.16 U				
PCB-37					< 5.57 U				
PCB-38					< 5.48 U				
PCB-39					< 4.88 U				
Total Tetrachlorobiphenyl (pg/L)[a]					16.9				
Estimated Total Tetrachlorobiphenyl (pg/L)[b]					16.9				
PCB-40/71					< 4.45 CU				
PCB-41					< 6.02 U				
PCB-42					< 5.15 U				
PCB-43					< 5.68 U				
PCB-44/47/65					5.89 CJ				
PCB-45					< 5.23 U				
PCB-46					< 5.69 U				
PCB-48					< 4.69 U				
PCB-49/69					< 3.86 CU				
PCB-50/53					< 4.58 CU				
PCB-51					< 4.55 U				
PCB-52					< 11.0 U				
PCB-54					< 3.34 U				

Table G-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: King County International Airport

Location ID					KC-VT-1593					
Collection Date					5/30/2013					
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result		EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-55					< 3.60	U				
PCB-56					< 3.76	U				
PCB-57					< 3.55	U				
PCB-58					< 3.44	U				
PCB-59/62/75					< 3.42	CU				
PCB-60					< 3.61	U				
PCB-61/70/74/76					< 3.46	CU				
PCB-63					< 3.14	U				
PCB-64					< 3.21	U				
PCB-66					< 3.63	U				
PCB-67					< 3.30	U				
PCB-68					< 3.10	U				
PCB-72					< 3.44	U				
PCB-73					< 3.49	U				
PCB-77					< 3.49	U				
PCB-78					< 3.84	U				
PCB-79					< 3.11	U				
PCB-80					< 3.14	U				
PCB-81					< 3.67	U				
Total Pentachlorobiphenyl (pg/L)[a]					26.9					
Estimated Total Pentachlorobiphenyl (pg/L)[b]					75.5	J				
PCB-82					< 3.33	U				
PCB-83					< 3.31	U				
PCB-84					< 7.04	U				
PCB-85/116					< 2.44	CU				
PCB-86/87/97/109/119/125					< 7.98	U				
PCB-88					< 3.01	U				
PCB-89					< 3.03	U				
PCB-90/101/113					< 14.5	CU				
PCB-91					< 2.45	U				
PCB-92					< 2.84	U				
PCB-93/100					< 2.63	CU				
PCB-94					< 2.93	U				
PCB-95					21.8					
PCB-96					< 2.29	U				
PCB-98					< 2.82	U				
PCB-99					< 2.66	U				
PCB-102					< 2.61	U				
PCB-103					< 2.50	U				
PCB-104					< 1.97	U				
PCB-105					< 2.00	U				
PCB-106					< 2.11	U				
PCB-107					< 1.99	U				
PCB-108/124					< 2.13	CU				
PCB-110					< 19.1	U				
PCB-111					< 1.96	U				
PCB-112					< 1.97	U				
PCB-114					< 1.87	U				
PCB-115					< 2.09	U				
PCB-117					< 2.12	U				
PCB-118					5.07	J				
PCB-120					< 1.96	U				
PCB-121					< 1.98	U				
PCB-122					< 2.27	U				
PCB-123					< 1.88	U				
PCB-126					< 2.86	U				
PCB-127					< 2.12	U				
Total Hexachlorobiphenyl (pg/L)[a]					5.10					

Table G-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: King County International Airport

Location ID					KC-VT-1593					
Collection Date					5/30/2013					
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result		EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Estimated Total Hexachlorobiphenyl (pg/L)[b]					45.7	J				
PCB-128/166					< 2.69	CU				
PCB-129/138/163					< 16.9	CU				
PCB-130					< 2.8	U				
PCB-131					< 2.74	U				
PCB-132					5.10	J				
PCB-133					< 2.52	U				
PCB-134					< 2.97	U				
PCB-135/151					< 2.45	CU				
PCB-136					< 1.64	U				
PCB-137					< 2.19	U				
PCB-139/140					< 2.30	CU				
PCB-141					< 2.53	U				
PCB-142					< 2.70	U				
PCB-143					< 2.45	U				
PCB-144					< 2.36	U				
PCB-145					< 1.61	U				
PCB-146					< 2.30	U				
PCB-147/149					< 13.2	U				
PCB-148					< 2.36	U				
PCB-150					< 1.51	U				
PCB-152					< 1.54	U				
PCB-153/168					< 10.5	CU				
PCB-154					< 2.11	U				
PCB-155					< 1.41	U				
PCB-156/157					< 2.84	CU				
PCB-158					< 1.74	U				
PCB-159					< 2.24	U				
PCB-160					< 1.94	U				
PCB-161					< 1.81	U				
PCB-162					< 2.24	U				
PCB-164					< 1.95	U				
PCB-165					< 1.95	U				
PCB-167					< 2.09	U				
PCB-169					< 2.51	U				
Total Heptachlorobiphenyl (pg/L)[a]					9.66					
Estimated Total Heptachlorobiphenyl (pg/L)[b]					9.66					
PCB-170					< 4.23	U				
PCB-171/173					< 4.23	CU				
PCB-172					< 4.12	U				
PCB-174					< 4.05	U				
PCB-175					< 3.76	U				
PCB-176					< 2.09	U				
PCB-177					< 4.26	U				
PCB-178					< 3.07	U				
PCB-179					< 2.26	U				
PCB-180/193					9.66	CJ				
PCB-181					< 3.70	U				
PCB-182					< 3.44	U				
PCB-183					< 3.42	U				
PCB-184					< 2.30	U				
PCB-185					< 3.74	U				
PCB-186					< 2.22	U				
PCB-187					< 3.55	U				
PCB-188					< 2.06	U				
PCB-189					< 2.89	U				
PCB-190					< 3.07	U				
PCB-191					< 3.02	U				

Table G-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: King County International Airport

Location ID					KC-VT-1593				
Collection Date					5/30/2013				
Analyte	WA WQC Marine		NTR WQC Human Health	NR WQC Human Health	Result	EF			
	Chronic	Acute	Organism	Organism		WA MC	WA MA	NTR HHO	NR HHO
PCB-192					< 3.16 U				
Total Octachlorobiphenyl (pg/L)[a]					< 2.55 U				
Estimated Total Octachlorobiphenyl (pg/L)[b]					< 2.55 U				
PCB-194					< 3.23 U				
PCB-195					< 3.50 U				
PCB-196					< 3.24 U				
PCB-197					< 2.19 U				
PCB-198/199					< 3.35 CU				
PCB-200					< 2.43 U				
PCB-201					< 2.29 U				
PCB-202					< 2.54 U				
PCB-203					< 3.06 U				
PCB-204					< 2.40 U				
PCB-205					< 2.55 U				
Total Nonachlorobiphenyl (pg/L)[a]					< 4.56 U				
Estimated Total Nonachlorobiphenyl (pg/L)[b]					< 4.56 U				
PCB-206					< 5.53 U				
PCB-207					< 3.53 U				
PCB-208					< 3.60 U				
Decachlorobiphenyl (pg/L)					< 2.09 U				
PCB-209					< 2.09 U				
PCB TEQ, nd SDL*0					0.00015 J				
PCB TEQ, nd SDL*0.5					0.182 J				
PCB TEQ, nd SDL*1					0.364 J				

a - Total PCBs and total PCB homologs include only congeners that met identification criteria as required by EPA Method1668B.
b - Estimated total PCBs and estimated total PCB homologs include congeners that were identified
"estimated maximum possible concentration" or EMPC. The EMPC values were qualified by EcoChem as "U" to indicate
the analyte was not detected at an elevated reporting limit that met criteria required by EPA Method1668B. Estimated total PCBs
and estimated total PCB homolog values were qualified as estimated (J) where EMPCs were included in the reported totals.
c - This is a field duplicate of the sample directly preceding it.

Results in **bold** exceed the WA WQC Marine Chronic.
Results in ***bold italics*** exceed the WA WQC Marine Acute.
Results that are shaded gray exceed the NTR HHO criteria.
Exceedance Factors (EFs) are presented for detected concentrations that exceed the WA, NTR, or NR WQC.
The EFs are calculated (result/criterion) and have no regulatory relevance. They provide an
indication of the general magnitude of the concentration relative to the WA, NTR, or NR WQC.

< - not detected
µg/L - micrograms per liter
C - coelution
EMPC - estimated maximum possible concentration
J - estimated concentration
nd - non-detect
NPDES - National Pollutant Discharge Elimination System
PCBs - polychlorinated biphenyls
pg/L - picograms per liter
SDL - sample detection limit
TEQ - toxic equivalency
U - not detected

Table G-5. Water Sample Results – Conventionals
NPDES Inspection Sampling Support: King County International Airport

Location ID			KC-VT-1593
Collection Date			5/30/2013
Analyte	WA NPDES ISGP	Unit	Result
Conventionals			
Alkalinity	--	mg/L CaCO3	167
Bicarbonate	--	mg/L CaCO3	167
Carbonate	--	mg/L CaCO3	< 1.0 U
Chloride	--	mg/L	12
Conductivity	--	µmhos/cm	384
Dissolved Organic Carbon	--	mg/L	10.8
Hydroxide	--	mg/L CaCO3	< 1.0 U
N-Nitrate	--	mg-N/L	0.1
pH	5-9	std units	6.78
Sulfate	--	mg/L	9.9
Total Organic Carbon	--	mg/L	10.8
Total Suspended Solids	--	mg/L	< 2.1 U

a - This is a field duplicate of the sample directly preceding it.
Results in **bold** exceed the WA NPDES ISGP.

< - not detected
µmhos/cm - micromhos per centimeter
CaCO3 - calcium carbonate
ISGP - Industrial Stormwater General Permit
mg/L - milligrams per liter
mg-N/L - milligrams per liter as nitrogen
NPDES - National Pollutant Discharge Elimination System
std units - standard units
U - not detected
WA - Washington
J - estimated concentration

Table G-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: King County International Airport

Location ID / Collection Date	KC-CB-01	KC-DD-2009	KC-IV-SPS	KC-VT-1593
Analyte	**5/30/2013**	**5/30/2013**	**5/31/2013**	**5/30/2013**
Metals (Total) (mg/kg)				
Antimony	EPA200.8	EPA200.8	EPA200.8	EPA200.8
Arsenic	EPA200.8	EPA200.8	EPA200.8	EPA200.8
Beryllium	SW6010C	SW6010C	SW6010C	SW6010C
Cadmium	EPA200.8	EPA200.8	EPA200.8	EPA200.8
Chromium	EPA200.8	EPA200.8	EPA200.8	EPA200.8
Copper	SW6010C	SW6010C	SW6010C	SW6010C
Lead	EPA200.8	EPA200.8	EPA200.8	EPA200.8
Mercury	SW7471A	SW7471A	SW7471A	SW7471A
Nickel	EPA200.8	EPA200.8	EPA200.8	EPA200.8
Selenium	EPA200.8	EPA200.8	EPA200.8	EPA200.8
Silver	EPA200.8	EPA200.8	EPA200.8	EPA200.8
Thallium	EPA200.8	EPA200.8	EPA200.8	EPA200.8
Zinc	SW6010C	SW6010C	SW6010C	SW6010C
PAHs (µg/kg)				
1-Methylnaphthalene	SW8270D	SW8270D	SW8270D	SW8270D
2-Chloronaphthalene	SW8270D	SW8270D	SW8270D	SW8270D
2-Methylnaphthalene	SW8270D	SW8270D	SW8270D	SW8270D
Acenaphthene	SW8270D	SW8270D	SW8270D	SW8270D
Acenaphthylene	SW8270D	SW8270D	SW8270D	SW8270D
Anthracene	SW8270D	SW8270D	SW8270D	SW8270D
Benzo(a)anthracene	SW8270D	SW8270D	SW8270D	SW8270D
Benzo(a)pyrene	SW8270D	SW8270D	SW8270D	SW8270D
Benzo(g,h,i)perylene	SW8270D	SW8270D	SW8270D	SW8270D
Chrysene	SW8270D	SW8270D	SW8270D	SW8270D
Dibenz(a,h)anthracene	SW8270D	SW8270DSIM	SW8270DSIM	SW8270D
Dibenzofuran	SW8270D	SW8270D	SW8270D	SW8270D
Fluoranthene	SW8270D	SW8270D	SW8270D	SW8270D
Fluorene	SW8270D	SW8270D	SW8270D	SW8270D
Indeno(1,2,3-cd)pyrene	SW8270D	SW8270D	SW8270D	SW8270D
Naphthalene	SW8270D	SW8270D	SW8260C	SW8270D
Phenanthrene	SW8270D	SW8270D	SW8270D	SW8270D
Pyrene	SW8270D	SW8270D	SW8270D	SW8270D
Total Benzofluoranthenes	SW8270D	SW8270D	SW8270D	SW8270D
Total HPAHs	SW8270D	SW8270DSIM	SW8270DSIM	SW8270D
Total LPAHs	SW8270D	SW8270D	SW8270D	SW8270D
Total PAHs	SW8270D	SW8270DSIM	SW8270DSIM	SW8270D
cPAHs, nd RL*0	SW8270D	SW8270DSIM	SW8270DSIM	SW8270D
cPAHs, nd RL*0.5	SW8270D	SW8270DSIM	SW8270DSIM	SW8270D
cPAHs, nd RL*1	SW8270D	SW8270DSIM	SW8270DSIM	SW8270D
Phthalates (µg/kg)				
bis(2-Ethylhexyl)phthalate	SW8270D	SW8270D	SW8270D	SW8270D
Butylbenzylphthalate	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8270DSIM
Di-n-Butylphthalate	SW8270D	SW8270D	SW8270D	SW8270D
Diethylphthalate	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8270DSIM

Table G-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: King County International Airport

Location ID / Collection Date	KC-CB-01	KC-DD-2009	KC-IV-SPS	KC-VT-1593
Analyte	**5/30/2013**	**5/30/2013**	**5/31/2013**	**5/30/2013**
Dimethylphthalate	SW8270DSIM	SW8270D	SW8270DSIM	SW8270DSIM
Di-n-Octyl phthalate	SW8270D	SW8270D	SW8270D	SW8270D
Phenols (µg/kg)				
2,4,5-Trichlorophenol	SW8270D	SW8270D	SW8270D	SW8270D
2,4,6-Trichlorophenol	SW8270D	SW8270D	SW8270D	SW8270D
2,4-Dichlorophenol	SW8270D	SW8270D	SW8270D	SW8270D
2,4-Dimethylphenol	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8270DSIM
2,4-Dinitrophenol	SW8270D	SW8270D	SW8270D	SW8270D
2-Chlorophenol	SW8270D	SW8270D	SW8270D	SW8270D
2-Methylphenol	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8270DSIM
2-Nitrophenol	SW8270D	SW8270D	SW8270D	SW8270D
4,6-Dinitro-2-Methylphenol	SW8270D	SW8270D	SW8270D	SW8270D
4-Chloro-3-methylphenol	SW8270D	SW8270D	SW8270D	SW8270D
4-Methylphenol	SW8270D	SW8270D	SW8270D	SW8270D
4-Nitrophenol	SW8270D	SW8270D	SW8270D	SW8270D
Pentachlorophenol	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8270DSIM
Phenol	SW8270D	SW8270D	SW8270D	SW8270D
Other SVOCs (µg/kg)				
1,2,4-Trichlorobenzene	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8260C
1,2-Dichlorobenzene	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8260C
1,3-Dichlorobenzene	SW8270DSIM	SW8270DSIM	SW8260C	SW8260C
1,4-Dichlorobenzene	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8260C
2,4-Dinitrotoluene	SW8270D	SW8270D	SW8270D	SW8270D
2,6-Dinitrotoluene	SW8270D	SW8270D	SW8270D	SW8270D
2-Nitroaniline	SW8270D	SW8270D	SW8270D	SW8270D
3,3'-Dichlorobenzidine	SW8270D	SW8270D	SW8270D	R
3-Nitroaniline	SW8270D	SW8270D	SW8270D	SW8270D
4-Bromophenyl-phenylether	SW8270D	SW8270D	SW8270D	SW8270D
4-Chloroaniline	SW8270D	SW8270D	SW8270D	R
4-Chlorophenyl-phenylether	SW8270D	SW8270D	SW8270D	SW8270D
4-Nitroaniline	SW8270D	SW8270D	SW8270D	SW8270D
Aniline	SW8270D	SW8270D	SW8270D	R
Benzoic Acid	SW8270D	SW8270D	SW8270D	SW8270D
Benzyl Alcohol	SW8270D	SW8270D	SW8270DSIM	SW8270DSIM
2,2'-Oxybis(1-Chloropropane)	SW8270D	SW8270D	SW8270D	SW8270D
bis(2-Chloroethoxy) Methane	SW8270D	SW8270D	SW8270D	SW8270D
Bis-(2-Chloroethyl) Ether	SW8270D	SW8270D	SW8270D	SW8270D
Carbazole	SW8270D	SW8270D	SW8270D	SW8270D
Hexachlorobenzene	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8081B
Hexachlorobutadiene	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8260C
Hexachlorocyclopentadiene	SW8270D	SW8270D	SW8270D	SW8270D
Hexachloroethane	SW8270D	SW8270D	SW8270D	SW8270D
Isophorone	SW8270D	SW8270D	SW8270D	SW8270D
Nitrobenzene	SW8270D	SW8270D	SW8270D	SW8270D
N-Nitrosodimethylamine	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8270DSIM

Table G-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: King County International Airport

Location ID / Collection Date	KC-CB-01	KC-DD-2009	KC-IV-SPS	KC-VT-1593
Analyte	**5/30/2013**	**5/30/2013**	**5/31/2013**	**5/30/2013**
N-Nitroso-Di-N-Propylamine	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8270DSIM
N-Nitrosodiphenylamine	SW8270DSIM	SW8270DSIM	SW8270DSIM	SW8270DSIM
PCB Aroclors (µg/kg)				
PCB Aroclors	SW8082A	SW8082A	SW8082A	SW8082A
Pesticides (µg/kg)				
Pesticides	SW8081B	SW8081B	SW8081B	SW8081B
VOCs (µg/kg)				
VOCs	na	na	SW8260C	SW8260C
TPHs (mg/kg)				
Gasoline-Range Hydrocarbons	na	na	NWTPHG	NWTPHG
Diesel-Range Hydrocarbons	na	na	NWTPHD	NWTPHD
Motor Oil-Range Hydrocarbons	na	na	NWTPHD	NWTPHD
Dioxins and Furans (ng/kg)				
Dioxins and Furans	na	na	EPA 1613B	EPA 1613B
Grain size (%)				
Grain size	PSEP-PS	PSEP-PS	PSEP-PS	PSEP-PS
Conventionals (%)				
Total Organic Carbon	PLUMB81TC	PLUMB81TC	PLUMB81TC	PLUMB81TC
Total Solids	SM2540B	SM2540B	SM2540B	SM2540B

a - This is a field duplicate of the sample directly preceding it.

% - percent
µg/kg - micrograms per kilogram
cPAHs - carcinogenic polycyclic aromatic hydrocarbons
EPA - U.S. Environmental Protection Agency
HPAHs - high molecular weight polycyclic aromatic hydrocarbons
LPAHs - low molecular weight polycyclic aromatic hydrocarbons
mg/kg - milligrams per kilogram
nd - non-detect
ng/kg - nanograms per kilogram
NPDES - National Pollutant Discharge Elimination System
PAHs - polycyclic aromatic hydrocarbons
PCBs - polychlorinated biphenyls
R - Result rejected during data validation review.
RL - reporting limit
SIM - selected ion monitoring
SVOCs - semivolatile organic compounds
TPH - total petroleum hydrocarbons
VOCs - volatile organic compounds

Table G-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: King County International Airport

Location ID			KC-CB-01			KC-DD-2009			KC-IV-SPS			KC-VT-1593		
Collection Date			5/30/2013			5/30/2013			5/31/2013			5/30/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Metals (Total) (mg/kg)														
Antimony	--	--	< 0.3 UJ			0.4 J			< 0.3 UJ			< 0.3 UJ		
Arsenic	57	93	10.5			8.3			2.4			15.5		
Beryllium	--	--	0.2			0.3			< 0.1 U			< 0.3 U		
Cadmium	5.1	6.7	4.6			**18.4**	3.6	2.7	0.2			0.6		
Chromium	260	270	27.9			66.2			9.3			13.6		
Copper	390	390	42.2			149			13.5			31.8		
Lead	450	530	148 J			234 J			8.4			45.4 J		
Mercury	0.41	0.59	0.08			**2.83**	6.9	4.8	< 0.02 U			< 0.03 U		
Nickel	--	--	20.5			48.1			8.6			21.5		
Selenium	--	--	< 0.7 U			< 0.8 U			< 0.7 U			< 0.6 U		
Silver	6.1	6.1	< 0.3 U			1.1			< 0.3 U			< 0.3 U		
Thallium	--	--	< 0.3 U			< 0.3 U			< 0.3 U			< 0.3 U		
Zinc	410	960	180			**813**	2.0		32			159		
PAHs (µg/kg)														
1-Methylnaphthalene	--	--	17 J			30 J			< 19 U			< 39 U		
2-Chloronaphthalene	--	--	< 20 U			< 54 U			< 19 U			< 39 U		
2-Methylnaphthalene	670	1,400	32			51 J			< 19 U			22 J		
Acenaphthene	500	730	11 J			240			< 19 U			31 J		
Acenaphthylene	1,300	1,300	28			110			< 19 U			< 39 U		
Anthracene	960	4,400	20			220			< 19 U			140		
Benzo(a)anthracene	1,300	1,600	100			840			10 J			1,000 J		
Benzo(a)pyrene	1,600	3,000	230			1,200			16 J			1,300 J		
Benzo(g,h,i)perylene	670	720	240			**920**	1.4	1.3	12 J			**990 J**	1.5	1.4
Chrysene	1,400	2,800	190			**1,600**	1.1		20			**1,500 J**	1.1	
Dibenz(a,h)anthracene	230	540	91			**350**	1.5		4.7			**370**	1.6	
Dibenzofuran	540	700	13 J			89			< 19 U			51		
Fluoranthene	1,700	2,500	240			**2,500**	1.5		30			**2,600**	1.5	1
Fluorene	540	1,000	< 20 U			130			< 19 U			63		
Indeno(1,2,3-cd)pyrene	600	690	250			**920**	1.5	1.3	12 J			**970 J**	1.6	1.4
Naphthalene	2,100	2,400	24			64			< 4.7 U			22 J		
Phenanthrene	1,500	5,400	130			**1,800**	1.2		10 J			1,400 J		
Pyrene	2,600	3,300	230			2,200			32			2,300		
Total Benzofluoranthenes	3,200	3,600	510			2,900			39			2,600 J		

Table G-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: King County International Airport

Location ID			KC-CB-01			KC-DD-2009			KC-IV-SPS			KC-VT-1593		
Collection Date			5/30/2013			5/30/2013			5/31/2013			5/30/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Total HPAHs	12,000	17,000	2,100			**13,000**	1.1		180 J			**14,000 J**	1.2	
Total LPAHs	5,200	13,000	210 J			2,600			10 J			1,700 J		
Total PAHs	--	--	2,300 J			16,000			190 J			15,000 J		
cPAHs, nd RL*0	1,000	--	330			**1,700**	1.7		23 J			**1,800 J**	1.8	
cPAHs, nd RL*0.5	1,000	--	330			**1,700**	1.7		23 J			**1,800 J**	1.8	
cPAHs, nd RL*1	1,000	--	330			**1,700**	1.7		23 J			**1,800 J**	1.8	
Phthalates (µg/kg)														
bis(2-Ethylhexyl)phthalate	1,300	1,900	**1,800**	1.4		**3,400**	2.6	1.8	34			81		
Butylbenzylphthalate	63	900	28 J			**450 J**	7.1		< 4.7 U			7.3 J		
Di-n-Butylphthalate	1,400	5,100	140			140			< 19 U			< 39 U		
Diethylphthalate	200	1,200	< 28 U			< 29 U			< 11 U			< 6.2 U		
Dimethylphthalate	71	160	4.3 J			27 J			< 4.7 U			< 4.9 U		
Di-n-Octyl phthalate	6,200	--	23			100			< 19 U			< 39 U		
Phenols (µg/kg)														
2,4,5-Trichlorophenol	--	--	< 98 U			< 270 U			< 95 U			< 200 U		
2,4,6-Trichlorophenol	--	--	< 98 U			< 270 U			< 95 U			< 200 U		
2,4-Dichlorophenol	--	--	< 200 U			< 540 U			< 190 U			< 390 U		
2,4-Dimethylphenol	29	29	< 20 U			**< 54 U**			< 19 U			3.8 J		
2,4-Dinitrophenol	--	--	< 840 U			< 2,300 U			< 800 U			< 1,700 U		
2-Chlorophenol	--	--	< 20 U			< 54 U			< 19 U			< 39 U		
2-Methylphenol	63	63	< 4.9 U			7.0 J			< 4.7 U			< 4.9 U		
2-Nitrophenol	--	--	< 98 U			< 270 U			< 95 U			< 200 U		
4,6-Dinitro-2-Methylphenol	--	--	< 200 U			< 540 U			< 190 U			< 390 U		
4-Chloro-3-methylphenol	--	--	< 98 U			< 270 U			< 95 U			< 200 U		
4-Methylphenol	670	670	< 20 U			62			< 19 U			< 39 U		
4-Nitrophenol	--	--	< 98 U			< 270 U			< 95 U			< 200 U		
Pentachlorophenol	360	690	< 49 U			< 130 U			< 47 U			< 49 U		
Phenol	420	1,200	25			200			< 19 U			< 39 U		
Other SVOCs (µg/kg)														
1,2,4-Trichlorobenzene	31	51	< 4.9 U			< 13 U			< 4.7 U			< 3.9 U		
1,2-Dichlorobenzene	35	50	< 4.9 U			< 13 U			3.8 J			< 0.8 U		
1,3-Dichlorobenzene	--	--	< 4.9 U			< 13 U			< 0.9 U			< 0.8 U		
1,4-Dichlorobenzene	110	120	< 4.9 U			< 13 U			2.6 J			< 0.8 U		
2,4-Dinitrotoluene	--	--	< 98 U			< 270 U			< 95 U			< 200 U		

Table G-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: King County International Airport

Location ID			KC-CB-01			KC-DD-2009			KC-IV-SPS			KC-VT-1593		
Collection Date			5/30/2013			5/30/2013			5/31/2013			5/30/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
2,6-Dinitrotoluene	--	--	< 98 U			< 270 U			< 95 U			< 200 U		
2-Nitroaniline	--	--	< 98 U			< 270 U			< 95 U			< 200 U		
3,3'-Dichlorobenzidine	--	--	< 150 U			< 400 U			< 140 U			R		
3-Nitroaniline	--	--	< 98 U			< 270 U			< 95 U			< 200 U		
4-Bromophenyl-phenylether	--	--	< 20 U			< 54 U			< 19 U			< 39 U		
4-Chloroaniline	--	--	< 260 U			< 730 U			< 260 U			R		
4-Chlorophenyl-phenylether	--	--	< 20 U			< 54 U			< 19 U			< 39 U		
4-Nitroaniline	--	--	< 98 U			< 270 U			< 95 U			< 200 U		
Aniline	--	--	< 530 U			< 1,400 U			< 510 U			R		
Benzoic Acid	650	650	120 J			**680 J**	1.0	1.0	< 380 U			**< 790 U**		
Benzyl Alcohol	57	73	< 20 U			< 54 U			< 19 U			< 20 U		
2,2'-Oxybis(1-Chloropropane)	--	--	< 20 U			< 54 U			< 19 U			< 39 U		
bis(2-Chloroethoxy) Methane	--	--	< 20 U			< 54 U			< 19 U			< 39 U		
Bis-(2-Chloroethyl) Ether	--	--	< 20 U			< 54 U			< 19 U			< 39 U		
Carbazole	--	--	38			340			< 19 U			360 J		
Hexachlorobenzene	22	70	< 4.9 U			< 13 U			< 4.7 U			< 4.7 U		
Hexachlorobutadiene	11	120	< 4.9 U			**< 13 U**			< 4.7 U			< 3.9 U		
Hexachlorocyclopentadiene	--	--	< 390 U			< 1,100 U			< 380 U			< 790 U		
Hexachloroethane	--	--	< 20 U			< 54 U			< 19 U			< 39 U		
Isophorone	--	--	< 20 U			< 54 U			< 19 U			< 39 U		
Nitrobenzene	--	--	< 20 U			< 54 U			< 19 U			< 39 U		
N-Nitrosodimethylamine	--	--	< 25 U			< 67 U			< 24 U			< 25 U		
N-Nitroso-Di-N-Propylamine	--	--	< 12 U			< 32 U			< 11 U			< 12 U		
N-Nitrosodiphenylamine	28	40	3.5 J			13 J			< 19 U			< 20 U		
PCB Aroclors (µg/kg)														
Aroclor 1016	--	--	< 130 U			< 320 U			< 3.9 U			< 3.8 U		
Aroclor 1221	--	--	< 130 U			< 320 U			< 3.9 U			< 3.8 U		
Aroclor 1232	--	--	< 130 U			< 320 U			< 3.9 U			< 3.8 U		
Aroclor 1242	--	--	< 130 U			< 320 U			< 3.9 U			< 3.8 U		
Aroclor 1248	--	--	< 380 U			< 8,000 U			< 3.9 U			< 3.8 U		
Aroclor 1254	--	--	5,000			120,000			17			6.5		
Aroclor 1260	--	--	1,400			26,000			15			9.7		
Aroclor 1262	--	--	< 130 U			< 320 U			< 3.9 U			< 3.8 U		
Aroclor 1268	--	--	< 130 U			< 320 U			< 3.9 U			< 3.8 U		

Table G-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: King County International Airport

Location ID			KC-CB-01			KC-DD-2009			KC-IV-SPS			KC-VT-1593		
Collection Date			5/30/2013			5/30/2013			5/31/2013			5/30/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Total PCB Aroclors	130	1,000	**6,400**	49	6.4	**150,000**	1,200	150	32			16		
Pesticides (µg/kg)														
4,4'-DDD	--	--	< 32 U			< 80 U			< 4.8 U			< 4.7 U		
4,4'-DDE	--	--	< 200 U			< 3,500 U			< 4.8 U			< 4.7 U		
4,4'-DDT	--	--	< 680 U			< 10,000 U			< 4.8 U			< 4.7 UJ		
Total DDTs	--	--	< 680 U			< 10,000 U			< 4.8 U			< 4.7 U		
Aldrin	--	--	< 16 U			< 40 U			< 2.4 U			< 2.4 U		
alpha-BHC	--	--	< 16 U			< 40 U			< 2.4 U			< 2.4 U		
beta-BHC	--	--	< 16 U			< 40 U			< 2.4 U			< 2.4 U		
cis-Chlordane	--	--	< 16 U			< 40 U			< 2.4 U			< 2.4 U		
delta-BHC	--	--	< 16 U			< 40 U			< 2.4 U			< 2.4 UJ		
Dieldrin	--	--	< 160 U			< 2,400 U			< 4.8 U			< 4.7 U		
Endosulfan I	--	--	< 16 U			< 970 U			< 2.4 U			< 2.4 U		
Endosulfan II	--	--	< 180 U			< 560 U			< 4.8 U			< 4.7 U		
Endosulfan Sulfate	--	--	< 32 U			< 80 U			< 4.8 U			< 4.7 U		
Endrin	--	--	< 300 U			< 660 U			< 4.8 U			< 4.7 UJ		
Endrin Aldehyde	--	--	< 32 U			< 670 U			< 4.8 U			< 4.7 U		
Endrin Ketone	--	--	< 32 U			< 1,800 U			< 4.8 U			< 4.7 U		
Heptachlor	--	--	< 16 U			< 40 U			< 2.4 U			< 2.4 U		
Heptachlor Epoxide	--	--	< 74 U			< 1,600 U			< 4.8 U			< 4.7 U		
gamma-BHC (Lindane)	--	--	< 16 U			< 40 U			< 2.4 U			< 2.4 U		
Methoxychlor	--	--	< 160 U			< 400 U			< 24 U			< 24 UJ		
Toxaphene	--	--	< 3,200 U			< 8,000 U			< 480 U			< 470 U		
trans-Chlordane	--	--	< 16 U			< 990 U			< 2.4 U			< 2.4 U		
Total aldrin/dieldrin	--	--	< 160 U			< 2,400 U			< 4.8 U			< 4.7 U		
Total Chlordane	--	--	< 16 U			< 990 U			< 2.4 U			< 2.4 U		
VOCs (µg/kg)														
1,1,1,2-Tetrachloroethane	--	--	na			na			< 0.9 U			< 0.8 U		
1,1,1-Trichloroethane	--	--	na			na			< 0.9 U			< 0.8 U		
1,1,2,2-Tetrachloroethane	--	--	na			na			< 0.9 U			< 0.8 U		
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	na			na			< 1.9 U			< 1.6 U		
1,1,2-Trichloroethane	--	--	na			na			< 0.9 U			< 0.8 U		
1,1-Dichloroethane	--	--	na			na			< 0.9 U			< 0.8 U		
1,1-Dichloroethene	--	--	na			na			< 0.9 UJ			< 0.8 U		

Table G-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: King County International Airport

Location ID			KC-CB-01			KC-DD-2009			KC-IV-SPS			KC-VT-1593		
Collection Date			5/30/2013			5/30/2013			5/31/2013			5/30/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
1,1-Dichloropropene	--	--	na			na			< 0.9 U			< 0.8 U		
1,2,3-Trichlorobenzene	--	--	na			na			< 4.7 U			< 3.9 U		
1,2,3-Trichloropropane	--	--	na			na			< 1.9 U			< 1.6 U		
1,2,4-Trimethylbenzene	--	--	na			na			< 0.9 U			< 0.8 U		
1,2-Dibromo-3-chloropropane	--	--	na			na			< 4.7 U			< 3.9 U		
1,2-Dibromoethane	--	--	na			na			< 0.9 U			< 0.8 U		
1,2-Dichloroethane	--	--	na			na			< 0.9 U			< 0.8 U		
1,2-Dichloropropane	--	--	na			na			< 0.9 U			< 0.8 U		
1,3,5-Trimethylbenzene	--	--	na			na			< 0.9 U			< 0.8 U		
1,3-Dichloropropane	--	--	na			na			< 0.9 U			< 0.8 U		
2,2-Dichloropropane	--	--	na			na			< 0.9 U			< 0.8 U		
2-Chloroethylvinylether	--	--	na			na			< 4.7 U			< 3.9 U		
2-Chlorotoluene	--	--	na			na			< 0.9 U			< 0.8 U		
2-Hexanone	--	--	na			na			< 4.7 U			< 3.9 U		
4-Chlorotoluene	--	--	na			na			< 0.9 U			< 0.8 U		
Acetone	--	--	na			na			< 4.7 U			130		
Acrolein	--	--	na			na			< 47 UJ			< 39 U		
Acrylonitrile	--	--	na			na			< 4.7 U			< 3.9 U		
Benzene	--	--	na			na			< 0.9 U			< 0.8 U		
Bromobenzene	--	--	na			na			< 0.9 U			< 0.8 U		
Bromochloromethane	--	--	na			na			< 0.9 U			< 0.8 U		
Bromoethane	--	--	na			na			< 1.9 UJ			< 1.6 U		
Bromoform	--	--	na			na			< 0.9 U			< 0.8 U		
Bromomethane	--	--	na			na			< 0.9 U			< 0.8 U		
Carbon Disulfide	--	--	na			na			7.3			5.9		
Carbon Tetrachloride	--	--	na			na			< 0.9 U			< 0.8 U		
Chlorobenzene	--	--	na			na			< 0.9 U			< 0.8 U		
Dibromochloromethane	--	--	na			na			< 0.9 U			< 0.8 U		
Chloroethane	--	--	na			na			< 0.9 U			< 0.8 U		
Chloroform	--	--	na			na			< 0.9 U			< 0.8 U		
Chloromethane	--	--	na			na			< 0.9 U			< 0.8 U		
cis-1,2-Dichloroethene	--	--	na			na			< 0.9 U			< 0.8 U		
cis-1,3-Dichloropropene	--	--	na			na			< 0.9 U			< 0.8 U		
Dibromomethane	--	--	na			na			< 0.9 U			< 0.8 U		

Table G-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: King County International Airport

Location ID			KC-CB-01			KC-DD-2009			KC-IV-SPS			KC-VT-1593		
Collection Date			5/30/2013			5/30/2013			5/31/2013			5/30/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Bromodichloromethane	--	--	na			na			< 0.9 U			< 0.8 U		
Dichlorodifluoromethane	--	--	na			na			< 0.9 U			< 0.8 U		
Ethylbenzene	--	--	na			na			< 0.9 U			< 0.8 U		
Isopropylbenzene	--	--	na			na			< 0.9 U			< 0.8 U		
m,p-Xylene	--	--	na			na			< 0.9 U			< 0.8 U		
2-Butanone	--	--	na			na			< 4.7 U			8.4		
Iodomethane	--	--	na			na			< 0.9 UJ			< 0.8 U		
4-Methyl-2-Pentanone (MIBK)	--	--	na			na			< 4.7 U			< 3.9 U		
Methyl tert-Butyl Ether	--	--	na			na			< 0.9 U			< 0.8 U		
Methylene Chloride	--	--	na			na			2.0			< 1.2 U		
n-Butylbenzene	--	--	na			na			< 0.9 U			< 0.8 U		
n-Propylbenzene	--	--	na			na			< 0.9 U			< 0.8 U		
o-Xylene	--	--	na			na			< 0.9 U			< 0.8 U		
4-Isopropyltoluene	--	--	na			na			< 0.9 U			< 0.8 U		
sec-Butylbenzene	--	--	na			na			< 0.9 U			< 0.8 U		
Styrene	--	--	na			na			< 0.9 U			< 0.8 U		
tert-Butylbenzene	--	--	na			na			< 0.9 U			< 0.8 U		
Tetrachloroethene	--	--	na			na			< 0.9 U			< 0.8 U		
Toluene	--	--	na			na			< 0.9 U			< 0.8 U		
Total Xylenes	--	--	na			na			< 0.9 U			< 0.8 U		
trans-1,2-Dichloroethene	--	--	na			na			< 0.9 U			< 0.8 U		
trans-1,3-Dichloropropene	--	--	na			na			< 0.9 U			< 0.8 U		
trans-1,4-Dichloro-2-butene	--	--	na			na			< 4.7 UJ			< 3.9 UJ		
Trichloroethene	--	--	na			na			< 0.9 U			< 0.8 U		
Trichlorofluoromethane	--	--	na			na			< 0.9 U			< 0.8 U		
Vinyl Acetate	--	--	na			na			< 4.7 UJ			< 3.9 UJ		
Vinyl Chloride	--	--	na			na			< 0.9 U			< 0.8 U		
TPH (mg/kg)														
Gasoline-Range Hydrocarbons	30/100	--	na			na			30			< 6.2 U		
Diesel-Range Hydrocarbons	2,000	--	na			na			53			150 J		
Motor Oil-Range Hydrocarbons	2,000	--	na			na			110			730		
Dioxins and Furans (ng/kg)														
2,3,7,8-TCDD	--	--	na			na			1.54			< 0.452 U		
1,2,3,7,8-PeCDD	--	--	na			na			0.277 J			1.1		

Attachment G-1
Inspection Photographic Log

Conveyance Structure Information	
Structure Identification Number: KC-VT-1593	**N←**
Structure Type: Vault	
General Location: Southwestern portion of facility	
Characteristics: 8 feet to bottom of structure Diversion weir	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Catch basin grate	
Volume Gauge: No	
Sample ID: KC-VT-1593-20130530-W KC-VT-1593-20130530-S	
Drainage Information:	
The vault receives stormwater from the southwest portion of King County International Airport. The vault has a central weir that diverts stormwater northeast to an oil water separator. Stormwater re-enters the vault on the northwest side of the weir prior to discharging to the west. During periods of high flow, a portion stormwater flows over the weir and bypasses the oil water separator. Observed flow was attributed to groundwater infiltrating the storm drain system. Iron bacteria precipitate was observed on top layer of sediment.	**N↑**

Conveyance Structure Information	
Structure Identification Number: KC-CB-01	**N➔**
Structure Type: Catch Basin	
General Location: Southwestern portion of facility	
Characteristics: n/a	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Open catch basin grate	
Volume Gauge: No	
Sample ID: KC-CB-01-20130530-S	
Drainage Information:	
This catch basin is located in grassy area along the southwestern fence line. The potential for sheet flow from the Boeing facility to the west was observed. Investigation was unable to determine where/if the catch basin connects to the storm drain system at King County International Airport.	**N➔**

Conveyance Structure Information	
Structure Identification Number: KC-DD-2009	**N↑**
Structure Type: Drainage Ditch	
General Location: Southwestern corner of facility	
Characteristics: Open drainage channel	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Open	
Volume Gauge: No	
Sample ID: KC-DD-2009-20130530-S	
Drainage Information	
KC-DD-2009 drains the southwestern corner of King County International Airport. Stormwater is conveyed from the drainage ditch to an oil water separator prior to discharge to the public storm drain system. The drainage ditch has potential to receive sheet flow from the Boeing facility to the west.	**N←**

Conveyance Structure Information	
Structure Identification Number: KC-IV-SPS	**N➔**
Structure Type: Vault/Pump Station	
General Location: Western portion of facility	
Characteristics: 17 feet to bottom of structure Grated weir	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Concrete grates	
Volume Gauge: No	
Sample ID: KC-IV-SPS-20130531-S	
Drainage Information	
Stormwater from Drainage Area 2 is conveyed to the vault. Stormwater passes through the grated weir in the vault to the South Pump Station. Stormwater discharges from the pump station to the LDW via Outfall 2. A sample was collected from the influent portion of the vault/pump station.	**N➔**

Attachment G-2
Field Documentation

SAIC
From Science to Solutions

SURFACE WATER SAMPLING FORM

Client: Department of Ecology **Site:** ~~KCIA~~ KCIA cw 5/30/13 **Job #:** 209977

Sample ID	TIME	DATE	Flow	pH	Electrical Conductivity	Temp (°C)	Total Dissolved Solids	Turbidity (NTU)	Oil & Grease (visible?)	COMMENTS
KC-VT-1543-20130530-W	1206	5/30/13	Yes	7.07	388 ☐ µS/cm	15.47	NA	NA	No	Yellow-yellow orange Clear to Slightly Cloudy
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
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Sample Date: 5/30/2013

Sediment Collection Form

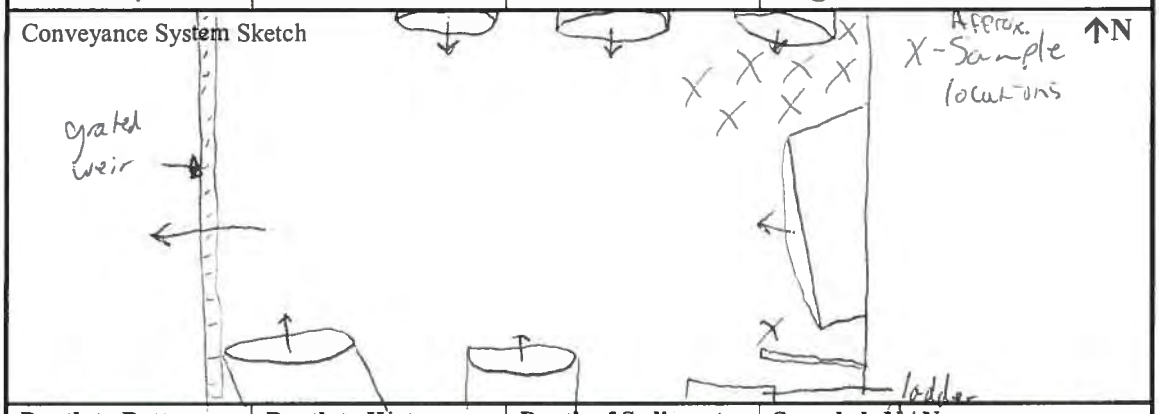
Project: NPDES Sampling Support **Location ID:** KC-IV-SPS

Facility Name: KCIA **Sample ID:** KC-IV-SPS-20130531-S

Sampled By: CW MP CN **Date:** 5 / 31 / 2013 **Time:** 1027

Structure Type:	Dimensions:	Standing Water:	Flow:
Inflow Vault	W 10.7' L 10.7'	(Y) / N	Y / (N)

Conveyance System Sketch



South Pump Station Vault

Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
17 ft	10.7 ft	12-18 in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	(Brown)	Slight	
(Sand) C (M) (F) Minimal Fine	Brown surface	(Moderate)	
(Silt/clay) Trace	(Gray)	Strong	
Organic matter	Black	Overwhelming	Photo ID(s): South Pump Station Inflent Vault
Debris	Tan	H_2S	
		Petroleum	GPS ID: KC-IV-SPS

NOTES: Collected Sediment from the upstream storage vault at the South Pump Station. Due to depth of vault ~~17.5'~~ 17' + depth of water ~6.5'; may have lost some fines during raising the sampler up through the water column.

All drains convey SW from ~~site~~ Drainage Basin 2 to Vault. Stormwater is conveyed ~~west~~ west through the grated weir to the South Pump Station vault directly on the west side of grated weir. SPS discharges to outfall 2.

Recorded By/Date: Corey Wilson 5/31/13 **Reviewed By/Date:** _____

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Sediment Collection Form

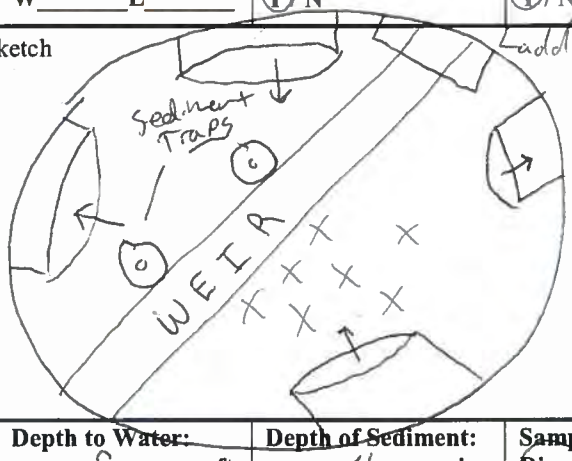
Project: NPDES Sampling Support **Location ID:** KC-VT-1593

Facility Name: **Sample ID:** KC-VT-1593-20130530-S

Sampled By: CW / CN **Date:** 5 / 30 / 2013 **Time:** 1247

Structure Type:	Dimensions:	Standing Water:	Flow:
Manhole / Vault	W_____ L_____	(Y) N	(Y) / N Potential GW Infiltration

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
8 ft	6 ft	~4 in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	(None)	First ~~couple of~~ grabs were primarily organic material. Samples of organic material not collected
Gravel	(Brown) Dark	Slight	
(Sand) (C) (M) (F)	Brown surface	Moderate	
Silt/clay	Gray	Strong	
(Organic matter)	(Black)	Overwhelming	Photo ID(s): OWS 1592
(Debris)	Tan	H_2S	GPS ID: KC-VT-1593
	Rust Colored ~~Bacteria~~ Matrix (CW)	Petroleum	

NOTES: Sample contains some organic growth that was colored reddish orange. Sediment traps are located on west side of weir. Water and Sediment Sample were collected from upstream side of weir (East side in Diagram above). Vault receives SW from portion of KCIA. SW from OWS 1592 is conveyed to discharge pipe in NE corner of vault, through a catch basin and to OWS 1592. OWS 1592 discharges back in to Vault on west side of weir. Stormwater discharges from vault to effluent pipe on west side of diagram

Recorded By/Date: CW 5/30/13 **Reviewed By/Date:** _____

Version2 -030311

SAIC
From Science to Solutions

Sediment Collection Form

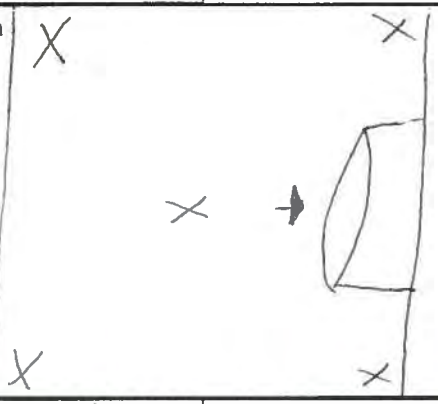
Project: NPDES Sampling Support **Location ID:** ~~KC~~ KC-CB-01

Facility Name: KCIA **Sample ID:** KC-CB-01-20130530-S

Sampled By: CW / CN **Date:** 5 / 30 / 2013 **Time:**

Structure Type:	Dimensions:	Standing Water:	Flow:
CB	W 2.5' L 2.5'	(Y) / N	Y (N)

Conveyance System Sketch



↑N

X - Sample collection areas

Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
2 ft	1.5 ft	4 in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
~~Cobble~~	Drab olive	~~None~~	
Gravel	~~Brown~~	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	~~Black~~	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	UNKNOWN CB-01
		Petroleum	GPS ID:
			KC-CB-01

NOTES: Catch basin located in a grassy area along fenceline adjacent to Boeing. Potential for sheet flow from Boeing facility to catch basin. Unclear where catch basin discharges to. PD of KC could not locate connecting point in drainage system to the east

Did not collect VOAs or Gas sample

Recorded By/Date: CW 5/30/13 **Reviewed By/Date:**

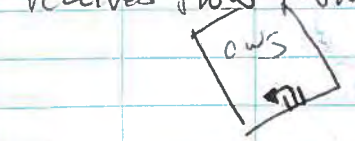
Version2 -030311

King County Airport 5/30/13

0615 CN/CW onsite at storage unit — Forecast 50° Windy
Load equipment into field truck
0745 Mobilize from field office to KCIA
0810 Arrive at ~~KC~~ KCIA main terminal
and meet Bob Wright, MA, + KW Env
0822 Peter Dunaling (King County) on site
Discussion about sampling locations + Drainage basins
PD indicated recent grab and sediment trap sampling recently conducted in ~~May~~ May 2013
PD said he would provide data to ECY
0855 Wrapped up discussion and mobilized to west side of airport to parking lot at E Marginal + S 87th PL
0934 Held H+S meeting prior to entering restrictive area
0943 Drive on site to the pump vault - south pump station
- Arrive onsite at open South Pump Station vault lid approx 15' deep, hard bottom visible stream, no flow.
- Opened OWS (1801) soft bottom ~3" sed available
Newly constructed area, pending as-builts.
- CN/MA/PD observed large catchbasin (round) in grassy median upgradient of South pump that receives flow from the eastern portion of the site
1029 MOB ~~to~~ south to wet vault I area

5/30/13 King County Airport

Team ~~opened~~ observed hit to CB vault downgradient to OWS1592. CB-1--3 receives flow from south, west, and east.



decent flow
Seals present
in grassy area (overgrown)
discharges to OWS

1114 Team decided to collect water and sediment sample from upstream side of weir in vault CBV
GPS'd KC-VT-1593 and KC-OWS-1592

1157 Collected water grab sample
KC-VT-1593-20130530-W

1206 Field Parameters for KC-VT-1593-20130530-W:

Temp:	15.47°C
Cond:	388 mS/cm
pH:	7.07
ORP:	11.7
DO:	7.32
Sal:	NA
TDS:	NA
Turb:	NA

Odorless; yellow-yellow orange; clear to sl. cloudy.

King County Airport 5/30/13

DTB = 8' bgs
DTW = 6' bgs
Approx 4" sediment; 2-3" sludge
fine to med grnd seals

1247 Collected Sediment Sample
KC-VT-1593-20130530-S
First two to three scoops contained primarily reddish orange organic matter
Was able to find area in vault of consistent sediment. Did not containerize organic matter for analysis

1334 Completed demob at VT-1539 mobed offsite for lunch break

1415 Arrived back on site

1428 Mobilized to Southern portion of facility on west side of Taxiway B
Investigating a catch basin in grassed area along fenceline next to Boeing facility

1447 GPS ID: KC-CB-01

1513 Collected Sample KC-CB-01-20130530-S
No VOA or Gas collection

King County Airport 5/30/13

1539 Mobilized further south to S'west corner of airport. Investigated drainage ditch
1553 Collected GPS points KC-DD-2009 and KC-OWS-2009
Removed large rocks from drainage ditch and evaluated sample location
1553 Collected sediment sample KC-DD-2009-20130530-S
Bob Wright requested sample collection following a high hit of PCBs during a previous round of sampling in around July 2012. Drainage ditch appears to convey stormwater to OWS-2009 prior to discharge to LDW
1605 Sample collection complete
Decon equipment

1624 Bob and Ken offsite (ECY)
1629 CW and CW offsite (SAIC)
-Plan to meet at western gate at 8:45AM
1647 Arrive at Field Office to unload coolers & equipment
1705 Depart Field office

5/30/13

King County Airport 5/31/13

Overcast, 60°
0645 Arrive at Field office to pick up Sandals
0652 Depart field office for ARI
0711 Arrive at ARI dropped off two coolers and pick up 3 empty coolers
0717 Depart ARI for field office
0732 Arrive at field office
0757 Michael Payel (SAIC) arrive at field office. Load field truck
0830 CW + MP depart field office for KCIA
0845 CW + MP arrive at KCA
0852 CW, BW, X (ECY) arrive onsite
0900 Meet Peter, MOB into the airport to South pumping station (SPS)
Influent vault to SPS
L W D
10.7 × 10.7 × 17.1'
DTW
WC = 6.5'
Conducted H&S meeting. Began prepping for Sediment sampling, GPS ID - KC-IV-SPS
1019 Collected sediment sample KC-IV-SPS-20130531-S
Full Suite of analytes including Dioxins
Bob, Ken, Peter in North end of airport during inspection; SAIC on standby - no escort available

5/31/13 King County Airport

Bibs, Ken, Peter arrive at gate. Team decides to MOB to north end to open up SPM (Sampling Point Maintenance) No solids present, low groundwater flow. Older manhole

DTB = approx 7' bgs

1154 MOB to SP-1 location inside of airport fence older MH, rough bottom shallow, trace sds.
SP-1 same as 229A No Solids
Open CB-229 (NBF) No sds
UNK-CB-27 (NBF) No sds
No sampling conducted in North lateral

1215 King County, Ecology, + SAIC offsite
SAIC to ARI

1249 Arrive at ARI and relinquish samples
Mob to Field office

1358 Complete unload of gear and sample equipment
Mob to TNW to return equipment

1424 Return equipment Mob to office

1454 Arrive at office, PCB congeners samples in cooler

CL 5/31/13

Attachment G-3
Chain of Custody Forms

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Date: 5.30.13
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1
Client Contact: **Christine Nancarrow**		No. of Coolers: 2 Cooler Temps: 1.4, 0.8
Client Project Name: **NPDES Sampling Support**		
Client Project #: **209977**	Samplers: CW / CN	

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	PCB Aroclors (EPA 8082)	SVOCs (EPA 8270 / PAH EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	Notes/Comments: TPH-Gas (NWTPH-Gx)
					Analysis Requested (Sediment Sample)											
KC-VT-1513-20130530-S	5/30/13	1247	Sediment	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
KC-CB-01-20130530-S	5/30/13	1513	Sediment	5	✓	✓	✓				✓	✓	✓	✓	✓	
KC-DD-2007-20130530-S	5/30/13	1553	Sediment	5	✓	✓	✓				✓	✓	✓	✓	✓	
KC-TB-01-20130530-W	5/30/13	1300	H2O	2						✓						

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by (Signature)	Received by: (Signature)
Do not dispose of samples without prior written authorization from SAIC PM.	Printed Name: Corey H. Wilson	Printed Name: Jennifer Milsap	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 5/31/12 0712	Date & Time: 5/31/13 712	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Date: 5.30.13
ARI Client Company: **SAIC**	Phone: **206.300.2144** **nancarrowc@saic.com**	Page: 1 of 1
Client Contact: **Christine Nancarrow**		No. of Coolers: 1 Cooler Temps: 1.4, 0.8
Client Project Name: **NPDES Sampling Support**		
Client Project #: **209977**	Samplers: CW CN	

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	SVOCs/PAHs (EPA 8270/8270SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments
Analysis Requested (Aqueous Sample)																	
KC-VT-1573-20130530-W	5/30/13	1157	Water	10	X	X	X	X	X	X	X	X	X	X	X	X	

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
Do not dispose of samples without prior written authorization from SAIC PM.	(Signature)	(Signature)	(Signature)	(Signature)
	Printed Name: Corey H. Wilson	Printed Name: Jennifer M. Wilson	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 5/31/13 0712	Date & Time: 5/31/13 712	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Date: 5/31/13	
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1	
Client Contact: **Christine Nancarrow**		No. of Coolers: 1	Cooler Temps: 1.3
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: CW / CN / MP		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	PCB Aroclors (EPA 8082)	SVOCs (EPA 8270 PAH EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (~~AK/NWTPH-Dx~~)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	Notes/Comments: TPH-Gas (NW/AK-Gx)
					Analysis Requested (Sediment Sample)											
KC-IV-SED-20130531-S	5/31/13	1019	Sediment	11	X	X	X	X	X	X	X	X	X	X	X	X
~~EB~~ KC-TB-02	4/15/13	12	Water	1						X						

CW 5/31/13

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Do not dispose of samples w/o prior written authorization from SAIC PM	Printed Name: Corey H. Wilson	Printed Name: Taylor Street	Printed Name:	Printed Name:
	Company: SAIC	Company: DOT	Company:	Company:
	Date & Time: 5/31/13 1244	Date & Time: 5-31-13 1250	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Attachment G-4
Laboratory Reports

Note: Laboratory reports are included with digital files. The complete SGS Analytical laboratory report for PCB congeners analysis is available from Ecology upon request.

Table of Contents: ARI Job WR99, WS01

Client: SAIC

Project: 209977 NPDES Sampling Support

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BL

Signature

June-19-2013

Date

Table of Contents: ARI Job WR99, WS01

Client: SAIC

Project: 209977 NPDES Sampling Support

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BL

Signature

June-19-2013

Date

Table of Contents: ARI Job WR99, WS01

Client: SAIC

Project: 209977 NPDES Sampling Support

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BL
Signature

June-19-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 21, 2013

Christine Nancarrow
SAIC
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

RE: Project: NPDES Sampling Support, 209977
ARI Job Nos.: WR99 & WS01

Dear Christine:

Please find enclosed the Chain-of-Custody records (COCs), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details of the analyses are discussed in the Case Narrative.

An electronic copy of this data package will be kept on file with ARI. Should you have any questions or problems, please feel free to contact me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile WR99_WS01

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: WR99, WS01

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WR699	Turn-around Requested: Standard	Date: 5.30.13	
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1	
Client Contact: **Christine Nancarrow**		No. of Coolers: 1	Cooler Temps: 1.4, 0.8
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: CW CN		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	SVOCs (EPA 8270)/PAHs (EPA 8270 SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments
KC-VT-1533-20130530-W	5/30/13	1157	Water	10	X	X	X	X	X	X	X	X	X	X	X	X	

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
Do not dispose of samples without prior written authorization from SAIC PM.	Printed Name: Corey H Wilson	Printed Name: Jennifer M. Illg	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 5/31/13 0712	Date & Time: 5/31/13 712	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WR99	Turn-around Requested: Standard	Date: 5.30.13	
ARI Client Company: **SAIC**	Phone: **206.300.2144**	Page: 1 of 1	
	nancarrowc@saic.com		
Client Contact: **Christine Nancarrow**		No. of Coolers: 2	Cooler Temps: 1.4, 0.8
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: CW / CN		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	PCB Aroclors (EPA 8082)	SVOCs (EPA 8270 / PAH EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	Notes/Comments
					Analysis Requested (Sediment Sample)											
KC-VT-1513-20130530-S	5/30/13	1347	Sediment	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X (TPH-Gas (NWTPH-Gx))
KC-CB-01-20130530-S	5/30/13	1513	Sediment	5	✓	✓	✓				✓	✓	✓	✓	✓	
KC-DD-2009-20130530-S	5/30/13	1553	Sediment	5	✓	✓	✓				✓	✓	✓	✓	✓	
KC-TB-01-20130530-W	5/30/13	1300	H2O	2						✓						

Comments/Special Instructions: Do not dispose of samples without prior written authorization from SAIC PM.	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
	Printed Name: Corey H. Wilson	Printed Name: Jennifer Millsap	Printed Name	Printed Name
	Company: SAIC	Company: ARI	Company	Company
	Date & Time: 5/31/12 0712	Date & Time: 5/31/13 712	Date & Time	Date & Time

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client SAIC Project Name: NPDES Sampling Support

COC No(s) _____ (NA) Delivered by Fed-Ex UPS Courier (Hand Delivered) Other _____

Assigned ARI Job No WK09 Tracking No _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? (YES) NO

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc.) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6 0 °C for chemistry): 1.4 0.8 ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877052

Cooler Accepted by: JM Date: 5/31/13 Time: 712

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) NA (YES) NO

Were all VOC vials free of air bubbles? NA (YES) NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI. NA 4/15/13

Was Sample Split by ARI: (NA) YES Date/Time _____ Equipment: _____ Split by: _____

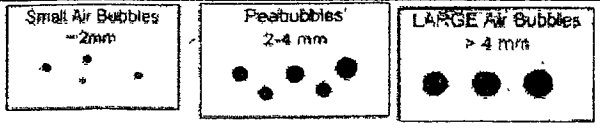
Samples Logged by: JM Date: 5/31/13 Time: 748

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

PRESERVATION VERIFICATION 05/31/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WR99**

PC: Cheronne
VTSR: 05/31/13

Inquiry Number: NONE
Analysis Requested: 05/31/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-491
Validatable Package: Lv4
Deliverables:

Project #: 209977
Project: NPDES Sampling Support
Sample Site:
SDG No:
Analytical Protocol: PSDDA

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-11541 **WR99A**	KC-VT-1593-20130530-W						TOT pass					fail						★DOC TOC	<2	9806C 9N H_2SO_4	1ml	5-31-13 CAOC
13-11542 **WR99B**	KC-VT-1593-20130530-W						DIS fail									N						

TOC & DOC share a bottle

TOC needs to be preserved,

DOC needs to be filtered & preserved.

★Sample split, Filtered and preserved for D.O.C. 5-31-13 cr

Checked By JW Date 5/31/13

PRESERVATION VERIFICATION 05/31/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WR99**

PC: Cheronne
VTSR: 05/31/13

Inquiry Number: NONE
Analysis Requested: 05/31/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-491
Validatable Package: Lv4
Deliverables:

Project #: 209977
Project: NPDES Sampling Support
Sample Site:
SDG No:
Analytical Protocol: PSDDA

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-11541 **WR99A**	KC-VT-1593-20130530-W						TOT pass					fail										
13-11542 **WR99B**	KC-VT-1593-20130530-W						DIS fail									N			2	MP245$_2$	2mL	CB 5/31/13

TOC & DOC share a bottle

TOC needs to be preserved.

DOC needs to be filtered & preserved.

Filter & preserve Sample B in lab CB 5/31/13

Checked By JW Date 5/31/13

209977 05231314

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: ~~VOA~~ VSO ~~WR99~~	Turn-around Requested: Standard
ARI Client Company: **SAIC**	Phone: **206.300.2144**
Client Contact. **Christine Nancarrow**	**nancarrowc@saic.com**
Client Project Name: **NPDES Sampling Support**	
Client Project #: **209977**	Samplers: CW CN

Date: 5.30.13
Page: 1 of 1
No. of Coolers: 1 Cooler Temps: 1.4, 0.8

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	SVOCs (EPA 8270/8270SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments
KC-VT-1593-20130530-W	5/30/13	1157	Water	10	X	X	X	X	X	X	X	X	X	X	X	X	

Analysis Requested (Aqueous Sample)

Comments/Special Instructions	Relinquished by	Received by	Relinquished by	Received by
Do not dispose of samples without prior written authorization from SAIC PM.	(Signature)	(Signature)	(Signature)	(Signature)
	Printed Name: Corey H. Wilson	Printed Name: Jennifer Mitton	Printed Name	Printed Name
	Company: SAIC	Company: ARI	Company	Company
	Date & Time: 5/31/13 0712	Date & Time: 5/31/13 112	Date & Time	Date & Time

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: SAIC Project Name: NPDES Sampling Support

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: WK49 WS01 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? (YES) NO

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc.) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry): 1.4 0.8 ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877752

Cooler Accepted by: JM Date: 5/31/13 Time: 712

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) NA (YES) NO

Were all VOC vials free of air bubbles? NA (YES) NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI: NA 4/15/13

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

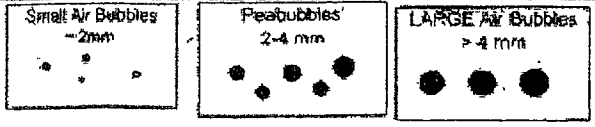
Samples Logged by: JM Date: 5/31/13 Time: 748

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

PRESERVATION VERIFICATION 05/31/13
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ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WS01**

PC: Cheronne
VTSR: 05/31/13

Inquiry Number: NONE
Analysis Requested: 05/31/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: LV4
Deliverables:

Project #: 209977
Project: NPDES Sampling Support
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-11547 **WS01A**	KC-VT-1593-20130530-W						TOT ~~DISS~~															
13-11548 **WS01B**	KC-VT-1593-20130530-W						~~DIS~~ Fail									N			<2	MP2452	2mL	CB 5/31/13

Filter & Preserve
Sample B in lab
CB 5/31/13

Checked By JM Date 5/31/13

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WR99, WS01

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job Nos.: WR99 & WS01

Sample Receipt

Two water samples and three sediment samples were received on May 31, 2013 under ARI jobs WR99 and WS01. The cooler temperatures measured by IR thermometer following ARI SOP were 0.8 and 1.4°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles by SW8260C

The samples were analyzed within the recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration was outside the 20% control limit high for Chloroethane, Acrolein, Iodomethane, Methylene Chloride, and trans-1,2-Dichloroethene. All detected results for these compounds have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Methylene Chloride, Acetone, Naphthalene, and 1,2,3-Trichlorobenzene were present in the the method blank at low levels. All detected results for these compounds have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries of Methylene Chloride and Acrolein were outside the control limits high for **LCS-060413A**. All other percent recoveries were within control limits. No corrective action was taken.

Semivolatiles by SW8270D

The samples and associated laboratory QC were extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 6/11/13 fell outside the 20% control limit low for 2,2-Oxybis(1-Chloropropane). All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

The CCAL on 6/13/13 fell outside the 20% control limit low for Hexachlorocyclopentadiene and 2,4-Dinitrophenol. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

The CCAL on 6/14/13 was outside the 20% control limit high for Phenol, and fell out low for Benzyl Alcohol, Hexachlorocyclopentadiene, 3-Nitroaniline, 2,4-Dinitrophenol, Carbazole, and 3,3'-Dichlorobenzidine. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits.

The LCS and LCSD percent recoveries of 4-Chloroaniline and 3-Nitroaniline were outside the control limits high for **LCS-060513**. All other percent recoveries were within control limits. No corrective action was taken.

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **KC-VT-1593-20130530-S**. No corrective action is required for matrix QC.

SIM Semivolatiles by SW78270-SIM

The samples and associated laboratory QC were extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration was outside the 20% control limit high for Butylbenzylphthalate. All detected results for this compound have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Diethylphthalate was present in **MB-060813** at a level that was greater than the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries were within control limits.

The matrix spike/matrix spike duplicate RPD of 2,4-Dimethylphenol was outside the control limit for sample **KC-VT-1593-20130530-S**. All matrix spike and matrix spike duplicate percent recoveries were within advisory control limits. No corrective action is required for matrix QC.

Low-Level PAHs by SW8270D-SIM

The sample was extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

Dioxin/Furans by SW1613B

The sample was extracted and analyzed within the method recommended holding times.

Analysis was performed using the application specific RTX-Dioxin 2 column, which has a unique isomer separation for the 2378-TCDF, eliminating the need for second column confirmation.

Initial and continuing calibration results were within method requirements.

Both extraction and cleanup surrogates had recoveries within control limits.

The method blank contained reportable responses below the reporting limit for several compounds. Associated sample results were greater than ten times the levels found in the method blank. No corrective action was taken.

The OPR (Ongoing Precision and Accuracy or LCS) percent recoveries were within control limits.

Specific results have been "EMPC"-flagged indicating a response not meeting requirements of positive identification. The EMPC values are treated as undetects under some programs and as hits under programs with more conservative protocols.

The TEQ is presented with WHO2005 with ND=0 for undetects and ND=1/2 for undetects, with EMPCs included as hits.

Pesticides by SW8081

The samples and associated laboratory QC were extracted and analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **KC-VT-1593-20130530-S**. No corrective action is required for matrix QC.

Aroclor PCBs by SW8082

The samples and associated laboratory QC were extracted and analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

NWTPH-Dx

The sample and associated laboratory QC were extracted and analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS percent recovery was within control limits.

The matrix spike and matrix spike duplicate percent recoveries of Diesel fell outside advisory control limits low for sample **KC-VT-1593-20130530-S**. No corrective action is required for matrix QC.

NWTPH-Gx

The samples were analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

Metals and Mercury

The samples and associated laboratory QC were digested and analyzed within method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike percent recoveries of antimony and lead fell outside the control limits low for sample **KC-VT-1593-20130530-S**. Post digestion spikes were performed and recoveries were within control limits. All relevant data have been flagged with an "N" qualifier on the appropriate Form V. No further corrective action was taken.

The duplicate RPDs of arsenic, copper, and lead were outside the control limit for sample **KC-VT-1593-20130530-S**. All relevant data have been flagged with a "*" qualifier on the appropriate Form VI. No further corrective action was taken.

Low-Level Mercury

The samples and associated laboratory QC were digested and analyzed within method recommended holding times.

The method blanks were clean at the reporting limit. The LCS percent recoveries were within control limits.

The matrix spike percent recoveries and duplicate RPDs were within control limits.

General Chemistry

The samples and associated laboratory QC were initially prepared and analyzed within method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The SRM percent recoveries were within limits.

The matrix spike percent recoveries and replicate RPDs were within the control limit.

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: SAIC	**ARI Job No.:** WR99
Client Project: NPDES Sampling Support	**Client Project No.:** 209977

Case Narrative

1. Three samples were submitted for analysis on May 31, 2013.
2. The samples were submitted for grain size analysis by means of X-ray diffraction using a Sedigraph 5120. The values are calculated using Stokes' Law of sedimentation and Beer's law of extinction.
3. The samples were run in a single batch and one sample from another job was chosen for triplicate analysis.
4. The standard operating procedure calls for the sample to be measured on the #4 (4750 µm) sieve, down to the 1.0 µm particle size with the Sedigraph 5120. If there were no particles measured at these extremes, the data is not included in the report.
5. Organic material does not absorb X-rays, and is not included in the fine portion of the analysis.
6. The data is provided in summary tables and plots.
7. There were no other noted anomalies in the sample or methods on this project.

Released by: Elizabeth Dobie — *Technician* Date: June 18, 2013

Reviewed by: Quincy Curtis — *Geotechnical Laboratory Manager* Date: 6/18/13

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WR99
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	KC-VT-1593-20130530-W	WR99A	13-11541	Water	05/30/13 11:57	05/31/13 07:12
2.	KC-VT-1593-20130530-W	WR99B	13-11542	Water	05/30/13 11:57	05/31/13 07:12
3.	KC-TB-01-20130530-W	WR99C	13-11543	Water	05/30/13	05/31/13 07:12
4.	KC-VT-1593-20130530-S	WR99D	13-11544	Sediment	05/30/13 12:47	05/31/13 07:12
5.	KC-CB-01-20130530-S	WR99E	13-11545	Sediment	05/30/13 15:13	05/31/13 07:12
6.	KC-DD-2009-20130530-S	WR99F	13-11546	Sediment	05/30/13 15:53	05/31/13 07:12

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WS01
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	KC-VT-1593-20130530-W	WS01A	13-11547	Water	05/30/13 11:57	05/31/13 07:12
2.	KC-VT-1593-20130530-W	WS01B	13-11548	Water	05/30/13 11:57	05/31/13 07:12

WS01 : 209977

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Duplicate RPD is not within established control limits
B	Reported value is less than the CRDL but ≥ the Reporting Limit
N	Matrix Spike recovery not within established control limits
NA	Not Applicable, analyte not spiked
H	The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
L	Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Flagged value is not within established control limits
B	Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
J	Estimated concentration when the value is less than ARI's established reporting limits
D	The spiked compound was not detected due to sample extract dilution
E	Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

UB99 : 00022

Geotechnical Data

A	The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
F	Samples were frozen prior to particle size determination
SM	Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
SS	Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
W	Weight of sample in some pipette aliquots was below the level required for accurate weighting

DL[1] LOD[1], LOQ[1] and Control Limits Summary
VOA Analysis of Soil (EPA Method 8260C)

Analyte	DL[1,5] µg/kg	LOD[1] µg/kg	LOQ[1] µg/kg	LCS Recovery[2,4]	Replicate RPD[3]
Dichlorodifluoromethane	0.207	0.5	**1.0**	67 – 142	≤ 40
Chloromethane	0.263	0.5	**1.0**	65 – 129	≤ 40
Vinyl Chloride	0.235	0.5	**1.0**	74 – 134	≤ 40
Bromomethane	0.187	0.5	**1.0**	40 – 172	≤ 40
Chloroethane	0.462	0.5	**1.0**	53 – 154	≤ 40
Trichlorofluoromethane	0.266	0.5	**1.0**	57 – 161	≤ 40
Acrolein*	3.809	25	**50.0**	60 – 130	≤ 40
Acetone*	0.482	2.5	**5.0**	48 – 132	≤ 40
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.287	1.0	**2.0**	72 – 142	≤ 40
1,1-Dichloroethene	0.336	0.5	**1.0**	73 – 138	≤ 40
Bromoethane	0.440	1.0	**2.0**	74 – 132	≤ 40
Iodomethane (Methyl Iodide)	0.215	0.5	**1.0**	34 – 181	≤ 40
Methylene Chloride	0.635	1.0	**2.0**	61 – 128	≤ 40
Carbon Disulfide	0.559	1.0	**1.0**	72 – 146	≤ 40
Acrylonitrile	1.026	2.5	**5.0**	59 – 124	≤ 40
Methyl-t-butyl ether (MTBE)	0.231	0.5	**1.0**	68 – 124	≤ 40
trans-1,2-Dichloroethene	0.266	0.5	**1.0**	73 – 131	≤ 40
Vinyl Acetate	0.381	2.5	**5.0**	54 – 138	≤ 40
1,1-Dichloroethane	0.203	0.5	**1.0**	65 – 139	≤ 40
2-Butanone*	0.513	2.5	**5.0**	64 – 120	≤ 40
2,2-Dichloropropane	0.292	0.5	**1.0**	77 – 137	≤ 40
cis-1,2-Dichloroethene	0.240	0.5	**1.0**	75 – 124	≤ 40
Chloroform	0.234	0.5	**1.0**	75 – 126	≤ 40
Bromochloromethane	0.323	0.5	**1.0**	69 – 133	≤ 40
1,1,1-Trichloroethane	0.226	0.5	**1.0**	78 – 133	≤ 40
1,1-Dichloropropene	0.312	0.5	**1.0**	80 – 123	≤ 40
Carbon Tetrachloride	0.213	0.5	**1.0**	76 – 136	≤ 40
1,2-Dichloroethane	0.191	0.5	**1.0**	77 – **120**	≤ 40
Benzene	0.296	0.5	**1.0**	80 – **120**	≤ 40
Trichloroethene	0.212	0.5	**1.0**	80 – 120	≤ 40
1,2-Dichloropropane	0.162	0.5	**1.0**	74 – **120**	≤ 40
Bromodichloromethane	0.254	0.5	**1.0**	80 – 122	≤ 40
Dibromomethane	0.147	0.5	**1.0**	80 – **120**	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary
VOA Analysis of Soil (EPA Method 8260C)

Analyte	DL[1,5] µg/kg	LOD[1] µg/kg	LOQ[1] µg/kg	LCS Recovery[2,4]	Replicate RPD[3]
2-Chloroethyl Vinyl Ether	0.276	2.5	**5.0**	20 – 157	≤ 40
4-Methyl-2-Pentanone*	0.420	2.5	**5.0**	70 – 124	≤ 40
cis-1,3-Dichloropropene	0.226	0.5	**1.0**	80 – 124	≤ 40
Toluene	0.151	0.5	**1.0**	78 – **120**	≤ 40
trans-1,3-Dichloropropene	0.216	0.5	**1.0**	80 – 126	≤ 40
1,1,2-Trichloroethane	0.286	0.5	**1.0**	77 – **120**	≤ 40
1,2-Dibromoethane (Ethylene Dibromide)	0.176	0.5	**1.0**	79 – **120**	≤ 40
2-Hexanone*	0.439	2.5	**5.0**	62 – 128	≤ 40
1,3-Dichloropropane	0.209	0.5	**1.0**	77 – **120**	≤ 40
Tetrachloroethene	0.257	0.5	**1.0**	76 – 131	≤ 40
Dibromochloromethane	0.266	0.5	**1.0**	77 – 123	≤ 40
Chlorobenzene	0.219	0.5	**1.0**	80 – **120**	≤ 40
1,1,1,2-Tetrachloroethane	0.233	0.5	**1.0**	80 – **120**	≤ 40
Ethyl Benzene	0.202	0.5	**1.0**	**80 – 120**	≤ 40
m,p-Xylene	0.392	0.5	**1.0**	**80** – 123	≤ 40
o-Xylene	0.224	0.5	**1.0**	**80 – 120**	≤ 40
Styrene	0.138	0.5	**1.0**	**80** – 122	≤ 40
Bromoform	0.297	0.5	**1.0**	63 – **120**	≤ 40
Isopropyl Benzene	0.233	0.5	**1.0**	77 – 127	≤ 40
1,1,2,2-Tetrachloroethane	0.253	0.5	**1.0**	71 – **120**	≤ 40
1,2,3-Trichloropropane	0.517	1.0	**2.0**	75 – **120**	≤ 40
trans-1,4-Dichloro-2-Butene	0.437	2.5	**5.0**	62 – 127	≤ 40
n-Propyl Benzene	0.272	0.5	**1.0**	76 – 126	≤ 40
Bromobenzene	0.153	0.5	**1.0**	75 – **120**	≤ 40
1,3,5-Trimethylbenzene	0.254	0.5	**1.0**	77 – 126	≤ 40
2-Chlorotoluene	0.300	0.5	**1.0**	76 – 120	≤ 40
4-Chlorotoluene	0.277	0.5	**1.0**	75 – 121	≤ 40
t-Butylbenzene	0.306	0.5	**1.0**	77 – 125	≤ 40
1,2,4-Trimethylbenzene	0.230	0.5	**1.0**	77 – 125	≤ 40
s-Butylbenzene	0.240	0.5	**1.0**	77 – 127	≤ 40
4-Isopropyl Toluene	0.236	0.5	**1.0**	78 – 131	≤ 40
1,3-Dichlorobenzene	0.227	0.5	**1.0**	76 – 120	≤ 40
1,4-Dichlorobenzene	0.232	0.5	**1.0**	75 – **120**	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary VOA Analysis of Soil (EPA Method 8260C)					
Analyte	**DL[1,5] µg/kg**	**LOD[1] µg/kg**	**LOQ[1] µg/kg**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
n-Butylbenzene	0.262	0.5	**1.0**	75 – 134	≤ 40
1,2-Dichlorobenzene	0.293	0.5	**1.0**	77 – **120**	≤ 40
1,2-Dibromo-3-Chloropropane	0.586	2.5	**5.0**	61 – 128	≤ 40
1,2,4-Trichlorobenzene	0.332	2.5	**5.0**	75 – 130	≤ 40
Hexachloro-1,3-Butadiene	0.410	2.5	**5.0**	72 – 135	≤ 40
Naphthalene	0.429	2.5	**5.0**	71 – 122	≤ 40
1,2,3-Trichlorobenzene	0.305	2.5	**5.0**	76 – 122	≤ 40
Surrogate Standards			**MB / LCS**	**Samples**	**RPD**
1,2-Dichloroethane-d_4			**80** – 122	**80** – 149	≤ 40
1,2-Dichlorobenzene-d_4			**80 – 120**	**80 – 120**	≤ 40
Toluene-d_8			**80 – 120**	77 – **120**	≤ 40
4-Bromofluorobenzene			**80 – 120**	**80 – 120**	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Control limits calculated using all data from 1/1/12 through 5/31/12.
(3) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(4) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that:
a. ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit or
b. Control limits for analyzes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.
(5) MDL study QD19 – 3/8/10

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS, MS Control Limits (%)		RPD[2]
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Full Scan	SIM	
Phenol	8.65	10	**20**	2.56	5	**5**	34 – 105	30 – 160	≤ 40
bis-(2-Chloroethyl)ether	3.35	10	**20**	--	--	--	36 – **100**	--	≤ 40
2-Chlorophenol	2.39	10	**20**	--	--	--	39 – **100**	--	≤ 40
1,3-Dichlorobenzene	2.63	10	**20**	1.31	2.5	**5**	40 – **100**	30 – **100**	≤ 40
1,4-Dichlorobenzene	2.86	10	**20**	1.19	2.5	**5**	39 – **100**	36 – **100**	≤ 40
1,2-Dichlorobenzene	2.50	10	**20**	1.10	2.5	**5**	40 – **100**	36 – **100**	≤ 40
Benzyl alcohol	6.09	10	**20**	7.04	10	**20**[3]	19 – 117	25 – 123	≤ 40
2,2'-oxy-*bis*-(1-Chloropropane)	3.76	10	**20**	--	--	--	32 – **100**	--	≤ 40
2-Methylphenol	5.25	10	**20**	1.81	2.5	**5**	28 – **100**	26 – **100**	≤ 40
Hexachloroethane	2.94	10	**20**	--	--	--	38 – **100**	--	≤ 40
N-Nitroso-di-n-propylamine	3.36	10	**20**	9.48	10	**12**[3]	34 – **100**	30 – 160	≤ 40
4-Methylphenol[6]	6.63	10	**20**	2.52	5	**10**	29 – 100	30 – 160	≤ 40
Nitrobenzene	4.06	10	**20**	--	--	--	36 – **100**	--	≤ 40
Isophorone	2.86	10	**20**	--	--	--	37 – 101	--	≤ 40
2-Nitrophenol	38.7	50	**100**	--	--	--	30 – 112	--	≤ 40
2,4-Dimethylphenol	3.46	20	**40**	2.89	10	**20**	**10** – **100**	10 – 103	≤ 40
bis-(2-Chloroethoxy)methane	2.00	10	**20**	--	--	--	39 – **100**	--	≤ 40
2,4-Dichlorophenol	21.5	100	**200**	--	--	--	28 – 112	--	≤ 40
1,2,4-Trichlorobenzene	3.48	10	**20**	1.86	2.5	**5**	35 – 103	35 – **100**	≤ 40
Naphthalene	2.76	10	**20**	--	--	--	43 – 100	--	≤ 40
Benzoic acid	101	200	**400**[5]	--	--	--	**10** – 107	--	≤ 40
4-Chloroaniline	22.3	135	**270**[4]	--	--	--	11 – **100**	--	≤ 40
Hexachlorobutadiene	4.57	10	**20**	0.96	2.5	**5**	37 – **100**	34 – **100**	≤ 40
4-Chloro-3-methylphenol	15.1	50	**100**	--	--	--	32 – 117	--	≤ 40
2-Methylnaphthalene	3.06	10	**20**	--	--	--	43 – **100**	--	≤ 40
Hexachlorocyclopentadiene	66.4	200	**400**[4]	--	--	--	**10** – 103	--	≤ 40
2,4,6-Trichlorophenol	22.4	50	**100**	--	--	--	30 – 113	--	≤ 40
2,4,5-Trichlorophenol	21.4	50	**100**	--	--	--	28 – 118	--	≤ 40
2-Chloronaphthalene	2.64	10	**20**	--	--	--	40 – **100**	--	≤ 40
2-Nitroaniline	18.4	50	**100**	--	--	--	31 – 126	--	≤ 40
Acenaphthylene	5.71	10	**20**	--	--	--	42 – 102	--	≤ 40
Dimethylphthalate	2.90	10	**20**	1.34	2.5	**5**	43 – 114	38 – 112	≤ 40
2,6-Dinitrotoluene	30.6	50	**100**	--	--	--	33 – 123	--	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS, MS Control Limits (%)		RPD[2]
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Full Scan	SIM	
Acenaphthene	3.28	10	**20**	--	--	--	45 – **100**	--	≤ 40
3-Nitroaniline	22.5	50	**100**	--	--	--	22 – 113	--	≤ 40
2,4-Dinitrophenol	111	425	**850**[4]	--	--	--	**10** – 105	--	≤ 40
Dibenzofuran	4.10	10	**20**	--	--	--	43 – 103	--	≤ 40
4-Nitrophenol	34.7	50	**100**	--	--	--	15 – 138	--	≤ 40
2,4-Dinitrotoluene	19.5	50	**100**	--	--	--	35 – 127	--	≤ 40
Fluorene	4.35	10	**20**	--	--	--	45 – 107	--	≤ 40
4-Chlorophenyl-phenylether	5.29	10	**20**	--	--	--	32 – 116	--	≤ 40
Diethylphthalate	36.6	50	**50**[3]	3.26	5.0	**5.0**	50 – 120	55 – 104	≤ 40
4-Nitroaniline	37.9	50	**100**	--	--	--	24 – 125	--	≤ 40
4,6-Dinitro-2-methylphenol	21.2	100	**200**	--	--	--	24 – 119	--	≤ 40
N-Nitrosodiphenylamine	5.39	10	**20**	1.38	10	**20**	36 – 111	27 – 115	≤ 40
4-Bromophenyl-phenylether	5.03	10	**20**	--	--	--	39 – 114	--	≤ 40
Hexachlorobenzene	4.29	10	**20**	1.26	2.5	**5**	33 – 113	32 – 106	≤ 40
Pentachlorophenol	48.5	100	**200**[4]	14.3	25	**50**	16 – 120	26 – 106	≤ 40
Phenanthrene	3.64	10	**20**	--	--	--	49 – 112	--	≤ 40
Anthracene	4.50	10	**20**	--	--	--	45 – 106	--	≤ 40
Carbazole	2.69	10	**20**	--	--	--	43 – 135	--	≤ 40
Di-n-butylphthalate	8.16	10	**20**	--	--	--	48 – 126	--	≤ 40
Fluoranthene	2.91	10	**20**	--	--	--	53 – 118	--	≤ 40
Pyrene	1.94	10	**20**	--	--	--	48 – 121	--	≤ 40
Butylbenzylphthalate	6.14	10	**20**	2.89	5.0	**5**	45 – 132	32 – 142	≤ 40
Benzo(a)anthracene	3.29	10	**20**	--	--	--	49 – 115	--	≤ 40
3,3'-Dichlorobenzidine	17.8	75	**150**[4]	--	--	--	**10 – 100**	--	≤ 40
Chrysene	3.75	10	**20**	--	--	--	47 – 115	--	≤ 40
bis-(2-Ethylhexyl)phthalate	14.6	20	**25**[3]	--	--	--	34 – 130	--	≤ 40
Di-n-octylphthalate	5.84	10	**20**	--	--	--	28 – 124	--	≤ 40
Benzo(b)fluoranthene[7]	3.47	10	**20**	--	--	--	42 – 132	--	≤ 40
Benzo(k)fluoranthene[7]	4.18	10	**20**	--	--	--	39 – 129	--	≤ 40
Benzofluoranthene-Total[8]	6.67	20	**40**	--	--	--	30 – 160	--	≤ 40
Benzo(a)pyrene	5.45	10	**20**	--	--	--	42 – 113	--	≤ 40
Indeno(1,2,3-cd)pyrene	4.68	10	**20**	--	--	--	42 – 123	--	≤ 40
Dibenzo(a,h)anthracene	4.31	10	**20**	2.02	2.5	**5**	30 – 133	28 – 125	≤ 40
Benzo(g,h,i)perylene	4.40	10	**20**	--	--	--	38 – 126	--	≤ 40
N-Nitrosodimethylamine	14.1	50	**100**	3.15	13	**25**	17 – **100**	30 – 160	≤ 40
Aniline	40.0	270	**540**[4]	--	--	--	**10** – 134	--	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS, MS Control Limits (%)		RPD[2]
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Full Scan	SIM	
Pyridine	32.7	75	**150**[4]	--	--	--	**10** – 147	--	≤ 40
1-Methylnaphthalene	2.68	10	**20**	--	--	--	42 – **100**	--	≤ 40
Azobenzene (1,2-DP-Hydrazine)	2.98	10	**20**	--	--	--	35 – 112	--	≤ 40
Retene [9]	4.01	10	**20**	--	--	--	30 – 160	--	≤ 40
Surrogate Standards							**MB / LCS**	**Samples**	**RPD**
2-Fluorophenol							32 – **100**	27 – **100**	≤ 40
Phenol-d_5							32 – 101	29 – **100**	≤ 40
2-Chlorophenol-d_4							36 – 101	31 – **100**	≤ 40
1,2-Dichlorobenzene-d_4							37 – **100**	32 – **100**	≤ 40
Nitrobenzene-d_5							33 –102	30 – **100**	≤ 40
2-Fluorobiphenyl							35 –101	35 – **100**	≤ 40
2,4,6-Tribromophenol							23 – 133	24 – 134	≤ 40
p-Terphenyl-d_{14}							42 – 124	37 – 111	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD), Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(3) Spiked at 5 ppb
(4) Spiked at 100 ppb
(5) Spiked at 200 ppb
(6) 3-Methylphenol (not calibrated) co-elutes with 4-Methylphennol (calibrated)
(7) Benzo(b)fluoranthene and Benzo(k)fluoranthene are reported as separate analytes only when the height of the valley between the isomer peaks is less than than 50% of the average of the two peak heights, otherwise total Benzofluoranthenes are reported.
(8) Benzo(b)fluoranthene + Benzo(j)fluoranthene + Benzo(k)fluoranthene (only the b & k isomers are calibrated)
(9) LOD study WC15 (2/5/13)

LOD, LOQ and Control Limits Summary
GC - MS – SVOA Analysis of Aqueous Samples
EPA Method 8270D
ARI Analysis: BANWLI & BANWSI

Continuous Liquid-Liquid (EPA Method 3520C, Bench Sheet 3006F) or Separatory Funnel (EPA method 3510C, Bench Sheet 3010F) extraction using 500mL sample concentrated to 0.5 mL final extract volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS, MS Recovery[2,3]	Replicate RPD[4]
Phenol	0.445	0.5	1	26 – 112	≤ 40
Bis(2-Chloroethyl)ether	0.257	0.5	1	51 – 100	≤ 40
2-Chlorophenol	0.246	0.5	1	50 – 100	≤ 40
1,3-Dichlorobenzene	0.499	0.5	1	27 – 100	≤ 40
1,4-Dichlorobenzene	0.470	0.5	1	29 – 100	≤ 40
1,2-Dichlorobenzene	0.436	0.5	1	32 – 100	≤ 40
Benzyl alcohol	0.409	1.0	2	10 - 128	≤ 40
2,2'-oxybis(1-Chloropropane)	0.221	0.5	1	39 - 101	≤ 40
2-Methylphenol	0.329	0.5	1	47 – 100	≤ 40
Hexachloroethane	0.610	1.0	2	19 – 100	≤ 40
N-Nitroso-di-n-propylamine	0.365	0.5	1	46 – 100	≤ 40
4-Methylphenol	0.536	1.0	2	46 – 100	≤ 40
Nitrobenzene	0.490	0.5	1	46 – 103	≤ 40
Isophorone	0.258	0.5	1	62 – 105	≤ 40
2-Nitrophenol	0.979	1.5	3	32 – 116	≤ 40
2,4-Dimethylphenol	0.627	1.5	3	15 – 100	≤ 40
Bis(2-Chloroethoxy)methane	0.252	0.5	1	44 – 100	≤ 40
2,4-Dichlorophenol	1.109	1.5	3	35 – 114	≤ 40
1,2,4-Trichlorobenzene	0.495	0.5	1	34 – 100	≤ 40
Naphthalene	0.326	0.5	1	48 – 100	≤ 40
Benzoic acid	8.647	10	20	10 - 172	≤ 40
4-Chloroaniline	1.733	2.5	5	10 - 153	≤ 40
2,6-Dinitrotoluene	1.300	1.5	3	32 – 129	≤ 40
Hexachlorobutadiene	0.604	1.5	3	22 – 100	≤ 40
4-Chloro-3-methylphenol	0.919	1.5	3	33 – 123	≤ 40
Hexachlorocyclopentadiene	1.862	2.5	5	10 – 100	≤ 40
2,4,6-Trichlorophenol	1.235	1.5	3	37 – 120	≤ 40
2,4,5-Trichlorophenol	1.706	2.5	5	37 – 124	≤ 40
2-Chloronaphthalene	0.340	0.5	1	49 – 100	≤ 40
2-Nitroaniline	0.784	1.5	3	18 – 140	≤ 40
Acenaphthylene	0.274	0.5	1	47 – 110	≤ 40
Dimethylphthalate	0.264	0.5	1	60 – 106	≤ 40
Acenaphthene	0.347	0.5	1	55 – 101	≤ 40

LOD, LOQ and Control Limits Summary
GC - MS – SVOA Analysis of Aqueous Samples
EPA Method 8270D
ARI Analysis: BANWLI & BANWSI

Continuous Liquid-Liquid (EPA Method 3520C, Bench Sheet 3006F) or Separatory Funnel (EPA method 3510C, Bench Sheet 3010F) extraction using 500mL sample concentrated to 0.5 mL final extract volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS, MS Recovery[2,3]	Replicate RPD[4]
3-Nitroaniline	1.140	1.5	3	10 – 208	≤ 40
2-Methylnaphthalene	0.241	0.5	1	38 – 100	≤ 40
2,4-Dinitrophenol	5.474	10	20	10 – 224	≤ 40
Dibenzofuran	0.198	0.5	1	46 – 108	≤ 40
4-Nitrophenol	2.895	5.0	10	10 – 103	≤ 40
2,4-Dinitrotoluene	1.277	1.5	3	33 – 134	≤ 40
Fluorene	0.266	0.5	1	59 – 108	≤ 40
4-Chlorophenyl-phenylether	0.342	0.5	1	54 – 104	≤ 40
Diethylphthalate	0.407	0.5	1	60 - 108	≤ 40
4-Nitroaniline	1.366	1.5	3	13 – 144	≤ 40
4,6-Dinitro-2-methylphenol	4.928	5.0	10	10 – 190	≤ 40
N-Nitrosodiphenylamine	0.392	0.5	1	39 – 100	≤ 40
4-Bromophenyl-phenylether	0.262	0.5	1	56 – 105	≤ 40
Hexachlorobenzene	0.335	0.5	1	54 – 108	≤ 40
Pentachlorophenol	2.746	5.0	10	25 – 144	≤ 40
Phenanthrene	0.283	0.5	1	64 – 115	≤ 40
Anthracene	0.303	0.5	1	59 – 107	≤ 40
Carbazole	0.251	0.5	1	36 – 123	≤ 40
Di-n-butylphthalate	0.304	0.5	1	62 – 110	≤ 40
Fluoranthene	0.290	0.5	1	63 – 119	≤ 40
Pyrene	0.379	0.5	1	57 – 117	≤ 40
Butylbenzylphthalate	0.402	0.5	1	49 – 118	≤ 40
Benzo(a)anthracene	0.373	0.5	1	61 – 113	≤ 40
3,3'-Dichlorobenzidine	1.553	2.5	5	10 – 151	≤ 40
Chrysene	0.397	0.5	1	62 – 115	≤ 40
bis(2-Ethylhexyl)phthalate	1.050	1.5	3	47 – 127	≤ 40
Di-n-octylphthalate	0.331	0.5	1	60 – 106	≤ 40
Benzo(b)fluoranthene	0.298	0.5	1	61 – 120	≤ 40
Benzo(k)fluoranthene	0.487	0.5	1	59 – 120	≤ 40
Benzo(a)pyrene	0.425	0.5	1	46 – 105	≤ 40
Indeno(1,2,3-cd)pyrene	0.435	0.5	1	42 – 134	≤ 40
Dibenzo(a,h)anthracene	0.437	0.5	1	46 – 132	≤ 40
Benzo(g,h,i)perylene	0.464	0.5	1	33 – 135	≤ 40
N-Nitrosodimethylamine	1.209	1.5	3	17 - 106	≤ 40

LOD, LOQ and Control Limits Summary
GC - MS – SVOA Analysis of Aqueous Samples
EPA Method 8270D
ARI Analysis: BANWLI & BANWSI

Continuous Liquid-Liquid (EPA Method 3520C, Bench Sheet 3006F) or Separatory Funnel (EPA method 3510C, Bench Sheet 3010F) extraction using 500mL sample concentrated to 0.5 mL final extract volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS, MS Recovery[2,3]	Replicate RPD[4]
Aniline	**0.470**	**0.5**	**1**	**10** – 113	≤ 40
1-methylnaphthalene	**0.199**	**0.5**	**1**	43 – **100**	≤ 40
Azobenzene (1,2-DP-Hydrazine)	**0.214**	**0.5**	**1**	52 – 111	≤ 40
Benzofluoranthenes, Total	**2.317**	**2.5**	**5**	60 – 130[5]	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
2-Fluorophenol			33 – 100	23 – **100**	≤ 40
Phenol-d_5			15 - 121	16 – 106	≤ 40
2-Chlorophenol-d_4			46 – 102	33 – 100	≤ 40
1,2-Dichlorobenzene-d_4			40 – **100**	27 – **100**	≤ 40
Nitrobenzene-d_5			50 – **100**	34 – 101	≤ 40
2-Fluorobiphenyl			51 – **100**	38 – **100**	≤ 40
2,4,6-Tribromophenol			46 – 125	31 – 128	≤ 40
p-Terphenyl-d_{14}			54 – 117	27 – 122	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Control limits calculated using all data from 8/1/10 through 7/31/11.
(3) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

(5) 30 – 160 are default limits used when there is insufficient data to calculate historic control limits.

DL[1], LOD[1], LOQ[1] and Control Limits Summary
Analysis of Sediment Samples for Dioxins & Furans
EPA Method 1613B

Soxhlet (EPA Method 3540C) Extraction using 10 g sample with extract concentrated to 0.02 mL final volume. ARI Bench Sheet 3083F

LOD Spike level = LOQ = 0.1 ppt (ng/kg) = 1 pg/g

Analyte	DL[1] pg/g	LOD[1] pg/g	LOQ[1] pg/g	OPR Control Limit [2,3]	Sample Replicate RPD [3,4]
2,3,7,8-TCDF	0.230	**0.5**	**1**	75 – 158	≤ 25
2,3,7,8-TCDD	0.274	**0.5**	**1**	67 – 158	≤ 25
1,2,3,7,8-PeCDF	0.832	**2.5**	**2.5**	80 – 134	≤ 25
2,3,4,7,8-PeCDF	1.076	**2.5**	**1**	68 – 160	≤ 25
1,2,3,7,8-PeCDD	0.647	**2.5**	**1**	70 – 142	≤ 25
1,2,3,4,7,8-HxCDF	0.991	**2.5**	**2.5**	72 – 134	≤ 25
1,2,3,6,7,8-HxCDF	0.769	**2.5**	**2.5**	84 – 130	≤ 25
2,3,4,6,7,8-HxCDF	0.904	**2.5**	**2.5**	70 – 156	≤ 25
1,2,3,7,8,9-HxCDF	0.857	**2.5**	**2.5**	78 – 130	≤ 25
1,2,3,4,7,8-HxCDD	0.481	**2.5**	**2.5**	70 – 164	≤ 25
1,2,3,6,7,8-HxCDD	0.561	**2.5**	**2.5**	76 – 134	≤ 25
1,2,3,7,8,9-HxCDD	0.886	**2.5**	**2.5**	64 – 162	≤ 25
1,2,3,4,6,7,8-HpCDF	1.165	**2.5**	**2.5**	82 – 122	≤ 25
1,2,3,4,7,8,9-HpCDF	0.688	**2.5**	**2.5**	78 – 138	≤ 25
1,2,3,4,6,7,8-HpCDD	0.828	**2.5**	**2.5**	70 – 140	≤ 25
OCDF	2.176	**5.0**	**5**	63 – 170	≤ 25
OCDD	7.452	**5.0**	**5**	78 – 144	≤ 25

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S

(2) Ongoing precision and recovery (OPR) analyzes as specified in the referenced method.

(3) Method specified control limits.

(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

LOD[1], LOQ[2] and Control Limits Summary
Analysis of Water Samples for Low Concentration PNA
EPA Method 8270 – SIM

Separatory Funnel Extraction (EPA Method 3510C) using 500 mL sample with extract concentrated to 0.5 mL final volume. Silica gel cleanup performed on extract prior to analysis. ARI bench Sheet 3071F

DL, LOD & LOQ units are nanograms per liter (ng/L) = parts-per-trillion (ppt). LOD Spike level = LOQ

Analyte	DL[1] ng/L	LOD[1] ng/L	LOQ[1] ng/L	LCS Control Limit[2,3]	Replicate RPD[4]
Naphthalene	0.85	**5**	**10**	37 – **120**	≤ 30
2-Methylnaphthalene	0.72	**5**	**10**	39 – **120**	≤ 30
Acenaphthylene	0.81	**5**	**10**	35 – **120**	≤ 30
Acenaphthene	0.83	**5**	**10**	38 – **120**	≤ 30
Dibenzofuran	0.94	**5**	**10**	36 – **120**	≤ 30
Fluorene	1.41	**5**	**10**	41 – **120**	≤ 30
Phenanthrene	1.01	**5**	**10**	41 – **120**	≤ 30
Anthracene	0.58	**5**	**10**	28 – **120**	≤ 30
Fluoranthene	0.92	**5**	**10**	49 – **120**	≤ 30
Pyrene	0.70	**5**	**10**	42 - **120**	≤ 30
Benzo(a)anthracene	1.27	**5**	**10**	42 – **120**	≤ 30
Chrysene	1.57	**5**	**10**	46 – **120**	≤ 30
Benzo(b)fluoranthene	2.54	**5**	**10**	39 – **120**	≤ 30
Benzo(k)fluoranthene	0.85	**5**	**10**	50 – **120**	≤ 30
Benzo(j)fluoranthene	1.65	**5**	**10**	30 – 160 [5]	≤ 30
Benzo(a)pyrene	1.14	**5**	**10**	20 – **120**	≤ 30
Indeno(1,2,3-cd)pyrene	1.82	**5**	**10**	32 – **120**	≤ 30
Dibenz(a,h)anthracene	0.97	**5**	**10**	30 – **120**	≤ 30
Benzo(g,h,i)perylene	1.87	**5**	**10**	27 – **120**	≤ 30
1-Methylnaphthalene	0.88	**5**	**10**	38 – **120**	≤ 30
Perylene	3.21	**5**	**10**	30 – 160 [5]	≤ 30
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
2-Methylnapthalene-d_{10}			40 – **120**	35 – **120**	≤ 30
Fluoranthene-d_{10}			30 – 160 [5]	30 – 160 [5]	≤ 30
Dibenzo(a,h)anthracene-d_{14}			31 – **120**	26 – **120**	≤ 30

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ)are defined in ARI SOP 1018S

(2) Control limits calculated using data from all samples prepared between 4/1/11 through 3/31/12.

(3) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 120 for the upper limit.

(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

(5) Default limits pending generation of historic limits for Benzo(j)fluoranthene and Perylene

4

DL[1], LOD[1], LOQ[1] and Control Limits Summary
Analysis of Soil/Sediment Samples for Chlorinated Pesticides
EPA Method 8081B

Microwave (EPA Method 3546) Extraction using 12.5g (dry weight) sample with extract concentrated to 2.5 mL final volume. ARI Bench Sheet 3046F

LOD Spike level = LOQ Concentration

Analyte	DL[1,2] µg/kg	LOD[1] µg/kg	LOQ[1] µg/kg	LCS Control Limit[3,4]	Replicate RPD[5]
alpha-BHC	0.081	0.25	**0.5**	68 – 115	≤ 40
beta-BHC	0.139	0.25	**0.5**	60 – 126	≤ 40
gamma-BHC (Lindane)	0.048	0.25	**0.5**	68 – 134	≤ 40
delta-BHC	0.082	0.25	**0.5**	71 – 154	≤ 40
Heptachlor	0.132	0.25	**0.5**	66 – 115	≤ 40
Aldrin	0.055	0.25	**0.5**	66 – 115	≤ 40
Heptachlor Epoxide	0.085	0.25	**0.5**	65 – 127	≤ 40
trans-Chlordane (*beta*-Chlordane, *gamma*-Chlordane)	0.077	0.25	**0.5**	73 – 136	≤ 40
cis-Chlordane (*alpha*-chlordane)	0.051	0.25	**0.5**	77 – 124	≤ 40
Endosulfan I	0.072	0.25	**0.5**	28 – **100**	≤ 40
4,4'-DDE	0.124	0.5	**1.0**	71 – 149	≤ 40
Dieldrin	0.100	0.5	**1.0**	74 – 131	≤ 40
Endrin	0.215	0.5	**1.0**	72 – 135	≤ 40
Endosulfan II	0.116	0.5	**1.0**	37 – 110	≤ 40
4,4'-DDD	0.135	0.5	**1.0**	76 – 137	≤ 40
Endrin Aldehyde	0.218	0.5	**1.0**	38 – 109	≤ 40
4,4'-DDT	0.192	0.5	**1.0**	58 – 144	≤ 40
Endosulfan Sulfate	0.192	0.5	**1.0**	47 – 148	≤ 40
Endrin Ketone	0.119	0.5	**1.0**	29 – 165	≤ 40
Methoxychlor	0.698	2.5	**5.0**	65 – 123	≤ 40
Hexachlorobutadiene	0.138	0.5	**1.0**	43 – 104	≤ 40
Hexachlorobenzene	0.094	0.5	**1.0**	62 – 119	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
Tetrachloro-*m*-xylene (TCMX)			47 – 124	34 – 169	≤ 40
Decachlorobiphenyl			60 – 149	36 – 182	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation as defined in ARI SOP 1018S.
(2) MDL study QZ38
(3) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(4) Control limits calculated using all data from 1/1/12 through 7/31/12.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

DL[1], LOD[1], LOQ[1] and Control Limits Summary
Analysis of Water Samples for Chlorinated Pesticides
EPA Method 8081B

Separatory Funnel (EPA Method 3510C) Extraction using 500 mL sample with extract concentrated to 5 mL final volume. ARI Bench Sheet 3038F

LOD Spike level = LOQ Concentration

Analyte	DL[1,2] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS Control Limit[3,4]	Replicate RPD[5]
alpha-BHC	0.0085	0.025	**0.05**	51 – 120	≤ 40
beta-BHC	0.0098	0.025	**0.05**	44 – 134	≤ 40
gamma-BHC (Lindane)	0.0159	0.025	**0.05**	59 – 131	≤ 40
delta-BHC	0.0087	0.025	**0.05**	44 – 156	≤ 40
Heptachlor	0.0113	0.025	**0.05**	47 – 110	≤ 40
Aldrin	0.0103	0.025	**0.05**	47 – 106	≤ 40
Heptachlor Epoxide	0.0079	0.025	**0.05**	62 – 121	≤ 40
trans-Chlordane (*beta*-Chlordane, *gamma*-Chlordane)	0.0082	0.025	**0.05**	63 – 125	≤ 40
cis-Chlordane (*alpha*-chlordane)	0.0082	0.025	**0.05**	62 – 123	≤ 40
Endosulfan I	0.0089	0.025	**0.05**	**10** – 110	≤ 40
4,4'-DDE	0.0184	0.05	**0.10**	61 – 138	≤ 40
Dieldrin	0.0168	0.05	**0.10**	64 – 123	≤ 40
Endrin	0.0167	0.05	**0.10**	53 – 127	≤ 40
Endosulfan II	0.0139	0.05	**0.10**	23 – 102	≤ 40
4,4'-DDD	0.0186	0.05	**0.10**	53 – 133	≤ 40
Endrin Aldehyde	0.0163	0.05	**0.10**	28 – 107	≤ 40
4,4'-DDT	0.0169	0.05	**0.10**	49 – 127	≤ 40
Endosulfan Sulfate	0.0235	0.05	**0.10**	49 – 121	≤ 40
Endrin Ketone	0.0151	0.05	**0.10**	45 – 126	≤ 40
Methoxychlor	0.0744	0.25	**0.50**	48 – 118	≤ 40
Hexachlorobutadiene	0.0123	0.05	**0.10**	23 – **100**	≤ 40
Hexachlorobenzene	0.0101	0.05	**0.10**	44 – 101	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
Tetrachloro-*m*-xylene (TCMX)			38 – 103	30 – 105	≤ 40
Decachlorobiphenyl			37 – 125	11 – 144	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation as defined in ARI SOP 1018S.
(2) MDL study QD48
(3) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(4) Control limits calculated using all data from 1/1/12 through 7/31/12.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

Analytical Resources, Incorporated
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Quality Control Criteria for Analysis of Solid Matrix Samples for Aroclors (Polychlorinated Biphenyls – PCB) EPA Method 8082B

Extraction Bench Sheet	Extraction	DL[1] (ppb)	LOD[1] (ppb)	LOQ[1] (ppb)	Analyte	Spike Recovery Control Limits (%)[2,3,5]			RPD[4]
						LCS	MB/LCS Surrogate	Sample Surrogate	
Soil / Sediment Samples (Microwave Extraction – EPA Method 3546)									
PCB 15-3067F	12g to 4 mL	10.69	17	33	Aroclor 1016	62 – 111	--	--	≤ 40
		14.42	17	33	Aroclor 1260	59 – 118	--	--	
PCB 08-3025F		--	--	--	TCMX	--	58 – 112	53 – 116	
		--	--	--	DCBP	--	59 – 115	35 – 133	
PCB 05-3017F	5 g to 5 mL[6]	8.00	10	20	Aroclor 1016	56 – 115	--	--	≤ 40
		9.28	10	20	Aroclor 1260	58 – 120	--	--	
PCB 06-3026F		--	--	--	TCMX	--	52 – 117	57 – 109	
		--	--	--	DCBP	--	61 – 114	54 – 115	
PCB 18-3098F	5 g to 2.5 mL[6]	4.61	5	10	Aroclor 1016	66 – 114	--	--	≤ 40
		4.97	5	10	Aroclor 1260	63 – 120	--	--	
PCB06-3026F		--	--	--	TCMX	--	57 – 114	71 – 108	
		--	--	--	DCBP	--	59 – 118	53 – 126	
PCB 19-3099F	12.5 g to 2.5 mL[6]	1.56	2	4	Aroclor 1016	64 – **100**	--	--	≤ 40
		0.589	2	4	Aroclor 1260	64 – 107	--	--	
PCB 06-3026F		--	--	--	TCMX	--	54 – **100**	45 – 102	
		--	--	--	DCBP	--	64 – 105	37 – 128	
Soil / Sediment Samples Medium Level (Vortex Extraction – EPA Method 3546)									
PCB 12-3019F	5 g to 40 mL	38.2	400	800	Aroclor 1016	30 – 160	--	--	≤ 40
		73.1	400	800	Aroclor 1260	30 – 160	--	--	
		--	--	--	TCMX	--	30 – 160	30 – 160	
		--	--	--	DCBP	--	30 – 160	30 – 160	

(1) Detection Limit (DL), Limit of Detection (LOD) & Limit of Quantitation (LOQ) are defined in ARI SOP 1018S.
(2) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(3) 30 – 160 are default limits used when there is insufficient data to calculate historic control limits
(4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(5) Control Limits calculated usng all data generated between 6/1/12 and 12/31/12

UR99 : 00037

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Quality Control Criteria
Total Petroleum Hydrocarbons
(Diesel & Motor Oil)

Analysis Code	Analyte[5]	DL[1] ppm	LOD[1] ppm	LOQ[2] ppm	Spike % Recovery Control Limits[3]			RPD[4]
					LCS	MB/LCS Surrogate	Sample Surrogate	
HCIWVX	NWTPH-HCID – Water Samples	--	--	0.50 [7]	--	--	50-150	≤ 40
HCISVX	NWTPH-HCID – Solid Samples	--	--	50 [7]	--	--	50-150	
Aqueous Samples – No Extract Clean-up – Separatory Funnel Extraction – 500 to 1.0 mL								
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.022	0.05	0.1	64-112	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.022	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.044	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [9]	0.1	0.2	60-120 [6]	60-120	50-150	
Aqueous Samples – With Acid and/or Silica Gel Clean-up – Separatory Funnel Extraction – 500 to 1.0 mL								
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.039	0.05	0.1	61-104	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.042	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.010	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [8]	0.1	0.2	60-120 [6]	60-120	50-150	
Solid Matrix Samples – No Extract Clean-up – Microwave Extraction – 10 g to 1 mL								
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.35	2.5	5	62-119	50-150	50-150	≤ 40
DIESMI	DRO – NWTPH-Dext Jet A	2.22 [11]	2.5	5	60 – 130 [8]	50-150	50-150	
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.43	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	2.48	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [9]	5	10	60-120 [6]	60-120	50-150	
Solid Matrix Samples – With Acid and/or Silica Gel Clean-up – Microwave Extraction – 10 g to 1 mL								
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.28	2.5	5	60-108	50-150	50-150	≤ 40
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.06	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	1.57	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [10]	5	10	60-120 [6]	60-120	50-150	

(1) DL (Detection Limit) and LOD (Limit of Detection) as defined in ARI SOP 1018S.
(2) Limit of Quantitation as defined in ARI SOP 1018S. The spike concentration used to determine the DL and the concentration of the lowest standard used to calibrate the GC-FID instrument.
(3) All surrogate recovery limits are specified in the published methods (AK102, AK103 & NWTPH-Dext). The surrogate standard is *o*-Terphenyl.
(4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(5) DRO = Diesel Range Organics and RRO = Residual Range Organics as defined in the methods referenced in footnote 3.
(6) Method specified LCS acceptance limits.
(7) Method specified reporting limits
(8) Default LCS control limits pending calculation of historic limits
(9) MDL study QD55 completed 2/12/10
(10) MDL study QD35 completed 1/29/10
(11) LOD Study UI44 completed 2/28/12

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Quality Control Criteria
Gasoline and BTEX

Method	Analyte	DL[1]	LOD[1]	LOQ[1]	Spike % Recovery Control Limits			RPD[3]
					LCS	MB/LCS Surrogate	Sample Surrogate	
Aqueous Samples 5 mL purge volume (DL, LOD & LOQ values in µg/L (ppb) for BTEX and mg/L (ppm) for gasoline								
NWTPH-G	Toluene – Naphthalene	0.057	0.125	0.25	**80 – 120**	--	--	≤ 40
8015B	2-methylpentane – 1,2,4-Trimethylbenzene	0.031	0.125	0.25	**80 – 120**	--	--	
WA-TPH-G	Toluene – nC_{12})	0.087	0.125	0.25	**80 – 120**	--	--	
AK-101	nC_6 – nC_{12}	0.032	0.050	0.10	**80 – 120**	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 - 120**	**80 – 120**	
	Bromobenzene	--	--	--	--	**80 - 120**	**80 – 120**	
8021B	Benzene	0.094	0.5	1.0	76 – **120**	--	--	≤ 40
8021B	Toluene	0.113	0.5	1.0	77 – 122	--	--	
8021B	Ethylbenzene	0.117	0.5	1.0	68 – **120**	--	--	
8021B	m/p-Xylene	0.265	1.0	2.0	75 – **120**	--	--	
8021B	o-Xylene	0.136	0.5	1.0	75 – 121	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 – 120**	**80 - 120**	
	Bromobenzene	--	--	--	--	**80 – 120**	77 - **120**	
Solid Samples - (DL, LOD & LOQ values in µg/kg (ppb) for BTEX and mg/kg (ppm) for gasoline								
NWTPH-G	Toluene – Naphthalene	1.66	2.5	5	**80 – 120**	--	--	≤ 40
8015B	2-methylpentane – 1,2,4-Trimethylbenzene	1.57	2.5	5	**80 – 120**	--	--	
WA-TPH-G	Toluene – nC_{12})	1.54	2.5	5	**80 – 120**	--	--	
AK-101	nC_6 – nC_{12}	1.84	2.5	5	**80** – 127	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 - 120**	65-128	
	Bromobenzene	--	--	--	--	**80 - 120**	52-149	
8021B	Benzene	4.59	12.5	25	78 – **120**	--	--	≤ 40
8021B	Toluene	7.13	12.5	25	80 – **120**	--	--	
8021B	Ethylbenzene	4.98	12.5	25	73 – **120**	--	--	
8021B	m/p-Xylene	11.9	25.0	50	79 – **120**	--	--	
8021B	o-Xylene	6.23	12.5	25	80 – **120**	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 - 120**	69 – 126	
	Bromobenzene	--	--	--	--	**80 - 120**	49 – 143	

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S.
(2) Highlighted control limits (bold font) are adjusted from the calculated values as follows:
a) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
b) Control limits for analytes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.
(3) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$
(4) Default control limits pending sufficient data to calculate historic limits.

Quality Control Parameters for Metals Analysis-ICP-OES EPA Methods 200.7 and 6010C

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ mg/kg	LOQ mg/kg
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$
(6) ARI does not analyze for Silicon in solids or tissue samples

Quality Control Parameters for Metals Analysis ICP-MS EPA Methods 200.8 or 6020A								
Analyte	Mass	Aqueous Samples[2]			Spike Recovery		RPD [3]	Solids[2]
		DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ[1] mg/kg
Aluminum	27	1.601	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Antimony	121	0.010	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
	123	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #1	75	0.048	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #2	75	0.092	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Barium	135	0.020	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	137	0.019	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Beryllium	9	0.021	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Cadmium	111	0.010	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
	114	0.005	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Calcium	43	3.983	25	**50.0**	75 – 125	80 – 120	≤ 20	**50.0**
Chromium	52	0.045	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	53	0.118	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Cobalt	59	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Copper	63	0.158	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	65	0.236	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Iron	54	5.753	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
	57	3.876	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Lead	208	0.046	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Magnesium	24	0.297	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Manganese	55	0.022	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Molybdenum	98	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Nickel	60	0.079	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	62	0.089	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Potassium	39	2.944	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Selenium	82	0.127	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	78	0.324	0.25	**2.0**	75 – 125	80 – 120	≤ 20	**2.0**
Silver	107	0.008	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Sodium	23	2.833	50	**100.0**	75 – 125	80 – 120	≤ 20	**100.0**
Thorium [4]	232	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Thallium	205	0.004	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Uranium [4]	238	0.003	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Vanadium	51	0.043	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Zinc	66	0.497	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	67	0.531	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	68	0.524	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume Solids LOQ based on 100% solids using 1.0 g sample 100 mL final volume.
(3) Relative Percent Difference in replicate analyzes. $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$ where C_0=Original, C_D=Duplicate
(4) ARI has no accreditation for these elements.

Quality Control Parameters for Mercury Analysis using CVAA
EPA Methods 7470A or 245.1 for Aqueous Samples
EPA Methods 7471B or 245.5 for Solid Samples

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[2]	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	**LOD[1] mg/kg**	**LOQ[1] mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.025[3]	75 – 125	80 – 120	≤ 20
	Tissue Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	**LOD[1] mg/kg**	**LOQ[1] mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.005[4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

Quality Control Parameters for Mercury Analysis using CVAA
EPA Methods 7470A or 245.1 for Aqueous Samples
EPA Methods 7471B or 245.5 for Solid Samples

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[2]	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	LOD[1] mg/kg	LOQ[1] mg/kg	Matrix Spike	LCS	
Mercury	0.0021	0.0125	0.025[3]	75 – 125	80 – 120	≤ 20
	Tissue Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	LOD[1] mg/kg	LOQ[1] mg/kg	Matrix Spike	LCS	
Mercury	0.0004	0.0025	0.005[4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

Volatile Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: KC-TB-01-20130530-W**
Page 1 of 2 **SAMPLE**

Lab Sample ID: WR99C
LIMS ID: 13-11543
Matrix: Water
Data Release Authorized: MW
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/04/13 15:35

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.13	1.0	< 1.0 U
74-83-9	Bromomethane	0.43	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.25	1.0	< 1.0 U
75-00-3	Chloroethane	0.19	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.19**	**2.0**	**3.2 QB**
67-64-1	Acetone	3.0	10	< 10 U
75-15-0	Carbon Disulfide	0.18	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.30	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.21	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.20	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.10	1.0	< 1.0 U
67-66-3	Chloroform	0.19	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.24	1.0	< 1.0 U
78-93-3	2-Butanone	2.0	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.18	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.23	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.22	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.19	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.23	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.29	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.23	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.26	1.0	< 1.0 U
71-43-2	Benzene	0.25	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.22	5.0	< 5.0 U
75-25-2	Bromoform	0.29	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.37	5.0	< 5.0 U
591-78-6	2-Hexanone	0.93	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.09	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	1.0	< 1.0 U
108-88-3	Toluene	0.18	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.14	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.18	1.0	< 1.0 U
100-42-5	Styrene	0.12	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.18	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.18	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.36	2.0	< 2.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.20	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.28	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.28	1.0	< 1.0 U
107-02-8	Acrolein	1.9	10	< 10 U
74-88-4	Iodomethane	0.26	1.0	< 1.0 U
74-96-4	Bromoethane	0.42	2.0	< 2.0 U
107-13-1	Acrylonitrile	0.50	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.27	1.0	< 1.0 U
74-95-3	Dibromomethane	0.29	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.29	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.44	5.0	< 5.0 U

Lab Sample ID: WR99C
LIMS ID: 13-11543
Matrix: Water
Date Analyzed: 06/04/13 15:35

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
96-18-4	1,2,3-Trichloropropane	0.54	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.86	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.14	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.15	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.18	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.20	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.25	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.10	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.17	5.0	< 5.0 U
98-82-8	Isopropylbenzene	0.30	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.12	1.0	< 1.0 U
108-86-1	Bromobenzene	0.24	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.14	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.21	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.40	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.13	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.35	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.37	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	0.34	5.0	< 5.0 U
91-20-3	Naphthalene	0.23	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	0.32	5.0	< 5.0 U
1634-04-4	Methyl tert-Butyl Ether	0.16	1.0	< 1.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	116%
d8-Toluene	103%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	105%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: KC-VT-1593-20130530-S**
Page 1 of 2 **SAMPLE**

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/04/13 15:59

Sample Amount: 6.43 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 21.9%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.20	0.8	< 0.8 U
74-83-9	Bromomethane	0.15	0.8	< 0.8 U
75-01-4	Vinyl Chloride	0.18	0.8	< 0.8 U
75-00-3	Chloroethane	0.36	0.8	< 0.8 U
75-09-2	**Methylene Chloride**	**0.49**	**1.6**	**1.2 JQB**
67-64-1	**Acetone**	**0.37**	**3.9**	**130**
75-15-0	**Carbon Disulfide**	**0.43**	**0.8**	**5.9**
75-35-4	1,1-Dichloroethene	0.26	0.8	< 0.8 U
75-34-3	1,1-Dichloroethane	0.16	0.8	< 0.8 U
156-60-5	trans-1,2-Dichloroethene	0.21	0.8	< 0.8 U
156-59-2	cis-1,2-Dichloroethene	0.19	0.8	< 0.8 U
67-66-3	Chloroform	0.18	0.8	< 0.8 U
107-06-2	1,2-Dichloroethane	0.15	0.8	< 0.8 U
78-93-3	**2-Butanone**	**0.40**	**3.9**	**8.4**
71-55-6	1,1,1-Trichloroethane	0.18	0.8	< 0.8 U
56-23-5	Carbon Tetrachloride	0.17	0.8	< 0.8 U
108-05-4	Vinyl Acetate	0.30	3.9	< 3.9 U
75-27-4	Bromodichloromethane	0.20	0.8	< 0.8 U
78-87-5	1,2-Dichloropropane	0.13	0.8	< 0.8 U
10061-01-5	cis-1,3-Dichloropropene	0.18	0.8	< 0.8 U
79-01-6	Trichloroethene	0.16	0.8	< 0.8 U
124-48-1	Dibromochloromethane	0.21	0.8	< 0.8 U
79-00-5	1,1,2-Trichloroethane	0.22	0.8	< 0.8 U
71-43-2	Benzene	0.23	0.8	< 0.8 U
10061-02-6	trans-1,3-Dichloropropene	0.17	0.8	< 0.8 U
110-75-8	2-Chloroethylvinylether	0.21	3.9	< 3.9 U
75-25-2	Bromoform	0.23	0.8	< 0.8 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.33	3.9	< 3.9 U
591-78-6	2-Hexanone	0.34	3.9	< 3.9 U
127-18-4	Tetrachloroethene	0.20	0.8	< 0.8 U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	0.8	< 0.8 U
108-88-3	Toluene	0.12	0.8	< 0.8 U
108-90-7	Chlorobenzene	0.17	0.8	< 0.8 U
100-41-4	Ethylbenzene	0.16	0.8	< 0.8 U
100-42-5	Styrene	0.11	0.8	< 0.8 U
75-69-4	Trichlorofluoromethane	0.21	0.8	< 0.8 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.22	1.6	< 1.6 U
179601-23-1	m,p-Xylene	0.30	0.8	< 0.8 U
95-47-6	o-Xylene	0.17	0.8	< 0.8 U
95-50-1	1,2-Dichlorobenzene	0.23	0.8	< 0.8 U
541-73-1	1,3-Dichlorobenzene	0.18	0.8	< 0.8 U
106-46-7	1,4-Dichlorobenzene	0.18	0.8	< 0.8 U
107-02-8	Acrolein	3.0	39	< 39 U

WR99 : 0001G

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Date Analyzed: 06/04/13 15:59

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.17	0.8	< 0.8 U
74-96-4	Bromoethane	0.34	1.6	< 1.6 U
107-13-1	Acrylonitrile	0.80	3.9	< 3.9 U
563-58-6	1,1-Dichloropropene	0.24	0.8	< 0.8 U
74-95-3	Dibromomethane	0.11	0.8	< 0.8 U
630-20-6	1,1,1,2-Tetrachloroethane	0.18	0.8	< 0.8 U
96-12-8	1,2-Dibromo-3-chloropropane	0.46	3.9	< 3.9 U
96-18-4	1,2,3-Trichloropropane	0.40	1.6	< 1.6 U
110-57-6	trans-1,4-Dichloro-2-butene	0.34	3.9	< 3.9 U
108-67-8	1,3,5-Trimethylbenzene	0.20	0.8	< 0.8 U
95-63-6	1,2,4-Trimethylbenzene	0.18	0.8	< 0.8 U
87-68-3	Hexachlorobutadiene	0.32	3.9	< 3.9 U
106-93-4	1,2-Dibromoethane	0.14	0.8	< 0.8 U
74-97-5	Bromochloromethane	0.25	0.8	< 0.8 U
75-71-8	Dichlorodifluoromethane	0.16	0.8	< 0.8 U
594-20-7	2,2-Dichloropropane	0.23	0.8	< 0.8 U
142-28-9	1,3-Dichloropropane	0.16	0.8	< 0.8 U
98-82-8	Isopropylbenzene	0.18	0.8	< 0.8 U
103-65-1	n-Propylbenzene	0.21	0.8	< 0.8 U
108-86-1	Bromobenzene	0.12	0.8	< 0.8 U
95-49-8	2-Chlorotoluene	0.23	0.8	< 0.8 U
106-43-4	4-Chlorotoluene	0.22	0.8	< 0.8 U
98-06-6	tert-Butylbenzene	0.24	0.8	< 0.8 U
135-98-8	sec-Butylbenzene	0.19	0.8	< 0.8 U
99-87-6	4-Isopropyltoluene	0.18	0.8	< 0.8 U
104-51-8	n-Butylbenzene	0.20	0.8	< 0.8 U
120-82-1	1,2,4-Trichlorobenzene	0.26	3.9	< 3.9 U
91-20-3	Naphthalene	0.33	3.9	< 3.9 U
87-61-6	1,2,3-Trichlorobenzene	0.24	3.9	< 3.9 U
1634-04-4	Methyl tert-Butyl Ether	0.18	0.8	< 0.8 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	121%
d8-Toluene	103%
Bromofluorobenzene	99.9%
d4-1,2-Dichlorobenzene	104%

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-060413A	Method Blank	Low	113%	102%	101%	103%	0
LCS-060413A	Lab Control	Low	108%	101%	102%	101%	0
LCSD-060413A	Lab Control Dup	Low	110%	101%	101%	102%	0
WR99D	KC-VT-1593-20130530-S	Low	121%	103%	99.9%	104%	0

	LCS/MB LIMITS		QC LIMITS	
SW8260C	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	80-122	76-120	80-149	69-120
(TOL) = d8-Toluene	80-120	80-120	77-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	80-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 13-11544 to 13-11544

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-060413A	Method Blank	5	113%	102%	101%	103%	0
LCS-060413A	Lab Control	5	108%	101%	102%	101%	0
LCSD-060413A	Lab Control Dup	5	110%	101%	101%	102%	0
WR99C	KC-TB-01-20130530-W	5	116%	103%	100%	105%	0

	LCS/MB LIMITS	QC LIMITS
SW8260C		
(DCE) = d4-1,2-Dichloroethane	80-122	80-125
(TOL) = d8-Toluene	80-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120

Prep Method: SW5030B
Log Number Range: 13-11543 to 13-11543

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-060413A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-060413A
LIMS ID: 13-11543
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/04/13 13:11
LCSD: 06/04/13 13:35

Sample Amount LCS: 5.00 mL
LCSD: 5.00 mL
Purge Volume LCS: 5.0 mL
LCSD: 5.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	40.9	50.0	81.8%	44.2	50.0	88.4%	7.8%
Bromomethane	50.0	50.0	100%	51.1	50.0	102%	2.2%
Vinyl Chloride	54.7	50.0	109%	52.8	50.0	106%	3.5%
Chloroethane	55.3 Q	50.0	111%	60.3 Q	50.0	121%	8.7%
Methylene Chloride	77.1 QB	50.0	154%	79.3 QB	50.0	159%	2.8%
Acetone	252	250	101%	253	250	101%	0.4%
Carbon Disulfide	43.4	50.0	86.8%	45.1	50.0	90.2%	3.8%
1,1-Dichloroethene	42.9	50.0	85.8%	45.4	50.0	90.8%	5.7%
1,1-Dichloroethane	51.0	50.0	102%	53.6	50.0	107%	5.0%
trans-1,2-Dichloroethene	58.9 Q	50.0	118%	61.8 Q	50.0	124%	4.8%
cis-1,2-Dichloroethene	50.1	50.0	100%	52.4	50.0	105%	4.5%
Chloroform	50.9	50.0	102%	49.7	50.0	99.4%	2.4%
1,2-Dichloroethane	45.4	50.0	90.8%	46.5	50.0	93.0%	2.4%
2-Butanone	262	250	105%	266	250	106%	1.5%
1,1,1-Trichloroethane	50.4	50.0	101%	53.7	50.0	107%	6.3%
Carbon Tetrachloride	46.3	50.0	92.6%	48.8	50.0	97.6%	5.3%
Vinyl Acetate	51.2	50.0	102%	53.4	50.0	107%	4.2%
Bromodichloromethane	45.6	50.0	91.2%	47.3	50.0	94.6%	3.7%
1,2-Dichloropropane	45.7	50.0	91.4%	47.8	50.0	95.6%	4.5%
cis-1,3-Dichloropropene	47.3	50.0	94.6%	48.8	50.0	97.6%	3.1%
Trichloroethene	45.7	50.0	91.4%	47.7	50.0	95.4%	4.3%
Dibromochloromethane	45.0	50.0	90.0%	46.1	50.0	92.2%	2.4%
1,1,2-Trichloroethane	46.0	50.0	92.0%	47.3	50.0	94.6%	2.8%
Benzene	46.6	50.0	93.2%	48.6	50.0	97.2%	4.2%
trans-1,3-Dichloropropene	46.8	50.0	93.6%	48.6	50.0	97.2%	3.8%
2-Chloroethylvinylether	49.1	50.0	98.2%	50.2	50.0	100%	2.2%
Bromoform	43.8	50.0	87.6%	45.6	50.0	91.2%	4.0%
4-Methyl-2-Pentanone (MIBK)	239	250	95.6%	250	250	100%	4.5%
2-Hexanone	232	250	92.8%	240	250	96.0%	3.4%
Tetrachloroethene	45.4	50.0	90.8%	46.6	50.0	93.2%	2.6%
1,1,2,2-Tetrachloroethane	42.7	50.0	85.4%	44.2	50.0	88.4%	3.5%
Toluene	46.4	50.0	92.8%	47.8	50.0	95.6%	3.0%
Chlorobenzene	44.6	50.0	89.2%	45.9	50.0	91.8%	2.9%
Ethylbenzene	47.0	50.0	94.0%	48.7	50.0	97.4%	3.6%
Styrene	47.4	50.0	94.8%	49.0	50.0	98.0%	3.3%
Trichlorofluoromethane	50.3	50.0	101%	53.1	50.0	106%	5.4%
1,1,2-Trichloro-1,2,2-trifluoroetha	43.7	50.0	87.4%	45.3	50.0	90.6%	3.6%
m,p-Xylene	94.2	100	94.2%	98.1	100	98.1%	4.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-060413A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-060413A QC Report No: WR99-SAIC
LIMS ID: 13-11543 Project: NPDES Sampling Support
Matrix: Water 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	47.3	50.0	94.6%	49.0	50.0	98.0%	3.5%
1,2-Dichlorobenzene	42.8	50.0	85.6%	44.0	50.0	88.0%	2.8%
1,3-Dichlorobenzene	43.9	50.0	87.8%	45.2	50.0	90.4%	2.9%
1,4-Dichlorobenzene	42.9	50.0	85.8%	44.0	50.0	88.0%	2.5%
Acrolein	465 Q	250	186%	478 Q	250	191%	2.8%
Iodomethane	51.4 Q	50.0	103%	61.2 Q	50.0	122%	17.4%
Bromoethane	57.3	50.0	115%	59.1	50.0	118%	3.1%
Acrylonitrile	49.6	50.0	99.2%	51.0	50.0	102%	2.8%
1,1-Dichloropropene	45.9	50.0	91.8%	48.2	50.0	96.4%	4.9%
Dibromomethane	45.0	50.0	90.0%	45.8	50.0	91.6%	1.8%
1,1,1,2-Tetrachloroethane	44.3	50.0	88.6%	46.1	50.0	92.2%	4.0%
1,2-Dibromo-3-chloropropane	43.0	50.0	86.0%	44.2	50.0	88.4%	2.8%
1,2,3-Trichloropropane	42.9	50.0	85.8%	43.9	50.0	87.8%	2.3%
trans-1,4-Dichloro-2-butene	42.7	50.0	85.4%	44.0	50.0	88.0%	3.0%
1,3,5-Trimethylbenzene	46.2	50.0	92.4%	47.8	50.0	95.6%	3.4%
1,2,4-Trimethylbenzene	46.6	50.0	93.2%	48.0	50.0	96.0%	3.0%
Hexachlorobutadiene	43.8	50.0	87.6%	45.8	50.0	91.6%	4.5%
1,2-Dibromoethane	46.2	50.0	92.4%	48.1	50.0	96.2%	4.0%
Bromochloromethane	50.3	50.0	101%	52.9	50.0	106%	5.0%
Dichlorodifluoromethane	47.6	50.0	95.2%	51.8	50.0	104%	8.5%
2,2-Dichloropropane	50.6	50.0	101%	53.2	50.0	106%	5.0%
1,3-Dichloropropane	44.4	50.0	88.8%	46.0	50.0	92.0%	3.5%
Isopropylbenzene	46.6	50.0	93.2%	48.7	50.0	97.4%	4.4%
n-Propylbenzene	46.1	50.0	92.2%	47.6	50.0	95.2%	3.2%
Bromobenzene	42.6	50.0	85.2%	44.4	50.0	88.8%	4.1%
2-Chlorotoluene	44.6	50.0	89.2%	46.2	50.0	92.4%	3.5%
4-Chlorotoluene	44.8	50.0	89.6%	45.7	50.0	91.4%	2.0%
tert-Butylbenzene	45.6	50.0	91.2%	47.7	50.0	95.4%	4.5%
sec-Butylbenzene	46.5	50.0	93.0%	48.2	50.0	96.4%	3.6%
4-Isopropyltoluene	47.6	50.0	95.2%	49.2	50.0	98.4%	3.3%
n-Butylbenzene	48.3	50.0	96.6%	49.5	50.0	99.0%	2.5%
1,2,4-Trichlorobenzene	46.0	50.0	92.0%	46.1	50.0	92.2%	0.2%
Naphthalene	45.2 B	50.0	90.4%	45.8 B	50.0	91.6%	1.3%
1,2,3-Trichlorobenzene	44.6 B	50.0	89.2%	45.1 B	50.0	90.2%	1.1%
Methyl tert-Butyl Ether	54.1	50.0	108%	56.0	50.0	112%	3.5%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	108%	110%
d8-Toluene	101%	101%
Bromofluorobenzene	102%	101%
d4-1,2-Dichlorobenzene	101%	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-060413A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-060413A
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/04/13 13:11
LCSD: 06/04/13 13:35

Sample Amount LCS: 5.00 g-dry-wt
LCSD: 5.00 g-dry-wt
Purge Volume LCS: 5.0 mL
LCSD: 5.0 mL
Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	40.9	50.0	81.8%	44.2	50.0	88.4%	7.8%
Bromomethane	50.0	50.0	100%	51.1	50.0	102%	2.2%
Vinyl Chloride	54.7	50.0	109%	52.8	50.0	106%	3.5%
Chloroethane	55.3 Q	50.0	111%	60.3 Q	50.0	121%	8.7%
Methylene Chloride	77.1 QB	50.0	154%	79.3 QB	50.0	159%	2.8%
Acetone	252 B	250	101%	253 B	250	101%	0.4%
Carbon Disulfide	43.4	50.0	86.8%	45.1	50.0	90.2%	3.8%
1,1-Dichloroethene	42.9	50.0	85.8%	45.4	50.0	90.8%	5.7%
1,1-Dichloroethane	51.0	50.0	102%	53.6	50.0	107%	5.0%
trans-1,2-Dichloroethene	58.9 Q	50.0	118%	61.8 Q	50.0	124%	4.8%
cis-1,2-Dichloroethene	50.1	50.0	100%	52.4	50.0	105%	4.5%
Chloroform	50.9	50.0	102%	49.7	50.0	99.4%	2.4%
1,2-Dichloroethane	45.4	50.0	90.8%	46.5	50.0	93.0%	2.4%
2-Butanone	262	250	105%	266	250	106%	1.5%
1,1,1-Trichloroethane	50.4	50.0	101%	53.7	50.0	107%	6.3%
Carbon Tetrachloride	46.3	50.0	92.6%	48.8	50.0	97.6%	5.3%
Vinyl Acetate	51.2	50.0	102%	53.4	50.0	107%	4.2%
Bromodichloromethane	45.6	50.0	91.2%	47.3	50.0	94.6%	3.7%
1,2-Dichloropropane	45.7	50.0	91.4%	47.8	50.0	95.6%	4.5%
cis-1,3-Dichloropropene	47.3	50.0	94.6%	48.8	50.0	97.6%	3.1%
Trichloroethene	45.7	50.0	91.4%	47.7	50.0	95.4%	4.3%
Dibromochloromethane	45.0	50.0	90.0%	46.1	50.0	92.2%	2.4%
1,1,2-Trichloroethane	46.0	50.0	92.0%	47.3	50.0	94.6%	2.8%
Benzene	46.6	50.0	93.2%	48.6	50.0	97.2%	4.2%
trans-1,3-Dichloropropene	46.8	50.0	93.6%	48.6	50.0	97.2%	3.8%
2-Chloroethylvinylether	49.1	50.0	98.2%	50.2	50.0	100%	2.2%
Bromoform	43.8	50.0	87.6%	45.6	50.0	91.2%	4.0%
4-Methyl-2-Pentanone (MIBK)	239	250	95.6%	250	250	100%	4.5%
2-Hexanone	232	250	92.8%	240	250	96.0%	3.4%
Tetrachloroethene	45.4	50.0	90.8%	46.6	50.0	93.2%	2.6%
1,1,2,2-Tetrachloroethane	42.7	50.0	85.4%	44.2	50.0	88.4%	3.5%
Toluene	46.4	50.0	92.8%	47.8	50.0	95.6%	3.0%
Chlorobenzene	44.6	50.0	89.2%	45.9	50.0	91.8%	2.9%
Ethylbenzene	47.0	50.0	94.0%	48.7	50.0	97.4%	3.6%
Styrene	47.4	50.0	94.8%	49.0	50.0	98.0%	3.3%
Trichlorofluoromethane	50.3	50.0	101%	53.1	50.0	106%	5.4%
1,1,2-Trichloro-1,2,2-trifluoroetha	43.7	50.0	87.4%	45.3	50.0	90.6%	3.6%

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-060413A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-060413A QC Report No: WR99-SAIC
LIMS ID: 13-11544 Project: NPDES Sampling Support
Matrix: Sediment 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
m,p-Xylene	94.2	100	94.2%	98.1	100	98.1%	4.1%
o-Xylene	47.3	50.0	94.6%	49.0	50.0	98.0%	3.5%
1,2-Dichlorobenzene	42.8	50.0	85.6%	44.0	50.0	88.0%	2.8%
1,3-Dichlorobenzene	43.9	50.0	87.8%	45.2	50.0	90.4%	2.9%
1,4-Dichlorobenzene	42.9	50.0	85.8%	44.0	50.0	88.0%	2.5%
Acrolein	465 Q	250	186%	478 Q	250	191%	2.8%
Iodomethane	51.4 Q	50.0	103%	61.2 Q	50.0	122%	17.4%
Bromoethane	57.3	50.0	115%	59.1	50.0	118%	3.1%
Acrylonitrile	49.6	50.0	99.2%	51.0	50.0	102%	2.8%
1,1-Dichloropropene	45.9	50.0	91.8%	48.2	50.0	96.4%	4.9%
Dibromomethane	45.0	50.0	90.0%	45.8	50.0	91.6%	1.8%
1,1,1,2-Tetrachloroethane	44.3	50.0	88.6%	46.1	50.0	92.2%	4.0%
1,2-Dibromo-3-chloropropane	43.0	50.0	86.0%	44.2	50.0	88.4%	2.8%
1,2,3-Trichloropropane	42.9	50.0	85.8%	43.9	50.0	87.8%	2.3%
trans-1,4-Dichloro-2-butene	42.7	50.0	85.4%	44.0	50.0	88.0%	3.0%
1,3,5-Trimethylbenzene	46.2	50.0	92.4%	47.8	50.0	95.6%	3.4%
1,2,4-Trimethylbenzene	46.6	50.0	93.2%	48.0	50.0	96.0%	3.0%
Hexachlorobutadiene	43.8	50.0	87.6%	45.8	50.0	91.6%	4.5%
1,2-Dibromoethane	46.2	50.0	92.4%	48.1	50.0	96.2%	4.0%
Bromochloromethane	50.3	50.0	101%	52.9	50.0	106%	5.0%
Dichlorodifluoromethane	47.6	50.0	95.2%	51.8	50.0	104%	8.5%
2,2-Dichloropropane	50.6	50.0	101%	53.2	50.0	106%	5.0%
1,3-Dichloropropane	44.4	50.0	88.8%	46.0	50.0	92.0%	3.5%
Isopropylbenzene	46.6	50.0	93.2%	48.7	50.0	97.4%	4.4%
n-Propylbenzene	46.1	50.0	92.2%	47.6	50.0	95.2%	3.2%
Bromobenzene	42.6	50.0	85.2%	44.4	50.0	88.8%	4.1%
2-Chlorotoluene	44.6	50.0	89.2%	46.2	50.0	92.4%	3.5%
4-Chlorotoluene	44.8	50.0	89.6%	45.7	50.0	91.4%	2.0%
tert-Butylbenzene	45.6	50.0	91.2%	47.7	50.0	95.4%	4.5%
sec-Butylbenzene	46.5	50.0	93.0%	48.2	50.0	96.4%	3.6%
4-Isopropyltoluene	47.6	50.0	95.2%	49.2	50.0	98.4%	3.3%
n-Butylbenzene	48.3	50.0	96.6%	49.5	50.0	99.0%	2.5%
1,2,4-Trichlorobenzene	46.0	50.0	92.0%	46.1	50.0	92.2%	0.2%
Naphthalene	45.2 B	50.0	90.4%	45.8 B	50.0	91.6%	1.3%
1,2,3-Trichlorobenzene	44.6 B	50.0	89.2%	45.1 B	50.0	90.2%	1.1%
Methyl tert-Butyl Ether	54.1	50.0	108%	56.0	50.0	112%	3.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	108%	110%
d8-Toluene	101%	101%
Bromofluorobenzene	102%	101%
d4-1,2-Dichlorobenzene	101%	102%

4A
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0604

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WR99

Project: NPDES SAMPLING

Lab File ID: MB0604

Lab Sample ID: MB0604

Date Analyzed: 06/04/13

Time Analyzed: 1359

Instrument ID: NT5

Heated Purge: (Y/N) Y

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0604	LCS0604	LCS0604	1311
02	LCS0604	LCS0604	LCS0604A	1335
03	KC-TB-01-201	WR99C	WR99C	1535
04	KC-VT-1593-2	WR99D	WR99D	1559
05				
06				
07				
08				
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10				
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COMMENTS:

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-060413A**
 METHOD BLANK

Lab Sample ID: MB-060413A
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/04/13 13:59

Sample Amount: 5.00 g-dry-wt
Purge Volume: 5.0 mL
Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.26	1.0	< 1.0 U
74-83-9	Bromomethane	0.19	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.24	1.0	< 1.0 U
75-00-3	Chloroethane	0.46	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.64**	**2.0**	**5.4 Q**
67-64-1	**Acetone**	**0.48**	**5.0**	**2.5 J**
75-15-0	Carbon Disulfide	0.56	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.34	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.20	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.27	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.24	1.0	< 1.0 U
67-66-3	Chloroform	0.23	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.19	1.0	< 1.0 U
78-93-3	2-Butanone	0.51	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.23	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.21	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.38	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.25	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.16	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.21	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.27	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.29	1.0	< 1.0 U
71-43-2	Benzene	0.30	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.22	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.28	5.0	< 5.0 U
75-25-2	Bromoform	0.30	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.42	5.0	< 5.0 U
591-78-6	2-Hexanone	0.44	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.26	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.25	1.0	< 1.0 U
108-88-3	Toluene	0.15	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.22	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.20	1.0	< 1.0 U
100-42-5	Styrene	0.14	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.27	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.29	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.39	1.0	< 1.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.29	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.23	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.23	1.0	< 1.0 U
107-02-8	Acrolein	3.8	50	< 50 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-060413A**
 METHOD BLANK

Lab Sample ID: MB-060413A QC Report No: WR99-SAIC
LIMS ID: 13-11544 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 06/04/13 13:59

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.22	1.0	< 1.0 U
74-96-4	Bromoethane	0.44	2.0	< 2.0 U
107-13-1	Acrylonitrile	1.0	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.31	1.0	< 1.0 U
74-95-3	Dibromomethane	0.15	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.23	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.59	5.0	< 5.0 U
96-18-4	1,2,3-Trichloropropane	0.52	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.44	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.25	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.23	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.41	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.32	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.21	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.29	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.21	1.0	< 1.0 U
98-82-8	Isopropylbenzene	0.23	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.27	1.0	< 1.0 U
108-86-1	Bromobenzene	0.15	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.30	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.28	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.31	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.24	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.24	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.26	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	0.33	5.0	< 5.0 U
91-20-3	**Naphthalene**	**0.43**	**5.0**	**0.8 J**
87-61-6	**1,2,3-Trichlorobenzene**	**0.30**	**5.0**	**0.5 J**
1634-04-4	Methyl tert-Butyl Ether	0.23	1.0	< 1.0 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	113%
d8-Toluene	102%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	103%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-060413A**
 METHOD BLANK

Lab Sample ID: MB-060413A
LIMS ID: 13-11543
Matrix: Water
Data Release Authorized: MW
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/04/13 13:59

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.13	1.0	< 1.0 U
74-83-9	Bromomethane	0.43	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.25	1.0	< 1.0 U
75-00-3	Chloroethane	0.19	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.19**	**2.0**	**5.4 Q**
67-64-1	Acetone	3.0	10	< 10 U
75-15-0	Carbon Disulfide	0.18	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.30	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.21	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.20	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.10	1.0	< 1.0 U
67-66-3	Chloroform	0.19	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.24	1.0	< 1.0 U
78-93-3	2-Butanone	2.0	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.18	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.23	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.22	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.19	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.23	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.29	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.23	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.26	1.0	< 1.0 U
71-43-2	Benzene	0.25	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.22	5.0	< 5.0 U
75-25-2	Bromoform	0.29	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.37	5.0	< 5.0 U
591-78-6	2-Hexanone	0.93	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.09	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	1.0	< 1.0 U
108-88-3	Toluene	0.18	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.14	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.18	1.0	< 1.0 U
100-42-5	Styrene	0.12	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.18	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.18	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.36	2.0	< 2.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.20	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.28	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.28	1.0	< 1.0 U
107-02-8	Acrolein	1.9	10	< 10 U
74-88-4	Iodomethane	0.26	1.0	< 1.0 U
74-96-4	Bromoethane	0.42	2.0	< 2.0 U
107-13-1	Acrylonitrile	0.50	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.27	1.0	< 1.0 U
74-95-3	Dibromomethane	0.29	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.29	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.44	5.0	< 5.0 U

WR99 : 00053

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-060413A**
 METHOD BLANK

Lab Sample ID: MB-060413A QC Report No: WR99-SAIC
LIMS ID: 13-11543 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 06/04/13 13:59

CAS Number	Analyte	DL	LOQ	Result
96-18-4	1,2,3-Trichloropropane	0.54	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.86	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.14	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.15	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.18	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.20	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.25	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.10	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.17	5.0	< 5.0 U
98-82-8	Isopropylbenzene	0.30	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.12	1.0	< 1.0 U
108-86-1	Bromobenzene	0.24	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.14	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.21	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.40	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.13	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.35	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.37	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	0.34	5.0	< 5.0 U
91-20-3	**Naphthalene**	**0.23**	**5.0**	**0.8 J**
87-61-6	**1,2,3-Trichlorobenzene**	**0.32**	**5.0**	**0.5 J**
1634-04-4	Methyl tert-Butyl Ether	0.16	1.0	< 1.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	113%
d8-Toluene	102%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	103%

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SDG No.: WR99

Lab File ID: BFB0524 BFB Injection Date: 05/24/13

Instrument ID: NT5 BFB Injection Time: 0656

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.4
75	30.0 - 66.0% of mass 95	46.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	81.5
175	4.0 - 9.0% of mass 174	6.1 (7.4)1
176	95.0 - 101.0% of mass 174	78.8 (96.7)1
177	5.0 - 9.0% of mass 176	5.1 (6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	IC0524	2000524	05/24/13	0818
02	VSTD150	IC0524	1500524	05/24/13	0842
03	VSTD100	IC0524	1000524	05/24/13	0906
04	VSTD50	IC0524	0500524	05/24/13	0930
05	VSTD10	IC0524	0100524	05/24/13	0954
06	VSTD5	IC0524	0050524	05/24/13	1018
07	VSTD2	IC0524	0020524	05/24/13	1042
08	VSTD1	IC0524	0010524	05/24/13	1106
09	ICV0524	ICV0524	ICV0524	05/24/13	1146
10					
11					
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22					

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SDG No.: WR99

Lab File ID: BFB0604 BFB Injection Date: 06/04/13

Instrument ID: NT5 BFB Injection Time: 1045

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.0
75	30.0 - 66.0% of mass 95	45.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.2 (0.3)1
174	50.0 - 101.0% of mass 95	82.7
175	4.0 - 9.0% of mass 174	6.2 (7.5)1
176	95.0 - 101.0% of mass 174	80.3 (97.1)1
177	5.0 - 9.0% of mass 176	5.3 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	CC0604	CC0604A	06/04/13	1235
02	LCS0604	LCS0604	LCS0604	06/04/13	1311
03	LCS0604	LCS0604	LCS0604A	06/04/13	1335
04	MB0604	MB0604	MB0604	06/04/13	1359
05	KC-TB-01-2013053	WR99C	WR99C	06/04/13	1535
06	KC-VT-1593-20130	WR99D	WR99D	06/04/13	1559
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF1: 0010524 RF2: 0020524 RF5: 0050524
RF10: 0100524 RF50: 0500524

COMPOUND	RF1	RF2	RF5	RF10	RF50
Chloromethane	1.286	1.469	1.500	1.592	1.280
Vinyl Chloride	1.212	1.316	1.281	1.310	1.149
Bromomethane	0.750	0.816	0.746	0.746	0.637
Chloroethane	0.743	0.791	0.778	0.796	0.694
Trichlorofluoromethane	1.284	1.419	1.455	1.550	1.203
Acrolein			0.165	0.111	0.152
112Trichloro122Trifluoroetha	0.699	0.757	0.751	0.667	0.552
Acetone	0.388	0.404	0.351	0.413	0.337
1,1-Dichloroethene	0.776	0.810	0.852	0.750	0.638
Bromoethane	0.554	0.639	0.485	0.454	0.389
Iodomethane	0.549	0.614	0.534	0.495	0.494
Methylene Chloride			0.868	0.595	0.870
Acrylonitrile	0.446	0.518	0.514	0.528	0.478
Carbon Disulfide	2.531	2.591	2.821	2.426	2.112
Trans-1,2-Dichloroethene	0.956	1.048	1.009	1.152	0.895
Vinyl Acetate	2.414	2.704	2.768	2.952	2.603
1,1-Dichloroethane	1.838	2.174	2.188	2.376	1.878
2-Butanone	0.119	0.134	0.134	0.139	0.134
2,2-Dichloropropane	1.386	1.648	1.649	1.762	1.355
Cis-1,2-Dichloroethene	1.011	1.124	1.135	1.200	0.972
Chloroform	1.622	1.821	1.790	1.937	1.601
Bromochloromethane	0.431	0.485	0.497	0.504	0.432
1,1,1-Trichloroethane	1.452	1.586	1.660	1.788	1.397
1,1-Dichloropropene	0.429	0.493	0.519	0.592	0.433
Carbon Tetrachloride	0.403	0.441	0.458	0.488	0.386
1,2-Dichloroethane	0.420	0.478	0.491	0.503	0.430
Benzene	1.303	1.486	1.559	1.738	1.313
Trichloroethene	0.320	0.362	0.372	0.394	0.309
1,2-Dichloropropane	0.363	0.410	0.427	0.447	0.368
Bromodichloromethane	0.408	0.444	0.461	0.481	0.408
Dibromomethane	0.189	0.195	0.204	0.211	0.181
2-Chloroethyl Vinyl Ether	0.172	0.188	0.210	0.239	0.226
4-Methyl-2-Pentanone	0.137	0.164	0.175	0.185	0.175
Cis 1,3-dichloropropene	0.473	0.548	0.588	0.637	0.540
Toluene	0.896	0.938	0.968	1.040	0.823
Trans 1,3-Dichloropropene	0.437	0.501	0.545	0.572	0.495
2-Hexanone	0.207	0.244	0.265	0.282	0.265

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF1: 0010524 RF2: 0020524 RF5: 0050524
RF10: 0100524 RF50: 0500524

COMPOUND	RF1	RF2	RF5	RF10	RF50
1,1,2-Trichloroethane	0.256	0.303	0.302	0.319	0.276
1,3-Dichloropropane	0.434	0.468	0.494	0.528	0.454
Tetrachloroethene	0.290	0.339	0.343	0.383	0.287
Chlorodibromomethane	0.262	0.274	0.295	0.315	0.273
1,2-Dibromoethane	0.252	0.273	0.292	0.308	0.271
Chlorobenzene	0.770	0.867	0.906	0.950	0.751
Ethyl Benzene	1.281	1.460	1.564	1.708	1.338
1,1,1,2-Tetrachloroethane	0.268	0.295	0.302	0.318	0.267
m,p-xylene	0.449	0.535	0.588	0.634	0.505
o-Xylene	0.386	0.471	0.520	0.602	0.486
Styrene	0.681	0.818	0.928	1.024	0.839
Bromoform	0.339	0.378	0.401	0.419	0.373
1,1,2,2-Tetrachloroethane	0.574	0.646	0.680	0.706	0.624
1,2,3-Trichloropropane	0.182	0.196	0.206	0.217	0.192
Trans-1,4-Dichloro 2-Butene	0.243	0.251	0.254	0.274	0.233
N-Propyl Benzene	2.658	3.020	3.324	3.678	2.728
Bromobenzene	0.602	0.651	0.700	0.743	0.582
Isopropyl Benzene	1.960	2.328	2.676	3.016	2.305
2-Chloro Toluene	1.613	1.770	1.967	2.149	1.676
4-Chloro Toluene	1.649	1.883	2.067	2.284	1.751
T-Butyl Benzene	1.396	1.746	1.981	2.199	1.704
1,3,5-Trimethyl Benzene	1.620	2.004	2.245	2.524	1.945
1,2,4-Trimethylbenzene	1.585	1.942	2.213	2.491	1.930
S-Butyl Benzene	2.225	2.716	3.015	3.326	2.511
4-Isopropyl Toluene	1.675	2.064	2.381	2.700	2.068
1,3-Dichlorobenzene	1.122	1.242	1.305	1.406	1.088
1,4-Dichlorobenzene	1.239	1.313	1.359	1.459	1.110
N-Butyl Benzene	1.558	1.973	2.208	2.537	1.935
1,2-Dichlorobenzene	1.123	1.221	1.266	1.344	1.053
1,2-Dibromo 3-Chloropropane	0.108	0.135	0.129	0.135	0.126
1,2,4-Trichlorobenzene	0.702	0.786	0.840	0.939	0.762
Hexachloro 1,3-Butadiene	0.456	0.516	0.555	0.593	0.452
Naphthalene	1.665	1.727	1.837	2.065	1.887
1,2,3-Trichlorobenzene	0.702	0.774	0.822	0.875	0.741
Dichlorodifluoromethane	0.764	0.714	0.729	0.734	0.652
Methyl tert butyl ether	2.718	3.069	3.167	3.337	2.916

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF1: 0010524 RF2: 0020524 RF5: 0050524
RF10: 0100524 RF50: 0500524

COMPOUND	RF1	RF2	RF5	RF10	RF50
d4-1,2-Dichloroethane	1.138	1.160	1.142	1.122	1.114
d8-Toluene	1.424	1.438	1.420	1.410	1.410
4-Bromofluorobenzene	0.531	0.535	0.535	0.531	0.532
d4-1,2-Dichlorobenzene	0.993	0.994	0.995	0.997	0.984
Dibromofluoromethane	1.129	1.142	1.132	1.117	1.123

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF100: 1000524 RF150: 1500524 RF200: 2000524

COMPOUND	RF100	RF150	RF200
Chloromethane	1.549	1.531	1.540
Vinyl Chloride	1.515	1.588	1.552
Bromomethane	0.694	0.666	0.644
Chloroethane	0.755	0.683	0.613
Trichlorofluoromethane	1.462	1.466	1.478
Acrolein	0.118	0.124	
112Trichloro122Trifluoroetha	0.670	0.730	0.920
Acetone	0.274		
1,1-Dichloroethene	0.771	0.816	0.980
Bromoethane	0.450	0.455	0.561
Iodomethane	0.713	0.760	
Methylene Chloride	0.586	0.588	0.693
Acrylonitrile	0.511	0.490	
Carbon Disulfide	2.505	2.620	3.042
Trans-1,2-Dichloroethene	0.699	0.668	0.777
Vinyl Acetate	2.824	2.692	2.573
1,1-Dichloroethane	2.215	2.178	
2-Butanone	0.142	0.135	0.132
2,2-Dichloropropane	1.648	1.660	1.675
Cis-1,2-Dichloroethene	1.146	1.135	1.146
Chloroform	1.872	1.853	1.859
Bromochloromethane	0.496	0.493	0.497
1,1,1-Trichloroethane	1.705	1.707	1.721
1,1-Dichloropropene	0.528	0.537	0.540
Carbon Tetrachloride	0.471	0.479	0.482
1,2-Dichloroethane	0.482	0.471	0.465
Benzene	1.525	1.457	1.378
Trichloroethene	0.370	0.377	0.380
1,2-Dichloropropane	0.436	0.430	0.428
Bromodichloromethane	0.474	0.466	0.466
Dibromomethane	0.206	0.202	0.201
2-Chloroethyl Vinyl Ether	0.256	0.250	0.245
4-Methyl-2-Pentanone	0.183	0.172	0.163
Cis 1,3-dichloropropene	0.621	0.610	0.600
Toluene	0.959	0.934	0.902
Trans 1,3-Dichloropropene	0.560	0.547	0.538
2-Hexanone	0.270	0.261	0.251

WR99 : 00065

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF100: 1000524 RF150: 1500524 RF200: 2000524

COMPOUND	RF100	RF150	RF200
1,1,2-Trichloroethane	0.310	0.304	0.301
1,3-Dichloropropane	0.512	0.508	0.495
Tetrachloroethene	0.347	0.360	0.363
Chlorodibromomethane	0.312	0.312	0.308
1,2-Dibromoethane	0.303	0.297	0.293
Chlorobenzene	0.858	0.850	0.816
Ethyl Benzene	1.504	1.423	1.310
1,1,1,2-Tetrachloroethane	0.312	0.314	0.310
m,p-xylene	0.574	0.553	0.519
o-Xylene	0.576	0.577	0.567
Styrene	0.965	0.935	0.890
Bromoform	0.422	0.427	0.403
1,1,2,2-Tetrachloroethane	0.688	0.698	0.657
1,2,3-Trichloropropane	0.210	0.211	0.198
Trans-1,4-Dichloro 2-Butene	0.258	0.270	0.237
N-Propyl Benzene	3.110	3.006	2.654
Bromobenzene	0.681	0.703	0.675
Isopropyl Benzene	2.687	2.636	2.343
2-Chloro Toluene	1.959	1.984	1.827
4-Chloro Toluene	2.041	2.058	1.934
T-Butyl Benzene	2.018	2.037	1.867
1,3,5-Trimethyl Benzene	2.270	2.274	2.067
1,2,4-Trimethylbenzene	2.242	2.225	2.026
S-Butyl Benzene	2.886	2.801	2.487
4-Isopropyl Toluene	2.404	2.366	2.142
1,3-Dichlorobenzene	1.256	1.269	1.194
1,4-Dichlorobenzene	1.283	1.302	1.249
N-Butyl Benzene	2.290	2.290	2.111
1,2-Dichlorobenzene	1.193	1.203	1.163
1,2-Dibromo 3-Chloropropane	0.130	0.135	0.128
1,2,4-Trichlorobenzene	0.886	0.934	0.947
Hexachloro 1,3-Butadiene	0.529	0.556	0.560
Naphthalene	2.033	2.026	1.882
1,2,3-Trichlorobenzene	0.830	0.869	0.871
Dichlorodifluoromethane	0.743	0.951	0.765
Methyl tert butyl ether	3.223	1.751	

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF100: 1000524 RF150: 1500524 RF200: 2000524

COMPOUND	RF100	RF150	RF200
d4-1,2-Dichloroethane	1.112	1.112	1.094
d8-Toluene	1.408	1.407	1.395
4-Bromofluorobenzene	0.532	0.526	0.523
d4-1,2-Dichlorobenzene	0.974	0.979	0.978
Dibromofluoromethane	1.125	1.121	1.122

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
Chloromethane	AVRG	1.468	8.2
Vinyl Chloride	AVRG	1.365	12.1
Bromomethane	AVRG	0.712	8.7
Chloroethane	AVRG	0.732	8.7
Trichlorofluoromethane	AVRG	1.415	8.0
Acrolein	AVRG	0.134	17.4
112Trichloro122Trifluoroetha	AVRG	0.718	14.5
Acetone	AVRG	0.361	14.4
1,1-Dichloroethene	AVRG	0.799	12.1
Bromoethane	AVRG	0.498	16.1
Iodomethane	AVRG	0.594	17.8
Methylene Chloride	AVRG	0.700	19.5
Acrylonitrile	AVRG	0.498	5.8
Carbon Disulfide	AVRG	2.581	10.6
Trans-1,2-Dichloroethene	AVRG	0.900	19.2
Vinyl Acetate	AVRG	2.691	6.1
1,1-Dichloroethane	AVRG	2.121	9.1
2-Butanone	AVRG	0.134	5.0
2,2-Dichloropropane	AVRG	1.598	9.1
Cis-1,2-Dichloroethene	AVRG	1.109	6.9
Chloroform	AVRG	1.794	6.7
Bromochloromethane	AVRG	0.479	6.3
1,1,1-Trichloroethane	AVRG	1.627	8.5
1,1-Dichloropropene	AVRG	0.509	10.9
Carbon Tetrachloride	AVRG	0.451	8.5
1,2-Dichloroethane	AVRG	0.467	6.2
Benzene	AVRG	1.470	9.8
Trichloroethene	AVRG	0.360	8.3
1,2-Dichloropropane	AVRG	0.414	7.6
Bromodichloromethane	AVRG	0.451	6.4
Dibromomethane	AVRG	0.199	4.9
2-Chloroethyl Vinyl Ether	AVRG	0.223	13.7
4-Methyl-2-Pentanone	AVRG	0.169	8.9
Cis 1,3-dichloropropene	AVRG	0.577	9.4
Toluene	AVRG	0.932	6.8
Trans 1,3-Dichloropropene	AVRG	0.524	8.4
2-Hexanone	AVRG	0.256	8.9

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
1,1,2-Trichloroethane	AVRG	0.296	6.8
1,3-Dichloropropane	AVRG	0.487	6.6
Tetrachloroethene	AVRG	0.339	10.1
Chlorodibromomethane	AVRG	0.294	7.2
1,2-Dibromoethane	AVRG	0.286	6.7
Chlorobenzene	AVRG	0.846	7.8
Ethyl Benzene	AVRG	1.449	9.9
1,1,1,2-Tetrachloroethane	AVRG	0.298	6.8
m,p-xylene	AVRG	0.544	10.4
o-Xylene	AVRG	0.523	13.8
Styrene	AVRG	0.885	12.0
Bromoform	AVRG	0.395	7.6
1,1,2,2-Tetrachloroethane	AVRG	0.659	6.7
1,2,3-Trichloropropane	AVRG	0.201	5.7
Trans-1,4-Dichloro 2-Butene	AVRG	0.252	5.8
N-Propyl Benzene	AVRG	3.022	11.8
Bromobenzene	AVRG	0.667	8.0
Isopropyl Benzene	AVRG	2.494	13.0
2-Chloro Toluene	AVRG	1.868	9.6
4-Chloro Toluene	AVRG	1.958	10.2
T-Butyl Benzene	AVRG	1.869	13.4
1,3,5-Trimethyl Benzene	AVRG	2.118	12.9
1,2,4-Trimethylbenzene	AVRG	2.082	13.1
S-Butyl Benzene	AVRG	2.746	12.5
4-Isopropyl Toluene	AVRG	2.225	13.8
1,3-Dichlorobenzene	AVRG	1.235	8.2
1,4-Dichlorobenzene	AVRG	1.289	7.8
N-Butyl Benzene	AVRG	2.113	14.0
1,2-Dichlorobenzene	AVRG	1.196	7.4
1,2-Dibromo 3-Chloropropane	AVRG	0.128	7.0
1,2,4-Trichlorobenzene	AVRG	0.850	10.8
Hexachloro 1,3-Butadiene	AVRG	0.527	9.6
Naphthalene	AVRG	1.890	7.7
1,2,3-Trichlorobenzene	AVRG	0.810	8.1
Dichlorodifluoromethane	AVRG	0.756	11.4
Methyl tert butyl ether	AVRG	2.883	18.7

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
d4-1,2-Dichloroethane	AVRG	1.124	1.9
d8-Toluene	AVRG	1.414	0.9
4-Bromofluorobenzene	AVRG	0.531	0.8
d4-1,2-Dichlorobenzene	AVRG	0.987	0.9
Dibromofluoromethane	AVRG	1.126	0.7

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

WR99 : 00071

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/04/13

Init. Calib. Date: 05/24/13 Cont. Calib. Time: 1235

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Chloromethane	1.468	1.4151	0.100	AVRG	-3.6	
Vinyl Chloride	1.365	1.6181	0.010	AVRG	18.5	
Bromomethane	0.712	0.8057	0.010	AVRG	13.2	
Chloroethane	0.732	0.9345	0.010	AVRG	27.7	<-
Trichlorofluoromethane	1.415	1.6396	0.010	AVRG	15.9	
Acrolein	0.134	0.2357	0.010	AVRG	75.9	<-
112Trichloro122Trifluoroetha	0.718	0.7432	0.010	AVRG	3.5	
Acetone	0.361	0.3782	0.010	AVRG	4.8	
1,1-Dichloroethene	0.799	0.8203	0.010	AVRG	2.7	
Bromoethane	0.498	0.5332	0.010	AVRG	7.1	
Iodomethane	0.594	0.7506	0.010	AVRG	26.4	<-
Methylene Chloride	0.700	1.1360	0.010	AVRG	62.3	<-
Acrylonitrile	0.498	0.5128	0.010	AVRG	3.0	
Carbon Disulfide	2.581	2.6847	0.010	AVRG	4.0	
Trans-1,2-Dichloroethene	0.900	1.2030	0.010	AVRG	33.7	<-
Vinyl Acetate	2.691	2.9154	0.010	AVRG	8.3	
1,1-Dichloroethane	2.121	2.3979	0.100	AVRG	13.0	
2-Butanone	0.134	0.1422	0.010	AVRG	6.1	
2,2-Dichloropropane	1.598	1.8255	0.010	AVRG	14.2	
Cis-1,2-Dichloroethene	1.109	1.2452	0.010	AVRG	12.3	
Chloroform	1.794	2.0160	0.010	AVRG	12.4	
Bromochloromethane	0.479	0.5246	0.010	AVRG	9.5	
1,1,1-Trichloroethane	1.627	1.8595	0.010	AVRG	14.3	
1,1-Dichloropropene	0.509	0.5276	0.010	AVRG	3.6	
Carbon Tetrachloride	0.451	0.4691	0.010	AVRG	4.0	
1,2-Dichloroethane	0.468	0.4532	0.010	AVRG	-3.2	
Benzene	1.470	1.5260	0.010	AVRG	3.8	
Trichloroethene	0.360	0.3741	0.010	AVRG	3.9	
1,2-Dichloropropane	0.414	0.4180	0.010	AVRG	1.0	
Bromodichloromethane	0.451	0.4514	0.010	AVRG	0.1	
Dibromomethane	0.199	0.1926	0.010	AVRG	-3.2	
2-Chloroethyl Vinyl Ether	0.223	0.2308	0.010	AVRG	3.5	
4-Methyl-2-Pentanone	0.169	0.1687	0.010	AVRG	-0.2	
Cis 1,3-dichloropropene	0.577	0.5975	0.010	AVRG	3.6	
Toluene	0.932	0.9638	0.010	AVRG	3.4	
Trans 1,3-Dichloropropene	0.524	0.5304	0.010	AVRG	1.2	
2-Hexanone	0.256	0.2484	0.010	AVRG	-3.0	

<- Exceeds QC limit of 20% D
* RF less than minimum RF

WR99 : 0006 72

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/04/13

Init. Calib. Date: 05/24/13 Cont. Calib. Time: 1235

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.296	0.2892	0.010	AVRG	-2.3
1,3-Dichloropropane	0.487	0.4682	0.010	AVRG	-3.9
Tetrachloroethene	0.339	0.3480	0.010	AVRG	2.6
Chlorodibromomethane	0.294	0.2880	0.010	AVRG	-2.0
1,2-Dibromoethane	0.286	0.2815	0.010	AVRG	-1.6
Chlorobenzene	0.846	0.8442	0.300	AVRG	-0.2
Ethyl Benzene	1.448	1.5300	0.010	AVRG	5.7
1,1,1,2-Tetrachloroethane	0.298	0.2928	0.010	AVRG	-1.7
m,p-xylene	0.545	0.5818	0.010	AVRG	6.8
o-Xylene	0.523	0.5569	0.010	AVRG	6.5
Styrene	0.885	0.9310	0.010	AVRG	5.2
Bromoform	0.395	0.3754	0.100	AVRG	-5.0
1,1,2,2-Tetrachloroethane	0.659	0.5975	0.300	AVRG	-9.3
1,2,3-Trichloropropane	0.202	0.1863	0.010	AVRG	-7.8
Trans-1,4-Dichloro 2-Butene	0.252	0.2305	0.010	AVRG	-8.5
N-Propyl Benzene	3.022	3.1713	0.010	AVRG	4.9
Bromobenzene	0.667	0.6396	0.010	AVRG	-4.1
Isopropyl Benzene	2.494	2.6735	0.010	AVRG	7.2
2-Chloro Toluene	1.868	1.8940	0.010	AVRG	1.4
4-Chloro Toluene	1.958	1.9856	0.010	AVRG	1.4
T-Butyl Benzene	1.868	1.9672	0.010	AVRG	5.3
1,3,5-Trimethyl Benzene	2.119	2.2388	0.010	AVRG	5.6
1,2,4-Trimethylbenzene	2.082	2.1946	0.010	AVRG	5.4
S-Butyl Benzene	2.746	2.9352	0.010	AVRG	6.9
4-Isopropyl Toluene	2.225	2.4416	0.010	AVRG	9.7
1,3-Dichlorobenzene	1.235	1.2229	0.010	AVRG	-1.0
1,4-Dichlorobenzene	1.289	1.2456	0.010	AVRG	-3.4
N-Butyl Benzene	2.113	2.3256	0.010	AVRG	10.1
1,2-Dichlorobenzene	1.196	1.1454	0.010	AVRG	-4.2
1,2-Dibromo 3-Chloropropane	0.128	0.1159	0.010	AVRG	-9.4
1,2,4-Trichlorobenzene	0.850	0.8740	0.010	AVRG	2.8
Hexachloro 1,3-Butadiene	0.527	0.5441	0.010	AVRG	3.2
Naphthalene	1.890	1.8330	0.010	AVRG	-3.0
1,2,3-Trichlorobenzene	0.810	0.8001	0.010	AVRG	-1.2
Dichlorodifluoromethane	0.756	0.8089	0.010	AVRG	7.0
Methyl tert butyl ether	2.883	3.3374	0.010	AVRG	15.8

<- Exceeds QC limit of 20% D
* RF less than minimum RF

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/04/13

Init. Calib. Date: 05/24/13 Cont. Calib. Time: 1235

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	1.124	1.2351	0.010	AVRG	9.9
d8-Toluene	1.414	1.4344	0.010	AVRG	1.4
4-Bromofluorobenzene	0.531	0.5365	0.010	AVRG	1.0
d4-1,2-Dichlorobenzene	0.987	1.0115	0.010	AVRG	2.5
Dibromofluoromethane	1.126	1.2912	0.010	AVRG	14.7

<- Exceeds QC limit of 20% D
* RF less than minimum RF

WR99 : 06074

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Ical Midpoint ID: 0100524 Ical Date: 05/24/13

Instrument ID: NT5 Project Run Date: 05/24/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	462910	4.66	1417886	5.11	1584356	7.60
	UPPER LIMIT	925820	5.16	2835772	5.61	3168712	8.10
	LOWER LIMIT	231455	4.16	708943	4.61	792178	7.10
	Sample ID						
01	ICV0524	436823	4.66	1350934	5.11	1490058	7.61
02							
03							
04							
05							
06							
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19							
20							
21							
22							

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CLB) = d5-Chlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Ical Midpoint ID: 0100524 Ical Date: 05/24/13

Instrument ID: NT5 Project Run Date: 05/24/13

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	826523	9.68				
	UPPER LIMIT	1653046	10.18				
	LOWER LIMIT	413262	9.18				
	Sample ID						
01	ICV0524	805888	9.68				
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 (DCB) = d4-1,4-Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Ical Midpoint ID: 0100524 Ical Date: 05/24/13

Instrument ID: NT5 Project Run Date: 06/04/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	462910	4.66	1417886	5.11	1584356	7.60
	UPPER LIMIT	925820	5.16	2835772	5.61	3168712	8.10
	LOWER LIMIT	231455	4.16	708943	4.61	792178	7.10
	Sample ID						
01	LCS0604	484756	4.66	1633573	5.11	1880392	7.61
02	LCS0604	474930	4.67	1610669	5.12	1862966	7.61
03	MB0604	455081	4.67	1552765	5.12	1796929	7.61
04	KC-TB-01-201	432099	4.66	1478463	5.11	1724829	7.60
05	KC-VT-1593-2	455993	4.67	1550616	5.12	1833420	7.61
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CLB) = d5-Chlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WR99 | Project: NPDES SAMPLING

Ical Midpoint ID: 0100524 | Ical Date: 05/24/13

Instrument ID: NT5 | Project Run Date: 06/04/13

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	826523	9.68				
	UPPER LIMIT	1653046	10.18				
	LOWER LIMIT	413262	9.18				
	Sample ID						
01	LCS0604	1029875	9.68				
02	LCS0604	1019587	9.68				
03	MB0604	963412	9.68				
04	KC-TB-01-201	908327	9.68				
05	KC-VT-1593-2	937143	9.68				
06							
07							
08							
09							
10							
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12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 (DCB) = d4-1,4-Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3510C
Page 1 of 2

Sample ID: KC-VT-1593-20130530-W
SAMPLE

Lab Sample ID: WR99A
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/05/13
Date Analyzed: 06/11/13 13:41
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.15	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.24	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.28	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.24	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.21	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.61	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.23	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.24	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.19	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.44	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.30	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.24	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.20	1.0	< 1.0 U
78-59-1	Isophorone	0.22	1.0	< 1.0 U
88-75-5	2-Nitrophenol	1.7	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	0.35	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.0	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.29	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	0.82	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.23	1.0	< 1.0 U
91-20-3	Naphthalene	0.24	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.30	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.0	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.22	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.5	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	0.93	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.0	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.30	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.6	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.36	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.29	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.7	3.0	< 3.0 U
83-32-9	**Acenaphthene**	**0.27**	**1.0**	**3.5**
51-28-5	2,4-Dinitrophenol	4.2	20	< 20 U
100-02-7	4-Nitrophenol	0.90	10	< 10 U
132-64-9	**Dibenzofuran**	**0.36**	**1.0**	**0.7 J**
606-20-2	2,6-Dinitrotoluene	1.2	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.2	3.0	< 3.0 U

Lab Sample ID: WR99A
LIMS ID: 13-11541
Matrix: Water
Date Analyzed: 06/11/13 13:41

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.29	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.30	1.0	< 1.0 U
86-73-7	**Fluorene**	**0.31**	**1.0**	**1.0**
100-01-6	4-Nitroaniline	1.9	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.4	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.25	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.37	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.33	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.6	10	< 10 U
85-01-8	Phenanthrene	0.40	1.0	< 1.0 U
86-74-8	Carbazole	0.37	1.0	< 1.0 U
120-12-7	Anthracene	0.32	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.34	1.0	< 1.0 U
206-44-0	Fluoranthene	0.40	1.0	< 1.0 U
129-00-0	Pyrene	0.36	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.32	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.6	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.35	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	0.34	3.0	< 3.0 U
218-01-9	Chrysene	0.42	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.33	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.33	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.39	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.43	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.41	1.0	< 1.0 U
62-53-3	Aniline	0.91	1.0	< 1.0 U
122-66-7	1,2-Diphenylhydrazine	0.40	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine	0.94	3.0	< 3.0 U
103-33-3	Azobenzene	0.27	1.0	< 1.0 U
58-90-2	2,3,4,6-Tetrachlorophenol	0.15	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.38	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.78	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	75.2%	d4-1,2-Dichlorobenzene	64.0%
d5-Phenol	31.5%	2-Fluorophenol	41.1%
2,4,6-Tribromophenol	92.3%	d4-2-Chlorophenol	64.0%

1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. ARI calibrates with Azobenzene and always reports these compounds as a combined concentration

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-060513	74.4%	71.6%	68.4%	61.6%	38.4%	49.9%	94.1%	78.1%	0
LCS-060513	72.4%	82.8%	89.6%	67.2%	37.9%	49.6%	108%	73.1%	0
LCSD-060513	71.6%	80.8%	86.0%	64.0%	37.9%	48.0%	105%	72.3%	0
KC-VT-1593-2013053	62.8%	72.0%	75.2%	64.0%	31.5%	41.1%	92.3%	64.0%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-120)	(38-120)
(FBP) = 2-Fluorobiphenyl	(50-120)	(40-120)
(TPH) = d14-p-Terphenyl	(57-120)	(39-120)
(DCB) = d4-1,2-Dichlorobenzene	(40-120)	(33-120)
(PHL) = d5-Phenol	(20-120)	(12-120)
(2FP) = 2-Fluorophenol	(30-120)	(21-120)
(TBP) = 2,4,6-Tribromophenol	(55-124)	(37-126)
(2CP) = d4-2-Chlorophenol	(49-120)	(33-120)

Prep Method: SW3510C
Log Number Range: 13-11541 to 13-11541

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 2

Sample ID: LCS-060513
LCS/LCSD

Lab Sample ID: LCS-060513
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted LCS/LCSD: 06/05/13

Date Analyzed LCS: 06/11/13 12:32
LCSD: 06/11/13 13:07
Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: NO

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	10.2	25.0	40.8%	10.9	25.0	43.6%	6.6%
Bis-(2-Chloroethyl) Ether	17.9	25.0	71.6%	18.9	25.0	75.6%	5.4%
2-Chlorophenol	19.7	25.0	78.8%	20.7	25.0	82.8%	5.0%
1,3-Dichlorobenzene	15.7	25.0	62.8%	16.1	25.0	64.4%	2.5%
1,4-Dichlorobenzene	16.6	25.0	66.4%	16.8	25.0	67.2%	1.2%
Benzyl Alcohol	17.6	25.0	70.4%	18.6	25.0	74.4%	5.5%
1,2-Dichlorobenzene	16.1	25.0	64.4%	16.7	25.0	66.8%	3.7%
2-Methylphenol	17.2	25.0	68.8%	18.0	25.0	72.0%	4.5%
2,2'-Oxybis(1-Chloropropane)	14.6 Q	25.0	58.4%	15.0 Q	25.0	60.0%	2.7%
4-Methylphenol	34.4	50.0	68.8%	36.4	50.0	72.8%	5.6%
N-Nitroso-Di-N-Propylamine	16.4	25.0	65.6%	16.7	25.0	66.8%	1.8%
Hexachloroethane	14.0	25.0	56.0%	14.2	25.0	56.8%	1.4%
Nitrobenzene	18.8	25.0	75.2%	19.6	25.0	78.4%	4.2%
Isophorone	19.2	25.0	76.8%	20.0	25.0	80.0%	4.1%
2-Nitrophenol	22.0	25.0	88.0%	23.3	25.0	93.2%	5.7%
2,4-Dimethylphenol	44.5	75.0	59.3%	47.7	75.0	63.6%	6.9%
Benzoic Acid	46.1	138	33.4%	49.9	138	36.2%	7.9%
bis(2-Chloroethoxy) Methane	18.5	25.0	74.0%	19.3	25.0	77.2%	4.2%
2,4-Dichlorophenol	66.7	75.0	88.9%	67.8	75.0	90.4%	1.6%
1,2,4-Trichlorobenzene	17.2	25.0	68.8%	17.9	25.0	71.6%	4.0%
Naphthalene	19.8	25.0	79.2%	20.7	25.0	82.8%	4.4%
4-Chloroaniline	141	75.0	188%	148	75.0	197%	4.8%
Hexachlorobutadiene	16.0	25.0	64.0%	16.8	25.0	67.2%	4.9%
4-Chloro-3-methylphenol	64.6	75.0	86.1%	65.5	75.0	87.3%	1.4%
2-Methylnaphthalene	21.0	25.0	84.0%	21.7	25.0	86.8%	3.3%
Hexachlorocyclopentadiene	38.7	75.0	51.6%	39.4	75.0	52.5%	1.8%
2,4,6-Trichlorophenol	71.2	75.0	94.9%	72.7	75.0	96.9%	2.1%
2,4,5-Trichlorophenol	75.4	75.0	101%	76.6	75.0	102%	1.6%
2-Chloronaphthalene	25.0	25.0	100%	26.3	25.0	105%	5.1%
2-Nitroaniline	70.6	75.0	94.1%	72.4	75.0	96.5%	2.5%
Dimethylphthalate	21.8	25.0	87.2%	22.6	25.0	90.4%	3.6%
Acenaphthylene	23.0	25.0	92.0%	24.0	25.0	96.0%	4.3%
3-Nitroaniline	178	75.0	237%	185	75.0	247%	3.9%
Acenaphthene	21.9	25.0	87.6%	23.1	25.0	92.4%	5.3%
2,4-Dinitrophenol	116	138	84.1%	120	138	87.0%	3.4%
4-Nitrophenol	32.5	75.0	43.3%	33.9	75.0	45.2%	4.2%
Dibenzofuran	24.7	25.0	98.8%	25.8	25.0	103%	4.4%
2,6-Dinitrotoluene	71.8	75.0	95.7%	73.2	75.0	97.6%	1.9%
2,4-Dinitrotoluene	70.2	75.0	93.6%	70.9	75.0	94.5%	1.0%
Diethylphthalate	22.8	25.0	91.2%	23.4	25.0	93.6%	2.6%
4-Chlorophenyl-phenylether	22.9	25.0	91.6%	23.8	25.0	95.2%	3.9%
Fluorene	25.9	25.0	104%	27.2	25.0	109%	4.9%
4-Nitroaniline	99.3	75.0	132%	98.8	75.0	132%	0.5%
4,6-Dinitro-2-Methylphenol	117	138	84.8%	116	138	84.1%	0.9%
N-Nitrosodiphenylamine	20.3	25.0	81.2%	21.0	25.0	84.0%	3.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-060513
LCS/LCSD

Lab Sample ID: LCS-060513
LIMS ID: 13-11541
Matrix: Water
Date Analyzed LCS: 06/11/13 12:32
LCSD: 06/11/13 13:07

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	21.6	25.0	86.4%	22.2	25.0	88.8%	2.7%
Hexachlorobenzene	20.6	25.0	82.4%	21.4	25.0	85.6%	3.8%
Pentachlorophenol	75.0	75.0	100%	75.8	75.0	101%	1.1%
Phenanthrene	22.3	25.0	89.2%	22.6	25.0	90.4%	1.3%
Carbazole	28.0	25.0	112%	29.3	25.0	117%	4.5%
Anthracene	21.6	25.0	86.4%	22.1	25.0	88.4%	2.3%
Di-n-Butylphthalate	20.1	25.0	80.4%	20.2	25.0	80.8%	0.5%
Fluoranthene	24.1	25.0	96.4%	24.7	25.0	98.8%	2.5%
Pyrene	23.7	25.0	94.8%	24.3	25.0	97.2%	2.5%
Butylbenzylphthalate	20.5	25.0	82.0%	21.0	25.0	84.0%	2.4%
3,3'-Dichlorobenzidine	75.0	75.0	100%	77.5	75.0	103%	3.3%
Benzo(a)anthracene	26.1	25.0	104%	26.9	25.0	108%	3.0%
bis(2-Ethylhexyl)phthalate	21.7	25.0	86.8%	22.5	25.0	90.0%	3.6%
Chrysene	24.3	25.0	97.2%	24.6	25.0	98.4%	1.2%
Di-n-Octyl phthalate	22.7	25.0	90.8%	23.6	25.0	94.4%	3.9%
Benzo(a)pyrene	23.1	25.0	92.4%	24.1	25.0	96.4%	4.2%
Indeno(1,2,3-cd)pyrene	21.6	25.0	86.4%	22.5	25.0	90.0%	4.1%
Dibenz(a,h)anthracene	21.9	25.0	87.6%	22.9	25.0	91.6%	4.5%
Benzo(g,h,i)perylene	20.1	25.0	80.4%	21.0	25.0	84.0%	4.4%
Aniline	52.2	75.0	69.6%	52.1	75.0	69.5%	0.2%
1,2-Diphenylhydrazine	20.4	25.0	81.6%	21.2	25.0	84.8%	3.8%
N-Nitrosodimethylamine	29.4	75.0	39.2%	28.8	75.0	38.4%	2.1%
Azobenzene	20.4	25.0	81.6%	21.2	25.0	84.8%	3.8%
2,3,4,6-Tetrachlorophenol	26.9	25.0	108%	27.2	25.0	109%	1.1%
1-Methylnaphthalene	21.0	25.0	84.0%	21.3	25.0	85.2%	1.4%
Total Benzofluoranthenes	45.7	50.0	91.4%	46.8	50.0	93.6%	2.4%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	72.4%	71.6%
2-Fluorobiphenyl	82.8%	80.8%
d14-p-Terphenyl	89.6%	86.0%
d4-1,2-Dichlorobenzene	67.2%	64.0%
d5-Phenol	37.9%	37.9%
2-Fluorophenol	49.6%	48.0%
2,4,6-Tribromophenol	108%	105%
d4-2-Chlorophenol	73.1%	72.3%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WR99MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WR99

Project: NPDES SAMPLING SUPPO

Lab File ID: 06111302

Date Extracted: 06/05/13

Instrument ID: NT6

Date Analyzed: 06/11/13

Matrix: LIQUID

Time Analyzed: 1158

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WR99LCSW1	WR99LCSW1	06111303	06/11/13
02	WR99LCSDW1	WR99LCSDW1	06111304	06/11/13
03	KC-VT-1593-20130	WR99A	06111305	06/11/13
04				
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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3510C

Sample ID: MB-060513
METHOD BLANK

Lab Sample ID: MB-060513
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/11/13 11:58
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.15	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.24	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.28	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.24	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.21	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.61	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.23	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.24	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.19	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.44	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.30	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.24	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.20	1.0	< 1.0 U
78-59-1	Isophorone	0.22	1.0	< 1.0 U
88-75-5	2-Nitrophenol	1.7	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	0.35	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.0	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.29	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	0.82	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.23	1.0	< 1.0 U
91-20-3	Naphthalene	0.24	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.30	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.0	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.22	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.5	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	0.93	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.0	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.30	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.6	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.36	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.29	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.7	3.0	< 3.0 U
83-32-9	Acenaphthene	0.27	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	4.2	20	< 20 U
100-02-7	4-Nitrophenol	0.90	10	< 10 U
132-64-9	Dibenzofuran	0.36	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.2	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.2	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-060513**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-060513 QC Report No: WR99-SAIC
LIMS ID: 13-11541 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 06/11/13 11:58

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.29	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.30	1.0	< 1.0 U
86-73-7	Fluorene	0.31	1.0	< 1.0 U
100-01-6	4-Nitroaniline	1.9	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.4	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.25	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.37	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.33	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.6	10	< 10 U
85-01-8	Phenanthrene	0.40	1.0	< 1.0 U
86-74-8	Carbazole	0.37	1.0	< 1.0 U
120-12-7	Anthracene	0.32	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.34	1.0	< 1.0 U
206-44-0	Fluoranthene	0.40	1.0	< 1.0 U
129-00-0	Pyrene	0.36	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.32	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.6	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.35	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	0.34	3.0	< 3.0 U
218-01-9	Chrysene	0.42	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.33	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.33	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.39	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.43	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.41	1.0	< 1.0 U
62-53-3	Aniline	0.91	1.0	< 1.0 U
122-66-7	1,2-Diphenylhydrazine	0.40	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine	0.94	3.0	< 3.0 U
103-33-3	Azobenzene	0.27	1.0	< 1.0 U
58-90-2	2,3,4,6-Tetrachlorophenol	0.15	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.38	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.78	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	74.4%	2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	68.4%	d4-1,2-Dichlorobenzene	61.6%
d5-Phenol	38.4%	2-Fluorophenol	49.9%
2,4,6-Tribromophenol	94.1%	d4-2-Chlorophenol	78.1%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT6 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 03/06/13 DFTPP Injection Time: 1216

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	44.1
68	Less than 2.0% of mass 69	0.5 (1.2)1
69	Mass 69 relative abundance	40.7
70	Less than 2.0% of mass 69	0.1 (0.1)1
127	10.0 - 80.0% of mass 198	46.2
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.3
275	10.0 - 60.0% of mass 198	24.2
365	Greater than 1.0% of mass 198	3.15
441	0.0 - 24.0% of mass 442	11.9 (14.1)2
442	50.0 - 200.0% of mass 198	84.3
443	15.0 - 24.0% of mass 442	16.6 (19.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	IC250306	IC250306	03061301	03/06/13	1216
02	IC020306	IC020306	03061302	03/06/13	1251
03	IC10306	IC10306	03061303	03/06/13	1325
04	IC50306	IC50306	03061304	03/06/13	1400
05	IC100306	IC100306	03061305	03/06/13	1434
06	IC400306	IC40306	03061306	03/06/13	1509
07	IC600306	IC60306	03061307	03/06/13	1543
08	IC800306	IC80306	03061308	03/06/13	1618
09					
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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT6 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/11/13 DFTPP Injection Time: 1124

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	40.7
70	Less than 2.0% of mass 69	0.4 (0.9)1
127	10.0 - 80.0% of mass 198	49.9
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.0
275	10.0 - 60.0% of mass 198	23.8
365	Greater than 1.0% of mass 198	2.10
441	0.0 - 24.0% of mass 442	10.2 (13.7)2
442	50.0 - 200.0% of mass 198	74.3
443	15.0 - 24.0% of mass 442	13.9 (18.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0611	CC0611	06111301	06/11/13	1124
02	WR99MBW1	WR99MBW1	06111302	06/11/13	1158
03	WR99LCSW1	WR99LCSW1	06111303	06/11/13	1232
04	WR99LCSDW1	WR99LCSDW1	06111304	06/11/13	1307
05	KC-VT-1593-20130	WR99A	06111305	06/11/13	1341
06					
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6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Calibration Date: 03/05/13

Method = SW846030613.m
Cal levels = 8

LAB FILE ID: RRF1 =03061303 RRF5 =03061304 RRF10 =03061305
RRF25 =03061301 RRF40 =03061306 RRF60 =03061307
RRF80 =03061308 RRF0.2=03061302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Phenol	1.762	1.739	1.830	1.554	1.486	1.367	1.442		1.597	11.2
Bis(2-Chloroethyl)ether	1.600	1.464	1.595	1.353	1.281	1.187	1.230		1.387	12.2
2-Chlorophenol	1.378	1.355	1.482	1.274	1.210	1.103	1.144		1.278	10.6
1,3-Dichlorobenzene	1.817	1.600	1.721	1.477	1.375	1.238	1.220		1.492	15.5
1,4-Dichlorobenzene	1.820	1.555	1.672	1.430	1.326	1.192	1.174		1.453	16.8
1,2-Dichlorobenzene	1.757	1.523	1.606	1.354	1.236	1.094	1.151		1.389	17.8
Benzyl alcohol	0.878	0.944	0.968	0.889	0.801	0.770	0.841		0.870	8.3
2,2'-oxybis(1-Chloropropane)	2.656	2.347	2.534	2.161	2.042	1.891	1.796		2.204	14.7
2-Methylphenol	1.251	1.276	1.407	1.229	1.168	1.088	1.060		1.211	9.8
Hexachloroethane	0.699	0.619	0.678	0.578	0.544	0.501	0.494		0.588	13.9
N-Nitroso-di-n-propylamine	1.195	1.074	1.162	1.020	0.964	0.914	0.956		1.041	10.3
4-Methylphenol	1.242	1.268	1.423	1.242	1.155	1.051	1.003		1.198	11.9
Nitrobenzene	0.476	0.424	0.448	0.375	0.345	0.308	0.312		0.384	17.4
Isophorone	0.781	0.689	0.747	0.635	0.616	0.595	0.624		0.670	10.7
2-Nitrophenol	0.145	0.182	0.213	0.186	0.184	0.169	0.165		0.178	12.0
2,4-Dimethylphenol	0.361	0.355	0.387	0.331	0.323	0.300	0.294		0.336	10.0
Bis(2-Chloroethoxy)methane	0.541	0.466	0.499	0.424	0.398	0.374	0.373		0.439	14.8
2,4-Dichlorophenol	0.240	0.271	0.313	0.274	0.248	0.234	0.231		0.259	11.4
1,2,4-Trichlorobenzene	0.405	0.340	0.369	0.310	0.293	0.269	0.269		0.322	16.0
Naphthalene	1.258	1.044	1.069	0.857	0.767	0.676			0.945	0.999
Benzoic acid		0.210	0.319	0.307	0.309	0.295	0.306		0.291	13.8
4-Chloroaniline	0.406	0.412	0.377	0.256	0.238	0.214			0.317	0.997
Hexachlorobutadiene	0.234	0.204	0.223	0.192	0.180	0.168	0.169		0.196	13.2
4-Chloro-3-methylphenol	0.245	0.284	0.331	0.287	0.277	0.248	0.252		0.275	11.1
2-Methylnaphthalene	0.596	0.574	0.566	0.481	0.425	0.387	0.376		0.486	19.1
Hexachlorocyclopentadiene	0.234	0.284	0.361	0.348	0.334	0.333	0.354		0.321	14.3
2,4,6-Trichlorophenol	0.285	0.328	0.365	0.343	0.342	0.340	0.350		0.336	7.5
2,4,5-Trichlorophenol	0.237	0.342	0.402	0.349	0.348	0.326	0.318		0.332	15.0
2-Chloronaphthalene	1.302	1.097	1.100	0.902	0.814	0.748	0.769		0.962	0.996
2-Nitroaniline	0.211	0.315	0.339	0.315	0.297	0.292	0.301		0.296	13.7
Acenaphthylene	2.058	1.780	1.820	1.508	1.372	1.244	1.261		1.578	19.9
Dimethylphthalate	1.478	1.260	1.342	1.162	1.101	1.004	1.079		1.204	13.8
2,6-Dinitrotoluene	0.248	0.276	0.301	0.260	0.245	0.226	0.244		0.257	9.7
Acenaphthene	1.341	1.113	1.146	0.976	0.900	0.830	0.843		1.021	18.4
3-Nitroaniline	0.219	0.260	0.219	0.192	0.172	0.144	0.140		0.192	0.996
2,4-Dinitrophenol		0.111	0.202	0.197	0.194	0.192	0.205		0.184	19.5
Dibenzofuran	1.680	1.555	1.522	1.311	1.185	1.027	1.071		1.336	19.1

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-1

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Calibration Date: 03/05/13

Method = SW846030613.m
Cal levels = 8

LAB FILE ID: RRF1 =03061303 RRF5 =03061304 RRF10 =03061305
RRF25 =03061301 RRF40 =03061306 RRF60 =03061307
RRF80 =03061308 RRF0.2=03061302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
4-Nitrophenol		0.110	0.149	0.141	0.132	0.128	0.123		0.130	10.5
2,4-Dinitrotoluene	0.304	0.354	0.412	0.358	0.346	0.326	0.335		0.348	9.7
Fluorene	1.426	1.192	1.221	1.020	0.887	0.806	0.823		1.054	0.995
4-Chlorophenyl-phenylether	0.758	0.643	0.666	0.567	0.516	0.459	0.495		0.586	18.3
Diethylphthalate		1.336	1.345	1.109	1.037	0.944	0.920		1.115	16.8
4-Nitroaniline	0.197	0.224	0.180	0.179	0.196	0.197	0.199		0.196	7.6
4,6-Dinitro-2-methylphenol		0.121	0.163	0.146	0.148	0.142	0.145		0.144	9.5
N-Nitrosodiphenylamine (1)	0.681	0.594	0.634	0.522	0.483	0.445	0.449		0.544	17.2
4-Bromophenyl-phenylether	0.252	0.228	0.251	0.212	0.206	0.184	0.203		0.219	11.5
Hexachlorobenzene	0.274	0.234	0.255	0.213	0.205	0.190	0.213		0.226	13.1
Pentachlorophenol		0.109	0.150	0.136	0.136	0.127	0.143		0.134	10.9
Phenanthrene	1.289	1.068	1.102	0.868	0.836	0.773			0.989	19.9
Anthracene	1.191	1.076	1.158	0.933	0.840	0.746			0.991	18.1
Carbazole	1.142	0.915	0.799	0.666	0.703	0.690	0.718		0.805	0.998
Di-n-butylphthalate	1.541	1.382	1.453	1.159	1.040	0.919			1.249	19.8
Fluoranthene	1.255	1.129	1.241	1.027	0.937	0.850	0.847		1.041	16.6
Pyrene	1.384	1.180	1.258	1.054	0.974	0.891	0.904		1.092	17.2
Butylbenzylphthalate	0.592	0.582	0.629	0.534	0.502	0.450	0.451		0.534	13.2
Benzo(a)anthracene	1.070	0.963	1.036	0.887	0.835	0.777	0.815		0.912	12.4
3,3'-Dichlorobenzidine	0.266	0.287	0.294	0.240	0.231	0.218	0.220		0.251	12.6
Chrysene	1.149	1.006	1.089	0.896	0.840	0.761	0.774		0.931	16.5
bis(2-Ethylhexyl)phthalate	0.647	0.607	0.679	0.590	0.557	0.518	0.523		0.589	10.3
Di-n-octylphthalate	1.130	0.976	1.035	0.935	0.888	0.821	0.824		0.944	12.0
Benzo(b)fluoranthene	0.899	0.855	1.042	0.957	0.838	0.814	0.798		0.886	0.998
Benzo(k)fluoranthene	1.393	1.257	1.260	0.963	0.962	0.803	0.808		1.064	0.994
Benzo(a)pyrene	0.925	0.862	1.024	0.861	0.820	0.745	0.746		0.855	11.6
Indeno(1,2,3-cd)pyrene	1.048	1.019	1.202	1.022	1.000	0.940	0.970		1.029	8.2
Dibenzo(a,h)anthracene	0.726	0.819	0.976	0.828	0.796	0.753	0.772		0.810	10.1
Benzo(g,h,i)perylene	0.829	0.858	1.027	0.887	0.887	0.824	0.847		0.880	7.9
N-Nitrosodimethylamine	0.996	0.924	1.016	0.929	0.904	0.881	0.941		0.942	5.1
Aniline	2.223	2.101	1.970	1.670	1.485	1.393	1.546		1.770	18.4
Benzidine			0.109	0.082	0.088	0.102	0.104		0.097	11.7
Pyridine	1.431	1.468	1.751	1.627	1.389	1.336	1.453		1.494	9.7
1-methylnaphthalene	0.610	0.570	0.564	0.484	0.437	0.400	0.392		0.494	17.9
Azobenzene (1,2-DP-Hydrazine	1.598	1.419	1.455	1.244	1.130	1.028	0.996		1.267	18.2
2,3,4,6-Tetrachlorophenol	0.211	0.277	0.332	0.308	0.301	0.276	0.293		0.285	13.3
1,2,4,5-Tetrachlorobenzene	0.597	0.500	0.533	0.472	0.449	0.429	0.439		0.488	12.3

(1) Cannot be seperated from Diphenylamine
<- Outside QC limits: %RSD <20% or R^2 > 0.990

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Calibration Date: 03/05/13

Method = SW846030613.m
Cal levels = 8

LAB FILE ID: RRF1 =03061303 RRF5 =03061304 RRF10 =03061305
RRF25 =03061301 RRF40 =03061306 RRF60 =03061307
RRF80 =03061308 RRF0.2=03061302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Total Benzofluoranthenes	1.078	1.027	1.108	0.895	0.836	0.757	0.744		0.921	16.4
2-Fluorophenol	1.397	1.385	1.437	1.223	1.197	1.136			1.296	9.7
Phenol-d5	1.709	1.712	1.702	1.399	1.326	1.254			1.517	14.1
2-Chlorophenol-d4	1.467	1.398	1.431	1.205	1.128	1.064			1.282	13.4
1,2-Dichlorobenzene-d4	1.122	1.025	1.001	0.827	0.761	0.679			0.902	19.1
Nitrobenzene-d5	0.462	0.434	0.441	0.373	0.357	0.340			0.401	12.7
2-Fluorobiphenyl	1.606	1.460	1.337	1.112	1.066	0.993			1.262	19.3
2,4,6-Tribromophenol	0.148	0.171	0.179	0.156	0.148	0.146			0.158	8.6
Terphenyl-d14	0.836	0.810	0.754	0.631	0.606	0.575			0.702	16.0

<- Outside QC limits: %RSD <20% or R^2 > 0.990

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 06/11/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1124

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.597	1.542	0.800	AVRG	-3.4	
Bis(2-Chloroethyl)ether	1.387	1.283	0.700	AVRG	-7.5	
2-Chlorophenol	1.278	1.209	0.800	AVRG	-5.4	
1,3-Dichlorobenzene	1.492	1.437	0.010	AVRG	-3.7	
1,4-Dichlorobenzene	1.453	1.407	0.010	AVRG	-3.2	
1,2-Dichlorobenzene	1.389	1.283	0.010	AVRG	-7.6	
Benzyl alcohol	0.870	0.764	0.010	AVRG	-12.2	
2,2'-oxybis(1-Chloropropane)	2.204	1.672	0.010	AVRG	-24.1	<-
2-Methylphenol	1.211	1.097	0.700	AVRG	-9.4	
Hexachloroethane	0.588	0.495	0.300	AVRG	-15.8	
N-Nitroso-di-n-propylamine	1.041	0.865	0.500	AVRG	-16.9	
4-Methylphenol	1.198	1.149	0.600	AVRG	-4.1	
Nitrobenzene	0.384	0.352	0.200	AVRG	-8.3	
Isophorone	0.670	0.563	0.400	AVRG	-16.0	
2-Nitrophenol	0.178	0.178	0.100	AVRG	0.0	
2,4-Dimethylphenol	0.336	0.307	0.200	AVRG	-8.6	
Bis(2-Chloroethoxy)methane	0.439	0.393	0.300	AVRG	-10.5	
2,4-Dichlorophenol	0.259	0.266	0.200	AVRG	2.7	
1,2,4-Trichlorobenzene	0.322	0.303	0.010	AVRG	-5.9	
Naphthalene	25.00	25.08	0.700	2ORDR	0.3	
Benzoic acid	0.291	0.312	0.010	AVRG	7.2	
4-Chloroaniline	25.00	20.67	0.010	2ORDR	-17.3	
Hexachlorobutadiene	0.196	0.191	0.010	AVRG	-2.6	
4-Chloro-3-methylphenol	0.275	0.258	0.200	AVRG	-6.2	
2-Methylnaphthalene	0.486	0.468	0.400	AVRG	-3.7	
Hexachlorocyclopentadiene	0.321	0.268	0.050	AVRG	-16.5	
2,4,6-Trichlorophenol	0.336	0.335	0.200	AVRG	-0.3	
2,4,5-Trichlorophenol	0.332	0.358	0.200	AVRG	7.8	
2-Chloronaphthalene	25.00	27.29	0.800	2ORDR	9.2	
2-Nitroaniline	0.296	0.275	0.010	AVRG	-7.1	
Acenaphthylene	1.578	1.503	0.900	AVRG	-4.8	
Dimethylphthalate	1.204	1.118	0.010	AVRG	-7.1	
2,6-Dinitrotoluene	0.257	0.284	0.200	AVRG	10.5	
Acenaphthene	1.021	0.948	0.900	AVRG	-7.1	
3-Nitroaniline	25.00	26.20	0.010	2ORDR	4.8	
2,4-Dinitrophenol	0.184	0.208	0.010	AVRG	13.0	
Dibenzofuran	1.336	1.311	0.800	AVRG	-1.9	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WR99 : 06013

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 06/11/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1124

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
4-Nitrophenol	0.130	0.138	0.010	AVRG	6.2
2,4-Dinitrotoluene	0.348	0.363	0.200	AVRG	4.3
Fluorene	25.00	26.01	0.900	2ORDR	4.0
4-Chlorophenyl-phenylether	0.586	0.594	0.400	AVRG	1.4
Diethylphthalate	1.115	1.043	0.010	AVRG	-6.4
4-Nitroaniline	0.196	0.214	0.010	AVRG	9.2
4,6-Dinitro-2-methylphenol	0.144	0.142	0.010	AVRG	-1.4
N-Nitrosodiphenylamine(1)	0.544	0.490	0.010	AVRG	-9.9
4-Bromophenyl-phenylether	0.219	0.206	0.100	AVRG	-5.9
Hexachlorobenzene	0.226	0.214	0.100	AVRG	-5.3
Pentachlorophenol	0.134	0.136	0.050	AVRG	1.5
Phenanthrene	0.989	0.858	0.700	AVRG	-13.2
Anthracene	0.991	0.864	0.700	AVRG	-12.8
Carbazole	25.00	29.24	0.010	2ORDR	17.0
Di-n-butylphthalate	1.249	1.018	0.010	AVRG	-18.5
Fluoranthene	1.041	0.974	0.600	AVRG	-6.4
Pyrene	1.092	0.939	0.600	AVRG	-14.0
Butylbenzylphthalate	0.534	0.439	0.010	AVRG	-17.8
Benzo(a)anthracene	0.912	0.899	0.800	AVRG	-1.4
3,3'-Dichlorobenzidine	0.251	0.252	0.010	AVRG	0.4
Chrysene	0.931	0.867	0.700	AVRG	-6.9
bis(2-Ethylhexyl)phthalate	0.589	0.550	0.010	AVRG	-6.6
Di-n-octylphthalate	0.944	0.875	0.010	AVRG	-7.3
Benzo(b)fluoranthene	25.00	25.15	0.700	2ORDR	0.6
Benzo(k)fluoranthene	25.00	21.74	0.700	2ORDR	-13.0
Benzo(a)pyrene	0.855	0.811	0.700	AVRG	-5.1
Indeno(1,2,3-cd)pyrene	1.029	0.940	0.500	AVRG	-8.6
Dibenzo(a,h)anthracene	0.810	0.773	0.400	AVRG	-4.6
Benzo(g,h,i)perylene	0.880	0.782	0.500	AVRG	-11.1
N-Nitrosodimethylamine	0.942	0.781	0.010	AVRG	-17.1
Aniline	1.770		0.010	AVRG	
Benzidine	0.097		0.010	AVRG	
Pyridine	1.494	1.277	0.010	AVRG	-14.5
1-methylnaphthalene	0.494	0.467	0.010	AVRG	-5.5
Azobenzene (1,2-DP-Hydrazine	1.267	1.107	0.010	AVRG	-12.6
2,3,4,6-Tetrachlorophenol	0.285	0.307	0.010	AVRG	7.7

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 06/11/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1124

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,2,4,5-Tetrachlorobenzene	0.488	0.474	0.010	AVRG	-2.9
Total Benzofluoranthenes	0.921	0.837	0.010	AVRG	-9.1
2-Fluorophenol	1.296	1.154	0.010	AVRG	-11.0
Phenol-d5	1.517	1.459	0.010	AVRG	-3.8
2-Chlorophenol-d4	1.282	1.144	0.010	AVRG	-10.8
1,2-Dichlorobenzene-d4	0.902	0.808	0.010	AVRG	-10.4
Nitrobenzene-d5	0.401	0.332	0.010	AVRG	-17.2
2-Fluorobiphenyl	1.262	1.103	0.010	AVRG	-12.6
2,4,6-Tribromophenol	0.158	0.172	0.010	AVRG	8.9
Terphenyl-d14	0.702	0.580	0.010	AVRG	-17.4

<- Exceeds QC limit of 20% D

* RF less than minimum RF

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 03061301 Ical Date: 03/05/13

Instrument ID: NT6 Cont. Cal Date: 06/11/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	458117	8.39	1718341	10.42	1010041	13.29
	UPPER LIMIT	916234		3436682		2020082	
	LOWER LIMIT	229058		859170		505020	
	CCAL	445819	7.57	1673194	9.60	977816	12.43
	UPPER LIMIT		8.07		10.10		12.93
	LOWER LIMIT		7.07		9.10		11.93
01	WR99MBW1	280352	7.57	1010907	9.60	589498	12.42
02	WR99LCSW1	314829	7.57	1140797	9.60	641115	12.43
03	WR99LCSDW1	309830	7.56	1111878	9.60	621145	12.43
04	KC-VT-1593-2	313067	7.56	1102454	9.60	638169	12.42
05							
06							
07							
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09							
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22							
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24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 03061301 Ical Date: 03/05/13

Instrument ID: NT6 Cont. Cal Date: 06/11/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	1666734	15.66	1675752	19.98	1637524	22.14
	UPPER LIMIT	3333468		3351504		3275048	
	LOWER LIMIT	833367		837876		818762	
	CCAL	1708032	14.77	1820287	19.03	2093555	21.16
	UPPER LIMIT		15.27		19.53		21.66
	LOWER LIMIT		14.27		18.53		20.66
01	WR99MBW1	955762	14.76	1047387	19.01	1131881	21.14
02	WR99LCSW1	1095892	14.77	1099808	19.02	1301594	21.15
03	WR99LCSDW1	1081710	14.77	1077904	19.02	1294859	21.15
04	KC-VT-1593-2	1044049	14.76	1166961	19.01	1251862	21.15
05							
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22							
23							
24							
25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

WR99 : 0097

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 03061301 Ical Date: 03/05/13

Instrument ID: NT6 Cont. Cal Date: 06/11/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	2026355	21.09				
	UPPER LIMIT	4052710					
	LOWER LIMIT	1013178					
	CCAL	2066889	20.21				
	UPPER LIMIT		20.71				
	LOWER LIMIT		19.71				
01	WR99MBW1	1190984	20.20				
02	WR99LCSW1	1302204	20.20				
03	WR99LCSDW1	1254108	20.20				
04	KC-VT-1593-2	1321023	20.20				
05							
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25							

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
Page 1 of 2

Sample ID: KC-VT-1593-20130530-S
SAMPLE

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/14/13 19:37
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 2.00
Percent Moisture: 21.9%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	17	39	< 39 U
111-44-4	Bis-(2-Chloroethyl) Ether	6.6	39	< 39 U
95-57-8	2-Chlorophenol	4.7	39	< 39 U
541-73-1	1,3-Dichlorobenzene	5.2	39	< 39 U
106-46-7	1,4-Dichlorobenzene	5.6	39	< 39 U
100-51-6	Benzyl Alcohol	12	39	< 39 U
95-50-1	1,2-Dichlorobenzene	4.9	39	< 39 U
95-48-7	2-Methylphenol	10	39	< 39 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	7.4	39	< 39 U
106-44-5	4-Methylphenol	13	39	< 39 U
621-64-7	N-Nitroso-Di-N-Propylamine	6.6	39	< 39 U
67-72-1	Hexachloroethane	5.8	39	< 39 U
98-95-3	Nitrobenzene	8.0	39	< 39 U
78-59-1	Isophorone	5.6	39	< 39 U
88-75-5	2-Nitrophenol	76	200	< 200 U
105-67-9	2,4-Dimethylphenol	6.8	79	< 79 U
65-85-0	Benzoic Acid	200	790	< 790 U
111-91-1	bis(2-Chloroethoxy) Methane	3.9	39	< 39 U
120-83-2	2,4-Dichlorophenol	42	390	< 390 U
120-82-1	1,2,4-Trichlorobenzene	6.8	39	< 39 U
91-20-3	**Naphthalene**	**5.4**	**39**	**22 J**
106-47-8	4-Chloroaniline	44	530	< 530 U
87-68-3	Hexachlorobutadiene	9.0	39	< 39 U
59-50-7	4-Chloro-3-methylphenol	30	200	< 200 U
91-57-6	**2-Methylnaphthalene**	**6.0**	**39**	**22 J**
77-47-4	Hexachlorocyclopentadiene	130	790	< 790 U
88-06-2	2,4,6-Trichlorophenol	44	200	< 200 U
95-95-4	2,4,5-Trichlorophenol	42	200	< 200 U
91-58-7	2-Chloronaphthalene	5.2	39	< 39 U
88-74-4	2-Nitroaniline	36	200	< 200 U
131-11-3	Dimethylphthalate	5.7	39	< 39 U
208-96-8	Acenaphthylene	11	39	< 39 U
99-09-2	3-Nitroaniline	44	200	< 200 U
83-32-9	**Acenaphthene**	**6.4**	**39**	**31 J**
51-28-5	2,4-Dinitrophenol	220	1,700	< 1,700 U
100-02-7	4-Nitrophenol	68	200	< 200 U
132-64-9	**Dibenzofuran**	**8.1**	**39**	**51**
606-20-2	2,6-Dinitrotoluene	60	200	< 200 U
121-14-2	2,4-Dinitrotoluene	38	200	< 200 U
84-66-2	Diethylphthalate	72	98	< 98 U
7005-72-3	4-Chlorophenyl-phenylether	10	39	< 39 U
86-73-7	**Fluorene**	**8.5**	**39**	**63**
100-01-6	4-Nitroaniline	74	200	< 200 U

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Date Analyzed: 06/14/13 19:37

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	42	390	< 390 U
86-30-6	N-Nitrosodiphenylamine	11	39	< 39 U
101-55-3	4-Bromophenyl-phenylether	9.9	39	< 39 U
118-74-1	Hexachlorobenzene	8.4	39	< 39 U
87-86-5	Pentachlorophenol	95	390	< 390 U
85-01-8	**Phenanthrene**	**7.2**	**39**	**1,400**
86-74-8	**Carbazole**	**5.3**	**39**	**360 Q**
120-12-7	**Anthracene**	**8.8**	**39**	**140**
84-74-2	Di-n-Butylphthalate	16	39	< 39 U
206-44-0	**Fluoranthene**	**5.7**	**39**	**2,600**
129-00-0	**Pyrene**	**3.8**	**39**	**2,300**
85-68-7	Butylbenzylphthalate	12	39	< 39 U
91-94-1	3,3'-Dichlorobenzidine	35	300	< 300 U
56-55-3	**Benzo(a)anthracene**	**6.5**	**39**	**1,000**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**29**	**49**	**81**
218-01-9	**Chrysene**	**7.4**	**39**	**1,500**
117-84-0	Di-n-Octyl phthalate	11	39	< 39 U
50-32-8	**Benzo(a)pyrene**	**11**	**39**	**1,300**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**9.2**	**39**	**970**
53-70-3	**Dibenz(a,h)anthracene**	**8.5**	**39**	**370**
191-24-2	**Benzo(g,h,i)perylene**	**8.6**	**39**	**990**
62-53-3	Aniline	79	1,100	< 1,100 U
62-75-9	N-Nitrosodimethylamine	28	200	< 200 U
90-12-0	1-Methylnaphthalene	5.3	39	< 39 U
TOTBFA	**Total Benzofluoranthenes**	**5.4**	**79**	**2,600**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.4%	2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	79.2%	d4-1,2-Dichlorobenzene	56.8%
d5-Phenol	63.5%	2-Fluorophenol	58.4%
2,4,6-Tribromophenol	86.7%	d4-2-Chlorophenol	63.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: KC-CB-01-20130530-S
SAMPLE

Lab Sample ID: WR99E
LIMS ID: 13-11545
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 19:53
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.8%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**8.5**	**20**	**25**
111-44-4	Bis-(2-Chloroethyl) Ether	3.3	20	< 20 U
95-57-8	2-Chlorophenol	2.4	20	< 20 U
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.8	20	< 20 U
100-51-6	Benzyl Alcohol	6.0	20	< 20 U
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
95-48-7	2-Methylphenol	5.2	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.7	20	< 20 U
106-44-5	4-Methylphenol	6.5	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	3.3	20	< 20 U
67-72-1	Hexachloroethane	2.9	20	< 20 U
98-95-3	Nitrobenzene	4.0	20	< 20 U
78-59-1	Isophorone	2.8	20	< 20 U
88-75-5	2-Nitrophenol	38	98	< 98 U
105-67-9	2,4-Dimethylphenol	3.4	39	< 39 U
65-85-0	**Benzoic Acid**	**99**	**390**	**120 J**
111-91-1	bis(2-Chloroethoxy) Methane	2.0	20	< 20 U
120-83-2	2,4-Dichlorophenol	21	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	3.4	20	< 20 U
91-20-3	**Naphthalene**	**2.7**	**20**	**24**
106-47-8	4-Chloroaniline	22	260	< 260 U
87-68-3	Hexachlorobutadiene	4.5	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	15	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**3.0**	**20**	**32**
77-47-4	Hexachlorocyclopentadiene	65	390	< 390 U
88-06-2	2,4,6-Trichlorophenol	22	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	21	98	< 98 U
91-58-7	2-Chloronaphthalene	2.6	20	< 20 U
88-74-4	2-Nitroaniline	18	98	< 98 U
131-11-3	Dimethylphthalate	2.9	20	< 20 U
208-96-8	**Acenaphthylene**	**5.6**	**20**	**28**
99-09-2	3-Nitroaniline	22	98	< 98 U
83-32-9	**Acenaphthene**	**3.2**	**20**	**11 J**
51-28-5	2,4-Dinitrophenol	110	840	< 840 U
100-02-7	4-Nitrophenol	34	98	< 98 U
132-64-9	**Dibenzofuran**	**4.0**	**20**	**13 J**
606-20-2	2,6-Dinitrotoluene	30	98	< 98 U
121-14-2	2,4-Dinitrotoluene	19	98	< 98 U
84-66-2	Diethylphthalate	36	49	< 49 U
7005-72-3	4-Chlorophenyl-phenylether	5.2	20	< 20 U
86-73-7	Fluorene	4.3	20	< 20 U
100-01-6	4-Nitroaniline	37	98	< 98 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
Page 2 of 2

Sample ID: KC-CB-01-20130530-S
SAMPLE

Lab Sample ID: WR99E
LIMS ID: 13-11545
Matrix: Sediment
Date Analyzed: 06/13/13 19:53

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	21	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	5.3	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	4.9	20	< 20 U
118-74-1	Hexachlorobenzene	4.2	20	< 20 U
87-86-5	Pentachlorophenol	48	200	< 200 U
85-01-8	**Phenanthrene**	**3.6**	**20**	**130**
86-74-8	**Carbazole**	**2.6**	**20**	**38**
120-12-7	**Anthracene**	**4.4**	**20**	**20**
84-74-2	**Di-n-Butylphthalate**	**8.0**	**20**	**140**
206-44-0	**Fluoranthene**	**2.9**	**20**	**240**
129-00-0	**Pyrene**	**1.9**	**20**	**230**
85-68-7	**Butylbenzylphthalate**	**6.0**	**20**	**26**
91-94-1	3,3'-Dichlorobenzidine	18	150	< 150 U
56-55-3	**Benzo(a)anthracene**	**3.2**	**20**	**100**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**14**	**25**	**1,800**
218-01-9	**Chrysene**	**3.7**	**20**	**190**
117-84-0	**Di-n-Octyl phthalate**	**5.7**	**20**	**23**
50-32-8	**Benzo(a)pyrene**	**5.4**	**20**	**230**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**4.6**	**20**	**250**
53-70-3	**Dibenz(a,h)anthracene**	**4.2**	**20**	**91**
191-24-2	**Benzo(g,h,i)perylene**	**4.3**	**20**	**240**
62-53-3	Aniline	39	530	< 530 U
62-75-9	N-Nitrosodimethylamine	14	98	< 98 U
90-12-0	**1-Methylnaphthalene**	**2.6**	**20**	**17 J**
TOTBFA	**Total Benzofluoranthenes**	**2.7**	**39**	**510**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.6%	2-Fluorobiphenyl	68.2%
d14-p-Terphenyl	74.8%	d4-1,2-Dichlorobenzene	59.6%
d5-Phenol	67.2%	2-Fluorophenol	61.3%
2,4,6-Tribromophenol	86.1%	d4-2-Chlorophenol	65.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
Page 1 of 2

Sample ID: KC-DD-2009-20130530-S
SAMPLE

Lab Sample ID: WR99F
LIMS ID: 13-11546
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 20:30
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 3.72 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 38.1%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**23**	**54**	**200**
111-44-4	Bis-(2-Chloroethyl) Ether	9.0	54	< 54 U
95-57-8	2-Chlorophenol	6.4	54	< 54 U
541-73-1	1,3-Dichlorobenzene	7.1	54	< 54 U
106-46-7	1,4-Dichlorobenzene	7.7	54	< 54 U
100-51-6	Benzyl Alcohol	16	54	< 54 U
95-50-1	1,2-Dichlorobenzene	6.7	54	< 54 U
95-48-7	2-Methylphenol	14	54	< 54 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	54	< 54 U
106-44-5	**4-Methylphenol**	**18**	**54**	**62**
621-64-7	N-Nitroso-Di-N-Propylamine	9.0	54	< 54 U
67-72-1	Hexachloroethane	7.9	54	< 54 U
98-95-3	Nitrobenzene	11	54	< 54 U
78-59-1	Isophorone	7.7	54	< 54 U
88-75-5	2-Nitrophenol	100	270	< 270 U
105-67-9	2,4-Dimethylphenol	9.3	110	< 110 U
65-85-0	**Benzoic Acid**	**270**	**1,100**	**680 J**
111-91-1	bis(2-Chloroethoxy) Methane	5.4	54	< 54 U
120-83-2	2,4-Dichlorophenol	58	540	< 540 U
120-82-1	1,2,4-Trichlorobenzene	9.4	54	< 54 U
91-20-3	**Naphthalene**	**7.4**	**54**	**64**
106-47-8	4-Chloroaniline	60	730	< 730 U
87-68-3	Hexachlorobutadiene	12	54	< 54 U
59-50-7	4-Chloro-3-methylphenol	41	270	< 270 U
91-57-6	**2-Methylnaphthalene**	**8.2**	**54**	**51 J**
77-47-4	Hexachlorocyclopentadiene	180	1,100	< 1,100 U
88-06-2	2,4,6-Trichlorophenol	60	270	< 270 U
95-95-4	2,4,5-Trichlorophenol	58	270	< 270 U
91-58-7	2-Chloronaphthalene	7.1	54	< 54 U
88-74-4	2-Nitroaniline	49	270	< 270 U
131-11-3	**Dimethylphthalate**	**7.8**	**54**	**27 J**
208-96-8	**Acenaphthylene**	**15**	**54**	**110**
99-09-2	3-Nitroaniline	60	270	< 270 U
83-32-9	**Acenaphthene**	**8.8**	**54**	**240**
51-28-5	2,4-Dinitrophenol	300	2,300	< 2,300 U
100-02-7	4-Nitrophenol	93	270	< 270 U
132-64-9	**Dibenzofuran**	**11**	**54**	**89**
606-20-2	2,6-Dinitrotoluene	82	270	< 270 U
121-14-2	2,4-Dinitrotoluene	52	270	< 270 U
84-66-2	Diethylphthalate	98	130	< 130 U
7005-72-3	4-Chlorophenyl-phenylether	14	54	< 54 U
86-73-7	**Fluorene**	**12**	**54**	**130**
100-01-6	4-Nitroaniline	100	270	< 270 U

Lab Sample ID: WR99F
LIMS ID: 13-11546
Matrix: Sediment
Date Analyzed: 06/13/13 20:30

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	57	540	< 540 U
86-30-6	N-Nitrosodiphenylamine	14	54	< 54 U
101-55-3	4-Bromophenyl-phenylether	14	54	< 54 U
118-74-1	Hexachlorobenzene	12	54	< 54 U
87-86-5	Pentachlorophenol	130	540	< 540 U
85-01-8	**Phenanthrene**	**9.8**	**54**	**1,800**
86-74-8	**Carbazole**	**7.2**	**54**	**340**
120-12-7	**Anthracene**	**12**	**54**	**220**
84-74-2	**Di-n-Butylphthalate**	**22**	**54**	**140**
206-44-0	**Fluoranthene**	**7.8**	**54**	**2,500**
129-00-0	**Pyrene**	**5.2**	**54**	**2,200**
85-68-7	**Butylbenzylphthalate**	**17**	**54**	**410**
91-94-1	3,3'-Dichlorobenzidine	48	400	< 400 U
56-55-3	**Benzo(a)anthracene**	**8.8**	**54**	**840**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**39**	**67**	**3,400**
218-01-9	**Chrysene**	**10**	**54**	**1,600**
117-84-0	**Di-n-Octyl phthalate**	**16**	**54**	**100**
50-32-8	**Benzo(a)pyrene**	**15**	**54**	**1,200**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**13**	**54**	**920**
53-70-3	**Dibenz(a,h)anthracene**	**12**	**54**	**340**
191-24-2	**Benzo(g,h,i)perylene**	**12**	**54**	**920**
62-53-3	Aniline	110	1,400	< 1,400 U
62-75-9	N-Nitrosodimethylamine	38	270	< 270 U
90-12-0	**1-Methylnaphthalene**	**7.2**	**54**	**30 J**
TOTBFA	**Total Benzofluoranthenes**	**7.4**	**110**	**2,900**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.8%	2-Fluorobiphenyl	64.2%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	52.4%
d5-Phenol	61.6%	2-Fluorophenol	55.5%
2,4,6-Tribromophenol	84.4%	d4-2-Chlorophenol	59.2%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-060813	65.2%	65.0%	83.8%	63.6%	69.2%	63.7%	71.6%	67.2%	0
LCS-060813	70.6%	70.0%	85.0%	67.2%	74.3%	70.9%	80.7%	70.4%	0
LCSD-060813	68.8%	67.6%	85.8%	63.4%	70.7%	67.6%	78.8%	66.8%	0
KC-VT-1593-2013053	60.4%	65.6%	79.2%	56.8%	63.5%	58.4%	86.7%	63.7%	0
KC-VT-1593-2013053 MS	65.0%	70.4%	78.0%	61.0%	68.3%	61.9%	84.5%	66.3%	0
KC-VT-1593-2013053 MSD	60.2%	63.2%	69.6%	55.0%	61.1%	56.1%	76.3%	60.1%	0
KC-CB-01-20130530-	63.6%	68.2%	74.8%	59.6%	67.2%	61.3%	86.1%	65.7%	0
KC-DD-2009-2013053	57.8%	64.2%	70.8%	52.4%	61.6%	55.5%	84.4%	59.2%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(33-120)	(30-120)
(FBP) = 2-Fluorobiphenyl	(35-120)	(35-120)
(TPH) = d14-p-Terphenyl	(42-124)	(37-120)
(DCB) = d4-1,2-Dichlorobenzene	(37-120)	(32-120)
(PHL) = d5-Phenol	(32-120)	(29-120)
(2FP) = 2-Fluorophenol	(32-120)	(27-120)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(36-120)	(31-120)

Prep Method: SW3546
Log Number Range: 13-11544 to 13-11546

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: KC-VT-1593-20130530-S
MS/MSD

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted MS/MSD: 06/08/13

Date Analyzed MS: 06/13/13 18:40
MSD: 06/13/13 19:16
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount MS: 10.18 g-dry-wt
MSD: 10.16 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 1.00
MSD: 1.00
Percent Moisture: 21.9 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	< 39 U	327	491	66.6%	298	492	60.6%	9.3%
Bis-(2-Chloroethyl) Ether	< 39 U	340	491	69.2%	321	492	65.2%	5.7%
2-Chlorophenol	< 39 U	301	491	61.3%	274	492	55.7%	9.4%
1,3-Dichlorobenzene	< 39 U	297	491	60.5%	281	492	57.1%	5.5%
1,4-Dichlorobenzene	< 39 U	296	491	60.3%	285	492	57.9%	3.8%
Benzyl Alcohol	< 39 U	384	491	78.2%	197	492	40.0%	64.4%
1,2-Dichlorobenzene	< 39 U	319	491	65.0%	286	492	58.1%	10.9%
2-Methylphenol	< 39 U	272	491	55.4%	261	492	53.0%	4.1%
2,2'-Oxybis(1-Chloropropane)	< 39 U	332	491	67.6%	311	492	63.2%	6.5%
4-Methylphenol	< 39 U	604	982	61.5%	559	984	56.8%	7.7%
N-Nitroso-Di-N-Propylamine	< 39 U	378	491	77.0%	346	492	70.3%	8.8%
Hexachloroethane	< 39 U	307	491	62.5%	284	492	57.7%	7.8%
Nitrobenzene	< 39 U	353	491	71.9%	323	492	65.7%	8.9%
Isophorone	< 39 U	333	491	67.8%	312	492	63.4%	6.5%
2-Nitrophenol	< 200 U	388	491	79.0%	357	492	72.6%	8.3%
2,4-Dimethylphenol	< 79 U	370	1470	25.2%	532	1480	35.9%	35.9%
Benzoic Acid	< 790 U	1580	2700	58.5%	1480	2710	54.6%	6.5%
bis(2-Chloroethoxy) Methane	< 39 U	382	491	77.8%	351	492	71.3%	8.5%
2,4-Dichlorophenol	< 390 U	1030	1470	70.1%	962	1480	65.0%	6.8%
1,2,4-Trichlorobenzene	< 39 U	335	491	68.2%	308	492	62.6%	8.4%
Naphthalene	22 J	329	491	62.5%	321	492	60.8%	2.5%
4-Chloroaniline	< 530 U	32.4 J	1470	2.2%	52.2 J	1480	3.5%	46.8%
Hexachlorobutadiene	< 39 U	317	491	64.6%	303	492	61.6%	4.5%
4-Chloro-3-methylphenol	< 200 U	1210	1470	82.3%	1130	1480	76.4%	6.8%
2-Methylnaphthalene	22 J	366	491	70.1%	349	492	66.5%	4.8%
Hexachlorocyclopentadiene	< 790 U	295 JQ	1470	20.1%	253 JQ	1480	17.1%	15.3%
2,4,6-Trichlorophenol	< 200 U	1160	1470	78.9%	1070	1480	72.3%	8.1%
2,4,5-Trichlorophenol	< 200 U	1290	1470	87.8%	1160	1480	78.4%	10.6%
2-Chloronaphthalene	< 39 U	385	491	78.4%	351	492	71.3%	9.2%
2-Nitroaniline	< 200 U	1430	1470	97.3%	1300	1480	87.8%	9.5%
Dimethylphthalate	< 39 U	441	491	89.8%	386	492	78.5%	13.3%
Acenaphthylene	< 39 U	358	491	72.9%	325	492	66.1%	9.7%
3-Nitroaniline	< 200 U	381	1470	25.9%	356	1480	24.1%	6.8%
Acenaphthene	31 J	406	491	76.4%	353	492	65.4%	14.0%
2,4-Dinitrophenol	< 1700 U	1180 Q	2700	43.7%	1070 Q	2710	39.5%	9.8%
4-Nitrophenol	< 200 U	1060	1470	72.1%	936	1480	63.2%	12.4%
Dibenzofuran	51	450	491	81.3%	396	492	70.1%	12.8%
2,6-Dinitrotoluene	< 200 U	1310	1470	89.1%	1170	1480	79.1%	11.3%
2,4-Dinitrotoluene	< 200 U	1350	1470	91.8%	1180	1480	79.7%	13.4%
Diethylphthalate	< 98 U	479	491	97.6%	418	492	85.0%	13.6%
4-Chlorophenyl-phenylether	< 39 U	447	491	91.0%	402	492	81.7%	10.6%
Fluorene	63	484	491	85.7%	370	492	62.4%	26.7%
4-Nitroaniline	< 200 U	511	1470	34.8%	477	1480	32.2%	6.9%
4,6-Dinitro-2-Methylphenol	< 390 U	1600	2700	59.3%	1450	2710	53.5%	9.8%
N-Nitrosodiphenylamine	< 39 U	508	491	103%	401	492	81.5%	23.5%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: KC-VT-1593-20130530-S
MS/MSD

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Date Analyzed MS: 06/13/13 18:40
MSD: 06/13/13 19:16

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
4-Bromophenyl-phenylether	< 39 U	465	491	94.7%	393	492	79.9%	16.8%
Hexachlorobenzene	< 39 U	416	491	84.7%	372	492	75.6%	11.2%
Pentachlorophenol	< 390 U	1190	1470	81.0%	1110	1480	75.0%	7.0%
Phenanthrene	1400	2070 E	491	136%	1330	492	NA	43.5%
Carbazole	360 Q	997	491	130%	762	492	81.7%	26.7%
Anthracene	140	526	491	78.6%	441	492	61.2%	17.6%
Di-n-Butylphthalate	< 39 U	475	491	96.7%	424	492	86.2%	11.3%
Fluoranthene	2600	3320 E	491	NA	2330 E	492	NA	35.0%
Pyrene	2300	2550 E	491	NA	1840	492	NA	32.3%
Butylbenzylphthalate	< 39 U	505	491	103%	452	492	91.9%	11.1%
3,3'-Dichlorobenzidine	< 300 U	17.7 J	1470	1.2%	< 148 U	1480	NA	NA
Benzo(a)anthracene	1000	1290	491	59.1%	987	492	NA	26.6%
bis(2-Ethylhexyl)phthalate	81	396	491	64.2%	397	492	64.2%	0.3%
Chrysene	1500	1840	491	69.2%	1350	492	NA	30.7%
Di-n-Octyl phthalate	< 39 U	308	491	62.7%	310	492	63.0%	0.6%
Benzo(a)pyrene	1300	1710	491	83.5%	1270	492	NA	29.5%
Indeno(1,2,3-cd)pyrene	970	1250	491	57.0%	965	492	NA	25.7%
Dibenz(a,h)anthracene	370	762	491	79.8%	614	492	49.6%	21.5%
Benzo(g,h,i)perylene	990	1200	491	42.8%	869	492	NA	32.0%
Aniline	< 1100 U	< 530 U	1470	NA	< 531 U	1480	NA	NA
N-Nitrosodimethylamine	< 200 U	861	1470	58.6%	783	1480	52.9%	9.5%
1-Methylnaphthalene	< 39 U	384	491	78.2%	364	492	74.0%	5.3%
Total Benzofluoranthenes	2600	3460	982	87.6%	2540	984	NA	30.7%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.
NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
Page 1 of 2

Sample ID: KC-VT-1593-20130530-S
MATRIX SPIKE

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 18:40
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.9%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.5	20	---
111-44-4	Bis-(2-Chloroethyl) Ether	3.3	20	---
95-57-8	2-Chlorophenol	2.3	20	---
541-73-1	1,3-Dichlorobenzene	2.6	20	---
106-46-7	1,4-Dichlorobenzene	2.8	20	---
100-51-6	Benzyl Alcohol	6.0	20	---
95-50-1	1,2-Dichlorobenzene	2.5	20	---
95-48-7	2-Methylphenol	5.2	20	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.7	20	---
106-44-5	4-Methylphenol	6.5	20	---
621-64-7	N-Nitroso-Di-N-Propylamine	3.3	20	---
67-72-1	Hexachloroethane	2.9	20	---
98-95-3	Nitrobenzene	4.0	20	---
78-59-1	Isophorone	2.8	20	---
88-75-5	2-Nitrophenol	38	98	---
105-67-9	2,4-Dimethylphenol	3.4	39	---
65-85-0	Benzoic Acid	99	390	---
111-91-1	bis(2-Chloroethoxy) Methane	2.0	20	---
120-83-2	2,4-Dichlorophenol	21	200	---
120-82-1	1,2,4-Trichlorobenzene	3.4	20	---
91-20-3	Naphthalene	2.7	20	---
106-47-8	4-Chloroaniline	22	260	---
87-68-3	Hexachlorobutadiene	4.5	20	---
59-50-7	4-Chloro-3-methylphenol	15	98	---
91-57-6	2-Methylnaphthalene	3.0	20	---
77-47-4	Hexachlorocyclopentadiene	65	390	---
88-06-2	2,4,6-Trichlorophenol	22	98	---
95-95-4	2,4,5-Trichlorophenol	21	98	---
91-58-7	2-Chloronaphthalene	2.6	20	---
88-74-4	2-Nitroaniline	18	98	---
131-11-3	Dimethylphthalate	2.8	20	---
208-96-8	Acenaphthylene	5.6	20	---
99-09-2	3-Nitroaniline	22	98	---
83-32-9	Acenaphthene	3.2	20	---
51-28-5	2,4-Dinitrophenol	110	840	---
100-02-7	4-Nitrophenol	34	98	---
132-64-9	Dibenzofuran	4.0	20	---
606-20-2	2,6-Dinitrotoluene	30	98	---
121-14-2	2,4-Dinitrotoluene	19	98	---
84-66-2	Diethylphthalate	36	49	---
7005-72-3	4-Chlorophenyl-phenylether	5.2	20	---
86-73-7	Fluorene	4.3	20	---
100-01-6	4-Nitroaniline	37	98	---

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Date Analyzed: 06/13/13 18:40

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	21	200	---
86-30-6	N-Nitrosodiphenylamine	5.3	20	---
101-55-3	4-Bromophenyl-phenylether	4.9	20	---
118-74-1	Hexachlorobenzene	4.2	20	---
87-86-5	Pentachlorophenol	48	200	---
85-01-8	Phenanthrene	3.6	20	---
86-74-8	Carbazole	2.6	20	---
120-12-7	Anthracene	4.4	20	---
84-74-2	Di-n-Butylphthalate	8.0	20	---
206-44-0	Fluoranthene	2.9	20	---
129-00-0	Pyrene	1.9	20	---
85-68-7	Butylbenzylphthalate	6.0	20	---
91-94-1	3,3'-Dichlorobenzidine	17	150	---
56-55-3	Benzo(a)anthracene	3.2	20	---
117-81-7	bis(2-Ethylhexyl)phthalate	14	25	---
218-01-9	Chrysene	3.7	20	---
117-84-0	Di-n-Octyl phthalate	5.7	20	---
50-32-8	Benzo(a)pyrene	5.4	20	---
193-39-5	Indeno(1,2,3-cd)pyrene	4.6	20	---
53-70-3	Dibenz(a,h)anthracene	4.2	20	---
191-24-2	Benzo(g,h,i)perylene	4.3	20	---
62-53-3	Aniline	39	530	---
62-75-9	N-Nitrosodimethylamine	14	98	---
90-12-0	1-Methylnaphthalene	2.6	20	---
TOTBFA	Total Benzofluoranthenes	2.7	39	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.0%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	78.0%	d4-1,2-Dichlorobenzene	61.0%
d5-Phenol	68.3%	2-Fluorophenol	61.9%
2,4,6-Tribromophenol	84.5%	d4-2-Chlorophenol	66.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: KC-VT-1593-20130530-S
MATRIX SPIKE DUPLICATE

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 19:16
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.9%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.5	20	---
111-44-4	Bis-(2-Chloroethyl) Ether	3.3	20	---
95-57-8	2-Chlorophenol	2.4	20	---
541-73-1	1,3-Dichlorobenzene	2.6	20	---
106-46-7	1,4-Dichlorobenzene	2.8	20	---
100-51-6	Benzyl Alcohol	6.0	20	---
95-50-1	1,2-Dichlorobenzene	2.5	20	---
95-48-7	2-Methylphenol	5.2	20	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.7	20	---
106-44-5	4-Methylphenol	6.5	20	---
621-64-7	N-Nitroso-Di-N-Propylamine	3.3	20	---
67-72-1	Hexachloroethane	2.9	20	---
98-95-3	Nitrobenzene	4.0	20	---
78-59-1	Isophorone	2.8	20	---
88-75-5	2-Nitrophenol	38	98	---
105-67-9	2,4-Dimethylphenol	3.4	39	---
65-85-0	Benzoic Acid	99	390	---
111-91-1	bis(2-Chloroethoxy) Methane	2.0	20	---
120-83-2	2,4-Dichlorophenol	21	200	---
120-82-1	1,2,4-Trichlorobenzene	3.4	20	---
91-20-3	Naphthalene	2.7	20	---
106-47-8	4-Chloroaniline	22	270	---
87-68-3	Hexachlorobutadiene	4.5	20	---
59-50-7	4-Chloro-3-methylphenol	15	98	---
91-57-6	2-Methylnaphthalene	3.0	20	---
77-47-4	Hexachlorocyclopentadiene	65	390	---
88-06-2	2,4,6-Trichlorophenol	22	98	---
95-95-4	2,4,5-Trichlorophenol	21	98	---
91-58-7	2-Chloronaphthalene	2.6	20	---
88-74-4	2-Nitroaniline	18	98	---
131-11-3	Dimethylphthalate	2.9	20	---
208-96-8	Acenaphthylene	5.6	20	---
99-09-2	3-Nitroaniline	22	98	---
83-32-9	Acenaphthene	3.2	20	---
51-28-5	2,4-Dinitrophenol	110	840	---
100-02-7	4-Nitrophenol	34	98	---
132-64-9	Dibenzofuran	4.0	20	---
606-20-2	2,6-Dinitrotoluene	30	98	---
121-14-2	2,4-Dinitrotoluene	19	98	---
84-66-2	Diethylphthalate	36	49	---
7005-72-3	4-Chlorophenyl-phenylether	5.2	20	---
86-73-7	Fluorene	4.3	20	---
100-01-6	4-Nitroaniline	37	98	---

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Date Analyzed: 06/13/13 19:16

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	21	200	---
86-30-6	N-Nitrosodiphenylamine	5.3	20	---
101-55-3	4-Bromophenyl-phenylether	5.0	20	---
118-74-1	Hexachlorobenzene	4.2	20	---
87-86-5	Pentachlorophenol	48	200	---
85-01-8	Phenanthrene	3.6	20	---
86-74-8	Carbazole	2.6	20	---
120-12-7	Anthracene	4.4	20	---
84-74-2	Di-n-Butylphthalate	8.0	20	---
206-44-0	Fluoranthene	2.9	20	---
129-00-0	Pyrene	1.9	20	---
85-68-7	Butylbenzylphthalate	6.0	20	---
91-94-1	3,3'-Dichlorobenzidine	18	150	---
56-55-3	Benzo(a)anthracene	3.2	20	---
117-81-7	bis(2-Ethylhexyl)phthalate	14	25	---
218-01-9	Chrysene	3.7	20	---
117-84-0	Di-n-Octyl phthalate	5.7	20	---
50-32-8	Benzo(a)pyrene	5.4	20	---
193-39-5	Indeno(1,2,3-cd)pyrene	4.6	20	---
53-70-3	Dibenz(a,h)anthracene	4.2	20	---
191-24-2	Benzo(g,h,i)perylene	4.3	20	---
62-53-3	Aniline	39	530	---
62-75-9	N-Nitrosodimethylamine	14	98	---
90-12-0	1-Methylnaphthalene	2.6	20	---
TOTBFA	Total Benzofluoranthenes	2.7	39	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.2%	2-Fluorobiphenyl	63.2%
d14-p-Terphenyl	69.6%	d4-1,2-Dichlorobenzene	55.0%
d5-Phenol	61.1%	2-Fluorophenol	56.1%
2,4,6-Tribromophenol	76.3%	d4-2-Chlorophenol	60.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-060813
LCS/LCSD

Lab Sample ID: LCS-060813
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted LCS/LCSD: 06/08/13

Date Analyzed LCS: 06/13/13 14:21
LCSD: 06/13/13 14:58
Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount LCS: 10.00 g
LCSD: 10.00 g
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	382	500	76.4%	375	500	75.0%	1.8%
Bis-(2-Chloroethyl) Ether	370	500	74.0%	355	500	71.0%	4.1%
2-Chlorophenol	315	500	63.0%	306	500	61.2%	2.9%
1,3-Dichlorobenzene	326	500	65.2%	320	500	64.0%	1.9%
1,4-Dichlorobenzene	332	500	66.4%	329	500	65.8%	0.9%
Benzyl Alcohol	243	500	48.6%	183	500	36.6%	28.2%
1,2-Dichlorobenzene	338	500	67.6%	333	500	66.6%	1.5%
2-Methylphenol	295	500	59.0%	291	500	58.2%	1.4%
2,2'-Oxybis(1-Chloropropane)	359	500	71.8%	358	500	71.6%	0.3%
4-Methylphenol	615	1000	61.5%	613	1000	61.3%	0.3%
N-Nitroso-Di-N-Propylamine	378	500	75.6%	366	500	73.2%	3.2%
Hexachloroethane	336	500	67.2%	329	500	65.8%	2.1%
Nitrobenzene	370	500	74.0%	374	500	74.8%	1.1%
Isophorone	348	500	69.6%	348	500	69.6%	0.0%
2-Nitrophenol	408	500	81.6%	405	500	81.0%	0.7%
2,4-Dimethylphenol	531	1500	35.4%	628	1500	41.9%	16.7%
Benzoic Acid	1550	2750	56.4%	1650	2750	60.0%	6.2%
bis(2-Chloroethoxy) Methane	394	500	78.8%	389	500	77.8%	1.3%
2,4-Dichlorophenol	1030	1500	68.7%	1010	1500	67.3%	2.0%
1,2,4-Trichlorobenzene	343	500	68.6%	347	500	69.4%	1.2%
Naphthalene	318	500	63.6%	323	500	64.6%	1.6%
4-Chloroaniline	537	1500	35.8%	536	1500	35.7%	0.2%
Hexachlorobutadiene	345	500	69.0%	346	500	69.2%	0.3%
4-Chloro-3-methylphenol	1140	1500	76.0%	1170	1500	78.0%	2.6%
2-Methylnaphthalene	343	500	68.6%	350	500	70.0%	2.0%
Hexachlorocyclopentadiene	842 Q	1500	56.1%	838 Q	1500	55.9%	0.5%
2,4,6-Trichlorophenol	1080	1500	72.0%	1110	1500	74.0%	2.7%
2,4,5-Trichlorophenol	1140	1500	76.0%	1170	1500	78.0%	2.6%
2-Chloronaphthalene	377	500	75.4%	380	500	76.0%	0.8%
2-Nitroaniline	1410	1500	94.0%	1390	1500	92.7%	1.4%
Dimethylphthalate	423	500	84.6%	435	500	87.0%	2.8%
Acenaphthylene	333	500	66.6%	329	500	65.8%	1.2%
3-Nitroaniline	1020	1500	68.0%	1070	1500	71.3%	4.8%
Acenaphthene	353	500	70.6%	347	500	69.4%	1.7%

WR99-00112

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCSD-060813
LCS/LCSD

Lab Sample ID: LCS-060813
LIMS ID: 13-11544
Matrix: Sediment
Date Analyzed LCS: 06/13/13 14:21
LCSD: 06/13/13 14:58

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4-Dinitrophenol	1400 Q	2750	50.9%	1530 Q	2750	55.6%	8.9%
4-Nitrophenol	1030	1500	68.7%	1050	1500	70.0%	1.9%
Dibenzofuran	376	500	75.2%	374	500	74.8%	0.5%
2,6-Dinitrotoluene	1280	1500	85.3%	1300	1500	86.7%	1.6%
2,4-Dinitrotoluene	1340	1500	89.3%	1370	1500	91.3%	2.2%
Diethylphthalate	431	500	86.2%	436	500	87.2%	1.2%
4-Chlorophenyl-phenylether	437	500	87.4%	430	500	86.0%	1.6%
Fluorene	352	500	70.4%	355	500	71.0%	0.8%
4-Nitroaniline	1260	1500	84.0%	1300	1500	86.7%	3.1%
4,6-Dinitro-2-Methylphenol	1900	2750	69.1%	2010	2750	73.1%	5.6%
N-Nitrosodiphenylamine	431	500	86.2%	439	500	87.8%	1.8%
4-Bromophenyl-phenylether	412	500	82.4%	422	500	84.4%	2.4%
Hexachlorobenzene	375	500	75.0%	374	500	74.8%	0.3%
Pentachlorophenol	1140	1500	76.0%	1160	1500	77.3%	1.7%
Phenanthrene	392	500	78.4%	403	500	80.6%	2.8%
Carbazole	558	500	112%	578	500	116%	3.5%
Anthracene	357	500	71.4%	364	500	72.8%	1.9%
Di-n-Butylphthalate	474	500	94.8%	493	500	98.6%	3.9%
Fluoranthene	405	500	81.0%	430	500	86.0%	6.0%
Pyrene	404	500	80.8%	426	500	85.2%	5.3%
Butylbenzylphthalate	521	500	104%	541	500	108%	3.8%
3,3'-Dichlorobenzidine	372	1500	24.8%	446	1500	29.7%	18.1%
Benzo(a)anthracene	396	500	79.2%	421	500	84.2%	6.1%
bis(2-Ethylhexyl)phthalate	418	500	83.6%	403	500	80.6%	3.7%
Chrysene	385	500	77.0%	402	500	80.4%	4.3%
Di-n-Octyl phthalate	391	500	78.2%	362	500	72.4%	7.7%
Benzo(a)pyrene	392	500	78.4%	407	500	81.4%	3.8%
Indeno(1,2,3-cd)pyrene	422	500	84.4%	435	500	87.0%	3.0%
Dibenz(a,h)anthracene	385	500	77.0%	400	500	80.0%	3.8%
Benzo(g,h,i)perylene	407	500	81.4%	427	500	85.4%	4.8%
Aniline	238 J	1500	15.9%	273 J	1500	18.2%	13.7%
N-Nitrosodimethylamine	1010	1500	67.3%	978	1500	65.2%	3.2%
1-Methylnaphthalene	365	500	73.0%	363	500	72.6%	0.5%
Total Benzofluoranthenes	812	1000	81.2%	839	1000	83.9%	3.3%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	70.6%	68.8%
2-Fluorobiphenyl	70.0%	67.6%
d14-p-Terphenyl	85.0%	85.8%
d4-1,2-Dichlorobenzene	67.2%	63.4%
d5-Phenol	74.3%	70.7%
2-Fluorophenol	70.9%	67.6%
2,4,6-Tribromophenol	80.7%	78.8%
d4-2-Chlorophenol	70.4%	66.8%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

WR99 : 06113

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WS49MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WS21

Project: NPDES SAMPLING SUPPORT

Lab File ID: WS49MB

Date Extracted: 06/08/13

Instrument ID: NT10

Date Analyzed: 06/13/13

Matrix: SOLID

Time Analyzed: 1345

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WS49LCSS1	WS49LCSS1	WS49SB	06/13/13
02	WS49LCSDS1	WS49LCSDS1	WS49SBD	06/13/13
03	KC-VT-1593-2013	WR99DMS	WR99DMS	06/13/13
04	KC-VT-1593-2013	WR99DMSD	WR99DMSD	06/13/13
05	KC-CB-01-2013053	WR99E	WR99E	06/13/13
06	KC-DD-2009-20130	WR99F	WR99F	06/13/13
07	KC-IV-SPS-201305	WS21A	WS21A	06/13/13
08	KC-VT-1593-20130	WR99D	WR99D	06/14/13
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-060813**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-060813
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 13:45
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.0 g
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.6	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	3.4	20	< 20 U
95-57-8	2-Chlorophenol	2.4	20	< 20 U
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.9	20	< 20 U
100-51-6	Benzyl Alcohol	6.1	20	< 20 U
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
95-48-7	2-Methylphenol	5.2	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.8	20	< 20 U
106-44-5	4-Methylphenol	6.6	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	3.4	20	< 20 U
67-72-1	Hexachloroethane	2.9	20	< 20 U
98-95-3	Nitrobenzene	4.1	20	< 20 U
78-59-1	Isophorone	2.9	20	< 20 U
88-75-5	2-Nitrophenol	39	100	< 100 U
105-67-9	2,4-Dimethylphenol	3.5	40	< 40 U
65-85-0	Benzoic Acid	100	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	2.0	20	< 20 U
120-83-2	2,4-Dichlorophenol	22	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	3.5	20	< 20 U
91-20-3	Naphthalene	2.8	20	< 20 U
106-47-8	4-Chloroaniline	22	270	< 270 U
87-68-3	Hexachlorobutadiene	4.6	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	15	100	< 100 U
91-57-6	2-Methylnaphthalene	3.1	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	66	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	22	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	21	100	< 100 U
91-58-7	2-Chloronaphthalene	2.6	20	< 20 U
88-74-4	2-Nitroaniline	18	100	< 100 U
131-11-3	Dimethylphthalate	2.9	20	< 20 U
208-96-8	Acenaphthylene	5.7	20	< 20 U
99-09-2	3-Nitroaniline	22	100	< 100 U
83-32-9	Acenaphthene	3.3	20	< 20 U
51-28-5	2,4-Dinitrophenol	110	850	< 850 U
100-02-7	4-Nitrophenol	35	100	< 100 U
132-64-9	Dibenzofuran	4.1	20	< 20 U
606-20-2	2,6-Dinitrotoluene	31	100	< 100 U
121-14-2	2,4-Dinitrotoluene	20	100	< 100 U
84-66-2	Diethylphthalate	37	50	< 50 U
7005-72-3	4-Chlorophenyl-phenylether	5.3	20	< 20 U
86-73-7	Fluorene	4.4	20	< 20 U
100-01-6	4-Nitroaniline	38	100	< 100 U

WR99:00115

Lab Sample ID: MB-060813 QC Report No: WR99-SAIC
LIMS ID: 13-11544 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 06/13/13 13:45

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	21	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	5.4	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	5.0	20	< 20 U
118-74-1	Hexachlorobenzene	4.3	20	< 20 U
87-86-5	Pentachlorophenol	48	200	< 200 U
85-01-8	Phenanthrene	3.6	20	< 20 U
86-74-8	Carbazole	2.7	20	< 20 U
120-12-7	Anthracene	4.5	20	< 20 U
84-74-2	Di-n-Butylphthalate	8.2	20	< 20 U
206-44-0	Fluoranthene	2.9	20	< 20 U
129-00-0	Pyrene	1.9	20	< 20 U
85-68-7	Butylbenzylphthalate	6.1	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	18	150	< 150 U
56-55-3	Benzo(a)anthracene	3.3	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	15	25	< 25 U
218-01-9	Chrysene	3.8	20	< 20 U
117-84-0	Di-n-Octyl phthalate	5.8	20	< 20 U
50-32-8	Benzo(a)pyrene	5.4	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	4.3	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	4.4	20	< 20 U
62-53-3	Aniline	40	540	< 540 U
62-75-9	N-Nitrosodimethylamine	14	100	< 100 U
90-12-0	1-Methylnaphthalene	2.7	20	< 20 U
TOTBFA	Total Benzofluoranthenes	2.8	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%	2-Fluorobiphenyl	65.0%
d14-p-Terphenyl	83.8%	d4-1,2-Dichlorobenzene	63.6%
d5-Phenol	69.2%	2-Fluorophenol	63.7%
2,4,6-Tribromophenol	71.6%	d4-2-Chlorophenol	67.2%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 04/29/13 DFTPP Injection Time: 1637

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	16.7
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Mass 69 relative abundance	32.0
70	Less than 2.0% of mass 69	0.1 (0.5)1
127	10.0 - 80.0% of mass 198	44.8
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	27.4
365	Greater than 1.0% of mass 198	4.00
441	0.0 - 24.0% of mass 442	16.8 (15.6)2
442	50.0 - 200.0% of mass 198	108.0
443	15.0 - 24.0% of mass 442	20.8 (19.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0429A	IC0429A	04/29/13	1653
02		IC0429B	IC0429B	04/29/13	1730
03		IC0429C	IC0429C	04/29/13	1807
04		IC0429D	IC0429D	04/29/13	1844
05		IC0429E	IC0429E	04/29/13	1921
06		IC0429G	IC0429G	04/29/13	2034
07		IC0429I	IC0429I	04/29/13	2147
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/13/13 DFTPP Injection Time: 1216

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.1
68	Less than 2.0% of mass 69	0.7 (1.8)1
69	Mass 69 relative abundance	40.0
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	10.0 - 80.0% of mass 198	49.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	25.1
365	Greater than 1.0% of mass 198	3.19
441	0.0 - 24.0% of mass 442	11.6 (14.7)2
442	50.0 - 200.0% of mass 198	79.0
443	15.0 - 24.0% of mass 442	14.6 (18.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0613	CC0613	06/13/13	1230
02	WS49MBS1	WS49MBS1	WS49MB	06/13/13	1345
03	WS49LCSS1	WS49LCSS1	WS49SB	06/13/13	1421
04	WS49LCSDS1	WS49LCSDS1	WS49SBD	06/13/13	1458
05	KC-VT-1593-2013	WR99DMS	WR99DMS	06/13/13	1840
06	KC-VT-1593-2013	WR99DMSD	WR99DMSD	06/13/13	1916
07	KC-CB-01-2013053	WR99E	WR99E	06/13/13	1953
08	KC-DD-2009-20130	WR99F	WR99F	06/13/13	2030
09	KC-IV-SPS-201305	WS21A	WS21A	06/13/13	2107
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/14/13 DFTPP Injection Time: 1238

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.6
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Mass 69 relative abundance	36.4
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	46.4
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	26.8
365	Greater than 1.0% of mass 198	3.75
441	0.0 - 24.0% of mass 442	15.7 (15.3)2
442	50.0 - 200.0% of mass 198	102.2
443	15.0 - 24.0% of mass 442	19.6 (19.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0614	CC0614	06/14/13	1253
02	KC-VT-1593-20130	WR99D	WR99D	06/14/13	1937
03					
04					
05					
06					
07					
08					
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12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 04/29/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0429C RRF0.5=IC0429I RRF1 =IC0429D
RRF2.5=IC0429G RRF5 =IC0429A RRF10 =IC0429E
RRF20 =IC0429B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	___ RRF	%RSD /R^2
Phenol	2.077	2.017	1.990	2.151	2.006	2.200	2.034	2.068	3.9
Bis(2-Chloroethyl)ether	1.569	1.539	1.470	1.553	1.377	1.500	1.401	1.487	5.1
2-Chlorophenol	1.550	1.467	1.471	1.542	1.510	1.815	1.808	1.595	9.5
1,3-Dichlorobenzene	1.693	1.545	1.590	1.600	1.552	1.628	1.594	1.600	3.1
1,4-Dichlorobenzene	1.714	1.526	1.513	1.625	1.533	1.581	1.549	1.577	4.5
1,2-Dichlorobenzene	1.625	1.492	1.506	1.516	1.456	1.497	1.480	1.510	3.6
Benzyl alcohol	0.851	0.735	0.830	0.901	0.883	0.969	0.920	0.870	8.6
2,2'-oxybis(1-Chloropropane)	0.426	0.440	0.464	0.485	0.458	0.477	0.463	0.459	4.4
2-Methylphenol	1.490	1.406	1.450	1.544	1.458	1.560	1.508	1.488	3.7
Hexachloroethane	0.689	0.659	0.654	0.684	0.620	0.669	0.644	0.660	3.6
N-Nitroso-di-n-propylamine	0.952	0.894	0.878	0.986	0.887	0.977	0.928	0.929	4.7
4-Methylphenol	1.437	1.355	1.490	1.593	1.527	1.677	1.541	1.517	6.9
Nitrobenzene	0.395	0.393	0.386	0.400	0.366	0.404	0.385	0.390	3.2
Isophorone	0.712	0.664	0.673	0.711	0.681	0.862	0.828	0.733	10.8
2-Nitrophenol	0.208	0.186	0.201	0.221	0.229	0.242	0.243	0.218	9.7
2,4-Dimethylphenol	0.412	0.372	0.393	0.415	0.402	0.422	0.394	0.401	4.2
Bis(2-Chloroethoxy)methane	0.443	0.434	0.433	0.442	0.414	0.440	0.418	0.432	2.7
2,4-Dichlorophenol	0.318	0.288	0.385	0.393	0.395	0.418	0.391	0.370	12.8
1,2,4-Trichlorobenzene	0.412	0.350	0.364	0.354	0.345	0.353	0.351	0.361	6.4
Naphthalene	1.205	1.006	1.040	1.064	1.020	1.073	1.046	1.065	6.2
Benzoic acid		0.160	0.251	0.309	0.338	0.374	0.383	0.302	0.999
4-Chloroaniline	0.424	0.364	0.406	0.423	0.425	0.489	0.381	0.416	9.6
Hexachlorobutadiene	0.233	0.200	0.214	0.209	0.207	0.221	0.218	0.214	5.1
4-Chloro-3-methylphenol	0.263	0.272	0.312	0.344	0.343	0.377	0.365	0.325	13.7
2-Methylnaphthalene	0.740	0.674	0.682	0.702	0.687	0.739	0.727	0.707	4.0
Hexachlorocyclopentadiene	0.448	0.393	0.415	0.425	0.443	0.466	0.490	0.440	7.4
2,4,6-Trichlorophenol	0.389	0.368	0.407	0.426	0.433	0.453	0.470	0.421	8.4
2,4,5-Trichlorophenol	0.355	0.372	0.419	0.443	0.454	0.493	0.502	0.434	12.9
2-Chloronaphthalene	1.258	1.048	1.069	1.098	1.071	1.125	1.112	1.112	6.3
2-Nitroaniline	0.205	0.222	0.260	0.290	0.289	0.311	0.301	0.268	15.2
Acenaphthylene	2.087	1.803	1.831	1.816	1.772	2.129	1.756	1.885	8.2
Dimethylphthalate	1.365	1.135	1.172	1.190	1.160	1.208	1.175	1.201	6.3
2,6-Dinitrotoluene	0.261	0.257	0.275	0.296	0.284	0.305	0.290	0.281	6.4
Acenaphthene	1.307	1.096	1.084	1.134	1.066	1.135	1.130	1.136	7.0
3-Nitroaniline	0.208	0.214	0.254	0.251	0.240	0.251	0.208	0.232	9.2
2,4-Dinitrophenol		0.092	0.145	0.196	0.239	0.272	0.282	0.204	0.998
Dibenzofuran	1.673	1.498	1.520	1.552	1.472	1.584	1.575	1.553	4.3

<- Outside QC limits: %RSD <20% or R^2 > 0.990

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 04/29/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0429C RRF0.5=IC0429I RRF1 =IC0429D
RRF2.5=IC0429G RRF5 =IC0429A RRF10 =IC0429E
RRF20 =IC0429B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	___ RRF	%RSD /R^2
4-Nitrophenol		0.079	0.115	0.152	0.164	0.185	0.183	0.146	0.999
2,4-Dinitrotoluene	0.305	0.311	0.361	0.383	0.378	0.406	0.396	0.363	11.1
Fluorene	1.464	1.260	1.300	1.336	1.271	1.344	1.302	1.325	5.2
4-Chlorophenyl-phenylether	0.738	0.602	0.614	0.616	0.592	0.726	0.674	0.652	9.3
Diethylphthalate	1.354	1.141	1.157	1.206	1.170	1.229	1.188	1.206	5.9
4-Nitroaniline	0.210	0.198	0.271	0.240	0.244	0.272	0.254	0.241	11.8
4,6-Dinitro-2-methylphenol	0.107	0.123	0.161	0.175	0.189	0.198	0.199	0.164	0.999
N-Nitrosodiphenylamine (1)	0.496	0.429	0.473	0.473	0.458	0.461	0.451	0.463	4.5
4-Bromophenyl-phenylether	0.228	0.217	0.230	0.222	0.223	0.230	0.234	0.226	2.6
Hexachlorobenzene	0.323	0.258	0.266	0.258	0.256	0.263	0.266	0.270	8.8
Pentachlorophenol	0.155	0.140	0.173	0.199	0.211	0.221	0.227	0.189	17.8
Phenanthrene	1.229	1.013	1.086	1.066	1.046	1.099	1.099	1.091	6.3
Anthracene	1.196	1.068	1.098	1.103	1.079	1.137	1.142	1.118	4.0
Carbazole		0.800	0.834	0.643	0.476	0.605	0.715	0.679	19.5
Di-n-butylphthalate	1.235	1.000	1.095	1.115	1.141	1.237	1.254	1.154	8.1
Fluoranthene	1.358	1.180	1.246	1.248	1.273	1.334	1.350	1.284	5.1
Pyrene	1.372	1.136	1.192	1.197	1.222	1.259	1.285	1.238	6.2
Butylbenzylphthalate	0.426	0.342	0.412	0.416	0.439	0.457	0.465	0.422	9.6
Benzo(a)anthracene	1.256	1.035	1.094	1.074	1.095	1.140	1.147	1.120	6.3
3,3'-Dichlorobenzidine	0.512	0.365	0.406	0.358	0.385	0.470	0.489	0.426	14.8
Chrysene	1.178	0.953	0.950	0.973	0.977	1.022	1.041	1.013	7.9
bis(2-Ethylhexyl)phthalate	0.632	0.494	0.524	0.534	0.505	0.523	0.510	0.532	8.7
Di-n-octylphthalate	1.055	0.944	0.871	0.906	0.871	0.905	0.894	0.921	6.9
Benzo(b)fluoranthene	1.350	1.055	1.094	1.126	1.215	1.242	1.233	1.188	8.6
Benzo(k)fluoranthene	1.429	1.149	1.245	1.226	1.139	1.225	1.345	1.251	8.3
Benzo(a)pyrene	1.151	0.872	0.973	0.973	1.002	1.055	1.076	1.014	8.8
Indeno(1,2,3-cd)pyrene	1.182	1.014	1.103	1.121	1.204	1.272	1.288	1.169	8.3
Dibenzo(a,h)anthracene	0.924	0.733	0.855	0.886	0.920	0.970	0.990	0.897	9.6
Benzo(g,h,i)perylene	1.046	0.902	0.989	0.991	1.001	1.071	1.081	1.012	6.1
N-Nitrosodimethylamine	0.881	0.875	0.883	0.963	0.856	0.996	0.924	0.911	5.7
Aniline	4.002	3.883	3.894	4.215	3.954	4.212	3.925	4.012	3.6
Benzidine		0.200	0.258	0.144	0.124	0.129	0.158	0.169	0.996
Retene	0.527	0.415	0.449	0.450	0.464	0.479	0.495	0.468	7.7
Perylene	1.360	1.098	1.116	1.099	1.101	1.161	1.185	1.160	8.2
Pyridine	0.727	0.806	0.788	0.868	0.780	0.846	0.791	0.801	5.8
1-methylnaphthalene	0.704	0.597	0.625	0.640	0.633	0.668	0.673	0.648	5.5
Azobenzene (1,2-DP-Hydrazine	1.323	1.268	1.241	1.274	1.124	1.247	1.184	1.237	5.2

(1) Cannot be seperated from Diphenylamine
<- Outside QC limits: %RSD <20% or R^2 > 0.990

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 04/29/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0429C RRF0.5=IC0429I RRF1 =IC0429D
RRF2.5=IC0429G RRF5 =IC0429A RRF10 =IC0429E
RRF20 =IC0429B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	RRF	%RSD /R^2
2,3,4,6-Tetrachlorophenol	0.263	0.256	0.308	0.323	0.352	0.376	0.381	0.323	15.7
Total Benzofluoranthenes	1.309	1.054	1.127	1.118	1.118	1.170	1.178	1.153	6.9
2-Fluorophenol	1.341	1.365	1.373	1.457	1.432	1.532	1.493	1.428	5.0
Phenol-d5	1.744	1.701	1.730	1.881	1.858	2.054	1.962	1.847	7.1
2-Chlorophenol-d4	1.482	1.318	1.345	1.412	1.390	1.440	1.430	1.402	4.0
1,2-Dichlorobenzene-d4	0.989	1.001	0.997	1.022	0.981	1.044	1.027	1.009	2.2
Nitrobenzene-d5	0.429	0.417	0.418	0.430	0.401	0.441	0.419	0.422	3.0
2-Fluorobiphenyl	1.566	1.339	1.343	1.374	1.337	1.414	1.400	1.396	5.8
2,4,6-Tribromophenol	0.200	0.170	0.195	0.214	0.219	0.242	0.241	0.212	12.1
Terphenyl-d14	0.892	0.700	0.754	0.760	0.763	0.794	0.787	0.778	7.5

<- Outside QC limits: %RSD <20% or R^2 > 0.990

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/13/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1230

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.068	2.440	0.800	AVRG	18.0	
Bis(2-Chloroethyl)ether	1.487	1.478	0.700	AVRG	-0.6	
2-Chlorophenol	1.595	1.564	0.800	AVRG	-1.9	
1,3-Dichlorobenzene	1.600	1.537	0.010	AVRG	-3.9	
1,4-Dichlorobenzene	1.577	1.529	0.010	AVRG	-3.0	
1,2-Dichlorobenzene	1.510	1.446	0.010	AVRG	-4.2	
Benzyl alcohol	0.870	0.708	0.010	AVRG	-18.6	
2,2'-oxybis(1-Chloropropane)	0.459	0.464	0.010	AVRG	1.1	
2-Methylphenol	1.488	1.509	0.700	AVRG	1.4	
Hexachloroethane	0.660	0.638	0.300	AVRG	-3.3	
N-Nitroso-di-n-propylamine	0.929	0.962	0.500	AVRG	3.6	
4-Methylphenol	1.517	1.589	0.600	AVRG	4.7	
Nitrobenzene	0.390	0.391	0.200	AVRG	0.2	
Isophorone	0.733	0.735	0.400	AVRG	0.3	
2-Nitrophenol	0.218	0.238	0.100	AVRG	9.2	
2,4-Dimethylphenol	0.401	0.393	0.200	AVRG	-2.0	
Bis(2-Chloroethoxy)methane	0.432	0.439	0.300	AVRG	1.6	
2,4-Dichlorophenol	0.370	0.377	0.200	AVRG	1.9	
1,2,4-Trichlorobenzene	0.361	0.343	0.010	AVRG	-5.0	
Naphthalene	1.065	1.008	0.700	AVRG	-5.4	
Benzoic acid	20.00	16.20	0.010	2ORDR	-19.0	
4-Chloroaniline	0.416	0.423	0.010	AVRG	1.7	
Hexachlorobutadiene	0.214	0.208	0.010	AVRG	-2.8	
4-Chloro-3-methylphenol	0.325	0.362	0.200	AVRG	11.4	
2-Methylnaphthalene	0.707	0.683	0.400	AVRG	-3.4	
Hexachlorocyclopentadiene	0.440	0.350	0.050	AVRG	-20.4	<-
2,4,6-Trichlorophenol	0.421	0.430	0.200	AVRG	2.1	
2,4,5-Trichlorophenol	0.434	0.477	0.200	AVRG	9.9	
2-Chloronaphthalene	1.112	1.068	0.800	AVRG	-4.0	
2-Nitroaniline	0.268	0.308	0.010	AVRG	14.9	
Acenaphthylene	1.885	1.734	0.900	AVRG	-8.0	
Dimethylphthalate	1.201	1.192	0.010	AVRG	-0.7	
2,6-Dinitrotoluene	0.281	0.290	0.200	AVRG	3.2	
Acenaphthene	1.136	1.072	0.900	AVRG	-5.6	
3-Nitroaniline	0.232	0.277	0.010	AVRG	19.4	
2,4-Dinitrophenol	20.00	13.56	0.010	2ORDR	-32.2	<-
Dibenzofuran	1.553	1.472	0.800	AVRG	-5.2	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/13/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1230

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	10.00	10.04	0.010	2ORDR	0.4	
2,4-Dinitrotoluene	0.363	0.384	0.200	AVRG	5.8	
Fluorene	1.325	1.246	0.900	AVRG	-6.0	
4-Chlorophenyl-phenylether	0.652	0.578	0.400	AVRG	-11.3	
Diethylphthalate	1.206	1.193	0.010	AVRG	-1.1	
4-Nitroaniline	0.241	0.278	0.010	AVRG	15.4	
4,6-Dinitro-2-methylphenol	20.00	17.75	0.010	2ORDR	-11.2	
N-Nitrosodiphenylamine(1)	0.463	0.460	0.010	AVRG	-0.6	
4-Bromophenyl-phenylether	0.226	0.227	0.100	AVRG	0.4	
Hexachlorobenzene	0.270	0.258	0.100	AVRG	-4.4	
Pentachlorophenol	0.189	0.191	0.050	AVRG	1.0	
Phenanthrene	1.091	1.038	0.700	AVRG	-4.8	
Anthracene	1.118	1.080	0.700	AVRG	-3.4	
Carbazole	0.679	0.686	0.010	AVRG	1.0	
Di-n-butylphthalate	1.154	1.176	0.010	AVRG	1.9	
Fluoranthene	1.284	1.289	0.600	AVRG	0.4	
Pyrene	1.238	1.267	0.600	AVRG	2.3	
Butylbenzylphthalate	0.422	0.471	0.010	AVRG	11.6	
Benzo(a)anthracene	1.120	1.108	0.800	AVRG	-1.1	
3,3'-Dichlorobenzidine	0.426	0.342	0.010	AVRG	-19.7	
Chrysene	1.013	0.973	0.700	AVRG	-3.9	
bis(2-Ethylhexyl)phthalate	0.532	0.520	0.010	AVRG	-2.2	
Di-n-octylphthalate	0.921	0.871	0.010	AVRG	-5.4	
Benzo(b)fluoranthene	1.188	1.285	0.700	AVRG	8.2	
Benzo(k)fluoranthene	1.251	1.182	0.700	AVRG	-5.5	
Benzo(a)pyrene	1.014	1.033	0.700	AVRG	1.9	
Indeno(1,2,3-cd)pyrene	1.169	1.245	0.500	AVRG	6.5	
Dibenzo(a,h)anthracene	0.897	0.944	0.400	AVRG	5.2	
Benzo(g,h,i)perylene	1.012	1.077	0.500	AVRG	6.4	
N-Nitrosodimethylamine	0.911	0.903	0.010	AVRG	-0.9	
Aniline	4.012	4.222	0.010	AVRG	5.2	
Benzidine	10.00	4.771	0.010	2ORDR	-52.3	<-
Retene	0.468	0.473	0.010	AVRG	1.1	
Perylene	1.160	1.086	0.010	AVRG	-6.4	
Pyridine	0.801	0.753	0.010	AVRG	-6.0	
1-methylnaphthalene	0.648	0.621	0.010	AVRG	-4.2	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WR09 : 06124

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/13/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1230

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.237	1.189	0.010	AVRG	-3.9
2,3,4,6-Tetrachlorophenol	0.323	0.342	0.010	AVRG	5.9
Total Benzofluoranthenes	1.153	1.153	0.010	AVRG	0.0
2-Fluorophenol	1.428	1.479	0.010	AVRG	3.6
Phenol-d5	1.847	1.964	0.010	AVRG	6.3
2-Chlorophenol-d4	1.402	1.412	0.010	AVRG	0.7
1,2-Dichlorobenzene-d4	1.009	0.986	0.010	AVRG	-2.3
Nitrobenzene-d5	0.422	0.430	0.010	AVRG	1.9
2-Fluorobiphenyl	1.396	1.327	0.010	AVRG	-4.9
2,4,6-Tribromophenol	0.212	0.217	0.010	AVRG	2.4
Terphenyl-d14	0.778	0.761	0.010	AVRG	-2.2

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/14/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1253

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.068	2.508	0.800	AVRG	21.3	<-
Bis(2-Chloroethyl)ether	1.487	1.479	0.700	AVRG	-0.5	
2-Chlorophenol	1.595	1.598	0.800	AVRG	0.2	
1,3-Dichlorobenzene	1.600	1.572	0.010	AVRG	-1.8	
1,4-Dichlorobenzene	1.577	1.554	0.010	AVRG	-1.4	
1,2-Dichlorobenzene	1.510	1.508	0.010	AVRG	-0.1	
Benzyl alcohol	0.870	0.670	0.010	AVRG	-23.0	<-
2,2'-oxybis(1-Chloropropane)	0.459	0.468	0.010	AVRG	2.0	
2-Methylphenol	1.488	1.564	0.700	AVRG	5.1	
Hexachloroethane	0.660	0.644	0.300	AVRG	-2.4	
N-Nitroso-di-n-propylamine	0.929	0.998	0.500	AVRG	7.4	
4-Methylphenol	1.517	1.622	0.600	AVRG	6.9	
Nitrobenzene	0.390	0.393	0.200	AVRG	0.8	
Isophorone	0.733	0.738	0.400	AVRG	0.7	
2-Nitrophenol	0.218	0.240	0.100	AVRG	10.1	
2,4-Dimethylphenol	0.401	0.392	0.200	AVRG	-2.2	
Bis(2-Chloroethoxy)methane	0.432	0.447	0.300	AVRG	3.5	
2,4-Dichlorophenol	0.370	0.342	0.200	AVRG	-7.6	
1,2,4-Trichlorobenzene	0.361	0.349	0.010	AVRG	-3.3	
Naphthalene	1.065	1.009	0.700	AVRG	-5.2	
Benzoic acid	20.00	17.30	0.010	2ORDR	-13.5	
4-Chloroaniline	0.416	0.399	0.010	AVRG	-4.1	
Hexachlorobutadiene	0.214	0.210	0.010	AVRG	-1.9	
4-Chloro-3-methylphenol	0.325	0.371	0.200	AVRG	14.2	
2-Methylnaphthalene	0.707	0.690	0.400	AVRG	-2.4	
Hexachlorocyclopentadiene	0.440	0.348	0.050	AVRG	-20.9	<-
2,4,6-Trichlorophenol	0.421	0.433	0.200	AVRG	2.8	
2,4,5-Trichlorophenol	0.434	0.480	0.200	AVRG	10.6	
2-Chloronaphthalene	1.112	1.070	0.800	AVRG	-3.8	
2-Nitroaniline	0.268	0.311	0.010	AVRG	16.0	
Acenaphthylene	1.885	1.730	0.900	AVRG	-8.2	
Dimethylphthalate	1.201	1.185	0.010	AVRG	-1.3	
2,6-Dinitrotoluene	0.281	0.292	0.200	AVRG	3.9	
Acenaphthene	1.136	1.082	0.900	AVRG	-4.8	
3-Nitroaniline	0.232	0.166	0.010	AVRG	-28.4	<-
2,4-Dinitrophenol	20.00	14.15	0.010	2ORDR	-29.2	<-
Dibenzofuran	1.553	1.496	0.800	AVRG	-3.7	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/14/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1253

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	10.00	10.28	0.010	2ORDR	2.8	
2,4-Dinitrotoluene	0.363	0.399	0.200	AVRG	9.9	
Fluorene	1.325	1.236	0.900	AVRG	-6.7	
4-Chlorophenyl-phenylether	0.652	0.576	0.400	AVRG	-11.6	
Diethylphthalate	1.206	1.194	0.010	AVRG	-1.0	
4-Nitroaniline	0.241	0.202	0.010	AVRG	-16.2	
4,6-Dinitro-2-methylphenol	20.00	18.01	0.010	2ORDR	-10.0	
N-Nitrosodiphenylamine(1)	0.463	0.451	0.010	AVRG	-2.6	
4-Bromophenyl-phenylether	0.226	0.225	0.100	AVRG	-0.4	
Hexachlorobenzene	0.270	0.259	0.100	AVRG	-4.1	
Pentachlorophenol	0.189	0.194	0.050	AVRG	2.6	
Phenanthrene	1.091	1.060	0.700	AVRG	-2.8	
Anthracene	1.118	1.078	0.700	AVRG	-3.6	
Carbazole	0.679	0.440	0.010	AVRG	-35.2	<-
Di-n-butylphthalate	1.154	1.192	0.010	AVRG	3.3	
Fluoranthene	1.284	1.277	0.600	AVRG	-0.5	
Pyrene	1.238	1.239	0.600	AVRG	0.1	
Butylbenzylphthalate	0.422	0.466	0.010	AVRG	10.4	
Benzo(a)anthracene	1.120	1.108	0.800	AVRG	-1.1	
3,3'-Dichlorobenzidine	0.426	0.329	0.010	AVRG	-22.8	<-
Chrysene	1.013	0.960	0.700	AVRG	-5.2	
bis(2-Ethylhexyl)phthalate	0.532	0.522	0.010	AVRG	-1.9	
Di-n-octylphthalate	0.921	0.861	0.010	AVRG	-6.5	
Benzo(b)fluoranthene	1.188	1.200	0.700	AVRG	1.0	
Benzo(k)fluoranthene	1.251	1.232	0.700	AVRG	-1.5	
Benzo(a)pyrene	1.014	1.022	0.700	AVRG	0.8	
Indeno(1,2,3-cd)pyrene	1.169	1.199	0.500	AVRG	2.6	
Dibenzo(a,h)anthracene	0.897	0.926	0.400	AVRG	3.2	
Benzo(g,h,i)perylene	1.012	1.026	0.500	AVRG	1.4	
N-Nitrosodimethylamine	0.911	0.905	0.010	AVRG	-0.6	
Aniline	4.012	4.260	0.010	AVRG	6.2	
Benzidine	10.00	3.819	0.010	2ORDR	-61.8	<-
Retene	0.468	0.464	0.010	AVRG	-0.8	
Perylene	1.160	1.072	0.010	AVRG	-7.6	
Pyridine	0.801	0.790	0.010	AVRG	-1.4	
1-methylnaphthalene	0.648	0.632	0.010	AVRG	-2.5	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WR99:00127

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/14/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1253

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.237	1.212	0.010	AVRG	-2.0
2,3,4,6-Tetrachlorophenol	0.323	0.343	0.010	AVRG	6.2
Total Benzofluoranthenes	1.153	1.140	0.010	AVRG	-1.1
2-Fluorophenol	1.428	1.528	0.010	AVRG	7.0
Phenol-d5	1.847	1.999	0.010	AVRG	8.2
2-Chlorophenol-d4	1.402	1.456	0.010	AVRG	3.8
1,2-Dichlorobenzene-d4	1.009	1.028	0.010	AVRG	1.9
Nitrobenzene-d5	0.422	0.429	0.010	AVRG	1.6
2-Fluorobiphenyl	1.396	1.329	0.010	AVRG	-4.8
2,4,6-Tribromophenol	0.212	0.215	0.010	AVRG	1.4
Terphenyl-d14	0.778	0.752	0.010	AVRG	-3.3

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/13/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	45250	8.99	166754	11.64	106910	15.54
	UPPER LIMIT	90500		333508		213820	
	LOWER LIMIT	22625		83377		53455	
	CCAL	42831	8.05	158742	10.63	99508	14.43
	UPPER LIMIT		8.55		11.13		14.93
	LOWER LIMIT		7.55		10.13		13.93
01	WS49MBS1	48215	8.06	191089	10.63	113052	14.43
02	WS49LCSS1	49398	8.06	184077	10.64	110624	14.44
03	WS49LCSDS1	48747	8.06	177018	10.64	106844	14.44
04	KC-VT-1593-2	44567	8.07	165654	10.65	98201	14.45
05	KC-VT-1593-2	48362	8.07	175201	10.65	105767	14.45
06	KC-CB-01-201	48623	8.07	186419	10.65	110252	14.45
07	KC-DD-2009-2	46964	8.07	178324	10.65	106965	14.45
08	KC-IV-SPS-20	49157	8.07	186626	10.65	103730	14.45
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10							
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25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

WR99:80129

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/13/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	179783	18.82	192841	23.90	184310	26.35
	UPPER LIMIT	359566		385682		368620	
	LOWER LIMIT	89892		96420		92155	
	CCAL	166294	17.63	171121	22.80	154519	25.07
	UPPER LIMIT		18.13		23.30		25.57
	LOWER LIMIT		17.13		22.30		24.57
01	WS49MBS1	194526	17.63	194694	22.80	173223	25.08
02	WS49LCSS1	183746	17.64	192330	22.81	173982	25.08
03	WS49LCSDS1	176399	17.64	184289	22.81	169418	25.08
04	KC-VT-1593-2	147103	17.65	158721	22.83	150546	25.11
05	KC-VT-1593-2	159897	17.65	172440	22.83	164290	25.11
06	KC-CB-01-201	177509	17.65	174547	22.82	160617	25.10
07	KC-DD-2009-2	163111	17.65	169850	22.82	157436	25.12
08	KC-IV-SPS-20	167446	17.65	167618	22.82	158417	25.09
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/13/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	229567	24.99				
	UPPER LIMIT	459134					
	LOWER LIMIT	114784					
	CCAL	215324	23.98				
	UPPER LIMIT		24.48				
	LOWER LIMIT		23.48				
01	WS49MBS1	236085	23.98				
02	WS49LCSS1	240893	23.98				
03	WS49LCSDS1	231019	23.99				
04	KC-VT-1593-2	207090	24.00				
05	KC-VT-1593-2	222724	24.00				
06	KC-CB-01-201	221209	23.99				
07	KC-DD-2009-2	216475	24.00				
08	KC-IV-SPS-20	214830	23.99				
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24							
25							

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/14/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	45250	8.99	166754	11.64	106910	15.54
	UPPER LIMIT	90500		333508		213820	
	LOWER LIMIT	22625		83377		53455	
	CCAL	38921	7.95	147394	10.56	93424	14.39
	UPPER LIMIT		8.45		11.06		14.89
	LOWER LIMIT		7.45		10.06		13.89
01	KC-VT-1593-2	51803	7.96	200423	10.57	119167	14.41
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/14/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	179783	18.82	192841	23.90	184310	26.35
	UPPER LIMIT	359566		385682		368620	
	LOWER LIMIT	89892		96420		92155	
	CCAL	157890	17.62	168131	22.86	148837	25.16
	UPPER LIMIT		18.12		23.36		25.66
	LOWER LIMIT		17.12		22.36		24.66
01	KC-VT-1593-2	190945	17.66	177051	22.92	171951	25.23
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

LRQ9 : 80132

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/14/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	229567	24.99				
	UPPER LIMIT	459134					
	LOWER LIMIT	114784					
	CCAL	210456	24.07				
	UPPER LIMIT		24.57				
	LOWER LIMIT		23.57				
01	KC-VT-1593-2	235826	24.14				
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

SIM Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: KC-VT-1593-20130530-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 18:03
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.9 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**2.0**	**4.9**	**360**
106-46-7	1,4-Dichlorobenzene	1.2	4.9	< 4.9 U
120-82-1	1,2,4-Trichlorobenzene	1.8	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	1.2	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	0.94	4.9	< 4.9 U
131-11-3	Dimethylphthalate	1.3	4.9	< 4.9 U
84-66-2	**Diethylphthalate**	**3.2**	**4.9**	**6.2 B**
85-68-7	**Butylbenzylphthalate**	**2.8**	**4.9**	**7.3 Q**
95-48-7	2-Methylphenol	1.8	4.9	< 4.9 U
105-67-9	**2,4-Dimethylphenol**	**2.8**	**20**	**3.8 J**
86-30-6	N-Nitrosodiphenylamine	1.4	20	< 20 U
100-51-6	Benzyl Alcohol	6.9	20	< 20 U
87-86-5	Pentachlorophenol	14	49	< 49 U
95-50-1	1,2-Dichlorobenzene	1.1	4.9	< 4.9 U
541-73-1	1,3-Dichlorobenzene	1.3	4.9	< 4.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	9.3	12	< 12 U
62-75-9	N-Nitrosodimethylamine	3.1	25	< 25 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	60.0%
d14-p-Terphenyl	80.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: KC-CB-01-20130530-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WR99E
LIMS ID: 13-11545
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 19:53
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.8 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**2.0**	**4.9**	**68**
106-46-7	1,4-Dichlorobenzene	1.2	4.9	< 4.9 U
120-82-1	1,2,4-Trichlorobenzene	1.8	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	1.2	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	0.94	4.9	< 4.9 U
131-11-3	**Dimethylphthalate**	**1.3**	**4.9**	**4.3 J**
84-66-2	**Diethylphthalate**	**3.2**	**4.9**	**28 B**
85-68-7	**Butylbenzylphthalate**	**2.8**	**4.9**	**28 Q**
95-48-7	2-Methylphenol	1.8	4.9	< 4.9 U
105-67-9	2,4-Dimethylphenol	2.8	20	< 20 U
86-30-6	**N-Nitrosodiphenylamine**	**1.4**	**20**	**3.5 J**
100-51-6	Benzyl Alcohol	6.9	20	< 20 U
87-86-5	Pentachlorophenol	14	49	< 49 U
95-50-1	1,2-Dichlorobenzene	1.1	4.9	< 4.9 U
541-73-1	1,3-Dichlorobenzene	1.3	4.9	< 4.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	9.3	12	< 12 U
62-75-9	N-Nitrosodimethylamine	3.1	25	< 25 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	61.6%
d14-p-Terphenyl	76.6%

WR99:00137

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: KC-DD-2009-20130530-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WR99F
LIMS ID: 13-11546
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 20:30
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 3.72 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 38.1 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**5.4**	**13**	**350**
106-46-7	1,4-Dichlorobenzene	3.2	13	< 13 U
120-82-1	1,2,4-Trichlorobenzene	5.0	13	< 13 U
118-74-1	Hexachlorobenzene	3.4	13	< 13 U
87-68-3	Hexachlorobutadiene	2.6	13	< 13 U
131-11-3	**Dimethylphthalate**	**3.6**	**13**	**26**
84-66-2	**Diethylphthalate**	**8.8**	**13**	**29 B**
85-68-7	**Butylbenzylphthalate**	**7.8**	**13**	**450 Q**
95-48-7	**2-Methylphenol**	**4.9**	**13**	**7.0 J**
105-67-9	2,4-Dimethylphenol	7.8	54	< 54 U
86-30-6	**N-Nitrosodiphenylamine**	**3.7**	**54**	**13 J**
100-51-6	Benzyl Alcohol	19	54	< 54 U
87-86-5	Pentachlorophenol	38	130	< 130 U
95-50-1	1,2-Dichlorobenzene	3.0	13	< 13 U
541-73-1	1,3-Dichlorobenzene	3.5	13	< 13 U
621-64-7	N-Nitroso-Di-N-Propylamine	25	32	< 32 U
62-75-9	N-Nitrosodimethylamine	8.5	67	< 67 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	55.2%
d14-p-Terphenyl	73.2%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Client ID	FPH	TER	TOT OUT
MB-060813	62.4%	82.4%	0
LCS-060813	69.7%	84.4%	0
LCSD-060813	68.0%	85.6%	0
KC-VT-1593-20130530-S	60.0%	80.0%	0
KC-VT-1593-20130530-S MS	62.3%	80.6%	0
KC-VT-1593-20130530-S MSD	58.0%	71.2%	0
KC-CB-01-20130530-S	61.6%	76.6%	0
KC-DD-2009-20130530-S	55.2%	73.2%	0

	LCS/MB LIMITS	QC LIMITS
(FPH) = 2-Fluorophenol	(32-100)	(27-100)
(TER) = d14-p-Terphenyl	(42-124)	(37-111)

Prep Method: SW3546
Log Number Range: 13-11544 to 13-11546

WR99:60139

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: KC-VT-1593-20130530-S**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted MS/MSD: 06/08/13

Sample Amount MS: 10.18 g-dry-wt
MSD: 10.16 g-dry-wt

Date Analyzed MS: 06/13/13 18:40
MSD: 06/13/13 19:16

Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL

Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ

Dilution Factor MS: 1.00
MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Dibenz(a,h)anthracene	360	771 E	491	83.7%	637 E	492	56.3%	19.0%
1,4-Dichlorobenzene	< 4.9 U	289	491	58.9%	271	492	55.1%	6.4%
1,2,4-Trichlorobenzene	< 4.9 U	315	491	64.2%	295	492	60.0%	6.6%
Hexachlorobenzene	< 4.9 U	398	491	81.1%	362	492	73.6%	9.5%
Hexachlorobutadiene	< 4.9 U	303	491	61.7%	281	492	57.1%	7.5%
Dimethylphthalate	< 4.9 U	433	491	88.2%	394	492	80.1%	9.4%
Diethylphthalate	6.2 B	457 B	491	91.8%	404 B	492	80.9%	12.3%
Butylbenzylphthalate	7.3 Q	569 EQ	491	114%	502 EQ	492	101%	12.5%
2-Methylphenol	< 4.9 U	278	491	56.6%	274	492	55.7%	1.4%
2,4-Dimethylphenol	3.8 J	371	1470	25.0%	528	1480	35.4%	34.9%
N-Nitrosodiphenylamine	< 20 U	481	491	98.0%	426	492	86.6%	12.1%
Benzyl Alcohol	< 20 U	347	491	70.7%	293	492	59.6%	16.9%
Pentachlorophenol	< 49 U	1310 E	1470	89.1%	1220 E	1480	82.4%	7.1%
1,2-Dichlorobenzene	< 4.9 U	298	491	60.7%	278	492	56.5%	6.9%
1,3-Dichlorobenzene	< 4.9 U	286	491	58.2%	270	492	54.9%	5.8%
N-Nitroso-Di-N-Propylamine	< 12 U	368	491	74.9%	340	492	69.1%	7.9%
N-Nitrosodimethylamine	< 25 U	867	1470	59.0%	799	1480	54.0%	8.2%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: KC-VT-1593-20130530-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 18:40
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.9 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	2.0	4.9	---
106-46-7	1,4-Dichlorobenzene	1.2	4.9	---
120-82-1	1,2,4-Trichlorobenzene	1.8	4.9	---
118-74-1	Hexachlorobenzene	1.2	4.9	---
87-68-3	Hexachlorobutadiene	0.94	4.9	---
131-11-3	Dimethylphthalate	1.3	4.9	---
84-66-2	Diethylphthalate	3.2	4.9	---
85-68-7	Butylbenzylphthalate	2.8	4.9	---
95-48-7	2-Methylphenol	1.8	4.9	---
105-67-9	2,4-Dimethylphenol	2.8	20	---
86-30-6	N-Nitrosodiphenylamine	1.4	20	---
100-51-6	Benzyl Alcohol	6.9	20	---
87-86-5	Pentachlorophenol	14	49	---
95-50-1	1,2-Dichlorobenzene	1.1	4.9	---
541-73-1	1,3-Dichlorobenzene	1.3	4.9	---
621-64-7	N-Nitroso-Di-N-Propylamine	9.3	12	---
62-75-9	N-Nitrosodimethylamine	3.1	25	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	62.3%
d14-p-Terphenyl	80.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: KC-VT-1593-20130530-S**
Extraction Method: SW3546 **MATRIX SPIKE DUP**

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 19:16
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.9 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	2.0	4.9	---
106-46-7	1,4-Dichlorobenzene	1.2	4.9	---
120-82-1	1,2,4-Trichlorobenzene	1.8	4.9	---
118-74-1	Hexachlorobenzene	1.2	4.9	---
87-68-3	Hexachlorobutadiene	0.94	4.9	---
131-11-3	Dimethylphthalate	1.3	4.9	---
84-66-2	Diethylphthalate	3.2	4.9	---
85-68-7	Butylbenzylphthalate	2.8	4.9	---
95-48-7	2-Methylphenol	1.8	4.9	---
105-67-9	2,4-Dimethylphenol	2.8	20	---
86-30-6	N-Nitrosodiphenylamine	1.4	20	---
100-51-6	Benzyl Alcohol	6.9	20	---
87-86-5	Pentachlorophenol	14	49	---
95-50-1	1,2-Dichlorobenzene	1.1	4.9	---
541-73-1	1,3-Dichlorobenzene	1.3	4.9	---
621-64-7	N-Nitroso-Di-N-Propylamine	9.3	12	---
62-75-9	N-Nitrosodimethylamine	3.1	25	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	58.0%
d14-p-Terphenyl	71.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-060813**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-060813
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/08/13

Sample Amount LCS: 10.00 g-dry-wt
LCSD: 10.00 g-dry-wt
Date Analyzed LCS: 06/13/13 14:21
LCSD: 06/13/13 14:58
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Dibenz(a,h)anthracene	385	500	77.0%	404	500	80.8%	4.8%
1,4-Dichlorobenzene	312	500	62.4%	311	500	62.2%	0.3%
1,2,4-Trichlorobenzene	334	500	66.8%	329	500	65.8%	1.5%
Hexachlorobenzene	350	500	70.0%	351	500	70.2%	0.3%
Hexachlorobutadiene	321	500	64.2%	320	500	64.0%	0.3%
Dimethylphthalate	428	500	85.6%	428	500	85.6%	0.0%
Diethylphthalate	437 B	500	87.4%	439 B	500	87.8%	0.5%
Butylbenzylphthalate	576 Q	500	115%	597 Q	500	119%	3.6%
2-Methylphenol	310	500	62.0%	326	500	65.2%	5.0%
2,4-Dimethylphenol	547	1500	36.5%	631	1500	42.1%	14.3%
N-Nitrosodiphenylamine	448	500	89.6%	458	500	91.6%	2.2%
Benzyl Alcohol	318	500	63.6%	276	500	55.2%	14.1%
Pentachlorophenol	1280 E	1500	85.3%	1310 E	1500	87.3%	2.3%
1,2-Dichlorobenzene	320	500	64.0%	318	500	63.6%	0.6%
1,3-Dichlorobenzene	312	500	62.4%	311	500	62.2%	0.3%
N-Nitroso-Di-N-Propylamine	371	500	74.2%	374	500	74.8%	0.8%
N-Nitrosodimethylamine	992	1500	66.1%	977	1500	65.1%	1.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
2-Fluorophenol	69.7%	68.0%
d14-p-Terphenyl	84.4%	85.6%

WR99 : 00142

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WS49MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WS21

Project: FOX AVENUE S SOURCE

Lab File ID: WS49MB

Date Extracted: 06/08/13

Instrument ID: NT10

Date Analyzed: 06/13/13

Matrix: SOLID

Time Analyzed: 1345

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WS49LCSS1	WS49LCSS1	WS49SB	06/13/13
02	WS49LCSDS1	WS49LCSDS1	WS49SBD	06/13/13
03	FA-1-S	WS49A	WS49A	06/13/13
04	FA-2-4	WS49B	WS49B	06/13/13
05	FA-3-2	WS49C	WS49C	06/13/13
06	FA-4-3	WS49D	WS49D	06/13/13
07	KC-VT-1593-20130	WR99D	WR99D	06/13/13
08	KC-VT-1593-2013	WR99DMS	WR99DMS	06/13/13
09	KC-VT-1593-2013	WR99DMSD	WR99DMSD	06/13/13
10	KC-CB-01-2013053	WR99E	WR99E	06/13/13
11	KC-DD-2009-20130	WR99F	WR99F	06/13/13
12	KC-IV-SPS-201305	WS21A	WS21A	06/13/13
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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: MB-060813**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-060813
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 13:45
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	2.0	5.0	< 5.0 U
106-46-7	1,4-Dichlorobenzene	1.2	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.9	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.96	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.3	5.0	< 5.0 U
84-66-2	**Diethylphthalate**	**3.3**	**5.0**	**8.5**
85-68-7	Butylbenzylphthalate	2.9	5.0	< 5.0 U
95-48-7	2-Methylphenol	1.8	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	2.9	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	1.4	20	< 20 U
100-51-6	Benzyl Alcohol	7.0	20	< 20 U
87-86-5	Pentachlorophenol	14	50	< 50 U
95-50-1	1,2-Dichlorobenzene	1.1	5.0	< 5.0 U
541-73-1	1,3-Dichlorobenzene	1.3	5.0	< 5.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	9.5	12	< 12 U
62-75-9	N-Nitrosodimethylamine	3.2	25	< 25 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	62.4%
d14-p-Terphenyl	82.4%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES

DFTPP Injection Date: 04/29/13 DFTPP Injection Time: 1637

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	16.7
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Mass 69 relative abundance	32.0
70	Less than 2.0% of mass 69	0.1 (0.5)1
127	10.0 - 80.0% of mass 198	44.8
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	27.4
365	Greater than 1.0% of mass 198	4.00
441	0.0 - 24.0% of mass 442	16.8 (15.6)2
442	50.0 - 200.0% of mass 198	108.0
443	15.0 - 24.0% of mass 442	20.8 (19.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0429A	IC0429A	04/29/13	1653
02		IC0429C	IC0429C	04/29/13	1807
03		IC0429D	IC0429D	04/29/13	1844
04		IC0429F	IC0429F	04/29/13	1957
05		IC0429G	IC0429G	04/29/13	2034
06		IC0429H	IC0429H	04/29/13	2111
07					
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22					

URS : 80146

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES

DFTPP Injection Date: 06/13/13 DFTPP Injection Time: 1216

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.1
68	Less than 2.0% of mass 69	0.7 (1.8)1
69	Mass 69 relative abundance	40.0
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	10.0 - 80.0% of mass 198	49.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	25.1
365	Greater than 1.0% of mass 198	3.19
441	0.0 - 24.0% of mass 442	11.6 (14.7)2
442	50.0 - 200.0% of mass 198	79.0
443	15.0 - 24.0% of mass 442	14.6 (18.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0613A	CC0613A	06/13/13	1307
02	WS49MBS1	WS49MBS1	WS49MB	06/13/13	1345
03	WS49LCSS1	WS49LCSS1	WS49SB	06/13/13	1421
04	WS49LCSDS1	WS49LCSDS1	WS49SBD	06/13/13	1458
05	FA-1-S	WS49A	WS49A	06/13/13	1535
06	FA-2-4	WS49B	WS49B	06/13/13	1612
07	FA-3-2	WS49C	WS49C	06/13/13	1649
08	FA-4-3	WS49D	WS49D	06/13/13	1726
09	KC-VT-1593-20130	WR99D	WR99D	06/13/13	1803
10	KC-VT-1593-2013	WR99DMS	WR99DMS	06/13/13	1840
11	KC-VT-1593-2013	WR99DMSD	WR99DMSD	06/13/13	1916
12	KC-CB-01-2013053	WR99E	WR99E	06/13/13	1953
13	KC-DD-2009-20130	WR99F	WR99F	06/13/13	2030
14	KC-IV-SPS-201305	WS21A	WS21A	06/13/13	2107
15					
16					
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21					
22					

WR99:0014?

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES

Instrument ID: NT10 Calibration Date: 04/29/13

Method = SIM.b/SIMABN2.m
Cal levels = 7

LAB FILE ID: RRF0.05=IC0429F RRF0.1=IC0429H RRF0.2=IC0429C
RRF0.5=IC0429I RRF1 =IC0429D RRF2.5=IC0429G
RRF5 =IC0429A

COMPOUND	RRF 0.05	RRF 0.1	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	$\overline{RRF}$	%RSD /R^2
Phenol	2.193	1.937	2.061	1.929	1.947	2.088	1.982	2.020	4.9
1,3-Dichlorobenzene	1.876	1.752	1.728	1.588	1.573	1.595	1.539	1.664	7.4
1,4-Dichlorobenzene	1.919	1.703	1.739	1.578	1.552	1.578	1.529	1.657	8.5
1,2-Dichlorobenzene	1.801	1.618	1.674	1.494	1.476	1.511	1.447	1.574	8.2
Benzyl alcohol	1.014	0.924	0.960	0.916	0.949	1.024	0.993	0.968	4.4
2-Methylphenol	1.595	1.392	1.487	1.364	1.397	1.471	1.401	1.444	5.6
N-Nitroso-di-n-propylamine	0.914	0.806	0.850	0.799	0.801	0.850	0.783	0.829	5.5
4-Methylphenol	1.588	1.377	1.517	1.385	1.444	1.521	1.461	1.470	5.2
2,4-Dimethylphenol	0.406	0.356	0.404	0.372	0.385	0.404	0.385	0.387	4.8
1,2,4-Trichlorobenzene	0.443	0.394	0.409	0.363	0.361	0.366	0.347	0.383	8.8
Hexachlorobutadiene	0.272	0.237	0.244	0.221	0.219	0.226	0.215	0.233	8.5
Dimethylphthalate	1.295	1.185	1.226	1.063	1.108	1.111	1.090	1.154	7.3
Diethylphthalate	1.489	1.226	1.394	1.181	1.282	1.302	1.275	1.307	8.0
N-Nitrosodiphenylamine (1)	0.394	0.383	0.485	0.433	0.463	0.459	0.453	0.438	8.5
Hexachlorobenzene	0.376	0.301	0.330	0.268	0.276	0.273	0.274	0.300	13.4
Pentachlorophenol	0.145	0.138	0.182	0.166	0.190	0.205	0.220	0.178	17.1
Butylbenzylphthalate	0.361	0.291	0.415	0.320	0.389	0.402	0.419	0.371	13.3
Dibenzo(a,h)anthracene	0.974	0.783	0.989	0.789	0.879	0.896	0.932	0.892	9.2
N-Nitrosodimethylamine	0.902	0.860	0.851	0.863	0.840	0.902	0.815	0.862	3.7
2-Fluorophenol	1.520	1.352	1.446	1.312	1.367	1.434	1.396	1.404	4.9
Terphenyl-d14	0.565	0.465	0.538	0.444	0.480	0.471	0.478	0.492	8.8

(1) Cannot be seperated from Diphenylamine
<- Outside QC limits: %RSD <20% or R^2 > 0.990

WS9 : 80118

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES

Instrument ID: NT10 Cont. Calib. Date: 06/13/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1307

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.020	2.385	0.800	AVRG	18.1	
1,3-Dichlorobenzene	1.664	1.562	0.010	AVRG	-6.1	
1,4-Dichlorobenzene	1.657	1.547	0.010	AVRG	-6.6	
1,2-Dichlorobenzene	1.574	1.500	0.010	AVRG	-4.7	
Benzyl alcohol	0.968	0.831	0.010	AVRG	-14.2	
2-Methylphenol	1.444	1.623	0.700	AVRG	12.4	
N-Nitroso-di-n-propylamine	0.829	0.860	0.500	AVRG	3.7	
4-Methylphenol	1.470	1.570	0.600	AVRG	6.8	
2,4-Dimethylphenol	0.387	0.380	0.200	AVRG	-1.8	
1,2,4-Trichlorobenzene	0.383	0.366	0.010	AVRG	-4.4	
Hexachlorobutadiene	0.233	0.217	0.010	AVRG	-6.9	
Dimethylphthalate	1.154	1.182	0.010	AVRG	2.4	
Diethylphthalate	1.307	1.368	0.010	AVRG	4.7	
N-Nitrosodiphenylamine(1)	0.438	0.479	0.010	AVRG	9.4	
Hexachlorobenzene	0.300	0.286	0.100	AVRG	-4.7	
Pentachlorophenol	0.178	0.166	0.050	AVRG	-6.7	
Butylbenzylphthalate	0.371	0.453	0.010	AVRG	22.1	<-
Dibenzo(a,h)anthracene	0.892	0.944	0.400	AVRG	5.8	
N-Nitrosodimethylamine	0.862	0.846	0.010	AVRG	-1.8	
2-Fluorophenol	1.405	1.429	0.010	AVRG	1.7	
Terphenyl-d14	0.492	0.508	0.010	AVRG	3.2	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WR99:00149

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES

Ical Midpoint ID: IC0429D Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/13/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	52658	8.98	192325	11.65	109274	15.54
	UPPER LIMIT	105316		384650		218548	
	LOWER LIMIT	26329		96162		54637	
	CCAL	58483	8.06	213145	10.64	116288	14.43
	UPPER LIMIT		8.56		11.14		14.93
	LOWER LIMIT		7.56		10.14		13.93
01	WS49MBS1	56989	8.07	218544	10.64	119177	14.44
02	WS49LCSS1	57812	8.07	210144	10.64	114587	14.44
03	WS49LCSDS1	55629	8.07	203083	10.64	112054	14.44
04	FA-1-S	51149	8.07	192718	10.64	102356	14.44
05	FA-2-4	51777	8.07	197537	10.65	104929	14.45
06	FA-3-2	55896	8.07	213575	10.65	114040	14.45
07	FA-4-3	48857	8.07	186953	10.65	97684	14.45
08	KC-VT-1593-2	55422	8.07	212390	10.65	113058	14.45
09	KC-VT-1593-2	51687	8.07	189590	10.65	102081	14.45
10	KC-VT-1593-2	55494	8.07	202065	10.65	109663	14.45
11	KC-CB-01-201	56517	8.07	213384	10.65	114345	14.45
12	KC-DD-2009-2	54904	8.07	207233	10.65	112128	14.45
13	KC-IV-SPS-20	56710	8.07	214283	10.65	108036	14.45
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

WR99 : 00158

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS21 | Project: NPDES

Ical Midpoint ID: IC0429D | Ical Date: 04/29/13

Instrument ID: NT10 | Cont. Cal Date: 06/13/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	203933	18.82	223647	23.90	211919	26.35
	UPPER LIMIT	407866		447294		423838	
	LOWER LIMIT	101966		111824		105960	
	CCAL	220667	17.63	232122	22.81	213159	25.07
	UPPER LIMIT		18.13		23.31		25.57
	LOWER LIMIT		17.13		22.31		24.57
01	WS49MBS1	223736	17.64	232122	22.81	210573	25.07
02	WS49LCSS1	211440	17.64	228571	22.81	213817	25.08
03	WS49LCSDS1	206704	17.64	218716	22.81	207476	25.08
04	FA-1-S	182203	17.64	184530	22.82	175902	25.10
05	FA-2-4	187131	17.64	183259	22.82	180421	25.10
06	FA-3-2	199383	17.64	198447	22.82	188502	25.11
07	FA-4-3	174407	17.64	174319	22.82	171345	25.11
08	KC-VT-1593-2	203862	17.65	197388	22.84	188689	25.12
09	KC-VT-1593-2	174416	17.65	187437	22.83	181554	25.11
10	KC-VT-1593-2	185441	17.65	204036	22.83	198486	25.11
11	KC-CB-01-201	207913	17.64	204651	22.82	194068	25.11
12	KC-DD-2009-2	188798	17.65	199317	22.83	185586	25.11
13	KC-IV-SPS-20	198678	17.65	201377	22.82	192571	25.10
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

WR99:00151

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: KC-VT-1593-20130530-W**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: WR99A
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/10/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/05/13
Date Analyzed: 06/08/13 13:55
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
91-20-3	**Naphthalene**	**0.00085**	**0.010**	**0.072**
91-57-6	**2-Methylnaphthalene**	**0.00072**	**0.010**	**0.018**
90-12-0	**1-Methylnaphthalene**	**0.00088**	**0.010**	**0.088**
208-96-8	**Acenaphthylene**	**0.00081**	**0.010**	**0.047**
83-32-9	**Acenaphthene**	**0.00083**	**0.010**	**2.2 E**
86-73-7	**Fluorene**	**0.0014**	**0.010**	**0.76**
85-01-8	**Phenanthrene**	**0.0010**	**0.010**	**0.083**
120-12-7	**Anthracene**	**0.00058**	**0.010**	**0.074**
206-44-0	**Fluoranthene**	**0.00092**	**0.010**	**0.28**
129-00-0	**Pyrene**	**0.00070**	**0.010**	**0.20**
56-55-3	Benzo(a)anthracene	0.0013	0.010	< 0.010 U
218-01-9	Chrysene	0.0016	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0025	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.00085	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0011	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0018	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.00097	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.0019	0.010	< 0.010 U
132-64-9	**Dibenzofuran**	**0.00094**	**0.010**	**0.54**
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	85.0%
d10-2-Methylnaphthalene	72.7%
d14-Dibenzo(a,h)anthracen	85.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: KC-VT-1593-20130530-W**
Extraction Method: SW3510C **DILUTION**

Lab Sample ID: WR99A
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/10/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/05/13
Date Analyzed: 06/08/13 14:49
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 3.00

CAS Number	Analyte	DL	LOQ	Result
91-20-3	**Naphthalene**	**0.0026**	**0.030**	**0.074**
91-57-6	2-Methylnaphthalene	0.0022	0.030	< 0.030 U
90-12-0	**1-Methylnaphthalene**	**0.0026**	**0.030**	**0.089**
208-96-8	**Acenaphthylene**	**0.0024**	**0.030**	**0.049**
83-32-9	**Acenaphthene**	**0.0025**	**0.030**	**2.7**
86-73-7	**Fluorene**	**0.0042**	**0.030**	**0.79**
85-01-8	**Phenanthrene**	**0.0030**	**0.030**	**0.079**
120-12-7	**Anthracene**	**0.0017**	**0.030**	**0.068**
206-44-0	**Fluoranthene**	**0.0028**	**0.030**	**0.28**
129-00-0	**Pyrene**	**0.0021**	**0.030**	**0.19**
56-55-3	Benzo(a)anthracene	0.0038	0.030	< 0.030 U
218-01-9	Chrysene	0.0047	0.030	< 0.030 U
205-99-2	Benzo(b)fluoranthene	0.0076	0.030	< 0.030 U
207-08-9	Benzo(k)fluoranthene	0.0026	0.030	< 0.030 U
50-32-8	Benzo(a)pyrene	0.0034	0.030	< 0.030 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0055	0.030	< 0.030 U
53-70-3	Dibenz(a,h)anthracene	0.0029	0.030	< 0.030 U
191-24-2	Benzo(g,h,i)perylene	0.0056	0.030	< 0.030 U
132-64-9	**Dibenzofuran**	**0.0028**	**0.030**	**0.56**
TOTBFA	Total Benzofluoranthenes	0.0076	0.060	< 0.060 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	82.4%
d10-2-Methylnaphthalene	75.7%
d14-Dibenzo(a,h)anthracen	78.2%

WR99 : 00154

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Client ID	FLN	MNP	DBA	TOT OUT
MB-060513	84.3%	74.0%	91.0%	0
LCS-060513	93.7%	81.7%	90.0%	0
LCSD-060513	94.3%	85.0%	92.3%	0
KC-VT-1593-20130530-W	85.0%	72.7%	85.7%	0
KC-VT-1593-20130530-W DL	82.4%	75.7%	78.2%	0

	LCS/MB LIMITS	QC LIMITS
(FLN) = d10-Fluoranthene	(30-160)	(30-150)
(MNP) = d10-2-Methylnaphthalene	(40-120)	(35-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(31-120)	(26-120)

Prep Method: SW3510C
Log Number Range: 13-11541 to 13-11541

WR99 : 20155

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LCS-060513**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-060513
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/10/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 06/05/13

Date Analyzed LCS: 06/08/13 12:52
LCSD: 06/08/13 13:23
Instrument/Analyst LCS: NT11/VTS
LCSD: NT11/VTS

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	0.229	0.300	76.3%	0.250	0.300	83.3%	8.8%
2-Methylnaphthalene	0.208	0.300	69.3%	0.228	0.300	76.0%	9.2%
1-Methylnaphthalene	0.208	0.300	69.3%	0.227	0.300	75.7%	8.7%
Acenaphthylene	0.224	0.300	74.7%	0.240	0.300	80.0%	6.9%
Acenaphthene	0.212	0.300	70.7%	0.227	0.300	75.7%	6.8%
Fluorene	0.214	0.300	71.3%	0.229	0.300	76.3%	6.8%
Phenanthrene	0.238	0.300	79.3%	0.259	0.300	86.3%	8.5%
Anthracene	0.226	0.300	75.3%	0.246	0.300	82.0%	8.5%
Fluoranthene	0.230	0.300	76.7%	0.244	0.300	81.3%	5.9%
Pyrene	0.275	0.300	91.7%	0.304	0.300	101%	10.0%
Benzo(a)anthracene	0.257	0.300	85.7%	0.279	0.300	93.0%	8.2%
Chrysene	0.257	0.300	85.7%	0.281	0.300	93.7%	8.9%
Benzo(b)fluoranthene	0.256	0.300	85.3%	0.277	0.300	92.3%	7.9%
Benzo(k)fluoranthene	0.246	0.300	82.0%	0.265	0.300	88.3%	7.4%
Benzo(a)pyrene	0.228	0.300	76.0%	0.248	0.300	82.7%	8.4%
Indeno(1,2,3-cd)pyrene	0.247	0.300	82.3%	0.267	0.300	89.0%	7.8%
Dibenz(a,h)anthracene	0.233	0.300	77.7%	0.259	0.300	86.3%	10.6%
Benzo(g,h,i)perylene	0.238	0.300	79.3%	0.259	0.300	86.3%	8.5%
Dibenzofuran	0.216	0.300	72.0%	0.228	0.300	76.0%	5.4%
Total Benzofluoranthenes	0.764	0.900	84.9%	0.824	0.900	91.6%	7.6%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-Fluoranthene	93.7%	94.3%
d10-2-Methylnaphthalene	81.7%	85.0%
d14-Dibenzo(a,h)anthracene	90.0%	92.3%

WR99 : 00156

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WR99MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WR99

Project: NPDES SAMPLING SUPPO

Lab File ID: WR99MB

Date Extracted: 06/05/13

Instrument ID: NT11

Date Analyzed: 06/08/13

Matrix: LIQUID

Time Analyzed: 1219

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WR99LCSW1	WR99LCSW1	WR99SB	06/08/13
02	WR99LCSDW1	WR99LCSDW1	WR99SBD	06/08/13
03	KC-VT-1593-20130	WR99A	WR99A	06/08/13
04	KC-VT-1593-20130	WR99A	WR99ADL	06/08/13
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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MB-060513**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-060513
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/10/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/08/13 12:19
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	0.00085	0.010	< 0.010 U
91-57-6	2-Methylnaphthalene	0.00072	0.010	< 0.010 U
90-12-0	1-Methylnaphthalene	0.00088	0.010	< 0.010 U
208-96-8	Acenaphthylene	0.00081	0.010	< 0.010 U
83-32-9	Acenaphthene	0.00083	0.010	< 0.010 U
86-73-7	Fluorene	0.0014	0.010	< 0.010 U
85-01-8	Phenanthrene	0.0010	0.010	< 0.010 U
120-12-7	Anthracene	0.00058	0.010	< 0.010 U
206-44-0	Fluoranthene	0.00092	0.010	< 0.010 U
129-00-0	Pyrene	0.00070	0.010	< 0.010 U
56-55-3	Benzo(a)anthracene	0.0013	0.010	< 0.010 U
218-01-9	Chrysene	0.0016	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0025	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.00085	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0011	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0018	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.00097	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.0019	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.00094	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	84.3%
d10-2-Methylnaphthalene	74.0%
d14-Dibenzo(a,h)anthracen	91.0%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT11 Project: NPDES SAMPLING

DFTPP Injection Date: 02/23/13 DFTPP Injection Time: 0936

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	32.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	37.1
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	48.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	23.6
365	Greater than 1.0% of mass 198	2.90
441	0.0 - 24.0% of mass 442	13.0 (14.7)2
442	50.0 - 200.0% of mass 198	88.6
443	15.0 - 24.0% of mass 442	17.0 (19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SIM 250	IC0223A	02/23/13	0951
02		SIM 1000	IC0223B	02/23/13	1020
03		SIM 10	IC0223C	02/23/13	1050
04		SIM 500	IC0223D	02/23/13	1119
05		SIM 50	IC0223E	02/23/13	1148
06		SIM 100	IC0223F	02/23/13	1217
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4293 : 60159

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT11 Project: NPDES SAMPLING

DFTPP Injection Date: 06/08/13 DFTPP Injection Time: 1125

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	54.4
68	Less than 2.0% of mass 69	0.6 (1.4)1
69	Mass 69 relative abundance	46.3
70	Less than 2.0% of mass 69	0.3 (0.8)1
127	10.0 - 80.0% of mass 198	53.8
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 60.0% of mass 198	20.0
365	Greater than 1.0% of mass 198	2.95
441	0.0 - 24.0% of mass 442	14.7 (16.3)2
442	50.0 - 200.0% of mass 198	89.9
443	15.0 - 24.0% of mass 442	18.4 (20.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SIM 250	CC0608	06/08/13	1144
02	WR99MBW1	WR99MBW1	WR99MB	06/08/13	1219
03	WR99LCSW1	WR99LCSW1	WR99SB	06/08/13	1252
04	WR99LCSDW1	WR99LCSDW1	WR99SBD	06/08/13	1323
05	KC-VT-1593-20130	WR99A	WR99A	06/08/13	1355
06	KC-VT-1593-20130	WR99A	WR99ADL	06/08/13	1449
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6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT11 Calibration Date: 02/23/13

Method = lowsim.m
Cal levels = 6

LAB FILE ID: RRF10 =IC0223C RRF50 =IC0223E RRF100=IC0223F
RRF250=IC0223A RRF500=IC0223D RRF1000=IC0223B

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	___ RRF	%RSD /R^2
Naphthalene	1.180	1.070	1.122	1.072	1.056	1.070	1.095	4.3
2-Methylnaphthalene	0.700	0.654	0.700	0.688	0.678	0.691	0.685	2.5
Acenaphthylene	1.840	1.680	1.755	1.786	1.782	1.871	1.786	3.7
Acenaphthene	1.228	1.136	1.199	1.164	1.165	1.180	1.179	2.7
Dibenzofuran	1.818	1.675	1.786	1.661	1.669	1.694	1.717	3.9
Fluorene	1.337	1.223	1.283	1.270	1.271	1.306	1.282	3.0
Phenanthrene	1.291	1.191	1.283	1.207	1.215	1.224	1.235	3.4
Anthracene	1.162	1.072	1.181	1.160	1.159	1.219	1.159	4.2
Fluoranthene	1.216	1.137	1.251	1.236	1.236	1.252	1.221	3.6
Pyrene	1.744	1.537	1.695	1.674	1.700	1.699	1.675	4.3
Benzo(a)anthracene	1.430	1.292	1.401	1.399	1.379	1.402	1.384	3.4
Chrysene	1.514	1.356	1.486	1.406	1.411	1.408	1.430	4.1
Benzo(b)fluoranthene	1.639	1.535	1.649	1.505	1.610	1.572	1.585	3.6
Benzo(k)fluoranthene	1.829	1.548	1.664	1.774	1.758	1.769	1.724	5.9
Benzo(j)fluoranthene	1.711	1.801	1.886	1.701	1.704	1.693	1.749	4.5
Benzo(a)pyrene	1.375	1.251	1.359	1.348	1.342	1.352	1.338	3.3
Indeno(1,2,3-cd)pyrene	1.643	1.524	1.703	1.647	1.676	1.686	1.646	3.9
Dibenzo(a,h)anthracene	1.423	1.201	1.366	1.301	1.324	1.329	1.324	5.6
Benzo(g,h,i)perylene	1.637	1.395	1.504	1.428	1.448	1.427	1.473	6.0
1-methylnaphthalene	0.740	0.654	0.700	0.684	0.672	0.684	0.689	4.3
Perylene	1.606	1.450	1.575	1.502	1.503	1.508	1.524	3.7
2-Methylnaphthalene-d10	0.630	0.616	0.649	0.635	0.629	0.638	0.633	1.7
Dibenzo(a,h)anthracene-d14	1.083	1.081	1.180	1.163	1.172	1.179	1.143	4.2
Fluoranthene-d10	0.998	0.959	1.044	1.065	1.060	1.094	1.037	4.7

<- Outside QC limits: %RSD <20% or R^2 > 0.990

WR99 : 00151

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Instrument ID: NT11 Cont. Calib. Date: 06/08/13

Init. Calib. Date: 02/23/13 Cont. Calib. Time: 1144

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	1.095	1.088	0.700	AVRG	-0.6
2-Methylnaphthalene	0.685	0.626	0.400	AVRG	-8.6
Acenaphthylene	1.786	1.717	0.900	AVRG	-3.9
Acenaphthene	1.179	1.069	0.900	AVRG	-9.3
Dibenzofuran	1.717	1.547	0.800	AVRG	-9.9
Fluorene	1.282	1.120	0.900	AVRG	-12.6
Phenanthrene	1.235	1.256	0.700	AVRG	1.7
Anthracene	1.159	1.211	0.700	AVRG	4.5
Fluoranthene	1.221	1.136	0.600	AVRG	-7.0
Pyrene	1.675	1.732	0.600	AVRG	3.4
Benzo(a)anthracene	1.384	1.391	0.800	AVRG	0.5
Chrysene	1.430	1.456	0.700	AVRG	1.8
Benzo(b)fluoranthene	1.585	1.526	0.700	AVRG	-3.7
Benzo(k)fluoranthene	1.724	1.651	0.700	AVRG	-4.2
Benzo(j)fluoranthene	1.749	1.784	0.010	AVRG	2.0
Benzo(a)pyrene	1.338	1.360	0.700	AVRG	1.6
Indeno(1,2,3-cd)pyrene	1.646	1.667	0.500	AVRG	1.3
Dibenzo(a,h)anthracene	1.324	1.294	0.400	AVRG	-2.3
Benzo(g,h,i)perylene	1.473	1.440	0.500	AVRG	-2.2
1-methylnaphthalene	0.689	0.627	0.010	AVRG	-9.0
Perylene	1.524	1.540	0.010	AVRG	1.0
2-Methylnaphthalene-d10	0.633	0.622	0.010	AVRG	-1.7
Dibenzo(a,h)anthracene-d14	1.143	1.172	0.010	AVRG	2.5
Fluoranthene-d10	1.037	1.054	0.010	AVRG	1.6

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Ical Midpoint ID: IC0223A Ical Date: 02/23/13

Instrument ID: NT11 Cont. Cal Date: 06/08/13

		IS1(NPT) AREA #	RT #	IS2(ANT) AREA #	RT #	IS3(PHN) AREA #	RT #
	ICAL MIDPT	255285	6.13	142891	9.11	220853	11.76
	UPPER LIMIT	510570		285782		441706	
	LOWER LIMIT	127642		71446		110426	
	CCAL	347438	5.99	189057	8.94	238826	11.59
	UPPER LIMIT		6.49		9.44		12.09
	LOWER LIMIT		5.49		8.44		11.09
01	WR99MBW1	321688	5.99	167973	8.94	223753	11.59
02	WR99LCSW1	308391	5.99	168261	8.94	230221	11.59
03	WR99LCSDW1	309684	5.99	169813	8.94	224578	11.59
04	KC-VT-1593-2	339111	5.98	176688	8.94	238647	11.59
05	KC-VT-1593-2	302902	5.98	159634	8.94	216123	11.59
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IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

WR99 : 061552

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WR99 Project: NPDES SAMPLING

Ical Midpoint ID: IC0223A Ical Date: 02/23/13

Instrument ID: NT11 Cont. Cal Date: 06/08/13

		IS4(CRY) AREA #	RT #	IS5(PRY) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	162525	16.47	139028	19.06		
	UPPER LIMIT	325050		278056			
	LOWER LIMIT	81262		69514			
	CCAL	152482	16.28	143287	18.81		
	UPPER LIMIT		16.78		19.31		
	LOWER LIMIT		15.78		18.31		
01	WR99MBW1	128263	16.28	115847	18.81		
02	WR99LCSW1	144124	16.28	128071	18.81		
03	WR99LCSDW1	134216	16.28	120366	18.81		
04	KC-VT-1593-2	133547	16.28	118137	18.81		
05	KC-VT-1593-2	120145	16.28	108969	18.82		
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IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: KC-VT-1593-20130530-S

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 21:07
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	1.12	0.65-0.89		0.965	0.423	JEMPC
2,3,7,8-TCDD	0.54	0.65-0.89		0.965	0.452	BJEMPC
1,2,3,7,8-PeCDF	1.13	1.32-1.78		0.965	0.384	BJEMPC
2,3,4,7,8-PeCDF	1.45	1.32-1.78		0.965	0.741	BJ
1,2,3,7,8-PeCDD	1.62	1.32-1.78		0.965	1.10	
1,2,3,4,7,8-HxCDF	1.17	1.05-1.43		0.965	1.11	B
1,2,3,6,7,8-HxCDF	1.41	1.05-1.43		0.965	0.718	BJ
2,3,4,6,7,8-HxCDF	1.19	1.05-1.43		0.965	1.03	B
1,2,3,7,8,9-HxCDF	1.23	1.05-1.43		0.965	0.506	J
1,2,3,4,7,8-HxCDD	1.09	1.05-1.43		0.965	1.01	
1,2,3,6,7,8-HxCDD	1.10	1.05-1.43		0.965	2.49	
1,2,3,7,8,9-HxCDD	1.21	1.05-1.43		0.965	2.18	
1,2,3,4,6,7,8-HpCDF	1.00	0.88-1.20		0.965	6.31	
1,2,3,4,7,8,9-HpCDF	0.63	0.88-1.20		0.965	0.438	JEMPC
1,2,3,4,6,7,8-HpCDD	1.00	0.88-1.20		0.965	39.7	
OCDF	0.90	0.76-1.02		1.93	10.6	
OCDD	0.87	0.76-1.02		1.93	315	

Homologue Group	EDL	RL	Result	
Total TCDF		0.965	16.8	EMPC
Total TCDD		0.965	6.78	EMPC
Total PeCDF		1.93	43.2	EMPC
Total PeCDD		0.965	10.8	EMPC
Total HxCDF		1.93	22.8	EMPC
Total HxCDD		1.93	29.2	EMPC
Total HpCDF		1.93	16.7	EMPC
Total HpCDD		1.93	95.9	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 3.29

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 3.29

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: KC-VT-1593-20130530-S**

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 21:07
Instrument/Analyst: AS1/PK

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.76	0.65-0.89	76.0	24-169	
13C-2,3,7,8-TCDD	0.76	0.65-0.89	87.3	25-164	
13C-1,2,3,7,8-PeCDF	1.54	1.32-1.78	81.3	24-185	
13C-2,3,4,7,8-PeCDF	1.55	1.32-1.78	82.8	21-178	
13C-1,2,3,7,8-PeCDD	1.54	1.32-1.78	90.7	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	87.3	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	79.8	26-123	
13C-2,3,4,6,7,8-HxCDF	0.50	0.43-0.59	77.7	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	67.2	29-147	
13C-1,2,3,4,7,8-HxCDD	1.23	1.05-1.43	90.7	32-141	
13C-1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	88.6	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	68.9	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	72.7	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	78.9	23-140	
13C-OCDD	0.88	0.76-1.02	69.2	17-157	
37Cl4-2,3,7,8-TCDD			90.4	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-060513**

Lab Sample ID: OPR-060513
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 17:38
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.78	0.65-0.89	1.00	19.7
2,3,7,8-TCDD	0.74	0.65-0.89	1.00	20.6
1,2,3,7,8-PeCDF	1.55	1.32-1.78	1.00	99.0
2,3,4,7,8-PeCDF	1.51	1.32-1.78	1.00	94.6
1,2,3,7,8-PeCDD	1.50	1.32-1.78	1.00	95.2
1,2,3,4,7,8-HxCDF	1.20	1.05-1.43	1.00	98.6
1,2,3,6,7,8-HxCDF	1.19	1.05-1.43	1.00	101
2,3,4,6,7,8-HxCDF	1.24	1.05-1.43	1.00	96.0
1,2,3,7,8,9-HxCDF	1.21	1.05-1.43	1.00	98.9
1,2,3,4,7,8-HxCDD	1.24	1.05-1.43	1.00	93.1
1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	1.00	97.4
1,2,3,7,8,9-HxCDD	1.32	1.05-1.43	1.00	88.9
1,2,3,4,6,7,8-HpCDF	1.01	0.88-1.20	1.00	110
1,2,3,4,7,8,9-HpCDF	0.99	0.88-1.20	1.00	94.8
1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	1.00	95.4
OCDF	0.85	0.76-1.02	2.00	182
OCDD	0.86	0.76-1.02	2.00	197

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	20.5	
Total TCDD		1.00	21.3	EMPC
Total PeCDF		2.00	200	EMPC
Total PeCDD		1.00	95.8	EMPC
Total HxCDF		2.00	398	EMPC
Total HxCDD		2.00	282	EMPC
Total HpCDF		2.00	208	EMPC
Total HpCDD		2.00	99.5	

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-060513**

Lab Sample ID: OPR-060513
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 17:38
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.75	0.65-0.89	71.6	22-152	
13C-2,3,7,8-TCDD	0.76	0.65-0.89	82.8	20-175	
13C-1,2,3,7,8-PeCDF	1.53	1.32-1.78	78.9	21-192	
13C-2,3,4,7,8-PeCDF	1.53	1.32-1.78	75.2	13-328	
13C-1,2,3,7,8-PeCDD	1.55	1.32-1.78	83.3	21-227	
13C-1,2,3,4,7,8-HxCDF	0.50	0.43-0.59	88.0	19-202	
13C-1,2,3,6,7,8-HxCDF	0.49	0.43-0.59	95.2	21-159	
13C-2,3,4,6,7,8-HxCDF	0.50	0.43-0.59	86.4	22-176	
13C-1,2,3,7,8,9-HxCDF	0.50	0.43-0.59	75.2	17-205	
13C-1,2,3,4,7,8-HxCDD	1.24	1.05-1.43	93.6	21-193	
13C-1,2,3,6,7,8-HxCDD	1.23	1.05-1.43	99.9	25-163	
13C-1,2,3,4,6,7,8-HpCDF	0.43	0.37-0.51	71.8	21-158	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	69.6	20-186	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	80.8	26-166	
13C-OCDD	0.91	0.76-1.02	66.8	13-198	
37Cl4-2,3,7,8-TCDD			88.5	31-191	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-060513**

Lab Sample ID: OPR-060513
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 17:38
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	OPR	Spiked	Recovery	Limits
2,3,7,8-TCDF	19.7	20.0	98.5	75-158
2,3,7,8-TCDD	20.6	20.0	103	67-158
1,2,3,7,8-PeCDF	99.0	100	99.0	80-134
2,3,4,7,8-PeCDF	94.6	100	94.6	68-160
1,2,3,7,8-PeCDD	95.2	100	95.2	70-142
1,2,3,4,7,8-HxCDF	98.6	100	98.6	72-134
1,2,3,6,7,8-HxCDF	101	100	101	84-130
2,3,4,6,7,8-HxCDF	96.0	100	96.0	70-156
1,2,3,7,8,9-HxCDF	98.9	100	98.9	78-130
1,2,3,4,7,8-HxCDD	93.1	100	93.1	70-164
1,2,3,6,7,8-HxCDD	97.4	100	97.4	76-134
1,2,3,7,8,9-HxCDD	88.9	100	88.9	64-162
1,2,3,4,6,7,8-HpCDF	110	100	110	82-132
1,2,3,4,7,8,9-HpCDF	94.8	100	94.8	78-138
1,2,3,4,6,7,8-HpCDD	95.4	100	95.4	70-140
OCDF	182	200	91.0	63-170
OCDD	197	200	98.5	78-144

Reported in pg/g

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

Blank No.
WR99MB

Lab Name: ANALYTICAL RESOURCES, INC.
Contract: SAIC
Lab Code: WR99
Project: NPDES SAMPLING
Matrix:(Soil/Water/Ash/Tissue/Oil) SOIL
Lab Sample ID: WR99MBS
Sample wt/vol: 10 (g/ml) g
Lab File ID: 13061704
Water Sample Prep: (sep/spe)
Date Received: 31-MAY-13
GC Column: RTX-DIOXIN2 ID: 0.25 mm
Date Extracted: 05-JUN-13
Instrument ID: AUTOSPEC1
Date Analyzed: 17-JUN-13

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
WR99OPR	WS30OPR	13061705	06/17/13
KC-IV-SPS-20130531-S	WS21A	13061707	06/17/13
KC-VT-1593-20130530-S	WR99D	13061709	06/17/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-060513**

Lab Sample ID: MB-060513
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 16:45
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF		0.65-0.89	0.160	1.00	< 0.160	U
2,3,7,8-TCDD	0.67	0.65-0.89		1.00	0.212	J
1,2,3,7,8-PeCDF	1.02	1.32-1.78		1.00	0.296	JEMPC
2,3,4,7,8-PeCDF	1.29	1.32-1.78		1.00	0.326	JEMPC
1,2,3,7,8-PeCDD		1.32-1.78	0.190	1.00	< 0.190	U
1,2,3,4,7,8-HxCDF	1.30	1.05-1.43		1.00	0.182	J
1,2,3,6,7,8-HxCDF	0.66	1.05-1.43		1.00	0.202	JEMPC
2,3,4,6,7,8-HxCDF	1.96	1.05-1.43		1.00	0.206	JEMPC
1,2,3,7,8,9-HxCDF		1.05-1.43	0.124	1.00	< 0.124	U
1,2,3,4,7,8-HxCDD		1.05-1.43	0.156	1.00	< 0.156	U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.158	1.00	< 0.158	U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.158	1.00	< 0.158	U
1,2,3,4,6,7,8-HpCDF	1.88	0.88-1.20		1.00	0.162	JEMPC
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.188	1.00	< 0.188	U
1,2,3,4,6,7,8-HpCDD	0.72	0.88-1.20		1.00	0.502	JEMPC
OCDF		0.76-1.02	0.340	2.00	< 0.340	U
OCDD	1.16	0.76-1.02		2.00	3.18	EMPC

Homologue Group	EDL	RL	Result	
Total TCDF	0.160	1.00	< 0.160	U
Total TCDD		1.00	1.23	EMPC
Total PeCDF		2.00	0.773	EMPC
Total PeCDD	0.190	1.00	0.513	EMPC
Total HxCDF		2.00	0.591	EMPC
Total HxCDD	0.158	2.00	1.83	EMPC
Total HpCDF		2.00	0.322	EMPC
Total HpCDD		2.00	1.59	EMPC

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.39

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.52

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-060513**

Lab Sample ID: MB-060513
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 16:45
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.76	0.65-0.89	69.8	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	76.4	25-164	
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	75.6	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	71.2	21-178	
13C-1,2,3,7,8-PeCDD	1.53	1.32-1.78	77.6	25-181	
13C-1,2,3,4,7,8-HxCDF	0.50	0.43-0.59	97.1	26-152	
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	104	26-123	
13C-2,3,4,6,7,8-HxCDF	0.50	0.43-0.59	94.2	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	79.8	29-147	
13C-1,2,3,4,7,8-HxCDD	1.20	1.05-1.43	99.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.21	1.05-1.43	110	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.43	0.37-0.51	82.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	74.0	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.01	0.88-1.20	89.8	23-140	
13C-OCDD	0.85	0.76-1.02	76.8	17-157	
37Cl4-2,3,7,8-TCDD			84.3	35-197	

Reported in Percent Recovery

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

Standard No.: CS3

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WR99 Project: NPDES SAMPLING

GC Column: RTX-DIOXIN2 ID: 0.25 mm Lab File ID: 13061702

Instrument ID: AUTOSPEC1 Date Analyzed: 17-JUN-13

Time Analyzed: 1449

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	24.36	27.84
TCDF	23.09	28.11
PeCDD	29.62	32.76
PeCDF	27.95	33.15
HxCDD	34.86	37.56
HxCDF	34.06	37.99
HpCDD	40.66	41.97
HpCDF	40.10	42.90

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

Standard No.

TETRA ISC

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WR99	Project:	NPDES SAMPLING
GC Column:	RTX-DIOXIN2 ID: .25 mm	Lab File ID:	13061703
Instrument:	AUTOSPEC1	Date Analyzed:	17-JUN-13
		Time Analyzed:	1554

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

1278-TCDD/2378-TCDD: 11.2

Quality Control (QC) Limits:

Percent Valley between the TCDD isomers must be less than or equal to 25%

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

3467-TCDF/2378-TCDF: 8.9

QC Limits:

Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WR99 Project: NPDES SAMPLING

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 06-JUN-13

Init: Calib. Times: 14:34 to 19:01

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
CS3	CS3	13061702	06/17/13	1449
ISC01	ISC	13061703	06/17/13	1554
WR99MB	WS30MBS	13061704	06/17/13	1645
WR99OPR	WS30OPR	13061705	06/17/13	1738
KC-IV-SPS-20130531-S	WS21A	13061707	06/17/13	1922
KC-VT-1593-20130530-S	WR99D	13061709	06/17/13	2107
CS3	CS3	13061713	06/18/13	0036

6DFA - Form VI-HR CDD-1
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WR99	Case No.:	NPDES SAMPLING
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	06-Jun-13	Init.Calib.Time CSL:	14:34:26
Init.Calib.Date CS1:	06-Jun-13	Init.Calib.Time CS1:	15:31:00
Init.Calib.Date CS2:	06-Jun-13	Init.Calib.Time CS2:	16:22:19
Init.Calib.Date CS3:	06-Jun-13	Init.Calib.Time CS3:	17:15:21
Init.Calib.Date CS4:	06-Jun-13	Init.Calib.Time CS4:	18:08:22
Init.Calib.Date CS5:	06-Jun-13	Init.Calib.Time CS5:	19:01:24

Target Analytes	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	0.00	0.88	0.91	0.94	0.97	0.99	0.94	4.5	20.0
2378-TCDF	0.00	0.82	0.83	0.83	0.83	0.85	0.83	1.6	20.0
12378-PeCDF	0.84	0.84	0.85	0.86	0.87	0.87	0.85	1.5	20.0
12378-PeCDD	0.91	0.93	0.93	0.93	0.94	0.95	0.93	1.2	20.0
23478-PeCDF	0.90	0.89	0.87	0.87	0.88	0.90	0.88	1.6	20.0
123478-HxCDF	1.04	1.01	1.01	0.99	1.02	1.03	1.02	1.7	20.0
123678-HxCDF	0.99	1.00	0.99	1.00	1.00	1.01	1.00	0.9	20.0
123478-HxCDD	0.95	0.92	0.91	0.91	0.93	0.95	0.93	2.0	20.0
123678-HxCDD	0.91	0.82	0.84	0.85	0.84	0.86	0.85	3.3	20.0
123789-HxCDD[2]	0.90	0.89	0.87	0.88	0.88	0.89	0.89	0.9	20.0
234678-HxCDF	1.01	1.07	1.09	1.06	1.07	1.11	1.07	3.1	20.0
123789-HxCDF	0.96	0.95	0.92	0.94	0.95	0.96	0.95	1.6	20.0
1234678-HpCDF	1.11	1.15	1.14	1.13	1.18	1.19	1.15	2.6	20.0
1234678-HpCDD	1.07	0.97	0.93	0.93	0.94	0.96	0.97	5.5	20.0
1234789-HpCDF	1.14	1.16	1.17	1.17	1.18	1.18	1.17	1.1	20.0
OCDD	0.92	0.93	0.91	0.92	0.92	0.94	0.92	1.2	20.0
OCDF[1]	1.06	0.95	0.97	0.98	1.00	1.04	1.00	3.9	20.0
37CL-2378-TCDD	0.93	0.94	1.00	0.96	1.01	1.09	0.99	5.9	20.0

(1) The Relative Response (RR) is calculated based on the labeled analogs of the other two HxCDDs.
(2) The RR is calculated based on the labeled analog of OCDD.

Labeled Compounds	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.90	0.89	0.93	0.91	0.93	0.99	0.93	3.7	35.0
13C-12378-PeCDD	0.68	0.70	0.70	0.72	0.77	0.83	0.73	7.3	35.0
13C-123478-HxCDD	0.97	0.98	0.98	0.99	0.98	1.00	0.98	1.0	35.0
13C-123678-HxCDD	1.00	1.04	1.02	1.06	1.06	1.08	1.04	2.7	35.0
13C-1234678-HpCDD	0.84	0.90	0.90	0.91	0.92	0.88	0.89	3.1	35.0
13C-OCDD	0.80	0.83	0.89	0.84	0.88	0.85	0.85	3.7	35.0
13C-2378-TCDF	1.29	1.25	1.28	1.26	1.29	1.33	1.28	2.1	35.0
13C-12378-PeCDF	0.99	1.01	1.02	1.02	1.07	1.20	1.05	7.6	35.0
13C-23478-PeCDF	0.95	0.99	0.99	1.02	1.07	1.16	1.03	7.4	35.0
13C-123478-HxCDF	1.05	1.06	1.07	1.08	1.06	1.09	1.07	1.4	35.0
13C-123678-HxCDF	1.11	1.11	1.13	1.12	1.12	1.15	1.12	1.4	35.0
13C-234678-HxCDF	1.08	1.03	1.03	1.03	1.04	1.04	1.04	1.8	35.0
13C-123789-HxCDF	1.00	1.04	1.05	1.04	1.05	1.05	1.04	2.0	35.0
13C-1234678-HpCDF	0.91	0.96	0.98	1.00	0.98	0.96	0.96	3.0	35.0
13C-1234789-HpCDF	0.73	0.75	0.78	0.76	0.78	0.75	0.76	2.7	35.0

6DFB - Form VI-HR CDD-2

CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WR99	Case No.:	NPDES SAMPLING
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	06-Jun-13	Init.Calib.Time CSL:	14:34:26
Init.Calib.Date CS1:	06-Jun-13	Init.Calib.Time CS1:	15:31:00
Init.Calib.Date CS2:	06-Jun-13	Init.Calib.Time CS2:	16:22:19
Init.Calib.Date CS3:	06-Jun-13	Init.Calib.Time CS3:	17:15:21
Init.Calib.Date CS4:	06-Jun-13	Init.Calib.Time CS4:	18:08:22
Init.Calib.Date CS5:	06-Jun-13	Init.Calib.Time CS5:	19:01:24

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.00	0.69	0.75	0.75	0.76	0.76		0.65 - 0.89
2378-TCDF	304/306	0.00	0.88	0.71	0.77	0.74	0.75		0.65 - 0.89
12378-PeCDF	340/342	1.44	1.50	1.55	1.55	1.53	1.52		1.32 - 1.78
12378-PeCDD	356/358	1.57	1.41	1.50	1.57	1.51	1.52		1.32 - 1.78
23478-PeCDF	340/342	1.54	1.60	1.54	1.51	1.53	1.52		1.32 - 1.78
123478-HxCDF	374/376	1.14	1.16	1.18	1.24	1.21	1.22		1.05 - 1.43
123678-HxCDF	374/376	1.20	1.19	1.24	1.23	1.22	1.21		1.05 - 1.43
123478-HxCDD	390/392	1.19	1.33	1.23	1.25	1.24	1.23		1.05 - 1.43
123678-HxCDD	390/392	1.21	1.12	1.20	1.19	1.23	1.22		1.05 - 1.43
123789-HxCDD	390/392	1.12	1.14	1.21	1.22	1.23	1.22		1.05 - 1.43
234678-HxCDF	374/376	1.22	1.27	1.24	1.20	1.23	1.21		1.05 - 1.43
123789-HxCDF	374/376	1.32	1.22	1.20	1.19	1.21	1.22		1.05 - 1.43
1234678-HpCDF	408/410	0.90	0.90	1.03	1.01	0.99	1.01		0.89 - 1.21
1234678-HpCDD	424/426	1.17	0.94	1.05	1.02	1.03	1.03		0.89 - 1.21
1234789-HpCDF	408/410	1.02	1.03	1.05	1.02	1.02	1.01		0.89 - 1.21
OCDD	458/460	0.76	0.89	0.84	0.86	0.89	0.88		0.76 - 1.02
OCDF	442/444	0.88	0.85	0.87	0.89	0.88	0.88		0.76 - 1.02

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0.77	0.78	0.76	0.77	0.78	0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	1.53	1.56	1.53	1.57	1.57	1.55		1.32 - 1.78
13C-123478-HxCDD	402/404	1.24	1.25	1.26	1.26	1.25	1.25		1.05 - 1.43
13C-123678-HxCDD	402/404	1.23	1.19	1.24	1.23	1.21	1.23		1.05 - 1.43
13C-1234678-HpCDD	436/438	1.03	1.05	1.03	1.03	1.02	1.05		0.89 - 1.21
13C-OCDD	470/472	0.89	0.88	0.89	0.88	0.89	0.89		0.76 - 1.02
13C-2378-TCDF	316/318	0.77	0.76	0.77	0.77	0.77	0.76		0.65 - 0.89
13C-12378-PeCDF	352/354	1.55	1.57	1.56	1.55	1.55	1.56		1.32 - 1.78
13C-23478-PeCDF	352/354	1.57	1.55	1.55	1.55	1.56	1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	0.51	0.52	0.52	0.52	0.51	0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	0.52	0.51	0.51	0.52	0.51	0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	0.51	0.53	0.51	0.52	0.51	0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	0.52	0.51	0.51	0.51	0.52	0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.45	0.44	0.45	0.44	0.44	0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.45	0.44	0.43	0.44	0.45	0.45		0.37 - 0.51

Internal Standards	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ion Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-1234-TCDD	332/334	0.78	0.78	0.79	0.78	0.79	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	1.25	1.24	1.21	1.21	1.22	1.24		1.05 - 1.43

(#) Quality Control (QC) limits represent ±15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	SAIC
Lab Code.	WR99	Case No.:	NPDES SAMPLING
TO No..		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID	AUTOSPEC1	Lab File ID:	13061702
Date Analysed	17-Jun-13	Time Analysed	14:49:09
Init.Calib.Date:	06-JUN-13	Init.Calib Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	0.96	0.94	2.3		0.76		0.65 - 0.89
2378-TCDF	304/306	0.83	0.83	-0.6		0.75		0.65 - 0.89
12378-PeCDF	340/342	0.84	0.85	-1.6		1.52		1 32 - 1.78
12378-PeCDD	356/358	0.88	0.93	-5.1		1.55		1 32 - 1.78
23478-PeCDF	340/342	0 84	0.88	-4.8		1.49		1.32 - 1.78
123478-HxCDF	374/376	0 99	1.02	-3.0		1 18		1.05 - 1.43
123678-HxCDF	374/376	0.99	1.00	-1.4		1.17		1.05 - 1.43
123478-HxCDD	390/392	0.89	0.93	-4.2		1.23		1.05 - 1.43
123678-HxCDD	390/392	0.81	0.85	-5.5		1.21		1.05 - 1.43
123789-HxCDD	390/392	0.80	0.89	-9.2		1.26		1.05 - 1.43
234678-HxCDF	374/376	1.03	1.07	-3.1		1.24		1.05 - 1.43
123789-HxCDF	374/376	0.92	0.95	-2.8		1.23		1.05 - 1.43
1234678-HpCDF	408/410	1.11	1.15	-3.6		1.02		0.89 - 1.21
1234678-HpCDD	424/426	0.88	0.97	-9.2		1.02		0.89 - 1.21
1234789-HpCDF	408/410	1.12	1.17	-4.1		1.03		0.89 - 1.21
OCDD	458/460	0.87	0.92	-5.2		0.88		0.76 - 1.02
OCDF	442/444	0.90	1.00	-10.0		0.90		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.82	0.93	-11.6		0.76		0.65 - 0.89
13C-12378-PeCDD	368/370	0.65	0.73	-11 5		1.52		1.32 - 1.78
13C-123478-HxCDD	402/404	1.05	0.98	6 7		1.24		1.05 - 1.43
13C-123678-HxCDD	402/404	1.12	1.04	7 7		1.24		1.05 - 1 43
13C-1234678-HpCDD	436/438	0.91	0 89	2.6		1.03		0.89 - 1.21
13C-OCDD	470/472	0 89	0.85	4.7		0.87		0 76 - 1.02
13C-2378-TCDF	316/318	1.05	1.28	-18.4		0 74		0 65 - 0.89
13C-12378-PeCDF	352/354	0.88	1.05	-16.4		1.53		1.32 - 1.78
13C-23478-PeCDF	352/354	0.86	1.03	-16.5		1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	1 12	1.07	5.2		0.50		0.43 - 0.59
13C-123678-HxCDF	384/386	1.17	1.12	4.5		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	1.04	1.04	0.2		0.50		0.43 - 0.59
13C-123789-HxCDF	384/386	0.94	1.04	-9 5		0.51		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.93	0.96	-3.2		0.43		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.69	0.76	-9.5		0.44		0.37 - 0 51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	0.87	0.99	-11.9		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.21		1.05 - 1 43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	SAIC
Lab Code:	WR99	Case No.:	NPDES SAMPLING
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13061702
Date Analysed	17-Jun-13	Time Analysed	14:49:09
Init.Calib.Date:	06-JUN-13	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	27.24
2378-TCDF	1.00	26.60
12378-PeCDF	1.00	30 76
12378-PeCDD	1.00	32 36
23478-PeCDF	1 00	32.11
123478-HxCDF	1 00	35.79
123678-HxCDF	1.00	35.95
123478-HxCDD	1 00	37.02
123678-HxCDD	1.00	37.14
123789-HxCDD	1.01	37.56
234678-HxCDF	1.00	36.89
123789-HxCDF	1.00	37.99
1234678-HpCDF	1.00	40.10
1234678-HpCDD	1.00	41.98
1234789-HpCDF	1 00	42.90
OCDD	1.00	48.10
OCDF	1.01	48.39

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.23
13C-12378-PeCDD	1.22	32.34
13C-123478-HxCDD	0.99	37.00
13C-123678-HxCDD	0.99	37.13
13C-1234678-HpCDD	1.12	41.95
13C-OCDD	1.28	48.08
13C-2378-TCDF	1.01	26.59
13C-12378-PeCDF	1.16	30.74
13C-23478-PeCDF	1.22	32.09
13C-123478-HxCDF	0 95	35 77
13C-123678-HxCDF	0.96	35.93
13C-234678-HxCDF	0.98	36.87
13C-123789-HxCDF	1.01	37.98
13C-1234678-HpCDF	1.07	40.08
13C-1234789-HpCDF	1.14	42.88

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	27.24

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.41
13C-123789-HxCDD	0.00	37.55

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract	SAIC
Lab Code:	WR99	Case No :	NPDES SAMPLING
TO No :		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm)	25
Instrument ID.	AUTOSPEC1	Lab File ID:	13061713
Date Analysed	18-Jun-13	Time Analysed	00.36.31
Init Calib.Date:	06-JUN-13	Init.Calib.Time.	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	0 92	0.94	-1.9		0.76		0.65 - 0 89
2378-TCDF	304/306	0.76	0.83	-8.3		0.74		0 65 - 0 89
12378-PeCDF	340/342	0.81	0.85	-5.6		1 45		1.32 - 1.78
12378-PeCDD	356/358	0.86	0 93	-7.4		1.50		1.32 - 1.78
23478-PeCDF	340/342	0 81	0 88	-8.3		1.50		1.32 - 1 78
123478-HxCDF	374/376	0.95	1 02	-6.2		1.22		1.05 - 1 43
123678-HxCDF	374/376	0.95	1.00	-4.5		1 17		1.05 - 1.43
123478-HxCDD	390/392	0 84	0.93	-9.2		1.24		1 05 - 1.43
123678-HxCDD	390/392	0.83	0.85	-3.2		1 22		1.05 - 1.43
123789-HxCDD	390/392	0.79	0 89	-10.8		1.19		1.05 - 1.43
234678-HxCDF	374/376	1.03	1.07	-3.6		1 21		1 05 - 1.43
123789-HxCDF	374/376	0.88	0.95	-7.0		1 16		1.05 - 1.43
1234678-HpCDF	408/410	1.11	1.15	-3.9		0 97		0 89 - 1.21
1234678-HpCDD	424/426	0.88	0 97	-9.3		1 01		0.89 - 1.21
1234789-HpCDF	408/410	1 12	1.17	-4.2		0 99		0 89 - 1 21
OCDD	458/460	0.88	0 92	-4.8		0 88		0.76 - 1.02
OCDF	442/444	0 87	1 00	-13.1		0.87		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.92	0 93	-0.3		0 78		0 65 - 0.89
13C-12378-PeCDD	368/370	0.71	0 73	-3.8		1 56		1 32 - 1.78
13C-123478-HxCDD	402/404	1.04	0.98	5.6		1 23		1.05 - 1.43
13C-123678-HxCDD	402/404	1.08	1 04	3.9		1 21		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.84	0.89	-5.3		1.03		0.89 - 1.21
13C-OCDD	470/472	0.81	0 85	-4.7		0.87		0.76 - 1.02
13C-2378-TCDF	316/318	1 16	1.28	-9.3		0.76		0.65 - 0.89
13C-12378-PeCDF	352/354	0.93	1.05	-11 6		1.52		1.32 - 1.78
13C-23478-PeCDF	352/354	0.91	1.03	-11 4		1.51		1.32 - 1 78
13C-123478-HxCDF	384/386	1 06	1.07	-0.7		0.51		0.43 - 0 59
13C-123678-HxCDF	384/386	1.11	1.12	-1.2		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	0.98	1.04	-5.4		0.50		0.43 - 0 59
13C-123789-HxCDF	384/386	0.94	1.04	-9 4		0.51		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.84	0.96	-13 2		0.43		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.64	0.76	-15.3		0.43		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	0.98	0.99	-1.1		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.22		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	SAIC
Lab Code:	WR99	Case No.:	NPDES SAMPLING
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13061713
Date Analysed	18-Jun-13	Time Analysed	00:36:31
Init.Calib.Date:	06-JUN-13	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	27.20
2378-TCDF	1.00	26.56
12378-PeCDF	1.00	30.72
12378-PeCDD	1.00	32.33
23478-PeCDF	1 00	32.07
123478-HxCDF	1 00	35.75
123678-HxCDF	1.00	35.90
123478-HxCDD	1.00	36.98
123678-HxCDD	1.00	37.11
123789-HxCDD	1.01	37.53
234678-HxCDF	1.00	36.85
123789-HxCDF	1.00	37.97
1234678-HpCDF	1.00	40.07
1234678-HpCDD	1.00	41.93
1234789-HpCDF	1.00	42.85
OCDD	1.00	48.06
OCDF	1.01	48.35

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.18
13C-12378-PeCDD	1.23	32 31
13C-123478-HxCDD	0.99	36.97
13C-123678-HxCDD	0.99	37.10
13C-1234678-HpCDD	1.12	41.91
13C-OCDD	1.28	48.03
13C-2378-TCDF	1.01	26.54
13C-12378-PeCDF	1.16	30.71
13C-23478-PeCDF	1.22	32.06
13C-123478-HxCDF	0.95	35.74
13C-123678-HxCDF	0.96	35.88
13C-234678-HxCDF	0.98	36.84
13C-123789-HxCDF	1.01	37.94
13C-1234678-HpCDF	1.07	40 05
13C-1234789-HpCDF	1.14	42 84

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	27.20

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26 36
13C-123789-HxCDD	0.00	37.52

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: KC-VT-1593-20130530-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WR99A
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized: mw
Reported: 06/14/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/05/13
Date Analyzed: 06/12/13 16:44
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: No
Florisil Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.0085	0.050	< 0.050 U
319-85-7	beta-BHC	0.0098	0.050	< 0.050 U
319-86-8	delta-BHC	0.0087	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.016	0.050	< 0.050 U
76-44-8	Heptachlor	0.011	0.050	< 0.050 U
309-00-2	Aldrin	0.010	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.0079	0.050	< 0.050 U
959-98-8	Endosulfan I	0.0089	0.050	< 0.050 U
60-57-1	Dieldrin	0.017	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.018	0.10	< 0.10 U
72-20-8	Endrin	0.017	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.014	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.019	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.024	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.017	0.10	< 0.10 U
72-43-5	Methoxychlor	0.074	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.015	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.016	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.0082	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.0082	0.050	< 0.050 U
8001-35-2	Toxaphene	0.22	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.010	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.012	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	71.8%
Tetrachlorometaxylene	57.5%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

WR99 - 13541

ANALYTICAL RESOURCES INCORPORATED

SW8081/PESTICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-060513	62.5%	60.8%	0
LCS-060513	58.0%	60.0%	0
LCSD-060513	58.2%	57.0%	0
KC-VT-1593-20130530-W	71.8%	57.5%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(37-125)	(11-144)
(TCMX) = Tetrachlorometaxylene	(38-103)	(30-105)

Prep Method: SW3510C
Log Number Range: 13-11541 to 13-11541

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-060513**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-060513 QC Report No: WR99-SAIC
LIMS ID: 13-11541 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: 05/30/13
Reported: 06/14/13 Date Received: 05/31/13

Date Extracted LCS/LCSD: 06/05/13 Sample Amount LCS: 500 mL
LCSD: 500 mL
Date Analyzed LCS: 06/12/13 16:08 Final Extract Volume LCS: 5.0 mL
LCSD: 06/12/13 16:26 LCSD: 5.0 mL
Instrument/Analyst LCS: ECD6/JGR Dilution Factor LCS: 1.00
LCSD: ECD6/JGR LCSD: 1.00
GPC Cleanup: No Sulfur Cleanup: No
Florisil Cleanup: No Silica Gel: No

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	0.171	0.200	85.5%	0.169	0.200	84.5%	1.2%
beta-BHC	0.166	0.200	83.0%	0.165	0.200	82.5%	0.6%
delta-BHC	0.186	0.200	93.0%	0.183	0.200	91.5%	1.6%
gamma-BHC (Lindane)	0.177	0.200	88.5%	0.176	0.200	88.0%	0.6%
Heptachlor	0.153	0.200	76.5%	0.151	0.200	75.5%	1.3%
Aldrin	0.145	0.200	72.5%	0.143	0.200	71.5%	1.4%
Heptachlor Epoxide	0.191	0.200	95.5%	0.188	0.200	94.0%	1.6%
Endosulfan I	0.194	0.200	97.0%	0.191	0.200	95.5%	1.6%
Dieldrin	0.385	0.400	96.2%	0.381	0.400	95.2%	1.0%
4,4'-DDE	0.413	0.400	103%	0.412	0.400	103%	0.2%
Endrin	0.361	0.400	90.2%	0.356	0.400	89.0%	1.4%
Endosulfan II	0.332	0.400	83.0%	0.326	0.400	81.5%	1.8%
4,4'-DDD	0.312	0.400	78.0%	0.306	0.400	76.5%	1.9%
Endosulfan Sulfate	0.328	0.400	82.0%	0.323	0.400	80.8%	1.5%
4,4'-DDT	0.335	0.400	83.8%	0.331	0.400	82.8%	1.2%
Methoxychlor	1.56	2.00	78.0%	1.55	2.00	77.5%	0.6%
Endrin Ketone	0.326	0.400	81.5%	0.322	0.400	80.5%	1.2%
Endrin Aldehyde	0.281	0.400	70.2%	0.270	0.400	67.5%	4.0%
trans-Chlordane	0.182	0.200	91.0%	0.180	0.200	90.0%	1.1%
cis-Chlordane	0.186	0.200	93.0%	0.183	0.200	91.5%	1.6%
Hexachlorobenzene	0.140	0.200	70.0%	0.140	0.200	70.0%	0.0%
Hexachlorobutadiene	0.100	0.200	50.0%	0.0935	0.200	46.8%	6.7%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	58.0%	58.2%
Tetrachlorometaxylene	60.0%	57.0%

Results reported in µg/L (ppb)
RPD calculated using sample concentrations per SW846.

WR99 : 00185

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WR99MBW1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WR99
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WR99MBW1
Lab File ID: 0612A012

Date Extracted: 06/05/13
Matrix: LIQUID

Date Analyzed: 06/12/13
Instrument ID: ECD6

Time Analyzed: 1550
GC Columns: STX-CLP1/STX-CLP2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WR99LCSW1	WR99LCSW1	06/12/13
02	WR99LCSDW1	WR99LCSDW1	06/12/13
03	KC-VT-1593-20130530	WR99A	06/12/13

ALL RUNS ARE DUAL COLUMN

FORM IV PCB

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: MB-060513**
Extraction Method: SW3510C **METHOD BLANK**

Page 1 of 1
Lab Sample ID: MB-060513 QC Report No: WR99-SAIC
LIMS ID: 13-11541 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: NA
Reported: 06/14/13 Date Received: NA

Date Extracted: 06/05/13 Sample Amount: 500 mL
Date Analyzed: 06/12/13 15:50 Final Extract Volume: 5.0 mL
Instrument/Analyst: ECD6/JGR Dilution Factor: 1.00
GPC Cleanup: No Silica Gel: No
Sulfur Cleanup: No
Florisil Cleanup: No

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.0085	0.050	< 0.050 U
319-85-7	beta-BHC	0.0098	0.050	< 0.050 U
319-86-8	delta-BHC	0.0087	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.016	0.050	< 0.050 U
76-44-8	Heptachlor	0.011	0.050	< 0.050 U
309-00-2	Aldrin	0.010	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.0079	0.050	< 0.050 U
959-98-8	Endosulfan I	0.0089	0.050	< 0.050 U
60-57-1	Dieldrin	0.017	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.018	0.10	< 0.10 U
72-20-8	Endrin	0.017	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.014	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.019	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.024	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.017	0.10	< 0.10 U
72-43-5	Methoxychlor	0.074	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.015	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.016	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.0082	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.0082	0.050	< 0.050 U
8001-35-2	Toxaphene	0.22	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.010	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.012	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	62.5%
Tetrachlorometaxylene	60.8%

WR99:00138

6D
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

COMPOUND	RT OF STANDARDS							MEAN RT	RT WINDOW FROM	RT WINDOW TO
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7			
alpha-BHC	4.33	4.33	4.33	4.33	4.28	4.33	4.33	4.32	4.23	4.33
beta-BHC	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.59	4.69
delta-BHC	4.86	4.86	4.86	4.86	4.81	4.86	4.86	4.85	4.76	4.86
gamma-BHC (Lindane)	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.52	4.62
Heptachlor	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	4.96	5.06
Aldrin	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.25	5.35
Heptachlor epoxide b	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.83	5.93
Endosulfan I	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.21	6.31
Dieldrin	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.43	6.53
4,4'-DDE	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.13	6.23
Endrin	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.65	6.75
Endosulfan II	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.85	6.95
4,4'-DDD	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Endosulfan sulfate	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.62	7.72
4,4'-DDT	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.94	7.04
Methoxychlor	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.37	7.47
Endrin ketone	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.92	7.88	7.98
Endrin aldehyde	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.23	7.33
gamma-Chlordane	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.95	6.05
alpha-Chlordane	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.07	6.17
Hexachlorobutadiene	2.34	2.34	2.34	2.34	2.31	2.34	2.34	2.34	2.26	2.36
Hexachlorobenzene	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.09	4.19
Tetrachloro-m-xylene	3.84	3.84	3.84	3.84	3.80	3.84	3.83	3.83	3.75	3.85
Decachlorobiphenyl	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.72	8.82

WR99:00189

6D
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

COMPOUND	RT OF STANDARDS							MEAN	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.76	4.76	4.76	4.75	4.71	4.75	4.75	4.75	4.66	4.76
beta-BHC	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.09	5.19
delta-BHC	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.40	5.50
gamma-BHC (Lindane)	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.01	5.11
Heptachlor	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.48	5.58
Aldrin	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.82	5.92
Heptachlor epoxide b	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.37	6.47
Endosulfan I	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.76	6.86
Dieldrin	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.02	7.12
4,4'-DDE	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.82	6.92
Endrin	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.31	7.41
Endosulfan II	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.49	7.59
4,4'-DDD	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.36	7.46
Endosulfan sulfate	8.14	8.14	8.14	8.14	8.09	8.14	8.13	8.13	8.04	8.14
4,4'-DDT	7.75	7.75	7.75	7.75	7.69	7.74	7.74	7.74	7.64	7.74
Methoxychlor	8.33	8.33	8.33	8.33	8.28	8.33	8.33	8.32	8.23	8.33
Endrin ketone	8.63	8.63	8.63	8.63	8.58	8.63	8.63	8.62	8.53	8.63
Endrin aldehyde	7.90	7.90	7.89	7.89	7.84	7.89	7.89	7.89	7.79	7.89
gamma-Chlordane	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.55	6.65
alpha-Chlordane	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Hexachlorobutadiene	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.42	2.52
Hexachlorobenzene	4.64	4.64	4.64	4.63	4.58	4.63	4.63	4.63	4.53	4.63
Tetrachloro-m-xylene	4.17	4.17	4.17	4.17	4.13	4.17	4.17	4.16	4.08	4.18
Decachlorobiphenyl	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.67	9.77

WR99 : 06190

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.5968	1.5392	1.5872	1.6901	1.7297	1.7443	2.0426	1.7043	9.9
beta-BHC	0.7301	0.6823	0.6738	0.6482	0.6413	0.6319	0.7220	0.6756	5.7
delta-BHC	1.2786	1.2619	1.3188	1.4477	1.4389	1.4775	1.7328	1.4223	11.4
gamma-BHC (Lindane)	1.3776	1.3221	1.3739	1.4737	1.5045	1.5173	1.7699	1.4770	10.1
Heptachlor	1.4402	1.3545	1.3699	1.4447	1.4364	1.4095	1.5937	1.4356	5.4
Aldrin	1.3391	1.3219	1.3589	1.4306	1.4442	1.4284	1.6236	1.4210	7.2
Heptachlor epoxide b	1.3188	1.2294	1.2355	1.2904	1.2630	1.2402	1.3930	1.2815	4.6
Endosulfan I	1.3372	1.2241	1.1948	1.2064	1.1670	1.1231	1.2589	1.2159	5.6
Dieldrin	1.2814	1.2331	1.2629	1.3180	1.2916	1.2529	1.4056	1.2922	4.4
4,4'-DDE	1.0790	0.9920	0.9834	1.0026	1.0023	1.0038	1.1801	1.0347	6.9
Endrin	1.0004	0.9514	0.9880	1.0588	1.0584	1.0706	1.2004	1.0468	7.7
Endosulfan II	1.1252	1.0889	1.0545	1.1510	1.1162	1.1303	1.2764	1.1346	6.2
4,4'-DDD	1.2252	1.1470	1.1595	1.2032	1.1608	1.1774	1.3268	1.2000	5.2
Endosulfan sulfate	1.0443	0.9656	0.9745	1.0088	0.9846	1.0061	1.1424	1.0180	6.0
4,4'-DDT	1.0032	0.9598	0.9927	1.0672	1.0551	1.1004	1.2648	1.0633	9.5
Methoxychlor	0.5427	0.5024	0.4926	0.4960	0.4752	0.4831	0.5639	0.5080	6.4
Endrin ketone	1.4418	1.2742	1.2510	1.2600	1.2054	1.2244	1.3916	1.2926	6.9
Endrin aldehyde	1.0145	0.9294	0.9220	0.9490	0.9087	0.9217	1.0364	0.9545	5.3
gamma-Chlordane	1.3433	1.2904	1.3019	1.3866	1.3786	1.3702	1.5490	1.3743	6.2
alpha-Chlordane	1.2651	1.1864	1.2049	1.2783	1.2847	1.2776	1.4501	1.2782	6.7
Hexachlorobutadiene	1.7932	1.6939	1.7496	1.7815	1.7512	1.7130	1.9878	1.7814	5.5
Hexachlorobenzene	1.4975	1.3905	1.3345	1.3248	1.2691	1.2270	1.3907	1.3477	6.6
Tetrachloro-m-xylene	1.0573	1.0250	1.0491	1.0957	1.1043	1.0784	1.2256	1.0908	6.0
Decachlorobiphenyl	1.3691	1.1703	1.1864	1.0954	1.0150	0.9957	1.1297	1.1374	11.0

WR99:0191

6E

8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.5964	1.6078	1.7179	1.8556	1.8716	1.8406	2.0861	1.7966	9.6
beta-BHC	0.6754	0.6491	0.6617	0.6966	0.7003	0.6895	0.7649	0.6911	5.4
delta-BHC	1.2504	1.2562	1.3640	1.5177	1.5783	1.5735	1.7885	1.4755	13.3
gamma-BHC (Lindane)	1.4128	1.3982	1.4757	1.5963	1.6109	1.5910	1.8271	1.5588	9.5
Heptachlor	1.5214	1.4662	1.5073	1.5651	1.5171	1.4171	1.4920	1.4980	3.1
Aldrin	1.3673	1.3404	1.3839	1.4765	1.4663	1.3818	1.4814	1.4139	4.2
Heptachlor epoxide b	1.3111	1.1809	1.2247	1.2731	1.2517	1.1802	1.2468	1.2384	3.8
Endosulfan I	1.1289	1.0916	1.1276	1.1988	1.1753	1.1147	1.1712	1.1440	3.4
Dieldrin	1.2194	1.2005	1.1957	1.2291	1.1560	1.0591	1.1010	1.1658	5.5
4,4'-DDE	1.2420	1.2138	1.2482	1.2889	1.2055	1.1204	1.1599	1.2112	4.7
Endrin	1.5490	1.4864	1.5394	1.5891	1.5221	1.4268	1.4967	1.5156	3.4
Endosulfan II	1.8235	1.7385	1.7960	1.8865	1.7723	1.6578	1.7732	1.7782	4.0
4,4'-DDD	1.8815	1.7757	1.8133	1.8367	1.7370	1.6484	1.7986	1.7844	4.2
Endosulfan sulfate	1.4746	1.3972	1.4421	1.4952	1.4478	1.4024	1.5233	1.4546	3.2
4,4'-DDT	1.4079	1.3584	1.4277	1.5130	1.4495	1.4659	1.6656	1.4697	6.7
Methoxychlor	0.6750	0.6230	0.6058	0.5795	0.5179	0.4760	0.4876	0.5664	13.2
Endrin ketone	1.7032	1.5827	1.5941	1.6097	1.5259	1.4661	1.6076	1.5842	4.7
Endrin aldehyde	1.5133	1.4032	1.4138	1.4303	1.3655	1.3052	1.4070	1.4055	4.5
gamma-Chlordane	1.2795	1.2138	1.2586	1.3396	1.3316	1.2796	1.3829	1.2979	4.4
alpha-Chlordane	1.1495	1.1150	1.1611	1.2432	1.2285	1.1863	1.2871	1.1958	5.0
Hexachlorobutadiene	1.6005	1.4941	1.4733	1.5378	1.4342	1.4100	1.5669	1.5024	4.6
Hexachlorobenzene	1.9113	1.8141	1.8472	1.9384	1.8917	1.8032	1.9964	1.8860	3.7
Tetrachloro-m-xylene	1.3675	1.3120	1.3324	1.3607	1.2884	1.2131	1.2297	1.3005	4.7
Decachlorobiphenyl	1.8027	1.6202	1.5938	1.5991	1.5250	1.4884	1.6834	1.6161	6.4

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/21/13

COMPOUND	RT OF STANDARDS							MEAN	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
Oxychlordane	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.73	5.83
2,4-DDE	5.86	5.86	5.86	5.86	5.86	5.86	5.86	5.86	5.81	5.91
trans-Nonachlor	6.11	6.11	6.11	6.11	6.11	6.11	6.11	6.11	6.06	6.16
2,4-DDD	6.35	6.35	6.35	6.35	6.34	6.35	6.34	6.35	6.29	6.39
2,4-DDT	6.58	6.58	6.58	6.58	6.58	6.58	6.58	6.58	6.53	6.63
cis-Nonachlor	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.67	6.77
Mirex	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.55	7.65
Tetrachloro-m-xylene	3.84	3.84	3.84	3.84	3.80	3.84	3.83	3.83	3.75	3.85
Decachlorobiphenyl	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.72	8.82

FORM VI PEST-1

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/21/13

COMPOUND	RT OF STANDARDS							MEAN	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
Oxychlordane	6.33	6.33	6.33	6.33	6.33	6.33	6.33	6.33	6.28	6.38
2,4-DDE	6.58	6.58	6.58	6.58	6.58	6.58	6.58	6.58	6.53	6.63
trans-Nonachlor	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.64	6.74
2,4-DDD	7.06	7.06	7.06	7.06	7.06	7.07	7.06	7.06	7.01	7.11
2,4-DDT	7.35	7.35	7.35	7.35	7.35	7.35	7.35	7.35	7.30	7.40
cis-Nonachlor	7.41	7.41	7.41	7.41	7.41	7.41	7.42	7.41	7.37	7.47
Mirex	8.56	8.56	8.56	8.56	8.56	8.57	8.56	8.56	8.51	8.61
Tetrachloro-m-xylene	4.17	4.17	4.17	4.17	4.13	4.17	4.17	4.16	4.08	4.18
Decachlorobiphenyl	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.67	9.77

FORM VI PEST-1

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/21/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
Oxychlordane	1.2122	1.0917	1.1239	1.1226	1.0302	0.9898	0.9168	1.0696	9.2
2,4-DDE	0.9427	0.7988	0.8618	0.8511	0.7804	0.7414	0.6757	0.8074	10.8
trans-Nonachlor	1.4216	1.3068	1.3618	1.3795	1.2863	1.2567	1.1722	1.3121	6.4
2,4-DDD	0.8004	0.7210	0.7494	0.7511	0.6944	0.6690	0.6178	0.7147	8.4
2,4-DDT	0.8882	0.8058	0.8329	0.8387	0.7768	0.7521	0.7010	0.7994	7.7
cis-Nonachlor	1.5360	1.4036	1.4609	1.4873	1.3927	1.3629	1.2784	1.4174	6.0
Mirex	1.0395	0.9133	0.9144	0.9014	0.8227	0.8001	0.7516	0.8776	10.8
Tetrachloro-m-xylene	1.0573	1.0250	1.0491	1.0957	1.1043	1.0784	1.2256	1.0908	6.0
Decachlorobiphenyl	1.3691	1.1703	1.1864	1.0954	1.0150	0.9957	1.1297	1.1374	11.0

FORM VI PEST-2

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/21/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
Oxychlordane	1.1719	1.0942	1.1386	1.1773	1.0667	1.0481	0.9381	1.0907	7.7
2,4-DDE	0.9264	0.8537	0.8774	0.8912	0.7851	0.7343	0.6336	0.8145	12.7
trans-Nonachlor	2.0118	1.8155	1.9221	1.9440	1.7813	1.6928	1.3973	1.7950	11.5
2,4-DDD	1.1501	1.0099	1.0620	1.0720	0.9802	0.9086	0.8035	0.9980	11.5
2,4-DDT	1.1668	1.0498	1.1031	1.1266	1.0356	0.9698	0.8702	1.0460	9.7
cis-Nonachlor	2.0986	1.9050	2.0165	2.0342	1.8630	1.7801	1.4443	1.8774	11.7
Mirex	1.2088	1.0352	1.0420	1.0284	0.9379	0.9019	0.8388	0.9990	12.0
Tetrachloro-m-xylene	1.3675	1.3120	1.3324	1.3607	1.2884	1.2131	1.2297	1.3005	4.7
Decachlorobiphenyl	1.8027	1.6202	1.5938	1.5991	1.5250	1.4884	1.6834	1.6161	6.4

FORM VI PEST-2

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

YZ 6/13/13

Lab ID: DS ARI Job No.:

Analysis Date: 12-JUN-2013 14:01 Init. Calib. Date: 14-MAY-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.181	115252
Endrin	6.697	7054747
4,4'-DDD	6.737	426894
4,4'-DDT	6.994	6694731
Endrin ketone	7.924	403637
Endrin aldehyde	7.280	179683

DDT Percent Breakdown = 7.5 %
((115252+426894) * 100)/(115252+426894+6694731)

Endrin Percent Breakdown = 7.6 %
((179683+403637) * 100)/(179683+403637+7054747)

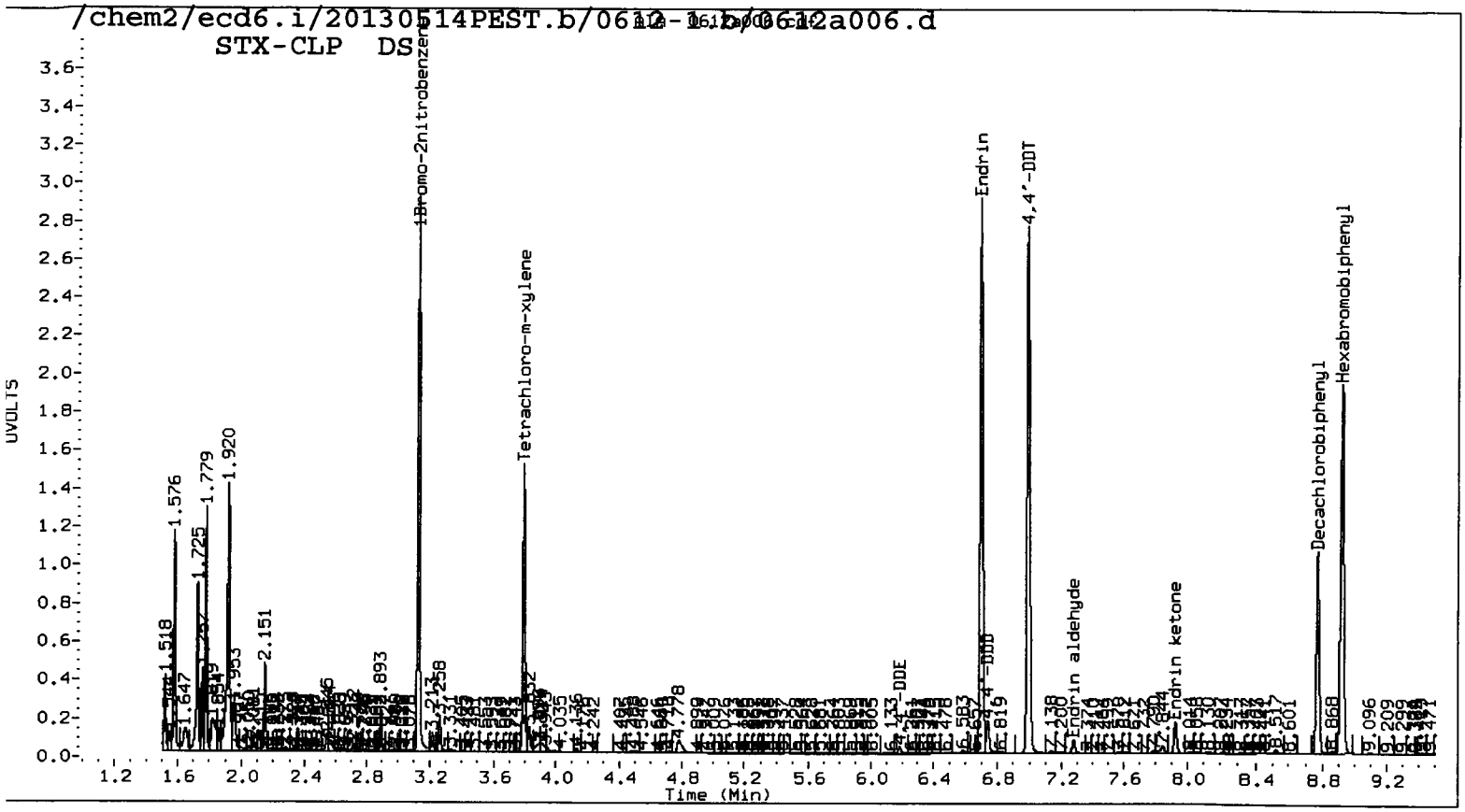
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.868	587286
Endrin	7.356	29704309
4,4'-DDD	7.406	2184891
4,4'-DDT	7.695	26502543
Endrin ketone	8.577	1547104
Endrin aldehyde	7.841	802503

DDT Percent Breakdown = 9.5 %
((587286+2184891) * 100)/(587286+2184891+26502543)

Endrin Percent Breakdown = 7.3 %
((802503+1547104) * 100)/(802503+1547104+29704309)

W899 : 06197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STX-CLP DS
UVOLTS
Time (Min)
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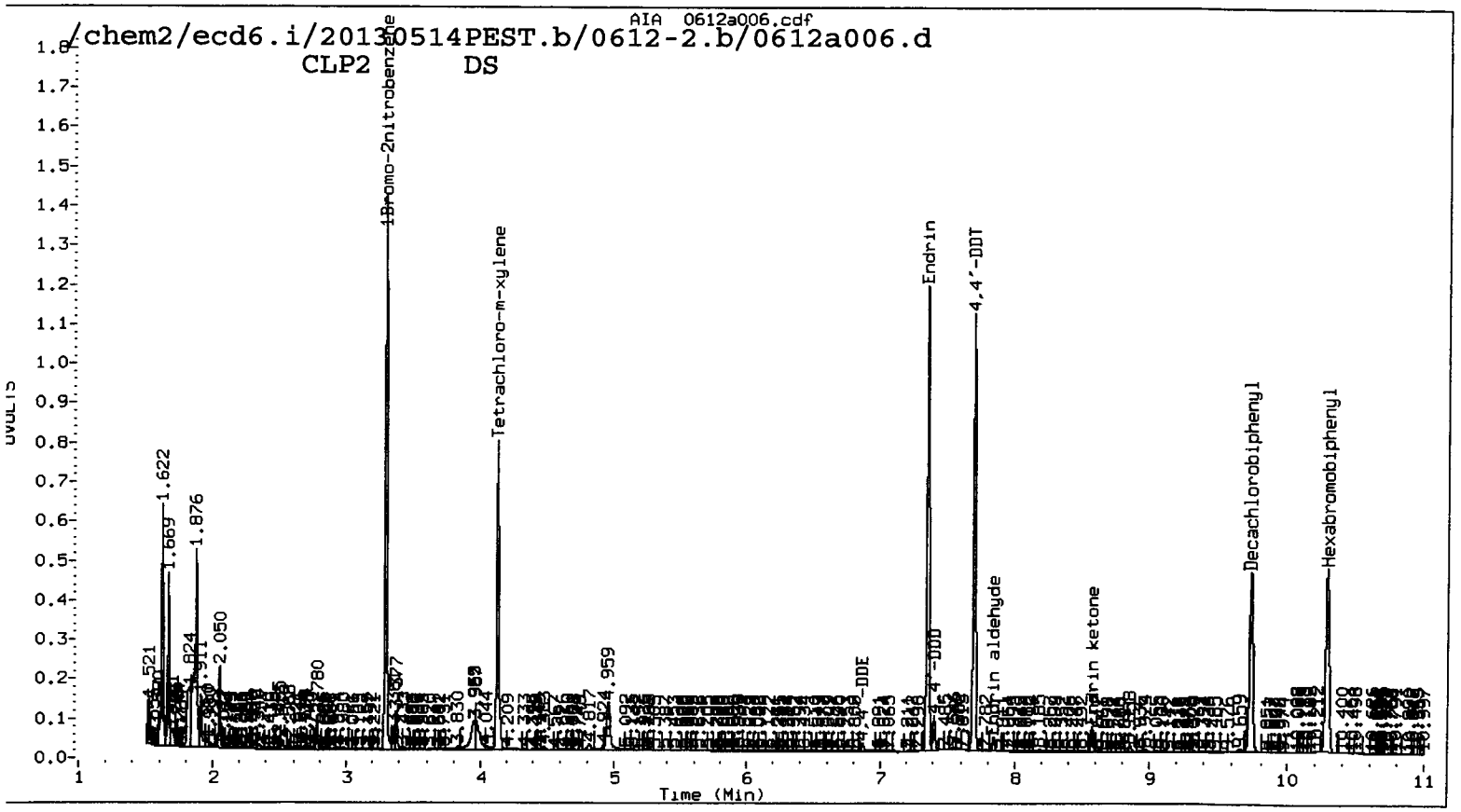
1.779
1.920
2.151
1.518
1.893
3.213
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
DDE
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
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1.669
1.876
2.050
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
DDE
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 12-JUN-2013 19:06 Init. Calib. Date: 14-MAY-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.182	140843
Endrin	6.698	6199699
4,4'-DDD	6.738	367537
4,4'-DDT	6.996	5645214
Endrin ketone	7.925	319464
Endrin aldehyde	7.280	135123

DDT Percent Breakdown = 8.3 %
((140843+367537) * 100)/(140843+367537+5645214)

Endrin Percent Breakdown = 6.8 %
((135123+319464) * 100)/(135123+319464+6199699)

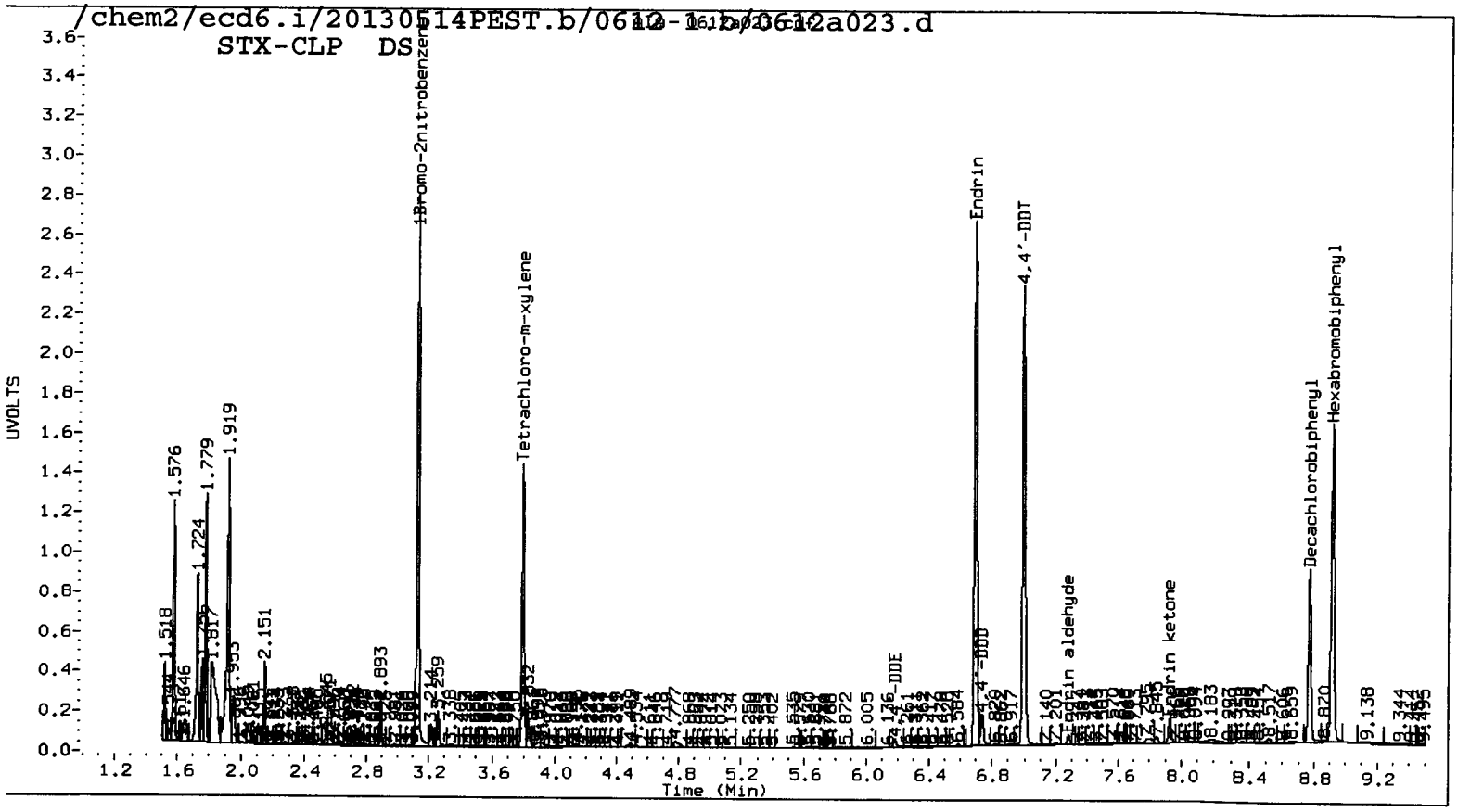
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.870	549752
Endrin	7.356	19195934
4,4'-DDD	7.407	1331059
4,4'-DDT	7.695	16618510
Endrin ketone	8.578	1057496
Endrin aldehyde	7.844	313813

DDT Percent Breakdown = 10.2 %
((549752+1331059) * 100)/(549752+1331059+16618510)

Endrin Percent Breakdown = 6.7 %
((313813+1057496) * 100)/(313813+1057496+19195934)

WR94 : 00199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STX-CLP DS
UVOLTS
Time (Min)
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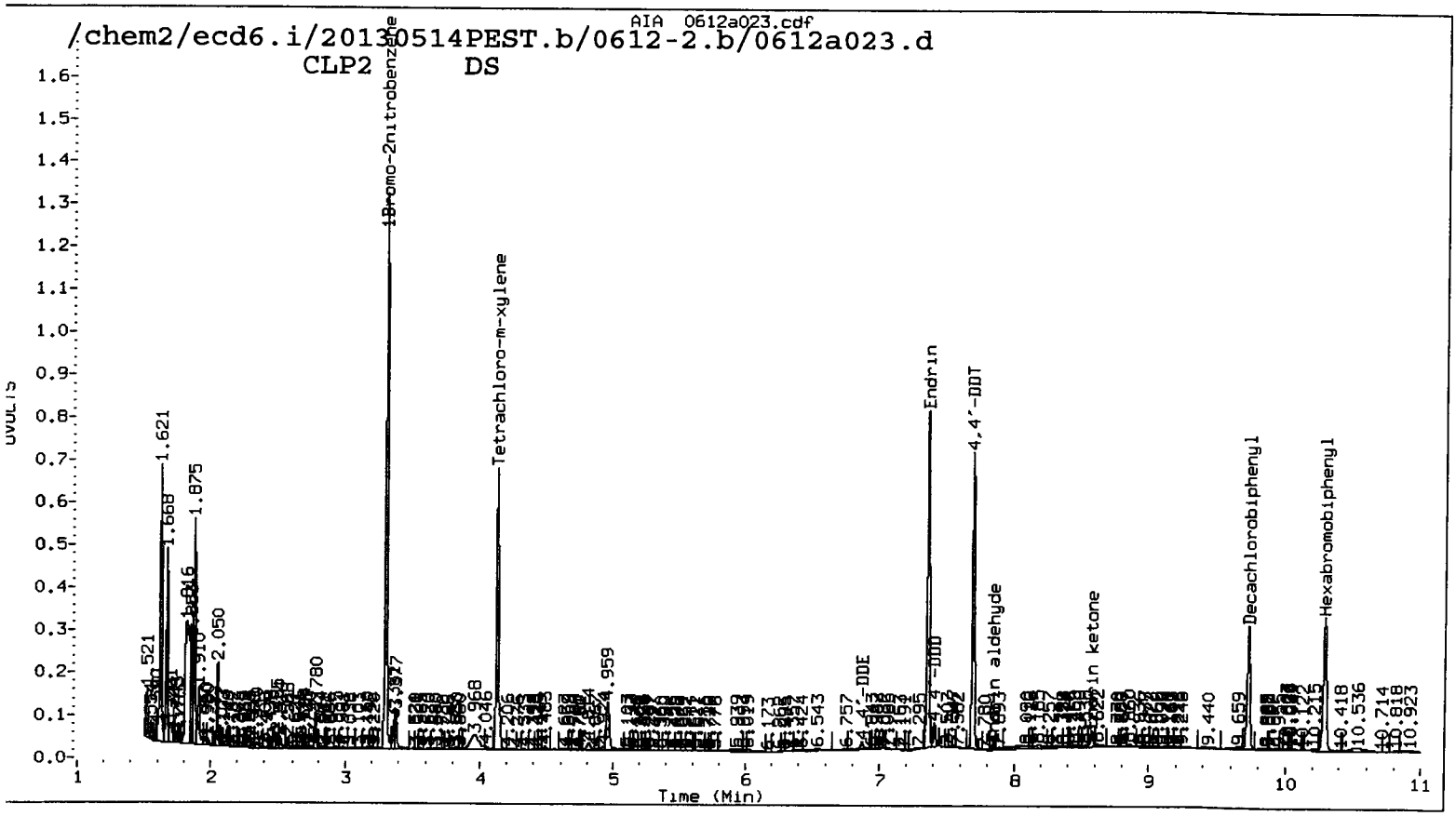
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
4,4'-DDE
Endrin aldehyde
Endrin ketone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CLP2 DS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
4,4'-DDE
Endrin aldehyde
Endrin ketone

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/12/13,1419

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.28	4.23	4.33	18.6	20.0	-7.1	
beta-BHC	4.64	4.59	4.69	16.8	20.0	-16.0	
delta-BHC	4.81	4.76	4.86	18.1	20.0	-9.7	
gamma-BHC (Lindane)	4.57	4.52	4.62	19.3	20.0	-3.6	
Heptachlor	5.01	4.96	5.06	18.6	20.0	-7.0	
Aldrin	5.30	5.25	5.35	18.5	20.0	-7.6	
Heptachlor epoxide b	5.88	5.83	5.93	19.0	20.0	-5.2	
Endosulfan I	6.26	6.21	6.31	18.5	20.0	-7.5	
Dieldrin	6.48	6.43	6.53	37.4	40.0	-6.4	
4,4'-DDE	6.18	6.13	6.23	35.0	40.0	-12.5	
Endrin	6.70	6.65	6.75	37.8	40.0	-5.5	
Endosulfan II	6.90	6.85	6.95	34.1	40.0	-14.6	
4,4'-DDD	6.74	6.69	6.79	33.2	40.0	-17.0	
Endosulfan sulfate	7.67	7.62	7.72	34.6	40.0	-13.5	
4,4'-DDT	6.99	6.94	7.04	34.4	40.0	-13.9	
Methoxychlor	7.42	7.37	7.47	162.3	200.0	-18.8	
Endrin ketone	7.92	7.88	7.98	34.1	40.0	-14.7	
Endrin aldehyde	7.28	7.23	7.33	32.7	40.0	-18.3	
gamma-Chlordane	6.00	5.95	6.05	18.5	20.0	-7.6	
alpha-Chlordane	6.12	6.07	6.17	19.0	20.0	-5.2	
Hexachlorobutadiene	2.31	2.26	2.36	17.9	20.0	-10.6	
Hexachlorobenzene	4.14	4.09	4.19	16.8	20.0	-16.0	
Tetrachloro-m-xylene	3.80	3.75	3.85	36.6	40.0	-8.4	
Decachlorobiphenyl	8.77	8.72	8.82	30.5	40.0	-23.7	<-

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: WND Date/Time Analyzed: 06/12/13,1457

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Hexachloroethane	1.76	1.71	1.81	0.0	20.0	-100.0	<-
Oxychlordane	5.79	5.73	5.83	38.9	40.0	-2.8	
2,4-DDE	5.86	5.81	5.91	40.5	40.0	1.2	
trans-Nonachlor	6.11	6.06	6.16	40.5	40.0	1.4	
2,4-DDD	6.35	6.29	6.39	41.7	40.0	4.2	
2,4-DDT	6.59	6.53	6.63	41.7	40.0	4.3	
cis-Nonachlor	6.73	6.67	6.77	40.9	40.0	2.3	
Mirex	7.60	7.55	7.65	39.6	40.0	-0.9	
Tetrachloro-m-xylene	3.80	3.75	3.85	38.7	40.0	-3.2	
Decachlorobiphenyl	8.77	8.72	8.82	34.3	40.0	-14.3	

WR99 : 88282

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/12/13,1419

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.71	4.66	4.76	19.2	20.0	-4.0
beta-BHC	5.14	5.09	5.19	17.6	20.0	-11.9
delta-BHC	5.45	5.40	5.50	19.7	20.0	-1.7
gamma-BHC (Lindane)	5.06	5.01	5.11	17.5	20.0	-12.4
Heptachlor	5.53	5.48	5.58	18.9	20.0	-5.3
Aldrin	5.87	5.82	5.92	19.5	20.0	-2.3
Heptachlor epoxide b	6.42	6.37	6.47	21.2	20.0	6.2
Endosulfan I	6.81	6.76	6.86	21.0	20.0	4.8
Dieldrin	7.07	7.02	7.12	40.6	40.0	1.5
4,4'-DDE	6.87	6.82	6.92	39.5	40.0	-1.3
Endrin	7.35	7.31	7.41	37.1	40.0	-7.2
Endosulfan II	7.54	7.49	7.59	35.3	40.0	-11.7
4,4'-DDD	7.41	7.36	7.46	34.4	40.0	-14.0
Endosulfan sulfate	8.09	8.04	8.14	36.0	40.0	-10.1
4,4'-DDT	7.69	7.64	7.74	34.5	40.0	-13.6
Methoxychlor	8.28	8.23	8.33	161.2	200.0	-19.4
Endrin ketone	8.58	8.53	8.63	35.1	40.0	-12.3
Endrin aldehyde	7.84	7.79	7.89	34.0	40.0	-15.0
gamma-Chlordane	6.60	6.55	6.65	20.5	20.0	2.4
alpha-Chlordane	6.74	6.69	6.79	20.9	20.0	4.3
Hexachlorobutadiene	2.47	2.42	2.52	16.7	20.0	-16.6
Hexachlorobenzene	4.58	4.53	4.63	18.8	20.0	-6.2
Tetrachloro-m-xylene	4.12	4.08	4.18	36.2	40.0	-9.4
Decachlorobiphenyl	9.72	9.67	9.77	34.3	40.0	-14.2

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: WND Date/Time Analyzed: 06/12/13,1457

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Hexachloroethane	1.73	1.67	1.77	0.0	40.0	-100.0	<-
Oxychlordane	6.33	6.28	6.38	40.8	40.0	2.0	
2,4-DDE	6.58	6.53	6.63	40.0	40.0	-0.0	
trans-Nonachlor	6.69	6.64	6.74	45.4	40.0	13.4	
2,4-DDD	7.07	7.01	7.11	46.1	40.0	15.4	
2,4-DDT	7.35	7.30	7.40	45.8	40.0	14.6	
cis-Nonachlor	7.41	7.37	7.47	45.2	40.0	12.9	
Mirex	8.57	8.51	8.61	40.9	40.0	2.1	
Tetrachloro-m-xylene	4.13	4.08	4.18	39.3	40.0	-1.8	
Decachlorobiphenyl	9.73	9.67	9.77	38.2	40.0	-4.5	

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/12/13,1924

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.28	4.23	4.33	18.7	20.0	-6.6	
beta-BHC	4.64	4.59	4.69	16.8	20.0	-16.1	
delta-BHC	4.81	4.76	4.86	17.6	20.0	-11.9	
gamma-BHC (Lindane)	4.57	4.52	4.62	19.3	20.0	-3.4	
Heptachlor	5.01	4.96	5.06	18.5	20.0	-7.6	
Aldrin	5.31	5.25	5.35	18.4	20.0	-7.9	
Heptachlor epoxide b	5.88	5.83	5.93	18.7	20.0	-6.6	
Endosulfan I	6.26	6.21	6.31	18.1	20.0	-9.3	
Dieldrin	6.48	6.43	6.53	36.4	40.0	-9.0	
4,4'-DDE	6.18	6.13	6.23	34.7	40.0	-13.2	
Endrin	6.70	6.65	6.75	39.1	40.0	-2.2	
Endosulfan II	6.90	6.85	6.95	34.5	40.0	-13.7	
4,4'-DDD	6.74	6.69	6.79	33.9	40.0	-15.2	
Endosulfan sulfate	7.67	7.62	7.72	33.8	40.0	-15.5	
4,4'-DDT	7.00	6.94	7.04	33.9	40.0	-15.4	
Methoxychlor	7.42	7.37	7.47	167.5	200.0	-16.3	
Endrin ketone	7.93	7.88	7.98	33.8	40.0	-15.4	
Endrin aldehyde	7.28	7.23	7.33	32.9	40.0	-17.8	
gamma-Chlordane	6.00	5.95	6.05	18.0	20.0	-9.9	
alpha-Chlordane	6.12	6.07	6.17	18.4	20.0	-7.9	
Hexachlorobutadiene	2.31	2.26	2.36	17.9	20.0	-10.3	
Hexachlorobenzene	4.14	4.09	4.19	16.9	20.0	-15.3	
Tetrachloro-m-xylene	3.80	3.75	3.85	37.1	40.0	-7.3	
Decachlorobiphenyl	8.77	8.72	8.82	30.4	40.0	-23.9	<-

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: WND Date/Time Analyzed: 06/12/13,2000

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Hexachloroethane	1.76	1.71	1.81	0.0	20.0	-100.0	<-
Oxychlordane	5.78	5.73	5.83	41.0	40.0	2.5	
2,4-DDE	5.86	5.81	5.91	41.9	40.0	4.7	
trans-Nonachlor	6.11	6.06	6.16	41.7	40.0	4.4	
2,4-DDD	6.35	6.29	6.39	43.0	40.0	7.6	
2,4-DDT	6.58	6.53	6.63	42.1	40.0	5.3	
cis-Nonachlor	6.72	6.67	6.77	41.7	40.0	4.3	
Mirex	7.60	7.55	7.65	39.7	40.0	-0.7	
Tetrachloro-m-xylene	3.80	3.75	3.85	40.5	40.0	1.3	
Decachlorobiphenyl	8.77	8.72	8.82	34.3	40.0	-14.1	

WR99 : 880206

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/12/13,1924

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.71	4.66	4.76	18.6	20.0	-6.9
beta-BHC	5.14	5.09	5.19	17.3	20.0	-13.5
delta-BHC	5.45	5.40	5.50	18.3	20.0	-8.5
gamma-BHC (Lindane)	5.06	5.01	5.11	17.6	20.0	-12.0
Heptachlor	5.53	5.48	5.58	18.0	20.0	-10.1
Aldrin	5.87	5.82	5.92	18.2	20.0	-9.0
Heptachlor epoxide b	6.42	6.37	6.47	18.9	20.0	-5.6
Endosulfan I	6.81	6.76	6.86	17.7	20.0	-11.3
Dieldrin	7.07	7.02	7.12	33.3	40.0	-16.6
4,4'-DDE	6.87	6.82	6.92	33.1	40.0	-17.3
Endrin	7.36	7.31	7.41	38.3	40.0	-4.3
Endosulfan II	7.54	7.49	7.59	36.0	40.0	-9.9
4,4'-DDD	7.41	7.36	7.46	35.0	40.0	-12.4
Endosulfan sulfate	8.09	8.04	8.14	34.7	40.0	-13.2
4,4'-DDT	7.69	7.64	7.74	35.5	40.0	-11.2
Methoxychlor	8.28	8.23	8.33	177.0	200.0	-11.5
Endrin ketone	8.58	8.53	8.63	32.6	40.0	-18.6
Endrin aldehyde	7.84	7.79	7.89	34.5	40.0	-13.8
gamma-Chlordane	6.60	6.55	6.65	17.5	20.0	-12.6
alpha-Chlordane	6.74	6.69	6.79	17.7	20.0	-11.4
Hexachlorobutadiene	2.47	2.42	2.52	16.5	20.0	-17.3
Hexachlorobenzene	4.58	4.53	4.63	18.2	20.0	-9.2
Tetrachloro-m-xylene	4.13	4.08	4.18	35.8	40.0	-10.6
Decachlorobiphenyl	9.73	9.67	9.77	33.8	40.0	-15.5

WR99 : 00294

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: WND Date/Time Analyzed: 06/12/13,2000

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Hexachloroethane	1.73	1.67	1.77	0.0	40.0	-100.0	<-
Oxychlordane	6.33	6.28	6.38	39.9	40.0	-0.3	
2,4-DDE	6.58	6.53	6.63	38.9	40.0	-2.7	
trans-Nonachlor	6.69	6.64	6.74	48.5	40.0	21.3	<-
2,4-DDD	7.06	7.01	7.11	48.7	40.0	21.8	<-
2,4-DDT	7.35	7.30	7.40	47.0	40.0	17.4	
cis-Nonachlor	7.41	7.37	7.47	46.5	40.0	16.3	
Mirex	8.56	8.51	8.61	40.6	40.0	1.4	
Tetrachloro-m-xylene	4.13	4.08	4.18	40.1	40.0	0.1	
Decachlorobiphenyl	9.73	9.67	9.77	38.2	40.0	-4.6	

WR99 : 6A20A

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP1 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 05/14/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5500669	3.162	5319006	8.997
	UPPER LIMIT	11001338	3.212	10638012	9.047
	LOWER LIMIT	2750334	3.112	2659503	8.947

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		DS	05/14/13	1417	5564401	3.162	5015229	8.993
02		INDAE	05/14/13	1437	5500669	3.162	5319006	8.997
03		INDAA	05/14/13	1457	5276720	3.162	5051117	8.998
04		INDAB	05/14/13	1517	5534770	3.162	5379091	8.998
05		INDAC	05/14/13	1537	5478422	3.161	5322227	8.999
06		INDAD	05/14/13	1556	5395940	3.160	5185525	8.998
07		INDAF	05/14/13	1616	5385380	3.161	5022010	8.999
08		INDAG	05/14/13	1634	4447256	3.160	4183112	8.999
09	ZZZZZ	ZZZZZ	05/14/13	1654	5229139	3.162	5072678	9.001
10		TOXAPH	05/14/13	1712	5170972	3.160	5171544	8.999
11		WNDE	05/21/13	1537	5914796	3.128	5919666	8.919*
12		WNDA	05/21/13	1555	5527236	3.128	5536043	8.919*
13		WNDB	05/21/13	1612	5909776	3.128	5944864	8.920*
14		WNDC	05/21/13	1630	5659319	3.128	5650177	8.919*
15		WNDD	05/21/13	1648	5307388	3.128	5382033	8.919*
16		WNDF	05/21/13	1706	5516087	3.128	5627563	8.920*
17		WNDG	05/21/13	1724	5677070	3.128	5781437	8.919*
18	ZZZZZ	ZZZZZ	05/21/13	1741	5197426	3.129	5287939	8.918*
19		INDAE	06/12/13	1419	6164849	3.128	6258113	8.920*
20		TOXAPH	06/12/13	1437	5829997	3.129	5894745	8.920*
21		WND	06/12/13	1457	5603121	3.130	5597162	8.923*
22	WR99MBW1	WR99MBW1	06/12/13	1550	6035583	3.129	6159253	8.920*
23	WR99LCSW1	WR99LCSW1	06/12/13	1608	6354177	3.129	6510512	8.920*
24	WR99LCSDW1	WR99LCSDW1	06/12/13	1626	6318779	3.129	6526308	8.920*
25	KC-VT-1593-2	WR99A	06/12/13	1644	6253861	3.128	6555799	8.919*
26		INDAE	06/12/13	1924	5887010	3.129	5632493	8.921*
27		TOXAPH	06/12/13	1942	5695567	3.129	5435755	8.920*
28		WND	06/12/13	2000	5410272	3.129	5241384	8.921*

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES SMAPLING

GC Column: STX-CLP2 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 05/14/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	29060499	3.331	16515704	10.370
	UPPER LIMIT	58120998	3.381	33031408	10.421
	LOWER LIMIT	14530250	3.281	8257852	10.320

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		DS	05/14/13	1417	27868012	3.331	15069896	10.368
02		INDAE	05/14/13	1437	29060499	3.331	16515704	10.370
03		INDAA	05/14/13	1457	28661245	3.331	16075431	10.370
04		INDAB	05/14/13	1517	30201103	3.331	17146317	10.371
05		INDAC	05/14/13	1537	29972511	3.330	16795593	10.372
06		INDAD	05/14/13	1556	29160968	3.329	16527116	10.370
07		INDAF	05/14/13	1616	29405183	3.330	16433920	10.372
08		INDAG	05/14/13	1634	24971444	3.329	13819406	10.371
09	ZZZZZ	ZZZZZ	05/14/13	1654	29203550	3.331	16453002	10.372
10		TOXAPH	05/14/13	1712	29085221	3.329	16639283	10.371
11		WNDE	05/21/13	1537	31740743	3.298	22536533	10.288*
12		WNDA	05/21/13	1555	30048266	3.298	20751503	10.288*
13		WNDB	05/21/13	1612	32393322	3.298	23291422	10.289*
14		WNDC	05/21/13	1630	31411054	3.298	22287787	10.289*
15		WNDD	05/21/13	1648	29643543	3.298	21453875	10.290*
16		WNDF	05/21/13	1706	30259797	3.298	22177289	10.290*
17		WNDG	05/21/13	1724	30833383	3.299	22527046	10.290*
18	ZZZZZ	ZZZZZ	05/21/13	1741	28235575	3.298	20349765	10.289*
19		INDAE	06/12/13	1419	31376876	3.299	20287175	10.288*
20		TOXAPH	06/12/13	1437	29871429	3.299	18056260	10.287*
21		WND	06/12/13	1457	29062075	3.299	18479613	10.290*
22	WR99MBW1	WR99MBW1	06/12/13	1550	31448786	3.299	20922041	10.288*
23	WR99LCSW1	WR99LCSW1	06/12/13	1608	33075009	3.299	22132570	10.288*
24	WR99LCSDW1	WR99LCSDW1	06/12/13	1626	33119544	3.299	22200604	10.289*
25	KC-VT-1593-2	WR99A	06/12/13	1644	29883711	3.298	21083494	10.287*
26		INDAE	06/12/13	1924	30861935	3.299	15952663	10.289*
27		TOXAPH	06/12/13	1942	29805904	3.299	15313396	10.288*
28		WND	06/12/13	2000	28506124	3.299	16340523	10.289*

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546

Sample ID: KC-VT-1593-20130530-S
SAMPLE

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/14/13 13:24
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 21.9%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.38	2.4	< 2.4 U
319-85-7	beta-BHC	0.65	2.4	< 2.4 U
319-86-8	delta-BHC	0.39	2.4	< 2.4 U
58-89-9	gamma-BHC (Lindane)	0.23	2.4	< 2.4 U
76-44-8	Heptachlor	0.62	2.4	< 2.4 U
309-00-2	Aldrin	0.26	2.4	< 2.4 U
1024-57-3	Heptachlor Epoxide	0.40	4.7	< 4.7 U
959-98-8	Endosulfan I	0.34	2.4	< 2.4 U
60-57-1	Dieldrin	0.47	4.7	< 4.7 U
72-55-9	4,4'-DDE	0.58	4.7	< 4.7 U
72-20-8	Endrin	1.0	4.7	< 4.7 U
33213-65-9	Endosulfan II	0.55	4.7	< 4.7 U
72-54-8	4,4'-DDD	0.63	4.7	< 4.7 U
1031-07-8	Endosulfan Sulfate	0.90	4.7	< 4.7 U
50-29-3	4,4'-DDT	0.90	4.7	< 4.7 U
72-43-5	Methoxychlor	3.3	24	< 24 U
53494-70-5	Endrin Ketone	0.56	4.7	< 4.7 U
7421-93-4	Endrin Aldehyde	1.0	4.7	< 4.7 U
5103-74-2	trans-Chlordane	0.36	2.4	< 2.4 U
5103-71-9	cis-Chlordane	0.24	2.4	< 2.4 U
8001-35-2	Toxaphene	160	470	< 470 U
118-74-1	Hexachlorobenzene	0.44	4.7	< 4.7 U
87-68-3	Hexachlorobutadiene	0.65	4.7	< 4.7 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	112%
Tetrachlorometaxylene	82.4%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: KC-CB-01-20130530-S
SAMPLE

Lab Sample ID: WR99E
LIMS ID: 13-11545
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/14/13 14:20
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 3.93 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 21.8%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	2.6	16	< 16 U
319-85-7	beta-BHC	4.4	16	< 16 U
319-86-8	delta-BHC	2.6	16	< 16 U
58-89-9	gamma-BHC (Lindane)	1.5	16	< 16 U
76-44-8	Heptachlor	4.2	16	< 16 U
309-00-2	Aldrin	1.7	16	< 16 U
1024-57-3	Heptachlor Epoxide	2.7	74	< 74 Y
959-98-8	Endosulfan I	2.3	16	< 16 U
60-57-1	Dieldrin	3.2	160	< 160 Y
72-55-9	4,4'-DDE	3.9	200	< 200 Y
72-20-8	Endrin	6.9	300	< 300 Y
33213-65-9	Endosulfan II	3.7	180	< 180 Y
72-54-8	4,4'-DDD	4.3	32	< 32 U
1031-07-8	Endosulfan Sulfate	6.1	32	< 32 U
50-29-3	4,4'-DDT	6.1	680	< 680 Y
72-43-5	Methoxychlor	22	160	< 160 U
53494-70-5	Endrin Ketone	3.8	32	< 32 U
7421-93-4	Endrin Aldehyde	6.9	32	< 32 U
5103-74-2	trans-Chlordane	2.4	16	< 16 U
5103-71-9	cis-Chlordane	1.6	16	< 16 U
8001-35-2	Toxaphene	1100	3200	< 3,200 U
118-74-1	Hexachlorobenzene	3.0	32	< 32 U
87-68-3	Hexachlorobutadiene	4.4	32	< 32 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	106%
Tetrachlorometaxylene	72.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546

Sample ID: KC-DD-2009-20130530-S
SAMPLE

Lab Sample ID: WR99F
LIMS ID: 13-11546
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/14/13 14:38
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 1.57 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 38.1%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	6.5	40	< 40 U
319-85-7	beta-BHC	11	40	< 40 U
319-86-8	delta-BHC	6.5	40	< 40 U
58-89-9	gamma-BHC (Lindane)	3.8	40	< 40 U
76-44-8	Heptachlor	11	40	< 40 U
309-00-2	Aldrin	4.4	40	< 40 U
1024-57-3	Heptachlor Epoxide	6.8	1600	< 1,600 Y
959-98-8	Endosulfan I	5.7	970	< 970 Y
60-57-1	Dieldrin	8.0	2400	< 2,400 Y
72-55-9	4,4'-DDE	9.9	80	< 3,500 YEP
72-20-8	Endrin	17	80	< 660 YEP
33213-65-9	Endosulfan II	9.3	80	< 560 YEP
72-54-8	4,4'-DDD	11	80	< 80 U
1031-07-8	Endosulfan Sulfate	15	80	< 80 U
50-29-3	4,4'-DDT	15	80	< 10,000 YE
72-43-5	Methoxychlor	56	400	< 400 U
53494-70-5	Endrin Ketone	9.5	1800	< 1,800 Y
7421-93-4	Endrin Aldehyde	17	670	< 670 Y
5103-74-2	trans-Chlordane	6.1	990	< 990 Y
5103-71-9	cis-Chlordane	4.1	40	< 40 U
8001-35-2	Toxaphene	2800	8000	< 8,000 U
118-74-1	Hexachlorobenzene	7.5	80	< 80 U
87-68-3	Hexachlorobutadiene	11	80	< 80 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	114%
Tetrachlorometaxylene	75.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-061013	88.8%	79.8%	0
LCS-061013	81.5%	74.0%	0
KC-VT-1593-20130530-S	112%	82.4%	0
KC-VT-1593-20130530-S MS	106%	104%	0
KC-VT-1593-20130530-S MSD	94.8%	82.9%	0
KC-CB-01-20130530-S	106%	72.8%	0
KC-DD-2009-20130530-S	114%	75.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(60-149)	(36-182)
(TCMX) = Tetrachlorometaxylene	(47-124)	(34-169)

Prep Method: SW3546
Log Number Range: 13-11544 to 13-11546

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: KC-VT-1593-20130530-S
MS/MSD

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted MS/MSD: 06/10/13

Date Analyzed MS: 06/14/13 13:42
MSD: 06/14/13 14:00
Instrument/Analyst MS: ECD6/JGR
MSD: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount MS: 13.3 g-dry-wt
MSD: 13.3 g-dry-wt
Final Extract Volume MS: 2.5 mL
MSD: 2.5 mL
Dilution Factor MS: 5.00
MSD: 5.00
Silica Gel: Yes

Percent Moisture: 21.9%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
alpha-BHC	< 2.35	2.65	3.76	70.5%	1.93 J	3.76	51.3%	31.4%
beta-BHC	< 2.35	2.26 J	3.76	60.1%	1.72 J	3.76	45.7%	27.1%
delta-BHC	< 2.35	0.995 J	3.76	26.5%	0.903 J	3.76	24.0%	9.7%
gamma-BHC (Lindane)	< 2.35	2.95 JP	3.76	78.5%	2.75 JP	3.76	73.1%	7.0%
Heptachlor	< 2.35	2.69 JP	3.76	71.5%	2.51 JP	3.76	66.8%	6.9%
Aldrin	< 2.35	3.28 JP	3.76	87.2%	2.22 J	3.76	59.0%	38.5%
Heptachlor Epoxide	< 4.70	2.95 J	3.76	78.5%	3.04 JP	3.76	80.9%	3.0%
Endosulfan I	< 2.35	2.24 J	3.76	59.6%	1.54 J	3.76	41.0%	37.0%
Dieldrin	< 4.70	9.49	7.51	126%	9.01 P	7.52	120%	5.2%
4,4'-DDE	< 4.70	8.66 JP	7.51	115%	7.73 JP	7.52	103%	11.3%
Endrin	< 4.70	15.3 JP	7.51	204%	2.85 J	7.52	37.9%	137%
Endosulfan II	< 4.70	< 4.70 U	7.51	NA	4.81 JP	7.52	64.0%	NA
4,4'-DDD	< 4.70	6.45	7.51	85.9%	4.61 J	7.52	61.3%	33.3%
Endosulfan Sulfate	< 4.70	6.87 JP	7.51	91.5%	3.09 J	7.52	41.1%	75.9%
4,4'-DDT	< 4.70	12.4 JP	7.51	165%	3.67 JP	7.52	48.8%	109%
Methoxychlor	< 23.5	22.8 JP	37.6	60.6%	7.12 J	37.6	18.9%	105%
Endrin Ketone	< 4.70	14.7 P	7.51	196%	3.01 J	7.52	40.0%	132%
Endrin Aldehyde	< 4.70	3.47 J	7.51	46.2%	2.36 JP	7.52	31.4%	38.1%
trans-Chlordane	< 2.35	3.62	3.76	96.3%	2.45 J	3.76	65.2%	38.6%
cis-Chlordane	< 2.35	2.65	3.76	70.5%	2.48 J	3.76	66.0%	6.6%
Hexachlorobenzene	< 4.70	3.01 J	3.76	80.1%	2.86 J	3.76	76.1%	5.1%
Hexachlorobutadiene	< 4.70	3.07 J	3.76	81.6%	3.52 J	3.76	93.6%	13.7%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD **Sample ID: KC-VT-1593-20130530-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/14/13 13:42
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 21.9%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.38	2.4	---
319-85-7	beta-BHC	0.65	2.4	---
319-86-8	delta-BHC	0.39	2.4	---
58-89-9	gamma-BHC (Lindane)	0.23	2.4	---
76-44-8	Heptachlor	0.62	2.4	---
309-00-2	Aldrin	0.26	2.4	---
1024-57-3	Heptachlor Epoxide	0.40	4.7	---
959-98-8	Endosulfan I	0.34	2.4	---
60-57-1	Dieldrin	0.47	4.7	---
72-55-9	4,4'-DDE	0.58	4.7	---
72-20-8	Endrin	1.0	4.7	---
33213-65-9	Endosulfan II	0.54	4.7	---
72-54-8	4,4'-DDD	0.63	4.7	---
1031-07-8	Endosulfan Sulfate	0.90	4.7	---
50-29-3	4,4'-DDT	0.90	4.7	---
72-43-5	Methoxychlor	3.3	24	---
53494-70-5	Endrin Ketone	0.56	4.7	---
7421-93-4	Endrin Aldehyde	1.0	4.7	---
5103-74-2	trans-Chlordane	0.36	2.4	---
5103-71-9	cis-Chlordane	0.24	2.4	---
8001-35-2	Toxaphene	160	470	< 470 U
118-74-1	Hexachlorobenzene	0.44	4.7	---
87-68-3	Hexachlorobutadiene	0.65	4.7	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	106%
Tetrachlorometaxylene	104%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: KC-VT-1593-20130530-S
MATRIX SPIKE DUP

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/14/13 14:00
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 21.9%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.38	2.4	---
319-85-7	beta-BHC	0.65	2.4	---
319-86-8	delta-BHC	0.39	2.4	---
58-89-9	gamma-BHC (Lindane)	0.23	2.4	---
76-44-8	Heptachlor	0.62	2.4	---
309-00-2	Aldrin	0.26	2.4	---
1024-57-3	Heptachlor Epoxide	0.40	4.7	---
959-98-8	Endosulfan I	0.34	2.4	---
60-57-1	Dieldrin	0.47	4.7	---
72-55-9	4,4'-DDE	0.58	4.7	---
72-20-8	Endrin	1.0	4.7	---
33213-65-9	Endosulfan II	0.55	4.7	---
72-54-8	4,4'-DDD	0.63	4.7	---
1031-07-8	Endosulfan Sulfate	0.90	4.7	---
50-29-3	4,4'-DDT	0.90	4.7	---
72-43-5	Methoxychlor	3.3	24	---
53494-70-5	Endrin Ketone	0.56	4.7	---
7421-93-4	Endrin Aldehyde	1.0	4.7	---
5103-74-2	trans-Chlordane	0.36	2.4	---
5103-71-9	cis-Chlordane	0.24	2.4	---
8001-35-2	Toxaphene	160	470	< 470 U
118-74-1	Hexachlorobenzene	0.44	4.7	---
87-68-3	Hexachlorobutadiene	0.65	4.7	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	94.8%
Tetrachlorometaxylene	82.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-061013
LAB CONTROL

Lab Sample ID: LCS-061013
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/14/13 12:49
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
alpha-BHC	3.70	4.00	92.5%
beta-BHC	3.78	4.00	94.5%
delta-BHC	4.10	4.00	102%
gamma-BHC (Lindane)	3.92	4.00	98.0%
Heptachlor	3.88	4.00	97.0%
Aldrin	3.82	4.00	95.5%
Heptachlor Epoxide	4.24	4.00	106%
Endosulfan I	4.12	4.00	103%
Dieldrin	8.22	8.00	103%
4,4'-DDE	9.60	8.00	120%
Endrin	7.98	8.00	99.8%
Endosulfan II	7.34	8.00	91.8%
4,4'-DDD	6.86	8.00	85.8%
Endosulfan Sulfate	7.18	8.00	89.8%
4,4'-DDT	7.18	8.00	89.8%
Methoxychlor	35.0	40.0	87.5%
Endrin Ketone	6.90	8.00	86.2%
Endrin Aldehyde	3.24	8.00	40.5%
trans-Chlordane	4.12	4.00	103%
cis-Chlordane	4.12	4.00	103%
Hexachlorobenzene	3.64	4.00	91.0%
Hexachlorobutadiene	3.12	4.00	78.0%

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	81.5%
Tetrachlorometaxylene	74.0%

Reported in µg/kg (ppb)

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WR99MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WR99
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WR99MBS1
Lab File ID: 0614A020

Date Extracted: 06/10/13
Matrix: SOLID

Date Analyzed: 06/14/13
Instrument ID: ECD6

Time Analyzed: 1231
GC Columns: STX-CLP1/STX-CLP2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WR99LCSS1	WR99LCSS1	06/14/13
02	KC-VT-1593-20130530	WR99D	06/14/13
03	KC-VT-1593-2013 MS	WR99DMS	06/14/13
04	KC-VT-1593-2013 MSD	WR99DMSD	06/14/13
05	KC-CB-01-20130530-S	WR99E	06/14/13
06	KC-DD-2009-20130530	WR99F	06/14/13
07	KC-IV-SPS-20130531-	WS21A	06/14/13

ALL RUNS ARE DUAL COLUMN

WR99 : 00219

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD **Sample ID: MB-061013**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-061013
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/10/13
Date Analyzed: 06/14/13 12:31
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.081	0.50	< 0.50 U
319-85-7	beta-BHC	0.14	0.50	< 0.50 U
319-86-8	delta-BHC	0.082	0.50	< 0.50 U
58-89-9	gamma-BHC (Lindane)	0.048	0.50	< 0.50 U
76-44-8	Heptachlor	0.13	0.50	< 0.50 U
309-00-2	Aldrin	0.055	0.50	< 0.50 U
1024-57-3	Heptachlor Epoxide	0.085	1.0	< 1.0 U
959-98-8	Endosulfan I	0.072	0.50	< 0.50 U
60-57-1	Dieldrin	0.10	1.0	< 1.0 U
72-55-9	4,4'-DDE	0.12	1.0	< 1.0 U
72-20-8	Endrin	0.22	1.0	< 1.0 U
33213-65-9	Endosulfan II	0.12	1.0	< 1.0 U
72-54-8	4,4'-DDD	0.14	1.0	< 1.0 U
1031-07-8	Endosulfan Sulfate	0.19	1.0	< 1.0 U
50-29-3	4,4'-DDT	0.19	1.0	< 1.0 U
72-43-5	Methoxychlor	0.70	5.0	< 5.0 U
53494-70-5	Endrin Ketone	0.12	1.0	< 1.0 U
7421-93-4	Endrin Aldehyde	0.22	1.0	< 1.0 U
5103-74-2	trans-Chlordane	0.077	0.50	< 0.50 U
5103-71-9	cis-Chlordane	0.051	0.50	< 0.50 U
8001-35-2	Toxaphene	35	100	< 100 U
118-74-1	Hexachlorobenzene	0.094	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.14	1.0	< 1.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	88.8%
Tetrachlorometaxylene	79.8%

6D
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

COMPOUND	RT OF STANDARDS							MEAN	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.33	4.33	4.33	4.33	4.28	4.33	4.33	4.32	4.23	4.33
beta-BHC	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.59	4.69
delta-BHC	4.86	4.86	4.86	4.86	4.81	4.86	4.86	4.85	4.76	4.86
gamma-BHC (Lindane)	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.52	4.62
Heptachlor	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	4.96	5.06
Aldrin	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.25	5.35
Heptachlor epoxide b	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.83	5.93
Endosulfan I	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.21	6.31
Dieldrin	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.43	6.53
4,4'-DDE	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.13	6.23
Endrin	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.65	6.75
Endosulfan II	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.85	6.95
4,4'-DDD	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Endosulfan sulfate	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.62	7.72
4,4'-DDT	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.94	7.04
Methoxychlor	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.37	7.47
Endrin ketone	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.92	7.88	7.98
Endrin aldehyde	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.23	7.33
gamma-Chlordane	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.95	6.05
alpha-Chlordane	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.07	6.17
Hexachlorobutadiene	2.34	2.34	2.34	2.34	2.31	2.34	2.34	2.34	2.26	2.36
Hexachlorobenzene	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.09	4.19
Tetrachloro-m-xylene	3.84	3.84	3.84	3.84	3.80	3.84	3.83	3.83	3.75	3.85
Decachlorobiphenyl	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.72	8.82

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

COMPOUND	RT OF STANDARDS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	4.76	4.76	4.76	4.75	4.71	4.75	4.75	4.75	4.66	4.76
beta-BHC	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.09	5.19
delta-BHC	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.40	5.50
gamma-BHC (Lindane)	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.01	5.11
Heptachlor	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.48	5.58
Aldrin	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.82	5.92
Heptachlor epoxide b	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.37	6.47
Endosulfan I	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.76	6.86
Dieldrin	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.02	7.12
4,4'-DDE	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.82	6.92
Endrin	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.31	7.41
Endosulfan II	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.49	7.59
4,4'-DDD	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.36	7.46
Endosulfan sulfate	8.14	8.14	8.14	8.14	8.09	8.14	8.13	8.13	8.04	8.14
4,4'-DDT	7.75	7.75	7.75	7.75	7.69	7.74	7.74	7.74	7.64	7.74
Methoxychlor	8.33	8.33	8.33	8.33	8.28	8.33	8.33	8.32	8.23	8.33
Endrin ketone	8.63	8.63	8.63	8.63	8.58	8.63	8.63	8.62	8.53	8.63
Endrin aldehyde	7.90	7.90	7.89	7.89	7.84	7.89	7.89	7.89	7.79	7.89
gamma-Chlordane	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.55	6.65
alpha-Chlordane	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Hexachlorobutadiene	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.42	2.52
Hexachlorobenzene	4.64	4.64	4.64	4.63	4.58	4.63	4.63	4.63	4.53	4.63
Tetrachloro-m-xylene	4.17	4.17	4.17	4.17	4.13	4.17	4.17	4.16	4.08	4.18
Decachlorobiphenyl	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.67	9.77

WR99 : 060222

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.5968	1.5392	1.5872	1.6901	1.7297	1.7443	2.0426	1.7043	9.9
beta-BHC	0.7301	0.6823	0.6738	0.6482	0.6413	0.6319	0.7220	0.6756	5.7
delta-BHC	1.2786	1.2619	1.3188	1.4477	1.4389	1.4775	1.7328	1.4223	11.4
gamma-BHC (Lindane)	1.3776	1.3221	1.3739	1.4737	1.5045	1.5173	1.7699	1.4770	10.1
Heptachlor	1.4402	1.3545	1.3699	1.4447	1.4364	1.4095	1.5937	1.4356	5.4
Aldrin	1.3391	1.3219	1.3589	1.4306	1.4442	1.4284	1.6236	1.4210	7.2
Heptachlor epoxide b	1.3188	1.2294	1.2355	1.2904	1.2630	1.2402	1.3930	1.2815	4.6
Endosulfan I	1.3372	1.2241	1.1948	1.2064	1.1670	1.1231	1.2589	1.2159	5.6
Dieldrin	1.2814	1.2331	1.2629	1.3180	1.2916	1.2529	1.4056	1.2922	4.4
4,4'-DDE	1.0790	0.9920	0.9834	1.0026	1.0023	1.0038	1.1801	1.0347	6.9
Endrin	1.0004	0.9514	0.9880	1.0588	1.0584	1.0706	1.2004	1.0468	7.7
Endosulfan II	1.1252	1.0889	1.0545	1.1510	1.1162	1.1303	1.2764	1.1346	6.2
4,4'-DDD	1.2252	1.1470	1.1595	1.2032	1.1608	1.1774	1.3268	1.2000	5.2
Endosulfan sulfate	1.0443	0.9656	0.9745	1.0088	0.9846	1.0061	1.1424	1.0180	6.0
4,4'-DDT	1.0032	0.9598	0.9927	1.0672	1.0551	1.1004	1.2648	1.0633	9.5
Methoxychlor	0.5427	0.5024	0.4926	0.4960	0.4752	0.4831	0.5639	0.5080	6.4
Endrin ketone	1.4418	1.2742	1.2510	1.2600	1.2054	1.2244	1.3916	1.2926	6.9
Endrin aldehyde	1.0145	0.9294	0.9220	0.9490	0.9087	0.9217	1.0364	0.9545	5.3
gamma-Chlordane	1.3433	1.2904	1.3019	1.3866	1.3786	1.3702	1.5490	1.3743	6.2
alpha-Chlordane	1.2651	1.1864	1.2049	1.2783	1.2847	1.2776	1.4501	1.2782	6.7
Hexachlorobutadiene	1.7932	1.6939	1.7496	1.7815	1.7512	1.7130	1.9878	1.7814	5.5
Hexachlorobenzene	1.4975	1.3905	1.3345	1.3248	1.2691	1.2270	1.3907	1.3477	6.6
Tetrachloro-m-xylene	1.0573	1.0250	1.0491	1.0957	1.1043	1.0784	1.2256	1.0908	6.0
Decachlorobiphenyl	1.3691	1.1703	1.1864	1.0954	1.0150	0.9957	1.1297	1.1374	11.0

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.5964	1.6078	1.7179	1.8556	1.8716	1.8406	2.0861	1.7966	9.6
beta-BHC	0.6754	0.6491	0.6617	0.6966	0.7003	0.6895	0.7649	0.6911	5.4
delta-BHC	1.2504	1.2562	1.3640	1.5177	1.5783	1.5735	1.7885	1.4755	13.3
gamma-BHC (Lindane)	1.4128	1.3982	1.4757	1.5963	1.6109	1.5910	1.8271	1.5588	9.5
Heptachlor	1.5214	1.4662	1.5073	1.5651	1.5171	1.4171	1.4920	1.4980	3.1
Aldrin	1.3673	1.3404	1.3839	1.4765	1.4663	1.3818	1.4814	1.4139	4.2
Heptachlor epoxide b	1.3111	1.1809	1.2247	1.2731	1.2517	1.1802	1.2468	1.2384	3.8
Endosulfan I	1.1289	1.0916	1.1276	1.1988	1.1753	1.1147	1.1712	1.1440	3.4
Dieldrin	1.2194	1.2005	1.1957	1.2291	1.1560	1.0591	1.1010	1.1658	5.5
4,4'-DDE	1.2420	1.2138	1.2482	1.2889	1.2055	1.1204	1.1599	1.2112	4.7
Endrin	1.5490	1.4864	1.5394	1.5891	1.5221	1.4268	1.4967	1.5156	3.4
Endosulfan II	1.8235	1.7385	1.7960	1.8865	1.7723	1.6578	1.7732	1.7782	4.0
4,4'-DDD	1.8815	1.7757	1.8133	1.8367	1.7370	1.6484	1.7986	1.7844	4.2
Endosulfan sulfate	1.4746	1.3972	1.4421	1.4952	1.4478	1.4024	1.5233	1.4546	3.2
4,4'-DDT	1.4079	1.3584	1.4277	1.5130	1.4495	1.4659	1.6656	1.4697	6.7
Methoxychlor	0.6750	0.6230	0.6058	0.5795	0.5179	0.4760	0.4876	0.5664	13.2
Endrin ketone	1.7032	1.5827	1.5941	1.6097	1.5259	1.4661	1.6076	1.5842	4.7
Endrin aldehyde	1.5133	1.4032	1.4138	1.4303	1.3655	1.3052	1.4070	1.4055	4.5
gamma-Chlordane	1.2795	1.2138	1.2586	1.3396	1.3316	1.2796	1.3829	1.2979	4.4
alpha-Chlordane	1.1495	1.1150	1.1611	1.2432	1.2285	1.1863	1.2871	1.1958	5.0
Hexachlorobutadiene	1.6005	1.4941	1.4733	1.5378	1.4342	1.4100	1.5669	1.5024	4.6
Hexachlorobenzene	1.9113	1.8141	1.8472	1.9384	1.8917	1.8032	1.9964	1.8860	3.7
Tetrachloro-m-xylene	1.3675	1.3120	1.3324	1.3607	1.2884	1.2131	1.2297	1.3005	4.7
Decachlorobiphenyl	1.8027	1.6202	1.5938	1.5991	1.5250	1.4884	1.6834	1.6161	6.4

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 14-JUN-2013 11:38 Init. Calib. Date: 14-MAY-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.194	174782
Endrin	6.709	8077221
4,4'-DDD	6.749	466782
4,4'-DDT	7.006	7638795
Endrin ketone	7.935	367582
Endrin aldehyde	7.291	182963

DDT Percent Breakdown = 7.7 %
((174782+466782) * 100)/(174782+466782+7638795)

Endrin Percent Breakdown = 6.4 %
((182963+367582) * 100)/(182963+367582+8077221)

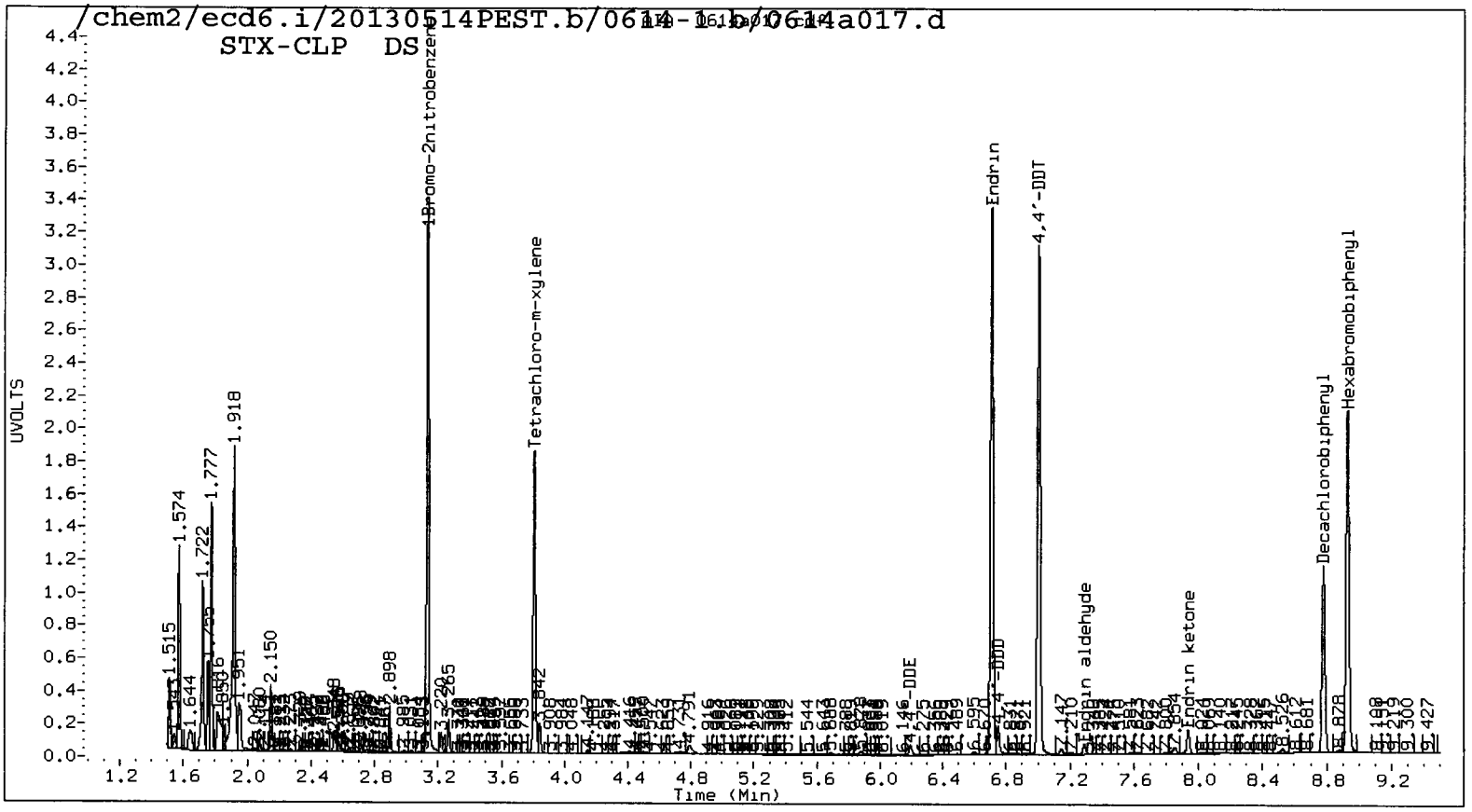
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.876	749506
Endrin	7.362	31386216
4,4'-DDD	7.412	1968497
4,4'-DDT	7.700	26890700
Endrin ketone	8.582	1212326
Endrin aldehyde	7.848	588424

DDT Percent Breakdown = 9.2 %
((749506+1968497) * 100)/(749506+1968497+26890700)

Endrin Percent Breakdown = 5.4 %
((588424+1212326) * 100)/(588424+1212326+31386216)

W99 : 08025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STX-CLP DS
UVOLTS
Time (Min)
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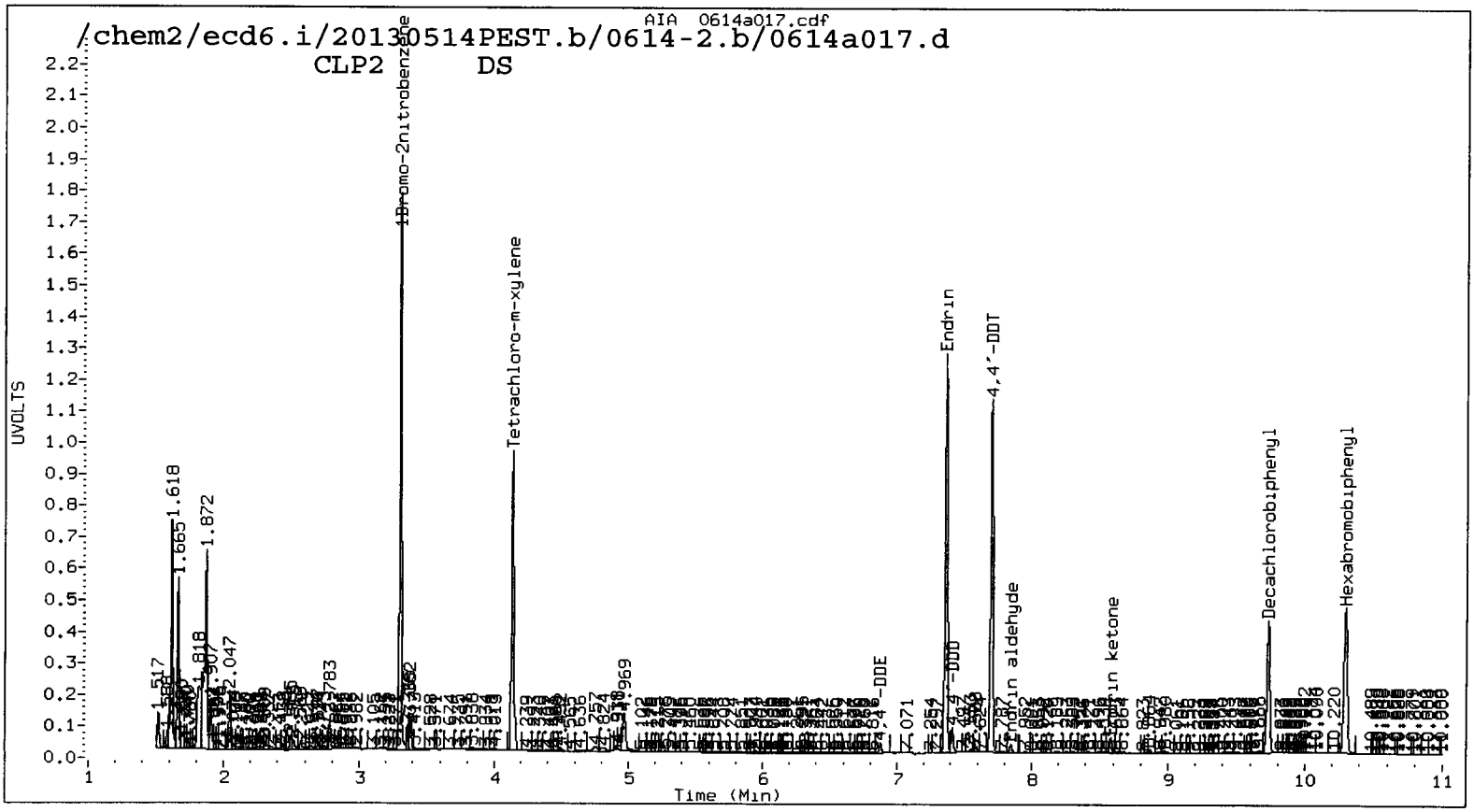
1.644
1.722
1.777
1.918
1.951
2.150
2.898
3.265
3.342
4.791
5.146
5.595
6.146
6.670
6.921
7.147
7.210
7.881
8.278
8.427
9.300
9.427
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
4,4'-DDE
Endrin
4,4'-DDD
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
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1.872
1.907
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2.783
3.062
3.969
4.624
5.071
5.254
5.424
6.220
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
4,4'-DDE
Endrin
4,4'-DDD
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 14-JUN-2013 15:13 Init. Calib. Date: 14-MAY-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.181	183977
Endrin	6.697	8101516
4,4'-DDD	6.737	496821
4,4'-DDT	6.994	7481873
Endrin ketone	7.924	416725
Endrin aldehyde	7.279	210281

DDT Percent Breakdown = 8.3 %
((183977+496821) * 100)/(183977+496821+7481873)

Endrin Percent Breakdown = 7.2 %
((210281+416725) * 100)/(210281+416725+8101516)

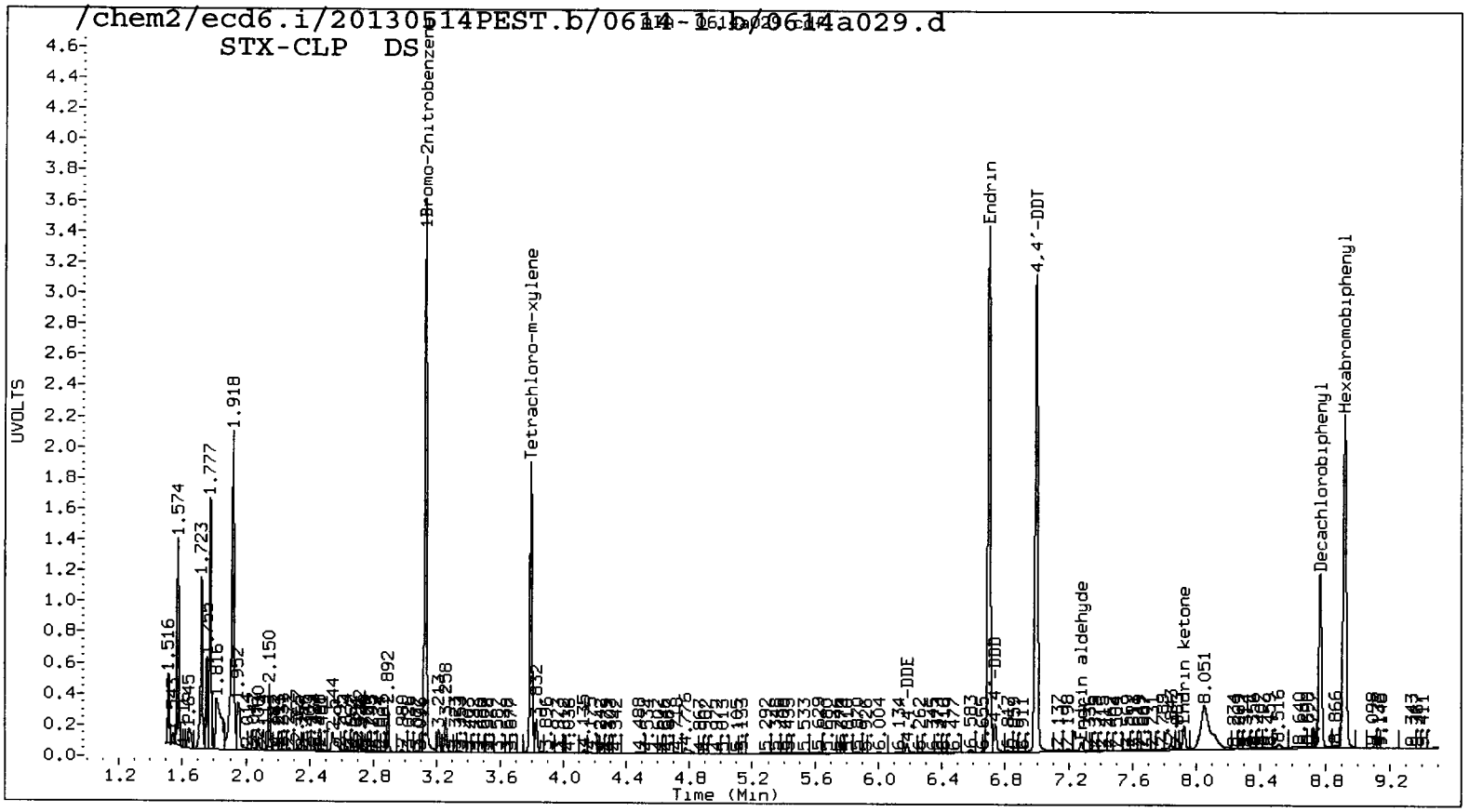
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.868	511711
Endrin	7.355	21695125
4,4'-DDD	7.406	1451061
4,4'-DDT	7.693	18509152
Endrin ketone	8.576	956578
Endrin aldehyde	7.841	455549

DDT Percent Breakdown = 9.6 %
((511711+1451061) * 100)/(511711+1451061+18509152)

Endrin Percent Breakdown = 6.1 %
((455549+956578) * 100)/(455549+956578+21695125)

LIR96 : 00227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STX-CLP DS
UVOLTS
Time (Min)
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1.918
1.516
2.150
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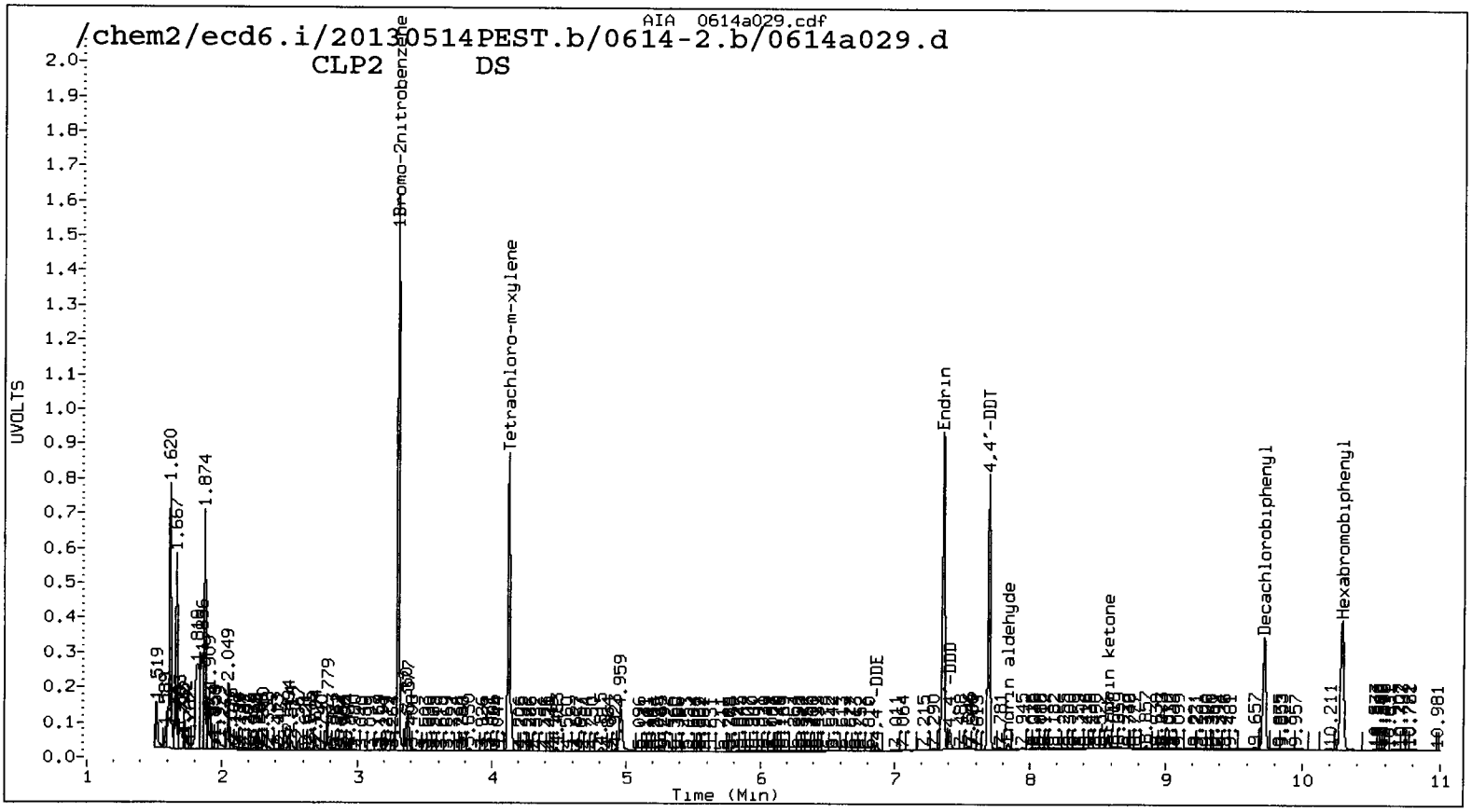
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
8.051
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
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1.667
1.874
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAB Date/Time Analyzed: 05/14/13,1517

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.33	4.23	4.33	2.3	2.5	-9.7
beta-BHC	4.72	4.59	4.69	2.5	2.5	1.0
delta-BHC	4.89	4.76	4.86	2.2	2.5	-11.3
gamma-BHC (Lindane)	4.62	4.52	4.62	2.2	2.5	-10.5
Heptachlor	5.07	4.96	5.06	2.4	2.5	-5.6
Aldrin	5.36	5.25	5.35	2.3	2.5	-7.0
Heptachlor epoxide b	5.94	5.83	5.93	2.4	2.5	-4.1
Endosulfan I	6.31	6.21	6.31	2.5	2.5	0.7
Dieldrin	6.54	6.43	6.53	4.8	5.0	-4.6
4,4'-DDE	6.24	6.13	6.23	4.8	5.0	-4.1
Endrin	6.76	6.65	6.75	4.5	5.0	-9.1
Endosulfan II	6.96	6.85	6.95	4.8	5.0	-4.0
4,4'-DDD	6.81	6.69	6.79	4.8	5.0	-4.4
Endosulfan sulfate	7.73	7.62	7.72	4.7	5.0	-5.2
4,4'-DDT	7.06	6.94	7.04	4.5	5.0	-9.7
Methoxychlor	7.49	7.37	7.47	24.7	25.0	-1.1
Endrin ketone	7.99	7.88	7.98	4.9	5.0	-1.4
Endrin aldehyde	7.34	7.23	7.33	4.9	5.0	-2.6
gamma-Chlordane	6.06	5.95	6.05	2.3	2.5	-6.1
alpha-Chlordane	6.18	6.07	6.17	2.3	2.5	-7.2
Hexachlorobutadiene	2.34	2.26	2.36	2.4	2.5	-4.9
Hexachlorobenzene	4.19	4.09	4.19	2.6	2.5	3.2
Tetrachloro-m-xylene	3.84	3.75	3.85	4.7	5.0	-6.0
Decachlorobiphenyl	8.83	8.72	8.82	5.1	5.0	2.9

WR99 : 80229

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAB Date/Time Analyzed: 05/14/13,1517

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.76	4.66	4.76	2.2	2.5	-10.5
beta-BHC	5.20	5.09	5.19	2.3	2.5	-6.1
delta-BHC	5.51	5.40	5.50	2.1	2.5	-14.9
gamma-BHC (Lindane)	5.12	5.01	5.11	2.2	2.5	-10.3
Heptachlor	5.58	5.48	5.58	2.4	2.5	-2.1
Aldrin	5.92	5.82	5.92	2.4	2.5	-5.2
Heptachlor epoxide b	6.47	6.37	6.47	2.4	2.5	-4.6
Endosulfan I	6.86	6.76	6.86	2.4	2.5	-4.6
Dieldrin	7.12	7.02	7.12	5.1	5.0	3.0
4,4'-DDE	6.92	6.82	6.92	5.0	5.0	0.2
Endrin	7.41	7.31	7.41	4.9	5.0	-1.9
Endosulfan II	7.60	7.49	7.59	4.9	5.0	-2.2
4,4'-DDD	7.47	7.36	7.46	5.0	5.0	-0.5
Endosulfan sulfate	8.14	8.04	8.14	4.8	5.0	-3.9
4,4'-DDT	7.75	7.64	7.74	4.6	5.0	-7.6
Methoxychlor	8.33	8.23	8.33	27.5	25.0	10.0
Endrin ketone	8.63	8.53	8.63	5.0	5.0	-0.1
Endrin aldehyde	7.90	7.79	7.89	5.0	5.0	-0.2
gamma-Chlordane	6.66	6.55	6.65	2.3	2.5	-6.5
alpha-Chlordane	6.79	6.69	6.79	2.3	2.5	-6.8
Hexachlorobutadiene	2.49	2.42	2.52	2.5	2.5	-0.6
Hexachlorobenzene	4.64	4.53	4.63	2.4	2.5	-3.8
Tetrachloro-m-xylene	4.17	4.08	4.18	5.0	5.0	0.9
Decachlorobiphenyl	9.79	9.67	9.77	5.0	5.0	0.2

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/14/13,1155

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.28	4.23	4.33	22.9	20.0	14.7
beta-BHC	4.64	4.59	4.69	21.2	20.0	6.0
delta-BHC	4.81	4.76	4.86	22.5	20.0	12.7
gamma-BHC (Lindane)	4.57	4.52	4.62	23.7	20.0	18.4
Heptachlor	5.01	4.96	5.06	22.8	20.0	14.1
Aldrin	5.31	5.25	5.35	23.3	20.0	16.5
Heptachlor epoxide b	5.88	5.83	5.93	23.3	20.0	16.4
Endosulfan I	6.26	6.21	6.31	22.5	20.0	12.6
Dieldrin	6.48	6.43	6.53	45.7	40.0	14.1
4,4'-DDE	6.18	6.13	6.23	42.5	40.0	6.2
Endrin	6.70	6.65	6.75	46.7	40.0	16.8
Endosulfan II	6.90	6.85	6.95	42.5	40.0	6.2
4,4'-DDD	6.74	6.69	6.79	40.4	40.0	1.0
Endosulfan sulfate	7.67	7.62	7.72	41.1	40.0	2.7
4,4'-DDT	7.00	6.94	7.04	42.5	40.0	6.3
Methoxychlor	7.42	7.37	7.47	200.0	200.0	-0.0
Endrin ketone	7.93	7.88	7.98	39.9	40.0	-0.3
Endrin aldehyde	7.28	7.23	7.33	40.2	40.0	0.5
gamma-Chlordane	6.00	5.95	6.05	22.6	20.0	13.2
alpha-Chlordane	6.12	6.07	6.17	23.3	20.0	16.3
Hexachlorobutadiene	2.31	2.26	2.36	22.6	20.0	13.0
Hexachlorobenzene	4.14	4.09	4.19	21.2	20.0	6.0
Tetrachloro-m-xylene	3.80	3.75	3.85	46.3	40.0	15.7
Decachlorobiphenyl	8.77	8.72	8.82	36.8	40.0	-8.0

WR99 : 60231

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/14/13,1155

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.71	4.66	4.76	23.1	20.0	15.3
beta-BHC	5.14	5.09	5.19	22.1	20.0	10.4
delta-BHC	5.45	5.40	5.50	23.8	20.0	19.1
gamma-BHC (Lindane)	5.07	5.01	5.11	22.8	20.0	13.9
Heptachlor	5.53	5.48	5.58	22.9	20.0	14.4
Aldrin	5.87	5.82	5.92	23.5	20.0	17.6
Heptachlor epoxide b	6.42	6.37	6.47	23.0	20.0	15.1
Endosulfan I	6.81	6.76	6.86	22.3	20.0	11.5
Dieldrin	7.07	7.02	7.12	43.1	40.0	7.8
4,4'-DDE	6.87	6.82	6.92	42.1	40.0	5.3
Endrin	7.36	7.31	7.41	44.0	40.0	10.0
Endosulfan II	7.54	7.49	7.59	40.0	40.0	-0.1
4,4'-DDD	7.41	7.36	7.46	39.5	40.0	-1.2
Endosulfan sulfate	8.09	8.04	8.14	38.8	40.0	-2.9
4,4'-DDT	7.69	7.64	7.74	40.1	40.0	0.3
Methoxychlor	8.28	8.23	8.33	191.6	200.0	-4.2
Endrin ketone	8.58	8.53	8.63	37.2	40.0	-6.9
Endrin aldehyde	7.84	7.79	7.89	37.1	40.0	-7.1
gamma-Chlordane	6.60	6.55	6.65	22.3	20.0	11.3
alpha-Chlordane	6.74	6.69	6.79	22.3	20.0	11.5
Hexachlorobutadiene	2.47	2.42	2.52	21.1	20.0	5.7
Hexachlorobenzene	4.59	4.53	4.63	22.9	20.0	14.7
Tetrachloro-m-xylene	4.13	4.08	4.18	44.8	40.0	12.0
Decachlorobiphenyl	9.73	9.67	9.77	39.2	40.0	-2.0

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/14/13,1531

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.28	4.23	4.33	22.9	20.0	14.5
beta-BHC	4.64	4.59	4.69	20.9	20.0	4.5
delta-BHC	4.81	4.76	4.86	22.1	20.0	10.4
gamma-BHC (Lindane)	4.57	4.52	4.62	23.3	20.0	16.7
Heptachlor	5.01	4.96	5.06	22.6	20.0	12.9
Aldrin	5.30	5.25	5.35	23.2	20.0	16.1
Heptachlor epoxide b	5.88	5.83	5.93	22.8	20.0	14.1
Endosulfan I	6.26	6.21	6.31	21.8	20.0	9.2
Dieldrin	6.48	6.43	6.53	43.8	40.0	9.4
4,4'-DDE	6.18	6.13	6.23	42.4	40.0	6.1
Endrin	6.70	6.65	6.75	47.5	40.0	18.8
Endosulfan II	6.90	6.85	6.95	43.1	40.0	7.8
4,4'-DDD	6.74	6.69	6.79	41.4	40.0	3.5
Endosulfan sulfate	7.67	7.62	7.72	39.6	40.0	-1.0
4,4'-DDT	6.99	6.94	7.04	41.0	40.0	2.5
Methoxychlor	7.42	7.37	7.47	202.2	200.0	1.1
Endrin ketone	7.92	7.88	7.98	39.6	40.0	-1.0
Endrin aldehyde	7.28	7.23	7.33	41.1	40.0	2.7
gamma-Chlordane	6.00	5.95	6.05	21.8	20.0	9.1
alpha-Chlordane	6.12	6.07	6.17	22.4	20.0	11.9
Hexachlorobutadiene	2.31	2.26	2.36	22.5	20.0	12.7
Hexachlorobenzene	4.14	4.09	4.19	21.2	20.0	6.1
Tetrachloro-m-xylene	3.80	3.75	3.85	46.1	40.0	15.1
Decachlorobiphenyl	8.77	8.72	8.82	36.8	40.0	-8.1

WR99 : 00233

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/14/13,1531

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.71	4.66	4.76	22.0	20.0	10.2
beta-BHC	5.14	5.09	5.19	20.9	20.0	4.6
delta-BHC	5.45	5.40	5.50	21.7	20.0	8.7
gamma-BHC (Lindane)	5.06	5.01	5.11	21.6	20.0	7.9
Heptachlor	5.53	5.48	5.58	20.9	20.0	4.3
Aldrin	5.87	5.82	5.92	20.9	20.0	4.3
Heptachlor epoxide b	6.42	6.37	6.47	19.9	20.0	-0.3
Endosulfan I	6.81	6.76	6.86	17.8	20.0	-11.0
Dieldrin	7.06	7.02	7.12	32.4	40.0	-19.0
4,4'-DDE	6.87	6.82	6.92	34.2	40.0	-14.5
Endrin	7.35	7.31	7.41	43.5	40.0	8.7
Endosulfan II	7.54	7.49	7.59	39.8	40.0	-0.5
4,4'-DDD	7.41	7.36	7.46	39.5	40.0	-1.2
Endosulfan sulfate	8.09	8.04	8.14	36.7	40.0	-8.1
4,4'-DDT	7.69	7.64	7.74	38.3	40.0	-4.2
Methoxychlor	8.28	8.23	8.33	206.8	200.0	3.4
Endrin ketone	8.58	8.53	8.63	36.7	40.0	-8.3
Endrin aldehyde	7.84	7.79	7.89	38.9	40.0	-2.7
gamma-Chlordane	6.60	6.55	6.65	18.8	20.0	-5.9
alpha-Chlordane	6.74	6.69	6.79	18.0	20.0	-9.8
Hexachlorobutadiene	2.47	2.42	2.52	21.2	20.0	5.8
Hexachlorobenzene	4.58	4.53	4.63	22.0	20.0	10.0
Tetrachloro-m-xylene	4.13	4.08	4.18	43.2	40.0	8.1
Decachlorobiphenyl	9.72	9.67	9.77	40.8	40.0	2.0

WR99 : 06234

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 05/14/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5500669	3.162	5319006	8.997
	UPPER LIMIT	11001338	3.212	10638012	9.047
	LOWER LIMIT	2750334	3.112	2659503	8.947

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		DS	05/14/13	1417	5564401	3.162	5015229	8.993
02		INDAE	05/14/13	1437	5500669	3.162	5319006	8.997
03		INDAA	05/14/13	1457	5276720	3.162	5051117	8.998
04		INDAB	05/14/13	1517	5534770	3.162	5379091	8.998
05		INDAC	05/14/13	1537	5478422	3.161	5322227	8.999
06		INDAD	05/14/13	1556	5395940	3.160	5185525	8.998
07		INDAF	05/14/13	1616	5385380	3.161	5022010	8.999
08		INDAG	05/14/13	1634	4447256	3.160	4183112	8.999
09	ZZZZZ	ZZZZZ	05/14/13	1654	5229139	3.162	5072678	9.001
10		TOXAPH	05/14/13	1712	5170972	3.160	5171544	8.999
11		DS	06/14/13	1138	6106233	3.134	5560865	8.930*
12		INDAE	06/14/13	1155	5062298	3.129	5017151	8.921*
13		TOXAPH	06/14/13	1213	6490816	3.128	6578881	8.919*
14	WR99MBS1	WR99MBS1	06/14/13	1231	5992911	3.128	6008642	8.919*
15	WR99LCSS1	WR99LCSS1	06/14/13	1249	6382179	3.128	6736535	8.918*
16	ZZZZZ	ZZZZZ	06/14/13	1307	6568482	3.128	6629665	8.918*
17	KC-VT-1593-2	WR99D	06/14/13	1324	5500369	3.128	5981100	8.920*
18	KC-VT-1593-2	WR99DMS	06/14/13	1342	6300117	3.128	6450091	8.922*
19	KC-VT-1593-2	WR99DMSD	06/14/13	1400	6064480	3.127	6551955	8.920*
20	KC-CB-01-201	WR99E	06/14/13	1420	5874255	3.128	5428326	8.921*
21	KC-DD-2009-2	WR99F	06/14/13	1438	6089419	3.127	5747943	8.919*
22	KC-IV-SPS-20	WS21A	06/14/13	1455	6366167	3.127	6434119	8.919*
23		DS	06/14/13	1513	6461724	3.128	5679255	8.918*
24		INDAE	06/14/13	1531	5519699	3.128	5198503	8.919*
25		TOXAPH	06/14/13	1551	7094744	3.129	6789314	8.922*

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 05/14/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	29060499	3.331	16515704	10.370
	UPPER LIMIT	58120998	3.381	33031408	10.421
	LOWER LIMIT	14530250	3.281	8257852	10.320

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		DS	05/14/13	1417	27868012	3.331	15069896	10.368
02		INDAE	05/14/13	1437	29060499	3.331	16515704	10.370
03		INDAA	05/14/13	1457	28661245	3.331	16075431	10.370
04		INDAB	05/14/13	1517	30201103	3.331	17146317	10.371
05		INDAC	05/14/13	1537	29972511	3.330	16795593	10.372
06		INDAD	05/14/13	1556	29160968	3.329	16527116	10.370
07		INDAF	05/14/13	1616	29405183	3.330	16433920	10.372
08		INDAG	05/14/13	1634	24971444	3.329	13819406	10.371
09	ZZZZZ	ZZZZZ	05/14/13	1654	29203550	3.331	16453002	10.372
10		TOXAPH	05/14/13	1712	29085221	3.329	16639283	10.371
11		DS	06/14/13	1138	32477989	3.303	15682951	10.296*
12		INDAE	06/14/13	1155	27642194	3.299	15706475	10.289*
13		TOXAPH	06/14/13	1213	34809892	3.299	18801167	10.287*
14	WR99MBS1	WR99MBS1	06/14/13	1231	28970198	3.298	17759464	10.288*
15	WR99LCSS1	WR99LCSS1	06/14/13	1249	29378191	3.298	18546379	10.286*
16	ZZZZZ	ZZZZZ	06/14/13	1307	30360464	3.298	18785317	10.287*
17	KC-VT-1593-2	WR99D	06/14/13	1324	24088740	3.298	10593945	10.288*
18	KC-VT-1593-2	WR99DMS	06/14/13	1342	24443149	3.298	12437423	10.288*
19	KC-VT-1593-2	WR99DMSD	06/14/13	1400	23634673	3.297	12662774	10.287*
20	KC-CB-01-201	WR99E	06/14/13	1420	25325930	3.298	11472749	10.289*
21	KC-DD-2009-2	WR99F	06/14/13	1438	28352002	3.298	12056814	10.288*
22	KC-IV-SPS-20	WS21A	06/14/13	1455	26604719	3.297	11934849	10.287*
23		DS	06/14/13	1513	29740778	3.298	12791116	10.286*
24		INDAE	06/14/13	1531	27028833	3.298	12296519	10.287*
25		TOXAPH	06/14/13	1551	34759697	3.299	16322638	10.289*

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

PCB Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: KC-VT-1593-20130530-S
SAMPLE

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/12/13 19:37
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 21.9%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	0.96	3.8	< 3.8 U
53469-21-9	Aroclor 1242	1.3	3.8	< 3.8 U
12672-29-6	Aroclor 1248	1.3	3.8	< 3.8 U
11097-69-1	**Aroclor 1254**	**1.3**	**3.8**	**6.5**
11096-82-5	**Aroclor 1260**	**1.3**	**3.8**	**9.7**
11104-28-2	Aroclor 1221	1.3	3.8	< 3.8 U
11141-16-5	Aroclor 1232	1.3	3.8	< 3.8 U
37324-23-5	Aroclor 1262	1.3	3.8	< 3.8 U
11100-14-4	Aroclor 1268	1.3	3.8	< 3.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	75.2%
Tetrachlorometaxylene	72.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: KC-CB-01-20130530-S
SAMPLE

Lab Sample ID: WR99E
LIMS ID: 13-11545
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/12/13 20:38
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 3.91 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 21.8%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	33	130	< 130 U
53469-21-9	Aroclor 1242	43	130	< 130 U
12672-29-6	Aroclor 1248	43	380	< 380 Y
11097-69-1	**Aroclor 1254**	**43**	**130**	**5,000**
11096-82-5	**Aroclor 1260**	**43**	**130**	**1,400**
11104-28-2	Aroclor 1221	43	130	< 130 U
11141-16-5	Aroclor 1232	43	130	< 130 U
37324-23-5	Aroclor 1262	43	130	< 130 U
11100-14-4	Aroclor 1268	43	130	< 130 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	117%
Tetrachlorometaxylene	99.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: KC-DD-2009-20130530-S
SAMPLE

Lab Sample ID: WR99F
LIMS ID: 13-11546
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/12/13 20:58
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.55 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 38.1%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	82	320	< 320 U
53469-21-9	Aroclor 1242	110	320	< 320 U
12672-29-6	Aroclor 1248	110	8,000	< 8,000 Y
11097-69-1	**Aroclor 1254**	**110**	**320**	**88,000 E**
11096-82-5	**Aroclor 1260**	**110**	**320**	**20,000**
11104-28-2	Aroclor 1221	110	320	< 320 U
11141-16-5	Aroclor 1232	110	320	< 320 U
37324-23-5	Aroclor 1262	110	320	< 320 U
11100-14-4	Aroclor 1268	110	320	< 320 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	91.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: KC-DD-2009-20130530-S
DILUTION

Lab Sample ID: WR99F
LIMS ID: 13-11546
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/13/13 07:46
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.55 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 100
Silica Gel: Yes

Percent Moisture: 38.1%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	820	3,200	< 3,200 U
53469-21-9	Aroclor 1242	1,100	3,200	< 3,200 U
12672-29-6	Aroclor 1248	1,100	9,600	< 9,600 Y
11097-69-1	**Aroclor 1254**	**1,100**	**3,200**	**120,000**
11096-82-5	**Aroclor 1260**	**1,100**	**3,200**	**26,000**
11104-28-2	Aroclor 1221	1,100	3,200	< 3,200 U
11141-16-5	Aroclor 1232	1,100	3,200	< 3,200 U
37324-23-5	Aroclor 1262	1,100	3,200	< 3,200 U
11100-14-4	Aroclor 1268	1,100	3,200	< 3,200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-061013	80.2%	64-105	79.5%	54-100	0
LCS-061013	79.5%	64-105	71.8%	54-100	0
LCSD-061013	87.2%	64-105	76.5%	54-100	0
KC-VT-1593-20130530-S	75.2%	37-128	72.5%	45-102	0
KC-VT-1593-20130530-S MS	83.0%	35-133	70.8%	53-116	0
KC-VT-1593-20130530-S MSD	73.2%	35-133	70.5%	53-116	0
KC-CB-01-20130530-S	117%	35-133	99.5%	53-116	0
KC-DD-2009-20130530-S	NR	35-133	91.5%	53-116	0
KC-DD-2009-20130530-S DL	D	35-133	D	53-116	0

Microwave (MARS) Control Limits PCBSMM
Prep Method: SW3546
Log Number Range: 13-11544 to 13-11546

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

Sample ID: KC-VT-1593-20130530-S
MS/MSD

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted MS/MSD: 06/10/13

Date Analyzed MS: 06/12/13 19:57
MSD: 06/12/13 20:17
Instrument/Analyst MS: ECD5/JGR
MSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 13.3 g-dry-wt
MSD: 13.3 g-dry-wt
Final Extract Volume MS: 2.5 mL
MSD: 2.5 mL
Dilution Factor MS: 1.00
MSD: 1.00
Silica Gel: Yes

Percent Moisture: 21.9%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 3.8 U	64.5	94.7	68.1%	62.4	94.7	65.9%	3.3%
Aroclor 1260	9.7	66.9	94.7	60.4%	69.0	94.7	62.6%	3.1%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: KC-VT-1593-20130530-S
MATRIX SPIKE

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/12/13 19:57
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 21.9%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	0.96	3.8	---
53469-21-9	Aroclor 1242	1.3	3.8	< 3.8 U
12672-29-6	Aroclor 1248	1.3	3.8	< 3.8 U
11097-69-1	**Aroclor 1254**	**1.3**	**3.8**	**33**
11096-82-5	Aroclor 1260	1.3	3.8	---
11104-28-2	Aroclor 1221	1.3	3.8	< 3.8 U
11141-16-5	Aroclor 1232	1.3	3.8	< 3.8 U
37324-23-5	Aroclor 1262	1.3	3.8	< 3.8 U
11100-14-4	Aroclor 1268	1.3	3.8	< 3.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	83.0%
Tetrachlorometaxylene	70.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: KC-VT-1593-20130530-S
MATRIX SPIKE DUP

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/12/13 20:17
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 21.9%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	0.96	3.8	---
53469-21-9	Aroclor 1242	1.3	3.8	< 3.8 U
12672-29-6	Aroclor 1248	1.3	3.8	< 3.8 U
11097-69-1	**Aroclor 1254**	**1.3**	**3.8**	**33**
11096-82-5	Aroclor 1260	1.3	3.8	---
11104-28-2	Aroclor 1221	1.3	3.8	< 3.8 U
11141-16-5	Aroclor 1232	1.3	3.8	< 3.8 U
37324-23-5	Aroclor 1262	1.3	3.8	< 3.8 U
11100-14-4	Aroclor 1268	1.3	3.8	< 3.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	73.2%
Tetrachlorometaxylene	70.5%

WR99D : 082215

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LCS-061013
LCS/LCSD

Lab Sample ID: LCS-061013
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 06/10/13

Date Analyzed LCS: 06/12/13 16:54
LCSD: 06/12/13 17:15
Instrument/Analyst LCS: ECD5/JGR
LCSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 12.5 g-dry-wt
LCSD: 12.5 g-dry-wt
Final Extract Volume LCS: 2.50 mL
LCSD: 2.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	78.2	101	77.4%	83.7	101	82.9%	6.8%
Aroclor 1260	79.5	101	78.7%	85.5	101	84.7%	7.3%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	79.5%	87.2%
Tetrachlorometaxylene	71.8%	76.5%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

WR99 : 00215

PCB METHOD BLANK SUMMARY

BLANK NO.

WR99MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WR99
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WR99MBS1
Lab File ID: 0612B006

Date Extracted: 06/10/13
Matrix: SOLID

Date Analyzed: 06/12/13
Instrument ID: ECD5

Time Analyzed: 1634
GC Columns: ZB5/ZB5

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WR99LCSS1	WR99LCSS1	06/12/13
02	WR99LCSDS1	WR99LCSDS1	06/12/13
03	KC-VT-1593-20130530	WR99D	06/12/13
04	KC-VT-1593-2013 MS	WR99DMS	06/12/13
05	KC-VT-1593-2013 MSD	WR99DMSD	06/12/13
06	KC-CB-01-20130530-S	WR99E	06/12/13
07	KC-DD-2009-20130530	WR99F	06/12/13
08	KC-IV-SPS-20130531-	WS21A	06/12/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546

Sample ID: MB-061013
METHOD BLANK

Lab Sample ID: MB-061013
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/10/13
Date Analyzed: 06/12/13 16:34
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	< 4.0 U
53469-21-9	Aroclor 1242	1.4	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.4	4.0	< 4.0 U
11097-69-1	Aroclor 1254	1.4	4.0	< 4.0 U
11096-82-5	Aroclor 1260	1.4	4.0	< 4.0 U
11104-28-2	Aroclor 1221	1.4	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.4	4.0	< 4.0 U
37324-23-5	Aroclor 1262	1.4	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.4	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	80.2%
Tetrachlorometaxylene	79.5%

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	4.31- 4.51	1.2778	1.2769	1.3021	1.2444	1.1977	1.1434	1.2404	4.8
DCB	12.73-12.93	1.4525	1.2874	1.2269	1.1209	1.0641	1.0185	1.1950	13.5

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	5.96- 6.16	0.0419	0.0392	0.0380	0.0346	0.0323	0.0304	0.0361	12.1
2	6.37- 6.57	0.1293	0.1202	0.1174	0.1063	0.0998	0.0934	0.1111	12.2
3	6.51- 6.71	0.0588	0.0546	0.0526	0.0473	0.0442	0.0411	0.0498	13.5
4	6.63- 6.83	0.0432	0.0407	0.0393	0.0352	0.0334	0.0312	0.0372	12.4

AROCLOR AVERAGE %RSD = 12.6

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	9.86-10.06	0.0809	0.0714	0.0687	0.0624	0.0572	0.0524	0.0655	15.7
2	10.18-10.38	0.0749	0.0676	0.0659	0.0605	0.0560	0.0517	0.0628	11.1
3	10.56-10.76	0.1738	0.1618	0.1583	0.1468	0.1383	0.1296	0.1514	8.8
4	10.96-11.16	0.0842	0.0787	0.0766	0.0716	0.0683	0.0640	0.0739	8.2
5	11.14-11.34	0.0430	0.0421	0.0415	0.0388	0.0375	0.0354	0.0397	5.7

AROCLOR AVERAGE %RSD = 9.9

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	4.31- 4.51	1.1379	1.1032	1.0970	1.0870	1.0583	1.0077	1.0818	4.1
DCB	13.10-13.30	1.4388	1.2455	1.1622	1.0676	1.0239	0.9694	1.1512	14.9

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	6.06- 6.26	0.0514	0.0510	0.0486	0.0445	0.0410	0.0373	0.0456	12.5
2	6.70- 6.90	0.1117	0.1063	0.1043	0.0972	0.0916	0.0843	0.0992	10.2
3	7.08- 7.28	0.0278	0.0270	0.0274	0.0257	0.0247	0.0232	0.0259	6.9
4	7.25- 7.45	0.0276	0.0258	0.0256	0.0233	0.0223	0.0204	0.0242	10.9

AROCLOR AVERAGE %RSD = 10.1

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	10.16-10.36	0.0846	0.0784	0.0760	0.0710	0.0656	0.0598	0.0726	12.4
2	10.61-10.81	0.0966	0.0905	0.0885	0.0844	0.0782	0.0718	0.0850	10.5
3	10.88-11.08	0.1687	0.1671	0.1641	0.1571	0.1479	0.1368	0.1569	7.9
4	11.40-11.60	0.0485	0.0457	0.0437	0.0415	0.0392	0.0366	0.0425	10.2

AROCLOR AVERAGE %RSD = 10.3

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	5.064	4.96- 5.16	0.03259
2	6.468	6.37- 6.57	0.00997
3	7.878	7.78- 7.98	0.01408

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.060	5.96- 6.16	0.01482
2	6.469	6.37- 6.57	0.04536
3	7.442	7.34- 7.54	0.02357
4	7.874	7.77- 7.97	0.02708

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.058	5.96- 6.16	0.02881
2	6.467	6.37- 6.57	0.08837
3	6.615	6.52- 6.72	0.03943
4	7.870	7.77- 7.97	0.04869

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.463	6.36- 6.56	0.05630
2	7.440	7.34- 7.54	0.06332
3	7.872	7.77- 7.97	0.08051
4	8.107	8.01- 8.21	0.05614

WR99 : 00251

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.190	8.09- 8.29	0.07461
2	8.561	8.46- 8.66	0.04925
3	8.698	8.60- 8.80	0.10267
4	9.051	8.95- 9.15	0.10574
5	9.359	9.26- 9.46	0.03999

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.283	10.18-10.38	0.07490
2	10.659	10.56-10.76	0.17600
3	11.059	10.96-11.16	0.05574
4	11.247	11.15-11.35	0.07824
5	11.918	11.82-12.02	0.06005

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.175	11.08-11.28	0.16835
2	11.246	11.15-11.35	0.18617
3	11.632	11.53-11.73	0.13825
4	12.422	12.32-12.52	0.38949

WR99 : 00252

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	3.694	3.59- 3.79	0.00820
2	5.095	4.99- 5.19	0.01373
3	5.345	5.25- 5.45	0.00748
4	5.460	5.36- 5.56	0.02352

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.165	6.07- 6.27	0.02053
2	6.801	6.70- 6.90	0.04099
3	7.011	6.91- 7.11	0.01709
4	8.239	8.14- 8.34	0.01434

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.162	6.06- 6.26	0.03645
2	6.800	6.70- 6.90	0.08006
3	7.007	6.91- 7.11	0.03345
4	8.235	8.14- 8.34	0.02802

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.795	6.70- 6.90	0.05013
2	7.703	7.60- 7.80	0.04157
3	8.235	8.13- 8.33	0.04304
4	8.580	8.48- 8.68	0.05593

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.298	8.20- 8.40	0.03879
2	8.474	8.37- 8.57	0.04792
3	8.996	8.90- 9.10	0.03671
4	9.147	9.05- 9.25	0.07862
5	9.932	9.83-10.03	0.04427

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.260	10.16-10.36	0.11065
2	10.710	10.61-10.81	0.10118
3	10.985	10.89-11.09	0.18978
4	11.567	11.47-11.67	0.12335
5	12.306	12.21-12.41	0.05956

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.507	11.41-11.61	0.19311
2	11.573	11.47-11.67	0.18203
3	11.969	11.87-12.07	0.14408
4	12.792	12.69-12.89	0.37318

WR99 : 0025

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1254

Time Analyzed :1554

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.19	8.09	8.29	246.3	250.0	-1.5
Aroclor-1254-2	8.56	8.46	8.66	223.9	250.0	-10.4
Aroclor-1254-3	8.70	8.60	8.80	233.6	250.0	-6.6
Aroclor-1254-4	9.05	8.95	9.15	241.2	250.0	-3.5
Aroclor-1254-5	9.36	9.26	9.46	247.4	250.0	-1.0

AVERAGE %D = 4.6

WR99 : 00255

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1254

Time Analyzed :1554

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.30	8.20	8.40	236.4	250.0	-5.4
Aroclor-1254-2	8.47	8.37	8.57	236.1	250.0	-5.5
Aroclor-1254-3	9.00	8.90	9.10	239.7	250.0	-4.1
Aroclor-1254-4	9.15	9.05	9.25	232.9	250.0	-6.8
Aroclor-1254-5	9.93	9.83	10.03	240.5	250.0	-3.8

AVERAGE %D = 5.1

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1614

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	248.5	250.0	-0.6
Aroclor-1016-2	6.47	6.37	6.57	251.3	250.0	0.5
Aroclor-1016-3	6.61	6.51	6.71	245.9	250.0	-1.6
Aroclor-1016-4	6.73	6.63	6.83	247.9	250.0	-0.8

AVERAGE %D = 0.9

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1614

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.86	10.06	218.9	250.0	-12.4
Aroclor-1260-2	10.28	10.18	10.38	219.2	250.0	-12.3
Aroclor-1260-3	10.66	10.56	10.76	225.9	250.0	-9.6
Aroclor-1260-4	11.06	10.96	11.16	235.0	250.0	-6.0
Aroclor-1260-5	11.25	11.14	11.34	231.3	250.0	-7.5

AVERAGE %D = 9.6

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 05/07/13

Lab Standard ID: AR1660

Date Analyzed :06/12/13

Time Analyzed :1614

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	235.7	250.0	-5.7
Aroclor-1016-2	6.80	6.70	6.90	239.0	250.0	-4.4
Aroclor-1016-3	7.19	7.08	7.28	241.7	250.0	-3.3
Aroclor-1016-4	7.36	7.25	7.45	231.4	250.0	-7.4

AVERAGE %D = 5.2

Lab Standard ID: AR1660

Date Analyzed :06/12/13

Time Analyzed :1614

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	217.5	250.0	-13.0
Aroclor-1260-2	10.71	10.61	10.81	217.6	250.0	-13.0
Aroclor-1260-3	10.98	10.88	11.08	230.6	250.0	-7.8
Aroclor-1260-4	11.51	11.40	11.60	244.5	250.0	-2.2

AVERAGE %D = 9.0

WR99 : 00258

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1248

Time Analyzed :1856

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.46	6.36	6.56	244.8	250.0	-2.1
Aroclor-1248-2	7.44	7.34	7.54	233.4	250.0	-6.6
Aroclor-1248-3	7.87	7.77	7.97	233.3	250.0	-6.7
Aroclor-1248-4	8.11	8.01	8.21	246.2	250.0	-1.5

AVERAGE %D = 4.2

WR99 : 00259

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1248

Time Analyzed :1856

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.80	6.70	6.90	235.6	250.0	-5.8
Aroclor-1248-2	7.70	7.60	7.80	229.2	250.0	-8.3
Aroclor-1248-3	8.23	8.13	8.33	227.3	250.0	-9.1
Aroclor-1248-4	8.58	8.48	8.68	221.9	250.0	-11.2

AVERAGE %D = 8.6

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WR99
Project: NPDES

GC Column: ZB5
Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660
Time Analyzed :1916

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	237.5	250.0	-5.0
Aroclor-1016-2	6.47	6.37	6.57	238.3	250.0	-4.7
Aroclor-1016-3	6.62	6.51	6.71	229.7	250.0	-8.1
Aroclor-1016-4	6.73	6.63	6.83	230.8	250.0	-7.7

AVERAGE %D = 6.4

Date Analyzed :06/12/13

Lab Standard ID: AR1660
Time Analyzed :1916

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.97	9.86	10.06	224.5	250.0	-10.2
Aroclor-1260-2	10.28	10.18	10.38	222.6	250.0	-11.0
Aroclor-1260-3	10.66	10.56	10.76	225.5	250.0	-9.8
Aroclor-1260-4	11.06	10.96	11.16	236.2	250.0	-5.5
Aroclor-1260-5	11.25	11.14	11.34	237.6	250.0	-4.9

AVERAGE %D = 8.3

WR99 : 002561

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1916

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	230.8	250.0	-7.7
Aroclor-1016-2	6.80	6.70	6.90	229.8	250.0	-8.1
Aroclor-1016-3	7.18	7.08	7.28	227.1	250.0	-9.1
Aroclor-1016-4	7.36	7.25	7.45	221.5	250.0	-11.4

AVERAGE %D = 9.1

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1916

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	214.9	250.0	-14.0
Aroclor-1260-2	10.71	10.61	10.81	220.8	250.0	-11.7
Aroclor-1260-3	10.98	10.88	11.08	231.8	250.0	-7.3
Aroclor-1260-4	11.50	11.40	11.60	237.0	250.0	-5.2

AVERAGE %D = 9.6

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1242

Time Analyzed :2159

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.06	5.96	6.16	248.9	250.0	-0.4
Aroclor-1242-2	6.47	6.37	6.57	250.3	250.0	0.1
Aroclor-1242-3	6.62	6.52	6.72	248.7	250.0	-0.5
Aroclor-1242-4	7.87	7.77	7.97	241.2	250.0	-3.5

AVERAGE %D = 1.1

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1242

Time Analyzed :2159

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.16	6.06	6.26	240.1	250.0	-4.0
Aroclor-1242-2	6.80	6.70	6.90	228.8	250.0	-8.5
Aroclor-1242-3	7.01	6.91	7.11	238.1	250.0	-4.7
Aroclor-1242-4	8.24	8.14	8.34	236.2	250.0	-5.5

AVERAGE %D = 5.7

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :2219

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	242.5	250.0	-3.0
Aroclor-1016-2	6.47	6.37	6.57	243.9	250.0	-2.4
Aroclor-1016-3	6.61	6.51	6.71	238.0	250.0	-4.8
Aroclor-1016-4	6.73	6.63	6.83	240.7	250.0	-3.7

AVERAGE %D = 3.5

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :2219

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.86	10.06	222.5	250.0	-11.0
Aroclor-1260-2	10.28	10.18	10.38	221.0	250.0	-11.6
Aroclor-1260-3	10.66	10.56	10.76	228.8	250.0	-8.5
Aroclor-1260-4	11.06	10.96	11.16	236.4	250.0	-5.4
Aroclor-1260-5	11.24	11.14	11.34	241.3	250.0	-3.5

AVERAGE %D = 8.0

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WR99
Project: NPDES

GC Column: ZB35
Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660
Time Analyzed :2219

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	234.4	250.0	-6.2
Aroclor-1016-2	6.80	6.70	6.90	236.3	250.0	-5.5
Aroclor-1016-3	7.18	7.08	7.28	235.3	250.0	-5.9
Aroclor-1016-4	7.35	7.25	7.45	228.5	250.0	-8.6

AVERAGE %D = 6.6

Date Analyzed :06/12/13

Lab Standard ID: AR1660
Time Analyzed :2219

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	215.8	250.0	-13.7
Aroclor-1260-2	10.71	10.61	10.81	218.6	250.0	-12.6
Aroclor-1260-3	10.98	10.88	11.08	230.4	250.0	-7.8
Aroclor-1260-4	11.50	11.40	11.60	239.0	250.0	-4.4

AVERAGE %D = 9.6

WR99 : 00256

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/13/13

Lab Standard ID: AR1254 Time Analyzed :0706

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.19	8.09	8.29	261.4	250.0	4.6
Aroclor-1254-2	8.56	8.46	8.66	237.1	250.0	-5.2
Aroclor-1254-3	8.70	8.60	8.80	252.0	250.0	0.8
Aroclor-1254-4	9.05	8.95	9.15	259.9	250.0	3.9
Aroclor-1254-5	9.36	9.26	9.46	265.6	250.0	6.2

AVERAGE %D = 4.1

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/13/13

Lab Standard ID: AR1254

Time Analyzed :0706

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.29	8.19	8.39	245.2	250.0	-1.9
Aroclor-1254-2	8.47	8.37	8.57	244.8	250.0	-2.1
Aroclor-1254-3	8.99	8.89	9.09	246.7	250.0	-1.3
Aroclor-1254-4	9.14	9.04	9.24	242.1	250.0	-3.2
Aroclor-1254-5	9.93	9.83	10.03	251.5	250.0	0.6

AVERAGE %D = 1.8

WR99 : 080268

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/13/13

Lab Standard ID: AR1660 Time Analyzed :0726

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	250.6	250.0	0.2
Aroclor-1016-2	6.47	6.36	6.56	251.4	250.0	0.5
Aroclor-1016-3	6.62	6.51	6.71	243.8	250.0	-2.5
Aroclor-1016-4	6.73	6.62	6.82	249.1	250.0	-0.4

AVERAGE %D = 0.9

Date Analyzed :06/13/13

Lab Standard ID: AR1660 Time Analyzed :0726

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.97	9.86	10.06	235.6	250.0	-5.8
Aroclor-1260-2	10.28	10.18	10.38	235.5	250.0	-5.8
Aroclor-1260-3	10.66	10.56	10.76	238.1	250.0	-4.8
Aroclor-1260-4	11.06	10.95	11.15	249.0	250.0	-0.4
Aroclor-1260-5	11.25	11.14	11.34	247.9	250.0	-0.8

AVERAGE %D = 3.5

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/13/13

Lab Standard ID: AR1660 Time Analyzed :0726

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	236.5	250.0	-5.4
Aroclor-1016-2	6.80	6.70	6.90	242.5	250.0	-3.0
Aroclor-1016-3	7.18	7.08	7.28	246.8	250.0	-1.3
Aroclor-1016-4	7.35	7.25	7.45	236.5	250.0	-5.4

AVERAGE %D = 3.8

Date Analyzed :06/13/13

Lab Standard ID: AR1660 Time Analyzed :0726

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	224.4	250.0	-10.2
Aroclor-1260-2	10.71	10.61	10.81	229.7	250.0	-8.1
Aroclor-1260-3	10.98	10.88	11.08	238.7	250.0	-4.5
Aroclor-1260-4	11.50	11.40	11.60	245.7	250.0	-1.7

AVERAGE %D = 6.1

WR99 : 00278

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/13/13

Lab Standard ID: AR1242

Time Analyzed :0947

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.05	5.95	6.15	242.2	250.0	-3.1
Aroclor-1242-2	6.46	6.36	6.56	245.4	250.0	-1.8
Aroclor-1242-3	6.61	6.51	6.71	239.6	250.0	-4.2
Aroclor-1242-4	7.87	7.77	7.97	232.9	250.0	-6.8

AVERAGE %D = 4.0

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/13/13

Lab Standard ID: AR1242

Time Analyzed :0947

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.16	6.06	6.26	235.5	250.0	-5.8
Aroclor-1242-2	6.80	6.70	6.90	224.1	250.0	-10.4
Aroclor-1242-3	7.01	6.91	7.11	231.7	250.0	-7.3
Aroclor-1242-4	8.23	8.13	8.33	234.7	250.0	-6.1

AVERAGE %D = 7.4

WR99 : 000272

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/13/13

Lab Standard ID: AR1660 Time Analyzed :1007

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	240.7	250.0	-3.7
Aroclor-1016-2	6.46	6.36	6.56	240.5	250.0	-3.8
Aroclor-1016-3	6.61	6.51	6.71	233.1	250.0	-6.8
Aroclor-1016-4	6.72	6.62	6.82	235.1	250.0	-5.9

AVERAGE %D = 5.1

Date Analyzed :06/13/13

Lab Standard ID: AR1660 Time Analyzed :1007

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.86	10.06	223.4	250.0	-10.6
Aroclor-1260-2	10.28	10.18	10.38	223.2	250.0	-10.7
Aroclor-1260-3	10.66	10.56	10.76	228.1	250.0	-8.8
Aroclor-1260-4	11.05	10.95	11.15	238.2	250.0	-4.7
Aroclor-1260-5	11.24	11.14	11.34	242.7	250.0	-2.9

AVERAGE %D = 7.5

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/13/13

Lab Standard ID: AR1660

Time Analyzed :1007

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	233.3	250.0	-6.7
Aroclor-1016-2	6.80	6.70	6.90	236.9	250.0	-5.2
Aroclor-1016-3	7.18	7.08	7.28	239.9	250.0	-4.0
Aroclor-1016-4	7.35	7.25	7.45	228.7	250.0	-8.5

AVERAGE %D = 6.1

Date Analyzed :06/13/13

Lab Standard ID: AR1660

Time Analyzed :1007

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	215.6	250.0	-13.8
Aroclor-1260-2	10.71	10.61	10.81	222.0	250.0	-11.2
Aroclor-1260-3	10.98	10.88	11.08	233.9	250.0	-6.4
Aroclor-1260-4	11.50	11.40	11.60	240.3	250.0	-3.9

AVERAGE %D = 8.8

WR99 : 60274

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 ID: 0.53 (mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

			IS1 AREA	RT	IS2 AREA	RT
		ICAL MIDPT	48977254	2.250	50004151	13.191
		UPPER LIMIT	97954508	2.350	100008302	13.291
		LOWER LIMIT	24488627	2.150	25002076	13.091

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	48807947	2.249	51001521	13.191
02		0.25PPMAR166	05/07/13	1639	48977254	2.250	50004151	13.191
03		0.02PPMAR166	05/07/13	1659	49978735	2.250	50389911	13.191
04		0.05PPMAR166	05/07/13	1719	50752482	2.250	53170067	13.191
05		1PPMAR1660	05/07/13	1739	49361946	2.249	53269354	13.189
06		0.1PPMAR1660	05/07/13	1759	51692067	2.249	53692342	13.191
07		0.5PPMAR1660	05/07/13	1819	50537542	2.249	53291913	13.190
08		AR1242	05/07/13	1839	51594521	2.248	55145987	13.190
09		AR1248	05/07/13	1859	52790343	2.249	57162764	13.190
10		AR1254	05/07/13	1920	52930034	2.249	57859101	13.190
11		AR2162	05/07/13	1940	53739671	2.248	58323154	13.191
12		AR3268	05/07/13	2000	53262724	2.248	57460185	13.191
13	ZZZZZ	ZZZZZ	05/07/13	2021	54248541	2.248	60099807	13.190
14	ZZZZZ	ZZZZZ	05/07/13	2041	53651835	2.248	60660565	13.190
15	ZZZZZ	ZZZZZ	05/07/13	2101	53642771	2.248	58188446	13.191
16	ZZZZZ	ZZZZZ	05/07/13	2121	54355833	2.249	58930522	13.190
17	ZZZZZ	ZZZZZ	05/07/13	2142	54884040	2.249	58566252	13.190
18	ZZZZZ	ZZZZZ	05/07/13	2202	54747539	2.248	60316622	13.190
19		AR1254	06/12/13	1554	55717451	2.247	63128266	13.189
20		AR1660	06/12/13	1614	57257025	2.247	66302804	13.189
21	WR99MBS1	WR99MBS1	06/12/13	1634	54564860	2.246	64458811	13.188
22	WR99LCSS1	WR99LCSS1	06/12/13	1654	55808676	2.246	65552837	13.187
23	WR99LCSDS1	WR99LCSDS1	06/12/13	1715	55233395	2.245	65166408	13.188
24		AR1248	06/12/13	1856	58322257	2.246	61167163	13.189
25		AR1660	06/12/13	1916	59009209	2.247	62782280	13.189
26	KC-VT-1593-2	WR99D	06/12/13	1937	53753844	2.246	58860876	13.185
27	KC-VT-1593-2	WR99DMS	06/12/13	1957	49373113	2.246	59100434	13.184
28	KC-VT-1593-2	WR99DMSD	06/12/13	2017	53275204	2.246	57512484	13.185
29	KC-CB-01-201	WR99E	06/12/13	2038	55185958	2.247	59159399	13.186
30	KC-DD-2009-2	WR99F	06/12/13	2058	54703262	2.246	68012891	13.186
31	KC-IV-SPS-20	WS21A	06/12/13	2118	54526230	2.247	68547695	13.186
32		AR1242	06/12/13	2159	62530670	2.245	68675704	13.187

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	48977254	2.250	50004151	13.191
				UPPER LIMIT	97954508	2.350	100008302	13.291
				LOWER LIMIT	24488627	2.150	25002076	13.091
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
33		AR1660	06/12/13	2219	61395809	2.246	69432904	13.187

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

			IS1 AREA	RT	IS2 AREA	RT
		ICAL MIDPT	14839715	2.727	9345340	14.074
		UPPER LIMIT	29679430	2.827	18690680	14.174
		LOWER LIMIT	7419858	2.627	4672670	13.974

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	15184482	2.727	9588268	14.075
02		0.25PPMAR166	05/07/13	1639	14839715	2.727	9345340	14.074
03		0.02PPMAR166	05/07/13	1659	14776833	2.727	9354827	14.073
04		0.05PPMAR166	05/07/13	1719	15017003	2.726	9808139	14.073
05		1PPMAR1660	05/07/13	1739	14864205	2.727	9909484	14.072
06		0.1PPMAR1660	05/07/13	1759	15354151	2.725	9856374	14.073
07		0.5PPMAR1660	05/07/13	1819	14890872	2.725	9751846	14.073
08		AR1242	05/07/13	1839	15094795	2.728	10120992	14.073
09		AR1248	05/07/13	1859	15297537	2.725	10392760	14.073
10		AR1254	05/07/13	1920	15196733	2.725	10477901	14.072
11		AR2162	05/07/13	1940	15340978	2.724	10583916	14.072
12		AR3268	05/07/13	2000	15239954	2.725	10518547	14.073
13	ZZZZZ	ZZZZZ	05/07/13	2021	15658755	2.725	10888882	14.072
14	ZZZZZ	ZZZZZ	05/07/13	2041	15441440	2.724	10952020	14.072
15	ZZZZZ	ZZZZZ	05/07/13	2101	15360402	2.725	10510294	14.073
16	ZZZZZ	ZZZZZ	05/07/13	2121	15522820	2.725	10608758	14.073
17	ZZZZZ	ZZZZZ	05/07/13	2142	15378234	2.725	10470042	14.073
18	ZZZZZ	ZZZZZ	05/07/13	2202	15307215	2.724	10773388	14.074
19		AR1254	06/12/13	1554	15886848	2.726	10370835	14.073
20		AR1660	06/12/13	1614	16325735	2.725	11278282	14.071
21	WR99MBS1	WR99MBS1	06/12/13	1634	15704773	2.724	11398988	14.073
22	WR99LCSS1	WR99LCSS1	06/12/13	1654	15833995	2.725	11676897	14.072
23	WR99LCSDS1	WR99LCSDS1	06/12/13	1715	15392655	2.724	11634249	14.072
24		AR1248	06/12/13	1856	16259753	2.722	11097948	14.071
25		AR1660	06/12/13	1916	16480424	2.722	11097077	14.072
26	KC-VT-1593-2	WR99D	06/12/13	1937	15363874	2.721	10848507	14.067
27	KC-VT-1593-2	WR99DMS	06/12/13	1957	14604387	2.721	10725601	14.069
28	KC-VT-1593-2	WR99DMSD	06/12/13	2017	14741776	2.722	10513140	14.068
29	KC-CB-01-201	WR99E	06/12/13	2038	15175126	2.722	10431045	14.068
30	KC-DD-2009-2	WR99F	06/12/13	2058	15119264	2.720	11168998	14.067
31	KC-IV-SPS-20	WS21A	06/12/13	2118	15111850	2.721	11176503	14.069
32		AR1242	06/12/13	2159	17045224	2.721	11790726	14.071

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8

PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	14839715	2.727	9345340	14.074
				UPPER LIMIT	29679430	2.827	18690680	14.174
				LOWER LIMIT	7419858	2.627	4672670	13.974
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
33		AR1660	06/12/13	2219	16838472	2.721	11875626	14.070

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min

IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	57171174	2.246	65204121	13.192
				UPPER LIMIT	114342348	2.346	130408242	13.292
				LOWER LIMIT	28585587	2.146	32602060	13.092

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		AR1254	06/13/13	0706	57171174	2.246	65204121	13.192
02		AR1660	06/13/13	0726	58417745	2.246	66796809	13.189
03	KC-DD-2009-2	WR99F	06/13/13	0746	52387910	2.245	65560650	13.188
04		AR1242	06/13/13	0947	62577819	2.243	67365615	13.186
05		AR1660	06/13/13	1007	62378319	2.245	69516655	13.187

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	16213048	2.719	11665185	14.069
				UPPER LIMIT	32426096	2.819	23330370	14.169
				LOWER LIMIT	8106524	2.619	5832592	13.969
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		AR1254	06/13/13	0706	16213048	2.719	11665185	14.069
02		AR1660	06/13/13	0726	16508980	2.720	11907083	14.070
03	KC-DD-2009-2	WR99F	06/13/13	0746	14884001	2.722	11649720	14.070
04		AR1242	06/13/13	0947	17367099	2.720	11953866	14.068
05		AR1660	06/13/13	1007	17233203	2.720	12292772	14.068

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID
Extraction Method: SW3546
Page 1 of 1

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Matrix: Sediment

Date Received: 05/31/13

Data Release Authorized: MW
Reported: 06/12/13

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-060413	Method Blank	06/04/13	1.0	Diesel	< 5.0 U	5.0	1.4
13-11544		FID3B		Motor Oil	< 10 U	10	2.5
				HC ID	---		
				o-Terphenyl	90.2%		
WR99D	KC-VT-1593-20130530-S	06/04/13	5.0	**Diesel**	**150**	32	8.5
13-11544		FID3B		**Motor Oil**	**730**	63	16
				HC ID	DRO/MOTOR OIL		
				o-Terphenyl	73.6%		

Reported in mg/kg (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

WR99 : 002882

ANALYTICAL RESOURCES INCORPORATED

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977

Client ID	OTER	TOT OUT
060413MBS	90.2%	0
060413LCS	85.3%	0
KC-VT-1593-20130530-S	73.6%	0
KC-VT-1593-20130530-S MS	69.9%	0
KC-VT-1593-20130530-S MSD	74.6%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-11544 to 13-11544

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1

Sample ID: KC-VT-1593-20130530-S
MS/MSD

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Date Extracted MS/MSD: 06/04/13

Date Analyzed MS: 06/04/13 18:19
MSD: 06/04/13 18:37
Instrument/Analyst MS: FID3B/JLW
MSD: FID3B/JLW

Sample Amount MS: 7.90 g-dry-wt
MSD: 7.96 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 5.00
MSD: 5.00
Percent Moisture: 21.9%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	150	208	190	30.5%	230	188	42.6%	10.0%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	69.9%	74.6%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

WR99 : 060284

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1

Sample ID: LCS-060413
LAB CONTROL

Lab Sample ID: LCS-060413
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/04/13
Date Analyzed: 06/04/13 17:27
Instrument/Analyst: FID3B/JLW

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	128	150	85.3%

TPHD Surrogate Recovery

o-Terphenyl	85.3%

Results reported in mg/kg

WR99 : 00295

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: WR99
Matrix: Sediment Project: NPDES Sampling Support
Date Received: 05/31/13 209977

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11544-060413MB1	Method Blank	10.0 g	1.00 mL	-	06/04/13
13-11544-060413LCS1	Lab Control	10.0 g	1.00 mL	-	06/04/13
13-11544-WR99D	KC-VT-1593-201305307.93 g		1.00 mL	D	06/04/13
13-11544-WR99DMS	KC-VT-1593-201305307.90 g		1.00 mL	D	06/04/13
13-11544-WR99DMSD	KC-VT-1593-201305307.96 g		1.00 mL	D	06/04/13

Basis: D=Dry Weight W=As Received

4

TPH METHOD BLANK SUMMARY

BLANK NO.

WR99MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

SDG No.: WR99

Project No.: NPDES SAMPLING SUPPORT

Date Extracted: 06/04/13

Matrix: SOLID

Date Analyzed : 06/04/13

Instrument ID : FID3B

Time Analyzed : 1708

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WR99LCSS1	WR99LCSS1	06/04/13
02	KC-VT-1593-2	WR99D	06/04/13
03	KC-VT-1593-2	WR99DMS	06/04/13
04	KC-VT-1593-2	WR99DMSD	06/04/13
05	KC-IV-SPS-20	WS21A	06/04/13
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
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17			
18			
19			
20			
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6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

Instrument: FID3B.I
Project: NPDES Sampling Support

Calibration Date: 10-MAY-2013
SDG No.: WR99/WS61

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	10856	10816	10366	10222	10078	9806	10358	4.0
AK Diesel	12969	12897	12393	12178	12035	11673	12357	4.1
OR Diesel	13048	12968	12457	12240	12092	11727	12422	4.1
Cal Diesel	12938	12873	12366	12154	12013	11647	12332	4.1
o-Terph	13177	13696	13787	13594	13504	12941	13450	2.4

<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges : WA Diesel C12-C24 (3.049-5.760)
AK Diesel C10-C25 (2.254-5.938)
OR Diesel C10-C28 (2.254-6.427)
Cal Diesel C10-C24 (2.254-5.760)

Calibration Files	Analysis Time
0510b004.d	10-MAY-2013 08:41
0510b005.d	10-MAY-2013 09:01
0510b006.d	10-MAY-2013 09:20
0510b007.d	10-MAY-2013 09:40
0510b008.d	10-MAY-2013 10:00
0510b009.d	10-MAY-2013 10:20

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

Instrument: FID3B.I

Project: NPDES Sampling Support

Calibration Date: 09-MAY-2013

SDG No.: WR99/WS61

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	9838	9724	9749	9868	9957	10101	9873	1.4
Triac Surr	12017	12392	13110	13138	13711	13920	13048	5.6

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0509b019.d	09-MAY-2013 17:30
0509b020.d	09-MAY-2013 17:50
0509b021.d	09-MAY-2013 18:09
0509b022.d	09-MAY-2013 18:29
0509b023.d	09-MAY-2013 18:49
0509b024.d	09-MAY-2013 19:08

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

ICal Date: 10-MAY-2013

Project: NPDES Sampling Supp

CCal Date: 04-JUN-2013

SDG No.: WR99

Analysis Time: 15:08

Lab ID: DIESEL#2

Instrument: FID3B.I

Lab File Name: 0604b019.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	2357377	227.6	250	-9.0	
AK102 (C10-C25)	2821698	228.4	250	-8.7	
ITDIES (C10-C24)	2814108	204.1	250	-18.4	<-
Terphenyl	574278	42.7	45	-5.1	

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25
IT Diesel C10-C24

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 09-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 04-JUN-2013
SDG No.: WR99

Analysis Time: 15:32
Lab ID: MOIL#2

Instrument: FID3B.I
Lab File Name: 0604b020.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D	
WAMoil(C24-C38)	5178434	524.5	500	4.9	
AK103 (C25-C36)	4461837	627.7	500	25.5	<-
n-Triacontane	637155	48.8	45	8.5	

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 10-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 04-JUN-2013
SDG No.: WR99

Analysis Time: 19:35
Lab ID: DIESEL#3

Instrument: FID3B.I
Lab File Name: 0604b032.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	2468390	238.3	250	-4.7	
AK102 (C10-C25)	2908437	235.4	250	-5.9	
ITDIES (C10-C24)	2901727	210.4	250	-15.8	<-
Terphenyl	609223	45.3	45	0.7	

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25
IT Diesel C10-C24

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 09-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 04-JUN-2013
SDG No.: WR99

Analysis Time: 19:54
Lab ID: MOIL#3

Instrument: FID3B.I
Lab File Name: 0604b033.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D	
WAMoil(C24-C38)	5126802	519.3	500	3.9	
AK103 (C25-C36)	4436491	624.1	500	24.8	
n-Triacontane	675513	51.8	45	15.0	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.67 TRIAC: 6.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	06/04/13	0813	4.66	6.70
02		RT0604	06/04/13	0832	4.67	6.70
03	ZZZZZ	ZZZZZ	06/04/13	0851	4.67	6.70
04	ZZZZZ	ZZZZZ	06/04/13	0911	4.67	6.70
05	ZZZZZ	ZZZZZ	06/04/13	0930	4.66	6.70
06	ZZZZZ	ZZZZZ	06/04/13	0951	4.67	6.70
07	ZZZZZ	ZZZZZ	06/04/13	1010	4.66	6.70
08	ZZZZZ	ZZZZZ	06/04/13	1030	4.67	6.70
09	ZZZZZ	ZZZZZ	06/04/13	1101	4.67	6.70
10	ZZZZZ	ZZZZZ	06/04/13	1120	4.66	6.70
11	ZZZZZ	ZZZZZ	06/04/13	1154	4.67	6.70
12	ZZZZZ	ZZZZZ	06/04/13	1222	4.66	
13	ZZZZZ	ZZZZZ	06/04/13	1253	4.66	
14	ZZZZZ	ZZZZZ	06/04/13	1324	4.66	
15	ZZZZZ	ZZZZZ	06/04/13	1348	4.66	6.70
16	ZZZZZ	ZZZZZ	06/04/13	1407	4.67	6.70
17	ZZZZZ	ZZZZZ	06/04/13	1426	4.67	6.70
18	ZZZZZ	ZZZZZ	06/04/13	1449	4.67	6.69
19	NPDES SAMPLI	DIESEL#2	06/04/13	1508	4.67	6.70
20	NPDES SAMPLI	MOIL#2	06/04/13	1532	4.66	6.70
21	ZZZZZ	ZZZZZ	06/04/13	1551	4.67	6.71
22	ZZZZZ	ZZZZZ	06/04/13	1610	4.67	6.72
23	ZZZZZ	ZZZZZ	06/04/13	1629	4.67	6.72
24	ZZZZZ	ZZZZZ	06/04/13	1648	4.67	6.72
25	WR99MBS1	WR99MBS1	06/04/13	1708	4.67	6.72
26	WR99LCSS1	WR99LCSS1	06/04/13	1727	4.67	6.72
27	KC-VT-1593-2	WR99D	06/04/13	1755	4.66	6.72
28	KC-VT-1593-2	WR99DMS	06/04/13	1819	4.67	6.73
29	KC-VT-1593-2	WR99DMSD	06/04/13	1837	4.67	6.74
30	KC-IV-SPS-20	WS21A	06/04/13	1856	4.68	6.75
31	ZZZZZ	ZZZZZ	06/04/13	1915	4.67	6.73
32	NPDES SAMPLI	DIESEL#3	06/04/13	1935	4.68	6.70

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.67 TRIAC: 6.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	NPDES SAMPLI	MOIL#3	06/04/13	1954	4.67	6.76*

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

8
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99/WS61 Project: NPDES Sampling Support

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	05/10/13	0743	4.69	6.78
02		RT0510	05/10/13	0802	4.68	6.72
03		IB0510	05/10/13	0821	4.68	6.72
04		DIESEL 50	05/10/13	0841	4.67	6.72
05		DIESEL 100	05/10/13	0901	4.67	6.72
06		DIESEL 250	05/10/13	0920	4.68	6.72
07		DIESEL 500	05/10/13	0940	4.69	6.73
08		DIESEL 1000	05/10/13	1000	4.69	6.72
09		DIESEL 2500	05/10/13	1020	4.71	6.72
10		DIESEL ICV 2	05/10/13	1040	4.68	6.72
11		DIESEL#1	05/10/13	1331	4.67	6.78
12		JETA#1	05/10/13	1350	4.68	6.78
13		DIESEL#2	05/10/13	1410	4.68	6.76
14	ZZZZZ	ZZZZZ	05/10/13	1438	4.67	6.72
15	ZZZZZ	ZZZZZ	05/10/13	1457	4.68	6.72
16	ZZZZZ	ZZZZZ	05/10/13	1517	4.68	6.72
17	ZZZZZ	ZZZZZ	05/10/13	1537	4.67	6.72*
18	ZZZZZ	ZZZZZ	05/10/13	1556	4.67	6.71*
19	ZZZZZ	ZZZZZ	05/10/13	1616	4.67	6.72*
20	ZZZZZ	ZZZZZ	05/10/13	1635	4.68	6.72
21	ZZZZZ	ZZZZZ	05/10/13	1655	4.68	6.72
22	ZZZZZ	ZZZZZ	05/10/13	1714	4.68	6.72
23		DIESEL#3	05/10/13	1733	4.68	6.77
24		JETA#2	05/10/13	1753	4.68	6.77
25		MOIL#1	05/10/13	1812	4.68	6.76
26		WP23MBS1	05/10/13	1832	4.68	6.77
27		WP23LCSS1	05/10/13	1851	4.68	6.76
28		WP23A	05/10/13	1910	4.68	6.77
29		WP23A	05/10/13	1930	4.67	6.76
30		WP23B	05/10/13	1949	4.68	6.77
31		WP23B	05/10/13	2009	4.67	6.76
32		WP23C	05/10/13	2029	4.68	6.76

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

UR99:08297

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		WP23C	05/10/13	2048	4.67	6.77
02		DIESEL#4	05/10/13	2107	4.68	6.77
03		MOIL#2	05/10/13	2127	4.68	6.76
04		WP24MBS1	05/10/13	2151	4.68	6.76
05		WP24LCSS1	05/10/13	2209	4.68	6.77
06		WN70A	05/10/13	2229	4.68	6.77
07		WP24A	05/10/13	2306	4.69	6.77

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

8
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99/WS61 Project: NPDES Sampling Support

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	0822	4.67	6.72
02		RT0509	05/09/13	0840	4.68	6.72
03	ZZZZZ	ZZZZZ	05/09/13	0859	4.68	6.72
04	ZZZZZ	ZZZZZ	05/09/13	0919	4.68	6.73
05	ZZZZZ	ZZZZZ	05/09/13	0938	4.67	6.72
06	ZZZZZ	ZZZZZ	05/09/13	1021	4.67	6.72
07	ZZZZZ	ZZZZZ	05/09/13	1040	4.68	6.72
08		RT0509	05/09/13	1100	4.68	6.72
09	ZZZZZ	ZZZZZ	05/09/13	1120	4.68	6.72
10	ZZZZZ	ZZZZZ	05/09/13	1140	4.68	6.72
11	ZZZZZ	ZZZZZ	05/09/13	1200	4.67	6.72
12	ZZZZZ	ZZZZZ	05/09/13	1514	4.67	6.73
13	ZZZZZ	ZZZZZ	05/09/13	1533	4.67	6.72
14	ZZZZZ	ZZZZZ	05/09/13	1552	4.68	6.72
15	ZZZZZ	ZZZZZ	05/09/13	1612	4.68	6.72
16	ZZZZZ	ZZZZZ	05/09/13	1632	4.69	6.73
17	ZZZZZ	ZZZZZ	05/09/13	1651	4.70	6.73
18		DIESEL ICV 2	05/09/13	1711	4.68	6.72
19		MOIL 100	05/09/13	1730	4.67	6.72*
20		MOIL 250	05/09/13	1750	4.68	6.72
21		MOIL 500	05/09/13	1809	4.68	6.73
22		MOIL 1000	05/09/13	1829	4.67	6.74
23		MOIL 2500	05/09/13	1849	4.67	6.75
24		MOIL 5000	05/09/13	1908	4.68	6.77
25		MOIL ICV 500	05/09/13	1928	4.68	6.73
26	ZZZZZ	ZZZZZ	05/09/13	1947	4.67	6.73
27	ZZZZZ	ZZZZZ	05/09/13	2006	4.67	6.73
28	ZZZZZ	ZZZZZ	05/09/13	2026	4.68	6.73
29	ZZZZZ	ZZZZZ	05/09/13	2045	4.68	6.73
30	ZZZZZ	ZZZZZ	05/09/13	2104	4.69	6.72
31	ZZZZZ	ZZZZZ	05/09/13	2123	4.71	6.72
32	ZZZZZ	ZZZZZ	05/09/13	2143	4.68	6.72*

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

8
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	2202	4.67	6.72
02	ZZZZZ	ZZZZZ	05/09/13	2221	4.68	6.73
03	ZZZZZ	ZZZZZ	05/09/13	2241	4.68	6.74
04	ZZZZZ	ZZZZZ	05/09/13	2300	4.68	6.75
05	ZZZZZ	ZZZZZ	05/09/13	2319	4.68	6.77
06		AK103 ICV 50	05/09/13	2339	4.67	6.72

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

TPHG Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Sediment

Data Release Authorized:
Reported: 06/11/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

ARI ID	Client ID	Analysis Date	Range	Result	LOQ	DL
MB-060313	Method Blank	06/03/13	Gasoline	< 5.0 U	5.0	1.7
13-11544		PID1	HC ID	---		
			Trifluorotoluene	98.1%		
			Bromobenzene	97.2%		
WR99D	KC-VT-1593-20130	06/03/13	Gasoline	< 6.2 U	6.2	2.1
13-11544		PID1	HC ID	---		
			Trifluorotoluene	93.9%		
			Bromobenzene	96.7%		

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ANALYTICAL RESOURCES INCORPORATED

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WR99
Matrix: Sediment

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	BFB	TFT	BBZ	TOT OUT
MB-060313	NA	98.1%	97.2%	0
LCS-060313	NA	98.6%	94.0%	0
LCSD-060313	NA	103%	98.6%	0
KC-VT-1593-20130530-S	NA	93.9%	96.7%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-11544 to 13-11544

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG

Sample ID: LCS-060313
LAB CONTROL SAMPLE

Lab Sample ID: LCS-060313
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/11/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 06/03/13 12:28
LCSD: 06/03/13 12:56
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	47.7	50.0	95.4%	46.5	50.0	93.0%	2.5%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	98.6%	103%
Bromobenzene	94.0%	98.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Water

Data Release Authorized:
Reported: 06/11/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

ARI ID	Client ID	Analysis Date	Basis	Range	Result	LOQ	DL
WR99C	KC-TB-01-201305306	06/03/13	Wet	Gasoline	< 0.25 U	0.25	0.057
13-11543		PID1		HC ID	---		
				Trifluorotoluene	95.4%		
				Bromobenzene	96.7%		

Gasoline values reported in mg/L (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

ANALYTICAL RESOURCES INCORPORATED

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: WR99
Matrix: Water

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	TFT	BBZ	TOT OUT
KC-TB-01-20130530-	95.4%	96.7%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 13-11543 to 13-11543

4

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0603

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99 Project No.: NPDES SAMPLING SUPPORT

Date Analyzed : 06/03/13 Matrix: SOIL

Time Analyzed : 1325 Instrument ID : PID1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0603	LCS0603	06/03/13
02	LCSD0603	LCSD0603	06/03/13
03	KC-TB-01-201	WR99C	06/03/13
04	KC-VT-1593-2	WR99D	06/03/13
05			
06			
07			
08			
09			
10			
11			
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WR99 · 00305

6a

GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument/Det: PID1.I/RTX 502-2 FID Project: NPDES SAMPLING SUPPORT

Calibration Date: 23-OCT-2012 SDG No.: WR99

Surr Calibration Date: 22-MAY-2013

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4

Surrogates Rel. Rec.	RF1	RF2	RF3	RF4	RF5	RF6	Ave RF	%RSD
$ TFT(Surr)	+++++	30.63636	30.95455	30.54545	29.88060	29.37000		
	28.75188	28.18539	28.40000				29.59053	3.634
$ BB(Surr)	+++++	20.63636	20.13636	20.50000	19.88060	19.80000		
	19.51128	19.17978	19.32000				19.87055	2.668

<- Indicates %RSD outside limits
Surrogate areas are not included in RF calculation.

Quant Ranges : WA Gas Toluene - nC12
AK Gas nC6 - nC10
NW Gas Toluene - Naphthalene
Cal Gas nC6 - nC12
8015 Gas 2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files	Analysis Time
1023a013.d	23-OCT-2012 22:13
1023a014.d	23-OCT-2012 22:42
1023a015.d	23-OCT-2012 23:11
1023a016.d	23-OCT-2012 23:40
1023a017.d	24-OCT-2012 00:10
1023a018.d	24-OCT-2012 00:39

Surr Calibration Files	Analysis Time
0522a002.d	22-MAY-2013 09:02
0522a003.d	22-MAY-2013 09:30
0522a004.d	22-MAY-2013 09:58
0522a005.d	22-MAY-2013 10:27
0522a006.d	22-MAY-2013 10:56
0522a007.d	22-MAY-2013 11:25
0522a008.d	22-MAY-2013 11:55
0522a009.d	22-MAY-2013 12:24

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 03-JUN-2013
SDG No.: WR99

Lab File Name: 0603a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	865918	2.42	2.50	-3.3
AKGas (C6-C10)	1385971	2.38	2.50	-4.9
NWGas (Tol-Nap)	909697	2.43	2.50	-3.0
8015C (2MP-TMB)	1715077	2.37	2.50	-5.2

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 03-JUN-2013
SDG No.: WR99

Lab File Name: 0603a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	47445	109.3	100.0	9.3
Bromobenzene	17983	102.6	100.0	2.6

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 03-JUN-2013
SDG No.: WR99

Lab File Name: 0603a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	820784	2.29	2.50	-8.3
AKGas (C6-C10)	1340748	2.30	2.50	-8.0
NWGas (Tol-Nap)	857708	2.29	2.50	-8.5
8015C (2MP-TMB)	1656460	2.29	2.50	-8.4

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 03-JUN-2013
SDG No.: WR99

Lab File Name: 0603a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	46628	108.1	100.0	8.1
Bromobenzene	18317	100.3	100.0	0.3

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 03-JUN-2013
SDG No.: WR999

Lab File Name: 0603a024.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	826590	2.31	2.50	-7.7
AKGas (C6-C10)	1306794	2.24	2.50	-10.3
NWGas (Tol-Nap)	867230	2.31	2.50	-7.5
8015C (2MP-TMB)	1620600	2.24	2.50	-10.4

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

ICal Date: 23-OCT-2012 Project: NPDES SAMPLING

CCal Date: 03-JUN-2013 SDG No.: WR999

Lab File Name: 0603a024.d Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	44117	102.3	100.0	2.3
Bromobenzene	16977	95.6	100.0	-4.4

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 06/03/13

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

METHOD SURROGATE RT
S1 : 7.85 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01	RT0603+BCAL	RT0603+BCAL	06/03/13	1114	7.85		15.38	
02	NPDES SAMPLI	GCAL 1	06/03/13	1143	7.85		15.38	
03	LCS0603	LCS0603	06/03/13	1228	7.85		15.38	
04	LCSD0603	LCSD0603	06/03/13	1256	7.85		15.38	
05	MB0603	MB0603	06/03/13	1325	7.85		15.38	
06	NPDES SAMPLI	GCAL 2	06/03/13	1721	7.85		15.38	
07	KC-TB-01-201	WR99C	06/03/13	2107	7.85		15.38	
08	KC-VT-1593-2	WR99D	06/03/13	2136	7.85		15.38	
09	NPDES SAMPLI	GCAL 3	06/03/13	2204	7.85		15.38	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 10/23/12

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

	METHOD SURROGATE RT S1 : 7.89 S2 : 15.39						
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01		RINSE	10/23/12	0941				
02		RT1023+BCAL1	10/23/12	1010	7.88		15.39	
03		GCAL1	10/23/12	1039	7.88		15.39	
04		B 200	10/23/12	1750	7.89		15.39	
05		B 100	10/23/12	1820	7.88		15.39	
06		B 50	10/23/12	1849	7.88		15.39	
07		B 25	10/23/12	1918	7.89		15.39	
08		B 5	10/23/12	1947	7.88		15.39	
09		B 1	10/23/12	2016	7.88		15.39	
10		B 0.5	10/23/12	2045	7.88		15.39	
11		B 0.25	10/23/12	2115	7.89		15.39	
12		BICV	10/23/12	2144	7.88		15.39	
13		G 0.10	10/23/12	2213	7.89		15.39	
14		G 0.25	10/23/12	2242	7.89		15.39	
15		G 1.0	10/23/12	2311	7.89		15.39	
16		G 2.5	10/23/12	2340	7.88		15.39	
17		G 5.0	10/24/12	0010	7.88		15.39	
18		G 10	10/24/12	0039	7.88		15.39	
19		GICV	10/24/12	0108	7.88		15.39	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)

S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Column: RTX 502-2 FID

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
S1 : 7.85 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01	BCAL0.25	BCAL0.25	05/22/13	0902	7.85		15.38	
02	BCAL0.5	BCAL0.5	05/22/13	0930	7.85		15.38	
03	BCAL1	BCAL1	05/22/13	0958	7.85		15.38	
04	BCAL5	BCAL5	05/22/13	1027	7.85		15.38	
05	BCAL25	BCAL25	05/22/13	1056	7.85		15.38	
06	BCAL50	BCAL50	05/22/13	1125	7.85		15.38	
07	BCAL100	BCAL100	05/22/13	1155	7.85		15.38	
08	BCAL200	BCAL200	05/22/13	1224	7.85		15.38	
09	ICV25	ICV25	05/22/13	1253	7.85		15.38	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
KC-VT-1593-2013053	WR99A	13-11541	
KC-VT-1593-2013053D	WR99ADUP	13-11541	
KC-VT-1593-2013053S	WR99ASPK	13-11541	
PBW	WR99MB1	13-11541	
LCSW	WR99MB1SPK	13-11541	
KC-VT-1593-2013053	WR99B	13-11542	
KC-VT-1593-2013053D	WR99BDUP	13-11542	
KC-VT-1593-2013053S	WR99BSPK	13-11542	
PBW	WR99MB2	13-11542	
LCSW	WR99MB2SPK	13-11542	
KC-VT-1593-2013053	WR99D	13-11544	
KC-VT-1593-2013053D	WR99DDUP	13-11544	
KC-VT-1593-2013053S	WR99DSPK	13-11544	
KC-CB-01-20130530-	WR99E	13-11545	
PBS	WR99MB3	13-11545	
LCSS	WR99MB3SPK	13-11545	
KC-DD-2009-2013053	WR99F	13-11546	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Eric Larson for Name: Jay Kuhn

Date: 6-12-13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-VT-1593-20130530-W
SAMPLE

Lab Sample ID: WR99A
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	06/04/13	200.8	06/06/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	**7440-38-2**	**Arsenic**	0.048	0.2	**0.7**	
200.8	06/04/13	200.8	06/06/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/04/13	200.8	06/06/13	**7440-47-3**	**Chromium**	0.11	1	**2**	
200.8	06/04/13	200.8	06/06/13	**7440-50-8**	**Copper**	0.158	0.5	**27.8**	
200.8	06/04/13	200.8	06/06/13	**7439-92-1**	**Lead**	0.046	0.1	**0.2**	
200.8	06/04/13	200.8	06/06/13	**7440-02-0**	**Nickel**	0.079	0.5	**7.9**	
200.8	06/04/13	200.8	06/06/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/04/13	200.8	06/06/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	**7440-66-6**	**Zinc**	0.50	4	**11**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

URSG : 00021

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-VT-1593-20130530-W
MATRIX SPIKE

Lab Sample ID: WR99A
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.2 U	24.4	25.0	97.6%	
Arsenic	200.8	0.7	25.2	25.0	98.0%	
Beryllium	200.8	0.2 U	23.1	25.0	92.4%	
Cadmium	200.8	0.1 U	23.4	25.0	93.6%	
Chromium	200.8	2	24	25	88.0%	
Copper	200.8	27.8	52.5	25.0	98.8%	
Lead	200.8	0.2	23.9	25.0	94.8%	
Nickel	200.8	7.9	32.0	25.0	96.4%	
Selenium	200.8	0.5 U	72.1	80.0	90.1%	
Silver	200.8	0.2 U	23.2	25.0	92.8%	
Thallium	200.8	0.2 U	23.0	25.0	92.0%	
Zinc	200.8	11	78	80	83.8%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked
NR-Not Recovered

Percent Recovery Limits: 75-125%

WR99 : 00322

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-VT-1593-20130530-W
DUPLICATE

Lab Sample ID: WR99A
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Arsenic	200.8	0.7	0.7	0.0%	+/- 0.2	L
Beryllium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Chromium	200.8	2	2	0.0%	+/- 1	L
Copper	200.8	27.8	28.2	1.4%	+/- 20%	
Lead	200.8	0.2	0.2	0.0%	+/- 0.1	L
Nickel	200.8	7.9	8.0	1.3%	+/- 20%	
Selenium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Zinc	200.8	11	11	0.0%	+/- 4	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KC-VT-1593-20130530-W
SAMPLE

Lab Sample ID: WR99B
LIMS ID: 13-11542
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	06/04/13	200.8	06/06/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	**7440-38-2**	**Arsenic**	0.048	0.2	**0.6**	
200.8	06/04/13	200.8	06/06/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/04/13	200.8	06/06/13	**7440-47-3**	**Chromium**	0.11	1	**1**	
200.8	06/04/13	200.8	06/06/13	**7440-50-8**	**Copper**	0.158	0.5	**26.1**	
200.8	06/04/13	200.8	06/06/13	**7439-92-1**	**Lead**	0.046	0.1	**0.1**	
200.8	06/04/13	200.8	06/06/13	**7440-02-0**	**Nickel**	0.079	0.5	**7.8**	
200.8	06/04/13	200.8	06/06/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/04/13	200.8	06/06/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	**7440-66-6**	**Zinc**	0.50	4	**10**	

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: KC-VT-1593-20130530-W
MATRIX SPIKE

Lab Sample ID: WR99B
LIMS ID: 13-11542
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.2 U	23.7	25.0	94.8%	
Arsenic	200.8	0.6	25.0	25.0	97.6%	
Beryllium	200.8	0.2 U	22.3	25.0	89.2%	
Cadmium	200.8	0.1 U	23.1	25.0	92.4%	
Chromium	200.8	1	23	25.0	88.0%	
Copper	200.8	26.1	48.8	25.0	90.8%	
Lead	200.8	0.1	24.3	25.0	96.8%	
Nickel	200.8	7.8	31.3	25.0	94.0%	
Selenium	200.8	0.5 U	73.1	80.0	91.4%	
Silver	200.8	0.2 U	22.8	25.0	91.2%	
Thallium	200.8	0.2 U	23.4	25.0	93.6%	
Zinc	200.8	10	77	80.0	83.8%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

WR99 · 00325

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: KC-VT-1593-20130530-W DUPLICATE

Lab Sample ID: WR99B
LIMS ID: 13-11542
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Arsenic	200.8	0.6	0.6	0.0%	+/- 0.2	L
Beryllium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Chromium	200.8	1	1	0.0%	+/- 1	L
Copper	200.8	26.1	25.9	0.8%	+/- 20%	
Lead	200.8	0.1	0.1	0.0%	+/- 0.1	L
Nickel	200.8	7.8	7.7	1.3%	+/- 20%	
Selenium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Zinc	200.8	10	10	0.0%	+/- 4	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WR99LCS
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	23.8	25.0	95.2%	
Arsenic	200.8	24.8	25.0	99.2%	
Beryllium	200.8	23.4	25.0	93.6%	
Cadmium	200.8	24.0	25.0	96.0%	
Chromium	200.8	24.2	25.0	96.8%	
Copper	200.8	25.4	25.0	102%	
Lead	200.8	24.8	25.0	99.2%	
Nickel	200.8	25.0	25.0	100%	
Selenium	200.8	75.7	80.0	94.6%	
Silver	200.8	24.6	25.0	98.4%	
Thallium	200.8	24.2	25.0	96.8%	
Zinc	200.8	78	80	97.5%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WR99MB
LIMS ID: 13-11541
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	06/04/13	200.8	06/06/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/04/13	200.8	06/06/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/04/13	200.8	06/06/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/04/13	200.8	06/06/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/04/13	200.8	06/06/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/04/13	200.8	06/06/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/04/13	200.8	06/06/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-66-6	Zinc	0.50	4	4	U

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

WR99 : 00329

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WR99LCS
LIMS ID: 13-11542
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	23.6	25.0	94.4%	
Arsenic	200.8	25.0	25.0	100%	
Beryllium	200.8	21.9	25.0	87.6%	
Cadmium	200.8	23.4	25.0	93.6%	
Chromium	200.8	24.2	25.0	96.8%	
Copper	200.8	25.8	25.0	103%	
Lead	200.8	25.2	25.0	101%	
Nickel	200.8	25.3	25.0	101%	
Selenium	200.8	75.3	80.0	94.1%	
Silver	200.8	24.3	25.0	97.2%	
Thallium	200.8	24.5	25.0	98.0%	
Zinc	200.8	77	80	96.2%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WR99MB
LIMS ID: 13-11542
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	06/04/13	200.8	06/06/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/04/13	200.8	06/06/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/04/13	200.8	06/06/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/04/13	200.8	06/06/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/04/13	200.8	06/06/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/04/13	200.8	06/06/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/04/13	200.8	06/06/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/04/13	200.8	06/06/13	7440-66-6	Zinc	0.50	4	4	U

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

WR99 : 00336

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: KC-VT-1593-20130530-S
SAMPLE

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Percent Total Solids: 71.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/06/13	200.8	06/10/13	7440-36-0	Antimony	0.017	0.3	0.3	U
3050B	06/06/13	200.8	06/10/13	**7440-38-2**	**Arsenic**	0.11	0.3	**15.5**	
3050B	06/06/13	6010C	06/11/13	7440-41-7	Beryllium	0.034	0.3	0.3	U
3050B	06/06/13	200.8	06/10/13	**7440-43-9**	**Cadmium**	0.016	0.1	**0.6**	
3050B	06/06/13	200.8	06/10/13	**7440-47-3**	**Chromium**	0.049	0.6	**13.6**	
3050B	06/06/13	6010C	06/11/13	**7440-50-8**	**Copper**	0.17	0.7	**31.8**	
3050B	06/06/13	200.8	06/10/13	**7439-92-1**	**Lead**	0.061	0.1	**45.4**	
CLP	06/06/13	7471A	06/10/13	7439-97-6	Mercury	0.0015	0.03	0.03	U
3050B	06/06/13	200.8	06/10/13	**7440-02-0**	**Nickel**	0.063	0.6	**21.5**	
3050B	06/06/13	200.8	06/10/13	7782-49-2	Selenium	0.13	0.6	0.6	U
3050B	06/06/13	200.8	06/10/13	7440-22-4	Silver	0.010	0.3	0.3	U
3050B	06/06/13	200.8	06/10/13	7440-28-0	Thallium	0.0039	0.3	0.3	U
3050B	06/06/13	6010C	06/11/13	**7440-66-6**	**Zinc**	0.41	3	**159**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-CB-01-20130530-S
SAMPLE

Lab Sample ID: WR99E
LIMS ID: 13-11545
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Percent Total Solids: 71.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/06/13	200.8	06/10/13	7440-36-0	Antimony	0.018	0.3	0.3	U
3050B	06/06/13	200.8	06/10/13	**7440-38-2**	**Arsenic**	0.12	0.3	**10.5**	
3050B	06/06/13	6010C	06/11/13	**7440-41-7**	**Beryllium**	0.014	0.1	**0.2**	
3050B	06/06/13	200.8	06/10/13	**7440-43-9**	**Cadmium**	0.017	0.1	**4.6**	
3050B	06/06/13	200.8	06/10/13	**7440-47-3**	**Chromium**	0.052	0.7	**27.9**	
3050B	06/06/13	6010C	06/11/13	**7440-50-8**	**Copper**	0.068	0.3	**42.2**	
3050B	06/06/13	200.8	06/10/13	**7439-92-1**	**Lead**	0.065	0.1	**148**	
CLP	06/06/13	7471A	06/10/13	**7439-97-6**	**Mercury**	0.0018	0.03	**0.08**	
3050B	06/06/13	200.8	06/10/13	**7440-02-0**	**Nickel**	0.068	0.7	**20.5**	
3050B	06/06/13	200.8	06/10/13	7782-49-2	Selenium	0.14	0.7	0.7	U
3050B	06/06/13	200.8	06/10/13	7440-22-4	Silver	0.011	0.3	0.3	U
3050B	06/06/13	200.8	06/10/13	7440-28-0	Thallium	0.0041	0.3	0.3	U
3050B	06/06/13	6010C	06/11/13	**7440-66-6**	**Zinc**	0.16	1	**180**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-DD-2009-20130530-S
SAMPLE

Lab Sample ID: WR99F
LIMS ID: 13-11546
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Percent Total Solids: 62.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/06/13	200.8	06/10/13	**7440-36-0**	**Antimony**	0.020	0.3	**0.4**	
3050B	06/06/13	200.8	06/10/13	**7440-38-2**	**Arsenic**	0.13	0.3	**8.3**	
3050B	06/06/13	6010C	06/11/13	**7440-41-7**	**Beryllium**	0.016	0.2	**0.3**	
3050B	06/06/13	200.8	06/10/13	**7440-43-9**	**Cadmium**	0.019	0.2	**18.4**	
3050B	06/06/13	200.8	06/10/13	**7440-47-3**	**Chromium**	0.059	0.8	**66.2**	
3050B	06/06/13	6010C	06/11/13	**7440-50-8**	**Copper**	0.079	0.3	**149**	
3050B	06/06/13	200.8	06/10/13	**7439-92-1**	**Lead**	0.073	0.2	**234**	
CLP	06/06/13	7471A	06/10/13	**7439-97-6**	**Mercury**	0.0018	0.03	**2.83**	
3050B	06/06/13	200.8	06/10/13	**7440-02-0**	**Nickel**	0.076	0.8	**48.1**	
3050B	06/06/13	200.8	06/10/13	7782-49-2	Selenium	0.15	0.8	0.8	U
3050B	06/06/13	200.8	06/10/13	**7440-22-4**	**Silver**	0.012	0.3	**1.1**	
3050B	06/06/13	200.8	06/10/13	7440-28-0	Thallium	0.0047	0.3	0.3	U
3050B	06/06/13	6010C	06/11/13	**7440-66-6**	**Zinc**	0.19	2	**813**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-VT-1593-20130530-S
MATRIX SPIKE

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.3 U	3.5	32.3	10.8%	N
Arsenic	200.8	15.5	42.4	32.3	83.3%	
Beryllium	6010C	0.3 U	66.8	68.7	97.2%	
Cadmium	200.8	0.6	31.9	32.3	96.9%	
Chromium	200.8	13.6	45.4	32.3	98.5%	
Copper	6010C	31.8	99.4	68.7	98.4%	
Lead	200.8	45.4	57.5	32.3	37.5%	N
Mercury	7471A	0.03 U	0.35	0.301	116%	
Nickel	200.8	21.5	53.1	32.3	97.8%	
Selenium	200.8	0.6 U	99.9	103	97.0%	
Silver	200.8	0.3 U	28.6	32.3	88.5%	
Thallium	200.8	0.3 U	28.9	32.3	89.5%	
Zinc	6010C	159	226	68.7	97.5%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-VT-1593-20130530-S
DUPLICATE

Lab Sample ID: WR99D
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Arsenic	200.8	15.5	12.0	25.5%	+/- 20%	*
Beryllium	6010C	0.3 U	0.3 U	0.0%	+/- 0.3	L
Cadmium	200.8	0.6	0.6	0.0%	+/- 0.1	L
Chromium	200.8	13.6	13.3	2.2%	+/- 20%	
Copper	6010C	31.8	40.5	24.1%	+/- 20%	*
Lead	200.8	45.4	26.7	51.9%	+/- 20%	*
Mercury	7471A	0.03 U	0.03 U	0.0%	+/- 0.03	L
Nickel	200.8	21.5	18.2	16.6%	+/- 20%	
Selenium	200.8	0.6 U	0.6 U	0.0%	+/- 0.6	L
Silver	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Zinc	6010C	159	175	9.6%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

WR99 : 00335

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: WR99LCS
LIMS ID: 13-11545
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.2	25.0	96.8%	
Arsenic	200.8	26.0	25.0	104%	
Beryllium	6010C	48.2	50.0	96.4%	
Cadmium	200.8	23.9	25.0	95.6%	
Chromium	200.8	23.7	25.0	94.8%	
Copper	6010C	50.3	50.0	101%	
Lead	200.8	23.4	25.0	93.6%	
Mercury	7471A	0.52	0.50	104%	
Nickel	200.8	25.5	25.0	102%	
Selenium	200.8	80.2	80.0	100%	
Silver	200.8	23.5	25.0	94.0%	
Thallium	200.8	23.0	25.0	92.0%	
Zinc	6010C	49	50	98.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WR99MB
LIMS ID: 13-11545
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/06/13	200.8	06/10/13	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	06/06/13	200.8	06/10/13	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	06/06/13	6010C	06/11/13	7440-41-7	Beryllium	0.010	0.1	0.1	U
3050B	06/06/13	200.8	06/10/13	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	06/06/13	200.8	06/10/13	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	06/06/13	6010C	06/11/13	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	06/06/13	200.8	06/10/13	7439-92-1	Lead	0.047	0.1	0.1	U
CLP	06/06/13	7471A	06/10/13	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	06/06/13	200.8	06/10/13	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	06/06/13	200.8	06/10/13	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	06/06/13	200.8	06/10/13	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	06/06/13	200.8	06/10/13	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	06/06/13	6010C	06/11/13	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

WR99 : 00037

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99

UNITS:ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS060681	50.0	49.78	**99.6**	50.0	49.79	**99.6**	49.21	**98.4**	49.84	**99.7**	49.94	**99.9**	48.44	**96.9**
Arsenic	AS	PMS	MS060681	50.0	52.70	**105.4**	50.0	50.22	**100.4**	49.67	**99.3**	49.82	**99.6**	49.74	**99.5**	49.93	**99.9**
Beryllium	BE	ICP	IP061172	1000.0	1021.53	**102.2**	1000.0	1021.00	**102.1**	1014.36	**101.4**	1017.97	**101.8**	1020.40	**102.0**	1007.33	**100.7**
Beryllium	BE	PMS	MS060681	50.0	49.68	**99.4**	50.0	52.57	**105.1**	49.32	**98.6**	50.05	**100.1**	47.16	**94.3**	42.55	**85.1**
Cadmium	CD	PMS	MS060681	50.0	48.88	**97.8**	50.0	50.14	**100.3**	49.87	**99.7**	49.69	**99.4**	50.12	**100.2**	49.10	**98.2**
Chromium	CR	PMS	MS060681	50.0	51.41	**102.8**	50.0	50.63	**101.3**	50.08	**100.2**	49.82	**99.6**	48.92	**97.8**	48.69	**97.4**
Copper	CU	ICP	IP061172	1000.0	1043.76	**104.4**	1000.0	1034.54	**103.5**	1004.09	**100.4**	1040.92	**104.1**	1008.94	**100.9**	1036.39	**103.6**
Copper	CU	PMS	MS060681	50.0	53.15	**106.3**	50.0	50.27	**100.5**	51.01	**102.0**	49.96	**99.9**	49.68	**99.4**	49.86	**99.7**
Lead	PB	PMS	MS060681	50.0	52.70	**105.4**	50.0	50.48	**101.0**	51.32	**102.6**	49.98	**100.0**	50.88	**101.8**	51.21	**102.4**
Mercury	HG	CVA	HG061001	8.0	8.00	**100.0**	4.0	4.04	**101.0**	4.05	**101.3**	4.08	**102.0**	4.12	**103.0**	4.14	**103.5**
Nickel	NI	PMS	MS060681	50.0	53.55	**107.1**	50.0	50.24	**100.5**	51.14	**102.3**	49.89	**99.8**	50.18	**100.4**	50.83	**101.7**
Selenium	SE	PMS	MS060681	80.0	82.15	**102.7**	50.0	50.11	**100.2**	51.20	**102.4**	49.70	**99.4**	50.44	**100.9**	53.49	**107.0**
Silver	AG	PMS	MS060681	50.0	51.07	**102.1**	50.0	50.67	**101.3**	50.54	**101.1**	50.31	**100.6**	49.98	**100.0**	48.88	**97.8**
Thallium	TL	PMS	MS060681	50.0	50.67	**101.3**	50.0	49.54	**99.1**	50.05	**100.1**	49.14	**98.3**	49.81	**99.6**	49.60	**99.2**
Zinc	ZN	ICP	IP061172	1000.0	1009.04	**100.9**	1000.0	1016.64	**101.7**	1008.46	**100.8**	1013.99	**101.4**	1027.63	**102.8**	1005.99	**100.6**
Zinc	ZN	PMS	MS060681	50.0	51.94	**103.9**	50.0	50.97	**101.9**	50.88	**101.8**	50.05	**100.1**	50.39	**100.8**	50.89	**101.8**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WR99

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS060681	50.0												
Arsenic	AS	PMS	MS060681	50.0												
Beryllium	BE	ICP	IP061172	1000.0	1000.17	**100.0**	1020.59	**102.1**	1032.05	**103.2**	1038.16	**103.8**				
Beryllium	BE	PMS	MS060681	50.0												
Cadmium	CD	PMS	MS060681	50.0												
Chromium	CR	PMS	MS060681	50.0												
Copper	CU	ICP	IP061172	1000.0	1031.72	**103.2**	1018.20	**101.8**	1058.82	**105.9**	1060.79	**106.1**				
Copper	CU	PMS	MS060681	50.0												
Lead	PB	PMS	MS060681	50.0												
Mercury	HG	CVA	HG061001	4.0	4.13	**103.3**	4.06	**101.5**								
Nickel	NI	PMS	MS060681	50.0												
Selenium	SE	PMS	MS060681	50.0												
Silver	AG	PMS	MS060681	50.0												
Thallium	TL	PMS	MS060681	50.0												
Zinc	ZN	ICP	IP061172	1000.0	1006.71	**100.7**	1033.09	**103.3**	1037.26	**103.7**	1044.13	**104.4**				
Zinc	ZN	PMS	MS060681	50.0												

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WR99

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS061011	50.0	50.63	**101.3**	50.0	49.73	**99.5**	49.33	**98.7**	49.41	**98.8**	49.08	**98.2**		
Arsenic	AS	PMS	MS061011	50.0	50.88	**101.8**	50.0	49.73	**99.5**	50.93	**101.9**	49.83	**99.7**	50.81	**101.6**		
Cadmium	CD	PMS	MS061011	50.0	49.02	**98.0**	50.0	50.09	**100.2**	50.36	**100.7**	49.74	**99.5**	48.52	**97.0**		
Chromium	CR	PMS	MS061011	50.0	49.33	**98.7**	50.0	49.17	**98.3**	48.71	**97.4**	48.43	**96.9**	48.70	**97.4**		
Lead	PB	PMS	MS061011	50.0	50.14	**100.3**	50.0	49.21	**98.4**	47.96	**95.9**	47.58	**95.2**	46.87	**93.7**		
Nickel	NI	PMS	MS061011	50.0	52.41	**104.8**	50.0	50.59	**101.2**	51.33	**102.7**	50.44	**100.9**	50.72	**101.4**		
Selenium	SE	PMS	MS061011	80.0	78.79	**98.5**	50.0	50.60	**101.2**	52.19	**104.4**	51.84	**103.7**	52.99	**106.0**		
Silver	AG	PMS	MS061011	50.0	50.46	**100.9**	50.0	49.42	**98.8**	48.95	**97.9**	47.84	**95.7**	47.19	**94.4**		
Thallium	TL	PMS	MS061011	50.0	49.17	**98.3**	50.0	49.17	**98.3**	48.17	**96.3**	47.11	**94.2**	46.70	**93.4**		

Control Limits: Mercury 80-120; Other Metals 90-110

SIR-SAS-0524

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99

UNITS:ug/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Antimony	SB	PMS	MS060681	0.2	0.21	**105.0**										
Arsenic	AS	PMS	MS060681	0.2	0.22	**110.0**										
Beryllium	BE	PMS	MS060681	0.2	0.20	**100.0**										
Beryllium	BE	ICP	IP061172	1.0	0.98	**98.0**	0.96	**96.0**								
Cadmium	CD	PMS	MS060681	0.1	0.11	**110.0**										
Chromium	CR	PMS	MS060681	0.5	0.45	**90.0**										
Copper	CU	PMS	MS060681	0.5	0.52	**104.0**										
Copper	CU	ICP	IP061172	2.0	2.21	**110.5**	2.48	**124.0**								
Lead	PB	PMS	MS060681	0.1	0.10	**100.0**										
Mercury	HG	CVA	HG061001	0.1	0.11	**110.0**										
Nickel	NI	PMS	MS060681	0.5	0.50	**100.0**										
Selenium	SE	PMS	MS060681	0.5	0.53	**106.0**										
Silver	AG	PMS	MS060681	0.2	0.19	**95.0**										
Thallium	TL	PMS	MS060681	0.2	0.19	**95.0**										
Zinc	ZN	PMS	MS060681	4.0	4.04	**101.0**										
Zinc	ZN	ICP	IP061172	10.0	12.59	**125.9**	11.46	**114.6**								

Control Limits: no control limits have been established by the EPA at this time.

Triangle Laboratories

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WR99

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Antimony	SB	PMS	MS061011	0.2	0.22	**110.0**										
Arsenic	AS	PMS	MS061011	0.2	0.21	**105.0**										
Cadmium	CD	PMS	MS061011	0.1	0.10	**100.0**										
Chromium	CR	PMS	MS061011	0.5	0.51	**102.0**										
Lead	PB	PMS	MS061011	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS061011	0.5	0.51	**102.0**										
Selenium	SE	PMS	MS061011	0.5	0.48	**96.0**										
Silver	AG	PMS	MS061011	0.2	0.20	**100.0**										
Thallium	TL	PMS	MS061011	0.2	0.21	**105.0**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS060681	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS060681	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Beryllium	BE	ICP	IP061172	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Beryllium	BE	PMS	MS060681	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS060681	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chromium	CR	PMS	MS060681	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	ICP	IP061172	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Copper	CU	PMS	MS060681	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Lead	PB	PMS	MS060681	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Mercury	HG	CVA	HG061001	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS060681	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Selenium	SE	PMS	MS060681	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS060681	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Thallium	TL	PMS	MS060681	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	ICP	IP061172	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Zinc	ZN	PMS	MS060681	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS060681	60.0	0.2												
Arsenic	AS	PMS	MS060681	10.0	0.2												
Beryllium	BE	ICP	IP061172	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U				
Beryllium	BE	PMS	MS060681	5.0	0.2												
Cadmium	CD	PMS	MS060681	5.0	0.1												
Chromium	CR	PMS	MS060681	10.0	0.5												
Copper	CU	ICP	IP061172	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U				
Copper	CU	PMS	MS060681	25.0	0.5												
Lead	PB	PMS	MS060681	3.0	0.1												
Mercury	HG	CVA	HG061001	0.2	0.1	0.1	U	0.1	U								
Nickel	NI	PMS	MS060681	40.0	0.5												
Selenium	SE	PMS	MS060681	5.0	0.5												
Silver	AG	PMS	MS060681	10.0	0.2												
Thallium	TL	PMS	MS060681	10.0	0.2												
Zinc	ZN	ICP	IP061172	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U				
Zinc	ZN	PMS	MS060681	20.0	4.0												

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS061011	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Arsenic	AS	PMS	MS061011	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Cadmium	CD	PMS	MS061011	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Chromium	CR	PMS	MS061011	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Lead	PB	PMS	MS061011	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Nickel	NI	PMS	MS061011	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Selenium	SE	PMS	MS061011	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Silver	AG	PMS	MS061011	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Thallium	TL	PMS	MS061011	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: IP061172

SDG: WR99

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	201847.7	201807.9	**100.9**	201712.0	202171.1	**101.1**			
Antimony		1000	9.7	1026.8	**102.7**	9.7	1023.6	**102.4**			
Arsenic		1000	18.0	1027.2	**102.7**	17.9	1024.3	**102.4**			
Barium		1000	-2.3	1006.4	**100.6**	-0.9	1020.2	**102.0**			
Beryllium		1000	0.1	996.9	**99.7**	0.1	994.6	**99.5**			
Boron			-5.6	-7.5		-7.2	-8.8				
Cadmium		1000	0.5	1022.8	**102.3**	0.5	1017.8	**101.8**			
Calcium	100000	100000	100011.6	99715.8	**99.7**	100150.8	100014.0	**100.0**			
Chromium		1000	1.0	1020.4	**102.0**	-0.5	1017.1	**101.7**			
Cobalt		1000	0.2	953.2	**95.3**	0.1	951.4	**95.1**			
Copper		1000	0.3	1052.6	**105.3**	0.6	1050.5	**105.1**			
Iron	200000	200000	200903.4	198931.9	**99.5**	199219.0	198859.0	**99.4**			
Lead		1000	-1.4	993.5	**99.4**	-3.8	988.4	**98.8**			
Magnesium	100000	100000	105087.7	99664.7	**99.7**	104605.2	99996.3	**100.0**			
Manganese		1000	0.3	964.7	**96.5**	0.2	963.8	**96.4**			
Molybdenum			0.6	0.5		0.5	0.5				
Nickel		1000	1.4	963.9	**96.4**	1.5	968.4	**96.8**			
Potassium			6.8	-27.2		3.3	-22.9				
Selenium		1000	13.0	1027.1	**102.7**	16.4	1014.5	**101.5**			
Silicon			-6.2	-2.5		-4.7	-5.6				
Silver		1000	-1.0	1063.9	**106.4**	-1.1	1069.5	**107.0**			
Sodium			4.8	-3.0		1.1	-7.7				
Strontium			5.5	5.4		5.4	5.4				
Thallium		1000	1.7	937.9	**93.8**	1.5	934.3	**93.4**			
Tin			-11.0	-11.0		-12.9	-12.2				
Titanium			2.4	1.9		2.5	2.3				
Vanadium		1000	-0.7	994.1	**99.4**	-1.2	995.6	**99.6**			
Zinc		1000	3.6	962.0	**96.2**	3.8	960.1	**96.0**			

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS060681

SDG: WR99

INSTRUMENT ID: PE ELAN 6000

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.1	19.3	**96.5**						
Cadmium		20	0.1	19.4	**97.0**						
Chromium		20	0.5	20.0	**100.0**						
Cobalt		20	0.0	19.3	**96.5**						
Copper		20	0.5	19.4	**97.0**						
Manganese		20	0.1	19.6	**98.0**						
Molybdenum	400	400	399.5	404.6	**101.2**						
Nickel		20	0.5	20.0	**100.0**						
Silver		20	0.0	19.0	**95.0**						
Zinc		20	2.3	20.2	**101.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS061011

SDG: WR99

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.1	19.6	**98.0**						
Barium			-0.1	-0.1							
Cadmium		20	0.2	19.6	**98.0**						
Chromium		20	0.6	19.1	**95.5**						
Cobalt		20	0.0	18.7	**93.5**						
Copper		20	0.9	21.0	**105.0**						
Manganese		20	0.0	18.8	**94.0**						
Molybdenum	400	400	404.3	411.9	**103.0**						
Nickel		20	0.3	21.1	**105.5**						
Selenium			-0.1	-0.1							
Silver		20	0.0	19.1	**95.5**						
Zinc		20	0.5	20.1	**100.5**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

ANALYSIS METHOD: PMS

SDG: WR99

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	KC-VT-1593-2013053	WR99DPOST	MS061011	482.36	B	1000.00	U	500	Sediment	**96.5**
Lead	KC-VT-1593-2013053	WR99DPOST	MS061011	1143.12		701.80		500	Sediment	**88.3**

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Antimony	SB	PMS	PE ELAN 6000 MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Arsenic	AS	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Beryllium	BE	ICP	OPTIMA ICP 2	313.04		5	1.0	4/1/2012	5000.0	1/22/2013
Beryllium	BE	PMS	PE ELAN 6000 MS	0.00		5	0.2	4/1/2012		
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Cadmium	CD	PMS	PE ELAN 6000 MS	0.00		5	0.1	4/1/2012		
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Chromium	CR	PMS	PE ELAN 6000 MS	0.00		10	0.5	4/1/2012		
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2012	40000.0	1/22/2013
Copper	CU	PMS	PE ELAN 6000 MS	0.00		25	0.5	4/1/2012		
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Lead	PB	PMS	PE ELAN 6000 MS	0.00		3	0.1	4/1/2012		
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Nickel	NI	PMS	PE ELAN 6000 MS	0.00		40	0.5	4/1/2012		
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Selenium	SE	PMS	PE ELAN 6000 MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Silver	AG	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2012	100000.0	1/22/2013
Zinc	ZN	PMS	PE ELAN 6000 MS	0.00		20	4.0	4/1/2012		

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 6/10/2013

SDG: WR99

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	13.5116900	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0733590	0.0000000	-1.1562270	1.6205640	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1808730	0.0000000	0.0000000	0.1684250
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.67	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	2.1037380	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	5.4930220	0.0000000	0.0000000	0.0000000	0.0000000	0.1385480	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0970800	0.0000000	0.0000000	0.0000000	0.0000000	-0.0418440
Cobalt	228.62	0.0000000	0.0000000	0.0906750	0.0000000	0.0000000	0.0000000	0.0000000	-0.0404570	0.0000000	0.0120010
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1617900	0.0000000	0.0000000	-0.0440960
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.0775070	0.0000000	0.0000000
Lead	220.35	-0.2330880	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1375770	-1.7455340	1.4164220	0.0510640
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.1238020	0.0000000	-1.6776030	-1.2063230	0.0000000	0.6021300
Manganese	257.61	0.0056830	0.0000000	0.0000000	0.0000000	0.0040290	0.0000000	0.0000000	0.0000000	0.0000000	-0.0043570
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0127170	0.0000000	0.0000000	0.0494370	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.1095620	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5156780	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.7783440	0.0000000	-0.6443870	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	4.3373140	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.9719930	0.4226130	0.0000000	-0.1373360
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1284010	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0622130	0.0000000	0.0000000	0.1906300	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.9208100	0.0000000	0.0530020
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0123920	0.0000000	0.0000000	-0.0659320	0.0000000	0.0000000

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 6/10/2013

SDG: WR99

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	16.0812590	0.0000000	0.0000000	0.0000000	1.9531650	0.0000000	15.6704600	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.8263670	0.0000000	-3.8485090	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.4165090	0.0000000	0.0000000	0.0000000	-32.1596340	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1266550	0.0000000	0.0000000	0.0000000	0.0000000	0.2235440	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0102770	0.0000000	0.2401990	0.0000000
Boron	249.67	0.0000000	0.0000000	-1.0759410	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9387840	0.0000000	0.0000000	0.0000000	0.0000000	0.0597550	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0860990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3212800	0.0000000
Cobalt	228.62	0.0000000	0.0000000	-0.1256200	0.1682020	0.0000000	0.0000000	1.7253070	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0058198	0.0000000	0.3004190	0.0000000	0.0000000	0.0000000	0.1851800	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	7.2530080	0.0000000
Lead	220.35	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.2138260	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.1832430	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5439300	0.0000000	0.4201630	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5911140	0.0000000
Silicon	288.16	-0.1130470	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.2887870	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	287.1603720	0.0000000	0.0000000	306.9999840
Thallium	190.80	0.0000000	0.0000000	-1.5891790	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.6439390	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0384380	-0.4873020	-0.2074990	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.9474070	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1525200	-0.5409400	0.0000000	0.0000000	0.0000000	0.5527510	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2376970	0.0000000	-0.0608720	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 6/6/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
KC-VT-1593-2013053	WR99D	1.013	0.0	50.0
KC-VT-1593-2013053D	WR99DDUP	1.016	0.0	50.0
KC-VT-1593-2013053S	WR99DSPK	1.016	0.0	50.0
KC-CB-01-20130530-	WR99E	1.033	0.0	50.0
KC-DD-2009-2013053	WR99F	1.015	0.0	50.0
PBS	WR99MB3	1.000	0.0	50.0
LCSS	WR99MB3SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99

ANALYSIS METHOD: PMS

ARI PREP CODE: REN

PREPDATE: 6/4/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
KC-VT-1593-2013053	WR99A	0.000	50.0	25.0
KC-VT-1593-2013053D	WR99ADUP	0.000	50.0	25.0
KC-VT-1593-2013053S	WR99ASPK	0.000	50.0	25.0
KC-VT-1593-2013053	WR99B	0.000	50.0	25.0
KC-VT-1593-2013053D	WR99BDUP	0.000	50.0	25.0
KC-VT-1593-2013053S	WR99BSPK	0.000	50.0	25.0
PBW	WR99MB1	0.000	50.0	25.0
LCSW	WR99MB1SPK	0.000	50.0	25.0
PBW	WR99MB2	0.000	50.0	25.0
LCSW	WR99MB2SPK	0.000	50.0	25.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 6/6/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
KC-VT-1593-2013053	WR99D	1.080	0.0	50.0
KC-VT-1593-2013053D	WR99DDUP	1.081	0.0	50.0
KC-VT-1593-2013053S	WR99DSPK	1.080	0.0	50.0
KC-CB-01-20130530-	WR99E	1.016	0.0	50.0
KC-DD-2009-2013053	WR99F	1.033	0.0	50.0
PBS	WR99MB3	1.000	0.0	50.0
LCSS	WR99MB3SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WR99

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 6/6/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
KC-VT-1593-2013053	WR99D	0.235	0.0	50.0
KC-VT-1593-2013053D	WR99DDUP	0.235	0.0	50.0
KC-VT-1593-2013053S	WR99DSPK	0.232	0.0	50.0
KC-CB-01-20130530-	WR99E	0.205	0.0	50.0
KC-DD-2009-2013053	WR99F	0.236	0.0	50.0
PBS	WR99MB3	0.200	0.0	50.0
LCSW	WR99MB3SPK	0.200	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 6/11/2013

SDG: WR99 | RUNID: IP061172 | METHOD: ICP | END DATE: 6/11/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09270							X					X																		X
S2	S2	1.00	09312												X																		
S3	S3	1.00	09331							X																							X
S4	S4	1.00	09354																														
S5	S5	1.00	09380																														
ICV	ICV	1.00	09412							X					X																		X
ICB	ICB	1.00	09452							X					X																		X
CRI	CRII	1.00	09494							X					X																		X
ICSA	ICSAI	1.00	09535							X					X																		X
ICSAB	ICSABI	1.00	09581							X					X																		X
CCV	CCV1	1.00	10021							X					X																		X
CCB	CCB1	1.00	10062							X					X																		X
ZZZZZZ	DICHECK	1.00	10103																														
ZZZZZZ	WS27MB1	2.00	10145																														
ZZZZZZ	WS27A-L	10.00	10190																														
ZZZZZZ	WS27A	2.00	10230																														
ZZZZZZ	WS27ADUP	2.00	10271																														
ZZZZZZ	WS27ASPK	2.00	10311																														
ZZZZZZ	ZZZZZZ	2.00	10351																														
ZZZZZZ	WS27REF1	2.00	10391																														
ZZZZZZ	WS27MB1SPK	2.00	10423																														
CCV	CCV2	1.00	10463							X					X																		X
CCB	CCB2	1.00	10504							X					X																		X
CRI	CRIF	1.00	10545							X					X																		X
ICSA	ICSAF	1.00	10591							X					X																		X
ICSAB	ICSABF	1.00	11032							X					X																		X
CCV	CCV3	1.00	11073							X					X																		X
CCB	CCB3	1.00	11113							X					X																		X
ZZZZZZ	WT10MB	1.00	11155																														
ZZZZZZ	WT10ADUP	5.00	11200																														
ZZZZZZ	WT10A	5.00	11242																														
ZZZZZZ	WT10ASPK	5.00	11283																														
ZZZZZZ	WT10MBSPK	1.00	11340																														
CCV	CCV4	1.00	11380							X					X																		X
CCB	CCB4	1.00	11420							X					X																		X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 6/11/2013

SDG: WR99 | RUNID: IP061172 | METHOD: ICP | END DATE: 6/11/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WT10ADUP	10.00	11462																														
ZZZZZZ	WT10A	10.00	11503																														
ZZZZZZ	WT10ASPK	10.00	11545																														
CCV	CCV5	1.00	12001							X					X																		X
CCB	CCB5	1.00	12042							X					X																		X
ZZZZZZ	WT03MB1	2.00	12083																														
ZZZZZZ	WT03ADUP	2.00	12125																														
ZZZZZZ	WT03A	2.00	12165																														
ZZZZZZ	WT03ASPK	2.00	12205																														
ZZZZZZ	WT03B	2.00	12241																														
ZZZZZZ	WT03C	2.00	12281																														
ZZZZZZ	WT03D	2.00	12321																														
ZZZZZZ	WT03E	2.00	12362																														
ZZZZZZ	WT03MB1SPK	2.00	12402																														
CCV	CCV6	1.00	12442							X					X																		X
CCB	CCB6	1.00	12482							X					X																		X
PBS	WR99MB3	2.00	12524							X					X																		X
KC-VT-1593-2013053D	WR99DDUP	2.00	12570																														
KC-VT-1593-2013053	WR99D	2.00	13010																														
KC-VT-1593-2013053S	WR99DSPK	2.00	13050																														
ZZZZZZ	ZZZZZZ	2.00	13082																														
KC-CB-01-20130530-	WR99E	2.00	13113							X					X																		X
KC-DD-2009-2013053	WR99F	2.00	13154							X					X																		X
LCSS	WR99MB3SPK	2.00	13194							X					X																		X
CCV	CCV7	1.00	13234							X					X																		X
CCB	CCB7	1.00	13274							X					X																		X
ZZZZZZ	WS21MB1	2.00	13320																														
ZZZZZZ	WS21ADUP	2.00	13361																														
ZZZZZZ	WS21A	2.00	13401																														
ZZZZZZ	WS21ASPK	2.00	13441																														
ZZZZZZ	ZZZZZZ	2.00	13482																														
ZZZZZZ	WS21MB1SPK	2.00	13522																														
CCV	CCV8	1.00	13562							X					X																		X
CCB	CCB8	1.00	14003							X					X																		X
KC-VT-1593-2013053D	WR99DDUP	5.00	14044							X					X																		X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 6/11/2013

SDG: WR99 | RUNID: IP061172 | METHOD: ICP | END DATE: 6/11/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
KC-VT-1593-2013053	WR99D	5.00	14084							X					X																		X
KC-VT-1593-2013053S	WR99DSPK	5.00	14124							X					X																		X
ZZZZZZ	ZZZZZZ	5.00	14165																														
CCV	CCV9	1.00	14205							X					X																		X
CCB	CCB9	1.00	14245							X					X																		X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 6/6/2013

SDG: WR99 | RUNID: MS060681 | METHOD: PMS | END DATE: 6/6/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09410		X		X			X		X		X	X								X	X	X	X				X			X
S1	S1	1.00	09470		X		X			X		X		X	X								X	X	X	X				X			X
S2	S2	1.00	09530		X		X			X		X		X	X								X	X	X	X				X			X
S3	S3	1.00	09590		X		X			X		X		X	X								X	X	X	X				X			X
S4	S4	1.00	10050		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	Rinse Samp1	1.00	10110																														
ICV	MICV	1.00	10180		X		X			X		X		X	X								X	X	X	X				X			X
ICB	ICB	1.00	10240		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV1	1.00	10300		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB1	1.00	10360		X		X			X		X		X	X								X	X	X	X				X			X
CRI	MCRI	1.00	10410		X		X			X		X		X	X								X	X	X	X				X			X
ICSA	ICSAI	1.00	10470		X		X			X		X		X	X								X	X	X	X				X			X
ICSAB	ICSABI	1.00	10530		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	LR200	1.00	10590																														
ZZZZZZ	LR300	1.00	11050																														
CCV	MCCV2	1.00	11110		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB2	1.00	11180		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WR99MB1	2.00	11230		X		X			X		X		X	X								X	X	X	X				X			X
KC-VT-1593-2013053D	WR99ADUP	2.00	11290		X		X			X		X			X								X	X	X	X				X			X
KC-VT-1593-2013053	WR99A	2.00	11350		X		X			X		X			X								X	X	X	X				X			X
KC-VT-1593-2013053S	WR99ASPK	2.00	11410		X		X			X		X			X								X	X	X	X				X			X
ZZZZZZ	ZZZZZZ	2.00	11470																														
LCSW	WR99MB1SPK	2.00	11530		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV3	1.00	11590		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB3	1.00	12050		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WR99MB2	2.00	12110		X		X			X		X		X	X								X	X	X	X				X			X
KC-VT-1593-2013053D	WR99BDUP	2.00	12170		X		X			X		X			X								X	X	X	X				X			X
KC-VT-1593-2013053	WR99B	2.00	12230		X		X			X		X			X								X	X	X	X				X			X
KC-VT-1593-2013053S	WR99BSPK	2.00	12290		X		X			X		X			X								X	X	X	X				X			X
ZZZZZZ	ZZZZZZ	2.00	12340																														
LCSW	WR99MB2SPK	2.00	12400		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV4	1.00	12460		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB4	1.00	12530		X		X			X		X		X	X								X	X	X	X				X			X
KC-VT-1593-2013053D	WR99ADUP	5.00	12580											X																			
KC-VT-1593-2013053	WR99A	5.00	13040											X																			

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 6/6/2013

SDG: WR99 | RUNID: MS060681 | METHOD: PMS | END DATE: 6/6/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
KC-VT-1593-2013053S	WR99ASPK	5.00	13100											X																			
ZZZZZZ	ZZZZZZ	5.00	13160																														
KC-VT-1593-2013053D	WR99BDUP	5.00	13220											X																			
KC-VT-1593-2013053	WR99B	5.00	13280											X																			
KC-VT-1593-2013053S	WR99BSPK	5.00	13340											X																			
ZZZZZZ	ZZZZZZ	5.00	13400																														
CCV	MCCV5	1.00	13460		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB5	1.00	13520		X		X			X		X		X	X								X	X	X	X				X			X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 6/10/2013

SDG: WR99 | RUNID: MS061011 | METHOD: PMS | END DATE: 6/10/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09530		X		X					X		X									X	X	X	X				X			
S1	S1	1.00	09570		X		X					X		X									X	X	X	X				X			
S2	S2	1.00	10010		X		X					X		X									X	X	X	X				X			
S3	S3	1.00	10060		X		X					X		X									X	X	X	X				X			
S4	S4	1.00	10100		X		X					X		X									X	X	X	X				X			
S5	S5	1.00	10150																														
ZZZZZZ	Rinse sampl	1.00	10210																														
ICV	MICV	1.00	10280		X		X					X		X									X	X	X	X				X			
ICB	ICB	1.00	10350		X		X					X		X									X	X	X	X				X			
CCV	MCCV1	1.00	10390		X		X					X		X									X	X	X	X				X			
CCB	CCB1	1.00	10450		X		X					X		X									X	X	X	X				X			
CRI	MCRI	1.00	10490		X		X					X		X									X	X	X	X				X			
ICSA	ICSAI	1.00	10540		X		X					X		X									X	X	X	X				X			
ICSAB	ICSABI	1.00	11000		X		X					X		X									X	X	X	X				X			
ZZZZZZ	LR200	1.00	11070																														
ZZZZZZ	LR300	1.00	11140																														
ZZZZZZ	B1	1.00	11210																														
CCV	MCCV2	1.00	11270		X		X					X		X									X	X	X	X				X			
CCB	CCB2	1.00	11340		X		X					X		X									X	X	X	X				X			
ZZZZZZ	WS21MB1	20.00	11400																														
ZZZZZZ	DI CHECK	1.00	11440																														
ZZZZZZ	ERAP197	10.00	11480																														
ZZZZZZ	WS21ADUP	20.00	11520																														
ZZZZZZ	WS21A	20.00	11560																														
ZZZZZZ	WS21ASPK	20.00	12010																														
ZZZZZZ	WS21APOST	20.00	12050																														
ZZZZZZ	WS21MB1SPK	20.00	12090																														
CCV	MCCV3	1.00	12130		X		X					X		X									X	X	X	X				X			
CCB	CCB3	1.00	12200		X		X					X		X									X	X	X	X				X			
PBS	WR99MB3	20.00	12260		X		X					X		X									X	X	X	X				X			
KC-CB-01-20130530-	WR99E	20.00	12300		X		X					X		X									X	X	X	X				X			
KC-DD-2009-2013053	WR99F	20.00	12340		X		X					X		X									X	X	X	X				X			
KC-VT-1593-2013053D	WR99DDUP	20.00	12380		X		X					X		X									X	X	X	X				X			
KC-VT-1593-2013053	WR99D	20.00	12420		X		X					X		X									X	X	X	X				X			
KC-VT-1593-2013053S	WR99DSPK	20.00	12470		X		X					X		X									X	X	X	X				X			

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 6/10/2013

SDG: WR99 | RUNID: MS061011 | METHOD: PMS | END DATE: 6/10/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
KC-VT-1593-2013053A	WR99DPOST	20.00	12510																					X	X								
LCSS	WR99MB3SPK	20.00	12550		X		X					X		X									X	X	X	X				X			
CCV	MCCV4	1.00	12590		X		X					X		X									X	X	X	X				X			
CCB	CCB4	1.00	13060		X		X					X		X									X	X	X	X				X			

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/10/2013

SDG: WR99 | RUNID: HG061001 | METHOD: CVA | END DATE: 6/10/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	13155														X																
S0.1	S0.1	1.00	13173														X																
S0.5	S0.5	1.00	13190														X																
S1	S1	1.00	13204														X																
S2	S2	1.00	13222														X																
S5	S5	1.00	13240														X																
S10	S10	1.00	13254														X																
ICV	AICV	1.00	13274														X																
ICB	ICB	1.00	13292														X																
CCV	ACCV1	1.00	13310														X																
CCB	CCB1	1.00	13324														X																
CRA	CRA	1.00	13342														X																
ZZZZZZ	WR57MB1	1.00	13355																														
ZZZZZZ	WR57MB1SPK	1.00	13373																														
ZZZZZZ	WR57MB1SPD	1.00	13390																														
ZZZZZZ	WR57A	1.00	13404																														
ZZZZZZ	WR57B	1.00	13422																														
ZZZZZZ	WR57C	1.00	13435																														
ZZZZZZ	WR57D	1.00	13453																														
ZZZZZZ	WS49MB1	1.00	13471																														
ZZZZZZ	WS49MB1SPK	1.00	13485																														
CCV	ACCV2	1.00	13502														X																
CCB	CCB2	1.00	13521														X																
ZZZZZZ	WS49A	1.00	13534																														
ZZZZZZ	WS49ADUP	1.00	13552																														
ZZZZZZ	WS49ASPK	1.00	13565																														
ZZZZZZ	WS49B	1.00	13583																														
ZZZZZZ	WS49C	1.00	14000																														
ZZZZZZ	WS49D	1.00	14014																														
ZZZZZZ	WS34MB1	1.00	14032																														
ZZZZZZ	WS34MB1SPK	1.00	14045																														
ZZZZZZ	WS34MB1SPD	1.00	14063																														
ZZZZZZ	WS34A	1.00	14081																														
CCV	ACCV3	1.00	14095														X																
CCB	CCB3	1.00	14113														X																

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/10/2013

SDG: WR99 | RUNID: HG061001 | METHOD: CVA | END DATE: 6/10/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WS35MB1	1.00	14131																														
ZZZZZZ	WS35MB1SPK	1.00	14145																														
ZZZZZZ	WS35MB1SPD	1.00	14163																														
ZZZZZZ	WS35A	1.00	14180																														
ZZZZZZ	WS20MB1	1.00	14194																														
ZZZZZZ	WS20MB1SPK	1.00	14211																														
ZZZZZZ	WS20A	1.00	14225																														
ZZZZZZ	WS20ADUP	1.00	14243																														
ZZZZZZ	WS20ASPK	1.00	14260																														
ZZZZZZ	WS20B	1.00	14274																														
CCV	ACCV4	1.00	14292														X																
CCB	CCB4	1.00	14310														X																
ZZZZZZ	WS20C	1.00	14324																														
ZZZZZZ	WS20D	1.00	14342																														
ZZZZZZ	WS20E	1.00	14360																														
ZZZZZZ	WS27MB1	1.00	14373																														
ZZZZZZ	WS27MB1SPK	1.00	14391																														
ZZZZZZ	WS27REF1	1.00	14405																														
ZZZZZZ	WS27A	1.00	14422																														
ZZZZZZ	WS27ADUP	1.00	14440																														
ZZZZZZ	WS27ASPK	1.00	14454																														
ZZZZZZ	WS21MB1	1.00	14471																														
CCV	ACCV5	1.00	14485														X																
CCB	CCB5	1.00	14503														X																
ZZZZZZ	WS21MB1SPK	1.00	14521																														
ZZZZZZ	WS21A	1.00	14535																														
ZZZZZZ	WS21ADUP	1.00	14553																														
ZZZZZZ	WS21ASPK	1.00	14571																														
PBW	WR99MB3	1.00	14585														X																
LCSW	WR99MB3SPK	1.00	15002														X																
KC-VT-1593-2013053	WR99D	1.00	15020														X																
KC-VT-1593-2013053D	WR99DDUP	1.00	15034														X																
KC-VT-1593-2013053S	WR99DSPK	1.00	15051														X																
KC-CB-01-20130530-	WR99E	1.00	15065														X																
CCV	ACCV6	1.00	15083														X																

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/10/2013

SDG: WR99 | RUNID: HG061001 | METHOD: CVA | END DATE: 6/10/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB6	1.00	15101														X																
KC-DD-2009-2013053	WR99F	1.00	15115														X																
CCV	ACCV7	1.00	15133														X																
CCB	CCB7	1.00	15151														X																

Mercury Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS01

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
KC-VT-1593-2013053	WS01A	13-11547	
KC-VT-1593-2013053D	WS01ADUP	13-11547	
KC-VT-1593-2013053S	WS01ASPK	13-11547	
PBW	WS01MB1	13-11547	
LCSW	WS01MB1SPK	13-11547	
KC-VT-1593-2013053	WS01B	13-11548	
KC-VT-1593-2013053D	WS01BDUP	13-11548	
KC-VT-1593-2013053S	WS01BSPK	13-11548	
PBW	WS01MB2	13-11548	
LCSW	WS01MB2SPK	13-11548	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Eric Larson for Name: Jay Kuhn

Date: 6/12/13 Title: Inorganics Director

WR99 : 00358

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Total Mercury by Method SW7470A

Data Release Authorized:
Reported: 06/12/13
Date Received: 05/31/13
Page 1 of 1

QC Report No: WS01-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
KC-VT-1593-20130530-W WS01A 13-11547	05/30/13	Water	06/04/13 06/11/13	20.0	20.0 U
MB-060413 Method Blank	NA	Water	06/04/13 06/11/13	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-VT-1593-20130530-W
MATRIX SPIKE

Lab Sample ID: WS01A
LIMS ID: 13-11547
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS01-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	89.6	100	89.6%	

Reported in ng/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-VT-1593-20130530-W
DUPLICATE

Lab Sample ID: WS01A
LIMS ID: 13-11547
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS01-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: WS01LCS
LIMS ID: 13-11547
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS01-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	181	200	90.5%	

Reported in ng/L

N-Control limit not met
Control Limits: 80-120%

WR39 : 00372

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Dissolved Mercury by Method SW7470A

Data Release Authorized:
Reported: 06/12/13
Date Received: 05/31/13
Page 1 of 1

QC Report No238: WS01-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
KC-VT-1593-20130530-W WS01B 13-11548	05/30/13	Water	06/04/13 06/11/13	20.0	20.0 U
MB-060413 Method Blank	NA	Water	06/04/13 06/11/13	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KC-VT-1593-20130530-W
MATRIX SPIKE

Lab Sample ID: WS01B
LIMS ID: 13-11548
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS01-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	90.9	100	90.9%	

Reported in ng/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KC-VT-1593-20130530-W
DUPLICATE

Lab Sample ID: WS01B
LIMS ID: 13-11548
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS01-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/30/13
Date Received: 05/31/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: LAB CONTROL**

Lab Sample ID: WS01LCS
LIMS ID: 13-11548
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS01-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	184	200	92.0%	

Reported in ng/L

N-Control limit not met
Control Limits: 80-120%

WR99:00376

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS01

UNITS: ng/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Mercury	HG	CVL	HG061101	500.0	469.00	**93.8**	500.0	490.00	**98.0**	496.00	**99.2**	513.00	**102.6**				

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS01

UNITS:ng/L

ANALYTE	EL	M	RUN	CRA/I	TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Mercury	HG	CVL	HG061101		20.0	16.60	**83.0**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ng/L

SDG: WS01

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Mercury	HG	CVL	HG061101	25.0	20.0	20.0	U	20.0	U	20.0	U	20.0	U				

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS01 UNITS: ng/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ng/L)	ICP LR DATE
Mercury	HG	CVL	CETAC MERCURY	253.70		25	20.0	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS01

ANALYSIS METHOD: CVL

ARI PREP CODE: DLM

PREPDATE: 6/4/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
KC-VT-1593-2013053	WS01B	0.000	20.0	20.0
KC-VT-1593-2013053D	WS01BDUP	0.000	20.0	20.0
KC-VT-1593-2013053S	WS01BSPK	0.000	20.0	20.0
PBW	WS01MB2	0.000	20.0	20.0
LCSW	WS01MB2SPK	0.000	20.0	20.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS01

ANALYSIS METHOD: CVL

ARI PREP CODE: TLM

PREPDATE: 6/4/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
KC-VT-1593-2013053	WS01A	0.000	20.0	20.0
KC-VT-1593-2013053D	WS01ADUP	0.000	20.0	20.0
KC-VT-1593-2013053S	WS01ASPK	0.000	20.0	20.0
PBW	WS01MB1	0.000	20.0	20.0
LCSW	WS01MB1SPK	0.000	20.0	20.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/11/2013

SDG: WS01 | RUNID: HG061101 | METHOD: CVL | END DATE: 6/11/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	11551														X																
S20	S20	1.00	11580														X																
S50	S50	1.00	12004														X																
S100	S100	1.00	12032														X																
S200	S200	1.00	12060														X																
S400	S400	1.00	12085														X																
S1000	S1000	1.00	12113														X																
ICV	AICV	1.00	12153														X																
ICB	ICB	1.00	12181														X																
CCV	ACCV1	1.00	12210														X																
CCB	CCB1	1.00	12234														X																
CRA	CRA	1.00	12262														X																
PBW	WS01MB1	1.00	12290														X																
LCSW	WS01MB1SPK	1.00	12314														X																
KC-VT-1593-2013053	WS01A	1.00	12343														X																
KC-VT-1593-2013053D	WS01ADUP	1.00	12371														X																
KC-VT-1593-2013053S	WS01ASPK	1.00	12395														X																
PBW	WS01MB2	1.00	12423														X																
LCSW	WS01MB2SPK	1.00	12451														X																
KC-VT-1593-2013053	WS01B	1.00	12480														X																
KC-VT-1593-2013053D	WS01BDUP	1.00	12504														X																
CCV	ACCV2	1.00	12532														X																
CCB	CCB2	1.00	12561														X																
KC-VT-1593-2013053S	WS01BSPK	1.00	12585														X																
CCV	ACCV3	1.00	13013														X																
CCB	CCB3	1.00	13042														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

SAMPLE RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/21/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Client ID: KC-VT-1593-20130530-W
ARI ID: 13-11541 WR99A

Analyte	Date Batch	Method	Units	RL	Sample
pH	05/31/13 053113#1	SM4500H	std units	0.01	6.78
Alkalinity	06/10/13 061013#1	SM 2320	mg/L CaCO3	1.0	167
Carbonate	06/10/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/10/13	SM 2320	mg/L CaCO3	1.0	167
Hydroxide	06/10/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	06/05/13 060513#1	EPA 120.1	umhos/cm	1.00	384
Total Suspended Solids	06/04/13 060413#1	SM2540D	mg/L	2.1	< 2.1 U
Chloride	05/31/13 053113#1	EPA 300.0	mg/L	0.5	12.0
N-Nitrate	05/31/13 053113#1	EPA 300.0	mg-N/L	0.1	0.1
Sulfate	05/31/13 053113#1	EPA 300.0	mg/L	0.5	9.9
Total Organic Carbon	05/31/13 053113#1	SM5310B	mg/L	1.50	10.8
Dissolved Organic Carbon	05/31/13 053113#1	SM5310B	mg/L	1.50	10.8

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/21/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WR99A Client ID: KC-VT-1593-20130530-W							
Chloride	EPA 300.0	05/31/13	mg/L	12.0	21.2	10.0	92.0%
N-Nitrate	EPA 300.0	05/31/13	mg-N/L	0.1	2.1	2.0	100.0%
Sulfate	EPA 300.0	05/31/13	mg/L	9.9	19.3	10.0	94.0%
Total Organic Carbon	SM5310B	05/31/13	mg/L	10.8	30.4	20.0	98.0%

WR99 : 00285

REPLICATE RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: QV
Reported: 06/21/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WR99A Client ID: KC-VT-1593-20130530-W						
pH	SM4500H	05/31/13	std units	6.78	6.80	0.02
Conductivity	EPA 120.1	06/05/13	umhos/cm	384	381	0.8%
Total Suspended Solids	SM2540D	06/04/13	mg/L	< 2.1	< 2.1	NA
Chloride	EPA 300.0	05/31/13	mg/L	12.0	12.0	0.0%
N-Nitrate	EPA 300.0	05/31/13	mg-N/L	0.1	0.1	0.0%
Sulfate	EPA 300.0	05/31/13	mg/L	9.9	9.9	0.0%
Total Organic Carbon	SM5310B	05/31/13	mg/L	10.8	10.8	0.0%

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

WR99 : 00087

LAB CONTROL RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: QC
Reported: 06/21/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH SM4500H	ICVL	05/31/13	std units	7.00	7.00	0.00
Total Suspended Solids SM2540D	ICVL	06/04/13	mg/L	49.4	50.0	98.8%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: QV
Reported: 06/21/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Conductivity	EPA 120.1	06/05/13	umhos/cm	< 1.00 U	
Total Suspended Solids	SM2540D	06/04/13	mg/L	< 1.0 U	
Chloride	EPA 300.0	05/31/13	mg/L	< 0.1 U	
N-Nitrate	EPA 300.0	05/31/13	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	05/31/13	mg/L	< 0.1 U	
Total Organic Carbon	SM5310B	05/31/13	mg/L	< 1.50 U	
Dissolved Organic Carbon	SM5310B	05/31/13	mg/L	< 1.50 U	
		05/31/13		< 1.50 U	FB
		05/31/13		< 1.50 U	FB

FB Filtration Blank

STANDARD REFERENCE RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MB
Reported: 06/21/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Alkalinity ERA #P114506	SM 2320	06/10/13	mg/L CaCO3	42.3	41.9	101.0%
Conductivity Ricca #4110724	EPA 120.1	06/05/13	umhos/cm	990	1,000	99.0%
Chloride ERA 210312	EPA 300.0	05/31/13	mg/L	3.0	3.0	100.0%
N-Nitrate EAR 230511	EPA 300.0	05/31/13	mg-N/L	2.9	3.0	96.7%
Sulfate ERA 240312	EPA 300.0	05/31/13	mg/L	3.0	3.0	100.0%
Total Organic Carbon ERA 0409-12-01	SM5310B	05/31/13	mg/L	20.3	20.0	101.5%
Dissolved Organic Carbon ERA 0409-12-01	SM5310B	05/31/13	mg/L	20.3	20.0	101.5%

SAMPLE RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Client ID: KC-VT-1593-20130530-S
ARI ID: 13-11544 WR99D

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/03/13 060313#1	SM2540B	Percent	0.01	72.42
Total Organic Carbon	06/11/13 061113#1	Plumb,1981	Percent	0.020	3.24

RL Analytical reporting limit
U Undetected at reported detection limit

WR99 : 00291

SAMPLE RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Client ID: KC-CB-01-20130530-S
ARI ID: 13-11545 WR99E

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/03/13 060313#1	SM2540B	Percent	0.01	70.55
Total Organic Carbon	06/11/13 061113#1	Plumb,1981	Percent	0.020	3.17

RL Analytical reporting limit
U Undetected at reported detection limit

WR99 : 00392

SAMPLE RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Client ID: KC-DD-2009-20130530-S
ARI ID: 13-11546 WR99F

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/03/13 060313#1	SM2540B	Percent	0.01	60.91
Total Organic Carbon	06/11/13 061113#1	Plumb,1981	Percent	0.020	6.00

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WR99D Client ID: KC-VT-1593-20130530-S						
Total Organic Carbon	06/11/13	Percent	3.24	5.14	2.34	81.1%

WR99 00394

REPLICATE RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: JB
Reported: 06/14/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/30/13
Date Received: 05/31/13

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WR99D Client ID: KC-VT-1593-20130530-S					
Total Solids	06/03/13	Percent	72.42	71.98 72.90	0.6%
Total Organic Carbon	06/11/13	Percent	3.24	2.13 2.37	22.6%

LAB CONTROL RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon Plumb,1981	ICVL	06/11/13	Percent	0.106	0.100	106.0%

WR99 : 00296

METHOD BLANK RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: JW
Reported: 06/14/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank	QC ID
Total Solids	06/03/13	Percent	< 0.01 U	ICB
Total Organic Carbon	06/11/13	Percent	< 0.020 U	ICB

STANDARD REFERENCE RESULTS-CONVENTIONALS
WR99-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	06/11/13	Percent	2.73	2.99	91.3%

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: WR99, WS01

SAIC
NPDES Sampling Support
209977

Modified PSEP - Sieve/Sedigraph Method
Apparent Grain Size Distribution Summary
Percent Finer Than Indicated Size

Sample No.	Gravel			Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt				Clay	
Phi Size	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Sieve Size (microns)	3/8"	#4 (4750)	#10 (2000)	#18 (1000)	#35 (500)	#60 (250)	#120 (125)	#230 (63)	31.00	15.60	7.80	3.90	2.00	1.00
CL-MH-SPS-20130605-S	100.0	100.0	98.9	95.2	85 5	67.5	54.7	43.8	42.2	9.1	5.9	4.1	3.3	2.6
	100.0	100.0	98.7	95.8	86.8	70.7	57.8	47.3	45.8	13.2	6.4	5.1	4.4	1.7
	100.0	100.0	99.3	96.7	87.9	72.2	60.0	49.6	48.3	14.2	7.3	5.3	4.6	3.7
KC-VT-1593-20130530-S	100.0	90.7	85.9	76.2	39.6	6.6	1.8	1.0	0.9	0.7	0.5	0.4	0.3	0.2
KC-CB-01-20130530-S	100.0	95.3	87.4	75.0	51.4	21.0	10.3	6.5	5.4	3.7	2.7	1.6	0.9	0.6
KC-DD-2009-20130530-S	100.0	100.0	95.7	89.4	76.5	58.1	45.4	38.9	35.9	27.3	19.7	12.1	6.9	3.2

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WR99

SAIC
NPDES Sampling Support
209977

Modified PSEP - Sieve/Sedigraph Method
Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	< -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	> 10	> 4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62 5-31 0	31 0-15 6	15 6-7 8	7 8-3 9	3 9-2 0	2 0-1 0	<1 0	<230 (<62)
CL-MH-SPS-20130605-S	1.1	3.7	9.7	18.0	12.8	10.9	1.6	33.1	3.2	1.8	0.8	0.7	2.6	43.8
	1.3	2.9	8.9	16.1	12.9	10.5	1.5	32.6	6.8	1.3	0.7	2.7	1.7	47.3
	0.7	2.6	8.7	15.7	12.2	10.4	1.3	34.1	6.9	2.0	0.7	0.9	3.7	49.6
KC-VT-1593-20130530-S	14.1	9.7	36.6	32.9	4.9	0.8	0.1	0.2	0.2	0.1	0.1	0.1	0.2	1.0
KC-CB-01-20130530-S	12.6	12.4	23.5	30.5	10 7	3.8	1.1	1.7	1.0	1.1	0.7	0.3	0.6	6.5
KC-DD-2009-20130530-S	4.3	6.3	12.9	18.4	12.7	6.6	3.0	8.6	7.6	7.6	5.2	3.7	3.2	38.9

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WR99

QA SUMMARY

Client	SAIC	Client Project	NPDES Sampling Support
ARI Trip Sample ID.	WS91A	Client Project No	209977
Client Trip Sample ID·	CL-MH-SPS-20130605-S	Batch No	WR99-1

Relative Standard Deviation, By Phi Size

Sample ID	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
CL-MH-SPS-20130605-S	100 0	100 0	98.9	95 2	85 5	67 5	54 7	43.8	42.2	9.1	5.9	4 1	3.3	2.6
	100.0	100 0	98 7	95 8	86.8	70 7	57 8	47.3	45 8	13.2	6 4	5 1	4 4	1 7
	100 0	100 0	99.3	96 7	87 9	72 2	60 0	49 6	48 3	14 2	7.3	5.3	4 6	3 7
AVE	100 0	100 0	98 9	95.9	86 7	70 1	57 5	46 9	45 4	12.2	6.5	4.8	4 1	2 7
STDEV	0.0	0.0	0.3	0.7	1.2	2 4	2 7	2 9	3 1	2 7	0.7	0.6	0 7	1.0
%RSD	0.0	0.0	0 3	0.8	1.4	3.4	4 6	6.2	6.7	22.2	10.9	13 3	17.1	37.6

The Triplicate Applies To The Following Samples

Client ID	Date Sampled	Date Extracted	Date Complete	Data Qualifier	Sedigraph Fine Portion Dry Mass (g)
CL-MH-SPS-20130605-S	6/5/2013	6/10/2013	6/18/2013		4.4
	6/5/2013	6/10/2013	6/18/2013		4.8
	6/5/2013	6/10/2013	6/18/2013		5.0
KC-VT-1593-20130530-S	5/30/2013	6/10/2013	6/18/2013		1.1
KC-CB-01-20130530-S	5/30/2013	6/10/2013	6/18/2013		3.8
KC-DD-2009-20130530-S	5/30/2013	6/10/2013	6/18/2013		5.9

* ARI Internal QA limits = 95-105%

Notes to the Testing.

1 Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution See narrative for discussion of the testing.

Total Solids

ARI Job ID: WR99, WS01

Solids Data Entry Report Checked by: CB Date: 6/10/13
Date: 06/10/13 Data Analyst: DM

Solids Determination performed on 06/06/13 by CB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
WR99	D	KC-VT-1593-20130530	1.012	10.508	7.813	71.62
WR99	E	KC-CB-01-20130530-S	0.981	10.537	7.795	71.31
WR99	F	KC-DD-2009-20130530	0.959	10.027	6.622	62.45

WR99 : 06H04

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 67 **Balance ID:** CB 6/6/13 0684 068755

Samples in Oven: Date: 06-06-13 Time: 0845 Temp: 104°C Analyst: CB

Removed from Oven: Date: 06-10-13 Time: 1015 Temp: 100°C Analyst: CB

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
WS27 A	1.000	10.247	9.277	—	√
WS21 A	0.989	10.419	7.829	—	√
WA99 0	1.012	10.508	7.813	—	√
" E	0.981	10.537	7.795	—	√
" F	0.959	10.027	6.622	—	√
		CB			
		6-06-13			

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

Extractions Total Solids-extts
Data By: Yen Luu
Created: 5/31/13

Worklist: 8099
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WR99D 13-11544 KC-VT-1593-20130530-S	1.18	13.00	10.41	78.1	NR
2.	WR99E 13-11545 KC-CB-01-20130530-S	1.18	12.08	9.70	78.2	NR
3.	WR99F 13-11546 KC-DD-2009-20130530-S	1.18	12.58	8.24	61.9	NR

Extractions Total Solids-extts
Data By: Yen Luu
Created: 5/31/13

Worklist: 8099
Analyst: YL
Comments:

Oven ID: Ø15

Balance ID: B1464261C

Samples In: Date: 05/31/13 Time: 17:55 Temp: 104 Analyst: YL

Samples Out: Date: 06/01/13 Time: 08:50 Temp: 100° Analyst: RR

06/01/13 RR

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WR99D 13-11544 KC-VT-1393-20130530-S	1.18	13.00	10.41		NR
2.	WR99E 13-11545 KC-CB-01-20130530-S	1.18	12.08	9.70		NR
3.	WR99F 13-11546 KC-DD-2009-20130530-S	1.18	12.53	8.24		NR

Volatile Raw Data
Preparation Log

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.	Client ID	Prep/Extraction Date	MeOH Lot No.	Analyst
WR99		6/4/17		D

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Split Volume (µL)	
1	WR99 C	1									
2	D	2	—		W795-4	42.82	34.59	8.23			
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:						

Volatile Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Curve Date(s): 5/24/16 Internal Standard ID MW774-2 Expiration 5/26/16

BFB Tune Meets Criteria?	YES / NO	ICV Exceeding ±20%?	YES / NO
~~ICal Meets %RSD & r^2 Criteria?~~	~~YES / NO~~	~~ICV Exceeding ±30%?~~	~~YES / NO~~
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated?	YES / NO	Calibration Points Dropped?	YES / NO
Minimum Response Factors Met	YES / NO	Purge Volume (mL)	5

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
water	BQ0614	6/30/16	acetone	MW794-1	12/31/16
water	MW794-1	12/31/16	SIGMA	MW797-1	6/30/16
chlorobenzene	MW793-1	12/31/16	water	150201	7/31/16
water	BQ0614	6/30/16			

Detail problems, corrective actions and/or other pertinent information below:

ICV - DCDFM 133%R, DC 121%R, acetone 69%R, DCM 125%R
from 1:2 DLE 124%R, IPA 45%L, from 1:4 dilution 75%R

Analyst: _____ **Date:** 6/10/16

Reviewer: _____ **Date:** _____

WRG : 004112

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 5/24/13 Analysis: 5ms Analyst: LD

GC Program: 624A Column No: 93855V Column Type: MXY

Instrument Tune (.U or .CT.): PATCH00 EM Voltage: 1444

Inj. Vol: 5 Calibration File: b130524 Curve Date: 5/24/13

IS/SS	Ical/Ccal	LCS/ICV
ms774-v	B000357	~~B000357~~ ms794-v
		ms797-)
		Isn1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/24MAY13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF						
1	0656	bfb0524.d	BFB0524	BFB0524			1						
2	1106	0010524.d	IC0524	VSTD1			1	4.67	446017	5 12	1371645	7.61	1554099	9.68	827039
3	0818	2000524.d	IC0524	VSTD200			1	4.66	471363	5.11	1455341	7.61	1604074	9 69	844016
4	0842	1500524.d	IC0524	VSTD150			1	4.66	473697	5 11	1449833	7.61	1585589	9 69	808326
5	0906	1000524 d	IC0524	VSTD100			1	4.67	456837	5 12	1403019	7.61	1562110	9.68	823874
6	0930	0500524.d	IC0524	VSTD50			1	4.67	470814	5.12	1445861	7.61	1620542	9.68	872028
7	0954	0100524.d	IC0524	VSTD10			1	4.66	462910	5 11	1417886	7.60	1584356	9.68	826523
8	1018	0050524.d	IC0524	VSTD5			1	4 66	450337	5.11	1381380	7.60	1550980	9.68	819317
9	1042	0020524.d	IC0524	VSTD2			1	4.67	426041	5.12	1321945	7 61	1495855	9.68	803637
10	1146	icv0524.d	ICV0524	ICV0524			1	4.66	436823	5.11	1350934	7 61	1490058	9.68	805888

LD 5/25/13

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Data File: /chem1/nt5.i/24MAY13.b/bfb0524.d

Date : 24-MAY-2013 06:56

Client ID: BFB0524

Instrument: nt5.i

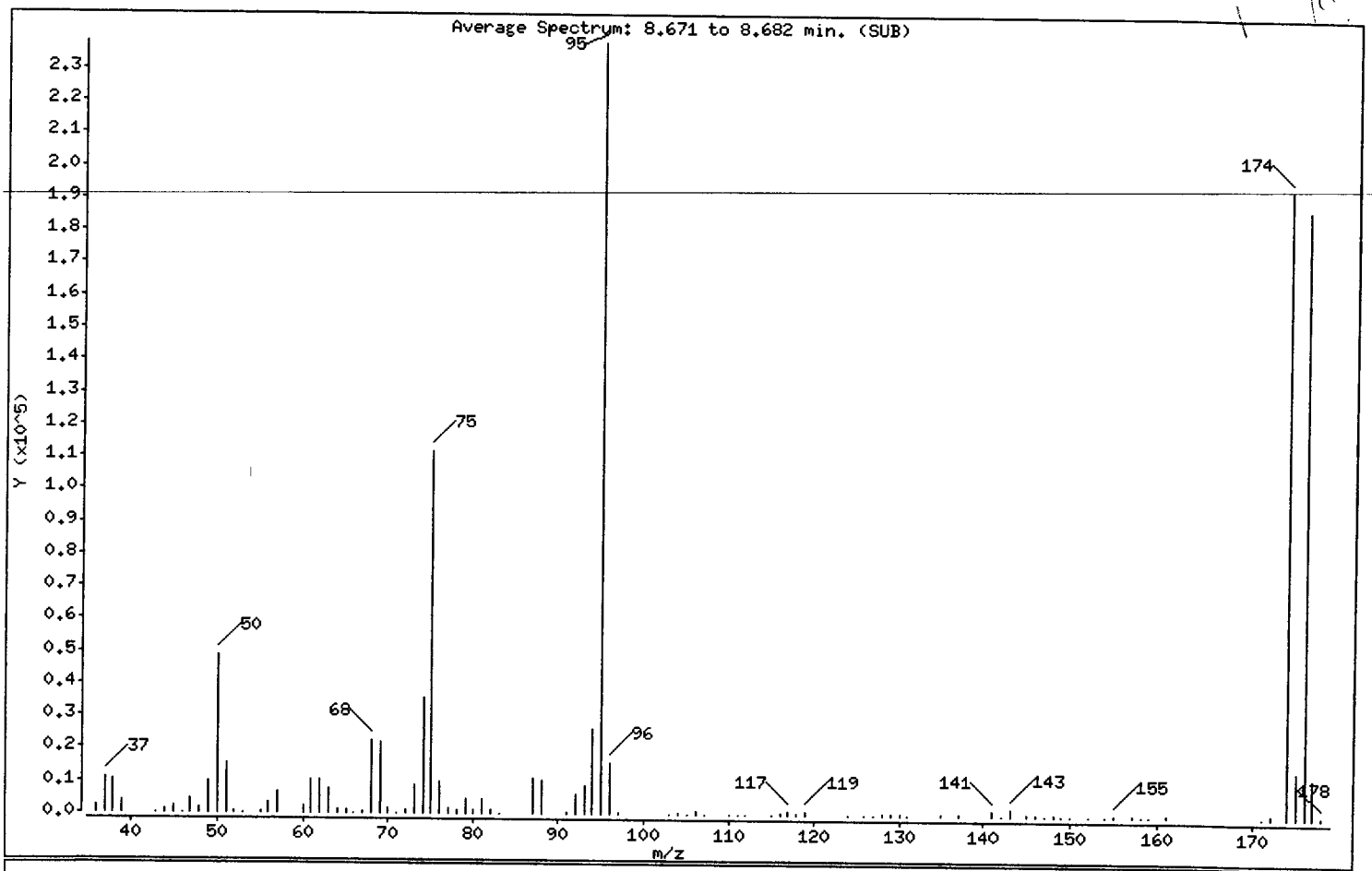
Sample Info: BFB0524,BFB0524,,1,24MAY13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	20.37
75	30.00 - 66.00% of mass 95	46.87
96	5.00 - 9.00% of mass 95	6.69
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	81.49
175	4.00 - 9.00% of mass 174	6.06 (7.44)
176	95.00 - 101.00% of mass 174	78.83 (96.74)
177	5.00 - 9.00% of mass 176	5.08 (6.45)

Data File: /chem1/nt5.i/24MAY13.b/bfb0524.d

Date : 24-MAY-2013 06:56

Client ID: BFB0524

Instrument: nt5.i

Sample Info: BFB0524,BFB0524,,1,24MAY13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0524.d

Spectrum: Average Spectrum: 8.671 to 8.682 min. (SUB)

Location of Maximum: 95.00

Number of points: 106

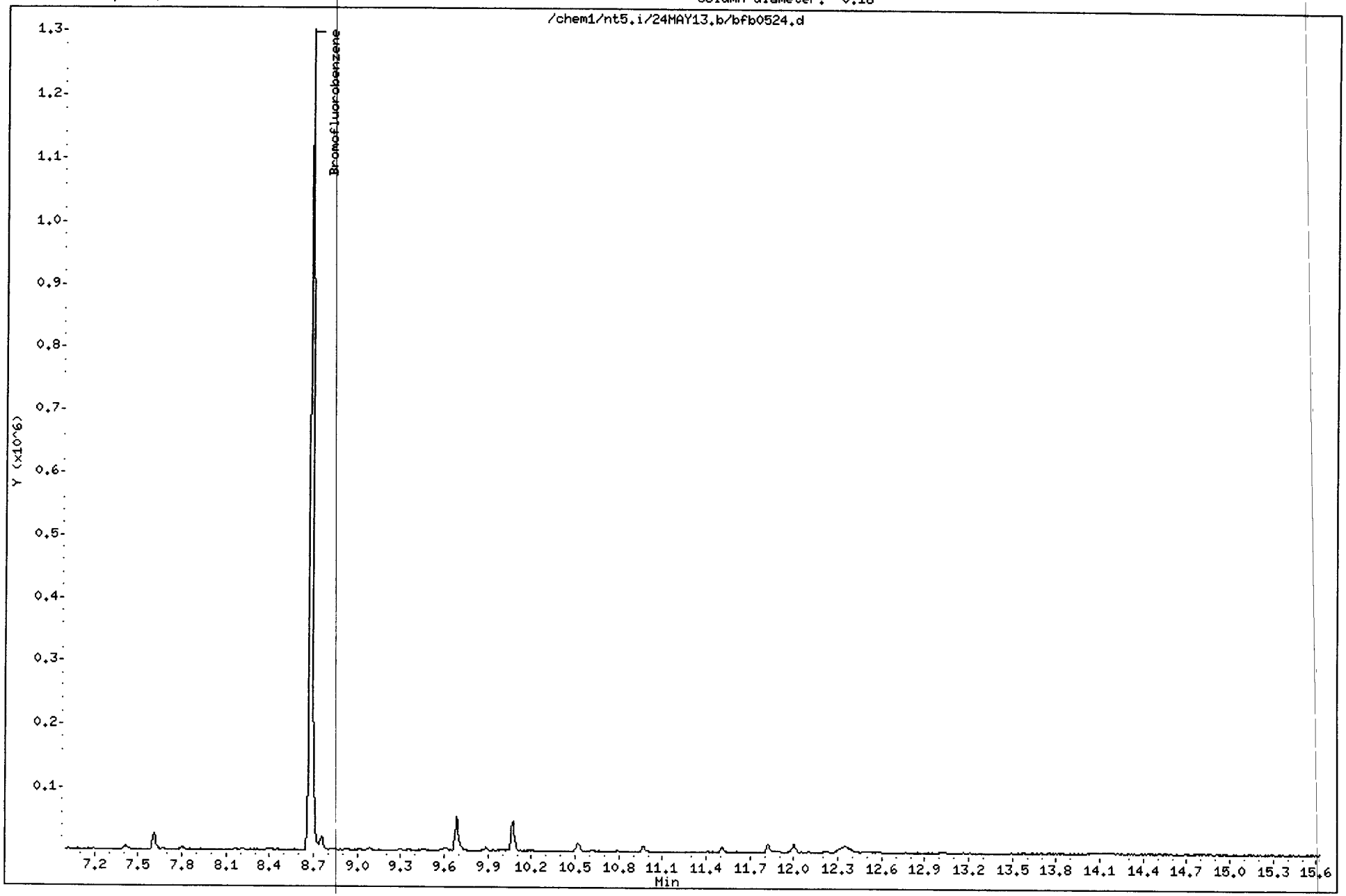
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2053	67.00	332	103.00	47	142.00	251
37.00	11080	68.00	22336	104.00	801	143.00	2202
38.00	10313	69.00	21808	105.00	251	144.00	116
39.00	4069	70.00	1643	106.00	850	145.00	354
40.00	76	71.00	40	107.00	253	146.00	362
43.00	123	72.00	948	110.00	44	147.00	146
44.00	1133	73.00	8984	111.00	189	148.00	595
45.00	2094	74.00	35688	112.00	103	149.00	213
46.00	228	75.00	111648	113.00	166	150.00	188
47.00	4364	76.00	9754	115.00	131	152.00	49
48.00	1431	77.00	1453	116.00	543	153.00	182
49.00	9707	78.00	952	117.00	1146	154.00	101
50.00	48512	79.00	4131	118.00	680	155.00	644
51.00	15114	80.00	1104	119.00	831	157.00	381
52.00	727	81.00	4388	120.00	36	158.00	40
53.00	55	82.00	932	124.00	116	159.00	242
55.00	805	83.00	142	126.00	95	161.00	290
56.00	3197	86.00	247	127.00	47	170.00	161
57.00	6305	87.00	10830	128.00	744	171.00	132
58.00	260	88.00	10136	129.00	318	172.00	1240
60.00	2031	91.00	656	130.00	718	174.00	194048
61.00	10582	92.00	6138	131.00	248	175.00	14434
62.00	10305	93.00	8999	135.00	316	176.00	187712
63.00	7723	94.00	26272	137.00	325	177.00	12104
64.00	931	95.00	238144	139.00	39	178.00	328
65.00	841	96.00	15945	140.00	157		
66.00	131	97.00	545	141.00	1822		

Data File: /chem1/nt5.i/24MAY13.b/bfb0524.d
Date : 24-MAY-2013 06:56
Client ID: BFB0524
Sample Info: BFB0524,BFB0524,,1,24MAY13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt5.i/24MAY13.b/0010524.d
Level 2: /chem1/nt5.i/24MAY13.b/0020524.d
Level 3: /chem1/nt5.i/24MAY13.b/0050524.d
Level 4: /chem1/nt5.i/24MAY13.b/0100524.d
Level 5: /chem1/nt5.i/24MAY13.b/0500524.d
Level 6: /chem1/nt5.i/24MAY13.b/1000524.d
Level 7: /chem1/nt5.i/24MAY13.b/1500524.d
Level 8: /chem1/nt5.i/24MAY13.b/2000524.d

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
1 Dichlorodifluoromethane	0.76398	0.71413	0.72865	0.73455	0.65246	0.74271		
	0.95124	0.76484					0.75657	11.405
2 Chloromethane	1.28571	1.46864	1.49981	1.59217	1.27963	1.54865		
	1.53068	1.53962					1.46811	8.170
3 Vinyl Chloride	1.21217	1.31566	1.28093	1.30978	1.14889	1.51521		
	1.58830	1.55157					1.36531	12.062
4 Bromomethane	0.74975	0.81559	0.74602	0.74561	0.63700	0.69436		
	0.66659	0.64371					0.71233	8.735
5 Chloroethane	0.74302	0.79147	0.77835	0.79616	0.69412	0.75470		
	0.68300	0.61267					0.73169	8.723
6 Trichlorofluoromethane	1.28437	1.41923	1.45535	1.54959	1.20315	1.46219		
	1.46573	1.47849					1.41476	8.039

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
7 1,1-Dichloroethene	0.77632	0.81019	0.85205	0.74994	0.63762	0.77144		
	0.81578	0.97972					0.79913	12.115
8 Carbon Disulfide	2.53118	2.59107	2.82109	2.42649	2.11165	2.50521		
	2.62019	3.04177					2.58108	10.600
9 112Trichloro122Trifluoroethan	0.69896	0.75732	0.75119	0.66743	0.55260	0.67019		
	0.73043	0.92035					0.71856	14.531
10 Iodomethane	0.54875	0.61361	0.53400	0.49534	0.49409	0.71341		
	0.75978	+++++					0.59414	17.851
11 Bromoethane	0.55458	0.63891	0.48495	0.45420	0.38896	0.45000		
	0.45460	0.56133					0.49844	16.127
12 Acrolein	+++++	+++++	0.16525	0.11075	0.15257	0.11855		
	0.12449	+++++					0.13432	17.423
13 Methylene Chloride	+++++	+++++	0.86795	0.59504	0.87002	0.58646		
	0.58800	0.69294					0.70007	19.546
14 Acetone	0.38860	0.40393	0.35089	0.41276	0.33671	0.27411		
	+++++	+++++					0.36116	14.401
15 Trans-1,2-Dichloroethene	0.95635	1.04849	1.00907	1.15178	0.89489	0.69869		
	0.66831	0.77701					0.90058	19.227

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
16 Methyl tert butyl ether	2.71806	3.06936	3.16701	3.33712	2.91593	3.22318			
	1.75105	+++++					2.88310	18.716	
17 1,1-Dichloroethane	1.83793	2.17379	2.18803	2.37603	1.87755	2.21543			
	2.17790	+++++					2.12095	9.107	
18 Acrylonitrile	0.44606	0.51844	0.51433	0.52800	0.47755	0.51143			
	0.49047	+++++					0.49804	5.760	
19 Vinyl Acetate	2.41370	2.70385	2.76857	2.95239	2.60303	2.82427			
	2.69184	2.57261					2.69128	6.136	
20 Cis-1,2-Dichloroethene	1.01072	1.12419	1.13486	1.20010	0.97178	1.14647			
	1.13515	1.14601					1.10866	6.915	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
22 2,2-Dichloropropane	1.38638	1.64773	1.64925	1.76220	1.35544	1.64759			
	1.66034	1.67486					1.59797	9.097	
23 Bromochloromethane	0.43081	0.48493	0.49696	0.50415	0.43239	0.49635			
	0.49340	0.49700					0.47950	6.264	
24 Chloroform	1.62191	1.82095	1.78968	1.93696	1.60112	1.87237			
	1.85286	1.85943					1.79441	6.723	

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
25 Carbon Tetrachloride	0.40266	0.44105	0.45847	0.48793	0.38564	0.47145			
	0.47887	0.48231					0.45105	8.506	
26 1,1,1-Trichloroethane	1.45196	1.58641	1.65980	1.78843	1.39670	1.70511			
	1.70739	1.72080					1.62707	8.498	
28 1,1-Dichloropropene	0.42941	0.49299	0.51897	0.59215	0.43309	0.52790			
	0.53696	0.53985					0.50891	10.879	
29 2-Butanone	0.11914	0.13421	0.13442	0.13936	0.13358	0.14161			
	0.13537	0.13167					0.13367	5.011	
30 Benzene	1.30322	1.48607	1.55925	1.73784	1.31333	1.52521			
	1.45694	1.37848					1.47004	9.754	
33 1,2-Dichloroethane	0.42001	0.47757	0.49081	0.50320	0.42990	0.48254			
	0.47062	0.46503					0.46746	6.174	
34 Trichloroethene	0.32038	0.36151	0.37164	0.39365	0.30879	0.37020			
	0.37690	0.37975					0.36035	8.286	
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
37 Dibromomethane	0.18930	0.19492	0.20367	0.21143	0.18117	0.20595			
	0.20244	0.20142					0.19879	4.924	

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
38 1,2-Dichloropropane	0.36310	0.40968	0.42670	0.44696	0.36809	0.43635		
	0.43052	0.42828					0.41371	7.611
39 Bromodichloromethane	0.40798	0.44436	0.46135	0.48098	0.40785	0.47425		
	0.46642	0.46617					0.45117	6.364
40 2-Chloroethyl Vinyl Ether	0.17162	0.18853	0.20988	0.23947	0.22589	0.25557		
	0.25049	0.24473					0.22327	13.719
41 Cis 1,3-dichloropropene	0.47261	0.54779	0.58845	0.63707	0.54033	0.62112		
	0.61024	0.59999					0.57720	9.356
43 Toluene	0.89655	0.93761	0.96779	1.04052	0.82282	0.95863		
	0.93390	0.90176					0.93245	6.770
44 Tetrachloroethene	0.28988	0.33879	0.34349	0.38340	0.28664	0.34742		
	0.36034	0.36348					0.33918	10.135
45 4-Methyl-2-Pentanone	0.13727	0.16396	0.17473	0.18473	0.17527	0.18304		
	0.17224	0.16343					0.16933	8.899
46 Trans 1,3-Dichloropropene	0.43685	0.50116	0.54476	0.57229	0.49509	0.55958		
	0.54740	0.53783					0.52437	8.443
47 1,1,2-Trichloroethane	0.25593	0.30296	0.30221	0.31872	0.27659	0.30994		
	0.30448	0.30110					0.29649	6.836

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/VO121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
48 Chlorodibromomethane	0.26215	0.27371	0.29487	0.31539	0.27282	0.31176		
	0.31178	0.30807					0.29382	7.234
49 1,3-Dichloropropane	0.43440	0.46774	0.49430	0.52845	0.45378	0.51214		
	0.50858	0.49477					0.48677	6.575
50 1,2-Dibromoethane	0.25185	0.27325	0.29201	0.30787	0.27078	0.30350		
	0.29677	0.29286					0.28611	6.663
51 2-Hexanone	0.20716	0.24441	0.26484	0.28257	0.26477	0.26982		
	0.26148	0.25098					0.25575	8.900
53 Chlorobenzene	0.77054	0.86700	0.90595	0.94988	0.75124	0.85850		
	0.84962	0.81658					0.84616	7.805
54 Ethyl Benzene	1.28065	1.46055	1.56457	1.70845	1.33777	1.50403		
	1.42314	1.31035					1.44869	9.916
55 1,1,1,2-Tetrachloroethane	0.26835	0.29486	0.30157	0.31850	0.26672	0.31216		
	0.31370	0.30984					0.29822	6.810
56 m,p-xylene	0.44873	0.53475	0.58804	0.63413	0.50526	0.57357		
	0.55282	0.51902					0.54454	10.365
57 o-Xylene	0.38614	0.47119	0.52007	0.60178	0.48655	0.57555		
	0.57688	0.56674					0.52311	13.811

Analytical Resources, Inc.

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/VO121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	150.000 Level 7	200.000 Level 8	RRF	% RSD	
58 Styrene	0.68075	0.81816	0.92850	1.02427	0.83931	0.96495	0.93500	0.89059	0.88519	11.962	
59 Bromoform	0.33904	0.37763	0.40140	0.41932	0.37316	0.42172	0.42696	0.40277	0.39525	7.613	
60 Isopropyl Benzene	1.95982	2.32823	2.67640	3.01624	2.30547	2.68740	2.63603	2.34284	2.49405	12.991	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
63 Bromobenzene	0.60209	0.65073	0.70034	0.74302	0.58255	0.68126	0.70297	0.67500	0.66724	8.023	
64 N-Propyl Benzene	2.65761	3.02058	3.32402	3.67860	2.72779	3.11017	3.00610	2.65452	3.02242	11.763	
65 1,1,2,2-Tetrachloroethane	0.57440	0.64641	0.68044	0.70611	0.62403	0.68775	0.69823	0.65707	0.65930	6.682	
66 2-Chloro Toluene	1.61316	1.77045	1.96715	2.14869	1.67611	1.95896	1.98433	1.82746	1.86829	9.561	
67 1,3,5-Trimethyl Benzene	1.61988	2.00395	2.24467	2.52421	1.94475	2.26995	2.27384	2.06693	2.11852	12.892	

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
68 1,2,3-Trichloropropane	0.18216	0.19577	0.20552	0.21709	0.19219	0.20994		
	0.21114	0.19813					0.20149	5.716
69 Trans-1,4-Dichloro 2-Butene	0.24322	0.25070	0.25458	0.27356	0.23266	0.25834		
	0.27027	0.23715					0.25256	5.827
70 4-Chloro Toluene	1.64895	1.88316	2.06730	2.28381	1.75143	2.04081		
	2.05779	1.93402					1.95841	10.199
71 T-Butyl Benzene	1.39619	1.74653	1.98144	2.19935	1.70420	2.01809		
	2.03665	1.86665					1.86864	13.384
72 1,2,4-Trimethylbenzene	1.58541	1.94177	2.21328	2.49141	1.93028	2.24160		
	2.22499	2.02578					2.08182	13.133
73 S-Butyl Benzene	2.22493	2.71637	3.01538	3.32610	2.51112	2.88551		
	2.80065	2.48726					2.74591	12.510
74 4-Isopropyl Toluene	1.67471	2.06399	2.38090	2.69963	2.06786	2.40405		
	2.36566	2.14227					2.22488	13.819
75 1,3-Dichlorobenzene	1.12220	1.24201	1.30533	1.40596	1.08778	1.25640		
	1.26897	1.19366					1.23529	8.207
77 1,4-Dichlorobenzene	1.23948	1.31291	1.35941	1.45935	1.11036	1.28317		
	1.30209	1.24906					1.28948	7.794

Analytical Resources, Inc.

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Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	150.000 Level 7	200.000 Level 8	RRF	% RSD
78 N-Butyl Benzene	1.55815	1.97266	2.20834	2.53701	1.93532	2.29057	2.28954	2.11135	2.11287	13.980
80 1,2-Dichlorobenzene	1.12298	1.22089	1.26610	1.34393	1.05281	1.19319	1.20338	1.16289	1.19577	7.373
81 1,2-Dibromo 3-Chloropropane	0.10798	0.13501	0.12923	0.13506	0.12602	0.13045	0.13474	0.12757	0.12826	6.951
82 Hexachloro 1,3-Butadiene	0.45621	0.51656	0.55461	0.59272	0.45206	0.52881	0.55582	0.56050	0.52716	9.559
83 1,2,4-Trichlorobenzene	0.70214	0.78633	0.84024	0.93944	0.76231	0.88555	0.93456	0.94674	0.84966	10.848
84 Naphthalene	1.66546	1.72733	1.83747	2.06478	1.88728	2.03329	2.02626	1.88234	1.89053	7.726
85 1,2,3-Trichlorobenzene	0.70172	0.77373	0.82236	0.87547	0.74078	0.82967	0.86892	0.87126	0.81049	8.061
$ 27 Dibromofluoromethane	1.12920	1.14235	1.13168	1.11695	1.12299	1.12479	1.12091	1.12186	1.12634	0.707
$ 32 d4-1,2-Dichloroethane	1.13811	1.15969	1.14200	1.12238	1.11455	1.11202	1.11226	1.09402	1.12438	1.862

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/VO121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

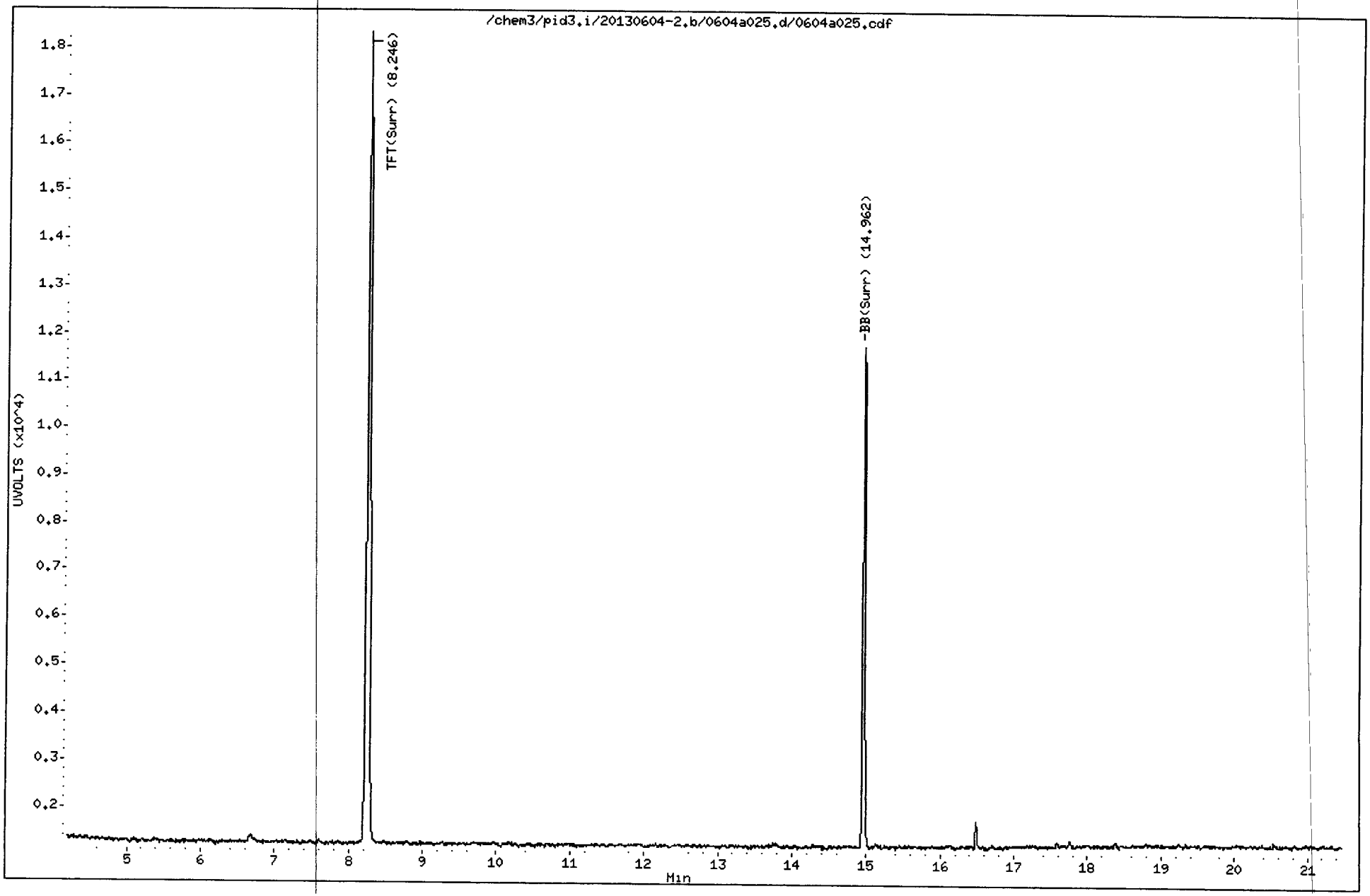
Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
$ 42 d8-Toluene	1.42382	1.43839	1.41990	1.40966	1.40990	1.40804		
	1.40692	1.39537					1.41400	0.924
$ 62 4-Bromofluorobenzene	0.53107	0.53545	0.53537	0.53088	0.53155	0.53183		
	0.52648	0.52290					0.53069	0.797
$ 79 d4-1,2-Dichlorobenzene	0.99295	0.99353	0.99460	0.99693	0.98358	0.97423		
	0.97921	0.97779					0.98660	0.901

Data File: /chem3/pid3.i/20130604-2.b/0604a025.d
Date : 04-JUN-2013 21:10
Client ID: INF-060313
Sample Info: WS43A

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: PC
Column diameter: 0.18



MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/24MAY13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 24-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0656	bfb0524.d	BFB0524	BFB0524	1	NO MANUAL INTEGRATION
1106	0010524.d	IC0524	VSTD1	1	Chloromethane, Acetone, Acrylonitrile, 1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene,
0818	2000524.d	IC0524	VSTD200	1	Chloromethane, 2-Butanone,
0842	1500524.d	IC0524	VSTD150	1	Chloromethane,
0906	1000524.d	IC0524	VSTD100	1	Chloromethane,
0930	0500524.d	IC0524	VSTD50	1	Chloromethane,
0954	0100524.d	IC0524	VSTD10	1	Chloromethane,
1018	0050524.d	IC0524	VSTD5	1	Chloromethane,
1042	0020524.d	IC0524	VSTD2	1	Chloromethane, 1,2,3-Trichloropropane,
1146	icv0524.d	ICV0524	ICV0524	1	Chloromethane, Chloroethane,

Report Date : 11-Jun-2013 15:28

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Batch File: /chem1/nt5.i/24MAY13.b
Inst ID: nt5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	2000524	1500524	1000524	0500524	0100524	0050524	0020524	0010524
INJ.DATE:	24-MAY-2013	24-MAY-2013	24-MAY-2013	24-MAY-2013	24-MAY-2013	24-MAY-2013	24-MAY-2013	24-MAY-2013
INJ.TIME:	08:18	08:42	09:06	09:30	09:54	10:18	10:42	11:06

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Dichlorodifluoromethan	1.023	1.012	1.023	1.017	1.006	1.000	1.023	1.017	1.017	0.924-1.110	1.015	0.009
2 Chloromethane	1.272	1.272	1.283	1.277	1.249	1.266	1.283	1.255	1.277	1.184-1.371	1.270	0.012
3 Vinyl Chloride	1.193	1.187	1.193	1.187	1.175	1.170	1.192	1.187	1.187	1.094-1.280	1.185	0.008
4 Bromomethane	1.402	1.396	1.402	1.396	1.385	1.385	1.402	1.396	1.396	1.303-1.490	1.395	0.007
5 Chloroethane	1.492	1.481	1.487	1.487	1.475	1.475	1.492	1.492	1.487	1.393-1.580	1.485	0.007
6 Trichlorofluoromethane	1.583	1.577	1.583	1.583	1.566	1.566	1.588	1.583	1.583	1.490-1.676	1.579	0.008
7 1,1-Dichloroethene	1.951	1.939	1.945	1.945	1.928	1.928	1.950	1.939	1.945	1.852-2.038	1.941	0.009
8 Carbon Disulfide	1.951	1.939	1.945	1.945	1.928	1.933	1.950	1.951	1.945	1.852-2.038	1.943	0.009
9 112Trichloro122Trifluo	1.996	1.985	1.990	1.985	1.967	1.973	1.990	1.990	1.985	1.891-2.078	1.984	0.010
10 Iodomethane	2.052	2.041	2.047	2.041	2.024	2.030	2.047	2.047	2.041	1.948-2.134	2.041	0.010
11 Bromoethane	2.149	2.137	2.143	2.137	2.120	2.131	2.154	2.149	2.137	2.044-2.231	2.140	0.011
12 Acrolein	2.262	2.245	2.245	2.245	2.228	2.233	2.250	2.245	2.245	2.151-2.338	2.244	0.010
13 Methylene Chloride	2.426	2.409	2.414	2.420	2.397	2.409	2.431	2.426	2.420	2.327-2.513	2.417	0.011
14 Acetone	2.629	2.578	2.590	2.567	2.561	2.567	2.544	2.550	2.567	2.474-2.660	2.573	0.027
15 Trans-1,2-Dichloroethe	2.562	2.545	2.550	2.562	2.533	2.544	2.573	2.567	2.562	2.468-2.655	2.554	0.013
16 Methyl tert butyl ethe	2.731	2.737	2.754	2.743	2.748	2.725	2.742	2.737	2.743	2.649-2.836	2.740	0.009
17 1,1-Dichloroethane	3.167	3.161	3.178	3.184	3.161	3.167	3.195	3.184	3.184	3.090-3.277	3.175	0.012

Reviewer 1 _____ Date: 6/11/13
Reviewer 2 _____ Date: _____

SDG 13625 - CCAL

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Batch File: /chem1/nt5.i/24MAY13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 Acrylonitrile	3.303	3.297	3.303	3.286	3.280	3.285	3.280	3.286	3.286	3.192-3.379	3.290	0.009
	19 Vinyl Acetate	3.523	3.523	3.529	3.523	3.517	3.512	3.523	3.523	3.523	3.430-3.616	3.522	0.005
	20 Cis-1,2-Dichloroethene	3.721	3.721	3.732	3.732	3.721	3.721	3.738	3.727	3.732	3.639-3.826	3.727	0.007
	21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.560	4.467-4.653	+++++	+++++
	22 2,2-Dichloropropane	3.812	3.817	3.829	3.829	3.817	3.817	3.840	3.829	3.829	3.735-3.922	3.824	0.009
	23 Bromochloromethane	3.908	3.908	3.919	3.919	3.902	3.908	3.919	3.919	3.919	3.826-4.012	3.913	0.007
	24 Chloroform	4.015	4.015	4.021	4.021	4.010	4.010	4.021	4.021	4.021	3.928-4.114	4.017	0.005
	25 Carbon Tetrachloride	4.095	4.095	4.100	4.106	4.094	4.094	4.111	4.106	4.106	4.003-4.208	4.100	0.007
	26 1,1,1-Trichloroethane	4.168	4.168	4.174	4.179	4.162	4.168	4.185	4.179	4.179	4.086-4.273	4.173	0.008
$	27 Dibromofluoromethane	4.185	4.185	4.191	4.185	4.179	4.179	4.191	4.185	4.185	4.092-4.278	4.185	0.004
	28 1,1-Dichloropropene	4.287	4.287	4.298	4.298	4.287	4.292	4.304	4.304	4.298	4.196-4.401	4.295	0.007
	29 2-Butanone	4.428	4.406	4.394	4.377	4.383	4.383	4.372	4.372	4.377	4.284-4.471	4.389	0.020
	30 Benzene	4.524	4.519	4.530	4.530	4.519	4.519	4.530	4.530	4.530	4.428-4.632	4.525	0.006
*	31 Pentafluorobenzene	4.660	4.660	4.666	4.666	4.660	4.660	4.671	4.672	4.666	4.573-4.759	4.664	0.005
$	32 d4-1,2-Dichloroethane	4.655	4.655	4.660	4.660	4.654	4.654	4.660	4.660	4.660	4.567-4.754	4.657	0.003
	33 1,2-Dichloroethane	4.722	4.717	4.722	4.722	4.711	4.711	4.722	4.722	4.722	4.620-4.825	4.719	0.005
	34 Trichloroethene	5.062	5.062	5.068	5.068	5.056	5.062	5.067	5.068	5.068	4.965-5.170	5.064	0.004
*	35 1,4-Difluorobenzene	5.113	5.113	5.118	5.118	5.113	5.113	5.124	5.124	5.118	5.016-5.221	5.117	0.005
	36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.693	5.591-5.795	+++++	+++++
	37 Dibromomethane	5.424	5.418	5.424	5.424	5.418	5.418	5.424	5.424	5.424	5.321-5.526	5.422	0.003
	38 1,2-Dichloropropane	5.520	5.514	5.520	5.514	5.509	5.514	5.520	5.514	5.514	5.412-5.617	5.516	0.004
	39 Bromodichloromethane	5.594	5.594	5.594	5.594	5.588	5.588	5.593	5.594	5.594	5.491-5.696	5.592	0.003

ARI-GC5 : 16114

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Batch File: /chem1/nt5.i/24MAY13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40	2-Chloroethyl Vinyl Et	6.137	6.131	6.131	6.125	6.125	6.125	6.125	6.125	6.125	6.023-6.228	6.128	0.004
41	Cis 1,3-dichloropropen	6.142	6.142	6.142	6.142	6.137	6.137	6.142	6.142	6.142	6.040-6.245	6.141	0.003
$ 42	d8-Toluene	6.301	6.295	6.301	6.301	6.295	6.295	6.301	6.301	6.301	6.198-6.403	6.299	0.003
43	Toluene	6.346	6.340	6.340	6.340	6.335	6.335	6.340	6.340	6.340	6.238-6.443	6.340	0.004
44	Tetrachloroethene	6.657	6.657	6.657	6.657	6.651	6.651	6.657	6.657	6.657	6.505-6.809	6.656	0.003
45	4-Methyl-2-Pentanone	6.725	6.719	6.714	6.708	6.708	6.708	6.708	6.708	6.708	6.606-6.810	6.712	0.007
46	Trans 1,3-Dichloroprop	6.708	6.708	6.708	6.708	6.702	6.702	6.708	6.708	6.708	6.606-6.810	6.707	0.003
47	1,1,2-Trichloroethane	6.844	6.844	6.838	6.838	6.832	6.832	6.832	6.832	6.838	6.736-6.940	6.837	0.005
48	Chlorodibromomethane	6.980	6.974	6.974	6.974	6.968	6.968	6.974	6.974	6.974	6.822-7.126	6.973	0.004
49	1,3-Dichloropropane	7.064	7.059	7.059	7.053	7.053	7.053	7.059	7.059	7.053	6.901-7.205	7.057	0.004
50	1,2-Dibromoethane	7.155	7.155	7.155	7.149	7.149	7.143	7.149	7.149	7.149	7.047-7.252	7.151	0.004
51	2-Hexanone	7.438	7.432	7.426	7.421	7.421	7.421	7.421	7.421	7.421	7.269-7.573	7.425	0.007
* 52	d5-Chlorobenzene	7.607	7.607	7.607	7.607	7.602	7.602	7.607	7.607	7.607	7.455-7.760	7.606	0.003
53	Chlorobenzene	7.624	7.624	7.624	7.619	7.619	7.619	7.619	7.619	7.619	7.467-7.771	7.621	0.003
54	Ethyl Benzene	7.681	7.675	7.675	7.670	7.670	7.670	7.670	7.670	7.670	7.517-7.822	7.672	0.004
55	1,1,1,2-Tetrachloroeth	7.698	7.692	7.692	7.687	7.687	7.681	7.686	7.687	7.687	7.534-7.839	7.689	0.005
56	m,p-xylene	7.817	7.811	7.811	7.805	7.800	7.800	7.800	7.800	7.805	7.653-7.958	7.805	0.007
57	o-Xylene	8.173	8.173	8.168	8.168	8.162	8.162	8.167	8.168	8.168	8.015-8.320	8.167	0.004
58	Styrene	8.224	8.218	8.218	8.213	8.213	8.213	8.213	8.213	8.213	8.060-8.365	8.216	0.004
59	Bromoform	8.218	8.213	8.213	8.207	8.207	8.201	8.207	8.207	8.207	8.013-8.401	8.209	0.005
60	Isopropyl Benzene	8.462	8.462	8.456	8.456	8.450	8.450	8.450	8.456	8.456	8.262-8.650	8.455	0.005
61	Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.568	8.416-8.720	+++++	+++++
$ 62	4-Bromofluorobenzene	8.682	8.677	8.677	8.677	8.677	8.677	8.676	8.677	8.677	8.524-8.829	8.677	0.002
63	Bromobenzene	8.761	8.756	8.756	8.756	8.750	8.750	8.750	8.756	8.756	8.562-8.949	8.754	0.004

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Batch File: /chem1/nt5.i/24MAY13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
64	N-Propyl Benzene	8.835	8.829	8.824	8.824	8.818	8.818	8.818	8.818	8.824	8.630-9.017	8.823	0.006
65	1,1,2,2-Tetrachloroeth	8.909	8.892	8.886	8.886	8.880	8.880	8.880	8.880	8.886	8.692-9.079	8.887	0.010
66	2-Chloro Toluene	8.943	8.937	8.937	8.931	8.931	8.931	8.931	8.931	8.931	8.737-9.125	8.934	0.004
67	1,3,5-Trimethyl Benzen	9.027	9.022	9.016	9.010	9.010	9.010	9.010	9.010	9.010	8.817-9.204	9.015	0.007
68	1,2,3-Trichloropropane	8.999	8.988	8.988	8.982	8.982	8.982	8.982	8.976	8.982	8.788-9.176	8.985	0.007
69	Trans-1,4-Dichloro 2-B	9.056	9.050	9.044	9.039	9.039	9.039	9.038	9.033	9.039	8.845-9.232	9.042	0.007
70	4-Chloro Toluene	9.101	9.095	9.090	9.084	9.084	9.084	9.084	9.084	9.084	8.890-9.277	9.088	0.007
71	T-Butyl Benzene	9.299	9.293	9.293	9.288	9.287	9.287	9.287	9.288	9.288	9.094-9.481	9.290	0.004
72	1,2,4-Trimethylbenzene	9.367	9.361	9.355	9.355	9.350	9.350	9.355	9.355	9.355	9.162-9.549	9.356	0.006
73	S-Butyl Benzene	9.463	9.457	9.457	9.452	9.451	9.446	9.451	9.452	9.452	9.258-9.645	9.454	0.005
74	4-Isopropyl Toluene	9.616	9.604	9.599	9.599	9.593	9.593	9.593	9.593	9.599	9.405-9.792	9.599	0.008
75	1,3-Dichlorobenzene	9.627	9.616	9.616	9.610	9.610	9.610	9.610	9.610	9.610	9.416-9.804	9.614	0.006
* 76	d4-1,4-Dichlorobenzene	9.695	9.689	9.684	9.684	9.683	9.683	9.683	9.684	9.684	9.490-9.877	9.686	0.004
77	1,4-Dichlorobenzene	9.712	9.706	9.701	9.695	9.695	9.695	9.695	9.695	9.695	9.501-9.889	9.699	0.007
78	N-Butyl Benzene	10.000	9.989	9.983	9.983	9.983	9.983	9.978	9.978	9.983	9.790-10.177	9.985	0.007
$ 79	d4-1,2-Dichlorobenzene	10.085	10.074	10.068	10.068	10.068	10.062	10.062	10.063	10.068	9.874-10.262	10.069	0.008
80	1,2-Dichlorobenzene	10.091	10.085	10.080	10.074	10.074	10.074	10.074	10.074	10.074	9.880-10.267	10.078	0.007
81	1,2-Dibromo 3-Chloropr	10.843	10.838	10.832	10.826	10.826	10.826	10.826	10.826	10.826	10.633-11.020	10.830	0.007
82	Hexachloro 1,3-Butadie	11.533	11.516	11.505	11.505	11.505	11.499	11.499	11.499	11.505	11.311-11.699	11.508	0.012
83	1,2,4-Trichlorobenzene	11.522	11.505	11.499	11.494	11.494	11.488	11.488	11.494	11.494	11.300-11.687	11.498	0.011
84	Naphthalene	11.833	11.816	11.811	11.805	11.805	11.805	11.805	11.805	11.805	11.611-11.998	11.810	0.010
85	1,2,3-Trichlorobenzene	12.020	11.997	11.992	11.986	11.986	11.986	11.980	11.980	11.986	11.792-12.180	11.991	0.013

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/0010524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD1
Inj Date : 24-MAY-2013 11:06
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/V0121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 11:06 Cal File: 0010524.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.017	1.017	(0.218)	6815	1.00000	1.010
2 Chloromethane	50	1.255	1.277	(0.269)	11469	1.00000	0.8758 (M)
3 Vinyl Chloride	62	1.187	1.187	(0.254)	10813	1.00000	0.8878
4 Bromomethane	94	1.396	1.396	(0.299)	6688	1.00000	1.053
5 Chloroethane	64	1.492	1.487	(0.319)	6628	1.00000	1.015
6 Trichlorofluoromethane	101	1.583	1.583	(0.339)	11457	1.00000	0.9078
7 1,1-Dichloroethene	96	1.939	1.945	(0.415)	6925	1.00000	0.9714
8 Carbon Disulfide	76	1.951	1.945	(0.418)	22579	1.00000	0.9807
9 112Trichloro122Trifluoroethane	101	1.990	1.985	(0.426)	6235	1.00000	0.9727
10 Iodomethane	142	2.047	2.041	(0.438)	4895	1.00000	0.9236
11 Bromoethane	108	2.149	2.137	(0.460)	4947	1.00000	1.113
12 Acrolein	56	2.245	2.245	(0.480)	10434	5.00000	8.708
13 Methylene Chloride	84	2.426	2.420	(0.519)	12172	1.00000	1.949
14 Acetone	43	2.550	2.567	(0.546)	17332	5.00000	5.380 (M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.562	(0.550)	8531	1.00000	1.062
	16 Methyl tert butyl ether	73	2.737	2.743	(0.586)	24246	1.00000	0.9428
	17 1,1-Dichloroethane	63	3.184	3.184	(0.682)	16395	1.00000	0.8666
	18 Acrylonitrile	53	3.286	3.286	(0.703)	3979	1.00000	0.8956 (M)
	19 Vinyl Acetate	43	3.523	3.523	(0.754)	21531	1.00000	0.8969
	20 Cis-1,2-Dichloroethene	96	3.727	3.732	(0.798)	9016	1.00000	0.9117
	22 2,2-Dichloropropane	77	3.829	3.829	(0.820)	12367	1.00000	0.8676
	23 Bromochloromethane	128	3.919	3.919	(0.839)	3843	1.00000	0.8985
	24 Chloroform	83	4.021	4.021	(0.861)	14468	1.00000	0.9039
	25 Carbon Tetrachloride	117	4.106	4.106	(0.801)	11046	1.00000	0.8927
$	27 Dibromofluoromethane	111	4.185	4.185	(0.896)	503642	50.0000	50.127
	26 1,1,1-Trichloroethane	97	4.179	4.179	(0.895)	12952	1.00000	0.8924
	28 1,1-Dichloropropene	75	4.304	4.298	(0.840)	11780	1.00000	0.8438
	29 2-Butanone	72	4.372	4.377	(0.936)	5314	5.00000	4.457
	30 Benzene	78	4.530	4.530	(0.884)	35751	1.00000	0.8865
*	31 Pentafluorobenzene	168	4.672	4.666	(1.000)	446017	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.998)	507616	50.0000	50.611
	33 1,2-Dichloroethane	62	4.722	4.722	(0.922)	11522	1.00000	0.8985
	34 Trichloroethene	95	5.068	5.068	(0.989)	8789	1.00000	0.8891
*	35 1,4-Difluorobenzene	114	5.124	5.118	(1.000)	1371645	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.058)	5193	1.00000	0.9523
	38 1,2-Dichloropropane	63	5.514	5.514	(1.076)	9961	1.00000	0.8777
	39 Bromodichloromethane	83	5.594	5.594	(1.092)	11192	1.00000	0.9043
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.195)	4708	1.00000	0.7686
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.199)	12965	1.00000	0.8188
$	42 d8-Toluene	98	6.301	6.301	(1.230)	1952980	50.0000	50.347
	43 Toluene	92	6.340	6.340	(1.237)	24595	1.00000	0.9615
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	9010	1.00000	0.8547
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.309)	18828	5.00000	4.053
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.309)	11984	1.00000	0.8331
	47 1,1,2-Trichloroethane	97	6.832	6.838	(1.333)	7021	1.00000	0.8632
	48 Chlorodibromomethane	129	6.974	6.974	(0.917)	8148	1.00000	0.8922
	49 1,3-Dichloropropane	76	7.059	7.053	(0.928)	13502	1.00000	0.8924
	50 1,2-Dibromoethane	107	7.149	7.149	(1.395)	6909	1.00000	0.8803
	51 2-Hexanone	43	7.421	7.421	(0.975)	32195	5.00000	4.050
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1554099	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	23950	1.00000	0.9106
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	39805	1.00000	0.8840
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	8341	1.00000	0.8999
	56 m,p-xylene	106	7.800	7.805	(1.025)	27895	2.00000	1.648
	57 o-Xylene	106	8.168	8.168	(1.074)	12002	1.00000	0.7382
	58 Styrene	104	8.213	8.213	(1.080)	21159	1.00000	0.7690
	59 Bromoform	173	8.207	8.207	(0.848)	5608	1.00000	0.8578
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	32417	1.00000	0.7858
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	825335	50.0000	50.036
	63 Bromobenzene	156	8.756	8.756	(0.904)	9959	1.00000	0.9023
	64 N-Propyl Benzene	91	8.818	8.824	(0.911)	43959	1.00000	0.8793

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65 1,1,2,2-Tetrachloroethane	83	8.880	8.886	(0.917)	9501	1.00000	0.8712
66 2-Chloro Toluene	91	8.931	8.931	(0.922)	26683	1.00000	0.8634
67 1,3,5-Trimethyl Benzene	105	9.010	9.010	(0.930)	26794	1.00000	0.7646
68 1,2,3-Trichloropropane	110	8.976	8.982	(0.927)	3013	1.00000	0.9040(TM)
69 Trans-1,4-Dichloro 2-Butene	53	9.033	9.039	(0.933)	4023	1.00000	0.9630(M)
70 4-Chloro Toluene	91	9.084	9.084	(0.938)	27275	1.00000	0.8420
71 T-Butyl Benzene	119	9.288	9.288	(0.959)	23094	1.00000	0.7472
72 1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	26224	1.00000	0.7616
73 S-Butyl Benzene	105	9.452	9.452	(0.976)	36802	1.00000	0.8103
74 4-Isopropyl Toluene	119	9.593	9.599	(0.991)	27701	1.00000	0.7527
75 1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	18562	1.00000	0.9084
* 76 d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	827039	50.0000	
77 1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	20502	1.00000	0.9612
78 N-Butyl Benzene	91	9.978	9.983	(1.030)	25773	1.00000	0.7375
$ 79 d4-1,2-Dichlorobenzene	152	10.063	10.068	(1.039)	821210	50.0000	50.322
80 1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	18575	1.00000	0.9391
81 1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	1786	1.00000	0.8419
82 Hexachloro 1,3-Butadiene	225	11.499	11.505	(1.188)	7546	1.00000	0.8654
83 1,2,4-Trichlorobenzene	180	11.494	11.494	(1.187)	11614	1.00000	0.8264
84 Naphthalene	128	11.805	11.805	(1.219)	27548	1.00000	0.8810
85 1,2,3-Trichlorobenzene	180	11.980	11.986	(1.237)	11607	1.00000	0.8658

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0010524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD1
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	446017	-5.27
35 1,4-Difluorobenze	1445861	722930	2891722	1371645	-5.13
52 d5-Chlorobenzene	1620542	810271	3241084	1554099	-4.10
76 d4-1,4-Dichlorobe	872028	436014	1744056	827039	-5.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

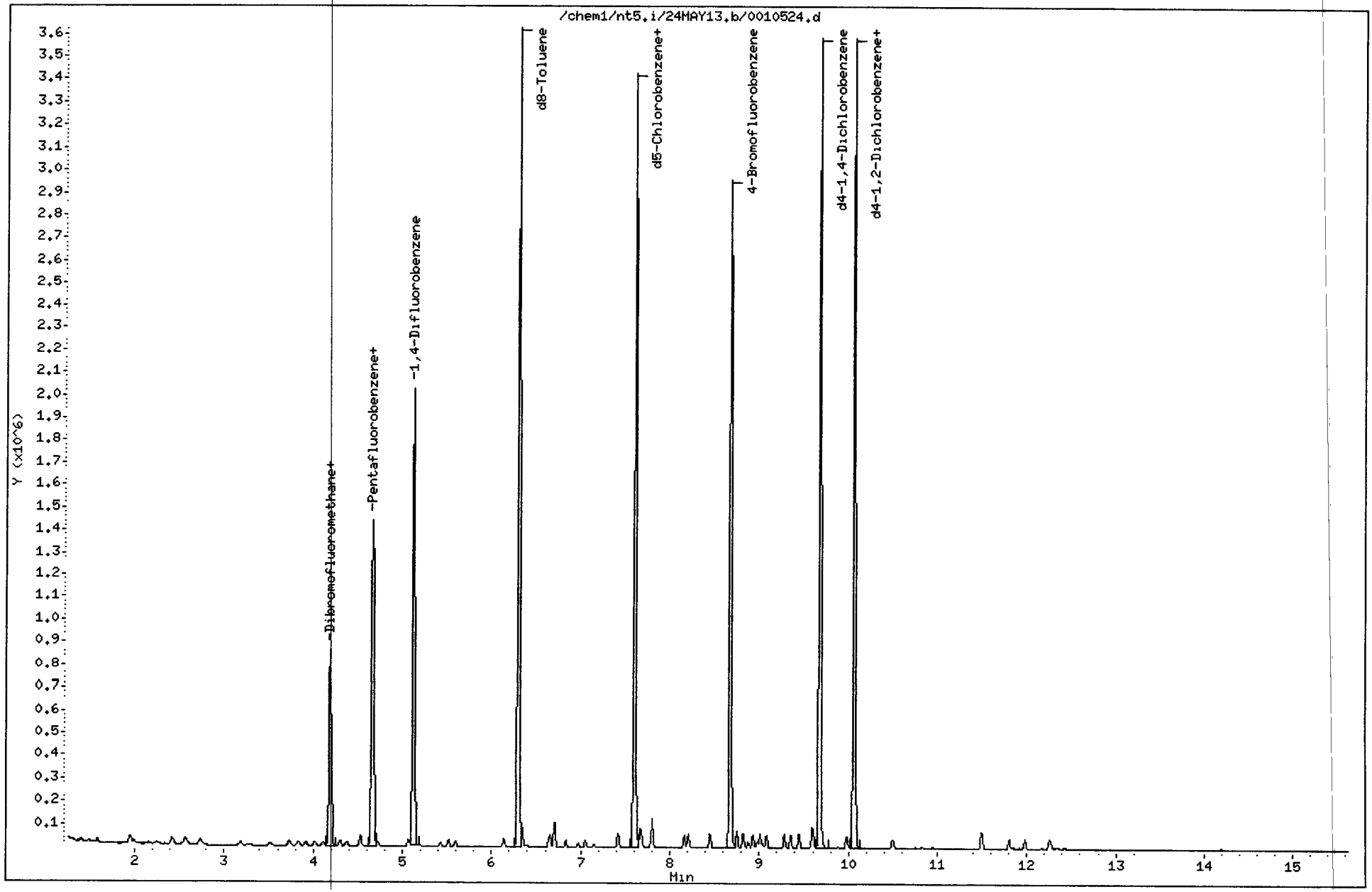
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/0010524.d
Date : 24-MAY-2013 11:06
Client ID: VSTD1
Sample Info: IC0524,5,5,0

Column phase: RTXVMS

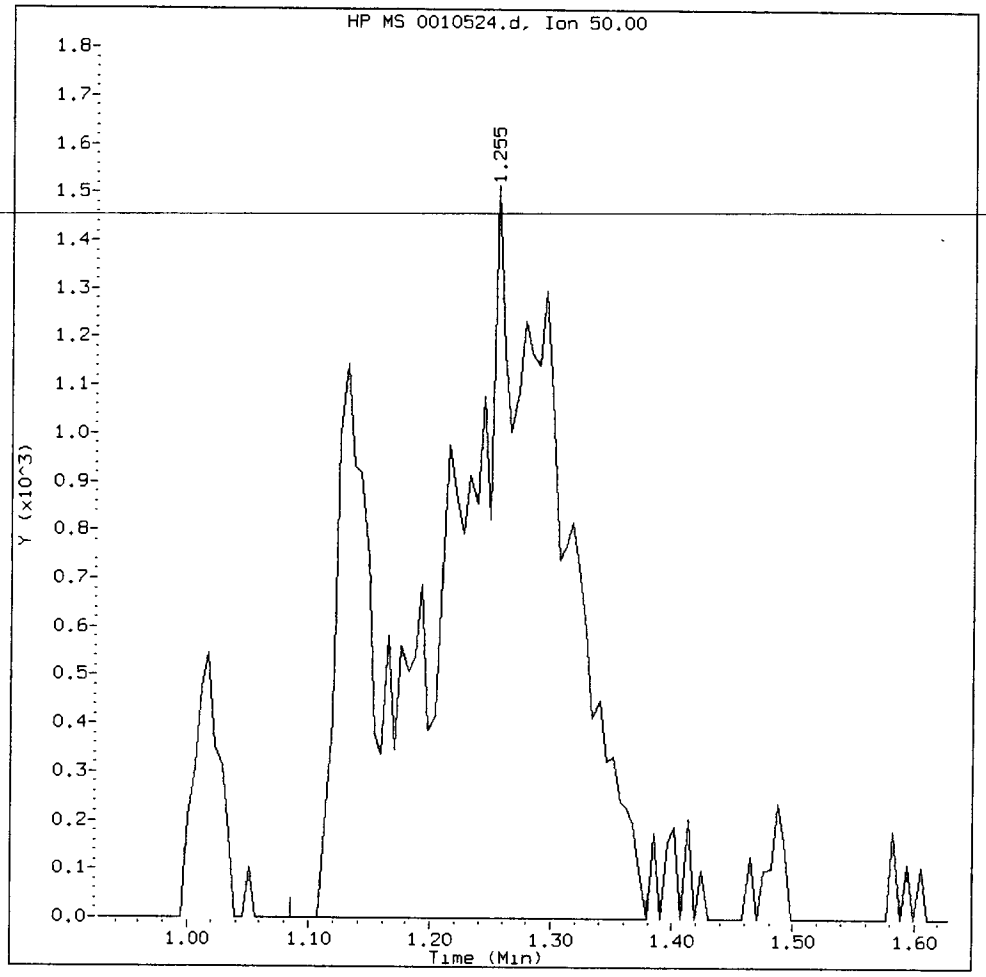
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0524, /chem1/nt5.i/24MAY13.b/0010524.d

Chloromethane Amount: 0.88 Area: 11469



MANUAL INTEGRATION for Chloromethane

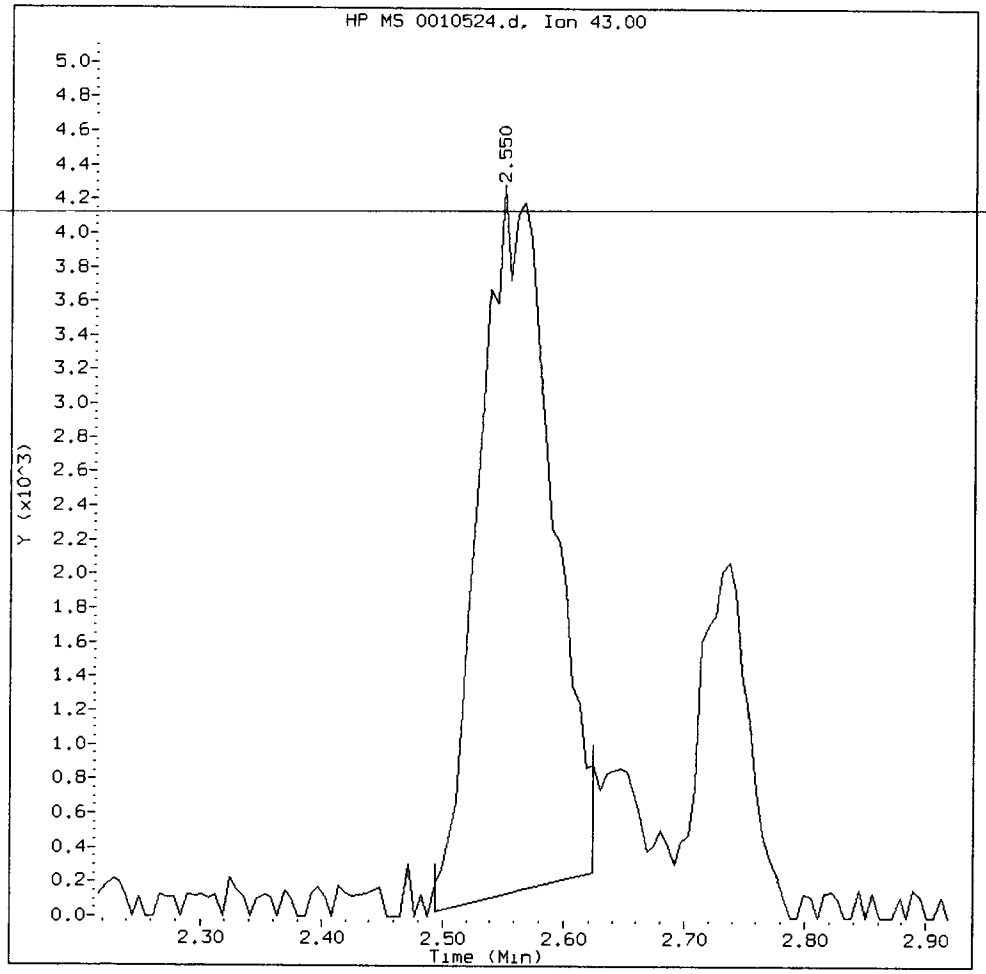
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/24/13

IC0524, /chem1/nt5.i/24MAY13.b/0010524.d

Acetone Amount: 5.38 Area: 17332



MANUAL INTEGRATION for Acetone

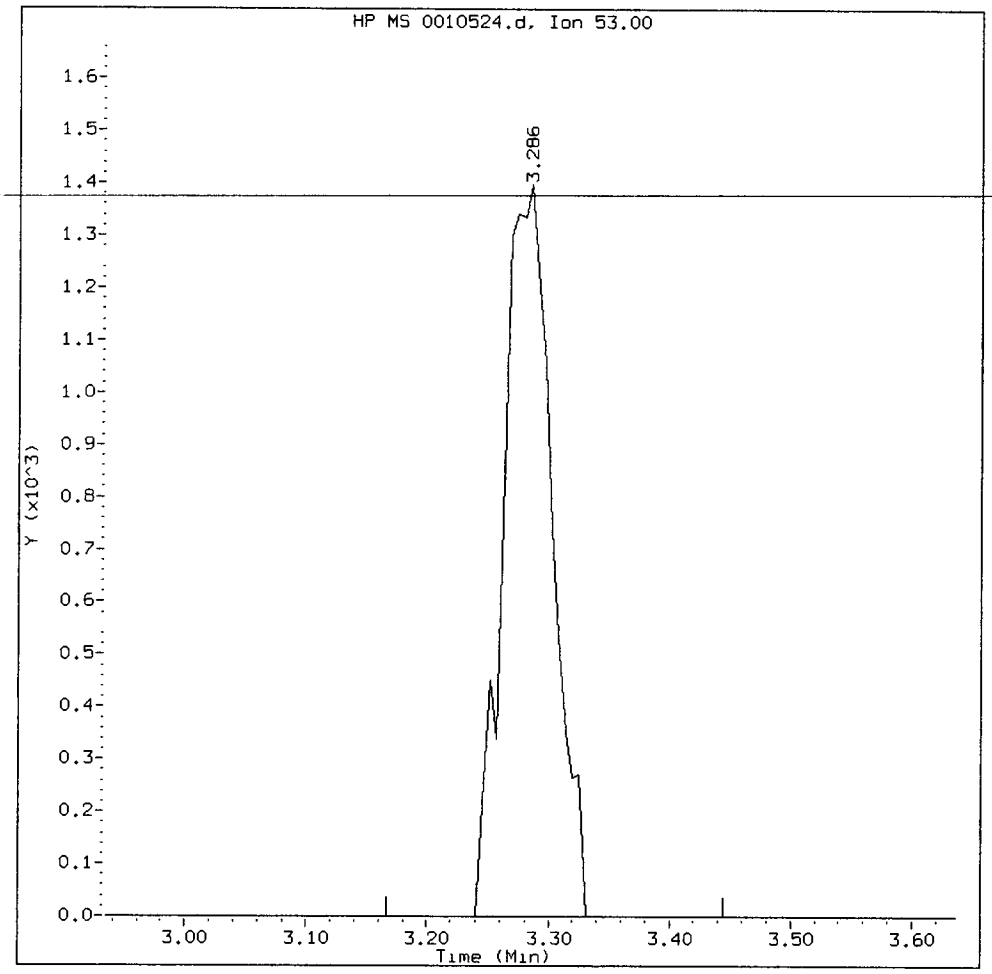
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

IC0524, /chem1/nt5.i/24MAY13.b/0010524.d

Acrylonitrile Amount: 0.90 Area: 3979



MANUAL INTEGRATION for Acrylonitrile

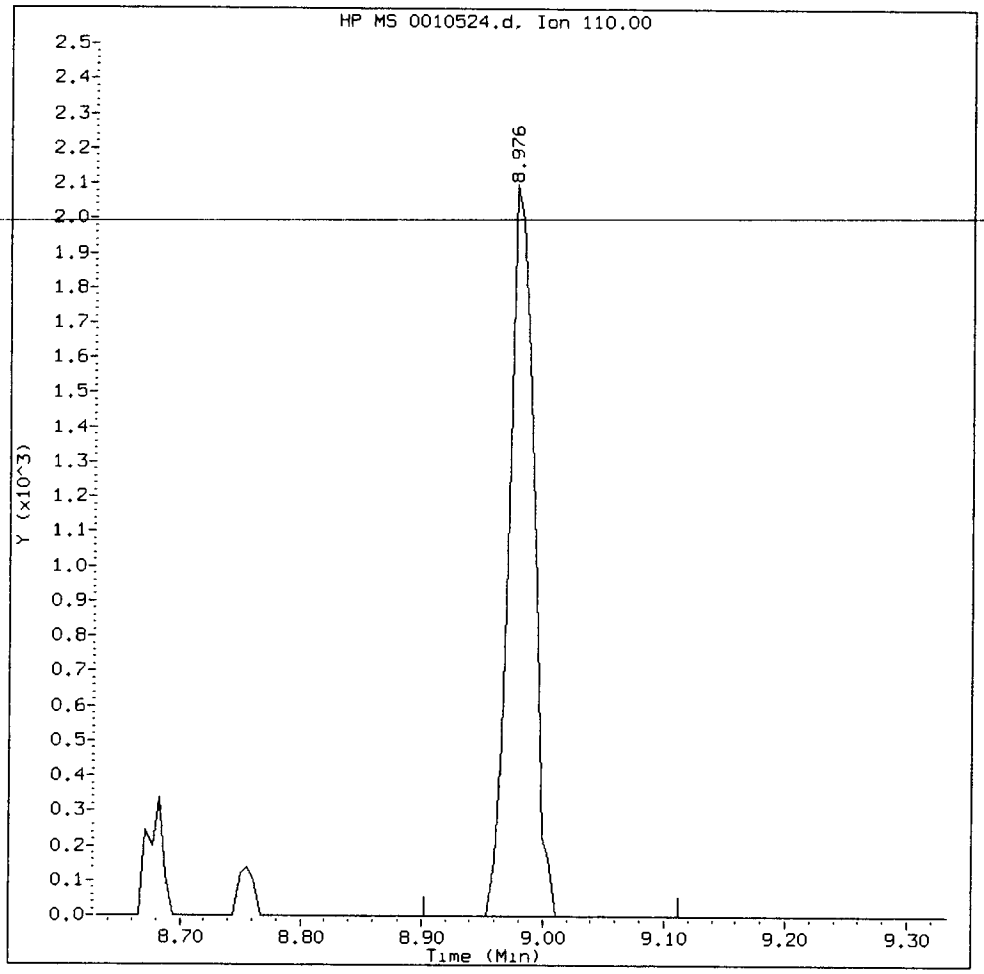
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/4/13

IC0524, /chem1/nt5.i/24MAY13.b/0010524.d

1,2,3-Trichloropropane Amount: 0.90 Area: 3013



MANUAL INTEGRATION for 1,2,3-Trichloropropane

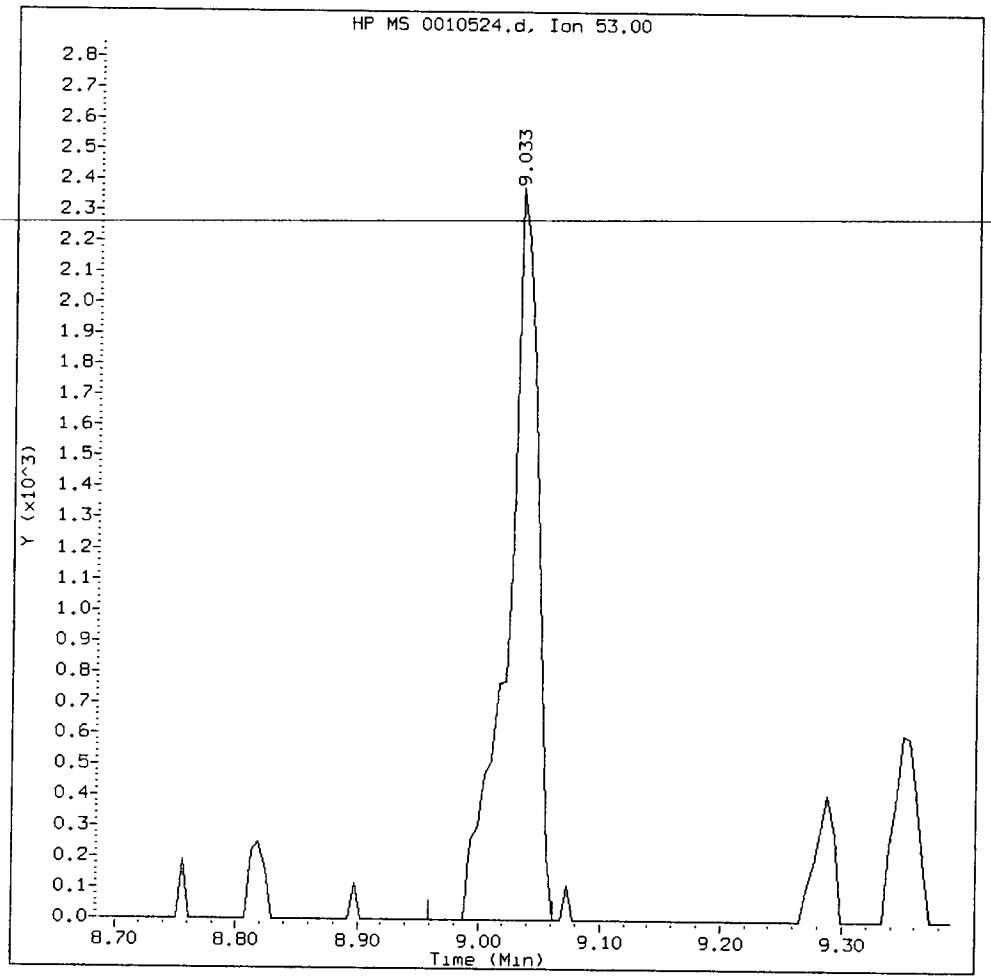
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 10/14/13

IC0524, /chem1/nt5.i/24MAY13.b/0010524.d

Trans-1,4-Dichloro 2-Butene Amount: 0.96 Area: 4023



MANUAL INTEGRATION for Trans-1,4-Dichloro 2-Butene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/18/13

CO-ELUTION SUMMARY FOR FILE - 0010524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/0020524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD2
Inj Date : 24-MAY-2013 10:42
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 10:42 Cal File: 0020524.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.023	1.017	(0.219)	12170	2.00000	1.888
2 Chloromethane	50	1.283	1.277	(0.275)	25028	2.00000	2.001(M)
3 Vinyl Chloride	62	1.192	1.187	(0.255)	22421	2.00000	1.927
4 Bromomethane	94	1.402	1.396	(0.300)	13899	2.00000	2.290
5 Chloroethane	64	1.492	1.487	(0.319)	13488	2.00000	2.163
6 Trichlorofluoromethane	101	1.588	1.583	(0.340)	24186	2.00000	2.006
7 1,1-Dichloroethene	96	1.950	1.945	(0.418)	13807	2.00000	2.028
8 Carbon Disulfide	76	1.950	1.945	(0.418)	44156	2.00000	2.008
9 112Trichloro122Trifluoroethane	101	1.990	1.985	(0.426)	12906	2.00000	2.108
10 Iodomethane	142	2.047	2.041	(0.438)	10457	2.00000	2.066
11 Bromoethane	108	2.154	2.137	(0.461)	10888	2.00000	2.564
12 Acrolein	56	2.250	2.245	(0.482)	22338	10.0000	19.517
13 Methylene Chloride	84	2.431	2.420	(0.520)	21512	2.00000	3.606
14 Acetone	43	2.544	2.567	(0.545)	34418	10.0000	11.184

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.573	2.562	(0.551)	17868	2.00000	2.328
	16 Methyl tert butyl ether	73	2.742	2.743	(0.587)	52307	2.00000	2.129
	17 1,1-Dichloroethane	63	3.195	3.184	(0.684)	37045	2.00000	2.050
	18 Acrylonitrile	53	3.280	3.286	(0.702)	8835	2.00000	2.082
	19 Vinyl Acetate	43	3.523	3.523	(0.754)	46078	2.00000	2.009
	20 Cis-1,2-Dichloroethene	96	3.738	3.732	(0.800)	19158	2.00000	2.028
	22 2,2-Dichloropropane	77	3.840	3.829	(0.822)	28080	2.00000	2.062
	23 Bromochloromethane	128	3.919	3.919	(0.839)	8264	2.00000	2.023
	24 Chloroform	83	4.021	4.021	(0.861)	31032	2.00000	2.030
	25 Carbon Tetrachloride	117	4.111	4.106	(0.802)	23322	2.00000	1.956
$	27 Dibromofluoromethane	111	4.191	4.185	(0.897)	486686	50.0000	50.710
	26 1,1,1-Trichloroethane	97	4.185	4.179	(0.896)	27035	2.00000	1.950
	28 1,1-Dichloropropene	75	4.304	4.298	(0.840)	26068	2.00000	1.937
	29 2-Butanone	72	4.372	4.377	(0.936)	11436	10.0000	10.041
	30 Benzene	78	4.530	4.530	(0.884)	78580	2.00000	2.022
*	31 Pentafluorobenzene	168	4.671	4.666	(1.000)	426041	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.998)	494077	50.0000	51.570
	33 1,2-Dichloroethane	62	4.722	4.722	(0.922)	25253	2.00000	2.043
	34 Trichloroethene	95	5.067	5.068	(0.989)	19116	2.00000	2.006
*	35 1,4-Difluorobenzene	114	5.124	5.118	(1.000)	1321945	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.058)	10307	2.00000	1.961
	38 1,2-Dichloropropane	63	5.520	5.514	(1.077)	21663	2.00000	1.981
	39 Bromodichloromethane	83	5.593	5.594	(1.092)	23497	2.00000	1.970
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.195)	9969	2.00000	1.689
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.199)	28966	2.00000	1.898
$	42 d8-Toluene	98	6.301	6.301	(1.230)	1901471	50.0000	50.862
	43 Toluene	92	6.340	6.340	(1.237)	49579	2.00000	2.011
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	20271	2.00000	1.998
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.309)	43348	10.0000	9.682
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.309)	26500	2.00000	1.911
	47 1,1,2-Trichloroethane	97	6.832	6.838	(1.333)	16020	2.00000	2.044
	48 Chlorodibromomethane	129	6.974	6.974	(0.917)	16377	2.00000	1.863
	49 1,3-Dichloropropane	76	7.059	7.053	(0.928)	27987	2.00000	1.922
	50 1,2-Dibromoethane	107	7.149	7.149	(1.395)	14449	2.00000	1.910
	51 2-Hexanone	43	7.421	7.421	(0.975)	73119	10.0000	9.556
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1495855	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	51876	2.00000	2.049
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	87391	2.00000	2.016
	55 1,1,1,2-Tetrachloroethane	131	7.686	7.687	(1.010)	17643	2.00000	1.978
	56 m,p-xylene	106	7.800	7.805	(1.025)	63993	4.00000	3.928
	57 o-Xylene	106	8.167	8.168	(1.074)	28193	2.00000	1.801
	58 Styrene	104	8.213	8.213	(1.080)	48954	2.00000	1.849
	59 Bromoform	173	8.207	8.207	(0.848)	12139	2.00000	1.911
	60 Isopropyl Benzene	105	8.450	8.456	(0.873)	74842	2.00000	1.867
$	62 4-Bromofluorobenzene	95	8.676	8.677	(1.141)	800963	50.0000	50.449
	63 Bromobenzene	156	8.750	8.756	(0.904)	20918	2.00000	1.950
	64 N-Propyl Benzene	91	8.818	8.824	(0.911)	97098	2.00000	1.999

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.880	8.886	(0.917)	20779	2.00000	1.961
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	56912	2.00000	1.895
67	1,3,5-Trimethyl Benzene	105	9.010	9.010	(0.930)	64418	2.00000	1.892
68	1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	6293	2.00000	1.943 (M)
69	Trans-1,4-Dichloro 2-Butene	53	9.038	9.039	(0.933)	8059	2.00000	1.985
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	60535	2.00000	1.923
71	T-Butyl Benzene	119	9.287	9.288	(0.959)	56143	2.00000	1.869
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	62419	2.00000	1.865
73	S-Butyl Benzene	105	9.451	9.452	(0.976)	87319	2.00000	1.978
74	4-Isopropyl Toluene	119	9.593	9.599	(0.991)	66348	2.00000	1.855
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	39925	2.00000	2.011
* 76	d4-1,4-Dichlorobenzene	152	9.683	9.684	(1.000)	803637	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	42204	2.00000	2.036
78	N-Butyl Benzene	91	9.978	9.983	(1.030)	63412	2.00000	1.867
$ 79	d4-1,2-Dichlorobenzene	152	10.062	10.068	(1.039)	798435	50.0000	50.351
80	1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	39246	2.00000	2.042
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	4340	2.00000	2.105
82	Hexachloro 1,3-Butadiene	225	11.499	11.505	(1.188)	16605	2.00000	1.960
83	1,2,4-Trichlorobenzene	180	11.488	11.494	(1.186)	25277	2.00000	1.851
84	Naphthalene	128	11.805	11.805	(1.219)	55526	2.00000	1.827
85	1,2,3-Trichlorobenzene	180	11.980	11.986	(1.237)	24872	2.00000	1.909

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0020524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD2
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	426041	-9.51
35 1,4-Difluorobenze	1445861	722930	2891722	1321945	-8.57
52 d5-Chlorobenzene	1620542	810271	3241084	1495855	-7.69
76 d4-1,4-Dichlorobe	872028	436014	1744056	803637	-7.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/0020524.d

Date : 24-MAY-2013 10:42

Client ID: VSTD2

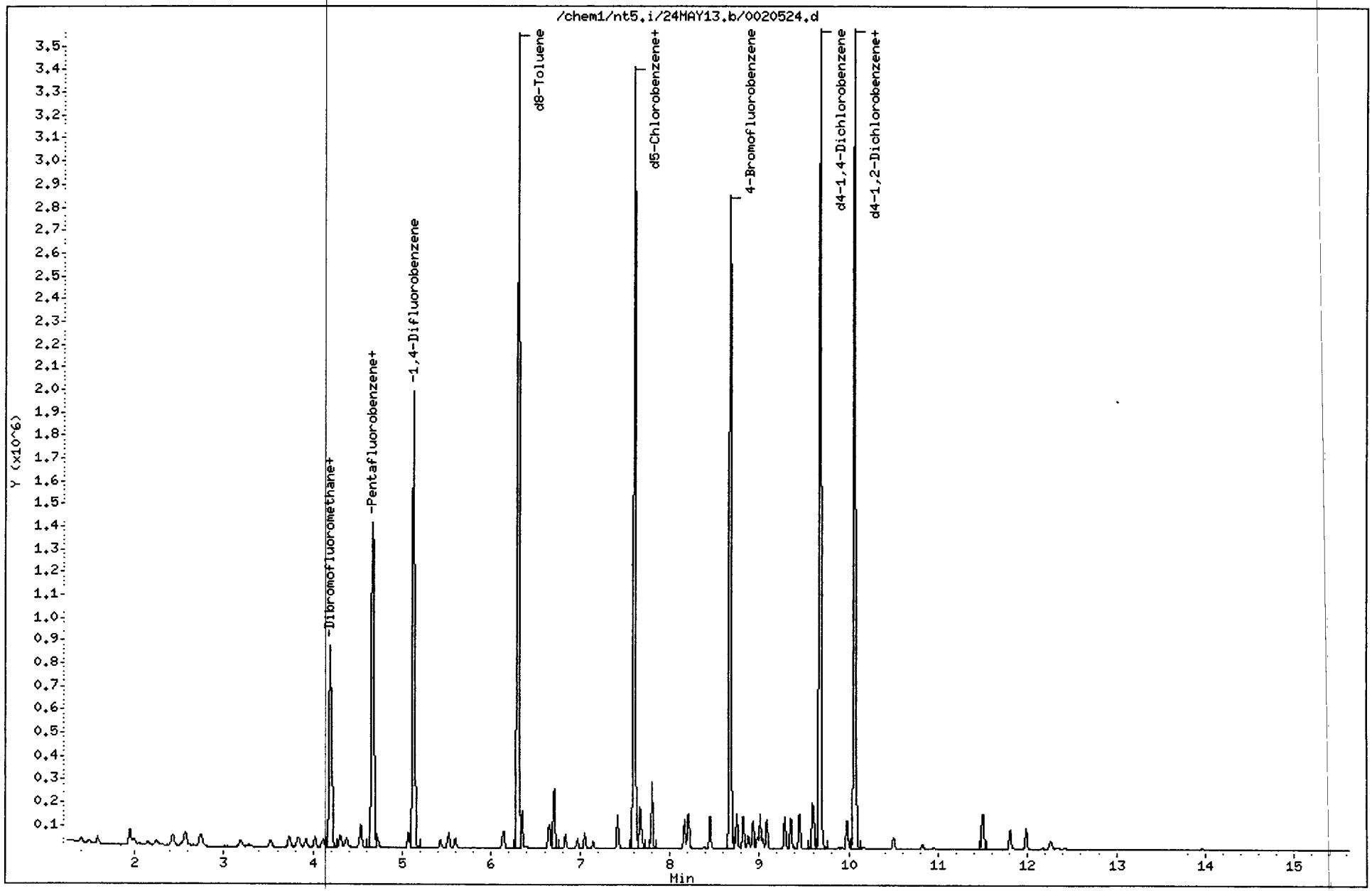
Sample Info: IC0524,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

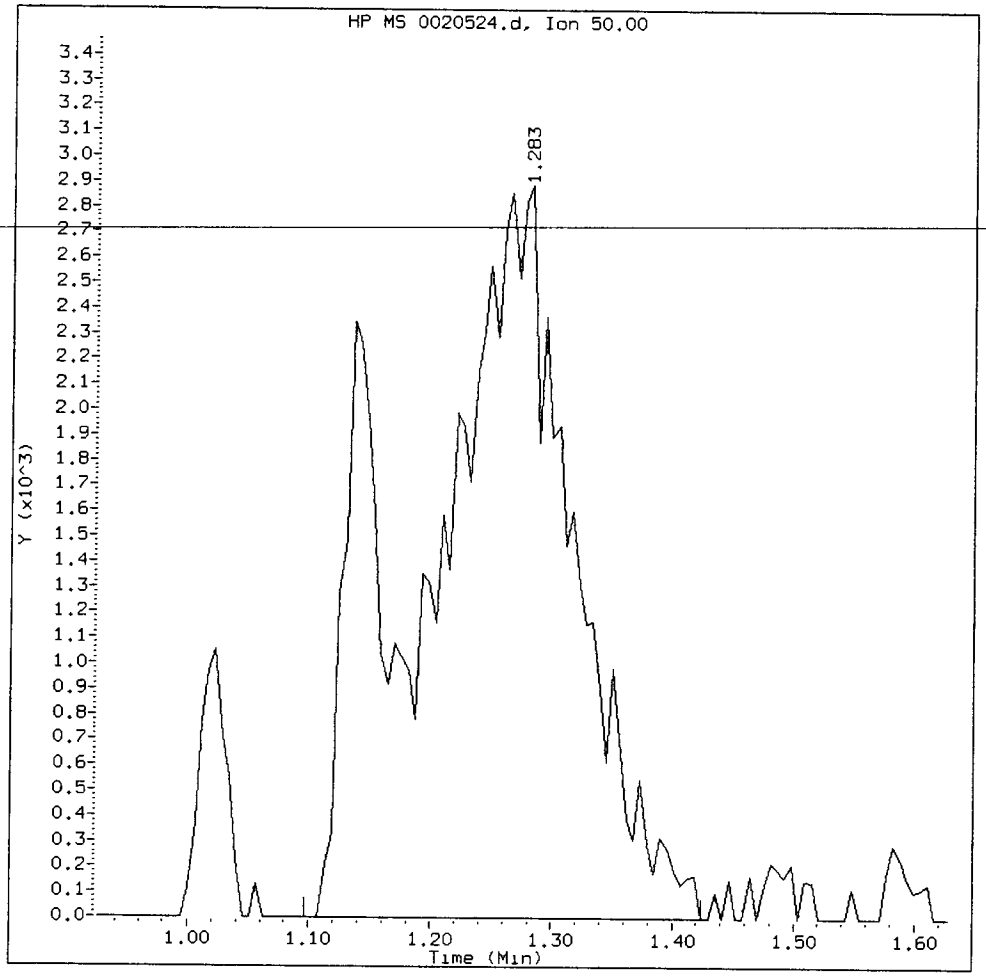
Operator: PB

Column diameter: 0.18



IC0524, /chem1/nt5.i/24MAY13.b/0020524.d

Chloromethane Amount: 2.00 Area: 25028



MANUAL INTEGRATION for Chloromethane

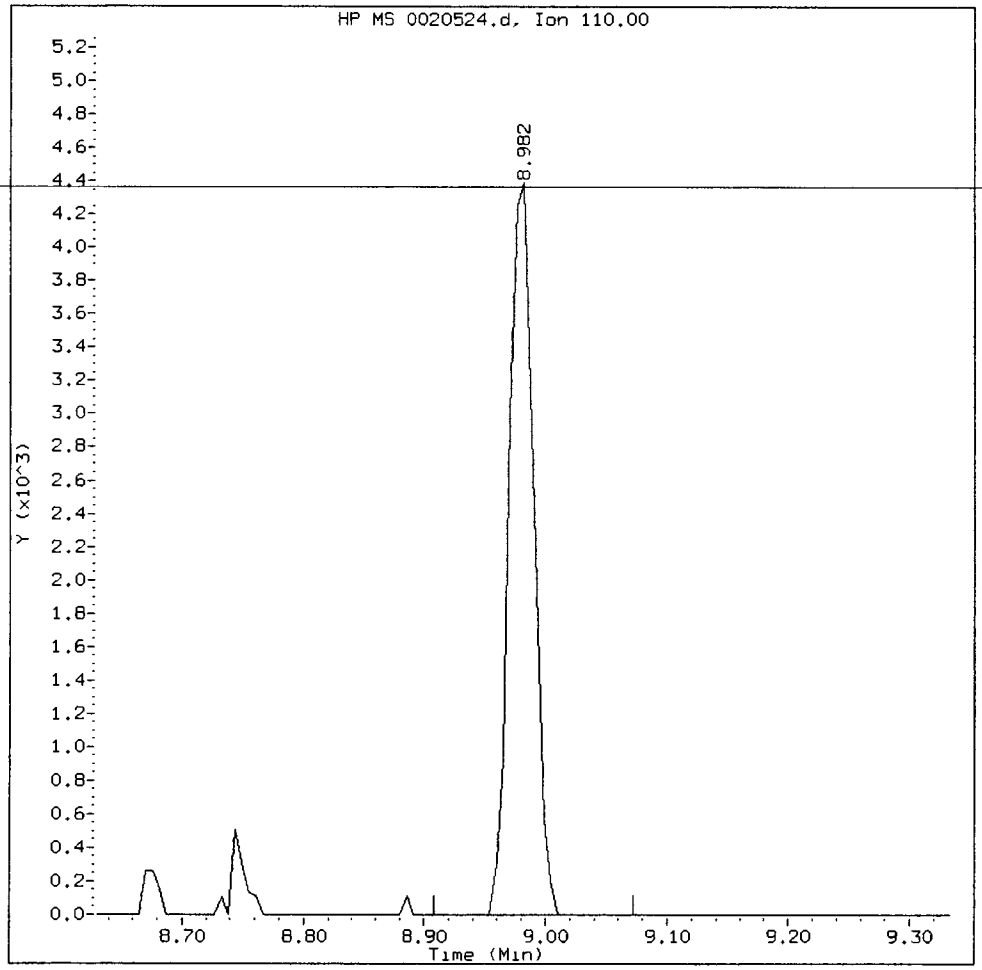
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0524, /chem1/nt5.i/24MAY13.b/0020524.d

1,2,3-Trichloropropane Amount: 1.94 Area: 6293



MANUAL INTEGRATION for 1,2,3-Trichloropropane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/21/13

CO-ELUTION SUMMARY FOR FILE - 0020524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/0050524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD5
Inj Date : 24-MAY-2013 10:18
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 10:18 Cal File: 0050524.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.000	1.017	(0.215)	32814	5.00000	4.815
2 Chloromethane	50	1.266	1.277	(0.272)	67542	5.00000	5.108(M)
3 Vinyl Chloride	62	1.170	1.187	(0.251)	57685	5.00000	4.691
4 Bromomethane	94	1.385	1.396	(0.297)	33596	5.00000	5.236
5 Chloroethane	64	1.475	1.487	(0.317)	35052	5.00000	5.319
6 Trichlorofluoromethane	101	1.566	1.583	(0.336)	65540	5.00000	5.143
7 1,1-Dichloroethene	96	1.928	1.945	(0.414)	38371	5.00000	5.331
8 Carbon Disulfide	76	1.933	1.945	(0.415)	127044	5.00000	5.465
9 112Trichloro122Trifluoroethane	101	1.973	1.985	(0.423)	33829	5.00000	5.227
10 Iodomethane	142	2.030	2.041	(0.436)	24048	5.00000	4.494
11 Bromoethane	108	2.131	2.137	(0.457)	21839	5.00000	4.865
12 Acrolein	56	2.233	2.245	(0.479)	37210	25.0000	30.757
13 Methylene Chloride	84	2.409	2.420	(0.517)	39087	5.00000	6.199
14 Acetone	43	2.567	2.567	(0.551)	79009	25.0000	24.289

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.544	2.562	(0.546)	45442	5.00000	5.602
	16 Methyl tert butyl ether	73	2.725	2.743	(0.585)	142622	5.00000	5.492
	17 1,1-Dichloroethane	63	3.167	3.184	(0.680)	98535	5.00000	5.158
	18 Acrylonitrile	53	3.285	3.286	(0.705)	23162	5.00000	5.164
	19 Vinyl Acetate	43	3.512	3.523	(0.754)	124679	5.00000	5.144
	20 Cis-1,2-Dichloroethene	96	3.721	3.732	(0.798)	51107	5.00000	5.118
	22 2,2-Dichloropropane	77	3.817	3.829	(0.819)	74272	5.00000	5.160
	23 Bromochloromethane	128	3.908	3.919	(0.839)	22380	5.00000	5.182
	24 Chloroform	83	4.010	4.021	(0.860)	80596	5.00000	4.987
	25 Carbon Tetrachloride	117	4.094	4.106	(0.801)	63332	5.00000	5.082
$	27 Dibromofluoromethane	111	4.179	4.185	(0.897)	509638	50.0000	50.237
	26 1,1,1-Trichloroethane	97	4.168	4.179	(0.894)	74747	5.00000	5.101
	28 1,1-Dichloropropene	75	4.292	4.298	(0.840)	71689	5.00000	5.099
	29 2-Butanone	72	4.383	4.377	(0.940)	30268	25.0000	25.141
	30 Benzene	78	4.519	4.530	(0.884)	215392	5.00000	5.303
*	31 Pentafluorobenzene	168	4.660	4.666	(1.000)	450337	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.654	4.660	(0.999)	514287	50.0000	50.784
	33 1,2-Dichloroethane	62	4.711	4.722	(0.921)	67800	5.00000	5.250
	34 Trichloroethene	95	5.062	5.068	(0.990)	51337	5.00000	5.157
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	1381380	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	28135	5.00000	5.123
	38 1,2-Dichloropropane	63	5.514	5.514	(1.079)	58944	5.00000	5.157
	39 Bromodichloromethane	83	5.588	5.594	(1.093)	63730	5.00000	5.113
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	28993	5.00000	4.700
	41 Cis 1,3-dichloropropene	75	6.137	6.142	(1.200)	81287	5.00000	5.097
$	42 d8-Toluene	98	6.295	6.301	(1.231)	1961424	50.0000	50.209
	43 Toluene	92	6.335	6.340	(1.239)	133689	5.00000	5.190
	44 Tetrachloroethene	166	6.651	6.657	(0.875)	53274	5.00000	5.064
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.312)	120684	25.0000	25.797
	46 Trans 1,3-Dichloropropene	75	6.702	6.708	(1.311)	75252	5.00000	5.194
	47 1,1,2-Trichloroethane	97	6.832	6.838	(1.336)	41747	5.00000	5.096
	48 Chlorodibromomethane	129	6.968	6.974	(0.917)	45733	5.00000	5.018
	49 1,3-Dichloropropane	76	7.053	7.053	(0.928)	76665	5.00000	5.077
	50 1,2-Dibromoethane	107	7.143	7.149	(1.397)	40337	5.00000	5.103
	51 2-Hexanone	43	7.421	7.421	(0.976)	205377	25.0000	25.888
*	52 d5-Chlorobenzene	117	7.602	7.607	(1.000)	1550980	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.002)	140511	5.00000	5.353
	54 Ethyl Benzene	91	7.670	7.670	(1.009)	242661	5.00000	5.400
	55 1,1,1,2-Tetrachloroethane	131	7.681	7.687	(1.010)	46773	5.00000	5.056
	56 m,p-xylene	106	7.800	7.805	(1.026)	182409	10.0000	10.799
	57 o-Xylene	106	8.162	8.168	(1.074)	80662	5.00000	4.971
	58 Styrene	104	8.213	8.213	(1.080)	144009	5.00000	5.245
	59 Bromoform	173	8.201	8.207	(0.847)	32887	5.00000	5.078
	60 Isopropyl Benzene	105	8.450	8.456	(0.873)	219282	5.00000	5.366
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	830349	50.0000	50.441
	63 Bromobenzene	156	8.750	8.756	(0.904)	57380	5.00000	5.248
	64 N-Propyl Benzene	91	8.818	8.824	(0.911)	272343	5.00000	5.499

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.880	8.886	(0.917)	55750	5.00000	5.160
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	161172	5.00000	5.265
67	1,3,5-Trimethyl Benzene	105	9.010	9.010	(0.930)	183910	5.00000	5.298
68	1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	16839	5.00000	5.100
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	20858	5.00000	5.040
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	169377	5.00000	5.278
71	T-Butyl Benzene	119	9.287	9.288	(0.959)	162343	5.00000	5.302
72	1,2,4-Trimethylbenzene	105	9.350	9.355	(0.966)	181338	5.00000	5.316
73	S-Butyl Benzene	105	9.446	9.452	(0.975)	247055	5.00000	5.491
74	4-Isopropyl Toluene	119	9.593	9.599	(0.991)	195071	5.00000	5.351
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	106948	5.00000	5.284
* 76	d4-1,4-Dichlorobenzene	152	9.683	9.684	(1.000)	819317	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	111379	5.00000	5.271
78	N-Butyl Benzene	91	9.983	9.983	(1.031)	180933	5.00000	5.226
$ 79	d4-1,2-Dichlorobenzene	152	10.062	10.068	(1.039)	814894	50.0000	50.405
80	1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	103734	5.00000	5.294
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	10588	5.00000	5.038
82	Hexachloro 1,3-Butadiene	225	11.499	11.505	(1.188)	45440	5.00000	5.260
83	1,2,4-Trichlorobenzene	180	11.488	11.494	(1.186)	68842	5.00000	4.945
84	Naphthalene	128	11.805	11.805	(1.219)	150547	5.00000	4.860
85	1,2,3-Trichlorobenzene	180	11.986	11.986	(1.238)	67377	5.00000	5.073

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0050524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD5
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	450337	-4.35
35 1,4-Difluorobenze	1445861	722930	2891722	1381380	-4.46
52 d5-Chlorobenzene	1620542	810271	3241084	1550980	-4.29
76 d4-1,4-Dichlorobe	872028	436014	1744056	819317	-6.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.60	-0.08
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

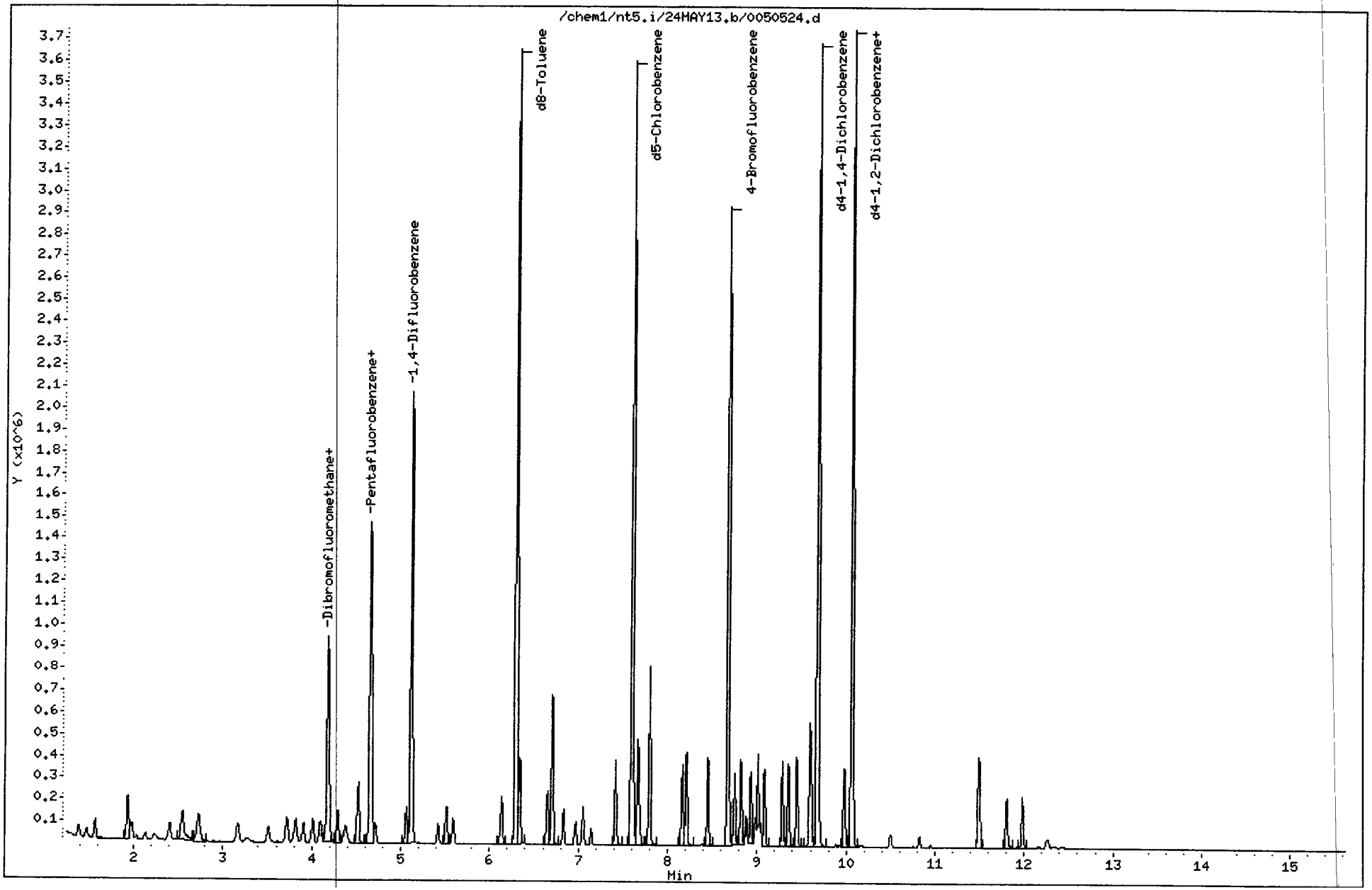
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/0050524.d
Date : 24-MAY-2013 10:18
Client ID: VSTD5
Sample Info: IC0524,5,5,0

Column phase: RTXVMS

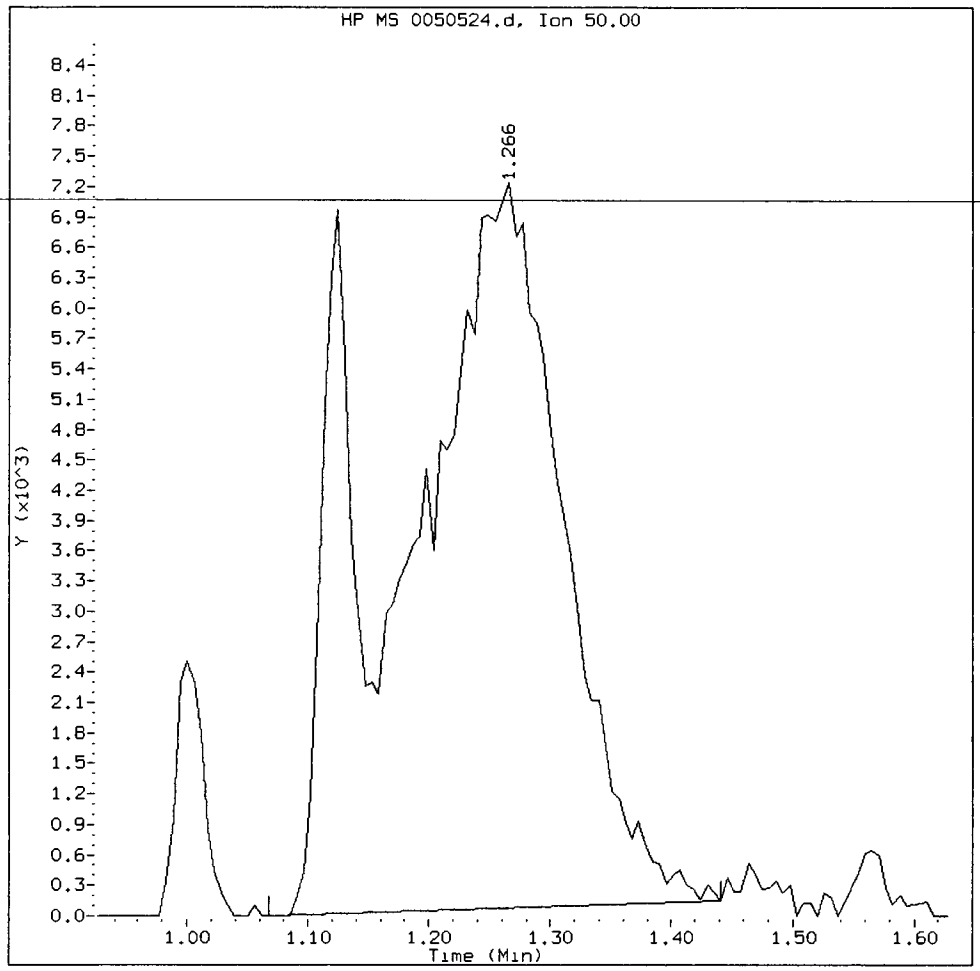
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0524, /chem1/nt5.i/24MAY13.b/0050524.d

Chloromethane Amount: 5.11 Area: 67542



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

CO-ELUTION SUMMARY FOR FILE - 0050524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/0100524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD10
Inj Date : 24-MAY-2013 09:54
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 09:54 Cal File: 0100524.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.006	1.017	(0.216)	68006	10.0000	9.709
2 Chloromethane	50	1.249	1.277	(0.268)	147406	10.0000	10.845(M)
3 Vinyl Chloride	62	1.175	1.187	(0.252)	121262	10.0000	9.593
4 Bromomethane	94	1.385	1.396	(0.297)	69030	10.0000	10.467
5 Chloroethane	64	1.475	1.487	(0.317)	73710	10.0000	10.881
6 Trichlorofluoromethane	101	1.566	1.583	(0.336)	143464	10.0000	10.953
7 1,1-Dichloroethene	96	1.928	1.945	(0.414)	69431	10.0000	9.384
8 Carbon Disulfide	76	1.928	1.945	(0.414)	224649	10.0000	9.401
9 112Trichloro122Trifluoroethane	101	1.967	1.985	(0.422)	61792	10.0000	9.288
10 Iodomethane	142	2.024	2.041	(0.434)	45860	10.0000	8.337
11 Bromoethane	108	2.120	2.137	(0.455)	42051	10.0000	9.112
12 Acrolein	56	2.228	2.245	(0.478)	51268	50.0000	41.226
13 Methylene Chloride	84	2.397	2.420	(0.514)	55090	10.0000	8.500
14 Acetone	43	2.561	2.567	(0.550)	191070	50.0000	57.143

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.533	2.562	(0.544)	106634	10.0000	12.789
	16 Methyl tert butyl ether	73	2.748	2.743	(0.590)	308957	10.0000	11.575
	17 1,1-Dichloroethane	63	3.161	3.184	(0.678)	219978	10.0000	11.203
	18 Acrylonitrile	53	3.280	3.286	(0.704)	48883	10.0000	10.602
	19 Vinyl Acetate	43	3.517	3.523	(0.755)	273338	10.0000	10.970
	20 Cis-1,2-Dichloroethene	96	3.721	3.732	(0.798)	111108	10.0000	10.825
	22 2,2-Dichloropropane	77	3.817	3.829	(0.819)	163148	10.0000	11.028
	23 Bromochloromethane	128	3.902	3.919	(0.837)	46675	10.0000	10.514
	24 Chloroform	83	4.010	4.021	(0.860)	179328	10.0000	10.794
	25 Carbon Tetrachloride	117	4.094	4.106	(0.801)	138365	10.0000	10.818
$	27 Dibromofluoromethane	111	4.179	4.185	(0.897)	517046	50.0000	49.583
	26 1,1,1-Trichloroethane	97	4.162	4.179	(0.893)	165576	10.0000	10.992
	28 1,1-Dichloropropene	75	4.287	4.298	(0.838)	167919	10.0000	11.635
	29 2-Butanone	72	4.383	4.377	(0.941)	64510	50.0000	52.127
	30 Benzene	78	4.519	4.530	(0.884)	492813	10.0000	11.822
*	31 Pentafluorobenzene	168	4.660	4.666	(1.000)	462910	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.654	4.660	(0.999)	519562	50.0000	49.911
	33 1,2-Dichloroethane	62	4.711	4.722	(0.921)	142696	10.0000	10.765
	34 Trichloroethene	95	5.056	5.068	(0.989)	111630	10.0000	10.924
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	1417886	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	59957	10.0000	10.636
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	126749	10.0000	10.804
	39 Bromodichloromethane	83	5.588	5.594	(1.093)	136394	10.0000	10.661
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	67907	10.0000	10.725
	41 Cis 1,3-dichloropropene	75	6.137	6.142	(1.200)	180658	10.0000	11.037
$	42 d8-Toluene	98	6.295	6.301	(1.231)	1998731	50.0000	49.846
	43 Toluene	92	6.335	6.340	(1.239)	295069	10.0000	11.159
	44 Tetrachloroethene	166	6.651	6.657	(0.875)	121487	10.0000	11.304
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.312)	261921	50.0000	54.545
	46 Trans 1,3-Dichloropropene	75	6.702	6.708	(1.311)	162287	10.0000	10.914
	47 1,1,2-Trichloroethane	97	6.832	6.838	(1.336)	90381	10.0000	10.750
	48 Chlorodibromomethane	129	6.968	6.974	(0.917)	99938	10.0000	10.734
	49 1,3-Dichloropropane	76	7.053	7.053	(0.928)	167452	10.0000	10.856
	50 1,2-Dibromoethane	107	7.149	7.149	(1.398)	87306	10.0000	10.761
	51 2-Hexanone	43	7.421	7.421	(0.976)	447697	50.0000	55.243
*	52 d5-Chlorobenzene	117	7.602	7.607	(1.000)	1584356	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.002)	300991	10.0000	11.226
	54 Ethyl Benzene	91	7.670	7.670	(1.009)	541359	10.0000	11.793
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.011)	100925	10.0000	10.680
	56 m,p-xylene	106	7.800	7.805	(1.026)	401877	20.0000	23.290
	57 o-Xylene	106	8.162	8.168	(1.074)	190688	10.0000	11.504
	58 Styrene	104	8.213	8.213	(1.080)	324562	10.0000	11.571
	59 Bromoform	173	8.207	8.207	(0.848)	69315	10.0000	10.609
	60 Isopropyl Benzene	105	8.450	8.456	(0.873)	498598	10.0000	12.094
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	841096	50.0000	50.017
	63 Bromobenzene	156	8.750	8.756	(0.904)	122824	10.0000	11.136
	64 N-Propyl Benzene	91	8.818	8.824	(0.911)	608089	10.0000	12.171

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.880	8.886	(0.917)	116723	10.0000	10.710
	66 2-Chloro Toluene	91	8.931	8.931	(0.922)	355188	10.0000	11.501
	67 1,3,5-Trimethyl Benzene	105	9.010	9.010	(0.930)	417264	10.0000	11.915
	68 1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	35886	10.0000	10.774
	69 Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	45220	10.0000	10.831
	70 4-Chloro Toluene	91	9.084	9.084	(0.938)	377524	10.0000	11.662
	71 T-Butyl Benzene	119	9.287	9.288	(0.959)	363563	10.0000	11.770
	72 1,2,4-Trimethylbenzene	105	9.350	9.355	(0.966)	411842	10.0000	11.967
	73 S-Butyl Benzene	105	9.451	9.452	(0.976)	549819	10.0000	12.113
	74 4-Isopropyl Toluene	119	9.593	9.599	(0.991)	446262	10.0000	12.134
	75 1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	232412	10.0000	11.382
*	76 d4-1,4-Dichlorobenzene	152	9.683	9.684	(1.000)	826523	50.0000	
	77 1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	241238	10.0000	11.317
	78 N-Butyl Benzene	91	9.983	9.983	(1.031)	419379	10.0000	12.007
$	79 d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	823987	50.0000	50.523
	80 1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	222158	10.0000	11.239
	81 1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	22326	10.0000	10.530
	82 Hexachloro 1,3-Butadiene	225	11.505	11.505	(1.188)	97980	10.0000	11.244
	83 1,2,4-Trichlorobenzene	180	11.494	11.494	(1.187)	155294	10.0000	11.057
	84 Naphthalene	128	11.805	11.805	(1.219)	341317	10.0000	10.922
	85 1,2,3-Trichlorobenzene	180	11.986	11.986	(1.238)	144719	10.0000	10.802

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0100524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD10
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	462910	-1.68
35 1,4-Difluorobenze	1445861	722930	2891722	1417886	-1.93
52 d5-Chlorobenzene	1620542	810271	3241084	1584356	-2.23
76 d4-1,4-Dichlorobe	872028	436014	1744056	826523	-5.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.60	-0.08
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

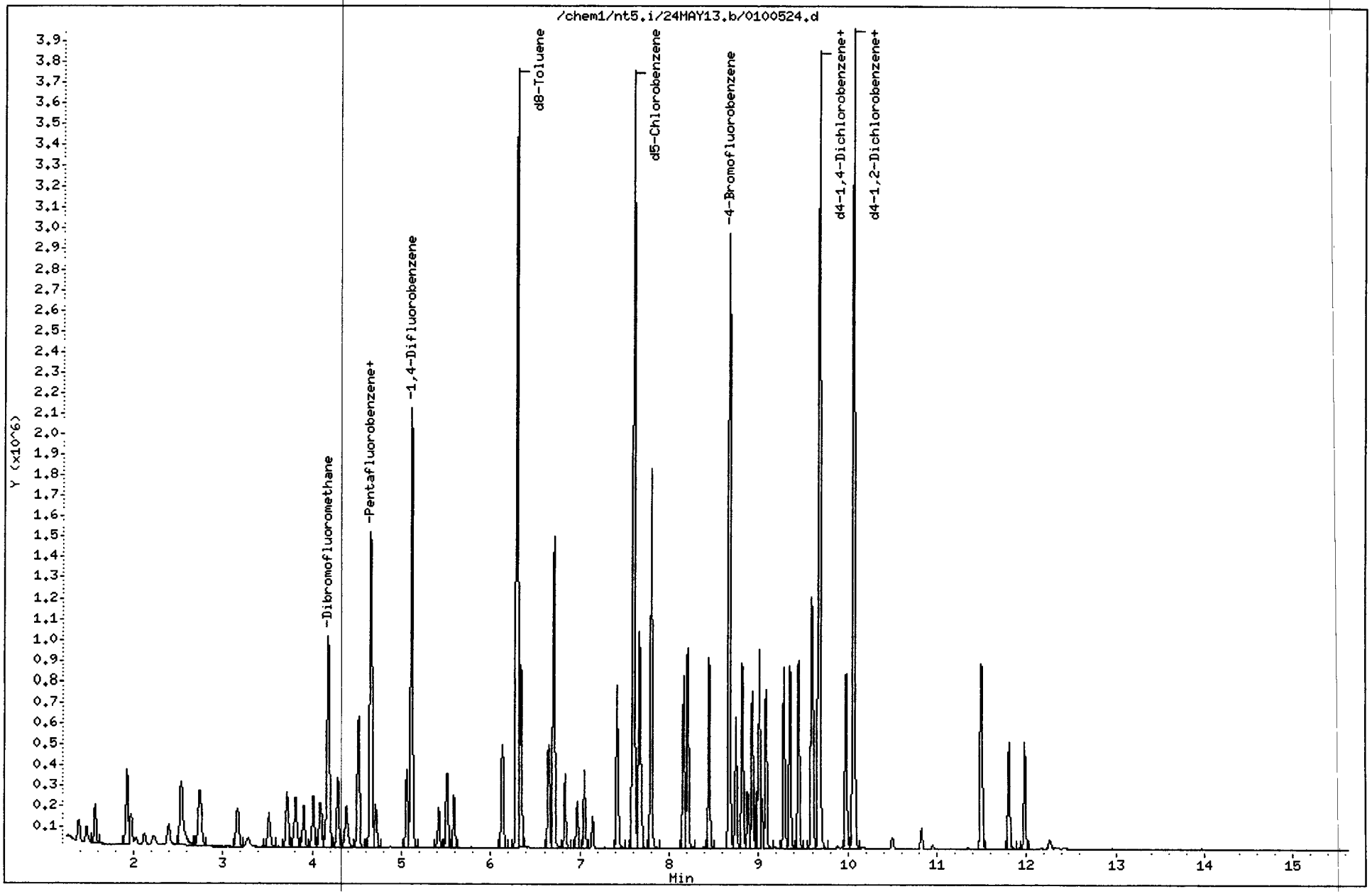
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/0100524.d
Date : 24-MAY-2013 09:54
Client ID: VSTD10
Sample Info: IC0524,5,5,0

Instrument: nt5.i

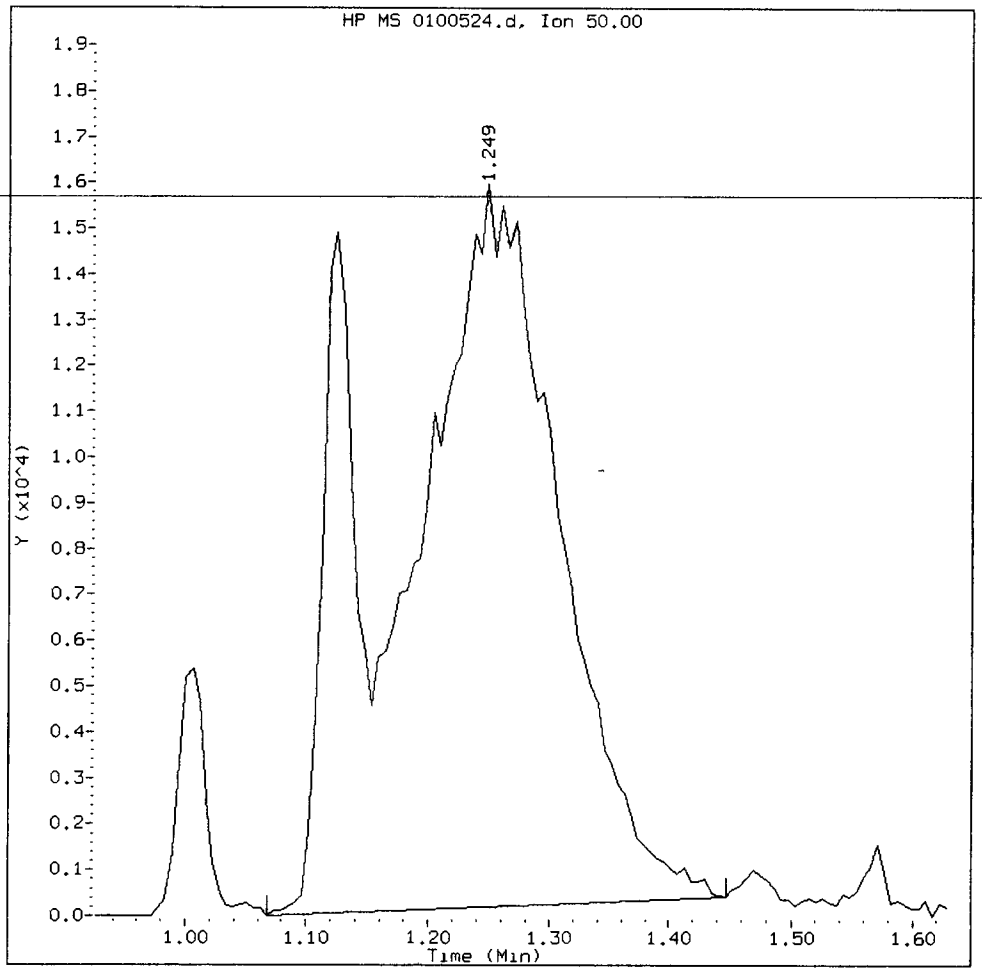
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0524, /chem1/nt5.i/24MAY13.b/0100524.d

Chloromethane Amount: 10.84 Area: 147406



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - 0100524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/0500524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD50
Inj Date : 24-MAY-2013 09:30
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-

Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 09:30 Cal File: 0500524.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.017	1.017	(0.218)	307188	50.0000	43.120
2 Chloromethane	50	1.277	1.277	(0.274)	602467	50.0000	43.581(M)
3 Vinyl Chloride	62	1.187	1.187	(0.254)	540913	50.0000	42.074
4 Bromomethane	94	1.396	1.396	(0.299)	299910	50.0000	44.713
5 Chloroethane	64	1.487	1.487	(0.319)	326801	50.0000	47.433
6 Trichlorofluoromethane	101	1.583	1.583	(0.339)	566461	50.0000	42.521
7 1,1-Dichloroethene	96	1.945	1.945	(0.417)	300199	50.0000	39.894
8 Carbon Disulfide	76	1.945	1.945	(0.417)	994196	50.0000	40.906
9 112Trichloro122Trifluoroethane	101	1.985	1.985	(0.425)	260170	50.0000	38.452
10 Iodomethane	142	2.041	2.041	(0.437)	232623	50.0000	41.580
11 Bromoethane	108	2.137	2.137	(0.458)	183126	50.0000	39.017
12 Acrolein	56	2.245	2.245	(0.481)	359165	250.000	283.96
13 Methylene Chloride	84	2.420	2.420	(0.519)	409617	50.0000	62.138
14 Acetone	43	2.567	2.567	(0.550)	792629	250.000	233.07

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.562	2.562	(0.549)	421328	50.0000	49.685
	16 Methyl tert butyl ether	73	2.743	2.743	(0.588)	1372861	50.0000	50.569
	17 1,1-Dichloroethane	63	3.184	3.184	(0.682)	883976	50.0000	44.262
	18 Acrylonitrile	53	3.286	3.286	(0.704)	224835	50.0000	47.943
	19 Vinyl Acetate	43	3.523	3.523	(0.755)	1225544	50.0000	48.360
	20 Cis-1,2-Dichloroethene	96	3.732	3.732	(0.800)	457528	50.0000	43.827
	22 2,2-Dichloropropane	77	3.829	3.829	(0.821)	638161	50.0000	42.411
	23 Bromochloromethane	128	3.919	3.919	(0.840)	203576	50.0000	45.088
	24 Chloroform	83	4.021	4.021	(0.862)	753831	50.0000	44.614
	25 Carbon Tetrachloride	117	4.106	4.106	(0.802)	557585	50.0000	42.750
$	27 Dibromofluoromethane	111	4.185	4.185	(0.897)	528721	50.0000	49.851
	26 1,1,1-Trichloroethane	97	4.179	4.179	(0.896)	657586	50.0000	42.921
	28 1,1-Dichloropropene	75	4.298	4.298	(0.840)	626191	50.0000	42.551
	29 2-Butanone	72	4.377	4.377	(0.938)	314466	250.000	249.84
	30 Benzene	78	4.530	4.530	(0.885)	1898889	50.0000	44.670
*	31 Pentafluorobenzene	168	4.666	4.666	(1.000)	470814	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.999)	524745	50.0000	49.563
	33 1,2-Dichloroethane	62	4.722	4.722	(0.923)	621573	50.0000	45.982
	34 Trichloroethene	95	5.068	5.068	(0.990)	446465	50.0000	42.845
*	35 1,4-Difluorobenzene	114	5.118	5.118	(1.000)	1445861	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.060)	261943	50.0000	45.568
	38 1,2-Dichloropropane	63	5.514	5.514	(1.077)	532202	50.0000	44.486
	39 Bromodichloromethane	83	5.594	5.594	(1.093)	589691	50.0000	45.199
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.197)	326610	50.0000	50.587
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.200)	781245	50.0000	46.806
$	42 d8-Toluene	98	6.301	6.301	(1.231)	2038524	50.0000	49.855
	43 Toluene	92	6.340	6.340	(1.239)	1189683	50.0000	44.121
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	464505	50.0000	42.255
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.311)	1267094	250.000	258.77
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.311)	715830	50.0000	47.208
	47 1,1,2-Trichloroethane	97	6.838	6.838	(1.336)	399905	50.0000	46.643
	48 Chlorodibromomethane	129	6.974	6.974	(0.917)	442120	50.0000	46.427
	49 1,3-Dichloropropane	76	7.053	7.053	(0.927)	735375	50.0000	46.612
	50 1,2-Dibromoethane	107	7.149	7.149	(1.397)	391509	50.0000	47.321
	51 2-Hexanone	43	7.421	7.421	(0.975)	2145359	250.000	258.81
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1620542	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	1217410	50.0000	44.391
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	2167908	50.0000	46.172
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	432236	50.0000	44.720
	56 m,p-xylene	106	7.805	7.805	(1.026)	1637588	100.000	92.786
	57 o-Xylene	106	8.168	8.168	(1.074)	788480	50.0000	46.506
	58 Styrene	104	8.213	8.213	(1.080)	1360134	50.0000	47.408
	59 Bromoform	173	8.207	8.207	(0.848)	325407	50.0000	47.206
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	2010437	50.0000	46.219
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	861398	50.0000	50.081
	63 Bromobenzene	156	8.756	8.756	(0.904)	508001	50.0000	43.654
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	2378706	50.0000	45.126

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.886	8.886	(0.918)	544172	50.0000	47.325
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	1461612	50.0000	44.857
67	1,3,5-Trimethyl Benzene	105	9.010	9.010	(0.930)	1695879	50.0000	45.899
68	1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	167597	50.0000	47.692
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	202886	50.0000	46.060
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	1527297	50.0000	44.716
71	T-Butyl Benzene	119	9.288	9.288	(0.959)	1486109	50.0000	45.600
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	1683259	50.0000	46.360
73	S-Butyl Benzene	105	9.452	9.452	(0.976)	2189766	50.0000	45.725
74	4-Isopropyl Toluene	119	9.599	9.599	(0.991)	1803233	50.0000	46.471
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	948574	50.0000	44.029
* 76	d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	872028	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	968266	50.0000	43.055
78	N-Butyl Benzene	91	9.983	9.983	(1.031)	1687656	50.0000	45.799
$ 79	d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	857710	50.0000	49.847
80	1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	918082	50.0000	44.022
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	109895	50.0000	49.129
82	Hexachloro 1,3-Butadiene	225	11.505	11.505	(1.188)	394211	50.0000	42.877
83	1,2,4-Trichlorobenzene	180	11.494	11.494	(1.187)	664756	50.0000	44.860
84	Naphthalene	128	11.805	11.805	(1.219)	1645762	50.0000	49.914
85	1,2,3-Trichlorobenzene	180	11.986	11.986	(1.238)	645979	50.0000	45.700

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0500524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	470814	0.00
35 1,4-Difluorobenze	1445861	722930	2891722	1445861	0.00
52 d5-Chlorobenzene	1620542	810271	3241084	1620542	0.00
76 d4-1,4-Dichlorobe	872028	436014	1744056	872028	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

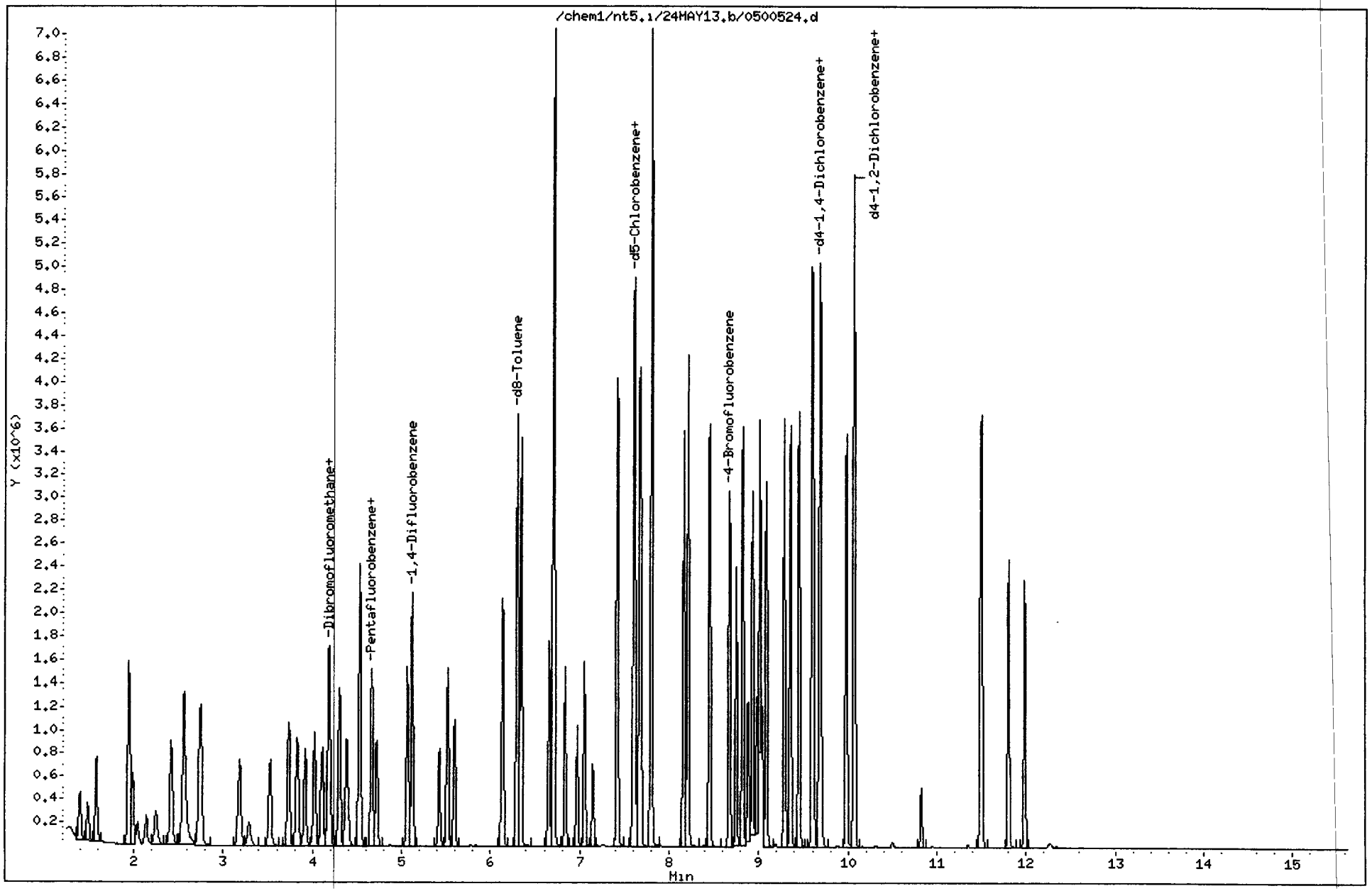
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/0500524.d
Date : 24-MAY-2013 09:30
Client ID: VSTD50
Sample Info: IC0524,5,5,0

Column phase: RTXVMS

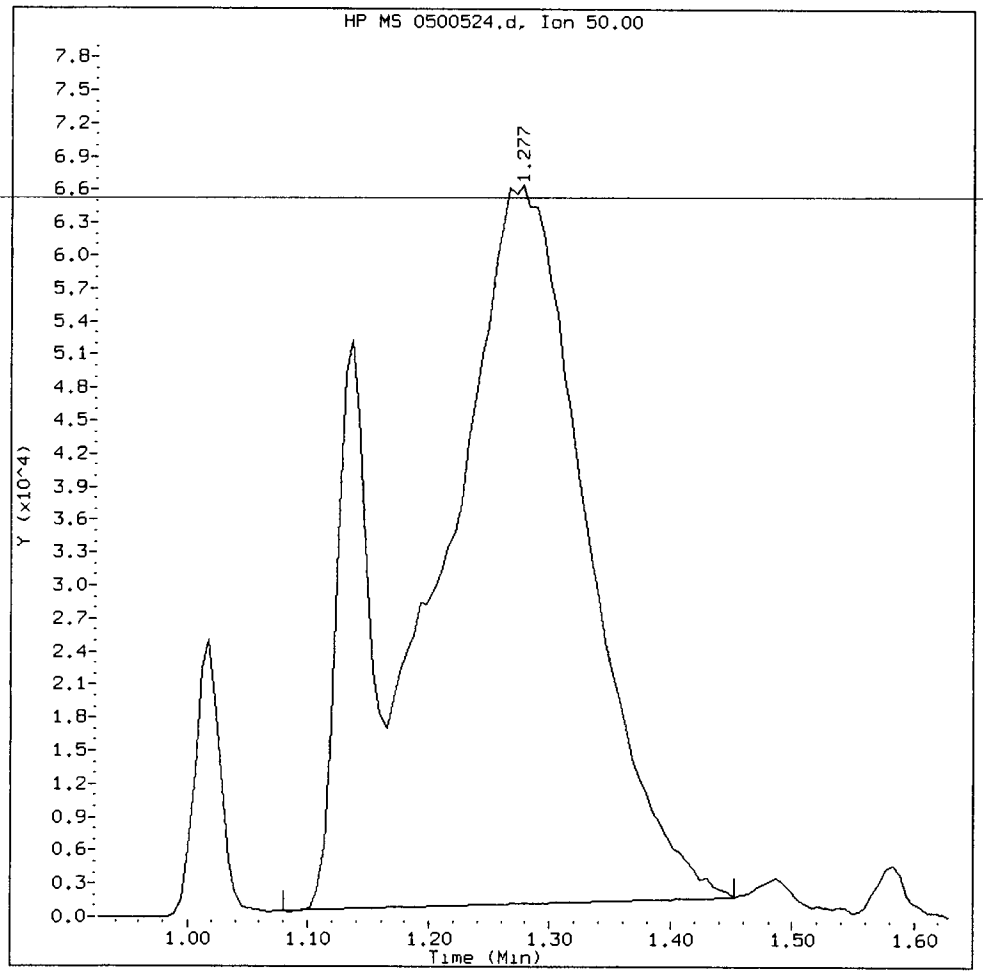
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0524, /chem1/nt5.i/24MAY13.b/0500524.d

Chloromethane Amount: 43.58 Area: 602467



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - 0500524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/1000524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD100
Inj Date : 24-MAY-2013 09:06
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 09:06 Cal File: 1000524.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.023	1.017	(0.219)	678597	100.000	98.168
2 Chloromethane	50	1.283	1.277	(0.275)	1414961	100.000	105.49(M)
3 Vinyl Chloride	62	1.193	1.187	(0.256)	1384408	100.000	110.98
4 Bromomethane	94	1.402	1.396	(0.300)	634419	100.000	97.477
5 Chloroethane	64	1.487	1.487	(0.319)	689546	100.000	103.14
6 Trichlorofluoromethane	101	1.583	1.583	(0.339)	1335961	100.000	103.35
7 1,1-Dichloroethene	96	1.945	1.945	(0.417)	704845	100.000	96.535
8 Carbon Disulfide	76	1.945	1.945	(0.417)	2288941	100.000	97.060
9 112Trichloro122Trifluoroethane	101	1.990	1.985	(0.427)	612335	100.000	93.268
10 Iodomethane	142	2.047	2.041	(0.439)	651820	100.000	120.07
11 Bromoethane	108	2.143	2.137	(0.459)	411157	100.000	90.282
12 Acrolein	56	2.245	2.245	(0.481)	541564	500.000	441.27
13 Methylene Chloride	84	2.414	2.420	(0.517)	535836	100.000	83.772
14 Acetone	43	2.590	2.567	(0.555)	1252245	500.000	379.48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.550	2.562	(0.547)	638379	100.000	77.583
	16 Methyl tert butyl ether	73	2.754	2.743	(0.590)	2944936	100.000	111.80
	17 1,1-Dichloroethane	63	3.178	3.184	(0.681)	2024183	100.000	104.45
	18 Acrylonitrile	53	3.303	3.286	(0.708)	467284	100.000	102.69
	19 Vinyl Acetate	43	3.529	3.523	(0.756)	2580465	100.000	104.94
	20 Cis-1,2-Dichloroethene	96	3.732	3.732	(0.800)	1047496	100.000	103.41
	22 2,2-Dichloropropane	77	3.829	3.829	(0.821)	1505362	100.000	103.11
	23 Bromochloromethane	128	3.919	3.919	(0.840)	453502	100.000	103.51
	24 Chloroform	83	4.021	4.021	(0.862)	1710740	100.000	104.34
	25 Carbon Tetrachloride	117	4.100	4.106	(0.801)	1322914	100.000	104.52
$	27 Dibromofluoromethane	111	4.191	4.185	(0.898)	513847	50.0000	49.931
	26 1,1,1-Trichloroethane	97	4.174	4.179	(0.895)	1557918	100.000	104.80
	28 1,1-Dichloropropene	75	4.298	4.298	(0.840)	1481310	100.000	103.73
	29 2-Butanone	72	4.394	4.377	(0.942)	646911	500.000	529.69
	30 Benzene	78	4.530	4.530	(0.885)	4279790	100.000	103.75
*	31 Pentafluorobenzene	168	4.666	4.666	(1.000)	456837	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.999)	508011	50.0000	49.450
	33 1,2-Dichloroethane	62	4.722	4.722	(0.923)	1354023	100.000	103.23
	34 Trichloroethene	95	5.068	5.068	(0.990)	1038807	100.000	102.73
*	35 1,4-Difluorobenzene	114	5.118	5.118	(1.000)	1403019	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.060)	577895	100.000	103.60
	38 1,2-Dichloropropane	63	5.520	5.514	(1.078)	1224410	100.000	105.47
	39 Bromodichloromethane	83	5.594	5.594	(1.093)	1330777	100.000	105.12
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.125	(1.198)	717149	100.000	114.47
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.200)	1742889	100.000	107.61
$	42 d8-Toluene	98	6.301	6.301	(1.231)	1975512	50.0000	49.789
	43 Toluene	92	6.340	6.340	(1.239)	2689949	100.000	102.81
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	1085403	100.000	102.43
	45 4-Methyl-2-Pentanone	58	6.714	6.708	(1.312)	2568058	500.000	540.47
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.311)	1570206	100.000	106.72
	47 1,1,2-Trichloroethane	97	6.838	6.838	(1.336)	869703	100.000	104.54
	48 Chlorodibromomethane	129	6.974	6.974	(0.917)	974010	100.000	106.11
	49 1,3-Dichloropropane	76	7.059	7.053	(0.928)	1600052	100.000	105.21
	50 1,2-Dibromoethane	107	7.155	7.149	(1.398)	851629	100.000	106.08
	51 2-Hexanone	43	7.426	7.421	(0.976)	4214951	500.000	527.51
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1562110	50.0000	
	53 Chlorobenzene	112	7.624	7.619	(1.002)	2682139	100.000	101.46
	54 Ethyl Benzene	91	7.675	7.670	(1.009)	4698919	100.000	103.82
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.687	(1.011)	975269	100.000	104.68
	56 m,p-xylene	106	7.811	7.805	(1.027)	3583927	200.000	210.66
	57 o-Xylene	106	8.168	8.168	(1.074)	1798142	100.000	110.02
	58 Styrene	104	8.218	8.213	(1.080)	3014720	100.000	109.01
	59 Bromoform	173	8.213	8.207	(0.848)	694892	100.000	106.70
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	4428152	100.000	107.75
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	830773	50.0000	50.107
	63 Bromobenzene	156	8.756	8.756	(0.904)	1122545	100.000	102.10
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	5124776	100.000	102.90

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.886	8.886	(0.918)	1133243	100.000	104.31
66	2-Chloro Toluene	91	8.937	8.931	(0.923)	3227877	100.000	104.85
67	1,3,5-Trimethyl Benzene	105	9.016	9.010	(0.931)	3740312	100.000	107.15
68	1,2,3-Trichloropropane	110	8.988	8.982	(0.928)	345930	100.000	104.19
69	Trans-1,4-Dichloro 2-Butene	53	9.044	9.039	(0.934)	425686	100.000	102.29
70	4-Chloro Toluene	91	9.090	9.084	(0.939)	3362746	100.000	104.21
71	T-Butyl Benzene	119	9.293	9.288	(0.960)	3325303	100.000	108.00
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	3693597	100.000	107.68
73	S-Butyl Benzene	105	9.457	9.452	(0.977)	4754586	100.000	105.08
74	4-Isopropyl Toluene	119	9.599	9.599	(0.991)	3961268	100.000	108.05
75	1,3-Dichlorobenzene	146	9.616	9.610	(0.993)	2070230	100.000	101.71
* 76	d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	823874	50.0000	
77	1,4-Dichlorobenzene	146	9.701	9.695	(1.002)	2114347	100.000	99.511
78	N-Butyl Benzene	91	9.983	9.983	(1.031)	3774288	100.000	108.41
$ 79	d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	802639	50.0000	49.373
80	1,2-Dichlorobenzene	146	10.080	10.074	(1.041)	1966081	100.000	99.784
81	1,2-Dibromo 3-Chloropropane	75	10.832	10.826	(1.119)	214953	100.000	101.71
82	Hexachloro 1,3-Butadiene	225	11.505	11.505	(1.188)	871338	100.000	100.31
83	1,2,4-Trichlorobenzene	180	11.499	11.494	(1.188)	1459156	100.000	104.22
84	Naphthalene	128	11.811	11.805	(1.220)	3350352	100.000	107.55
85	1,2,3-Trichlorobenzene	180	11.992	11.986	(1.238)	1367079	100.000	102.37

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1000524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD100
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	456837	-2.97
35 1,4-Difluorobenze	1445861	722930	2891722	1403019	-2.96
52 d5-Chlorobenzene	1620542	810271	3241084	1562110	-3.61
76 d4-1,4-Dichlorobe	872028	436014	1744056	823874	-5.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

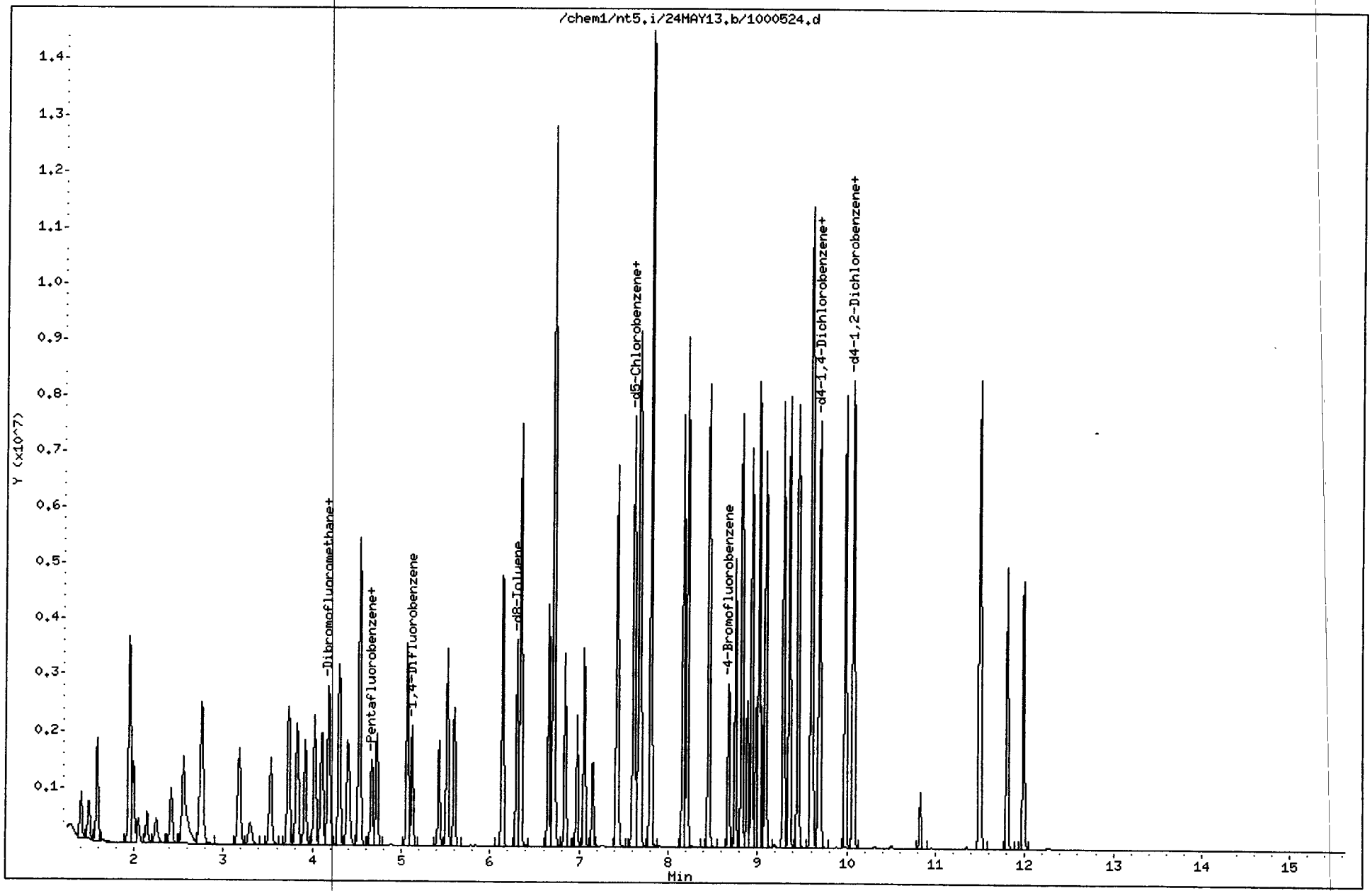
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/1000524.d
Date : 24-MAY-2013 09:06
Client ID: VSTD100
Sample Info: IC0524,5,5,0

Column phase: RTXVMS

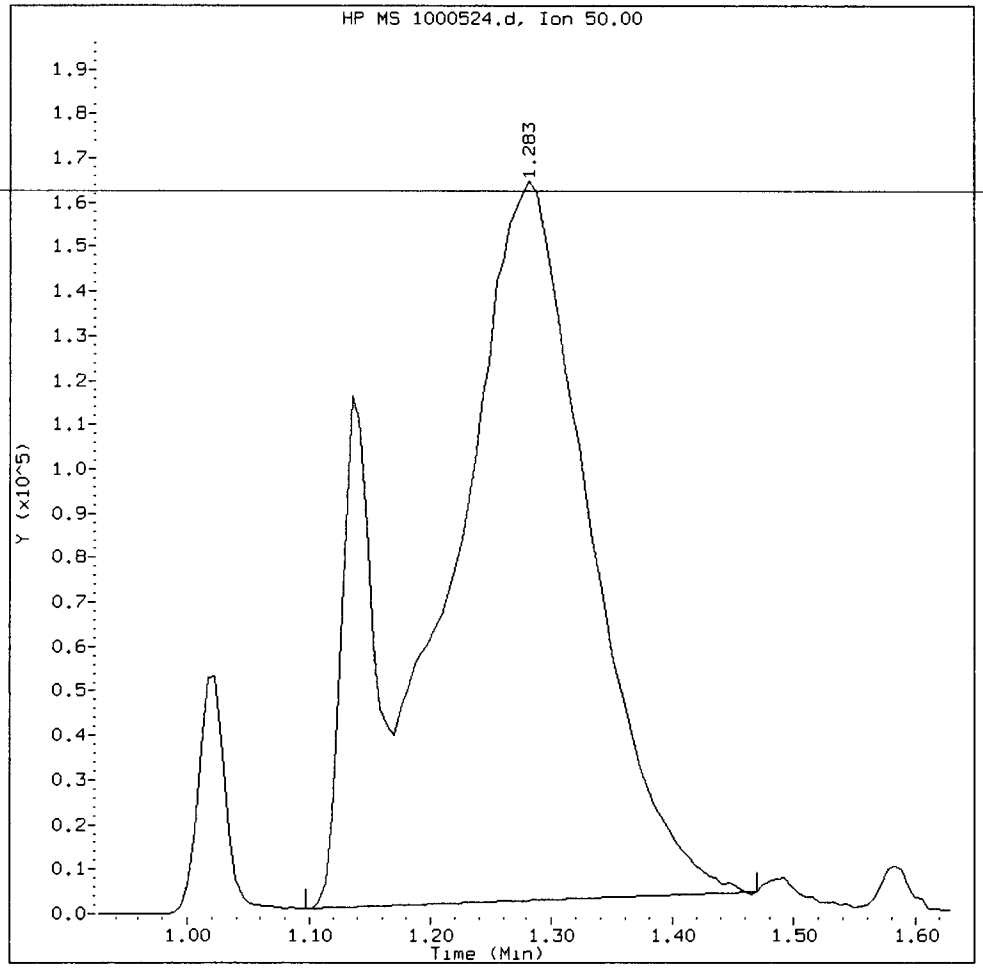
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0524, /chem1/nt5.i/24MAY13.b/1000524.d

Chloromethane Amount: 105.49 Area: 1414961



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/14/13

CO-ELUTION SUMMARY FOR FILE - 1000524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/1500524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD150
Inj Date : 24-MAY-2013 08:42
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:42 Cal File: 1500524.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.012	1.017	(0.217)	1351805	150.000	188.60
2 Chloromethane	50	1.272	1.277	(0.273)	2175240	150.000	156.39(M)
3 Vinyl Chloride	62	1.187	1.187	(0.255)	2257124	150.000	174.50
4 Bromomethane	94	1.396	1.396	(0.300)	947290	150.000	140.37
5 Chloroethane	64	1.481	1.487	(0.318)	970610	150.000	140.02
6 Trichlorofluoromethane	101	1.577	1.583	(0.338)	2082935	150.000	155.40
7 1,1-Dichloroethene	96	1.939	1.945	(0.416)	1159292	150.000	153.12
8 Carbon Disulfide	76	1.939	1.945	(0.416)	3723522	150.000	152.27
9 112Trichloro122Trifluoroethane	101	1.985	1.985	(0.426)	1038014	150.000	152.48
10 Iodomethane	142	2.041	2.041	(0.438)	1079718	150.000	191.82
11 Bromoethane	108	2.137	2.137	(0.459)	646031	150.000	136.81
12 Acrolein	56	2.245	2.245	(0.482)	884571	750.000	695.11
13 Methylene Chloride	84	2.409	2.420	(0.517)	835601	150.000	125.99
14 Acetone	43	2.578	2.567	(0.553)	899360	750.000	262.84

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.545	2.562	(0.546)	949728	150.000	111.31
	16 Methyl tert butyl ether	73	2.737	2.743	(0.587)	2488408	150.000	91.103
	17 1,1-Dichloroethane	63	3.161	3.184	(0.678)	3094997	150.000	154.03
	18 Acrylonitrile	53	3.297	3.286	(0.707)	697002	150.000	147.72
	19 Vinyl Acetate	43	3.523	3.523	(0.756)	3825356	150.000	150.03
	20 Cis-1,2-Dichloroethene	96	3.721	3.732	(0.798)	1613155	150.000	153.58
	22 2,2-Dichloropropane	77	3.817	3.829	(0.819)	2359496	150.000	155.85
	23 Bromochloromethane	128	3.908	3.919	(0.839)	701172	150.000	154.35
	24 Chloroform	83	4.015	4.021	(0.862)	2633088	150.000	154.89
	25 Carbon Tetrachloride	117	4.095	4.106	(0.801)	2082866	150.000	159.25
$	27 Dibromofluoromethane	111	4.185	4.185	(0.898)	530971	50.0000	49.759
	26 1,1,1-Trichloroethane	97	4.168	4.179	(0.894)	2426358	150.000	157.40
	28 1,1-Dichloropropene	75	4.287	4.298	(0.838)	2335486	150.000	158.27
	29 2-Butanone	72	4.406	4.377	(0.945)	961842	750.000	759.52
	30 Benzene	78	4.519	4.530	(0.884)	6336970	150.000	148.66
*	31 Pentafluorobenzene	168	4.660	4.666	(1.000)	473697	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.660	(0.999)	526874	50.0000	49.461
	33 1,2-Dichloroethane	62	4.717	4.722	(0.923)	2046946	150.000	151.01
	34 Trichloroethene	95	5.062	5.068	(0.990)	1639339	150.000	156.89
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	1449833	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	880505	150.000	152.76
	38 1,2-Dichloropropane	63	5.514	5.514	(1.079)	1872532	150.000	156.09
	39 Bromodichloromethane	83	5.594	5.594	(1.094)	2028682	150.000	155.07
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.125	(1.199)	1089505	150.000	168.28
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.201)	2654246	150.000	158.59
$	42 d8-Toluene	98	6.295	6.301	(1.231)	2039796	50.0000	49.750
	43 Toluene	92	6.340	6.340	(1.240)	4061978	150.000	150.23
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	1714054	150.000	159.36
	45 4-Methyl-2-Pentanone	58	6.719	6.708	(1.314)	3745805	750.000	762.88
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.312)	2380933	150.000	156.59
	47 1,1,2-Trichloroethane	97	6.844	6.838	(1.339)	1324341	150.000	154.04
	48 Chlorodibromomethane	129	6.974	6.974	(0.917)	1483051	150.000	159.17
	49 1,3-Dichloropropane	76	7.059	7.053	(0.928)	2419173	150.000	156.72
	50 1,2-Dibromoethane	107	7.155	7.149	(1.399)	1290797	150.000	155.59
	51 2-Hexanone	43	7.432	7.421	(0.977)	6218954	750.000	766.79
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1585589	50.0000	
	53 Chlorobenzene	112	7.624	7.619	(1.002)	4041450	150.000	150.61
	54 Ethyl Benzene	91	7.675	7.670	(1.009)	6769542	150.000	147.35
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.687	(1.011)	1492217	150.000	157.79
	56 m,p-xylene	106	7.811	7.805	(1.027)	5259306	300.000	304.56
	57 o-Xylene	106	8.173	8.168	(1.074)	2744061	150.000	165.42
	58 Styrene	104	8.218	8.213	(1.080)	4447592	150.000	158.44
	59 Bromoform	173	8.213	8.207	(0.848)	1035379	150.000	162.04
	60 Isopropyl Benzene	105	8.462	8.456	(0.873)	6392318	150.000	158.54
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	834787	50.0000	49.604
	63 Bromobenzene	156	8.756	8.756	(0.904)	1704680	150.000	158.03
	64 N-Propyl Benzene	91	8.829	8.824	(0.911)	7289724	150.000	149.19

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.892	8.886	(0.918)	1693190	150.000	158.86
	66 2-Chloro Toluene	91	8.937	8.931	(0.922)	4811966	150.000	159.32
	67 1,3,5-Trimethyl Benzene	105	9.022	9.010	(0.931)	5514007	150.000	161.00
	68 1,2,3-Trichloropropane	110	8.988	8.982	(0.928)	512009	150.000	157.18
	69 Trans-1,4-Dichloro 2-Butene	53	9.050	9.039	(0.934)	655389	150.000	160.52
	70 4-Chloro Toluene	91	9.095	9.084	(0.939)	4990089	150.000	157.61
	71 T-Butyl Benzene	119	9.293	9.288	(0.959)	4938835	150.000	163.49
	72 1,2,4-Trimethylbenzene	105	9.361	9.355	(0.966)	5395563	150.000	160.32
	73 S-Butyl Benzene	105	9.457	9.452	(0.976)	6791507	150.000	152.99
	74 4-Isopropyl Toluene	119	9.604	9.599	(0.991)	5736676	150.000	159.49
	75 1,3-Dichlorobenzene	146	9.616	9.610	(0.992)	3077224	150.000	154.09
*	76 d4-1,4-Dichlorobenzene	152	9.689	9.684	(1.000)	808326	50.0000	
	77 1,4-Dichlorobenzene	146	9.706	9.695	(1.002)	3157549	150.000	151.47
	78 N-Butyl Benzene	91	9.989	9.983	(1.031)	5552075	150.000	162.54
$	79 d4-1,2-Dichlorobenzene	152	10.074	10.068	(1.040)	791524	50.0000	49.626
	80 1,2-Dichlorobenzene	146	10.085	10.074	(1.041)	2918169	150.000	150.95
	81 1,2-Dibromo 3-Chloropropane	75	10.838	10.826	(1.119)	326731	150.000	157.58
	82 Hexachloro 1,3-Butadiene	225	11.516	11.505	(1.189)	1347846	150.000	158.15
	83 1,2,4-Trichlorobenzene	180	11.505	11.494	(1.187)	2266278	150.000	164.99
	84 Naphthalene	128	11.816	11.805	(1.220)	4913636	150.000	160.77
	85 1,2,3-Trichlorobenzene	180	11.997	11.986	(1.238)	2107123	150.000	160.82

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1500524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD150
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	473697	0.61
35 1,4-Difluorobenze	1445861	722930	2891722	1449833	0.27
52 d5-Chlorobenzene	1620542	810271	3241084	1585589	-2.16
76 d4-1,4-Dichlorobe	872028	436014	1744056	808326	-7.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.69	0.06

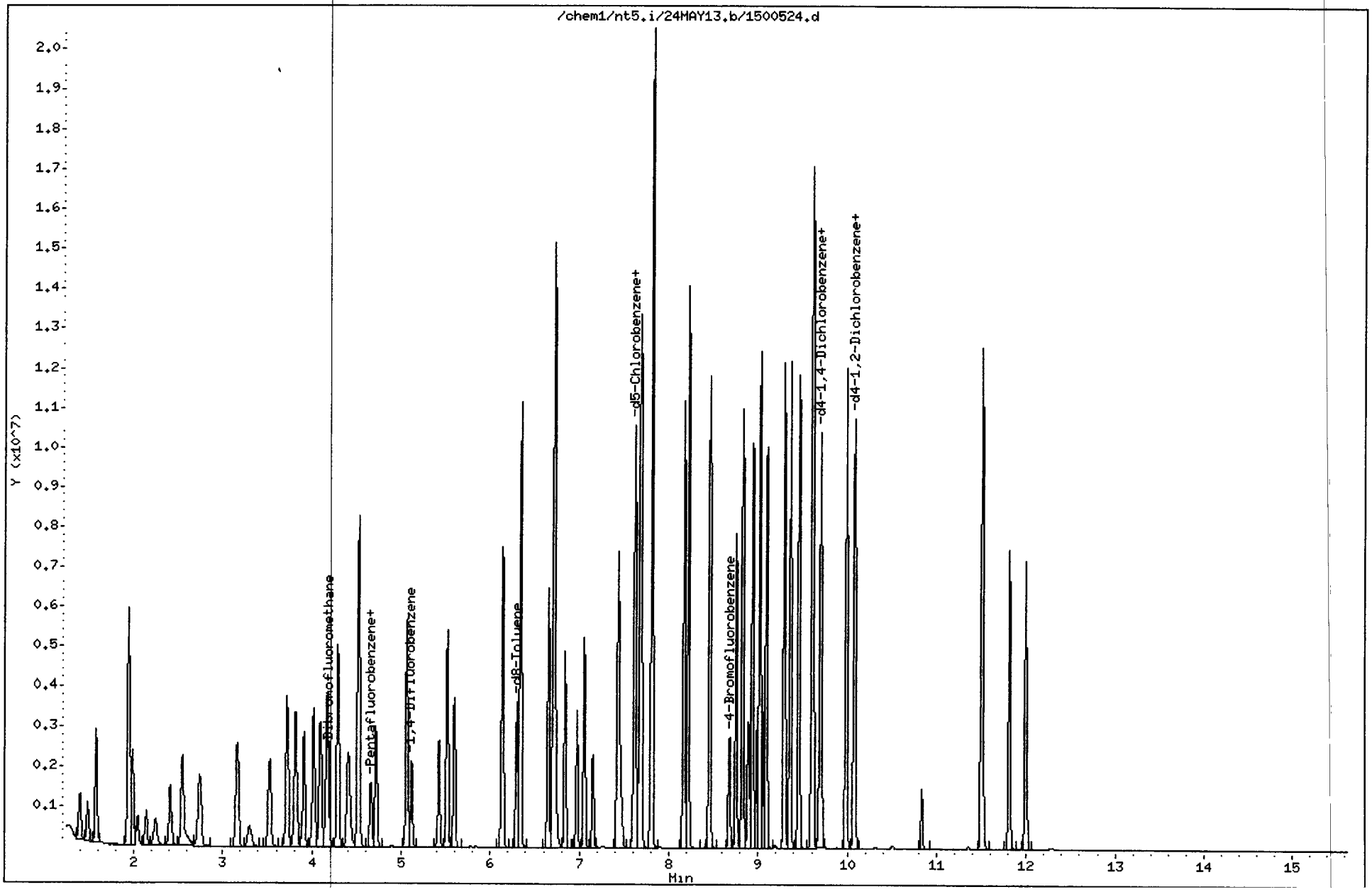
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/1500524.d
Date : 24-MAY-2013 08:42
Client ID: VSTD150
Sample Info: IC0524,5,5,0

Instrument: nt5.i

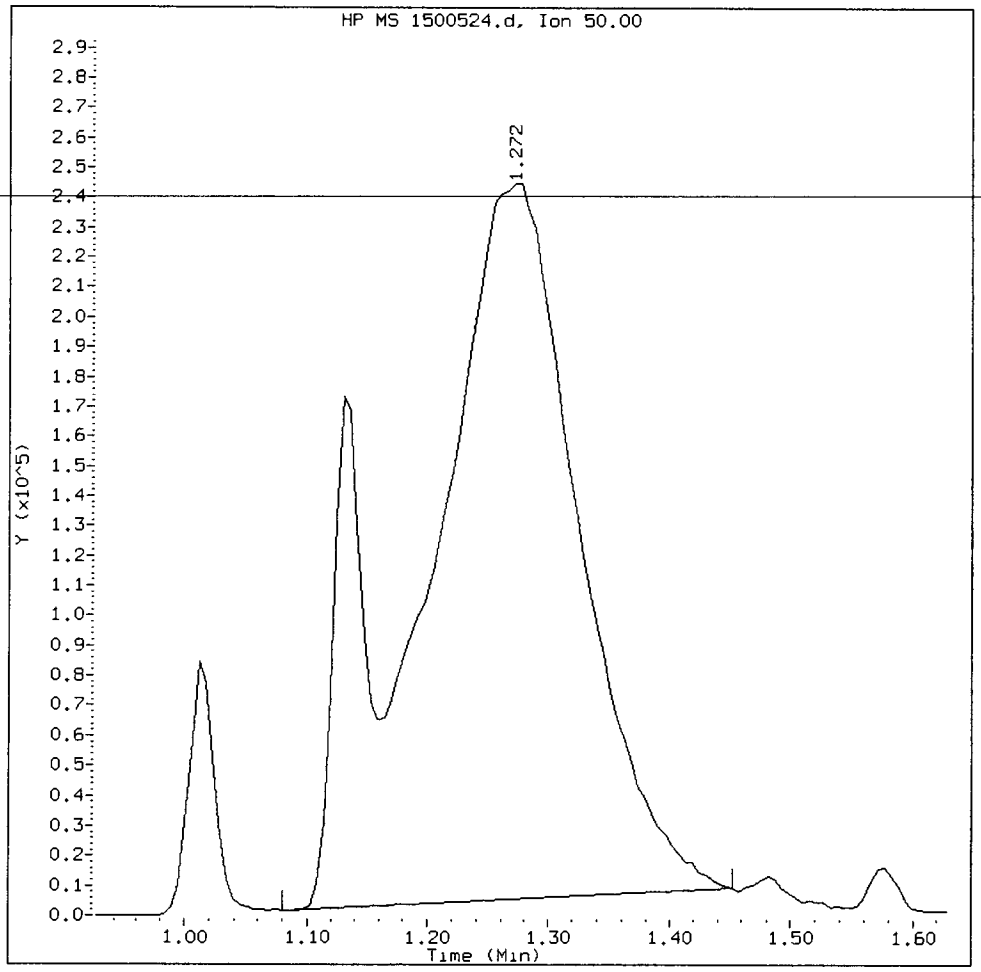
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0524, /chem1/nt5.i/24MAY13.b/1500524.d

Chloromethane Amount: 156.39 Area: 2175240



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

CO-ELUTION SUMMARY FOR FILE - 1500524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/2000524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD200
Inj Date : 24-MAY-2013 08:18
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.023	1.017	(0.219)	1442072	200.000	202.19
2 Chloromethane	50	1.272	1.277	(0.273)	2902878	200.000	209.74(M)
3 Vinyl Chloride	62	1.193	1.187	(0.256)	2925418	200.000	227.28
4 Bromomethane	94	1.402	1.396	(0.301)	1213680	200.000	180.73
5 Chloroethane	64	1.492	1.487	(0.320)	1155160	200.000	167.47
6 Trichlorofluoromethane	101	1.583	1.583	(0.340)	2787629	200.000	209.01
7 1,1-Dichloroethene	96	1.951	1.945	(0.419)	1847222	200.000	245.20
8 Carbon Disulfide	76	1.951	1.945	(0.419)	5735114	200.000	235.70
9 112Trichloro122Trifluoroethane	101	1.996	1.985	(0.428)	1735285	200.000	256.17
10 Iodomethane	142	2.052	2.041	(0.440)	1874041	200.000	334.58
11 Bromoethane	108	2.149	2.137	(0.461)	1058357	200.000	225.23
12 Acrolein	56	2.262	2.245	(0.485)	1742874	1000.00	1376.4
13 Methylene Chloride	84	2.426	2.420	(0.521)	1306499	200.000	197.96
14 Acetone	43	2.629	2.567	(0.564)	1423585	1000.00	418.11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.562	2.562	(0.550)	1465023	200.000	172.56
	16 Methyl tert butyl ether	73	2.731	2.743	(0.586)	4009751	200.000	147.53
	17 1,1-Dichloroethane	63	3.167	3.184	(0.680)	2022608	200.000	101.16
	18 Acrylonitrile	53	3.303	3.286	(0.709)	309267	200.000	65.870
	19 Vinyl Acetate	43	3.523	3.523	(0.756)	4850533	200.000	191.18
	20 Cis-1,2-Dichloroethene	96	3.721	3.732	(0.798)	2160756	200.000	206.74
	22 2,2-Dichloropropane	77	3.812	3.829	(0.818)	3157861	200.000	209.62
	23 Bromochloromethane	128	3.908	3.919	(0.839)	937061	200.000	207.30
	24 Chloroform	83	4.015	4.021	(0.862)	3505860	200.000	207.25
	25 Carbon Tetrachloride	117	4.095	4.106	(0.801)	2807720	200.000	213.86
$	27 Dibromofluoromethane	111	4.185	4.185	(0.898)	528804	50.0000	49.801
	26 1,1,1-Trichloroethane	97	4.168	4.179	(0.894)	3244480	200.000	211.52
	28 1,1-Dichloropropene	75	4.287	4.298	(0.838)	3142662	200.000	212.16
	29 2-Butanone	72	4.428	4.377	(0.950)	1241258	1000.00	985.01(M)
	30 Benzene	78	4.524	4.530	(0.885)	8024659	200.000	187.54
*	31 Pentafluorobenzene	168	4.660	4.666	(1.000)	471363	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.660	(0.999)	515680	50.0000	48.650
	33 1,2-Dichloroethane	62	4.722	4.722	(0.924)	2707101	200.000	198.96
	34 Trichloroethene	95	5.062	5.068	(0.990)	2210682	200.000	210.77
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	1455341	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.061)	1172536	200.000	202.65
	38 1,2-Dichloropropane	63	5.520	5.514	(1.080)	2493155	200.000	207.04
	39 Bromodichloromethane	83	5.594	5.594	(1.094)	2713730	200.000	206.65
	40 2-Chloroethyl Vinyl Ether	63	6.137	6.125	(1.200)	1424664	200.000	219.22
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.201)	3492775	200.000	207.90
$	42 d8-Toluene	98	6.301	6.301	(1.232)	2030733	50.0000	49.341
	43 Toluene	92	6.346	6.340	(1.241)	5249467	200.000	193.42
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	2332183	200.000	214.33
	45 4-Methyl-2-Pentanone	58	6.725	6.708	(1.315)	4757020	1000.00	965.16
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.312)	3130895	200.000	205.13
	47 1,1,2-Trichloroethane	97	6.844	6.838	(1.339)	1752824	200.000	203.11
	48 Chlorodibromomethane	129	6.980	6.974	(0.917)	1976641	200.000	209.70
	49 1,3-Dichloropropane	76	7.064	7.053	(0.929)	3174565	200.000	203.29
	50 1,2-Dibromoethane	107	7.155	7.149	(1.399)	1704863	200.000	204.72
	51 2-Hexanone	43	7.438	7.421	(0.978)	8051737	1000.00	981.33
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1604074	50.0000	
	53 Chlorobenzene	112	7.624	7.619	(1.002)	5239441	200.000	193.01
	54 Ethyl Benzene	91	7.681	7.670	(1.010)	8407602	200.000	180.90
	55 1,1,1,2-Tetrachloroethane	131	7.698	7.687	(1.012)	1988007	200.000	207.79
	56 m,p-xylene	106	7.817	7.805	(1.028)	6660419	400.000	381.25
	57 o-Xylene	106	8.173	8.168	(1.074)	3636398	200.000	216.68
	58 Styrene	104	8.224	8.213	(1.081)	5714302	200.000	201.22
	59 Bromoform	173	8.218	8.207	(0.848)	1359769	200.000	203.80
	60 Isopropyl Benzene	105	8.462	8.456	(0.873)	7909563	200.000	187.87
$	62 4-Bromofluorobenzene	95	8.682	8.677	(1.141)	838767	50.0000	49.266
	63 Bromobenzene	156	8.761	8.756	(0.904)	2278857	200.000	202.33
	64 N-Propyl Benzene	91	8.835	8.824	(0.911)	8961825	200.000	175.65

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.909	8.886	(0.919)	2218297	200.000	199.32
	66 2-Chloro Toluene	91	8.943	8.931	(0.922)	6169614	200.000	195.63
	67 1,3,5-Trimethyl Benzene	105	9.027	9.010	(0.931)	6978087	200.000	195.13
	68 1,2,3-Trichloropropane	110	8.999	8.982	(0.928)	668902	200.000	196.66
	69 Trans-1,4-Dichloro 2-Butene	53	9.056	9.039	(0.934)	800644	200.000	187.80
	70 4-Chloro Toluene	91	9.101	9.084	(0.939)	6529386	200.000	197.51
	71 T-Butyl Benzene	119	9.299	9.288	(0.959)	6301936	200.000	199.79
	72 1,2,4-Trimethylbenzene	105	9.367	9.355	(0.966)	6839171	200.000	194.62
	73 S-Butyl Benzene	105	9.463	9.452	(0.976)	8397162	200.000	181.16
	74 4-Isopropyl Toluene	119	9.616	9.599	(0.992)	7232429	200.000	192.57
	75 1,3-Dichlorobenzene	146	9.627	9.610	(0.993)	4029882	200.000	193.26
*	76 d4-1,4-Dichlorobenzene	152	9.695	9.684	(1.000)	844016	50.0000	
	77 1,4-Dichlorobenzene	146	9.712	9.695	(1.002)	4216912	200.000	193.73
	78 N-Butyl Benzene	91	10.000	9.983	(1.032)	7128039	200.000	199.86
$	79 d4-1,2-Dichlorobenzene	152	10.085	10.068	(1.040)	825273	50.0000	49.554
	80 1,2-Dichlorobenzene	146	10.091	10.074	(1.041)	3925999	200.000	194.50
	81 1,2-Dibromo 3-Chloropropane	75	10.843	10.826	(1.118)	430690	200.000	198.93
	82 Hexachloro 1,3-Butadiene	225	11.533	11.505	(1.190)	1892281	200.000	212.65
	83 1,2,4-Trichlorobenzene	180	11.522	11.494	(1.188)	3196239	200.000	222.85
	84 Naphthalene	128	11.833	11.805	(1.221)	6354889	200.000	199.13
	85 1,2,3-Trichlorobenzene	180	12.020	11.986	(1.240)	2941419	200.000	215.00

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 2000524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD200
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	471363	0.12
35 1,4-Difluorobenze	1445861	722930	2891722	1455341	0.66
52 d5-Chlorobenzene	1620542	810271	3241084	1604074	-1.02
76 d4-1,4-Dichlorobe	872028	436014	1744056	844016	-3.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.69	0.12

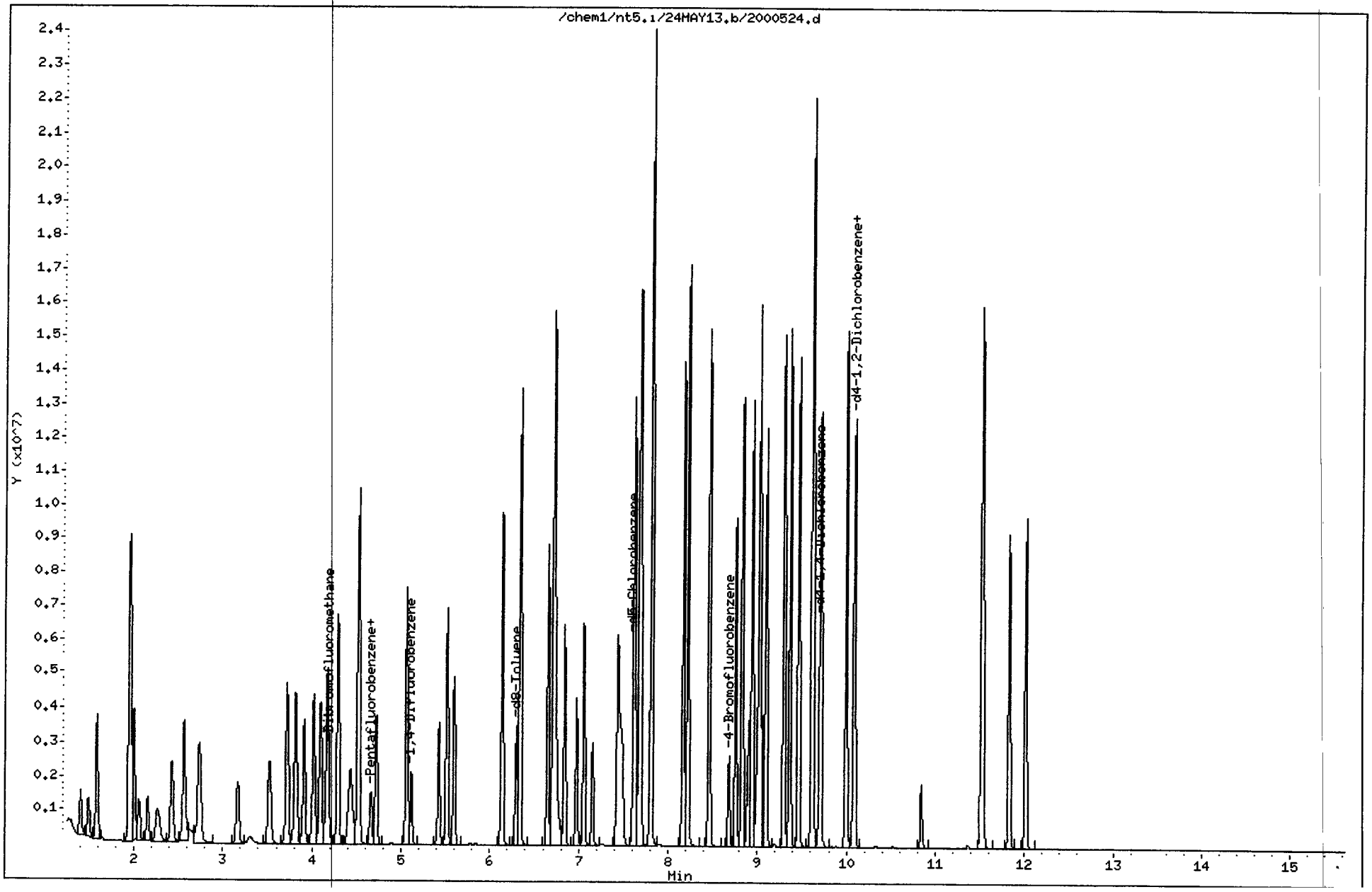
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/2000524.d
Date : 24-MAY-2013 08:18
Client ID: VSTD200
Sample Info: IC0524,5,5,0

Column phase: RTXVMS

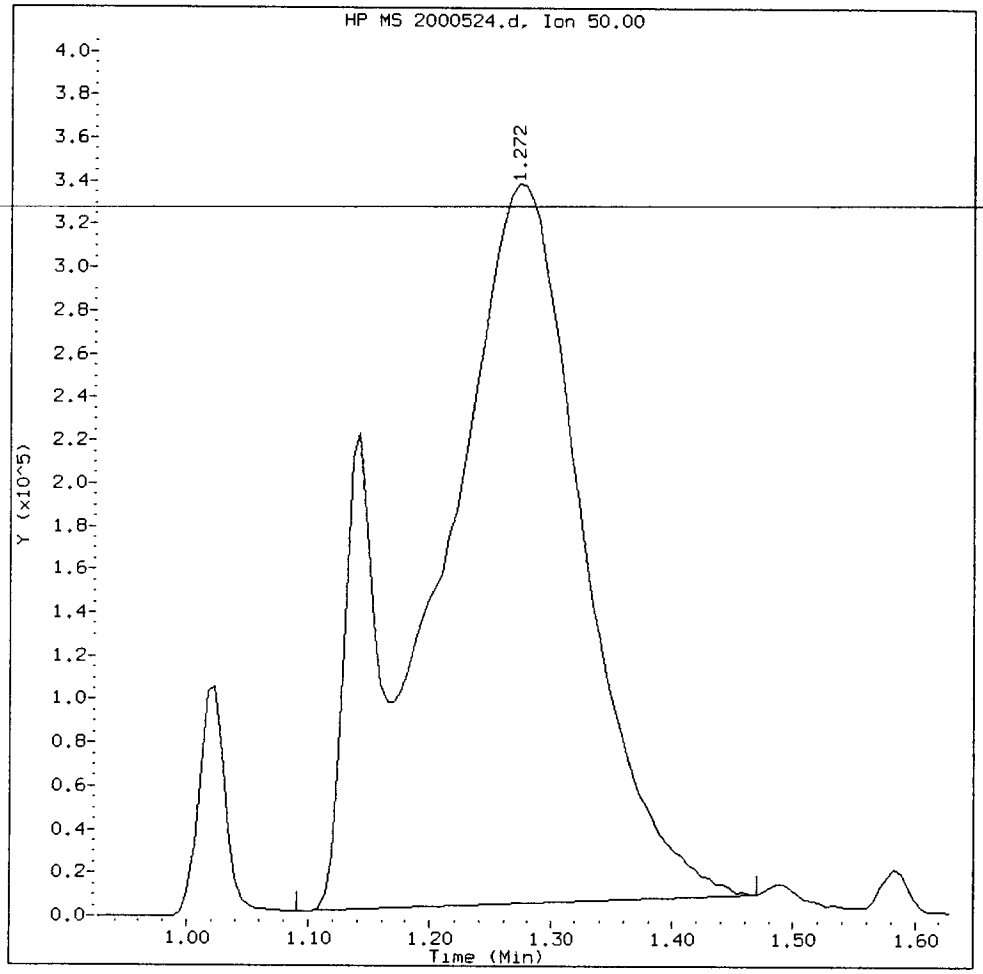
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0524, /chem1/nt5.i/24MAY13.b/2000524.d

Chloromethane Amount: 209.74 Area: 2902878



MANUAL INTEGRATION for Chloromethane

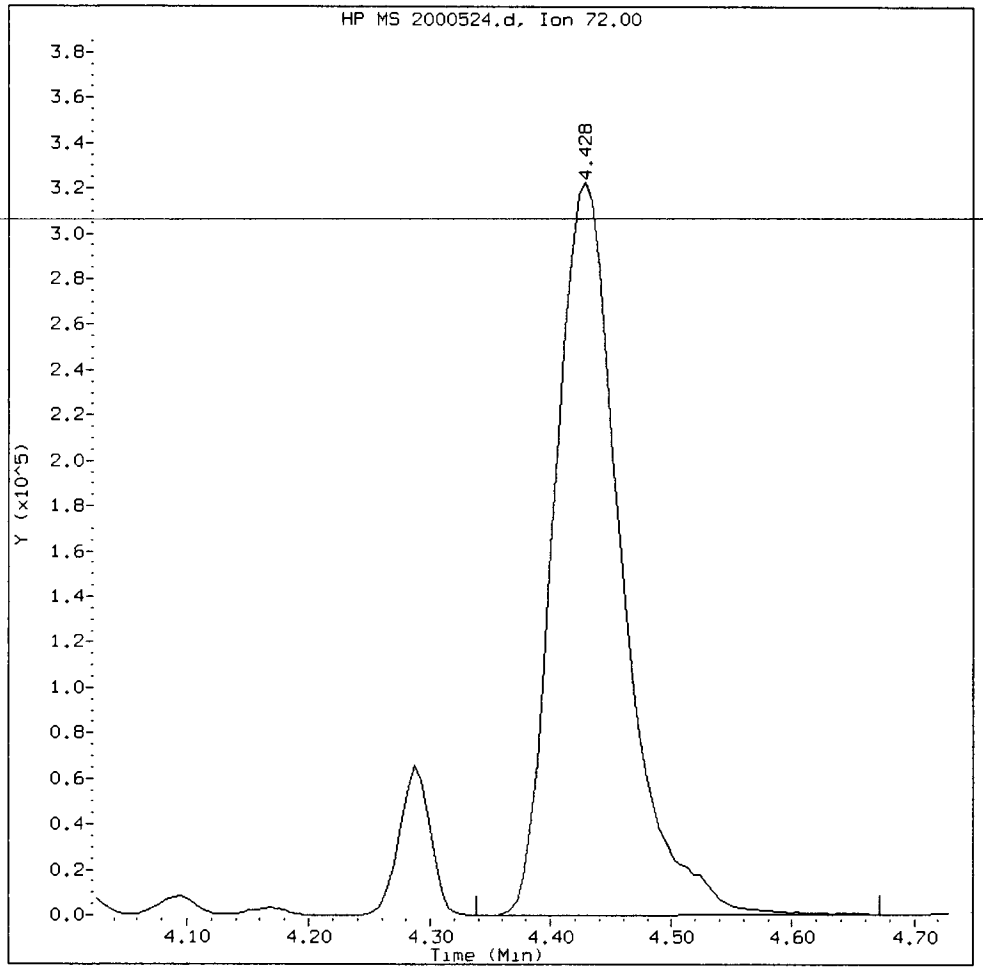
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0524, /chem1/nt5.i/24MAY13.b/2000524.d

2-Butanone Amount: 985.01 Area: 1241258



MANUAL INTEGRATION for 2-Butanone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

CO-ELUTION SUMMARY FOR FILE - 2000524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/icv0524.d
Lab Smp Id: ICV0524 Client Smp ID: ICV0524
Inj Date : 24-MAY-2013 11:46
Operator : PB Inst ID: nt5.i
Smp Info : ICV0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.006	1.017	(0.216)	440688	66.6723	66.672(R)
2 Chloromethane	50	1.125	1.277	(0.241)	706900	55.1141	55.114(M)
3 Vinyl Chloride	62	1.176	1.187	(0.252)	721863	60.5183	60.518(R)
4 Bromomethane	94	1.385	1.396	(0.297)	339674	54.5816	54.582
5 Chloroethane	64	1.470	1.487	(0.315)	381992	59.7577	59.758(M)
6 Trichlorofluoromethane	101	1.566	1.583	(0.336)	689884	55.8158	55.816
7 1,1-Dichloroethene	96	1.928	1.945	(0.414)	378385	54.1976	54.198
8 Carbon Disulfide	76	1.934	1.945	(0.415)	1197176	53.0910	53.091
9 112Trichloro122Trifluoroethane	101	1.973	1.985	(0.423)	349262	55.6356	55.636
10 Iodomethane	142	2.030	2.041	(0.436)	301499	58.0847	58.085
11 Bromoethane	108	2.126	2.137	(0.456)	220097	50.5435	50.544
12 Acrolein	56	2.233	2.245	(0.479)	57395	48.9089	48.909
13 Methylene Chloride	84	2.403	2.420	(0.516)	412524	67.4487	67.449(QR)
14 Acetone	43	2.561	2.567	(0.550)	108170	34.2820	34.282(R)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.545	2.562	(0.546)	475234	60.4021	60.402(R)
	16 Methyl tert butyl ether	73	2.726	2.743	(0.585)	1248932	49.5842	49.584
	17 1,1-Dichloroethane	63	3.167	3.184	(0.680)	908568	49.0333	49.033
	18 Acrylonitrile	53	3.274	3.286	(0.703)	197879	45.4780	45.478
	19 Vinyl Acetate	43	3.512	3.523	(0.754)	531257	22.5949	22.595(R)
	20 Cis-1,2-Dichloroethene	96	3.721	3.732	(0.798)	504134	52.0489	52.049
	22 2,2-Dichloropropane	77	3.817	3.829	(0.819)	701071	50.2177	50.218
	23 Bromochloromethane	128	3.908	3.919	(0.839)	398939	95.2321	95.232
	24 Chloroform	83	4.010	4.021	(0.860)	771544	49.2156	49.216
	25 Carbon Tetrachloride	117	4.100	4.106	(0.802)	622484	51.0788	51.079
$	27 Dibromofluoromethane	111	4.179	4.185	(0.897)	491247	49.9223	49.922
	26 1,1,1-Trichloroethane	97	4.168	4.179	(0.894)	719478	50.6144	50.614
	28 1,1-Dichloropropene	75	4.292	4.298	(0.840)	675850	49.1521	49.152
	29 2-Butanone	72	4.372	4.377	(0.938)	52530	44.9819	44.982(Q)
	30 Benzene	78	4.519	4.530	(0.884)	1966392	49.5081	49.508
*	31 Pentafluorobenzene	168	4.660	4.666	(1.000)	436823	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.660	(0.999)	482304	49.0990	49.099
	33 1,2-Dichloroethane	62	4.711	4.722	(0.921)	568894	45.0426	45.043
	34 Trichloroethene	95	5.062	5.068	(0.990)	486261	49.9432	49.943
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	1350934	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	239445	44.5814	44.581
	38 1,2-Dichloropropane	63	5.514	5.514	(1.079)	525654	47.0262	47.026
	39 Bromodichloromethane	83	5.588	5.594	(1.093)	628156	51.5304	51.530
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	294619	48.8383	48.838
	41 Cis 1,3-dichloropropene	75	6.137	6.142	(1.200)	788349	50.5508	50.551
$	42 d8-Toluene	98	6.295	6.301	(1.231)	1899135	49.7098	49.710
	43 Toluene	92	6.340	6.340	(1.240)	1238442	49.1572	49.157
	44 Tetrachloroethene	166	6.651	6.657	(0.874)	509497	50.4060	50.406
	45 4-Methyl-2-Pentanone	58	6.702	6.708	(1.311)	211119	46.1448	46.145(Q)
	46 Trans 1,3-Dichloropropene	75	6.702	6.708	(1.311)	652800	46.0765	46.076(Q)
	47 1,1,2-Trichloroethane	97	6.832	6.838	(1.336)	365269	45.5970	45.597
	48 Chlorodibromomethane	129	6.968	6.974	(0.916)	445184	50.8429	50.843
	49 1,3-Dichloropropane	76	7.053	7.053	(0.927)	663782	45.7581	45.758
	50 1,2-Dibromoethane	107	7.149	7.149	(1.398)	341088	44.1232	44.123
	51 2-Hexanone	43	7.421	7.421	(0.975)	350170	45.9435	45.944
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1490058	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	1166473	46.2580	46.258
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	2273106	52.6516	52.652
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	424899	47.8104	47.810
	56 m,p-xylene	106	7.805	7.805	(1.026)	1666660	102.703	102.70(Q)
	57 o-Xylene	106	8.167	8.168	(1.074)	751296	48.1928	48.193(Q)
	58 Styrene	104	8.213	8.213	(1.080)	1373384	52.0620	52.062
	59 Bromoform	173	8.207	8.207	(0.848)	295910	46.4498	46.450
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	1990743	49.5228	49.523
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	794910	50.2624	50.262
	63 Bromobenzene	156	8.756	8.756	(0.904)	498248	46.3293	46.329
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	2427740	49.8359	49.836

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.886	8.886	(0.918)	456108	42.9217	42.922
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	1438889	47.7836	47.784
67	1,3,5-Trimethyl Benzene	105	9.016	9.010	(0.931)	1847591	54.1088	54.109
68	1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	138057	42.5103	42.510
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	152769	37.5290	37.529(R)
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	1466121	46.4474	46.447
71	T-Butyl Benzene	119	9.288	9.288	(0.959)	1477278	49.0493	49.049
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	1792782	53.4294	53.429
73	S-Butyl Benzene	105	9.452	9.452	(0.976)	2205790	49.8394	49.839
74	4-Isopropyl Toluene	119	9.599	9.599	(0.991)	1872909	52.2281	52.228
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	912758	45.8440	45.844
* 76	d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	805888	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.700	9.695	(1.002)	998751	48.0549	48.055
78	N-Butyl Benzene	91	9.983	9.983	(1.031)	1897005	55.7047	55.705
$ 79	d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	790365	49.7028	49.703(Q)
80	1,2-Dichlorobenzene	146	10.079	10.074	(1.041)	847263	43.9607	43.961
81	1,2-Dibromo 3-Chloropropane	75	10.832	10.826	(1.119)	86093	41.6467	41.647
82	Hexachloro 1,3-Butadiene	225	11.516	11.505	(1.189)	421815	49.6449	49.645
83	1,2,4-Trichlorobenzene	180	11.499	11.494	(1.188)	676429	49.3936	49.394
84	Naphthalene	128	11.816	11.805	(1.220)	1368496	44.9114	44.911
85	1,2,3-Trichlorobenzene	180	11.997	11.986	(1.239)	608223	46.5599	46.560

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: icv0524.d
Lab Smp Id: ICV0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: ICV0524
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	436823	-7.22
35 1,4-Difluorobenze	1445861	722930	2891722	1350934	-6.57
52 d5-Chlorobenzene	1620542	810271	3241084	1490058	-8.05
76 d4-1,4-Dichlorobe	872028	436014	1744056	805888	-7.58

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: ICV0524
Level: LOW
Data Type: MS DATA
SpikeList File: icv.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Client SDG: 24MAY13
Fraction: VOA
Client Smp ID: ICV0524
Operator: PB
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	66.672	133.34*	80-120
2 Chloromethane	50.000	55.114	110.23	80-120
3 Vinyl Chloride	50.000	60.518	121.04*	80-120
4 Bromomethane	50.000	54.582	109.16	80-120
5 Chloroethane	50.000	59.758	119.52	80-120
6 Trichlorofluoromet	50.000	55.816	111.63	80-120
12 Acrolein	50.000	48.909	97.82	80-120
9 112Trichloro122Tri	50.000	55.636	111.27	80-120
14 Acetone	50.000	34.282	68.56*	80-120
7 1,1-Dichloroethene	50.000	54.198	108.40	80-120
11 Bromoethane	50.000	50.544	101.09	80-120
10 Iodomethane	50.000	58.085	116.17	80-120
13 Methylene Chloride	50.000	67.449	134.90*	80-120
8 Carbon Disulfide	50.000	53.091	106.18	80-120
18 Acrylonitrile	50.000	45.478	90.96	80-120
15 Trans-1,2-Dichloro	50.000	60.402	120.80*	80-120
16 Methyl tert butyl	50.000	49.584	99.17	80-120
19 Vinyl Acetate	50.000	22.595	45.19*	80-120
17 1,1-Dichloroethane	50.000	49.033	98.07	80-120
29 2-Butanone	50.000	44.982	89.96	80-120
22 2,2-Dichloropropan	50.000	50.218	100.44	80-120
20 Cis-1,2-Dichloroet	50.000	52.049	104.10	80-120
24 Chloroform	50.000	49.216	98.43	80-120
23 Bromochloromethane	100.00	95.232	95.23	80-120
26 1,1,1-Trichloroeth	50.000	50.614	101.23	80-120
28 1,1-Dichloropropen	50.000	49.152	98.30	80-120
25 Carbon Tetrachlori	50.000	51.079	102.16	80-120
33 1,2-Dichloroethane	50.000	45.043	90.09	80-120
30 Benzene	50.000	49.508	99.02	80-120
34 Trichloroethene	50.000	49.943	99.89	80-120
38 1,2-Dichloropropan	50.000	47.026	94.05	80-120
39 Bromodichlorometha	50.000	51.530	103.06	80-120
37 Dibromomethane	50.000	44.581	89.16	80-120

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
40 2-Chloroethyl Viny	50.000	48.838	97.68	80-120
45 4-Methyl-2-Pentano	50.000	46.145	92.29	80-120
41 Cis 1,3-dichloropr	50.000	50.551	101.10	80-120
43 Toluene	50.000	49.157	98.31	80-120
46 Trans 1,3-Dichloro	50.000	46.076	92.15	80-120
51 2-Hexanone	50.000	45.944	91.89	80-120
47 1,1,2-Trichloroeth	50.000	45.597	91.19	80-120
49 1,3-Dichloropropan	50.000	45.758	91.52	80-120
44 Tetrachloroethene	50.000	50.406	100.81	80-120
48 Chlorodibromometha	50.000	50.843	101.69	80-120
50 1,2-Dibromoethane	50.000	44.123	88.25	80-120
53 Chlorobenzene	50.000	46.258	92.52	80-120
55 1,1,1,2-Tetrachlor	50.000	47.810	95.62	80-120
54 Ethyl Benzene	50.000	52.652	105.30	80-120
56 m,p-xylene	100.00	102.70	102.70	80-120
57 o-Xylene	50.000	48.193	96.39	80-120
58 Styrene	50.000	52.062	104.12	80-120
60 Isopropyl Benzene	50.000	49.523	99.05	80-120
59 Bromoform	50.000	46.450	92.90	80-120
65 1,1,2,2-Tetrachlor	50.000	42.922	85.84	80-120
68 1,2,3-Trichloropro	50.000	42.510	85.02	80-120
69 Trans-1,4-Dichloro	50.000	37.529	75.06*	80-120
64 N-Propyl Benzene	50.000	49.836	99.67	80-120
63 Bromobenzene	50.000	46.329	92.66	80-120
67 1,3,5-Trimethyl Be	50.000	54.109	108.22	80-120
66 2-Chloro Toluene	50.000	47.784	95.57	80-120
70 4-Chloro Toluene	50.000	46.447	92.89	80-120
71 T-Butyl Benzene	50.000	49.049	98.10	80-120
72 1,2,4-Trimethylben	50.000	53.429	106.86	80-120
73 S-Butyl Benzene	50.000	49.839	99.68	80-120
74 4-Isopropyl Toluen	50.000	52.228	104.46	80-120
75 1,3-Dichlorobenzen	50.000	45.844	91.69	80-120
77 1,4-Dichlorobenzen	50.000	48.055	96.11	80-120
78 N-Butyl Benzene	50.000	55.705	111.41	80-120
80 1,2-Dichlorobenzen	50.000	43.961	87.92	80-120
81 1,2-Dibromo 3-Chlo	50.000	41.647	83.29	80-120
83 1,2,4-Trichloroben	50.000	49.394	98.79	80-120
82 Hexachloro 1,3-But	50.000	49.645	99.29	80-120
84 Naphthalene	50.000	44.911	89.82	80-120
85 1,2,3-Trichloroben	50.000	46.560	93.12	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	49.922	99.84	70-130

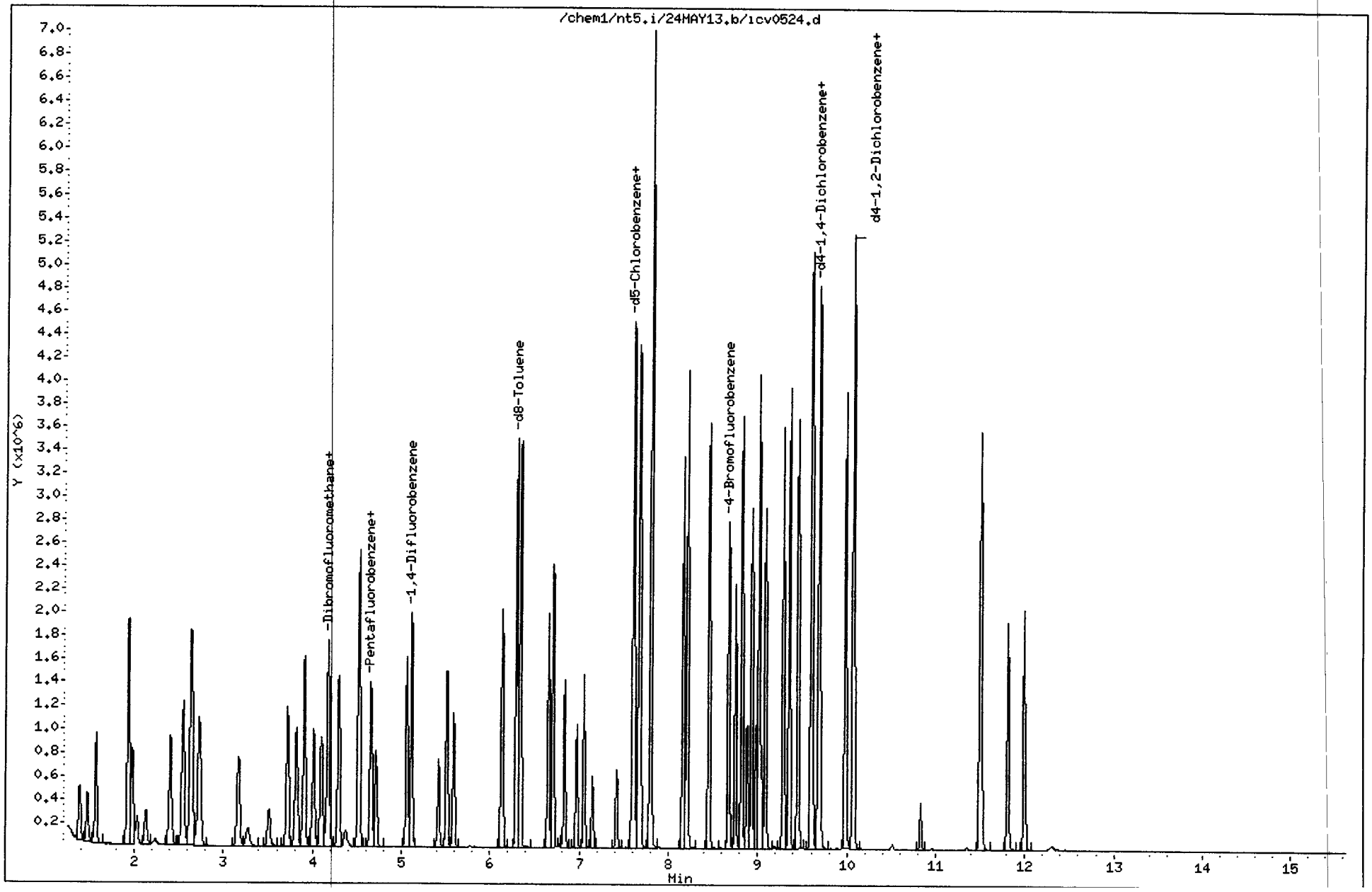
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	49.099	98.20	80-149
$ 42 d8-Toluene	50.000	49.710	99.42	77-120
$ 62 4-Bromofluorobenze	50.000	50.262	100.52	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.703	99.41	80-120

Data File: /chem1/nt5.i/24MAY13.b/icv0524.d
Date : 24-MAY-2013 11:46
Client ID: ICV0524
Sample Info: ICV0524,5,5,0

Column phase: RTXVMS

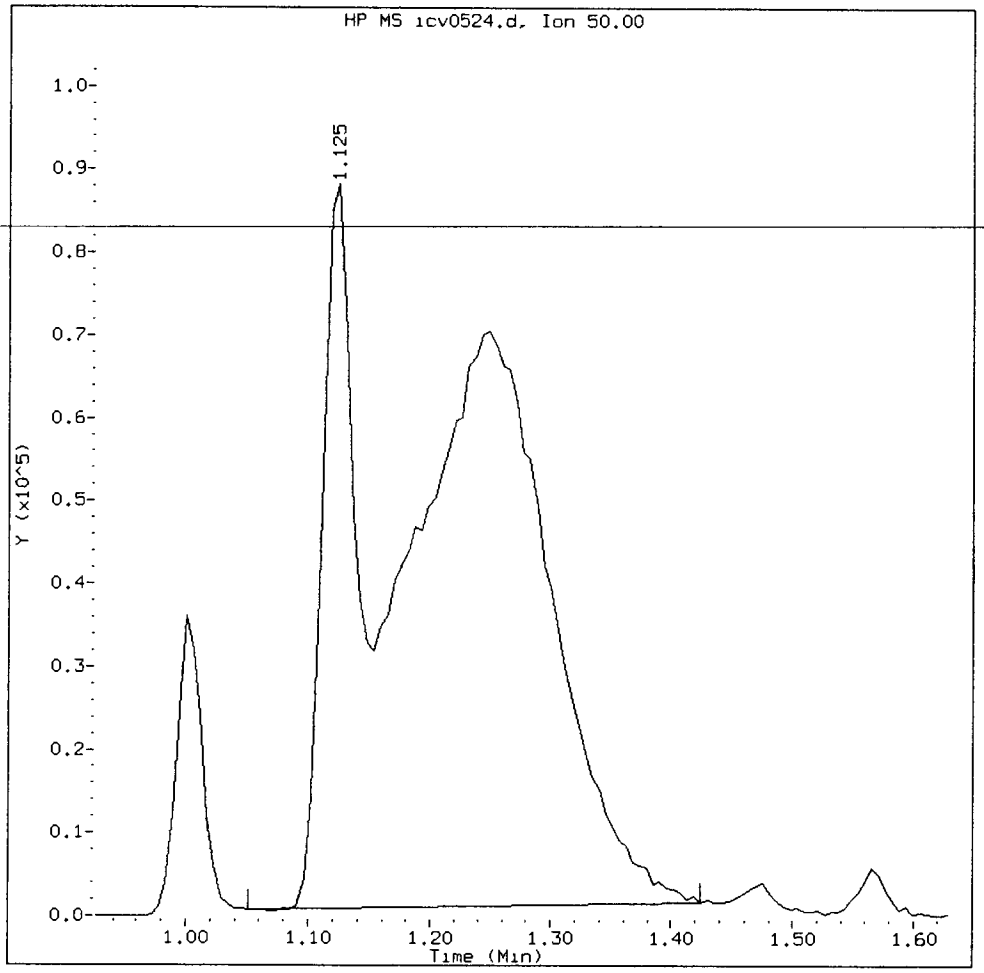
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



ICV0524, /chem1/nt5.i/24MAY13.b/icv0524.d

Chloromethane Amount: 55.11 Area: 706900



MANUAL INTEGRATION for Chloromethane

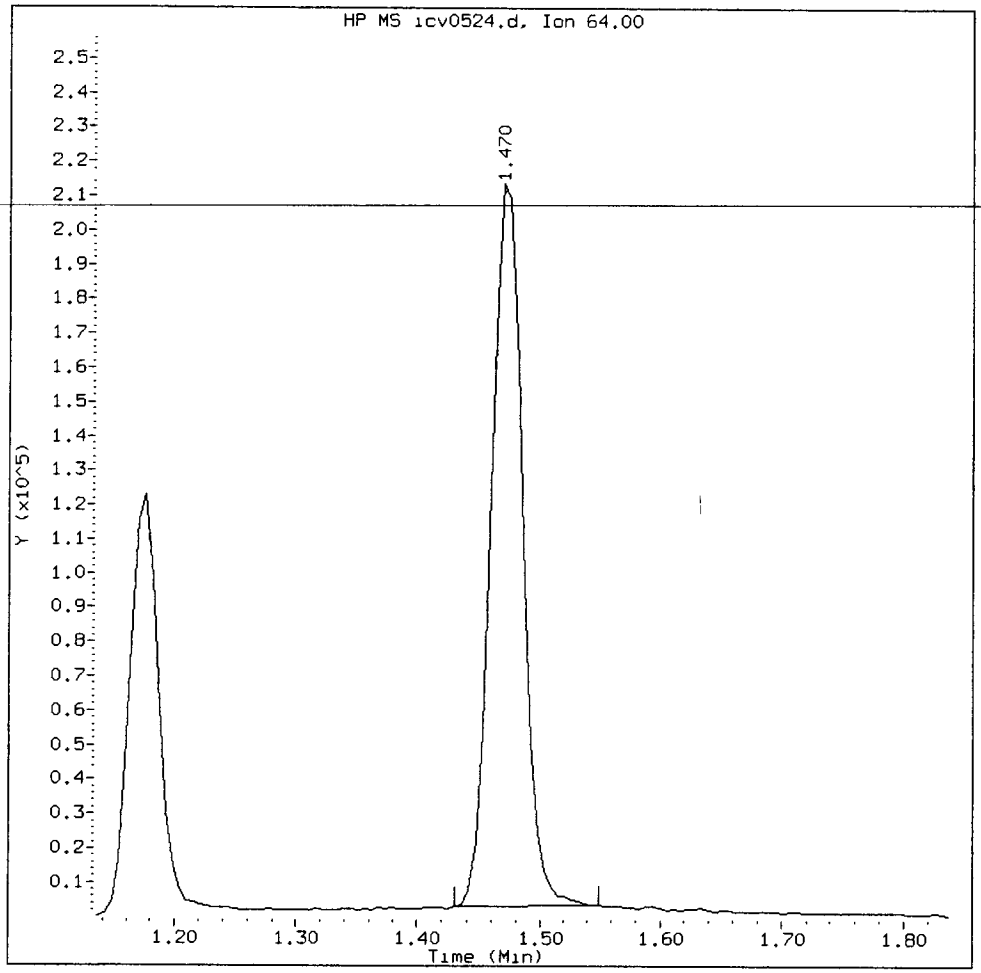
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

ICV0524, /chem1/nt5.i/24MAY13.b/icv0524.d

Chloroethane Amount: 59.76 Area: 381992



MANUAL INTEGRATION for Chloroethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/10/13

CO-ELUTION SUMMARY FOR FILE - icv0524.d

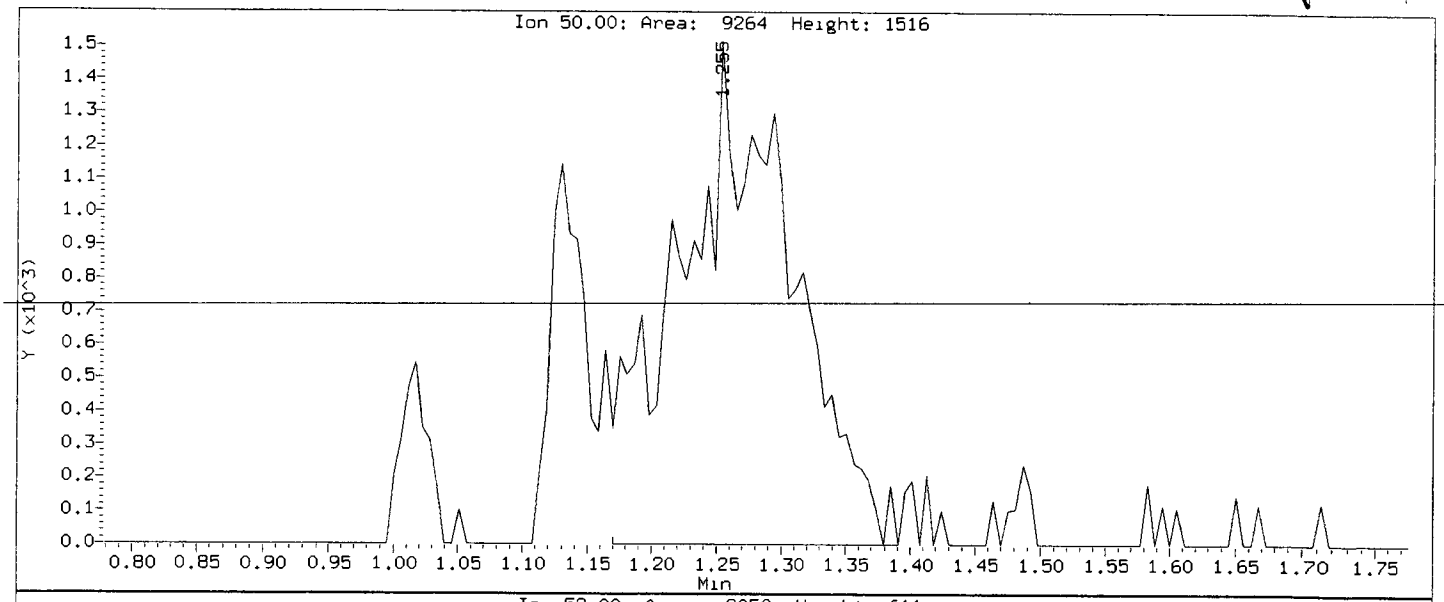
Lab ID: ICV0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

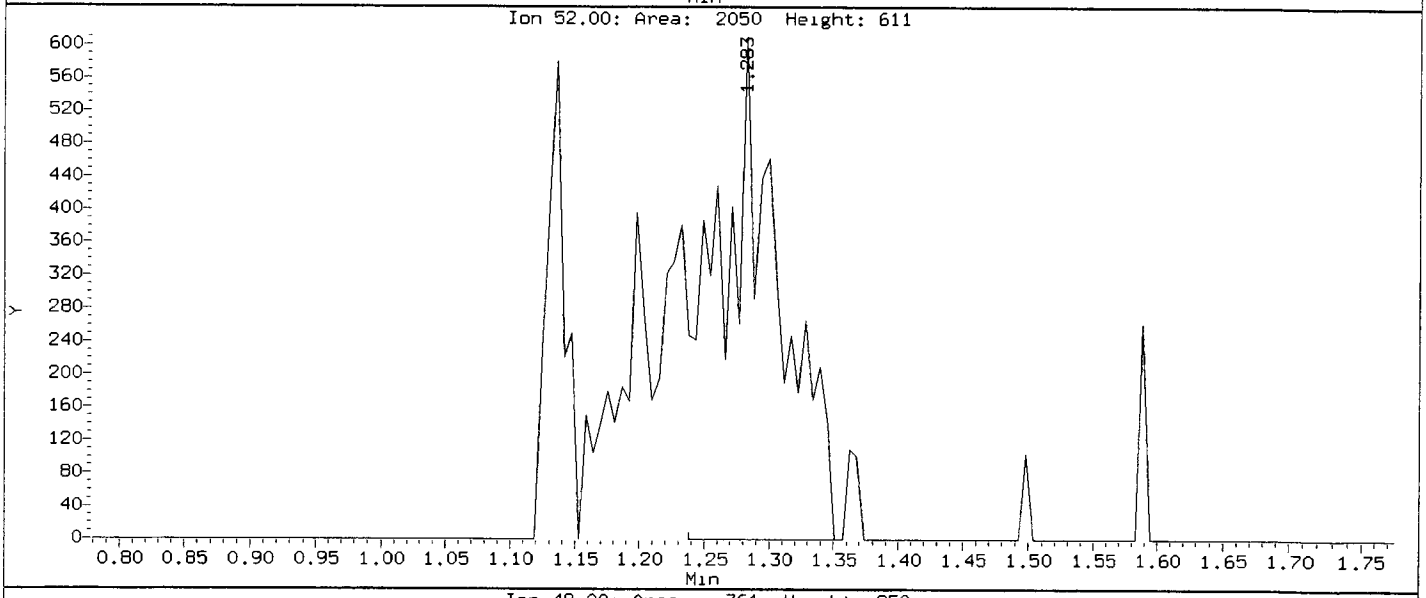
RT	CO-ELUTION COMPOUNDS

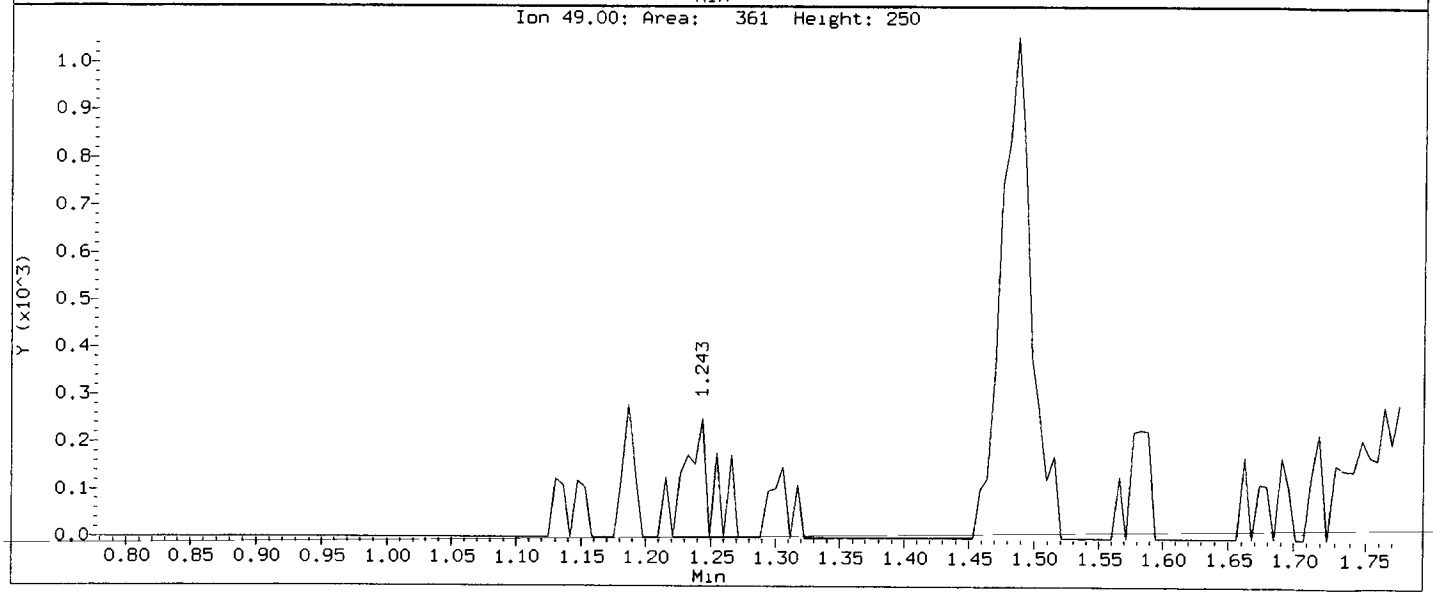
NO CO-ELUTIONS

Data File: /chem1/nt5.1/24MAY13.b/0010524.d
Injection Date: 24-MAY-2013 11:06
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: Chloromethane
CAS Number:

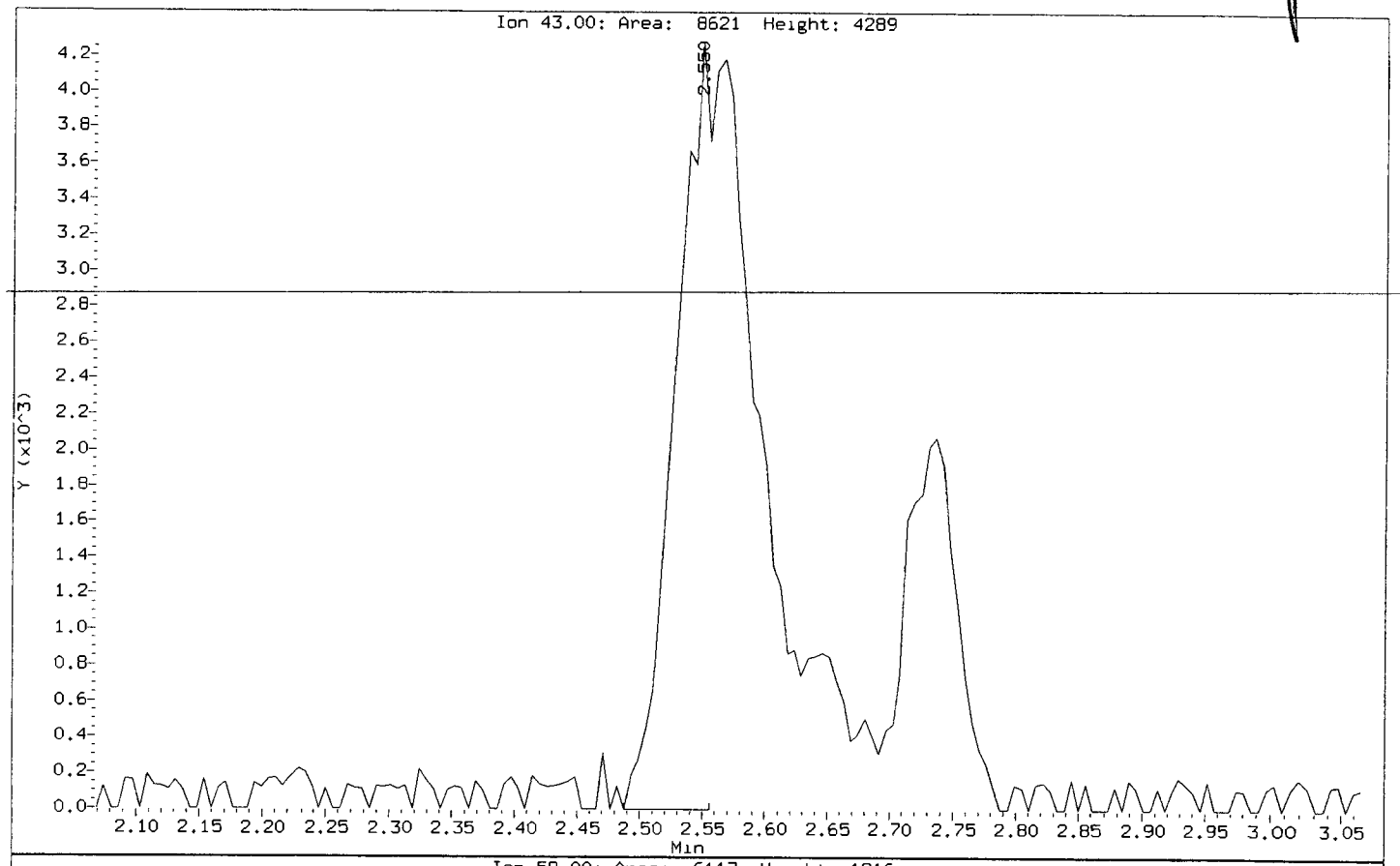


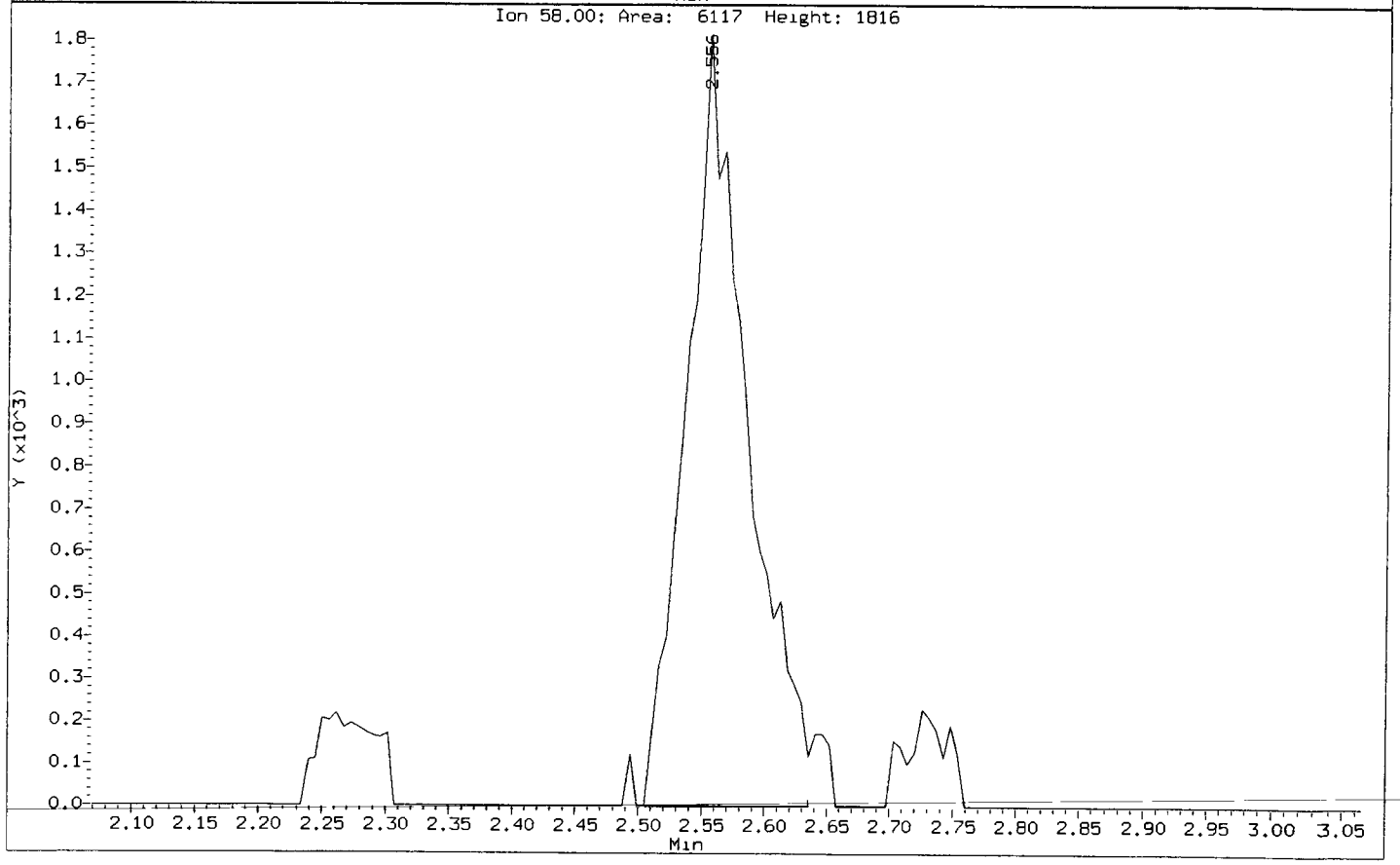




Data File: /chem1/nt5.i/24MAY13.b/0010524.d
Injection Date: 24-MAY-2013 11:06
Instrument: nt5.i
Client Sample ID: VSTD1

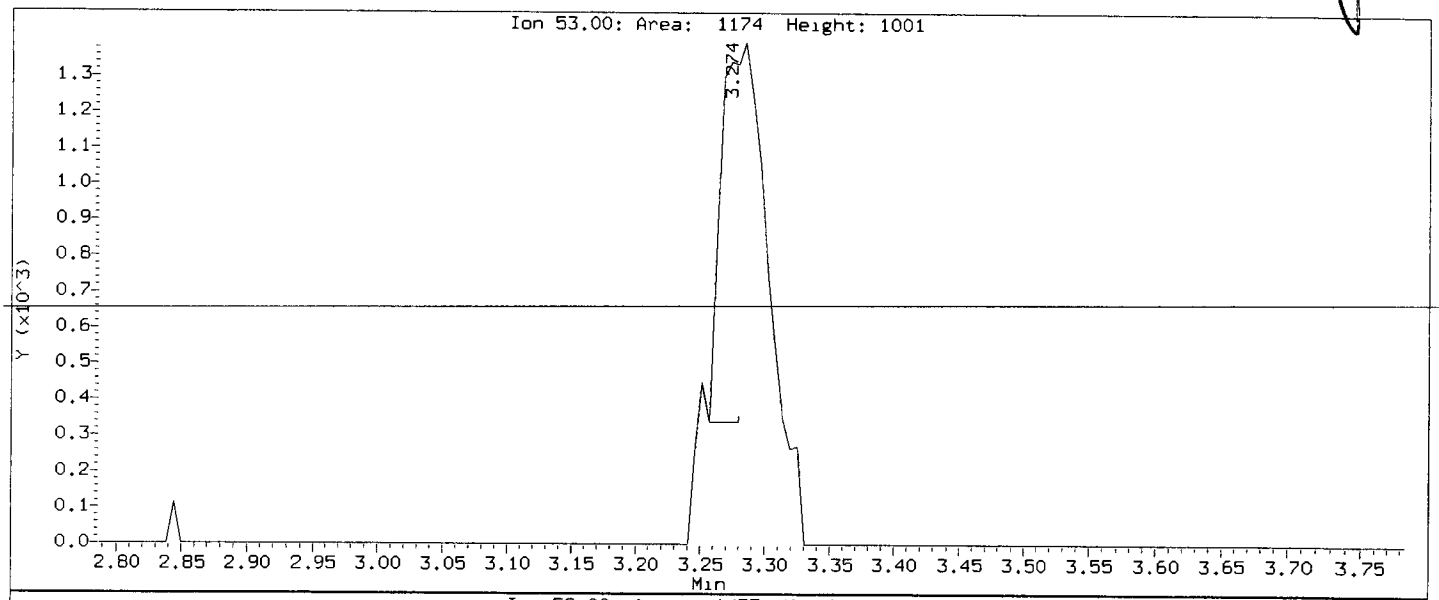
Compound: Acetone
CAS Number:

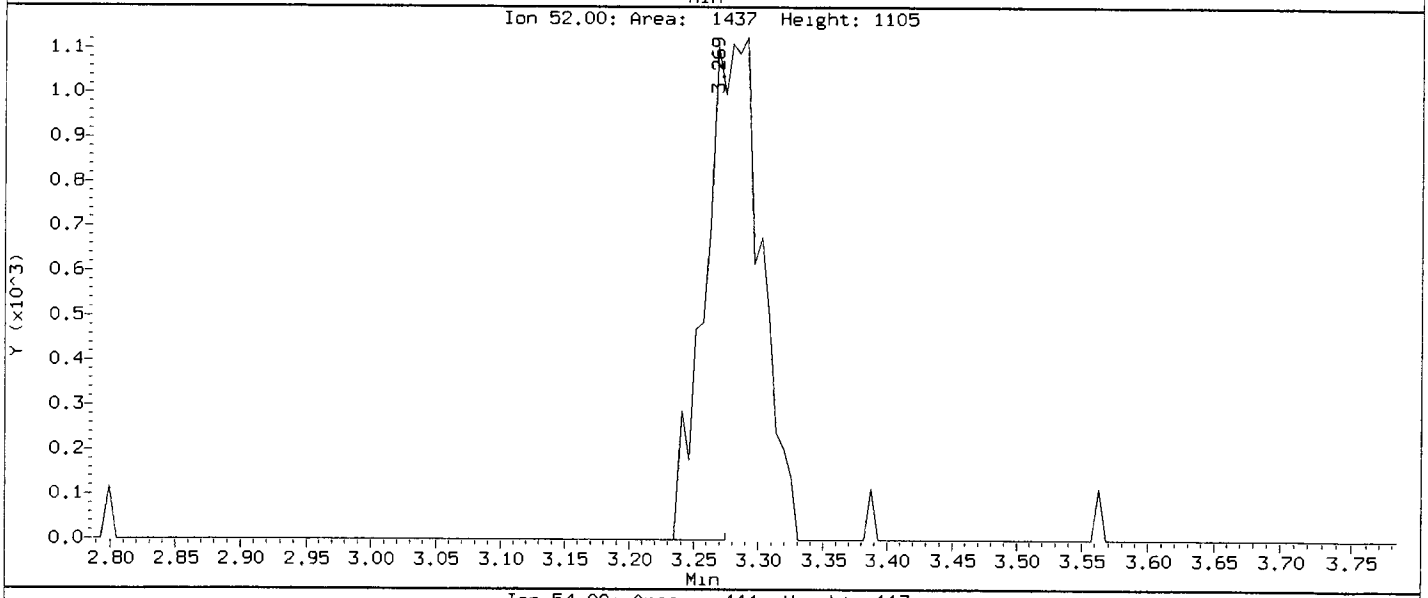


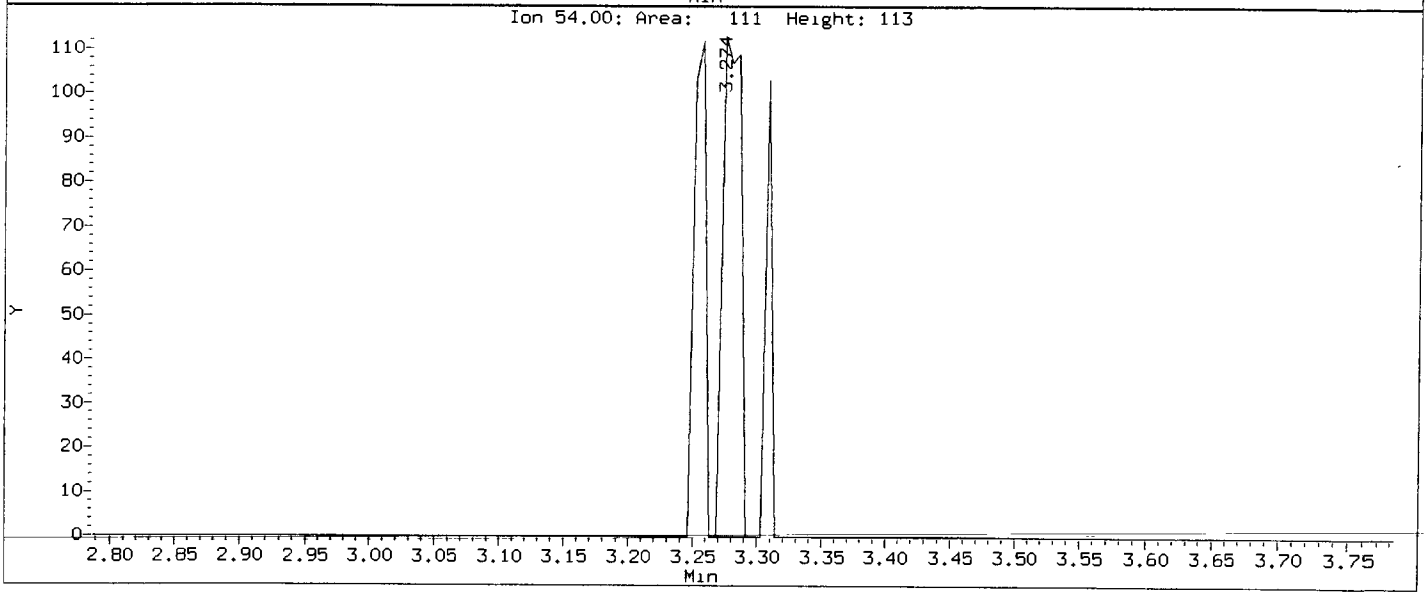


Data File: /chem1/nt5.i/24MAY13.b/0010524.d
Injection Date: 24-MAY-2013 11:06
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Acrylonitrile
CAS Number:

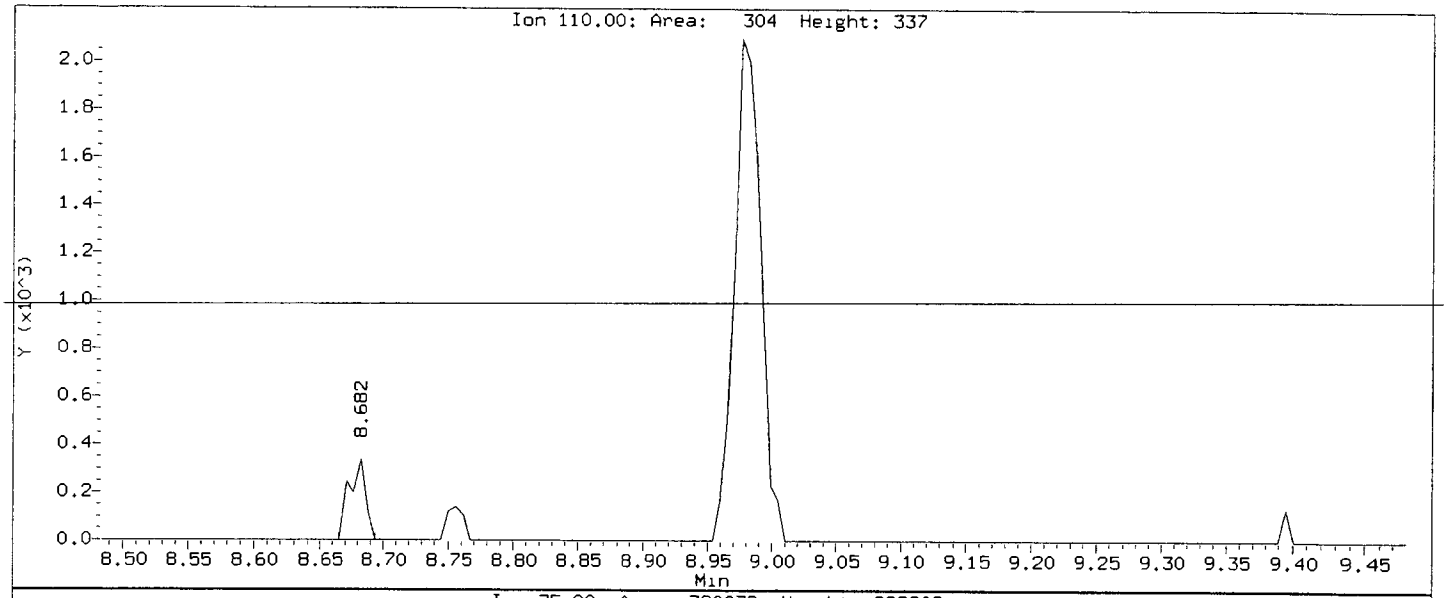


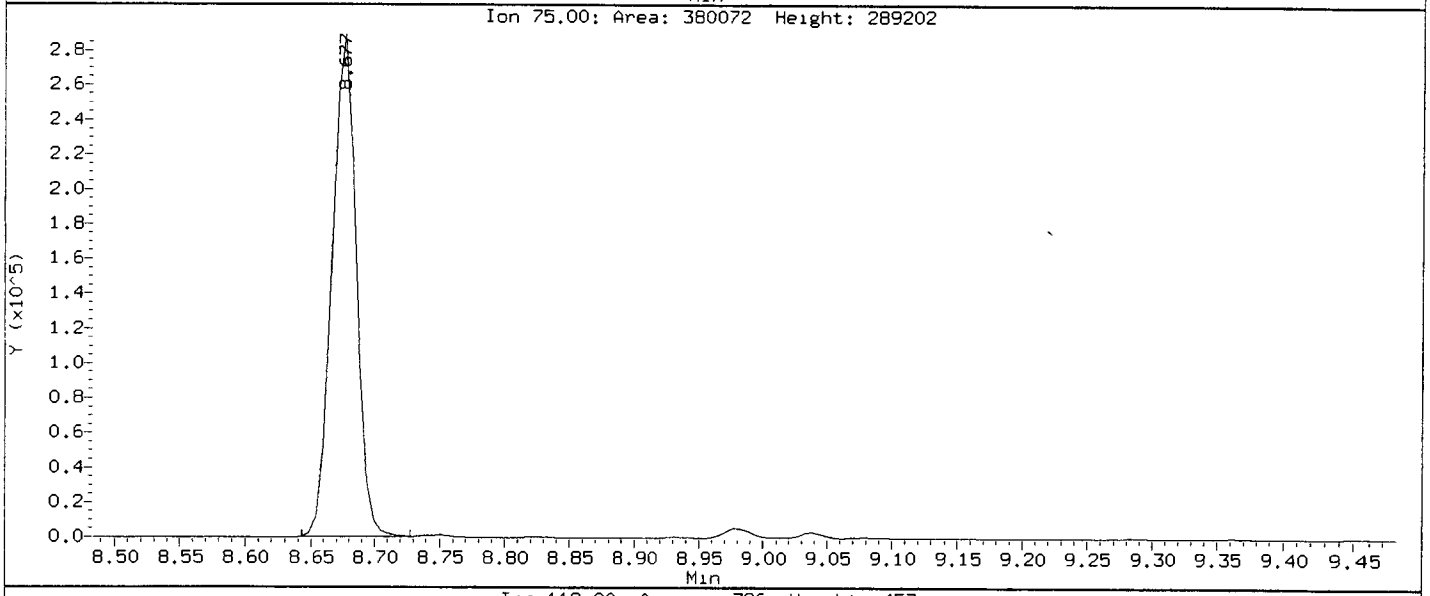


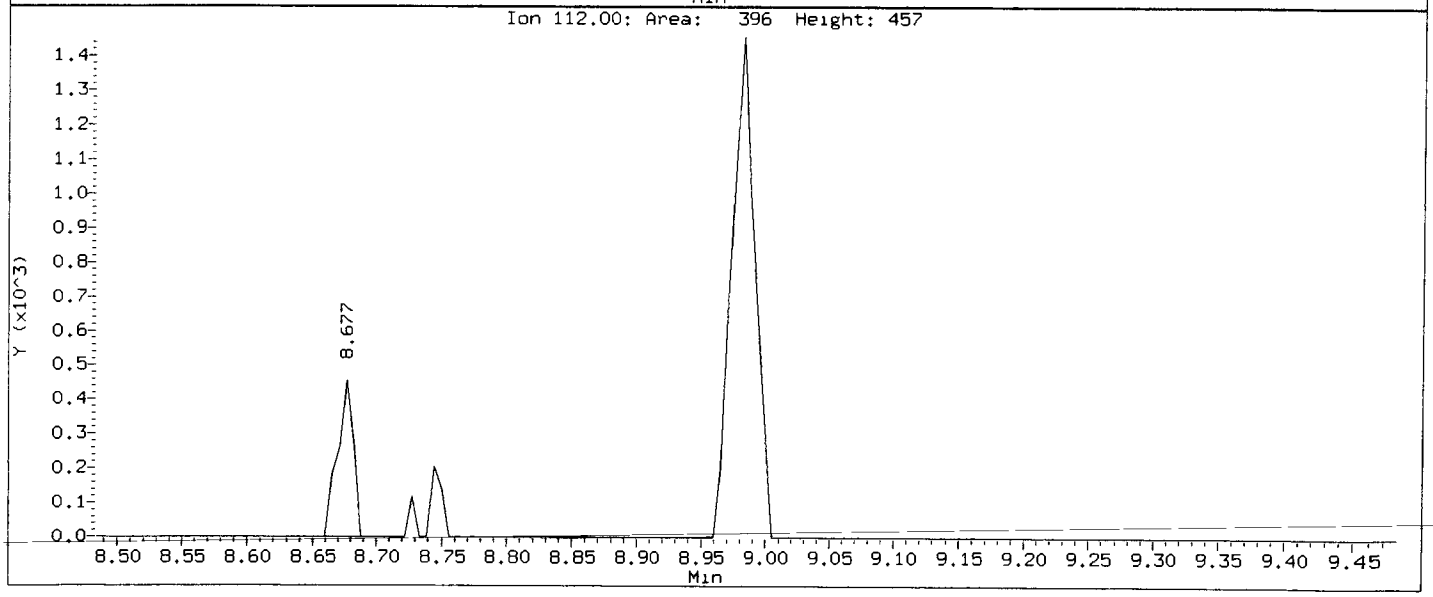


Data File: /chem1/nt5.1/24MAY13.b/0010524.d
Injection Date: 24-MAY-2013 11:06
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: 1,2,3-Trichloropropane
CAS Number:

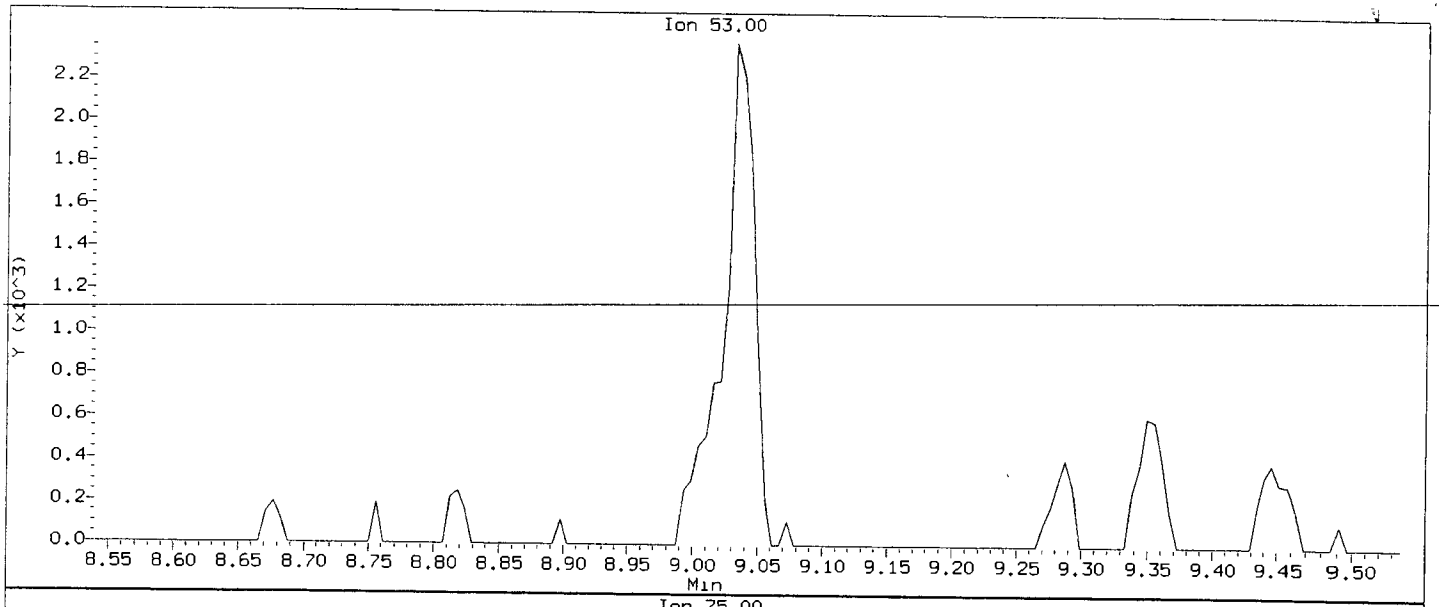


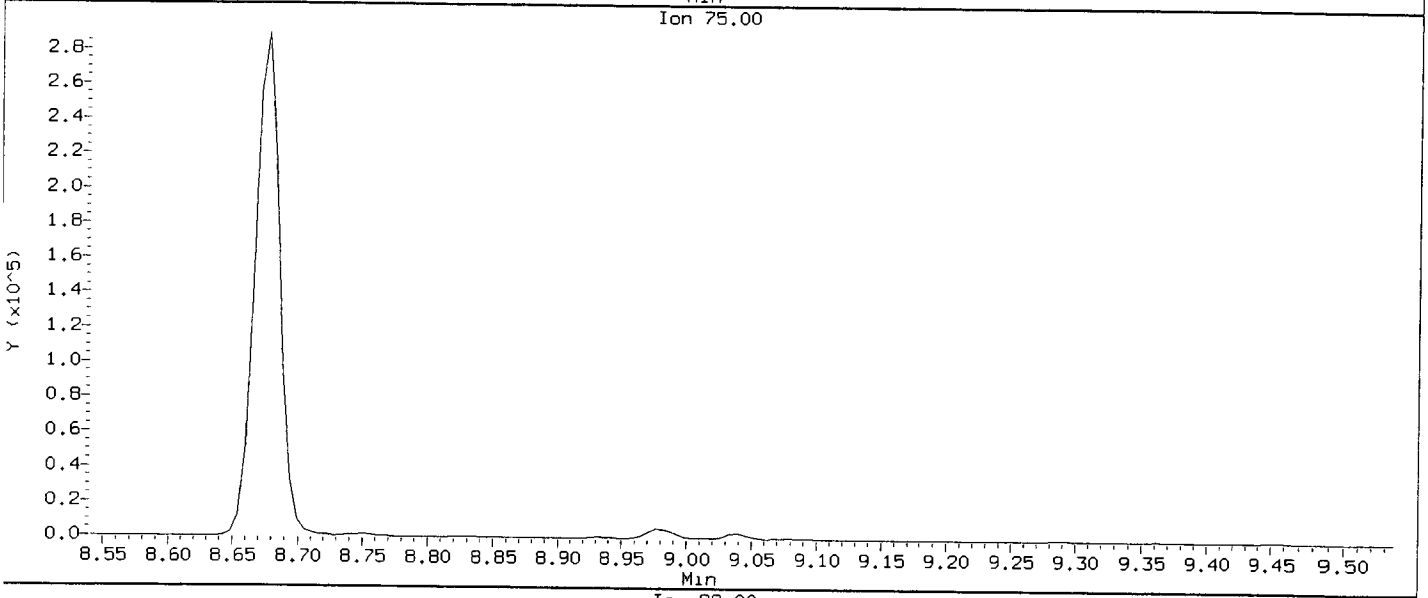


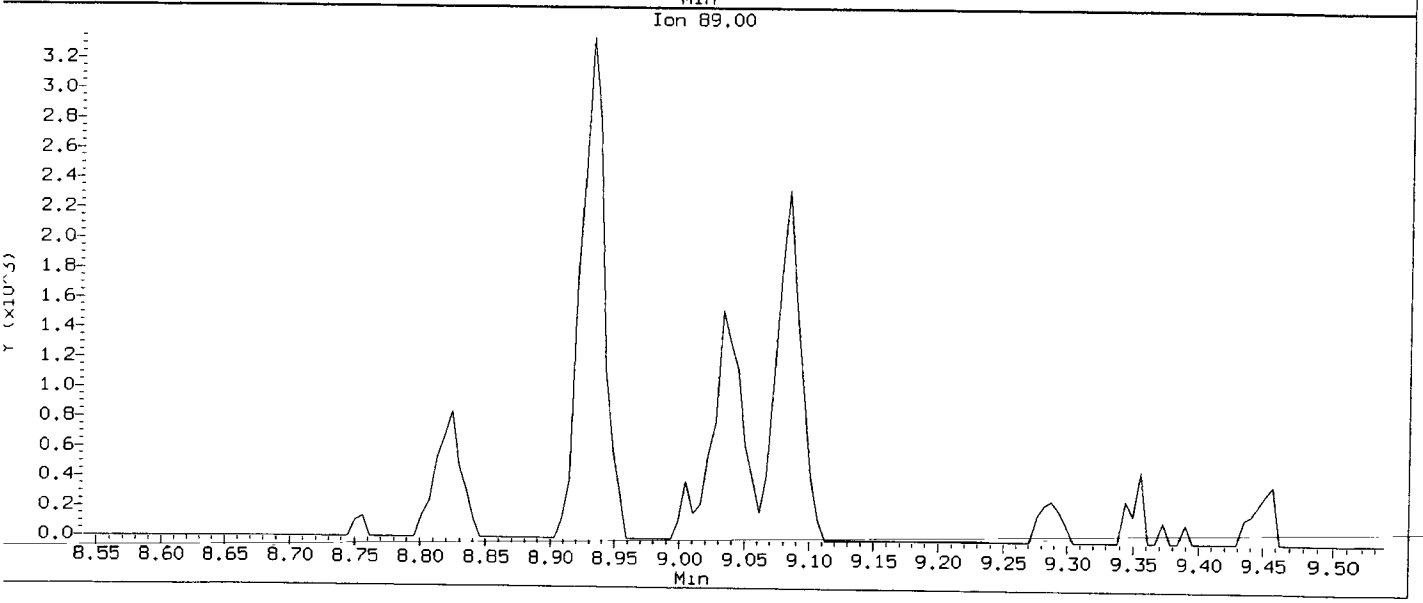


Data File: /chem1/nt5.i/24MAY13.b/0010524.d
Injection Date: 24-MAY-2013 11:06
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:

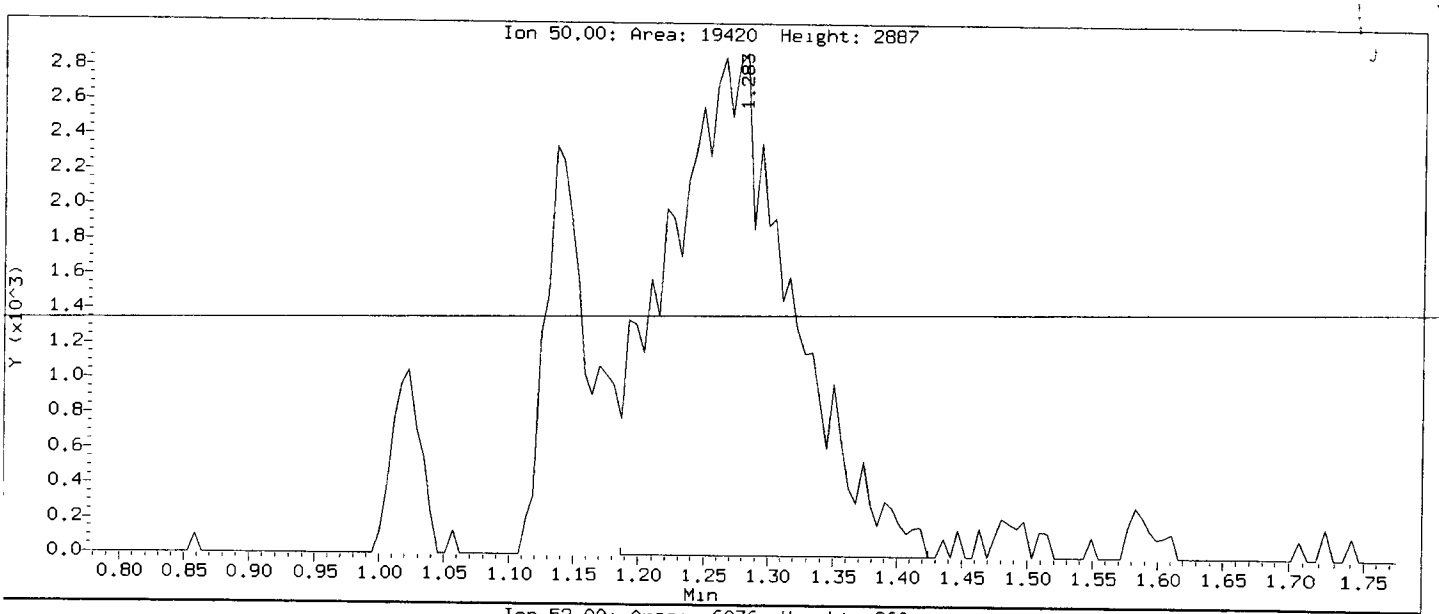


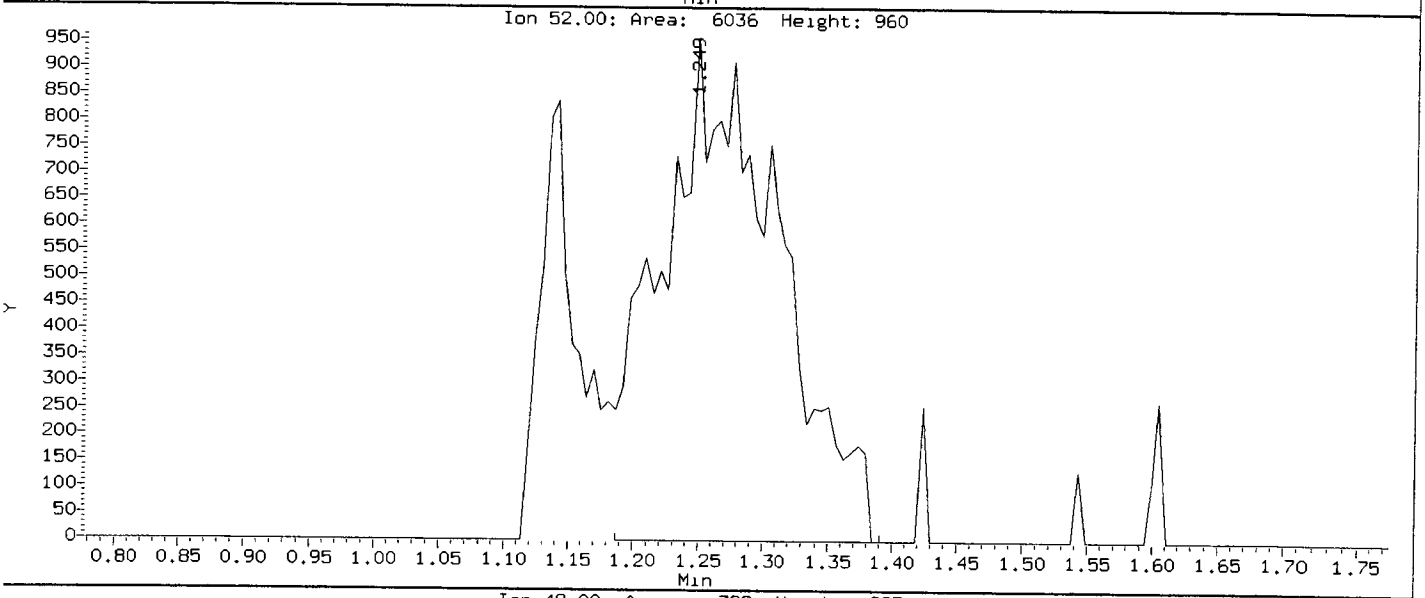


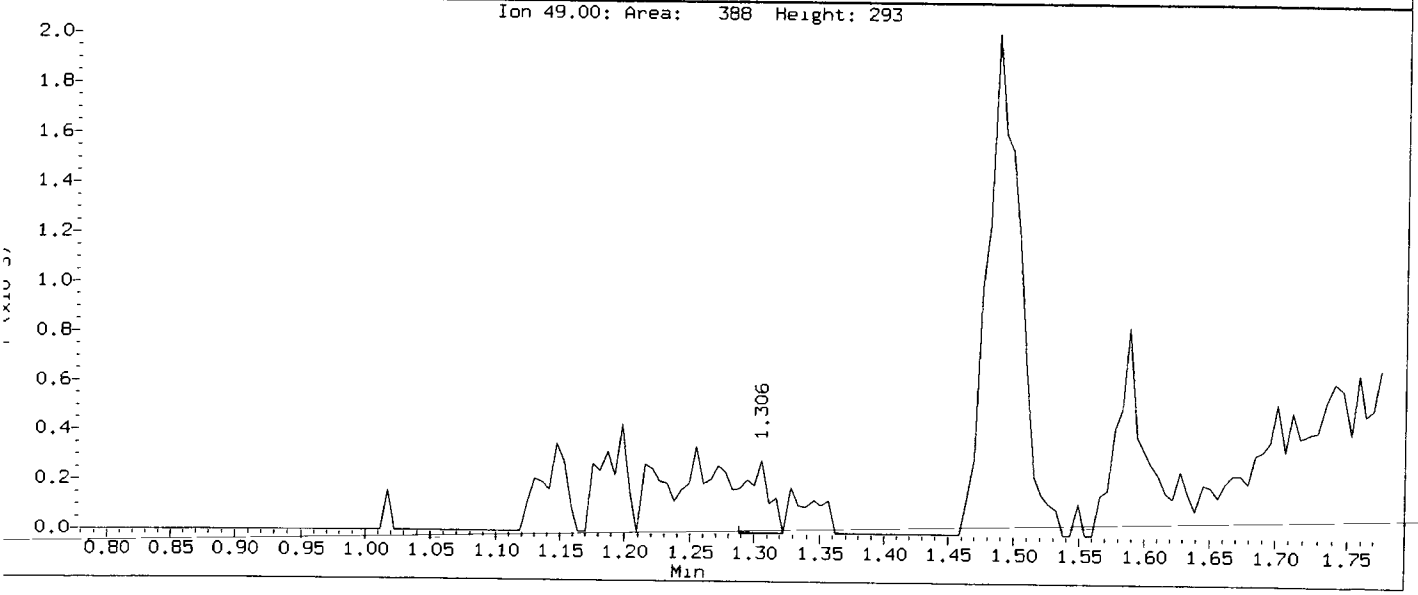


Data File: /chem1/nt5.i/24MAY13.b/0020524.d
Injection Date: 24-MAY-2013 10:42
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: Chloromethane
CAS Number:

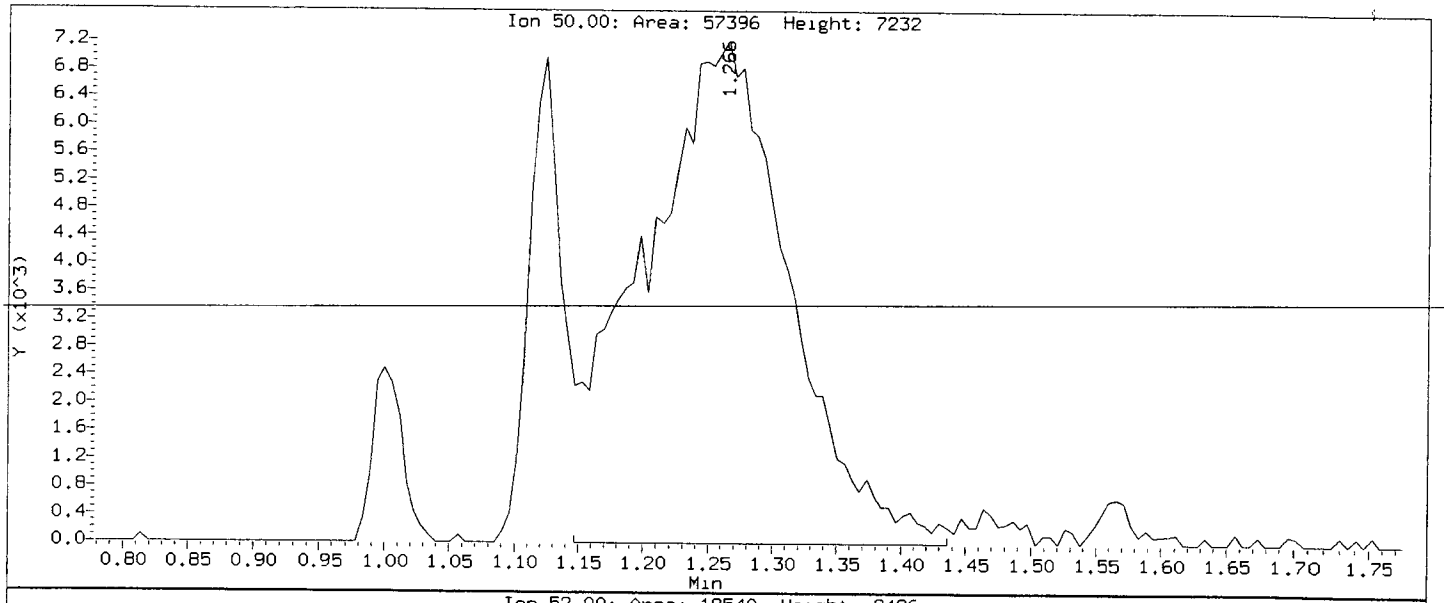


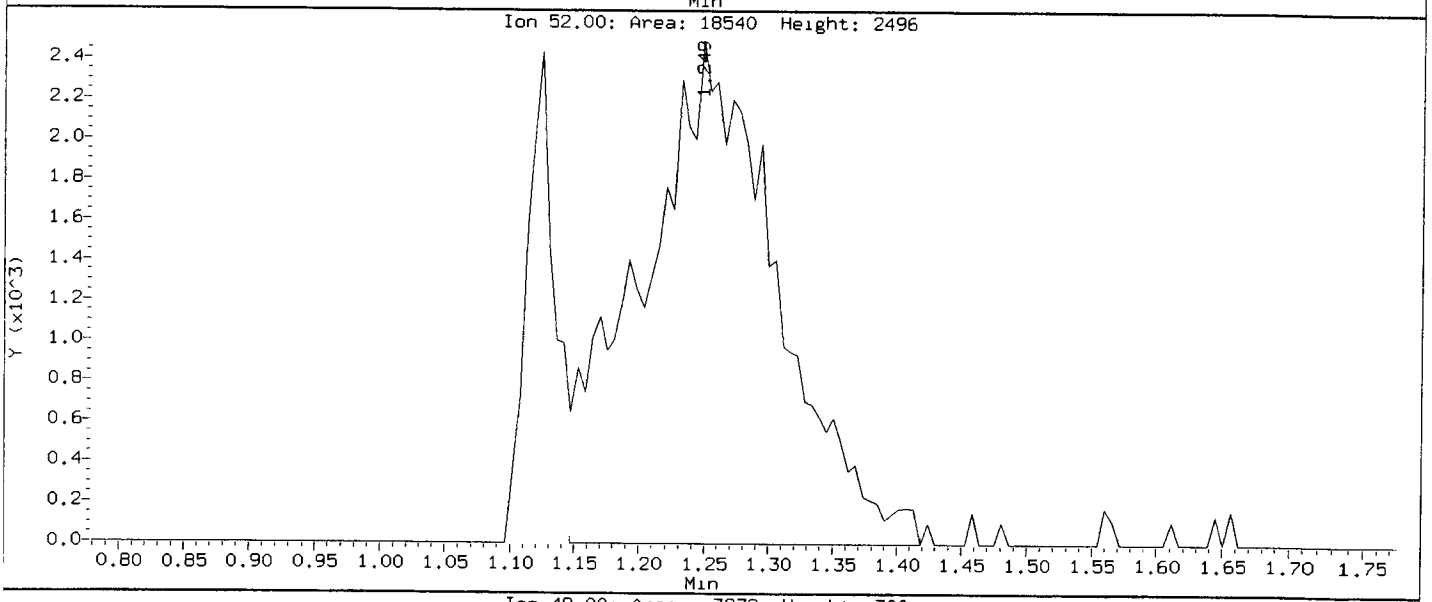


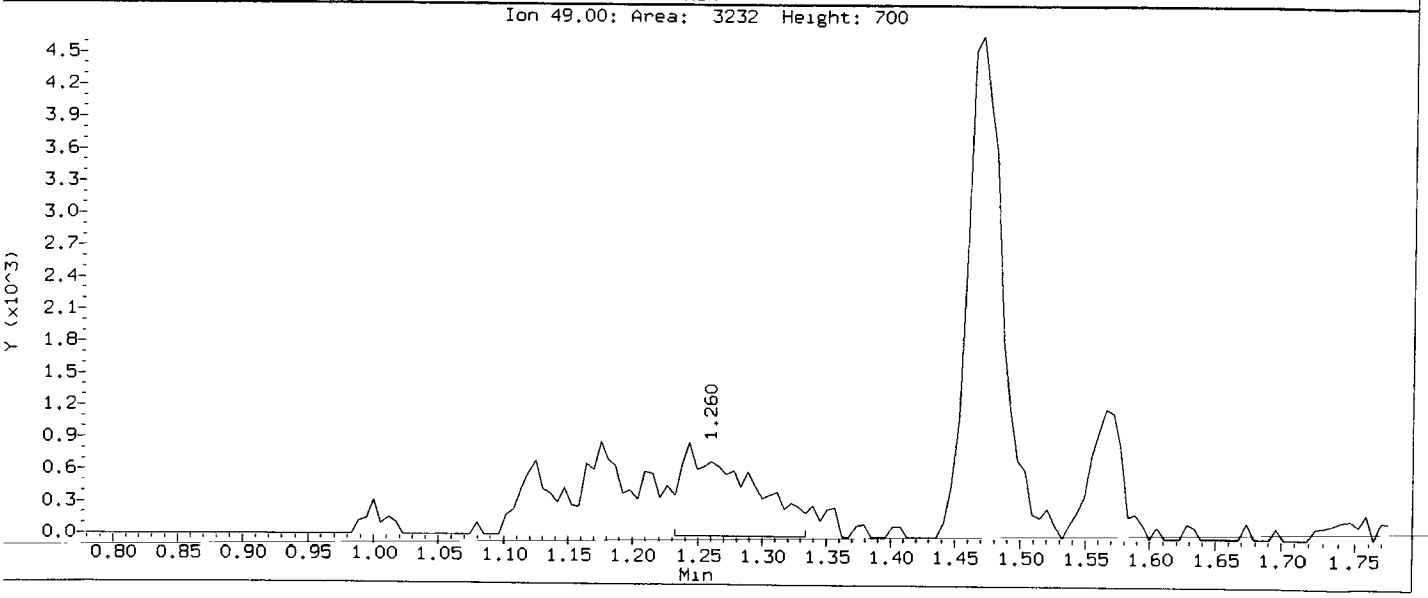


Data File: /chem1/nt5.1/24MAY13.b/0050524.d
Injection Date: 24-MAY-2013 10:18
Instrument: nt5.1
Client Sample ID: VSTD5

Compound: Chloromethane
CAS Number:

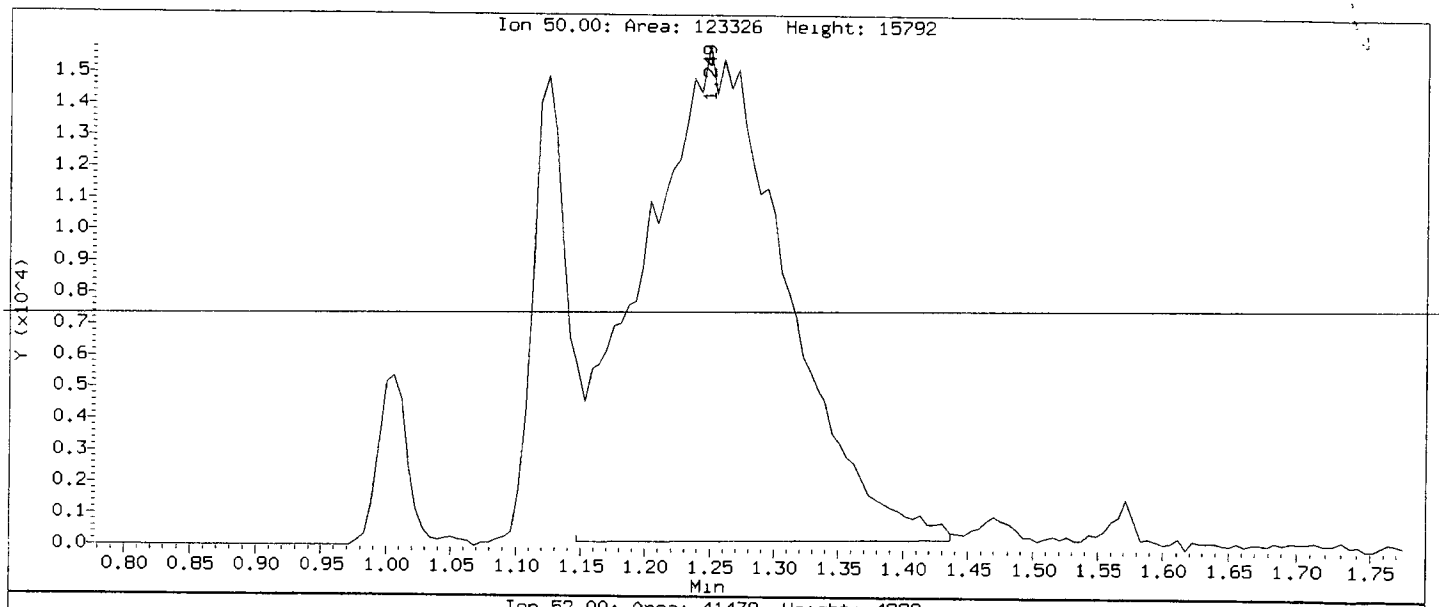


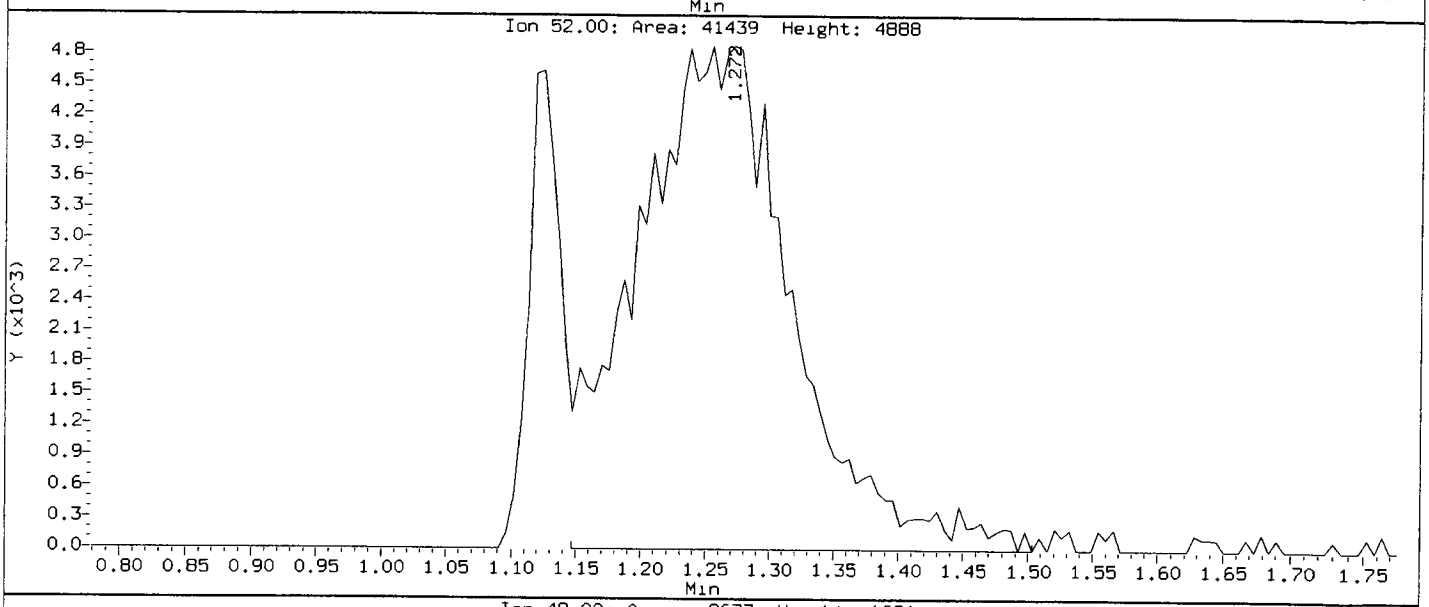


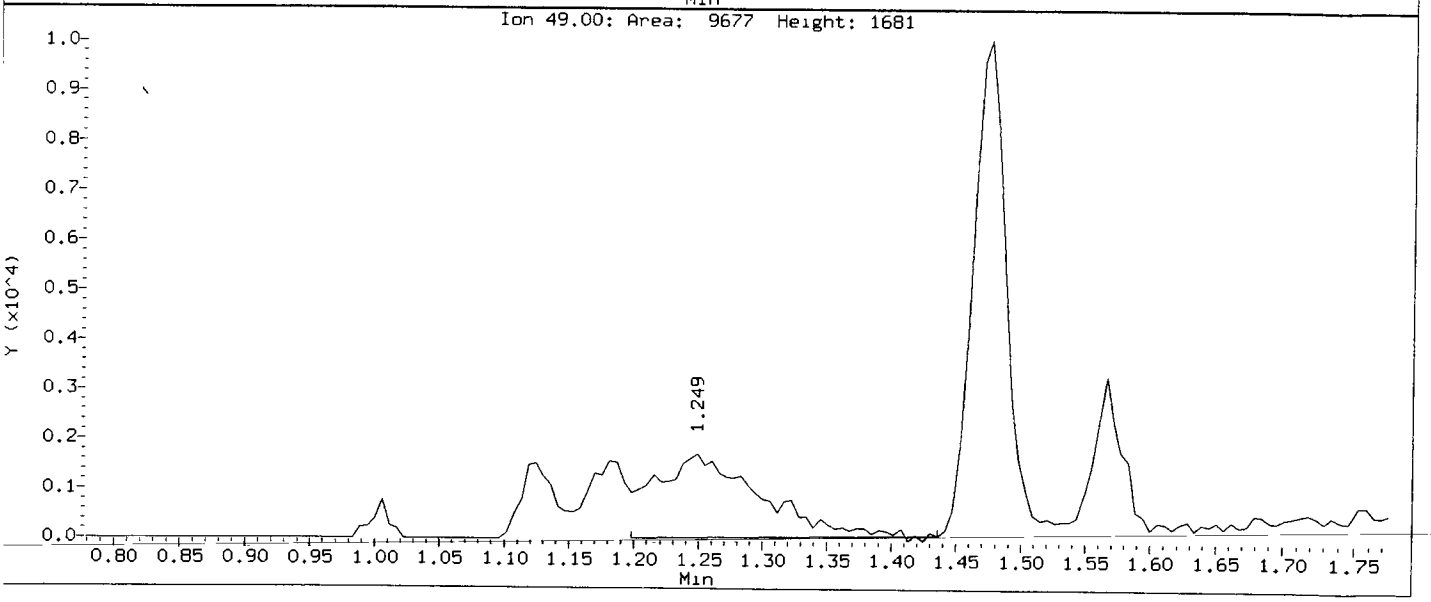


Data File: /chem1/nt5.1/24MAY13.b/0100524.d
Injection Date: 24-MAY-2013 09:54
Instrument: nt5.1
Client Sample ID: VSTD10

Compound: Chloromethane
CAS Number:

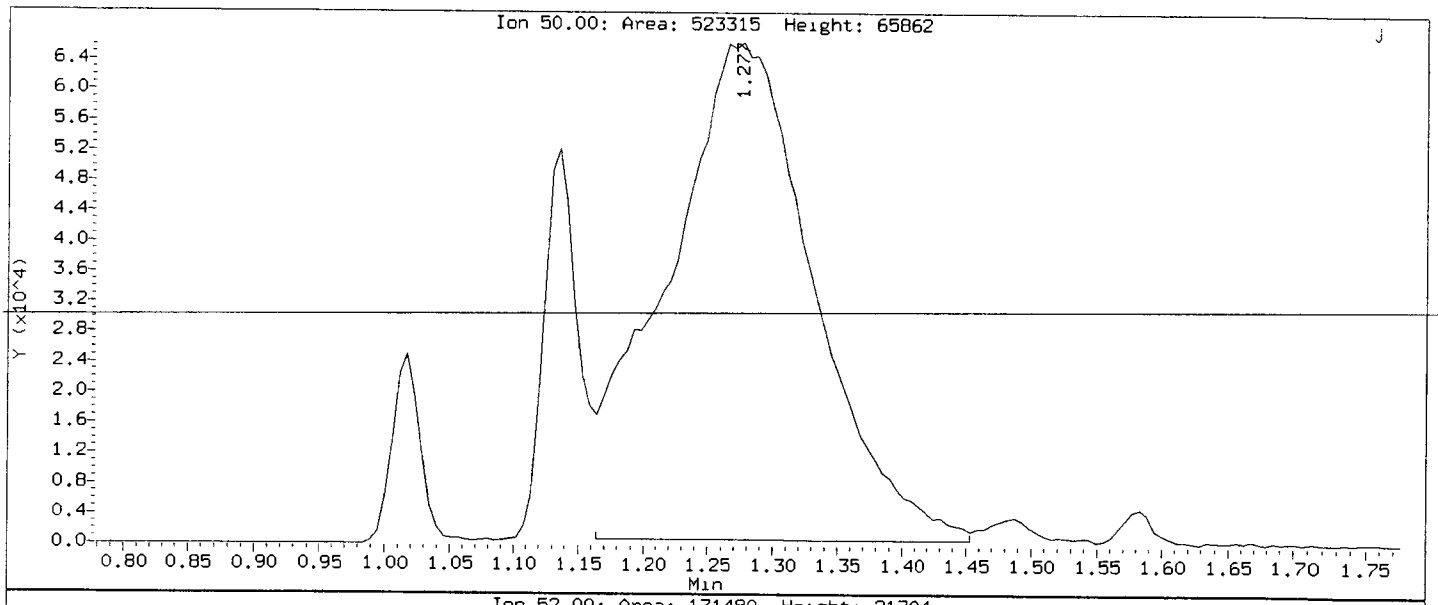


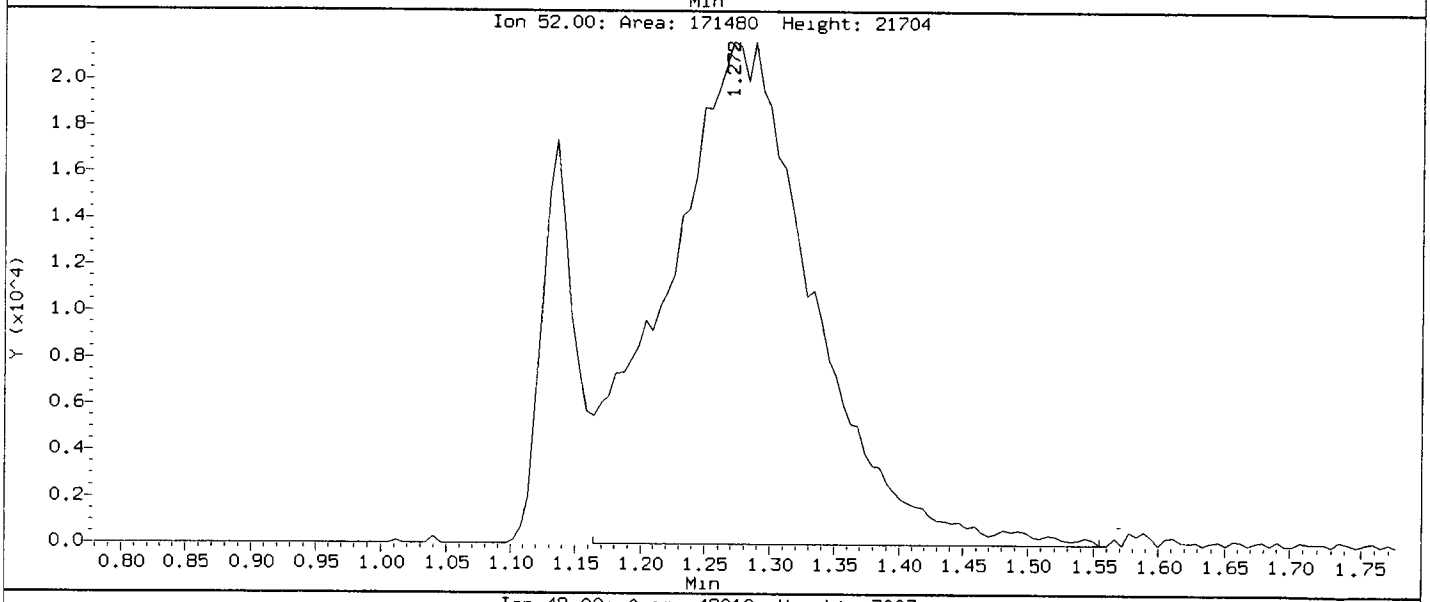


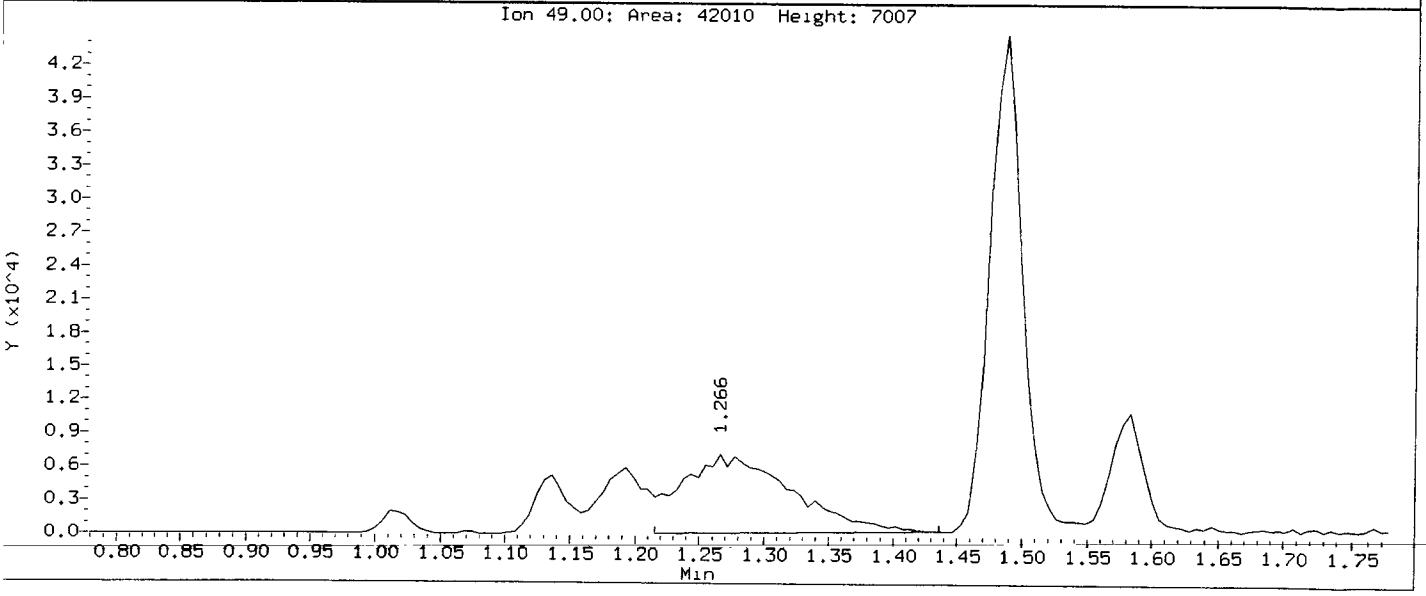


Data File: /chem1/nt5.i/24MAY13.b/0500524.d
Injection Date: 24-MAY-2013 09:30
Instrument: nt5.i
Client Sample ID: VSTD50

Compound: Chloromethane
CAS Number:

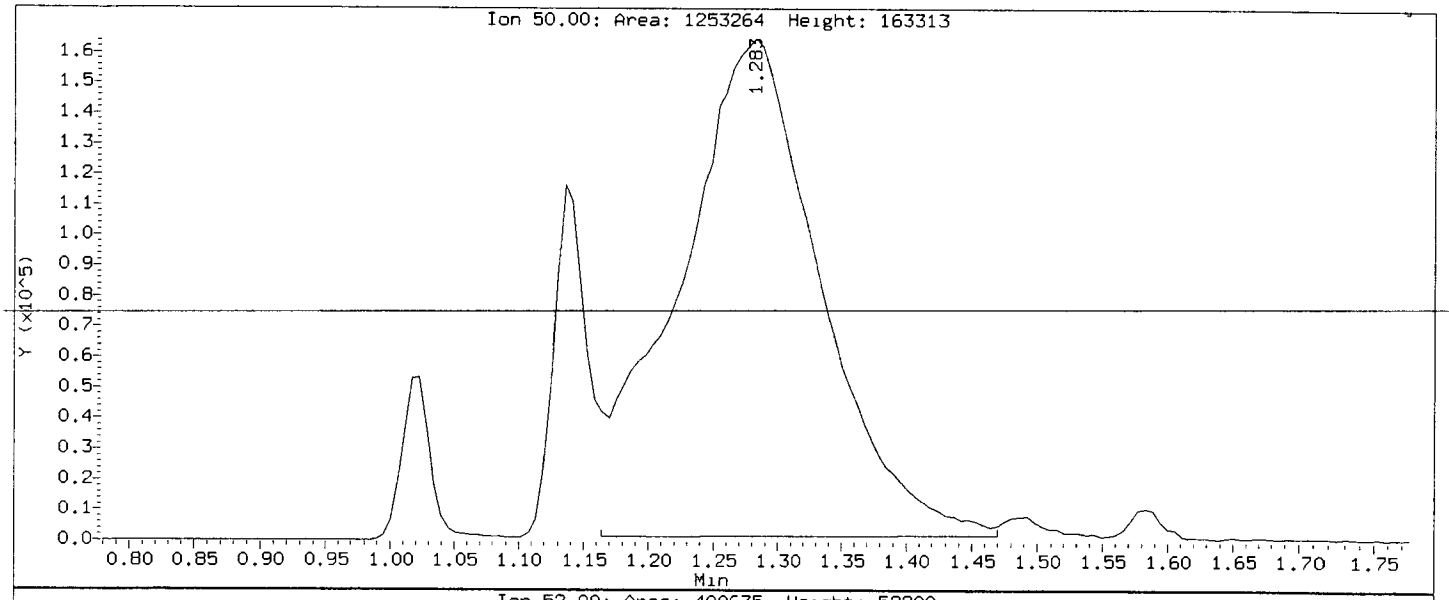


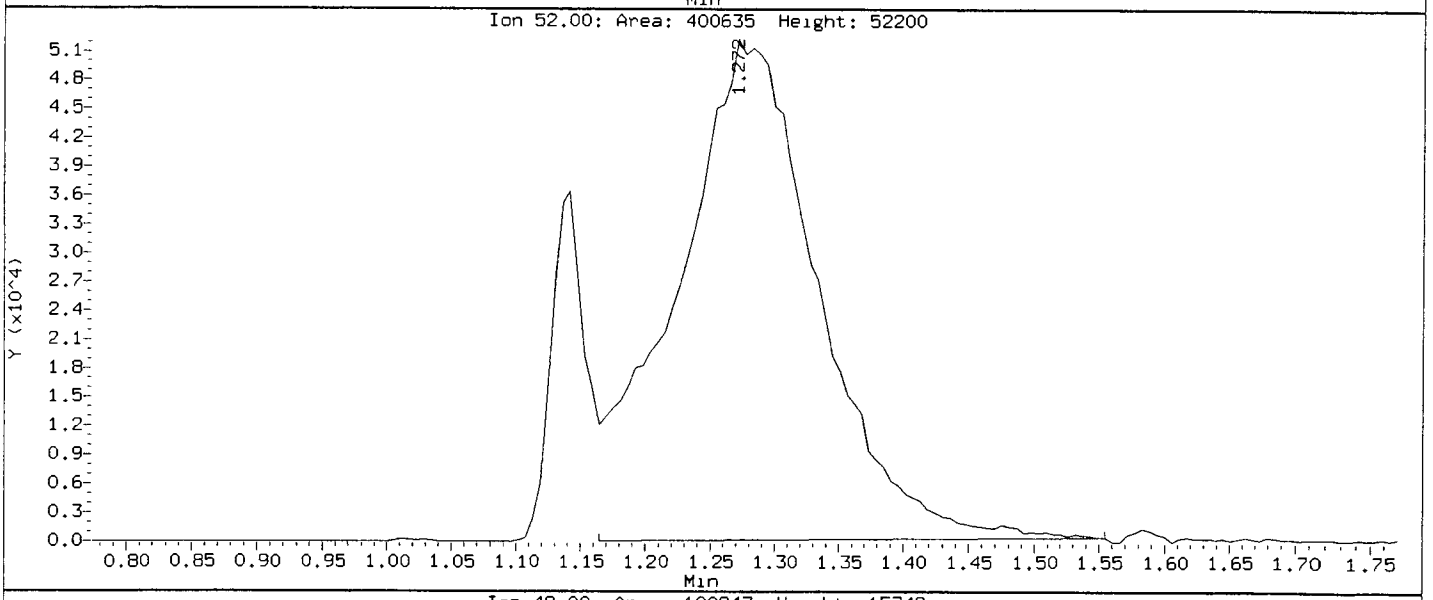


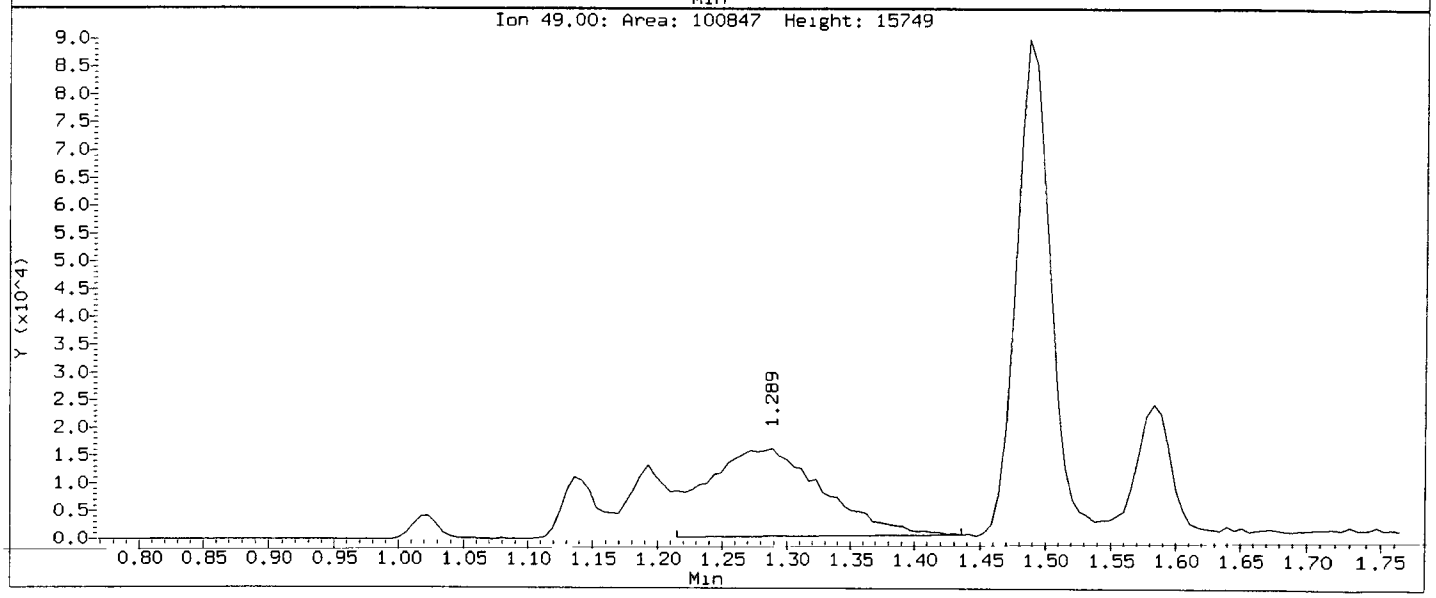


Data File: /chem1/nt5.i/24MAY13.b/1000524.d
Injection Date: 24-MAY-2013 09:06
Instrument: nt5.i
Client Sample ID: VSTD100

Compound: Chloromethane
CAS Number:

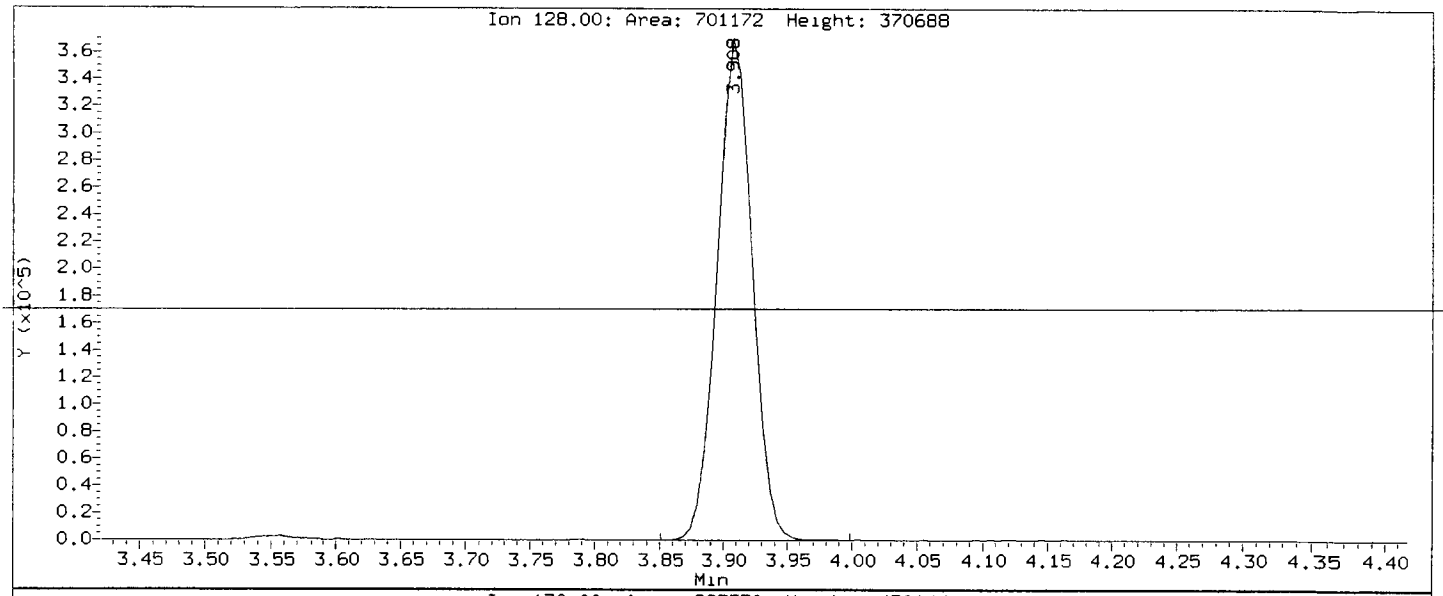


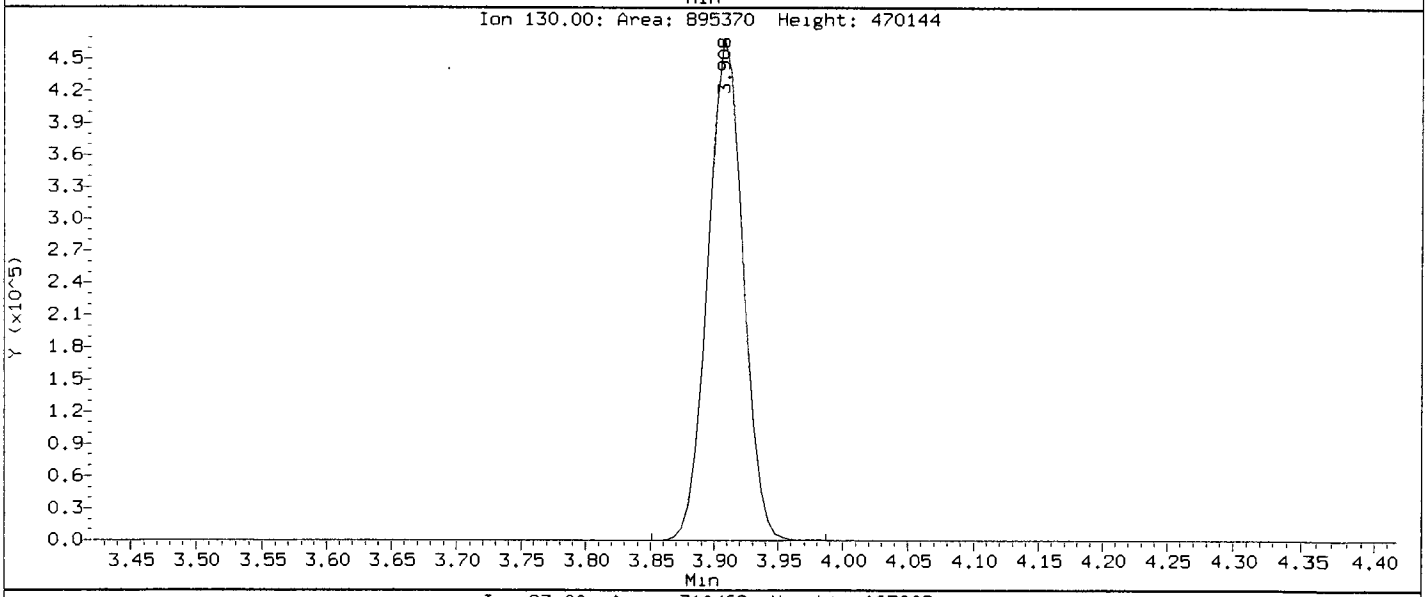


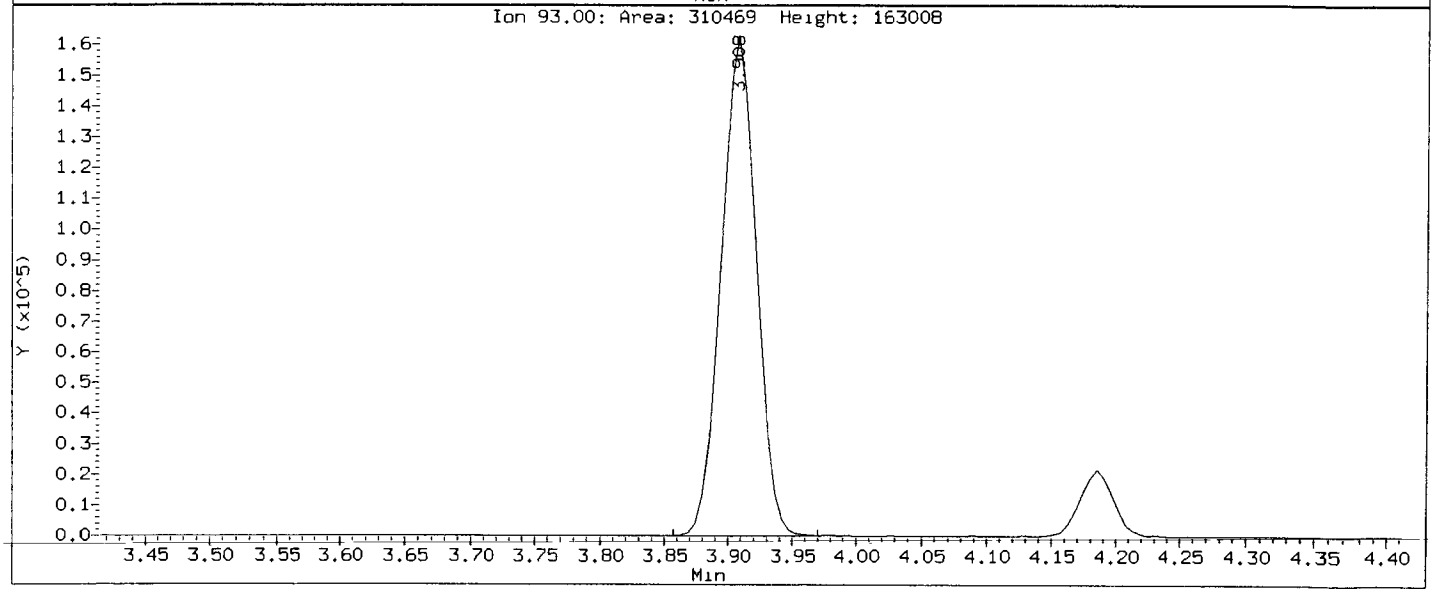


Data File: /chem1/nt5.i/24MAY13.b/1500524.d
Injection Date: 24-MAY-2013 08:42
Instrument: nt5.i
Client Sample ID: VSTD150

Compound: Bromochloromethane
CAS Number:

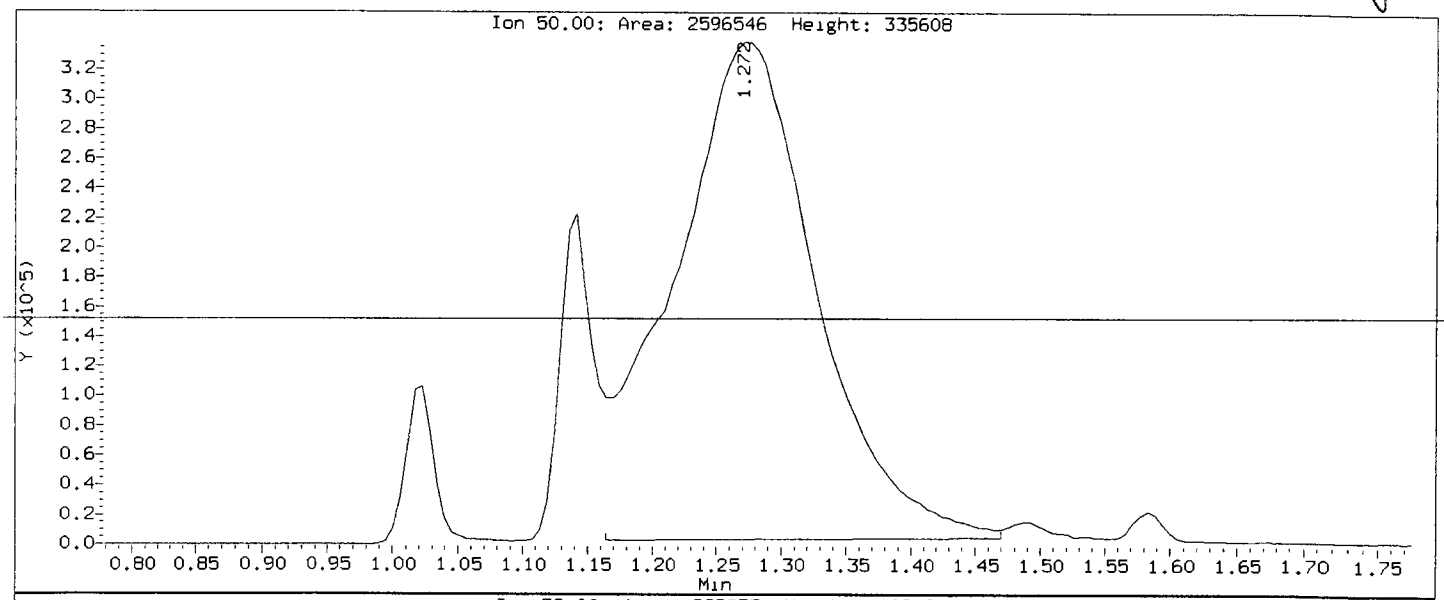


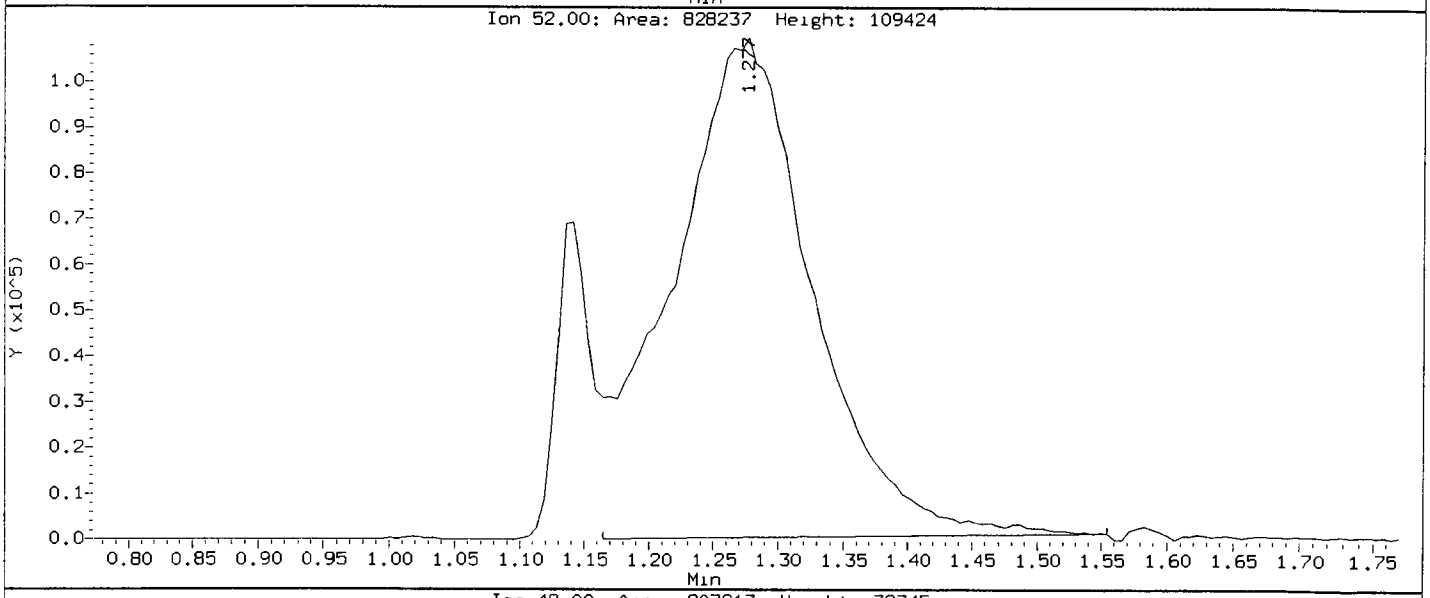


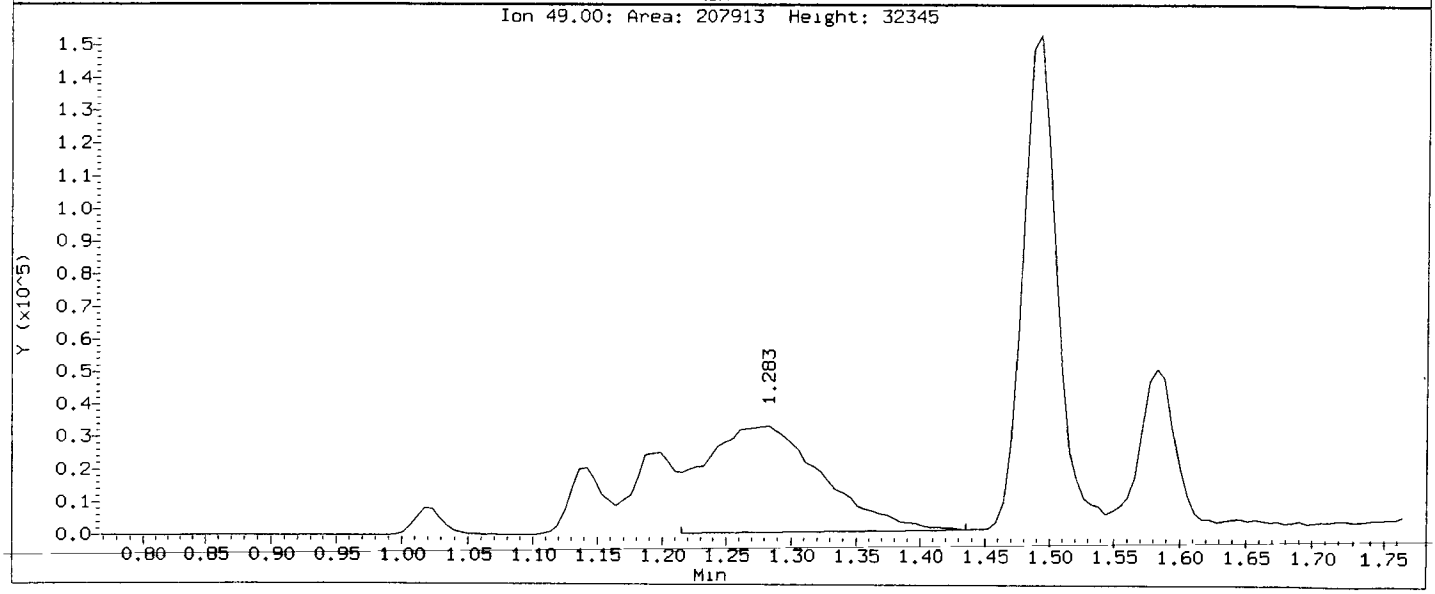


Data File: /chem1/nt5.i/24MAY13.b/2000524.d
Injection Date: 24-MAY-2013 08:18
Instrument: nt5.i
Client Sample ID: VSTD200

Compound: Chloromethane
CAS Number:

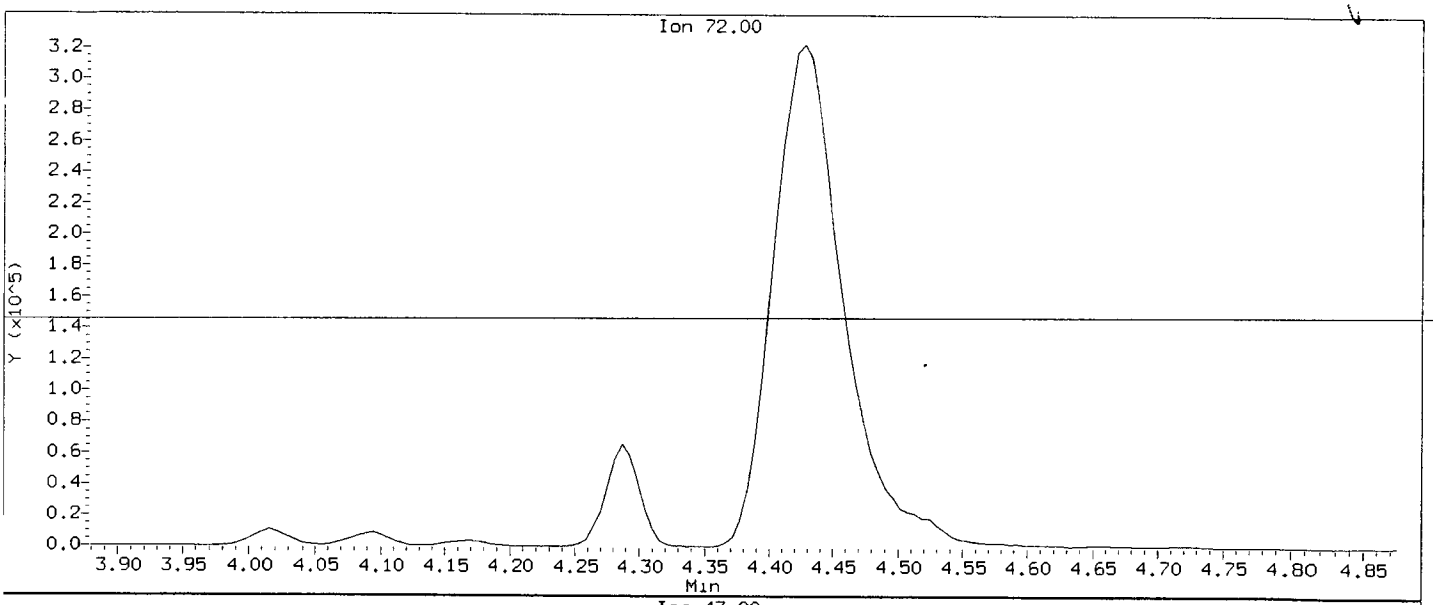


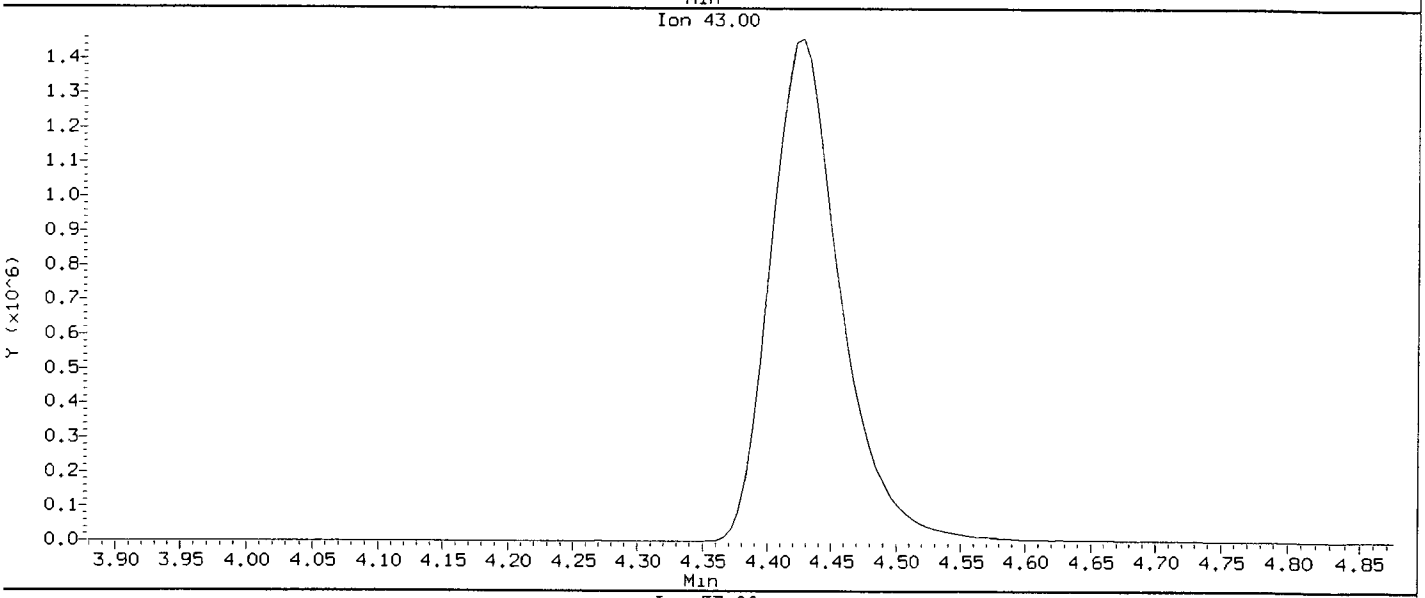


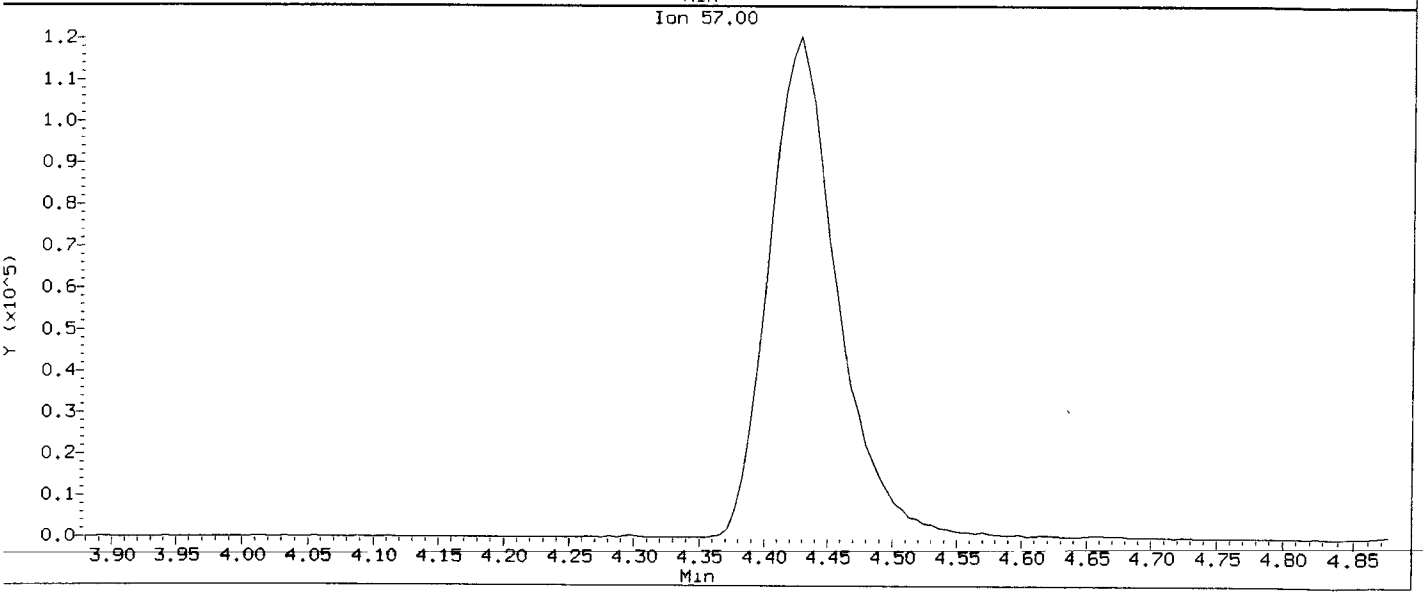


Data File: /chem1/nt5.1/24MAY13.b/2000524.d
Injection Date: 24-MAY-2013 08:18
Instrument: nt5.1
Client Sample ID: VSTD200

Compound: 2-Butanone
CAS Number:







Volatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WRG9 Client ID: SAIC

METHOD: **NW-TPH**(Gas) **8021B**(BTEX) **NW-VPH**(VPH) **8260C**(VOA) **8260C**(SIM VOA) **524.3**(VOA) **RSK-175**(MEE)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Purge Volume (mL) 5 Curve Date: 5/24/11 Analysis Start Date: 6/4/11

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA / Y / N / ____	Method Blank In Control?	Y / N / ✓
BFB Tune Meets Criteria?	NA / Y / N / ✓	Surrogate Recovery in Control?	Y / N / ✓
Internal STD within 50-200%?	NA / Y / N / ✓	LCS / LCSD Recovery Met?	Y / N / ✓
CCAL Meets %D	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / ____
ICAL Q flag applied?	NA / Y / N / ____	MS / MSD Recovery Met?	NA / Y / N / ____
CCAL Q Flag applied	NA / Y / N / ✓	MS / MSD RPD ≤30%?	NA / ____
Manual Integrations?	Y / N / ____	Samples Diluted?	Y / N / ____
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ____

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

MD- DCM @ 539 ug/kg - B flagged in LCS/LCSD/ samples

(Review 1)Analyst: [signature] **Date:** 6/16

(Review 2)Reviewer: MW **Date:** 6/12

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 6/4/13 Analysis: 8260 Analyst: M

GC Program: XACK Column No: 93105V Column Type: DB-624

Instrument Tune (.U or .CT.): PA1003 EM Voltage: 1518

Inj. Vol: 5 Calibration File: b130604 Curve Date: 5/24/13

IS/SS

IS774-L

Ical/Ccal

B000194
IS774-)
IS773-2
B000...

} B000157

LCS/ICV

IS794-L
IS797-)
ICV1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/04JUN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF								
1	1045	bfb0604.d	BFB0604	BFB0604	1										
2	1159	cc0604.d	CC0604	VSTD50	1	4.67	472344	5.12	1576391	7.61	1796523	9.68	972787		
3	1235	cc0604a.d	CC0604	VSTD50	1	4.66	467495	5.11	1582080	7.61	1806573	9.68	978861		
4	1311	lcs0604.d	LCS0604	LCS0604	1	4.66	484756	5.11	1633573	7.61	1880392	9.68	1029875		
5	1335	lcs0604a.d	LCS0604	LCS0604	1	4.67	474930	5.12	1610669	7.61	1862966	9.68	1019587		
6	1359	mb0604.d	MB0604	MB0604	1	4.67	455081	5.12	1552765	7.61	1796929	9.68	963412		
7	1452	ws51a.d	WS51A	A2-W30-S-4	1	4.67	447582	5.12	1512660	7.61	1750126	9.68	824292		
8	1535	wr99c.d	WR99C	KC-TB-01-20130530-W	1	4.66	432099	5.11	1478463	7.60	1724829	9.68	908327		
9	1559	wr99d.d	WR99D	KC-VT-1593-20130530	1	4.67	455993	5.12	1550616	7.61	1833420	9.68	937143		
10	1623	ws04a.d	WS04A	PF-PA-15-0513	1	4.66	438012	5.12	1510769	7.60	1812643	9.68	998054		
11	1647	ws16a.d	WS16A	G-FA-101C(3-4)	1	4.67	433016	5.12	1457152	7.60	1666479	9.68	814208		
12	1711	ws16b.d	WS16B	G-FA-101C(6-7)	1	4.67	471970	5.12	1591253	7.60	1855470	9.68	1009548		
13	1735	ws16c.d	WS16C	G-FA-201C(3-4)	1	4.67	459321	5.12	1565899	7.60	1869856	9.68	1026781		
14	1759	ws16o.d	WS16O	Trip Blanks	1	4.67	495090	5.12	1686867	7.60	2014224	9.68	1123777		
15	1823	ws21a.d	WS21A	KC-IV-SPS-20130531-	1	4.67	232331	5.12	755609	7.60	836774	9.68	418092		
16	1847	ws21b.d	WS21B	KC-TB-02	1	4.67	492568	5.12	1683921	7.60	1998320	9.68	1110285		

Maintenance / Comments

6/5/13

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

WR99 : 00520

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/04JUN13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 04-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1045	bfb0604.d	BFB0604	BFB0604	1	NO MANUAL INTEGRATION
1235	cc0604a.d	CC0604	VSTD50	1	NO MANUAL INTEGRATION
1311	lcs0604.d	LCS0604	LCS0604	1	NO MANUAL INTEGRATION
1335	lcs0604a.d	LCS0604	LCS0604	1	NO MANUAL INTEGRATION
1359	mb0604.d	MB0604	MB0604	1	NO MANUAL INTEGRATION
1535	wr99c.d	WR99C	KC-TB-01-2	1	NO MANUAL INTEGRATION
1559	wr99d.d	WR99D	KC-VT-1593	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt5.i/04JUN13.b

Instrument: nt5.i Date: 04-JUN-2013 Method: VO121012S.m

INITIAL CAL: 24-MAY-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 04-JUN-2013

Compound	%D
Chloroethane	27.7
Acrolein	75.5
Iodomethane	26.3
Methylene Chloride	62.3
Trans-1,2-Dichloroethene	33.6

Data File: /chem1/nt5.i/04JUN13.b/bfb0604.d

Date : 04-JUN-2013 10:45

Client ID: BFB0604

Instrument: nt5.i

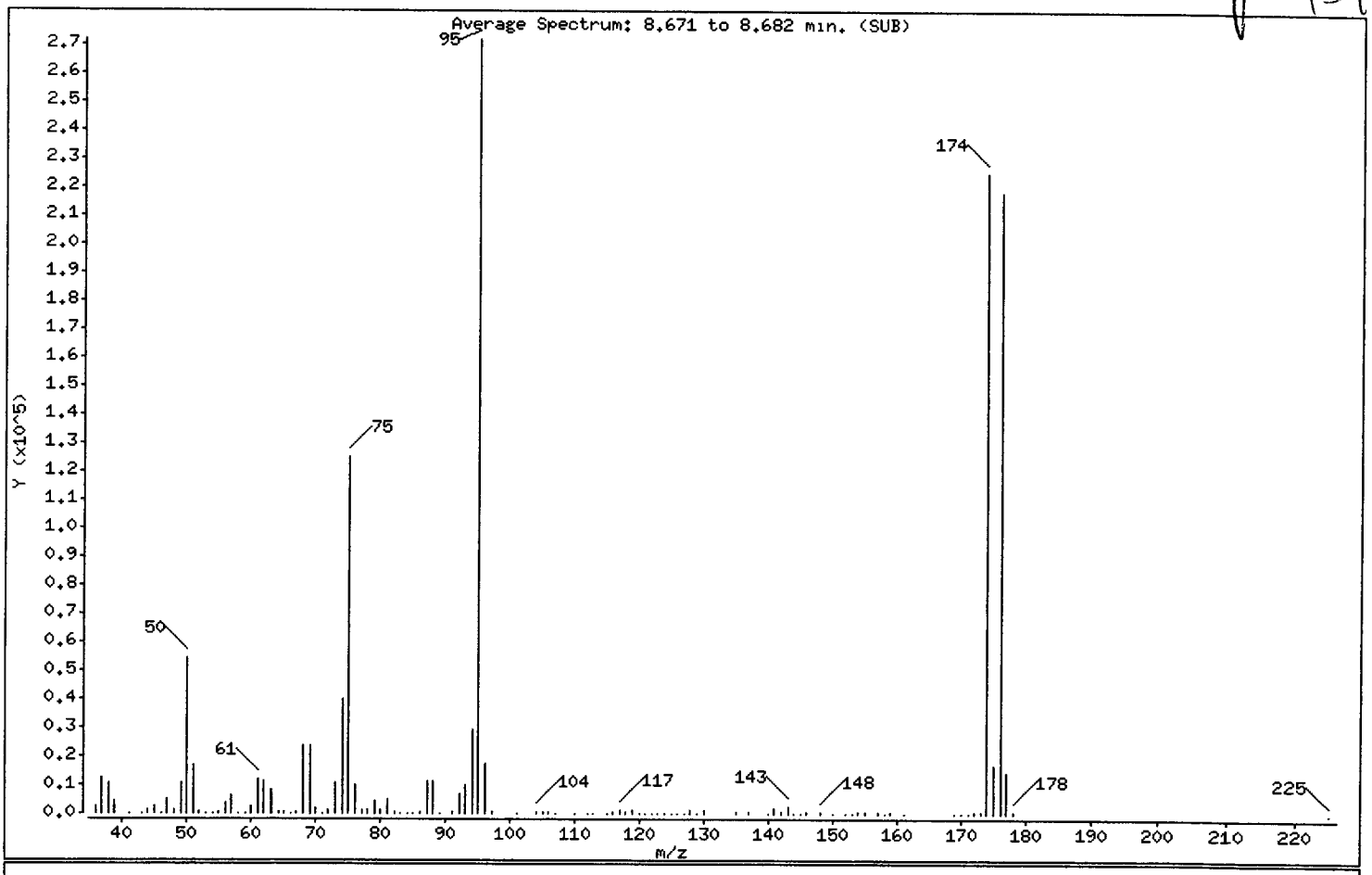
Sample Info: BFB0604,BFB0604,,1,04JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	19.99
75	30.00 - 66.00% of mass 95	45.95
96	5.00 - 9.00% of mass 95	6.50
173	Less than 2.00% of mass 174	0.21 (0.25)
174	50.00 - 101.00% of mass 95	82.72
175	4.00 - 9.00% of mass 174	6.20 (7.49)
176	95.00 - 101.00% of mass 174	80.33 (97.12)
177	5.00 - 9.00% of mass 176	5.30 (6.60)

Data File: /chem1/nt5.i/04JUN13.b/bfb0604.d

Date : 04-JUN-2013 10:45

Client ID: BFB0604

Instrument: nt5.i

Sample Info: BFB0604,BFB0604,,1,04JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0604.d

Spectrum: Average Spectrum: 8.671 to 8.682 min. (SUB)

Location of Maximum: 95.00

Number of points: 126

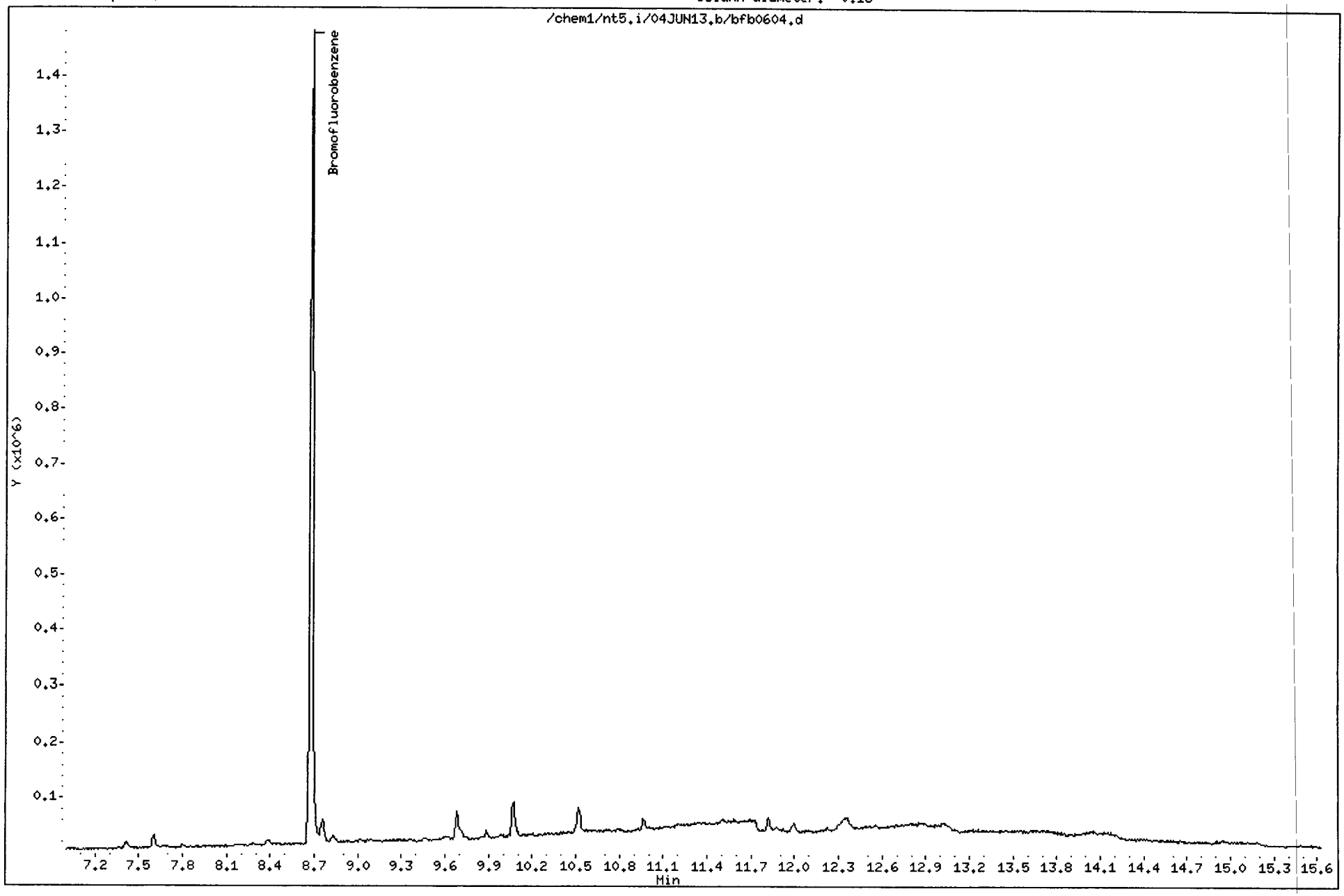
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2312	70.00	1788	106.00	779	143.00	2500
37.00	12444	71.00	182	107.00	273	144.00	181
38.00	10506	72.00	1188	108.00	36	145.00	243
39.00	4499	73.00	10557	110.00	175	146.00	508
41.00	36	74.00	39784	111.00	122	147.00	182
43.00	186	75.00	124912	112.00	47	148.00	666
44.00	1193	76.00	9966	113.00	201	149.00	144
45.00	2385	77.00	1321	115.00	311	150.00	273
46.00	130	78.00	1241	116.00	780	151.00	45
47.00	4756	79.00	4206	117.00	1179	152.00	70
48.00	1544	80.00	1490	118.00	794	153.00	206
49.00	10415	81.00	5014	119.00	1109	154.00	400
50.00	54344	82.00	879	120.00	137	155.00	612
51.00	16984	83.00	67	121.00	36	157.00	404
52.00	603	84.00	56	122.00	37	158.00	53
53.00	41	85.00	82	123.00	35	159.00	354
54.00	14	86.00	407	124.00	160	161.00	275
55.00	899	87.00	11393	125.00	41	166.00	37
56.00	3811	88.00	11042	126.00	122	168.00	36
57.00	6165	89.00	92	127.00	106	169.00	39
58.00	272	90.00	34	128.00	1056	170.00	43
59.00	53	91.00	661	129.00	83	171.00	128
60.00	2378	92.00	6629	130.00	956	172.00	532
61.00	11799	93.00	10028	131.00	223	173.00	564
62.00	11185	94.00	29224	132.00	84	174.00	224832
63.00	8402	95.00	271808	133.00	100	175.00	16848
64.00	905	96.00	17672	135.00	346	176.00	218368
65.00	411	97.00	533	136.00	33	177.00	14418
66.00	133	101.00	118	137.00	391	178.00	417
67.00	792	103.00	4	140.00	170	225.00	37
68.00	23888	104.00	821	141.00	2104		
69.00	23936	105.00	415	142.00	478		

Data File: /chem1/nt5.i/04JUN13.b/bfb0604.d
Date : 04-JUN-2013 10:45
Client ID: BFB0604
Sample Info: BFB0604,BFB0604,,1,04JUN13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/cc0604a.d
Lab Smp Id: CC0604 Client Smp ID: VSTD50
Inj Date : 04-JUN-2013 12:35
Operator : PB Inst ID: nt5.i
Smp Info : CC0604,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 04-Jun-2013 12:54 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.006	1.006	(0.216)	378151	50.0000	53.457
2 Chloromethane	50	1.306	1.306	(0.280)	661554	50.0000	48.195
3 Vinyl Chloride	62	1.181	1.181	(0.253)	756443	50.0000	59.257
4 Bromomethane	94	1.385	1.385	(0.297)	376644	50.0000	56.551
5 Chloroethane	64	1.475	1.475	(0.317)	436895	50.0000	63.862
6 Trichlorofluoromethane	101	1.572	1.572	(0.337)	766497	50.0000	57.945
7 1,1-Dichloroethene	96	1.934	1.934	(0.415)	383470	50.0000	51.322
8 Carbon Disulfide	76	1.934	1.934	(0.415)	1255099	50.0000	52.008
9 112Trichloro122Trifluoroethane	101	1.973	1.973	(0.423)	347463	50.0000	51.718
10 Iodomethane	142	2.030	2.030	(0.436)	350908	50.0000	63.168
11 Bromoethane	108	2.126	2.126	(0.456)	249255	50.0000	53.484
12 Acrolein	56	2.239	2.239	(0.480)	551005	250.000	438.73
13 Methylene Chloride	84	2.409	2.409	(0.517)	531099	50.0000	81.139
14 Acetone	43	2.550	2.550	(0.547)	883997	250.000	261.78

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.550	2.550	(0.547)	562394	50.0000	66.790
	16 Methyl tert butyl ether	73	2.731	2.731	(0.586)	1560209	50.0000	57.878
	17 1,1-Dichloroethane	63	3.172	3.172	(0.681)	1121028	50.0000	56.530
	18 Acrylonitrile	53	3.274	3.274	(0.703)	239744	50.0000	51.485
	19 Vinyl Acetate	43	3.512	3.512	(0.754)	1362920	50.0000	54.163
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.798)	582116	50.0000	56.157
	22 2,2-Dichloropropane	77	3.823	3.823	(0.820)	853422	50.0000	57.120
	23 Bromochloromethane	128	3.908	3.908	(0.839)	245257	50.0000	54.705
	24 Chloroform	83	4.010	4.010	(0.860)	942456	50.0000	56.174
	25 Carbon Tetrachloride	117	4.100	4.100	(0.802)	742211	50.0000	52.005
$	27 Dibromofluoromethane	111	4.179	4.179	(0.897)	603635	50.0000	57.319
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.894)	869305	50.0000	57.142
	28 1,1-Dichloropropene	75	4.293	4.293	(0.840)	834779	50.0000	51.840
	29 2-Butanone	72	4.372	4.372	(0.938)	332387	250.000	265.95(Q)
	30 Benzene	78	4.524	4.524	(0.885)	2414246	50.0000	51.903
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	467495	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.655	(0.999)	577393	50.0000	54.923
	33 1,2-Dichloroethane	62	4.717	4.717	(0.923)	716974	50.0000	48.473
	34 Trichloroethene	95	5.062	5.062	(0.990)	591849	50.0000	51.907
*	35 1,4-Difluorobenzene	114	5.113	5.113	(1.000)	1582080	50.0000	
	37 Dibromomethane	93	5.418	5.418	(1.060)	304647	50.0000	48.434
	38 1,2-Dichloropropane	63	5.514	5.514	(1.079)	661309	50.0000	50.518
	39 Bromodichloromethane	83	5.588	5.588	(1.093)	714159	50.0000	50.026
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	365191	50.0000	51.692
	41 Cis 1,3-dichloropropene	75	6.137	6.137	(1.200)	945245	50.0000	51.756
$	42 d8-Toluene	98	6.295	6.295	(1.231)	2269374	50.0000	50.722
	43 Toluene	92	6.340	6.340	(1.240)	1524890	50.0000	51.684
	44 Tetrachloroethene	166	6.652	6.652	(0.874)	628627	50.0000	51.296
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.312)	1334550	250.000	249.08
	46 Trans 1,3-Dichloropropene	75	6.702	6.702	(1.311)	839107	50.0000	50.573
	47 1,1,2-Trichloroethane	97	6.833	6.833	(1.336)	457491	50.0000	48.765
	48 Chlorodibromomethane	129	6.968	6.968	(0.916)	520369	50.0000	49.017
	49 1,3-Dichloropropane	76	7.053	7.053	(0.927)	845931	50.0000	48.098
	50 1,2-Dibromoethane	107	7.149	7.149	(1.398)	445423	50.0000	49.202
	51 2-Hexanone	43	7.421	7.421	(0.975)	2243713	250.000	242.81
*	52 d5-Chlorobenzene	117	7.608	7.608	(1.000)	1806573	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	1525190	50.0000	49.887
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	2763990	50.0000	52.805
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	529015	50.0000	49.097
	56 m,p-xylene	106	7.806	7.806	(1.026)	2101993	100.000	106.84
	57 o-Xylene	106	8.168	8.168	(1.074)	1006132	50.0000	53.232
	58 Styrene	104	8.213	8.213	(1.080)	1681845	50.0000	52.585
	59 Bromoform	173	8.207	8.207	(0.848)	367508	50.0000	47.495
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	2617001	50.0000	53.598
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	969205	50.0000	50.546
	63 Bromobenzene	156	8.750	8.750	(0.904)	626082	50.0000	47.929
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	3104259	50.0000	52.463

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.880	8.880	(0.917)	584884	50.0000	45.314
	66 2-Chloro Toluene	91	8.931	8.931	(0.922)	1853997	50.0000	50.689
	67 1,3,5-Trimethyl Benzene	105	9.016	9.016	(0.931)	2191438	50.0000	52.838
	68 1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	182329	50.0000	46.222
	69 Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	225672	50.0000	45.642
	70 4-Chloro Toluene	91	9.084	9.084	(0.938)	1943621	50.0000	50.694
	71 T-Butyl Benzene	119	9.288	9.288	(0.959)	1925568	50.0000	52.636
	72 1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	2148184	50.0000	52.708
	73 S-Butyl Benzene	105	9.452	9.452	(0.976)	2873113	50.0000	53.446
	74 4-Isopropyl Toluene	119	9.599	9.599	(0.991)	2389950	50.0000	54.869
	75 1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	1197049	50.0000	49.499
*	76 d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	978861	50.0000	
	77 1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	1219323	50.0000	48.301
	78 N-Butyl Benzene	91	9.983	9.983	(1.031)	2276497	50.0000	55.036
$	79 d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	990100	50.0000	51.261
	80 1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	1121184	50.0000	47.894
	81 1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	113460	50.0000	45.187
	82 Hexachloro 1,3-Butadiene	225	11.511	11.511	(1.189)	532574	50.0000	51.604
	83 1,2,4-Trichlorobenzene	180	11.499	11.499	(1.188)	855535	50.0000	51.433
	84 Naphthalene	128	11.811	11.811	(1.220)	1794305	50.0000	48.480
	85 1,2,3-Trichlorobenzene	180	11.992	11.992	(1.238)	783152	50.0000	49.357

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: cc0604a.d
Lab Smp Id: CC0604
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 04-JUN-2013
Calibration Time: 11:59
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	467495	-0.70
35 1,4-Difluorobenze	1445861	722930	2891722	1582080	9.42
52 d5-Chlorobenzene	1620542	810271	3241084	1806573	11.48
76 d4-1,4-Dichlorobe	872028	436014	1744056	978861	12.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/04JUN13.b/cc0604a.d
Report Date: 04-Jun-2013 12:54

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0604a.d
Analysis Type: SOIL
Lab Sample ID: CC0604
Method: /chem1/nt5.i/04JUN13.b/VO121012S.m

Injection Date: 04-JUN-2013 12:35
Init. Cal. Date(s): 24-MAY-2013 24-MAY-2013
Init. Cal. Times: 08:18 11:06
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 Dichlorodifluoromethane	0.75657	0.80889	0.100	6.91478	20.00000	Averaged	
2 Chloromethane	1.46811	1.41510	0.100	-3.61072	20.00000	Averaged	
3 Vinyl Chloride	1.36531	1.61808	0.100	18.51306	20.00000	Averaged	
4 Bromomethane	0.71233	0.80566	0.100	13.10287	20.00000	Averaged	
5 Chloroethane	0.73169	0.93455	0.100	27.72480	20.00000	Averaged	<-
6 Trichlorofluoromethane	1.41476	1.63958	0.100	15.89098	20.00000	Averaged	
7 1,1-Dichloroethene	0.79913	0.82026	0.100	2.64444	20.00000	Averaged	
8 Carbon Disulfide	2.58108	2.68473	0.010	4.01577	20.00000	Averaged	
9 112Trichloro122Trifluoroeth	0.71856	0.74325	0.010	3.43527	20.00000	Averaged	
10 Iodomethane	0.59414	0.75061	0.010	26.33632	20.00000	Averaged	<-
11 Bromoethane	0.49844	0.53317	0.100	6.96787	20.00000	Averaged	
12 Acrolein	0.13432	0.23573	0.000	75.49214	20.00000	Averaged	<-
13 Methylene Chloride	0.70007	1.13605	0.010	62.27734	20.00000	Averaged	<-
14 Acetone	0.36116	0.37818	0.001	4.71241	20.00000	Averaged	
15 Trans-1,2-Dichloroethene	0.90058	1.20299	0.010	33.58056	20.00000	Averaged	<-
16 Methyl tert butyl ether	2.88310	3.33738	0.100	15.75649	20.00000	Averaged	
17 1,1-Dichloroethane	2.12095	2.39794	0.100	13.05970	20.00000	Averaged	
18 Acrylonitrile	0.49804	0.51283	0.001	2.96942	20.00000	Averaged	
19 Vinyl Acetate	2.69128	2.91537	0.010	8.32624	20.00000	Averaged	
20 Cis-1,2-Dichloroethene	1.10866	1.24518	0.010	12.31391	20.00000	Averaged	
22 2,2-Dichloropropane	1.59797	1.82552	0.010	14.23965	20.00000	Averaged	
23 Bromochloromethane	0.47950	0.52462	0.050	9.41010	20.00000	Averaged	
24 Chloroform	1.79441	2.01597	0.100	12.34706	20.00000	Averaged	
25 Carbon Tetrachloride	0.45105	0.46914	0.100	4.01015	20.00000	Averaged	
$ 27 Dibromofluoromethane	1.12634	1.29121	0.100	14.63773	20.00000	Averaged	
26 1,1,1-Trichloroethane	1.62707	1.85949	0.100	14.28445	20.00000	Averaged	
28 1,1-Dichloropropene	0.50891	0.52765	0.010	3.68100	20.00000	Averaged	
29 2-Butanone	0.13367	0.14220	0.001	6.38064	20.00000	Averaged	
30 Benzene	1.47004	1.52599	0.100	3.80615	20.00000	Averaged	
$ 32 d4-1,2-Dichloroethane	1.12438	1.23508	0.010	9.84521	20.00000	Averaged	
33 1,2-Dichloroethane	0.46746	0.45318	0.100	-3.05370	20.00000	Averaged	
34 Trichloroethene	0.36035	0.37410	0.100	3.81351	20.00000	Averaged	
37 Dibromomethane	0.19879	0.19256	0.010	-3.13186	20.00000	Averaged	
38 1,2-Dichloropropane	0.41371	0.41800	0.100	1.03689	20.00000	Averaged	
39 Bromodichloromethane	0.45117	0.45141	0.100	0.05231	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0604a.d
Analysis Type: SOIL
Lab Sample ID: CC0604
Method: /chem1/nt5.i/04JUN13.b/VO121012S.m

Injection Date: 04-JUN-2013 12:35
Init. Cal. Date(s): 24-MAY-2013 24-MAY-2013
Init. Cal. Times: 08:18 11:06
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
40 2-Chloroethyl Vinyl Ether	0.22327	0.23083	0.000	3.38458	20.00000	Averaged
41 Cis 1,3-dichloropropene	0.57720	0.59747	0.100	3.51174	20.00000	Averaged
$ 42 d8-Toluene	1.41400	1.43442	0.010	1.44443	20.00000	Averaged
43 Toluene	0.93245	0.96385	0.100	3.36780	20.00000	Averaged
44 Tetrachloroethene	0.33918	0.34797	0.100	2.59155	20.00000	Averaged
45 4-Methyl-2-Pentanone	0.16933	0.16871	0.000	-0.36868	20.00000	Averaged
46 Trans 1,3-Dichloropropene	0.52437	0.53038	0.010	1.14679	20.00000	Averaged
47 1,1,2-Trichloroethane	0.29649	0.28917	0.100	-2.46933	20.00000	Averaged
48 Chlorodibromomethane	0.29382	0.28804	0.100	-1.96525	20.00000	Averaged
49 1,3-Dichloropropane	0.48677	0.46825	0.100	-3.80443	20.00000	Averaged
50 1,2-Dibromoethane	0.28611	0.28154	0.010	-1.59672	20.00000	Averaged
51 2-Hexanone	0.25575	0.24839	0.010	-2.87735	20.00000	Averaged
53 Chlorobenzene	0.84616	0.84425	0.300	-0.22679	20.00000	Averaged
54 Ethyl Benzene	1.44869	1.52996	0.100	5.61026	20.00000	Averaged
55 1,1,1,2-Tetrachloroethane	0.29822	0.29283	0.010	-1.80649	20.00000	Averaged
56 m,p-xylene	0.54454	0.58176	0.100	6.83508	20.00000	Averaged
57 o-Xylene	0.52311	0.55693	0.100	6.46434	20.00000	Averaged
58 Styrene	0.88519	0.93096	0.100	5.17026	20.00000	Averaged
59 Bromoform	0.39525	0.37544	0.100	-5.01064	20.00000	Averaged
60 Isopropyl Benzene	2.49405	2.67352	0.010	7.19563	20.00000	Averaged
$ 62 4-Bromofluorobenzene	0.53069	0.53649	0.200	1.09240	20.00000	Averaged
63 Bromobenzene	0.66724	0.63960	0.010	-4.14261	20.00000	Averaged
64 N-Propyl Benzene	3.02242	3.17130	0.010	4.92560	20.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.65930	0.59752	0.300	-9.37181	20.00000	Averaged
66 2-Chloro Toluene	1.86829	1.89403	0.010	1.37801	20.00000	Averaged
67 1,3,5-Trimethyl Benzene	2.11852	2.23876	0.010	5.67561	20.00000	Averaged
68 1,2,3-Trichloropropane	0.20149	0.18627	0.010	-7.55626	20.00000	Averaged
69 Trans-1,4-Dichloro 2-Butene	0.25256	0.23055	0.001	-8.71609	20.00000	Averaged
70 4-Chloro Toluene	1.95841	1.98559	0.010	1.38815	20.00000	Averaged
71 T-Butyl Benzene	1.86864	1.96715	0.010	5.27197	20.00000	Averaged
72 1,2,4-Trimethylbenzene	2.08182	2.19457	0.010	5.41631	20.00000	Averaged
73 S-Butyl Benzene	2.74591	2.93516	0.010	6.89191	20.00000	Averaged
74 4-Isopropyl Toluene	2.22488	2.44156	0.010	9.73884	20.00000	Averaged
75 1,3-Dichlorobenzene	1.23529	1.22290	0.100	-1.00294	20.00000	Averaged
77 1,4-Dichlorobenzene	1.28948	1.24565	0.100	-3.39871	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 04-JUN-2013 12:35
Lab File ID: cc0604a.d Init. Cal. Date(s): 24-MAY-2013 24-MAY-2013
Analysis Type: SOIL Init. Cal. Times: 08:18 11:06
Lab Sample ID: CC0604 Quant Type: ISTD
Method: /chem1/nt5.i/04JUN13.b/VO121012S.m

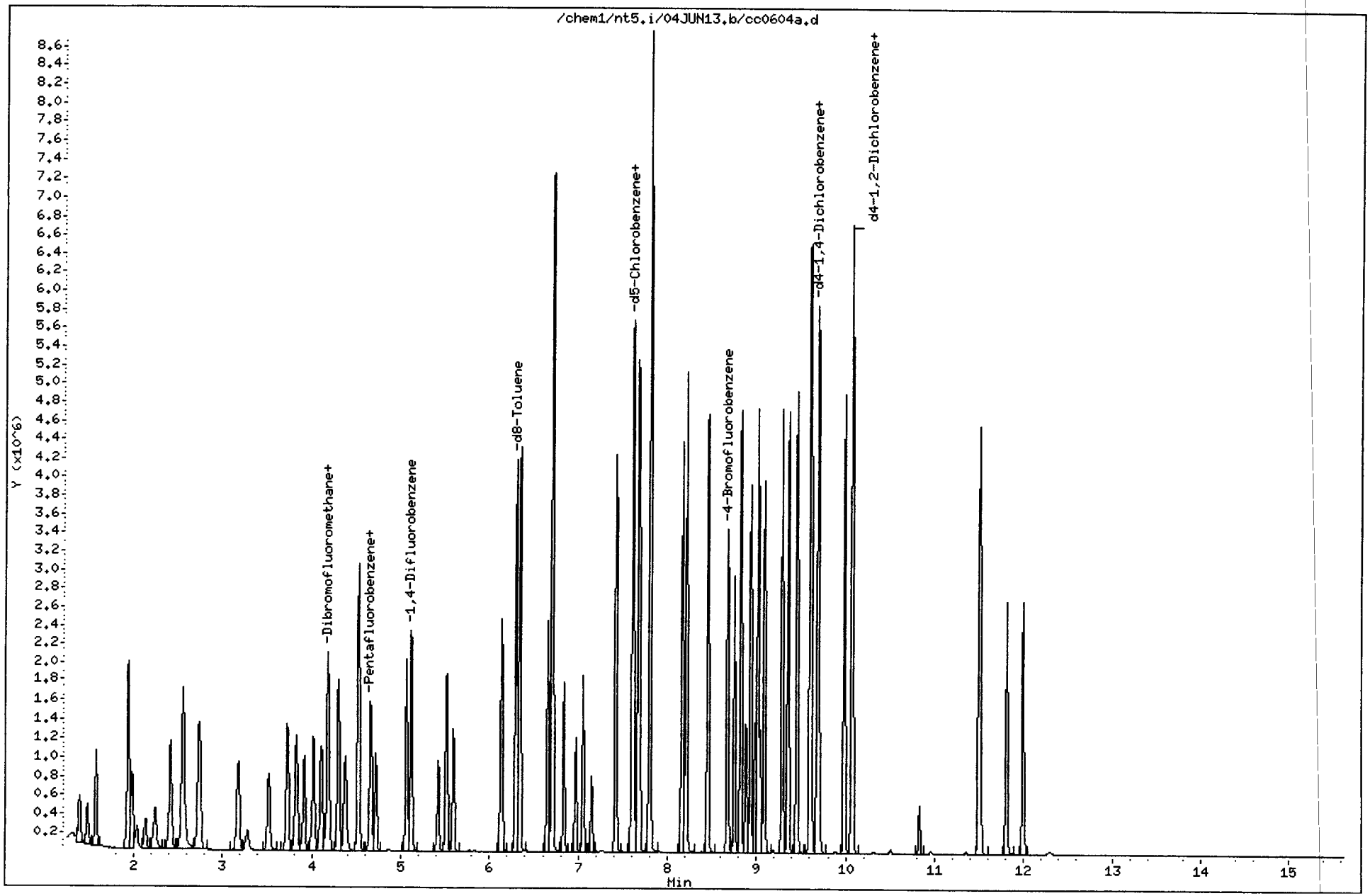
COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
78 N-Butyl Benzene	2.11287	2.32566	0.010	10.07127	20.00000	Averaged
$ 79 d4-1,2-Dichlorobenzene	0.98660	1.01148	0.010	2.52162	20.00000	Averaged
80 1,2-Dichlorobenzene	1.19577	1.14540	0.100	-4.21282	20.00000	Averaged
81 1,2-Dibromo 3-Chloropropane	0.12826	0.11591	0.010	-9.62674	20.00000	Averaged
82 Hexachloro 1,3-Butadiene	0.52716	0.54408	0.010	3.20885	20.00000	Averaged
83 1,2,4-Trichlorobenzene	0.84966	0.87401	0.010	2.86568	20.00000	Averaged
84 Naphthalene	1.89053	1.83305	0.010	-3.04004	20.00000	Averaged
85 1,2,3-Trichlorobenzene	0.81049	0.80006	0.010	-1.28607	20.00000	Averaged

Data File: /chem1/nt5.i/04JUN13.b/cc0604a.d
Date : 04-JUN-2013 12:35
Client ID: VSTD50
Sample Info: CC0604,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/lcs0604.d
Lab Smp Id: LCS0604 Client Smp ID: LCS0604
Inj Date : 04-JUN-2013 13:11
Operator : PB Inst ID: nt5.i
Smp Info : LCS0604,5,5,0
Misc Info : 13-11820
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 05-Jun-2013 07:53 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

6/5/13

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.006	1.006	(0.216)	349425	47.6376	47.638
2 Chloromethane	50	1.255	1.306	(0.269)	581808	40.8759	40.876
3 Vinyl Chloride	62	1.175	1.181	(0.252)	723752	54.6769	54.677
4 Bromomethane	94	1.385	1.385	(0.297)	345282	49.9966	49.997
5 Chloroethane	64	1.470	1.475	(0.315)	392575	55.3407	55.341
6 Trichlorofluoromethane	101	1.566	1.572	(0.336)	690438	50.3371	50.337
7 1,1-Dichloroethene	96	1.922	1.934	(0.412)	332608	42.9300	42.930
8 Carbon Disulfide	76	1.928	1.934	(0.414)	1086406	43.4148	43.415
9 112Trichloro122Trifluoroethane	101	1.967	1.973	(0.422)	304623	43.7266	43.727
10 Iodomethane	142	2.024	2.030	(0.434)	296353	51.4479	51.448
11 Bromoethane	108	2.120	2.126	(0.455)	276916	57.3036	57.304
12 Acrolein	56	2.228	2.239	(0.478)	605519	464.969	464.97(R)
13 Methylene Chloride	84	2.403	2.409	(0.516)	523439	77.1210	77.121(R)
14 Acetone	43	2.539	2.550	(0.545)	880552	251.476	251.48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.544	2.550	(0.546)	514292	58.9029	58.903
	16 Methyl tert butyl ether	73	2.725	2.731	(0.585)	1513250	54.1374	54.137
	17 1,1-Dichloroethane	63	3.167	3.172	(0.680)	1047691	50.9506	50.951
	18 Acrylonitrile	53	3.263	3.274	(0.700)	239683	49.6388	49.639
	19 Vinyl Acetate	43	3.506	3.512	(0.752)	1336439	51.2196	51.220
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.798)	538628	50.1114	50.111
	22 2,2-Dichloropropane	77	3.817	3.823	(0.819)	783973	50.6032	50.603
	23 Bromochloromethane	128	3.908	3.908	(0.839)	234044	50.3450	50.345
	24 Chloroform	83	4.010	4.010	(0.860)	885679	50.9098	50.910
	25 Carbon Tetrachloride	117	4.094	4.100	(0.801)	682681	46.3261	46.326
$	27 Dibromofluoromethane	111	4.179	4.179	(0.897)	625708	57.2992	57.299
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.894)	795317	50.4173	50.417
	28 1,1-Dichloropropene	75	4.292	4.293	(0.840)	763105	45.8957	45.896
	29 2-Butanone	72	4.360	4.372	(0.936)	339015	261.596	261.60 (Q)
	30 Benzene	78	4.519	4.524	(0.884)	2240542	46.6503	46.650
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	484756	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.655	(0.998)	591246	54.2378	54.238
	33 1,2-Dichloroethane	62	4.711	4.717	(0.921)	692901	45.3690	45.369
	34 Trichloroethene	95	5.056	5.062	(0.989)	538456	45.7354	45.735
*	35 1,4-Difluorobenzene	114	5.113	5.113	(1.000)	1633573	50.0000	
	37 Dibromomethane	93	5.418	5.418	(1.060)	292485	45.0347	45.035
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	617729	45.7018	45.702
	39 Bromodichloromethane	83	5.588	5.588	(1.093)	672808	45.6439	45.644
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	357912	49.0650	49.065
	41 Cis 1,3-dichloropropene	75	6.137	6.137	(1.200)	892395	47.3219	47.322
$	42 d8-Toluene	98	6.295	6.295	(1.231)	2336875	50.5845	50.585
	43 Toluene	92	6.340	6.340	(1.240)	1414047	46.4163	46.416
	44 Tetrachloroethene	166	6.651	6.652	(0.874)	578905	45.3840	45.384
	45 4-Methyl-2-Pentanone	58	6.702	6.708	(1.311)	1322432	239.036	239.04
	46 Trans 1,3-Dichloropropene	75	6.702	6.702	(1.311)	802603	46.8485	46.848
	47 1,1,2-Trichloroethane	97	6.832	6.833	(1.336)	445332	45.9730	45.973
	48 Chlorodibromomethane	129	6.968	6.968	(0.916)	497194	44.9957	44.996
	49 1,3-Dichloropropane	76	7.053	7.053	(0.927)	812369	44.3762	44.376
	50 1,2-Dibromoethane	107	7.149	7.149	(1.398)	431939	46.2081	46.208
	51 2-Hexanone	43	7.421	7.421	(0.975)	2234720	232.340	232.34
*	52 d5-Chlorobenzene	117	7.607	7.608	(1.000)	1880392	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	1420200	44.6289	44.629
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	2559360	46.9762	46.976
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	496938	44.3092	44.309
	56 m,p-xylene	106	7.800	7.806	(1.025)	1928506	94.1696	94.170
	57 o-Xylene	106	8.167	8.168	(1.074)	931410	47.3442	47.344
	58 Styrene	104	8.213	8.213	(1.080)	1577864	47.3973	47.397
	59 Bromoform	173	8.207	8.207	(0.848)	356182	43.7508	43.751
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	2393437	46.5910	46.591
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	1014226	50.8176	50.818
	63 Bromobenzene	156	8.756	8.750	(0.904)	584831	42.5531	42.553
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	2868828	46.0824	46.082

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.880	8.880	(0.917)	579639	42.6832	42.683
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	1716492	44.6050	44.605
67	1,3,5-Trimethyl Benzene	105	9.016	9.016	(0.931)	2018008	46.2461	46.246
68	1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	177996	42.8881	42.888
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	222172	42.7081	42.708
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	1807852	44.8172	44.817
71	T-Butyl Benzene	119	9.287	9.288	(0.959)	1753922	45.5691	45.569
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	1998751	46.6124	46.612
73	S-Butyl Benzene	105	9.452	9.452	(0.976)	2632102	46.5373	46.537
74	4-Isopropyl Toluene	119	9.599	9.599	(0.991)	2181197	47.5963	47.596
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	1116954	43.8988	43.899
* 76	d4-1,4-Dichlorobenzene	152	9.683	9.684	(1.000)	1029875	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	1138642	42.8704	42.870
78	N-Butyl Benzene	91	9.983	9.983	(1.031)	2102699	48.3160	48.316
$ 79	d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	1028548	50.6136	50.614
80	1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	1054573	42.8167	42.817
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	113472	42.9529	42.953
82	Hexachloro 1,3-Butadiene	225	11.511	11.511	(1.189)	475571	43.7984	43.798
83	1,2,4-Trichlorobenzene	180	11.499	11.499	(1.188)	804108	45.9466	45.947
84	Naphthalene	128	11.810	11.811	(1.220)	1758279	45.1534	45.153
85	1,2,3-Trichlorobenzene	180	11.991	11.992	(1.238)	745330	44.6465	44.647

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0604.d
Lab Smp Id: LCS0604
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

Calibration Date: 04-JUN-2013
Calibration Time: 12:35
Client Smp ID: LCS0604
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	484756	2.96
35 1,4-Difluorobenze	1445861	722930	2891722	1633573	12.98
52 d5-Chlorobenzene	1620542	810271	3241084	1880392	16.03
76 d4-1,4-Dichlorobe	872028	436014	1744056	1029875	18.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 04JUN13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: LCS0604 Client Smp ID: LCS0604
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCS
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	47.638	95.28	53-148
2 Chloromethane	50.000	40.876	81.75	64-125
3 Vinyl Chloride	50.000	54.677	109.35	63-137
4 Bromomethane	50.000	49.997	99.99	57-136
5 Chloroethane	50.000	55.341	110.68	64-131
6 Trichlorofluoromet	50.000	50.337	100.67	69-132
12 Acrolein	250.00	464.97	185.99*	54-137
9 112Trichloro122Tri	50.000	43.727	87.45	74-130
14 Acetone	250.00	251.48	100.59	60-131
7 1,1-Dichloroethene	50.000	42.930	85.86	75-126
11 Bromoethane	50.000	57.304	114.61	76-126
10 Iodomethane	50.000	51.448	102.90	65-139
13 Methylene Chloride	50.000	77.121	154.24*	70-123
8 Carbon Disulfide	50.000	43.415	86.83	71-129
18 Acrylonitrile	50.000	49.639	99.28	67-125
15 Trans-1,2-Dichloro	50.000	58.903	117.81	80-120
19 Vinyl Acetate	50.000	51.220	102.44	60-136
17 1,1-Dichloroethane	50.000	50.951	101.90	80-120
29 2-Butanone	250.00	261.60	104.64	70-120
22 2,2-Dichloropropan	50.000	50.603	101.21	74-123
20 Cis-1,2-Dichloroet	50.000	50.111	100.22	80-120
24 Chloroform	50.000	50.910	101.82	80-120
23 Bromochloromethane	50.000	50.345	100.69	80-120
26 1,1,1-Trichloroeth	50.000	50.417	100.83	77-121
28 1,1-Dichloropropen	50.000	45.896	91.79	80-120
25 Carbon Tetrachlori	50.000	46.326	92.65	77-122
33 1,2-Dichloroethane	50.000	45.369	90.74	76-120
30 Benzene	50.000	46.650	93.30	80-120
34 Trichloroethene	50.000	45.735	91.47	80-120
38 1,2-Dichloropropan	50.000	45.702	91.40	80-120
39 Bromodichlorometha	50.000	45.644	91.29	77-121
37 Dibromomethane	50.000	45.035	90.07	80-120
40 2-Chloroethyl Viny	50.000	49.065	98.13	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	239.04	95.61	67-120
41 Cis 1,3-dichloropr	50.000	47.322	94.64	74-120
43 Toluene	50.000	46.416	92.83	80-120
46 Trans 1,3-Dichloro	50.000	46.848	93.70	65-120
51 2-Hexanone	250.00	232.34	92.94	65-130
47 1,1,2-Trichloroeth	50.000	45.973	91.95	80-120
49 1,3-Dichloropropan	50.000	44.376	88.75	80-120
44 Tetrachloroethene	50.000	45.384	90.77	80-121
48 Chlorodibromometha	50.000	44.996	89.99	64-120
50 1,2-Dibromoethane	50.000	46.208	92.42	75-120
53 Chlorobenzene	50.000	44.629	89.26	80-120
55 1,1,1,2-Tetrachlor	50.000	44.309	88.62	69-121
54 Ethyl Benzene	50.000	46.976	93.95	80-127
56 m,p-xylene	100.00	94.170	94.17	80-125
57 o-Xylene	50.000	47.344	94.69	78-120
58 Styrene	50.000	47.397	94.79	80-123
60 Isopropyl Benzene	50.000	46.591	93.18	80-127
59 Bromoform	50.000	43.751	87.50	60-120
65 1,1,2,2-Tetrachlor	50.000	42.683	85.37	74-120
68 1,2,3-Trichloropro	50.000	42.888	85.78	72-121
69 Trans-1,4-Dichloro	50.000	42.708	85.42	65-126
64 N-Propyl Benzene	50.000	46.082	92.16	80-132
63 Bromobenzene	50.000	42.553	85.11	80-120
67 1,3,5-Trimethyl Be	50.000	46.246	92.49	80-125
66 2-Chloro Toluene	50.000	44.605	89.21	80-125
70 4-Chloro Toluene	50.000	44.817	89.63	80-127
71 T-Butyl Benzene	50.000	45.569	91.14	87-122
72 1,2,4-Trimethylben	50.000	46.612	93.22	80-126
73 S-Butyl Benzene	50.000	46.537	93.07	80-134
74 4-Isopropyl Toluen	50.000	47.596	95.19	80-131
75 1,3-Dichlorobenzen	50.000	43.899	87.80	80-120
77 1,4-Dichlorobenzen	50.000	42.870	85.74	80-120
78 N-Butyl Benzene	50.000	48.316	96.63	80-138
80 1,2-Dichlorobenzen	50.000	42.817	85.63	80-120
81 1,2-Dibromo 3-Chlo	50.000	42.953	85.91	59-120
83 1,2,4-Trichloroben	50.000	45.947	91.89	78-130
82 Hexachloro 1,3-But	50.000	43.798	87.60	76-129
84 Naphthalene	50.000	45.153	90.31	66-120
85 1,2,3-Trichloroben	50.000	44.647	89.29	73-123

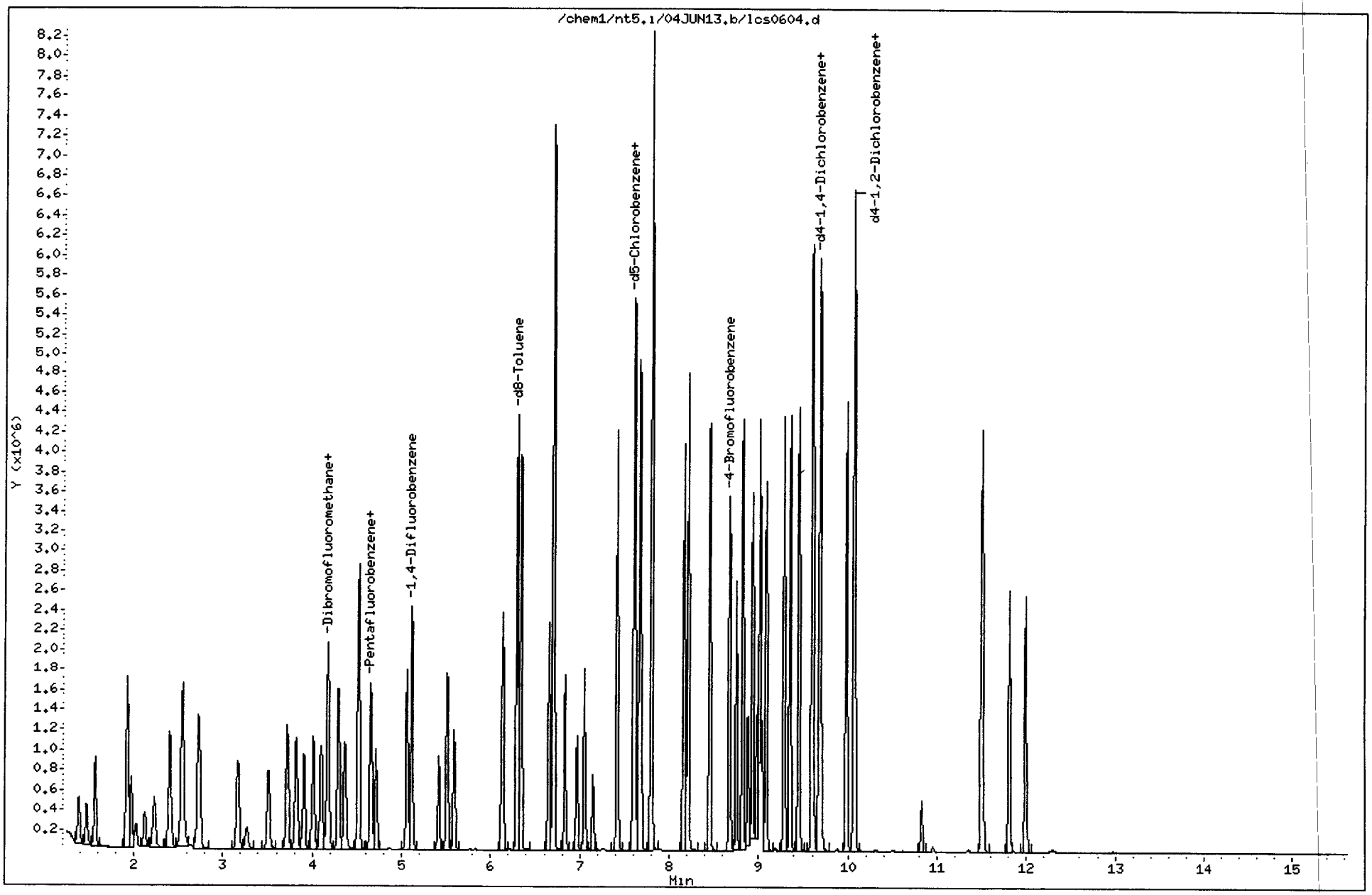
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.299	114.60	70-130

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	54.238	108.48	80-149
$ 42 d8-Toluene	50.000	50.585	101.17	77-120
$ 62 4-Bromofluorobenze	50.000	50.818	101.64	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.614	101.23	80-120

Data File: /chem1/nt5.i/04JUN13.b/lcs0604.d
Date : 04-JUN-2013 13:11
Client ID: LCS0604
Sample Info: LCS0604,5,5,0

Instrument: nt5.i
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0604.d

Lab ID: LCS0604, Method: V0121012S.m, Instrument: nt5.i, Date: 04-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/lcs0604a.d
Lab Smp Id: LCS0604 Client Smp ID: LCS0604
Inj Date : 04-JUN-2013 13:35
Operator : PB Inst ID: nt5.i
Smp Info : LCS0604,5,5,0
Misc Info : 13-11820
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 05-Jun-2013 07:53 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

6/5/13

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.023	1.006	(0.219)	372221	51.7953	51.795
2 Chloromethane	50	1.283	1.306	(0.275)	616673	44.2217	44.222
3 Vinyl Chloride	62	1.193	1.181	(0.255)	684723	52.7986	52.799
4 Bromomethane	94	1.402	1.385	(0.300)	345503	51.0636	51.064
5 Chloroethane	64	1.492	1.475	(0.319)	419107	60.3032	60.303
6 Trichlorofluoromethane	101	1.589	1.572	(0.340)	714168	53.1444	53.144
7 1,1-Dichloroethene	96	1.945	1.934	(0.416)	344285	45.3565	45.357
8 Carbon Disulfide	76	1.945	1.934	(0.416)	1104997	45.0713	45.071
9 112Trichloro122Trifluoroethane	101	1.984	1.973	(0.425)	309469	45.3413	45.341
10 Iodomethane	142	2.041	2.030	(0.437)	345666	61.2503	61.250
11 Bromoethane	108	2.143	2.126	(0.459)	279747	59.0871	59.087
12 Acrolein	56	2.250	2.239	(0.482)	609218	477.488	477.49(R)
13 Methylene Chloride	84	2.426	2.409	(0.519)	527494	79.3264	79.326(R)
14 Acetone	43	2.562	2.550	(0.548)	867315	252.820	252.82

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.550	(0.550)	528216	61.7493	61.749(R)
	16 Methyl tert butyl ether	73	2.748	2.731	(0.588)	1534375	56.0289	56.029
	17 1,1-Dichloroethane	63	3.184	3.172	(0.682)	1078897	53.5537	53.554
	18 Acrylonitrile	53	3.286	3.274	(0.703)	241112	50.9679	50.968
	19 Vinyl Acetate	43	3.523	3.512	(0.754)	1365131	53.4017	53.402
	20 Cis-1,2-Dichloroethene	96	3.732	3.721	(0.799)	552182	52.4353	52.435
	22 2,2-Dichloropropane	77	3.834	3.823	(0.821)	806838	53.1566	53.157
	23 Bromochloromethane	128	3.919	3.908	(0.839)	241005	52.9150	52.915
	24 Chloroform	83	4.021	4.010	(0.861)	846450	49.6615	49.661
	25 Carbon Tetrachloride	117	4.112	4.100	(0.802)	708550	48.7653	48.765
$	27 Dibromofluoromethane	111	4.191	4.179	(0.897)	610752	57.0868	57.087
	26 1,1,1-Trichloroethane	97	4.179	4.168	(0.895)	829536	53.6745	53.675
	28 1,1-Dichloropropene	75	4.298	4.293	(0.839)	789546	48.1612	48.161
	29 2-Butanone	72	4.377	4.372	(0.937)	337489	265.806	265.81(Q)
	30 Benzene	78	4.530	4.524	(0.884)	2301753	48.6063	48.606
*	31 Pentafluorobenzene	168	4.672	4.660	(1.000)	474930	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.655	(0.998)	586664	54.9309	54.931
	33 1,2-Dichloroethane	62	4.722	4.717	(0.922)	700812	46.5395	46.539
	34 Trichloroethene	95	5.068	5.062	(0.989)	554135	47.7365	47.736
*	35 1,4-Difluorobenzene	114	5.124	5.113	(1.000)	1610669	50.0000	
	37 Dibromomethane	93	5.424	5.418	(1.058)	293156	45.7799	45.780
	38 1,2-Dichloropropane	63	5.514	5.514	(1.076)	636710	47.7759	47.776
	39 Bromodichloromethane	83	5.594	5.588	(1.092)	687068	47.2742	47.274
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.125	(1.196)	361130	50.2101	50.210
	41 Cis 1,3-dichloropropene	75	6.142	6.137	(1.199)	907432	48.8035	48.804
$	42 d8-Toluene	98	6.301	6.295	(1.230)	2309118	50.6945	50.694
	43 Toluene	92	6.340	6.340	(1.237)	1434562	47.7593	47.759
	44 Tetrachloroethene	166	6.657	6.652	(0.875)	588379	46.5582	46.558
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.309)	1365903	250.405	250.40
	46 Trans 1,3-Dichloropropene	75	6.708	6.702	(1.309)	820546	48.5769	48.577
	47 1,1,2-Trichloroethane	97	6.838	6.833	(1.334)	451553	47.2781	47.278
	48 Chlorodibromomethane	129	6.974	6.968	(0.917)	504421	46.0768	46.077
	49 1,3-Dichloropropane	76	7.059	7.053	(0.928)	834776	46.0268	46.027
	50 1,2-Dibromoethane	107	7.149	7.149	(1.395)	443217	48.0889	48.089
	51 2-Hexanone	43	7.421	7.421	(0.975)	2283661	239.649	239.65
*	52 d5-Chlorobenzene	117	7.607	7.608	(1.000)	1862966	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	1446361	45.8762	45.876
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	2629378	48.7128	48.713
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	512655	46.1381	46.138
	56 m,p-xylene	106	7.805	7.806	(1.026)	1991169	98.1389	98.139
	57 o-Xylene	106	8.168	8.168	(1.074)	956044	49.0510	49.051
	58 Styrene	104	8.213	8.213	(1.080)	1617815	49.0520	49.052
	59 Bromoform	173	8.207	8.207	(0.848)	367279	45.5691	45.569
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	2478194	48.7276	48.728
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	1002877	50.7190	50.719
	63 Bromobenzene	156	8.750	8.750	(0.904)	603380	44.3457	44.346
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	2936920	47.6521	47.652

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.880	8.880	(0.917)	593640	44.1553	44.155
	66 2-Chloro Toluene	91	8.931	8.931	(0.922)	1758873	46.1675	46.167
	67 1,3,5-Trimethyl Benzene	105	9.010	9.016	(0.930)	2065914	47.8217	47.822
	68 1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	180292	43.8796	43.880
	69 Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	226399	43.9598	43.960
	70 4-Chloro Toluene	91	9.084	9.084	(0.938)	1825855	45.7203	45.720
	71 T-Butyl Benzene	119	9.288	9.288	(0.959)	1817498	47.6974	47.697
	72 1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	2036978	47.9832	47.983
	73 S-Butyl Benzene	105	9.452	9.452	(0.976)	2701104	48.2392	48.239
	74 4-Isopropyl Toluene	119	9.599	9.599	(0.991)	2233076	49.2200	49.220
	75 1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	1138391	45.1927	45.193
*	76 d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	1019587	50.0000	
	77 1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	1156483	43.9815	43.982
	78 N-Butyl Benzene	91	9.983	9.983	(1.031)	2132183	49.4878	49.488
$	79 d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	1021379	50.7680	50.768
	80 1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	1072690	43.9918	43.992
	81 1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	115675	44.2286	44.229
	82 Hexachloro 1,3-Butadiene	225	11.505	11.511	(1.188)	492819	45.8449	45.845
	83 1,2,4-Trichlorobenzene	180	11.494	11.499	(1.187)	798487	46.0858	46.086
	84 Naphthalene	128	11.805	11.811	(1.219)	1763657	45.7485	45.749
	85 1,2,3-Trichlorobenzene	180	11.986	11.992	(1.238)	745533	45.1093	45.109

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0604a.d
Lab Smp Id: LCS0604
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

Calibration Date: 04-JUN-2013
Calibration Time: 12:35
Client Smp ID: LCS0604
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	474930	0.87
35 1,4-Difluorobenze	1445861	722930	2891722	1610669	11.40
52 d5-Chlorobenzene	1620542	810271	3241084	1862966	14.96
76 d4-1,4-Dichlorobe	872028	436014	1744056	1019587	16.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: LCS0604
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

Client SDG: 04JUN13
Fraction: VOA
Client Smp ID: LCS0604
Operator: PB
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	51.795	103.59	53-148
2 Chloromethane	50.000	44.222	88.44	64-125
3 Vinyl Chloride	50.000	52.799	105.60	63-137
4 Bromomethane	50.000	51.064	102.13	57-136
5 Chloroethane	50.000	60.303	120.61	64-131
6 Trichlorofluoromet	50.000	53.144	106.29	69-132
12 Acrolein	250.00	477.49	191.00*	54-137
9 112Trichloro122Tri	50.000	45.341	90.68	74-130
14 Acetone	250.00	252.82	101.13	60-131
7 1,1-Dichloroethene	50.000	45.357	90.71	75-126
11 Bromoethane	50.000	59.087	118.17	76-126
10 Iodomethane	50.000	61.250	122.50	65-139
13 Methylene Chloride	50.000	79.326	158.65*	70-123
8 Carbon Disulfide	50.000	45.071	90.14	71-129
18 Acrylonitrile	50.000	50.968	101.94	67-125
15 Trans-1,2-Dichloro	50.000	61.749	123.50*	80-120
19 Vinyl Acetate	50.000	53.402	106.80	60-136
17 1,1-Dichloroethane	50.000	53.554	107.11	80-120
29 2-Butanone	250.00	265.81	106.32	70-120
22 2,2-Dichloropropan	50.000	53.157	106.31	74-123
20 Cis-1,2-Dichloroet	50.000	52.435	104.87	80-120
24 Chloroform	50.000	49.661	99.32	80-120
23 Bromochloromethane	50.000	52.915	105.83	80-120
26 1,1,1-Trichloroeth	50.000	53.675	107.35	77-121
28 1,1-Dichloropropen	50.000	48.161	96.32	80-120
25 Carbon Tetrachlori	50.000	48.765	97.53	77-122
33 1,2-Dichloroethane	50.000	46.539	93.08	76-120
30 Benzene	50.000	48.606	97.21	80-120
34 Trichloroethene	50.000	47.736	95.47	80-120
38 1,2-Dichloropropan	50.000	47.776	95.55	80-120
39 Bromodichlorometha	50.000	47.274	94.55	77-121
37 Dibromomethane	50.000	45.780	91.56	80-120
40 2-Chloroethyl Viny	50.000	50.210	100.42	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	250.40	100.16	67-120
41 Cis 1,3-dichloropr	50.000	48.804	97.61	74-120
43 Toluene	50.000	47.759	95.52	80-120
46 Trans 1,3-Dichloro	50.000	48.577	97.15	65-120
51 2-Hexanone	250.00	239.65	95.86	65-130
47 1,1,2-Trichloroeth	50.000	47.278	94.56	80-120
49 1,3-Dichloropropan	50.000	46.027	92.05	80-120
44 Tetrachloroethene	50.000	46.558	93.12	80-121
48 Chlorodibromometha	50.000	46.077	92.15	64-120
50 1,2-Dibromoethane	50.000	48.089	96.18	75-120
53 Chlorobenzene	50.000	45.876	91.75	80-120
55 1,1,1,2-Tetrachlor	50.000	46.138	92.28	69-121
54 Ethyl Benzene	50.000	48.713	97.43	80-127
56 m,p-xylene	100.00	98.139	98.14	80-125
57 o-Xylene	50.000	49.051	98.10	78-120
58 Styrene	50.000	49.052	98.10	80-123
60 Isopropyl Benzene	50.000	48.728	97.46	80-127
59 Bromoform	50.000	45.569	91.14	60-120
65 1,1,2,2-Tetrachlor	50.000	44.155	88.31	74-120
68 1,2,3-Trichloropro	50.000	43.880	87.76	72-121
69 Trans-1,4-Dichloro	50.000	43.960	87.92	65-126
64 N-Propyl Benzene	50.000	47.652	95.30	80-132
63 Bromobenzene	50.000	44.346	88.69	80-120
67 1,3,5-Trimethyl Be	50.000	47.822	95.64	80-125
66 2-Chloro Toluene	50.000	46.167	92.33	80-125
70 4-Chloro Toluene	50.000	45.720	91.44	80-127
71 T-Butyl Benzene	50.000	47.697	95.39	87-122
72 1,2,4-Trimethylben	50.000	47.983	95.97	80-126
73 S-Butyl Benzene	50.000	48.239	96.48	80-134
74 4-Isopropyl Toluen	50.000	49.220	98.44	80-131
75 1,3-Dichlorobenzen	50.000	45.193	90.39	80-120
77 1,4-Dichlorobenzen	50.000	43.982	87.96	80-120
78 N-Butyl Benzene	50.000	49.488	98.98	80-138
80 1,2-Dichlorobenzen	50.000	43.992	87.98	80-120
81 1,2-Dibromo 3-Chlo	50.000	44.229	88.46	59-120
83 1,2,4-Trichloroben	50.000	46.086	92.17	78-130
82 Hexachloro 1,3-But	50.000	45.845	91.69	76-129
84 Naphthalene	50.000	45.749	91.50	66-120
85 1,2,3-Trichloroben	50.000	45.109	90.22	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.087	114.17	70-130

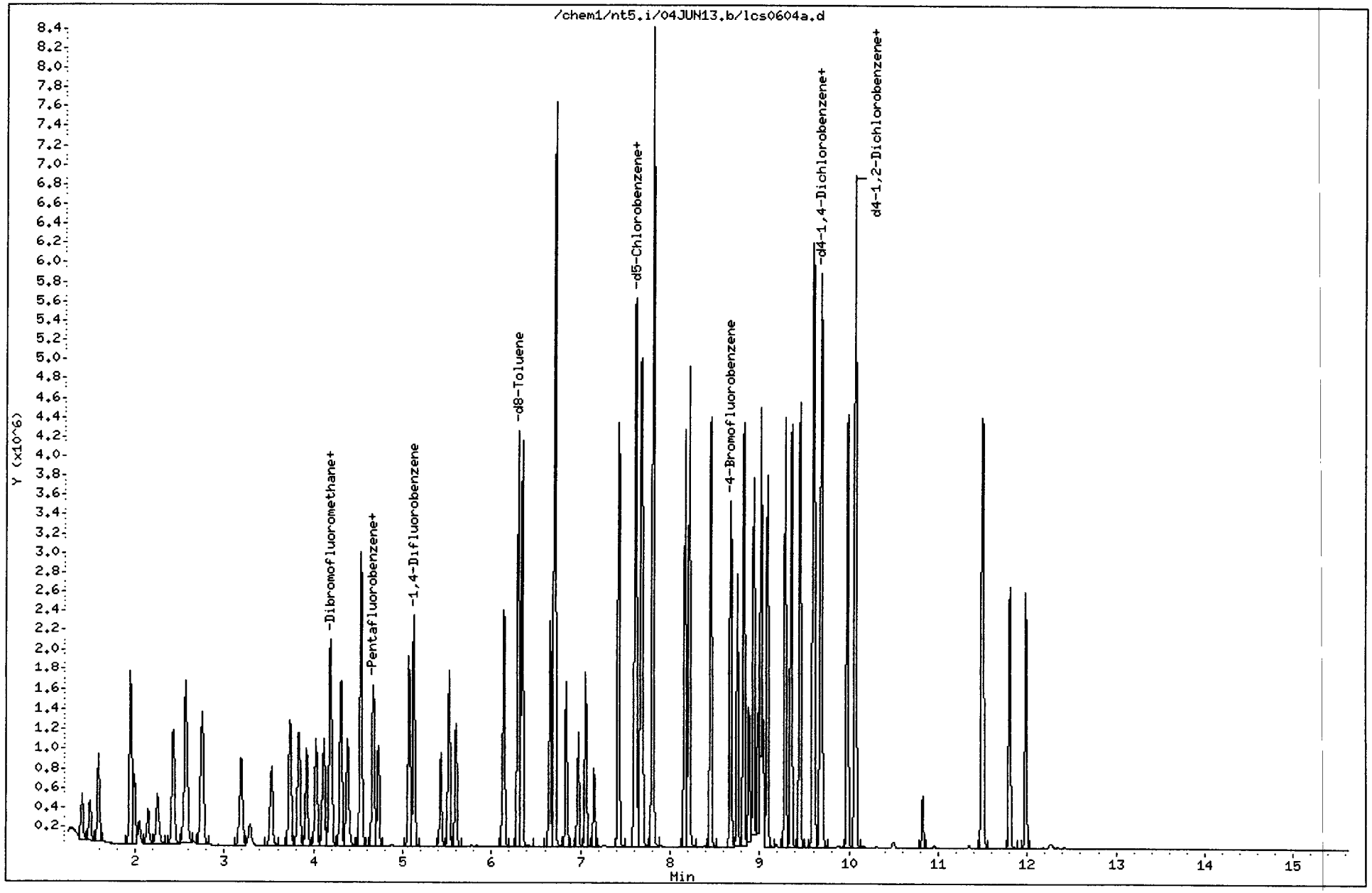
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	54.931	109.86	80-149
$ 42 d8-Toluene	50.000	50.694	101.39	77-120
$ 62 4-Bromofluorobenze	50.000	50.719	101.44	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.768	101.54	80-120

Data File: /chem1/nt5.i/04JUN13.b/lcs0604a.d
Date : 04-JUN-2013 13:35
Client ID: LCS0604
Sample Info: LCS0604,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0604a.d

Lab ID: LCS0604, Method: VO121012S.m, Instrument: nt5.i, Date: 04-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/mb0604.d
Lab Smp Id: MB0604 Client Smp ID: MB0604
Inj Date : 04-JUN-2013 13:59
Operator : PB Inst ID: nt5.i
Smp Info : MB0604,5,5,0
Misc Info : 13-11820
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 05-Jun-2013 07:53 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.437	2.409	(0.522)	34368	5.39381	5.394
14 Acetone	43	2.539	2.550	(0.543)	8234	2.50488	2.505
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.191	4.179	(0.897)	590735	57.6241	57.624
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.672	4.660	(1.000)	455081	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.655	(0.999)	578207	56.5004	56.500
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.113	(1.000)	1552765	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.301	6.295	(1.230)	2228406	50.7469	50.747
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.608	7.608	(1.000)	1796929	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	Compound Not Detected.					
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	961347	50.4054	50.405
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.684	(1.000)	963412	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.063	10.068	(1.040)	981244	51.6170	51.617
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.805	11.811	(1.220)	30385	0.83413	0.8341
85	1,2,3-Trichlorobenzene	180	11.980	11.992	(1.238)	8367	0.53577	0.5358

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: mb0604.d
Lab Smp Id: MB0604
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

Calibration Date: 04-JUN-2013
Calibration Time: 12:35
Client Smp ID: MB0604
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	455081	-3.34
35 1,4-Difluorobenze	1445861	722930	2891722	1552765	7.39
52 d5-Chlorobenzene	1620542	810271	3241084	1796929	10.88
76 d4-1,4-Dichlorobe	872028	436014	1744056	963412	10.48

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	-0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: MB0604
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

Client SDG: 04JUN13
Fraction: VOA
Client Smp ID: MB0604
Operator: PB
SampleType: BLANK
Quant Type: ISTD

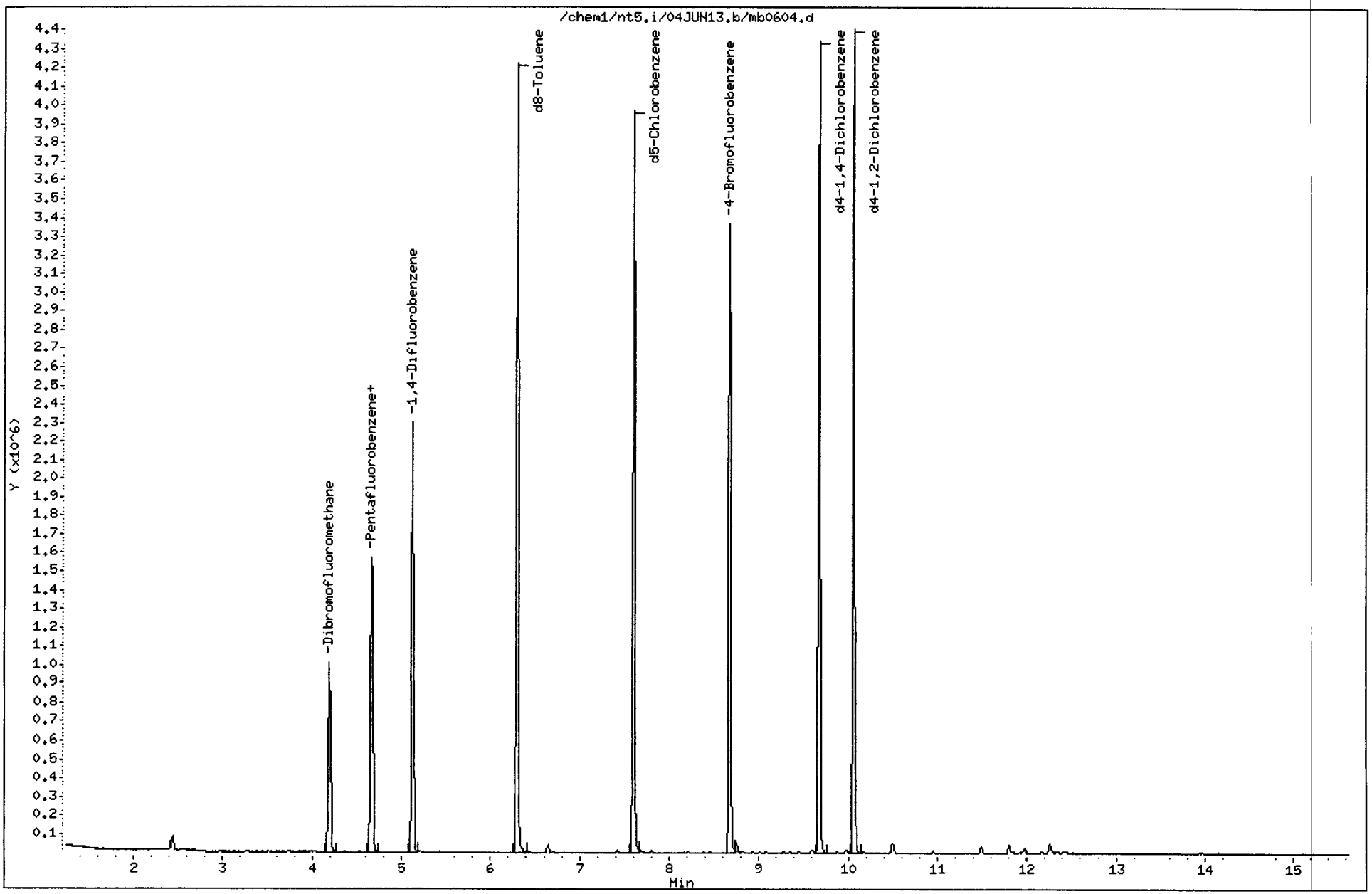
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.624	115.25	70-130
$ 32 d4-1,2-Dichloroeth	50.000	56.500	113.00	80-149
$ 42 d8-Toluene	50.000	50.747	101.49	77-120
$ 62 4-Bromofluorobenze	50.000	50.405	100.81	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.617	103.23	80-120

Data File: /chem1/nt5.i/04JUN13.b/mb0604.d
Date : 04-JUN-2013 13:59
Client ID: MB0604
Sample Info: MB0604,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - mb0604.d

Lab ID: MB0604, Method: VO121012S.m, Instrument: nt5.i, Date: 04-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.i/04JUN13.b/mb0604.d

Date : 04-JUN-2013 13:59

Client ID: MB0604

Instrument: nt5.i

Sample Info: MB0604,5,5,0

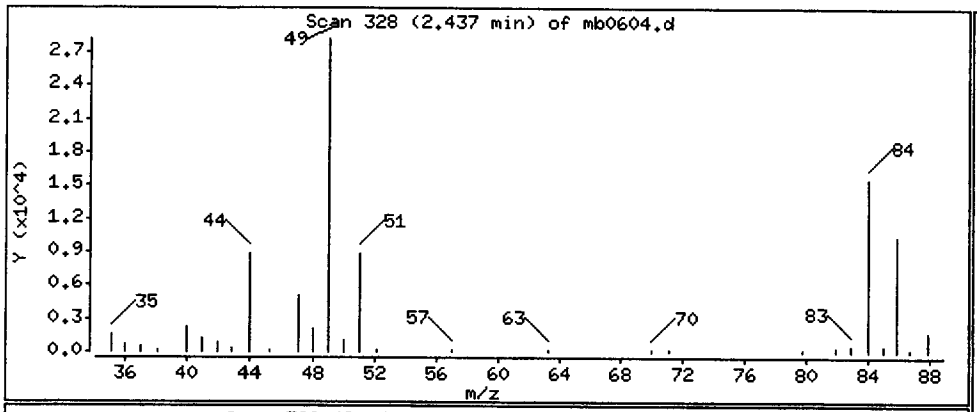
Operator: PB

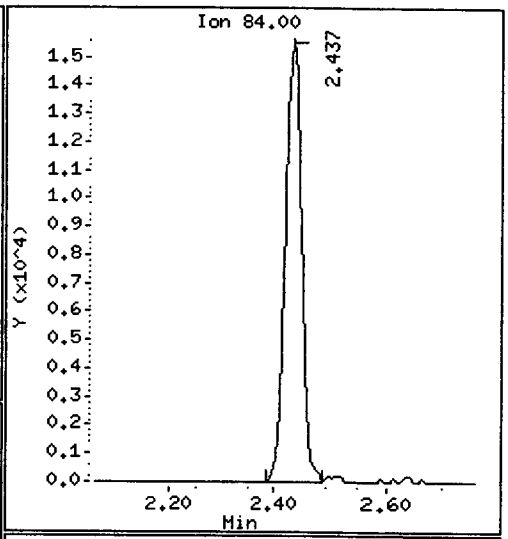
Column phase: RTXVMS

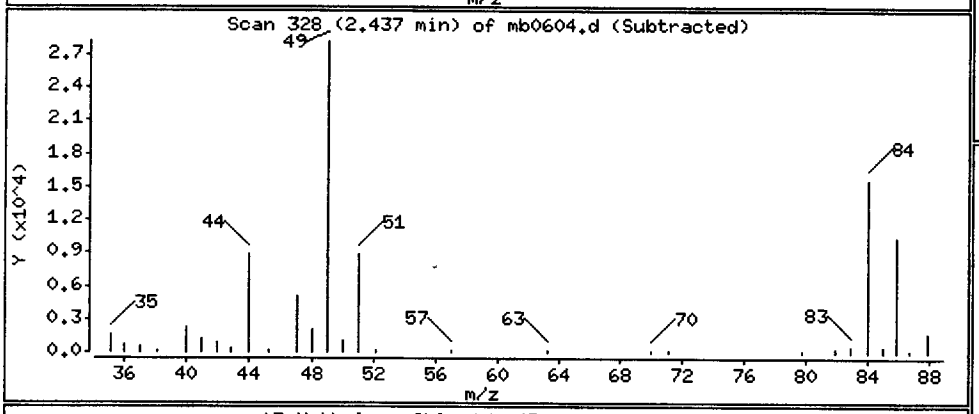
Column diameter: 0.18

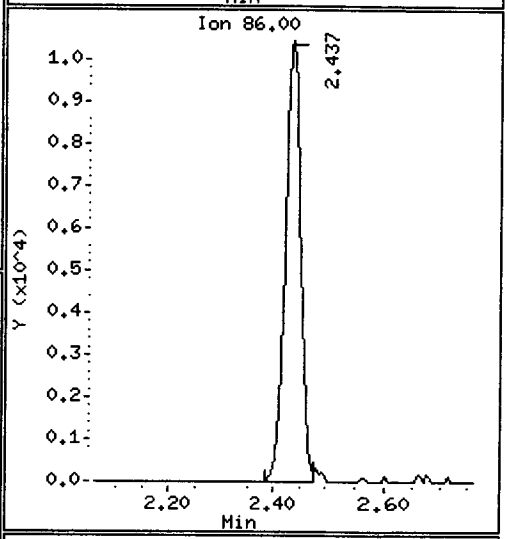
13 Methylene Chloride

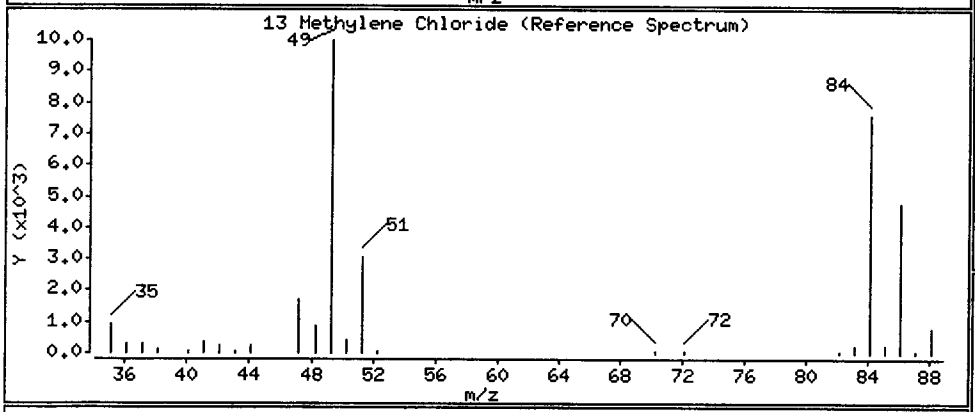
Concentration: 5.394 ug/Kg

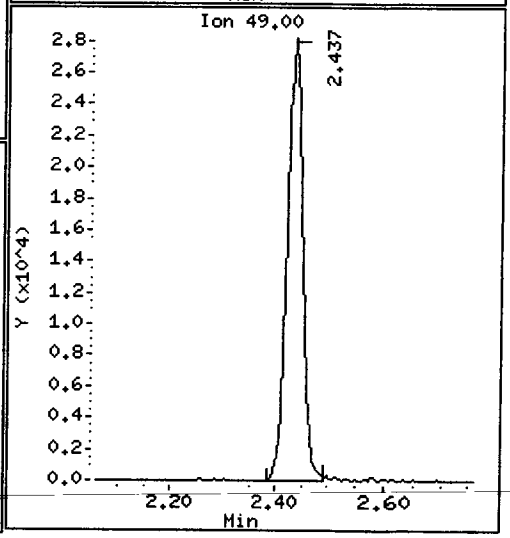


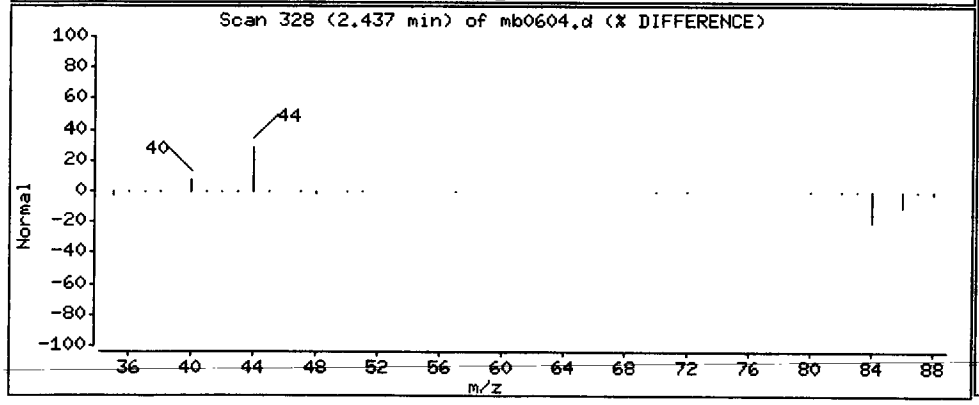












Data File: /chem1/nt5.i/04JUN13.b/mb0604.d

Date : 04-JUN-2013 13:59

Client ID: MB0604

Instrument: nt5.i

Sample Info: MB0604,5,5,0

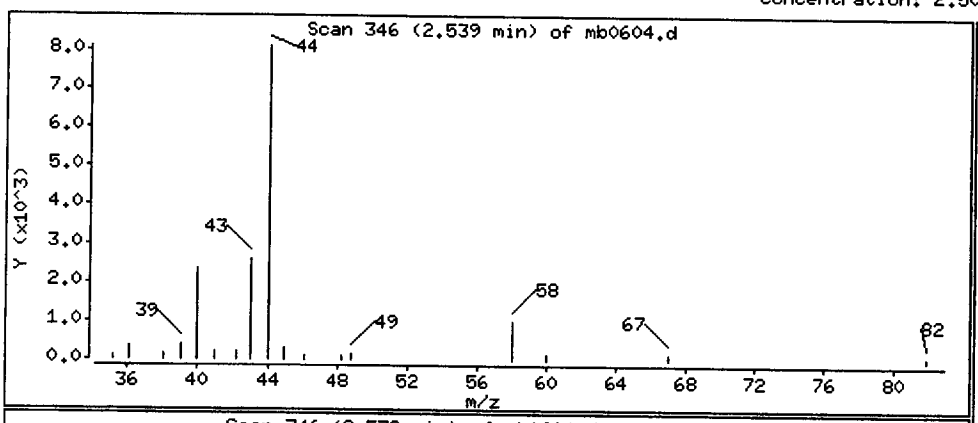
Operator: PB

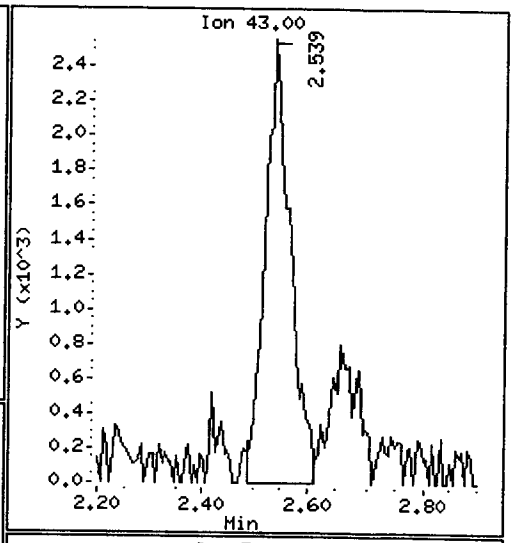
Column phase: RTXVMS

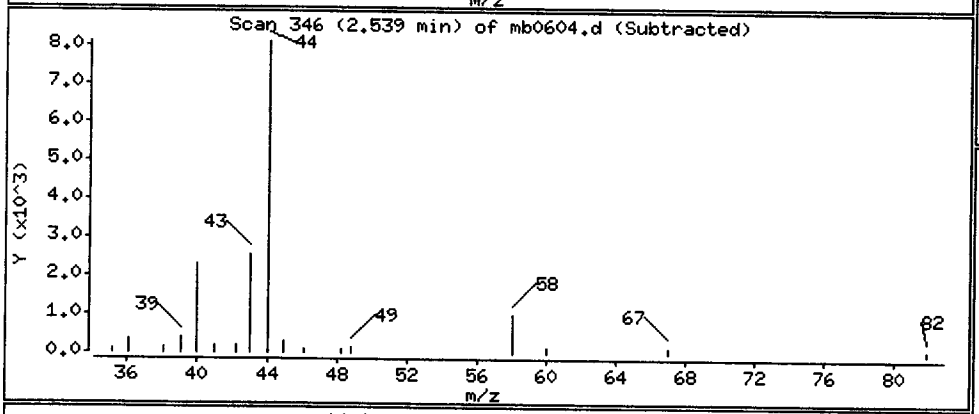
Column diameter: 0.18

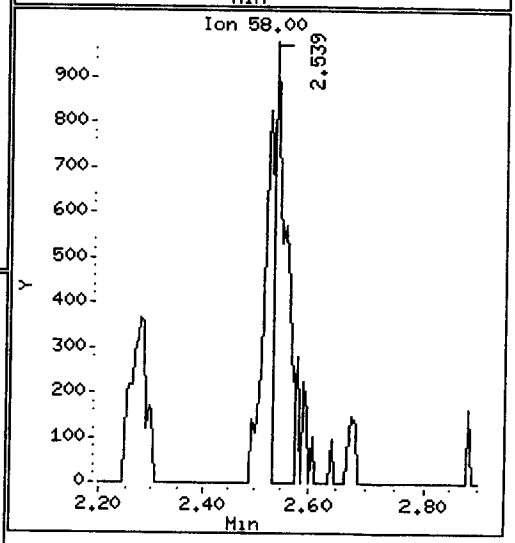
14 Acetone

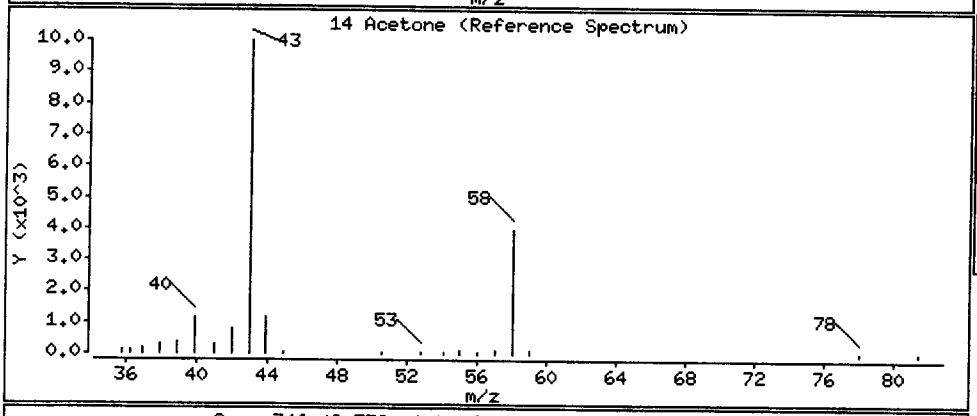
Concentration: 2.505 ug/Kg

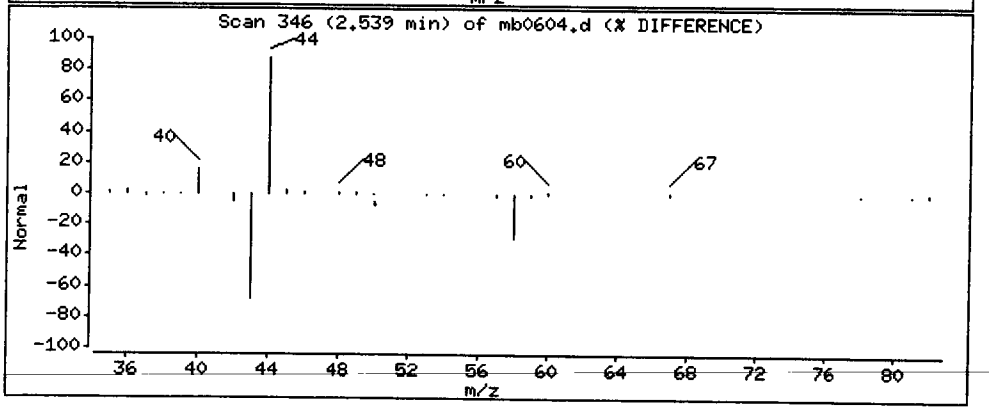












Data File: /chem1/nt5.i/04JUN13.b/mb0604.d

Date : 04-JUN-2013 13:59

Client ID: MB0604

Sample Info: MB0604,5,5,0

Instrument: nt5.i

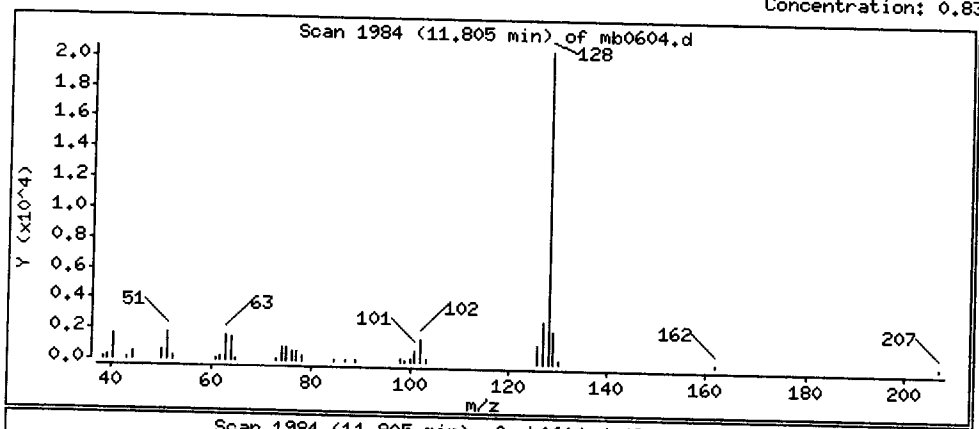
Operator: PB

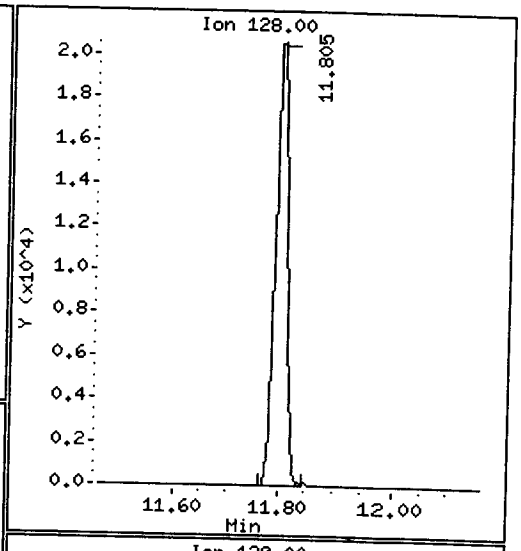
Column phase: RTXVMS

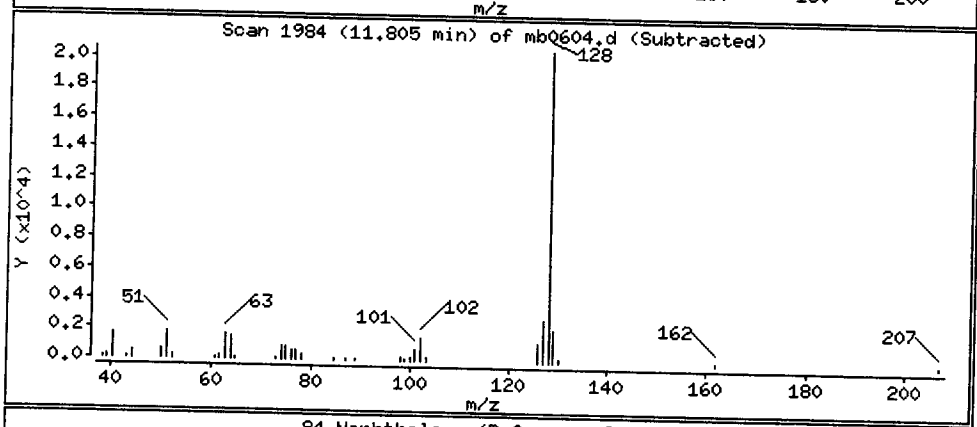
Column diameter: 0.18

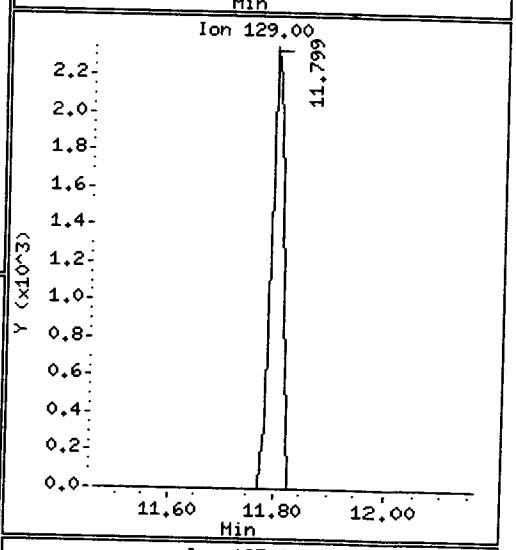
84 Naphthalene

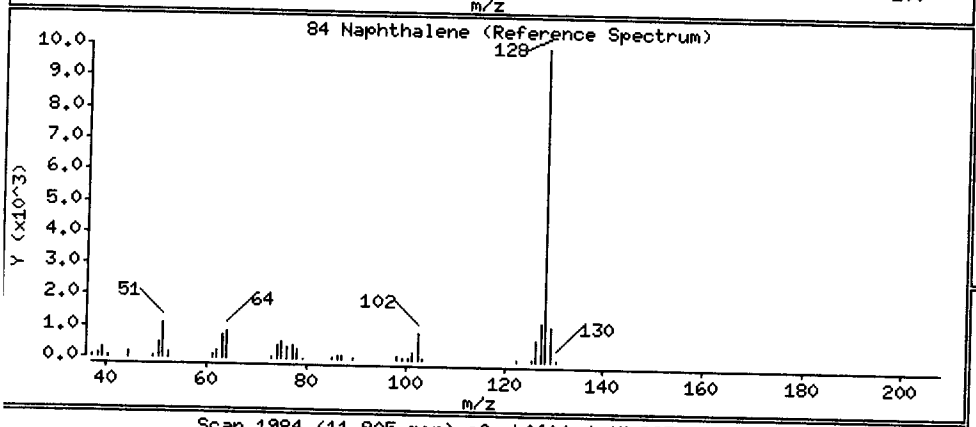
Concentration: 0.8341 ug/Kg

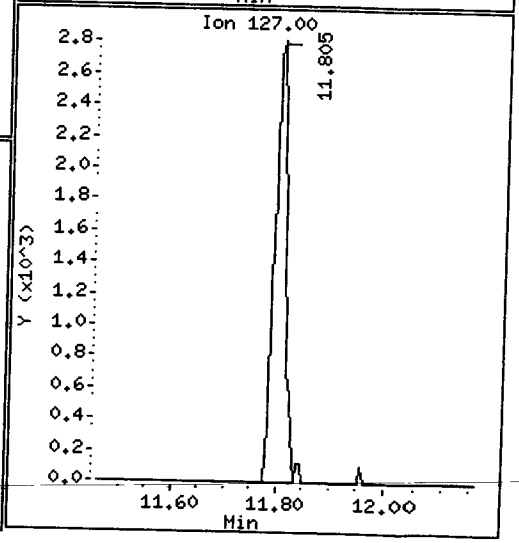


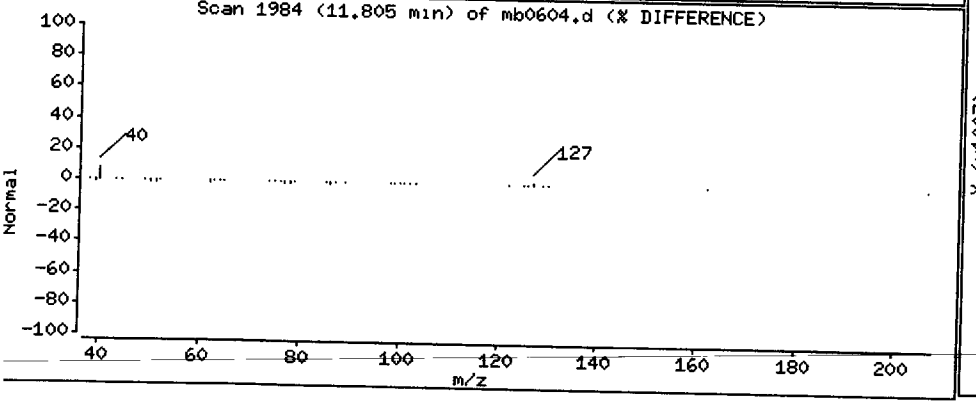












Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/wr99c.d
Lab Smp Id: WR99C Client Smp ID: KC-TB-01-20130530-W
Inj Date : 04-JUN-2013 15:35
Operator : PB Inst ID: nt5.i
Smp Info : WR99C,5,5,0
Misc Info : 13-11543
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 08-Jun-2013 21:56 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	0.00000	Purge Volume (mL)
Sa	0.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.409	2.409	(0.517)	19119	3.16018	3.160
14 Acetone	43	Compound Not Detected.					
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/L)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.179	4.179	(0.897)	576770	59.2542	59.254
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	432099	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.655	(0.998)	562735	57.9132	57.913
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.113	5.113	(1.000)	1478463	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.295	6.295	(1.231)	2143864	51.2752	51.275
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.602	7.608	(1.000)	1724829	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	Compound Not Detected.					
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	916857	50.0822	50.082
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/L)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	908327	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	937008	52.2792	52.279
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	Compound Not Detected.					
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wr99c.d
Lab Smp Id: WR99C
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11543

Calibration Date: 04-JUN-2013
Calibration Time: 12:35
Client Smp ID: KC-TB-01-20130530-W
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	432099	-8.22
35 1,4-Difluorobenze	1445861	722930	2891722	1478463	2.25
52 d5-Chlorobenzene	1620542	810271	3241084	1724829	6.44
76 d4-1,4-Dichlorobe	872028	436014	1744056	908327	4.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.61	7.11	8.11	7.60	-0.07
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WR99C
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11543

Client SDG: WR99
Fraction: VOA
Client Smp ID: KC-TB-01-20130530-W
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	59.254	118.51	30-160
$ 32 d4-1,2-Dichloroeth	50.000	57.913	115.83	75-152
$ 42 d8-Toluene	50.000	51.275	102.55	82-115
$ 62 4-Bromofluorobenze	50.000	50.082	100.16	71-120
$ 79 d4-1,2-Dichloroben	50.000	52.279	104.56	80-121

Data File: /chem1/nt5.i/04JUN13.b/wr99c.d

Date : 04-JUN-2013 15:35

Client ID: KC-TB-01-20130530-W

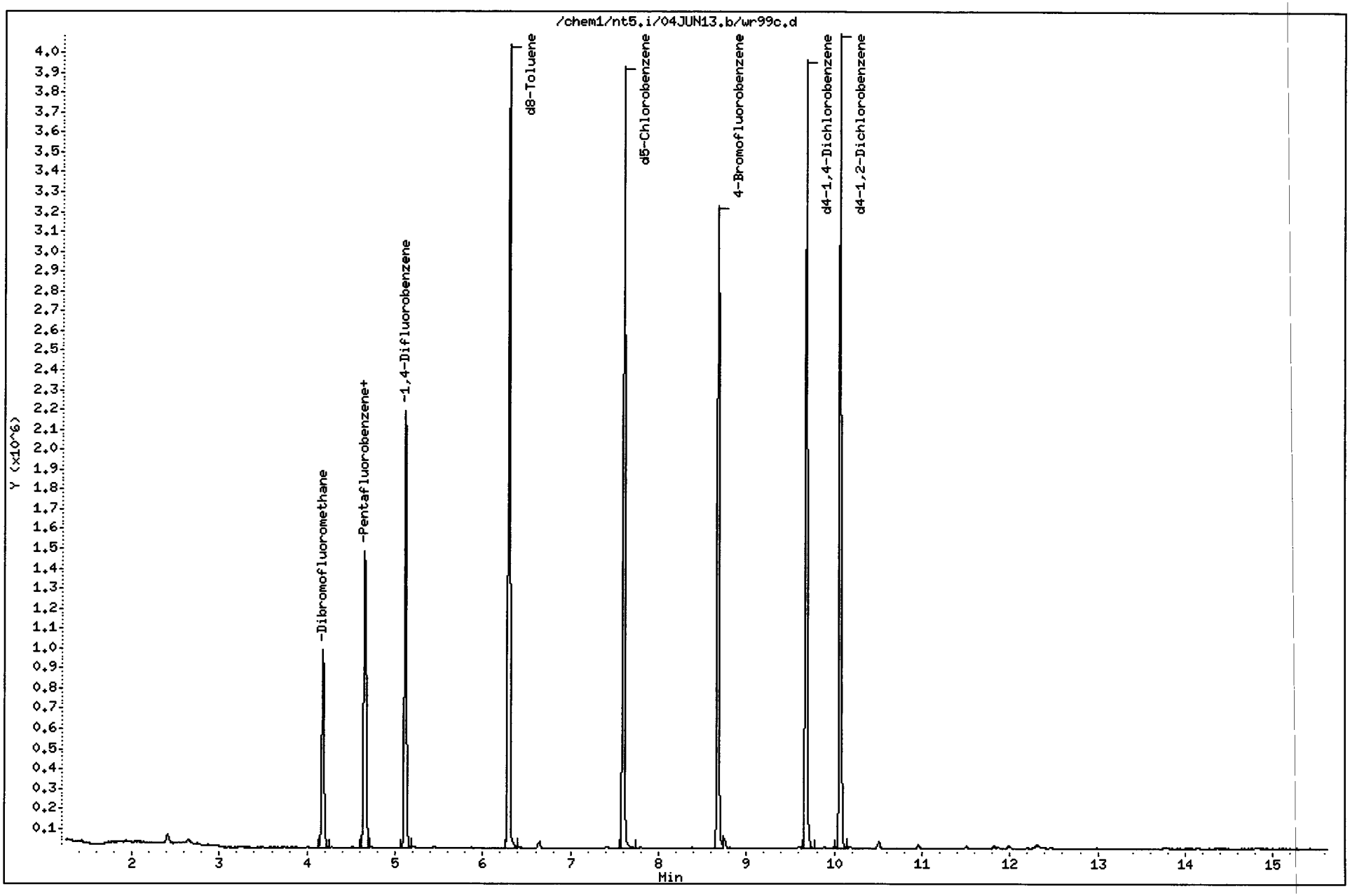
Sample Info: WR99C,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



Data File: /chem1/nt5.i/04JUN13.b/wr99c.d

Date : 04-JUN-2013 15:35

Client ID: KC-TB-01-20130530-W

Instrument: nt5.i

Sample Info: WR99C,5,5,0

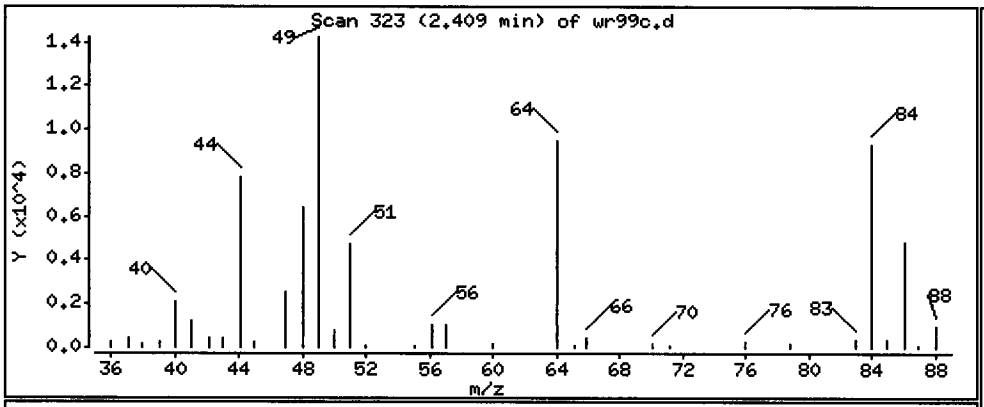
Operator: PB

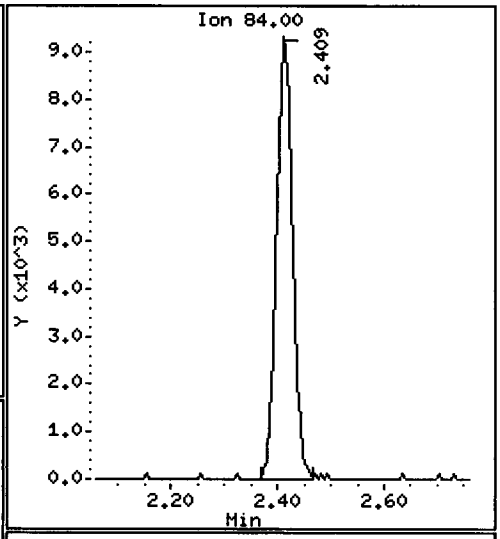
Column phase: RTXVMS

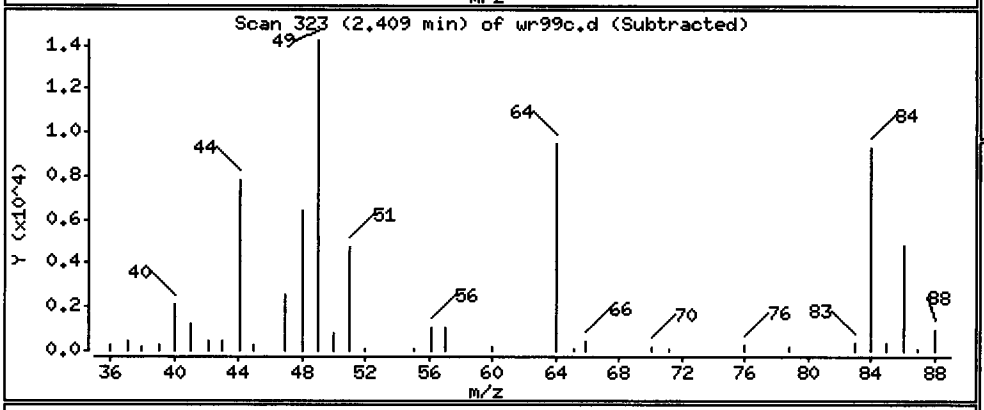
Column diameter: 0.18

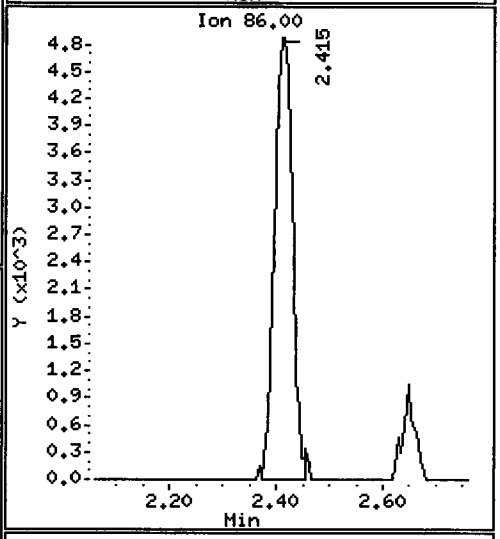
13 Methylene Chloride

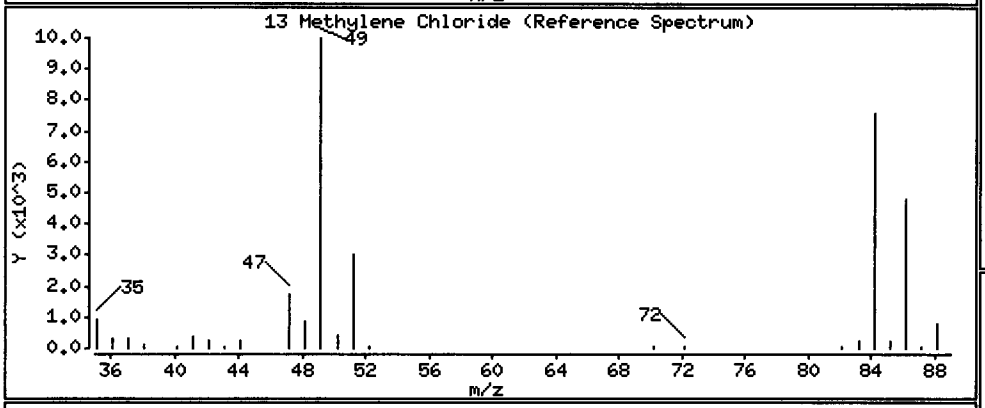
Concentration: 3.160 ug/L

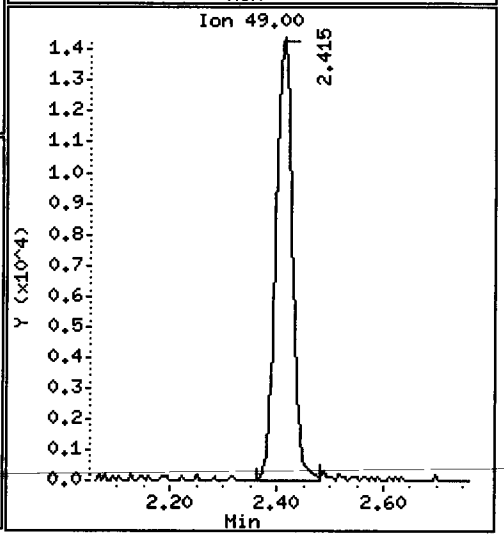


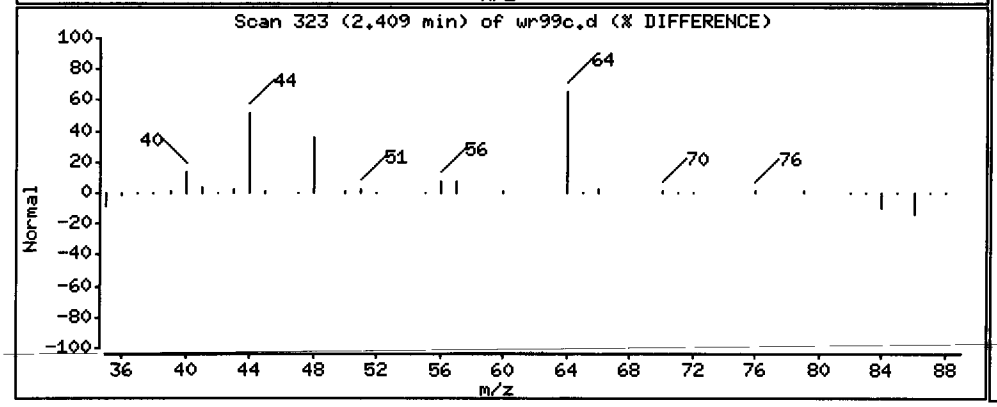












CO-ELUTION SUMMARY FOR FILE - wr99c.d

Lab ID: WR99C, Method: VO121012S.m, Instrument: nt5.i, Date: 04-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/wr99d.d
Lab Smp Id: WR99D Client Smp ID: KC-VT-1593-20130530
Inj Date : 04-JUN-2013 15:59
Operator : PB Inst ID: nt5.i
Smp Info : WR99D,5,8.23,0
Misc Info : 13-11544
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 08-Jun-2013 21:56 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	8.23000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	1.962	1.934	(0.420)	179241	7.61461	4.626
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	2.058	2.030	(0.441)	4785	0.88309	0.5365
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.437	2.409	(0.522)	9699	1.51944	0.9229
14 Acetone	43	2.556	2.550	(0.547)	564778	171.469	104.17
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.191	4.179	(0.897)	614235	59.7966	36.328
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.372	4.372	(0.936)	13087	10.7354	6.522 (Q)
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.672	4.660	(1.000)	455993	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.655	(0.999)	618395	60.3066	36.638
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.113	(1.000)	1550616	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.301	6.295	(1.230)	2255075	51.4254	31.243
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.607	7.608	(1.000)	1833420	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	Compound Not Detected.					
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	971711	49.9348	30.337
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.684	(1.000)	937143	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.063	10.068	(1.040)	959822	51.9054	31.534
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	Compound Not Detected.					
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wr99d.d
Lab Smp Id: WR99D
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11544

Calibration Date: 04-JUN-2013
Calibration Time: 12:35
Client Smp ID: KC-VT-1593-20130530
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	455993	-3.15
35 1,4-Difluorobenze	1445861	722930	2891722	1550616	7.25
52 d5-Chlorobenzene	1620542	810271	3241084	1833420	13.14
76 d4-1,4-Dichlorobe	872028	436014	1744056	937143	7.47

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	-0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WR99D
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11544

Client SDG: WR99
Fraction: VOA
Client Smp ID: KC-VT-1593-20130530
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	59.797	119.59	70-130
$ 32 d4-1,2-Dichloroeth	50.000	60.307	120.61	80-149
$ 42 d8-Toluene	50.000	51.425	102.85	77-120
$ 62 4-Bromofluorobenze	50.000	49.935	99.87	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.905	103.81	80-120

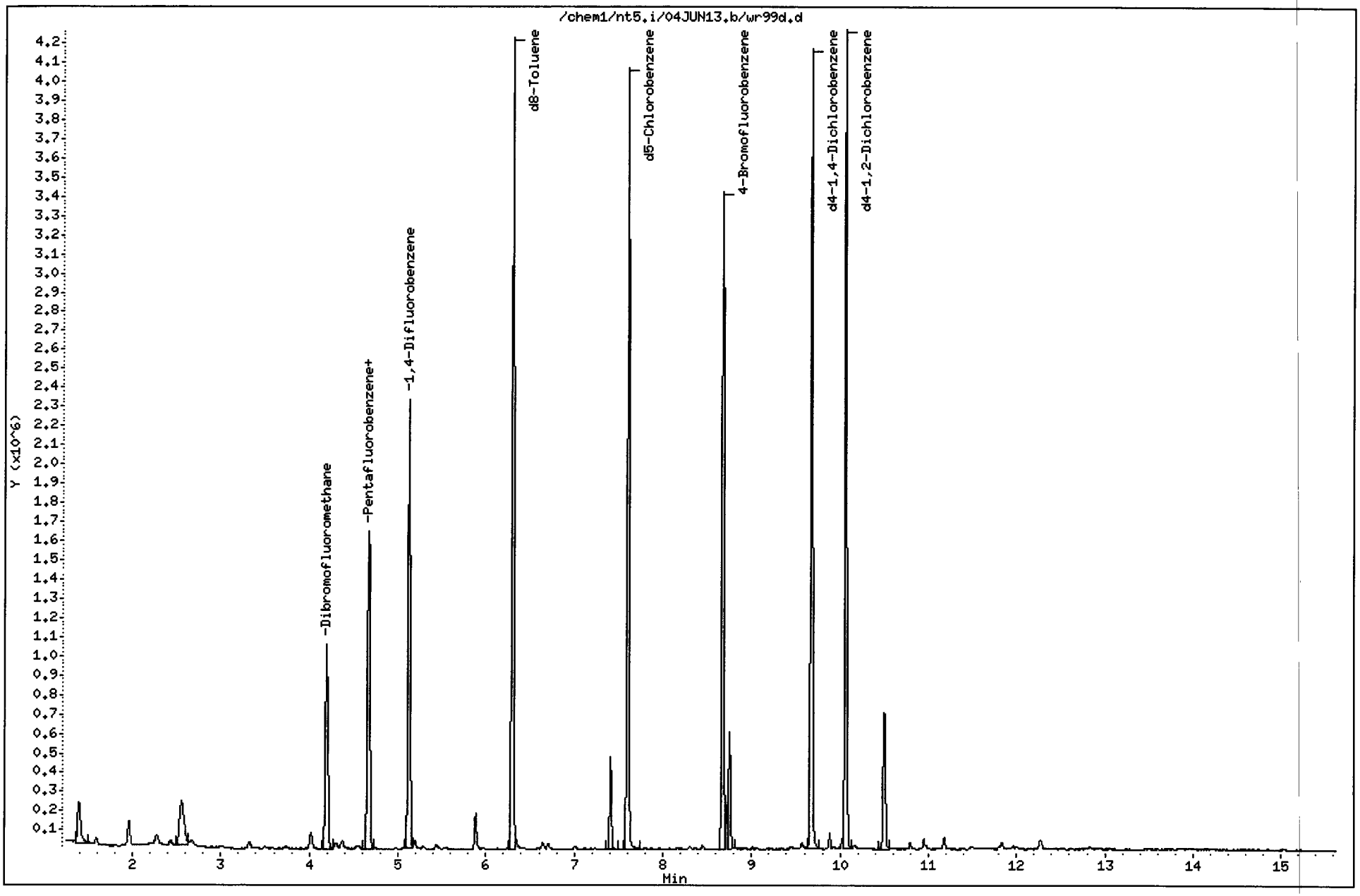
Data File: /chem1/nt5.i/04JUN13.b/wr99d.d
Date : 04-JUN-2013 15:59
Client ID: KC-VT-1593-20130530
Sample Info: WR99D,5,8.23,0

Instrument: nt5.i

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18



Data File: /chem1/nt5.i/04JUN13.b/wr99d.d

Date : 04-JUN-2013 15:59

Client ID: KC-VT-1593-20130530

Instrument: nt5.i

Sample Info: WR99D,5,8.23,0

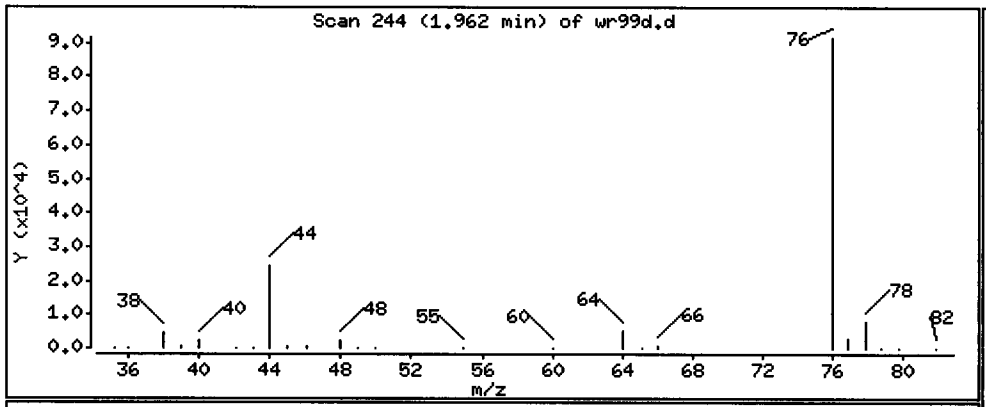
Operator: PB

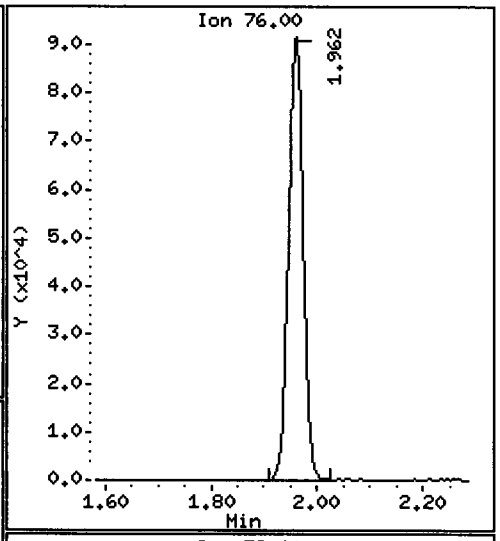
Column phase: RTXVMS

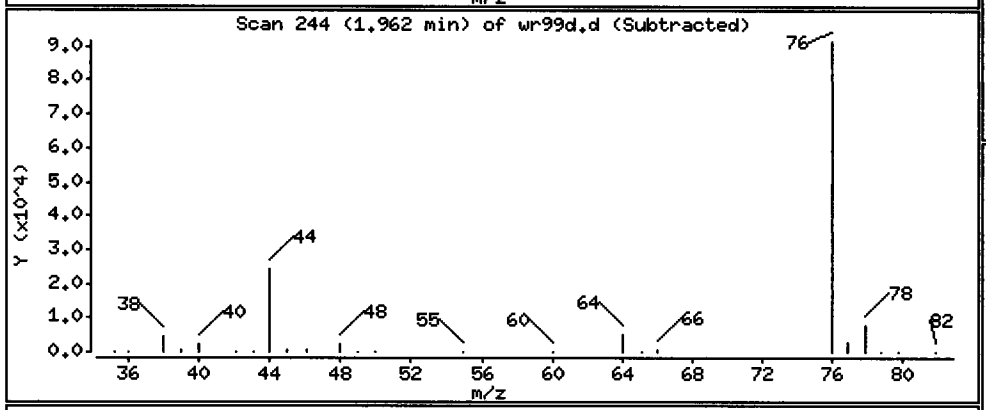
Column diameter: 0.18

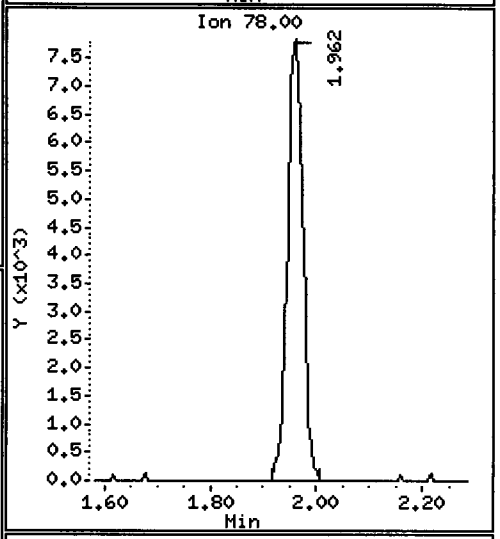
8 Carbon Disulfide

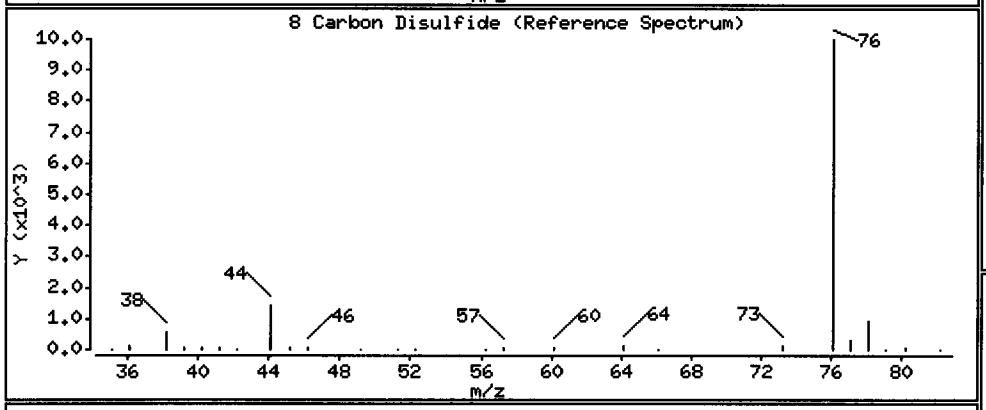
Concentration: 4.626 ug/Kg

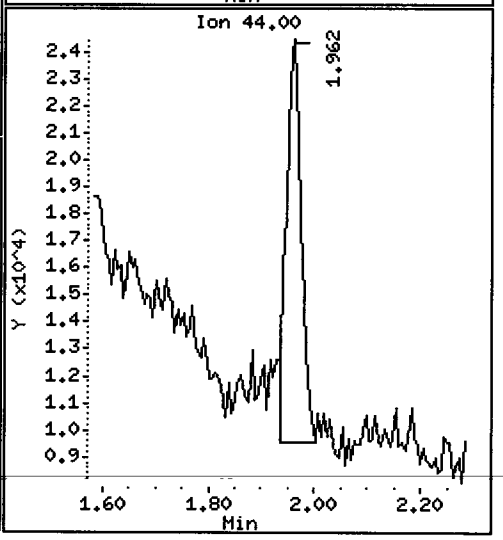


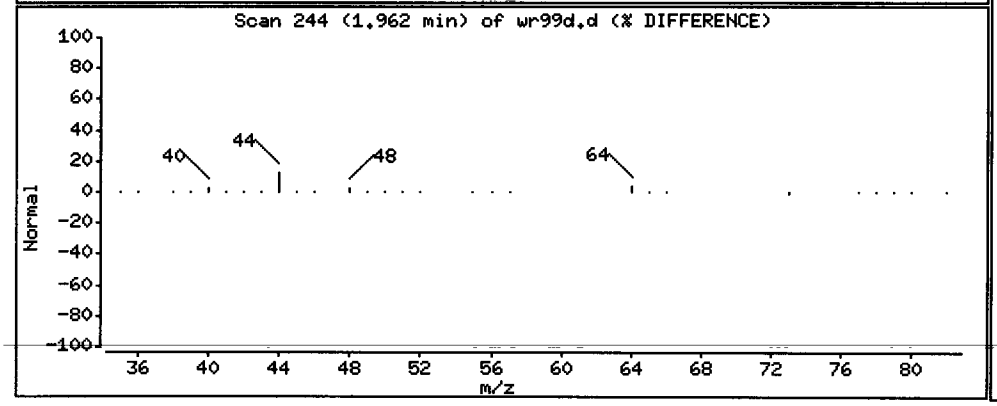












Data File: /chem1/nt5.i/04JUN13.b/wr99d.d

Date : 04-JUN-2013 15:59

Client ID: KC-VT-1593-20130530

Instrument: nt5.i

Sample Info: WR99D,5,8.23,0

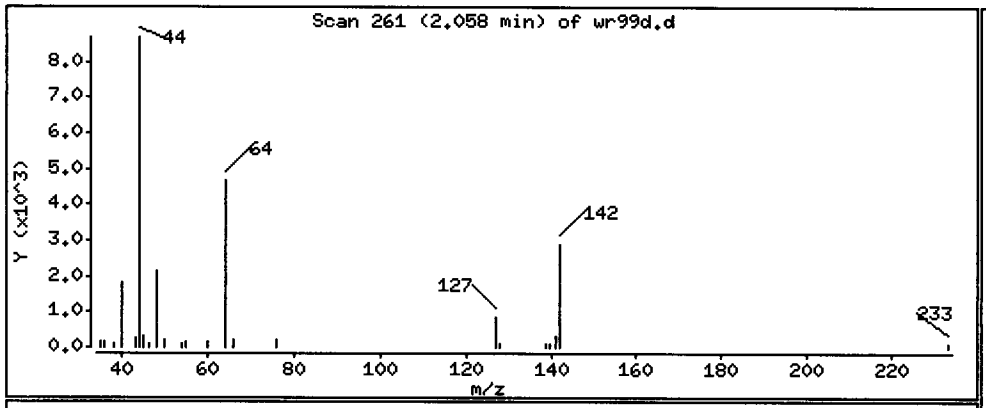
Operator: PB

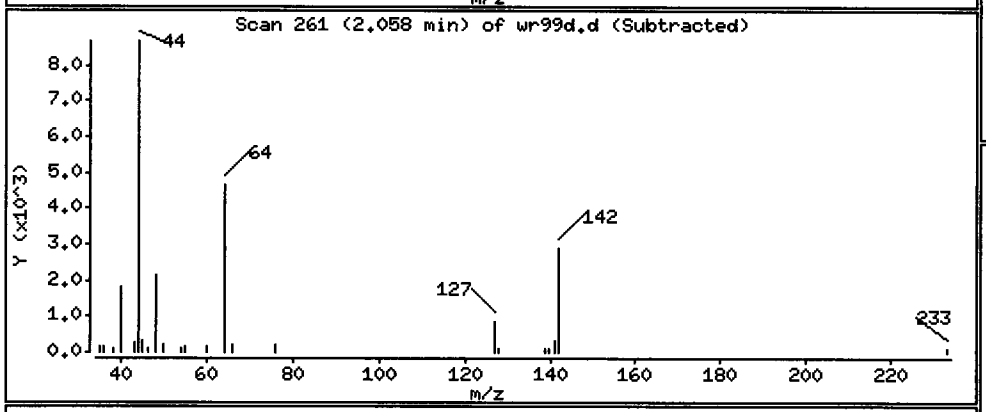
Column phase: RTXVMS

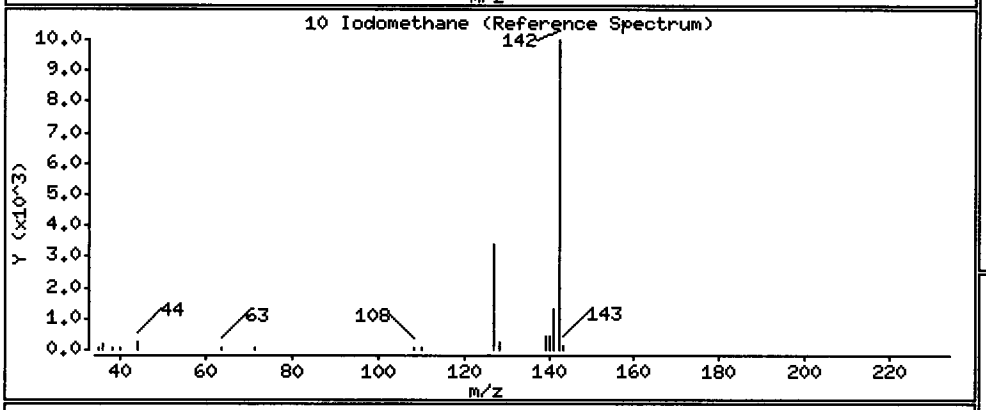
Column diameter: 0.18

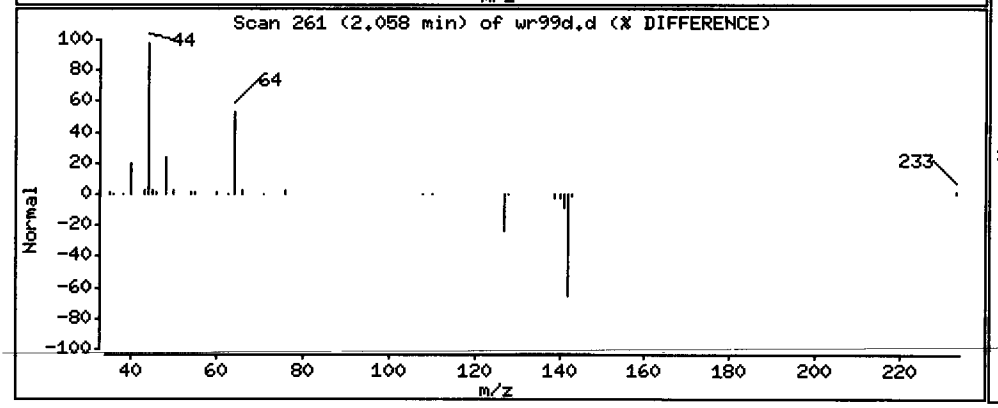
10 Iodomethane

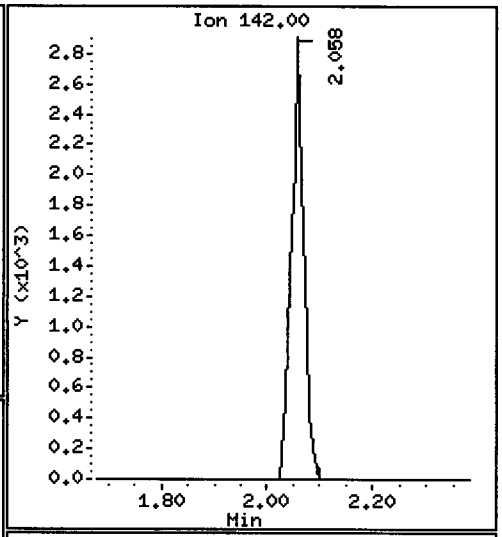
Concentration: 0.5365 ug/Kg

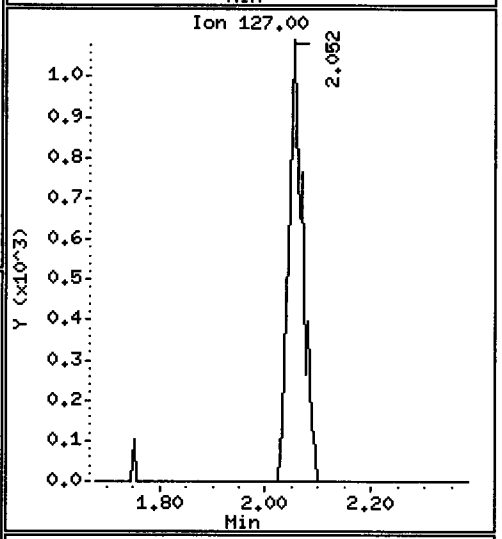


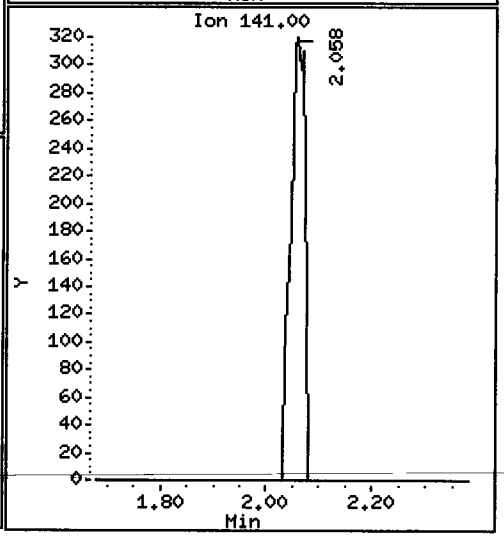












Data File: /chem1/nt5.i/04JUN13.b/wr99d.d

Date : 04-JUN-2013 15:59

Client ID: KC-VT-1593-20130530

Instrument: nt5.i

Sample Info: WR99D,5,8,23,0

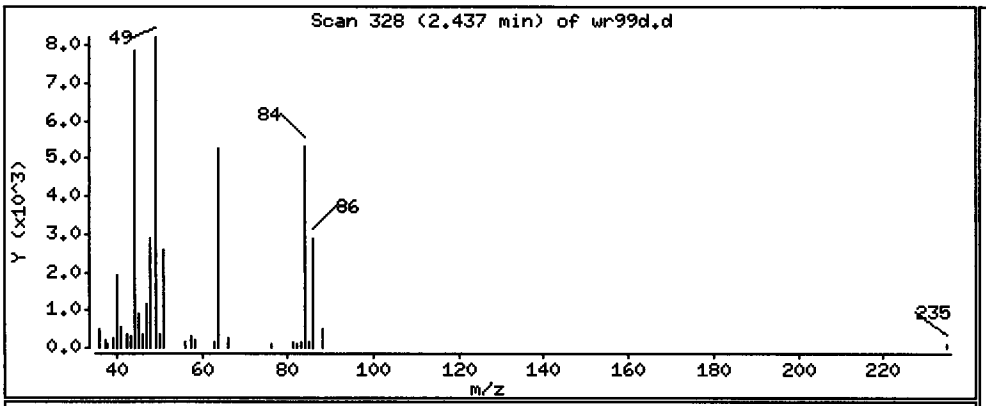
Operator: PB

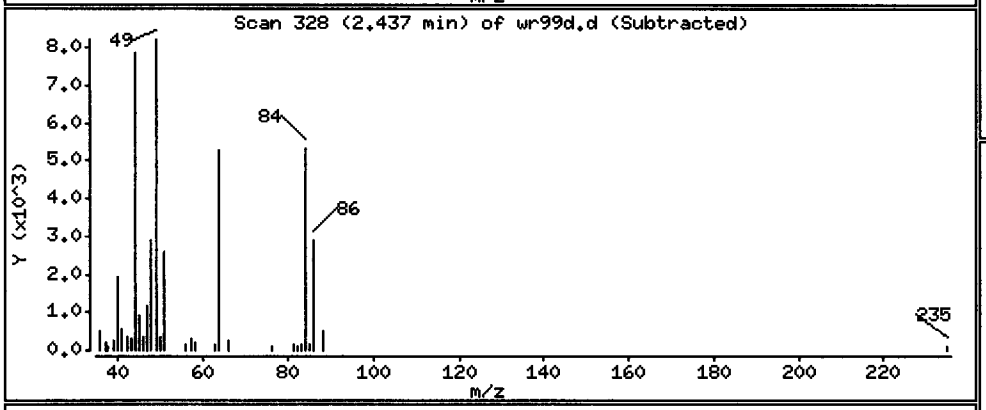
Column phase: RTXVMS

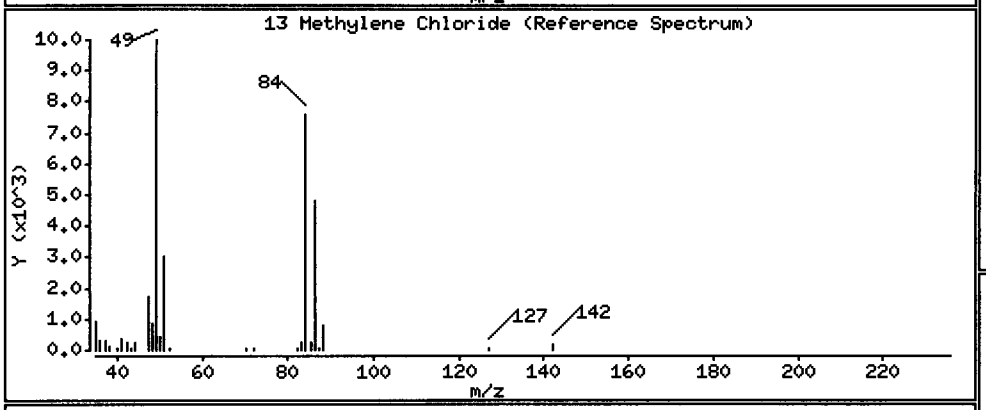
Column diameter: 0.18

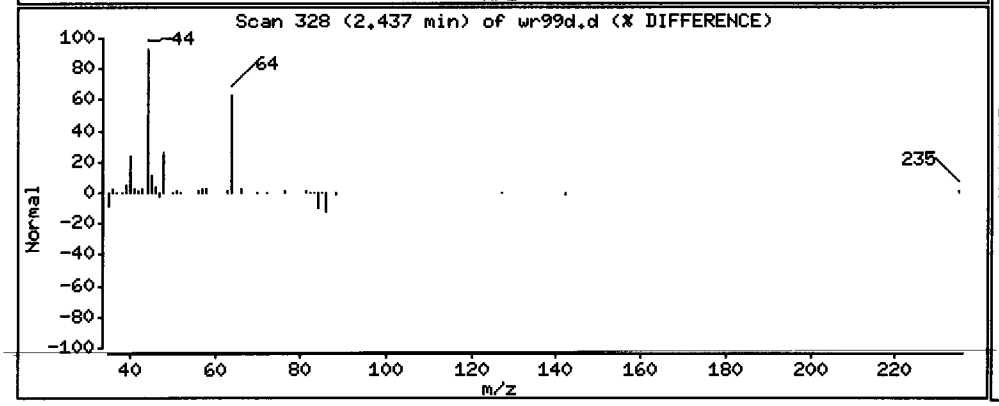
13 Methylene Chloride

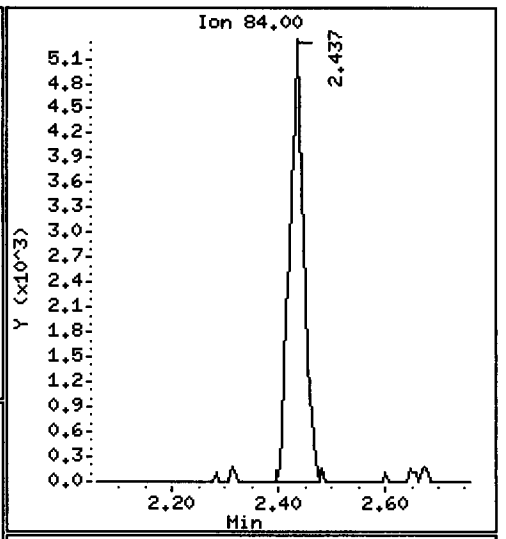
Concentration: 0.9229 ug/Kg

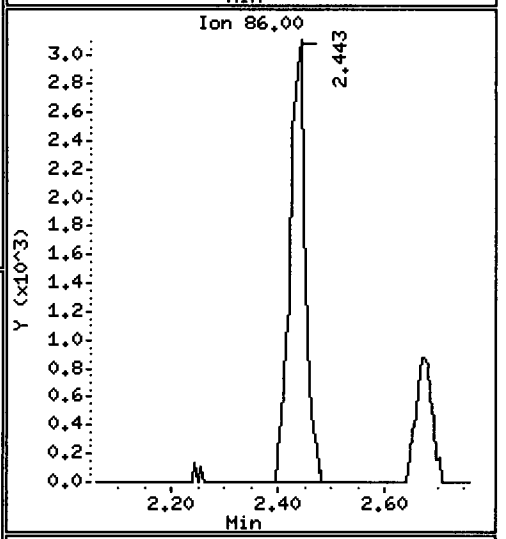


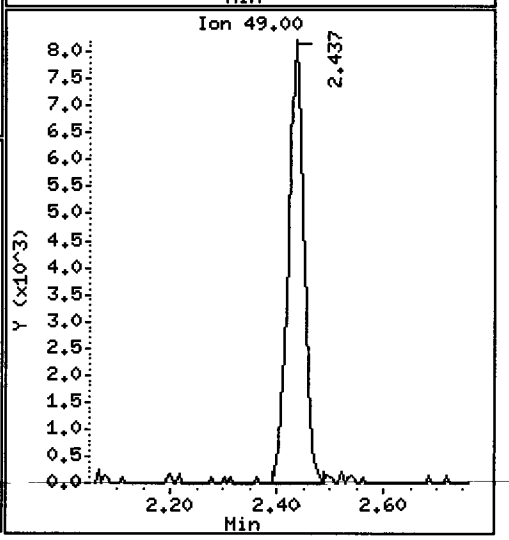












Data File: /chem1/nt5.i/04JUN13.b/wr99d.d

Date : 04-JUN-2013 15:59

Client ID: KC-VT-1593-20130530

Instrument: nt5.i

Sample Info: WR99D,5,8.23,0

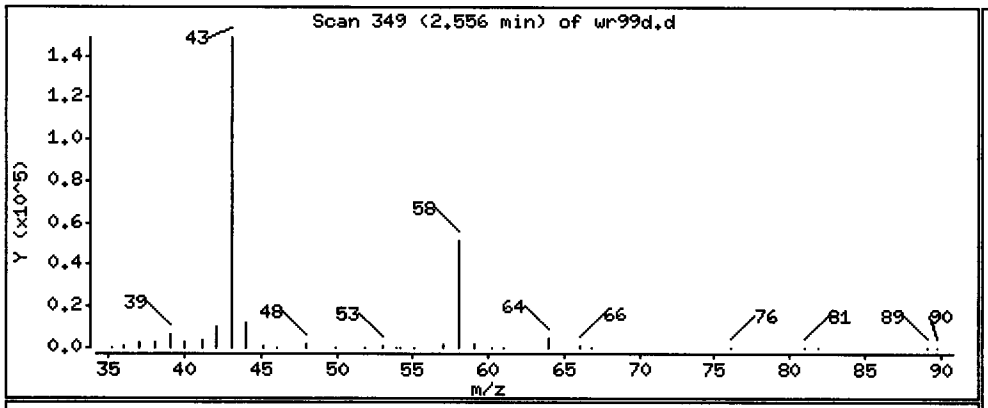
Operator: PB

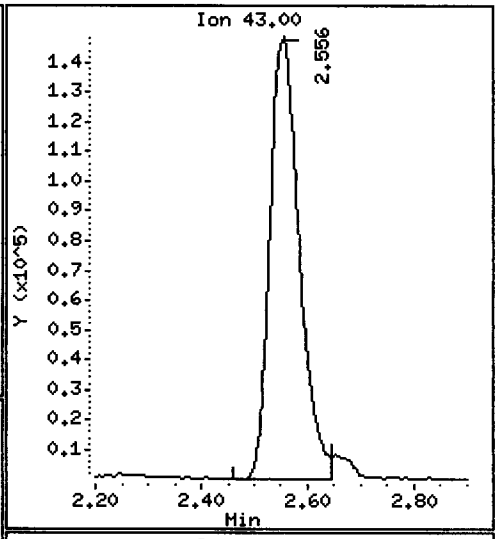
Column phase: RTXVMS

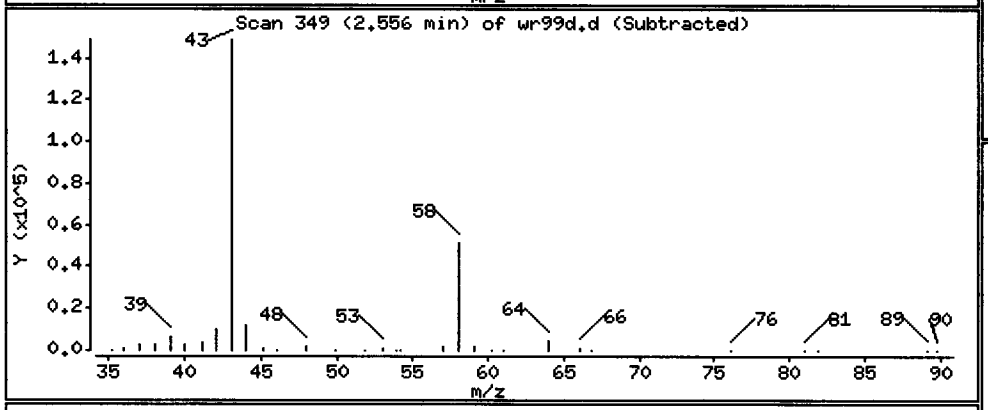
Column diameter: 0.18

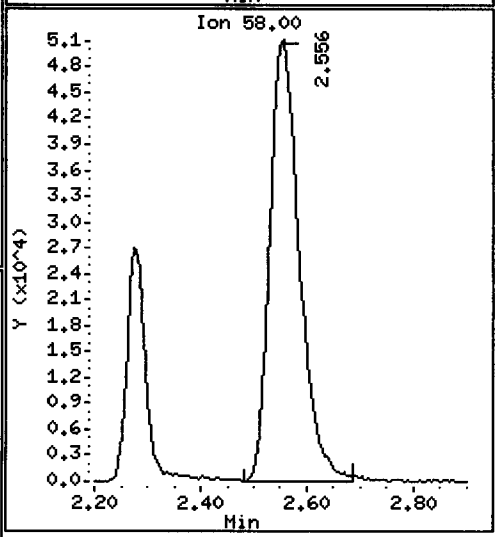
14 Acetone

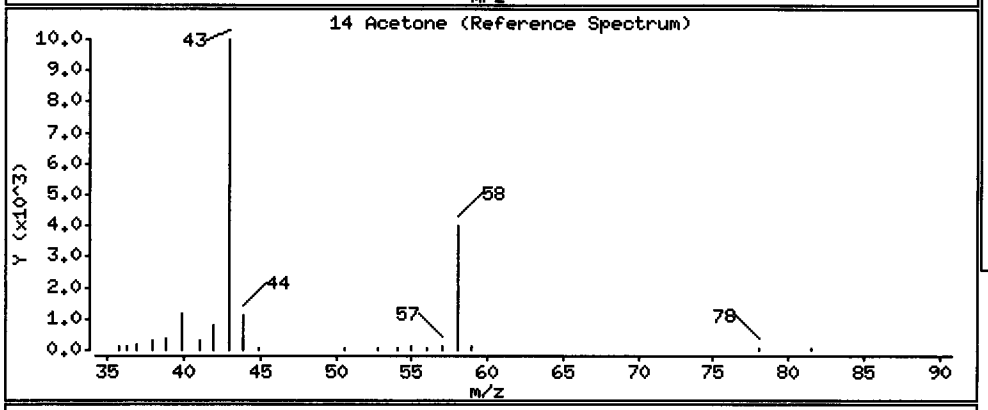
Concentration: 104.17 ug/Kg

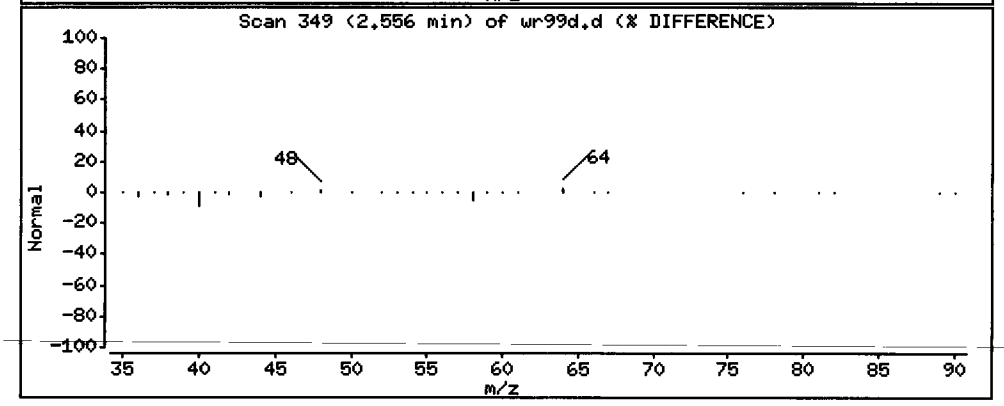












Data File: /chem1/nt5.i/04JUN13.b/wr99d.d

Date : 04-JUN-2013 15:59

Client ID: KC-VT-1593-20130530

Instrument: nt5.i

Sample Info: WR99D,5,8.23,0

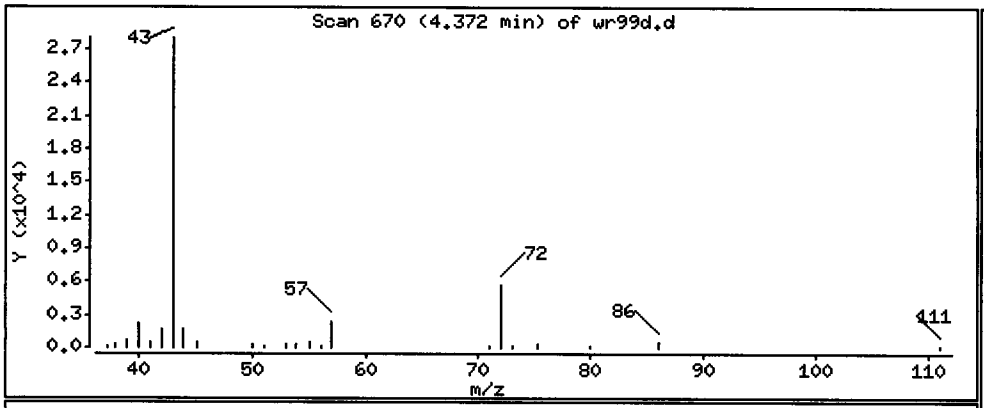
Operator: PB

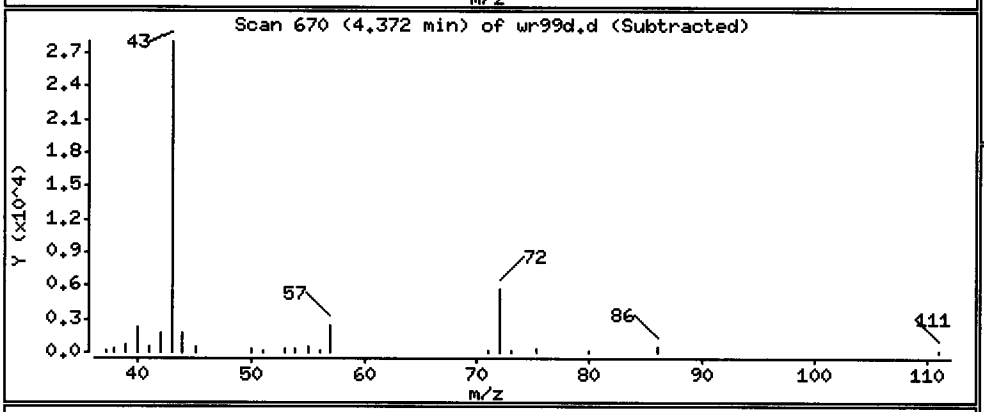
Column phase: RTXVMS

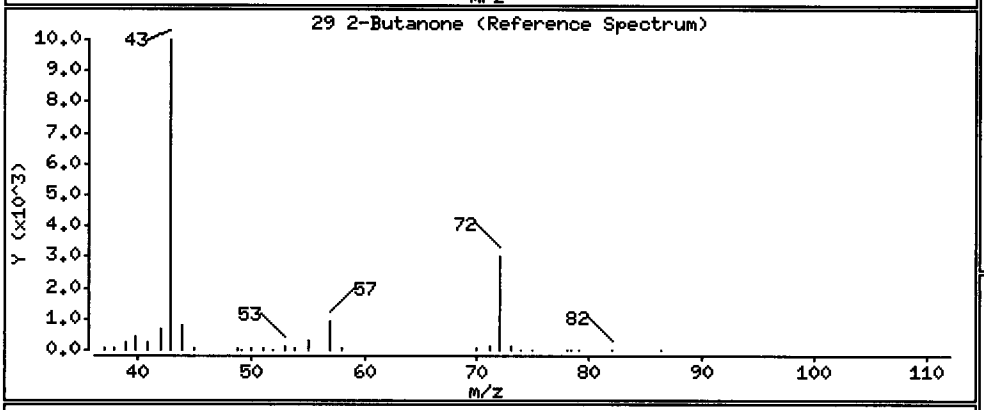
Column diameter: 0.18

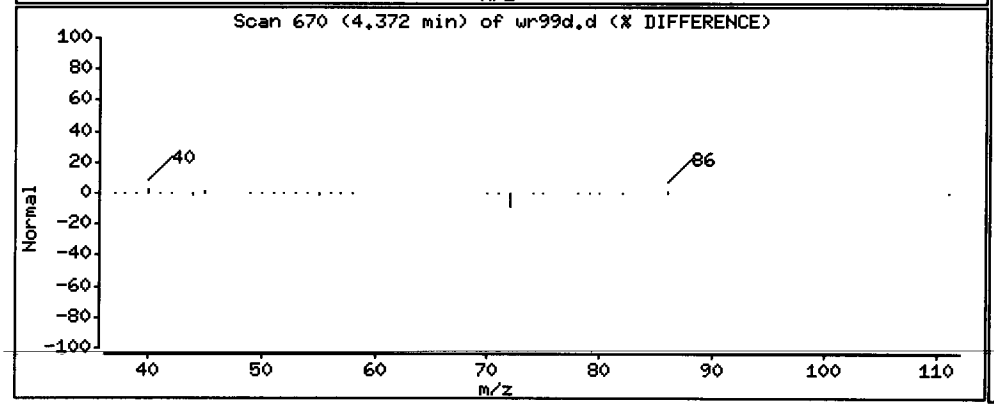
29 2-Butanone

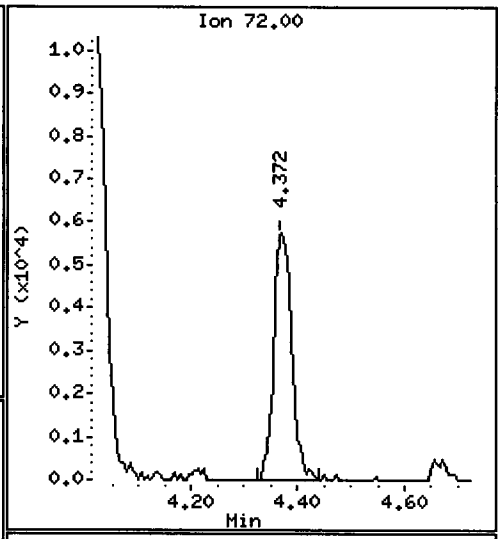
Concentration: 6.522 ug/Kg

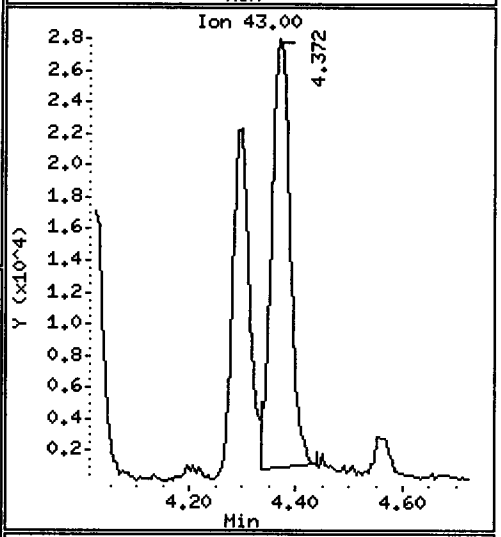


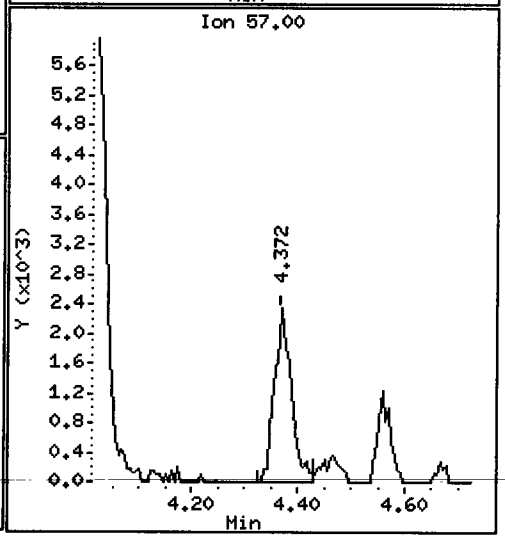












CO-ELUTION SUMMARY FOR FILE - wr99d.d

Lab ID: WR99D, Method: VO121012S.m, Instrument: nt5.i, Date: 04-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WR99, WS01

Incorporated
Analytical Chemists and
Consultants

(8270D) BAN –Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test BAN # 1 (BANWSI) In-House (1.0-5.0ppb)
ARI Job No(s) WR99 Page 1 of 1 Batch set up by: JH

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	WR99 MBW	500mL	0.5mL	0.5mL		WW 6/5/13
	SBW	500mL	0.5mL	0.5mL		
	SBW Dup	500mL	0.5mL	0.5mL		
	~~QLS~~	~~500mL~~	~~0.5mL~~	~~0.5mL~~		
6	WR99 A	500mL	0.5mL	0.5mL		
		~~500mL~~	~~0.5mL~~	~~0.5mL~~		Analyst/Date
		500mL	0.5mL	0.5mL		KD 80-85°C 1 2 3 4 5 6
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		6/10/13
		500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		TurboVap 1 2 3
		500mL	0.5mL	0.5mL		WW 6/10/13
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		~~500mL~~	~~0.5mL~~	~~0.5mL~~		
Analyst/Date		MLC 6/5/13	WW 6/10/13	WW 6/10/13	Review of B, WW 6/10/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2ϕ93-4)	100/150µg/mL	125µL	7/22/13	ML	WW
Full List Spike (Freezer)	7 (2ϕ63-5)	100µg/mL	125µL	1/29/14	ML	WW
Base Spike	56 (2ϕ65-2)	200µg/mL	125µL	7/31/13	ML	WW
~~Benzidine Spike~~	~~39 ( )~~	~~500µg/mL~~	~~125µL~~			
Acid Spike	38 (2ϕ91-4)	100/200µg/mL	125µL	2/28/14	ML	WW
~~QLS Spike~~ (Freezer)	~~14 ( )~~	~~10-100µg/mL~~	~~50µL~~			
Extraction Time:	3:15					

SPECIAL INSTRUCTIONS: 1. Add surr/spk. 2. Adjust Acid (pH <2) using 1:1 Sulfuric Acid. (1/4 pipet for blanks & 1/2 pipet for samples). Verify pH! 3. Extract 1X 60mL DCM, Plus 2X 30mL DCM. 4. Adjust Basic (pH >12) using 1 pipet 10 N Sodium Hydroxide solution. Verify pH! 5. Extract 1X 60mL DCM, Plus 2X 30mL DCM. 5. Pour Acid Fraction first into KD then Basic Fraction into Acid. 6. KD to 5mL at 80°. 7. TurboVap to 0.5mL. 8. Vial in DCM.

A. Archive Y (N)

WR99 : 66542

Reagent and Solutions Identification

(8270D) BAN –Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WR99

(8270D) BAN Aqueous:	Analyst/Date
Separatory Funnel Station: Methylene Chloride: (I# 8210) 1:1 Sulfuric Acid/DI H20: (H# 189) 10 N Sodium Hydroxide: (H# 649) Anhydrous Sodium Sulfate: (I# 8130 + jar date 6/10/13)	Sep Funnel AL 6/5/13
KD Station: Methylene Chloride: (I# 8270	KD KL 6/10/13
Vialing Station: Methylene Chloride: (I# 8270)	Vialing MW 6/10/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WR99 Client ID: SAIC

Parameter: BAN Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☒ Turbid/Color= A > Yellow	ww 6/5/13
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☒ Other (Details)= Sample received in 1L bottle for SVOA extraction. No bottle Rinse	ww 6/5/13
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

WR99 : 0056

Incorporated Analytical Chemists and Consultants

(8270D) BAN/SIM SVOA PSDDA-Soil/ Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (5-20ppb)

ARI Job No(s) W549, WR99, W521 Page 1 of 1 Batch set up by: ~~SP~~

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	W549 MBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 2 3 YL 6/08/13 Analyst/Date
	SBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	SBS Dup.	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C 1 2 3 4 5 6 Analyst/Date 6/10/13
2	~~QLS~~ A	~~10.00g~~ 11.07	(1:1) Y/N	1mL	1mL	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
2	~~QLS (SIM)~~ B	~~10.00g~~ 11.01	(1:1) Y/N	1mL	1mL	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 2 3
2	C	11.04	(1:1) Y/N	1mL	1mL		CJZ 6/10/13 Analyst/Date
2	D	12.01	(1:1) Y/N	1mL	1mL		GPC Prep Filter (1:1)
8	WR99 D	13.04	(1:1) Y/N	1mL	1mL		CJZ 6/10/13 Analyst/Date
8	DMS	13.04	(1:1) Y/N	1mL	1mL		
8	DMSD	13.01	(1:1) Y/N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6
3	E	13.01	(1:1) Y/N	1mL	1mL	See Analyst Notes	YL 6/11/13 Analyst/Date
3	F	6.01	(1:1) Y/N	1mL	1mL		
8	W521 A	13.04	(1:1) Y/N	1mL	1mL	Reviewed by	TurboVap 1 2 3
Analyst/Date	YL 6/08/13		CJZ 6/10/13	SP 6/11/13	SP 6/11/13	SP 6/11/13	SP 6/11/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2093-4)	100/150µg/mL	50µL	7/02/13	YL	
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/29/14	YL	
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	YL	
Acid Spike	38(2091-4)	100/150µg/mL	50µL	2/28/14	YL	
~~QLS Spike (14 in Freezer)~~	~~14(~~ ~~)~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25(~~ ~~)~~	~~1µg/mL~~	~~50µL~~			
Extraction Time: 12:45			Balance ID: 1464 2614			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~or large~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y /(N) B. Archive/Freeze Y /(N)

WR99 · 89586

(8270D) BAN/SIM SVOA PSDDA-Soil/ Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) W549, WR99, W521

(8270D) BAN/SIM SVOA PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Pre-Deactivated Sodium Sulfate: (H# 157)	CT 6-8-13
Anhydrous Sodium Sulfate: (I# 8134 jar date 5-20-13)	YL
1:1 Methylene Chloride/Acetone: (H# 195)	
Methylene Chloride: (I# 8249)	
Pre-Deactivated Glasswool: (H# 180)	
Pre-GPC KD Station:	Pre-GPC KD
Pre-Deactivated Glasswool: (H# 180)	RR 6/10/13
Anhydrous Sodium Sulfate: (I# 8134 jar date 5/24/13)	
Methylene Chloride: (I# 8249)	
GPC Filter Prep:	GPC Filter Prep
Methylene Chloride: (I# 8270)	CSZ 6/10/13
GPC Station:	GPC
Acetone: (I# 8218)	CSZ 6/10/13
Methylene Chloride: (I# 8270)	
Post GPC KD Station:	Post GPC KD
Methylene Chloride: (I# 8270)	YL 6/11/13
Vialing Station:	Vialing
Methylene Chloride: (I# 8270)	SG 6/11/13
Hexane: (I# N/A)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WR99 Client ID: SAIC

Parameter: BAN/SIM SVOA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A, B, C	YL 05/31/13
☒ Standing Water Decanted (Not shared)= A, B,	YL 05/31/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). GCMS analyst, (Centrifuge#1 used for all Centrifugations) reduced extraction weight for Sample 'F', due to very high concentrations of aroclor to avoid laboratory contamination. Samples E and F contain high concentrations of aroclor.	SH 6/07/13

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 **NT-6** NT-8 NT-10 NT11 NT12

Curve Date(s): 3/6/13 Internal Standard ID 1998-2 Expiration 7/3/13

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	N/A / YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Ultra	2053-2	8/5/13	Supelco	2046-1	8/13/13
↓	2064-1	12/5/13	↓	2057-1	12/5/13
↓	2066-1	12/5/13	↓	2058-1	12/5/13
in house stock	2061-1	12/5/13	in house stock	2061-1	12/5/13
Cambridge	18031	1/23/14	Cambridge	18031	1/23/14
SPEX & Restek	2027-2	10/5/13	Aldrich	2068-2	7/2/13
Aldrich	2068-2	7/2/13			

Detail problems, corrective actions and/or other pertinent information below:

Quadratic curve fit used: Butylated hydroxytoluene, Tributyl Phosphate, Biphenyl, Naphthalene, 4-chloroaniline, 2-chloronaphthalene, 3-Nitroaniline, Fluorene, Carbazole, Benzo(b,k) fluoranthene. ✓ BS

1ppm point dropped: Benzoic Acid, 2,4-Dinitrophenol, 4-Nitrophenol, Diethylphthalate, 4,6-Dinitro-2-methylphenol, PCP, & Benzidine.

80ppm point dropped: naphthalene, 4-chloroaniline, phenanthrene, Anthracene, Di-n-butylphthalate, Benzidine. didn't met min response factor and out of 20% limit on 20% ICV.

Analyst: _____ **Date:** 3/07/13

Reviewer: _____ **Date:** 3/7/13

WR99 : 00599

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Calibration File Names:
Level 1: /chem2/nt6.i/20130306.b/03061303.D
Level 2: /chem2/nt6.i/20130306.b/03061304.D
Level 3: /chem2/nt6.i/20130306.b/03061305.D
Level 4: /chem2/nt6.i/20130306.b/03061301.D
Level 5: /chem2/nt6.i/20130306.b/03061306.D
Level 6: /chem2/nt6.i/20130306.b/03061307.D
Level 7: /chem2/nt6.i/20130306.b/03061308.D
Level 8: /chem2/nt6.i/20130306.b/03061302.D

03/07/13

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
186 Carbaryl	0.39701	0.47535	0.56117	0.49062	0.46459	0.42558		
	0.42067	+++++					0.46214	11.884
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
177 p-Benzoquinone	0.05008	0.07043	0.09004	0.08723	0.08034	0.07949		
	0.07703	+++++					0.07638	17.383
168 Pentachlorobenzene	0.54002	0.44946	0.48381	0.42999	0.39543	0.37082		
	0.39690	+++++					0.43806	13.414
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
133 Butylatedhydroxytoluene	1.14333	0.98886	1.01757	0.90348	0.73978	0.64214			
	0.61393	+++++					0.86416	23.429	<-
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	

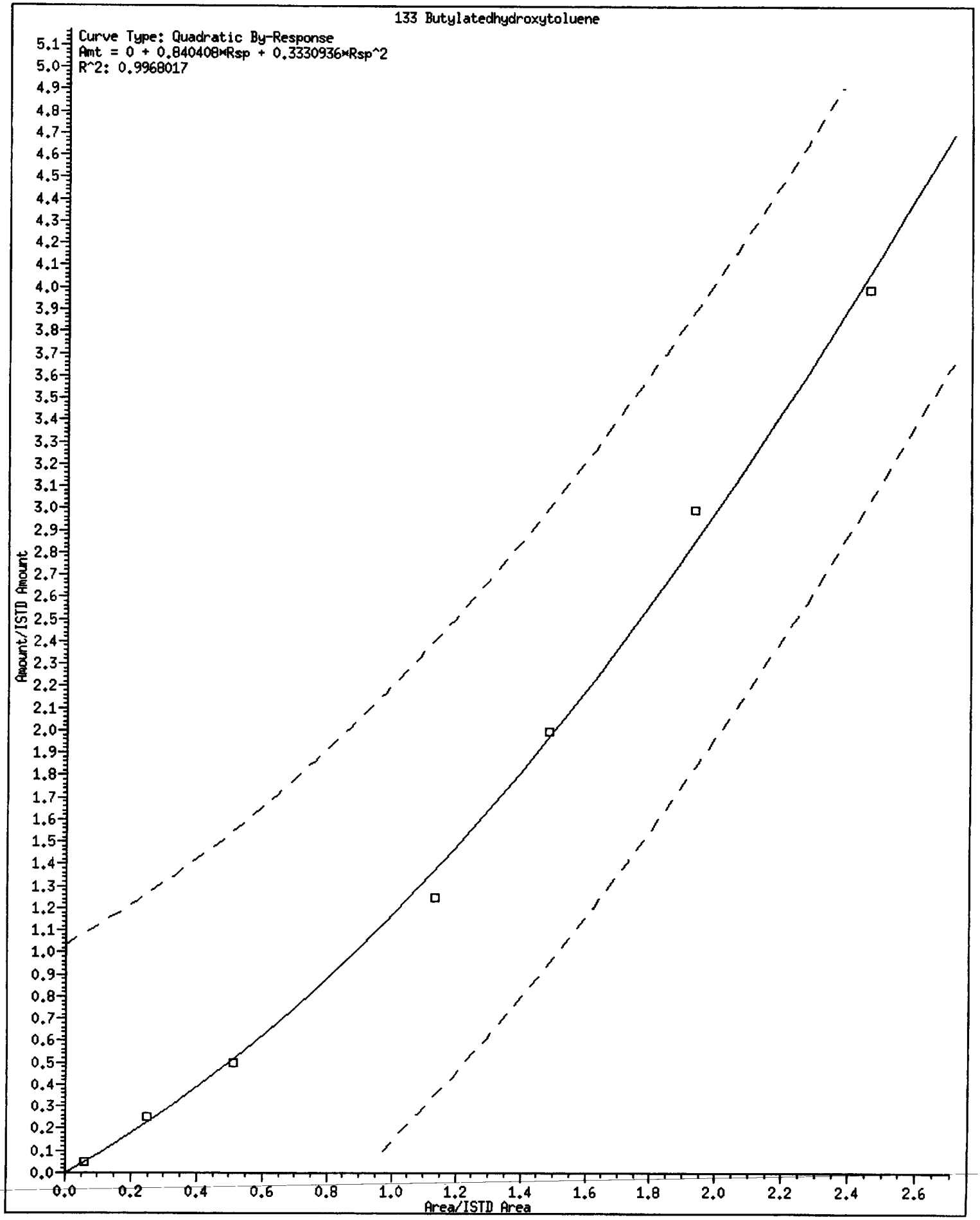
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

JZ 03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
133 Butylatedhydroxytoluene	55856	240649	644369	1140696	1474910	1855173					
	2177090	+++++					QUAD	0.000e+00	0.84041	0.33309	0.99680
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00


133 Butylatedhydroxytoluene
Curve Type: Quadratic By-Response
Amt = 0 + 0.840408*Rsp + 0.3330936*Rsp^2
R^2: 0.9968017
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
144 alpha-Terpineol	0.29935	0.28907	0.28287	0.25012	0.23154	0.21632		
	0.21106	+++++					0.25433	14.269
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
123 Acetophenone	2.14833	1.97774	2.14601	1.85029	1.73200	1.63910		
	1.68468	+++++					1.88259	11.294
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
143 1,4-Dioxane	0.70789	0.62615	0.68743	0.61563	0.60104	0.58481		
	0.62088	0.74708					0.64887	8.913
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
120 2,3,4,6-Tetrachlorophenol	0.21112	0.27662	0.33189	0.30795	0.30141	0.27621		
	0.29312	+++++					0.28547	13.312

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
178 2-Benzyl-4-Chlorophenol	0.15564	0.16773	0.19566	0.17601	0.15696	0.14827			
	0.15928	+++++					0.16565	9.643	
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
118 Triphenyl Phosphate	0.17525	0.16342	0.19227	0.18313	0.17027	0.16645			
	0.17518	+++++					0.17514	5.680	
117 Butyl Diphenyl Phosphate	0.21332	0.19997	0.21022	0.18688	0.17012	0.15561			
	0.15293	+++++					0.18415	13.621	
116 Dibutyl Phenyl Phosphate	0.56961	0.57941	0.64769	0.57421	0.51114	0.49019			
	0.32986	+++++					0.52887	19.190	
115 Tributyl Phosphate	1.07204	0.94669	0.98668	0.84143	0.73508	0.63101			
	0.65635	+++++					0.83847	20.377	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
113 Diphenyl Oxide	0.97304	0.82674	0.87158	0.78098	0.69512	0.65045			
	0.65225	+++++					0.77860	15.566	
112 Biphenyl	1.50584	1.36472	1.24623	1.05635	0.90153	0.79289			
	0.81967	+++++					1.09818	25.495	<-

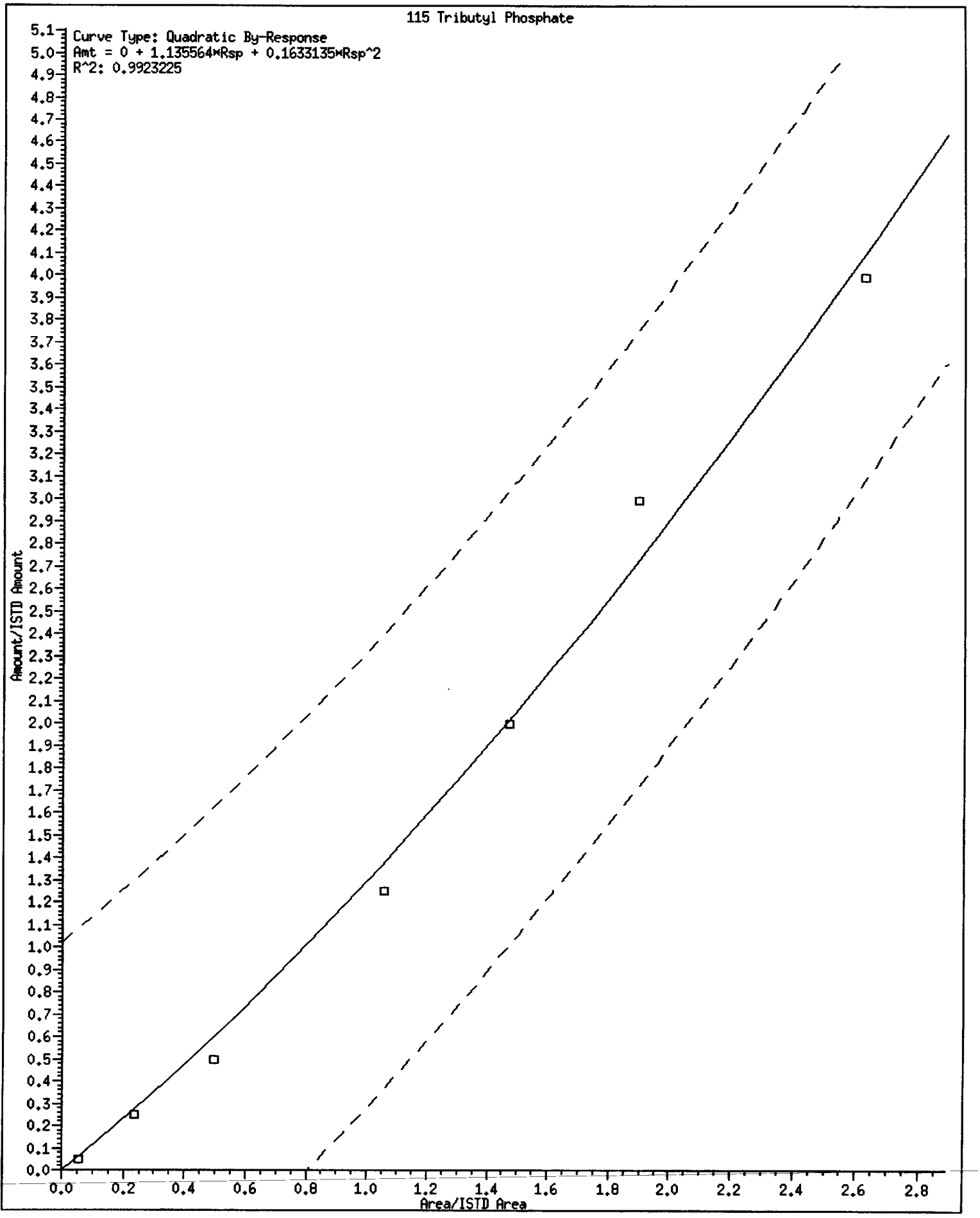
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

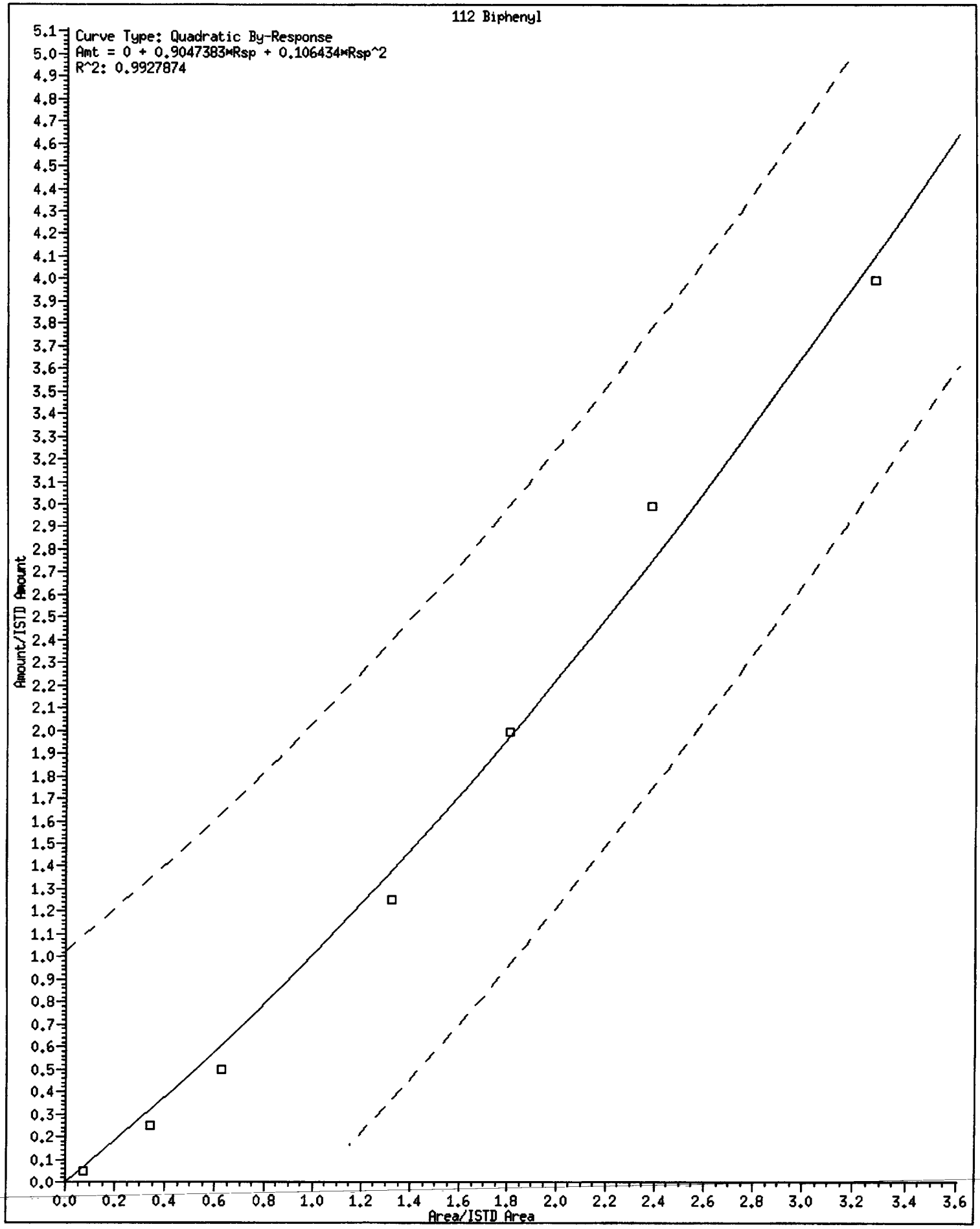
Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
117 Butyl Diphenyl Phosphate	0.21332	0.19997	0.21022	0.18688	0.17012	0.15561					
	0.15293	+++++					AVRG		0.18415		13.62056
116 Dibutyl Phenyl Phosphate	0.56961	0.57941	0.64769	0.57421	0.51114	0.49019					
	0.32986	+++++					AVRG		0.52887		19.19001
115 Tributyl Phosphate	82254	364951	993217	1753043	2401166	3026027					
	3817283	+++++					QUAD	0.000e+00	1.13556	0.16331	0.99232
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
113 Diphenyl Oxide	0.97304	0.82674	0.87158	0.78098	0.69512	0.65045					
	0.65225	+++++					AVRG		0.77860		15.56612
112 Biphenyl	73566	332118	789168	1333701	1797394	2290712					
	2906690	+++++					QUAD	0.000e+00	0.90474	0.10643	0.99279
111 Azobenzene (1,2-DP-Hydrazine)	1.59819	1.41911	1.45514	1.24383	1.12998	1.02761					
	0.99651	+++++					AVRG		1.26720		18.16759


115 Tributyl Phosphate
Curve Type: Quadratic By-Response
Amt = 0 + 1.135564*Rsp + 0.1633135*Rsp^2
R^2: 0.9923225
Amount/ISTD Amount
Area/ISTD Area

W299 : 00538


112 Biphenyl
Curve Type: Quadratic By-Response
Amt = 0 + 0.9047383*Rsp + 0.106434*Rsp^2
R^2: 0.9927874
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
111 Azobenzene (1,2-DP-Hydrazine)	1.59819	1.41911	1.45514	1.24383	1.12998	1.02761		
	0.99651	+++++					1.26720	18.168
110 Tetrachloroguaiacol	0.10144	0.10936	0.12483	0.10869	0.10075	0.09321		
	0.09632	+++++					0.10494	10.074
109 3,4,5-Trichloroguaiacol	0.11477	0.11815	0.12746	0.12229	0.10934	0.09910		
	0.10860	+++++					0.11425	8.305
181 3,4,6-Trichloroguaiacol	0.43141	0.47417	0.53018	0.50138	0.41933	0.41537		
	0.42275	+++++					0.45637	10.040
108 4,5,6-Trichloroguaiacol	0.16930	0.18527	0.21198	0.20697	0.18460	0.17184		
	0.17943	+++++					0.18706	8.817
184 3,4-Dichloroguaiacol	0.43918	0.42819	0.49791	0.46649	0.40627	0.38479		
	0.40939	+++++					0.43317	8.937
107 4,5-Dichloroguaiacol	0.24196	0.24929	0.27603	0.26392	0.23066	0.21900		
	0.23005	+++++					0.24442	8.269
182 4,6-Dichloroguaiacol	0.49926	0.53426	0.61321	0.57613	0.50603	0.47974		
	0.49129	+++++					0.52856	9.333
185 4-Chloroguaiacol	0.48657	0.54944	0.65015	0.62373	0.55846	0.49724		
	0.56809	+++++					0.56195	10.695

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
106 Guaiacol	1.24586	1.15918	1.23291	1.07310	0.91138	0.81234		
	0.84782	+++++					1.04037	17.558
105 1-methylnaphthalene	0.61050	0.56976	0.56450	0.48433	0.43716	0.40010		
	0.39230	+++++					0.49409	17.868
151 1,2,4,5-Tetrachlorobenzene	0.59727	0.49980	0.53345	0.47181	0.44897	0.42889		
	0.43944	+++++					0.48852	12.333
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
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Quant Method : ISTD
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Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
3 Phenol	1.76224	1.73918	1.83003	1.55412	1.48613	1.36745		
	1.44212	+++++					1.59733	11.217
4 Bis(2-Chloroethyl)ether	1.60048	1.46370	1.59535	1.35339	1.28082	1.18687		
	1.22983	+++++					1.38721	12.206
6 2-Chlorophenol	1.37831	1.35510	1.48160	1.27414	1.21027	1.10283		
	1.14376	+++++					1.27800	10.632
7 1,3-Dichlorobenzene	1.81681	1.60019	1.72092	1.47702	1.37550	1.23803		
	1.21973	+++++					1.49260	15.521
9 1,4-Dichlorobenzene	1.82032	1.55518	1.67185	1.43038	1.32574	1.19194		
	1.17353	+++++					1.45271	16.773
11 Benzyl alcohol	0.87814	0.94410	0.96815	0.88893	0.80130	0.76972		
	0.84099	+++++					0.87019	8.282
12 1,2-Dichlorobenzene	1.75726	1.52316	1.60555	1.35410	1.23587	1.09413		
	1.15115	+++++					1.38875	17.850
13 2-Methylphenol	1.25131	1.27565	1.40693	1.22918	1.16820	1.08763		
	1.05956	+++++					1.21121	9.799

Analytical Resources, Inc.

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Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
14 2,2'-oxybis(1-Chloropropane)	2.65572	2.34667	2.53456	2.16149	2.04249	1.89075		
	1.79656	+++++					2.20404	14.652
15 4-Methylphenol	1.24172	1.26860	1.42287	1.24234	1.15506	1.05073		
	1.00274	+++++					1.19772	11.861
16 N-Nitroso-di-n-propylamine	1.19534	1.07425	1.16253	1.02032	0.96375	0.91446		
	0.95659	+++++					1.04103	10.318
17 Hexachloroethane	0.69948	0.61914	0.67843	0.57825	0.54358	0.50067		
	0.49368	+++++					0.58761	13.924
19 Nitrobenzene	0.47644	0.42369	0.44826	0.37521	0.34533	0.30829		
	0.31169	+++++					0.38413	17.393
20 Isophorone	0.78131	0.68897	0.74735	0.63483	0.61575	0.59471		
	0.62384	+++++					0.66954	10.685
21 2-Nitrophenol	0.14475	0.18211	0.21326	0.18617	0.18391	0.16934		
	0.16463	+++++					0.17774	11.981
22 2,4-Dimethylphenol	0.36124	0.35541	0.38736	0.33105	0.32305	0.30039		
	0.29443	+++++					0.33613	10.045
23 Bis(2-Chloroethoxy)methane	0.54133	0.46642	0.49900	0.42377	0.39795	0.37399		
	0.37262	+++++					0.43930	14.803

Analytical Resources, Inc.

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Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
24 Benzoic acid	+++++	0.21032	0.31862	0.30681	0.30884	0.29513			
	0.30610	+++++					0.29097	13.821	
25 2,4-Dichlorophenol	0.24056	0.27100	0.31317	0.27389	0.24851	0.23391			
	0.23074	+++++					0.25883	11.350	
26 1,2,4-Trichlorobenzene	0.40472	0.33988	0.36900	0.30997	0.29325	0.26919			
	0.26929	+++++					0.32219	15.982	
28 Naphthalene	1.25818	1.04449	1.06870	0.85731	0.76662	0.67606			
	+++++	+++++					0.94522	22.941	<-
29 4-Chloroaniline	0.40601	0.41245	0.37680	0.25657	0.23831	0.21446			
	+++++	+++++					0.31743	28.516	<-
30 Hexachlorobutadiene	0.23409	0.20453	0.22348	0.19224	0.18055	0.16813			
	0.16943	+++++					0.19606	13.193	
31 4-Chloro-3-methylphenol	0.24514	0.28452	0.33097	0.28692	0.27737	0.24791			
	0.25165	+++++					0.27493	11.055	
32 2-Methylnaphthalene	0.59617	0.57361	0.56565	0.48068	0.42538	0.38709			
	0.37604	+++++					0.48637	19.091	
33 Hexachlorocyclopentadiene	0.23396	0.28456	0.36132	0.34785	0.33400	0.33313			
	0.35447	+++++					0.32133	14.309	

Analytical Resources, Inc.

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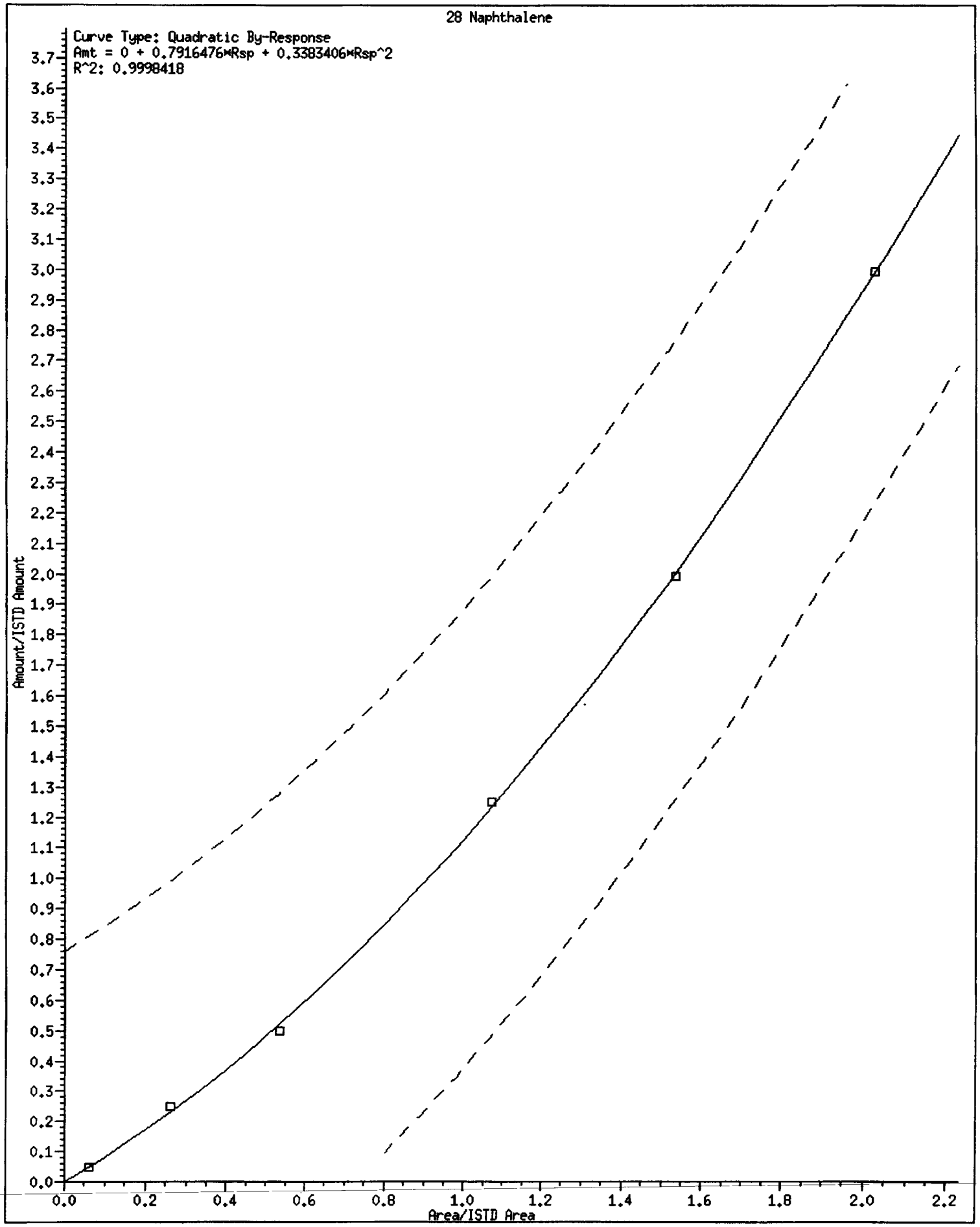
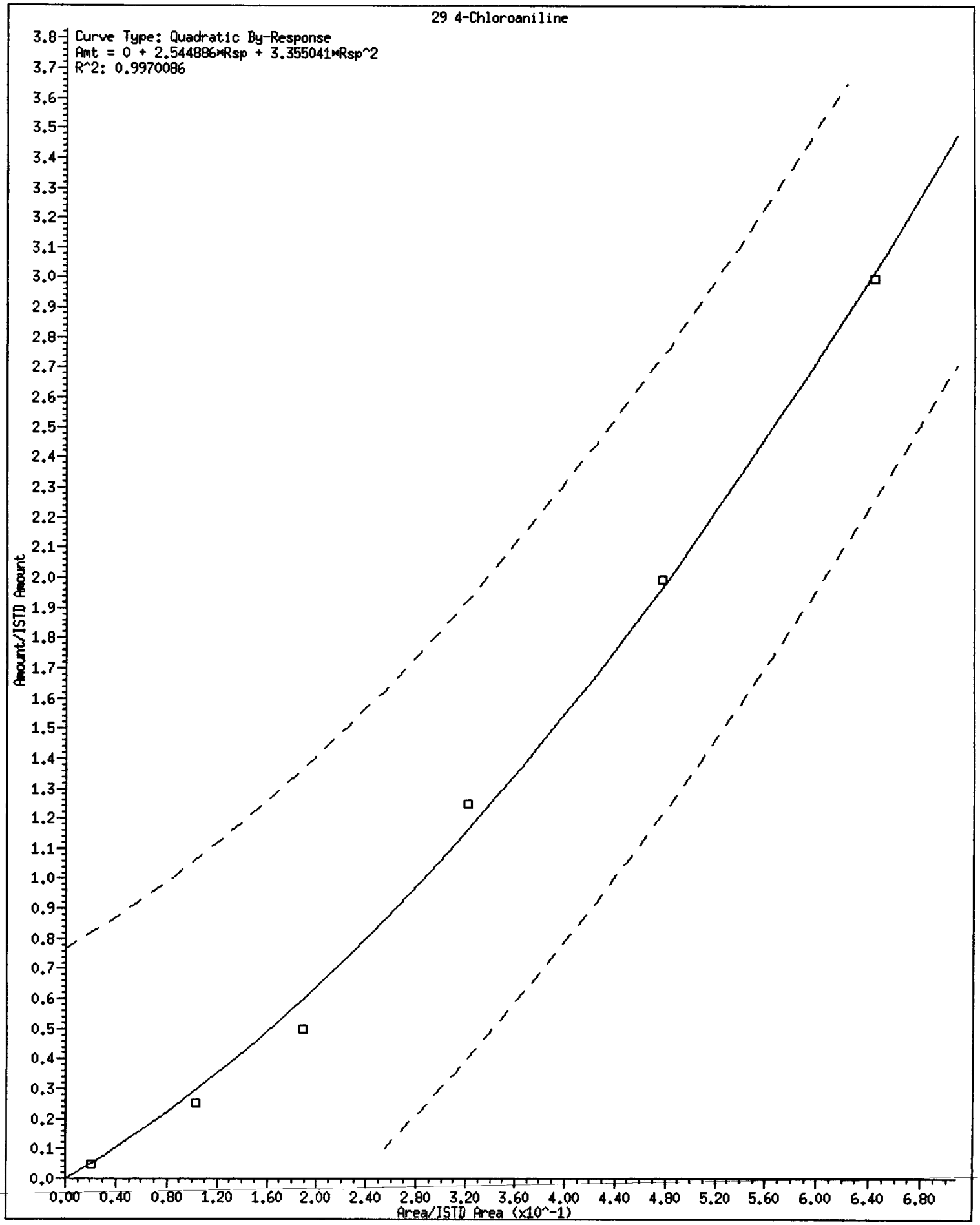
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
22 2,4-Dimethylphenol	0.36124	0.35541	0.38736	0.33105	0.32305	0.30039					
	0.29443	+++++					AVRG		0.33613		10.04487
23 Bis(2-Chloroethoxy)methane	0.54133	0.46642	0.49900	0.42377	0.39795	0.37399					
	0.37262	+++++					AVRG		0.43930		14.80298
24 Benzoic acid	+++++	0.21032	0.31862	0.30681	0.30884	0.29513					
	0.30610	+++++					AVRG		0.29097		13.82096
25 2,4-Dichlorophenol	0.24056	0.27100	0.31317	0.27389	0.24851	0.23391					
	0.23074	+++++					AVRG		0.25883		11.35002
26 1,2,4-Trichlorobenzene	0.40472	0.33988	0.36900	0.30997	0.29325	0.26919					
	0.26929	+++++					AVRG		0.32219		15.98220
28 Naphthalene	106156	433038	1122405	1841435	2641007	3435418					
	+++++	+++++					QUAD	0.000e+00	0.79165	0.33834	0.99984
29 4-Chloroaniline	34256	171000	395736	551083	820986	1089759					
	+++++	+++++					QUAD	0.000e+00	2.54489	3.35504	0.99701


28 Naphthalene
Curve Type: Quadratic By-Response
Amt = 0 + 0.7916476*Rsp + 0.3383406*Rsp^2
R^2: 0.9998418
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
0.1
0.3
0.5
0.7
0.9
1.1
1.3
1.5
1.7
1.9
2.1
2.3
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.1
3.2
3.3
3.4
3.5
3.6
3.7


29 4-Chloroaniline
Curve Type: Quadratic By-Response
Amt = 0 + 2.544886*Rsp + 3.355041*Rsp^2
R^2: 0.9970086
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.1
3.2
3.3
3.4
3.5
3.6
3.7
3.8
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
34 2,4,6-Trichlorophenol	0.28509	0.32769	0.36550	0.34273	0.34257	0.33960			
	0.35029	+++++					0.33621	7.521	
35 2,4,5-Trichlorophenol	0.23683	0.34153	0.40172	0.34946	0.34780	0.32623			
	0.31812	+++++					0.33167	14.969	
37 2-Chloronaphthalene	1.30198	1.09706	1.09950	0.90253	0.81425	0.74840			
	0.76882	+++++					0.96179	21.687	<-
38 2-Nitroaniline	0.21098	0.31500	0.33889	0.31514	0.29714	0.29154			
	0.30102	+++++					0.29567	13.698	
39 Dimethylphthalate	1.47783	1.26016	1.34236	1.16190	1.10101	1.00418			
	1.07862	+++++					1.20372	13.790	
40 Acenaphthylene	2.05852	1.77956	1.81983	1.50838	1.37166	1.24430			
	1.26069	+++++					1.57756	19.869	
41 2,6-Dinitrotoluene	0.24764	0.27592	0.30131	0.26038	0.24504	0.22578			
	0.24419	+++++					0.25718	9.659	
43 3-Nitroaniline	0.21873	0.26028	0.21928	0.19165	0.17183	0.14368			
	0.14011	+++++					0.19222	22.831	<-
44 Acenaphthene	1.34077	1.11343	1.14570	0.97612	0.89996	0.83034			
	0.84339	+++++					1.02139	18.356	

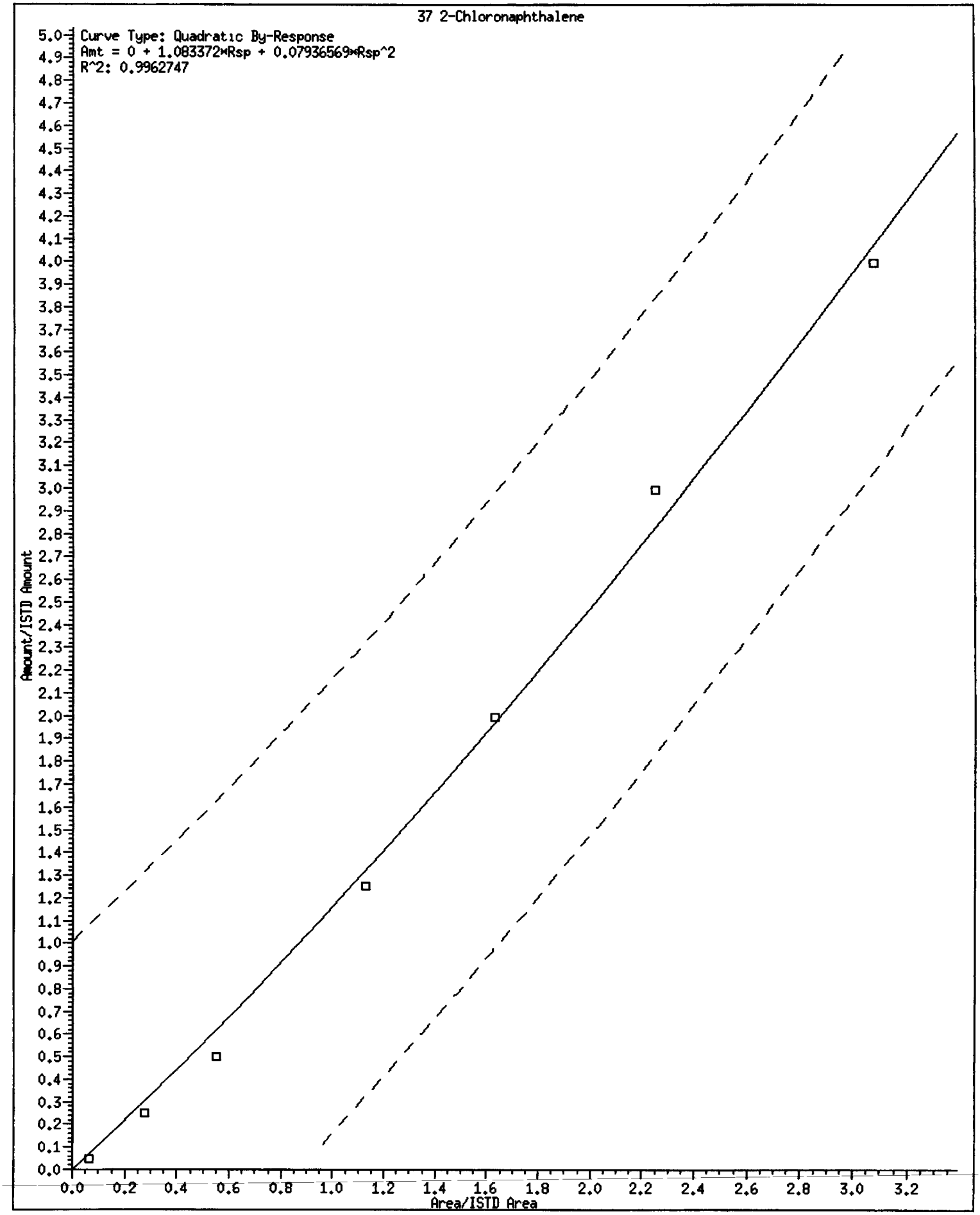
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
30 Hexachlorobutadiene	0.23409	0.20453	0.22348	0.19224	0.18055	0.16813					
	0.16943	+++++					AVRG		0.19606		13.19319
31 4-Chloro-3-methylphenol	0.24514	0.28452	0.33097	0.28692	0.27737	0.24791					
	0.25165	+++++					AVRG		0.27493		11.05467
32 2-Methylnaphthalene	0.59617	0.57361	0.56565	0.48068	0.42538	0.38709					
	0.37604	+++++					AVRG		0.48637		19.09150
33 Hexachlorocyclopentadiene	0.23396	0.28456	0.36132	0.34785	0.33400	0.33313					
	0.35447	+++++					AVRG		0.32133		14.30942
34 2,4,6-Trichlorophenol	0.28509	0.32769	0.36550	0.34273	0.34257	0.33960					
	0.35029	+++++					AVRG		0.33621		7.52054
35 2,4,5-Trichlorophenol	0.23683	0.34153	0.40172	0.34946	0.34780	0.32623					
	0.31812	+++++					AVRG		0.33167		14.96876
37 2-Chloronaphthalene	63607	266980	696255	1139487	1623373	2162175					
	2726374	+++++					QUAD	0.000e+00	1.08337	0.07937	0.99627


37 2-Chloronaphthalene
Curve Type: Quadratic By-Response
Amt = 0 + 1.083372*Rsp + 0.07936569*Rsp^2
R^2: 0.9962747
Amount/ISTD Amount
Area/ISTD Area

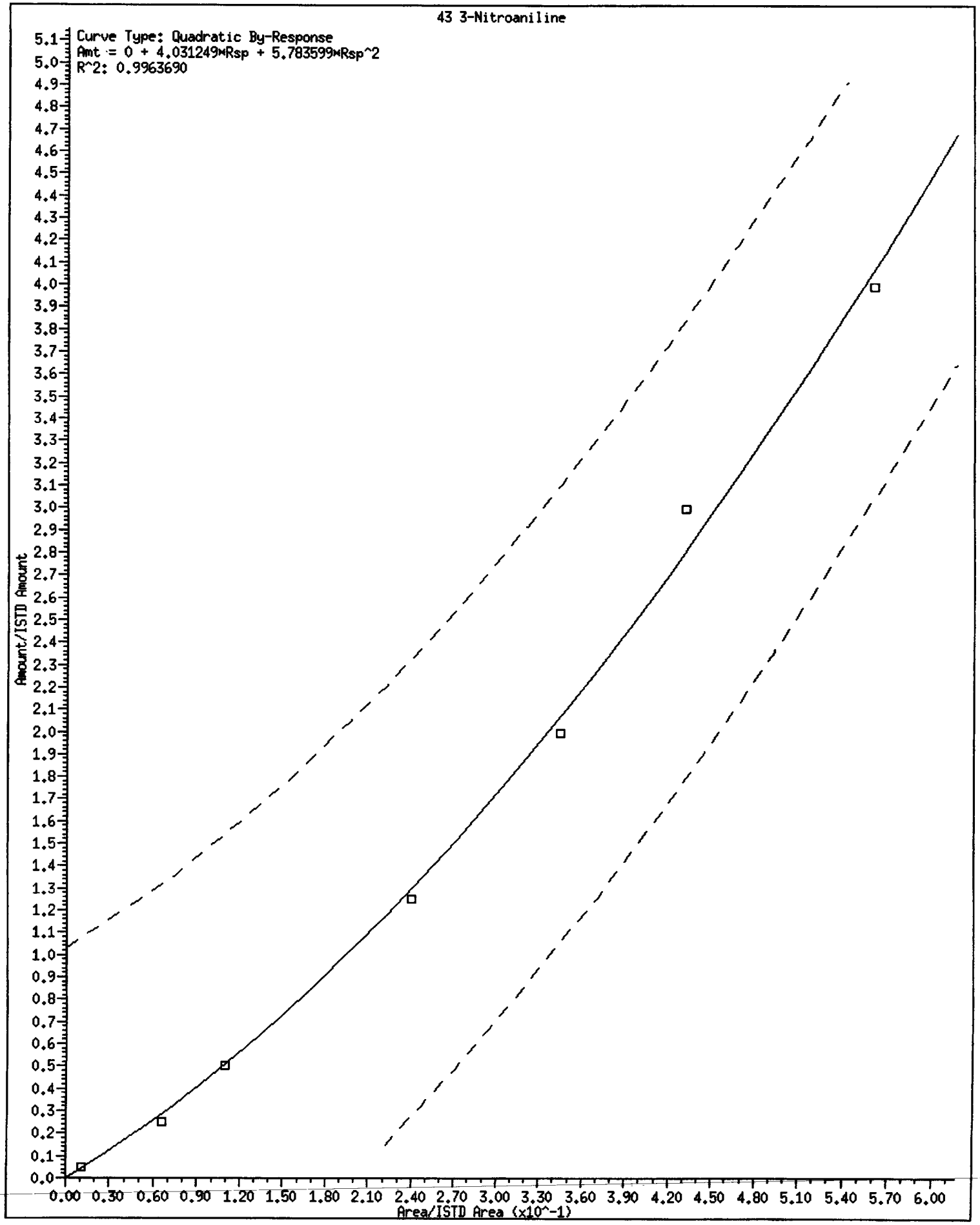
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
38 2-Nitroaniline	0.21098	0.31500	0.33889	0.31514	0.29714	0.29154					
	0.30102	+++++					AVRG		0.29567		13.69777
39 Dimethylphthalate	1.47783	1.26016	1.34236	1.16190	1.10101	1.00418					
	1.07862	+++++					AVRG		1.20372		13.78953
40 Acenaphthylene	2.05852	1.77956	1.81983	1.50838	1.37166	1.24430					
	1.26069	+++++					AVRG		1.57756		19.86859
41 2,6-Dinitrotoluene	0.24764	0.27592	0.30131	0.26038	0.24504	0.22578					
	0.24419	+++++					AVRG		0.25718		9.65852
43 3-Nitroaniline	10686	63342	138858	241966	342573	415090					
	496848	+++++					QUAD	0.000e+00	4.03125	5.78360	0.99637
44 Acenaphthene	1.34077	1.11343	1.14570	0.97612	0.89996	0.83034					
	0.84339	+++++					AVRG		1.02139		18.35615
45 2,4-Dinitrophenol	+++++	0.11131	0.20259	0.19675	0.19419	0.19201					
	0.20527	+++++					AVRG		0.18369		19.49624


43 3-Nitroaniline
Curve Type: Quadratic By-Response
Amt = 0 + 4.031249*Rsp + 5.783599*Rsp^2
R^2: 0.9963690
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.00 0.30 0.60 0.90 1.20 1.50 1.80 2.10 2.40 2.70 3.00 3.30 3.60 3.90 4.20 4.50 4.80 5.10 5.40 5.70 6.00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
45 2,4-Dinitrophenol	+++++	0.11131	0.20259	0.19675	0.19419	0.19201			
	0.20527	+++++					0.18369	19.496	
46 Dibenzofuran	1.67966	1.55463	1.52214	1.31107	1.18525	1.02741			
	1.07080	+++++					1.33585	19.072	
47 4-Nitrophenol	+++++	0.11044	0.14933	0.14144	0.13184	0.12815			
	0.12271	+++++					0.13065	10.521	
48 2,4-Dinitrotoluene	0.30384	0.35458	0.41176	0.35836	0.34621	0.32554			
	0.33475	+++++					0.34786	9.712	
49 Fluorene	1.42570	1.19230	1.22127	1.02020	0.88746	0.80652			
	0.82304	+++++					1.05379	22.212	<-
50 Diethylphthalate	+++++	1.33641	1.34532	1.10884	1.03680	0.94432			
	0.91979	+++++					1.11525	16.797	
51 4-Chlorophenyl-phenylether	0.75781	0.64324	0.66581	0.56719	0.51639	0.45871			
	0.49545	+++++					0.58637	18.257	
52 4-Nitroaniline	0.19716	0.22394	0.18022	0.17911	0.19621	0.19748			
	0.19900	+++++					0.19616	7.581	
53 4,6-Dinitro-2-methylphenol	+++++	0.12093	0.16337	0.14567	0.14760	0.14183			
	0.14470	+++++					0.14402	9.462	

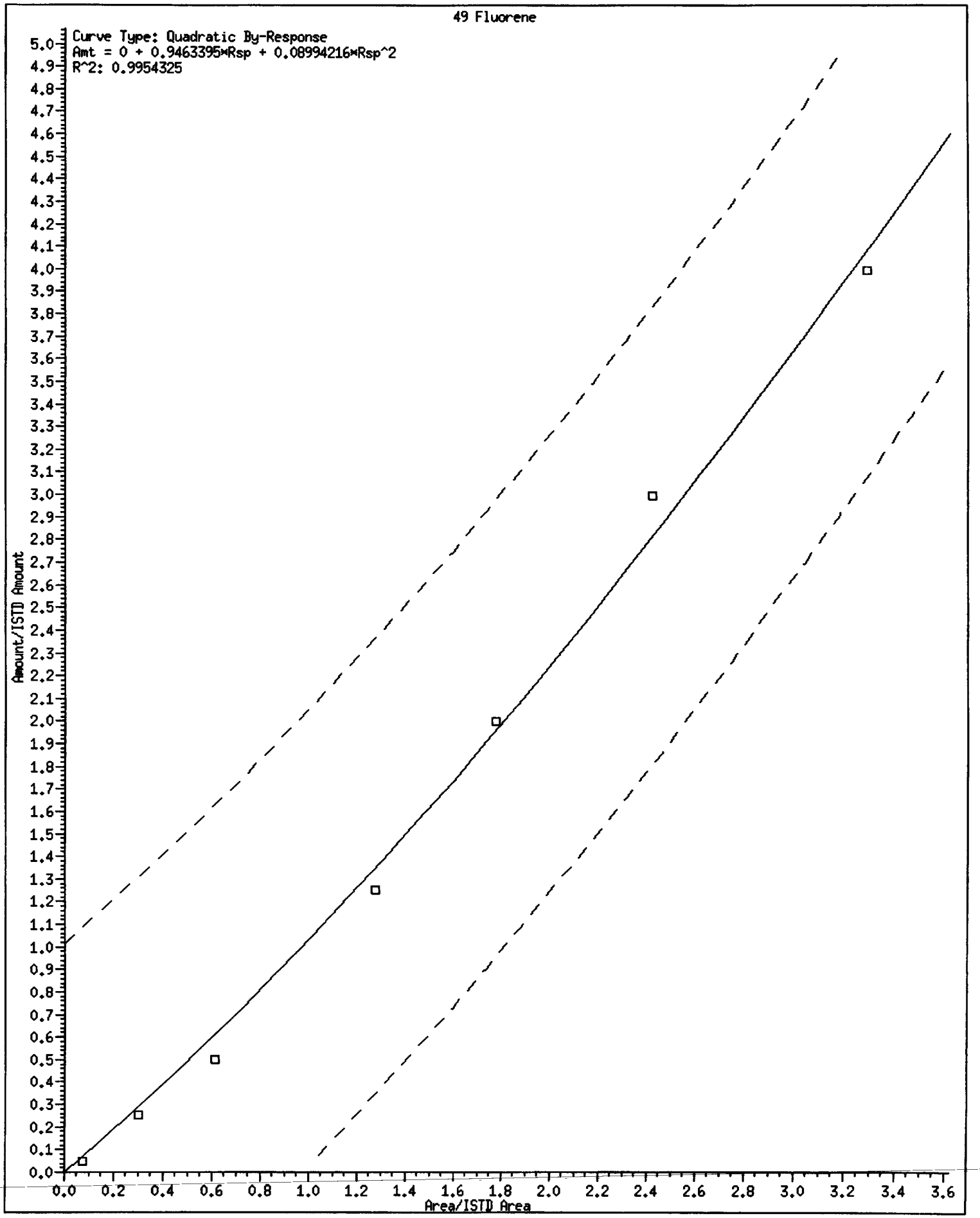
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
46 Dibenzofuran	1.67966	1.55463	1.52214	1.31107	1.18525	1.02741					
	1.07080	+++++					AVRG		1.33585		19.07199
47 4-Nitrophenol	+++++	0.11044	0.14933	0.14144	0.13184	0.12815					
	0.12271	+++++					AVRG		0.13065		10.52089
48 2,4-Dinitrotoluene	0.30384	0.35458	0.41176	0.35836	0.34621	0.32554					
	0.33475	+++++					AVRG		0.34786		9.71205
49 Fluorene	69651	290158	773364	1288051	1769346	2330094					
	2918650	+++++					QUAD	0.000e+00	0.94634	0.08994	0.99543
50 Diethylphthalate	+++++	1.33641	1.34532	1.10884	1.03680	0.94432					
	0.91979	+++++					AVRG		1.11525		16.79699
51 4-Chlorophenyl-phenylether	0.75781	0.64324	0.66581	0.56719	0.51639	0.45871					
	0.49545	+++++					AVRG		0.58637		18.25714
52 4-Nitroaniline	0.19716	0.22394	0.18022	0.17911	0.19621	0.19748					
	0.19900	+++++					AVRG		0.19616		7.58115


49 Fluorene
Curve Type: Quadratic By-Response
Amt = 0 + 0.9463395*Rsp + 0.08994216*Rsp^2
R^2: 0.9954325
Amount/ISTD Amount
Area/ISTD Area
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 5.0

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 14:11 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
54 N-Nitrosodiphenylamine	0.68117	0.59351	0.63351	0.52168	0.48269	0.44490			
	0.44875	+++++					0.54375	17.192	
56 4-Bromophenyl-phenylether	0.25180	0.22762	0.25074	0.21253	0.20583	0.18453			
	0.20347	+++++					0.21950	11.466	
57 Hexachlorobenzene	0.27367	0.23383	0.25499	0.21336	0.20543	0.18963			
	0.21317	+++++					0.22630	13.064	
58 Pentachlorophenol	+++++	0.10881	0.15047	0.13607	0.13563	0.12677			
	0.14329	+++++					0.13351	10.854	
60 Phenanthrene	1.28894	1.06840	1.10242	0.86833	0.83569	0.77325			
	+++++	+++++					0.98950	19.894	
61 Anthracene	1.19069	1.07644	1.15760	0.93304	0.84037	0.74643			
	+++++	+++++					0.99076	18.100	
62 Carbazole	1.14209	0.91469	0.79902	0.66574	0.70348	0.69029			
	0.71834	+++++					0.80481	21.285	<-
63 Di-n-butylphthalate	1.54066	1.38246	1.45272	1.15876	1.04056	0.91923			
	+++++	+++++					1.24906	19.764	
64 Fluoranthene	1.25483	1.12929	1.24063	1.02750	0.93710	0.85018			
	0.84693	+++++					1.04092	16.567	

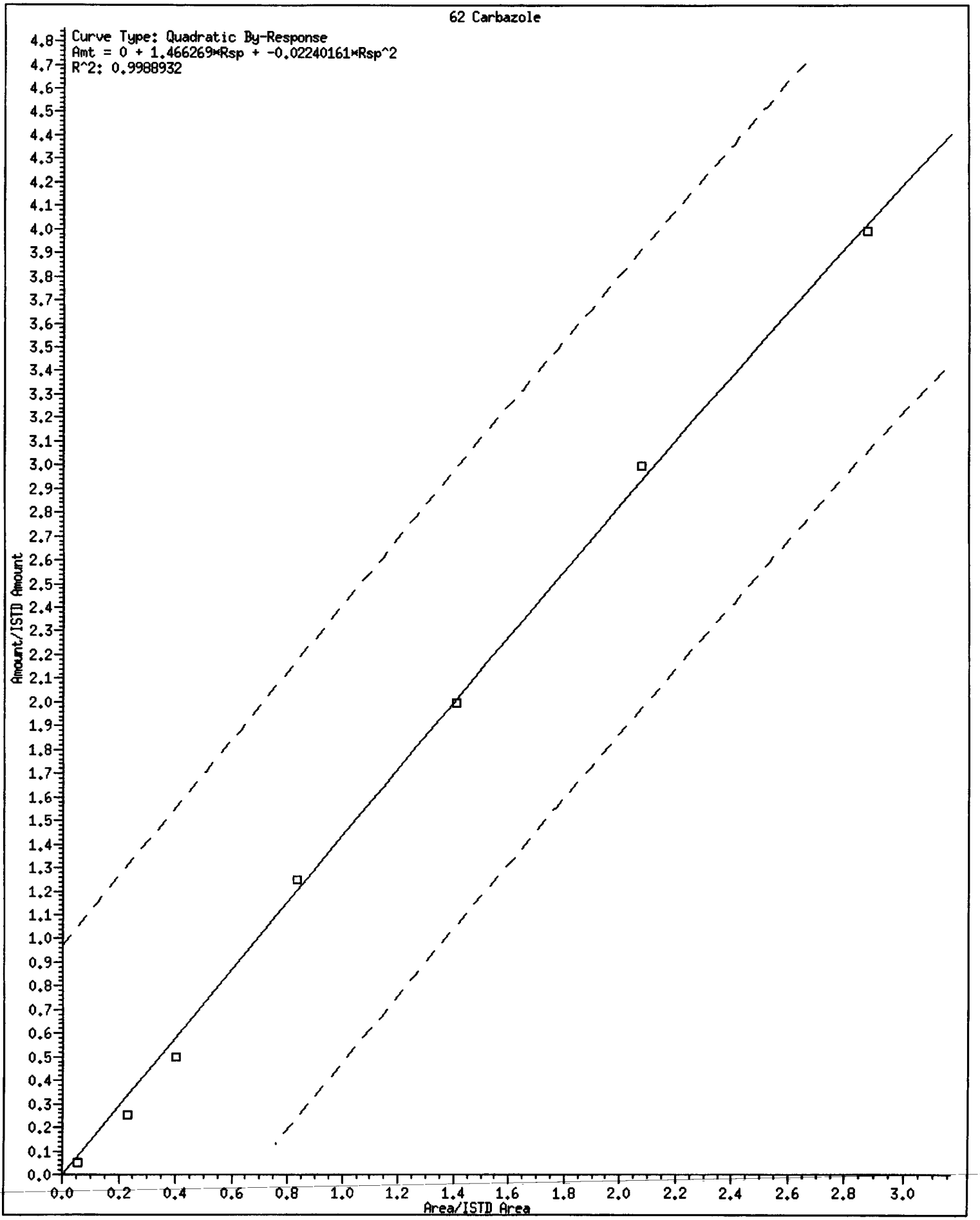
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
62 Carbazole	87629	352615	804312	1387020	2297956	3310342					
	4177813	+++++					QUAD	0.000e+00	1.46627	-0.02240	0.99889
63 Di-n-butylphthalate	1.54066	1.38246	1.45272	1.15876	1.04056	0.91923					
	+++++	+++++					AVRG		1.24906		19.76433
64 Fluoranthene	1.25483	1.12929	1.24063	1.02750	0.93710	0.85018					
	0.84693	+++++					AVRG		1.04092		16.56672
65 Pyrene	1.38441	1.18057	1.25832	1.05458	0.97355	0.89088					
	0.90359	+++++					AVRG		1.09227		17.22487
67 Butylbenzylphthalate	0.59155	0.58245	0.62877	0.53378	0.50169	0.44980					
	0.45073	+++++					AVRG		0.53411		13.17416
68 Benzo(a)anthracene	1.07054	0.96307	1.03562	0.88663	0.83466	0.77690					
	0.81543	+++++					AVRG		0.91184		12.44208
70 3,3'-Dichlorobenzidine	0.26639	0.28674	0.29446	0.23996	0.23070	0.21759					
	0.22026	+++++					AVRG		0.25087		12.60238


62 Carbazole
Curve Type: Quadratic By-Response
Amt = 0 + 1.466269*Rsp + -0.02240161*Rsp^2
R^2: 0.9988932
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
65 Pyrene	1.38441	1.18057	1.25832	1.05458	0.97355	0.89088			
	0.90359	+++++					1.09227	17.225	
67 Butylbenzylphthalate	0.59155	0.58245	0.62877	0.53378	0.50169	0.44980			
	0.45073	+++++					0.53411	13.174	
68 Benzo(a)anthracene	1.07054	0.96307	1.03562	0.88663	0.83466	0.77690			
	0.81543	+++++					0.91184	12.442	
70 3,3'-Dichlorobenzidine	0.26639	0.28674	0.29446	0.23996	0.23070	0.21759			
	0.22026	+++++					0.25087	12.602	
71 Chrysene	1.14947	1.00652	1.08941	0.89575	0.83974	0.76132			
	0.77370	+++++					0.93085	16.505	
72 bis(2-Ethylhexyl)phthalate	0.64692	0.60690	0.67888	0.58952	0.55677	0.51803			
	0.52262	+++++					0.58852	10.344	
73 Di-n-octylphthalate	1.12999	0.97646	1.03547	0.93501	0.88820	0.82066			
	0.82450	+++++					0.94433	11.973	
74 Benzo(b)fluoranthene	0.89938	0.85526	1.04183	0.95727	0.83840	0.81423			
	0.79806	+++++					0.88635	9.839	
75 Benzo(k)fluoranthene	1.39296	1.25661	1.25986	0.96283	0.96180	0.80306			
	0.80825	+++++					1.06362	22.310	<-

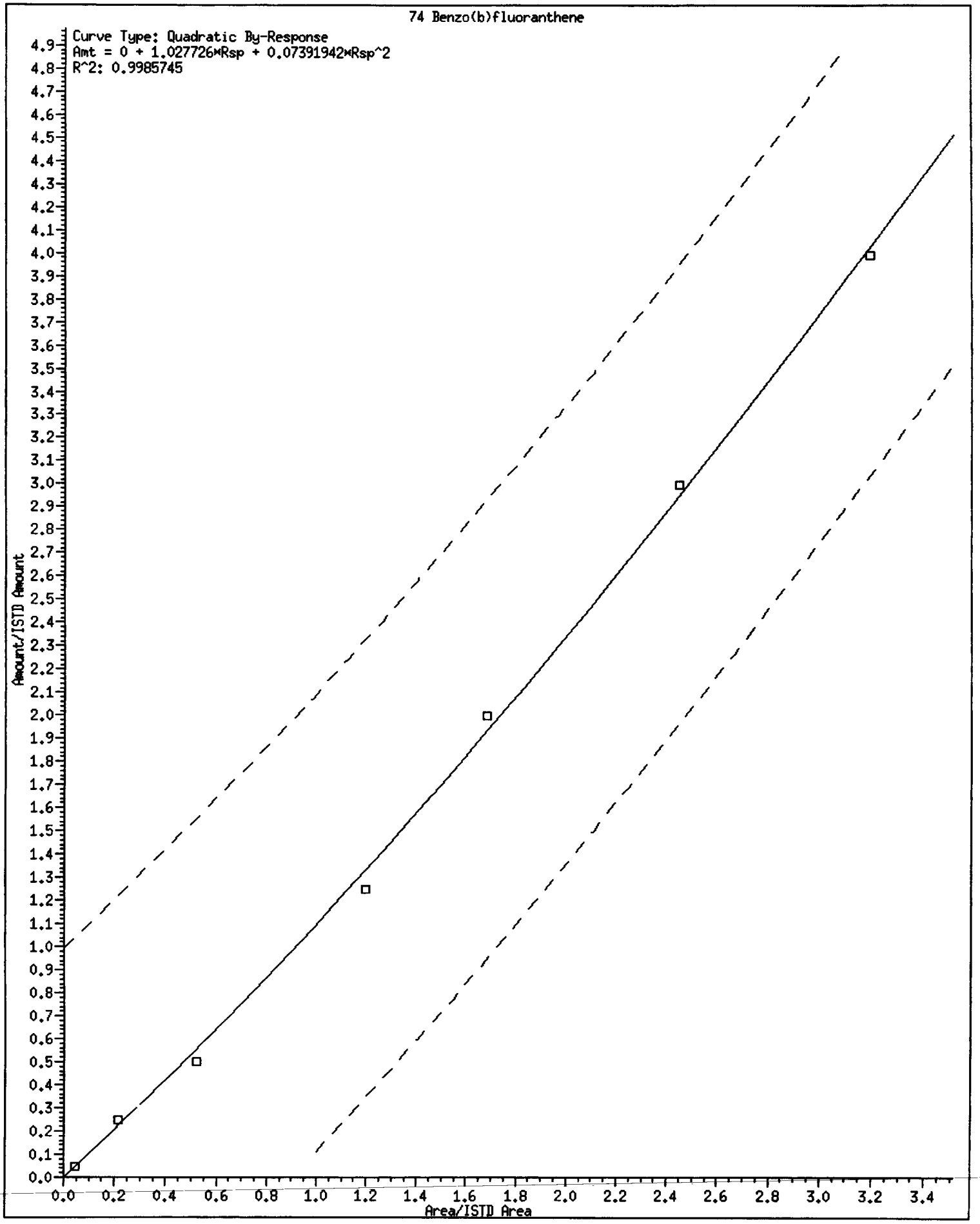
Analytical Resources, Inc.

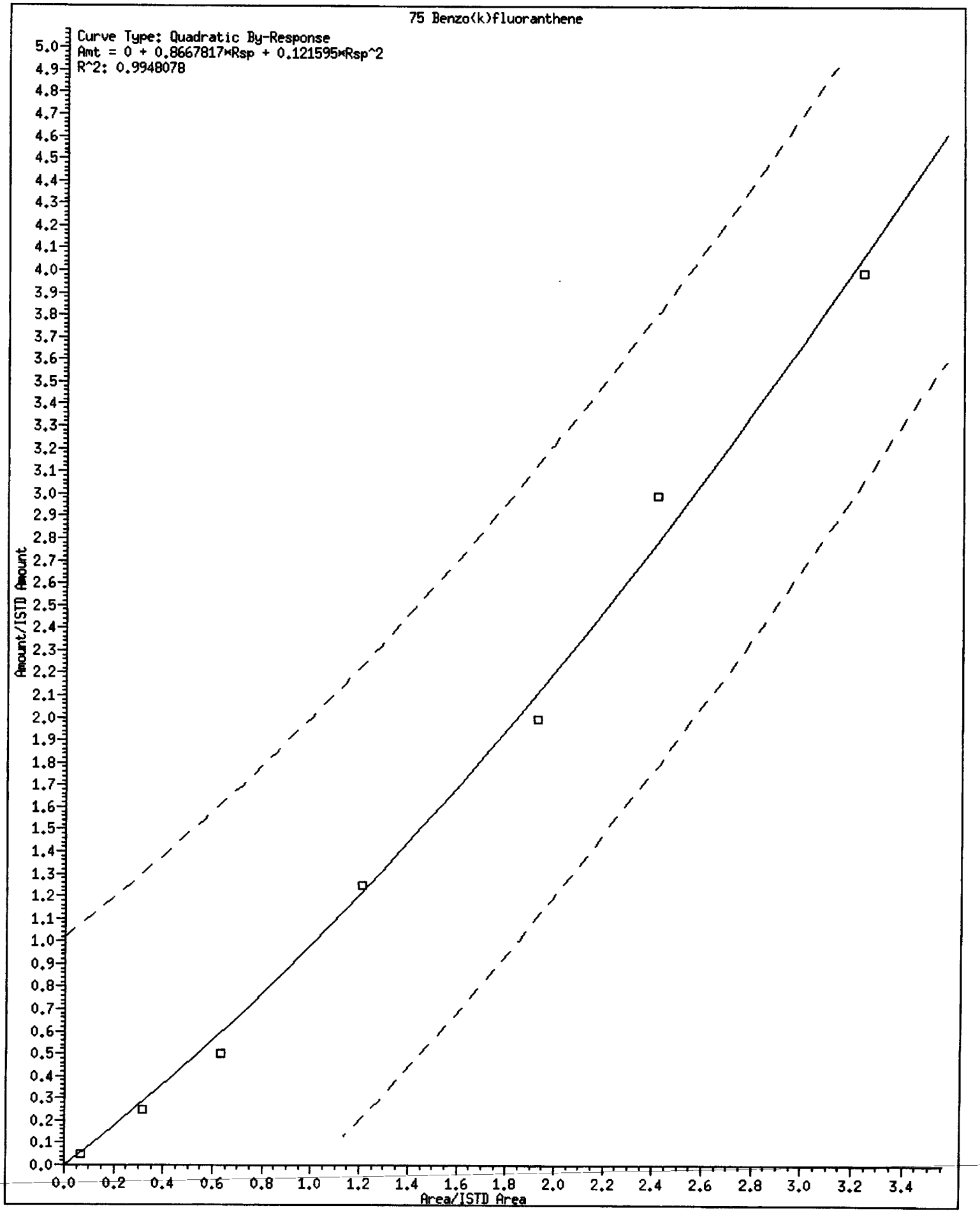
INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
71 Chrysene	1.14947	1.00652	1.08941	0.89575	0.83974	0.76132					
	0.77370	+++++					AVRG		0.93085		16.50541
72 bis(2-Ethylhexyl)phthalate	0.64692	0.60690	0.67888	0.58952	0.55677	0.51803					
	0.52262	+++++					AVRG		0.58852		10.34369
73 Di-n-octylphthalate	1.12999	0.97646	1.03547	0.93501	0.88820	0.82066					
	0.82450	+++++					AVRG		0.94433		11.97291
74 Benzo(b)fluoranthene	60045	314216	1040205	1959445	2694359	3947727					
	4864908	+++++					QUAD	0.000e+00	1.02773	0.07392	0.99857
75 Benzo(k)fluoranthene	92998	461669	1257901	1970824	3090941	3893557					
	4926982	+++++					QUAD	0.000e+00	0.86678	0.12160	0.99481
76 Benzo(a)pyrene	0.92501	0.86150	1.02405	0.86112	0.82038	0.74537					
	0.74649	+++++					AVRG		0.85485		11.55589
78 Indeno(1,2,3-cd)pyrene	1.04859	1.01895	1.20212	1.02187	0.99965	0.93988					
	0.97035	+++++					AVRG		1.02877		8.20489


74 Benzo(b)fluoranthene
Curve Type: Quadratic By-Response
Amt = 0 + 1.027726*Rsp + 0.07391942*Rsp^2
R^2: 0.9985745
Amount/ISTD Amount
Area/ISTD Area


75 Benzo(k)fluoranthene
Curve Type: Quadratic By-Response
Amt = 0 + 0.8667817*Rsp + 0.121595*Rsp^2
R^2: 0.9948078
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
76 Benzo(a)pyrene	0.92501	0.86150	1.02405	0.86112	0.82038	0.74537		
	0.74649	+++++					0.85485	11.556
78 Indeno(1,2,3-cd)pyrene	1.04859	1.01895	1.20212	1.02187	0.99965	0.93988		
	0.97035	+++++					1.02877	8.205
79 Dibenzo(a,h)anthracene	0.72560	0.81926	0.97643	0.82797	0.79605	0.75327		
	0.77178	+++++					0.81005	10.093
80 Benzo(g,h,i)perylene	0.82862	0.85803	1.02707	0.88731	0.88688	0.82365		
	0.84702	+++++					0.87980	7.918
90 N-Nitrosodimethylamine	0.99632	0.92450	1.01613	0.92945	0.90446	0.88103		
	0.94094	+++++					0.94183	5.136
91 Aniline	2.22343	2.10141	1.97052	1.66965	1.48467	1.39278		
	1.54639	+++++					1.76984	18.445
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
93 Benzidine	+++++	+++++	0.10900	0.08219	0.08858	0.10253		
	0.10411	+++++					0.09728	11.663
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

<- 3/7/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
98 Retene	0.53443	0.49274	0.52286	0.47522	0.43428	0.41626		
	0.42376	+++++					0.47136	10.167
99 Perylene	0.89315	0.82306	0.85562	0.73941	0.68087	0.63164		
	0.61789	+++++					0.74881	14.764
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
103 Pyridine	1.43098	1.46786	1.75118	1.62729	1.38945	1.33587		
	1.45312	+++++					1.49368	9.708
187 Total Benzofluoranthenes	1.07820	1.02709	1.10775	0.89502	0.83617	0.75745		
	0.74383	+++++					0.92079	16.402
188 2,6-Dichlorophenol	+++++	0.96091	1.01753	0.96424	0.81971	0.76745		
	0.78343	+++++					0.88554	12.162

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
189 N-Nitrosomethylethylamine	+++++	0.66719	0.69607	0.68402	0.62566	0.63220		
	0.65967	+++++					0.66080	4.214
$ 1 2-Fluorophenol	1.39745	1.38536	1.43699	1.22316	1.19684	1.13577		
	+++++	+++++					1.29593	9.697
$ 137 d8-1,4-Dioxane	0.67499	0.59708	0.66029	0.60426	0.58702	0.54859		
	0.57883	+++++					0.60730	7.416
$ 2 Phenol-d5	1.70898	1.71151	1.70189	1.39938	1.32653	1.25371		
	+++++	+++++					1.51700	14.086
$ 5 2-Chlorophenol-d4	1.46722	1.39820	1.43146	1.20537	1.12780	1.06397		
	+++++	+++++					1.28234	13.386
$ 10 1,2-Dichlorobenzene-d4	1.12248	1.02541	1.00084	0.82678	0.76090	0.67878		
	+++++	+++++					0.90253	19.127
$ 18 Nitrobenzene-d5	0.46223	0.43430	0.44112	0.37325	0.35728	0.33980		
	+++++	+++++					0.40133	12.653
$ 36 2-Fluorobiphenyl	1.60650	1.45970	1.33685	1.11210	1.06628	0.99323		
	+++++	+++++					1.26244	19.285
$ 55 2,4,6-Tribromophenol	0.14826	0.17093	0.17863	0.15638	0.14826	0.14641		
	+++++	+++++					0.15815	8.575

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
$ 66 Terphenyl-d14	0.83641	0.80990	0.75366	0.63080	0.60631	0.57508		
	+++++	+++++					0.70203	15.953
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/nt6.i/20130306.b

ARI Job No.: IC25 Method: SW846030613.m Instrument: nt6.i Date: 06-MAR-2013

03/07/13

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1216	03061301.D	IC250306	IC250306	1	N-Nitrosodiphenylamine,
1251	03061302.D	IC020306	IC020306	1	NO MANUAL INTEGRATION
1325	03061303.D	IC10306	IC10306	1	3-Nitroaniline, 4-Nitrophenol, 4,6-Dinitro-2-methylphenol, Benzo(k)fluoranthene, Benzidine, Total Benzofluoranthenes,
1400	03061304.D	IC50306	IC50306	1	Benzoic acid, 4-Nitrophenol,
1434	03061305.D	IC100306	IC100306	1	NO MANUAL INTEGRATION
1509	03061306.D	IC40306	IC400306	1	4-Chloroaniline, 3-Nitroaniline, N-Nitrosodiphenylamine,
1543	03061307.D	IC60306	IC600306	1	Benzoic acid, 3-Nitroaniline, N-Nitrosodiphenylamine, Phenanthrene,
1618	03061308.D	IC80306	IC800306	1	Benzoic acid, 3-Nitroaniline, N-Nitrosodiphenylamine,
1652	03061309.D	ICV0306	ICV0306	1	NO MANUAL INTEGRATION

Report Date : 07-Mar-2013 11:40

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	03061301	03061302	03061303	03061304	03061305	03061306	03061307	03061308
INJ.DATE:	06-MAR-2013	06-MAR-2013	06-MAR-2013	06-MAR-2013	06-MAR-2013	06-MAR-2013	06-MAR-2013	06-MAR-2013
INJ.TIME:	12:16	12:51	13:25	14:00	14:34	15:09	15:43	16:18

03/07/13

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.432	+++++	6.425	6.429	6.432	6.434	6.442	+++++	6.432	3.432-9.432	6.432	0.006
186 Carbaryl	16.459	+++++	16.447	16.445	16.448	16.462	16.470	16.473	16.459	13.459-19.459	16.458	0.011
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.225	5.225-11.225	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.363	11.363-17.363	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.531	15.531-21.531	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.634	13.634-19.634	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.609	14.609-20.609	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.863	13.863-19.863	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.605	17.605-23.605	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.015	14.015-20.015	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.609	14.609-20.609	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.562	14.562-20.562	+++++	+++++
177 p-Benzoquinone	7.083	+++++	7.082	7.080	7.078	7.086	7.089	7.092	7.083	4.083-10.083	7.085	0.005
168 Pentachlorobenzene	13.638	+++++	13.627	13.630	13.633	13.641	13.644	13.647	13.638	10.638-16.638	13.637	0.008
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date: _____
Reviewer 2 _____ Date: 3/7/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.871	10.871-16.871	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	3.039	+++++	3.060	3.047	3.050	3.047	3.061	3.086	3.039	0.039-6.039	3.056	0.015
* 134 Di-n-octylphthalate-d4	21.085	21.077	21.079	21.077	21.074	21.072	21.074	21.078	21.085	18.085-24.085	21.077	0.004
133 Butylatedhydroxytoluen	13.440	+++++	13.440	13.438	13.435	13.443	13.446	13.450	13.440	10.440-16.440	13.442	0.005
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	10.470	+++++	10.464	10.462	10.465	10.473	10.481	10.485	10.470	7.470-13.470	10.471	0.009
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	9.076	+++++	9.064	9.068	9.071	9.079	9.087	9.090	9.076	6.076-12.076	9.076	0.010
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	3.103	3.117	3.113	3.106	3.109	3.106	3.125	3.145	3.103	0.103-6.103	3.115	0.014
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	13.873	+++++	13.867	13.865	13.868	13.871	13.879	13.882	13.873	10.873-16.873	13.872	0.006
178 2-Benzyl-4-Chloropheno	16.411	+++++	16.399	16.397	16.400	16.413	16.421	16.425	16.411	13.411-19.411	16.410	0.011
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	19.482	+++++	19.476	19.474	19.472	19.480	19.482	19.486	19.482	16.482-22.482	19.479	0.005
117 Butyl Diphenyl Phospha	17.880	+++++	17.874	17.872	17.869	17.877	17.880	17.878	17.880	14.880-20.880	17.876	0.004
116 Dibutyl Phenyl Phospha	16.192	+++++	16.185	16.183	16.186	16.194	16.192	16.190	16.192	13.192-19.192	16.189	0.004
115 Tributyl Phosphate	14.461	+++++	14.444	14.442	14.450	14.469	14.477	14.486	14.461	11.461-17.461	14.461	0.017
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	12.538	+++++	12.531	12.529	12.532	12.535	12.538	12.541	12.538	9.538-15.538	12.535	0.004
112 Biphenyl	12.345	+++++	12.339	12.337	12.340	12.343	12.351	12.349	12.345	9.345-15.345	12.343	0.005
111 Azobenzene (1,2-DP-Hyd	14.423	+++++	14.412	14.415	14.413	14.426	14.429	14.438	14.423	11.423-17.423	14.422	0.010
110 Tetrachloroguaiacol	15.599	+++++	15.592	15.590	15.593	15.601	15.609	15.613	15.599	12.599-18.599	15.600	0.009
109 3,4,5-Trichloroguaiaco	13.969	+++++	13.963	13.961	13.959	13.967	13.975	13.978	13.969	10.969-16.969	13.967	0.007
181 3,4,6-Trichloroguaiaco	14.087	+++++	14.081	14.079	14.082	14.090	14.092	14.096	14.087	11.087-17.087	14.087	0.007
108 4,5,6-Trichloroguaiaco	15.000	+++++	14.994	14.992	14.990	14.998	15.000	15.004	15.000	12.000-18.000	14.997	0.005
184 3,4-Dichloroguaiacol	12.425	+++++	12.425	12.423	12.420	12.423	12.431	12.435	12.425	9.425-15.425	12.426	0.005
107 4,5-Dichloroguaiacol	13.205	+++++	13.194	13.197	13.200	13.208	13.216	13.220	13.205	10.205-16.205	13.206	0.010
182 4,6-Dichloroguaiacol	13.205	+++++	13.194	13.197	13.200	13.208	13.216	13.220	13.205	10.205-16.205	13.206	0.010
185 4-Chloroguaiacol	11.336	+++++	11.329	11.333	11.330	11.338	11.341	11.345	11.336	8.336-14.336	11.336	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106 Guaiacol	9.332	+++++	9.326	9.324	9.327	9.335	9.343	9.347	9.332	6.332-12.332	9.334	0.009
105 1-methylnaphthalene	11.747	+++++	11.741	11.739	11.742	11.744	11.747	11.751	11.747	8.747-14.747	11.744	0.004
151 1,2,4,5-Tetrachloroben	11.907	+++++	11.901	11.904	11.902	11.910	11.913	11.911	11.907	8.907-14.907	11.907	0.005
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.442	20.442-26.442	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.968	18.968-24.968	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.466	20.466-26.466	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.866	19.866-25.866	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.413	20.413-26.413	+++++	+++++
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.952	21.952-27.952	+++++	+++++
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.721	18.721-24.721	+++++	+++++
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.159	15.159-21.159	+++++	+++++
161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2 Phenol-d5	7.933	+++++	7.921	7.925	7.927	7.936	7.949	+++++	7.933	4.933-10.933	7.932	0.010
3 Phenol	7.954	+++++	7.942	7.941	7.943	7.957	7.970	7.969	7.954	4.954-10.954	7.954	0.012
4 Bis(2-Chloroethyl)ethe	8.050	+++++	8.044	8.047	8.045	8.053	8.061	8.059	8.050	5.050-11.050	8.051	0.007
$ 5 2-Chlorophenol-d4	8.082	+++++	8.081	8.079	8.082	8.085	8.093	+++++	8.082	5.082-11.082	8.084	0.005

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.109	+++++	8.103	8.101	8.104	8.112	8.114	8.118	8.109	5.109-11.109	8.109	0.007
	7 1,3-Dichlorobenzene	8.328	+++++	8.322	8.320	8.323	8.325	8.328	8.332	8.328	5.328-11.328	8.325	0.004
*	8 1,4-Dichlorobenzene-d4	8.387	8.384	8.381	8.384	8.382	8.384	8.387	8.385	8.387	5.387-11.387	8.384	0.002
	9 1,4-Dichlorobenzene	8.408	+++++	8.407	8.405	8.408	8.411	8.414	8.417	8.408	5.408-11.408	8.410	0.004
$	10 1,2-Dichlorobenzene-d4	8.681	+++++	8.680	8.683	8.681	8.683	8.686	+++++	8.681	5.681-11.681	8.682	0.002
	11 Benzyl alcohol	8.654	+++++	8.648	8.651	8.649	8.662	8.665	8.674	8.654	5.654-11.654	8.657	0.010
	12 1,2-Dichlorobenzene	8.707	+++++	8.701	8.704	8.702	8.705	8.707	8.706	8.707	5.707-11.707	8.705	0.002
	13 2-Methylphenol	8.878	+++++	8.872	8.870	8.873	8.886	8.889	8.898	8.878	5.878-11.878	8.881	0.010
	14 2,2'-oxybis(1-Chloropr	8.916	+++++	8.909	8.907	8.910	8.913	8.916	8.919	8.916	5.916-11.916	8.913	0.004
	15 4-Methylphenol	9.108	+++++	9.096	9.100	9.103	9.116	9.124	9.128	9.108	6.108-12.108	9.111	0.012
	16 N-Nitroso-di-n-propyla	9.135	+++++	9.118	9.121	9.124	9.137	9.151	9.155	9.135	6.135-12.135	9.134	0.014
	17 Hexachloroethane	9.193	+++++	9.193	9.191	9.188	9.191	9.194	9.192	9.193	6.193-12.193	9.192	0.002
$	18 Nitrobenzene-d5	9.311	+++++	9.305	9.303	9.306	9.314	9.316	+++++	9.311	6.311-12.311	9.309	0.005
	19 Nitrobenzene	9.343	+++++	9.331	9.330	9.332	9.346	9.354	9.358	9.343	6.343-12.343	9.342	0.011
	20 Isophorone	9.717	+++++	9.705	9.709	9.706	9.720	9.733	9.742	9.717	6.717-12.717	9.719	0.014
	21 2-Nitrophenol	9.851	+++++	9.850	9.848	9.845	9.853	9.856	9.860	9.851	6.851-12.851	9.852	0.005
	22 2,4-Dimethylphenol	9.947	+++++	9.940	9.939	9.941	9.949	9.952	9.961	9.947	6.947-12.947	9.947	0.008
	23 Bis(2-Chloroethoxy)met	10.096	+++++	10.090	10.093	10.091	10.099	10.107	10.111	10.096	7.096-13.096	10.098	0.008
	24 Benzoic acid	10.198	+++++	10.031	10.083	10.144	10.249	10.294	10.330	10.198	7.198-13.198	10.190	0.110
	25 2,4-Dichlorophenol	10.230	+++++	10.224	10.222	10.219	10.233	10.235	10.239	10.230	7.230-13.230	10.229	0.007
	26 1,2,4-Trichlorobenzene	10.363	+++++	10.357	10.361	10.358	10.366	10.369	10.367	10.363	7.363-13.363	10.363	0.005
*	27 Naphthalene-d8	10.422	10.419	10.421	10.419	10.422	10.425	10.428	10.426	10.422	7.422-13.422	10.423	0.003
	28 Naphthalene	10.454	+++++	10.448	10.451	10.449	10.457	10.460	10.463	10.454	7.454-13.454	10.455	0.006
	29 4-Chloroaniline	10.588	+++++	10.582	10.585	10.582	10.591	10.599	10.602	10.588	7.588-13.588	10.590	0.008

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	10.764	+++++	10.763	10.761	10.764	10.767	10.764	10.768	10.764	7.764-13.764	10.764	0.002
	31 4-Chloro-3-methylpheno	11.384	+++++	11.377	11.376	11.378	11.387	11.389	11.393	11.384	8.384-14.384	11.383	0.007
	32 2-Methylnaphthalene	11.571	+++++	11.564	11.563	11.565	11.568	11.576	11.580	11.571	8.571-14.571	11.570	0.006
	33 Hexachlorocyclopentadi	11.950	+++++	11.944	11.947	11.945	11.947	11.950	11.948	11.950	8.950-14.950	11.947	0.002
	34 2,4,6-Trichlorophenol	12.078	+++++	12.077	12.070	12.073	12.081	12.084	12.087	12.078	9.078-15.078	12.079	0.006
	35 2,4,5-Trichlorophenol	12.137	+++++	12.131	12.129	12.126	12.134	12.137	12.141	12.137	9.137-15.137	12.134	0.005
$	36 2-Fluorobiphenyl	12.212	+++++	12.206	12.204	12.206	12.209	12.212	+++++	12.212	9.212-15.212	12.208	0.003
	37 2-Chloronaphthalene	12.356	+++++	12.344	12.348	12.345	12.359	12.361	12.360	12.356	9.356-15.356	12.353	0.007
	38 2-Nitroaniline	12.580	+++++	12.569	12.567	12.570	12.583	12.586	12.595	12.580	9.580-15.580	12.579	0.010
	39 Dimethylphthalate	12.949	+++++	12.937	12.935	12.938	12.952	12.960	12.969	12.949	9.949-15.949	12.949	0.013
	40 Acenaphthylene	13.034	+++++	13.028	13.026	13.024	13.032	13.035	13.038	13.034	10.034-16.034	13.031	0.005
	41 2,6-Dinitrotoluene	13.045	+++++	13.034	13.032	13.040	13.048	13.056	13.060	13.045	10.045-16.045	13.045	0.011
*	42 Acenaphthene-d10	13.286	13.277	13.279	13.277	13.280	13.283	13.286	13.289	13.286	10.286-16.286	13.282	0.004
	43 3-Nitroaniline	13.264	+++++	13.247	13.245	13.254	13.262	13.270	13.273	13.264	10.264-16.264	13.259	0.011
	44 Acenaphthene	13.334	+++++	13.327	13.325	13.328	13.336	13.339	13.348	13.334	10.334-16.334	13.334	0.008
	45 2,4-Dinitrophenol	13.424	+++++	13.413	13.411	13.414	13.433	13.441	13.455	13.424	10.424-16.424	13.427	0.017
	46 Dibenzofuran	13.595	+++++	13.589	13.587	13.590	13.598	13.606	13.610	13.595	10.595-16.595	13.597	0.009
	47 4-Nitrophenol	13.547	+++++	13.536	13.534	13.537	13.545	13.558	13.567	13.547	10.547-16.547	13.546	0.013
	48 2,4-Dinitrotoluene	13.676	+++++	13.664	13.662	13.665	13.678	13.686	13.690	13.676	10.676-16.676	13.674	0.011
	49 Fluorene	14.156	+++++	14.145	14.143	14.146	14.154	14.156	14.165	14.156	11.156-17.156	14.152	0.008
	50 Diethylphthalate	14.098	+++++	14.086	14.089	14.092	14.106	14.108	14.112	14.098	11.098-17.098	14.099	0.010
	51 4-Chlorophenyl-phenyle	14.172	+++++	14.166	14.164	14.167	14.170	14.172	14.176	14.172	11.172-17.172	14.170	0.004
	52 4-Nitroaniline	14.252	+++++	14.241	14.234	14.242	14.261	14.274	14.288	14.252	11.252-17.252	14.256	0.020
	53 4,6-Dinitro-2-methylph	14.333	+++++	14.316	14.314	14.317	14.341	14.349	14.358	14.333	11.333-17.333	14.332	0.018

Analytical Resources, Inc.
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Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	14.375	+++++	14.364	14.362	14.365	14.378	14.386	14.390	14.375	11.375-17.375	14.374	0.011
$	55 2,4,6-Tribromophenol	14.573	+++++	14.567	14.565	14.568	14.576	14.578	+++++	14.573	11.573-17.573	14.571	0.005
	56 4-Bromophenyl-phenylet	14.952	+++++	14.946	14.944	14.947	14.950	14.952	14.956	14.952	11.952-17.952	14.950	0.004
	57 Hexachlorobenzene	15.182	+++++	15.170	15.174	15.171	15.179	15.182	15.186	15.182	12.182-18.182	15.178	0.006
	58 Pentachlorophenol	15.470	+++++	15.470	15.462	15.465	15.473	15.476	15.480	15.470	12.470-18.470	15.471	0.006
*	59 Phenanthrene-d10	15.663	15.655	15.657	15.655	15.658	15.660	15.663	15.667	15.663	12.663-18.663	15.659	0.004
	60 Phenanthrene	15.700	+++++	15.694	15.692	15.690	15.703	15.706	15.709	15.700	12.700-18.700	15.699	0.007
	61 Anthracene	15.770	+++++	15.763	15.761	15.764	15.772	15.780	15.784	15.770	12.770-18.770	15.771	0.009
	62 Carbazole	16.047	+++++	16.041	16.039	16.037	16.045	16.053	16.057	16.047	13.047-19.047	16.046	0.007
	63 Di-n-butylphthalate	16.747	+++++	16.741	16.739	16.737	16.745	16.747	16.751	16.747	13.747-19.747	16.744	0.005
	64 Fluoranthene	17.639	+++++	17.628	17.626	17.629	17.631	17.639	17.643	17.639	14.639-20.639	17.634	0.007
	65 Pyrene	17.992	+++++	17.986	17.984	17.987	17.995	17.997	18.001	17.992	14.992-20.992	17.992	0.007
$	66 Terphenyl-d14	18.291	+++++	18.290	18.288	18.286	18.289	18.291	+++++	18.291	15.291-21.291	18.289	0.002
	67 Butylbenzylphthalate	19.167	+++++	19.161	19.159	19.157	19.159	19.162	19.171	19.167	16.167-22.167	19.162	0.005
	68 Benzo(a)anthracene	19.953	+++++	19.941	19.939	19.942	19.950	19.953	19.956	19.953	16.953-22.953	19.948	0.007
*	69 Chrysene-d12	19.979	19.971	19.968	19.971	19.969	19.977	19.979	19.983	19.979	16.979-22.979	19.975	0.006
	70 3,3'-Dichlorobenzidine	19.953	+++++	19.941	19.939	19.937	19.945	19.947	19.951	19.953	16.953-22.953	19.945	0.006
	71 Chrysene	20.017	+++++	20.005	20.008	20.006	20.014	20.022	20.026	20.017	17.017-23.017	20.014	0.008
	72 bis(2-Ethylhexyl)phtha	20.150	+++++	20.149	20.147	20.140	20.142	20.145	20.149	20.150	17.150-23.150	20.146	0.004
	73 Di-n-octylphthalate	21.096	+++++	21.089	21.088	21.085	21.088	21.090	21.089	21.096	18.096-24.096	21.089	0.003
	74 Benzo(b)fluoranthene	21.609	+++++	21.592	21.595	21.593	21.606	21.609	21.618	21.609	18.609-24.609	21.603	0.010
	75 Benzo(k)fluoranthene	21.641	+++++	21.629	21.627	21.625	21.638	21.646	21.655	21.641	18.641-24.641	21.637	0.011
	76 Benzo(a)pyrene	22.057	+++++	22.046	22.044	22.041	22.049	22.057	22.066	22.057	19.057-25.057	22.052	0.009
*	77 Perylene-d12	22.137	22.129	22.131	22.129	22.132	22.130	22.132	22.136	22.137	19.137-25.137	22.132	0.003

Analytical Resources, Inc.
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Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
78	Indeno(1,2,3-cd)pyrene	23.767	+++++	23.755	23.748	23.745	23.759	23.767	23.781	23.767	20.767-26.767	23.760	0.012
79	Dibenzo(a,h)anthracene	23.788	+++++	23.766	23.764	23.767	23.786	23.799	23.808	23.788	20.788-26.788	23.782	0.017
80	Benzo(g,h,i)perylene	24.226	+++++	24.199	24.202	24.205	24.224	24.237	24.251	24.226	21.226-27.226	24.221	0.020
$ 85	p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$ 86	Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$ 87	Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$ 88	Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$ 89	Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
90	N-Nitrosodimethylamine	3.889	+++++	3.893	3.891	3.894	3.902	3.921	3.962	3.889	0.889-6.889	3.907	0.026
91	Aniline	7.938	+++++	7.937	7.935	7.938	7.941	7.943	7.947	7.938	4.938-10.938	7.940	0.004
92	1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
93	Benzidine	17.874	+++++	17.874	17.872	17.864	17.872	17.869	17.873	17.874	14.874-20.874	17.871	0.004
$ 95	D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
96	p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
97	Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
98	Retene	18.548	+++++	18.541	18.534	18.537	18.540	18.548	18.546	18.548	15.548-21.548	18.542	0.005
99	Perylene	22.175	+++++	22.158	22.161	22.159	22.167	22.175	22.179	22.175	19.175-25.175	22.168	0.009
100	3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.074	19.074-25.074	+++++	+++++
101	Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.255	19.255-25.255	+++++	+++++
102	beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.369	18.369-24.369	+++++	+++++
103	Pyridine	3.851	+++++	3.898	3.870	3.862	3.854	3.867	3.914	3.851	0.851-6.851	3.874	0.023
187	Total Benzofluoranthen	21.641	+++++	21.629	21.627	21.625	21.638	21.646	21.655	21.641	18.641-24.641	21.637	0.011
188	2,6-Dichlorophenol	10.598	+++++	10.592	10.596	10.593	10.601	10.604	10.613	10.598	7.598-13.598	10.600	0.007
189	N-Nitrosomethylethylam	5.620	+++++	5.635	5.627	5.625	5.622	5.625	5.634	5.620	2.620-8.620	5.627	0.006

Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 3/6/13 Analysis: 8270D Analyst: KB

GC Program: 8270D_NT6.M Column No: 234149 Column Type: ZB-5MSi

Instrument Tune (.U or .CT.): 121619 EM Voltage: 1647

Calibration File: 030613D.1 Curve Date: 3/6/13 Injection Vol.: 1µl

IS/SS	Ical/Ccal	LCS/ICV
1998-2	~~2052-1, 2054-1~~	~~2046-1, 2057-1~~
	~~2044-1, 2041-1~~	~~2058-1, 2061-1~~
	~~18031, 2027-2~~	~~18031, 2052-1~~
	~~2058-2~~	~~2058-2~~

Document All Maintenance Tasks in StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem2/nt6.i/20130306.b

	Time	Filename	LabID	ClientId	DF															
1	1216	03061301.D	IC250306	IC250306	1	8.39	458117	10.42	1718341	13.29	1010041	15.66	1666734	19.98	1675752	22.14	1637524	21.09	2026355	
2	1251	03061302.D	IC020306	IC020306	1	8.38	469293	10.42	1660759	13.28	977166	15.65	1519395	19.97	1581424	22.13	1491578	21.08	2063915	
3	1325	03061303.D	IC10306	IC10306	1	8.38	473521	10.42	1687458	13.28	977079	15.66	1534533	19.97	1440155	22.13	1335257	21.08	1913979	
4	1400	03061304.D	IC50306	IC50306	1	8.38	454719	10.42	1658379	13.28	973436	15.65	1542012	19.97	1542109	22.13	1469575	21.08	2051585	
5	1434	03061305.D	IC100306	IC100306	1	8.38	570088	10.42	2100513	13.28	1266491	15.66	2013244	19.97	2072136	22.13	1996890	21.07	2636581	
6	1509	03061306.D	IC40306	IC400306	1	8.38	462843	10.42	1722510	13.28	996854	15.66	1633268	19.98	1604385	22.13	1606852	21.07	1904606	
7	1543	03061307.D	IC60306	IC600306	1	8.39	453135	10.43	1693833	13.29	963022	15.66	1598516	19.98	1561828	22.13	1616143	21.07	1777444	
8	1618	03061308.D	IC80306	IC800306	1	8.39	415136	10.43	1588502	13.29	886542	15.67	1453987	19.98	1394767	22.14	1523971	21.08	1577157	
9	1652	03061309.D	ICV0306	ICV0306	1	8.38	436336	10.42	1601740	13.28	939966	15.65	1479267	19.97	1476943	22.12	1464482	21.07	1837060	

KB 03/07/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

Data File: /chem2/nt6.i/20130306.b/tune.b/03061301.D

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

Instrument: nt6.i

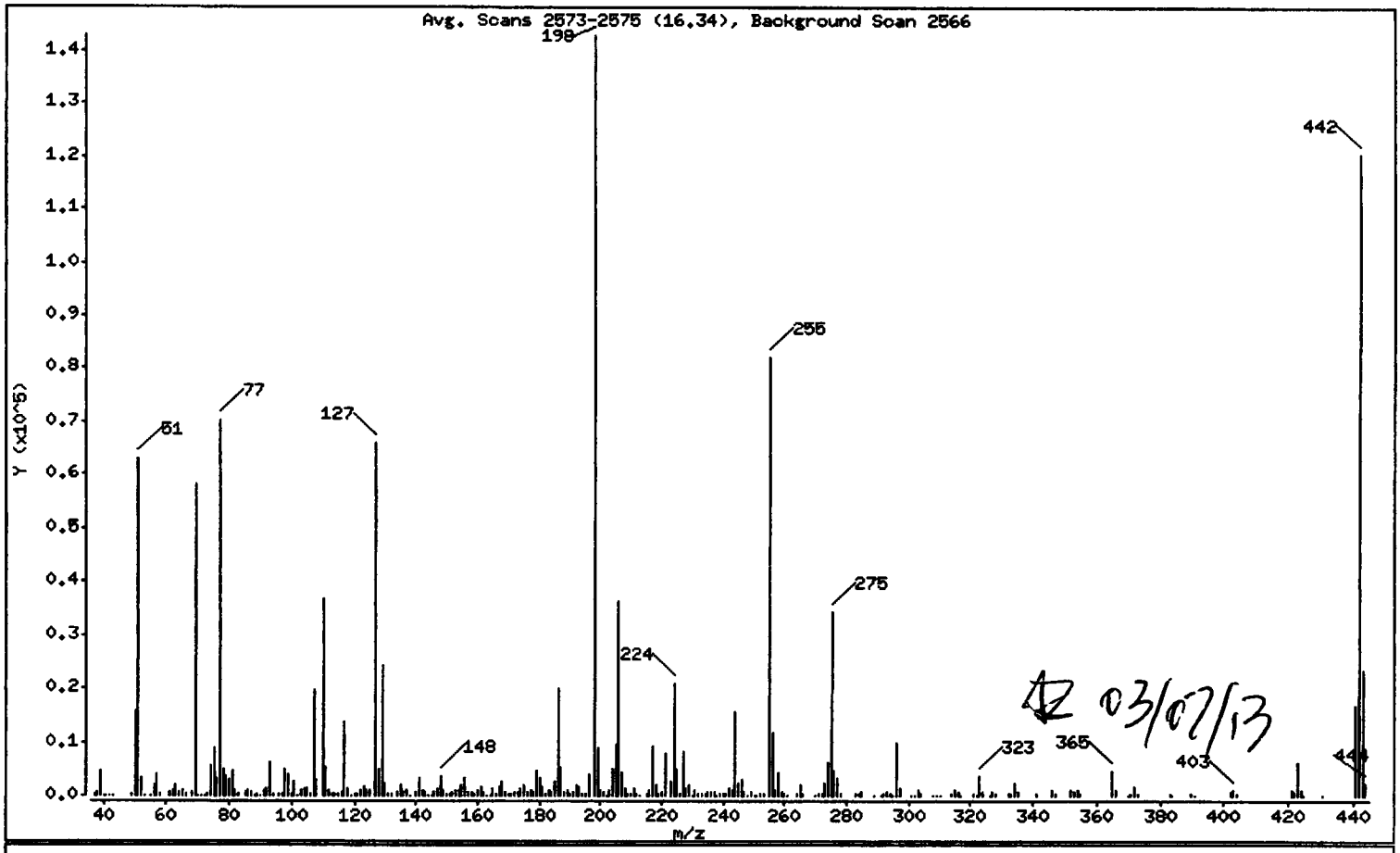
Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	44.13
68	Less than 2.00% of mass 69	0.49 (1.20)
69	Mass 69 relative abundance	40.66
70	Less than 2.00% of mass 69	0.05 (0.13)
127	10.00 - 80.00% of mass 198	46.23
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.29
275	10.00 - 60.00% of mass 198	24.23
365	Greater than 1.00% of mass 198	3.15
441	0.01 - 24.00% of mass 442	11.89 (14.10)
442	50.00 - 200.00% of mass 198	84.31
443	15.00 - 24.00% of mass 442	16.57 (19.65)

Data File: /chem2/nt6.i/20130306.b/tune.b/03061301.D

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306 Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 03061301.D
Spectrum: Avg. Scans 2573-2575 (16.34), Background Scan 2566
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	435	119.00	66	193.00	1619	273.00	2434
38.00	626	120.00	258	194.00	443	274.00	6355
39.00	4620	121.00	165	195.00	168	275.00	34624
40.00	86	122.00	886	196.00	3989	276.00	4716
41.00	135	123.00	1661	198.00	142912	277.00	3135
42.00	51	124.00	828	199.00	8988	278.00	473
43.00	28	125.00	867	200.00	881	283.00	323
45.00	136	127.00	66064	201.00	717	284.00	313
49.00	481	128.00	4907	202.00	116	285.00	557
50.00	15922	129.00	24440	203.00	1035	289.00	56
51.00	63072	130.00	2373	204.00	4827	291.00	57
52.00	3191	131.00	431	205.00	9390	292.00	177
53.00	162	132.00	298	206.00	36344	293.00	733
55.00	98	134.00	652	207.00	4326	294.00	208
56.00	1869	135.00	2095	208.00	1180	295.00	158
57.00	3936	136.00	536	209.00	372	296.00	9810
58.00	169	137.00	984	210.00	177	297.00	1471
61.00	642	138.00	123	211.00	1258	301.00	70
62.00	970	140.00	542	212.00	284	302.00	154
63.00	1956	141.00	3143	213.00	60	303.00	1095
64.00	580	142.00	1094	215.00	376	304.00	380
65.00	1013	143.00	721	216.00	827	308.00	75
66.00	210	144.00	116	217.00	9098	309.00	59
68.00	697	145.00	163	218.00	2040	310.00	77
69.00	58112	146.00	509	219.00	416	314.00	465
70.00	77	147.00	1412	220.00	540	315.00	1124
71.00	81	148.00	3677	221.00	7971	316.00	582
72.00	69	149.00	1042	223.00	2475	317.00	55
73.00	438	150.00	197	224.00	21088	321.00	316
74.00	5646	151.00	325	225.00	4987	322.00	65
75.00	8887	152.00	661	226.00	376	323.00	3459
76.00	3386	153.00	989	227.00	8225	324.00	632
77.00	70280	154.00	1118	228.00	1216	326.00	53
78.00	4804	155.00	1872	229.00	1823	327.00	643
79.00	3594	156.00	3281	230.00	87	328.00	319

Data File: /chem2/nt6.i/20130306.b/tune.b/03061301.D

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306 Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5ms1 Column diameter: 0.32

Data File: 03061301.D
Spectrum: Avg. Scans 2573-2575 (16.34), Background Scan 2566
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	3059	157.00	522	231.00	872	332.00	237
81.00	4436	158.00	528	232.00	224	333.00	301
82.00	972	159.00	466	233.00	206	334.00	2192
83.00	492	160.00	1036	234.00	485	335.00	686
85.00	751	161.00	1744	235.00	636	341.00	443
86.00	1051	162.00	516	236.00	521	346.00	856
87.00	634	163.00	117	237.00	702	347.00	183
88.00	127	164.00	129	238.00	55	352.00	952
89.00	252	165.00	1368	239.00	302	353.00	644
90.00	99	166.00	343	240.00	249	354.00	998
91.00	1049	167.00	1586	241.00	491	355.00	189
92.00	1155	168.00	2662	242.00	1253	365.00	4506
93.00	6399	169.00	655	243.00	1142	366.00	833
94.00	256	170.00	233	244.00	15704	370.00	54
96.00	212	171.00	359	245.00	2359	371.00	348
97.00	186	172.00	631	246.00	3012	372.00	1688
98.00	5046	173.00	729	247.00	819	373.00	481
99.00	4074	174.00	1277	248.00	77	383.00	453
100.00	397	175.00	1888	249.00	591	384.00	67
101.00	2639	176.00	773	250.00	59	390.00	264
102.00	93	177.00	1015	251.00	80	391.00	143
103.00	823	178.00	604	252.00	207	392.00	131
104.00	1234	179.00	4701	253.00	455	402.00	763
105.00	1408	180.00	3447	255.00	81992	403.00	990
106.00	237	181.00	1714	256.00	11952	404.00	418
107.00	19712	182.00	468	257.00	849	421.00	881
108.00	2948	183.00	943	258.00	4194	422.00	805
110.00	36840	184.00	660	259.00	769	423.00	6078
111.00	5315	185.00	2694	260.00	200	424.00	1104
112.00	1126	186.00	19928	261.00	83	425.00	146
113.00	289	187.00	5334	264.00	247	431.00	55
114.00	222	188.00	665	265.00	1902	441.00	16992
115.00	192	189.00	1117	266.00	328	442.00	120496
116.00	686	190.00	270	270.00	68	443.00	23680
117.00	13830	191.00	589	271.00	192	444.00	2214

Data File: /chem2/nt6.i/20130306.b/tune.b/03061301.D

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 03061301.D
Spectrum: Avg. Scans 2573-2575 (16.34), Background Scan 2566
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	1156	192.00	1832	272.00	311		

Data File: /chem2/nt6.i/20130306.b/tune.b/03061301.D

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

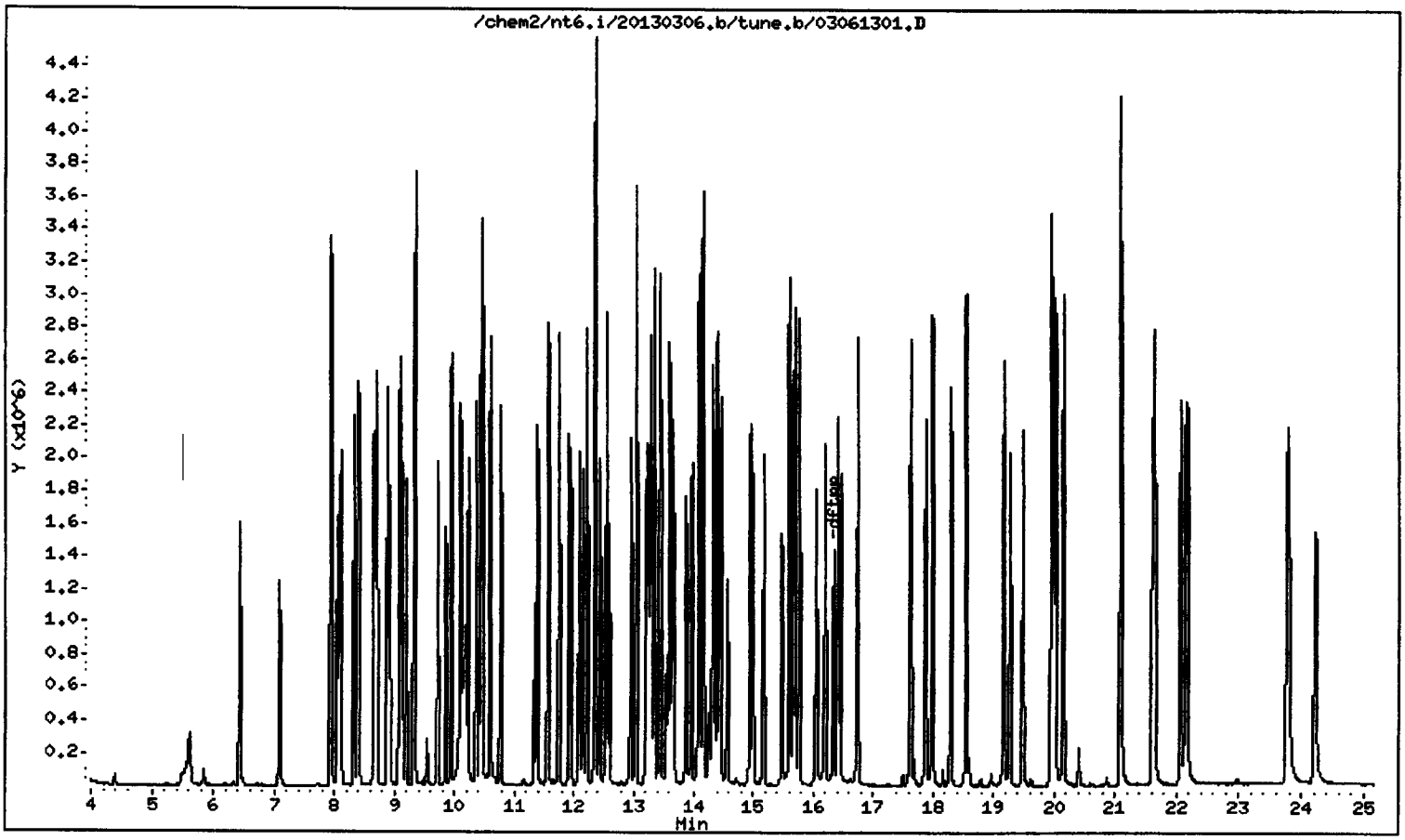
Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem2/nt6.i/20130306.b/ddt.b/03061301.D ARI ID: DDT0306
Method: /chem2/nt6.i/20130306.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 06-MAR-2013 12:16 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	15.470	294213
Benzidine	17.874	166212
4,4'-DDE	----	----
4,4'-DDD	18.799	12007
4,4'-DDT	19.274	647493

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

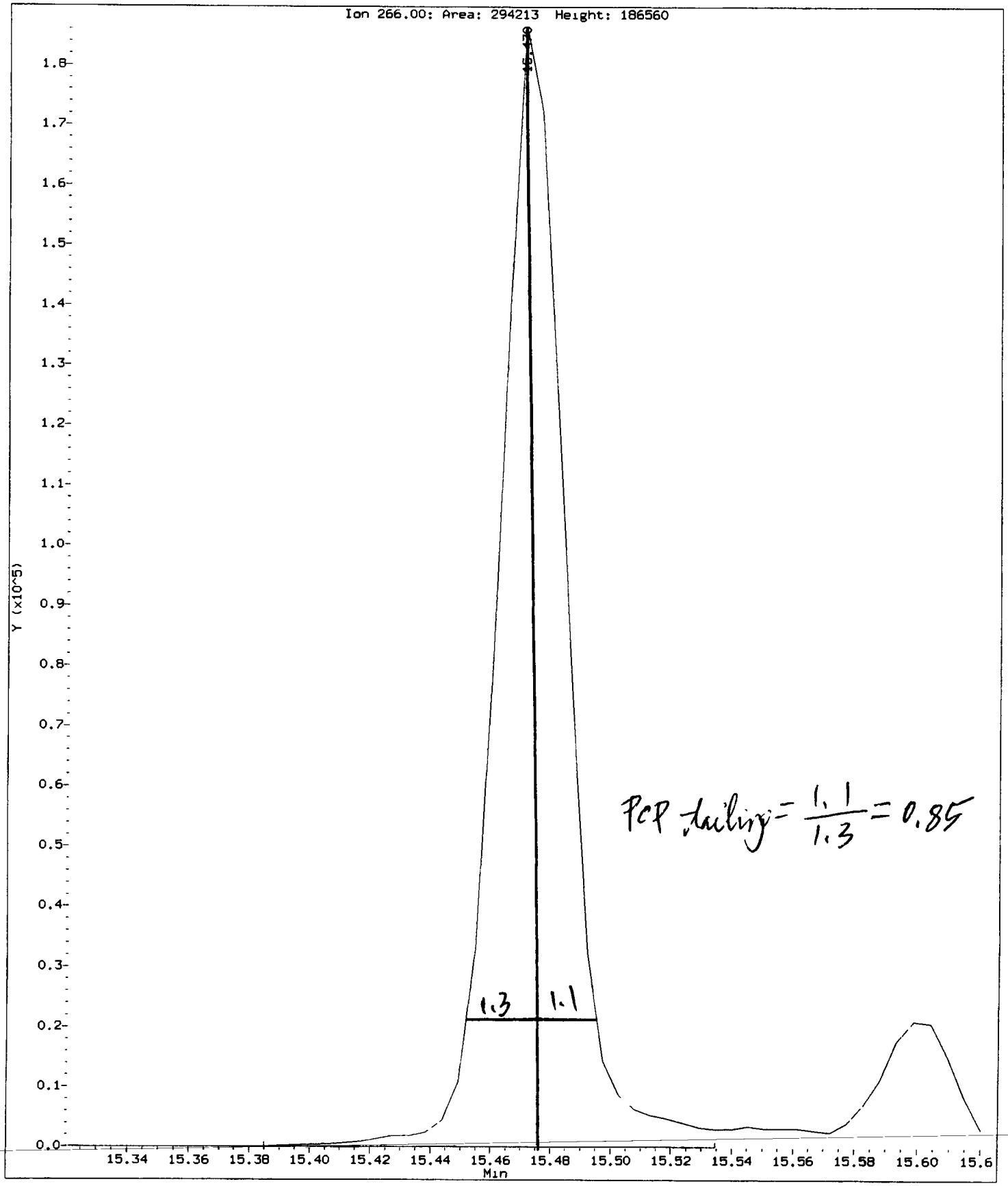
$$\text{DDT Percent Breakdown} = \frac{(0 + 12007) * 100}{(0 + 12007 + 647493)}$$

DDT Percent Breakdown = 1.8 %

03/07/13

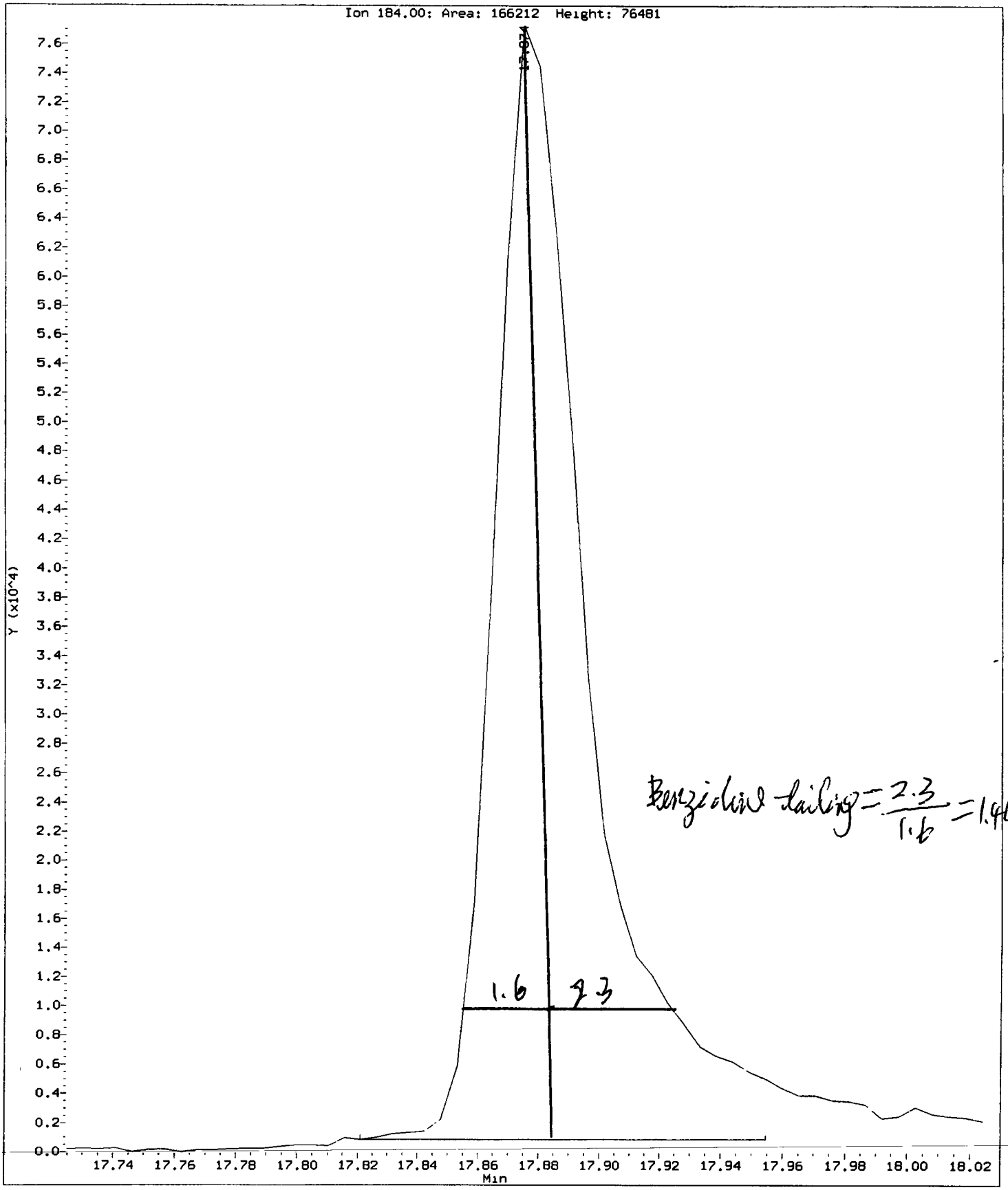
Data File: /chem2/nt6.i/20130306.b/ddt.b/03061301.D
Injection Date: 06-MAR-2013 12:16
Instrument: nt6.i
Client Sample ID: DDT0306

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.i/20130306.b/ddt.b/03061301.D
Injection Date: 06-MAR-2013 12:16
Instrument: nt6.i
Client Sample ID: DDT0306

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061302.D
Lab Smp Id: IC020306 Client Smp ID: IC020306
Inj Date : 06-MAR-2013 12:51
Operator : JZ Inst ID: nt6.i
Smp Info : IC020306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 2 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

AMOUNTS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	Compound Not Detected.					
$ 2 Phenol-d5	99	Compound Not Detected.					
3 Phenol	94	Compound Not Detected.					
$ 5 2-Chlorophenol-d4	132	Compound Not Detected.					
4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6 2-Chlorophenol	128	Compound Not Detected.					
7 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152	8.384	8.387	(1.000)	469293	20.0000	
9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12 1,2-Dichlorobenzene	146	Compound Not Detected.					
11 Benzyl alcohol	108	Compound Not Detected.					
14 2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
13 2-Methylphenol	108	Compound Not Detected.					
17 Hexachloroethane	117	Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15 4-Methylphenol	108	Compound Not Detected.					
$ 18 Nitrobenzene-d5	82	Compound Not Detected.					
19 Nitrobenzene	77	Compound Not Detected.					
20 Isophorone	82	Compound Not Detected.					
21 2-Nitrophenol	139	Compound Not Detected.					
22 2,4-Dimethylphenol	107	Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24 Benzoic acid	105	Compound Not Detected.					
25 2,4-Dichlorophenol	162	Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27 Naphthalene-d8	136	10.419	10.422	(1.000)	1660759	20.0000	
28 Naphthalene	128	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	141	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	Compound Not Detected.					
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	13.277	13.286	(1.000)	977166	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.655	15.663	(1.000)	1519395	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.971	19.979	(1.000)	1581424	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134 Di-n-octylphthalate-d4	153	21.077	21.085	(1.000)	2063915	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	22.129	22.137	(1.000)	1491578	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	105 1-methylnaphthalene	141	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	143 1,4-Dioxane	88	3.117	3.103	(0.372)	3506	0.20000	0.2303
$	137 d8-1,4-Dioxane	96	Compound Not Detected.					
	144 alpha-Terpineol	59	Compound Not Detected.					
	177 p-Benzoquinone	82	Compound Not Detected.					
	98 Retene	219	Compound Not Detected.					
	99 Perylene	252	Compound Not Detected.					
	133 Butylatedhydroxytoluene	205	Compound Not Detected.					
	115 Tributyl Phosphate	99	Compound Not Detected.					
	116 Dibutyl Phenyl Phosphate	175	Compound Not Detected.					
	117 Butyl Diphenyl Phosphate	94	Compound Not Detected.					
	118 Triphenyl Phosphate	326	Compound Not Detected.					
	123 Acetophenone	105	Compound Not Detected.					
	168 Pentachlorobenzene	250	Compound Not Detected.					
	113 Diphenyl Oxide	170	Compound Not Detected.					
	112 Biphenyl	154	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	110 Tetrachloroguaiacol	247	Compound Not Detected.					
	109 3,4,5-Trichloroguaiacol	213	Compound Not Detected.					
	181 3,4,6-Trichloroguaiacol	211	Compound Not Detected.					
	108 4,5,6-Trichloroguaiacol	213	Compound Not Detected.					
	184 3,4-Dichloroguaiacol	192	Compound Not Detected.					
	107 4,5-Dichloroguaiacol	192	Compound Not Detected.					
	182 4,6-Dichloroguaiacol	192	Compound Not Detected.					
	185 4-Chloroguaiacol	115	Compound Not Detected.					
	186 Carbaryl	144	Compound Not Detected.					
	178 2-Benzyl-4-Chlorophenol	218	Compound Not Detected.					
	106 Guaiacol	124	Compound Not Detected.					
	188 2,6-Dichlorophenol	162	Compound Not Detected.					
	189 N-Nitrosomethylethylamine	88	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061302.D
Lab Smp Id: IC020306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC020306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	469293	2.44
27 Naphthalene-d8	1718341	859170	3436682	1660759	-3.35
42 Acenaphthene-d10	1010041	505020	2020082	977166	-3.25
59 Phenanthrene-d10	1666734	833367	3333468	1519395	-8.84
69 Chrysene-d12	1675752	837876	3351504	1581424	-5.63
134 Di-n-octylphthala	2026355	1013178	4052710	2063915	1.85
77 Perylene-d12	1637524	818762	3275048	1491578	-8.91

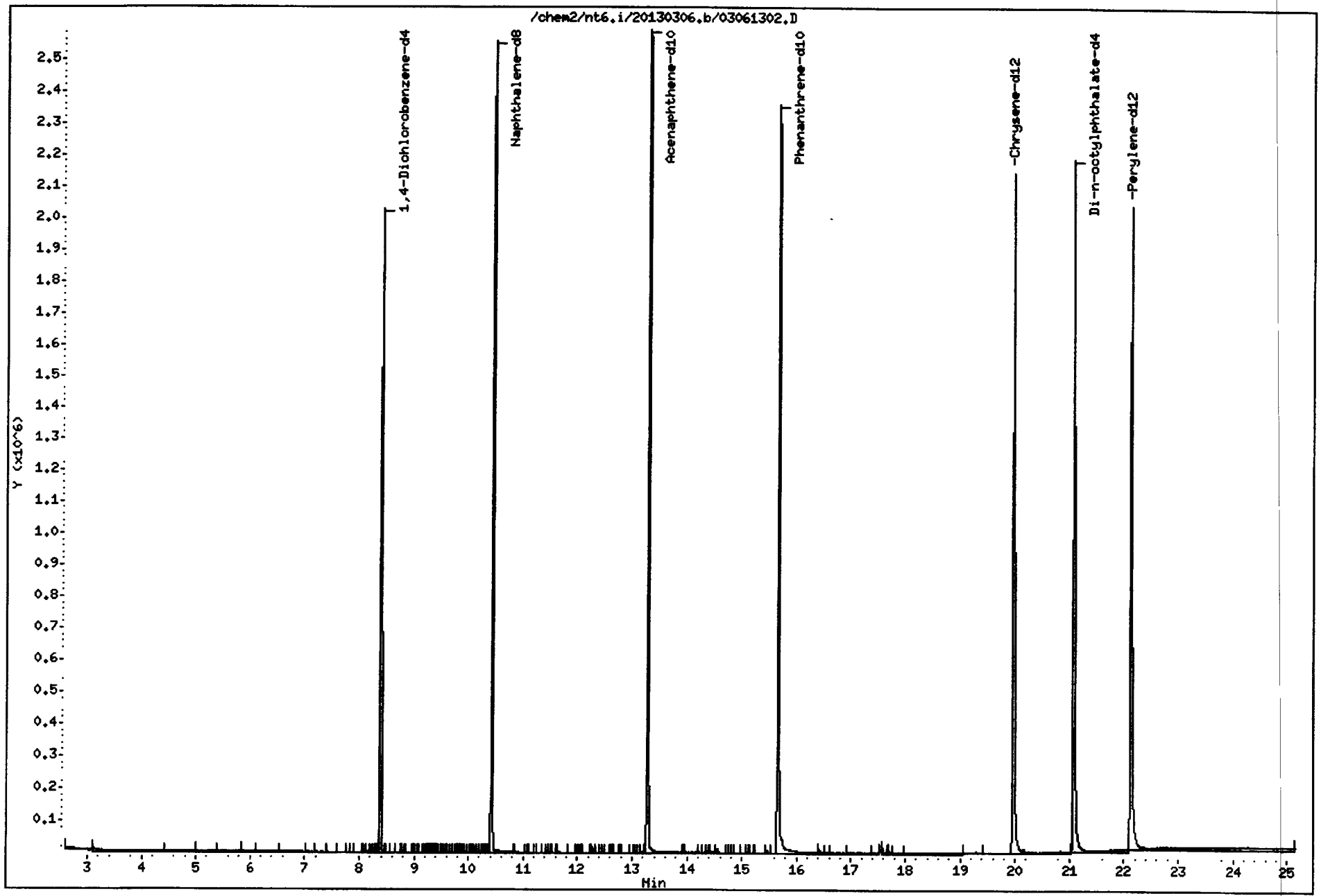
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.03
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.06
59 Phenanthrene-d10	15.66	15.16	16.16	15.65	-0.05
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.04
134 Di-n-octylphthala	21.09	20.59	21.59	21.08	-0.04
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061302.D
Date : 06-MAR-2013 12:51
Client ID: IC020306
Sample Info: IC020306,

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 03061302.D

Lab ID: IC020306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061303.D
Lab Smp Id: IC10306 Client Smp ID: IC10306
Inj Date : 06-MAR-2013 13:25
Operator : JZ Inst ID: nt6.i
Smp Info : IC10306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.425	6.432	(0.767)	33086	1.00000	1.078
$	2 Phenol-d5	99	7.921	7.933	(0.945)	40462	1.00000	1.127
	3 Phenol	94	7.942	7.954	(0.948)	41723	1.00000	1.103
$	5 2-Chlorophenol-d4	132	8.081	8.082	(0.964)	34738	1.00000	1.144
	4 Bis(2-Chloroethyl)ether	93	8.044	8.050	(0.960)	37893	1.00000	1.154
	6 2-Chlorophenol	128	8.103	8.109	(0.967)	32633	1.00000	1.078
	7 1,3-Dichlorobenzene	146	8.322	8.328	(0.993)	43015	1.00000	1.217
*	8 1,4-Dichlorobenzene-d4	152	8.381	8.387	(1.000)	473521	20.0000	
	9 1,4-Dichlorobenzene	146	8.407	8.408	(1.003)	43098	1.00000	1.253
$	10 1,2-Dichlorobenzene-d4	152	8.680	8.681	(1.036)	26576	1.00000	1.244
	12 1,2-Dichlorobenzene	146	8.701	8.707	(1.038)	41605	1.00000	1.265
	11 Benzyl alcohol	108	8.648	8.654	(1.032)	20791	1.00000	1.009
	14 2,2'-oxybis(1-Chloropropane)	45	8.909	8.916	(1.063)	62877	1.00000	1.205
	13 2-Methylphenol	108	8.872	8.878	(1.059)	29626	1.00000	1.033
	17 Hexachloroethane	117	9.193	9.193	(1.097)	16561	1.00000	1.190
	16 N-Nitroso-di-n-propylamine	70	9.118	9.135	(1.088)	28301	1.00000	1.148
	15 4-Methylphenol	108	9.096	9.108	(1.085)	29399	1.00000	1.037
$	18 Nitrobenzene-d5	82	9.305	9.311	(0.893)	39000	1.00000	1.152
	19 Nitrobenzene	77	9.331	9.343	(0.895)	40199	1.00000	1.240
	20 Isophorone	82	9.705	9.717	(0.931)	65921	1.00000	1.167
	21 2-Nitrophenol	139	9.850	9.851	(0.945)	12213	1.00000	0.8144
	22 2,4-Dimethylphenol	107	9.940	9.947	(0.954)	30479	1.00000	1.075
	23 Bis(2-Chloroethoxy)methane	93	10.090	10.096	(0.968)	45674	1.00000	1.232
	24 Benzoic acid	105	10.031	10.198	(0.963)	14014	2.00000	0.5712
	25 2,4-Dichlorophenol	162	10.224	10.230	(0.981)	20297	1.00000	0.9294
	26 1,2,4-Trichlorobenzene	180	10.357	10.363	(0.994)	34147	1.00000	1.256
*	27 Naphthalene-d8	136	10.421	10.422	(1.000)	1687458	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.448	10.454	(1.003)	106156	1.00000	1.023
	29 4-Chloroaniline	127	10.582	10.588	(1.015)	34256	1.00000	1.061
	30 Hexachlorobutadiene	225	10.763	10.764	(1.033)	19751	1.00000	1.194
	31 4-Chloro-3-methylphenol	107	11.377	11.384	(1.092)	20683	1.00000	0.8916
	32 2-Methylnaphthalene	141	11.564	11.571	(1.110)	50301	1.00000	1.226
	33 Hexachlorocyclopentadiene	237	11.944	11.950	(0.899)	11430	1.00000	0.7281
	34 2,4,6-Trichlorophenol	196	12.077	12.078	(0.909)	13928	1.00000	0.8480
	35 2,4,5-Trichlorophenol	196	12.131	12.137	(0.914)	11570	1.00000	0.7141
$	36 2-Fluorobiphenyl	172	12.206	12.212	(0.919)	78484	1.00000	1.273
	37 2-Chloronaphthalene	162	12.344	12.356	(0.930)	63607	1.00000	1.417
	38 2-Nitroaniline	65	12.569	12.580	(0.946)	10307	1.00000	0.7135
	39 Dimethylphthalate	163	12.937	12.949	(0.974)	72198	1.00000	1.228
	40 Acenaphthylene	152	13.028	13.034	(0.981)	100567	1.00000	1.305
	41 2,6-Dinitrotoluene	165	13.034	13.045	(0.981)	12098	1.00000	0.9629
*	42 Acenaphthene-d10	164	13.279	13.286	(1.000)	977079	20.0000	
	43 3-Nitroaniline	138	13.247	13.264	(0.998)	10686	1.00000	0.9026(M)
	44 Acenaphthene	153	13.327	13.334	(1.004)	65502	1.00000	1.313
	45 2,4-Dinitrophenol	184	13.413	13.424	(1.010)	2331	2.00000	0.2598
	46 Dibenzofuran	168	13.589	13.595	(1.023)	82058	1.00000	1.257
	47 4-Nitrophenol	109	13.536	13.547	(1.019)	3036	1.00000	0.4756(M)
	48 2,4-Dinitrotoluene	165	13.664	13.676	(1.029)	14844	1.00000	0.8735
	50 Diethylphthalate	149	14.086	14.098	(1.061)	78847	1.00000	1.447
	49 Fluorene	166	14.145	14.156	(1.065)	69651	1.00000	1.358
	51 4-Chlorophenyl-phenylether	204	14.166	14.172	(1.067)	37022	1.00000	1.292
	52 4-Nitroaniline	138	14.241	14.252	(1.072)	9632	1.00000	1.005
	53 4,6-Dinitro-2-methylphenol	198	14.316	14.333	(0.914)	9300	2.00000	0.8416(M)
	54 N-Nitrosodiphenylamine	169	14.364	14.375	(0.917)	52264	1.00000	1.217
$	55 2,4,6-Tribromophenol	330	14.567	14.573	(1.097)	7243	1.00000	0.9375
	56 4-Bromophenyl-phenylether	248	14.946	14.952	(0.955)	19320	1.00000	1.147
	57 Hexachlorobenzene	284	15.170	15.182	(0.969)	20998	1.00000	1.209
	58 Pentachlorophenol	266	15.470	15.470	(0.988)	4992	1.00000	0.4874
*	59 Phenanthrene-d10	188	15.657	15.663	(1.000)	1534533	20.0000	
	60 Phenanthrene	178	15.694	15.700	(1.002)	98896	1.00000	1.303
	61 Anthracene	178	15.763	15.770	(1.007)	91358	1.00000	1.202
	62 Carbazole	167	16.041	16.047	(1.025)	87629	1.00000	1.673
	63 Di-n-butylphthalate	149	16.741	16.747	(1.069)	118210	1.00000	1.233
	64 Fluoranthene	202	17.628	17.639	(1.126)	96279	1.00000	1.205
	65 Pyrene	202	17.986	17.992	(0.901)	99688	1.00000	1.267
$	66 Terphenyl-d14	244	18.290	18.291	(0.916)	60228	1.00000	1.191
	67 Butylbenzylphthalate	149	19.161	19.167	(0.960)	42596	1.00000	1.108
	68 Benzo(a)anthracene	228	19.941	19.953	(0.999)	77087	1.00000	1.174
*	69 Chrysene-d12	240	19.968	19.979	(1.000)	1440155	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.941	19.953	(0.999)	19182	1.00000	1.062
	71 Chrysene	228	20.005	20.017	(1.002)	82771	1.00000	1.235
	72 bis(2-Ethylhexyl)phthalate	149	20.149	20.150	(0.956)	61910	1.00000	1.099
*	134 Di-n-octylphthalate-d4	153	21.079	21.085	(1.000)	1913979	20.0000	
	73 Di-n-octylphthalate	149	21.089	21.096	(1.000)	108139	1.00000	1.197

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	21.592	21.609	(0.976)	60045	1.00000	0.9273
	75 Benzo(k)fluoranthene	252	21.629	21.641	(0.977)	92998	1.00000	1.219(M)
	187 Total Benzofluoranthenes	252	21.629	21.641	(0.977)	143967	2.00000	2.341(M)
	76 Benzo(a)pyrene	252	22.046	22.057	(0.996)	61756	1.00000	1.082
*	77 Perylene-d12	264	22.131	22.137	(1.000)	1335257	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	23.755	23.767	(1.073)	70007	1.00000	1.019
	79 Dibenzo(a,h)anthracene	278	23.766	23.788	(1.074)	48443	1.00000	0.8957
	80 Benzo(g,h,i)perylene	276	24.199	24.226	(1.093)	55321	1.00000	0.9418
	90 N-Nitrosodimethylamine	74	3.893	3.889	(0.465)	23589	1.00000	1.058
	103 Pyridine	79	3.898	3.851	(0.465)	33880	1.00000	0.9580
	91 Aniline	93	7.937	7.938	(0.947)	52642	1.00000	1.256
	105 1-methylnaphthalene	141	11.741	11.747	(1.127)	51510	1.00000	1.236
	93 Benzidine	184	17.874	17.874	(0.895)	22120	1.00000	3.150(M)
	111 Azobenzene (1,2-DP-Hydrazine)	77	14.412	14.423	(1.085)	78078	1.00000	1.261
	143 1,4-Dioxane	88	3.113	3.103	(0.371)	16760	1.00000	1.091
$	137 d8-1,4-Dioxane	96	3.060	3.039	(0.365)	15981	1.00000	1.111
	144 alpha-Terpineol	59	10.464	10.470	(1.004)	25257	1.00000	1.177
	177 p-Benzoquinone	82	7.082	7.083	(0.680)	4225	1.00000	0.6556
	98 Retene	219	18.541	18.548	(0.929)	38483	1.00000	1.134
	99 Perylene	252	22.158	22.175	(1.001)	59629	1.00000	1.193
	133 Butylatedhydroxytoluene	205	13.440	13.440	(1.012)	55856	1.00000	0.9826
	115 Tributyl Phosphate	99	14.444	14.461	(0.923)	82254	1.00000	1.227
	116 Dibutyl Phenyl Phosphate	175	16.185	16.192	(1.034)	43704	1.00000	1.077
	117 Butyl Diphenyl Phosphate	94	17.874	17.880	(0.895)	15361	1.00000	1.158
	118 Triphenyl Phosphate	326	19.476	19.482	(0.975)	12619	1.00000	1.001
	123 Acetophenone	105	9.064	9.076	(1.082)	50864	1.00000	1.141
	168 Pentachlorobenzene	250	13.627	13.638	(1.026)	26382	1.00000	1.233
	113 Diphenyl Oxide	170	12.531	12.538	(0.944)	47537	1.00000	1.250
	112 Biphenyl	154	12.339	12.345	(0.929)	73566	1.00000	1.374
	120 2,3,4,6-Tetrachlorophenol	232	13.867	13.873	(1.044)	10314	1.00000	0.7395
	151 1,2,4,5-Tetrachlorobenzene	216	11.901	11.907	(0.896)	29179	1.00000	1.223
	110 Tetrachloroguaiacol	247	15.592	15.599	(0.996)	15567	2.00000	1.933
	109 3,4,5-Trichloroguaiacol	213	13.963	13.969	(0.892)	8806	1.00000	1.005
	181 3,4,6-Trichloroguaiacol	211	14.081	14.087	(1.680)	10214	1.00000	0.9453
	108 4,5,6-Trichloroguaiacol	213	14.994	15.000	(1.129)	8271	1.00000	0.9051
	184 3,4-Dichloroguaiacol	192	12.425	12.425	(1.483)	10398	1.00000	1.014
	107 4,5-Dichloroguaiacol	192	13.194	13.205	(0.994)	23641	2.00000	1.980
	182 4,6-Dichloroguaiacol	192	13.194	13.205	(1.574)	23641	2.00000	1.889
	185 4-Chloroguaiacol	115	11.329	11.336	(1.352)	5760	0.50000	0.4329
	186 Carbaryl	144	16.447	16.459	(1.050)	30461	1.00000	0.8591
	178 2-Benzyl-4-Chlorophenol	218	16.399	16.411	(1.047)	11942	1.00000	0.9396
	106 Guaiacol	124	9.326	9.332	(1.113)	29497	1.00000	1.198
	188 2,6-Dichlorophenol	162	10.592	10.598	(1.264)	22124	2.00000	1.055
	189 N-Nitrosomethylethylamine	88	5.635	5.620	(0.672)	14520	2.00000	0.9281

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061303.D
Lab Smp Id: IC10306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC10306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	473521	3.36
27 Naphthalene-d8	1718341	859170	3436682	1687458	-1.80
42 Acenaphthene-d10	1010041	505020	2020082	977079	-3.26
59 Phenanthrene-d10	1666734	833367	3333468	1534533	-7.93
69 Chrysene-d12	1675752	837876	3351504	1440155	-14.06
134 Di-n-octylphthala	2026355	1013178	4052710	1913979	-5.55
77 Perylene-d12	1637524	818762	3275048	1335257	-18.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.07
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.01
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.05
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	-0.04
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.06
134 Di-n-octylphthala	21.09	20.59	21.59	21.08	-0.03
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.03

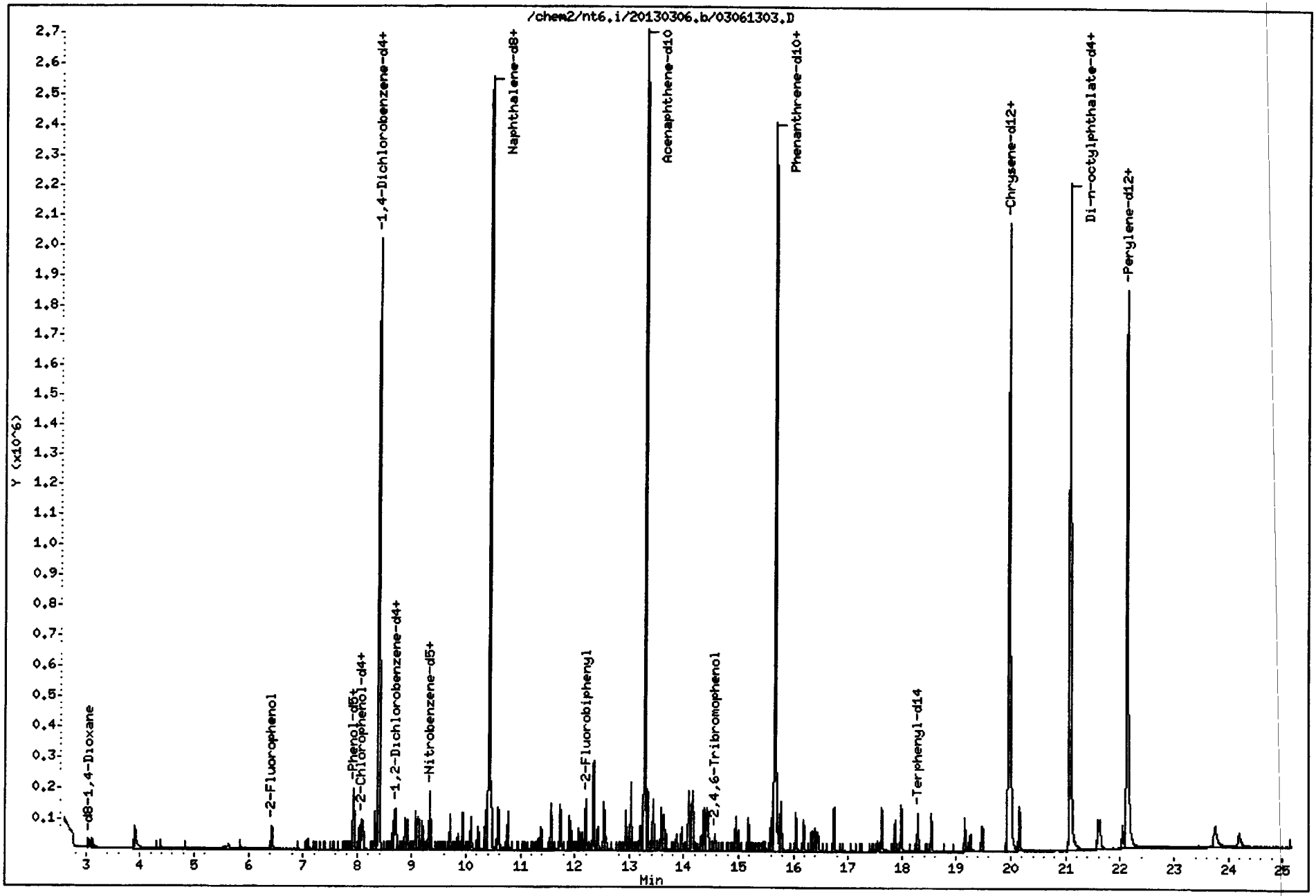
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061303.D
Date : 06-MAR-2013 13:25
Client ID: IC10306
Sample Info: IC10306,

Instrument: nt6.i

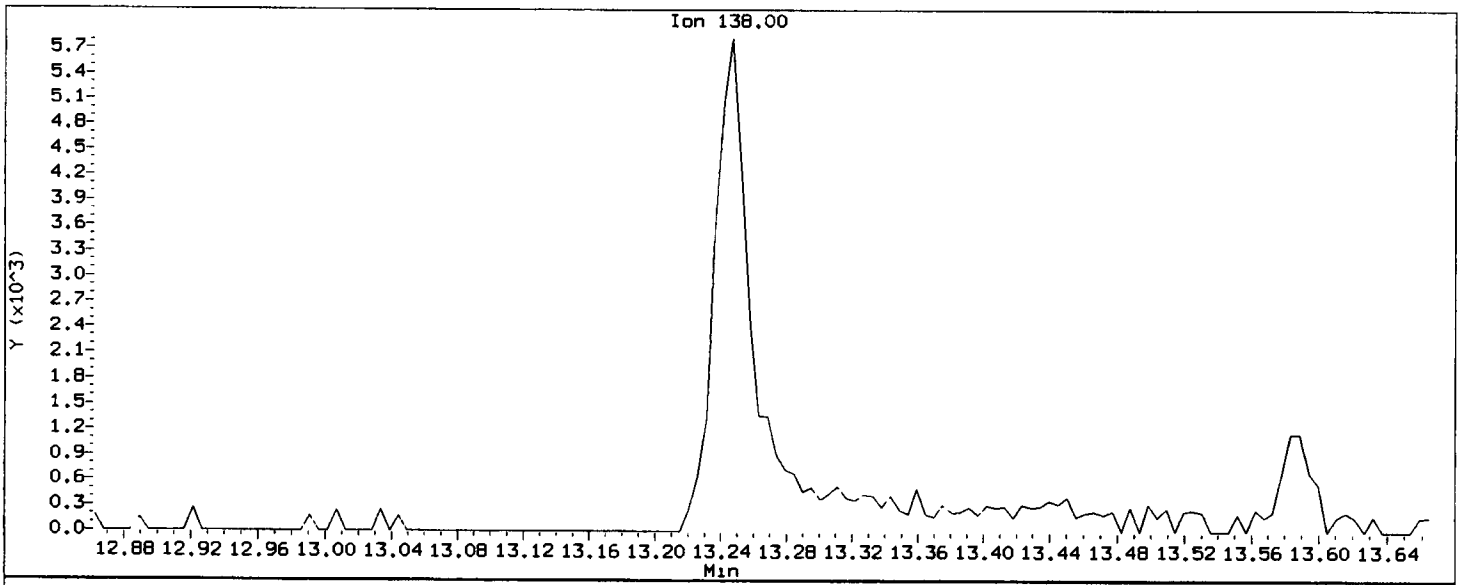
Operator: JZ
Column diameter: 0.32

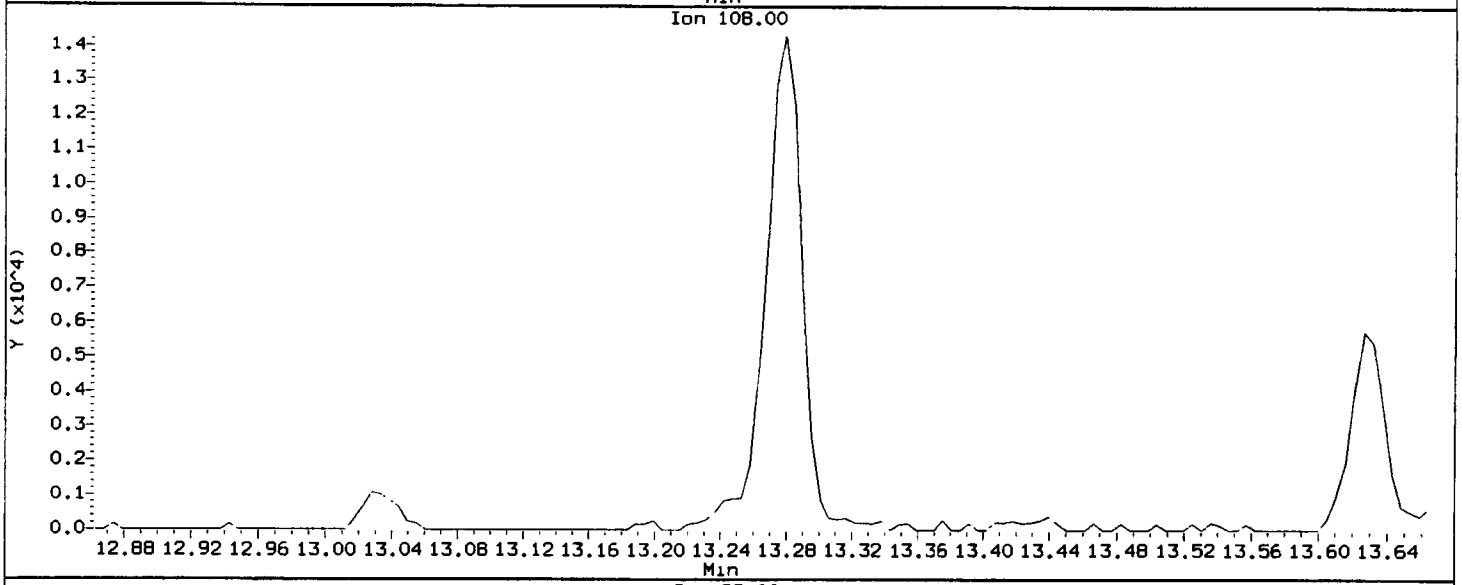
Column phase: ZB-5msi

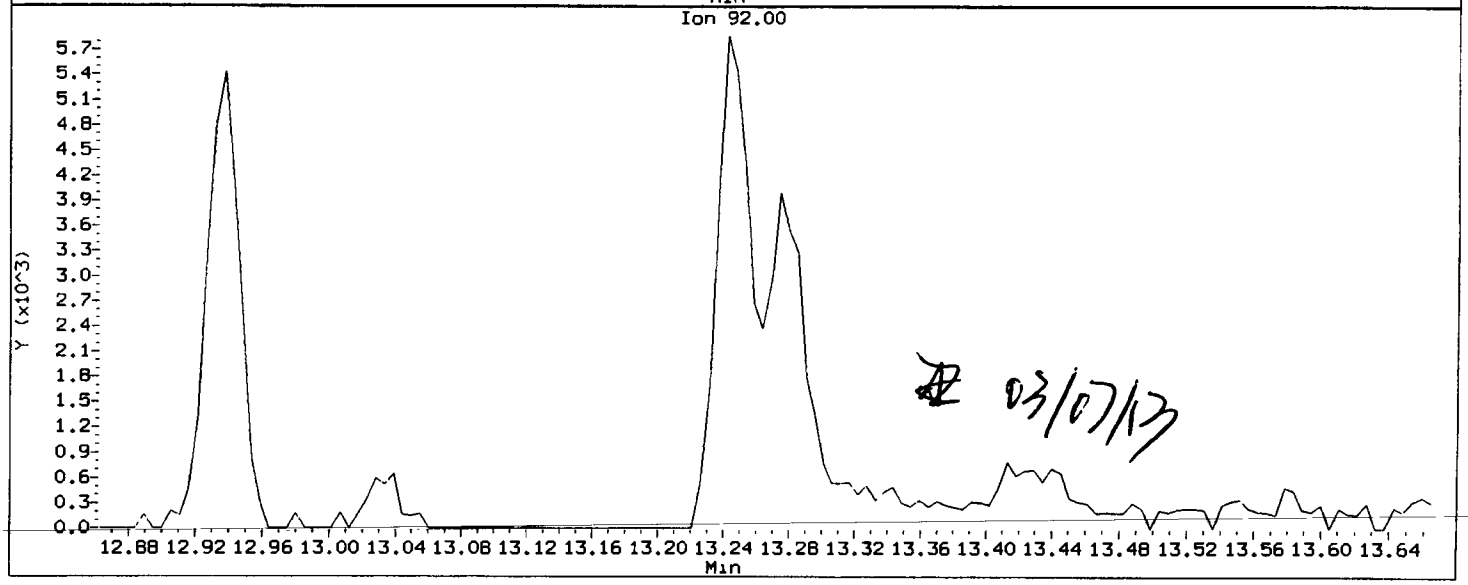


Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: 3-Nitroaniline
CAS Number: 99-09-2



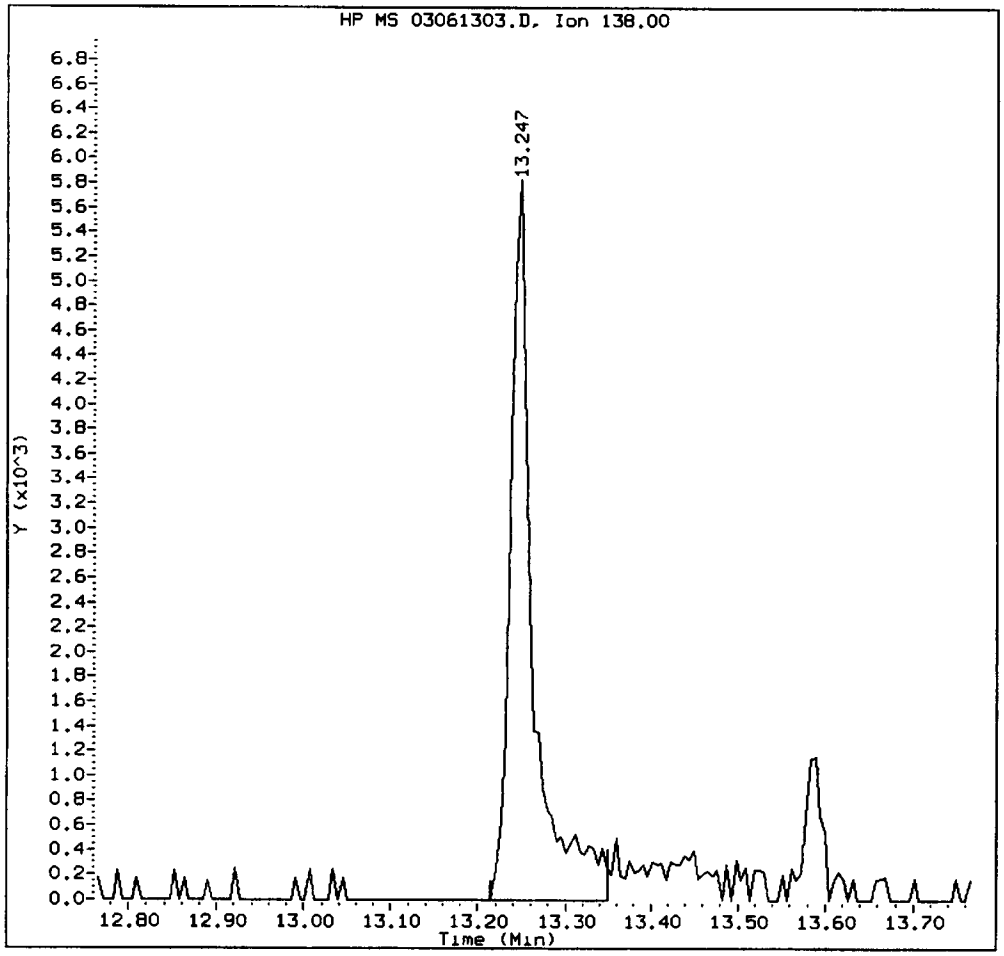




03/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

3-Nitroaniline Amount: 0.90 Area: 10686



MANUAL INTEGRATION for 3-Nitroaniline

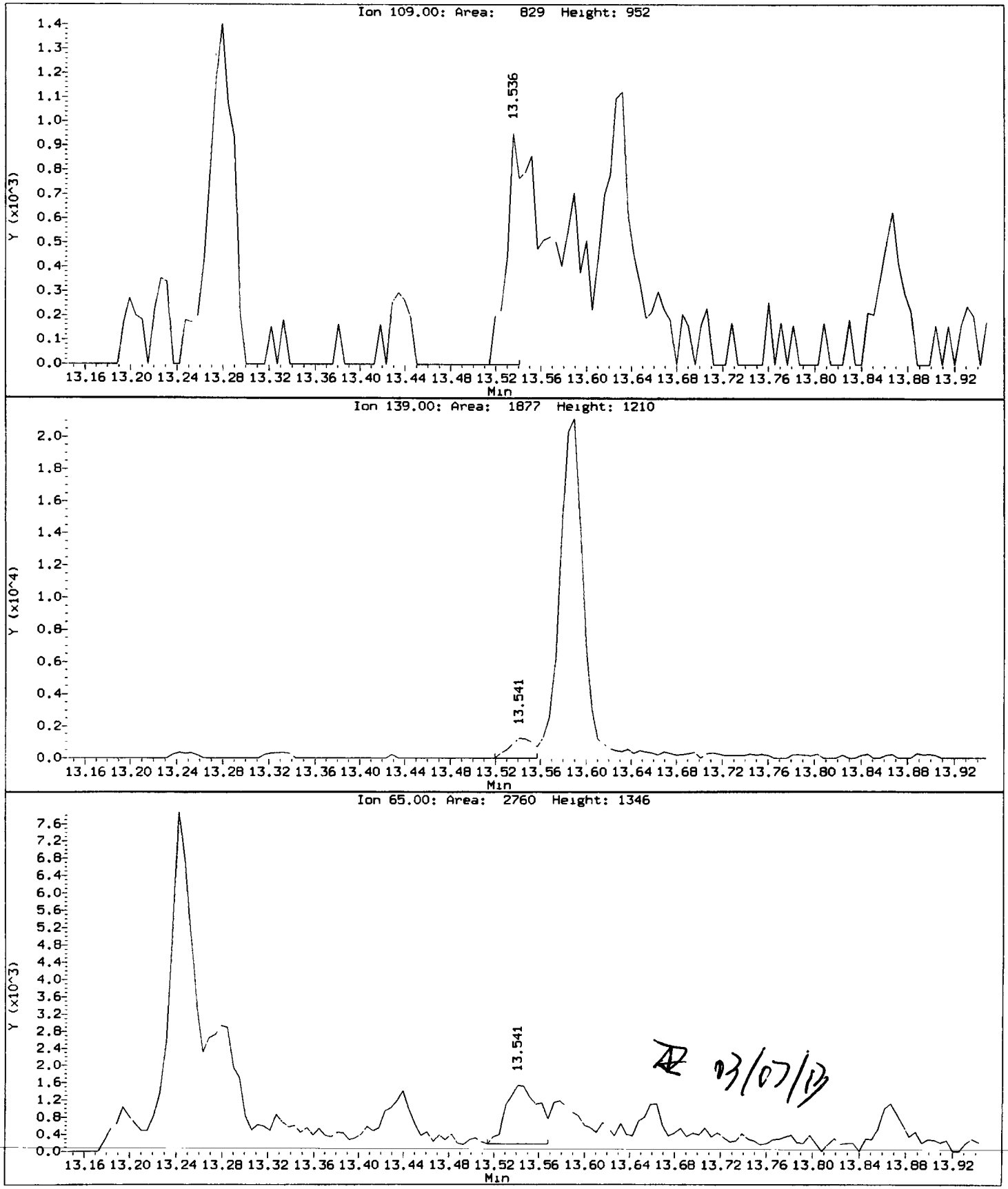
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.1/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.1
Client Sample ID: IC10306

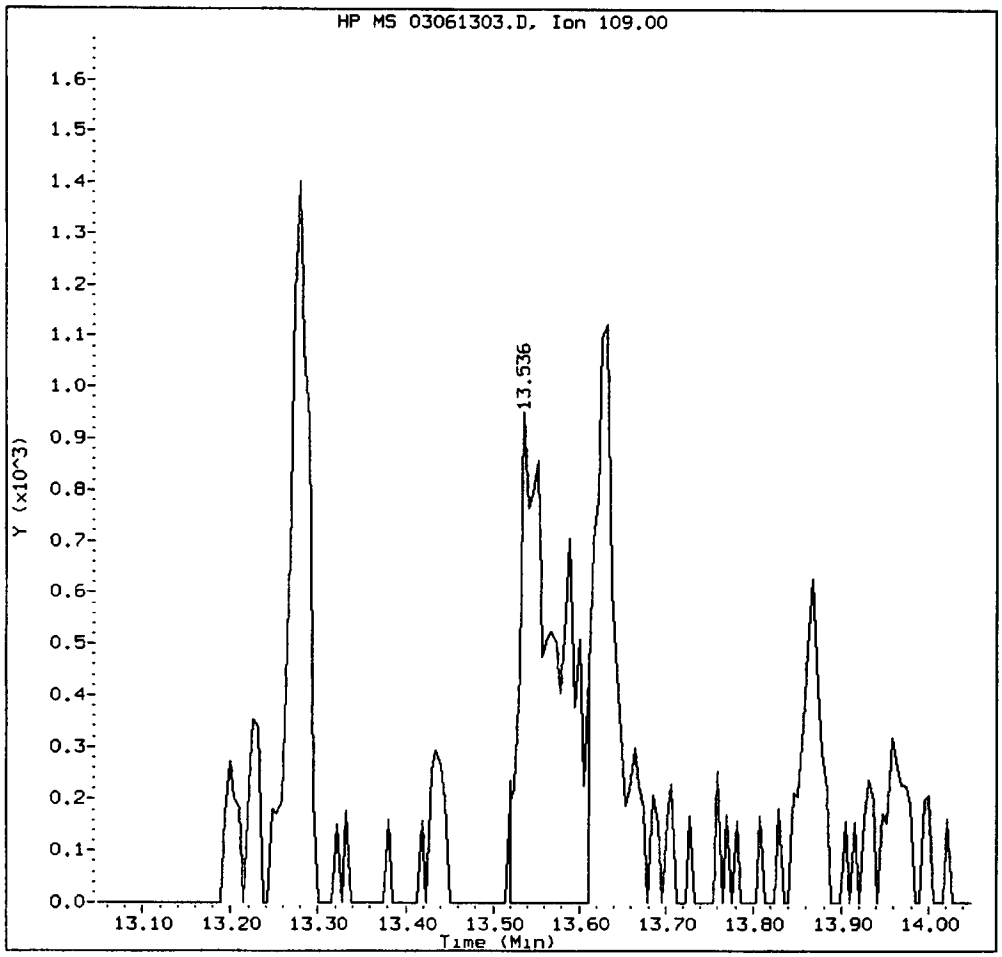
Compound: 4-Nitrophenol
CAS Number: 100-02-7



3/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

4-Nitrophenol Amount: 0.48 Area: 3036



MANUAL INTEGRATION for 4-Nitrophenol

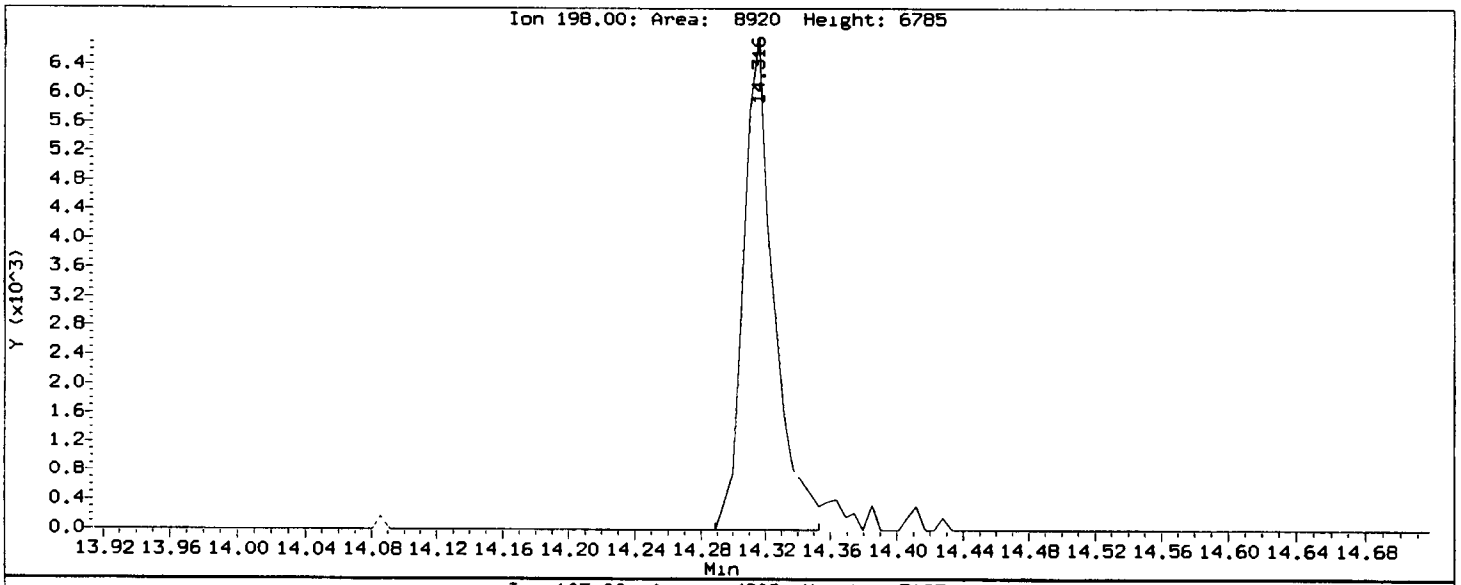
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

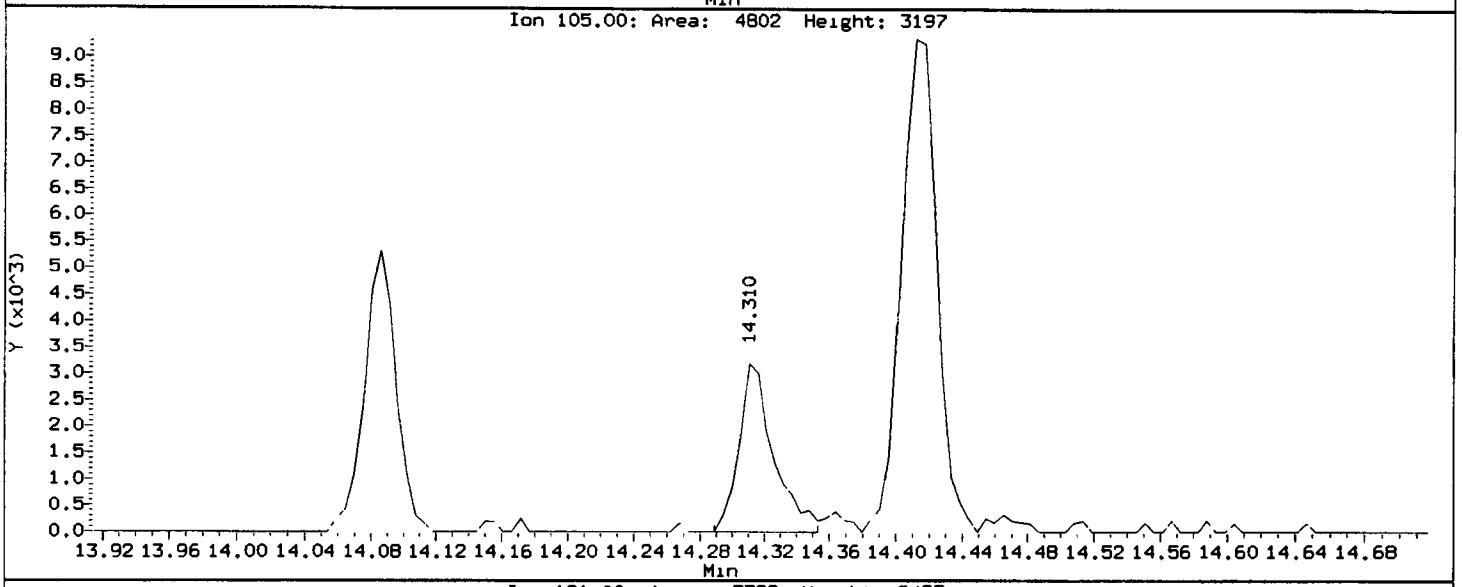
5. Other _____

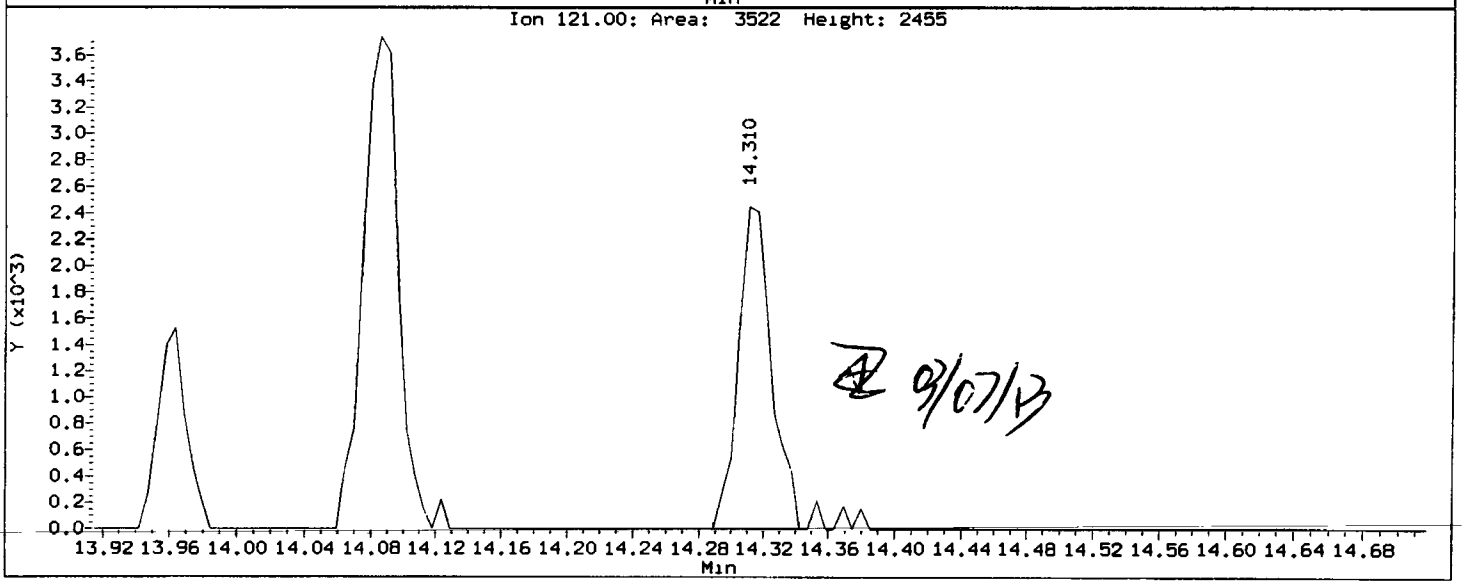
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: 4,6-Dinitro-2-methylphenol
CAS Number: 534-52-1



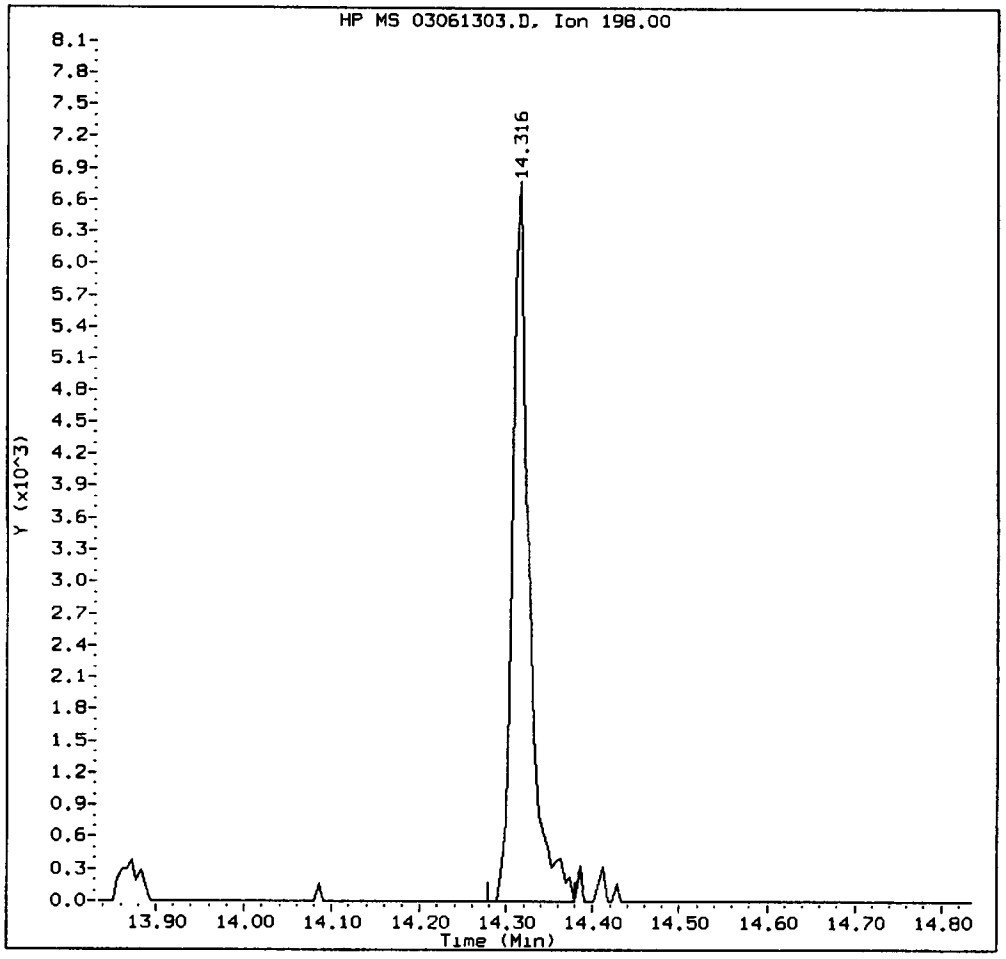




9/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

4,6-Dinitro-2-methylphenol Amount: 0.84 Area: 9300



MANUAL INTEGRATION for 4,6-Dinitro-2-methylphenol

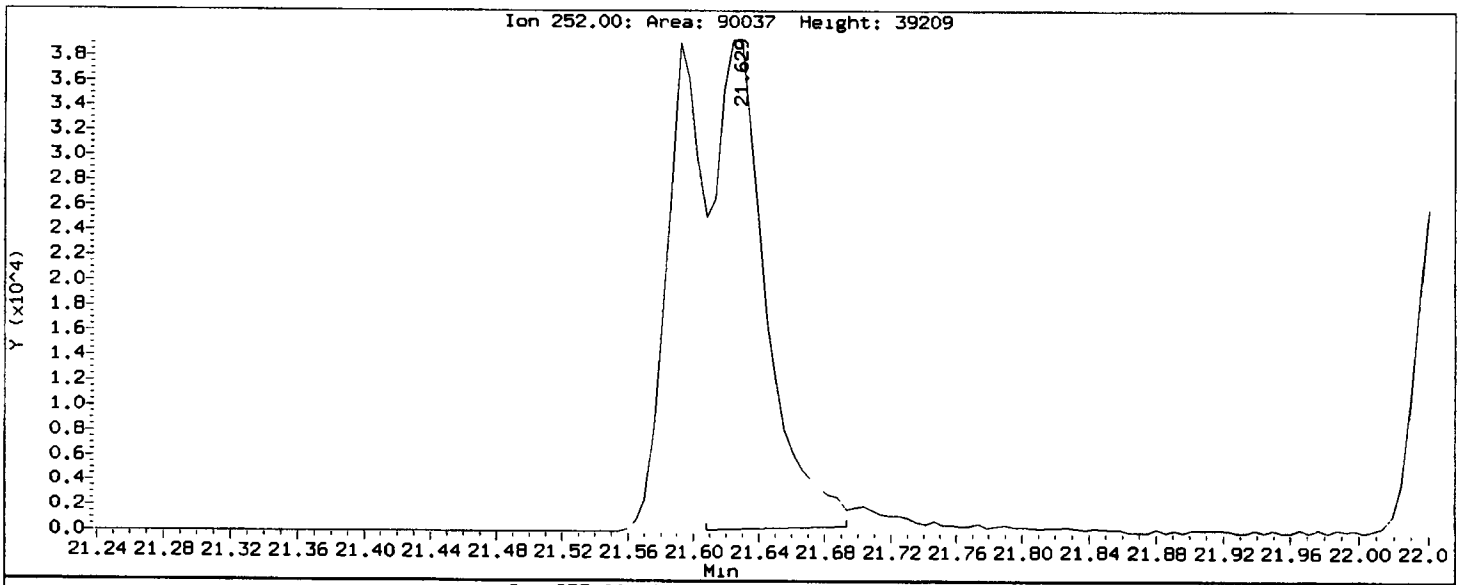
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

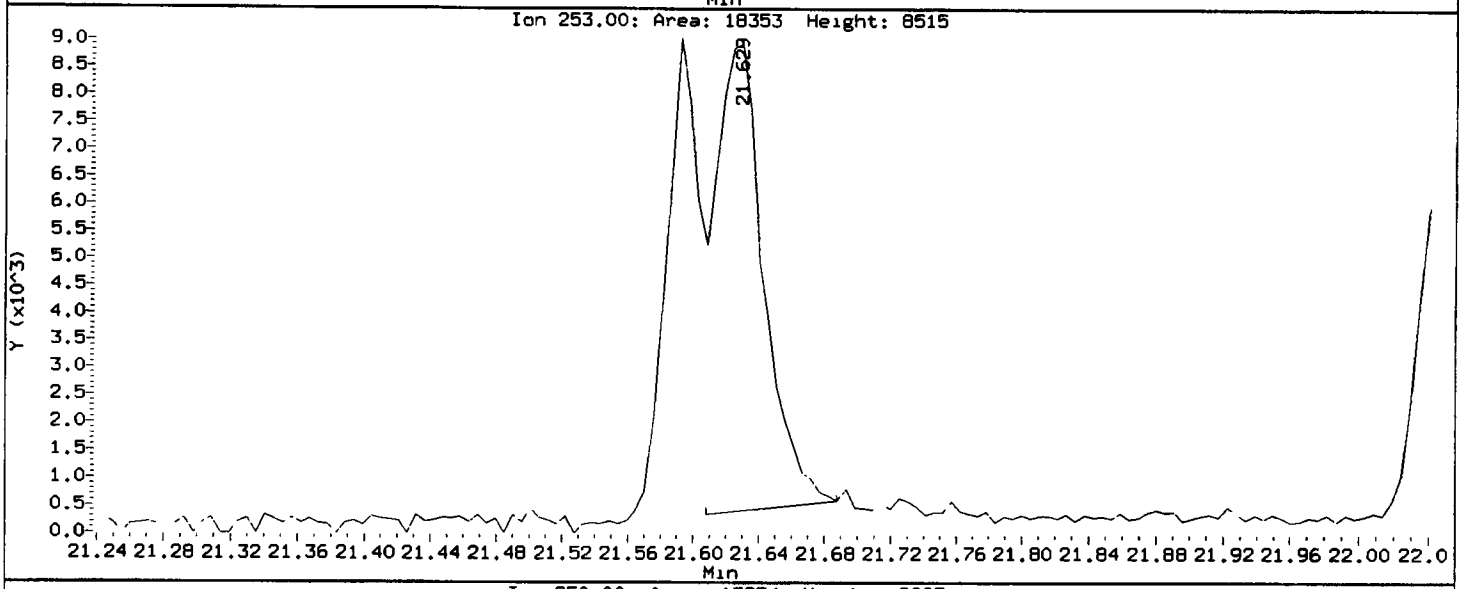
5. Other _____

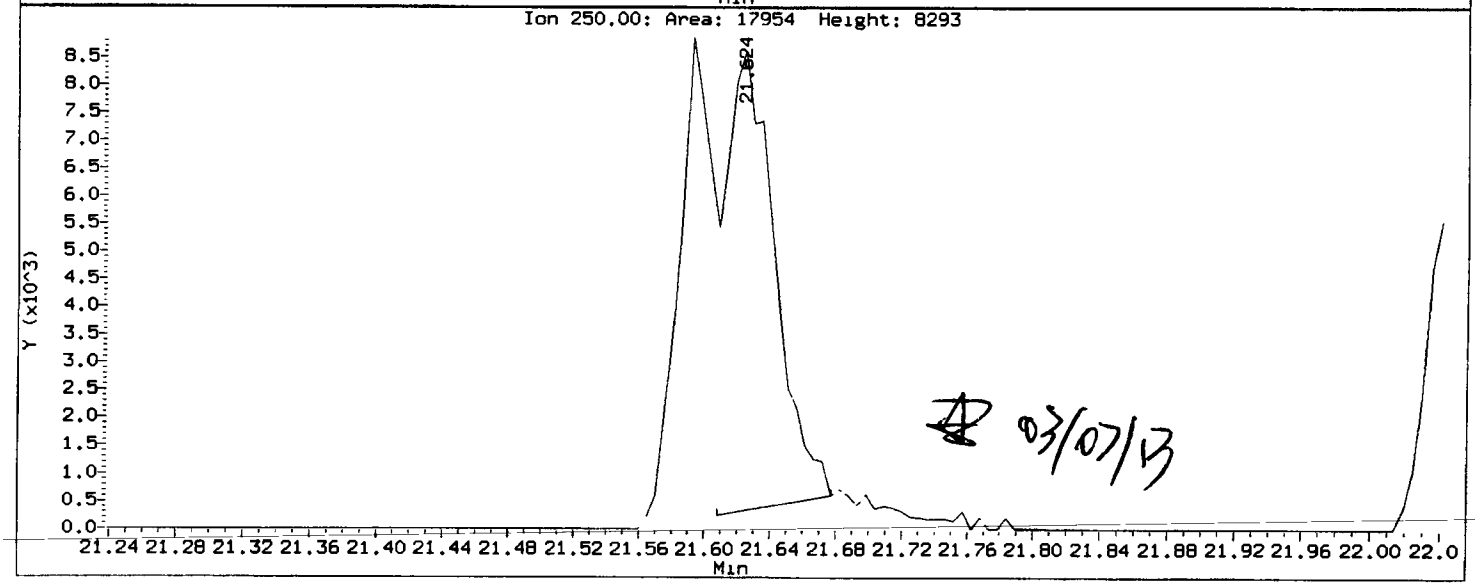
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9



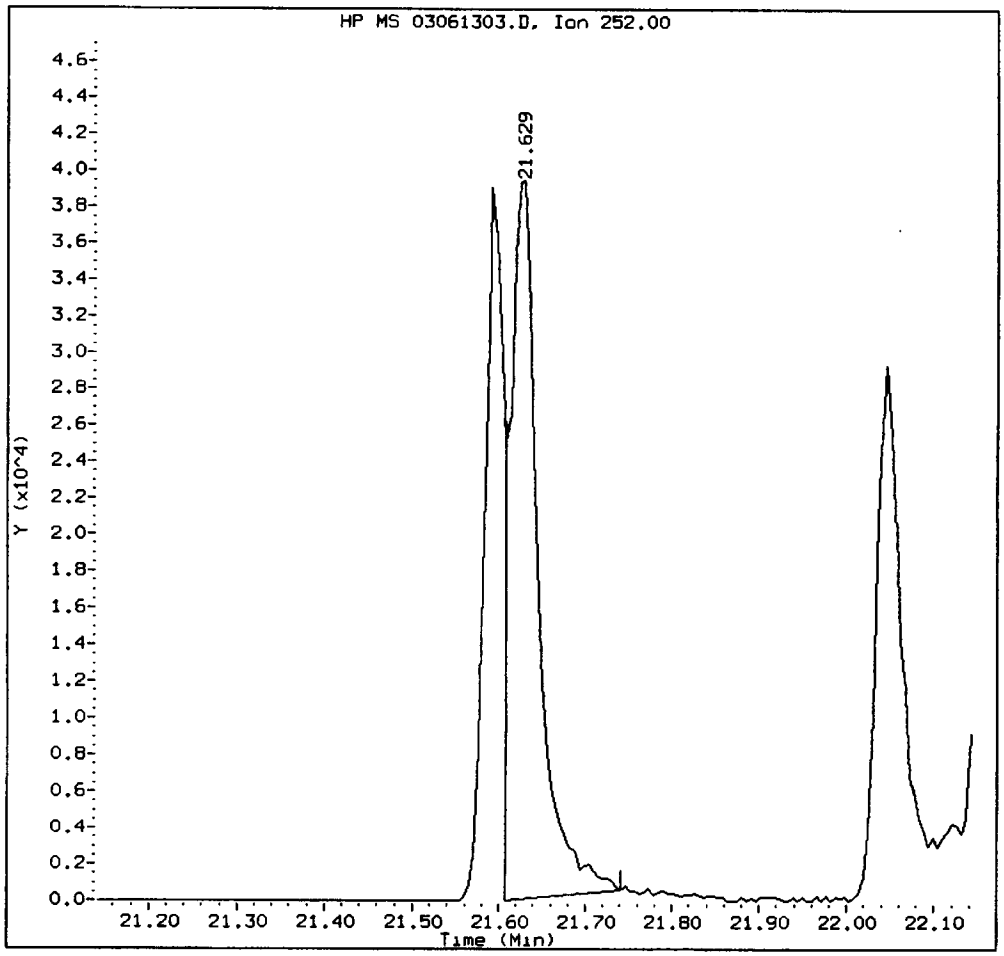




03/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

Benzo(k)fluoranthene Amount: 1.22 Area: 92998



MANUAL INTEGRATION for Benzo(k)fluoranthene

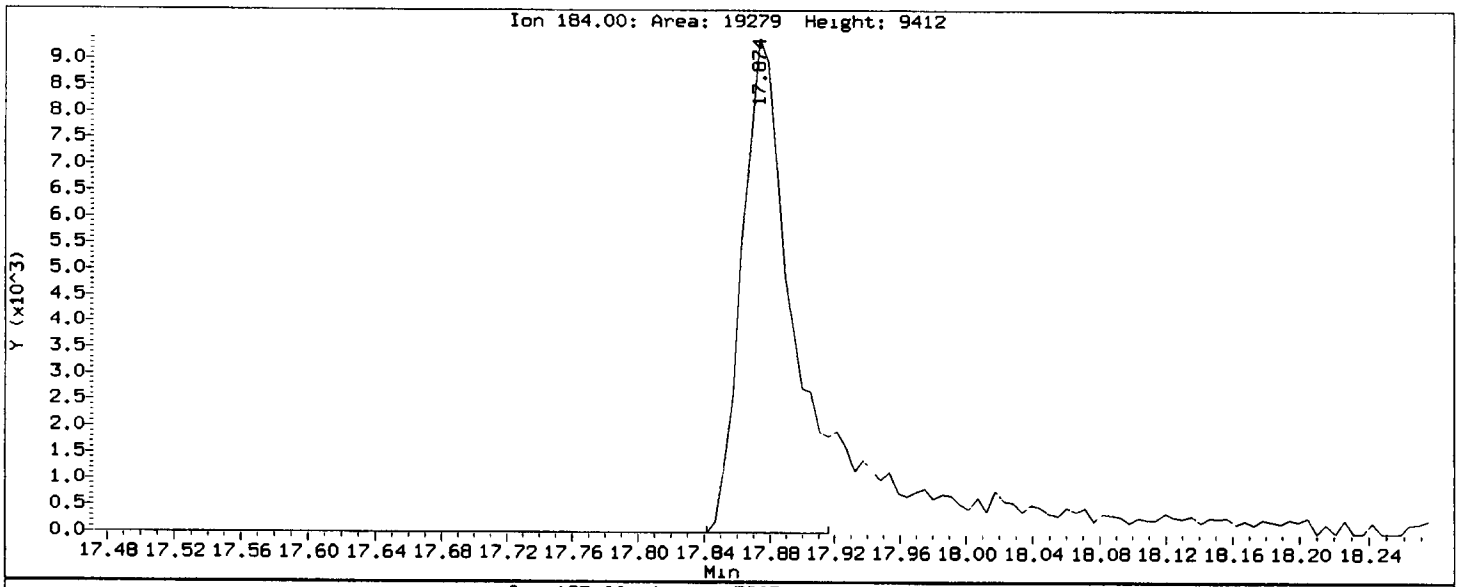
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

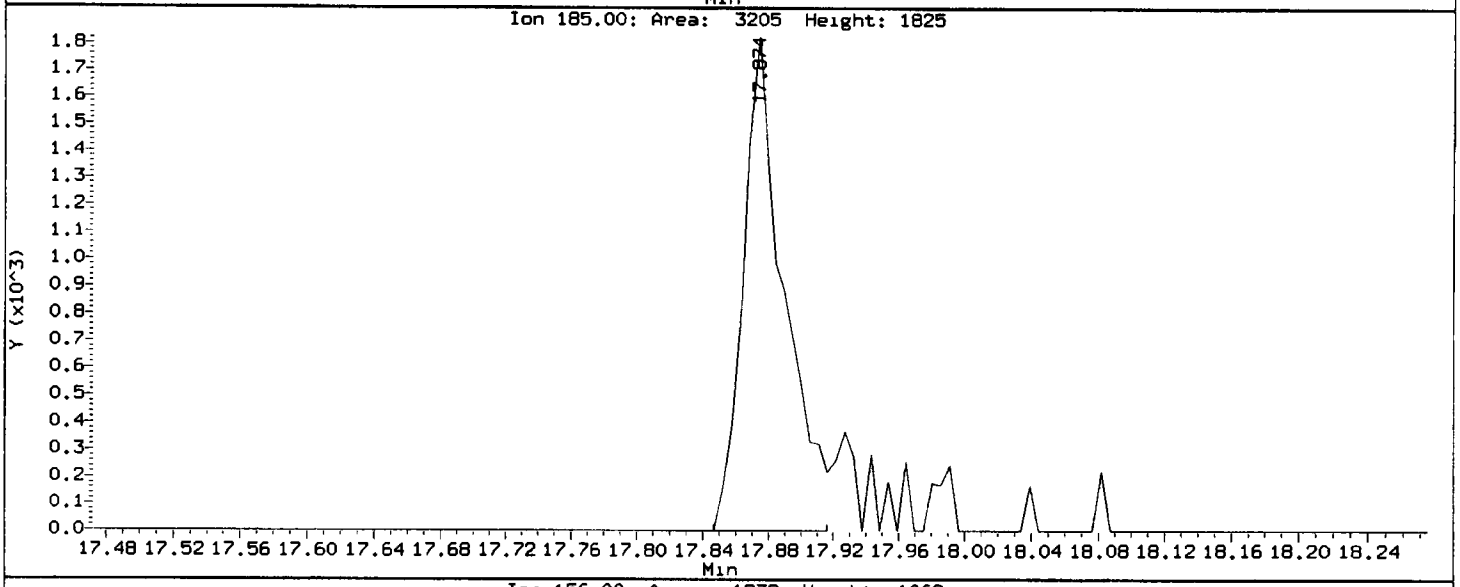
5. Other _____

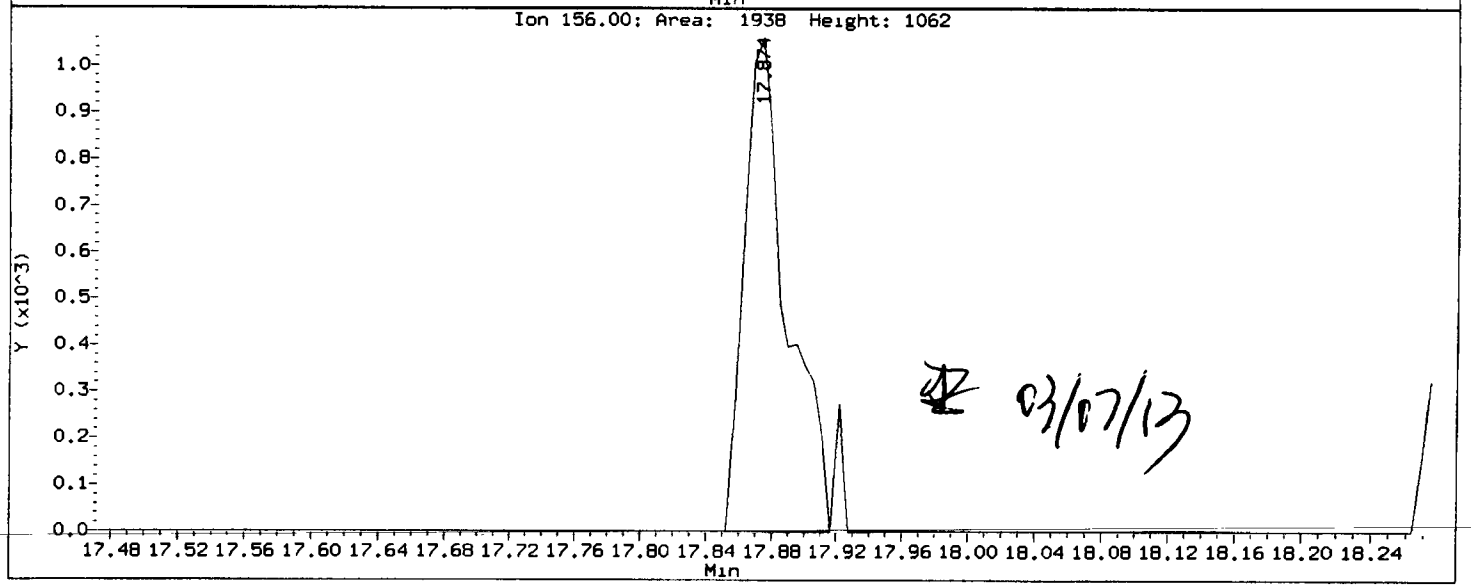
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: Benzidine
CAS Number:



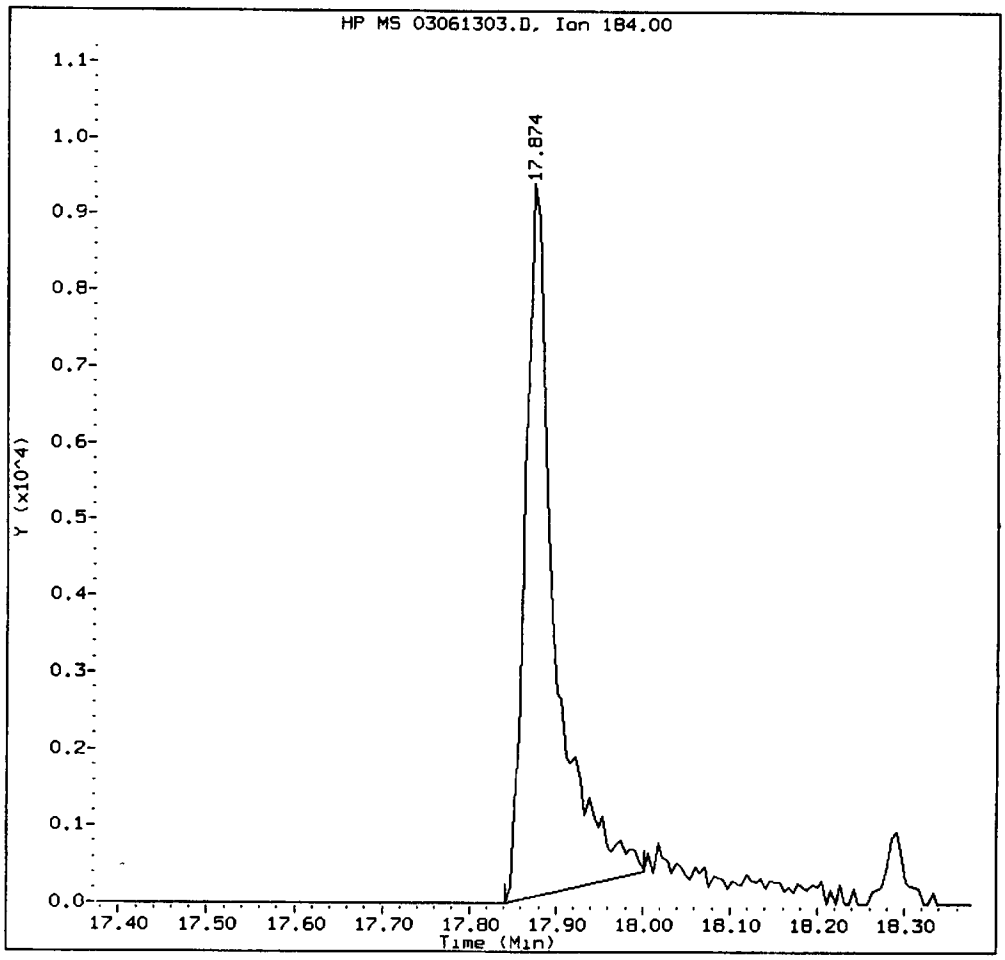




03/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

Benzidine Amount: 3.15 Area: 22120



MANUAL INTEGRATION for Benzidine

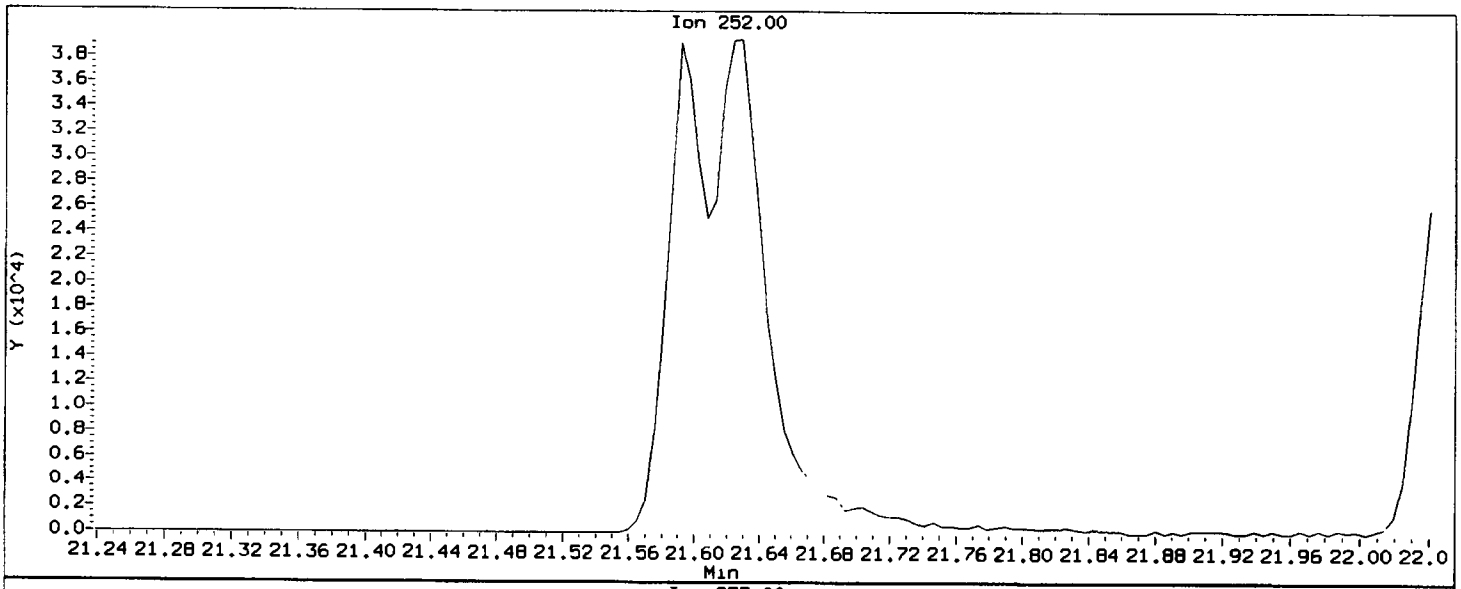
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

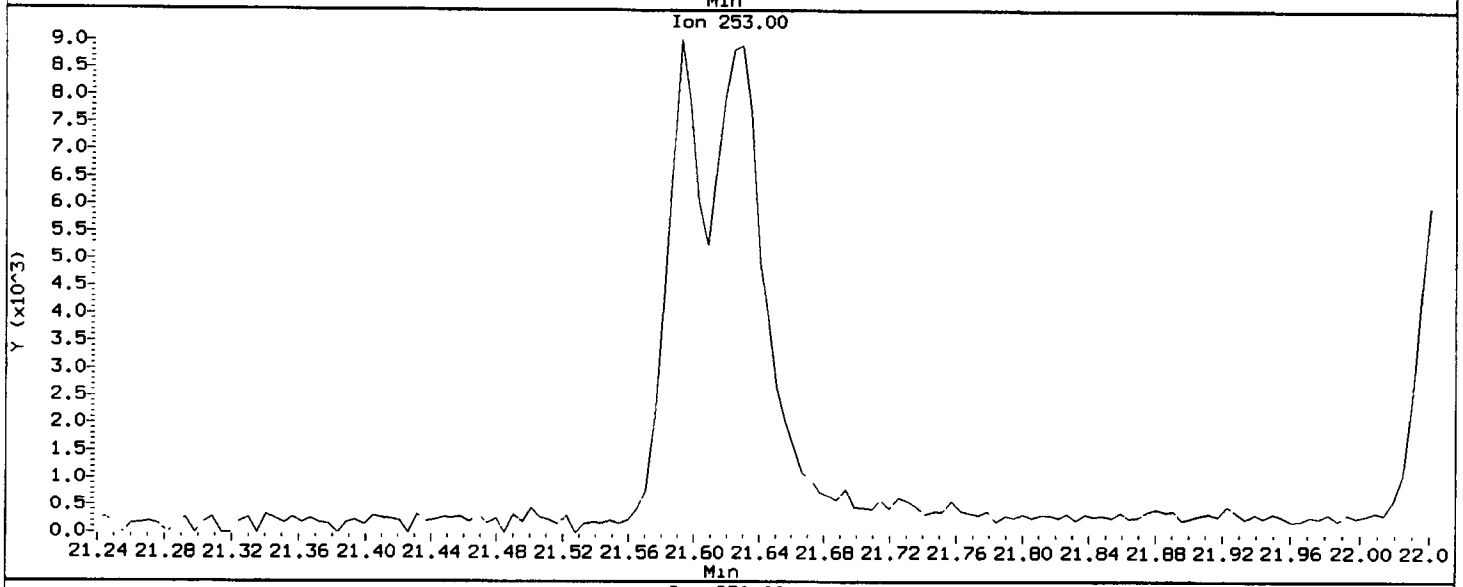
5. Other _____

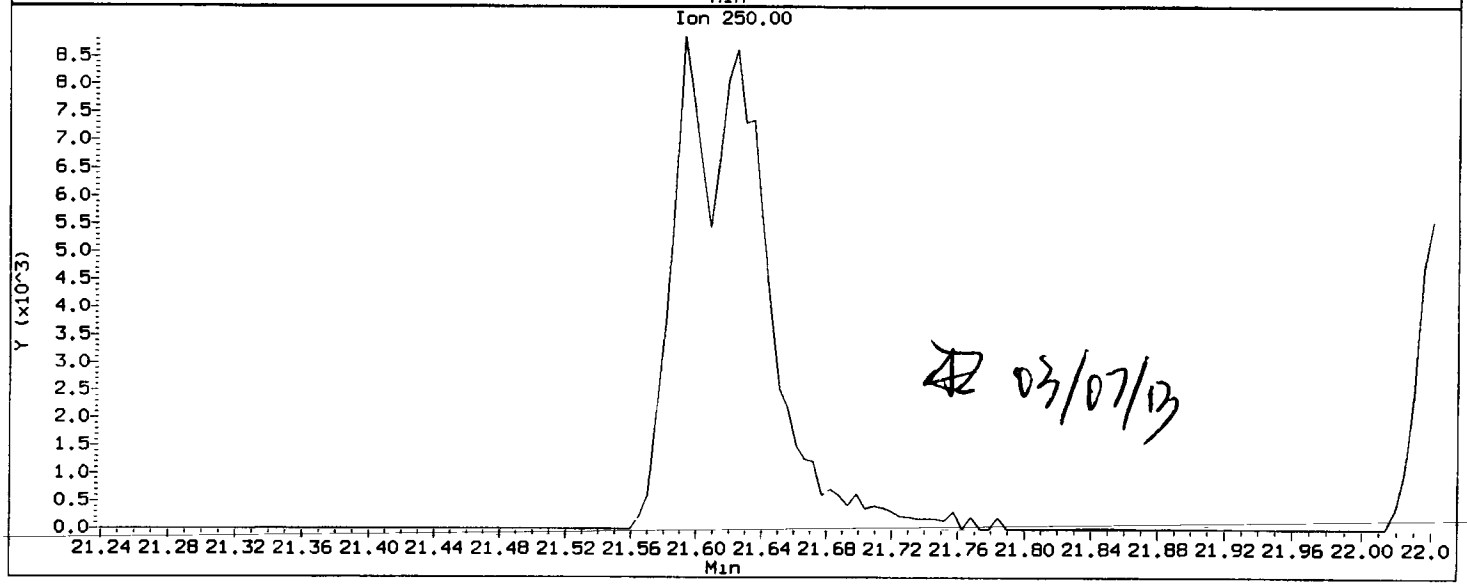
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: Total Benzofluoranthenes
CAS Number:



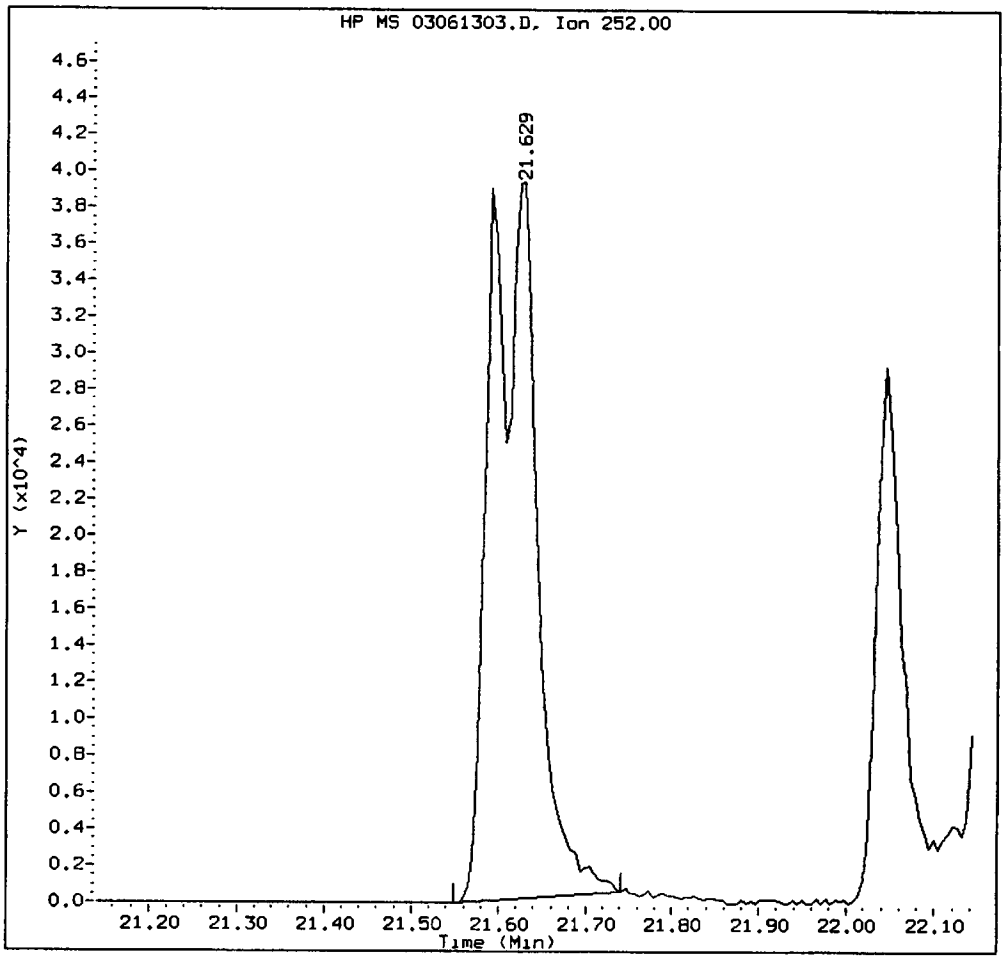




03/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

Total Benzofluoranthenes Amount: 2.34 Area: 143967



MANUAL INTEGRATION for Total Benzofluoranthenes

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061303.D

Lab ID: IC10306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS
19.941	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked OK

OK 03/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

ata file : /chem2/nt6.i/20130306.b/03061304.D
ab Smp Id: IC50306 Client Smp ID: IC50306
nj Date : 06-MAR-2013 14:00
perator : JZ Inst ID: nt6.i
mp Info : IC50306,
isc Info : 13-
omment : 1ul Injection
ethod : /chem2/nt6.i/20130306.b/SW846030613.m
eth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
al Date : 06-MAR-2013 16:18 Cal File: 03061308.D
ls bottle: 4 Calibration Sample, Level: 2
il Factor: 1.00000
ntegrator: HP RTE Compound Sublist: ICALS.sub
arget Version: 3.50

03/07/13

AMOUNTS

ompounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 2-Fluorophenol	112	6.429	6.432	(0.767)	157487	5.00000	5.345
2 Phenol-d5	99	7.925	7.933	(0.945)	194564	5.00000	5.641
3 Phenol	94	7.941	7.954	(0.947)	197710	5.00000	5.444
5 2-Chlorophenol-d4	132	8.079	8.082	(0.964)	158947	5.00000	5.452
4 Bis(2-Chloroethyl)ether	93	8.047	8.050	(0.960)	166393	5.00000	5.276
6 2-Chlorophenol	128	8.101	8.109	(0.966)	154047	5.00000	5.302
7 1,3-Dichlorobenzene	146	8.320	8.328	(0.992)	181909	5.00000	5.360
8 1,4-Dichlorobenzene-d4	152	8.384	8.387	(1.000)	454719	20.0000	
9 1,4-Dichlorobenzene	146	8.405	8.408	(1.003)	176793	5.00000	5.353
10 1,2-Dichlorobenzene-d4	152	8.683	8.681	(1.036)	116568	5.00000	5.681
12 1,2-Dichlorobenzene	146	8.704	8.707	(1.038)	173153	5.00000	5.484
11 Benzyl alcohol	108	8.651	8.654	(1.032)	107325	5.00000	5.425
14 2,2'-oxybis(1-Chloropropane)	45	8.907	8.916	(1.062)	266769	5.00000	5.324
13 2-Methylphenol	108	8.870	8.878	(1.058)	145016	5.00000	5.266
17 Hexachloroethane	117	9.191	9.193	(1.096)	70384	5.00000	5.268
16 N-Nitroso-di-n-propylamine	70	9.121	9.135	(1.088)	122120	5.00000	5.160
15 4-Methylphenol	108	9.100	9.108	(1.085)	144214	5.00000	5.296
18 Nitrobenzene-d5	82	9.303	9.311	(0.893)	180057	5.00000	5.411
19 Nitrobenzene	77	9.330	9.343	(0.895)	175660	5.00000	5.515
20 Isophorone	82	9.709	9.717	(0.932)	285645	5.00000	5.145
21 2-Nitrophenol	139	9.848	9.851	(0.945)	75503	5.00000	5.123
22 2,4-Dimethylphenol	107	9.939	9.947	(0.954)	147352	5.00000	5.287
23 Bis(2-Chloroethoxy)methane	93	10.093	10.096	(0.969)	193375	5.00000	5.309
24 Benzoic acid	105	10.083	10.198	(0.968)	174391	10.0000	7.233 (M)
25 2,4-Dichlorophenol	162	10.222	10.230	(0.981)	112355	5.00000	5.235
26 1,2,4-Trichlorobenzene	180	10.361	10.363	(0.994)	140913	5.00000	5.275
27 Naphthalene-d8	136	10.419	10.422	(1.000)	1658379	20.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	10.451	10.454	(1.003)	433038	5.00000	4.596
29 4-Chloroaniline	127	10.585	10.588	(1.016)	171000	5.00000	5.962
30 Hexachlorobutadiene	225	10.761	10.764	(1.033)	84797	5.00000	5.216
31 4-Chloro-3-methylphenol	107	11.376	11.384	(1.092)	117962	5.00000	5.175
32 2-Methylnaphthalene	141	11.563	11.571	(1.110)	237814	5.00000	5.897
33 Hexachlorocyclopentadiene	237	11.947	11.950	(0.900)	69251	5.00000	4.428
34 2,4,6-Trichlorophenol	196	12.070	12.078	(0.909)	79746	5.00000	4.873
35 2,4,5-Trichlorophenol	196	12.129	12.137	(0.913)	83114	5.00000	5.149
36 2-Fluorobiphenyl	172	12.204	12.212	(0.919)	355231	5.00000	5.781
37 2-Chloronaphthalene	162	12.348	12.356	(0.930)	266980	5.00000	6.062
38 2-Nitroaniline	65	12.567	12.580	(0.946)	76657	5.00000	5.327
39 Dimethylphthalate	163	12.935	12.949	(0.974)	306672	5.00000	5.234
40 Acenaphthylene	152	13.026	13.034	(0.981)	433072	5.00000	5.640
41 2,6-Dinitrotoluene	165	13.032	13.045	(0.981)	67148	5.00000	5.364
42 Acenaphthene-d10	164	13.277	13.286	(1.000)	973436	20.0000	
43 3-Nitroaniline	138	13.245	13.264	(0.998)	63342	5.00000	5.771
44 Acenaphthene	153	13.325	13.334	(1.004)	270963	5.00000	5.451
45 2,4-Dinitrophenol	184	13.411	13.424	(1.010)	54175	10.0000	6.060
46 Dibenzofuran	168	13.587	13.595	(1.023)	378333	5.00000	5.819
47 4-Nitrophenol	109	13.534	13.547	(1.019)	26876	5.00000	4.226 (M)
48 2,4-Dinitrotoluene	165	13.662	13.676	(1.029)	86291	5.00000	5.097
50 Diethylphthalate	149	14.089	14.098	(1.061)	325228	5.00000	5.992
49 Fluorene	166	14.143	14.156	(1.065)	290158	5.00000	5.801
51 4-Chlorophenyl-phenylether	204	14.164	14.172	(1.067)	156539	5.00000	5.485
52 4-Nitroaniline	138	14.234	14.252	(1.072)	54497	5.00000	5.708
53 4,6-Dinitro-2-methylphenol	198	14.314	14.333	(0.914)	93237	10.0000	8.397
54 N-Nitrosodiphenylamine	169	14.362	14.375	(0.917)	228800	5.00000	5.303
; 55 2,4,6-Tribromophenol	330	14.565	14.573	(1.097)	41598	5.00000	5.404
56 4-Bromophenyl-phenylether	248	14.944	14.952	(0.955)	87747	5.00000	5.185
57 Hexachlorobenzene	284	15.174	15.182	(0.969)	90144	5.00000	5.166
58 Pentachlorophenol	266	15.462	15.470	(0.988)	41947	5.00000	4.076
* 59 Phenanthrene-d10	188	15.655	15.663	(1.000)	1542012	20.0000	
60 Phenanthrene	178	15.692	15.700	(1.002)	411870	5.00000	5.399
61 Anthracene	178	15.761	15.770	(1.007)	414969	5.00000	5.432
62 Carbazole	167	16.039	16.047	(1.025)	352615	5.00000	6.682
63 Di-n-butylphthalate	149	16.739	16.747	(1.069)	532943	5.00000	5.534
64 Fluoranthene	202	17.626	17.639	(1.126)	435344	5.00000	5.424
65 Pyrene	202	17.984	17.992	(0.900)	455140	5.00000	5.404
$ 66 Terphenyl-d14	244	18.288	18.291	(0.916)	312240	5.00000	5.768
67 Butylbenzylphthalate	149	19.159	19.167	(0.959)	224551	5.00000	5.453
68 Benzo(a)anthracene	228	19.939	19.953	(0.998)	371290	5.00000	5.281
* 69 Chrysene-d12	240	19.971	19.979	(1.000)	1542109	20.0000	
70 3,3'-Dichlorobenzidine	252	19.939	19.953	(0.998)	110548	5.00000	5.715
71 Chrysene	228	20.008	20.017	(1.002)	388039	5.00000	5.406
72 bis(2-Ethylhexyl)phthalate	149	20.147	20.150	(0.956)	311275	5.00000	5.156
* 134 Di-n-octylphthalate-d4	153	21.077	21.085	(1.000)	2051585	20.0000	
73 Di-n-octylphthalate	149	21.088	21.096	(1.000)	500822	5.00000	5.170

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.595	21.609	(0.976)	314216	5.00000	4.462
75	Benzo(k)fluoranthene	252	21.627	21.641	(0.977)	461669	5.00000	5.686
187	Total Benzofluoranthenes	252	21.627	21.641	(0.977)	754693	10.0000	11.15
76	Benzo(a)pyrene	252	22.044	22.057	(0.996)	316511	5.00000	5.039
77	Perylene-d12	264	22.129	22.137	(1.000)	1469575	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.748	23.767	(1.073)	374355	5.00000	4.952
79	Dibenzo(a,h)anthracene	278	23.764	23.788	(1.074)	300992	5.00000	5.057
80	Benzo(g,h,i)perylene	276	24.202	24.226	(1.094)	315235	5.00000	4.876
90	N-Nitrosodimethylamine	74	3.891	3.889	(0.464)	105097	5.00000	4.908
103	Pyridine	79	3.870	3.851	(0.462)	166866	5.00000	4.914
91	Aniline	93	7.935	7.938	(0.946)	238888	5.00000	5.937
105	1-methylnaphthalene	141	11.739	11.747	(1.127)	236218	5.00000	5.766
93	Benzidine	184	17.872	17.874	(0.895)	81370	5.00000	10.82
111	Azobenzene (1,2-DP-Hydrazine)	77	14.415	14.423	(1.086)	345354	5.00000	5.599
143	1,4-Dioxane	88	3.106	3.103	(0.370)	71181	5.00000	4.825
137	d8-1,4-Dioxane	96	3.047	3.039	(0.363)	67876	5.00000	4.916
144	alpha-Terpineol	59	10.462	10.470	(1.004)	119847	5.00000	5.683
177	p-Benzoquinone	82	7.080	7.083	(0.680)	29200	5.00000	4.611
98	Retene	219	18.534	18.548	(0.928)	189965	5.00000	5.227
99	Perylene	252	22.161	22.175	(1.001)	302388	5.00000	5.496
133	Butylatedhydroxytoluene	205	13.438	13.440	(1.012)	240649	5.00000	4.562
115	Tributyl Phosphate	99	14.442	14.461	(0.923)	364951	5.00000	5.558
116	Dibutyl Phenyl Phosphate	175	16.183	16.192	(1.034)	223364	5.00000	5.478
117	Butyl Diphenyl Phosphate	94	17.872	17.880	(0.895)	77092	5.00000	5.429
118	Triphenyl Phosphate	326	19.474	19.482	(0.975)	63004	5.00000	4.666
123	Acetophenone	105	9.068	9.076	(1.082)	224829	5.00000	5.253
168	Pentachlorobenzene	250	13.630	13.638	(1.027)	109379	5.00000	5.130
113	Diphenyl Oxide	170	12.529	12.538	(0.944)	201195	5.00000	5.309
112	Biphenyl	154	12.337	12.345	(0.929)	332118	5.00000	6.421
120	2,3,4,6-Tetrachlorophenol	232	13.865	13.873	(1.044)	67318	5.00000	4.845
151	1,2,4,5-Tetrachlorobenzene	216	11.904	11.907	(0.897)	121631	5.00000	5.115
110	Tetrachloroguaiacol	247	15.590	15.599	(0.996)	84319	10.0000	10.42
109	3,4,5-Trichloroguaiacol	213	13.961	13.969	(0.892)	45547	5.00000	5.171
181	3,4,6-Trichloroguaiacol	211	14.079	14.087	(1.679)	53903	5.00000	5.195
108	4,5,6-Trichloroguaiacol	213	14.992	15.000	(1.129)	45087	5.00000	4.952
184	3,4-Dichloroguaiacol	192	12.423	12.425	(1.482)	48676	5.00000	4.941
107	4,5-Dichloroguaiacol	192	13.197	13.205	(0.994)	121336	10.0000	10.20
182	4,6-Dichloroguaiacol	192	13.197	13.205	(1.574)	121468	10.0000	10.11
185	4-Chloroguaiacol	115	11.333	11.336	(1.352)	31230	2.50000	2.444
186	Carbaryl	144	16.445	16.459	(1.050)	183249	5.00000	5.143
178	2-Benzyl-4-Chlorophenol	218	16.397	16.411	(1.047)	64662	5.00000	5.063
106	Guaiacol	124	9.324	9.332	(1.112)	131775	5.00000	5.571
188	2,6-Dichlorophenol	162	10.596	10.598	(1.264)	109236	5.00000	5.426
189	N-Nitrosomethylethylamine	88	5.627	5.620	(0.671)	75846	5.00000	5.048

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

nstrument ID: nt6.i
ıab File ID: 03061304.D
ıab Smp Id: IC50306
ınalysis Type: SV
ıuant Type: ISTD
ıperator: JZ
ethod File: /chem2/nt6.i/20130306.b/SW846030613.m
lisc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC50306
Level:
Sample Type:

'est Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	454719	-0.74
27 Naphthalene-d8	1718341	859170	3436682	1658379	-3.49
42 Acenaphthene-d10	1010041	505020	2020082	973436	-3.62
59 Phenanthrene-d10	1666734	833367	3333468	1542012	-7.48
69 Chrysene-d12	1675752	837876	3351504	1542109	-7.98
134 Di-n-octylphthala	2026355	1013178	4052710	2051585	1.25
77 Perylene-d12	1637524	818762	3275048	1469575	-10.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.03
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.06
59 Phenanthrene-d10	15.66	15.16	16.16	15.65	-0.05
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.04
134 Di-n-octylphthala	21.09	20.59	21.59	21.08	-0.04
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.04

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

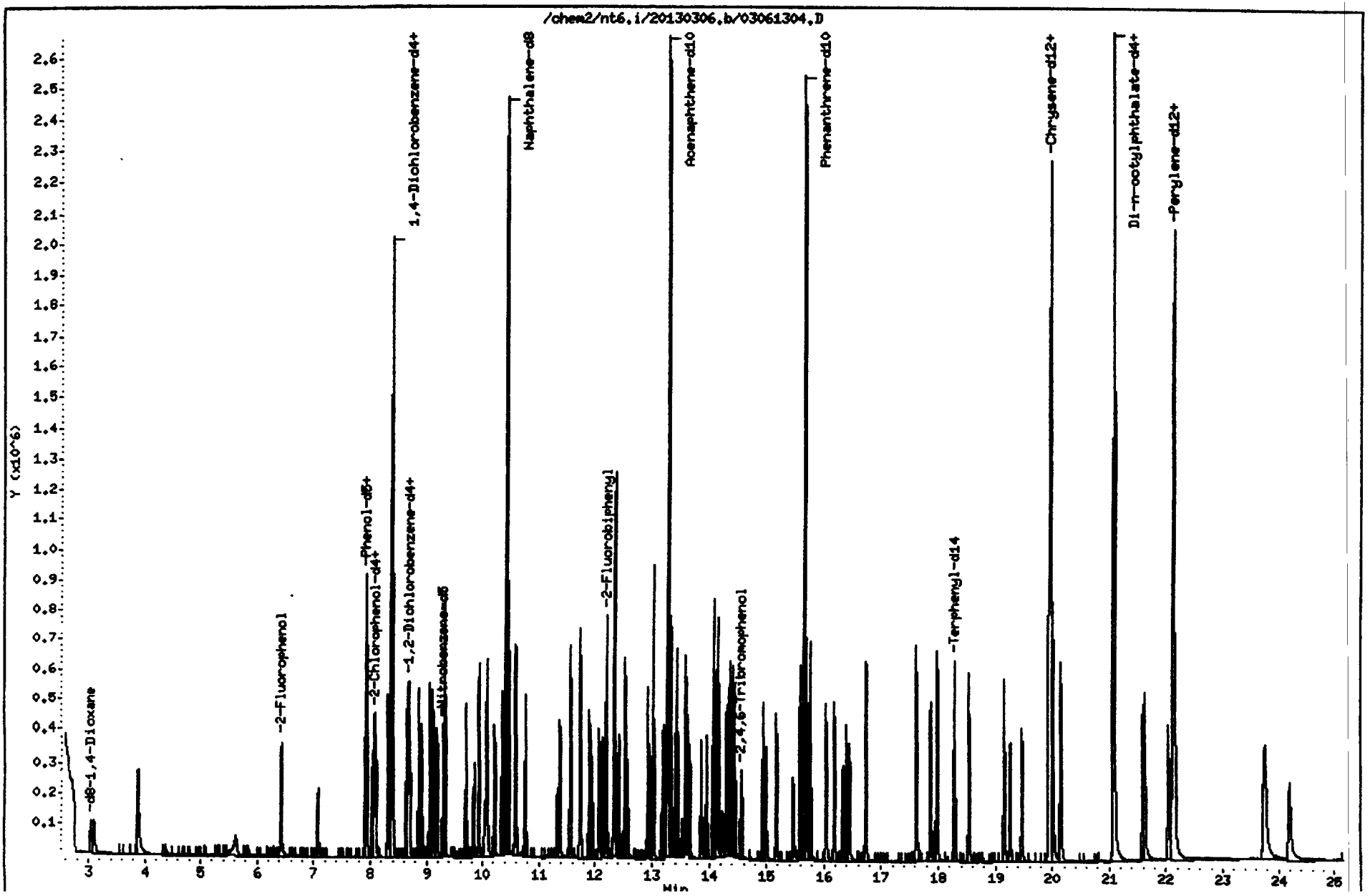
Data File: /chem2/nt6.i/20130306.b/03061304.D
Date : 06-MAR-2013 14:00
Client ID: IC50306
Sample Info: IC50306,

Instrument: nt6.i

Operator: JZ

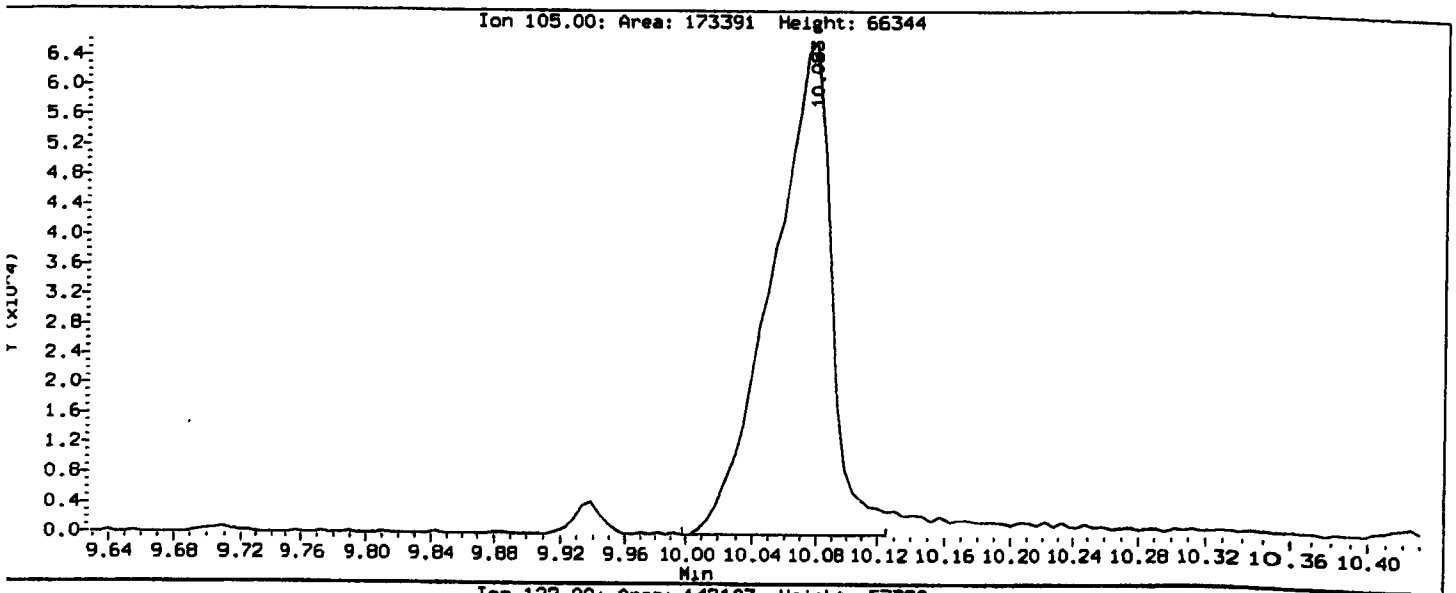
Column phase: ZB-5msi

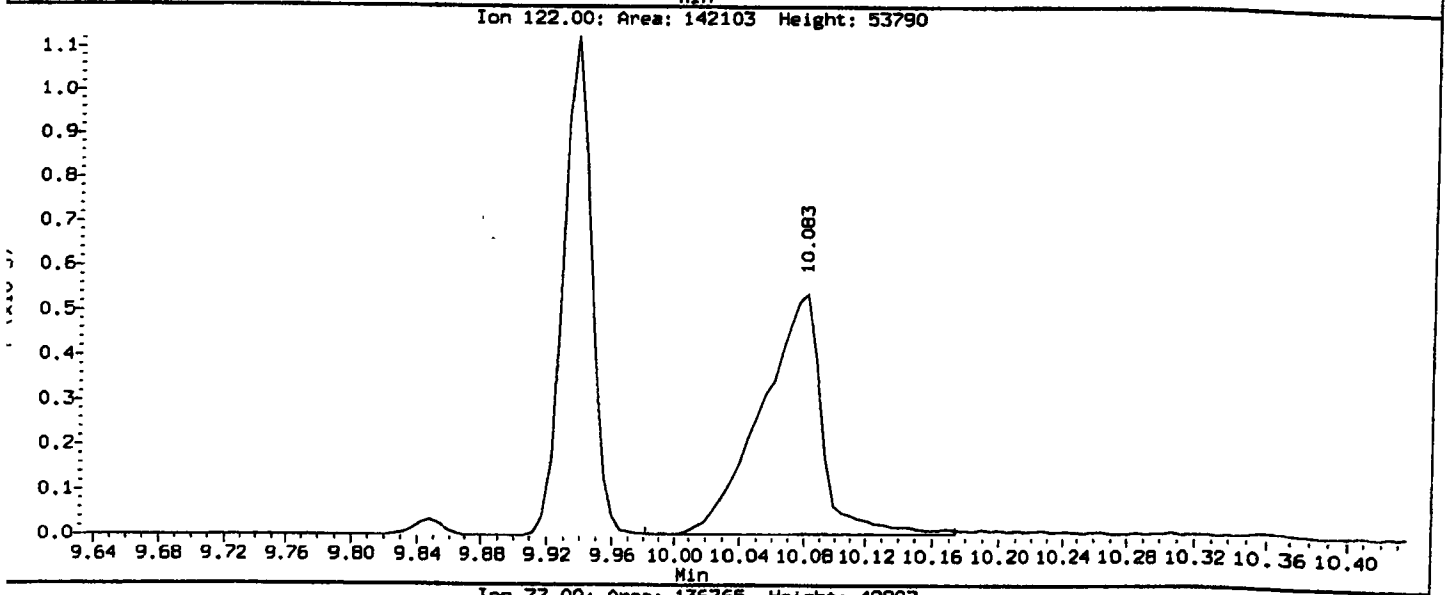
Column diameter: 0.32

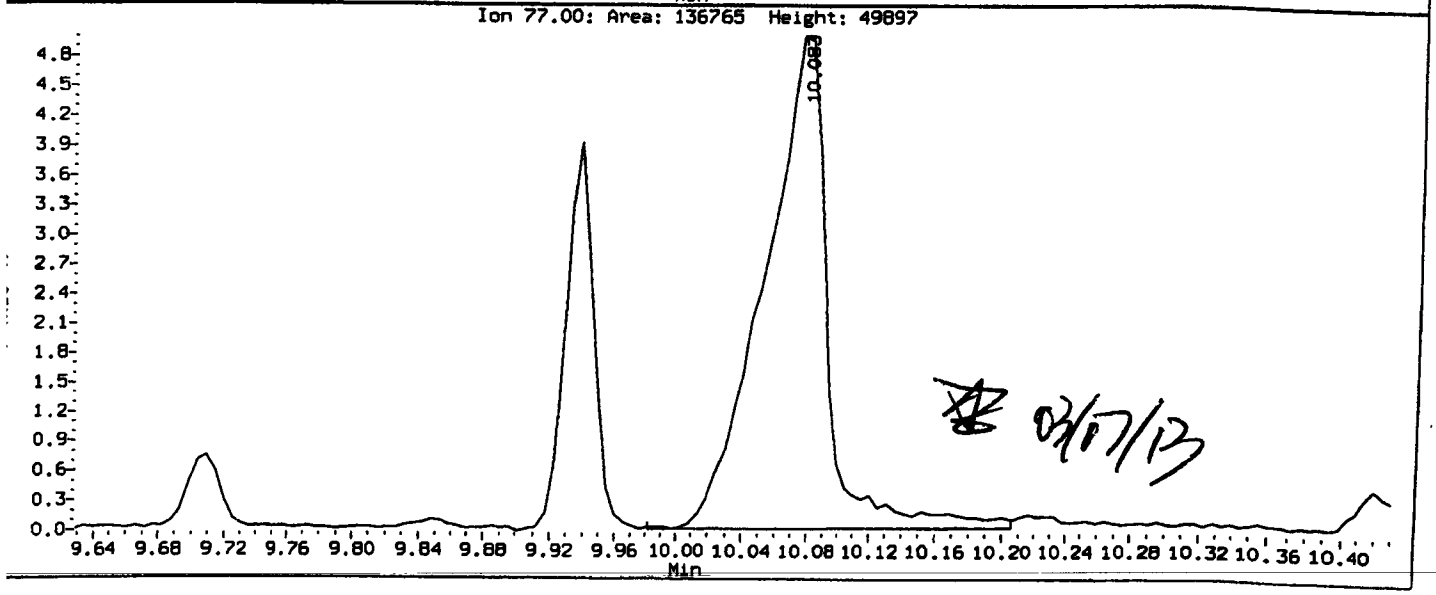


Data File: /chem2/nt6.i/20130306.b/03061304.D
Injection Date: 06-MAR-2013 14:00
Instrument: nt6.i
Client Sample ID: IC50306

Compound: Benzoic acid
CAS Number: 65-85-0



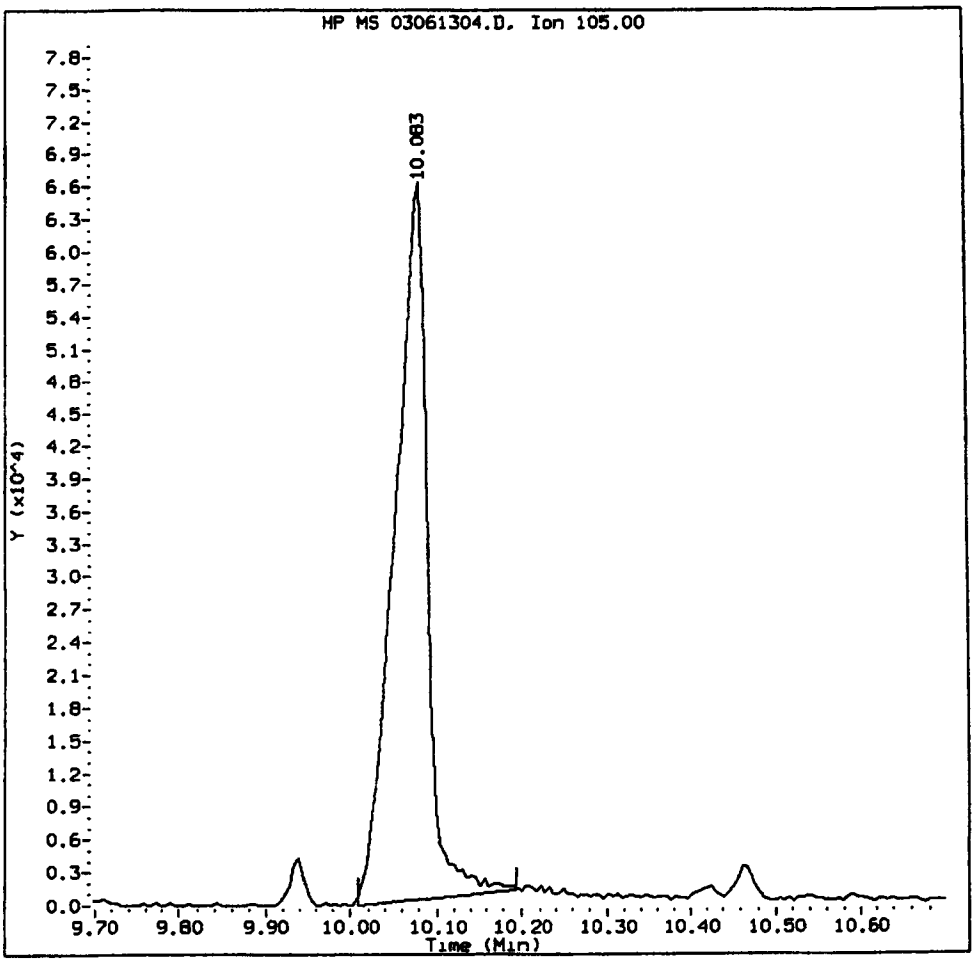




3/07/13

IC50306, /chem2/nt6.i/20130306.b/03061304.D

Benzoic acid Amount: 7.23 Area: 174391



MANUAL INTEGRATION for Benzoic acid

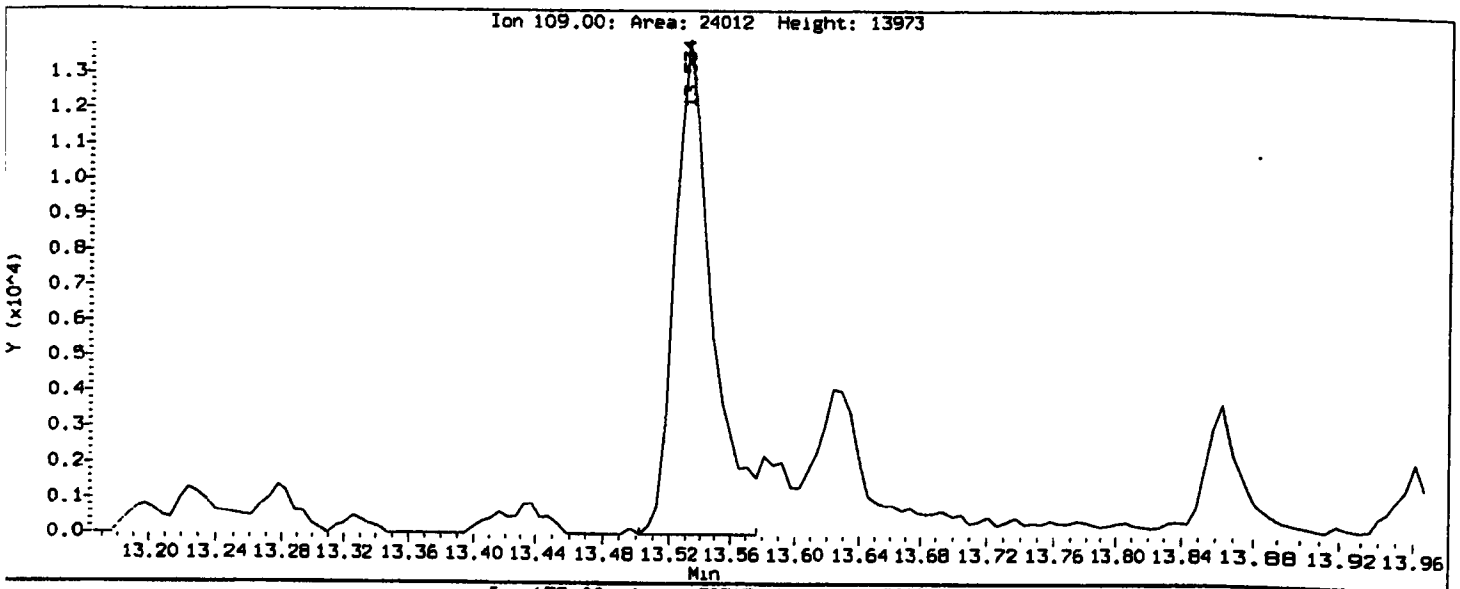
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

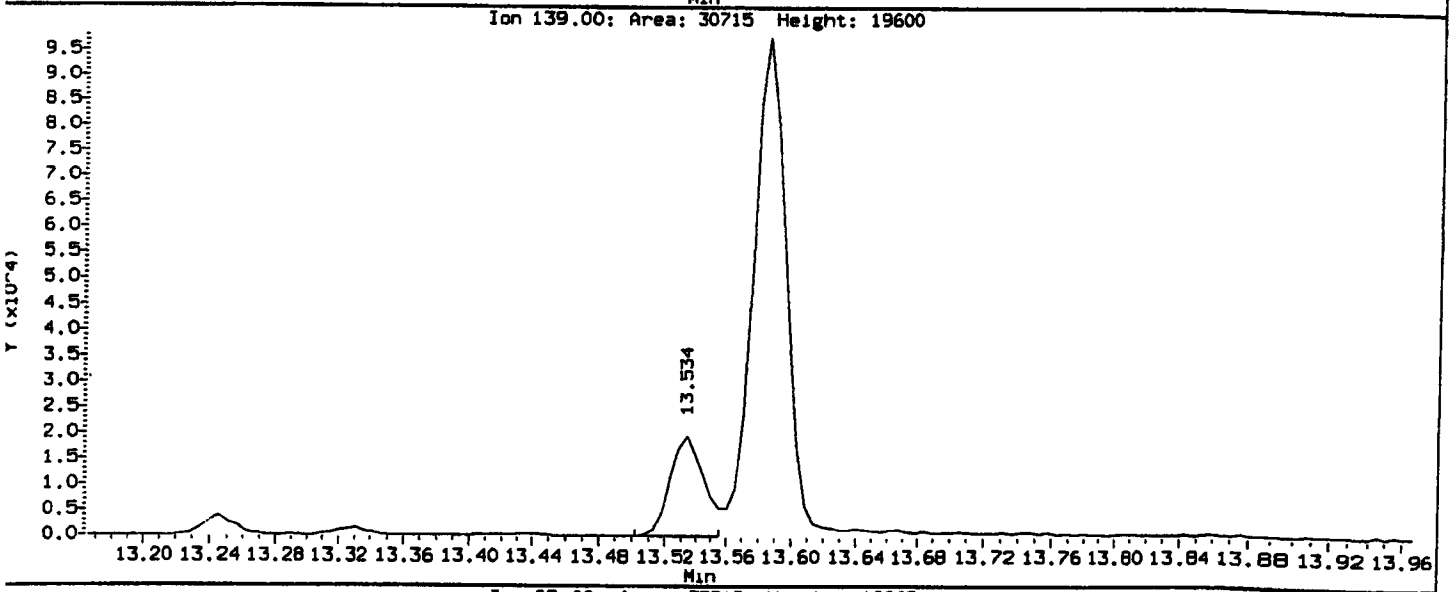
5. Other _____

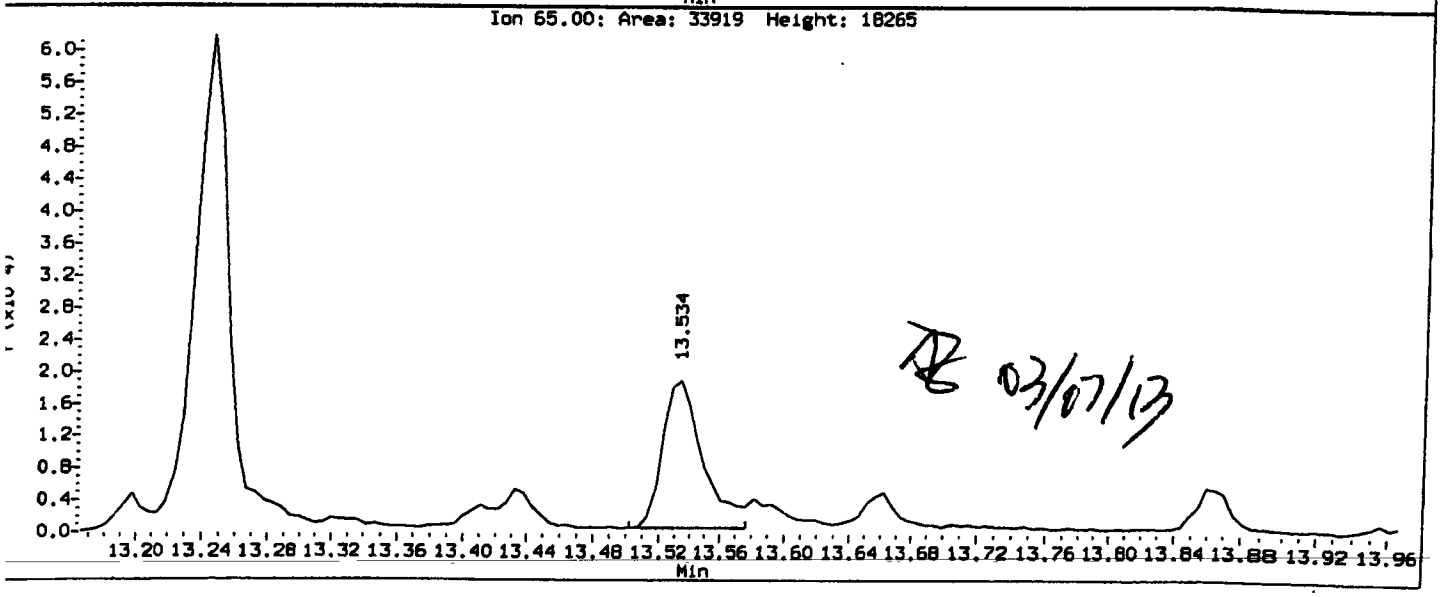
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061304.D
Injection Date: 06-MAR-2013 14:00
Instrument: nt6.i
Client Sample ID: IC50306

Compound: 4-Nitrophenol
CAS Number: 100-02-7



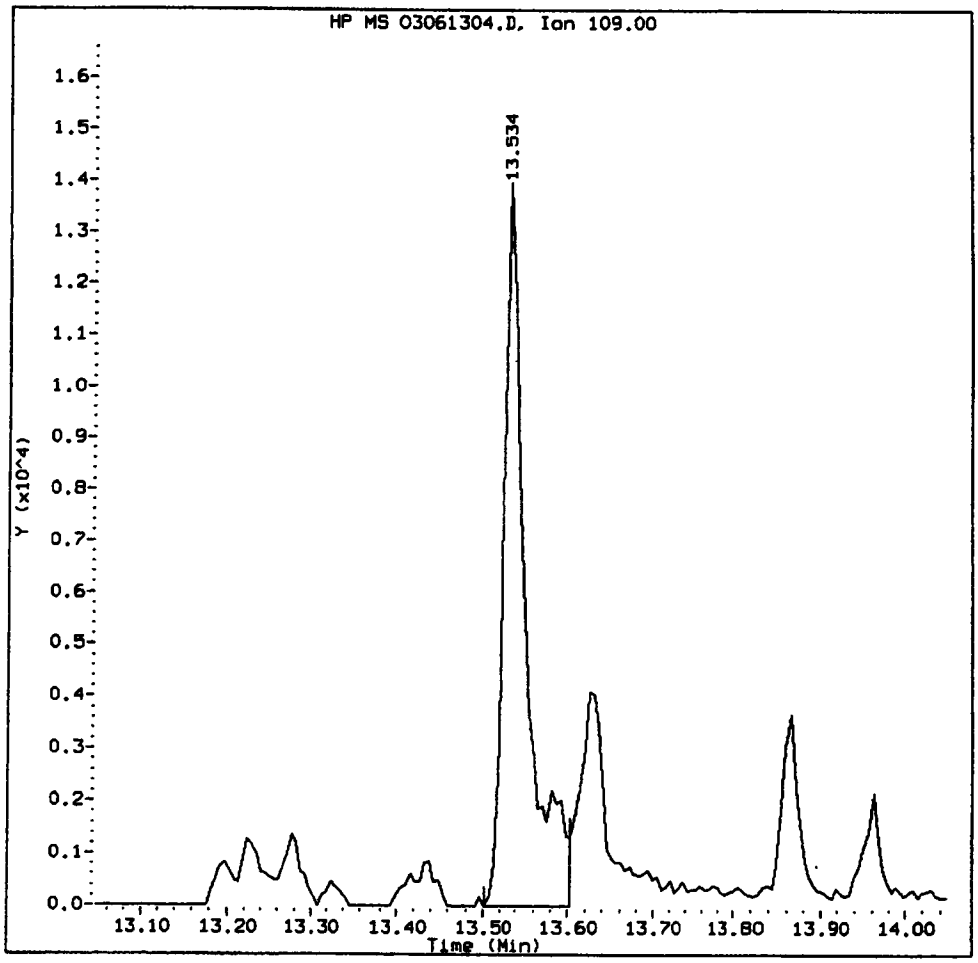




03/07/13

IC50306, /chem2/nt6.i/20130306.b/03061304.D

4-Nitrophenol Amount: 4.23 Area: 26876



MANUAL INTEGRATION for 4-Nitrophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061304.D

Lab ID: IC50306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS
19.939	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked ok

03/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061305.D
Lab Smp Id: IC100306 Client Smp ID: IC100306
Inj Date : 06-MAR-2013 14:34
Operator : JZ Inst ID: nt6.i
Smp Info : IC100306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

AMOUNTS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 2-Fluorophenol	112	6.432	6.432	(0.767)	409606	10.0000	11.09
2 Phenol-d5	99	7.927	7.933	(0.946)	485114	10.0000	11.22
3 Phenol	94	7.943	7.954	(0.948)	521638	10.0000	11.46
5 2-Chlorophenol-d4	132	8.082	8.082	(0.964)	408030	10.0000	11.16
4 Bis(2-Chloroethyl)ether	93	8.045	8.050	(0.960)	454744	10.0000	11.50
6 2-Chlorophenol	128	8.104	8.109	(0.967)	422320	10.0000	11.59
7 1,3-Dichlorobenzene	146	8.323	8.328	(0.993)	490538	10.0000	11.53
8 1,4-Dichlorobenzene-d4	152	8.382	8.387	(1.000)	570088	20.0000	
9 1,4-Dichlorobenzene	146	8.408	8.408	(1.003)	476551	10.0000	11.51
10 1,2-Dichlorobenzene-d4	152	8.681	8.681	(1.036)	285284	10.0000	11.09
12 1,2-Dichlorobenzene	146	8.702	8.707	(1.038)	457651	10.0000	11.56
11 Benzyl alcohol	108	8.649	8.654	(1.032)	275965	10.0000	11.13
14 2,2'-oxybis(1-Chloropropane)	45	8.910	8.916	(1.063)	722460	10.0000	11.50
13 2-Methylphenol	108	8.873	8.878	(1.059)	401038	10.0000	11.62
17 Hexachloroethane	117	9.188	9.193	(1.096)	193382	10.0000	11.55
16 N-Nitroso-di-n-propylamine	70	9.124	9.135	(1.089)	331372	10.0000	11.17
15 4-Methylphenol	108	9.103	9.108	(1.086)	405580	10.0000	11.88
18 Nitrobenzene-d5	82	9.306	9.311	(0.893)	463288	10.0000	10.99
19 Nitrobenzene	77	9.332	9.343	(0.895)	470788	10.0000	11.67
20 Isophorone	82	9.706	9.717	(0.931)	784907	10.0000	11.16
21 2-Nitrophenol	139	9.845	9.851	(0.945)	223980	10.0000	12.00
22 2,4-Dimethylphenol	107	9.941	9.947	(0.954)	406831	10.0000	11.52
23 Bis(2-Chloroethoxy)methane	93	10.091	10.096	(0.968)	524076	10.0000	11.36
24 Benzoic acid	105	10.144	10.198	(0.973)	669262	20.0000	21.92
25 2,4-Dichlorophenol	162	10.219	10.230	(0.981)	328904	10.0000	12.10
26 1,2,4-Trichlorobenzene	180	10.358	10.363	(0.994)	387548	10.0000	11.45
27 Naphthalene-d8	136	10.422	10.422	(1.000)	2100513	20.0000	

	ompounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28	Naphthalene	128	10.449	10.454	(1.003)	1122405	10.0000	10.39
29	4-Chloroaniline	127	10.582	10.588	(1.015)	395736	10.0000	11.97
30	Hexachlorobutadiene	225	10.764	10.764	(1.033)	234707	10.0000	11.40
31	4-Chloro-3-methylphenol	107	11.378	11.384	(1.092)	347605	10.0000	12.04
32	2-Methylnaphthalene	141	11.565	11.571	(1.110)	594073	10.0000	11.63
33	Hexachlorocyclopentadiene	237	11.945	11.950	(0.899)	228802	10.0000	11.24
34	2,4,6-Trichlorophenol	196	12.073	12.078	(0.909)	231449	10.0000	10.87
35	2,4,5-Trichlorophenol	196	12.126	12.137	(0.913)	254387	10.0000	12.11
36	2-Fluorobiphenyl	172	12.206	12.212	(0.919)	846552	10.0000	10.59
37	2-Chloronaphthalene	162	12.345	12.356	(0.930)	696255	10.0000	12.39
38	2-Nitroaniline	65	12.570	12.580	(0.946)	214601	10.0000	11.46
39	Dimethylphthalate	163	12.938	12.949	(0.974)	850044	10.0000	11.15
40	Acenaphthylene	152	13.024	13.034	(0.981)	1152396	10.0000	11.54
41	2,6-Dinitrotoluene	165	13.040	13.045	(0.982)	190803	10.0000	11.72
42	Acenaphthene-d10	164	13.280	13.286	(1.000)	1266491	20.0000	
43	3-Nitroaniline	138	13.254	13.264	(0.998)	138858	10.0000	10.28
44	Acenaphthene	153	13.328	13.334	(1.004)	725512	10.0000	11.22
45	2,4-Dinitrophenol	184	13.414	13.424	(1.010)	256578	20.0000	22.06
46	Dibenzofuran	168	13.590	13.595	(1.023)	963887	10.0000	11.39
47	4-Nitrophenol	109	13.537	13.547	(1.019)	94565	10.0000	11.43
48	2,4-Dinitrotoluene	165	13.665	13.676	(1.029)	260744	10.0000	11.84
50	Diethylphthalate	149	14.092	14.098	(1.061)	851918	10.0000	12.06
49	Fluorene	166	14.146	14.156	(1.065)	773364	10.0000	12.23
51	4-Chlorophenyl-phenylether	204	14.167	14.172	(1.067)	421621	10.0000	11.35
52	4-Nitroaniline	138	14.242	14.252	(1.072)	114126	10.0000	9.188
53	4,6-Dinitro-2-methylphenol	198	14.317	14.333	(0.914)	328910	20.0000	22.69
54	N-Nitrosodiphenylamine	169	14.365	14.375	(0.917)	637709	10.0000	11.32
55	2,4,6-Tribromophenol	330	14.568	14.573	(1.097)	113119	10.0000	11.30
56	4-Bromophenyl-phenylether	248	14.947	14.952	(0.955)	252399	10.0000	11.42
57	Hexachlorobenzene	284	15.171	15.182	(0.969)	256679	10.0000	11.27
58	Pentachlorophenol	266	15.465	15.470	(0.988)	151470	10.0000	11.27
59	Phenanthrene-d10	188	15.658	15.663	(1.000)	2013244	20.0000	
60	Phenanthrene	178	15.690	15.700	(1.002)	1109716	10.0000	11.14
61	Anthracene	178	15.764	15.770	(1.007)	1165266	10.0000	11.68
62	Carbazole	167	16.037	16.047	(1.024)	804312	10.0000	11.64
63	Di-n-butylphthalate	149	16.737	16.747	(1.069)	1462335	10.0000	11.63
64	Fluoranthene	202	17.629	17.639	(1.126)	1248849	10.0000	11.92
65	Pyrene	202	17.987	17.992	(0.901)	1303708	10.0000	11.52
66	Terphenyl-d14	244	18.286	18.291	(0.916)	780843	10.0000	10.74
67	Butylbenzylphthalate	149	19.157	19.167	(0.959)	651451	10.0000	11.77
68	Benzo(a)anthracene	228	19.942	19.953	(0.999)	1072977	10.0000	11.36
69	Chrysene-d12	240	19.969	19.979	(1.000)	2072136	20.0000	
70	3,3'-Dichlorobenzidine	252	19.937	19.953	(0.998)	305076	10.0000	11.74
71	Chrysene	228	20.006	20.017	(1.002)	1128707	10.0000	11.70
72	bis(2-Ethylhexyl)phthalate	149	20.140	20.150	(0.956)	894958	10.0000	11.54
134	Di-n-octylphthalate-d4	153	21.074	21.085	(1.000)	2636581	20.0000	
73	Di-n-octylphthalate	149	21.085	21.096	(1.000)	1365050	10.0000	10.97

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.593	21.609	(0.976)	1040205	10.0000	11.11
75	Benzo(k)fluoranthene	252	21.625	21.641	(0.977)	1257901	10.0000	11.89
187	Total Benzofluoranthenes	252	21.625	21.641	(0.977)	2212064	20.0000	24.05
76	Benzo(a)pyrene	252	22.041	22.057	(0.996)	1022456	10.0000	11.98
77	Perylene-d12	264	22.132	22.137	(1.000)	1996890	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.745	23.767	(1.073)	1200253	10.0000	11.68
79	Dibenzo(a,h)anthracene	278	23.767	23.788	(1.074)	974913	10.0000	12.05
80	Benzo(g,h,i)perylene	276	24.205	24.226	(1.094)	1025473	10.0000	11.67
90	N-Nitrosodimethylamine	74	3.894	3.889	(0.465)	289642	10.0000	10.79
103	Pyridine	79	3.862	3.851	(0.461)	499164	10.0000	11.72
91	Aniline	93	7.938	7.938	(0.947)	561686	10.0000	11.13
105	1-methylnaphthalene	141	11.742	11.747	(1.127)	592868	10.0000	11.42
93	Benzidine	184	17.864	17.874	(0.895)	112934	10.0000	11.18
111	Azobenzene (1,2-DP-Hydrazine)	77	14.413	14.423	(1.085)	921459	10.0000	11.48
143	1,4-Dioxane	88	3.109	3.103	(0.371)	195949	10.0000	10.59
137	d8-1,4-Dioxane	96	3.050	3.039	(0.364)	188211	10.0000	10.87
144	alpha-Terpineol	59	10.465	10.470	(1.004)	297085	10.0000	11.12
177	p-Benzoquinone	82	7.078	7.083	(0.679)	94569	10.0000	11.79
98	Retene	219	18.537	18.548	(0.928)	541721	10.0000	11.09
99	Perylene	252	22.159	22.175	(1.001)	854294	10.0000	11.43
133	Butylatedhydroxytoluene	205	13.435	13.440	(1.012)	644369	10.0000	10.28
115	Tributyl Phosphate	99	14.450	14.461	(0.923)	993217	10.0000	12.00
116	Dibutyl Phenyl Phosphate	175	16.186	16.192	(1.034)	651979	10.0000	12.25
117	Butyl Diphenyl Phosphate	94	17.869	17.880	(0.895)	217805	10.0000	11.42
118	Triphenyl Phosphate	326	19.472	19.482	(0.975)	199203	10.0000	10.98
123	Acetophenone	105	9.071	9.076	(1.082)	611708	10.0000	11.40
168	Pentachlorobenzene	250	13.633	13.638	(1.027)	306373	10.0000	11.04
113	Diphenyl Oxide	170	12.532	12.538	(0.944)	551926	10.0000	11.19
112	Biphenyl	154	12.340	12.345	(0.929)	789168	10.0000	12.10
120	2,3,4,6-Tetrachlorophenol	232	13.868	13.873	(1.044)	210165	10.0000	11.63
151	1,2,4,5-Tetrachlorobenzene	216	11.902	11.907	(0.896)	337802	10.0000	10.92
110	Tetrachloroguaiacol	247	15.593	15.599	(0.996)	251305	20.0000	23.79
109	3,4,5-Trichloroguaiacol	213	13.959	13.969	(0.892)	128306	10.0000	11.16
181	3,4,6-Trichloroguaiacol	211	14.082	14.087	(1.680)	151124	10.0000	11.62
108	4,5,6-Trichloroguaiacol	213	14.990	15.000	(1.129)	134238	10.0000	11.33
184	3,4-Dichloroguaiacol	192	12.420	12.425	(1.482)	141925	10.0000	11.49
107	4,5-Dichloroguaiacol	192	13.200	13.205	(0.994)	349586	20.0000	22.59
182	4,6-Dichloroguaiacol	192	13.200	13.205	(1.575)	349586	20.0000	23.21
185	4-Chloroguaiacol	115	11.330	11.336	(1.352)	92661	5.00000	5.785
186	Carbaryl	144	16.448	16.459	(1.050)	564889	10.0000	12.14
178	2-Benzyl-4-Chlorophenol	218	16.400	16.411	(1.047)	196958	10.0000	11.81
106	Guaiacol	124	9.327	9.332	(1.113)	351433	10.0000	11.85
188	2,6-Dichlorophenol	162	10.593	10.598	(1.264)	290040	10.0000	11.49
189	N-Nitrosomethylethylamine	88	5.625	5.620	(0.671)	198410	10.0000	10.53

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061305.D
Lab Smp Id: IC100306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC100306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	570088	24.44
27 Naphthalene-d8	1718341	859170	3436682	2100513	22.24
42 Acenaphthene-d10	1010041	505020	2020082	1266491	25.39
59 Phenanthrene-d10	1666734	833367	3333468	2013244	20.79
69 Chrysene-d12	1675752	837876	3351504	2072136	23.65
134 Di-n-octylphthala	2026355	1013178	4052710	2636581	30.11
77 Perylene-d12	1637524	818762	3275048	1996890	21.95

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.06
27 Naphthalene-d8	10.42	9.92	10.92	10.42	0.00
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.04
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	-0.03
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.05
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.05
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.02

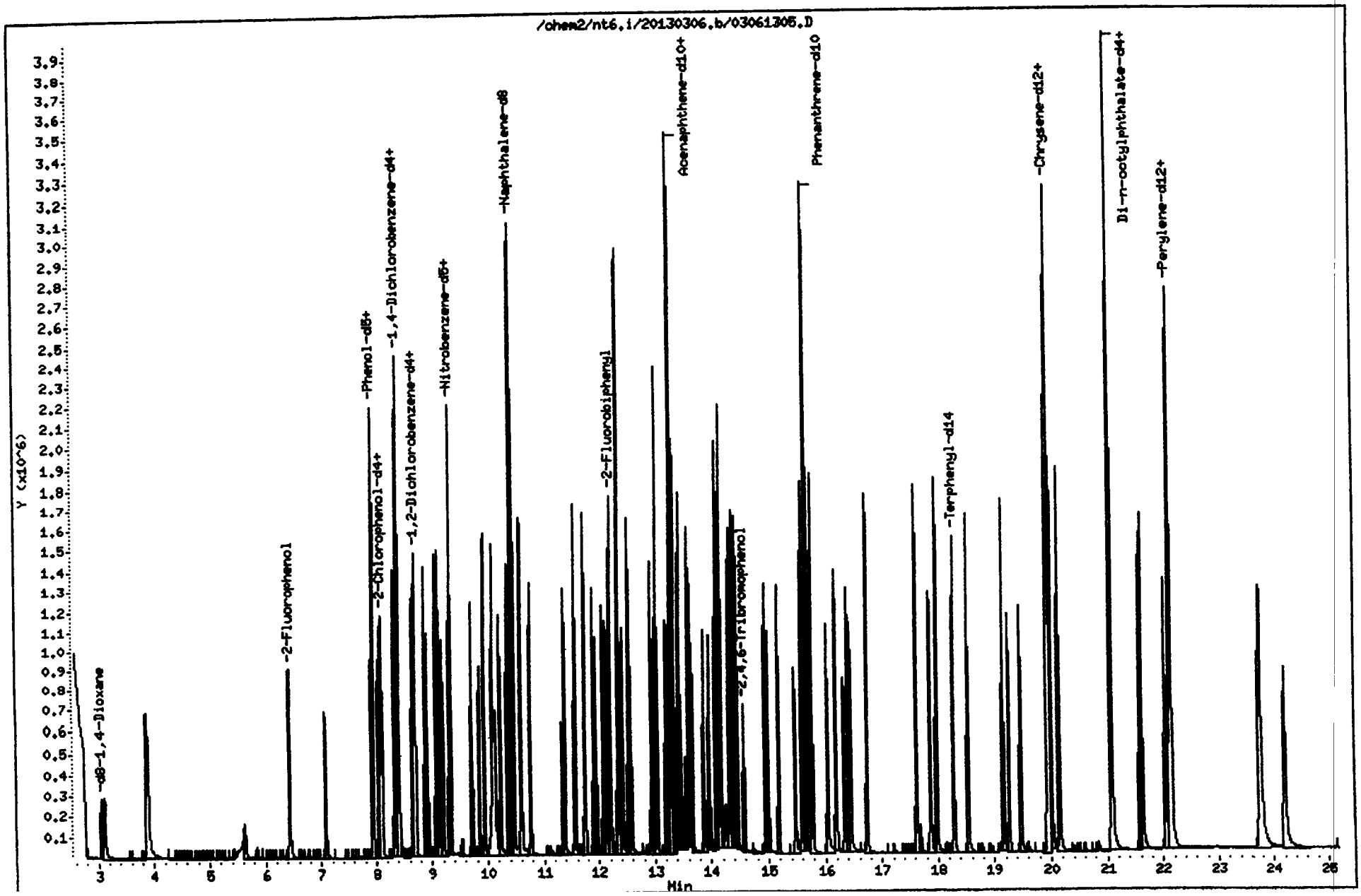
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061305.D
Date : 06-MAR-2013 14:34
Client ID: IC100306
Sample Info: IC100306,

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



O-ELUTION SUMMARY FOR FILE - 03061305.D

ab ID: IC100306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem2/nt6.i/20130306.b/03061301.D
Report Date: 07-Mar-2013 11:56

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061301.D
Lab Smp Id: IC250306 Client Smp ID: IC250306
Inj Date : 06-MAR-2013 12:16
Operator : JZ Inst ID: nt6.i
Smp Info : IC250306
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

AZ 03/07/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
1	2-Fluorophenol	112	6.432	6.432	(0.767)	700440	25.0000	23.60	
2	Phenol-d5	99	7.933	7.933	(0.946)	801352	25.0000	23.06	
3	Phenol	94	7.954	7.954	(0.948)	889960	25.0000	24.32	
5	2-Chlorophenol-d4	132	8.082	8.082	(0.964)	690249	25.0000	23.50	
4	Bis(2-Chloroethyl)ether	93	8.050	8.050	(0.960)	775014	25.0000	24.39	
6	2-Chlorophenol	128	8.109	8.109	(0.967)	729630	25.0000	24.92	
7	1,3-Dichlorobenzene	146	8.328	8.328	(0.993)	845812	25.0000	24.74	
8	1,4-Dichlorobenzene-d4	152	8.387	8.387	(1.000)	458117	20.0000		
9	1,4-Dichlorobenzene	146	8.408	8.408	(1.003)	819102	25.0000	24.62	
10	1,2-Dichlorobenzene-d4	152	8.681	8.681	(1.035)	473455	25.0000	22.90 (H)	
12	1,2-Dichlorobenzene	146	8.707	8.707	(1.038)	775420	25.0000	24.38	
11	Benzyl alcohol	108	8.654	8.654	(1.032)	509044	25.0000	25.54	
14	2,2'-oxybis(1-Chloropropane)	45	8.916	8.916	(1.063)	1237768	25.0000	24.52	
13	2-Methylphenol	108	8.878	8.878	(1.059)	703888	25.0000	25.37	
17	Hexachloroethane	117	9.193	9.193	(1.096)	331130	25.0000	24.60	
16	N-Nitroso-di-n-propylamine	70	9.135	9.135	(1.089)	584280	25.0000	24.50	
15	4-Methylphenol	108	9.108	9.108	(1.086)	711421	25.0000	25.93	
18	Nitrobenzene-d5	82	9.311	9.311	(0.893)	801723	25.0000	23.25	
19	Nitrobenzene	77	9.343	9.343	(0.896)	805918	25.0000	24.42	
20	Isophorone	82	9.717	9.717	(0.932)	1363565	25.0000	23.70	
21	2-Nitrophenol	139	9.851	9.851	(0.945)	399887	25.0000	26.19	
22	2,4-Dimethylphenol	107	9.947	9.947	(0.954)	711080	25.0000	24.62	
23	Bis(2-Chloroethoxy)methane	93	10.096	10.096	(0.969)	910222	25.0000	24.12	
24	Benzoic acid	105	10.198	10.198	(0.978)	1318002	50.0000	52.76	
25	2,4-Dichlorophenol	162	10.230	10.230	(0.982)	588303	25.0000	26.46	
26	1,2,4-Trichlorobenzene	180	10.363	10.363	(0.994)	665788	25.0000	24.05	
27	Naphthalene-d8	136	10.422	10.422	(1.000)	1718341	20.0000		

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	
	28 Naphthalene	128	10.454	10.454	(1.003)	1841435	25.0000	24.74	
	29 4-Chloroaniline	127	10.588	10.588	(1.016)	551083	25.0000	23.22	
	30 Hexachlorobutadiene	225	10.764	10.764	(1.033)	412907	25.0000	24.51	
	31 4-Chloro-3-methylphenol	107	11.384	11.384	(1.092)	616289	25.0000	26.09	
	32 2-Methylnaphthalene	141	11.571	11.571	(1.110)	1032469	25.0000	24.71	
	33 Hexachlorocyclopentadiene	237	11.950	11.950	(0.899)	439183	25.0000	27.06	
	34 2,4,6-Trichlorophenol	196	12.078	12.078	(0.909)	432718	25.0000	25.48	
	35 2,4,5-Trichlorophenol	196	12.137	12.137	(0.914)	441206	25.0000	26.34	
$	36 2-Fluorobiphenyl	172	12.212	12.212	(0.919)	1404089	25.0000	22.02	
	37 2-Chloronaphthalene	162	12.356	12.356	(0.930)	1139487	25.0000	26.46	
	38 2-Nitroaniline	65	12.580	12.580	(0.947)	397884	25.0000	26.65	
	39 Dimethylphthalate	163	12.949	12.949	(0.975)	1466956	25.0000	24.13	
	40 Acenaphthylene	152	13.034	13.034	(0.981)	1904411	25.0000	23.90	
	41 2,6-Dinitrotoluene	165	13.045	13.045	(0.982)	328738	25.0000	25.31	
*	42 Acenaphthene-d10	164	13.286	13.286	(1.000)	1010041	20.0000		
	43 3-Nitroaniline	138	13.264	13.264	(0.998)	241966	25.0000	26.00	
	44 Acenaphthene	153	13.334	13.334	(1.004)	1232398	25.0000	23.89	
	45 2,4-Dinitrophenol	184	13.424	13.424	(1.010)	496821	50.0000	53.56	
	46 Dibenzofuran	168	13.595	13.595	(1.023)	1655296	25.0000	24.54	
	47 4-Nitrophenol	109	13.547	13.547	(1.020)	178575	25.0000	27.06	
	48 2,4-Dinitrotoluene	165	13.676	13.676	(1.029)	452448	25.0000	25.75	
	50 Diethylphthalate	149	14.098	14.098	(1.061)	1399966	25.0000	24.86	
	49 Fluorene	166	14.156	14.156	(1.066)	1288051	25.0000	27.06	
	51 4-Chlorophenyl-phenylether	204	14.172	14.172	(1.067)	716110	25.0000	24.18	
	52 4-Nitroaniline	138	14.252	14.252	(1.073)	226139	25.0000	22.83	
	53 4,6-Dinitro-2-methylphenol	198	14.333	14.333	(0.915)	606968	50.0000	50.57	
	54 N-Nitrosodiphenylamine	169	14.375	14.375	(0.918)	1086875	25.0000	23.31	(M)
$	55 2,4,6-Tribromophenol	330	14.573	14.573	(1.097)	197436	25.0000	24.72	
	56 4-Bromophenyl-phenylether	248	14.952	14.952	(0.955)	442782	25.0000	24.21	
	57 Hexachlorobenzene	284	15.182	15.182	(0.969)	444526	25.0000	23.57	
	58 Pentachlorophenol	266	15.470	15.470	(0.988)	283481	25.0000	25.48	
*	59 Phenanthrene-d10	188	15.663	15.663	(1.000)	1666734	20.0000		
	60 Phenanthrene	178	15.700	15.700	(1.002)	1809085	25.0000	21.94	
	61 Anthracene	178	15.770	15.770	(1.007)	1943905	25.0000	23.54	
	62 Carbazole	167	16.047	16.047	(1.025)	1387020	25.0000	24.09	
	63 Di-n-butylphthalate	149	16.747	16.747	(1.069)	2414175	25.0000	23.19	
	64 Fluoranthene	202	17.639	17.639	(1.126)	2140710	25.0000	24.68	
	65 Pyrene	202	17.992	17.992	(0.901)	2209020	25.0000	24.14	
$	66 Terphenyl-d14	244	18.291	18.291	(0.916)	1321332	25.0000	22.46	
	67 Butylbenzylphthalate	149	19.167	19.167	(0.959)	1118097	25.0000	24.98	
	68 Benzo(a)anthracene	228	19.953	19.953	(0.999)	1857209	25.0000	24.31	
*	69 Chrysene-d12	240	19.979	19.979	(1.000)	1675752	20.0000		
	70 3,3'-Dichlorobenzidine	252	19.953	19.953	(0.999)	502648	25.0000	23.91	
	71 Chrysene	228	20.017	20.017	(1.002)	1876324	25.0000	24.06	
	72 bis(2-Ethylhexyl)phthalate	149	20.150	20.150	(0.956)	1493223	25.0000	25.04	
	134 Di-n-octylphthalate-d4	153	21.085	21.085	(1.000)	2026355	20.0000		
	73 Di-n-octylphthalate	149	21.096	21.096	(1.000)	2368328	25.0000	24.75	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	
74 Benzo(b)fluoranthene	252	21.609	21.609	(0.976)	1959445	25.0000	26.71	(H)
75 Benzo(k)fluoranthene	252	21.641	21.641	(0.978)	1970824	25.0000	24.39	
187 Total Benzofluoranthenes	252	21.641	21.641	(0.978)	3664023	50.0000	48.58	
76 Benzo(a)pyrene	252	22.057	22.057	(0.996)	1762639	25.0000	25.18	
* 77 Perylene-d12	264	22.137	22.137	(1.000)	1637524	20.0000		
78 Indeno(1,2,3-cd)pyrene	276	23.767	23.767	(1.074)	2091673	25.0000	24.83	
79 Dibenzo(a,h)anthracene	278	23.788	23.788	(1.075)	1694786	25.0000	25.55	
80 Benzo(g,h,i)perylene	276	24.226	24.226	(1.094)	1816240	25.0000	25.21	
90 N-Nitrosodimethylamine	74	3.889	3.889	(0.464)	532245	25.0000	24.67	
103 Pyridine	79	3.851	3.851	(0.459)	931862	25.0000	27.24	
91 Aniline	93	7.938	7.938	(0.946)	956121	25.0000	23.58	
105 1-methylnaphthalene	141	11.747	11.747	(1.127)	1040306	25.0000	24.51	
93 Benzidine	184	17.874	17.874	(0.895)	172170	25.0000	21.07	
111 Azobenzene (1,2-DP-Hydrazine)	77	14.423	14.423	(1.086)	1570394	25.0000	24.54	
143 1,4-Dioxane	88	3.103	3.103	(0.370)	352540	25.0000	23.72	
; 137 d8-1,4-Dioxane	96	3.039	3.039	(0.362)	346030	25.0000	24.88	
144 alpha-Terpineol	59	10.470	10.470	(1.005)	537237	25.0000	24.59	
177 p-Benzoquinone	82	7.083	7.083	(0.680)	187368	25.0000	28.55	
98 Retene	219	18.548	18.548	(0.928)	995435	25.0000	25.20	
99 Perylene	252	22.175	22.175	(1.002)	1513496	25.0000	24.69	
133 Butylatedhydroxytoluene	205	13.440	13.440	(1.012)	1140696	25.0000	27.48	
115 Tributyl Phosphate	99	14.461	14.461	(0.923)	1753043	25.0000	27.50	
116 Dibutyl Phenyl Phosphate	175	16.192	16.192	(1.034)	1196318	25.0000	27.14	
117 Butyl Diphenyl Phosphate	94	17.880	17.880	(0.895)	391455	25.0000	25.37	
118 Triphenyl Phosphate	326	19.482	19.482	(0.975)	383597	25.0000	26.14	
123 Acetophenone	105	9.076	9.076	(1.082)	1059559	25.0000	24.57	
168 Pentachlorobenzene	250	13.638	13.638	(1.027)	542883	25.0000	24.54	
113 Diphenyl Oxide	170	12.538	12.538	(0.944)	986027	25.0000	25.08	
112 Biphenyl	154	12.345	12.345	(0.929)	1333701	25.0000	27.60	
120 2,3,4,6-Tetrachlorophenol	232	13.873	13.873	(1.044)	388804	25.0000	26.97	
151 1,2,4,5-Tetrachlorobenzene	216	11.907	11.907	(0.896)	595688	25.0000	24.15	
110 Tetrachloroguaiacol	247	15.599	15.599	(0.996)	452880	50.0000	51.78	
109 3,4,5-Trichloroguaiacol	213	13.969	13.969	(0.892)	254783	25.0000	26.76	
181 3,4,6-Trichloroguaiacol	211	14.087	14.087	(1.680)	287113	25.0000	27.47	
108 4,5,6-Trichloroguaiacol	213	15.000	15.000	(1.129)	261306	25.0000	27.66	
184 3,4-Dichloroguaiacol	192	12.425	12.425	(1.482)	267135	25.0000	26.92	
107 4,5-Dichloroguaiacol	192	13.205	13.205	(0.994)	666413	50.0000	54.00	
182 4,6-Dichloroguaiacol	192	13.205	13.205	(1.575)	659838	50.0000	54.51	
185 4-Chloroguaiacol	115	11.336	11.336	(1.352)	178588	12.5000	13.87	
186 Carbaryl	144	16.459	16.459	(1.051)	1022156	25.0000	26.54	
178 2-Benzyl-4-Chlorophenol	218	16.411	16.411	(1.048)	366709	25.0000	26.56	
106 Guaiacol	124	9.332	9.332	(1.113)	614508	25.0000	25.79	
188 2,6-Dichlorophenol	162	10.598	10.598	(1.264)	552166	25.0000	27.22	
189 N-Nitrosomethylethylamine	88	5.620	5.620	(0.670)	391699	25.0000	25.88	

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061301.D
Lab Smp Id: IC250306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC250306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	458117	0.00
27 Naphthalene-d8	1718341	859170	3436682	1718341	0.00
42 Acenaphthene-d10	1010041	505020	2020082	1010041	0.00
59 Phenanthrene-d10	1666734	833367	3333468	1666734	0.00
69 Chrysene-d12	1675752	837876	3351504	1675752	0.00
134 Di-n-octylphthala	2026355	1013178	4052710	2026355	0.00
77 Perylene-d12	1637524	818762	3275048	1637524	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.00
27 Naphthalene-d8	10.42	9.92	10.92	10.42	0.00
42 Acenaphthene-d10	13.29	12.79	13.79	13.29	0.00
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	0.00
69 Chrysene-d12	19.98	19.48	20.48	19.98	0.00
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	0.00
77 Perylene-d12	22.14	21.64	22.64	22.14	0.00

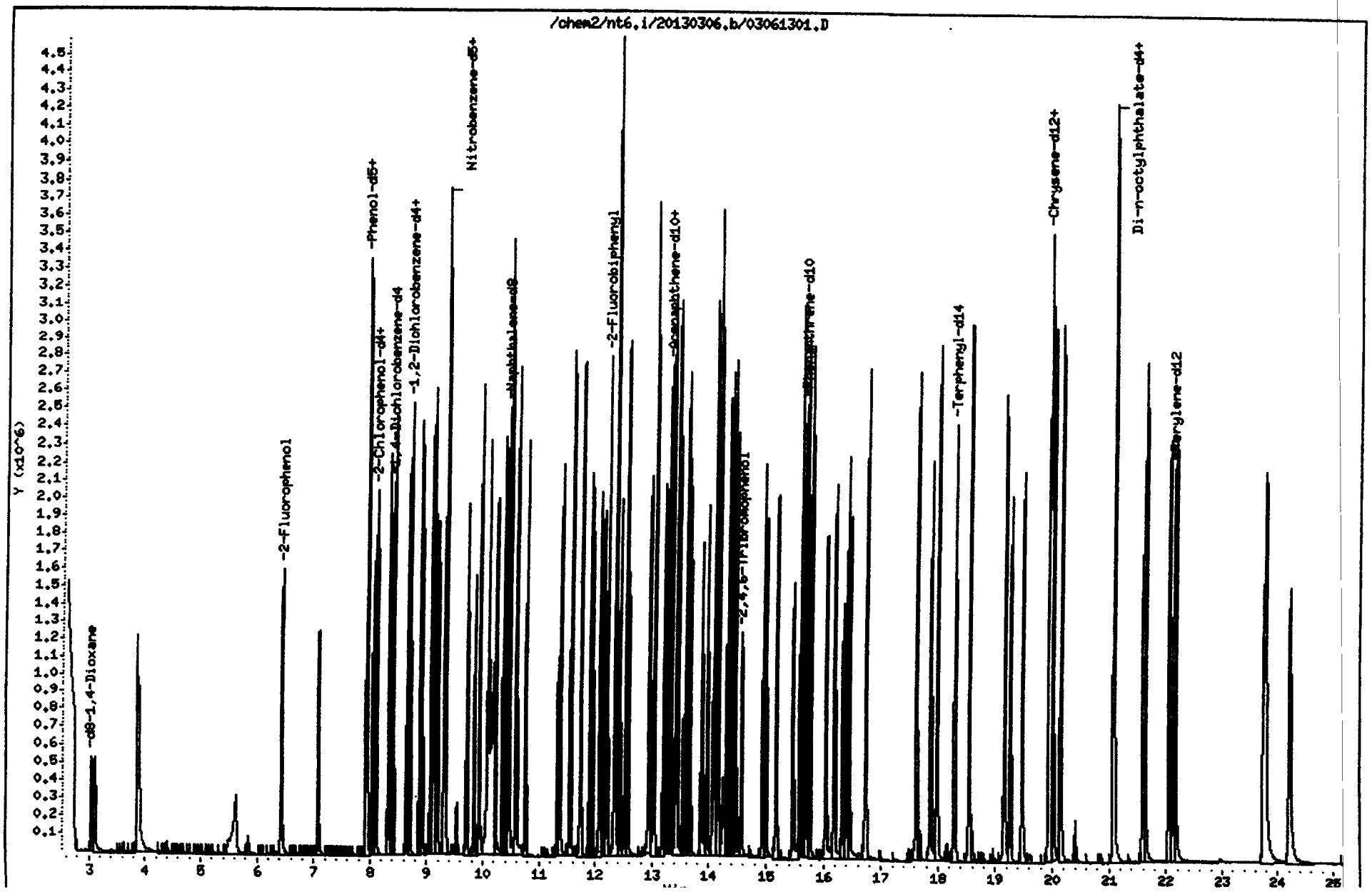
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061301.D
Date : 06-MAR-2013 12:16
Client ID: IC250306
Sample Info: IC250306

Instrument: nt6.i

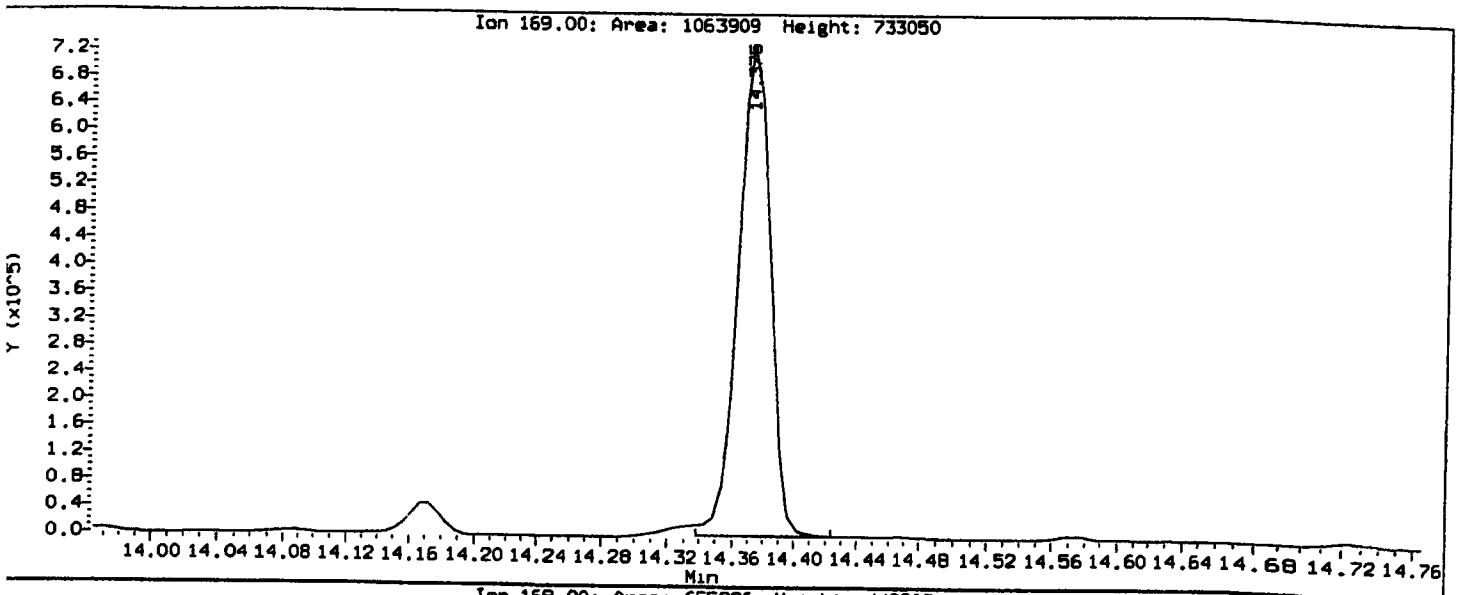
Operator: JZ
Column diameter: 0.32

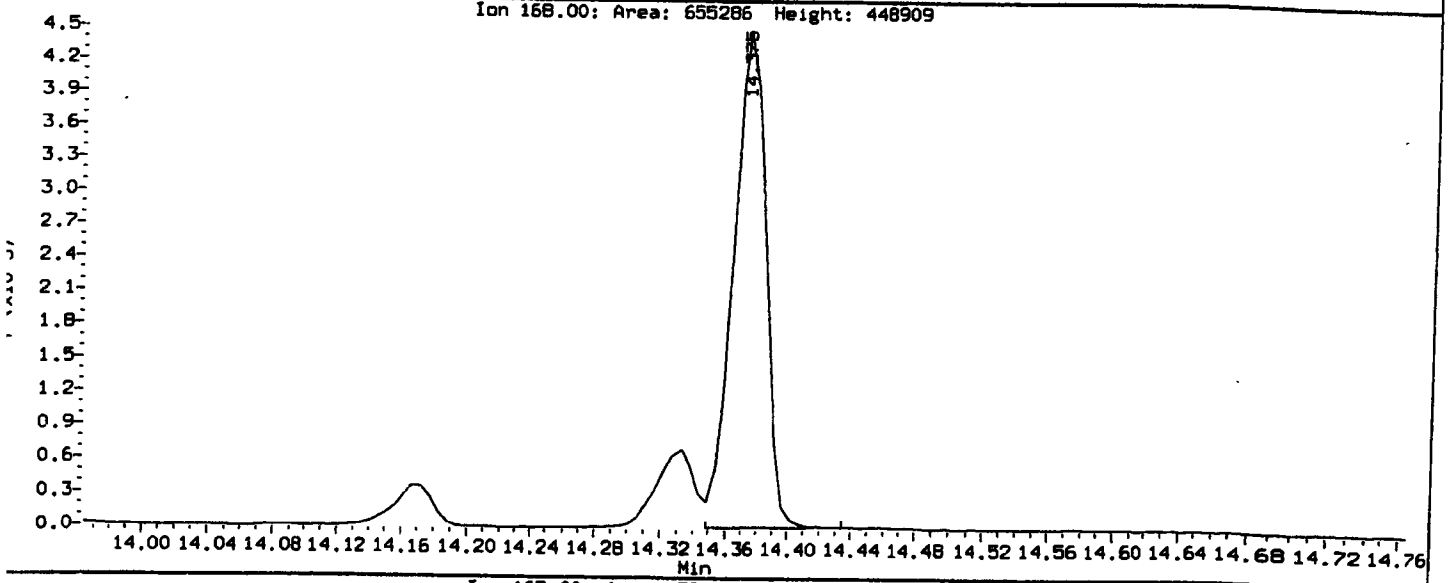
Column phase: ZB-5msi

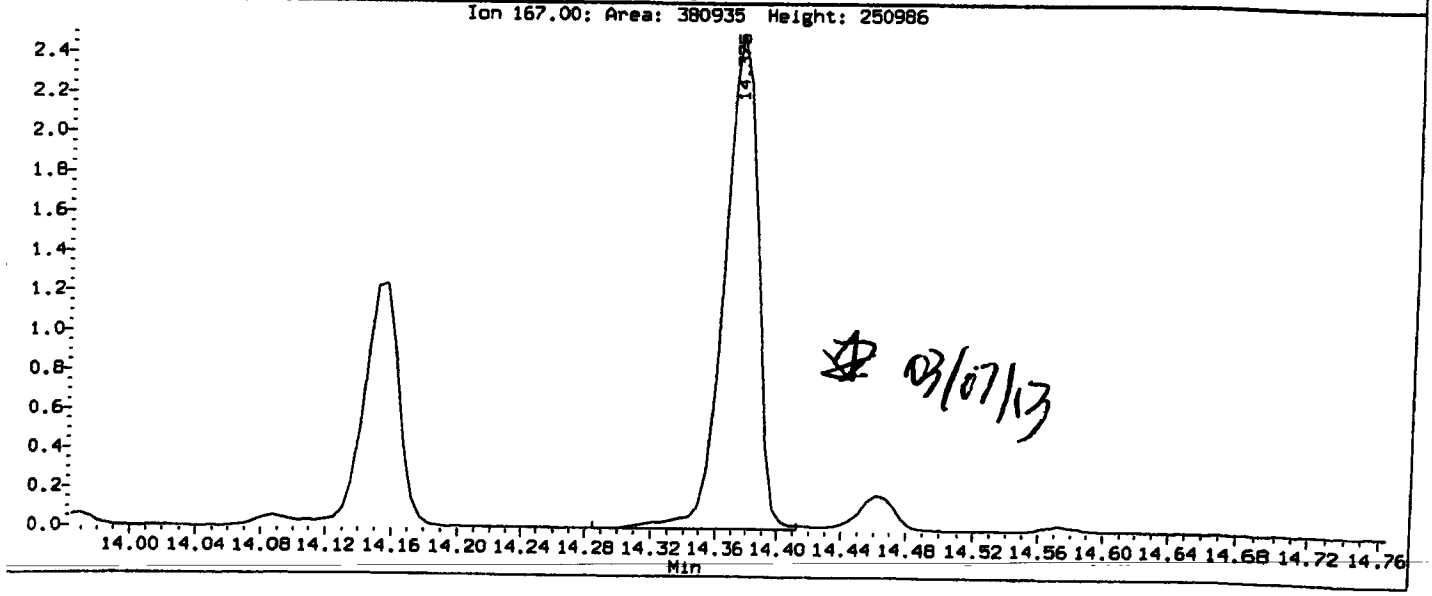


Data File: /chem2/nt6.i/20130306.b/03061301.D
Injection Date: 06-MAR-2013 12:16
Instrument: nt6.i
Client Sample ID: IC250306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



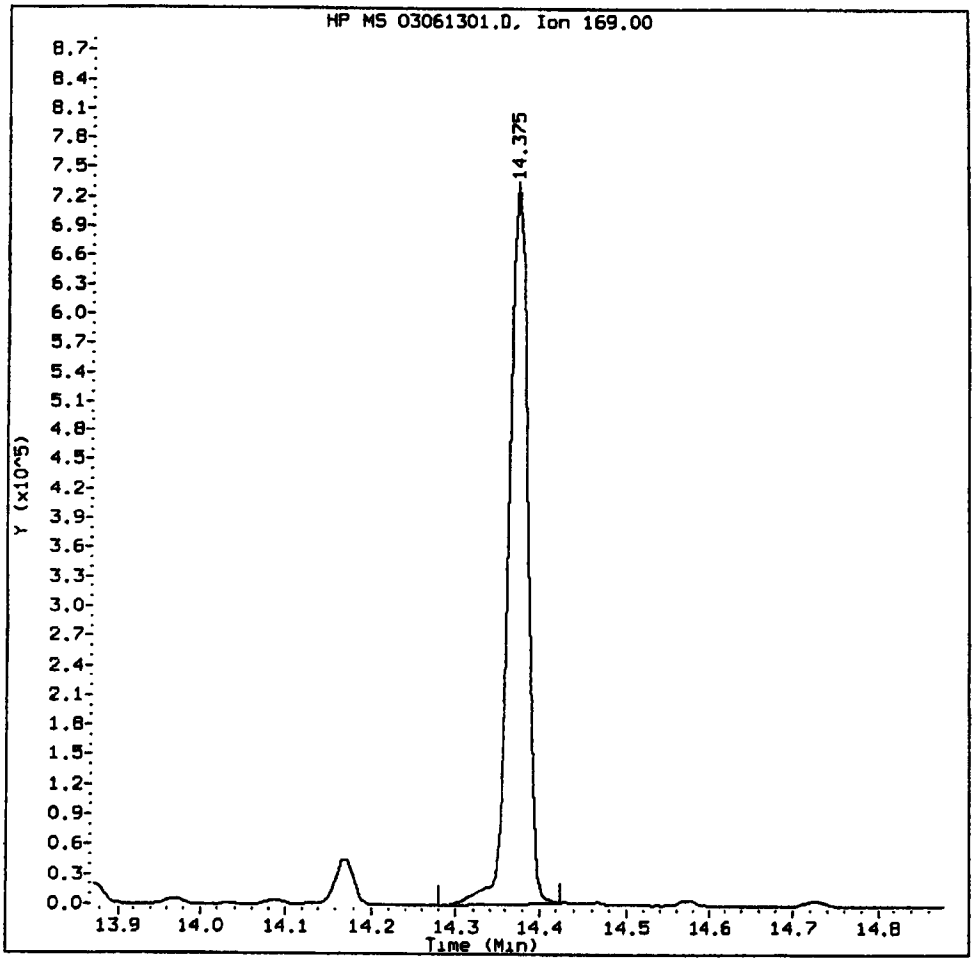




03/07/13

IC250306, /chem2/nt6.i/20130306.b/03061301.D

N-Nitrosodiphenylamine Amount: 23.31 Area: 1086875



MANUAL INTEGRATION for N-Nitrosodiphenylamine

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061301.D

Lab ID: IC250306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS
19.953	3,3'-Dichlorobenzidine and Benzo(a)anthracene

Checked OK

☆ 03/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061306.D
Lab Smp Id: IC40306 Client Smp ID: IC400306
Inj Date : 06-MAR-2013 15:09
Operator : JZ Inst ID: nt6.i
Smp Info : IC40306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.434	6.432	(0.767)	1107900	40.0000	36.94
$ 2	Phenol-d5	99	7.936	7.933	(0.946)	1227948	40.0000	34.98
3	Phenol	94	7.957	7.954	(0.949)	1375693	40.0000	37.22
$ 5	2-Chlorophenol-d4	132	8.085	8.082	(0.964)	1043987	40.0000	35.18
4	Bis(2-Chloroethyl)ether	93	8.053	8.050	(0.960)	1185638	40.0000	36.93
6	2-Chlorophenol	128	8.112	8.109	(0.968)	1120333	40.0000	37.88
7	1,3-Dichlorobenzene	146	8.325	8.328	(0.993)	1273280	40.0000	36.86
* 8	1,4-Dichlorobenzene-d4	152	8.384	8.387	(1.000)	462843	20.0000	
9	1,4-Dichlorobenzene	146	8.411	8.408	(1.003)	1227217	40.0000	36.50
$ 10	1,2-Dichlorobenzene-d4	152	8.683	8.681	(1.036)	704353	40.0000	33.72
12	1,2-Dichlorobenzene	146	8.705	8.707	(1.038)	1144025	40.0000	35.60
11	Benzyl alcohol	108	8.662	8.654	(1.033)	741756	40.0000	36.83
14	2,2'-oxybis(1-Chloropropane)	45	8.913	8.916	(1.063)	1890709	40.0000	37.07
13	2-Methylphenol	108	8.886	8.878	(1.060)	1081384	40.0000	38.58
17	Hexachloroethane	117	9.191	9.193	(1.096)	503186	40.0000	37.00
16	N-Nitroso-di-n-propylamine	70	9.137	9.135	(1.090)	892126	40.0000	37.03
15	4-Methylphenol	108	9.116	9.108	(1.087)	1069226	40.0000	38.58
$ 18	Nitrobenzene-d5	82	9.314	9.311	(0.893)	1230848	40.0000	35.61
19	Nitrobenzene	77	9.346	9.343	(0.896)	1189654	40.0000	35.96
20	Isophorone	82	9.720	9.717	(0.932)	2121281	40.0000	36.79
21	2-Nitrophenol	139	9.853	9.851	(0.945)	633587	40.0000	41.39
22	2,4-Dimethylphenol	107	9.949	9.947	(0.954)	1112897	40.0000	38.44
23	Bis(2-Chloroethoxy)methane	93	10.099	10.096	(0.969)	1370952	40.0000	36.24
24	Benzoic acid	105	10.249	10.198	(0.983)	2127913	80.0000	84.97
25	2,4-Dichlorophenol	162	10.233	10.230	(0.982)	856137	40.0000	38.41
26	1,2,4-Trichlorobenzene	180	10.366	10.363	(0.994)	1010268	40.0000	36.41
* 27	Naphthalene-d8	136	10.425	10.422	(1.000)	1722510	20.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	10.457	10.454	(1.003)	2641007	40.0000	40.18
29 4-Chloroaniline	127	10.591	10.588	(1.016)	820986	40.0000	39.50 (M)
30 Hexachlorobutadiene	225	10.767	10.764	(1.033)	622003	40.0000	36.84
31 4-Chloro-3-methylphenol	107	11.387	11.384	(1.092)	955539	40.0000	40.36
32 2-Methylnaphthalene	141	11.568	11.571	(1.110)	1465439	40.0000	34.98
33 Hexachlorocyclopentadiene	237	11.947	11.950	(0.899)	665905	40.0000	41.58
34 2,4,6-Trichlorophenol	196	12.081	12.078	(0.910)	682992	40.0000	40.76
35 2,4,5-Trichlorophenol	196	12.134	12.137	(0.914)	693411	40.0000	41.95
$ 36 2-Fluorobiphenyl	172	12.209	12.212	(0.919)	2125857	40.0000	33.78
37 2-Chloronaphthalene	162	12.359	12.356	(0.930)	1623373	40.0000	39.49
38 2-Nitroaniline	65	12.583	12.580	(0.947)	592401	40.0000	40.20
39 Dimethylphthalate	163	12.952	12.949	(0.975)	2195089	40.0000	36.59
40 Acenaphthylene	152	13.032	13.034	(0.981)	2734694	40.0000	34.78
41 2,6-Dinitrotoluene	165	13.048	13.045	(0.982)	488547	40.0000	38.11
* 42 Acenaphthene-d10	164	13.283	13.286	(1.000)	996854	20.0000	
43 3-Nitroaniline	138	13.262	13.264	(0.998)	342573	40.0000	41.36 (M)
44 Acenaphthene	153	13.336	13.334	(1.004)	1794261	40.0000	35.24
45 2,4-Dinitrophenol	184	13.433	13.424	(1.011)	774315	80.0000	84.57
46 Dibenzofuran	168	13.598	13.595	(1.024)	2363050	40.0000	35.49
47 4-Nitrophenol	109	13.545	13.547	(1.020)	262854	40.0000	40.36
48 2,4-Dinitrotoluene	165	13.678	13.676	(1.030)	690237	40.0000	39.81
50 Diethylphthalate	149	14.106	14.098	(1.062)	2067081	40.0000	37.19
49 Fluorene	166	14.154	14.156	(1.066)	1769346	40.0000	39.26
51 4-Chlorophenyl-phenylether	204	14.170	14.172	(1.067)	1029522	40.0000	35.23
52 4-Nitroaniline	138	14.261	14.252	(1.074)	391191	40.0000	40.01
53 4,6-Dinitro-2-methylphenol	198	14.341	14.333	(0.916)	964307	80.0000	81.99
54 N-Nitrosodiphenylamine	169	14.378	14.375	(0.918)	1576736	40.0000	34.50 (M)
55 2,4,6-Tribromophenol	330	14.576	14.573	(1.097)	295587	40.0000	37.50
56 4-Bromophenyl-phenylether	248	14.950	14.952	(0.955)	672353	40.0000	37.51
57 Hexachlorobenzene	284	15.179	15.182	(0.969)	671036	40.0000	36.31
58 Pentachlorophenol	266	15.473	15.470	(0.988)	443042	40.0000	40.64
59 Phenanthrene-d10	188	15.660	15.663	(1.000)	1633268	20.0000	
60 Phenanthrene	178	15.703	15.700	(1.003)	2729819	40.0000	33.78
61 Anthracene	178	15.772	15.770	(1.007)	2745113	40.0000	33.93
62 Carbazole	167	16.045	16.047	(1.025)	2297956	40.0000	40.37
63 Di-n-butylphthalate	149	16.745	16.747	(1.069)	3399020	40.0000	33.32
64 Fluoranthene	202	17.631	17.639	(1.126)	3061055	40.0000	36.01
65 Pyrene	202	17.995	17.992	(0.901)	3123892	40.0000	35.65
66 Terphenyl-d14	244	18.289	18.291	(0.915)	1945507	40.0000	34.55
67 Butylbenzylphthalate	149	19.159	19.167	(0.959)	1609814	40.0000	37.57
68 Benzo(a)anthracene	228	19.950	19.953	(0.999)	2678240	40.0000	36.61
69 Chrysene-d12	240	19.977	19.979	(1.000)	1604385	20.0000	
70 3,3'-Dichlorobenzidine	252	19.945	19.953	(0.998)	740264	40.0000	36.78
71 Chrysene	228	20.014	20.017	(1.002)	2694539	40.0000	36.09
72 bis(2-Ethylhexyl)phthalate	149	20.142	20.150	(0.956)	2120847	40.0000	37.84
134 Di-n-octylphthalate-d4	153	21.072	21.085	(1.000)	1904606	20.0000	
73 Di-n-octylphthalate	149	21.088	21.096	(1.001)	3383339	40.0000	37.62

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	21.606	21.609	(0.976)	2694359	40.0000	38.62
75 Benzo(k)fluoranthene	252	21.638	21.641	(0.978)	3090941	40.0000	42.35
187 Total Benzofluoranthenes	252	21.638	21.641	(0.978)	5374417	80.0000	72.61
76 Benzo(a)pyrene	252	22.049	22.057	(0.996)	2636463	40.0000	38.39
77 Perylene-d12	264	22.130	22.137	(1.000)	1606852	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	23.759	23.767	(1.074)	3212593	40.0000	38.87
79 Dibenzo(a,h)anthracene	278	23.786	23.788	(1.075)	2558263	40.0000	39.31
80 Benzo(g,h,i)perylene	276	24.224	24.226	(1.095)	2850182	40.0000	40.32
90 N-Nitrosodimethylamine	74	3.902	3.889	(0.465)	837250	40.0000	38.41
103 Pyridine	79	3.854	3.851	(0.460)	1286192	40.0000	37.21
91 Aniline	93	7.941	7.938	(0.947)	1374340	40.0000	33.56
105 1-methylnaphthalene	141	11.744	11.747	(1.127)	1506021	40.0000	35.39
93 Benzidine	184	17.872	17.874	(0.895)	284218	40.0000	36.33
111 Azobenzene (1,2-DP-Hydrazine)	77	14.426	14.423	(1.086)	2252849	40.0000	35.67
143 1,4-Dioxane	88	3.106	3.103	(0.370)	556372	40.0000	37.05
137 d8-1,4-Dioxane	96	3.047	3.039	(0.363)	543400	40.0000	38.66
144 alpha-Terpineol	59	10.473	10.470	(1.005)	797649	40.0000	36.41
177 p-Benzoquinone	82	7.086	7.083	(0.680)	276763	40.0000	42.07
98 Retene	219	18.540	18.548	(0.928)	1393516	40.0000	36.85
99 Perylene	252	22.167	22.175	(1.002)	2188116	40.0000	36.37
133 Butylatedhydroxytoluene	205	13.443	13.440	(1.012)	1474910	40.0000	39.45
115 Tributyl Phosphate	99	14.469	14.461	(0.924)	2401166	40.0000	40.45
116 Dibutyl Phenyl Phosphate	175	16.194	16.192	(1.034)	1669656	40.0000	38.66
117 Butyl Diphenyl Phosphate	94	17.877	17.880	(0.895)	545870	40.0000	36.95
118 Triphenyl Phosphate	326	19.480	19.482	(0.975)	546364	40.0000	38.89
123 Acetophenone	105	9.079	9.076	(1.083)	1603289	40.0000	36.80
168 Pentachlorobenzene	250	13.641	13.638	(1.027)	788366	40.0000	36.11
113 Diphenyl Oxide	170	12.535	12.538	(0.944)	1385867	40.0000	35.71
112 Biphenyl	154	12.343	12.345	(0.929)	1797394	40.0000	39.55
120 2,3,4,6-Tetrachlorophenol	232	13.871	13.873	(1.044)	600924	40.0000	42.23
151 1,2,4,5-Tetrachlorobenzene	216	11.910	11.907	(0.897)	895114	40.0000	36.76
110 Tetrachloroguaiacol	247	15.601	15.599	(0.996)	658192	80.0000	76.80
109 3,4,5-Trichloroguaiacol	213	13.967	13.969	(0.892)	357175	40.0000	38.28
181 3,4,6-Trichloroguaiacol	211	14.090	14.087	(1.680)	388170	40.0000	36.75
108 4,5,6-Trichloroguaiacol	213	14.998	15.000	(1.129)	368030	40.0000	39.47
184 3,4-Dichloroguaiacol	192	12.423	12.425	(1.482)	376077	40.0000	37.51
107 4,5-Dichloroguaiacol	192	13.208	13.205	(0.994)	919744	80.0000	75.51
182 4,6-Dichloroguaiacol	192	13.208	13.205	(1.575)	936857	80.0000	76.60
185 4-Chloroguaiacol	115	11.338	11.336	(1.352)	258479	20.0000	19.88
186 Carbaryl	144	16.462	16.459	(1.051)	1517584	40.0000	40.21
178 2-Benzyl-4-Chlorophenol	218	16.413	16.411	(1.048)	512701	40.0000	37.90
106 Guaiacol	124	9.335	9.332	(1.113)	843648	40.0000	35.04
188 2,6-Dichlorophenol	162	10.601	10.598	(1.264)	758794	40.0000	37.03
189 N-Nitrosomethylethylamine	88	5.622	5.620	(0.671)	579162	40.0000	37.87

)C Flag Legend

1 - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061306.D
Lab Smp Id: IC40306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC400306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

	COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8	1,4-Dichlorobenze	458117	229058	916234	462843	1.03
27	Naphthalene-d8	1718341	859170	3436682	1722510	0.24
42	Acenaphthene-d10	1010041	505020	2020082	996854	-1.31
59	Phenanthrene-d10	1666734	833367	3333468	1633268	-2.01
69	Chrysene-d12	1675752	837876	3351504	1604385	-4.26
134	Di-n-octylphthala	2026355	1013178	4052710	1904606	-6.01
77	Perylene-d12	1637524	818762	3275048	1606852	-1.87

	COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8	1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27	Naphthalene-d8	10.42	9.92	10.92	10.42	0.03
42	Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.02
59	Phenanthrene-d10	15.66	15.16	16.16	15.66	-0.02
69	Chrysene-d12	19.98	19.48	20.48	19.98	-0.01
134	Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.06
77	Perylene-d12	22.14	21.64	22.64	22.13	-0.04

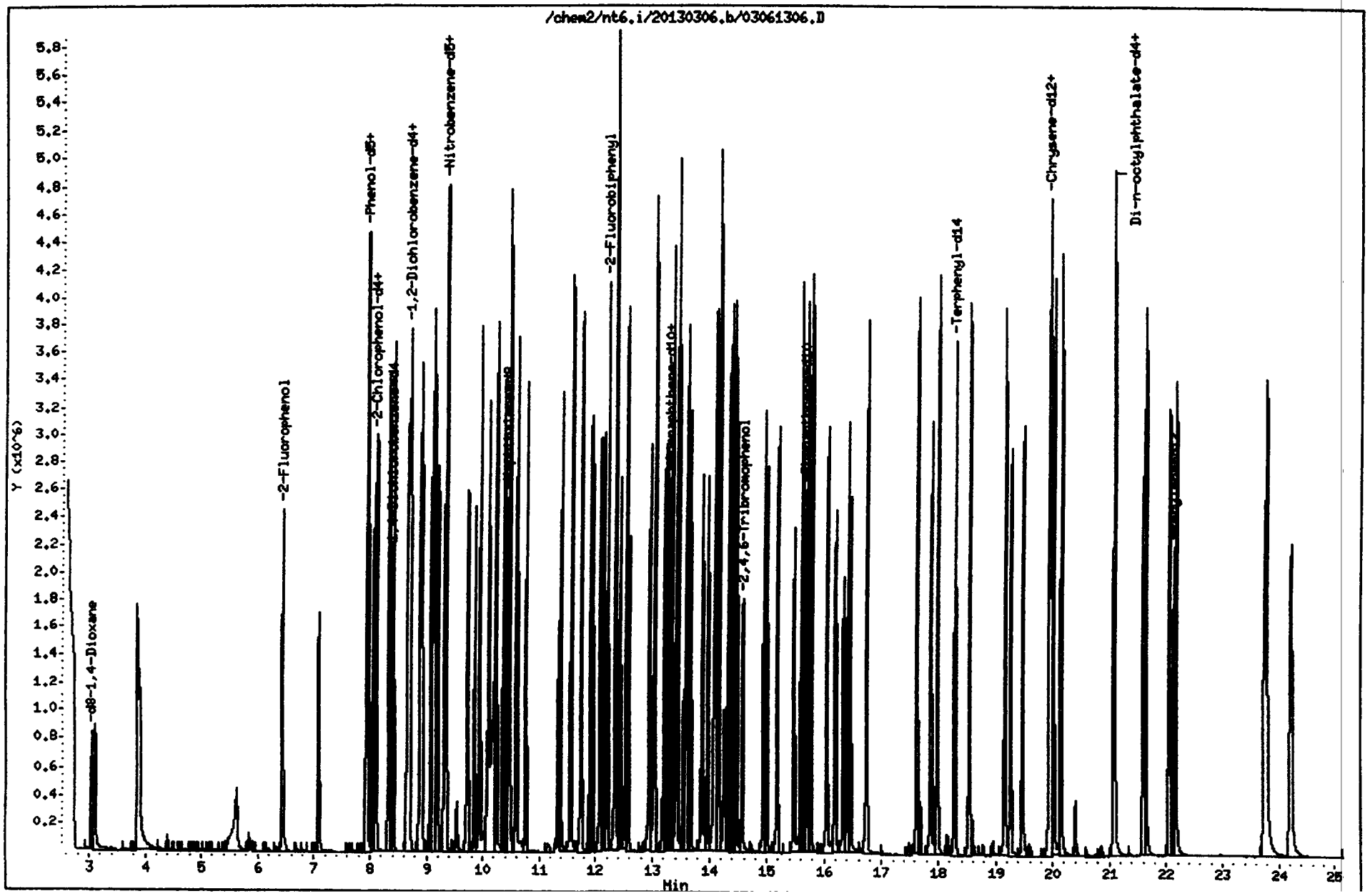
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061306.D
Date : 06-MAR-2013 18:09
Client ID: IC400306
Sample Info: IC40306,

Instrument: nt6.i

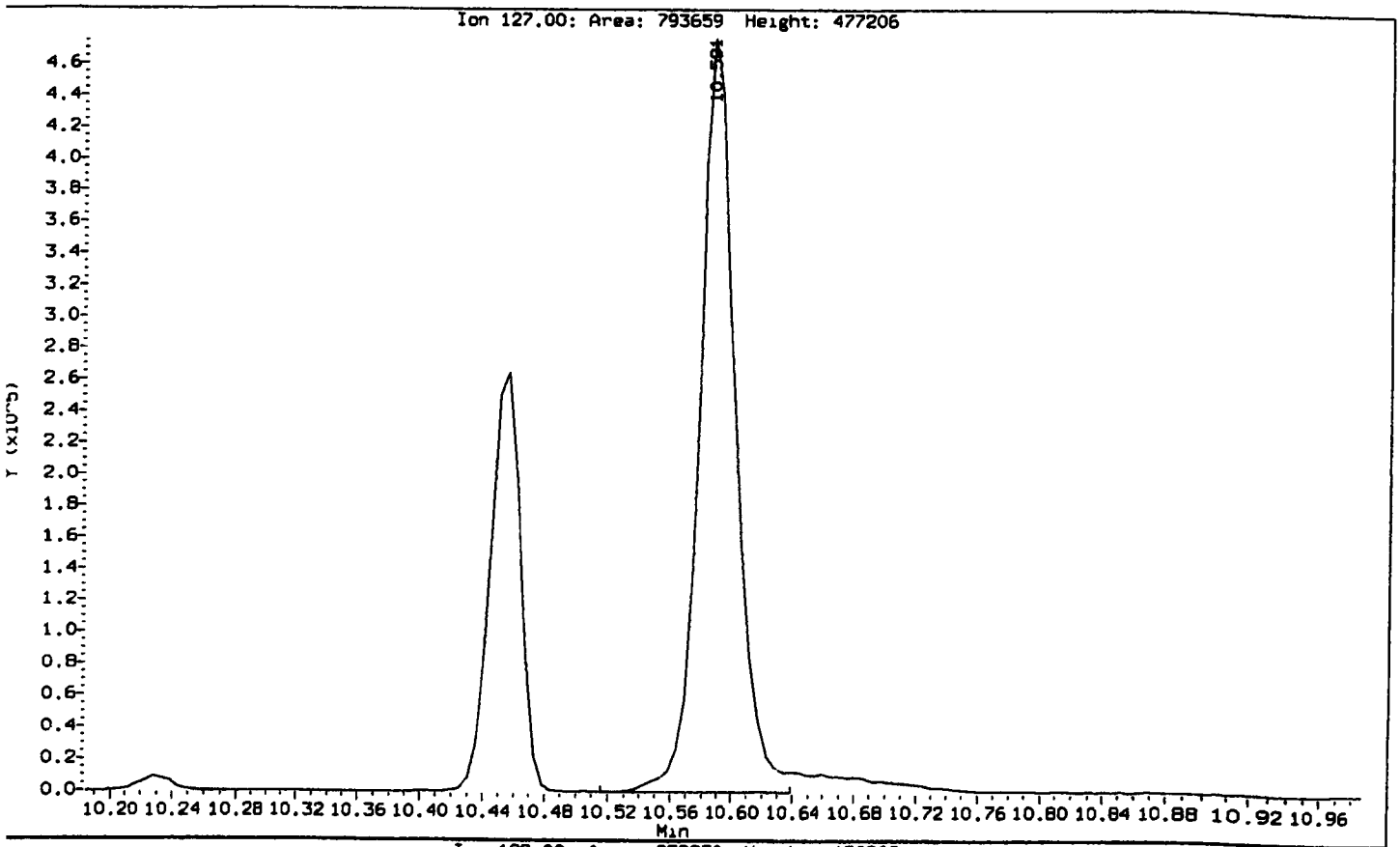
Operator: JZ
Column diameter: 0.32

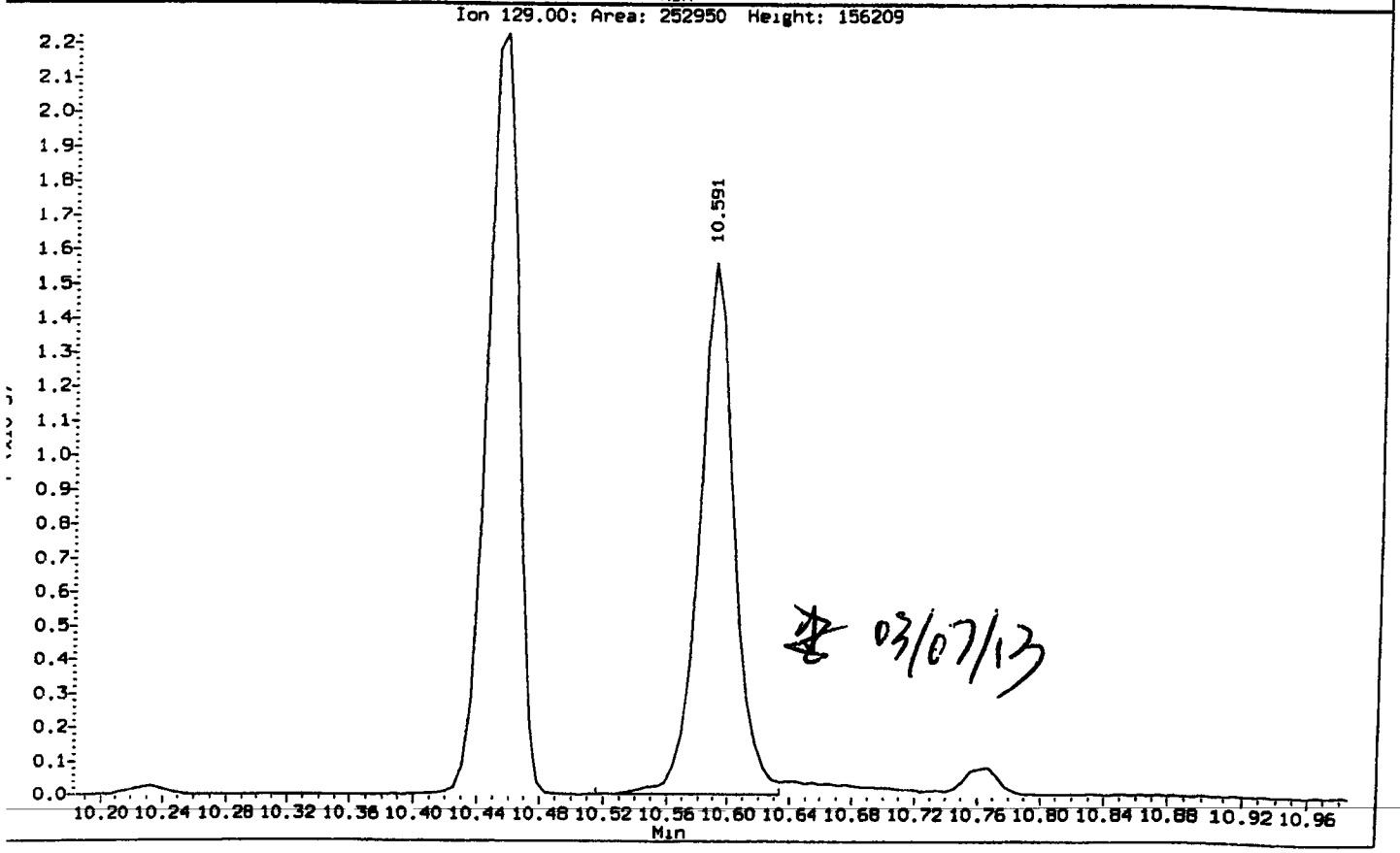
Column phase: ZB-5msi



Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

Compound: 4-Chloroaniline
CAS Number: 106-47-8

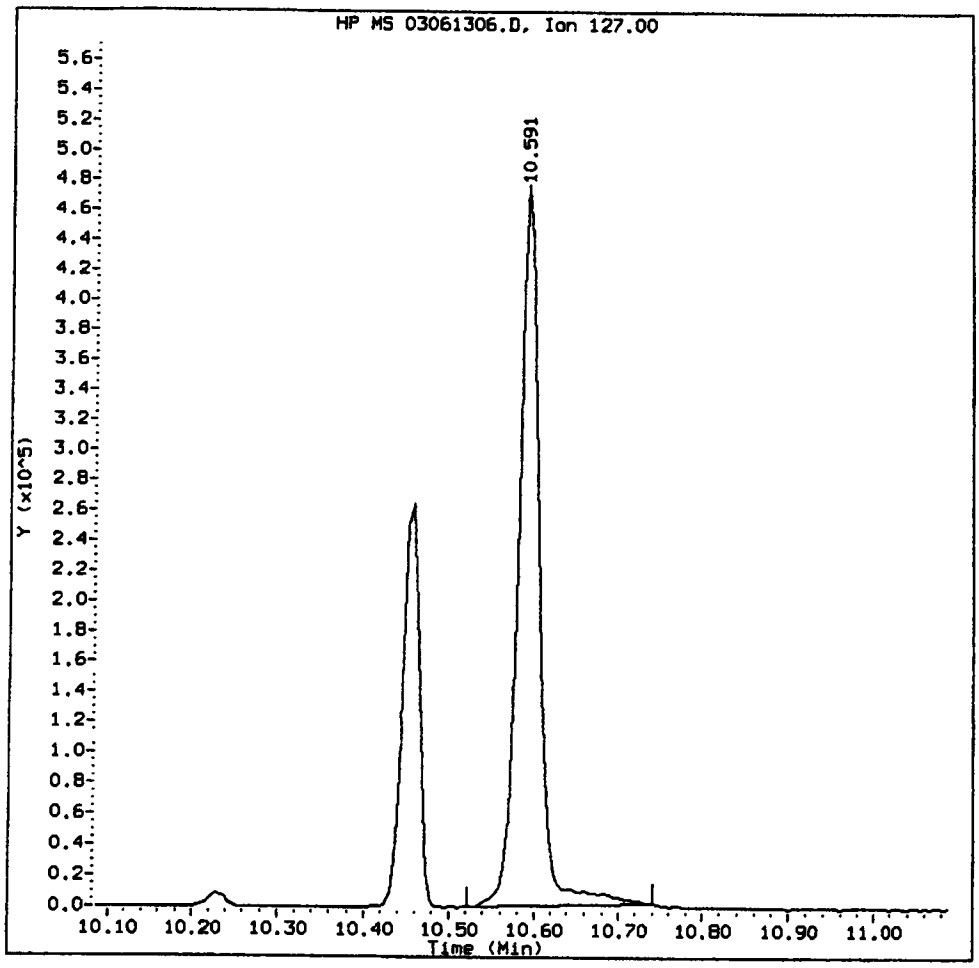




03/07/13

IC40306, /chem2/nt6.i/20130306.b/03061306.D

4-Chloroaniline Amount: 39.50 Area: 820986



MANUAL INTEGRATION for 4-Chloroaniline

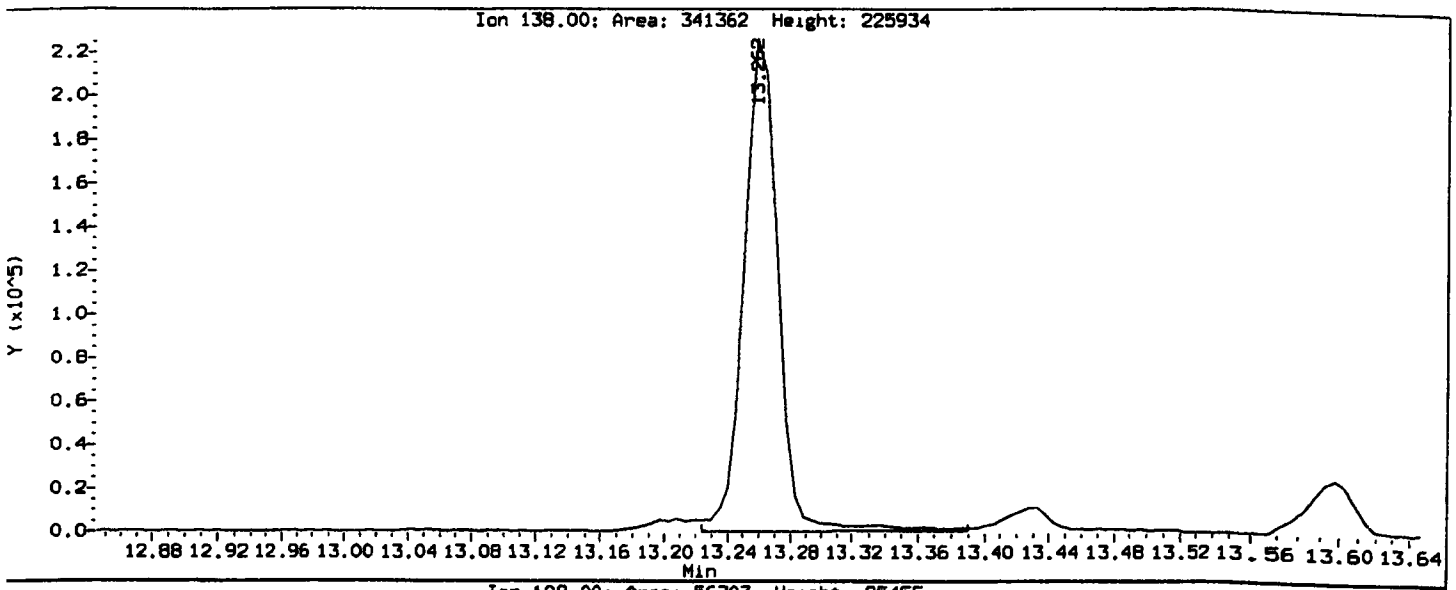
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

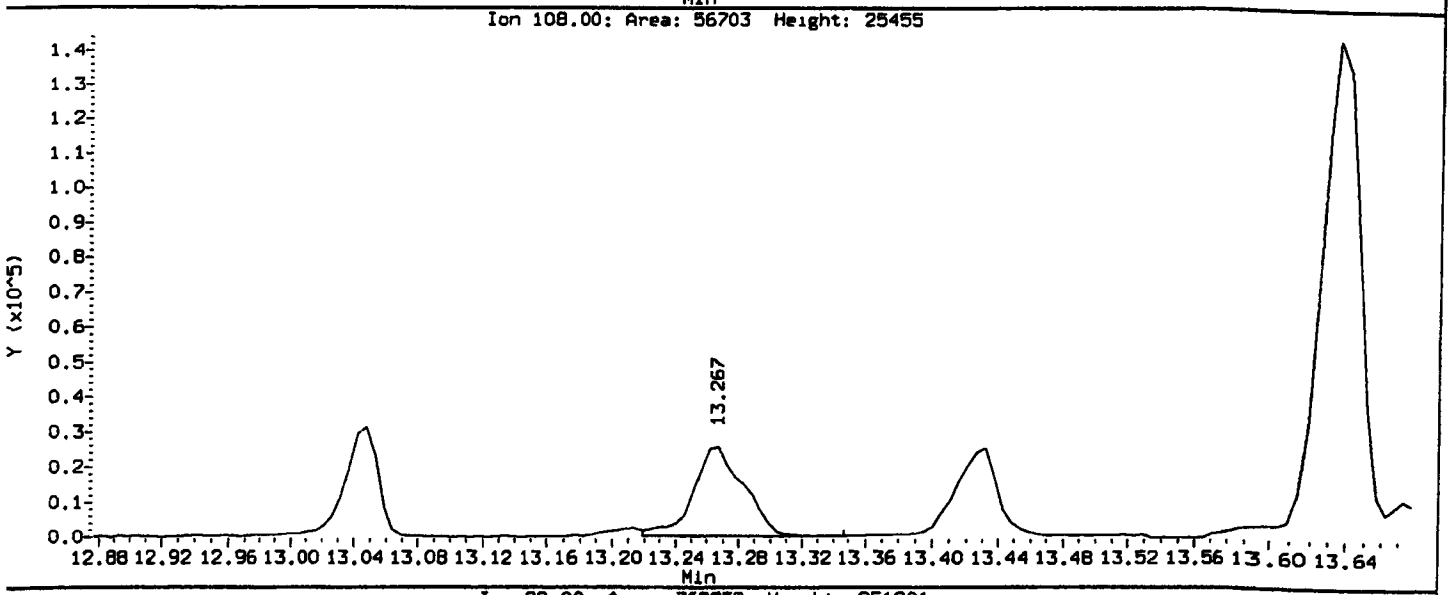
5. Other _____

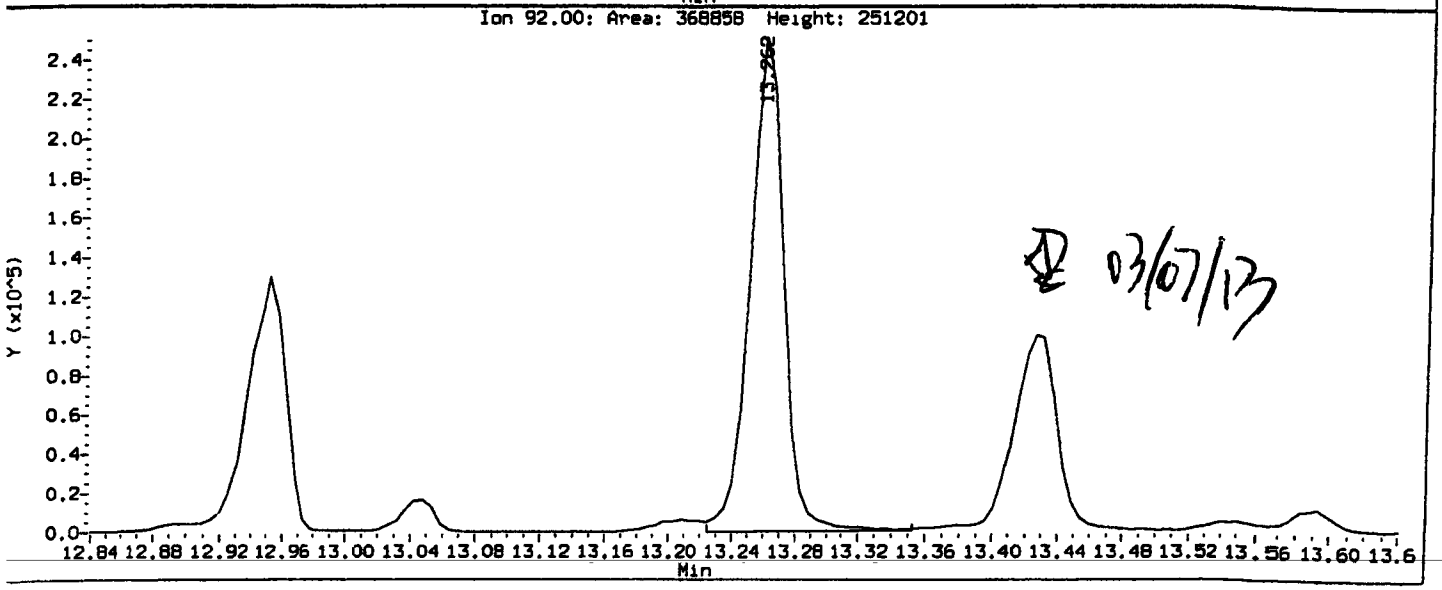
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

Compound: 3-Nitroaniline
CAS Number: 99-09-2



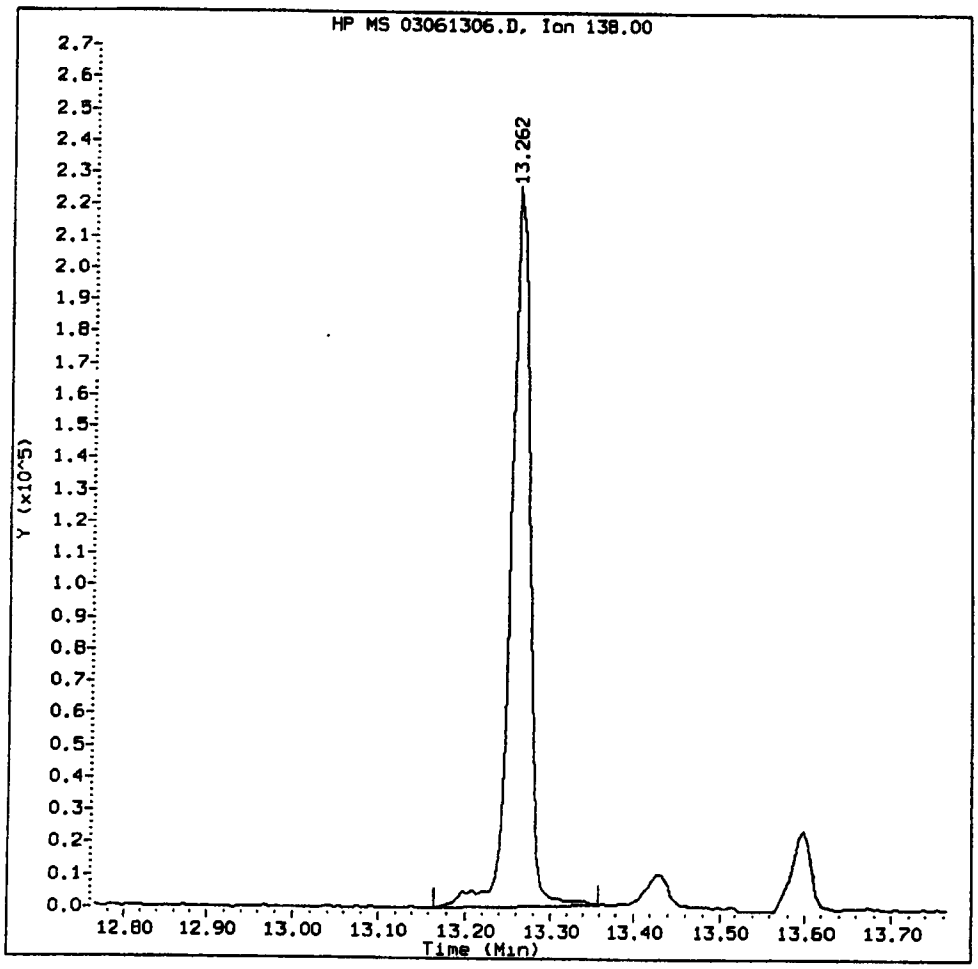




D 03/07/13

IC40306, /chem2/nt6.i/20130306.b/03061306.D

3-Nitroaniline Amount: 41.36 Area: 342573



MANUAL INTEGRATION for 3-Nitroaniline

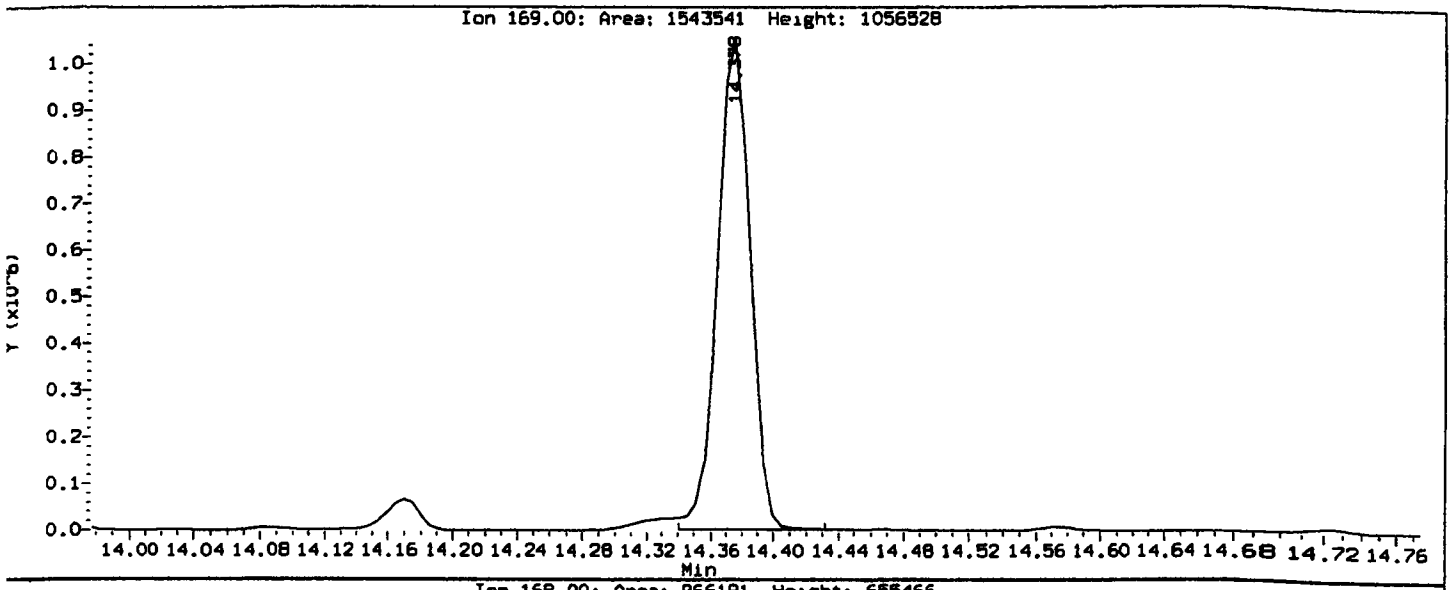
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

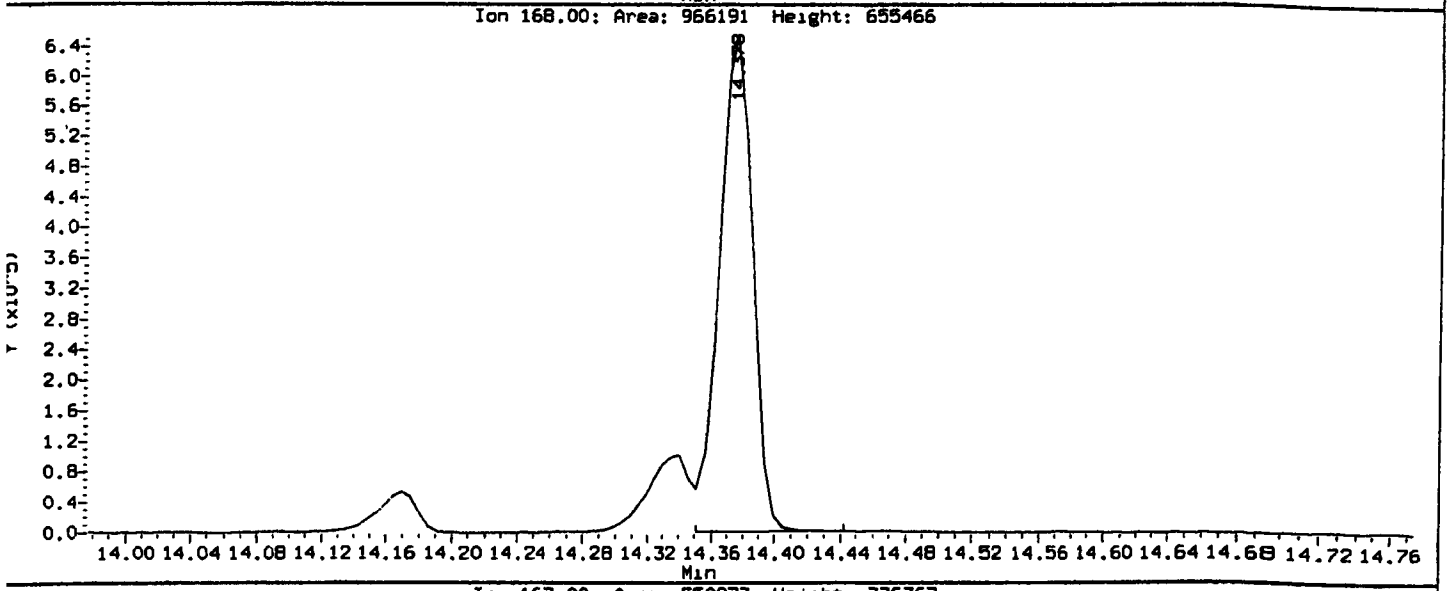
5. Other _____

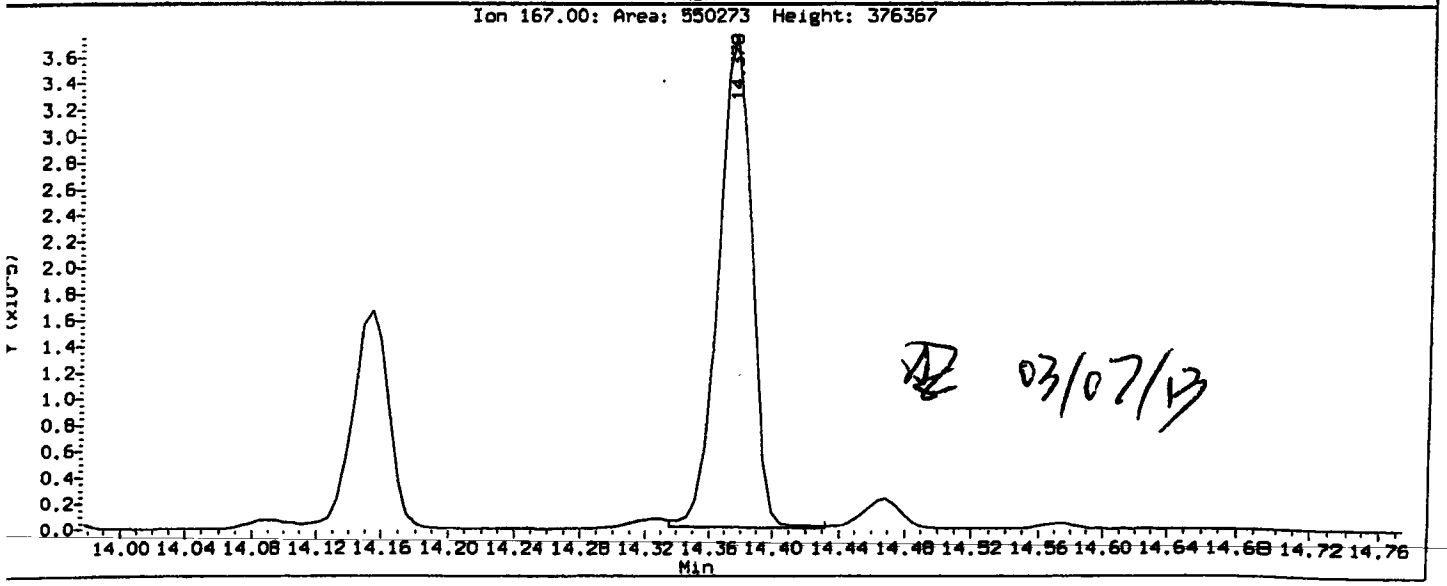
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



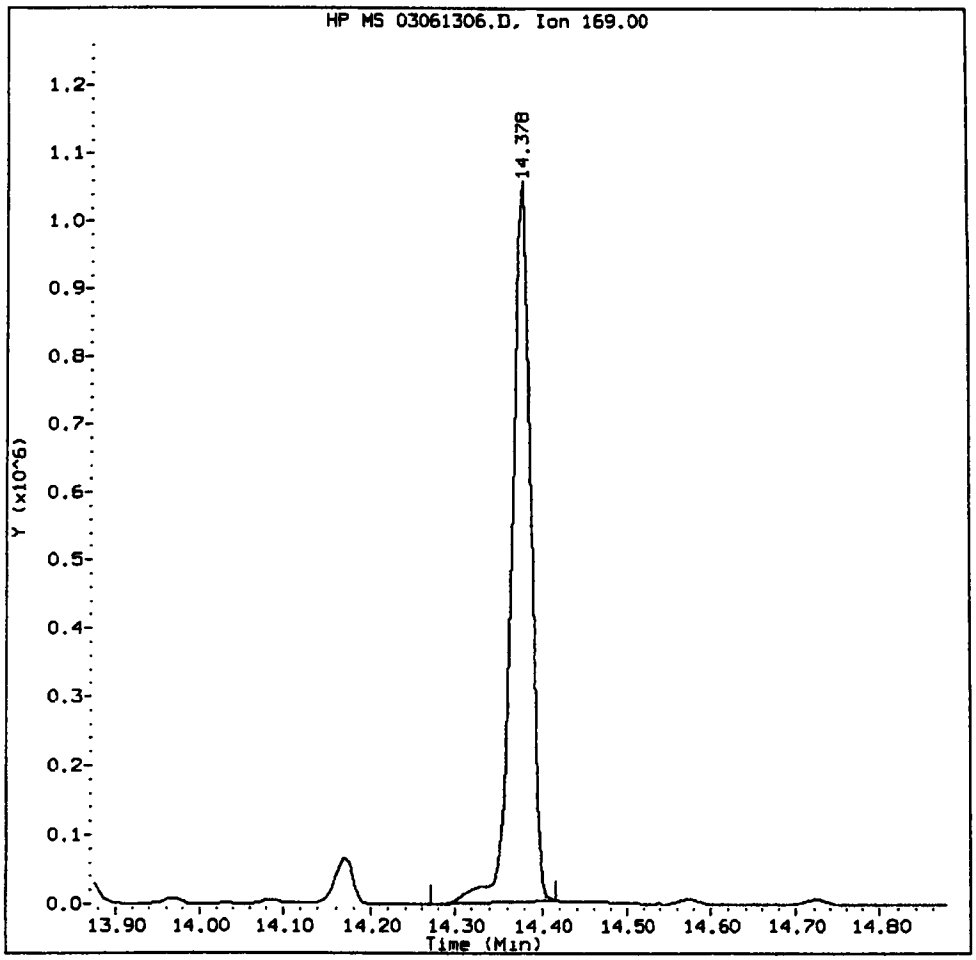




03/07/13

IC40306, /chem2/nt6.i/20130306.b/03061306.D

N-Nitrosodiphenylamine Amount: 34.50 Area: 1576736



MANUAL INTEGRATION for N-Nitrosodiphenylamine

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061306.D

Lab ID: IC40306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem2/nt6.i/20130306.b/03061307.D
Report Date: 07-Mar-2013 11:56

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061307.D
Lab Smp Id: IC60306 Client Smp ID: IC600306
Inj Date : 06-MAR-2013 15:43
Operator : JZ Inst ID: nt6.i
Smp Info : IC60306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

JZ 03/07/13

AMOUNTS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 2-Fluorophenol	112	6.442	6.432	(0.768)	1543969	60.0000	52.58
2 Phenol-d5	99	7.949	7.933	(0.948)	1704303	60.0000	49.59
3 Phenol	94	7.970	7.954	(0.950)	1858925	60.0000	51.37
5 2-Chlorophenol-d4	132	8.093	8.082	(0.965)	1446368	60.0000	49.78
4 Bis(2-Chloroethyl)ether	93	8.061	8.050	(0.961)	1613442	60.0000	51.34
6 2-Chlorophenol	128	8.114	8.109	(0.968)	1499188	60.0000	51.78
7 1,3-Dichlorobenzene	146	8.328	8.328	(0.993)	1682990	60.0000	49.77
8 1,4-Dichlorobenzene-d4	152	8.387	8.387	(1.000)	453135	20.0000	
9 1,4-Dichlorobenzene	146	8.414	8.408	(1.003)	1620328	60.0000	49.23
10 1,2-Dichlorobenzene-d4	152	8.686	8.681	(1.036)	922731	60.0000	45.12
12 1,2-Dichlorobenzene	146	8.707	8.707	(1.038)	1487370	60.0000	47.27
11 Benzyl alcohol	108	8.665	8.654	(1.033)	1046357	60.0000	53.07
14 2,2'-oxybis(1-Chloropropane)	45	8.916	8.916	(1.063)	2570296	60.0000	51.47
13 2-Methylphenol	108	8.889	8.878	(1.060)	1478529	60.0000	53.88
17 Hexachloroethane	117	9.194	9.193	(1.096)	680617	60.0000	51.12
16 N-Nitroso-di-n-propylamine	70	9.151	9.135	(1.091)	1243123	60.0000	52.71
15 4-Methylphenol	108	9.124	9.108	(1.088)	1428361	60.0000	52.64
18 Nitrobenzene-d5	82	9.316	9.311	(0.893)	1726673	60.0000	50.80
19 Nitrobenzene	77	9.354	9.343	(0.897)	1566587	60.0000	48.15
20 Isophorone	82	9.733	9.717	(0.933)	3022002	60.0000	53.29
21 2-Nitrophenol	139	9.856	9.851	(0.945)	860516	60.0000	57.17
22 2,4-Dimethylphenol	107	9.952	9.947	(0.954)	1526425	60.0000	53.62
23 Bis(2-Chloroethoxy)methane	93	10.107	10.096	(0.969)	1900431	60.0000	51.08
24 Benzoic acid	105	10.294	10.198	(0.987)	2999389	120.000	121.8 (M)
25 2,4-Dichlorophenol	162	10.235	10.230	(0.982)	1188590	60.0000	54.22
26 1,2,4-Trichlorobenzene	180	10.369	10.363	(0.994)	1367908	60.0000	50.13
27 Naphthalene-d8	136	10.428	10.422	(1.000)	1693833	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28 Naphthalene	128	10.460	10.454	(1.003)	3435418	60.0000	59.95
	29 4-Chloroaniline	127	10.599	10.588	(1.016)	1089759	60.0000	60.52
	30 Hexachlorobutadiene	225	10.764	10.764	(1.032)	854336	60.0000	51.45
	31 4-Chloro-3-methylphenol	107	11.389	11.384	(1.092)	1259730	60.0000	54.10
	32 2-Methylnaphthalene	141	11.576	11.571	(1.110)	1966974	60.0000	47.75
	33 Hexachlorocyclopentadiene	237	11.950	11.950	(0.899)	962426	60.0000	62.20
	34 2,4,6-Trichlorophenol	196	12.084	12.078	(0.910)	981135	60.0000	60.61
	35 2,4,5-Trichlorophenol	196	12.137	12.137	(0.914)	942506	60.0000	59.02
$	36 2-Fluorobiphenyl	172	12.212	12.212	(0.919)	2869518	60.0000	47.21
	37 2-Chloronaphthalene	162	12.361	12.356	(0.930)	2162175	60.0000	56.65
	38 2-Nitroaniline	65	12.586	12.580	(0.947)	842270	60.0000	59.16
	39 Dimethylphthalate	163	12.960	12.949	(0.975)	2901139	60.0000	50.05
	40 Acenaphthylene	152	13.035	13.034	(0.981)	3594874	60.0000	47.32
	41 2,6-Dinitrotoluene	165	13.056	13.045	(0.983)	652291	60.0000	52.67
*	42 Acenaphthene-d10	164	13.286	13.286	(1.000)	963022	20.0000	
	43 3-Nitroaniline	138	13.270	13.264	(0.999)	415090	60.0000	56.15 (M)
	44 Acenaphthene	153	13.339	13.334	(1.004)	2398903	60.0000	48.78
	45 2,4-Dinitrophenol	184	13.441	13.424	(1.012)	1109465	120.000	125.4
	46 Dibenzofuran	168	13.606	13.595	(1.024)	2968241	60.0000	46.15
	47 4-Nitrophenol	109	13.558	13.547	(1.020)	370235	60.0000	58.85
	48 2,4-Dinitrotoluene	165	13.686	13.676	(1.030)	940513	60.0000	56.15
	50 Diethylphthalate	149	14.108	14.098	(1.062)	2728210	60.0000	50.80
	49 Fluorene	166	14.156	14.156	(1.066)	2330094	60.0000	56.33
	51 4-Chlorophenyl-phenylether	204	14.172	14.172	(1.067)	1325257	60.0000	46.94
	52 4-Nitroaniline	138	14.274	14.252	(1.074)	570540	60.0000	60.40
	53 4,6-Dinitro-2-methylphenol	198	14.349	14.333	(0.916)	1360341	120.000	118.2
	54 N-Nitrosodiphenylamine	169	14.386	14.375	(0.918)	2133517	60.0000	47.70 (M)
$	55 2,4,6-Tribromophenol	330	14.578	14.573	(1.097)	422991	60.0000	55.55
	56 4-Bromophenyl-phenylether	248	14.952	14.952	(0.955)	884941	60.0000	50.44
	57 Hexachlorobenzene	284	15.182	15.182	(0.969)	909402	60.0000	50.28
	58 Pentachlorophenol	266	15.476	15.470	(0.988)	607951	60.0000	56.98
*	59 Phenanthrene-d10	188	15.663	15.663	(1.000)	1598516	20.0000	
	60 Phenanthrene	178	15.706	15.700	(1.003)	3708136	60.0000	46.89 (M)
	61 Anthracene	178	15.780	15.770	(1.008)	3579517	60.0000	45.20
	62 Carbazole	167	16.053	16.047	(1.025)	3310342	60.0000	58.81
	63 Di-n-butylphthalate	149	16.747	16.747	(1.069)	4408198	60.0000	44.16
	64 Fluoranthene	202	17.639	17.639	(1.126)	4077087	60.0000	49.01
	65 Pyrene	202	17.997	17.992	(0.901)	4174219	60.0000	48.94
	66 Terphenyl-d14	244	18.291	18.291	(0.916)	2694546	60.0000	49.15
	67 Butylbenzylphthalate	149	19.162	19.167	(0.959)	2107544	60.0000	50.53
	68 Benzo(a)anthracene	228	19.953	19.953	(0.999)	3640168	60.0000	51.12
	69 Chrysene-d12	240	19.979	19.979	(1.000)	1561828	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.947	19.953	(0.998)	1019524	60.0000	52.04
	71 Chrysene	228	20.022	20.017	(1.002)	3567166	60.0000	49.07
	72 bis(2-Ethylhexyl)phthalate	149	20.145	20.150	(0.956)	2762285	60.0000	52.81
	134 Di-n-octylphthalate-d4	153	21.074	21.085	(1.000)	1777444	20.0000	
	73 Di-n-octylphthalate	149	21.090	21.096	(1.001)	4376021	60.0000	52.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.609	21.609	(0.976)	3947727	60.0000	59.03
75	Benzo(k)fluoranthene	252	21.646	21.641	(0.978)	3893557	60.0000	55.88 (H)
187	Total Benzofluoranthenes	252	21.646	21.641	(0.978)	7344864	120.000	98.66
76	Benzo(a)pyrene	252	22.057	22.057	(0.997)	3613860	60.0000	52.32
* 77	Perylene-d12	264	22.132	22.137	(1.000)	1616143	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.767	23.767	(1.074)	4556930	60.0000	54.82
79	Dibenzo(a,h)anthracene	278	23.799	23.788	(1.075)	3652156	60.0000	55.79
80	Benzo(g,h,i)perylene	276	24.237	24.226	(1.095)	3993414	60.0000	56.17
90	N-Nitrosodimethylamine	74	3.921	3.889	(0.467)	1197674	60.0000	56.13
103	Pyridine	79	3.867	3.851	(0.461)	1815991	60.0000	53.66
91	Aniline	93	7.943	7.938	(0.947)	1893346	60.0000	47.22
105	1-methylnaphthalene	141	11.747	11.747	(1.127)	2033113	60.0000	48.59
93	Benzidine	184	17.869	17.874	(0.894)	480405	60.0000	63.08
111	Azobenzene (1,2-DP-Hydrazine)	77	14.429	14.423	(1.086)	2968844	60.0000	48.66
143	1,4-Dioxane	88	3.125	3.103	(0.373)	794994	60.0000	54.08
$ 137	d8-1,4-Dioxane	96	3.061	3.039	(0.365)	745761	60.0000	54.20
144	alpha-Terpineol	59	10.481	10.470	(1.005)	1099224	60.0000	51.03
177	p-Benzoquinone	82	7.089	7.083	(0.680)	403946	60.0000	62.45
98	Retene	219	18.548	18.548	(0.928)	1950387	60.0000	52.99
99	Perylene	252	22.175	22.175	(1.002)	3062481	60.0000	50.61
133	Butylatedhydroxytoluene	205	13.446	13.440	(1.012)	1855173	60.0000	57.10
115	Tributyl Phosphate	99	14.477	14.461	(0.924)	3026027	60.0000	54.70
116	Dibutyl Phenyl Phosphate	175	16.192	16.192	(1.034)	2350712	60.0000	55.61
117	Butyl Diphenyl Phosphate	94	17.880	17.880	(0.895)	729085	60.0000	50.70
118	Triphenyl Phosphate	326	19.482	19.482	(0.975)	779896	60.0000	57.02
123	Acetophenone	105	9.087	9.076	(1.083)	2228195	60.0000	52.24
168	Pentachlorobenzene	250	13.644	13.638	(1.027)	1071312	60.0000	50.79
113	Diphenyl Oxide	170	12.538	12.538	(0.944)	1879194	60.0000	50.12
112	Biphenyl	154	12.351	12.345	(0.930)	2290712	60.0000	55.09
120	2,3,4,6-Tetrachlorophenol	232	13.879	13.873	(1.045)	798003	60.0000	58.05
151	1,2,4,5-Tetrachlorobenzene	216	11.913	11.907	(0.897)	1239101	60.0000	52.68
110	Tetrachloroguaiacol	247	15.609	15.599	(0.997)	894026	120.000	106.6
109	3,4,5-Trichloroguaiacol	213	13.975	13.969	(0.892)	475254	60.0000	52.05
181	3,4,6-Trichloroguaiacol	211	14.092	14.087	(1.680)	564659	60.0000	54.61
108	4,5,6-Trichloroguaiacol	213	15.000	15.000	(1.129)	496468	60.0000	55.12
184	3,4-Dichloroguaiacol	192	12.431	12.425	(1.482)	523084	60.0000	53.28
107	4,5-Dichloroguaiacol	192	13.216	13.205	(0.995)	1265428	120.000	107.5
182	4,6-Dichloroguaiacol	192	13.216	13.205	(1.576)	1304327	120.000	108.9
185	4-Chloroguaiacol	115	11.341	11.336	(1.352)	337977	30.0000	26.55
186	Carbaryl	144	16.470	16.459	(1.052)	2040898	60.0000	55.25
178	2-Benzyl-4-Chlorophenol	218	16.421	16.411	(1.048)	711018	60.0000	53.70
106	Guaiacol	124	9.343	9.332	(1.114)	1104296	60.0000	46.85
188	2,6-Dichlorophenol	162	10.604	10.598	(1.264)	1043274	60.0000	52.00
189	N-Nitrosomethylethylamine	88	5.625	5.620	(0.671)	859420	60.0000	57.40

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061307.D
Lab Smp Id: IC60306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC600306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	453135	-1.09
27 Naphthalene-d8	1718341	859170	3436682	1693833	-1.43
42 Acenaphthene-d10	1010041	505020	2020082	963022	-4.66
59 Phenanthrene-d10	1666734	833367	3333468	1598516	-4.09
69 Chrysene-d12	1675752	837876	3351504	1561828	-6.80
134 Di-n-octylphthala	2026355	1013178	4052710	1777444	-12.28
77 Perylene-d12	1637524	818762	3275048	1616143	-1.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.00
27 Naphthalene-d8	10.42	9.92	10.92	10.43	0.05
42 Acenaphthene-d10	13.29	12.79	13.79	13.29	0.00
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	0.00
69 Chrysene-d12	19.98	19.48	20.48	19.98	0.00
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.05
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.02

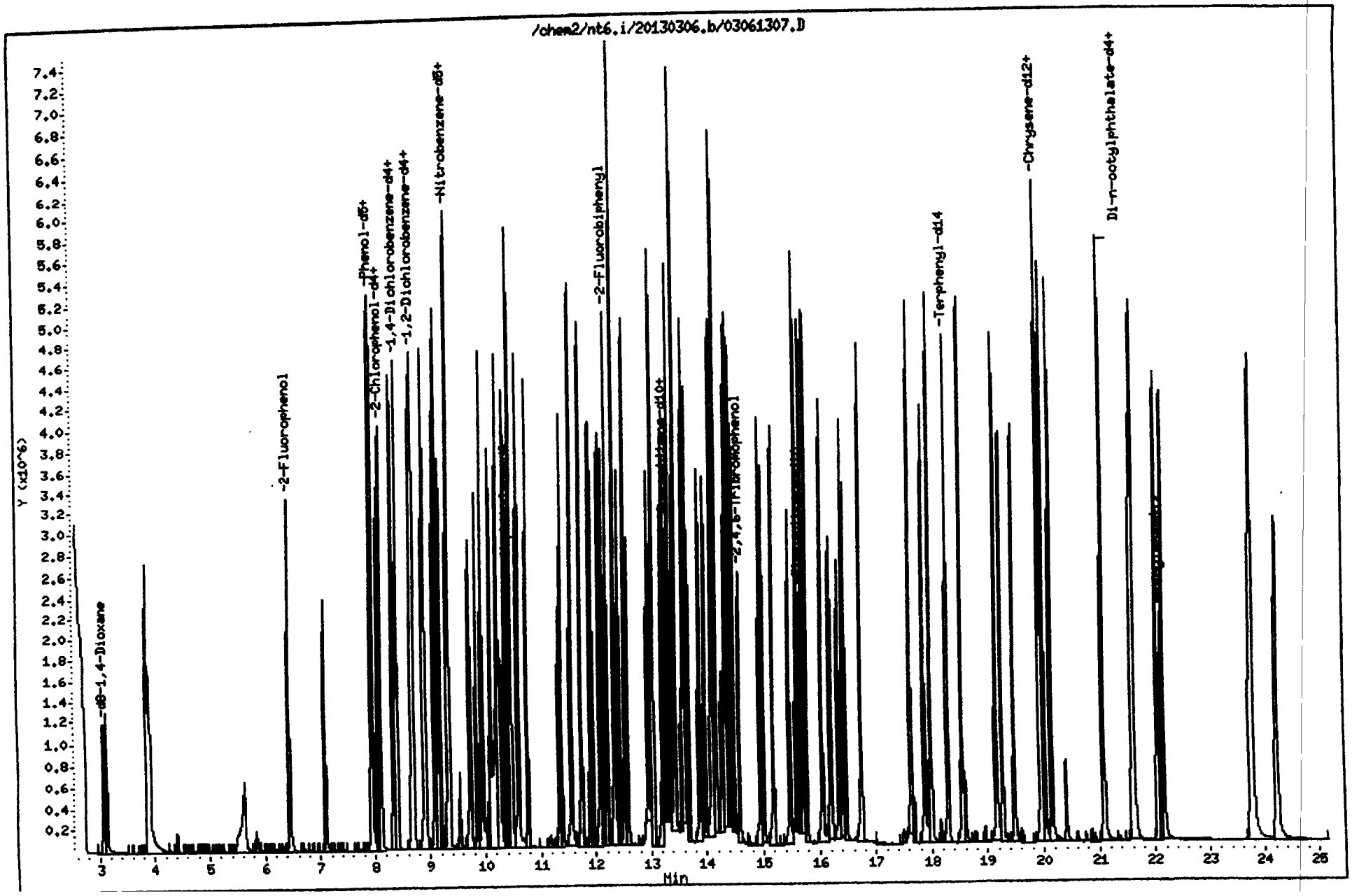
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061307.D
Date : 06-MAR-2013 15:43
Client ID: IC600306
Sample Info: IC60306,

Instrument: nt6.i

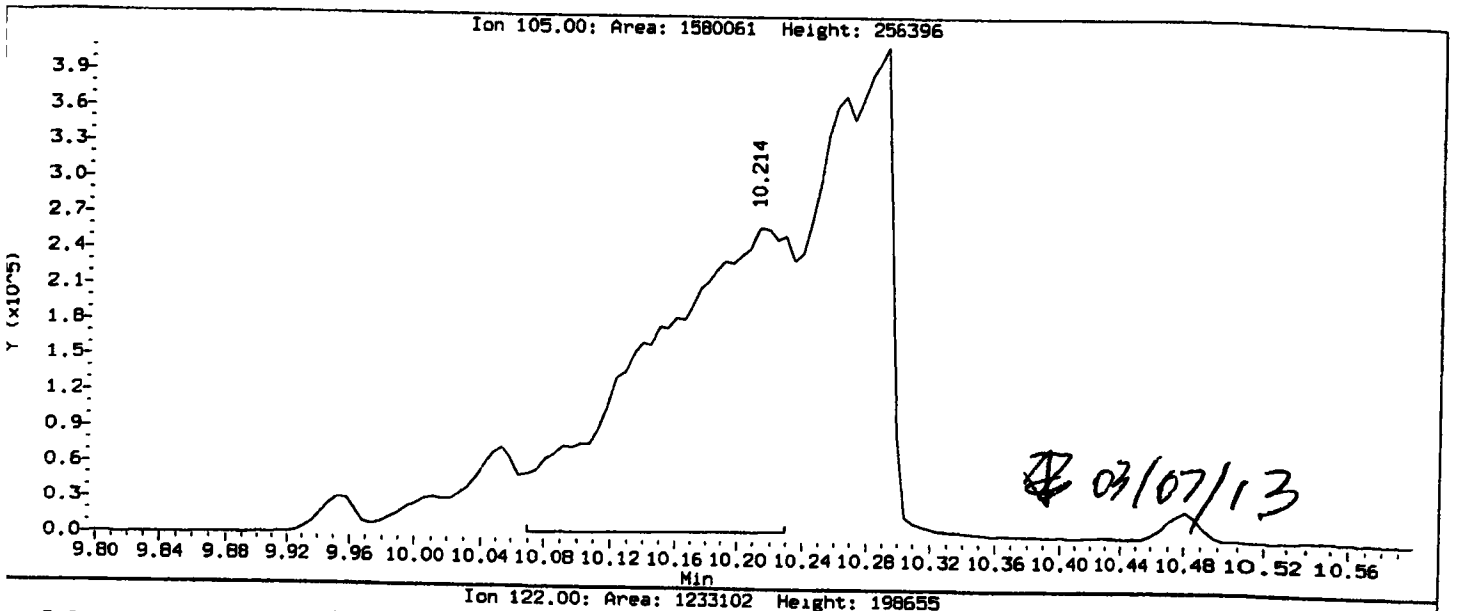
Operator: JZ
Column diameter: 0.32

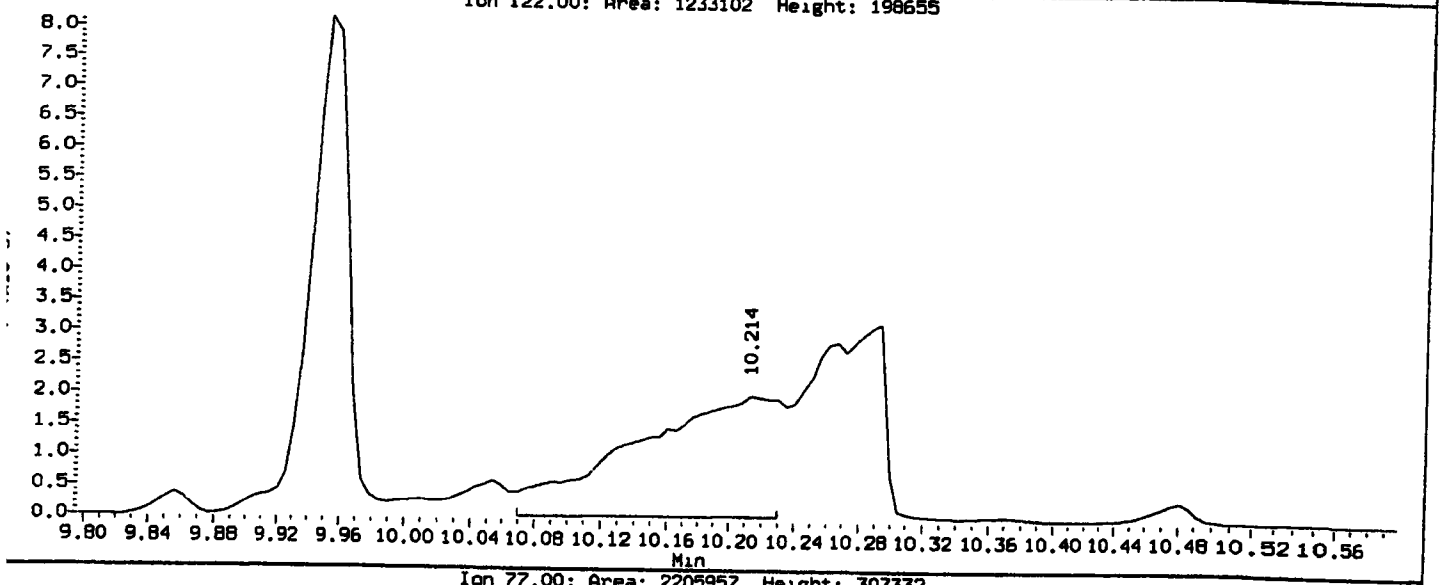
Column phase: ZB-5msi

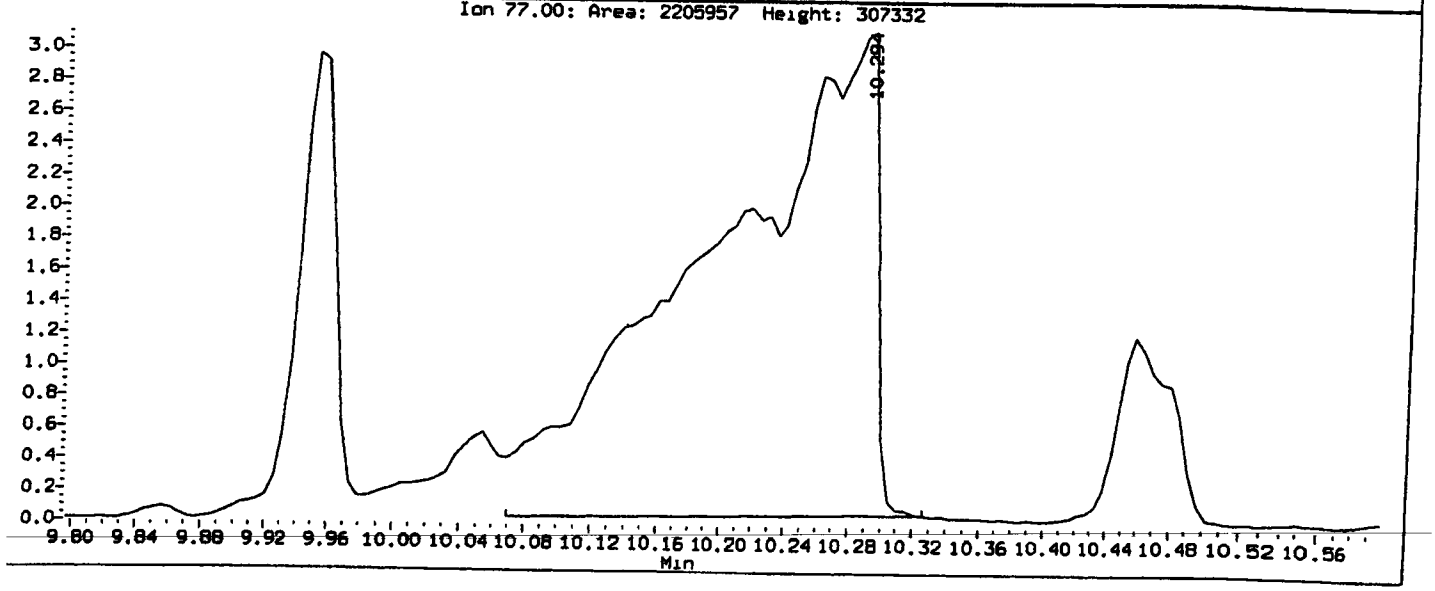


Data File: /chem2/nt6.i/20130306A.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

Compound: Benzoic acid
CAS Number: 65-85-0

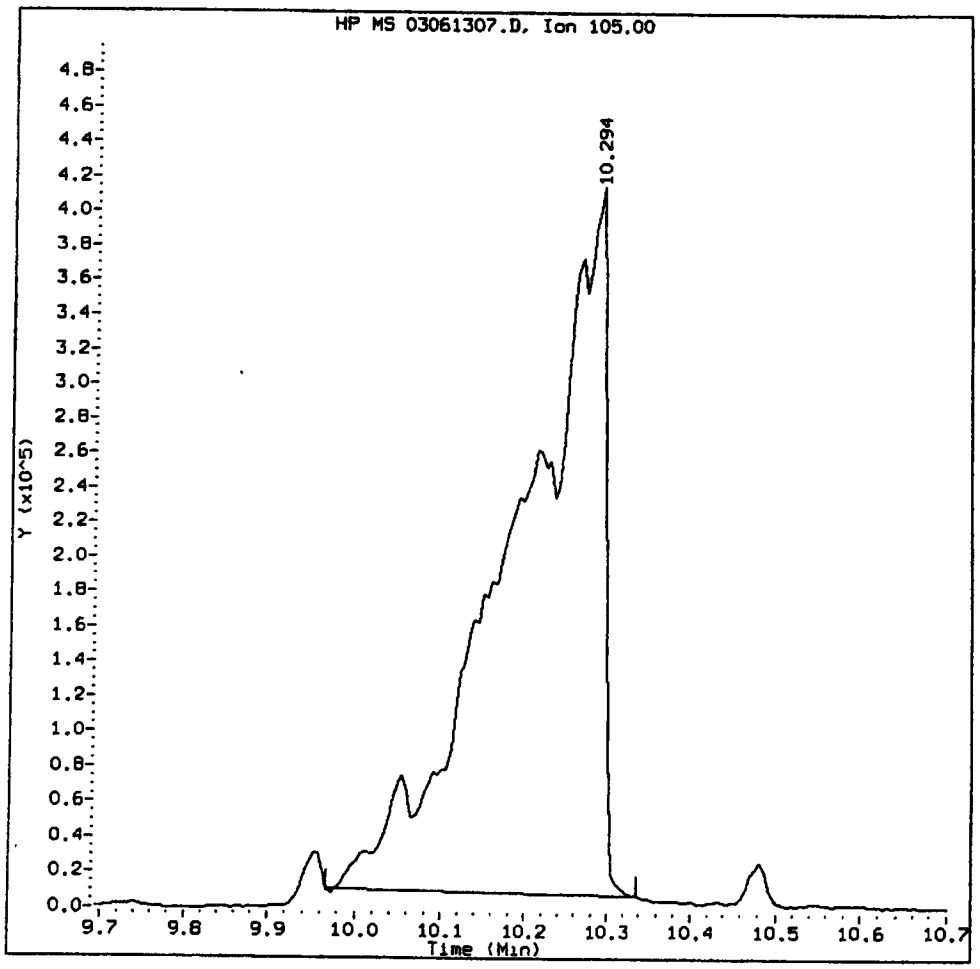






IC60306, /chem2/nt6.i/20130306.b/03061307.D

Benzoic acid Amount: 121.80 Area: 2999389



MANUAL INTEGRATION for Benzoic acid

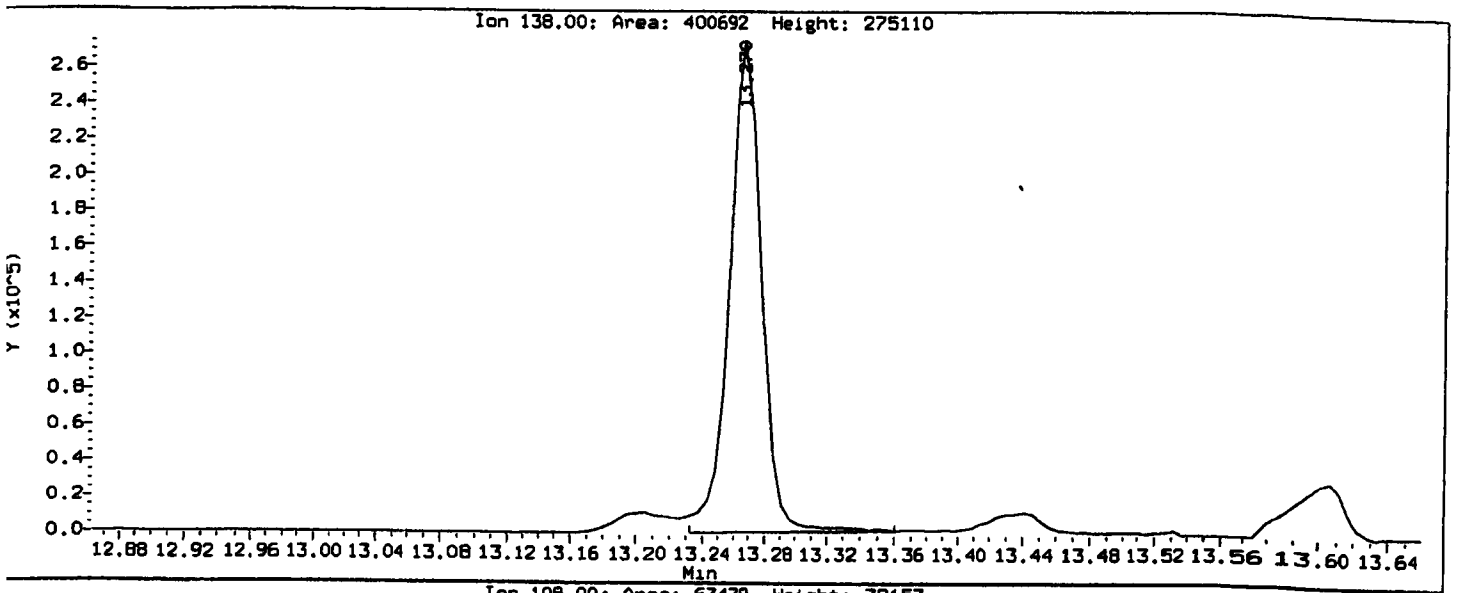
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

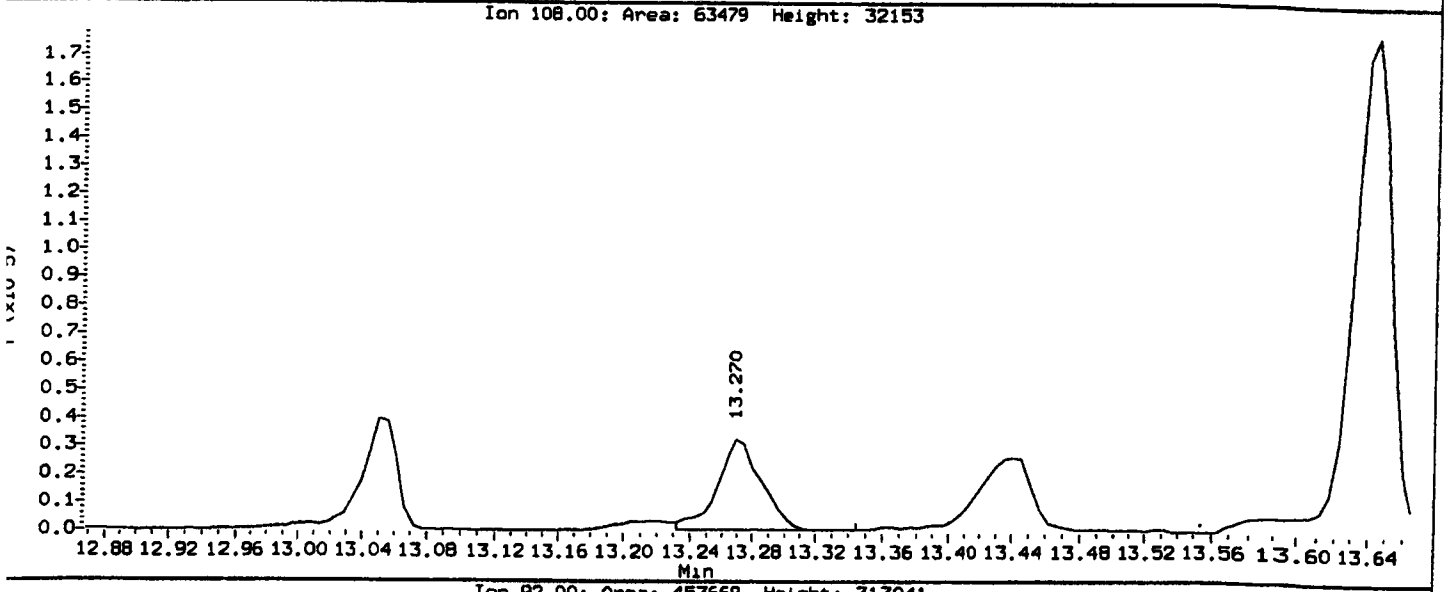
5. Other _____

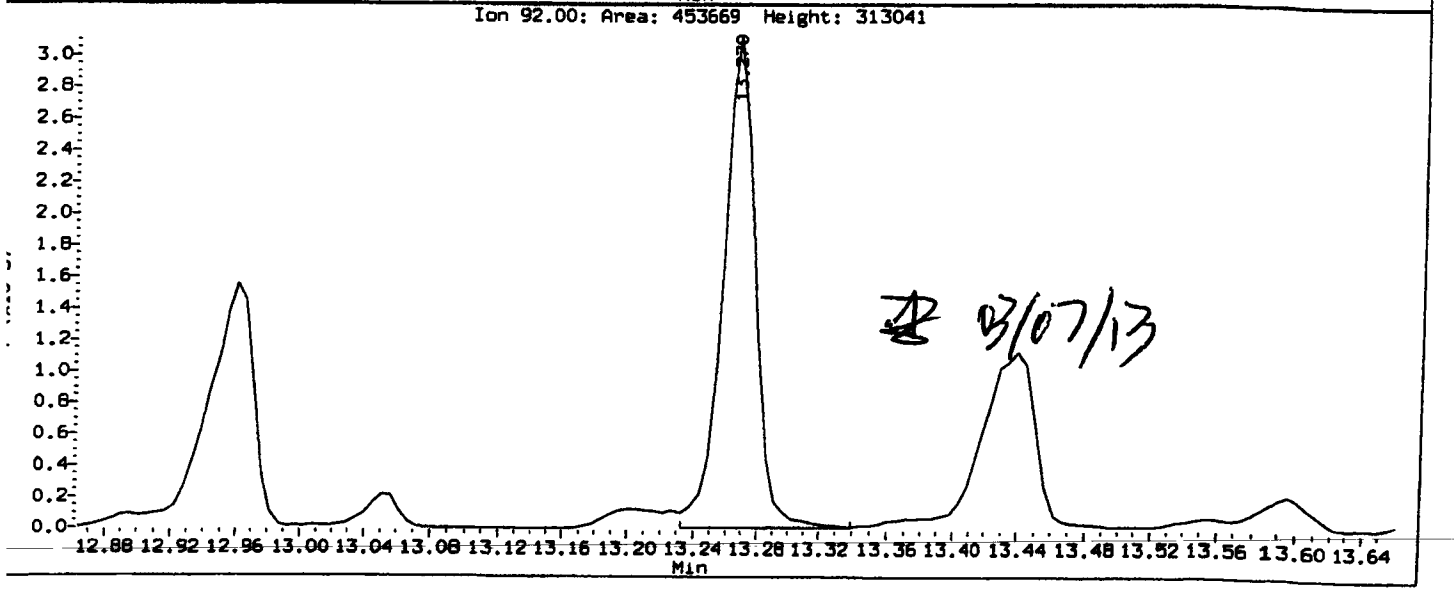
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

Compound: 3-Nitroaniline
CAS Number: 99-09-2



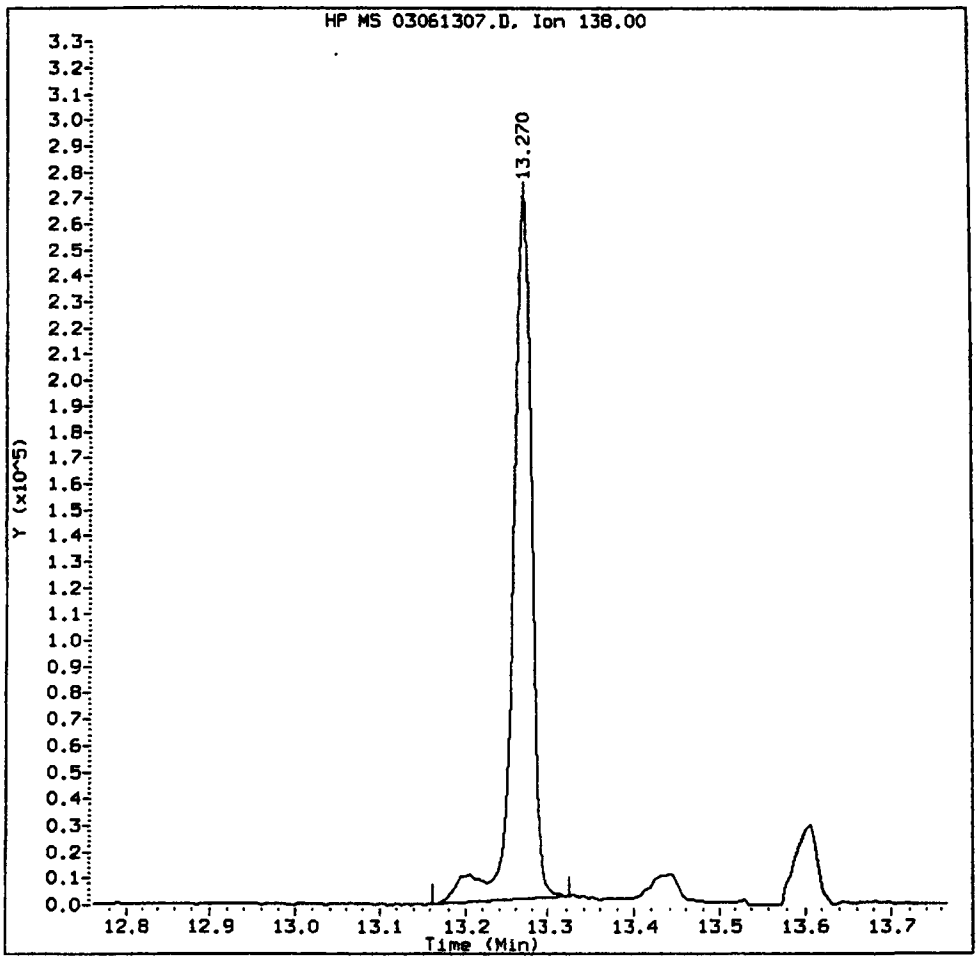




3/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

3-Nitroaniline Amount: 56.15 Area: 415090



MANUAL INTEGRATION for 3-Nitroaniline

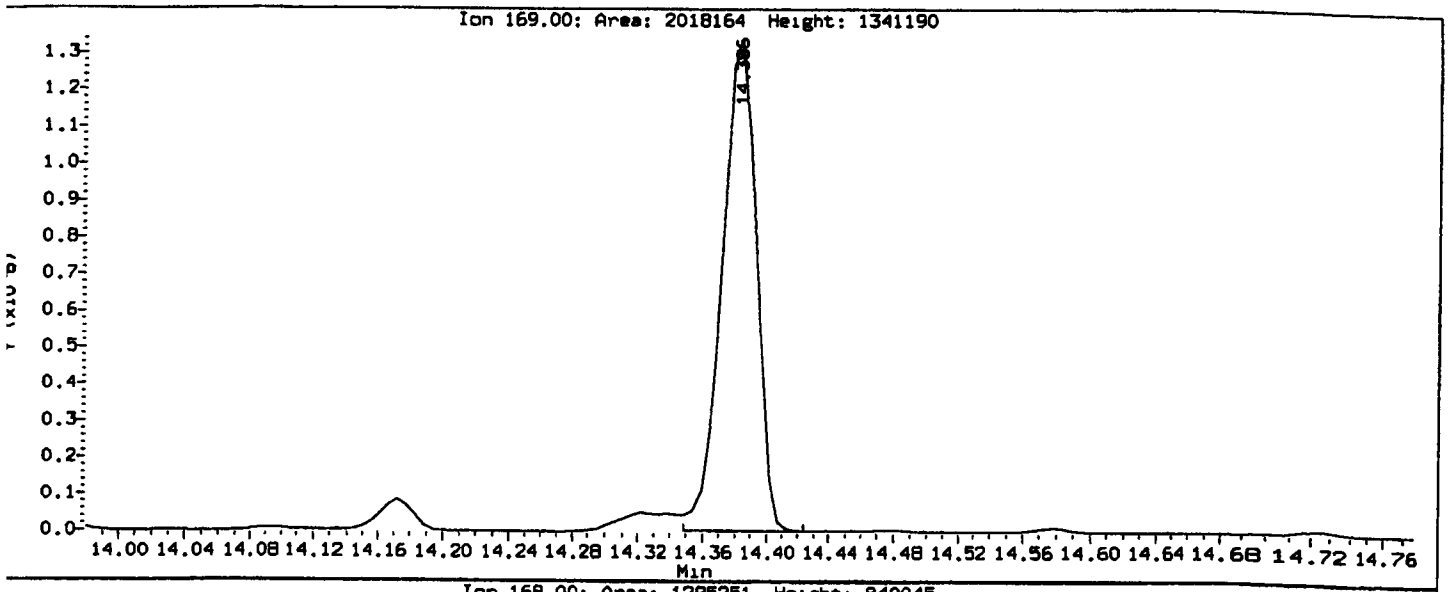
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

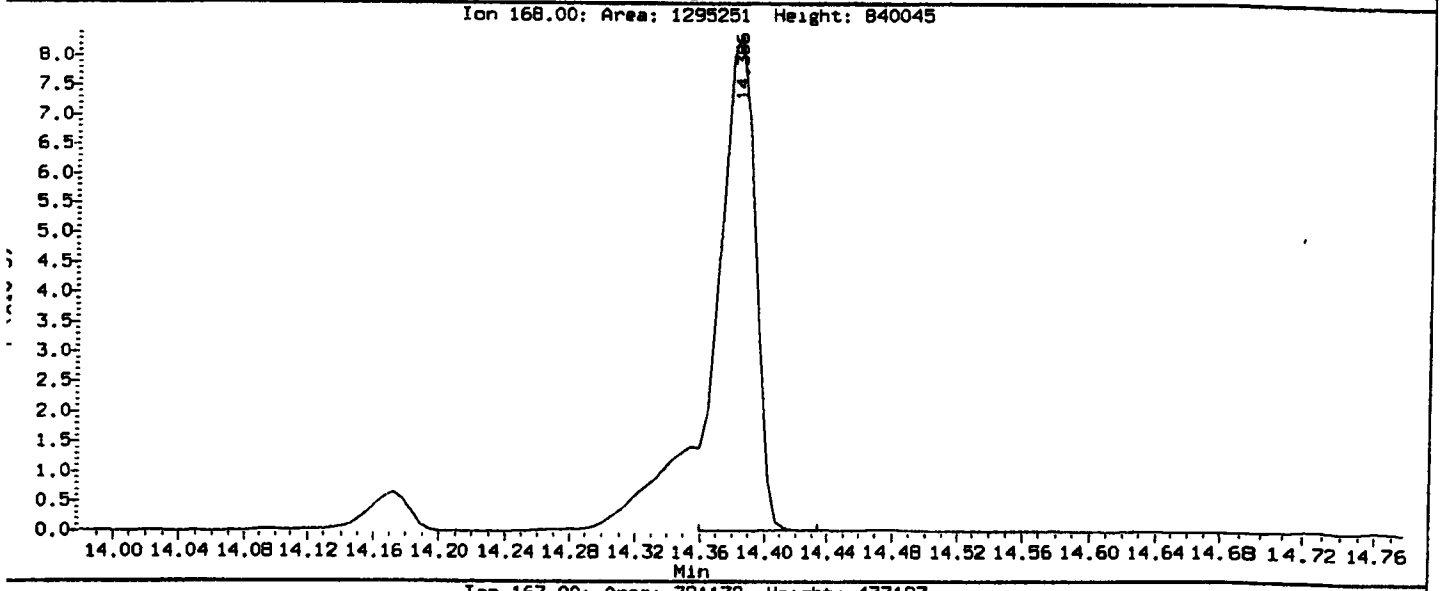
5. Other _____

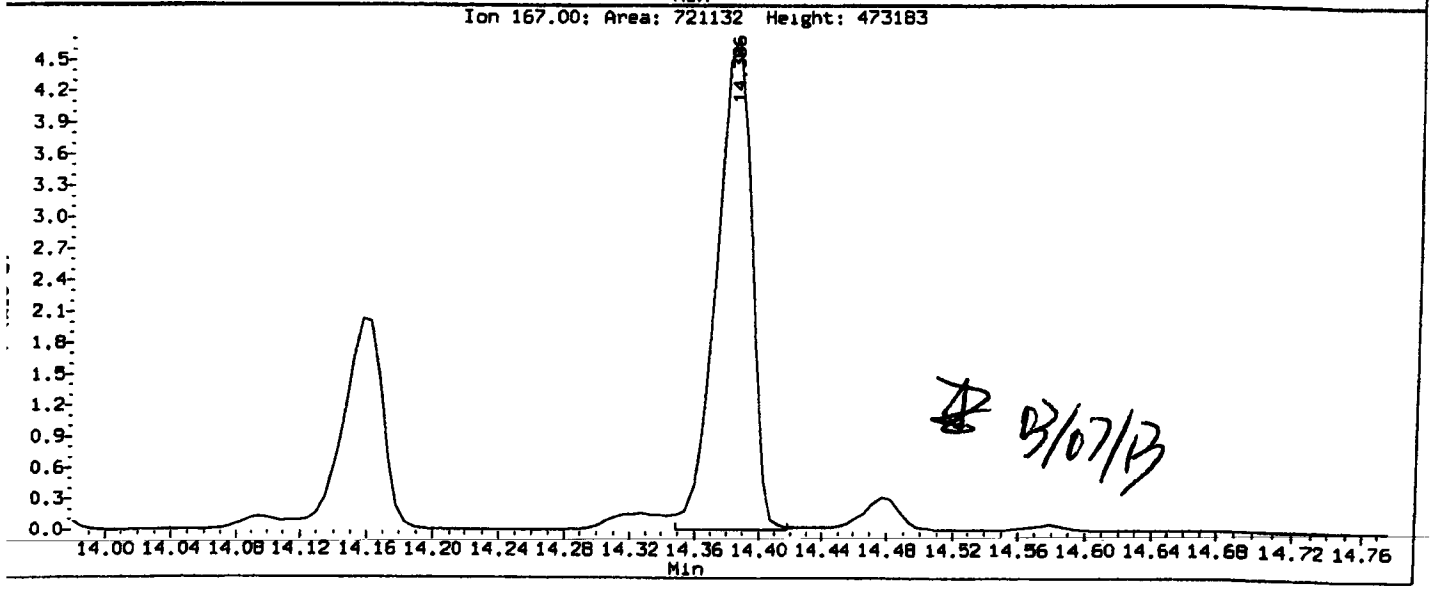
Analyst: AZ Date: 3/7/13

Data File: /chem2/nt6.i/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



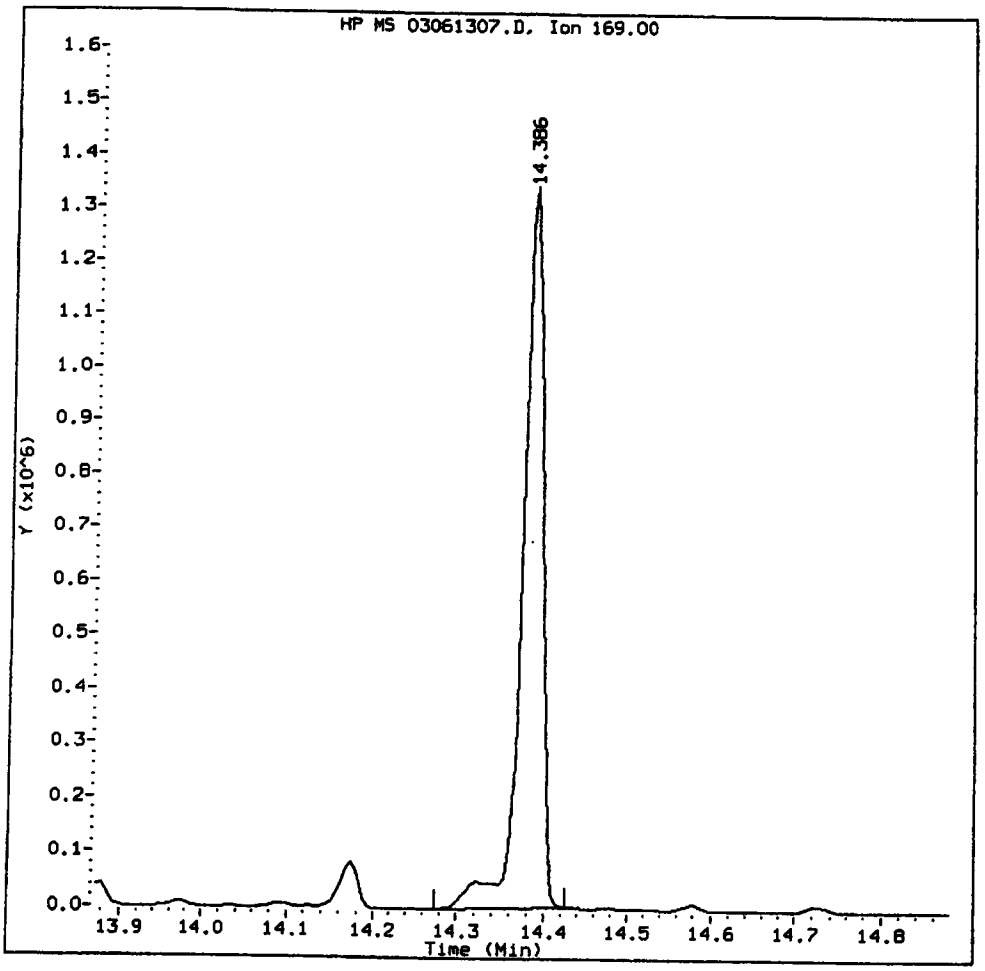




3/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

N-Nitrosodiphenylamine Amount: 47.70 Area: 2133517



MANUAL INTEGRATION for N-Nitrosodiphenylamine

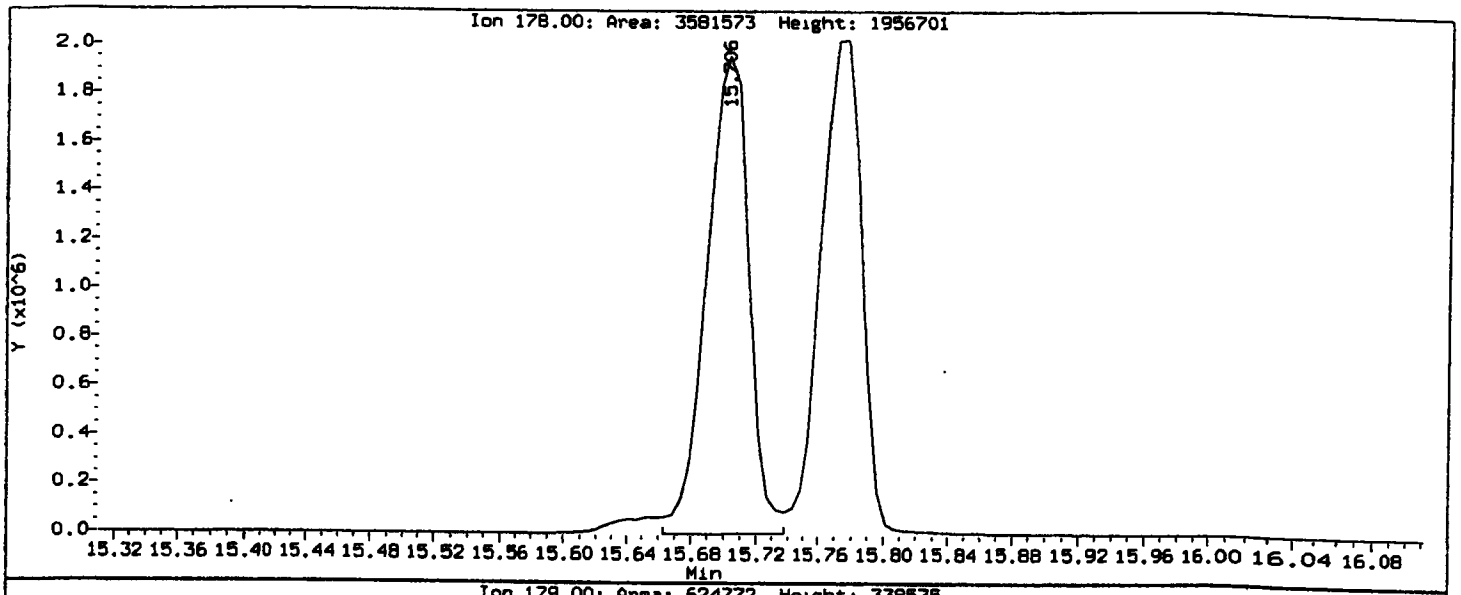
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

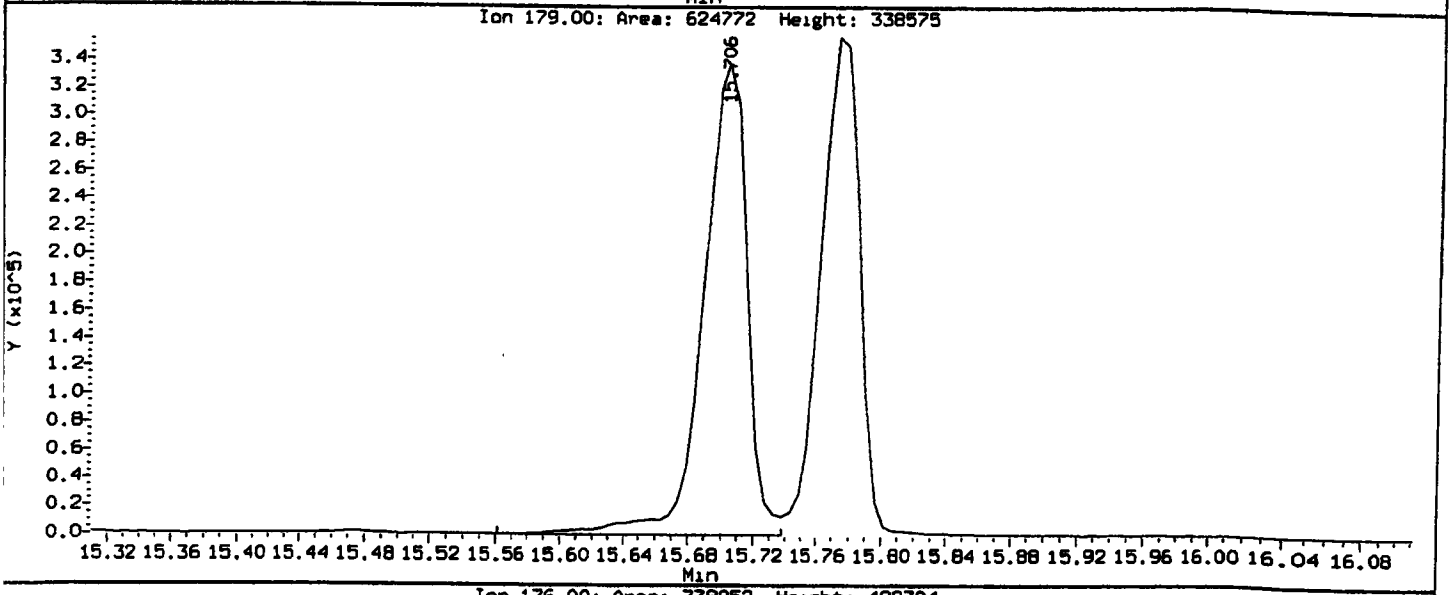
5. Other _____

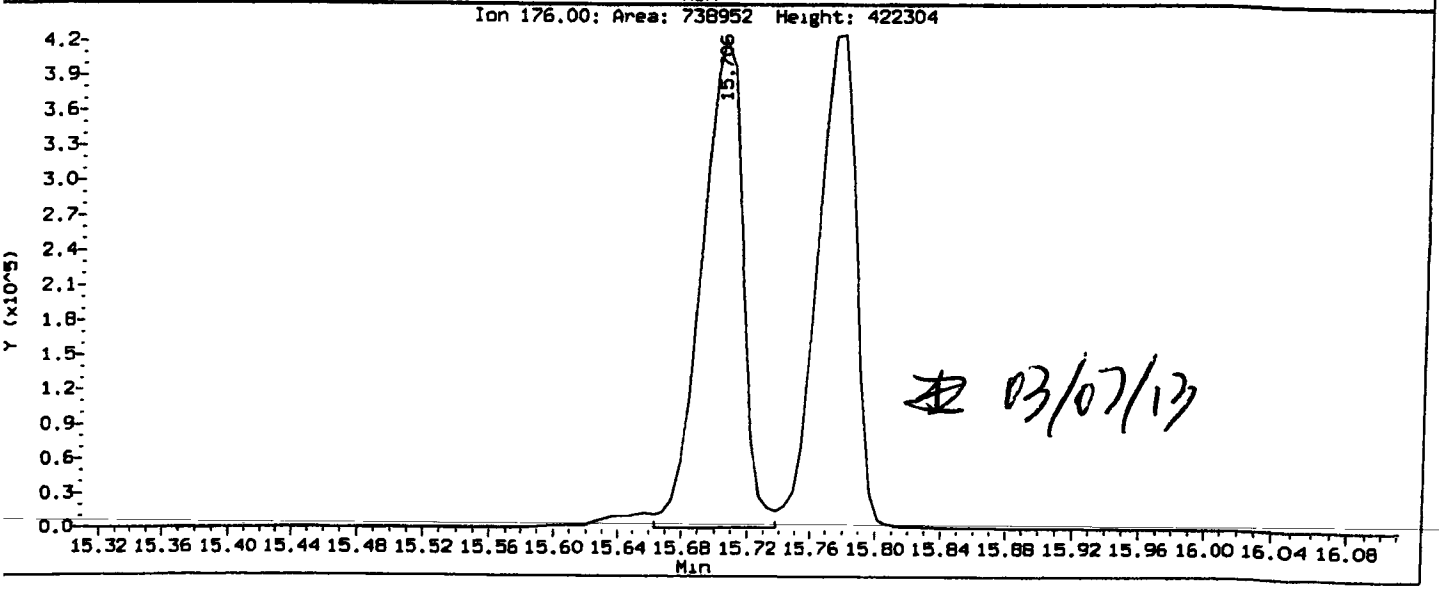
Analyst: _____ Date: 3/07/13

Data File: /chem2/nt6.i/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

Compound: Phenanthrene
CAS Number: 85-01-8



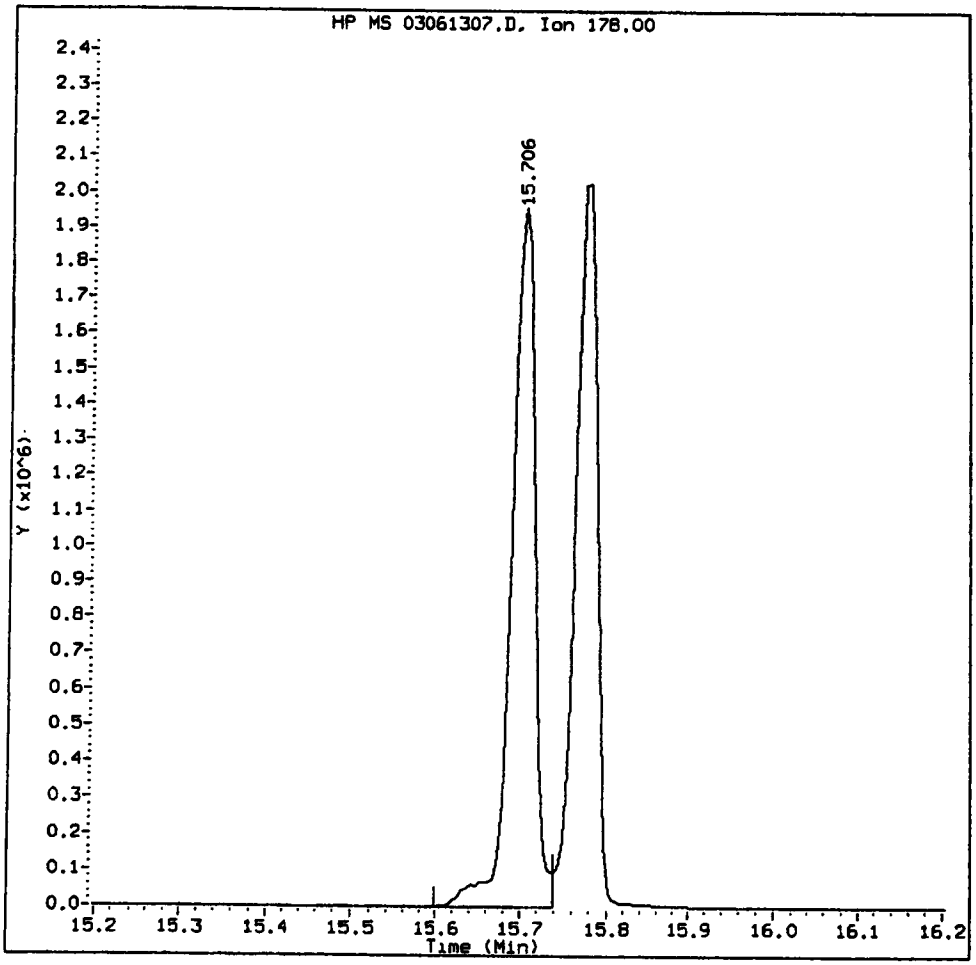




✱ 03/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

Phenanthrene Amount: 46.89 Area: 3708136



MANUAL INTEGRATION for Phenanthrene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061307.D

Lab ID: IC60306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061308.D
Lab Smp Id: IC80306 Client Smp ID: IC800306
Inj Date : 06-MAR-2013 16:18
Operator : JZ Inst ID: nt6.i
Smp Info : IC80306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 8 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
1	2-Fluorophenol	112	Compound Not Detected.					
2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	7.969	7.954	(0.950)	2394706	80.0000	72.23
5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.059	8.050	(0.961)	2042188	80.0000	70.92
6	2-Chlorophenol	128	8.118	8.109	(0.968)	1899262	80.0000	71.60
7	1,3-Dichlorobenzene	146	8.332	8.328	(0.994)	2025421	80.0000	65.37
8	1,4-Dichlorobenzene-d4	152	8.385	8.387	(1.000)	415136	20.0000	
9	1,4-Dichlorobenzene	146	8.417	8.408	(1.004)	1948690	80.0000	64.63
10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	8.706	8.707	(1.038)	1911534	80.0000	66.31
11	Benzyl alcohol	108	8.674	8.654	(1.034)	1396503	80.0000	77.32
14	2,2'-oxybis(1-Chloropropane)	45	8.919	8.916	(1.064)	2983275	80.0000	65.21
13	2-Methylphenol	108	8.898	8.878	(1.061)	1759442	80.0000	69.98
17	Hexachloroethane	117	9.192	9.193	(1.096)	819781	80.0000	67.21
16	N-Nitroso-di-n-propylamine	70	9.155	9.135	(1.092)	1588460	80.0000	73.51
15	4-Methylphenol	108	9.128	9.108	(1.089)	1665095	80.0000	66.98
18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	9.358	9.343	(0.898)	1980493	80.0000	64.91
20	Isophorone	82	9.742	9.717	(0.934)	3963893	80.0000	74.54
21	2-Nitrophenol	139	9.860	9.851	(0.946)	1046064	80.0000	74.10
22	2,4-Dimethylphenol	107	9.961	9.947	(0.955)	1870842	80.0000	70.08
23	Bis(2-Chloroethoxy)methane	93	10.111	10.096	(0.970)	2367641	80.0000	67.86
24	Benzoic acid	105	10.330	10.198	(0.991)	3889953	160.000	168.4 (M)
25	2,4-Dichlorophenol	162	10.239	10.230	(0.982)	1466098	80.0000	71.32
26	1,2,4-Trichlorobenzene	180	10.367	10.363	(0.994)	1711053	80.0000	66.86
27	Naphthalene-d8	136	10.426	10.422	(1.000)	1588502	20.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	10.463	10.454	(1.004)	4129583	80.0000	86.89
29 4-Chloroaniline	127	10.602	10.588	(1.017)	1419444	80.0000	99.06
30 Hexachlorobutadiene	225	10.768	10.764	(1.033)	1076533	80.0000	69.13
31 4-Chloro-3-methylphenol	107	11.393	11.384	(1.093)	1599016	80.0000	73.23
32 2-Methylnaphthalene	141	11.580	11.571	(1.111)	2389384	80.0000	61.85
33 Hexachlorocyclopentadiene	237	11.948	11.950	(0.899)	1256994	80.0000	88.25
34 2,4,6-Trichlorophenol	196	12.087	12.078	(0.910)	1242196	80.0000	83.35
35 2,4,5-Trichlorophenol	196	12.141	12.137	(0.914)	1128101	80.0000	76.73
$ 36 2-Fluorobiphenyl	172	Compound Not Detected.					
37 2-Chloronaphthalene	162	12.360	12.356	(0.930)	2726374	80.0000	81.65
38 2-Nitroaniline	65	12.595	12.580	(0.948)	1067475	80.0000	81.45
39 Dimethylphthalate	163	12.969	12.949	(0.976)	3824957	80.0000	71.69
40 Acenaphthylene	152	13.038	13.034	(0.981)	4470626	80.0000	63.93
41 2,6-Dinitrotoluene	165	13.060	13.045	(0.983)	865930	80.0000	75.96
* 42 Acenaphthene-d10	164	13.289	13.286	(1.000)	886542	20.0000	
43 3-Nitroaniline	138	13.273	13.264	(0.999)	496848	80.0000	81.26 (M)
44 Acenaphthene	153	13.348	13.334	(1.004)	2990801	80.0000	66.06
45 2,4-Dinitrophenol	184	13.455	13.424	(1.012)	1455877	160.000	178.8
46 Dibenzofuran	168	13.610	13.595	(1.024)	3797229	80.0000	64.13
47 4-Nitrophenol	109	13.567	13.547	(1.021)	435155	80.0000	75.14
48 2,4-Dinitrotoluene	165	13.690	13.676	(1.030)	1187085	80.0000	76.98
50 Diethylphthalate	149	14.112	14.098	(1.062)	3261747	80.0000	65.98
49 Fluorene	166	14.165	14.156	(1.066)	2918650	80.0000	81.81
51 4-Chlorophenyl-phenylether	204	14.176	14.172	(1.067)	1756954	80.0000	67.60
52 4-Nitroaniline	138	14.288	14.252	(1.075)	705690	80.0000	81.16
53 4,6-Dinitro-2-methylphenol	198	14.358	14.333	(0.916)	1683138	160.000	160.8
54 N-Nitrosodiphenylamine	169	14.390	14.375	(0.918)	2609924	80.0000	64.16 (M)
55 2,4,6-Tribromophenol	330	Compound Not Detected.					
56 4-Bromophenyl-phenylether	248	14.956	14.952	(0.955)	1183353	80.0000	74.16
57 Hexachlorobenzene	284	15.186	15.182	(0.969)	1239812	80.0000	75.36
58 Pentachlorophenol	266	15.480	15.470	(0.988)	833386	80.0000	85.88
59 Phenanthrene-d10	188	15.667	15.663	(1.000)	1453987	20.0000	
60 Phenanthrene	178	15.709	15.700	(1.003)	4601992	80.0000	63.97
61 Anthracene	178	15.784	15.770	(1.008)	4251383	80.0000	59.02
62 Carbazole	167	16.057	16.047	(1.025)	4177813	80.0000	80.56
63 Di-n-butylphthalate	149	16.751	16.747	(1.069)	5262499	80.0000	57.95
64 Fluoranthene	202	17.643	17.639	(1.126)	4925676	80.0000	65.09
65 Pyrene	202	18.001	17.992	(0.901)	5041196	80.0000	66.18
66 Terphenyl-d14	244	Compound Not Detected.					
67 Butylbenzylphthalate	149	19.171	19.167	(0.959)	2514680	80.0000	67.51
68 Benzo(a)anthracene	228	19.956	19.953	(0.999)	4549328	80.0000	71.54
69 Chrysene-d12	240	19.983	19.979	(1.000)	1394767	20.0000	
70 3,3'-Dichlorobenzidine	252	19.951	19.953	(0.998)	1228873	80.0000	70.24
71 Chrysene	228	20.026	20.017	(1.002)	4316537	80.0000	66.49
72 bis(2-Ethylhexyl)phthalate	149	20.149	20.150	(0.956)	3297035	80.0000	71.04
134 Di-n-octylphthalate-d4	153	21.078	21.085	(1.000)	1577157	20.0000	
73 Di-n-octylphthalate	149	21.089	21.096	(1.000)	5201474	80.0000	69.85

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.618	21.609	(0.977)	4864908	80.0000	80.68
75	Benzo(k)fluoranthene	252	21.655	21.641	(0.978)	4926982	80.0000	81.46
187	Total Benzofluoranthenes	252	21.655	21.641	(0.978)	9068544	160.000	129.2
76	Benzo(a)pyrene	252	22.066	22.057	(0.997)	4550492	80.0000	69.86
* 77	Perylene-d12	264	22.136	22.137	(1.000)	1523971	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.781	23.767	(1.074)	5915162	80.0000	75.46
79	Dibenzo(a,h)anthracene	278	23.808	23.788	(1.076)	4704710	80.0000	76.22
80	Benzo(g,h,i)perylene	276	24.251	24.226	(1.096)	5163322	80.0000	77.02
90	N-Nitrosodimethylamine	74	3.962	3.889	(0.472)	1562474	80.0000	79.92
103	Pyridine	79	3.914	3.851	(0.467)	2412972	80.0000	77.83
91	Aniline	93	7.947	7.938	(0.948)	2567853	80.0000	69.90
105	1-methylnaphthalene	141	11.751	11.747	(1.127)	2492684	80.0000	63.52
93	Benzidine	184	17.873	17.874	(0.894)	580818	80.0000	85.40
111	Azobenzene (1,2-DP-Hydrazine)	77	14.438	14.423	(1.086)	3533789	80.0000	62.91
143	1,4-Dioxane	88	3.145	3.103	(0.375)	1031006	80.0000	76.55
$ 137	d8-1,4-Dioxane	96	3.086	3.039	(0.368)	961171	80.0000	76.25
144	alpha-Terpineol	59	10.485	10.470	(1.006)	1341096	80.0000	66.39
177	p-Benzoquinone	82	7.092	7.083	(0.680)	489430	80.0000	80.68
98	Retene	219	18.546	18.548	(0.928)	2364163	80.0000	71.92
99	Perylene	252	22.179	22.175	(1.002)	3766561	80.0000	66.01
133	Butylatedhydroxytoluene	205	13.450	13.440	(1.012)	2177090	80.0000	81.45
115	Tributyl Phosphate	99	14.486	14.461	(0.925)	3817283	80.0000	82.14
116	Dibutyl Phenyl Phosphate	175	16.190	16.192	(1.033)	1918467	80.0000	49.90
117	Butyl Diphenyl Phosphate	94	17.878	17.880	(0.895)	853223	80.0000	66.44
118	Triphenyl Phosphate	326	19.486	19.482	(0.975)	977320	80.0000	80.02
123	Acetophenone	105	9.090	9.076	(1.084)	2797491	80.0000	71.59
168	Pentachlorobenzene	250	13.647	13.638	(1.027)	1407461	80.0000	72.48
113	Diphenyl Oxide	170	12.541	12.538	(0.944)	2312992	80.0000	67.02
112	Biphenyl	154	12.349	12.345	(0.929)	2906690	80.0000	82.21
120	2,3,4,6-Tetrachlorophenol	232	13.882	13.873	(1.045)	1039446	80.0000	82.14
151	1,2,4,5-Tetrachlorobenzene	216	11.911	11.907	(0.896)	1558330	80.0000	71.96
110	Tetrachloroguaiacol	247	15.613	15.599	(0.997)	1120414	160.000	146.9
109	3,4,5-Trichloroguaiacol	213	13.978	13.969	(0.892)	631624	80.0000	76.05
181	3,4,6-Trichloroguaiacol	211	14.096	14.087	(1.681)	701991	80.0000	74.11
108	4,5,6-Trichloroguaiacol	213	15.004	15.000	(1.129)	636275	80.0000	76.74
184	3,4-Dichloroguaiacol	192	12.435	12.425	(1.483)	679803	80.0000	75.59
107	4,5-Dichloroguaiacol	192	13.220	13.205	(0.995)	1631611	160.000	150.6
182	4,6-Dichloroguaiacol	192	13.220	13.205	(1.577)	1631611	160.000	148.7
185	4-Chloroguaiacol	115	11.345	11.336	(1.353)	471670	40.0000	40.44
186	Carbaryl	144	16.473	16.459	(1.051)	2446617	80.0000	72.82
178	2-Benzyl-4-Chlorophenol	218	16.425	16.411	(1.048)	926358	80.0000	76.92
106	Guaiacol	124	9.347	9.332	(1.115)	1407845	80.0000	65.19
188	2,6-Dichlorophenol	162	10.613	10.598	(1.266)	1300919	80.0000	70.78
189	N-Nitrosomethylethylamine	88	5.634	5.620	(0.672)	1095419	80.0000	79.86

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061308.D
Lab Smp Id: IC80306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC800306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	415136	-9.38
27 Naphthalene-d8	1718341	859170	3436682	1588502	-7.56
42 Acenaphthene-d10	1010041	505020	2020082	886542	-12.23
59 Phenanthrene-d10	1666734	833367	3333468	1453987	-12.76
69 Chrysene-d12	1675752	837876	3351504	1394767	-16.77
134 Di-n-octylphthala	2026355	1013178	4052710	1577157	-22.17
77 Perylene-d12	1637524	818762	3275048	1523971	-6.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	-0.02
27 Naphthalene-d8	10.42	9.92	10.92	10.43	0.04
42 Acenaphthene-d10	13.29	12.79	13.79	13.29	0.03
59 Phenanthrene-d10	15.66	15.16	16.16	15.67	0.02
69 Chrysene-d12	19.98	19.48	20.48	19.98	0.02
134 Di-n-octylphthala	21.09	20.59	21.59	21.08	-0.03
77 Perylene-d12	22.14	21.64	22.64	22.14	-0.01

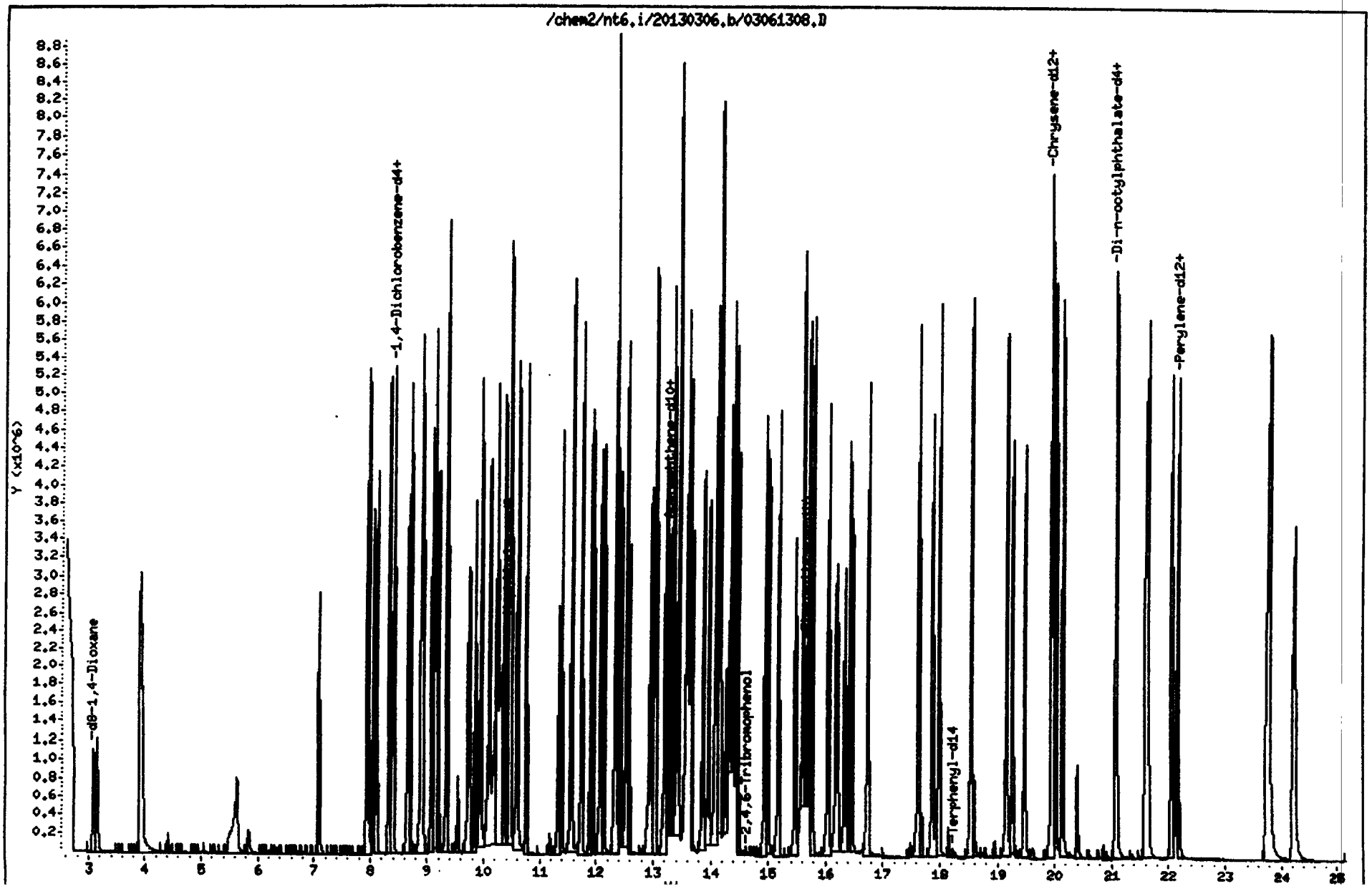
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061308.D
Date : 06-MAR-2013 16:18
Client ID: IC800306
Sample Info: IC80306,

Instrument: nt6.i

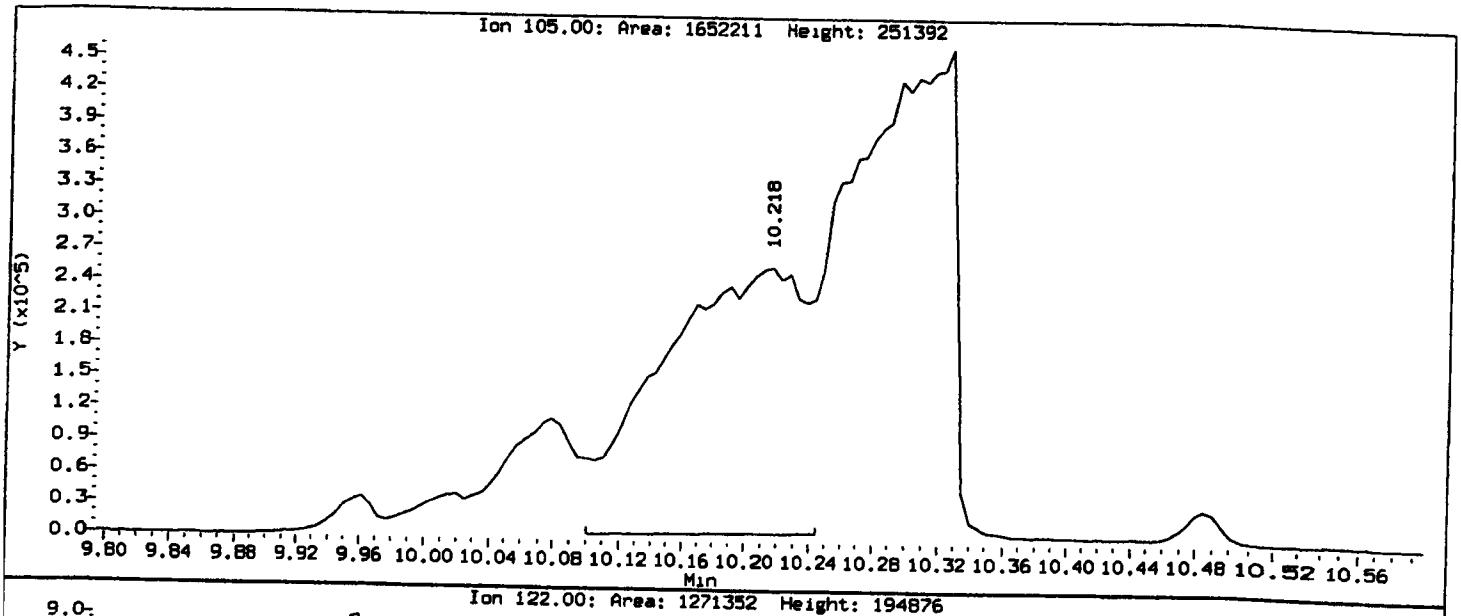
Operator: JZ
Column diameter: 0.32

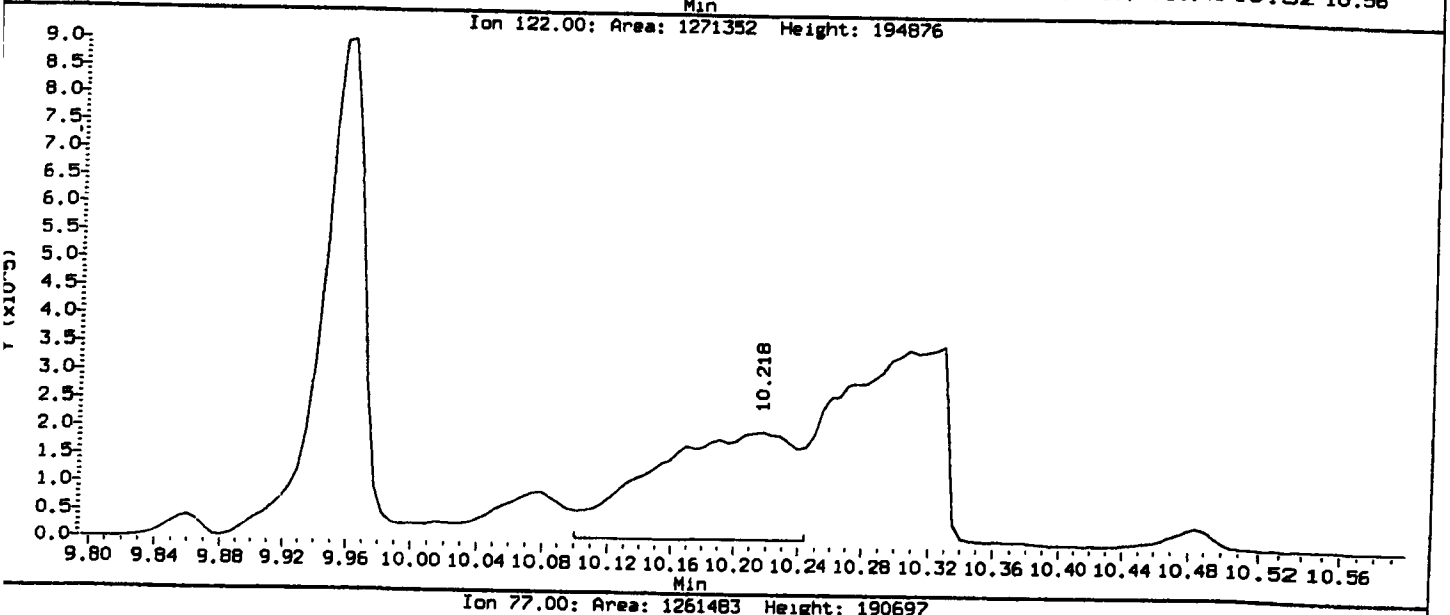
Column phase: ZB-5msi

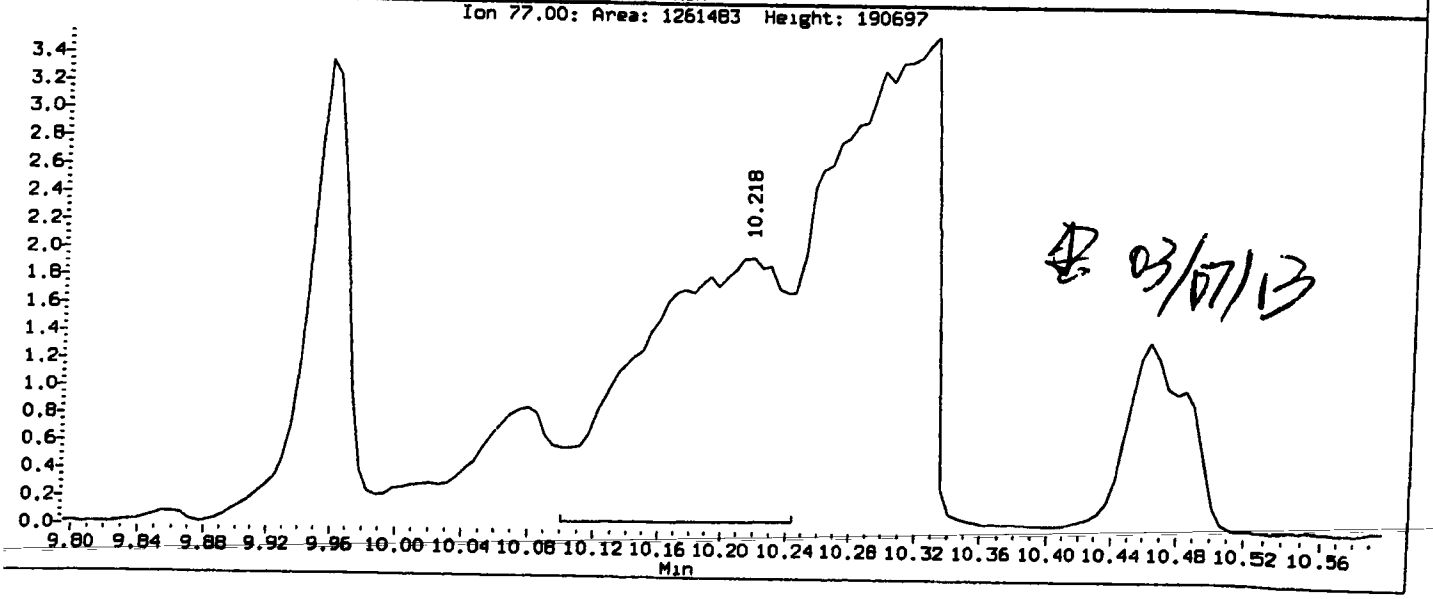


Data File: /chem2/nt6.i/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.i
Client Sample ID: ICB00306

Compound: Benzoic acid
CAS Number: 65-85-0



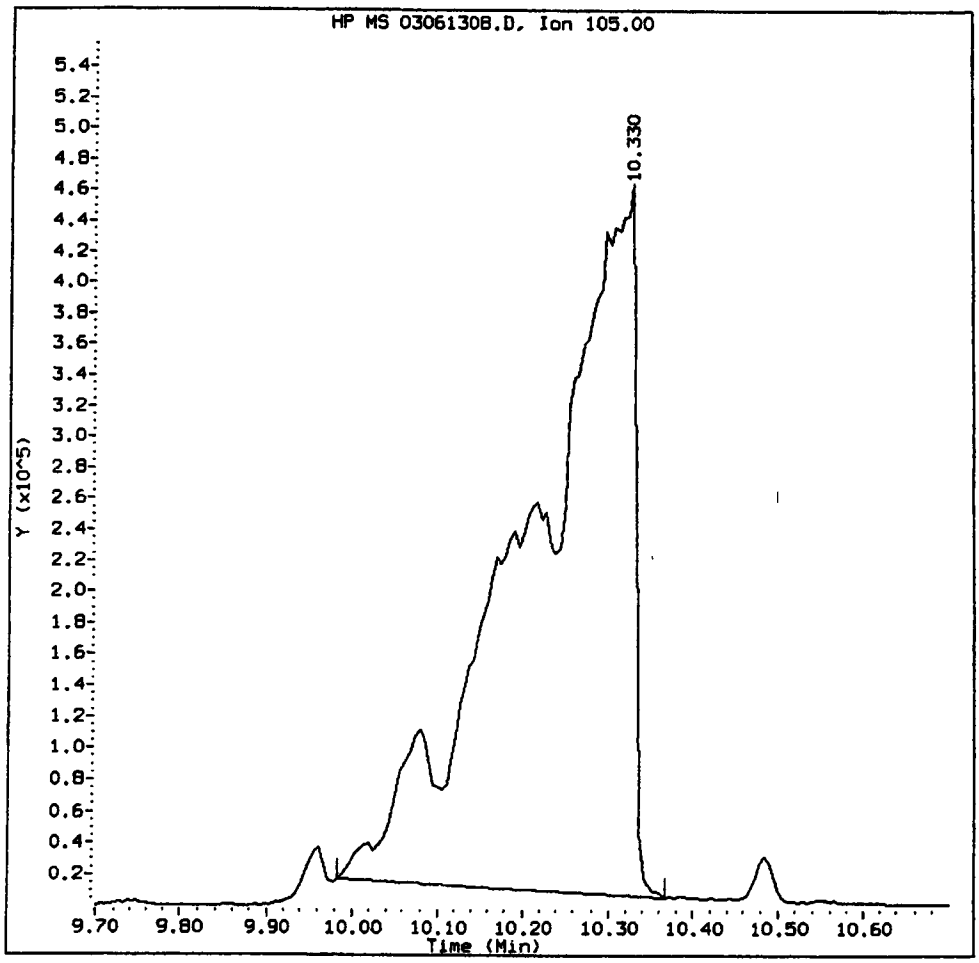




D 03/07/13

IC80306, /chem2/nt6.i/20130306.b/03061308.D

Benzoic acid Amount: 168.44 Area: 3889953



MANUAL INTEGRATION for Benzoic acid

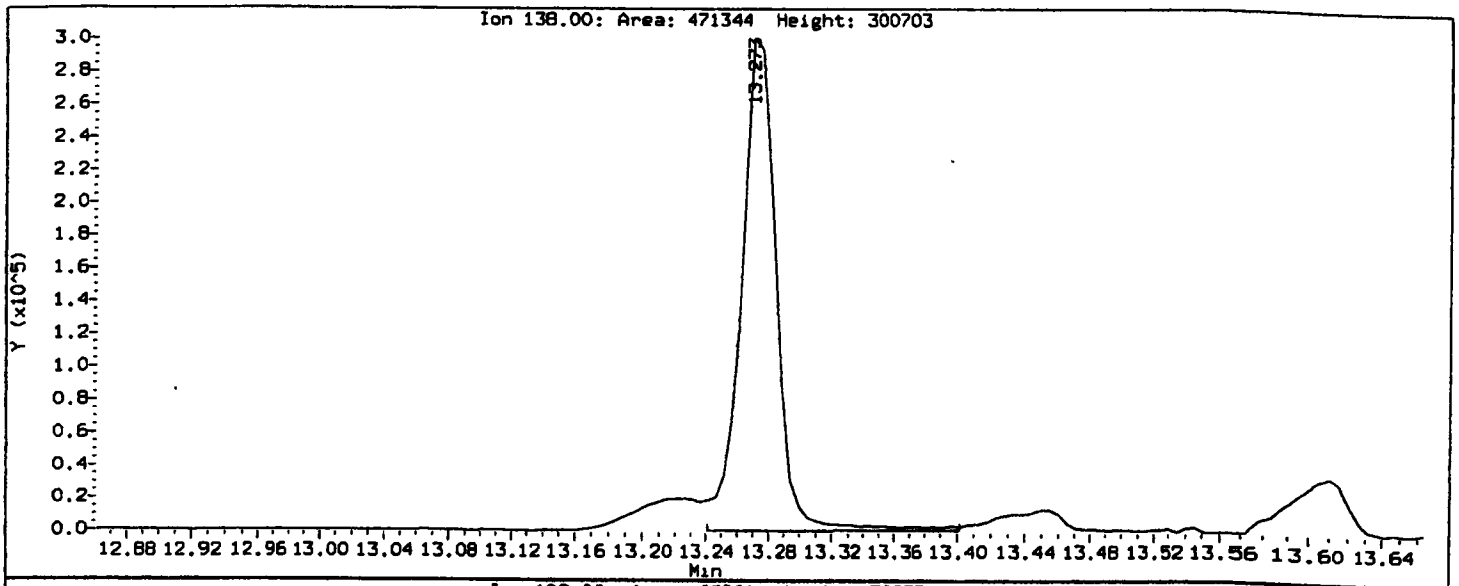
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

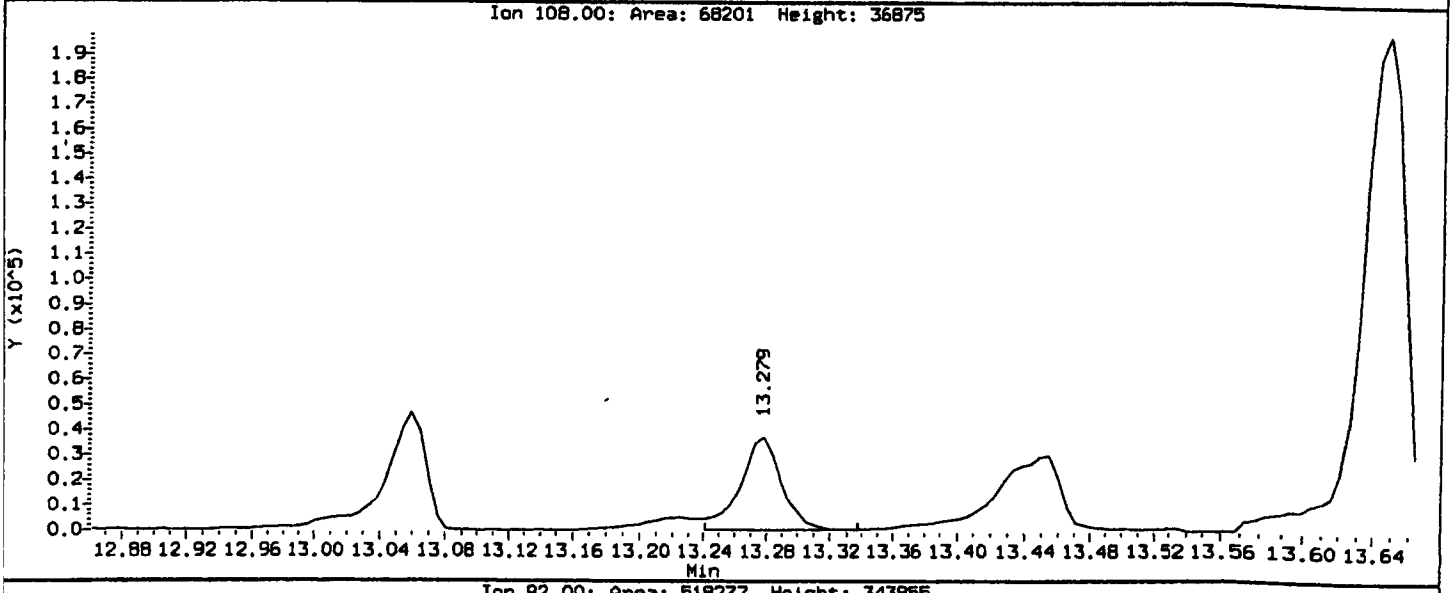
5. Other _____

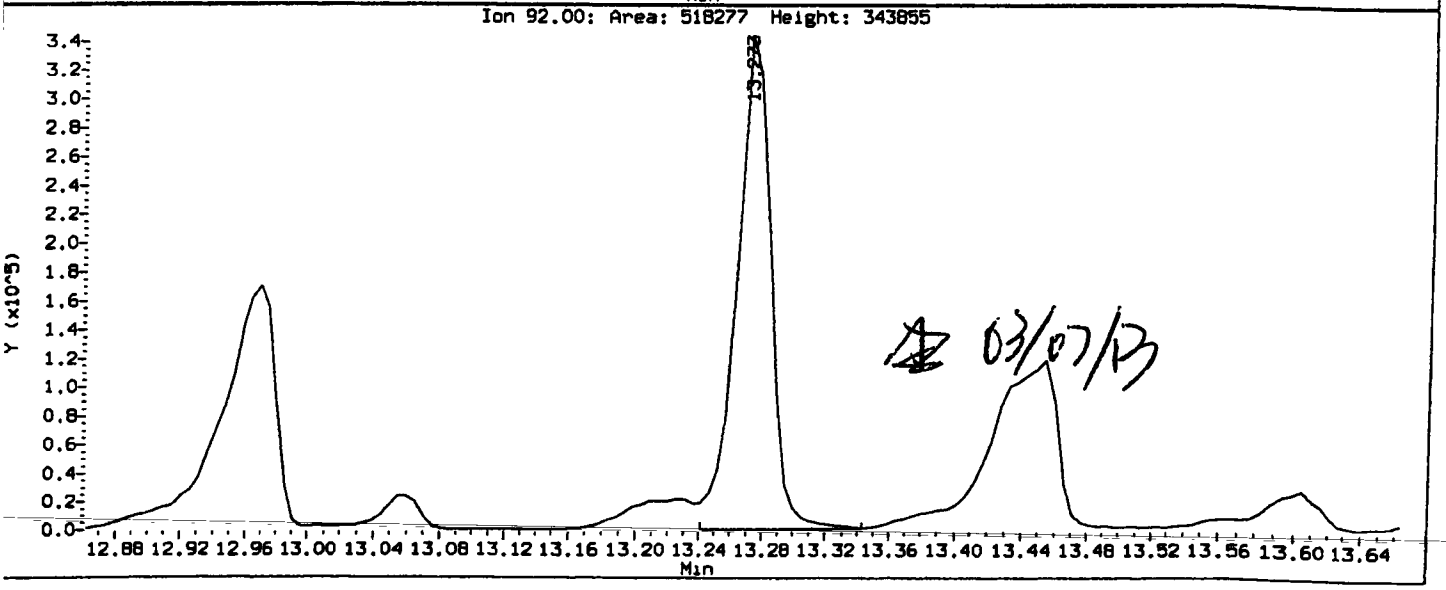
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.i
Client Sample ID: IC800306

Compound: 3-Nitroaniline
CAS Number: 99-09-2



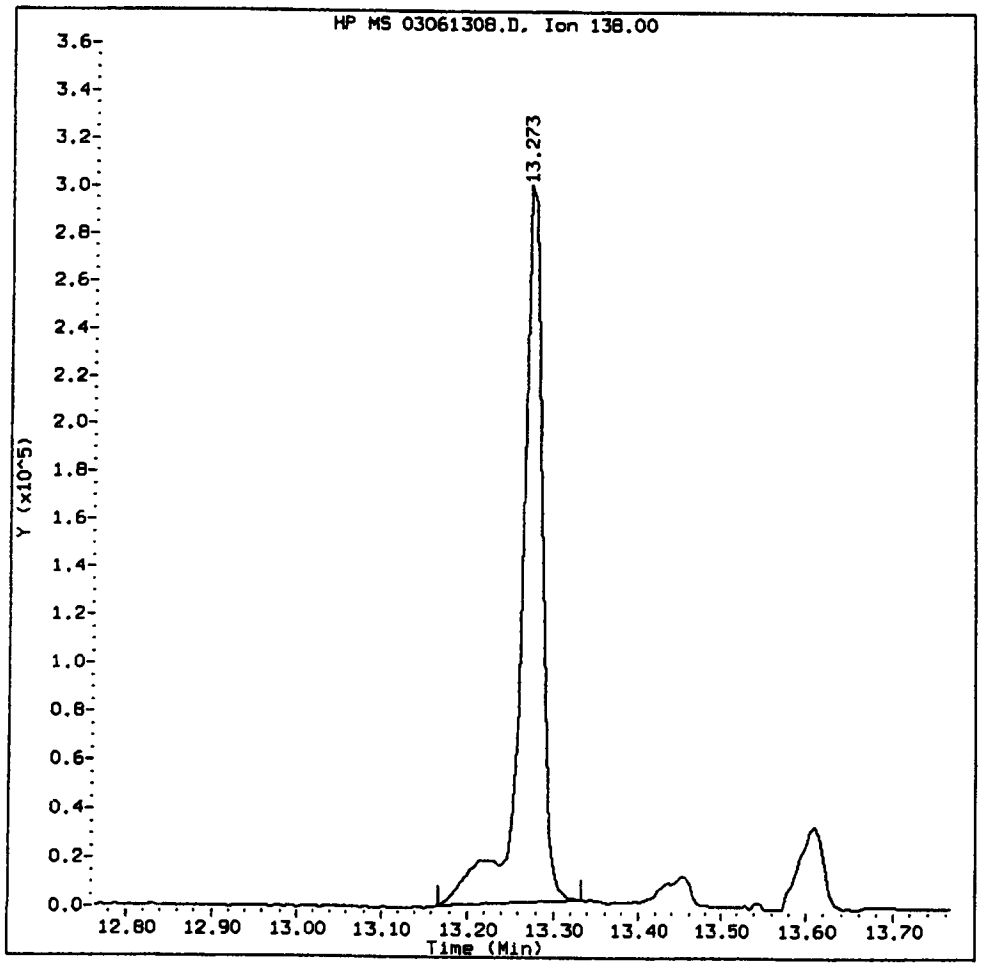




03/07/13

IC80306, /chem2/nt6.i/20130306.b/03061308.D

3-Nitroaniline Amount: 81.26 Area: 496848



MANUAL INTEGRATION for 3-Nitroaniline

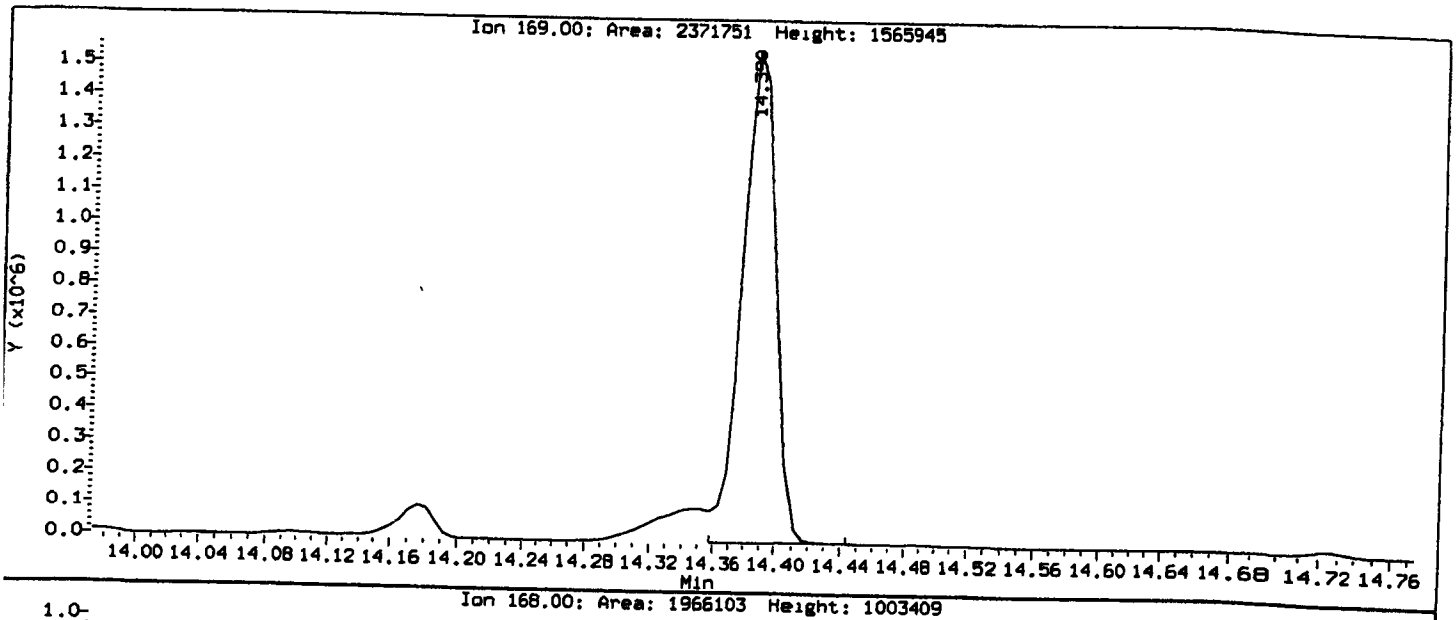
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

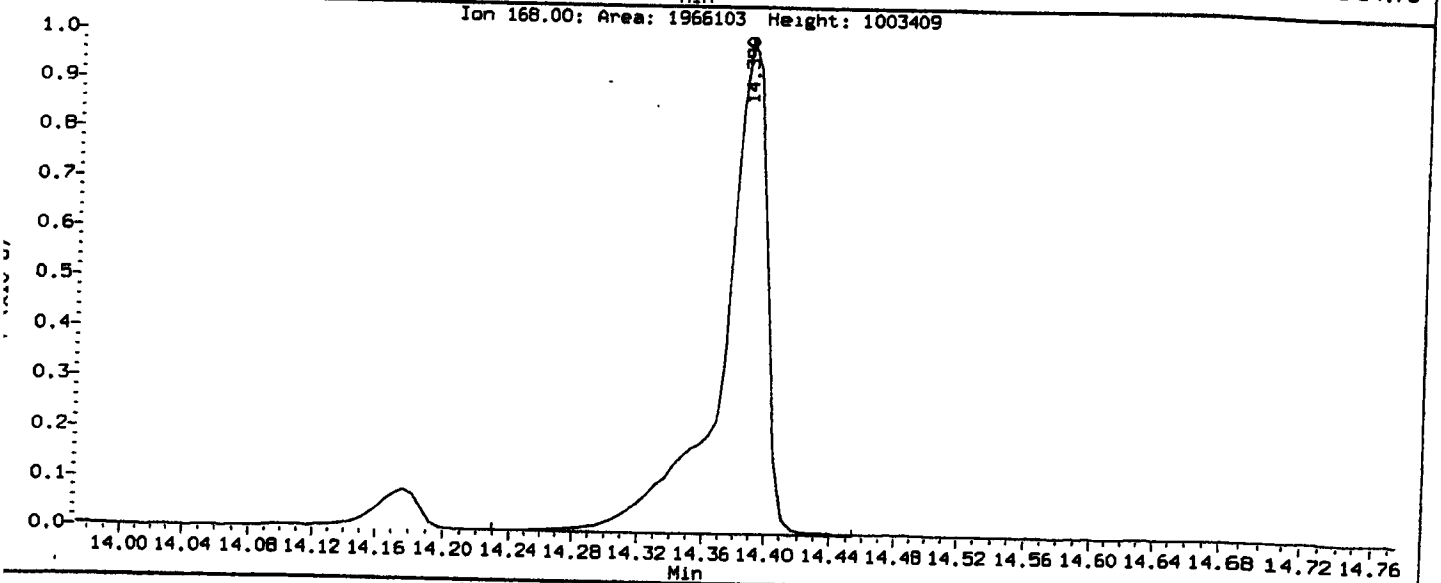
5. Other _____

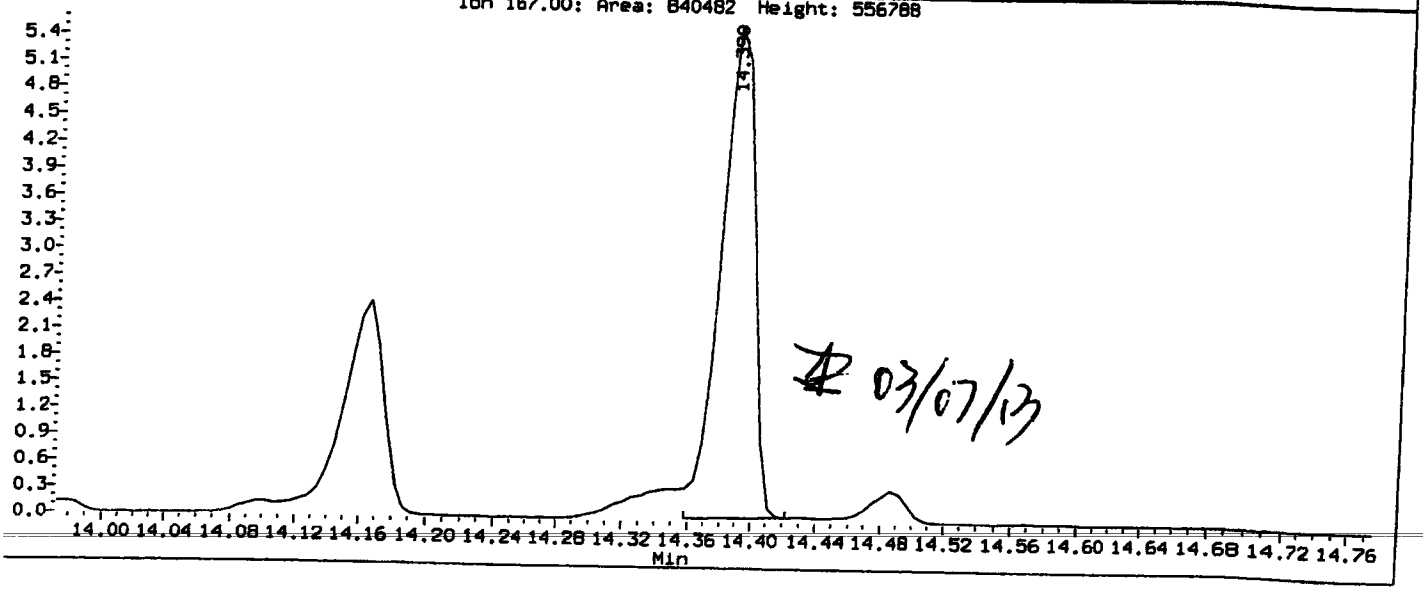
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.i
Client Sample ID: IC800306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



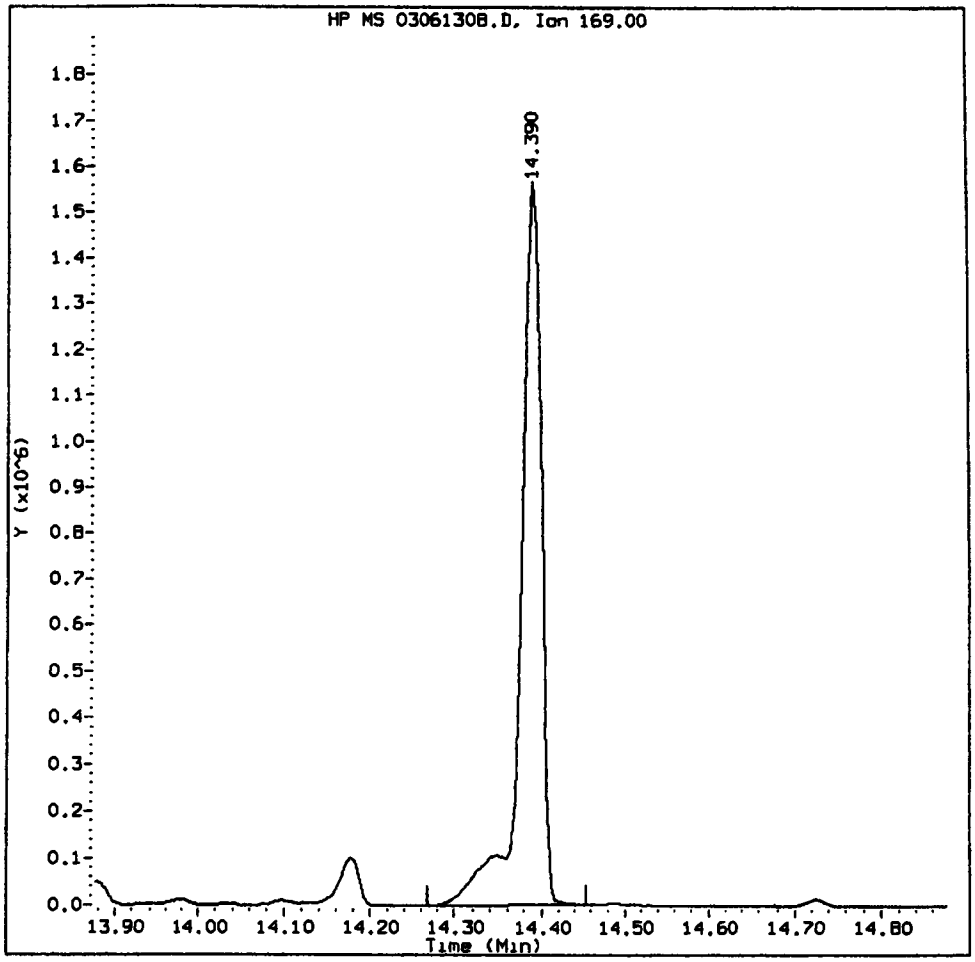




03/07/13

IC80306, /chem2/nt6.i/20130306.b/03061308.D

N-Nitrosodiphenylamine Amount: 64.16 Area: 2609924



MANUAL INTEGRATION for N-Nitrosodiphenylamine

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061308.D

Lab ID: IC80306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061309.D
Lab Smp Id: ICV0306 Client Smp ID: ICV0306
Inj Date : 06-MAR-2013 16:52
Operator : JZ Inst ID: nt6.i
Smp Info : ICV0306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 14:16 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICVS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable 03/07/13

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
1 2-Fluorophenol	112	6.429	6.432	(0.767)	680731	24.0771	24.08
2 Phenol-d5	99	7.930	7.933	(0.946)	780413	23.5802	23.58
3 Phenol	94	7.952	7.969	(0.948)	902305	25.8922	25.89
5 2-Chlorophenol-d4	132	8.080	8.082	(0.964)	662890	23.6945	23.69
4 Bis(2-Chloroethyl)ether	93	8.048	8.059	(0.960)	698741	23.0879	23.09
6 2-Chlorophenol	128	8.107	8.118	(0.967)	729337	26.1581	26.16
7 1,3-Dichlorobenzene	146	8.326	8.332	(0.993)	749128	23.0049	23.00
8 1,4-Dichlorobenzene-d4	152	8.384	8.385	(1.000)	436336	20.0000	
9 1,4-Dichlorobenzene	146	8.411	8.417	(1.003)	733836	23.1542	23.15
10 1,2-Dichlorobenzene-d4	152	8.684	8.681	(1.036)	461465	23.4361	23.44
12 1,2-Dichlorobenzene	146	8.705	8.706	(1.038)	693297	22.8826	22.88
11 Benzyl alcohol	108	8.651	8.674	(1.032)	448309	23.6141	23.61
14 2,2'-oxybis(1-Chloropropane)	45	8.908	8.919	(1.062)	1134956	23.6031	23.60
13 2-Methylphenol	108	8.876	8.898	(1.059)	723080	27.3638	27.36
17 Hexachloroethane	117	9.191	9.192	(1.096)	297182	23.1817	23.18
16 N-Nitroso-di-n-propylamine	70	9.127	9.155	(1.089)	503015	22.1475	22.15

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
15 4-Methylphenol	108	9.106	9.128	(1.086)	729199	27.9061	27.91
18 Nitrobenzene-d5	82	9.309	9.311	(0.893)	772979	24.0494	24.05
19 Nitrobenzene	77	9.335	9.358	(0.896)	711278	23.1206	23.12
20 Isophorone	82	9.715	9.742	(0.932)	1353521	25.2423	25.24
21 2-Nitrophenol	139	9.848	9.860	(0.945)	393118	27.6169	27.62
22 2,4-Dimethylphenol	107	9.944	9.961	(0.954)	711827	26.4423	26.44
23 Bis(2-Chloroethoxy)methane	93	10.094	10.111	(0.969)	770762	21.9078	21.91
24 Benzoic acid	105	10.201	10.330	(0.979)	1345602	57.7442	57.74
25 2,4-Dichlorophenol	162	10.222	10.239	(0.981)	573091	27.6475	27.65
26 1,2,4-Trichlorobenzene	180	10.361	10.367	(0.994)	592045	22.9449	22.94
27 Naphthalene-d8	136	10.420	10.426	(1.000)	1601740	20.0000	
28 Naphthalene	128	10.452	10.463	(1.003)	1764697	25.6575	25.66
29 4-Chloroaniline	127	10.585	10.602	(1.016)	659198	32.3122	32.31
30 Hexachlorobutadiene	225	10.762	10.768	(1.033)	362788	23.1045	23.10
31 4-Chloro-3-methylphenol	107	11.381	11.393	(1.092)	612805	27.8320	27.83
32 2-Methylnaphthalene	141	11.568	11.580	(1.110)	906115	23.2622	23.26
33 Hexachlorocyclopentadiene	237	11.942	11.948	(0.899)	375240	24.8473	24.85
34 2,4,6-Trichlorophenol	196	12.076	12.087	(0.909)	427256	27.0392	27.04
35 2,4,5-Trichlorophenol	196	12.129	12.141	(0.913)	468145	30.0326	30.03
36 2-Fluorobiphenyl	172	12.204	12.212	(0.919)	1325851	22.3460	22.35
37 2-Chloronaphthalene	162	12.348	12.360	(0.930)	1001690	24.8929	24.89
38 2-Nitroaniline	65	12.573	12.595	(0.947)	351131	25.2684	25.27
39 Dimethylphthalate	163	12.941	12.969	(0.975)	1245240	22.0112	22.01
40 Acenaphthylene	152	13.027	13.038	(0.981)	1824648	24.6099	24.61
41 2,6-Dinitrotoluene	165	13.037	13.060	(0.982)	275947	22.8301	22.83
42 Acenaphthene-d10	164	13.278	13.289	(1.000)	939966	20.0000	
43 3-Nitroaniline	138	13.256	13.273	(0.998)	239619	28.0702	28.07
44 Acenaphthene	153	13.331	13.348	(1.004)	1129525	23.5301	23.53
45 2,4-Dinitrophenol	184	13.422	13.455	(1.011)	479725	55.5689	55.57
46 Dibenzofuran	168	13.593	13.610	(1.024)	1455003	23.1752	23.18
47 4-Nitrophenol	109	13.534	13.567	(1.019)	172005	28.0119	28.01
48 2,4-Dinitrotoluene	165	13.668	13.690	(1.029)	385311	23.5679	23.57
50 Diethylphthalate	149	14.095	14.112	(1.062)	1220857	23.2922	23.29
49 Fluorene	166	14.148	14.165	(1.066)	1223636	27.6871	27.69
51 4-Chlorophenyl-phenylether	204	14.165	14.176	(1.067)	596246	21.6357	21.64
52 4-Nitroaniline	138	14.245	14.288	(1.073)	251920	27.3255	27.33
53 4,6-Dinitro-2-methylphenol	198	14.325	14.358	(0.915)	572575	53.7527	53.75
54 N-Nitrosodiphenylamine	169	14.368	14.390	(0.918)	914372	22.7358	22.74
55 2,4,6-Tribromophenol	330	14.571	14.573	(1.097)	189554	25.5032	25.50
56 4-Bromophenyl-phenylether	248	14.944	14.956	(0.955)	377350	23.2428	23.24
57 Hexachlorobenzene	284	15.174	15.186	(0.969)	384515	22.9728	22.97
58 Pentachlorophenol	266	15.468	15.480	(0.988)	287065	29.0708	29.07
59 Phenanthrene-d10	188	15.655	15.667	(1.000)	1479267	20.0000	
60 Phenanthrene	178	15.692	15.709	(1.002)	1680027	22.9553	22.96
61 Anthracene	178	15.767	15.784	(1.007)	1755058	23.9500	23.95
62 Carbazole	167	16.040	16.057	(1.025)	1330730	26.0182	26.02
63 Di-n-butylphthalate	149	16.734	16.751	(1.069)	2030430	21.9779	21.98

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	64 Fluoranthene	202	17.626	17.643	(1.126)	1972942	25.6259	25.63
	65 Pyrene	202	17.984	18.001	(0.901)	2056966	25.5013	25.50
$	66 Terphenyl-d14	244	18.283	18.291	(0.916)	1211475	23.3683	23.37
	67 Butylbenzylphthalate	149	19.154	19.171	(0.959)	908272	23.0277	23.03
	68 Benzo(a)anthracene	228	19.939	19.956	(0.999)	1685817	25.0357	25.04
*	69 Chrysene-d12	240	19.966	19.983	(1.000)	1476943	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.939	19.951	(0.999)	451257	24.3578	24.36
	71 Chrysene	228	20.009	20.026	(1.002)	1736178	25.2571	25.26
	72 bis(2-Ethylhexyl)phthalate	149	20.137	20.149	(0.956)	1228581	22.7274	22.73
*	134 Di-n-octylphthalate-d4	153	21.072	21.078	(1.000)	1837060	20.0000	
	73 Di-n-octylphthalate	149	21.083	21.089	(1.000)	1880578	21.6808	21.68
	74 Benzo(b)fluoranthene	252	21.595	21.618	(0.976)	1566636	23.6801	23.68
	75 Benzo(k)fluoranthene	252	21.627	21.655	(0.978)	1994452	28.1196	28.12
	187 Total Benzofluoranthenes	252	21.627	21.655	(0.978)	3327670	49.3546	49.35
	76 Benzo(a)pyrene	252	22.044	22.066	(0.996)	1613570	25.7778	25.78
*	77 Perylene-d12	264	22.124	22.136	(1.000)	1464482	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	23.743	23.781	(1.073)	1965367	26.0897	26.09
	79 Dibenzo(a,h)anthracene	278	23.770	23.808	(1.074)	1560578	26.3098	26.31
	80 Benzo(g,h,i)perylene	276	24.202	24.251	(1.094)	1686995	26.1865	26.19
	90 N-Nitrosodimethylamine	74	3.897	3.962	(0.465)	477683	23.2474	23.25
	103 Pyridine	79	3.860	3.914	(0.460)	714173	21.9157	21.92
	91 Aniline	93	7.941	7.947	(0.947)	926839	24.0038	24.00
	105 1-methylnaphthalene	141	11.739	11.751	(1.127)	940259	23.7617	23.76
	93 Benzidine	184	17.867	17.873	(0.895)	240615	33.4934	33.49 (R)
	111 Azobenzene (1,2-DP-Hydrazine)	77	14.416	14.438	(1.086)	1374366	23.0768	23.08
	143 1,4-Dioxane	88	3.112	3.145	(0.371)	350623	24.7683	24.77
	137 d8-1,4-Dioxane	96	3.053	3.086	(0.364)	318432	24.0340	24.03
	144 alpha-Terpineol	59	10.468	10.485	(1.005)	525055	25.7775	25.78
	177 p-Benzoquinone	82	7.081	7.092	(0.680)	168536	27.5531	27.55
	98 Retene	219	18.534	18.546	(0.928)	857189	24.6256	24.63
	99 Perylene	252	22.156	22.179	(1.001)	1395665	25.4541	25.45
	133 Butylatedhydroxytoluene	205	13.438	13.450	(1.012)	979147	24.7376	24.74
	115 Tributyl Phosphate	99	14.453	14.486	(0.923)	1516405	26.7138	26.71
	116 Dibutyl Phenyl Phosphate	175	16.189	16.190	(1.034)	1011072	25.8473	25.85
	117 Butyl Diphenyl Phosphate	94	17.867	17.878	(0.895)	334533	24.6000	24.60
	118 Triphenyl Phosphate	326	19.475	19.486	(0.975)	321794	24.8809	24.88
	123 Acetophenone	105	9.073	9.090	(1.082)	978965	23.8352	23.84
	168 Pentachlorobenzene	250	13.636	13.647	(1.027)	526515	25.5739	25.57
	113 Diphenyl Oxide	170	12.530	12.541	(0.944)	860260	23.5091	23.51
	112 Biphenyl	154	12.338	12.349	(0.929)	1201266	26.6016	26.60
	120 2,3,4,6-Tetrachlorophenol	232	13.865	13.882	(1.044)	367023	27.3555	27.36
	151 1,2,4,5-Tetrachlorobenzene	216	11.905	11.911	(0.897)	595534	25.9384	25.94
	110 Tetrachloroguaiacol	247	15.596	15.613	(0.996)	430258	55.4316	55.43
	109 3,4,5-Trichloroguaiacol	213	13.962	13.978	(0.892)	229733	27.1873	27.19
	181 3,4,6-Trichloroguaiacol	211	14.079	14.096	(1.679)	263271	26.4421	26.44
	108 4,5,6-Trichloroguaiacol	213	14.993	15.004	(1.129)	232582	26.4561	26.46
	184 3,4-Dichloroguaiacol	192	12.423	12.435	(1.482)	244376	25.8587	25.86

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
107 4,5-Dichloroguaiacol	192	13.203	13.220	(0.994)	600400	52.2673	52.27
182 4,6-Dichloroguaiacol	192	13.203	13.220	(1.575)	597711	51.8329	51.83
185 4-Chloroguaiacol	115	11.333	11.345	(1.352)	158010	12.8882	12.89
186 Carbaryl	144	16.451	16.473	(1.051)	922128	26.9774	26.98
178 2-Benzyl-4-Chlorophenol	218	16.403	16.425	(1.048)	320599	26.1670	26.17
106 Guaiacol	124	9.330	9.347	(1.113)	546489	24.0770	24.08

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ata File: /chem2/nt6.i/20130306.b/03061309.D
eport Date: 07-Mar-2013 14:18

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

nstrument ID: nt6.i
ab File ID: 03061309.D
ab Smp Id: ICV0306
nalysis Type: SV
uant Type: ISTD
perator: JZ
ethod File: /chem2/nt6.i/20130306.b/SW846030613.m
isc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: ICV0306
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	436336	-4.75
27 Naphthalene-d8	1718341	859170	3436682	1601740	-6.79
42 Acenaphthene-d10	1010041	505020	2020082	939966	-6.94
59 Phenanthrene-d10	1666734	833367	3333468	1479267	-11.25
69 Chrysene-d12	1675752	837876	3351504	1476943	-11.86
134 Di-n-octylphthala	2026355	1013178	4052710	1837060	-9.34
77 Perylene-d12	1637524	818762	3275048	1464482	-10.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.02
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.06
59 Phenanthrene-d10	15.66	15.16	16.16	15.65	-0.05
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.07
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.06
77 Perylene-d12	22.14	21.64	22.64	22.12	-0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061309.D
Report Date: 07-Mar-2013 14:18

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV0306
Level: LOW
Data Type: MS DATA
SpikeList File: ICV.spk
Sublist File: ICVS.sub
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Client SDG: 20130306
Fraction: SV
Client Smp ID: ICV0306
Operator: JZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 Phenol	25.00	25.89	103.57	70-130
4 Bis(2-Chloroethyl)	25.00	23.09	92.35	70-130
6 2-Chlorophenol	25.00	26.16	104.63	70-130
7 1,3-Dichlorobenzen	25.00	23.00	92.02	70-130
9 1,4-Dichlorobenzen	25.00	23.15	92.62	70-130
11 Benzyl alcohol	25.00	23.61	94.46	70-130
12 1,2-Dichlorobenzen	25.00	22.88	91.53	70-130
13 2-Methylphenol	25.00	27.36	109.46	70-130
14 2,2'-oxybis(1-Chlo	25.00	23.60	94.41	70-130
15 4-Methylphenol	25.00	27.91	111.62	70-130
16 N-Nitroso-di-n-pro	25.00	22.15	88.59	70-130
17 Hexachloroethane	25.00	23.18	92.73	70-130
19 Nitrobenzene	25.00	23.12	92.48	70-130
20 Isophorone	25.00	25.24	100.97	70-130
21 2-Nitrophenol	25.00	27.62	110.47	70-130
22 2,4-Dimethylphenol	25.00	26.44	105.77	70-130
23 Bis(2-Chloroethoxy	25.00	21.91	87.63	70-130
24 Benzoic acid	50.00	57.74	115.49	70-130
25 2,4-Dichlorophenol	25.00	27.65	110.59	70-130
26 1,2,4-Trichloroben	25.00	22.94	91.78	70-130
28 Naphthalene	25.00	25.66	102.63	70-130
29 4-Chloroaniline	25.00	32.31	129.25	70-130
30 Hexachlorobutadien	25.00	23.10	92.42	70-130
31 4-Chloro-3-methylp	25.00	27.83	111.33	70-130
32 2-Methylnaphthalen	25.00	23.26	93.05	70-130
33 Hexachlorocyclopen	25.00	24.85	99.39	70-130
34 2,4,6-Trichlorophe	25.00	27.04	108.16	70-130
35 2,4,5-Trichlorophe	25.00	30.03	120.13	70-130
37 2-Chloronaphthalen	25.00	24.89	99.57	70-130
38 2-Nitroaniline	25.00	25.27	101.07	70-130
39 Dimethylphthalate	25.00	22.01	88.04	70-130
40 Acenaphthylene	25.00	24.61	98.44	70-130
41 2,6-Dinitrotoluene	25.00	22.83	91.32	70-130

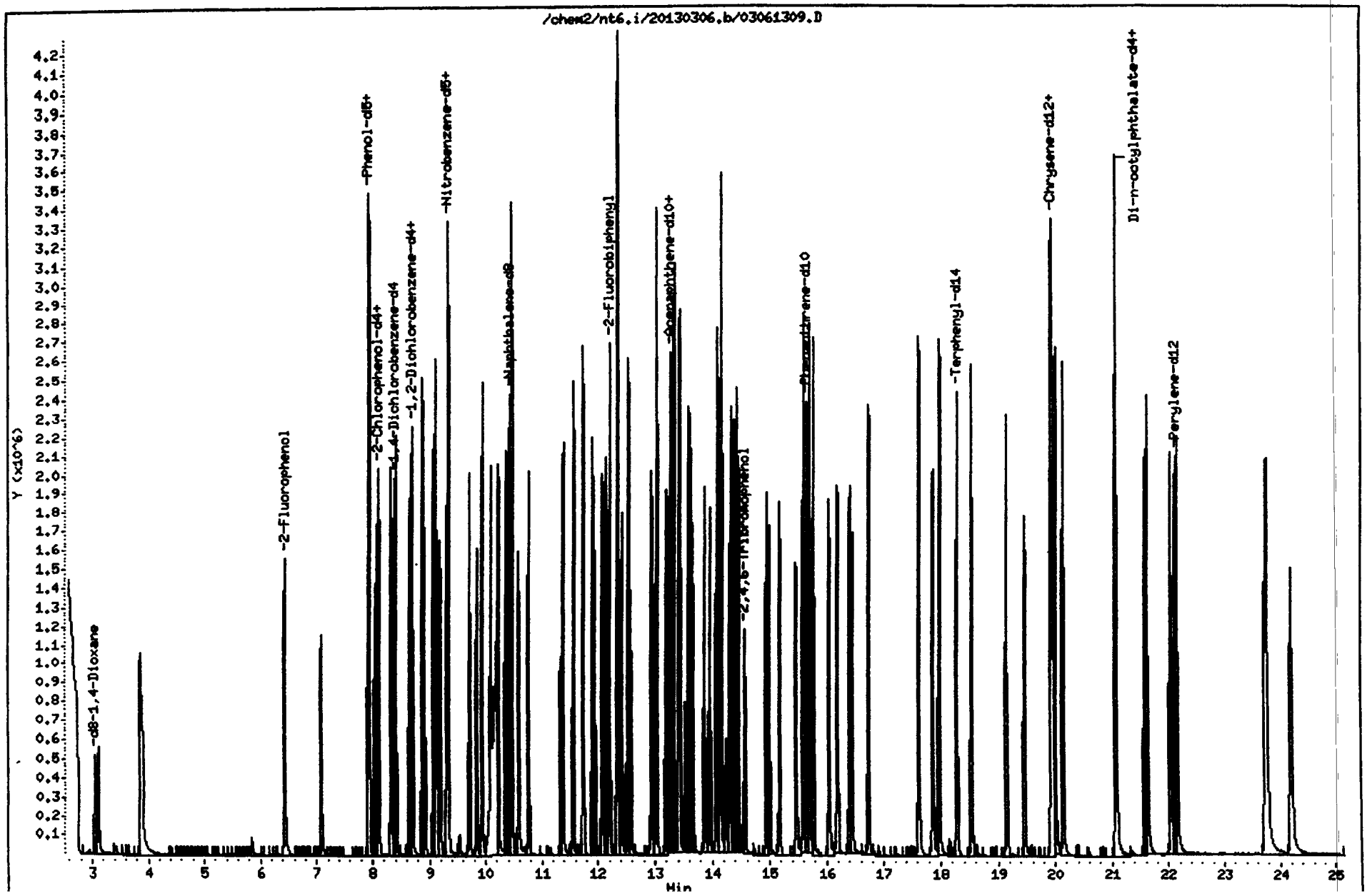
SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43	3-Nitroaniline	25.00	28.07	112.28	70-130
44	Acenaphthene	25.00	23.53	94.12	70-130
45	2,4-Dinitrophenol	50.00	55.57	111.14	70-130
46	Dibenzofuran	25.00	23.18	92.70	70-130
47	4-Nitrophenol	25.00	28.01	112.05	70-130
48	2,4-Dinitrotoluene	25.00	23.57	94.27	70-130
49	Fluorene	25.00	27.69	110.75	70-130
50	Diethylphthalate	25.00	23.29	93.17	70-130
51	4-Chlorophenyl-phe	25.00	21.64	86.54	70-130
52	4-Nitroaniline	25.00	27.33	109.30	70-130
53	4,6-Dinitro-2-meth	50.00	53.75	107.51	70-130
54	N-Nitrosodiphenyla	25.00	22.74	90.94	70-130
56	4-Bromophenyl-phen	25.00	23.24	92.97	70-130
57	Hexachlorobenzene	25.00	22.97	91.89	70-130
58	Pentachlorophenol	25.00	29.07	116.28	70-130
60	Phenanthrene	25.00	22.96	91.82	70-130
61	Anthracene	25.00	23.95	95.80	70-130
62	Carbazole	25.00	26.02	104.07	70-130
63	Di-n-butylphthalat	25.00	21.98	87.91	70-130
64	Fluoranthene	25.00	25.63	102.50	70-130
65	Pyrene	25.00	25.50	102.01	70-130
67	Butylbenzylphthala	25.00	23.03	92.11	70-130
68	Benzo(a)anthracene	25.00	25.04	100.14	70-130
70	3,3'-Dichlorobenzi	25.00	24.36	97.43	70-130
71	Chrysene	25.00	25.26	101.03	70-130
72	bis(2-Ethylhexyl)p	25.00	22.73	90.91	70-130
73	Di-n-octylphthalat	25.00	21.68	86.72	70-130
74	Benzo(b)fluoranthe	25.00	23.68	94.72	70-130
75	Benzo(k)fluoranthe	25.00	28.12	112.48	70-130
187	Total Benzofluoran	50.00	49.35	98.71	70-130
76	Benzo(a)pyrene	25.00	25.78	103.11	70-130
78	Indeno(1,2,3-cd)py	25.00	26.09	104.36	70-130
79	Dibenzo(a,h)anthra	25.00	26.31	105.24	70-130
80	Benzo(g,h,i)peryle	25.00	26.19	104.75	70-130
90	N-Nitrosodimethyla	25.00	23.25	92.99	70-130
103	Pyridine	25.00	21.92	87.66	70-130
91	Aniline	25.00	24.00	96.02	70-130
105	1-methylnaphthalen	25.00	23.76	95.05	70-130
93	Benzidine	25.00	33.49	133.97*	70-130
111	Azobenzene (1,2-DP	25.00	23.08	92.31	70-130
143	1,4-Dioxane	25.00	24.77	99.07	70-130
144	alpha-Terpineol	25.00	25.78	103.11	70-130
177	p-Benzoquinone	25.00	27.55	110.21	70-130
98	Retene	25.00	24.63	98.50	70-130
99	Perylene	25.00	25.45	101.82	70-130
133	Butylatedhydroxyto	25.00	24.74	98.95	70-130
115	Tributyl Phosphate	25.00	26.71	106.86	70-130

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
116 Dibutyl Phenyl Pho	25.00	25.85	103.39	70-130
117 Butyl Diphenyl Pho	25.00	24.60	98.40	70-130
118 Triphenyl Phosphat	25.00	24.88	99.52	70-130
123 Acetophenone	25.00	23.84	95.34	70-130
168 Pentachlorobenzene	25.00	25.57	102.30	70-130
113 Diphenyl Oxide	25.00	23.51	94.04	70-130
112 Biphenyl	25.00	26.60	106.41	70-130
120 2,3,4,6-Tetrachlor	25.00	27.36	109.42	70-130
151 1,2,4,5-Tetrachlor	25.00	25.94	103.75	70-130
106 Guaiacol	25.00	24.08	96.31	70-130
186 Carbaryl	25.00	26.98	107.91	70-130
178 2-Benzyl-4-Chlorop	25.00	26.17	104.67	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	25.00	24.08	96.31	75-125
$ 2 Phenol-d5	25.00	23.58	94.32	75-125
$ 5 2-Chlorophenol-d4	25.00	23.69	94.78	75-125
$ 10 1,2-Dichlorobenzen	25.00	23.44	93.74	75-125
$ 18 Nitrobenzene-d5	25.00	24.05	96.20	75-125
$ 36 2-Fluorobiphenyl	25.00	22.35	89.38	75-125
$ 55 2,4,6-Tribromophen	25.00	25.50	102.01	75-125
$ 66 Terphenyl-d14	25.00	23.37	93.47	75-125
$ 137 d8-1,4-Dioxane	25.00	24.03	96.14	75-125

Data File: /chem2/nt6.i/20130306.b/03061309.D
Date : 06-MAR-2013 16:52
Client ID: ICV0306
Sample Info: ICV0306,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



:O-ELUTION SUMMARY FOR FILE - 03061309.D

.ab ID: ICV0306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS
19.939	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked ok

DE 03/07/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 (NT-10) NT11 NT12

Curve Date(s): 04/29/13 Internal Standard ID 1998-2 Expiration 07/03/13

DFTPP Tune Meets Criteria?	(YES) / NO	Minimum Response Factors Met/	(YES) / NO
DDT Breakdown <20%?	(YES) / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	(YES) / NO	ICV Exceeding ±30%?	(YES) / NO
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	Linear Fits Used?	Benzidine (YES) / NO
Q flag applied?	YES / (NO)	Quadratic Fits Used?	(YES) / NO
Manual Integrations for ICal?	(YES) / NO	Calibration Points Dropped?	(YES) / NO
Spectral Library Updated?	(YES) / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	2072-1	6/31/13	Ultra	2055-1	12/05/13
	2073-1	6/31/13		2054-1	12/31/13
	2004-2	10/25/14		2053-2	08/13/13
	B000112	10/15/13			
	1998-4	7/02/13			

Detail problems, corrective actions and/or other pertinent information below:

Benzoic acid, 2,4 Dinitrophenol, 4 Nitrophenol, Benzidine
4,6 Dinitro-2-methylphenol - quadratic fit used.

- Low point of the curve dropped for Benzoic acid, 4 Nitrophenol, 2,4 Dinitrophenol, Carbazol Benzidine

Analyst: YZ **Date:** 5/3/13

Reviewer: VD **Date:** 5.4.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/29/13 Analysis: AOV/SIM AOV Analyst: YZ

GC Program: AOV_2 Column No: ~~247358~~ 252945 Column Type: ~~30~~ 5 mtr

Instrument Tune (.U or .CT.): B122814 EM Voltage: ~~1695~~ 1650

Calibration File: DF042 9 Curve Date: 04/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal		LCS/ICV
1998-2	~~2036-2~~	~~2050-1,2~~	2053-1
	~~2044-2~~	~~1998-4~~	2054-1
	~~2068-2~~		2053-1
	2072-1	B000112	
	2073-1	1998-4	
	2064-2		

Document All Maintenance Tasks in StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130429.b

	Time	Filename	LabID	ClientId	DF													
1	1637	df0429.d	DFTPP	DFTPP	1	NO ISTDs FOUND												
2	1653	ic0429a.d	IC0429A		1	8.99	45250	11.64	166784	15.54	106910	18.82	179783	23.90	192841	26.35	184310	24.99	229567
3	1730	ic0429b.d	IC0429B		1	8.99	36696	11.65	136283	15.55	88131	18.83	152272	23.90	162543	26.36	160177	25.00	211292
4	1807	ic0429c.d	IC0429C		1	8.99	50436	11.64	186081	15.54	109826	18.81	184210	23.90	198580	26.34	178934	24.99	212453
5	1844	ic0429d.d	IC0429D		1	8.98	44580	11.64	164171	15.54	101406	18.81	169929	23.90	185129	26.35	168300	25.00	198625
6	1921	ic0429e.d	IC0429E		1	8.99	38285	11.65	142908	15.54	92187	18.82	160272	23.90	172225	26.36	166300	25.00	210890
7	2034	ic0429g.d	IC0429G		1	8.99	36591	11.64	137898	15.54	87308	18.82	150153	23.90	164553	26.36	152859	25.00	178975
8	2147	ic0429i.d	IC0429I		1	8.98	41602	11.64	157280	15.53	96337	18.81	159583	23.90	170666	26.35	157899	24.99	174102
9	2224	ic0429icv.d	IC0429ICV		1	8.98	41290	11.64	152009	15.53	95722	18.81	161863	23.90	175186	26.35	166766	24.99	197383

YZ 5/03/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.349	26.357	26.342	26.349	26.357	26.357	26.350	26.349	23.349-29.349	26.352	0.006
	78 Indeno(1,2,3-cd)pyrene	28.690	28.713	28.674	28.682	28.705	28.697	28.690	28.690	25.690-31.690	28.693	0.013
	79 Dibenzo(a,h)anthracene	28.713	28.737	28.698	28.705	28.729	28.721	28.698	28.713	25.713-31.713	28.714	0.015
	80 Benzo(g,h,i)perylene	29.373	29.405	29.358	29.358	29.389	29.381	29.350	29.373	26.373-32.373	29.373	0.020
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.366	4.389	4.382	4.366	4.374	4.351	4.366	4.366	1.366-7.366	4.371	0.013
	91 Aniline	8.414	8.421	8.406	8.406	8.414	8.406	8.406	8.414	5.414-11.414	8.410	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.542	21.549	21.542	21.542	21.549	21.541	21.542	21.542	18.542-24.542	21.544	0.004
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	22.316	22.316	22.308	22.316	22.323	22.315	22.316	22.316	19.316-25.316	22.316	0.004
	99 Perylene	26.396	26.411	26.388	26.396	26.411	26.403	26.388	26.396	23.396-29.396	26.399	0.010
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.382	4.389	4.420	4.397	4.374	4.374	4.397	4.382	1.382-7.382	4.390	0.016
	188 2,6-Dichlorophenol	11.874	11.890	11.866	11.866	11.882	11.866	11.867	11.874	8.874-14.874	11.873	0.009
	189 N-Nitrosomethylethylam	5.818	5.825	5.833	5.818	5.825	5.817	5.818	5.818	2.818-8.818	5.822	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0429a	ic0429b	ic0429c	ic0429d	ic0429e	ic0429g	ic0429i
INJ.DATE:	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013
INJ.TIME:	16:53	17:30	18:07	18:44	19:21	20:34	21:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.629	6.636	6.636	6.628	6.628	6.628	6.629	6.629	3.629-9.629	6.631	0.004
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.645	5.645-11.645	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.455	14.455-20.455	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.696	17.696-23.696	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.219	16.219-22.219	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.949	19.949-25.949	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.195	16.195-22.195	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.503	17.503-23.503	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.827	4.827-10.827	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date: 5/3/13
Reviewer 2 _____ Date: 5.4.13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	24.994	25.002	24.994	25.002	25.002	25.002	24.995	24.994	21.994-27.994	24.999	0.004
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	16.346	16.354	16.338	16.338	16.346	16.346	16.338	16.346	13.346-19.346	16.344	0.006
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	17.103	17.118	17.095	17.095	17.111	17.103	17.095	17.103	14.103-20.103	17.103	0.009
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.324	14.324-20.324	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.115	12.115-18.115	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.270	12.270-18.270	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.519	13.519-19.519	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.019	10.019-16.019	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.095	11.095-17.095	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.118	11.118-17.118	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.572	8.572-14.572	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106	Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
105	1-methylnaphthalene	13.437	13.437	13.429	13.429	13.437	13.429	13.430	13.437	10.437-16.437	13.433	0.004
151	1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
152	Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153	Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
154	Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
155	Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
156	Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
157	Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
158	Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
159	4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
160	Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
161	1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162	1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163	1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164	1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165	1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166	Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167	2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2	Phenol-d5	8.344	8.352	8.336	8.336	8.344	8.336	8.337	8.344	5.344-11.344	8.341	0.006
3	Phenol	8.367	8.375	8.360	8.360	8.367	8.359	8.360	8.367	5.367-11.367	8.364	0.006
4	Bis(2-Chloroethyl)ethe	8.522	8.530	8.522	8.522	8.529	8.522	8.522	8.522	5.522-11.522	8.524	0.004
$ 5	2-Chlorophenol-d4	8.599	8.607	8.599	8.591	8.599	8.599	8.599	8.599	5.599-11.599	8.599	0.004

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.630	8.638	8.630	8.622	8.630	8.622	8.622	8.630	5.630-11.630	8.628	0.006
	7 1,3-Dichlorobenzene	8.917	8.917	8.917	8.909	8.917	8.916	8.909	8.917	5.917-11.917	8.914	0.004
*	8 1,4-Dichlorobenzene-d4	8.986	8.986	8.986	8.979	8.986	8.986	8.979	8.986	5.986-11.986	8.984	0.004
	9 1,4-Dichlorobenzene	9.017	9.017	9.017	9.010	9.017	9.017	9.018	9.017	6.017-12.017	9.016	0.003
$	10 1,2-Dichlorobenzene-d4	9.367	9.375	9.367	9.367	9.367	9.367	9.367	9.367	6.367-12.367	9.368	0.003
	11 Benzyl alcohol	9.289	9.305	9.289	9.289	9.297	9.289	9.289	9.289	6.289-12.289	9.292	0.006
	12 1,2-Dichlorobenzene	9.398	9.398	9.398	9.390	9.398	9.390	9.390	9.398	6.398-12.398	9.394	0.004
	13 2-Methylphenol	9.553	9.561	9.553	9.545	9.553	9.553	9.553	9.553	6.553-12.553	9.553	0.005
	14 2,2'-oxybis(1-Chloropr	9.623	9.623	9.623	9.623	9.623	9.623	9.623	9.623	6.623-12.623	9.623	0.000
	15 4-Methylphenol	9.848	9.856	9.840	9.840	9.848	9.840	9.840	9.848	6.848-12.848	9.845	0.006
	16 N-Nitroso-di-n-propyla	9.902	9.910	9.902	9.895	9.902	9.894	9.895	9.902	6.902-12.902	9.900	0.006
	17 Hexachloroethane	10.027	10.027	10.027	10.019	10.026	10.026	10.027	10.027	7.027-13.027	10.025	0.003
$	18 Nitrobenzene-d5	10.159	10.166	10.158	10.158	10.158	10.158	10.159	10.159	7.159-13.159	10.160	0.003
	19 Nitrobenzene	10.197	10.205	10.197	10.197	10.197	10.197	10.190	10.197	7.197-13.197	10.197	0.004
	20 Isophorone	10.686	10.709	10.686	10.686	10.694	10.686	10.686	10.686	7.686-13.686	10.691	0.009
	21 2-Nitrophenol	10.872	10.879	10.872	10.872	10.879	10.871	10.872	10.872	7.872-13.872	10.874	0.004
	22 2,4-Dimethylphenol	10.964	10.980	10.964	10.964	10.972	10.964	10.964	10.964	7.964-13.964	10.967	0.006
	23 Bis(2-Chloroethoxy)met	11.180	11.188	11.172	11.172	11.180	11.172	11.172	11.180	8.180-14.180	11.176	0.006
	24 Benzoic acid	11.226	11.280	11.064	11.110	11.303	11.164	11.080	11.226	8.226-14.226	11.175	0.096
	25 2,4-Dichlorophenol	11.365	11.380	11.365	11.365	11.372	11.365	11.365	11.365	8.365-14.365	11.368	0.006
	26 1,2,4-Trichlorobenzene	11.565	11.565	11.558	11.558	11.565	11.557	11.558	11.565	8.565-14.565	11.561	0.004
*	27 Naphthalene-d8	11.643	11.650	11.643	11.643	11.650	11.642	11.643	11.643	8.643-14.643	11.645	0.004
	28 Naphthalene	11.689	11.697	11.689	11.689	11.689	11.689	11.681	11.689	8.689-14.689	11.689	0.004
	29 4-Chloroaniline	11.859	11.874	11.851	11.851	11.859	11.851	11.843	11.859	8.859-14.859	11.855	0.010

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	12.098	12.106	12.106	12.098	12.106	12.098	12.099	12.098	9.098-15.098	12.102	0.004
	31 4-Chloro-3-methylpheno	12.919	12.927	12.911	12.911	12.919	12.911	12.911	12.919	9.919-15.919	12.915	0.006
	32 2-Methylnaphthalene	13.197	13.205	13.197	13.197	13.197	13.197	13.197	13.197	10.197-16.197	13.198	0.003
	33 Hexachlorocyclopentadi	13.716	13.716	13.708	13.708	13.716	13.716	13.708	13.716	10.716-16.716	13.712	0.004
	34 2,4,6-Trichlorophenol	13.878	13.894	13.878	13.878	13.886	13.878	13.879	13.878	10.878-16.878	13.882	0.006
	35 2,4,5-Trichlorophenol	13.956	13.964	13.956	13.956	13.956	13.956	13.948	13.956	10.956-16.956	13.956	0.004
$	36 2-Fluorobiphenyl	14.064	14.064	14.056	14.056	14.064	14.056	14.057	14.064	11.064-17.064	14.060	0.004
	37 2-Chloronaphthalene	14.265	14.273	14.258	14.257	14.265	14.265	14.258	14.265	11.265-17.265	14.263	0.006
	38 2-Nitroaniline	14.559	14.575	14.559	14.552	14.567	14.559	14.552	14.559	11.559-17.559	14.560	0.008
	39 Dimethylphthalate	15.055	15.070	15.047	15.055	15.062	15.055	15.047	15.055	12.055-18.055	15.056	0.008
	40 Acenaphthylene	15.202	15.202	15.194	15.194	15.194	15.194	15.194	15.202	12.202-18.202	15.196	0.004
	41 2,6-Dinitrotoluene	15.194	15.202	15.186	15.186	15.194	15.186	15.179	15.194	12.194-18.194	15.190	0.008
*	42 Acenaphthene-d10	15.542	15.550	15.542	15.542	15.542	15.542	15.535	15.542	12.542-18.542	15.542	0.004
	43 3-Nitroaniline	15.488	15.511	15.480	15.480	15.496	15.480	15.473	15.488	12.488-18.488	15.487	0.013
	44 Acenaphthene	15.612	15.619	15.612	15.612	15.612	15.611	15.604	15.612	12.612-18.612	15.612	0.004
	45 2,4-Dinitrophenol	15.712	15.743	15.712	15.704	15.727	15.712	15.705	15.712	12.712-18.712	15.717	0.014
	46 Dibenzofuran	15.967	15.983	15.959	15.967	15.975	15.967	15.960	15.967	12.967-18.967	15.968	0.008
	47 4-Nitrophenol	15.867	15.890	15.867	15.859	15.874	15.859	15.867	15.867	12.867-18.867	15.869	0.011
	48 2,4-Dinitrotoluene	16.060	16.075	16.052	16.052	16.068	16.052	16.052	16.060	13.060-19.060	16.059	0.009
	49 Fluorene	16.740	16.748	16.733	16.733	16.740	16.732	16.733	16.740	13.740-19.740	16.737	0.006
	50 Diethylphthalate	16.640	16.663	16.632	16.632	16.647	16.640	16.632	16.640	13.640-19.640	16.641	0.011
	51 4-Chlorophenyl-phenyle	16.756	16.756	16.748	16.756	16.756	16.756	16.748	16.756	13.756-19.756	16.754	0.004
	52 4-Nitroaniline	16.856	16.895	16.856	16.848	16.872	16.856	16.841	16.856	13.856-19.856	16.861	0.018
	53 4,6-Dinitro-2-methylph	16.964	16.995	16.949	16.949	16.972	16.956	16.949	16.964	13.964-19.964	16.962	0.017

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	17.026	17.041	17.026	17.026	17.034	17.026	17.026	17.026	14.026-20.026	17.029	0.006
$	55 2,4,6-Tribromophenol	17.319	17.327	17.311	17.311	17.319	17.311	17.311	17.319	14.319-20.319	17.316	0.006
	56 4-Bromophenyl-phenylet	17.836	17.843	17.835	17.835	17.835	17.835	17.836	17.836	14.836-20.836	17.837	0.003
	57 Hexachlorobenzene	18.160	18.160	18.153	18.153	18.160	18.152	18.153	18.160	15.160-21.160	18.156	0.004
	58 Pentachlorophenol	18.555	18.563	18.547	18.547	18.555	18.547	18.548	18.555	15.555-21.555	18.552	0.006
*	59 Phenanthrene-d10	18.818	18.826	18.810	18.810	18.818	18.818	18.811	18.818	15.818-21.818	18.816	0.006
	60 Phenanthrene	18.865	18.872	18.857	18.857	18.865	18.864	18.857	18.865	15.865-21.865	18.862	0.006
	61 Anthracene	18.965	18.973	18.957	18.957	18.965	18.957	18.958	18.965	15.965-21.965	18.962	0.006
	62 Carbazole	19.313	19.321	19.313	19.313	19.321	19.313	19.314	19.313	16.313-22.313	19.316	0.004
	63 Di-n-butylphthalate	20.188	20.188	20.188	20.188	20.188	20.187	20.188	20.188	17.188-23.188	20.188	0.000
	64 Fluoranthene	21.286	21.286	21.279	21.278	21.286	21.286	21.279	21.286	18.286-24.286	21.283	0.004
	65 Pyrene	21.704	21.704	21.696	21.696	21.704	21.704	21.697	21.704	18.704-24.704	21.701	0.004
$	66 Terphenyl-d14	22.021	22.029	22.021	22.021	22.029	22.029	22.022	22.021	19.021-25.021	22.025	0.004
	67 Butylbenzylphthalate	22.974	22.974	22.966	22.974	22.974	22.974	22.974	22.974	19.974-25.974	22.973	0.003
	68 Benzo(a)anthracene	23.872	23.880	23.864	23.864	23.872	23.872	23.864	23.872	20.872-26.872	23.870	0.006
*	69 Chrysene-d12	23.895	23.903	23.895	23.895	23.903	23.903	23.895	23.895	20.895-26.895	23.898	0.004
	70 3,3'-Dichlorobenzidine	23.849	23.857	23.841	23.849	23.856	23.849	23.841	23.849	20.849-26.849	23.849	0.006
	71 Chrysene	23.942	23.949	23.934	23.942	23.949	23.941	23.934	23.942	20.942-26.942	23.942	0.006
	72 bis(2-Ethylhexyl)phtha	24.019	24.019	24.019	24.019	24.027	24.027	24.019	24.019	21.019-27.019	24.021	0.004
	73 Di-n-octylphthalate	25.010	25.010	25.002	25.010	25.018	25.017	25.002	25.010	22.010-28.010	25.010	0.006
	74 Benzo(b)fluoranthene	25.668	25.676	25.660	25.668	25.676	25.668	25.660	25.668	22.668-28.668	25.668	0.006
	75 Benzo(k)fluoranthene	25.707	25.722	25.699	25.707	25.714	25.714	25.699	25.707	22.707-28.707	25.709	0.009
	187 Total Benzofluoranthen	25.707	25.722	25.660	25.668	25.714	25.668	25.699	25.707	22.707-28.707	25.691	0.025
	76 Benzo(a)pyrene	26.249	26.257	26.241	26.241	26.256	26.249	26.241	26.249	23.249-29.249	26.248	0.007

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Average

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/ic0429c.d
Level 2: /chem1/nt10.i/20130429.b/ic0429i.d
Level 3: /chem1/nt10.i/20130429.b/ic0429d.d
Level 4: /chem1/nt10.i/20130429.b/ic0429g.d
Level 5: /chem1/nt10.i/20130429.b/ic0429a.d
Level 6: /chem1/nt10.i/20130429.b/ic0429e.d
Level 7: /chem1/nt10.i/20130429.b/ic0429b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.32264	1.26754	1.24075	1.27398	1.12394	1.24670						
	1.18447						AVRG		1.23715		5.24731	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.70389	0.59747	0.62527	0.63990	0.63292	0.66830						
	0.67337						AVRG		0.64873		5.46363	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
162 1,2,3,4-Tetrachloronapthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	2.07745	2.01663	1.99013	2.15135	2.00628	2.20020					
	2.03355						AVRG		2.06794		3.85914
4 Bis(2-Chloroethyl)ether	1.56929	1.53896	1.46972	1.55326	1.37664	1.50058					
	1.40120						AVRG		1.48709		5.05358

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.55026	1.46704	1.47133	1.54154	1.50983	1.81549					
	1.80786						AVRG		1.59477		9.49947
7 1,3-Dichlorobenzene	1.69336	1.54473	1.58950	1.59956	1.55227	1.62846					
	1.59424						AVRG		1.60030		3.12454
9 1,4-Dichlorobenzene	1.71397	1.52647	1.51341	1.62532	1.53264	1.58116					
	1.54877						AVRG		1.57739		4.51793
11 Benzyl alcohol	0.85064	0.73516	0.83060	0.90072	0.88286	0.96932					
	0.91989						AVRG		0.86989		8.59920
12 1,2-Dichlorobenzene	1.62518	1.49204	1.50624	1.51578	1.45554	1.49728					
	1.47965						AVRG		1.51024		3.59480
13 2-Methylphenol	1.49001	1.40570	1.44998	1.54407	1.45837	1.56041					
	1.50801						AVRG		1.48808		3.66935
14 2,2'-oxybis(1-Chloropropane)	0.42611	0.44017	0.46397	0.48471	0.45795	0.47727					
	0.46264						AVRG		0.45898		4.42060

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
15 4-Methylphenol	1.43729	1.35493	1.48973	1.59318	1.52748	1.67713					
	1.54128						AVRG		1.51729		6.88641
16 N-Nitroso-di-n-propylamine	0.95251	0.89419	0.87815	0.98621	0.88743	0.97695					
	0.92792						AVRG		0.92905		4.74330
17 Hexachloroethane	0.68931	0.65881	0.65446	0.68375	0.62023	0.66920					
	0.64417						AVRG		0.65999		3.59193
19 Nitrobenzene	0.39510	0.39280	0.38552	0.39982	0.36572	0.40371					
	0.38522						AVRG		0.38970		3.22892
20 Isophorone	0.71195	0.66432	0.67279	0.71065	0.68101	0.86242					
	0.82790						AVRG		0.73300		10.82033
21 2-Nitrophenol	0.20754	0.18635	0.20138	0.22080	0.22866	0.24164					
	0.24290						AVRG		0.21847		9.68506
22 2,4-Dimethylphenol	0.41192	0.37230	0.39344	0.41516	0.40245	0.42253					
	0.39424						AVRG		0.40172		4.20008

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
23 Bis(2-Chloroethoxy)methane	0.44346	0.43452	0.43284	0.44204	0.41435	0.44041						
	0.41838						AVRG		0.43229		2.68164	
24 Benzoic acid	+++++	0.16051	0.25143	0.30891	0.33851	0.37356						
	0.37918						AVRG		0.30202		27.71646	<-
25 2,4-Dichlorophenol	0.31803	0.28833	0.38510	0.39343	0.39479	0.41768						
	0.39114						AVRG		0.36979		12.81889	
26 1,2,4-Trichlorobenzene	0.41240	0.34976	0.36404	0.35417	0.34495	0.35336						
	0.35130						AVRG		0.36143		6.42232	
28 Naphthalene	1.20528	1.00604	1.04043	1.06395	1.02045	1.07273						
	1.04570						AVRG		1.06494		6.20233	
29 4-Chloroaniline	0.42433	0.36449	0.40631	0.42348	0.42526	0.48932						
	0.38118						AVRG		0.41634		9.58081	
30 Hexachlorobutadiene	0.23345	0.19983	0.21390	0.20892	0.20729	0.22093						
	0.21857						AVRG		0.21470		5.08490	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.26343	0.27218	0.31153	0.34377	0.34343	0.37735					
	0.36548						AVRG		0.32531		13.65102
32 2-Methylnaphthalene	0.74054	0.67388	0.68178	0.70154	0.68736	0.73921					
	0.72726						AVRG		0.70737		3.96516
33 Hexachlorocyclopentadiene	0.44835	0.39323	0.41506	0.42533	0.44262	0.46660					
	0.48996						AVRG		0.44016		7.36429
34 2,4,6-Trichlorophenol	0.38934	0.36825	0.40727	0.42611	0.43278	0.45335					
	0.46998						AVRG		0.42101		8.44390
35 2,4,5-Trichlorophenol	0.35538	0.37249	0.41863	0.44267	0.45433	0.49279					
	0.50176						AVRG		0.43401		12.87553
37 2-Chloronaphthalene	1.25763	1.04782	1.06917	1.09796	1.07105	1.12488					
	1.11166						AVRG		1.11145		6.27651
38 2-Nitroaniline	0.20469	0.22227	0.26060	0.28971	0.28861	0.31072					
	0.30122						AVRG		0.26826		15.20234

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
39 Dimethylphthalate	1.36489	1.13508	1.17192	1.19054	1.15985	1.20823						
	1.17494						AVRG		1.20078		6.32260	
40 Acenaphthylene	2.08676	1.80273	1.83141	1.81650	1.77233	2.12941						
	1.75642						AVRG		1.88508		8.21819	
41 2,6-Dinitrotoluene	0.26069	0.25725	0.27537	0.29601	0.28450	0.30512						
	0.29050						AVRG		0.28135		6.35382	
43 3-Nitroaniline	0.20751	0.21366	0.25373	0.25128	0.24013	0.25105						
	0.20850						AVRG		0.23227		9.23578	
44 Acenaphthene	1.30679	1.09641	1.08357	1.13351	1.06627	1.13513						
	1.13044						AVRG		1.13602		7.04098	
45 2,4-Dinitrophenol	+++++	0.09212	0.14513	0.19634	0.23880	0.27206						
	0.28220						AVRG		0.20444		36.60389	<-
46 Dibenzofuran	1.67283	1.49829	1.51991	1.55200	1.47200	1.58360						
	1.57471						AVRG		1.55334		4.27158	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
47 4-Nitrophenol	+++++	0.07895	0.11479	0.15259	0.16439	0.18465						
	0.18270						AVRG		0.14635		28.48976	<-
48 2,4-Dinitrotoluene	0.30512	0.31097	0.36079	0.38342	0.37756	0.40613						
	0.39616						AVRG		0.36288		11.05203	
49 Fluorene	1.46413	1.26025	1.30008	1.33638	1.27146	1.34389						
	1.30199						AVRG		1.32546		5.15880	
50 Diethylphthalate	1.35396	1.14110	1.15749	1.20605	1.17048	1.22908						
	1.18817						AVRG		1.20662		5.91539	
51 4-Chlorophenyl-phenylether	0.73753	0.60252	0.61409	0.61582	0.59152	0.72584						
	0.67359						AVRG		0.65156		9.31141	
52 4-Nitroaniline	0.21006	0.19776	0.27062	0.24001	0.24443	0.27164						
	0.25433						AVRG		0.24126		11.76360	
53 4,6-Dinitro-2-methylphenol	0.10675	0.12341	0.16076	0.17466	0.18882	0.19809						
	0.19914						AVRG		0.16452		22.27885	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
54 N-Nitrosodiphenylamine	0.49563	0.42947	0.47333	0.47261	0.45791	0.46123					
	0.45114						AVRG		0.46304		4.45876
56 4-Bromophenyl-phenylether	0.22767	0.21687	0.23028	0.22247	0.22312	0.22955					
	0.23436						AVRG		0.22633		2.59516
57 Hexachlorobenzene	0.32278	0.25772	0.26649	0.25845	0.25551	0.26286					
	0.26660						AVRG		0.27006		8.75648
58 Pentachlorophenol	0.15515	0.14017	0.17294	0.19921	0.21130	0.22141					
	0.22676						AVRG		0.18956		17.84287
60 Phenanthrene	1.22947	1.01265	1.08610	1.06561	1.04600	1.09893					
	1.09863						AVRG		1.09106		6.27534
61 Anthracene	1.19624	1.06794	1.09848	1.10290	1.07915	1.13739					
	1.14221						AVRG		1.11776		3.95191
62 Carbazole	+++++	0.79964	0.83444	0.64299	0.47569	0.60549					
	0.71548						AVRG		0.67896		19.54874

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
63 Di-n-butylphthalate	1.23468	1.00016	1.09465	1.11547	1.14103	1.23687					
	1.25417						AVRG		1.15386		8.08770
64 Fluoranthene	1.35769	1.17978	1.24657	1.24812	1.27294	1.33427					
	1.34952						AVRG		1.28413		5.11850
65 Pyrene	1.37184	1.13560	1.19244	1.19696	1.22185	1.25931					
	1.28506						AVRG		1.23758		6.17908
67 Butylbenzylphthalate	0.42623	0.34242	0.41245	0.41654	0.43945	0.45663					
	0.46466						AVRG		0.42263		9.55905
68 Benzo(a)anthracene	1.25572	1.03482	1.09368	1.07381	1.09465	1.13986					
	1.14667						AVRG		1.11989		6.34024
70 3,3'-Dichlorobenzidine	0.51204	0.36539	0.40605	0.35790	0.38490	0.47001					
	0.48944						AVRG		0.42653		14.75318
71 Chrysene	1.17786	0.95330	0.94998	0.97296	0.97716	1.02164					
	1.04126						AVRG		1.01345		7.90157

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	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	1.04908	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92019		6.73684
73 Di-n-octylphthalate	1.05463	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92098		6.94061
74 Benzo(b)fluoranthene	1.35044	1.05465	1.09386	1.12584	1.21507	1.24210					
	1.23295						AVRG		1.18784		8.59752
75 Benzo(k)fluoranthene	1.42924	1.14868	1.24463	1.22609	1.13947	1.22473					
	1.34515						AVRG		1.25114		8.31220
187 Total Benzofluoranthenes	1.30881	1.05407	1.12671	1.11857	1.11816	1.16984					
	1.17534						AVRG		1.15307		6.89595
76 Benzo(a)pyrene	1.15104	0.87256	0.97331	0.97345	1.00238	1.05501					
	1.07592						AVRG		1.01481		8.78911
78 Indeno(1,2,3-cd)pyrene	1.18245	1.01361	1.10322	1.12112	1.20413	1.27168					
	1.28789						AVRG		1.16916		8.32633

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	20 Level 7										
79 Dibenzo(a,h)anthracene	0.92380	0.73303	0.85483	0.88584	0.92025	0.96990					
	0.99039						AVRG		0.89686		9.55761
80 Benzo(g,h,i)perylene	1.04564	0.90225	0.98911	0.99122	1.00081	1.07106					
	1.08082						AVRG		1.01156		6.05123
90 N-Nitrosodimethylamine	0.88097	0.87544	0.88313	0.96297	0.85634	0.99623					
	0.92370						AVRG		0.91125		5.67695
91 Aniline	4.00230	3.88308	3.89376	4.21542	3.95352	4.21183					
	3.92480						AVRG		4.01210		3.56908
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	8518	23877	29714	60043	110746					
	257371						QUAD	0.000e+00	8.17939	-1.16399	0.99615
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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	20 Level 7											
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	5229	8851	20776	46252	111862	206286						
	402573						QUAD	0.000e+00	2.17724	-0.06444	0.99996	
99 Perylene	1.36017	1.09787	1.11603	1.09868	1.10144	1.16094						
	1.18529						AVRG		1.16006		8.15448	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.72677	0.80583	0.78852	0.86813	0.78009	0.84643						
	0.79117						AVRG		0.80099		5.76462	

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	0.60097	0.54247	0.59080	0.60713	0.60866	0.63218						
	0.61259						AVRG		0.59926		4.67591	
189 N-Nitrosomethylethylamine	1.30866	1.29196	1.30579	1.43515	1.30380	1.45857						
	1.41072						AVRG		1.35923		5.31332	
$ 1 2-Fluorophenol	1.34097	1.36474	1.37344	1.45728	1.43245	1.53225						
	1.49284						AVRG		1.42771		4.99388	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.74449	1.70146	1.73037	1.88081	1.85833	2.05451						
	1.96238						AVRG		1.84748		7.08965	
$ 5 2-Chlorophenol-d4	1.48208	1.31763	1.34482	1.41250	1.38956	1.44002						
	1.43020						AVRG		1.40240		4.04486	
$ 10 1,2-Dichlorobenzene-d4	0.98938	1.00149	0.99695	1.02158	0.98109	1.04380						
	1.02722						AVRG		1.00879		2.24119	

Analytical Resources, Inc.

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Start Cal Date : 29-APR-2013 16:53
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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.42885	0.41732	0.41764	0.42993	0.40061	0.44115					
	0.41922						AVRG		0.42210		3.03179
$ 36 2-Fluorobiphenyl	1.56575	1.33869	1.34323	1.37457	1.33669	1.41362					
	1.40005						AVRG		1.39609		5.78874
$ 55 2,4,6-Tribromophenol	0.19995	0.17003	0.19549	0.21364	0.21873	0.24192					
	0.24098						AVRG		0.21154		12.14622
$ 66 Terphenyl-d14	0.89183	0.70027	0.75407	0.75999	0.76286	0.79419					
	0.78729						AVRG		0.77864		7.50175
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++	+++++					
								AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++					
								AVRG		0.000e+00		0.000e+00
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++					
								AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

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Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

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Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/ic0429c.d
Level 2: /chem1/nt10.i/20130429.b/ic0429i.d
Level 3: /chem1/nt10.i/20130429.b/ic0429d.d
Level 4: /chem1/nt10.i/20130429.b/ic0429g.d
Level 5: /chem1/nt10.i/20130429.b/ic0429a.d
Level 6: /chem1/nt10.i/20130429.b/ic0429e.d
Level 7: /chem1/nt10.i/20130429.b/ic0429b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
120 2,3,4,6-Tetrachlorophenol	0.26333	0.25576	0.30846	0.32296	0.35171	0.37615						
	0.38141						AVRG		0.32283		15.66985	
178 2-Benzyl-4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.32264	1.26754	1.24075	1.27398	1.12394	1.24670						
	1.18447						AVRG		1.23715		5.24731	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

4HK53 : 66753

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INITIAL CALIBRATION DATA

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.70389	0.59747	0.62527	0.63990	0.63292	0.66830						
	0.67337						AVRG		0.64873		5.46363	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
162 1,2,3,4-Tetrachloronapthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	2.07745	2.01663	1.99013	2.15135	2.00628	2.20020					
	2.03355						AVRG		2.06794		3.85914
4 Bis(2-Chloroethyl)ether	1.56929	1.53896	1.46972	1.55326	1.37664	1.50058					
	1.40120						AVRG		1.48709		5.05358

WR2S : 0067827

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.55026	1.46704	1.47133	1.54154	1.50983	1.81549					
	1.80786						AVRG		1.59477		9.49947
7 1,3-Dichlorobenzene	1.69336	1.54473	1.58950	1.59956	1.55227	1.62846					
	1.59424						AVRG		1.60030		3.12454
9 1,4-Dichlorobenzene	1.71397	1.52647	1.51341	1.62532	1.53264	1.58116					
	1.54877						AVRG		1.57739		4.51793
11 Benzyl alcohol	0.85064	0.73516	0.83060	0.90072	0.88286	0.96932					
	0.91989						AVRG		0.86989		8.59920
12 1,2-Dichlorobenzene	1.62518	1.49204	1.50624	1.51578	1.45554	1.49728					
	1.47965						AVRG		1.51024		3.59480
13 2-Methylphenol	1.49001	1.40570	1.44998	1.54407	1.45837	1.56041					
	1.50801						AVRG		1.48808		3.66935
14 2,2'-oxybis(1-Chloropropane)	0.42611	0.44017	0.46397	0.48471	0.45795	0.47727					
	0.46264						AVRG		0.45898		4.42060

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
15 4-Methylphenol	1.43729	1.35493	1.48973	1.59318	1.52748	1.67713					
	1.54128						AVRG		1.51729		6.88641
16 N-Nitroso-di-n-propylamine	0.95251	0.89419	0.87815	0.98621	0.88743	0.97695					
	0.92792						AVRG		0.92905		4.74330
17 Hexachloroethane	0.68931	0.65881	0.65446	0.68375	0.62023	0.66920					
	0.64417						AVRG		0.65999		3.59193
19 Nitrobenzene	0.39510	0.39280	0.38552	0.39982	0.36572	0.40371					
	0.38522						AVRG		0.38970		3.22892
20 Isophorone	0.71195	0.66432	0.67279	0.71065	0.68101	0.86242					
	0.82790						AVRG		0.73300		10.82033
21 2-Nitrophenol	0.20754	0.18635	0.20138	0.22080	0.22866	0.24164					
	0.24290						AVRG		0.21847		9.68506
22 2,4-Dimethylphenol	0.41192	0.37230	0.39344	0.41516	0.40245	0.42253					
	0.39424						AVRG		0.40172		4.20008

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
23 Bis(2-Chloroethoxy)methane	0.44346	0.43452	0.43284	0.44204	0.41435	0.44041					
	0.41838						AVRG		0.43229		2.68164
24 Benzoic acid	+++++	12620	41278	106496	282242	533852					
	1033515						QUAD	0.000e+00	2.88330	-0.03348	0.99937
25 2,4-Dichlorophenol	0.31803	0.28833	0.38510	0.39343	0.39479	0.41768					
	0.39114						AVRG		0.36979		12.81889
26 1,2,4-Trichlorobenzene	0.41240	0.34976	0.36404	0.35417	0.34495	0.35336					
	0.35130						AVRG		0.36143		6.42232
28 Naphthalene	1.20528	1.00604	1.04043	1.06395	1.02045	1.07273					
	1.04570						AVRG		1.06494		6.20233
29 4-Chloroaniline	0.42433	0.36449	0.40631	0.42348	0.42526	0.48932					
	0.38118						AVRG		0.41634		9.58081
30 Hexachlorobutadiene	0.23345	0.19983	0.21390	0.20892	0.20729	0.22093					
	0.21857						AVRG		0.21470		5.08490

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.26343	0.27218	0.31153	0.34377	0.34343	0.37735					
	0.36548						AVRG		0.32531		13.65102
32 2-Methylnaphthalene	0.74054	0.67388	0.68178	0.70154	0.68736	0.73921					
	0.72726						AVRG		0.70737		3.96516
33 Hexachlorocyclopentadiene	0.44835	0.39323	0.41506	0.42533	0.44262	0.46660					
	0.48996						AVRG		0.44016		7.36429
34 2,4,6-Trichlorophenol	0.38934	0.36825	0.40727	0.42611	0.43278	0.45335					
	0.46998						AVRG		0.42101		8.44390
35 2,4,5-Trichlorophenol	0.35538	0.37249	0.41863	0.44267	0.45433	0.49279					
	0.50176						AVRG		0.43401		12.87553
37 2-Chloronaphthalene	1.25763	1.04782	1.06917	1.09796	1.07105	1.12488					
	1.11166						AVRG		1.11145		6.27651
38 2-Nitroaniline	0.20469	0.22227	0.26060	0.28971	0.28861	0.31072					
	0.30122						AVRG		0.26826		15.20234

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
39 Dimethylphthalate	1.36489	1.13508	1.17192	1.19054	1.15985	1.20823					
	1.17494						AVRG		1.20078		6.32260
40 Acenaphthylene	2.08676	1.80273	1.83141	1.81650	1.77233	2.12941					
	1.75642						AVRG		1.88508		8.21819
41 2,6-Dinitrotoluene	0.26069	0.25725	0.27537	0.29601	0.28450	0.30512					
	0.29050						AVRG		0.28135		6.35382
43 3-Nitroaniline	0.20751	0.21366	0.25373	0.25128	0.24013	0.25105					
	0.20850						AVRG		0.23227		9.23578
44 Acenaphthene	1.30679	1.09641	1.08357	1.13351	1.06627	1.13513					
	1.13044						AVRG		1.13602		7.04098
45 2,4-Dinitrophenol	+++++	4345	14717	42855	127651	250805					
	497418						QUAD	0.000e+00	4.08739	-0.09870	0.99880
46 Dibenzofuran	1.67283	1.49829	1.51991	1.55200	1.47200	1.58360					
	1.57471						AVRG		1.55334		4.27158

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
47 4-Nitrophenol	+++++	1862	5820	16653	43938	85112					
	161016						QUAD	0.000e+00	5.79130	-0.18557	0.99905
48 2,4-Dinitrotoluene	0.30512	0.31097	0.36079	0.38342	0.37756	0.40613					
	0.39616						AVRG		0.36288		11.05203
49 Fluorene	1.46413	1.26025	1.30008	1.33638	1.27146	1.34389					
	1.30199						AVRG		1.32546		5.15880
50 Diethylphthalate	1.35396	1.14110	1.15749	1.20605	1.17048	1.22908					
	1.18817						AVRG		1.20662		5.91539
51 4-Chlorophenyl-phenylether	0.73753	0.60252	0.61409	0.61582	0.59152	0.72584					
	0.67359						AVRG		0.65156		9.31141
52 4-Nitroaniline	0.21006	0.19776	0.27062	0.24001	0.24443	0.27164					
	0.25433						AVRG		0.24126		11.76360
53 4,6-Dinitro-2-methylphenol	3933	9847	27317	65565	169735	317489					
	606483						QUAD	0.000e+00	5.26585	-0.06370	0.99977

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
54 N-Nitrosodiphenylamine	0.49563	0.42947	0.47333	0.47261	0.45791	0.46123					
	0.45114						AVRG		0.46304		4.45876
56 4-Bromophenyl-phenylether	0.22767	0.21687	0.23028	0.22247	0.22312	0.22955					
	0.23436						AVRG		0.22633		2.59516
57 Hexachlorobenzene	0.32278	0.25772	0.26649	0.25845	0.25551	0.26286					
	0.26660						AVRG		0.27006		8.75648
58 Pentachlorophenol	0.15515	0.14017	0.17294	0.19921	0.21130	0.22141					
	0.22676						AVRG		0.18956		17.84287
60 Phenanthrene	1.22947	1.01265	1.08610	1.06561	1.04600	1.09893					
	1.09863						AVRG		1.09106		6.27534
61 Anthracene	1.19624	1.06794	1.09848	1.10290	1.07915	1.13739					
	1.14221						AVRG		1.11776		3.95191
62 Carbazole	+++++	0.79964	0.83444	0.64299	0.47569	0.60549					
	0.71548						AVRG		0.67896		19.54874

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
63 Di-n-butylphthalate	1.23468	1.00016	1.09465	1.11547	1.14103	1.23687					
	1.25417						AVRG		1.15386		8.08770
64 Fluoranthene	1.35769	1.17978	1.24657	1.24812	1.27294	1.33427					
	1.34952						AVRG		1.28413		5.11850
65 Pyrene	1.37184	1.13560	1.19244	1.19696	1.22185	1.25931					
	1.28506						AVRG		1.23758		6.17908
67 Butylbenzylphthalate	0.42623	0.34242	0.41245	0.41654	0.43945	0.45663					
	0.46466						AVRG		0.42263		9.55905
68 Benzo(a)anthracene	1.25572	1.03482	1.09368	1.07381	1.09465	1.13986					
	1.14667						AVRG		1.11989		6.34024
70 3,3'-Dichlorobenzidine	0.51204	0.36539	0.40605	0.35790	0.38490	0.47001					
	0.48944						AVRG		0.42653		14.75318
71 Chrysene	1.17786	0.95330	0.94998	0.97296	0.97716	1.02164					
	1.04126						AVRG		1.01345		7.90157

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	1.04908	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92019		6.73684
73 Di-n-octylphthalate	1.05463	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92098		6.94061
74 Benzo(b)fluoranthene	1.35044	1.05465	1.09386	1.12584	1.21507	1.24210					
	1.23295						AVRG		1.18784		8.59752
75 Benzo(k)fluoranthene	1.42924	1.14868	1.24463	1.22609	1.13947	1.22473					
	1.34515						AVRG		1.25114		8.31220
187 Total Benzofluoranthenes	1.30881	1.05407	1.12671	1.11857	1.11816	1.16984					
	1.17534						AVRG		1.15307		6.89595
76 Benzo(a)pyrene	1.15104	0.87256	0.97331	0.97345	1.00238	1.05501					
	1.07592						AVRG		1.01481		8.78911
78 Indeno(1,2,3-cd)pyrene	1.18245	1.01361	1.10322	1.12112	1.20413	1.27168					
	1.28789						AVRG		1.16916		8.32633

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
79 Dibenzo(a,h)anthracene	0.92380	0.73303	0.85483	0.88584	0.92025	0.96990					
	0.99039						AVRG		0.89686		9.55761
80 Benzo(g,h,i)perylene	1.04564	0.90225	0.98911	0.99122	1.00081	1.07106					
	1.08082						AVRG		1.01156		6.05123
90 N-Nitrosodimethylamine	0.88097	0.87544	0.88313	0.96297	0.85634	0.99623					
	0.92370						AVRG		0.91125		5.67695
91 Aniline	4.00230	3.88308	3.89376	4.21542	3.95352	4.21183					
	3.92480						AVRG		4.01210		3.56908
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	8518	23877	29714	60043	110746					
	257371						QUAD	0.000e+00	8.17939	-1.16399	0.99615
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	0.52664	0.41489	0.44890	0.44972	0.46406	0.47911						
	0.49534						AVRG		0.46838		7.71935	
99 Perylene	1.36017	1.09787	1.11603	1.09868	1.10144	1.16094						
	1.18529						AVRG		1.16006		8.15448	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.72677	0.80583	0.78852	0.86813	0.78009	0.84643						
	0.79117						AVRG		0.80099		5.76462	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	0.60097	0.54247	0.59080	0.60713	0.60866	0.63218						
	0.61259						AVRG		0.59926		4.67591	
189 N-Nitrosomethylethylamine	1.30866	1.29196	1.30579	1.43515	1.30380	1.45857						
	1.41072						AVRG		1.35923		5.31332	
$ 1 2-Fluorophenol	1.34097	1.36474	1.37344	1.45728	1.43245	1.53225						
	1.49284						AVRG		1.42771		4.99388	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.74449	1.70146	1.73037	1.88081	1.85833	2.05451						
	1.96238						AVRG		1.84748		7.08965	
$ 5 2-Chlorophenol-d4	1.48208	1.31763	1.34482	1.41250	1.38956	1.44002						
	1.43020						AVRG		1.40240		4.04486	
$ 10 1,2-Dichlorobenzene-d4	0.98938	1.00149	0.99695	1.02158	0.98109	1.04380						
	1.02722						AVRG		1.00879		2.24119	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.42885	0.41732	0.41764	0.42993	0.40061	0.44115					
	0.41922						AVRG		0.42210		3.03179
$ 36 2-Fluorobiphenyl	1.56575	1.33869	1.34323	1.37457	1.33669	1.41362					
	1.40005						AVRG		1.39609		5.78874
$ 55 2,4,6-Tribromophenol	0.19995	0.17003	0.19549	0.21364	0.21873	0.24192					
	0.24098						AVRG		0.21154		12.14622
$ 66 Terphenyl-d14	0.89183	0.70027	0.75407	0.75999	0.76286	0.79419					
	0.78729						AVRG		0.77864		7.50175
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429a.d
Lab Smp Id: IC0429A
Inj Date : 29-APR-2013 16:53
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429A
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 16:53 Cal File: ic0429a.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.629	6.629	(0.738)	81023	5.00000	5.017
$ 2	Phenol-d5	99	8.344	8.337	(0.929)	105112	5.00000	5.029
3	Phenol	94	8.367	8.360	(0.931)	113480	5.00000	4.851
$ 5	2-Chlorophenol-d4	132	8.599	8.599	(0.957)	78597	5.00000	4.954
4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	77866	5.00000	4.629
6	2-Chlorophenol	128	8.630	8.622	(0.960)	85400	5.00000	4.734
7	1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	87800	5.00000	4.850
* 8	1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	45250	4.00000	
9	1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	86690	5.00000	4.858
$ 10	1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	55493	5.00000	4.863
12	1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	82329	5.00000	4.819
11	Benzyl alcohol	108	9.289	9.289	(1.034)	49937	5.00000	5.075
14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	25903	5.00000	4.989
13	2-Methylphenol	108	9.553	9.553	(1.063)	82489	5.00000	4.900
17	Hexachloroethane	117	10.027	10.027	(1.116)	35082	5.00000	4.699
16	N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	50195	5.00000	4.776
15	4-Methylphenol	108	9.848	9.840	(1.096)	86398	5.00000	5.034
$ 18	Nitrobenzene-d5	82	10.159	10.159	(0.873)	83504	5.00000	4.745
19	Nitrobenzene	77	10.197	10.190	(0.876)	76232	5.00000	4.692
20	Isophorone	82	10.686	10.686	(0.918)	141952	5.00000	4.645
21	2-Nitrophenol	139	10.872	10.872	(0.934)	47662	5.00000	5.233
22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	167774	10.0000	10.02
23	Bis(2-Chloroethoxy)methane	93	11.180	11.172	(0.960)	86369	5.00000	4.793
24	Benzoic acid	105	11.226	11.080	(0.964)	282242	20.0000	19.18
25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	164580	10.0000	10.68
26	1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	71903	5.00000	4.772
* 27	Naphthalene-d8	136	11.643	11.643	(1.000)	166754	4.00000	

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28	Naphthalene	128	11.689	11.681	(1.004)	212706	5.00000	4.791
	29	4-Chloroaniline	127	11.859	11.843	(1.019)	177286	10.0000	10.21
	30	Hexachlorobutadiene	225	12.098	12.099	(1.039)	43209	5.00000	4.828
	31	4-Chloro-3-methylphenol	107	12.919	12.911	(1.110)	143169	10.0000	10.56
	32	2-Methylnaphthalene	142	13.197	13.197	(1.134)	143274	5.00000	4.859
	33	Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	118300	10.0000	10.06
	34	2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	115672	10.0000	10.28
	35	2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	121431	10.0000	10.47
$	36	2-Fluorobiphenyl	172	14.064	14.057	(0.905)	178632	5.00000	4.787
	37	2-Chloronaphthalene	162	14.265	14.258	(0.918)	143132	5.00000	4.818
	38	2-Nitroaniline	65	14.559	14.552	(0.937)	77138	10.0000	10.76
	39	Dimethylphthalate	163	15.055	15.047	(0.969)	154999	5.00000	4.830
	40	Acenaphthylene	152	15.202	15.194	(0.978)	236850	5.00000	4.701
	41	2,6-Dinitrotoluene	165	15.194	15.179	(0.978)	76040	10.0000	10.11
*	42	Acenaphthene-d10	164	15.542	15.535	(1.000)	106910	4.00000	
	43	3-Nitroaniline	138	15.488	15.473	(0.997)	64182	10.0000	10.34
	44	Acenaphthene	153	15.612	15.604	(1.004)	142494	5.00000	4.693
	45	2,4-Dinitrophenol	184	15.712	15.705	(1.011)	127651	20.0000	18.96
	46	Dibenzofuran	168	15.967	15.960	(1.027)	196715	5.00000	4.738
	47	4-Nitrophenol	109	15.867	15.867	(1.021)	43938	10.0000	9.395
	48	2,4-Dinitrotoluene	165	16.060	16.052	(1.033)	100913	10.0000	10.40
	50	Diethylphthalate	149	16.640	16.632	(1.071)	156420	5.00000	4.850
	49	Fluorene	166	16.740	16.733	(1.077)	169915	5.00000	4.796
	51	4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	79049	5.00000	4.539
	52	4-Nitroaniline	138	16.856	16.841	(1.085)	65331	10.0000	10.13
	53	4,6-Dinitro-2-methylphenol	198	16.964	16.949	(0.901)	169735	20.0000	19.66
	54	N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	102905	5.00000	4.945
$	55	2,4,6-Tribromophenol	330	17.319	17.311	(1.114)	29230	5.00000	5.170
	56	4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	50141	5.00000	4.929
	57	Hexachlorobenzene	284	18.160	18.153	(0.965)	57420	5.00000	4.731
	58	Pentachlorophenol	266	18.555	18.548	(0.986)	94970	10.0000	11.15
*	59	Phenanthrene-d10	188	18.818	18.811	(1.000)	179783	4.00000	
	60	Phenanthrene	178	18.865	18.857	(1.002)	235067	5.00000	4.794
	61	Anthracene	178	18.965	18.958	(1.008)	242517	5.00000	4.827
	62	Carbazole	167	19.313	19.314	(1.026)	106901	5.00000	3.503
	63	Di-n-butylphthalate	149	20.188	20.188	(1.073)	256423	5.00000	4.944
	64	Fluoranthene	202	21.286	21.279	(1.131)	286067	5.00000	4.956
	65	Pyrene	202	21.704	21.697	(0.908)	294528	5.00000	4.936
$	66	Terphenyl-d14	244	22.021	22.022	(0.922)	183888	5.00000	4.899
	67	Butylbenzylphthalate	149	22.974	22.974	(0.961)	105931	5.00000	5.199
	68	Benzo(a)anthracene	228	23.872	23.864	(0.999)	263867	5.00000	4.887
*	69	Chrysene-d12	240	23.895	23.895	(1.000)	192841	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	185563	10.0000	9.024
	71	Chrysene	228	23.942	23.934	(1.002)	235545	5.00000	4.821
	72	bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	144972	5.00000	4.750(M)
*	134	Di-n-octylphthalate-d4	153	24.994	24.995	(1.000)	229567	4.00000	
	73	Di-n-octylphthalate	149	25.010	25.002	(1.001)	250054	5.00000	4.731

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	279937	5.00000	5.115
	75 Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	262519	5.00000	4.554
	76 Benzo(a)pyrene	252	26.249	26.241	(0.996)	230935	5.00000	4.939
*	77 Perylene-d12	264	26.349	26.350	(1.000)	184310	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	277417	5.00000	5.150
	79 Dibenzo(a,h)anthracene	278	28.713	28.698	(1.090)	212015	5.00000	5.130
	80 Benzo(g,h,i)perylene	276	29.373	29.350	(1.115)	230573	5.00000	4.947
	90 N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	96874	10.0000	9.397
	91 Aniline	93	8.414	8.406	(0.936)	223621	5.00000	4.927
	93 Benzidine	184	21.542	21.542	(0.902)	60043	10.0000	9.736
	103 Pyridine	79	4.382	4.397	(0.488)	88248	10.0000	9.739
	105 1-methylnaphthalene	142	13.437	13.430	(1.154)	131928	5.00000	4.878
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.100)	150200	5.00000	4.542
	187 Total Benzofluoranthenes	252	25.707	25.699	(0.976)	515221	10.0000	9.694
	99 Perylene	252	26.396	26.388	(1.002)	253757	5.00000	4.747
	98 Retene	219	22.316	22.316	(0.934)	111862	5.00000	4.954
	120 2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	47002	5.00000	5.447
	188 2,6-Dichlorophenol	162	11.874	11.867	(1.020)	253741	10.0000	10.16
	189 N-Nitrosomethylethylamine	88	5.818	5.818	(0.647)	147492	10.0000	9.592

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429a.d
Lab Smp Id: IC0429A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	45250	0.00
27 Naphthalene-d8	166754	83377	333508	166754	0.00
42 Acenaphthene-d10	106910	53455	213820	106910	0.00
59 Phenanthrene-d10	179783	89892	359566	179783	0.00
69 Chrysene-d12	192841	96420	385682	192841	0.00
134 Di-n-octylphthala	229567	114784	459134	229567	0.00
77 Perylene-d12	184310	92155	368620	184310	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

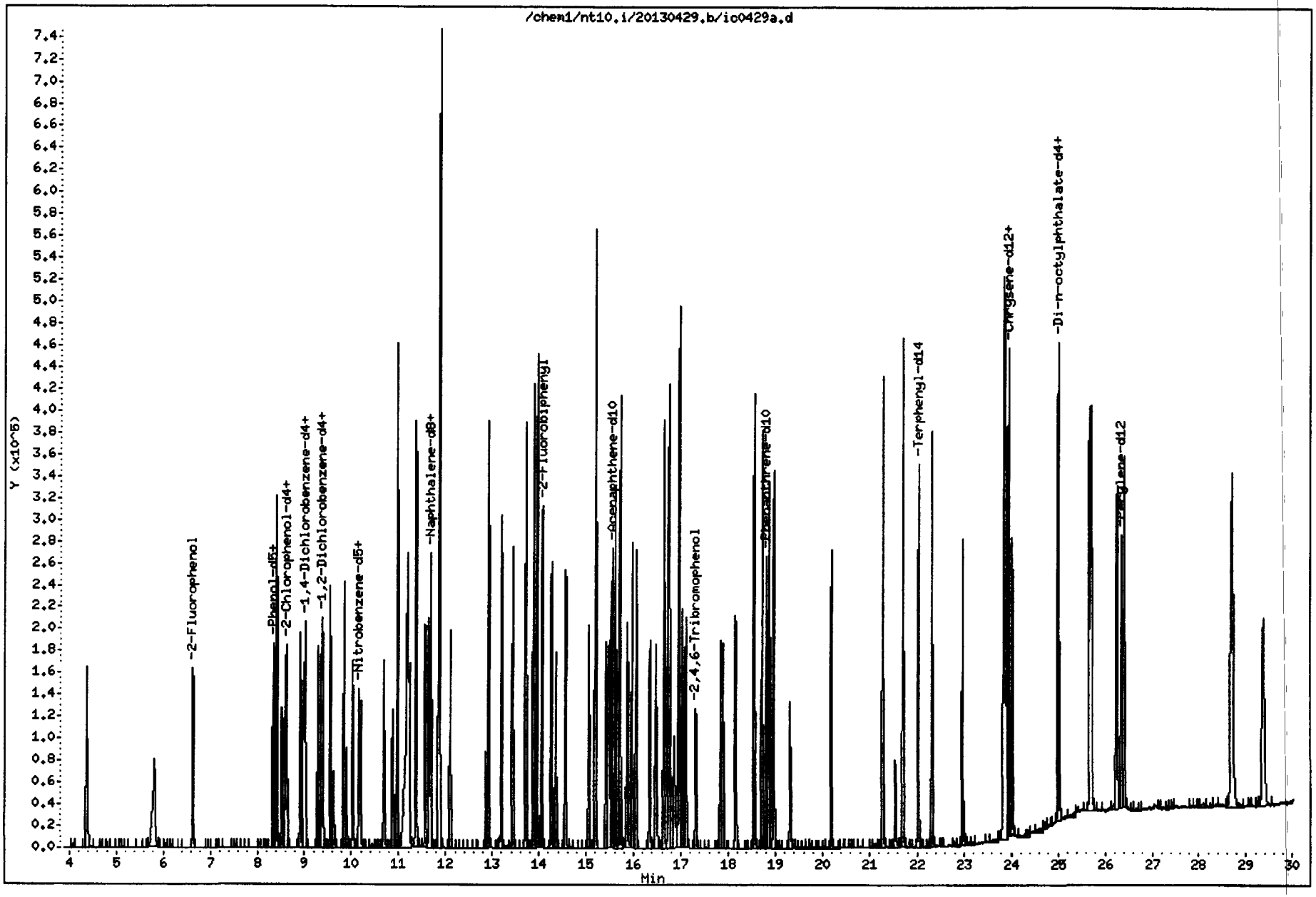
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429a.d
Date : 29-APR-2013 16:53
Client ID:
Sample Info: IC0429A

Instrument: nt10.i

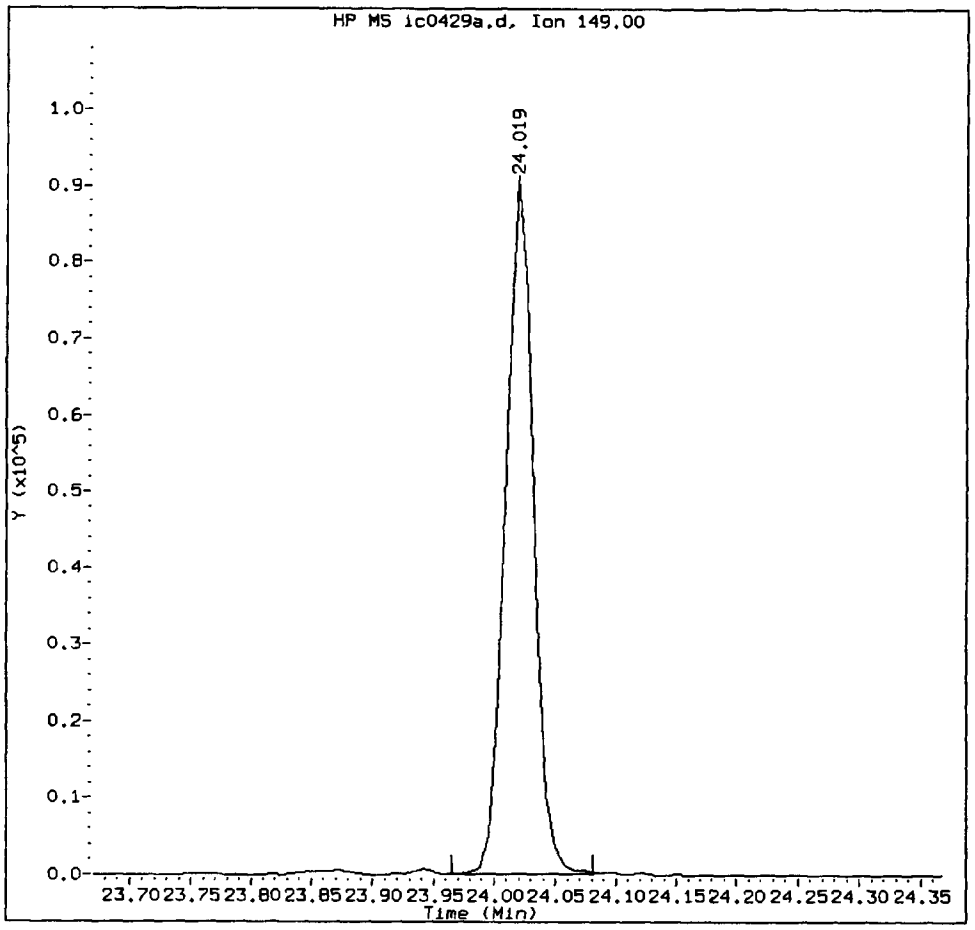
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429A, /chem1/nt10.i/20130429.b/ic0429a.d

bis(2-Ethylhexyl)phthalate Amount: 4.75 Area: 144972



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429a.d

Lab ID: IC0429A, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429b.d
Lab Smp Id: IC0429B
Inj Date : 29-APR-2013 17:30
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429B
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 17:30 Cal File: ic0429b.d
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.636	6.629	(0.738)	273907	20.0000	20.91
$ 2	Phenol-d5	99	8.352	8.337	(0.929)	360057	20.0000	21.24
3	Phenol	94	8.375	8.360	(0.932)	373116	20.0000	19.67
$ 5	2-Chlorophenol-d4	132	8.607	8.599	(0.958)	262414	20.0000	20.40
4	Bis(2-Chloroethyl)ether	93	8.530	8.522	(0.949)	257095	20.0000	18.85
6	2-Chlorophenol	128	8.638	8.622	(0.961)	331706	20.0000	22.67
7	1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	292512	20.0000	19.92
* 8	1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	36696	4.00000	
9	1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	284169	20.0000	19.64
$ 10	1,2-Dichlorobenzene-d4	152	9.375	9.367	(1.043)	188475	20.0000	20.37
12	1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	271486	20.0000	19.59
11	Benzyl alcohol	108	9.305	9.289	(1.035)	168782	20.0000	21.15
14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	84885	20.0000	20.16
13	2-Methylphenol	108	9.561	9.553	(1.064)	276689	20.0000	20.27
17	Hexachloroethane	117	10.027	10.027	(1.116)	118193	20.0000	19.52
16	N-Nitroso-di-n-propylamine	70	9.910	9.895	(1.103)	170255	20.0000	19.98
15	4-Methylphenol	108	9.856	9.840	(1.097)	282794	20.0000	20.32
$ 18	Nitrobenzene-d5	82	10.166	10.159	(0.873)	285663	20.0000	19.86
19	Nitrobenzene	77	10.205	10.190	(0.876)	262495	20.0000	19.77
20	Isophorone	82	10.709	10.686	(0.919)	564145	20.0000	22.59
21	2-Nitrophenol	139	10.879	10.872	(0.934)	165519	20.0000	22.24
22	2,4-Dimethylphenol	107	10.980	10.964	(0.942)	537286	40.0000	39.26
23	Bis(2-Chloroethoxy)methane	93	11.188	11.172	(0.960)	285091	20.0000	19.36
24	Benzoic acid	105	11.388	11.080	(0.977)	1043882	80.0000	79.78(M)
25	2,4-Dichlorophenol	162	11.380	11.365	(0.977)	533058	40.0000	42.31
26	1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	239383	20.0000	19.44
* 27	Naphthalene-d8	136	11.650	11.643	(1.000)	136283	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.697	11.681	(1.004)	712555	20.0000	19.64
	29 4-Chloroaniline	127	11.874	11.843	(1.019)	519478	40.0000	36.62
	30 Hexachlorobutadiene	225	12.106	12.099	(1.039)	148934	20.0000	20.36
	31 4-Chloro-3-methylphenol	107	12.927	12.911	(1.110)	498092	40.0000	44.94
	32 2-Methylnaphthalene	142	13.205	13.197	(1.133)	495565	20.0000	20.56
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	431807	40.0000	44.53
	34 2,4,6-Trichlorophenol	196	13.894	13.879	(0.894)	414194	40.0000	44.65
	35 2,4,5-Trichlorophenol	196	13.964	13.948	(0.898)	442203	40.0000	46.24
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.904)	616937	20.0000	20.06
	37 2-Chloronaphthalene	162	14.273	14.258	(0.918)	489858	20.0000	20.00
	38 2-Nitroaniline	65	14.575	14.552	(0.937)	265470	40.0000	44.92
	39 Dimethylphthalate	163	15.070	15.047	(0.969)	517745	20.0000	19.57
	40 Acenaphthylene	152	15.202	15.194	(0.978)	773977	20.0000	18.64
	41 2,6-Dinitrotoluene	165	15.202	15.179	(0.978)	256022	40.0000	41.30
*	42 Acenaphthene-d10	164	15.550	15.535	(1.000)	88131	4.00000	
	43 3-Nitroaniline	138	15.511	15.473	(0.998)	183750	40.0000	35.91
	44 Acenaphthene	153	15.619	15.604	(1.004)	498134	20.0000	19.90
	45 2,4-Dinitrophenol	184	15.743	15.705	(1.012)	497418	80.0000	79.70
	46 Dibenzofuran	168	15.983	15.960	(1.028)	693905	20.0000	20.28
	47 4-Nitrophenol	109	15.890	15.867	(1.022)	161016	40.0000	39.85
	48 2,4-Dinitrotoluene	165	16.075	16.052	(1.034)	349138	40.0000	43.67
	50 Diethylphthalate	149	16.663	16.632	(1.072)	523573	20.0000	19.69
	49 Fluorene	166	16.748	16.733	(1.077)	573728	20.0000	19.65
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	296820	20.0000	20.68
	52 4-Nitroaniline	138	16.895	16.841	(1.086)	224140	40.0000	42.17
	53 4,6-Dinitro-2-methylphenol	198	16.995	16.949	(0.903)	606483	80.0000	79.85
	54 N-Nitrosodiphenylamine	169	17.041	17.026	(0.905)	343477	20.0000	19.49
$	55 2,4,6-Tribromophenol	330	17.327	17.311	(1.114)	106190	20.0000	22.78
	56 4-Bromophenyl-phenylether	248	17.843	17.836	(0.948)	178429	20.0000	20.71
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	202975	20.0000	19.74
	58 Pentachlorophenol	266	18.563	18.548	(0.986)	345299	40.0000	47.85
*	59 Phenanthrene-d10	188	18.826	18.811	(1.000)	152272	4.00000	
	60 Phenanthrene	178	18.872	18.857	(1.002)	836454	20.0000	20.14
	61 Anthracene	178	18.973	18.958	(1.008)	869630	20.0000	20.44
	62 Carbazole	167	19.321	19.314	(1.026)	544741	20.0000	21.08
	63 Di-n-butylphthalate	149	20.188	20.188	(1.072)	954876	20.0000	21.74
	64 Fluoranthene	202	21.286	21.279	(1.131)	1027468	20.0000	21.02
	65 Pyrene	202	21.704	21.697	(0.908)	1044384	20.0000	20.77
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	639846	20.0000	20.22
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	377639	20.0000	21.99
	68 Benzo(a)anthracene	228	23.880	23.864	(0.999)	931914	20.0000	20.48
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	162543	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.857	23.841	(0.998)	795550	40.0000	45.90
	71 Chrysene	228	23.949	23.934	(1.002)	846249	20.0000	20.55
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	538822	20.0000	19.18(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	211292	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.000)	944988	20.0000	19.42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.676	25.660	(0.974)	987454	20.0000	20.76
75	Benzo(k)fluoranthene	252	25.722	25.699	(0.976)	1077307	20.0000	21.50
76	Benzo(a)pyrene	252	26.257	26.241	(0.996)	861687	20.0000	21.20
* 77	Perylene-d12	264	26.357	26.350	(1.000)	160177	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.713	28.690	(1.089)	1031455	20.0000	22.03
79	Dibenzo(a,h)anthracene	278	28.737	28.698	(1.090)	793192	20.0000	22.09
80	Benzo(g,h,i)perylene	276	29.405	29.350	(1.116)	865612	20.0000	21.37
90	N-Nitrosodimethylamine	74	4.389	4.366	(0.488)	338961	40.0000	40.55
91	Aniline	93	8.421	8.406	(0.937)	720123	20.0000	19.56
93	Benzidine	184	21.549	21.542	(0.902)	257371	40.0000	40.13
103	Pyridine	79	4.389	4.397	(0.488)	290326	40.0000	39.51
105	1-methylnaphthalene	142	13.437	13.430	(1.153)	458844	20.0000	20.76
111	Azobenzene (1,2-DP-Hydrazine)	77	17.118	17.095	(1.101)	521942	20.0000	19.15
187	Total Benzofluoranthenes	252	25.722	25.699	(0.976)	1886688	40.0000	40.85
99	Perylene	252	26.411	26.388	(1.002)	949277	20.0000	20.43
98	Retene	219	22.316	22.316	(0.934)	402573	20.0000	21.15
120	2,3,4,6-Tetrachlorophenol	232	16.354	16.338	(1.052)	168064	20.0000	23.63
188	2,6-Dichlorophenol	162	11.890	11.867	(1.021)	834861	40.0000	40.89
189	N-Nitrosomethylethylamine	88	5.825	5.818	(0.648)	517676	40.0000	41.51

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429b.d
Lab Smp Id: IC0429B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36696	-18.90
27 Naphthalene-d8	166754	83377	333508	136283	-18.27
42 Acenaphthene-d10	106910	53455	213820	88131	-17.57
59 Phenanthrene-d10	179783	89892	359566	152272	-15.30
69 Chrysene-d12	192841	96420	385682	162543	-15.71
134 Di-n-octylphthala	229567	114784	459134	211292	-7.96
77 Perylene-d12	184310	92155	368620	160177	-13.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.65	0.07
42 Acenaphthene-d10	15.54	15.04	16.04	15.55	0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.83	0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429b.d

Date : 29-APR-2013 17:30

Client ID:

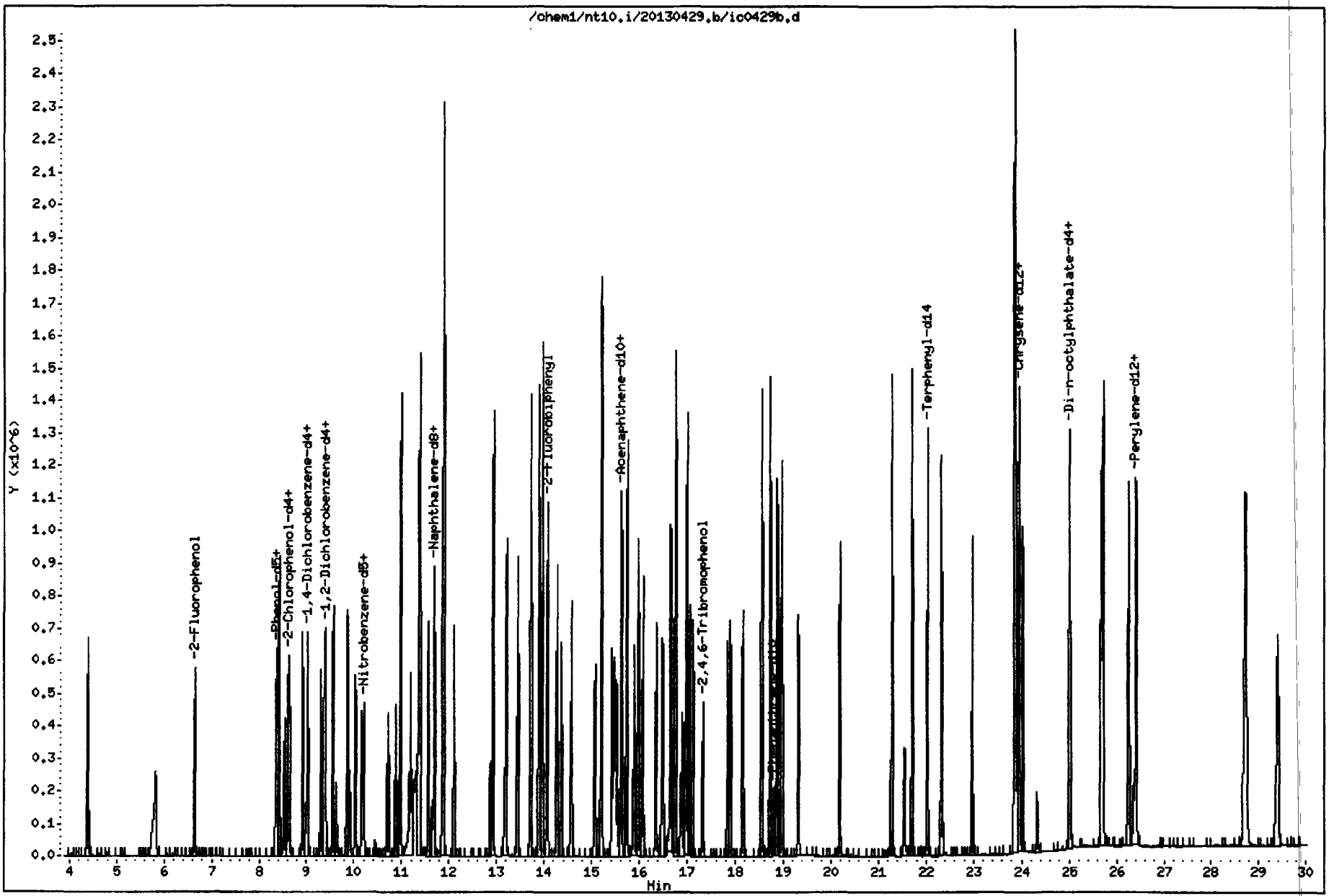
Sample Info: IC0429B

Column phase: ZB-5msi

Instrument: nt10.i

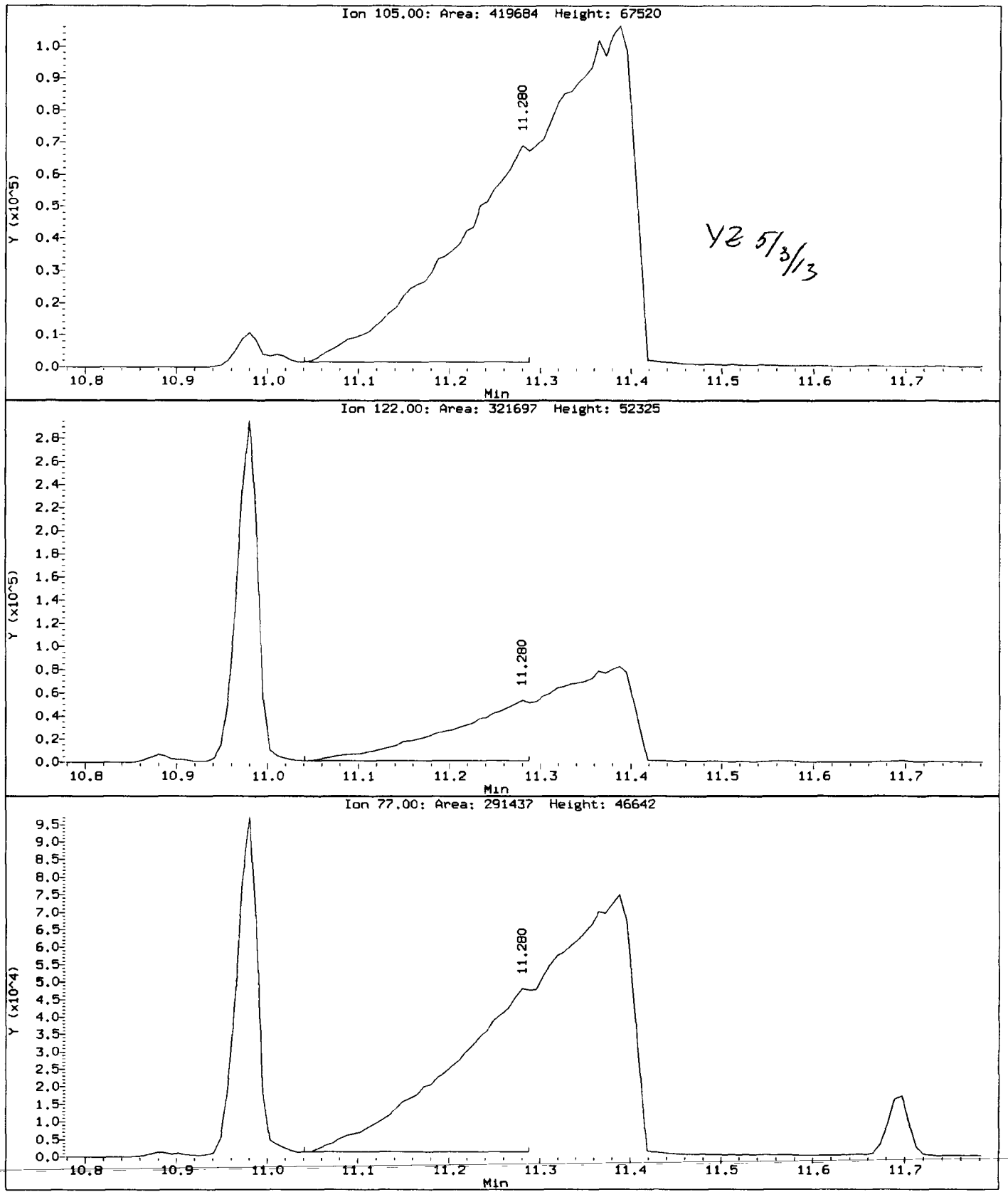
Operator: VTS/YZ

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/ic0429b.d
Injection Date: 29-APR-2013 17:30
Instrument: nt10.i
Client Sample ID:

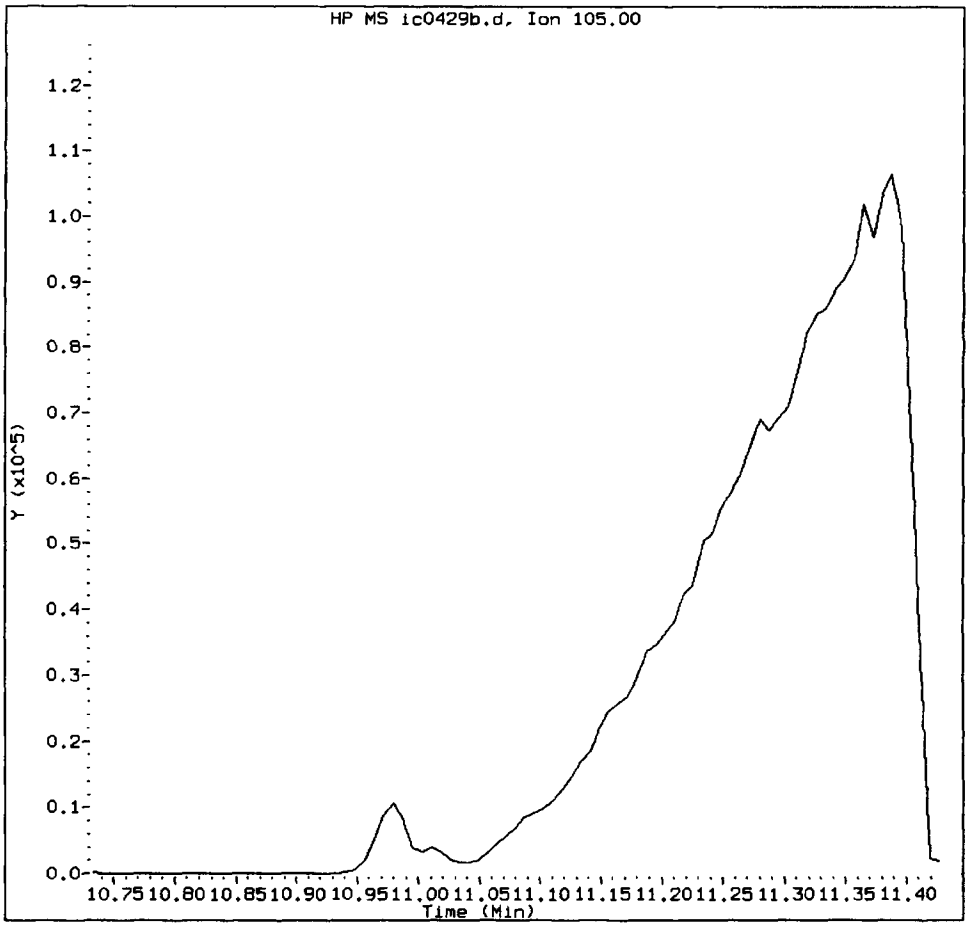
Compound: Benzoic acid
CAS Number: 65-85-0



YZ 5/3/13

IC0429B, /chem1/nt10.i/20130429.b/ic0429b.d

Benzoic acid Amount: 79.78 Area: 1043882



MANUAL INTEGRATION for Benzoic acid

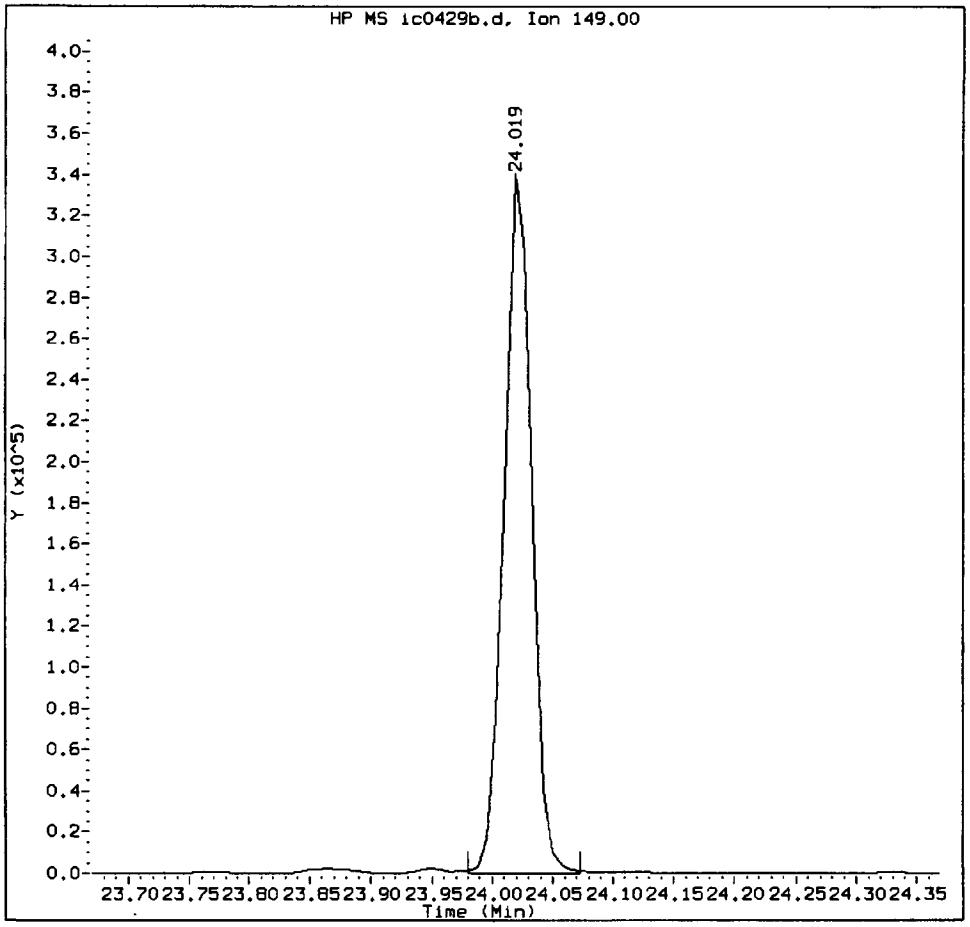
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/9/13

IC0429B, /chem1/nt10.i/20130429.b/ic0429b.d

bis(2-Ethylhexyl)phthalate Amount: 19.18 Area: 538822



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: KZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429b.d

Lab ID: IC0429B, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
15.202	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429c.d
Lab Smp Id: IC0429C
Inj Date : 29-APR-2013 18:07
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429C
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:07 Cal File: ic0429c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.636	6.629	(0.738)	3383	0.20000	0.1878
$	2	Phenol-d5	99	8.336	8.337	(0.928)	4401	0.20000	0.1889
	3	Phenol	94	8.360	8.360	(0.930)	5241	0.20000	0.2009
$	5	2-Chlorophenol-d4	132	8.599	8.599	(0.957)	3739	0.20000	0.2114
	4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	3959	0.20000	0.2111
	6	2-Chlorophenol	128	8.630	8.622	(0.960)	3911	0.20000	0.1944
	7	1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	4272	0.20000	0.2116
*	8	1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	50456	4.00000	
	9	1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	4324	0.20000	0.2173
$	10	1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	2496	0.20000	0.1962
	12	1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	4100	0.20000	0.2152
	11	Benzyl alcohol	108	9.289	9.289	(1.034)	2146	0.20000	0.1956
	14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	1075	0.20000	0.1857
	13	2-Methylphenol	108	9.553	9.553	(1.063)	3759	0.20000	0.2003
	17	Hexachloroethane	117	10.027	10.027	(1.116)	1739	0.20000	0.2089
	16	N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	2403	0.20000	0.2051
	15	4-Methylphenol	108	9.840	9.840	(1.095)	3626	0.20000	0.1895
$	18	Nitrobenzene-d5	82	10.158	10.159	(0.873)	3990	0.20000	0.2032
	19	Nitrobenzene	77	10.197	10.190	(0.876)	3676	0.20000	0.2028
	20	Isophorone	82	10.686	10.686	(0.918)	6624	0.20000	0.1943
	21	2-Nitrophenol	139	10.872	10.872	(0.934)	1931	0.20000	0.1900
	22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	7665	0.40000	0.4102
	23	Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	4126	0.20000	0.2052
	24	Benzoic acid	105	11.064	11.080	(0.950)	4976	0.80000	0.3099
	25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	5918	0.40000	0.3440
	26	1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	3837	0.20000	0.2282
*	27	Naphthalene-d8	136	11.643	11.643	(1.000)	186081	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28	Naphthalene	128	11.689	11.681	(1.004)	11214	0.20000	0.2264
29	4-Chloroaniline	127	11.851	11.843	(1.018)	7896	0.40000	0.4077
30	Hexachlorobutadiene	225	12.106	12.099	(1.040)	2172	0.20000	0.2175
31	4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	4902	0.40000	0.3239
32	2-Methylnaphthalene	142	13.197	13.197	(1.134)	6890	0.20000	0.2094
33	Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	4924	0.40000	0.4074
34	2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	4276	0.40000	0.3699
35	2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	3903	0.40000	0.3275
$ 36	2-Fluorobiphenyl	172	14.056	14.057	(0.904)	8598	0.20000	0.2243
37	2-Chloronaphthalene	162	14.258	14.258	(0.917)	6906	0.20000	0.2263
38	2-Nitroaniline	65	14.559	14.552	(0.937)	2248	0.40000	0.3052
39	Dimethylphthalate	163	15.047	15.047	(0.968)	7495	0.20000	0.2273
40	Acenaphthylene	152	15.194	15.194	(0.978)	11459	0.20000	0.2214
41	2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	2863	0.40000	0.3706
* 42	Acenaphthene-d10	164	15.542	15.535	(1.000)	109826	4.00000	
43	3-Nitroaniline	138	15.480	15.473	(0.996)	2279	0.40000	0.3574(M)
44	Acenaphthene	153	15.612	15.604	(1.004)	7176	0.20000	0.2301
45	2,4-Dinitrophenol	184	15.712	15.705	(1.011)	1264	0.80000	0.1881
46	Dibenzofuran	168	15.959	15.960	(1.027)	9186	0.20000	0.2154
47	4-Nitrophenol	109	15.867	15.867	(1.021)	600	0.40000	0.1265
48	2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	3351	0.40000	0.3363
50	Diethylphthalate	149	16.632	16.632	(1.070)	7435	0.20000	0.2244
49	Fluorene	166	16.733	16.733	(1.077)	8040	0.20000	0.2209
51	4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	4050	0.20000	0.2264
52	4-Nitroaniline	138	16.856	16.841	(1.085)	2307	0.40000	0.3483
53	4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	3933	0.80000	0.4496
54	N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	4565	0.20000	0.2141
$ 55	2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	1098	0.20000	0.1890
56	4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	2097	0.20000	0.2012
57	Hexachlorobenzene	284	18.153	18.153	(0.965)	2973	0.20000	0.2390
58	Pentachlorophenol	266	18.547	18.548	(0.986)	2858	0.40000	0.3274
* 59	Phenanthrene-d10	188	18.810	18.811	(1.000)	184210	4.00000	
60	Phenanthrene	178	18.857	18.857	(1.002)	11324	0.20000	0.2254
61	Anthracene	178	18.957	18.958	(1.008)	11018	0.20000	0.2140
62	Carbazole	167	19.313	19.314	(1.027)	8831	0.20000	0.2824
63	Di-n-butylphthalate	149	20.188	20.188	(1.073)	11372	0.20000	0.2140
64	Fluoranthene	202	21.279	21.279	(1.131)	12505	0.20000	0.2115
65	Pyrene	202	21.696	21.697	(0.908)	13621	0.20000	0.2217
$ 66	Terphenyl-d14	244	22.021	22.022	(0.922)	8855	0.20000	0.2291
67	Butylbenzylphthalate	149	22.966	22.974	(0.961)	4232	0.20000	0.2017
68	Benzo(a)anthracene	228	23.864	23.864	(0.999)	12468	0.20000	0.2243
* 69	Chrysene-d12	240	23.895	23.895	(1.000)	198580	4.00000	
70	3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	10168	0.40000	0.4802
71	Chrysene	228	23.934	23.934	(1.002)	11695	0.20000	0.2324
72	bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	6713	0.20000	0.2377(M)
* 134	Di-n-octylphthalate-d4	153	24.994	24.995	(1.000)	212453	4.00000	
73	Di-n-octylphthalate	149	25.002	25.002	(1.000)	11203	0.20000	0.2290

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.660	25.660	(0.974)	12082	0.20000	0.2274
75	Benzo(k)fluoranthene	252	25.699	25.699	(0.976)	12787	0.20000	0.2285
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	10298	0.20000	0.2268
* 77	Perylene-d12	264	26.342	26.350	(1.000)	178934	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.674	28.690	(1.089)	10579	0.20000	0.2023
79	Dibenzo(a,h)anthracene	278	28.698	28.698	(1.089)	8265	0.20000	0.2060
80	Benzo(g,h,i)perylene	276	29.358	29.350	(1.115)	9355	0.20000	0.2067
90	N-Nitrosodimethylamine	74	4.382	4.366	(0.488)	4445	0.40000	0.3867
91	Aniline	93	8.406	8.406	(0.935)	10097	0.20000	0.1995
93	Benzidine	184	21.542	21.542	(0.902)	6811	0.40000	1.117
103	Pyridine	79	4.420	4.397	(0.492)	3667	0.40000	0.3629
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	6549	0.20000	0.2170
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	7263	0.20000	0.2138
187	Total Benzofluoranthenes	252	25.660	25.699	(0.974)	23419	0.40000	0.4539
99	Perylene	252	26.388	26.388	(1.002)	12169	0.20000	0.2345
98	Retene	219	22.308	22.316	(0.934)	5229	0.20000	0.2249
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.051)	1446	0.20000	0.1631
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	11183	0.40000	0.4011
189	N-Nitrosomethylethylamine	88	5.833	5.818	(0.649)	6603	0.40000	0.3851

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429c.d
Lab Smp Id: IC0429C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	50456	11.50
27 Naphthalene-d8	166754	83377	333508	186081	11.59
42 Acenaphthene-d10	106910	53455	213820	109826	2.73
59 Phenanthrene-d10	179783	89892	359566	184210	2.46
69 Chrysene-d12	192841	96420	385682	198580	2.98
134 Di-n-octylphthala	229567	114784	459134	212453	-7.45
77 Perylene-d12	184310	92155	368620	178934	-2.92

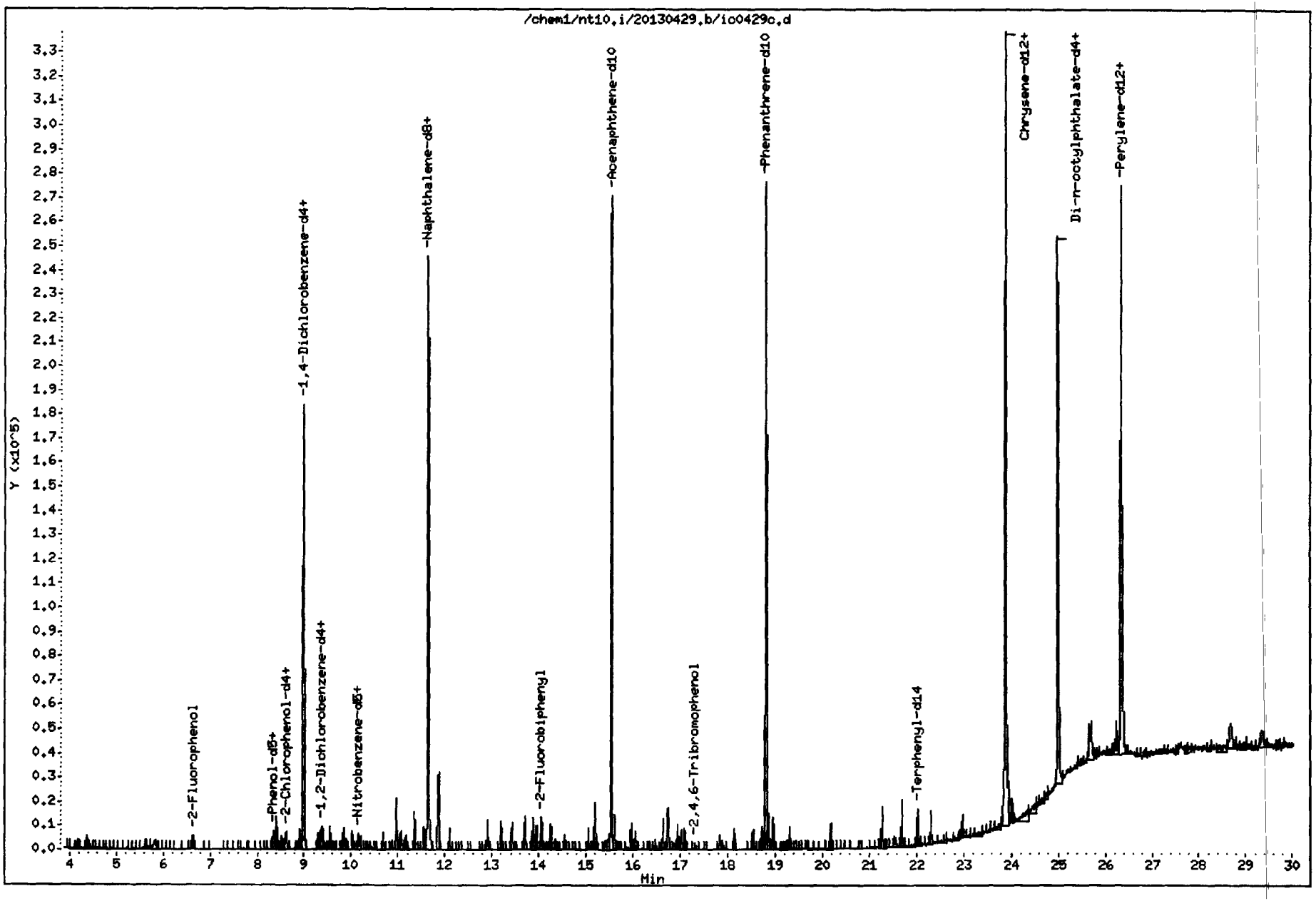
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.34	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429c.d
Date : 29-APR-2013 18:07
Client ID:
Sample Info: IC0429C

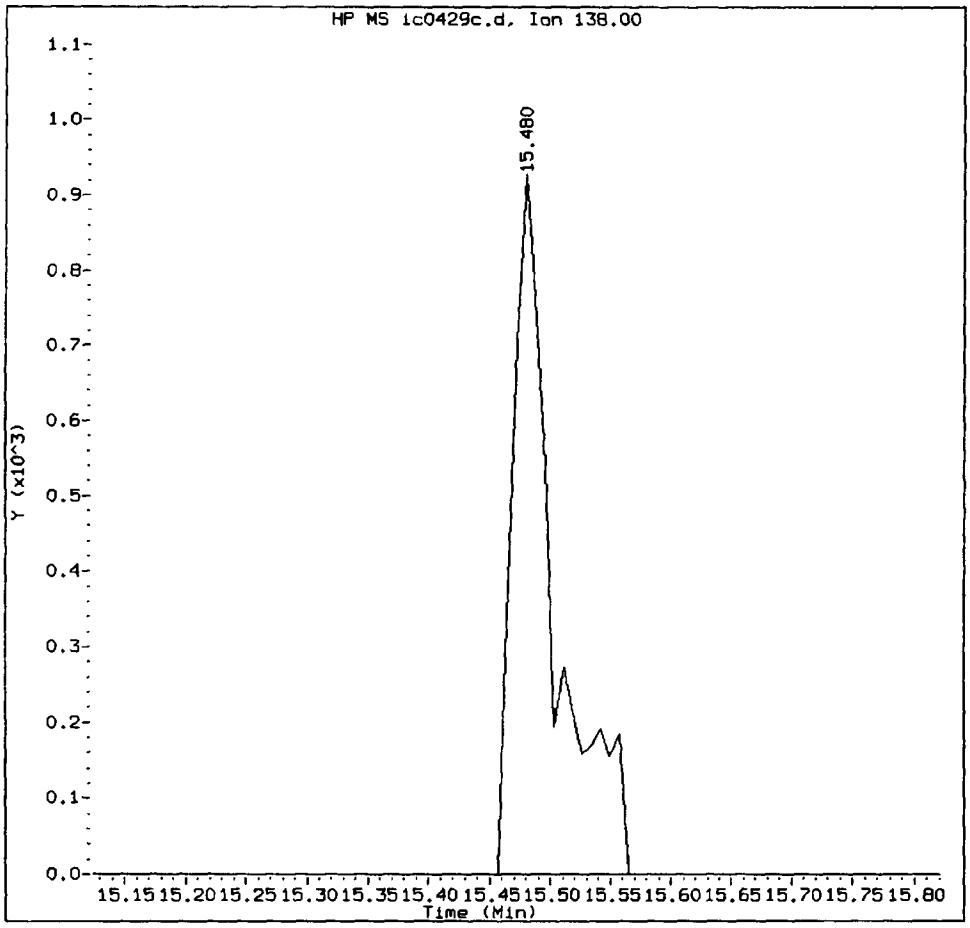
Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429C, /chem1/nt10.i/20130429.b/ic0429c.d

3-Nitroaniline Amount: 0.36 Area: 2279



MANUAL INTEGRATION for 3-Nitroaniline

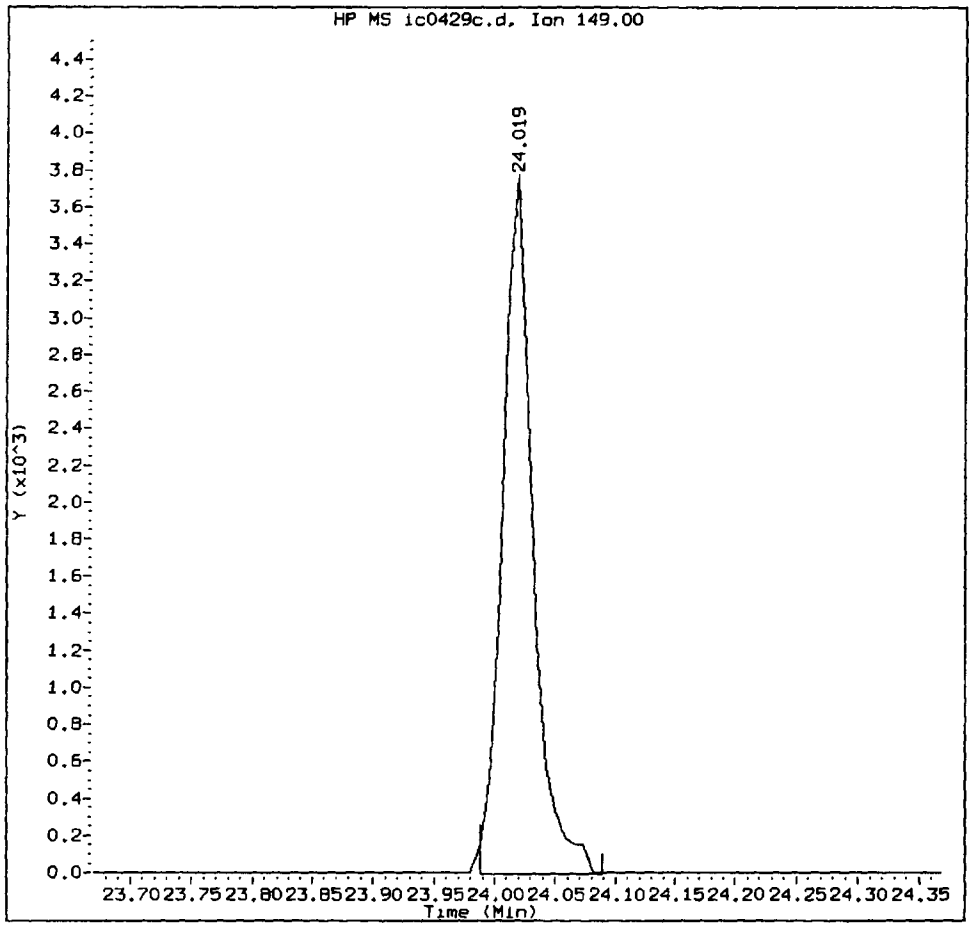
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 5/3/13

IC0429C, /chem1/nt10.i/20130429.b/ic0429c.d

bis(2-Ethylhexyl)phthalate Amount: 0.24 Area: 6713



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429c.d

Lab ID: IC0429C, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429d.d
Lab Smp Id: IC0429D
Inj Date : 29-APR-2013 18:44
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429D
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:44 Cal File: ic0429d.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	15307	1.00000	0.9620
$	2 Phenol-d5	99	8.336	8.337	(0.928)	19285	1.00000	0.9366
	3 Phenol	94	8.360	8.360	(0.931)	22180	1.00000	0.9624
$	5 2-Chlorophenol-d4	132	8.591	8.599	(0.957)	14988	1.00000	0.9589
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	16380	1.00000	0.9883
	6 2-Chlorophenol	128	8.622	8.622	(0.960)	16398	1.00000	0.9226
	7 1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	17715	1.00000	0.9933
*	8 1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	44580	4.00000	
	9 1,4-Dichlorobenzene	146	9.010	9.018	(1.003)	16867	1.00000	0.9594
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.043)	11111	1.00000	0.9883
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	16787	1.00000	0.9973
	11 Benzyl alcohol	108	9.289	9.289	(1.035)	9257	1.00000	0.9548
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	5171	1.00000	1.011
	13 2-Methylphenol	108	9.545	9.553	(1.063)	16160	1.00000	0.9744
	17 Hexachloroethane	117	10.019	10.027	(1.116)	7294	1.00000	0.9916
	16 N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	9787	1.00000	0.9452
	15 4-Methylphenol	108	9.840	9.840	(1.096)	16603	1.00000	0.9818
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	17141	1.00000	0.9894
	19 Nitrobenzene	77	10.197	10.190	(0.876)	15823	1.00000	0.9893
	20 Isophorone	82	10.686	10.686	(0.918)	27613	1.00000	0.9178
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	8265	1.00000	0.9218
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	32296	2.00000	1.959
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	17765	1.00000	1.001
	24 Benzoic acid	105	11.110	11.080	(0.954)	41278	4.00000	2.905
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	31611	2.00000	2.083
	26 1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	14941	1.00000	1.007
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	164171	4.00000	

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	42702	1.00000	0.9770
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	33352	2.00000	1.952
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	8779	1.00000	0.9963
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	25572	2.00000	1.915
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	27982	1.00000	0.9638
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	21045	2.00000	1.886
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	20650	2.00000	1.935
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	21226	2.00000	1.929
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	34053	1.00000	0.9621
	37 2-Chloronaphthalene	162	14.257	14.258	(0.917)	27105	1.00000	0.9620
	38 2-Nitroaniline	65	14.552	14.552	(0.936)	13213	2.00000	1.943
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	29710	1.00000	0.9760
	40 Acenaphthylene	152	15.194	15.194	(0.978)	46429	1.00000	0.9715
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	13962	2.00000	1.957
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	101406	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	12865	2.00000	2.185
	44 Acenaphthene	153	15.612	15.604	(1.004)	27470	1.00000	0.9538
	45 2,4-Dinitrophenol	184	15.704	15.705	(1.010)	14717	4.00000	2.364
	46 Dibenzofuran	168	15.967	15.960	(1.027)	38532	1.00000	0.9785
	47 4-Nitrophenol	109	15.859	15.867	(1.020)	5820	2.00000	1.327
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	18293	2.00000	1.988
	50 Diethylphthalate	149	16.632	16.632	(1.070)	29344	1.00000	0.9593
	49 Fluorene	166	16.733	16.733	(1.077)	32959	1.00000	0.9809
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	15568	1.00000	0.9425
	52 4-Nitroaniline	138	16.848	16.841	(1.084)	13721	2.00000	2.243
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	27317	4.00000	3.379
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	20108	1.00000	1.022
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	4956	1.00000	0.9242
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	9783	1.00000	1.017
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	11321	1.00000	0.9868
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	14694	2.00000	1.825
*	59 Phenanthrene-d10	188	18.810	18.811	(1.000)	169929	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	46140	1.00000	0.9955
	61 Anthracene	178	18.957	18.958	(1.008)	46666	1.00000	0.9828
	62 Carbazole	167	19.313	19.314	(1.027)	35449	1.00000	1.229
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	46503	1.00000	0.9487
	64 Fluoranthene	202	21.278	21.279	(1.131)	52957	1.00000	0.9708
	65 Pyrene	202	21.696	21.697	(0.908)	55189	1.00000	0.9635
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	34900	1.00000	0.9684
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	19089	1.00000	0.9759
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	50618	1.00000	0.9766
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	185129	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	37586	2.00000	1.904
	71 Chrysene	228	23.942	23.934	(1.002)	43967	1.00000	0.9374
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	26029	1.00000	0.9857(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	198625	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.000)	43269	1.00000	0.9461

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	46024	1.00000	0.9209
	75 Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	52368	1.00000	0.9948
	76 Benzo(a)pyrene	252	26.241	26.241	(0.996)	40952	1.00000	0.9591
*	77 Perylene-d12	264	26.349	26.350	(1.000)	168300	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.682	28.690	(1.089)	46418	1.00000	0.9436
	79 Dibenzo(a,h)anthracene	278	28.705	28.698	(1.089)	35967	1.00000	0.9531
	80 Benzo(g,h,i)perylene	276	29.358	29.350	(1.114)	41617	1.00000	0.9778
	90 N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	19685	2.00000	1.938
	91 Aniline	93	8.406	8.406	(0.936)	43396	1.00000	0.9705
	93 Benzidine	184	21.542	21.542	(0.902)	23877	2.00000	4.142
	103 Pyridine	79	4.397	4.397	(0.490)	17576	2.00000	1.969
	105 1-methylnaphthalene	142	13.429	13.430	(1.153)	25663	1.00000	0.9638
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	31455	1.00000	1.003
	187 Total Benzofluoranthenes	252	25.668	25.699	(0.974)	94813	2.00000	1.954
	99 Perylene	252	26.396	26.388	(1.002)	46957	1.00000	0.9620
	98 Retene	219	22.316	22.316	(0.934)	20776	1.00000	0.9584
	120 2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.051)	7820	1.00000	0.9555
	188 2,6-Dichlorophenol	162	11.866	11.867	(1.019)	48496	2.00000	1.972
	189 N-Nitrosomethylethylamine	88	5.818	5.818	(0.648)	29106	2.00000	1.921

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429d.d
Lab Smp Id: IC0429D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	44580	-1.48
27 Naphthalene-d8	166754	83377	333508	164171	-1.55
42 Acenaphthene-d10	106910	53455	213820	101406	-5.15
59 Phenanthrene-d10	179783	89892	359566	169929	-5.48
69 Chrysene-d12	192841	96420	385682	185129	-4.00
134 Di-n-octylphthala	229567	114784	459134	198625	-13.48
77 Perylene-d12	184310	92155	368620	168300	-8.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.09
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

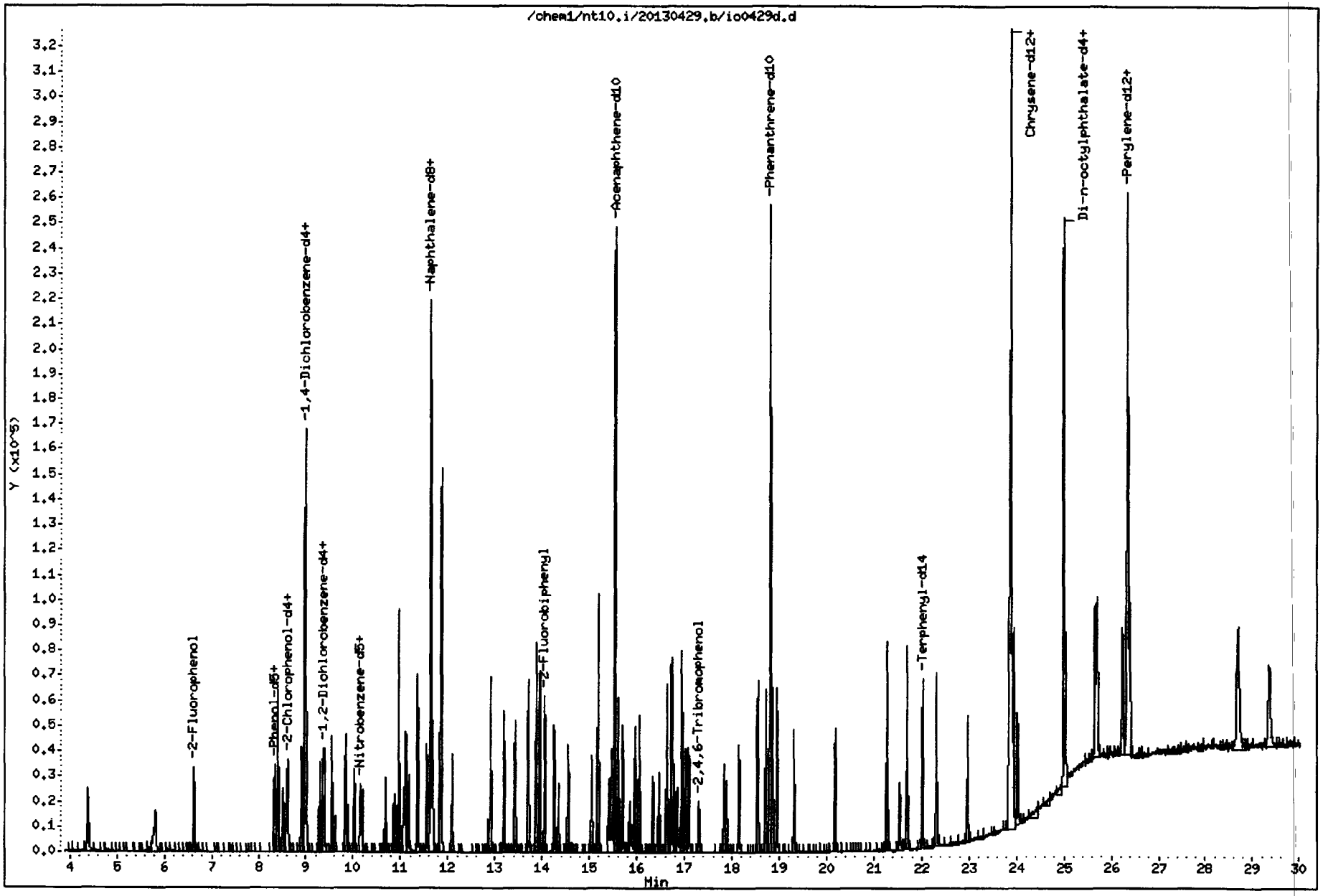
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429d.d
Date : 29-APR-2013 18:44
Client ID:
Sample Info: IC0429D

Instrument: nt10.i

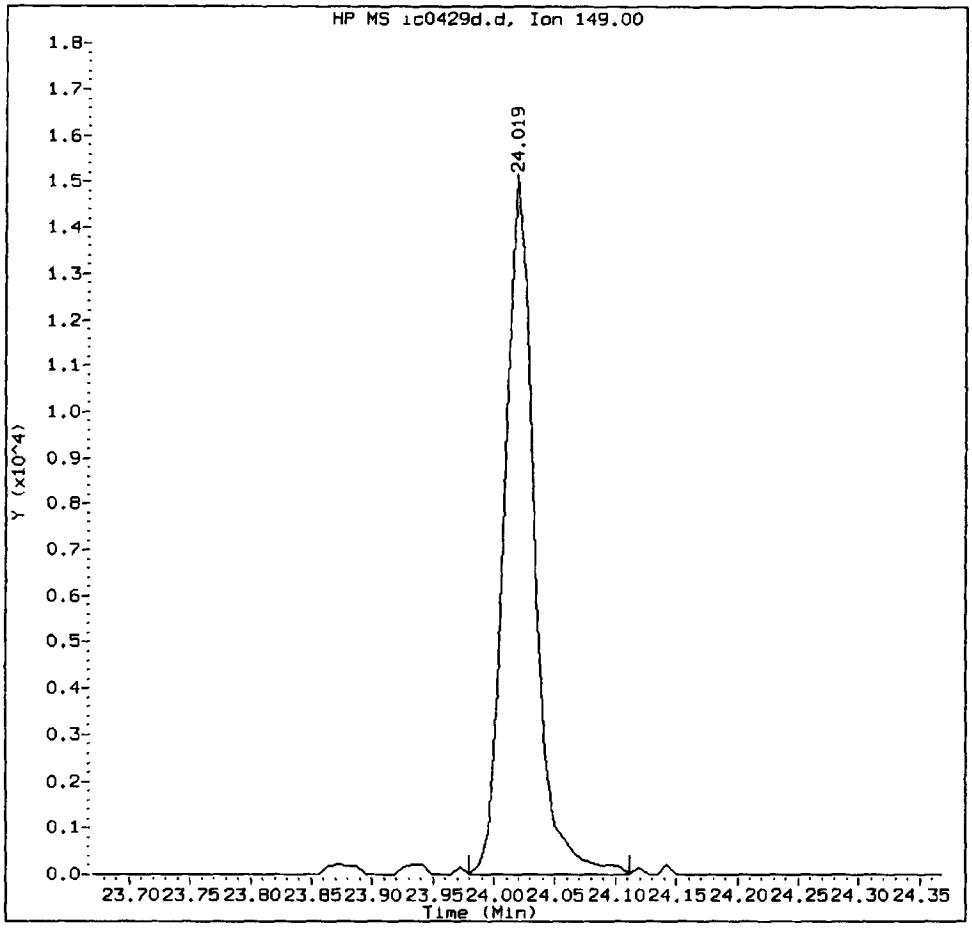
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429D, /chem1/nt10.i/20130429.b/ic0429d.d

bis(2-Ethylhexyl)phthalate Amount: 0.99 Area: 26029



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429d.d

Lab ID: IC0429D, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429e.d
Lab Smp Id: IC0429E
Inj Date : 29-APR-2013 19:21
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429E
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 19:21 Cal File: ic0429e.d
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.628	6.629	(0.738)	146655	10.0000	10.73
$ 2	Phenol-d5	99	8.344	8.337	(0.929)	196642	10.0000	11.12
3	Phenol	94	8.367	8.360	(0.931)	210587	10.0000	10.64
$ 5	2-Chlorophenol-d4	132	8.599	8.599	(0.957)	137828	10.0000	10.27
4	Bis(2-Chloroethyl)ether	93	8.529	8.522	(0.949)	143624	10.0000	10.09
6	2-Chlorophenol	128	8.630	8.622	(0.960)	173765	10.0000	11.38
7	1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	155864	10.0000	10.18
* 8	1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	38285	4.00000	
9	1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	151337	10.0000	10.02
$ 10	1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	99905	10.0000	10.35
12	1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	143308	10.0000	9.914
11	Benzyl alcohol	108	9.297	9.289	(1.035)	92776	10.0000	11.14
14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	45681	10.0000	10.40
13	2-Methylphenol	108	9.553	9.553	(1.063)	149351	10.0000	10.49
17	Hexachloroethane	117	10.026	10.027	(1.116)	64051	10.0000	10.14
16	N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	93506	10.0000	10.52
15	4-Methylphenol	108	9.848	9.840	(1.096)	160522	10.0000	11.05
$ 18	Nitrobenzene-d5	82	10.158	10.159	(0.872)	157610	10.0000	10.45
19	Nitrobenzene	77	10.197	10.190	(0.875)	144235	10.0000	10.36
20	Isophorone	82	10.694	10.686	(0.918)	308116	10.0000	11.77
21	2-Nitrophenol	139	10.879	10.872	(0.934)	86330	10.0000	11.06
22	2,4-Dimethylphenol	107	10.972	10.964	(0.942)	301913	20.0000	21.04
23	Bis(2-Chloroethoxy)methane	93	11.180	11.172	(0.960)	157345	10.0000	10.19
24	Benzoic acid	105	11.303	11.080	(0.970)	533852	40.0000	41.16
25	2,4-Dichlorophenol	162	11.372	11.365	(0.976)	298452	20.0000	22.59
26	1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	126245	10.0000	9.777
* 27	Naphthalene-d8	136	11.650	11.643	(1.000)	142908	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.003)	383254	10.0000	10.07
	29 4-Chloroaniline	127	11.859	11.843	(1.018)	349641	20.0000	23.51
	30 Hexachlorobutadiene	225	12.106	12.099	(1.039)	78933	10.0000	10.29
	31 4-Chloro-3-methylphenol	107	12.919	12.911	(1.109)	269630	20.0000	23.20
	32 2-Methylnaphthalene	142	13.197	13.197	(1.133)	264096	10.0000	10.45
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	215070	20.0000	21.20
	34 2,4,6-Trichlorophenol	196	13.886	13.879	(0.893)	208965	20.0000	21.54
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	227145	20.0000	22.71
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.905)	325794	10.0000	10.13
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	259249	10.0000	10.12
	38 2-Nitroaniline	65	14.567	14.552	(0.937)	143221	20.0000	23.17
	39 Dimethylphthalate	163	15.062	15.047	(0.969)	278457	10.0000	10.06
	40 Acenaphthylene	152	15.194	15.194	(0.978)	490760	10.0000	11.30
	41 2,6-Dinitrotoluene	165	15.194	15.179	(0.978)	140641	20.0000	21.69
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	92187	4.00000	
	43 3-Nitroaniline	138	15.496	15.473	(0.997)	115718	20.0000	21.62
	44 Acenaphthene	153	15.612	15.604	(1.004)	261611	10.0000	9.992
	45 2,4-Dinitrophenol	184	15.727	15.705	(1.012)	250805	40.0000	41.56
	46 Dibenzofuran	168	15.975	15.960	(1.028)	364969	10.0000	10.19
	47 4-Nitrophenol	109	15.874	15.867	(1.021)	85112	20.0000	20.75
	48 2,4-Dinitrotoluene	165	16.068	16.052	(1.034)	187198	20.0000	22.38
	50 Diethylphthalate	149	16.647	16.632	(1.071)	283263	10.0000	10.19
	49 Fluorene	166	16.740	16.733	(1.077)	309724	10.0000	10.14
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	167282	10.0000	11.14
	52 4-Nitroaniline	138	16.872	16.841	(1.086)	125210	20.0000	22.52
	53 4,6-Dinitro-2-methylphenol	198	16.972	16.949	(0.902)	317489	40.0000	40.73
	54 N-Nitrosodiphenylamine	169	17.034	17.026	(0.905)	184807	10.0000	9.961
$	55 2,4,6-Tribromophenol	330	17.319	17.311	(1.114)	55755	10.0000	11.44
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	91977	10.0000	10.14
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	105323	10.0000	9.733
	58 Pentachlorophenol	266	18.555	18.548	(0.986)	177427	20.0000	23.36
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	160272	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.002)	440318	10.0000	10.07
	61 Anthracene	178	18.965	18.958	(1.008)	455728	10.0000	10.18
	62 Carbazole	167	19.321	19.314	(1.027)	242608	10.0000	8.918
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	495591	10.0000	10.72
	64 Fluoranthene	202	21.286	21.279	(1.131)	534614	10.0000	10.39
	65 Pyrene	202	21.704	21.697	(0.908)	542210	10.0000	10.18
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	341948	10.0000	10.20
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	196606	10.0000	10.80
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	490781	10.0000	10.18
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	172225	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.856	23.841	(0.998)	404734	20.0000	22.04
	71 Chrysene	228	23.949	23.934	(1.002)	439878	10.0000	10.08
	72 bis(2-Ethylhexyl)phthalate	149	24.027	24.019	(0.961)	275645	10.0000	9.831(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	210890	4.00000	
	73 Di-n-octylphthalate	149	25.018	25.002	(1.001)	477130	10.0000	9.826

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.676	25.660	(0.974)	516402	10.0000	10.46
75	Benzo(k)fluoranthene	252	25.714	25.699	(0.976)	509181	10.0000	9.789
76	Benzo(a)pyrene	252	26.256	26.241	(0.996)	438619	10.0000	10.40
* 77	Perylene-d12	264	26.357	26.350	(1.000)	166300	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.705	28.690	(1.089)	528701	10.0000	10.88
79	Dibenzo(a,h)anthracene	278	28.729	28.698	(1.090)	403235	10.0000	10.81
80	Benzo(g,h,i)perylene	276	29.389	29.350	(1.115)	445295	10.0000	10.59
90	N-Nitrosodimethylamine	74	4.374	4.366	(0.487)	190704	20.0000	21.87
91	Aniline	93	8.414	8.406	(0.936)	403125	10.0000	10.50
93	Benzidine	184	21.549	21.542	(0.902)	110746	20.0000	19.11
103	Pyridine	79	4.374	4.397	(0.487)	162027	20.0000	21.13
105	1-methylnaphthalene	142	13.437	13.430	(1.153)	238762	10.0000	10.30
111	Azobenzene (1,2-DP-Hydrazine)	77	17.111	17.095	(1.101)	287323	10.0000	10.08
187	Total Benzofluoranthenes	252	25.714	25.699	(0.976)	972720	20.0000	20.28
99	Perylene	252	26.411	26.388	(1.002)	482660	10.0000	10.01
98	Retene	219	22.323	22.316	(0.934)	206286	10.0000	10.23
120	2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	86691	10.0000	11.65
188	2,6-Dichlorophenol	162	11.882	11.867	(1.020)	451718	20.0000	21.10
189	N-Nitrosomethylethylamine	88	5.825	5.818	(0.648)	279207	20.0000	21.46

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429e.d
Lab Smp Id: IC0429E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	38285	-15.39
27 Naphthalene-d8	166754	83377	333508	142908	-14.30
42 Acenaphthene-d10	106910	53455	213820	92187	-13.77
59 Phenanthrene-d10	179783	89892	359566	160272	-10.85
69 Chrysene-d12	192841	96420	385682	172225	-10.69
134 Di-n-octylphthala	229567	114784	459134	210890	-8.14
77 Perylene-d12	184310	92155	368620	166300	-9.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.65	0.07
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

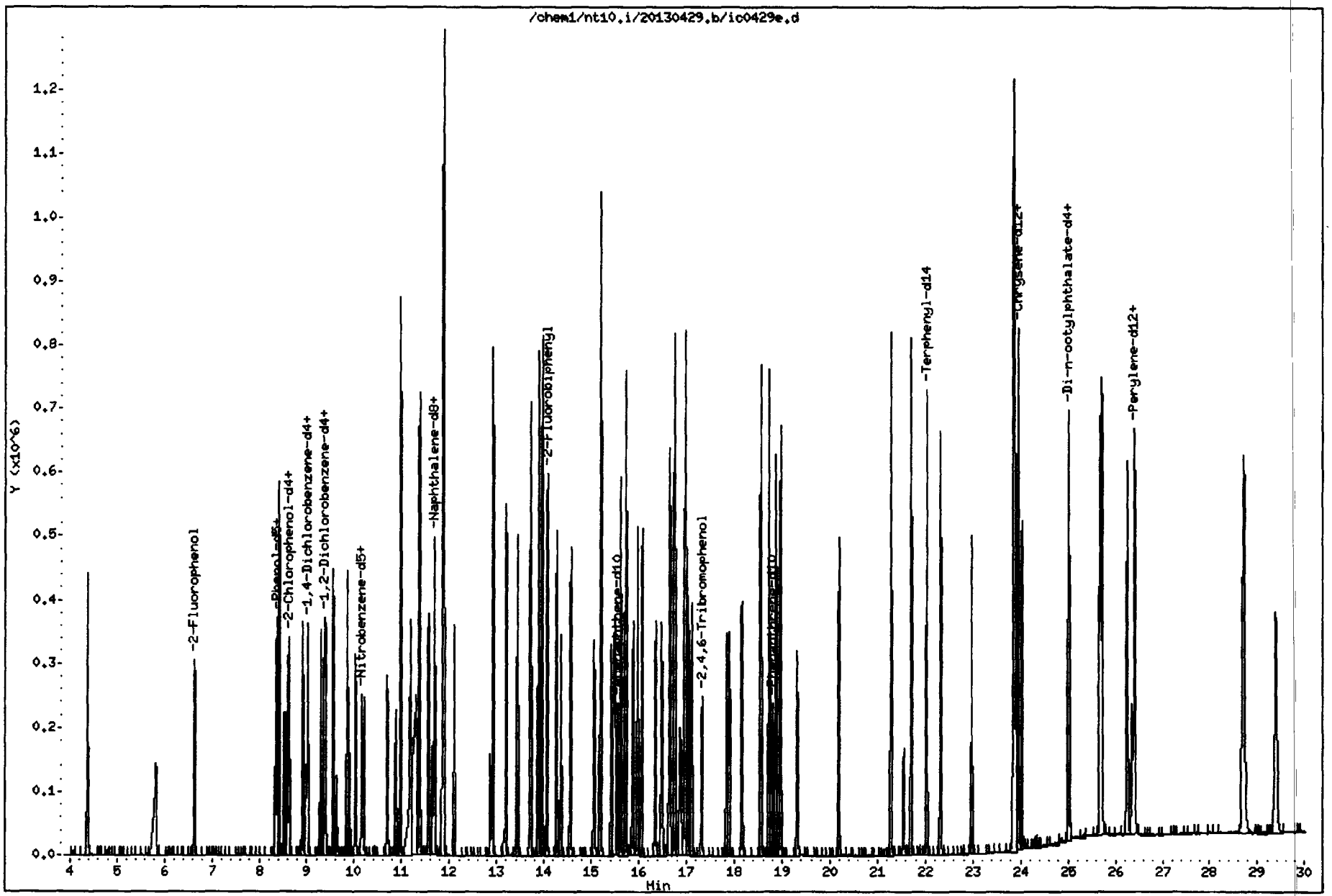
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429e.d
Date : 29-APR-2013 19:21
Client ID:
Sample Info: IC0429E

Instrument: nt10.i

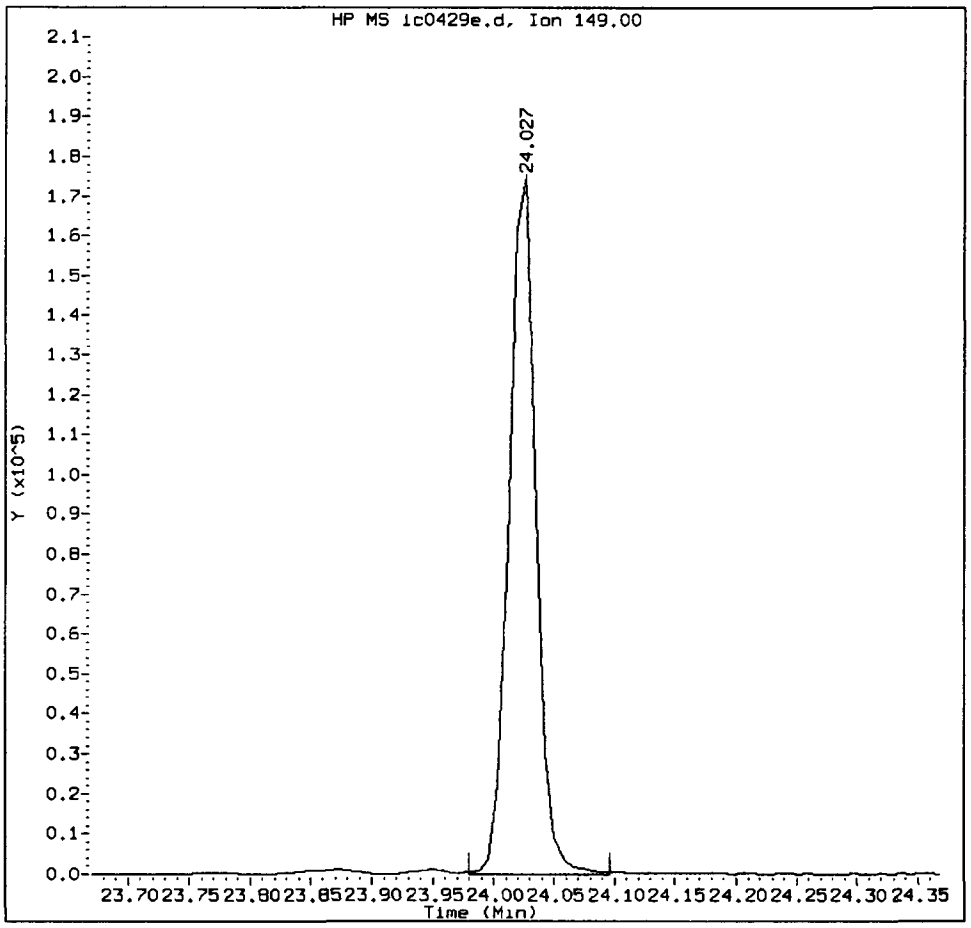
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429E, /chem1/nt10.i/20130429.b/ic0429e.d

bis(2-Ethylhexyl)phthalate Amount: 9.83 Area: 275645



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/2/13

CO-ELUTION SUMMARY FOR FILE - ic0429e.d

Lab ID: IC0429E, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
15.194	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429g.d
Lab Smp Id: IC0429G
Inj Date : 29-APR-2013 20:34
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429G
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 20:34 Cal File: ic0429g.d
Als bottle: 8 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	33327	2.50000	2.552
$	2 Phenol-d5	99	8.336	8.337	(0.928)	43013	2.50000	2.545
	3 Phenol	94	8.359	8.360	(0.930)	49200	2.50000	2.601
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	32303	2.50000	2.518
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	35522	2.50000	2.611
	6 2-Chlorophenol	128	8.622	8.622	(0.959)	35254	2.50000	2.417
	7 1,3-Dichlorobenzene	146	8.916	8.909	(0.992)	36581	2.50000	2.499
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	36591	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	37170	2.50000	2.576
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	23363	2.50000	2.532
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.045)	34665	2.50000	2.509
	11 Benzyl alcohol	108	9.289	9.289	(1.034)	20599	2.50000	2.589
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	11085	2.50000	2.640
	13 2-Methylphenol	108	9.553	9.553	(1.063)	35312	2.50000	2.594
	17 Hexachloroethane	117	10.026	10.027	(1.116)	15637	2.50000	2.590
	16 N-Nitroso-di-n-propylamine	70	9.894	9.895	(1.101)	22554	2.50000	2.654
	15 4-Methylphenol	108	9.840	9.840	(1.095)	36435	2.50000	2.625
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	37054	2.50000	2.546
	19 Nitrobenzene	77	10.197	10.190	(0.876)	34459	2.50000	2.565
	20 Isophorone	82	10.686	10.686	(0.918)	61248	2.50000	2.424
	21 2-Nitrophenol	139	10.871	10.872	(0.934)	19030	2.50000	2.527
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	71562	5.00000	5.167
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	38098	2.50000	2.556
	24 Benzoic acid	105	11.164	11.080	(0.959)	106496	10.0000	8.861
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	67816	5.00000	5.320
	26 1,2,4-Trichlorobenzene	180	11.557	11.558	(0.993)	30525	2.50000	2.450
*	27 Naphthalene-d8	136	11.642	11.643	(1.000)	137898	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	91698	2.50000	2.498
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	72996	5.00000	5.086
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	18006	2.50000	2.433
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	59257	5.00000	5.284
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	60463	2.50000	2.479
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	46418	5.00000	4.831
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	46504	5.00000	5.061
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	48311	5.00000	5.100
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	75007	2.50000	2.461
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	59913	2.50000	2.470
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	31617	5.00000	5.400
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	64965	2.50000	2.479
	40 Acenaphthylene	152	15.194	15.194	(0.978)	99122	2.50000	2.409
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	32305	5.00000	5.261
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	87308	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	27423	5.00000	5.409
	44 Acenaphthene	153	15.611	15.604	(1.004)	61853	2.50000	2.494
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	42855	10.0000	7.930
	46 Dibenzofuran	168	15.967	15.960	(1.027)	84689	2.50000	2.498
	47 4-Nitrophenol	109	15.859	15.867	(1.020)	16653	5.00000	4.391
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	41845	5.00000	5.283
	50 Diethylphthalate	149	16.640	16.632	(1.071)	65811	2.50000	2.499
	49 Fluorene	166	16.732	16.733	(1.077)	72923	2.50000	2.521
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	33604	2.50000	2.363
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	26194	5.00000	4.974
	53 4,6-Dinitro-2-methylphenol	198	16.956	16.949	(0.901)	65565	10.0000	9.149
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	44352	2.50000	2.552
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	11658	2.50000	2.525
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	20878	2.50000	2.457
	57 Hexachlorobenzene	284	18.152	18.153	(0.965)	24254	2.50000	2.393
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	37390	5.00000	5.254
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	150153	4.00000	
	60 Phenanthrene	178	18.864	18.857	(1.002)	100003	2.50000	2.442
	61 Anthracene	178	18.957	18.958	(1.007)	103502	2.50000	2.467
	62 Carbazole	167	19.313	19.314	(1.026)	60342	2.50000	2.368
	63 Di-n-butylphthalate	149	20.187	20.188	(1.073)	104682	2.50000	2.417
	64 Fluoranthene	202	21.286	21.279	(1.131)	117131	2.50000	2.430
	65 Pyrene	202	21.704	21.697	(0.908)	123102	2.50000	2.418
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	78162	2.50000	2.440
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	42839	2.50000	2.464
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	110437	2.50000	2.397
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	164553	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	73617	5.00000	4.195
	71 Chrysene	228	23.941	23.934	(1.002)	100065	2.50000	2.400
	72 bis(2-Ethylhexyl)phthalate	149	24.027	24.019	(0.961)	59748	2.50000	2.511(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	178975	4.00000	
	73 Di-n-octylphthalate	149	25.017	25.002	(1.001)	101315	2.50000	2.459

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	107559	2.50000	2.369
	75 Benzo(k)fluoranthene	252	25.714	25.699	(0.976)	117137	2.50000	2.450
	76 Benzo(a)pyrene	252	26.249	26.241	(0.996)	93000	2.50000	2.398
*	77 Perylene-d12	264	26.357	26.350	(1.000)	152859	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.697	28.690	(1.089)	107108	2.50000	2.397
	79 Dibenzo(a,h)anthracene	278	28.721	28.698	(1.090)	84630	2.50000	2.469
	80 Benzo(g,h,i)perylene	276	29.381	29.350	(1.115)	94698	2.50000	2.450
	90 N-Nitrosodimethylamine	74	4.351	4.366	(0.484)	44045	5.00000	5.284
	91 Aniline	93	8.406	8.406	(0.935)	96404	2.50000	2.627
	93 Benzidine	184	21.541	21.542	(0.901)	29714	5.00000	5.756
	103 Pyridine	79	4.374	4.397	(0.487)	39707	5.00000	5.419
	105 1-methylnaphthalene	142	13.429	13.430	(1.153)	55151	2.50000	2.466
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.100)	69518	2.50000	2.574
	187 Total Benzofluoranthenes	252	25.668	25.699	(0.974)	213730	5.00000	4.849
	99 Perylene	252	26.403	26.388	(1.002)	104964	2.50000	2.368
	98 Retene	219	22.315	22.316	(0.934)	46252	2.50000	2.400
	120 2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	17623	2.50000	2.501
	188 2,6-Dichlorophenol	162	11.866	11.867	(1.019)	104652	5.00000	5.066
	189 N-Nitrosomethylethylamine	88	5.817	5.818	(0.647)	65642	5.00000	5.279

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429g.d
Lab Smp Id: IC0429G
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36591	-19.14
27 Naphthalene-d8	166754	83377	333508	137898	-17.30
42 Acenaphthene-d10	106910	53455	213820	87308	-18.34
59 Phenanthrene-d10	179783	89892	359566	150153	-16.48
69 Chrysene-d12	192841	96420	385682	164553	-14.67
134 Di-n-octylphthala	229567	114784	459134	178975	-22.04
77 Perylene-d12	184310	92155	368620	152859	-17.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

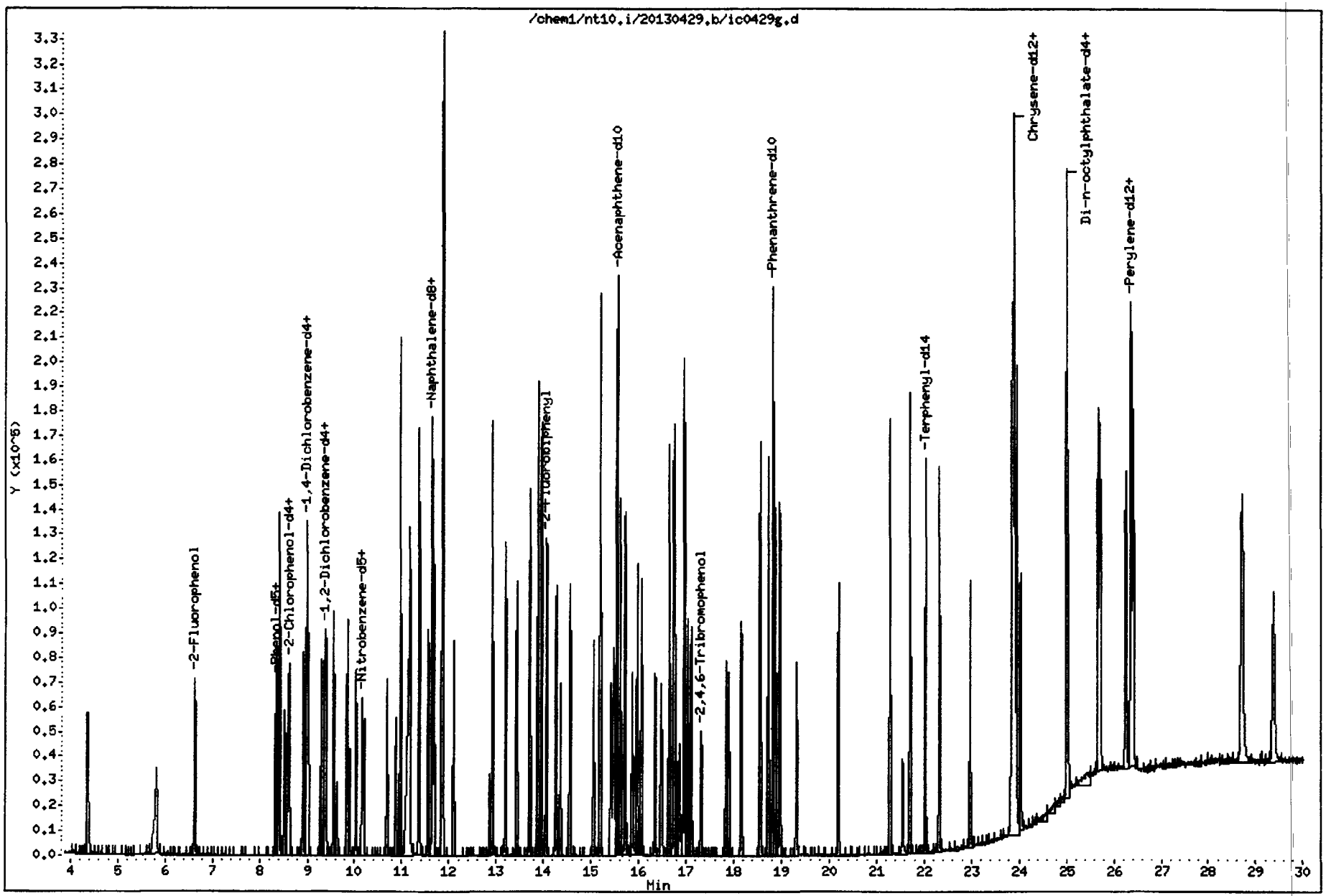
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429g.d
Date : 29-APR-2013 20:34
Client ID:
Sample Info: IC0429G

Instrument: nt10.i

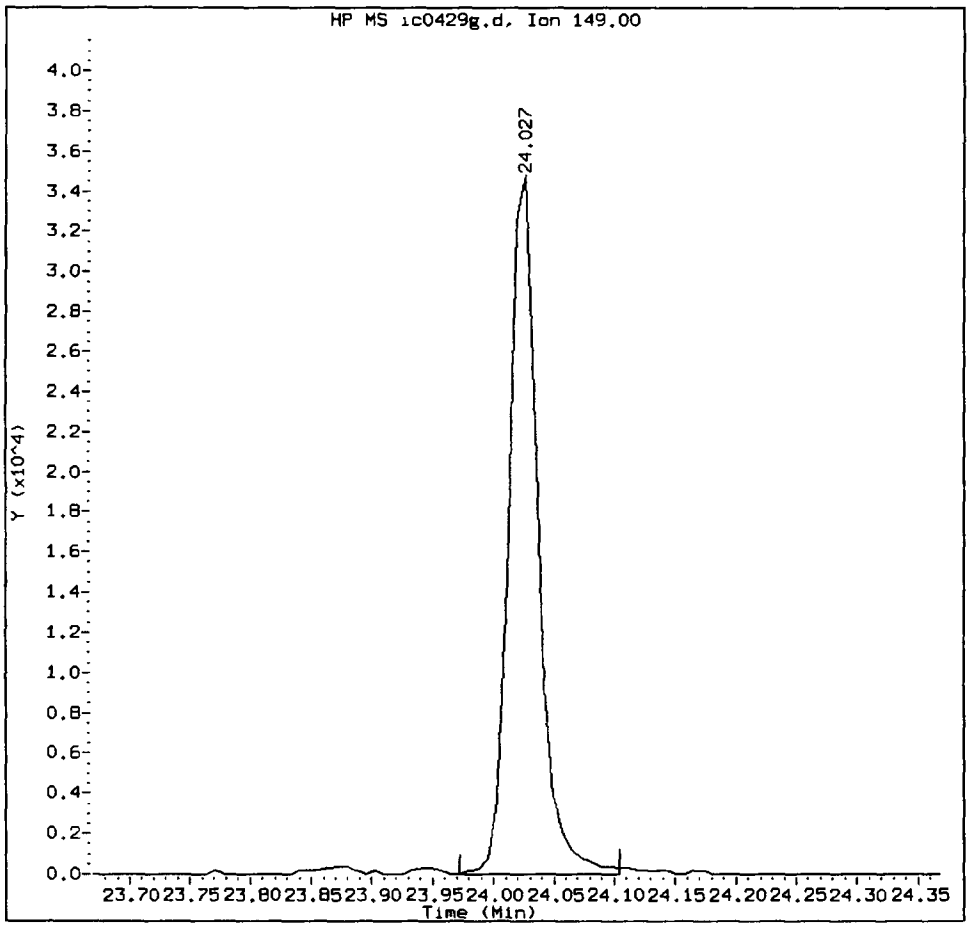
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429G, /chem1/nt10.i/20130429.b/ic0429g.d

bis(2-Ethylhexyl)phthalate Amount: 2.51 Area: 59748



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB **Date:** 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429g.d

Lab ID: IC0429G, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/8/13

Data file : /chem1/nt10.i/20130429.b/ic0429i.d
Lab Smp Id: IC0429I
Inj Date : 29-APR-2013 21:47
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429I
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.629	6.629	(0.738)	7097	0.50000	0.4779
$	2	Phenol-d5	99	8.337	8.337	(0.928)	8848	0.50000	0.4605
	3	Phenol	94	8.360	8.360	(0.931)	10487	0.50000	0.4876
$	5	2-Chlorophenol-d4	132	8.599	8.599	(0.958)	6852	0.50000	0.4698
	4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	8003	0.50000	0.5174
	6	2-Chlorophenol	128	8.622	8.622	(0.960)	7629	0.50000	0.4600
	7	1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	8033	0.50000	0.4826
*	8	1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	41602	4.00000	
	9	1,4-Dichlorobenzene	146	9.018	9.018	(1.004)	7938	0.50000	0.4839
$	10	1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.043)	5208	0.50000	0.4964
	12	1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	7759	0.50000	0.4940
	11	Benzyl alcohol	108	9.289	9.289	(1.035)	3823	0.50000	0.4226
	14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	2289	0.50000	0.4795
	13	2-Methylphenol	108	9.553	9.553	(1.064)	7310	0.50000	0.4723
	17	Hexachloroethane	117	10.027	10.027	(1.117)	3426	0.50000	0.4991
	16	N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	4650	0.50000	0.4812
	15	4-Methylphenol	108	9.840	9.840	(1.096)	7046	0.50000	0.4465
$	18	Nitrobenzene-d5	82	10.159	10.159	(0.873)	8203	0.50000	0.4943
	19	Nitrobenzene	77	10.190	10.190	(0.875)	7721	0.50000	0.5040
	20	Isophorone	82	10.686	10.686	(0.918)	13058	0.50000	0.4531
	21	2-Nitrophenol	139	10.872	10.872	(0.934)	3663	0.50000	0.4265
	22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	14636	1.00000	0.9268
	23	Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	8541	0.50000	0.5026
	24	Benzoic acid	105	11.080	11.080	(0.952)	12620	2.00000	0.9294
	25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	11335	1.00000	0.7797
	26	1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	6875	0.50000	0.4839
*	27	Naphthalene-d8	136	11.643	11.643	(1.000)	157250	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.681	11.681	(1.003)	19775	0.50000	0.4723
	29 4-Chloroaniline	127	11.843	11.843	(1.017)	14329	1.00000	0.8755
	30 Hexachlorobutadiene	225	12.099	12.099	(1.039)	3928	0.50000	0.4654
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	10700	1.00000	0.8367
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	13246	0.50000	0.4763
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	9274	1.00000	0.8934
	34 2,4,6-Trichlorophenol	196	13.879	13.879	(0.893)	8685	1.00000	0.8747
	35 2,4,5-Trichlorophenol	196	13.948	13.948	(0.898)	8785	1.00000	0.8583
$	36 2-Fluorobiphenyl	172	14.057	14.057	(0.905)	15786	0.50000	0.4794
	37 2-Chloronaphthalene	162	14.258	14.258	(0.918)	12356	0.50000	0.4714
	38 2-Nitroaniline	65	14.552	14.552	(0.937)	5242	1.00000	0.8286
	39 Dimethylphthalate	163	15.047	15.047	(0.969)	13385	0.50000	0.4726
	40 Acenaphthylene	152	15.194	15.194	(0.978)	21258	0.50000	0.4782
	41 2,6-Dinitrotoluene	165	15.179	15.179	(0.977)	6067	1.00000	0.9143
*	42 Acenaphthene-d10	164	15.535	15.535	(1.000)	94337	4.00000	
	43 3-Nitroaniline	138	15.473	15.473	(0.996)	5039	1.00000	0.9199
	44 Acenaphthene	153	15.604	15.604	(1.004)	12929	0.50000	0.4826
	45 2,4-Dinitrophenol	184	15.705	15.705	(1.011)	4345	2.00000	0.7522
	46 Dibenzofuran	168	15.960	15.960	(1.027)	17668	0.50000	0.4823
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	1862	1.00000	0.4569
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	7334	1.00000	0.8570
	50 Diethylphthalate	149	16.632	16.632	(1.071)	13456	0.50000	0.4729
	49 Fluorene	166	16.733	16.733	(1.077)	14861	0.50000	0.4754
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	7105	0.50000	0.4624
	52 4-Nitroaniline	138	16.841	16.841	(1.084)	4664	1.00000	0.8197
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	9847	2.00000	1.299
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	8567	0.50000	0.4637
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	2005	0.50000	0.4019
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	4326	0.50000	0.4791
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	5141	0.50000	0.4772
	58 Pentachlorophenol	266	18.548	18.548	(0.986)	5592	1.00000	0.7394
*	59 Phenanthrene-d10	188	18.811	18.811	(1.000)	159582	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	20200	0.50000	0.4641
	61 Anthracene	178	18.958	18.958	(1.008)	21303	0.50000	0.4777
	62 Carbazole	167	19.314	19.314	(1.027)	15951	0.50000	0.5889
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	19951	0.50000	0.4334
	64 Fluoranthene	202	21.279	21.279	(1.131)	23534	0.50000	0.4594
	65 Pyrene	202	21.697	21.697	(0.908)	24226	0.50000	0.4588
$	66 Terphenyl-d14	244	22.022	22.022	(0.922)	14939	0.50000	0.4497
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	7305	0.50000	0.4051
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	22076	0.50000	0.4620
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	170666	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	15590	1.00000	0.8567
	71 Chrysene	228	23.934	23.934	(1.002)	20337	0.50000	0.4703
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	10757	0.50000	0.4647(M)
*	134 Di-n-octylphthalate-d4	153	24.995	24.995	(1.000)	174102	4.00000	
	73 Di-n-octylphthalate	149	25.002	25.002	(1.000)	20550	0.50000	0.5126

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.660	25.660	(0.974)	20816	0.50000	0.4439
75	Benzo(k)fluoranthene	252	25.699	25.699	(0.975)	22672	0.50000	0.4591
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	17222	0.50000	0.4299
* 77	Perylene-d12	264	26.350	26.350	(1.000)	157899	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	20006	0.50000	0.4335
79	Dibenzo(a,h)anthracene	278	28.698	28.698	(1.089)	14468	0.50000	0.4087
80	Benzo(g,h,i)perylene	276	29.350	29.350	(1.114)	17808	0.50000	0.4460
90	N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	9105	1.00000	0.9607
91	Aniline	93	8.406	8.406	(0.936)	20193	0.50000	0.4839
93	Benzidine	184	21.542	21.542	(0.902)	8518	1.00000	1.621
103	Pyridine	79	4.397	4.397	(0.490)	8381	1.00000	1.006
105	1-methylnaphthalene	142	13.430	13.430	(1.153)	11744	0.50000	0.4605
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	14947	0.50000	0.5123
187	Total Benzofluoranthenes	252	25.699	25.699	(0.975)	41609	1.00000	0.9139
99	Perylene	252	26.388	26.388	(1.001)	21669	0.50000	0.4732
98	Retene	219	22.316	22.316	(0.934)	8851	0.50000	0.4429
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.052)	3016	0.50000	0.3961
188	2,6-Dichlorophenol	162	11.867	11.867	(1.019)	21326	1.00000	0.9052
189	N-Nitrosomethylethylamine	88	5.818	5.818	(0.648)	13437	1.00000	0.9505

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429i.d
Lab Smp Id: IC0429I
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

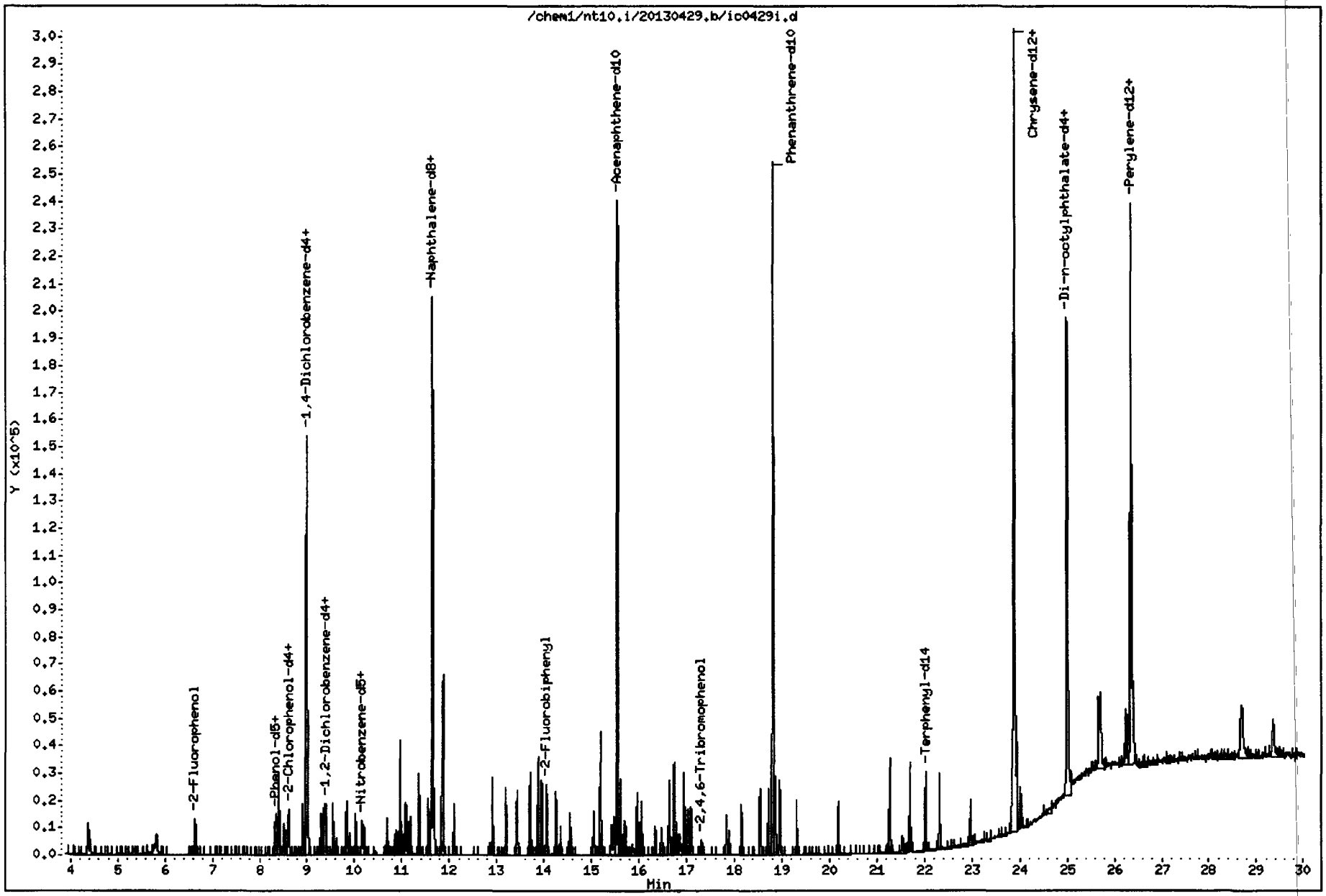
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41602	-8.06
27 Naphthalene-d8	166754	83377	333508	157250	-5.70
42 Acenaphthene-d10	106910	53455	213820	94337	-11.76
59 Phenanthrene-d10	179783	89892	359566	159582	-11.24
69 Chrysene-d12	192841	96420	385682	170666	-11.50
134 Di-n-octylphthala	229567	114784	459134	174102	-24.16
77 Perylene-d12	184310	92155	368620	157899	-14.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.08
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.53	-0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

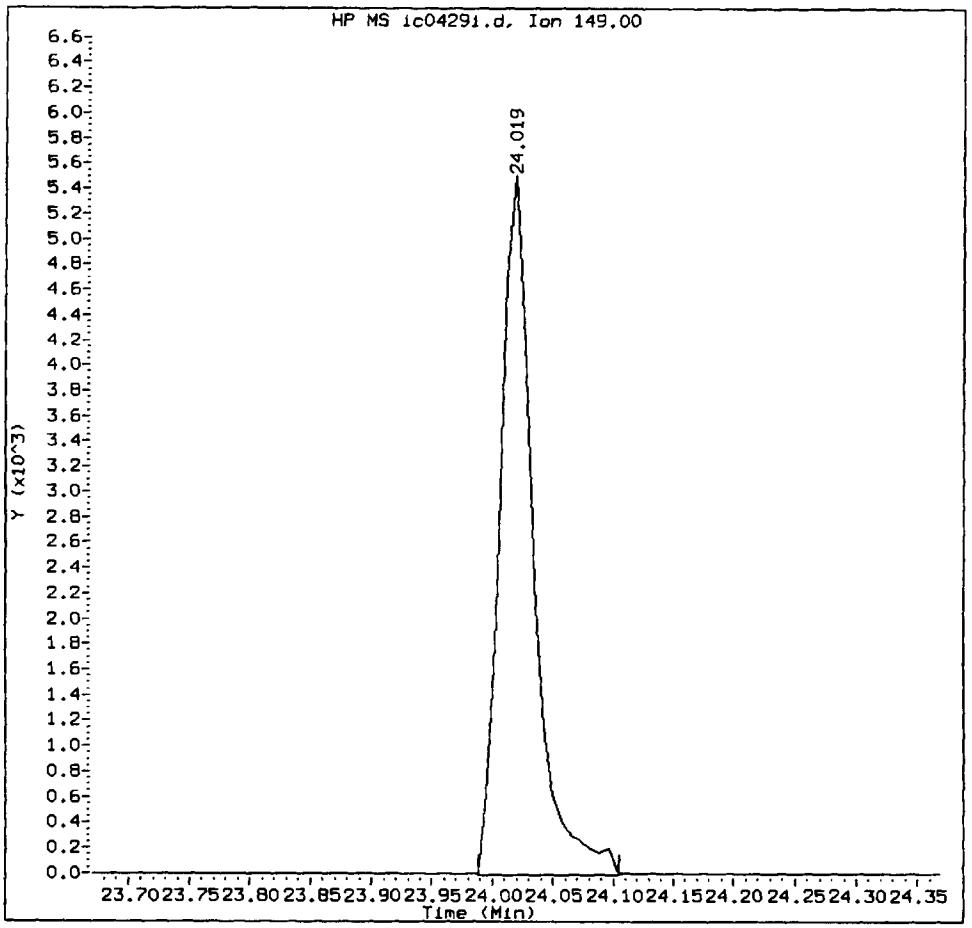
Data File: /chem1/nt10.i/20130429.b/ic0429i.d
Date : 29-APR-2013 21:47
Client ID:
Sample Info: IC0429I

Instrument: nt10.i
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0429I, /chem1/nt10.i/20130429.b/ic0429i.d

bis(2-Ethylhexyl)phthalate Amount: 0.46 Area: 10757



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/9/13

CO-ELUTION SUMMARY FOR FILE - ic0429i.d

Lab ID: IC0429I, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429icv.d
Lab Smp Id: IC0429ICV
Inj Date : 29-APR-2013 22:24
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429ICV
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

YZ 5/3/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
$ 2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	8.360	8.360	(0.931)	111426	5.21984	5.220
$ 5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	81953	5.33870	5.339
6	2-Chlorophenol	128	8.622	8.622	(0.960)	80570	4.89423	4.894
7	1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	84507	5.11566	5.116
* 8	1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	41290	4.00000	
9	1,4-Dichlorobenzene	146	9.017	9.018	(1.004)	84755	5.20517	5.205
$ 10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	79538	5.10200	5.102
11	Benzyl alcohol	108	9.289	9.289	(1.035)	44014	4.90168	4.902
14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	24983	5.27307	5.273
13	2-Methylphenol	108	9.545	9.553	(1.063)	84376	5.49292	5.493
17	Hexachloroethane	117	10.019	10.027	(1.116)	35524	5.21434	5.214
16	N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	51945	5.41648	5.416
15	4-Methylphenol	108	9.840	9.840	(1.096)	87603	5.59319	5.593
$ 18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	10.190	10.190	(0.875)	79523	5.36973	5.370
20	Isophorone	82	10.686	10.686	(0.918)	173340	6.22278	6.223
21	2-Nitrophenol	139	10.872	10.872	(0.934)	42978	5.17676	5.177
22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	164268	10.7602	10.76
23	Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	90256	5.49412	5.494
24	Benzoic acid	105	11.234	11.080	(0.965)	282915	21.0014	21.00
25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	155797	11.0867	11.09
26	1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	70353	5.12215	5.122
* 27	Naphthalene-d8	136	11.643	11.643	(1.000)	152009	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	191530	4.73263	4.733
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	173412	10.9603	10.96
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	42367	5.19271	5.193
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	147122	11.9007	11.90
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	129228	4.80733	4.807
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	107971	10.2504	10.25
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	112509	11.1670	11.17
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	125520	12.0854	12.09
$	36 2-Fluorobiphenyl	172	Compound Not Detected.					
	37 2-Chloronaphthalene	162	14.258	14.258	(0.918)	142918	5.37333	5.373
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	73989	11.5256	11.53
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	152060	5.29173	5.292
	40 Acenaphthylene	152	15.194	15.194	(0.978)	207472	4.59913	4.599
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.978)	75138	11.1601	11.16
*	42 Acenaphthene-d10	164	15.534	15.535	(1.000)	95722	4.00000	
	43 3-Nitroaniline	138	15.488	15.473	(0.997)	71502	12.8642	12.86
	44 Acenaphthene	153	15.612	15.604	(1.005)	131114	4.82292	4.823
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	126391	20.8995	20.90
	46 Dibenzofuran	168	15.967	15.960	(1.028)	179601	4.83159	4.832
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	43830	10.4514	10.45
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	100486	11.5716	11.57
	50 Diethylphthalate	149	16.640	16.632	(1.071)	148426	5.14027	5.140
	49 Fluorene	166	16.733	16.733	(1.077)	152283	4.80101	4.801
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	77730	4.98522	4.985
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	68038	11.7844	11.78
	53 4,6-Dinitro-2-methylphenol	198	16.964	16.949	(0.902)	169347	21.7583	21.76
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	102490	5.46980	5.470
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	49463	5.40070	5.401
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	56636	5.18261	5.183
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	90998	11.8629	11.86
*	59 Phenanthrene-d10	188	18.811	18.811	(1.000)	161863	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.003)	216640	4.90686	4.907
	61 Anthracene	178	18.958	18.958	(1.008)	219969	4.86323	4.863
	62 Carbazole	167	19.313	19.314	(1.027)	146715	5.34003	5.340
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	259155	5.55031	5.550
	64 Fluoranthene	202	21.279	21.279	(1.131)	257141	4.94850	4.949
	65 Pyrene	202	21.696	21.697	(0.908)	264541	4.88069	4.881
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	106153	5.73506	5.735
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	240855	4.91069	4.911
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	175186	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	155141	8.30491	8.305
	71 Chrysene	228	23.942	23.934	(1.002)	214847	4.84048	4.840
	72 bis(2-Ethylhexyl)phthalate	149	25.010	24.019	(1.001)	242465	5.33975	5.340
*	134 Di-n-octylphthalate-d4	153	24.995	24.995	(1.000)	197383	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.001)	242465	5.33515	5.335

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
74	Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	227705	4.59796	4.598
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	268725	5.15172	5.152
76	Benzo(a)pyrene	252	26.249	26.241	(0.996)	203839	4.81788	4.818
* 77	Perylene-d12	264	26.349	26.350	(1.000)	166766	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	251131	5.15203	5.152
79	Dibenzo(a,h)anthracene	278	28.713	28.698	(1.090)	191446	5.12002	5.120
80	Benzo(g,h,i)perylene	276	29.373	29.350	(1.115)	209597	4.96989	4.970
90	N-Nitrosodimethylamine	74	4.358	4.366	(0.485)	105643	11.2307	11.23
91	Aniline	93	8.406	8.406	(0.936)	203803	4.92093	4.921
93	Benzidine	184	21.542	21.542	(0.902)	86479	15.0162	15.02(R)
103	Pyridine	79	4.374	4.397	(0.487)	90444	10.9387	10.94
105	1-methylnaphthalene	142	13.430	13.430	(1.153)	118938	4.82444	4.824
111	Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.101)	163298	5.51577	5.516
187	Total Benzofluoranthenes	252	25.707	25.699	(0.976)	469919	9.77502	9.775
99	Perylene	252	26.404	26.388	(1.002)	212820	4.40032	4.400
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
188	2,6-Dichlorophenol	162	Compound Not Detected.					
189	N-Nitrosomethylethylamine	88	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429icv.d
Lab Smp Id: IC0429ICV
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41290	-8.75
27 Naphthalene-d8	166754	83377	333508	152009	-8.84
42 Acenaphthene-d10	106910	53455	213820	95722	-10.46
59 Phenanthrene-d10	179783	89892	359566	161863	-9.97
69 Chrysene-d12	192841	96420	385682	175186	-9.16
134 Di-n-octylphthala	229567	114784	459134	197383	-14.02
77 Perylene-d12	184310	92155	368620	166766	-9.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.09
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.53	-0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: NONE
Lab Smp Id: IC0429ICV
Level:
Data Type: MS DATA
SpikeList File: ICVS.spk
Sublist File: PSDDAHDR.sub
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Client SDG: 20130429
Fraction: SV

Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
3	Phenol	5.000	5.220	104.40	
4	Bis(2-Chloroethyl)	5.000	5.339	106.77	
6	2-Chlorophenol	5.000	4.894	97.88	
7	1,3-Dichlorobenzen	5.000	5.116	102.31	
9	1,4-Dichlorobenzen	5.000	5.205	104.10	
11	Benzyl alcohol	5.000	4.902	98.03	
12	1,2-Dichlorobenzen	5.000	5.102	102.04	
13	2-Methylphenol	5.000	5.493	109.86	
14	2,2'-oxybis(1-Chlo	5.000	5.273	105.46	
15	4-Methylphenol	5.000	5.593	111.86	
16	N-Nitroso-di-n-pro	5.000	5.416	108.33	
17	Hexachloroethane	5.000	5.214	104.29	
19	Nitrobenzene	5.000	5.370	107.39	
20	Isophorone	5.000	6.223	124.46	
21	2-Nitrophenol	5.000	5.177	103.54	
22	2,4-Dimethylphenol	10.00	10.76	107.60	
23	Bis(2-Chloroethoxy	5.000	5.494	109.88	
24	Benzoic acid	20.00	21.00	105.01	
25	2,4-Dichlorophenol	10.00	11.09	110.87	
26	1,2,4-Trichloroben	5.000	5.122	102.44	
28	Naphthalene	5.000	4.733	94.65	
29	4-Chloroaniline	10.00	10.96	109.60	
30	Hexachlorobutadien	5.000	5.193	103.85	
31	4-Chloro-3-methylp	10.00	11.90	119.01	
32	2-Methylnaphthalen	5.000	4.807	96.15	
33	Hexachlorocyclopen	10.00	10.25	102.50	
34	2,4,6-Trichlorophe	10.00	11.17	111.67	
35	2,4,5-Trichlorophe	10.00	12.09	120.85	
37	2-Chloronaphthalen	5.000	5.373	107.47	
38	2-Nitroaniline	10.00	11.53	115.26	
39	Dimethylphthalate	5.000	5.292	105.83	
40	Acenaphthylene	5.000	4.599	91.98	
41	2,6-Dinitrotoluene	10.00	11.16	111.60	

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43	3-Nitroaniline	10.00	12.86	128.64	
44	Acenaphthene	5.000	4.823	96.46	
45	2,4-Dinitrophenol	20.00	20.90	104.50	
46	Dibenzofuran	5.000	4.832	96.63	
47	4-Nitrophenol	10.00	10.45	104.51	
48	2,4-Dinitrotoluene	10.00	11.57	115.72	
49	Fluorene	5.000	4.801	96.02	
50	Diethylphthalate	5.000	5.140	102.81	
51	4-Chlorophenyl-phe	5.000	4.985	99.70	
52	4-Nitroaniline	10.00	11.78	117.84	
53	4,6-Dinitro-2-meth	20.00	21.76	108.79	
54	N-Nitrosodiphenyla	5.000	5.470	109.40	
56	4-Bromophenyl-phen	5.000	5.401	108.01	
57	Hexachlorobenzene	5.000	5.183	103.65	
58	Pentachlorophenol	10.00	11.86	118.63	
60	Phenanthrene	5.000	4.907	98.14	
61	Anthracene	5.000	4.863	97.26	
63	Di-n-butylphthalat	5.000	5.550	111.01	
64	Fluoranthene	5.000	4.949	98.97	
65	Pyrene	5.000	4.881	97.61	
67	Butylbenzylphthala	5.000	5.735	114.70	
68	Benzo(a)anthracene	5.000	4.911	98.21	
70	3,3'-Dichlorobenzi	10.00	8.305	83.05	
71	Chrysene	5.000	4.840	96.81	
72	bis(2-Ethylhexyl)p	5.000	5.340	106.80	
73	Di-n-octylphthalat	5.000	5.335	106.70	
74	Benzo(b)fluoranthe	5.000	4.598	91.96	
75	Benzo(k)fluoranthe	5.000	5.152	103.03	
76	Benzo(a)pyrene	5.000	4.818	96.36	
78	Indeno(1,2,3-cd)py	5.000	5.152	103.04	
79	Dibenzo(a,h)anthra	5.000	5.120	102.40	
80	Benzo(g,h,i)peryle	5.000	4.970	99.40	
90	N-Nitrosodimethyla	10.00	11.23	112.31	
91	Aniline	5.000	4.921	98.42	
93	Benzidine	10.00	15.02	150.16*	
105	1-methylnaphthalen	5.000	4.824	96.49	
120	2,3,4,6-Tetrachlo	5.000	0.000	*	
151	1,2,4,5-Tetrachlo	5.000	0.000	*	
110	Tetrachloroguaiac	10.00	0.000	*	
109	3,4,5-Trichlorogu	5.000	0.000	*	
181	3,4,6-Trichlorogu	5.000	0.000	*	
108	4,5,6-Trichlorogu	5.000	0.000	*	
184	3,4-Dichloroguaia	5.000	0.000	*	
107	4,5-Dichloroguaia	10.00	0.000	*	
182	4,6-Dichloroguaia	10.00	0.000	*	
185	4-Chloroguaiacol	2.500	0.000	*	
106	Guaiacol	5.000	0.000	*	

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130429
Sample Matrix: NONE Fraction: SV
Lab Smp Id: IC0429ICV
Level: Operator: VTS/YZ
Data Type: MS DATA SampleType: LCS
SpikeList File: ICVS.spk Quant Type: ISTD
Sublist File: PSDDAHDR.sub
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

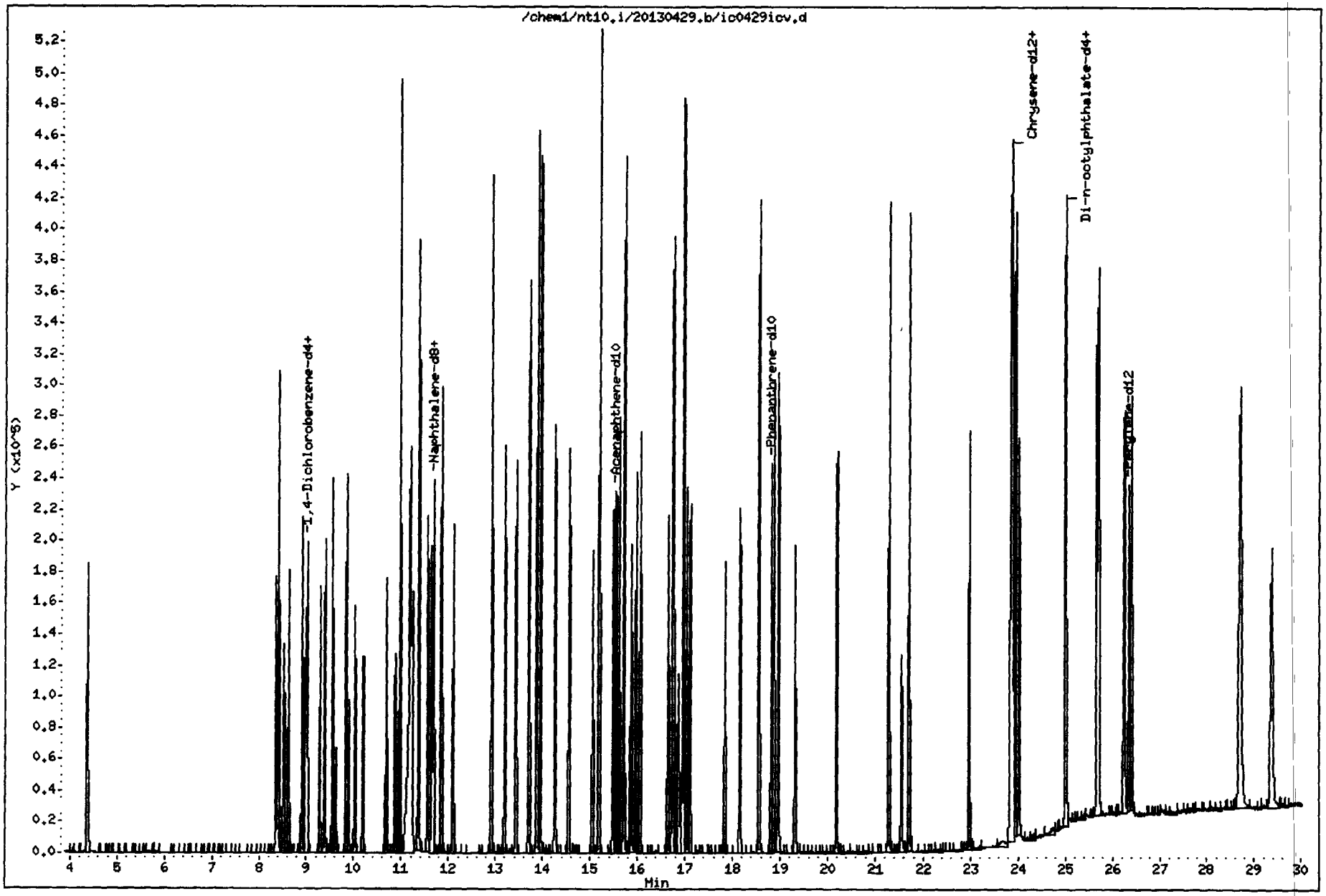
SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	7.500	0.000	*	
$ 2 Phenol-d5	7.500	0.000	*	
$ 5 2-Chlorophenol-d4	7.500	0.000	*	
$ 10 1,2-Dichlorobenze	5.000	0.000	*	
$ 18 Nitrobenzene-d5	5.000	0.000	*	
$ 36 2-Fluorobiphenyl	5.000	0.000	*	
$ 55 2,4,6-Tribromophe	7.500	0.000	*	
$ 66 Terphenyl-d14	5.000	0.000	*	

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Date : 29-APR-2013 22:24
Client ID:
Sample Info: IC0429ICV

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

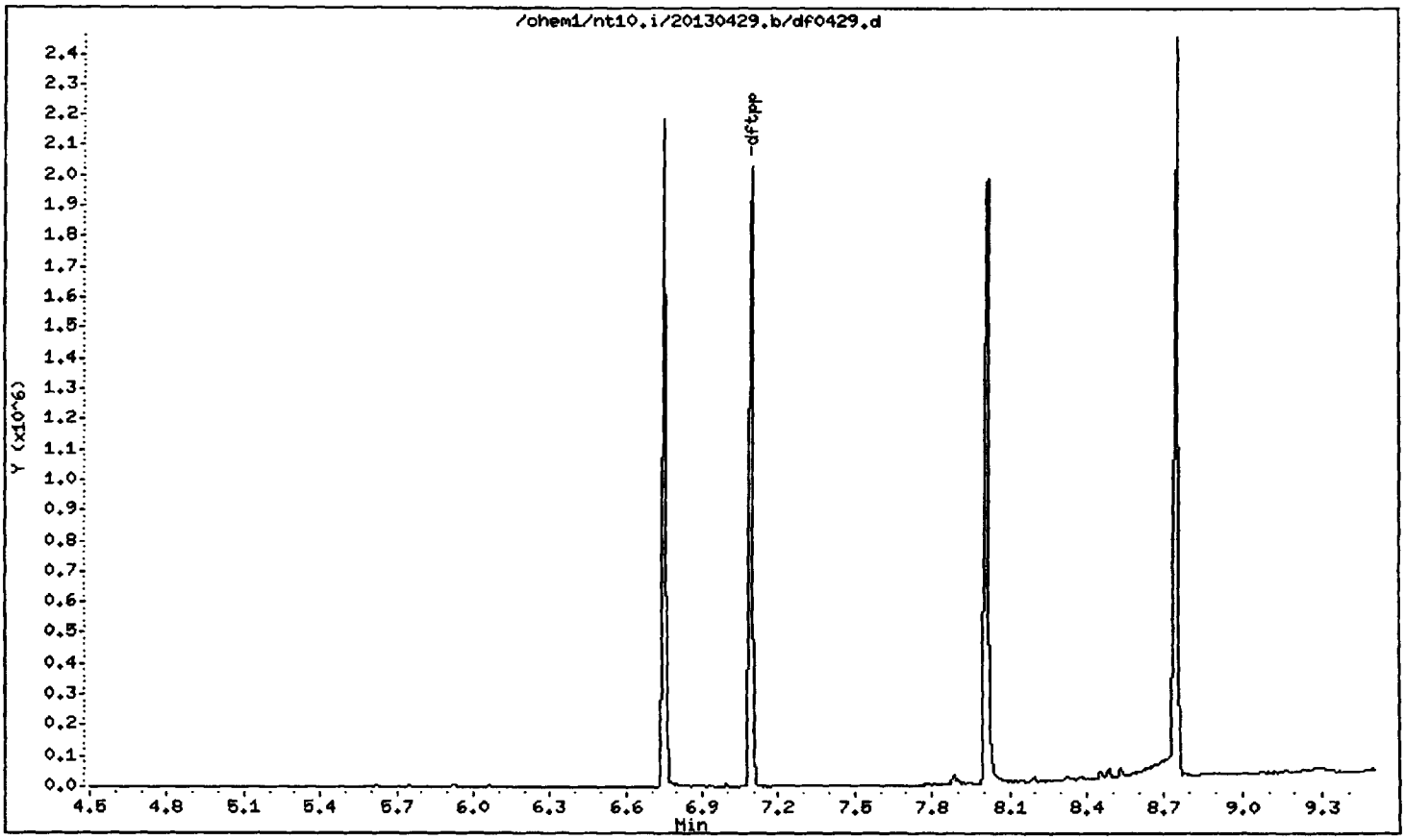
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

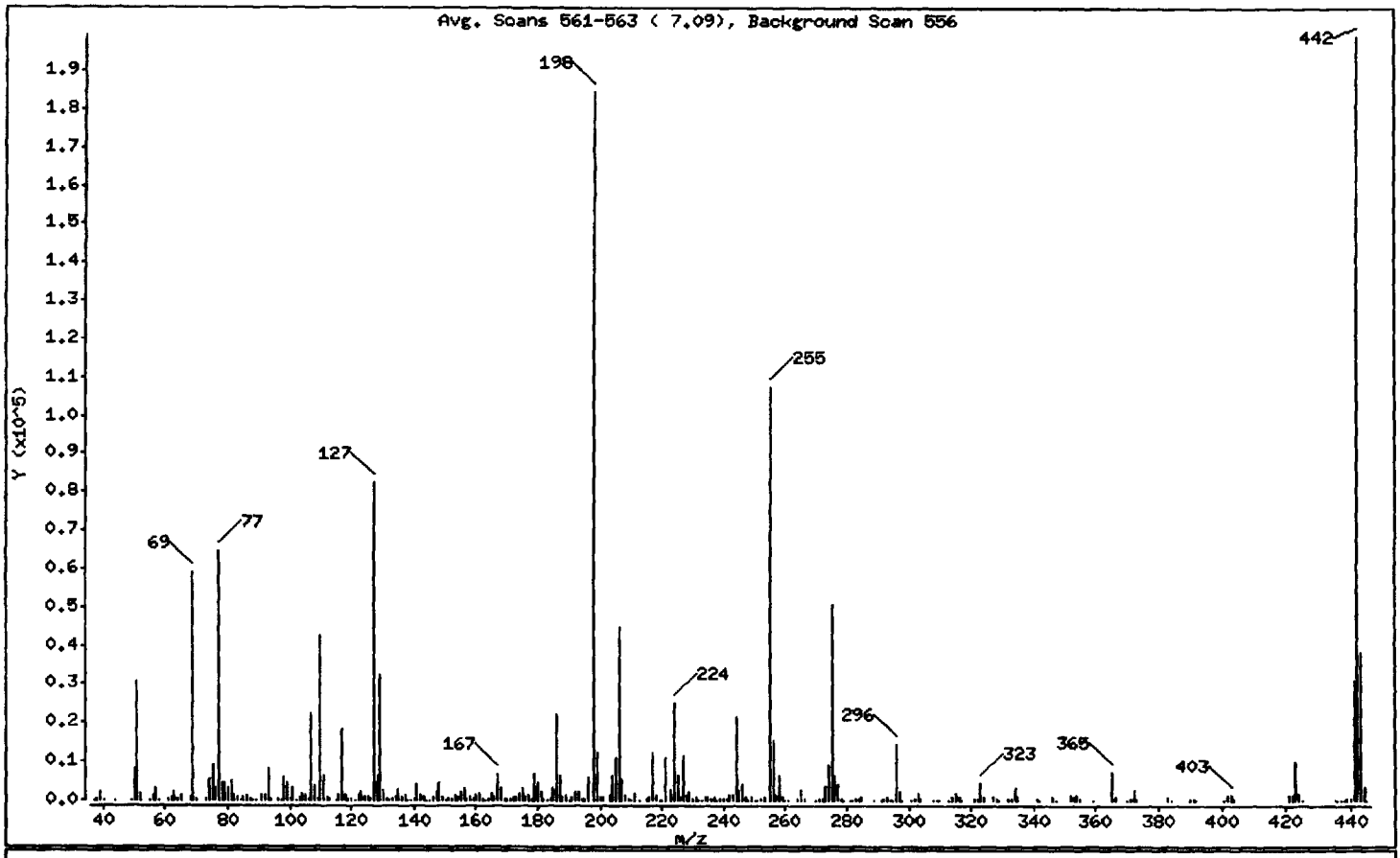
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	16.70
68	Less than 2.00% of mass 69	0.51 (1.60)
69	Mass 69 relative abundance	31.97
70	Less than 2.00% of mass 69	0.15 (0.46)
127	10.00 - 80.00% of mass 198	44.78
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	27.44
365	Greater than 1.00% of mass 198	4.00
441	0.01 - 24.00% of mass 442	16.80 (15.56)
442	50.00 - 200.00% of mass 198	107.98
443	15.00 - 24.00% of mass 442	20.84 (19.30)

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	119	128.00	6232	203.00	1259	289.00	149
38.00	415	129.00	32664	204.00	6492	291.00	55
39.00	2393	130.00	2738	205.00	11023	292.00	248
40.00	132	131.00	547	206.00	44808	293.00	944
44.00	78	132.00	207	207.00	5716	294.00	225
49.00	203	133.00	272	208.00	1602	295.00	86
50.00	8343	134.00	858	209.00	559	296.00	14604
51.00	30808	135.00	2801	210.00	130	297.00	2070
52.00	1637	136.00	916	211.00	1868	298.00	119
55.00	158	137.00	1248	213.00	64	301.00	172
56.00	1274	138.00	214	215.00	464	302.00	318
57.00	3130	139.00	128	216.00	999	303.00	1693
58.00	121	140.00	298	217.00	12350	304.00	431
61.00	576	141.00	4004	218.00	1562	308.00	140
62.00	758	142.00	1332	219.00	107	309.00	66
63.00	2110	143.00	918	220.00	86	310.00	122
64.00	365	144.00	184	221.00	10806	313.00	127
65.00	1151	145.00	229	223.00	2947	314.00	769
68.00	946	146.00	756	224.00	25312	315.00	1728
69.00	58984	147.00	2094	225.00	6355	316.00	922
70.00	271	148.00	4544	226.00	766	317.00	88
73.00	494	149.00	885	227.00	11288	321.00	436
74.00	5693	150.00	191	228.00	1533	322.00	230
75.00	9303	151.00	532	229.00	2272	323.00	4678
76.00	3182	152.00	251	230.00	340	324.00	920
77.00	64696	153.00	1367	231.00	1037	327.00	968
78.00	4399	154.00	1025	232.00	136	328.00	465
79.00	4595	155.00	2332	233.00	163	329.00	50
80.00	3355	156.00	3268	234.00	787	332.00	367
81.00	4879	157.00	652	235.00	849	333.00	490
82.00	1244	158.00	750	236.00	522	334.00	3152
83.00	1132	159.00	624	237.00	861	335.00	753
84.00	59	160.00	1324	238.00	117	341.00	568
85.00	783	161.00	1910	239.00	422	342.00	139
86.00	1346	162.00	596	240.00	404	346.00	1068

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	634	163.00	120	241.00	673	347.00	165
88.00	209	164.00	312	242.00	1491	352.00	1522
89.00	58	165.00	1684	243.00	1585	353.00	1048
91.00	1173	166.00	900	244.00	21560	354.00	1434
92.00	1265	167.00	7028	245.00	2828	355.00	307
93.00	8038	168.00	3167	246.00	4226	359.00	51
94.00	544	169.00	640	247.00	836	365.00	7383
96.00	486	170.00	289	248.00	173	366.00	950
97.00	173	171.00	367	249.00	766	370.00	83
98.00	5992	172.00	736	250.00	145	371.00	406
99.00	4376	173.00	984	251.00	198	372.00	2676
100.00	452	174.00	1650	252.00	278	373.00	680
101.00	3021	175.00	3419	253.00	722	383.00	692
102.00	131	176.00	1090	255.00	107624	384.00	117
103.00	907	177.00	1541	256.00	15761	390.00	337
104.00	1840	178.00	570	257.00	1160	391.00	291
105.00	1589	179.00	6738	258.00	6194	392.00	71
106.00	548	180.00	4416	259.00	1028	401.00	221
107.00	22656	181.00	2092	260.00	162	402.00	1163
108.00	3534	182.00	309	261.00	213	403.00	1545
109.00	609	183.00	166	264.00	253	404.00	599
110.00	42496	184.00	593	265.00	2647	421.00	1426
111.00	6272	185.00	3035	266.00	526	422.00	1250
112.00	744	186.00	22616	270.00	181	423.00	9992
113.00	246	187.00	6353	271.00	299	424.00	1966
115.00	56	188.00	695	272.00	416	425.00	183
116.00	1316	189.00	1391	273.00	3826	435.00	62
117.00	18496	190.00	224	274.00	8949	436.00	62
118.00	1424	191.00	864	275.00	50632	437.00	225
119.00	236	192.00	2063	276.00	6580	438.00	213
120.00	238	193.00	2223	277.00	4111	439.00	328
121.00	63	194.00	423	278.00	606	440.00	329
122.00	1437	195.00	416	279.00	122	441.00	31000
123.00	2280	196.00	5832	281.00	202	442.00	199232
124.00	999	198.00	184512	282.00	126	443.00	38448

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

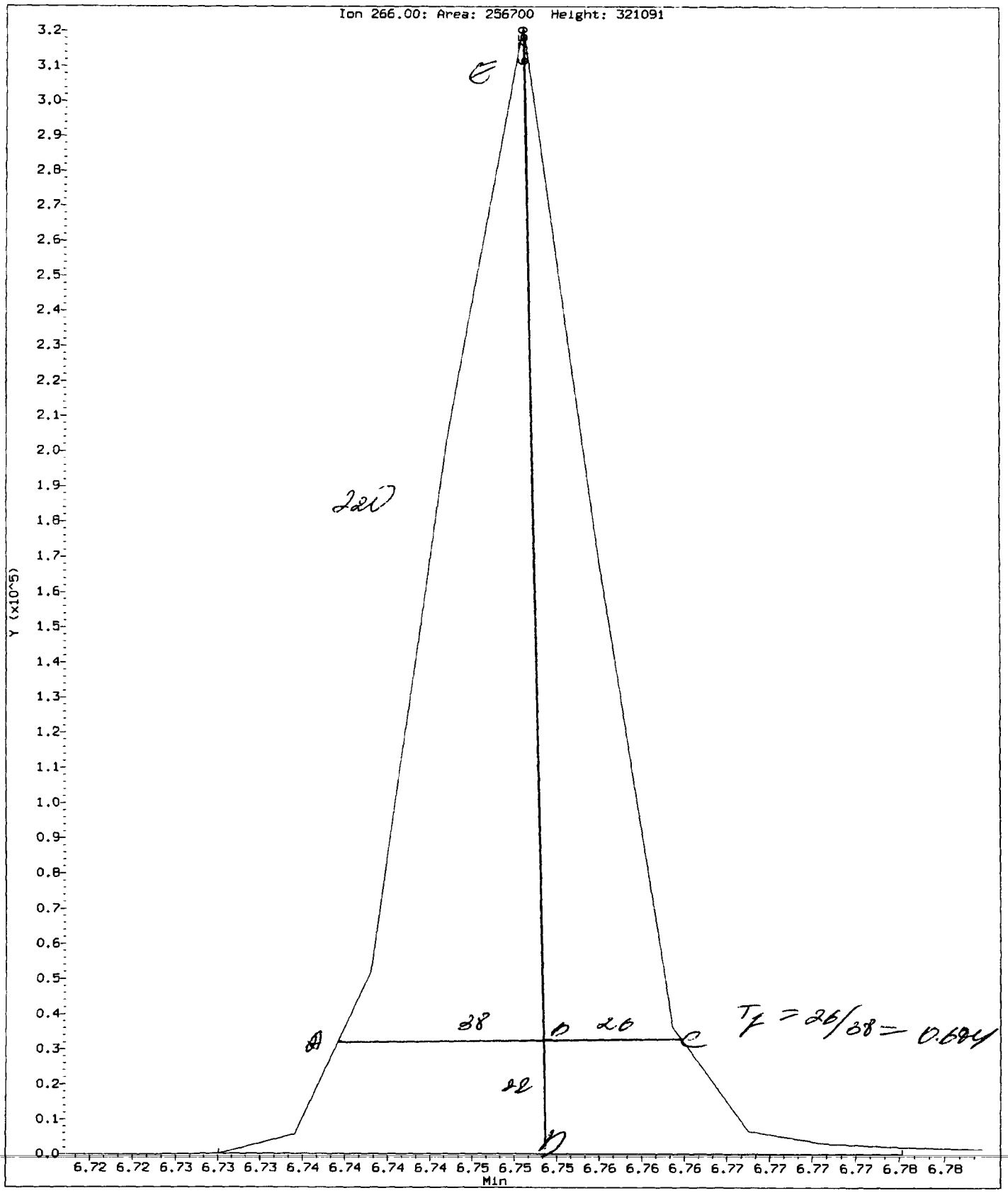
Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	975	199.00	12407	283.00	532	444.00	3455
126.00	347	200.00	963	284.00	335	445.00	131
127.00	82624	201.00	1058	285.00	774		

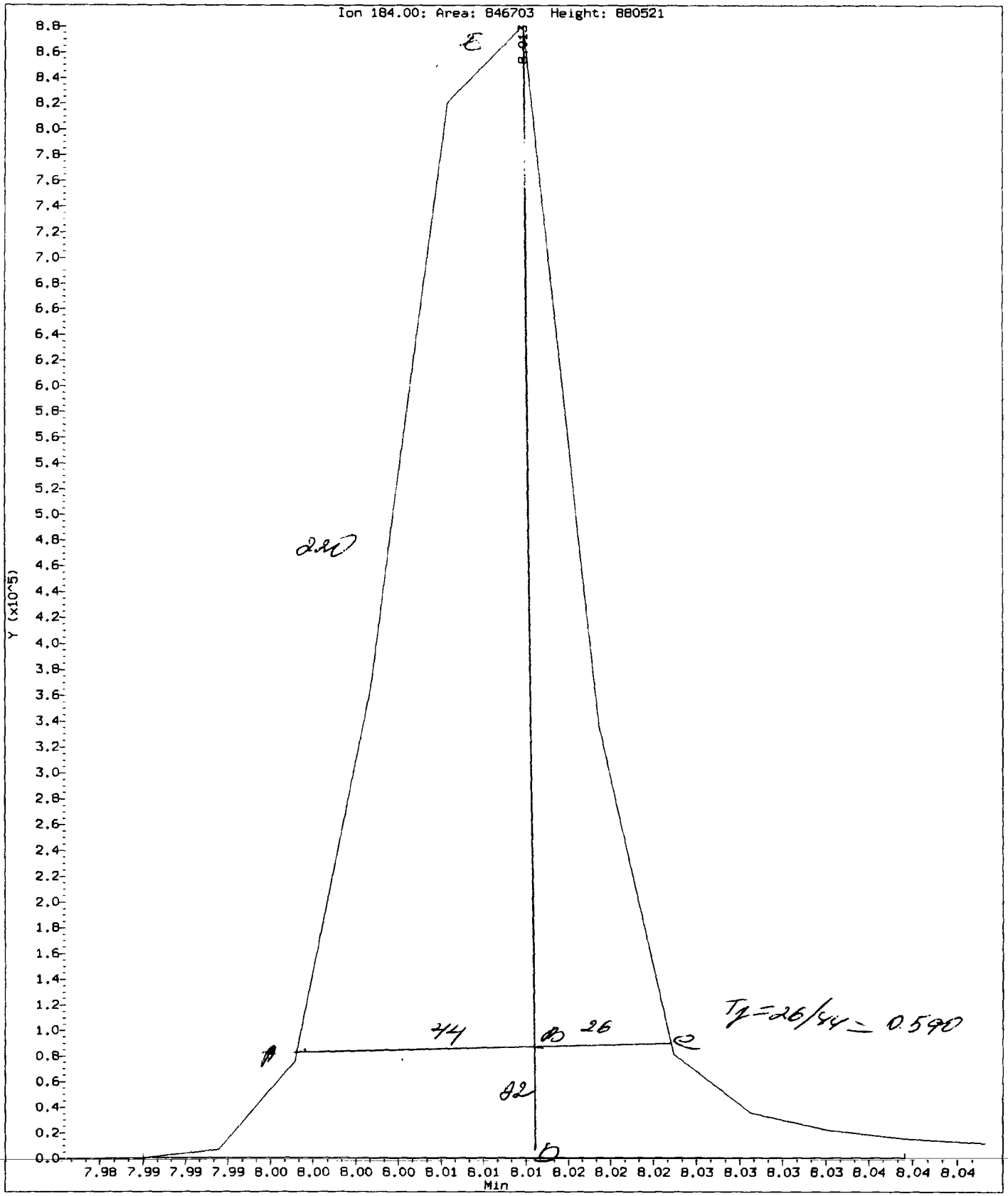
Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130429.b/ddt.b/df0429.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130429.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 29-APR-2013 16:37 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.750	256700
Benzidine	8.013	846703
4,4'-DDE	8.195	1804
4,4'-DDD	8.483	6740
4,4'-DDT	8.745	445165

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(1804 + 6740) * 100}{(1804 + 6740 + 445165)}$$

DDT Percent Breakdown = 1.9 %

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WR99, WS01

Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WR99 Client ID: SAIC

METHOD: **8270D(SIM-SVOA)** **KRONE(Butyl Tins)** **8270D(SVOA)** **8270D(OP-Pest)**

Instrument: NT-4 **NT-6** NT-8 NT-10 NT11 NT12

Curve Date: 3/6/13 Analysis Start Date: 6/8/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N / ✓	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
ICAL Q Flag applied?	NA / Y / N / ✓	LCS / LCSD RPD ≤ 30%?	NA / 40%
CCAL Q flag applied?	Y / N / ✓	MS / MSD Recovery in Control?	NA / Y / N / NA
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA / NA
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below.

Sample A + MB/LCS/LCSD

LCS/LCSD: Recoveries for compounds 4-chloroaniline & 3-nitroaniline out of QC limits on high bias with sample "A"

Forms included.

(Review 1) Analyst: _____ **Date:** 6/10/13

(Review 2) Reviewer: _____ **Date:** 6/12/13

Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 6/11/13 Analysis: 8270D Analyst: JB

GC Program: 8270W_2012 Column No: 23647-9 Column Type: 28-LMS

Instrument Tune (.U or .CT.): 17.10.19 EM Voltage: 17.53

Calibration File: 06B30 Curve Date: 3/6/13 Injection Vol.: 1 µl

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2053-1, 2054-1	
	~~2055-1~~, 2061-1	
	18031, 2027-2	
	2058-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem2/nt6.i/20130611.b

	Time	Filename	LabID	ClientId	DF													
1	1124	06111301.d	CC0611	CC0611	1	7.57	445819	9.60	1673194	12.43	977816	14.77	1708032	19.03	1820287	21.16	2093555	20.21	2066889
2	1158	06111302.d	WR99MBW1	WR99MBW1	1	7.57	280352	9.60	1010907	12.42	589498	14.76	955762	19.01	1047387	20.20	1190984	21.14	1131881
3	1232	06111303.d	WR99LCSW1	WR99LCSW1	1	7.57	314829	9.60	1140797	12.43	641115	14.77	1095892	19.02	1099808	20.20	1302204	21.15	1301594
4	1307	06111304.d	WR99LCSDW1	WR99LCSDW1	1	7.56	309830	9.60	1111878	12.43	621145	14.77	1081710	19.02	1077904	20.20	1254108	21.15	1294859
5	1341	06111305.d	WR99A	KC-VT-1593-2	1	7.56	313067	9.60	1102454	12.42	638169	14.76	1044049	19.01	1166961	20.20	1321023	21.15	1251862
6	1502	06111306.d	WR89MBTC1	WR89MBTC1	1	7.56	392345	9.59	1391581	12.43	796324	14.77	1307803	19.02	1452173	20.20	1636827	21.14	1549455
7	1536	06111307.d	WR89QLS	WR89QLS	1	7.57	388592	9.60	1385514	12.42	802432	14.76	1332399	19.01	1436937	20.20	1635336	21.14	1555616

JB 06/17/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/nt6.i/20130611.b

ARI Job No.: CC06 Method: SW846030613.m Instrument: nt6.i Date: 11-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1124	06111301.d	CC0611	CC0611	1	NO MANUAL INTEGRATION
1158	06111302.d	WR99MBW1	WR99MBW1	1	NO MANUAL INTEGRATION
1232	06111303.d	WR99LCSW1	WR99LCSW1	1	NO MANUAL INTEGRATION
1307	06111304.d	WR99LCSDW1	WR99LCSDW1	1	NO MANUAL INTEGRATION
1341	06111305.d	WR99A	KC-VT-1593	1	NO MANUAL INTEGRATION

06/12/13

ARI 2013 CC06

Q-FLAG SUMMARY FOR DATABATCH - /chem2/nt6.i/20130611.b

Instrument: nt6.i Date: 11-JUN-2013 Method: SW846030613.m

INITIAL CAL: 05-MAR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 11-JUN-2013

Compound	%D
2,2'-oxybis(1-Chloropropane)	-24.1

06/11/13

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 06111301.d
Analysis Type:
Lab Sample ID: CC0611
Method: /chem2/nt6.i/20130611.b/SW846030613.m

Injection Date: 11-JUN-2013 11:24
Init. Cal. Date(s): 05-MAR-2013 06-MAR-2013
Init. Cal. Times: 18:33 16:18
Quant Type: ISTD

DB 06/17/13

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.29593	1.15454	1.15454	0.010	-10.91030	20.00000	Averaged	
$ 2 Phenol-d5	1.51700	1.45949	1.45949	0.010	-3.79130	20.00000	Averaged	
3 Phenol	1.59733	1.54227	1.54227	0.010	-3.44701	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.28234	1.14364	1.14364	0.010	-10.81597	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.38721	1.28313	1.28313	0.010	-7.50283	20.00000	Averaged	
6 2-Chlorophenol	1.27800	1.20897	1.20897	0.010	-5.40106	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.49260	1.43677	1.43677	0.010	-3.74066	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.45271	1.40708	1.40708	0.010	-3.14071	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	0.90253	0.80811	0.80811	0.010	-10.46203	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.38875	1.28276	1.28276	0.010	-7.63181	20.00000	Averaged	
11 Benzyl alcohol	0.87019	0.76388	0.76388	0.010	-12.21709	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	2.20404	1.67219	1.67219	0.010	-24.13069	20.00000	Averaged	<-
13 2-Methylphenol	1.21121	1.09672	1.09672	0.010	-9.45207	20.00000	Averaged	
17 Hexachloroethane	0.58761	0.49509	0.49509	0.010	-15.74500	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	1.04103	0.86545	0.86545	0.005	-16.86640	20.00000	Averaged	
15 4-Methylphenol	1.19772	1.14900	1.14900	0.010	-4.06823	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.40133	0.33168	0.33168	0.010	-17.35519	20.00000	Averaged	
19 Nitrobenzene	0.38413	0.35250	0.35250	0.010	-8.23456	20.00000	Averaged	
20 Isophorone	0.66954	0.56310	0.56310	0.010	-15.89770	20.00000	Averaged	
21 2-Nitrophenol	0.17774	0.17844	0.17844	0.010	0.39253	20.00000	Averaged	
22 2,4-Dimethylphenol	0.33613	0.30677	0.30677	0.010	-8.73676	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.43930	0.39261	0.39261	0.010	-10.62736	20.00000	Averaged	
24 Benzoic acid	0.29097	0.31174	0.31174	0.010	7.13959	20.00000	Averaged	
25 2,4-Dichlorophenol	0.25883	0.26599	0.26599	0.010	2.76740	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.32219	0.30308	0.30308	0.010	-5.93074	20.00000	Averaged	
28 Naphthalene	25.08162	25.00000	0.86634	0.010	0.32649	20.00000	Quadratic	
29 4-Chloroaniline	20.66930	25.00000	0.23436	0.010	-17.32281	20.00000	Quadratic	
30 Hexachlorobutadiene	0.19606	0.19117	0.19117	0.010	-2.49421	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.27493	0.25808	0.25808	0.010	-6.12922	20.00000	Averaged	
32 2-Methylnaphthalene	0.48637	0.46796	0.46796	0.010	-3.78570	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.32133	0.26854	0.26854	0.010	-16.42664	20.00000	Averaged	
34 2,4,6-Trichlorophenol	0.33621	0.33542	0.33542	0.010	-0.23519	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.33167	0.35854	0.35854	0.010	8.10091	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.26244	1.10282	1.10282	0.010	-12.64411	20.00000	Averaged	
37 2-Chloronaphthalene	27.28982	25.00000	0.92862	0.010	9.15929	20.00000	Quadratic	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 11-JUN-2013 11:24
Lab File ID: 06111301.d Init. Cal. Date(s): 05-MAR-2013 06-MAR-2013
Analysis Type: Init. Cal. Times: 18:33 16:18
Lab Sample ID: CC0611 Quant Type: ISTD
Method: /chem2/nt6.i/20130611.b/SW846030613.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.29567	0.27505	0.27505	0.010	-6.97380	20.00000	Averaged
39 Dimethylphthalate	1.20372	1.11843	1.11843	0.010	-7.08599	20.00000	Averaged
40 Acenaphthylene	1.57756	1.50268	1.50268	0.010	-4.74681	20.00000	Averaged
41 2,6-Dinitrotoluene	0.25718	0.28438	0.28438	0.010	10.57585	20.00000	Averaged
43 3-Nitroaniline	26.19800	25.00000	0.19309	0.010	4.79199	20.00000	Quadratic
44 Acenaphthene	1.02139	0.94771	0.94771	0.010	-7.21309	20.00000	Averaged
45 2,4-Dinitrophenol	0.18369	0.20790	0.20790	0.010	13.18340	20.00000	Averaged
46 Dibenzofuran	1.33585	1.31131	1.31131	0.010	-1.83719	20.00000	Averaged
47 4-Nitrophenol	0.13065	0.13853	0.13853	0.010	6.02766	20.00000	Averaged
48 2,4-Dinitrotoluene	0.34786	0.36334	0.36334	0.010	4.44865	20.00000	Averaged
50 Diethylphthalate	1.11525	1.04301	1.04301	0.010	-6.47695	20.00000	Averaged
49 Fluorene	26.00890	25.00000	0.98426	0.010	4.03561	20.00000	Quadratic
51 4-Chlorophenyl-phenylether	0.58637	0.59396	0.59396	0.010	1.29349	20.00000	Averaged
52 4-Nitroaniline	0.19616	0.21415	0.21415	0.010	9.17051	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.14402	0.14200	0.14200	0.010	-1.39949	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.54375	0.49024	0.49024	0.010	-9.84080	20.00000	Averaged
$ 55 2,4,6-Tribromophenol	0.15815	0.17232	0.17232	0.010	8.96046	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.21950	0.20553	0.20553	0.010	-6.36677	20.00000	Averaged
57 Hexachlorobenzene	0.22630	0.21421	0.21421	0.010	-5.34147	20.00000	Averaged
58 Pentachlorophenol	0.13351	0.13644	0.13644	0.010	2.19658	20.00000	Averaged
60 Phenanthrene	0.98950	0.85817	0.85817	0.010	-13.27263	20.00000	Averaged
61 Anthracene	0.99076	0.86367	0.86367	0.010	-12.82723	20.00000	Averaged
62 Carbazole	29.24047	25.00000	0.81022	0.010	16.96187	20.00000	Quadratic
63 Di-n-butylphthalate	1.24906	1.01854	1.01854	0.010	-18.45535	20.00000	Averaged
64 Fluoranthene	1.04092	0.97367	0.97367	0.010	-6.46111	20.00000	Averaged
65 Pyrene	1.09227	0.93946	0.93946	0.010	-13.99015	20.00000	Averaged
$ 66 Terphenyl-d14	0.70203	0.58049	0.58049	0.010	-17.31253	20.00000	Averaged
67 Butylbenzylphthalate	0.53411	0.43871	0.43871	0.010	-17.86157	20.00000	Averaged
68 Benzo(a)anthracene	0.91184	0.89898	0.89898	0.010	-1.41042	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.25087	0.25159	0.25159	0.010	0.28718	20.00000	Averaged
71 Chrysene	0.93085	0.86727	0.86727	0.010	-6.82986	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.58852	0.55012	0.55012	0.010	-6.52461	20.00000	Averaged
73 Di-n-octylphthalate	0.94433	0.87461	0.87461	0.010	-7.38297	20.00000	Averaged
74 Benzo(b)fluoranthene	25.15348	25.00000	0.90531	0.010	0.61390	20.00000	Quadratic
75 Benzo(k)fluoranthene	21.73632	25.00000	0.87027	0.010	-13.05472	20.00000	Quadratic

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 11-JUN-2013 11:24
Lab File ID: 06111301.d Init. Cal. Date(s): 05-MAR-2013 06-MAR-2013
Analysis Type: Init. Cal. Times: 18:33 16:18
Lab Sample ID: CC0611 Quant Type: ISTD
Method: /chem2/nt6.i/20130611.b/SW846030613.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
187 Total Benzofluoranthenes	0.92079	0.83736	0.83736	0.010	-9.06064	20.00000	Averaged
76 Benzo(a)pyrene	0.85485	0.81066	0.81066	0.010	-5.16878	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.02877	0.94044	0.94044	0.010	-8.58646	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.81005	0.77316	0.77316	0.010	-4.55414	20.00000	Averaged
80 Benzo(g,h,i)perylene	0.87980	0.78235	0.78235	0.010	-11.07559	20.00000	Averaged
90 N-Nitrosodimethylamine	0.94183	0.78141	0.78141	0.010	-17.03313	20.00000	Averaged
103 Pyridine	1.49368	1.27678	1.27678	0.010	-14.52139	20.00000	Averaged
105 1-methylnaphthalene	0.49409	0.46679	0.46679	0.010	-5.52669	20.00000	Averaged
111 Azobenzene (1,2-DP-Hydrazin	1.26720	1.10674	1.10674	0.010	-12.66196	20.00000	Averaged
143 1,4-Dioxane	0.64887	0.52169	0.52169	0.010	-19.60030	20.00000	Averaged
$ 137 d8-1,4-Dioxane	0.60730	0.51070	0.51070	0.010	-15.90633	20.00000	Averaged
144 alpha-Terpineol	0.25433	0.22063	0.22063	0.010	-13.25225	20.00000	Averaged
99 Perylene	0.74881	0.67501	0.67501	0.010	-9.85568	20.00000	Averaged
120 2,3,4,6-Tetrachlorophenol	0.28547	0.30725	0.30725	0.010	7.62717	20.00000	Averaged
151 1,2,4,5-Tetrachlorobenzene	0.48852	0.47415	0.47415	0.010	-2.94050	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130611.b/06111301.d
Lab Smp Id: CC0611 Client Smp ID: CC0611
Inj Date : 11-JUN-2013 11:24
Operator : JZ Inst ID: nt6.i
Smp Info : CC0611
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130611.b/SW846030613.m
Meth Date : 12-Jun-2013 15:12 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALA.sub
Target Version: 3.50

06/12/13

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	5.617	5.617	(0.742)	643394	25.0000	22.27
$	2	Phenol-d5	99	7.209	7.209	(0.953)	813335	25.0000	24.05
	3	Phenol	94	7.230	7.230	(0.956)	859465	25.0000	24.14
$	5	2-Chlorophenol-d4	132	7.284	7.284	(0.963)	637321	25.0000	22.30
	4	Bis(2-Chloroethyl)ether	93	7.262	7.262	(0.960)	715053	25.0000	23.12
	6	2-Chlorophenol	128	7.305	7.305	(0.965)	673730	25.0000	23.65
	7	1,3-Dichlorobenzene	146	7.503	7.503	(0.992)	800674	25.0000	24.06
*	8	1,4-Dichlorobenzene-d4	152	7.567	7.567	(1.000)	445819	20.0000	
	9	1,4-Dichlorobenzene	146	7.593	7.593	(1.004)	784130	25.0000	24.21
$	10	1,2-Dichlorobenzene-d4	152	7.861	7.861	(1.039)	450338	25.0000	22.38
	12	1,2-Dichlorobenzene	146	7.882	7.882	(1.042)	714849	25.0000	23.09
	11	Benzyl alcohol	108	7.882	7.882	(1.042)	425690	25.0000	21.95
	14	2,2'-oxybis(1-Chloropropane)	45	8.128	8.128	(1.074)	931866	25.0000	18.97
	13	2-Methylphenol	108	8.144	8.144	(1.076)	611176	25.0000	22.64
	17	Hexachloroethane	117	8.363	8.363	(1.105)	275899	25.0000	21.06
	16	N-Nitroso-di-n-propylamine	70	8.352	8.352	(1.104)	482292	25.0000	20.78
	15	4-Methylphenol	108	8.379	8.379	(1.107)	640306	25.0000	23.98
$	18	Nitrobenzene-d5	82	8.507	8.507	(0.886)	693703	25.0000	20.66
	19	Nitrobenzene	77	8.534	8.534	(0.889)	737249	25.0000	22.94
	20	Isophorone	82	8.918	8.918	(0.929)	1177710	25.0000	21.03
	21	2-Nitrophenol	139	9.046	9.046	(0.942)	373203	25.0000	25.10
	22	2,4-Dimethylphenol	107	9.196	9.196	(0.958)	641601	25.0000	22.82
	23	Bis(2-Chloroethoxy)methane	93	9.324	9.324	(0.971)	821145	25.0000	22.34
	24	Benzoic acid	105	9.549	9.549	(0.994)	1304014	50.0000	53.57
	25	2,4-Dichlorophenol	162	9.442	9.442	(0.983)	556312	25.0000	25.69
	26	1,2,4-Trichlorobenzene	180	9.549	9.549	(0.994)	633885	25.0000	23.52
*	27	Naphthalene-d8	136	9.602	9.602	(1.000)	1673194	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	9.634	9.634	(1.003)	1811949	25.0000	25.08
	29 4-Chloroaniline	127	9.800	9.800	(1.021)	490166	25.0000	20.67
	30 Hexachlorobutadiene	225	9.955	9.955	(1.037)	399835	25.0000	24.38
	31 4-Chloro-3-methylphenol	107	10.638	10.638	(1.108)	539763	25.0000	23.47
	32 2-Methylnaphthalene	141	10.740	10.740	(1.119)	978737	25.0000	24.05
	33 Hexachlorocyclopentadiene	237	11.119	11.119	(0.895)	328233	25.0000	20.89
	34 2,4,6-Trichlorophenol	196	11.269	11.269	(0.907)	409975	25.0000	24.94
	35 2,4,5-Trichlorophenol	196	11.333	11.333	(0.912)	438229	25.0000	27.03
$	36 2-Fluorobiphenyl	172	11.392	11.392	(0.917)	1347944	25.0000	21.84
	37 2-Chloronaphthalene	162	11.509	11.509	(0.926)	1135027	25.0000	27.29
	38 2-Nitroaniline	65	11.766	11.766	(0.947)	336187	25.0000	23.26
	39 Dimethylphthalate	163	12.145	12.145	(0.977)	1367020	25.0000	23.23
	40 Acenaphthylene	152	12.177	12.177	(0.980)	1836681	25.0000	23.81
	41 2,6-Dinitrotoluene	165	12.230	12.230	(0.984)	347586	25.0000	27.64
*	42 Acenaphthene-d10	164	12.428	12.428	(1.000)	977816	20.0000	
	43 3-Nitroaniline	138	12.444	12.444	(1.001)	236005	25.0000	26.20
	44 Acenaphthene	153	12.476	12.476	(1.004)	1158362	25.0000	23.20
	45 2,4-Dinitrophenol	184	12.604	12.604	(1.014)	508229	50.0000	56.59
	46 Dibenzofuran	168	12.743	12.743	(1.025)	1602773	25.0000	24.54
	47 4-Nitrophenol	109	12.802	12.802	(1.030)	169318	25.0000	26.51
	48 2,4-Dinitrotoluene	165	12.850	12.850	(1.034)	444098	25.0000	26.11
	50 Diethylphthalate	149	13.283	13.283	(1.069)	1274845	25.0000	23.38
	49 Fluorene	166	13.288	13.288	(1.069)	1203027	25.0000	26.01
	51 4-Chlorophenyl-phenylether	204	13.326	13.326	(1.072)	725976	25.0000	25.32
	52 4-Nitroaniline	138	13.432	13.432	(1.081)	261749	25.0000	27.29
	53 4,6-Dinitro-2-methylphenol	198	13.496	13.496	(0.914)	606360	50.0000	49.30
	54 N-Nitrosodiphenylamine	169	13.539	13.539	(0.916)	1046674	25.0000	22.54
$	55 2,4,6-Tribromophenol	330	13.710	13.710	(1.103)	210617	25.0000	27.24
	56 4-Bromophenyl-phenylether	248	14.095	14.095	(0.954)	438808	25.0000	23.41
	57 Hexachlorobenzene	284	14.298	14.298	(0.968)	457351	25.0000	23.66
	58 Pentachlorophenol	266	14.613	14.613	(0.989)	291306	25.0000	25.55
*	59 Phenanthrene-d10	188	14.773	14.773	(1.000)	1708032	20.0000	
	60 Phenanthrene	178	14.805	14.805	(1.002)	1832226	25.0000	21.68
	61 Anthracene	178	14.880	14.880	(1.007)	1843978	25.0000	21.79
	62 Carbazole	167	15.174	15.174	(1.027)	1729853	25.0000	29.24
	63 Di-n-butylphthalate	149	15.906	15.906	(1.077)	2174633	25.0000	20.39
	64 Fluoranthene	202	16.712	16.712	(1.131)	2078818	25.0000	23.38
	65 Pyrene	202	17.060	17.060	(0.896)	2137611	25.0000	21.50
$	66 Terphenyl-d14	244	17.391	17.391	(0.914)	1320821	25.0000	20.67
	67 Butylbenzylphthalate	149	18.288	18.288	(0.961)	998224	25.0000	20.53
	68 Benzo(a)anthracene	228	19.004	19.004	(0.999)	2045492	25.0000	24.65
*	69 Chrysene-d12	240	19.031	19.031	(1.000)	1820287	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.031	19.031	(1.000)	572464	25.0000	25.07
	71 Chrysene	228	19.068	19.068	(1.002)	1973352	25.0000	23.29
	72 bis(2-Ethylhexyl)phthalate	149	19.282	19.282	(0.954)	1421299	25.0000	23.37
*	134 Di-n-octylphthalate-d4	153	20.212	20.212	(1.000)	2066889	20.0000	
	73 Di-n-octylphthalate	149	20.222	20.222	(1.001)	2259647	25.0000	23.15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	20.639	20.639	(0.976)	2369144	25.0000	25.15
75	Benzo(k)fluoranthene	252	20.671	20.671	(0.977)	2277455	25.0000	21.74
187	Total Benzofluoranthenes	252	20.671	20.671	(0.977)	4382632	50.0000	45.47
76	Benzo(a)pyrene	252	21.077	21.077	(0.996)	2121452	25.0000	23.71
* 77	Perylene-d12	264	21.157	21.157	(1.000)	2093555	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	22.514	22.514	(1.064)	2461075	25.0000	22.85
79	Dibenzo(a,h)anthracene	278	22.535	22.535	(1.065)	2023320	25.0000	23.86
80	Benzo(g,h,i)perylene	276	22.851	22.851	(1.080)	2047378	25.0000	22.23
90	N-Nitrosodimethylamine	74	2.759	2.759	(0.365)	435459	25.0000	20.74
103	Pyridine	79	2.716	2.716	(0.359)	711515	25.0000	21.37
105	1-methylnaphthalene	141	10.911	10.911	(1.136)	976279	25.0000	23.62
111	Azobenzene (1,2-DP-Hydrazine)	77	13.577	13.577	(1.092)	1352740	25.0000	21.83
143	1,4-Dioxane	88	2.171	2.171	(0.287)	290722	25.0000	20.10
$ 137	d8-1,4-Dioxane	96	2.134	2.134	(0.282)	284598	25.0000	21.02
144	alpha-Terpineol	59	9.682	9.682	(1.008)	461441	25.0000	21.69
99	Perylene	252	21.189	21.189	(1.002)	1766452	25.0000	22.54
120	2,3,4,6-Tetrachlorophenol	232	13.037	13.037	(1.049)	375539	25.0000	26.91
151	1,2,4,5-Tetrachlorobenzene	216	11.076	11.076	(0.891)	579544	25.0000	24.26

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06111301.d
Lab Smp Id: CC0611
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130611.b/SW846030613.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 11:24
Client Smp ID: CC0611
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	445819	-2.68
27 Naphthalene-d8	1718341	859170	3436682	1673194	-2.63
42 Acenaphthene-d10	1010041	505020	2020082	977816	-3.19
59 Phenanthrene-d10	1666734	833367	3333468	1708032	2.48
69 Chrysene-d12	1675752	837876	3351504	1820287	8.63
134 Di-n-octylphthala	2026355	1013178	4052710	2066889	2.00
77 Perylene-d12	1637524	818762	3275048	2093555	27.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.57	7.07	8.07	7.57	0.00
27 Naphthalene-d8	9.60	9.10	10.10	9.60	0.00
42 Acenaphthene-d10	12.43	11.93	12.93	12.43	0.00
59 Phenanthrene-d10	14.77	14.27	15.27	14.77	0.00
69 Chrysene-d12	19.03	18.53	19.53	19.03	0.00
134 Di-n-octylphthala	20.21	19.71	20.71	20.21	0.00
77 Perylene-d12	21.16	20.66	21.66	21.16	0.00

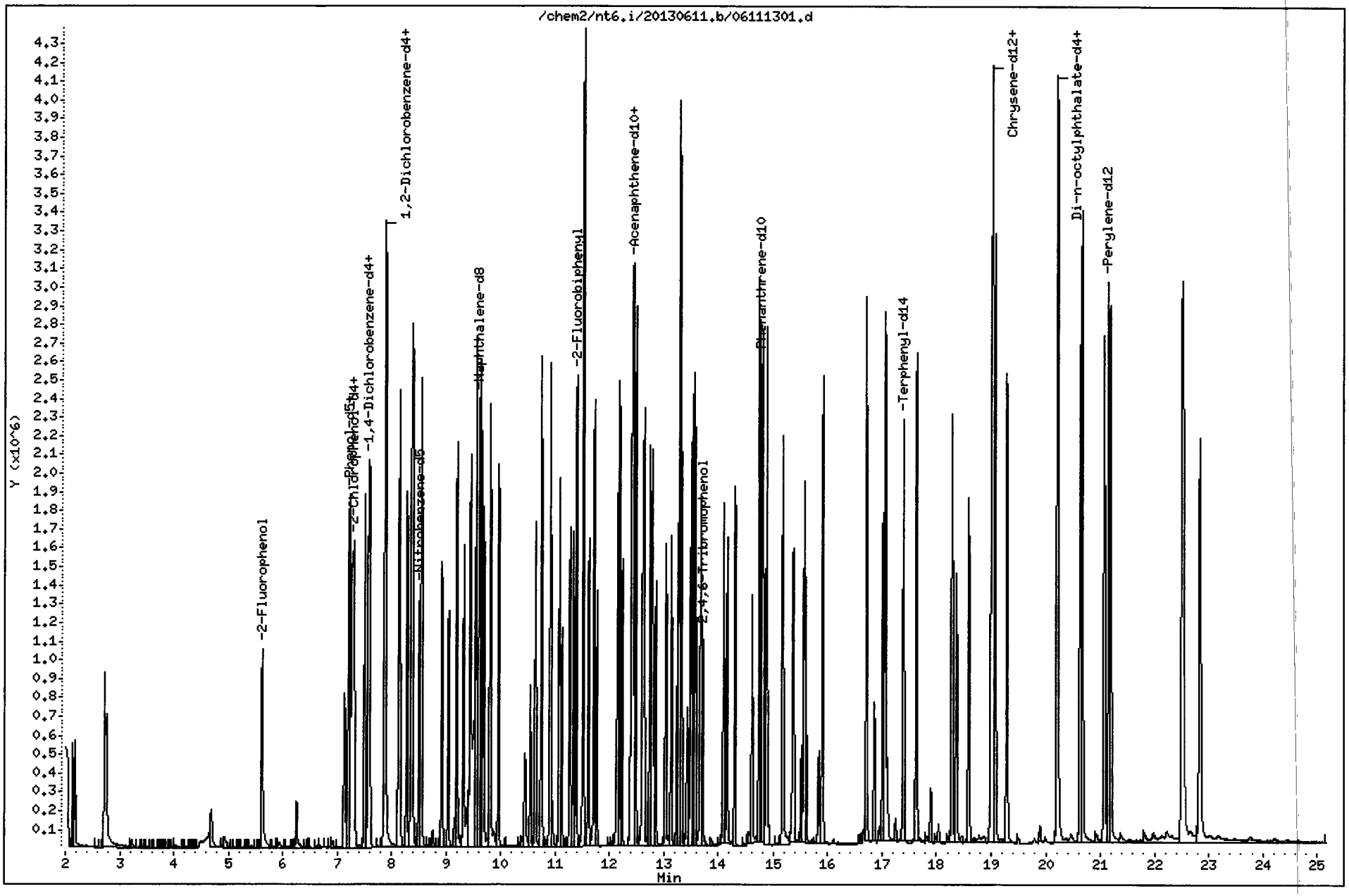
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130611.b/06111301.d
Date : 11-JUN-2013 11:24
Client ID: CC0611
Sample Info: CC0611

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 06111301.d

Lab ID: CC0611, Method: SW846030613.m, Instrument: nt6.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS
7.882	1,2-Dichlorobenzene and Benzyl alcohol

checked OK.

OK 06/17/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06111301.d
Lab Smp Id: CC0611
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130611.b/SW846030613.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 11:24
Client Smp ID: CC0611
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	445819	-2.68
27 Naphthalene-d8	1718341	859170	3436682	1673194	-2.63
42 Acenaphthene-d10	1010041	505020	2020082	977816	-3.19
59 Phenanthrene-d10	1666734	833367	3333468	1708032	2.48
69 Chrysene-d12	1675752	837876	3351504	1820287	8.63
134 Di-n-octylphthala	2026355	1013178	4052710	2066889	2.00
77 Perylene-d12	1637524	818762	3275048	2093555	27.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.57	7.07	8.07	7.57	0.00
27 Naphthalene-d8	9.60	9.10	10.10	9.60	0.00
42 Acenaphthene-d10	12.43	11.93	12.93	12.43	0.00
59 Phenanthrene-d10	14.77	14.27	15.27	14.77	0.00
69 Chrysene-d12	19.03	18.53	19.53	19.03	0.00
134 Di-n-octylphthala	20.21	19.71	20.71	20.21	0.00
77 Perylene-d12	21.16	20.66	21.66	21.16	0.00

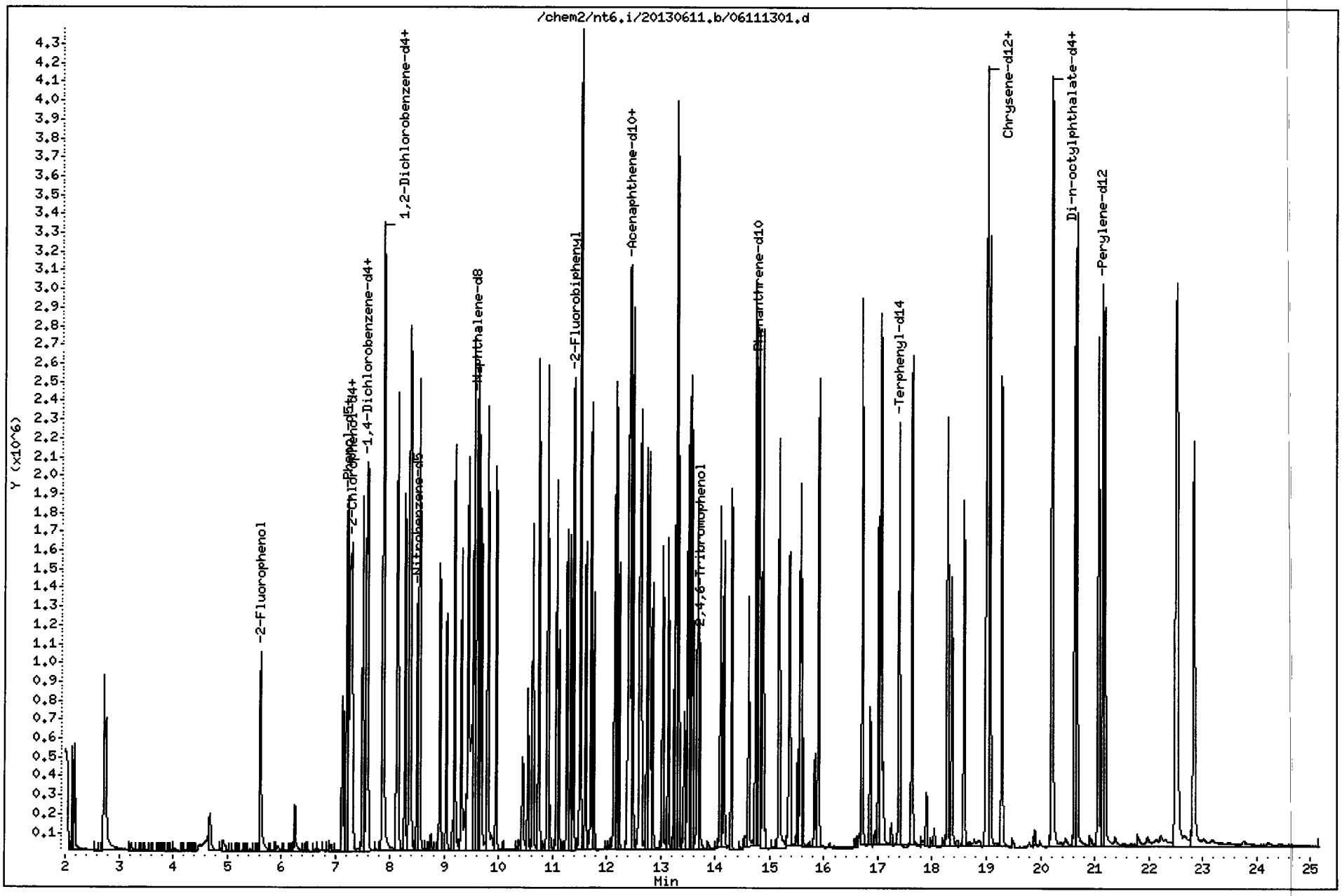
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130611.b/06111301.d
Date : 11-JUN-2013 11:24
Client ID: CC0611
Sample Info: CC0611

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 06111301.d

Lab ID: CC0611, Method: SW846030613.m, Instrument: nt6.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS
7.882	1,2-Dichlorobenzene and Benzyl alcohol

checked ok

06/11/13

Data File: /chem2/nt6.i/20130611.b/tune.b/06111301.d

Date : 11-JUN-2013 11:24

Client ID: DFTPP0611

Instrument: nt6.i

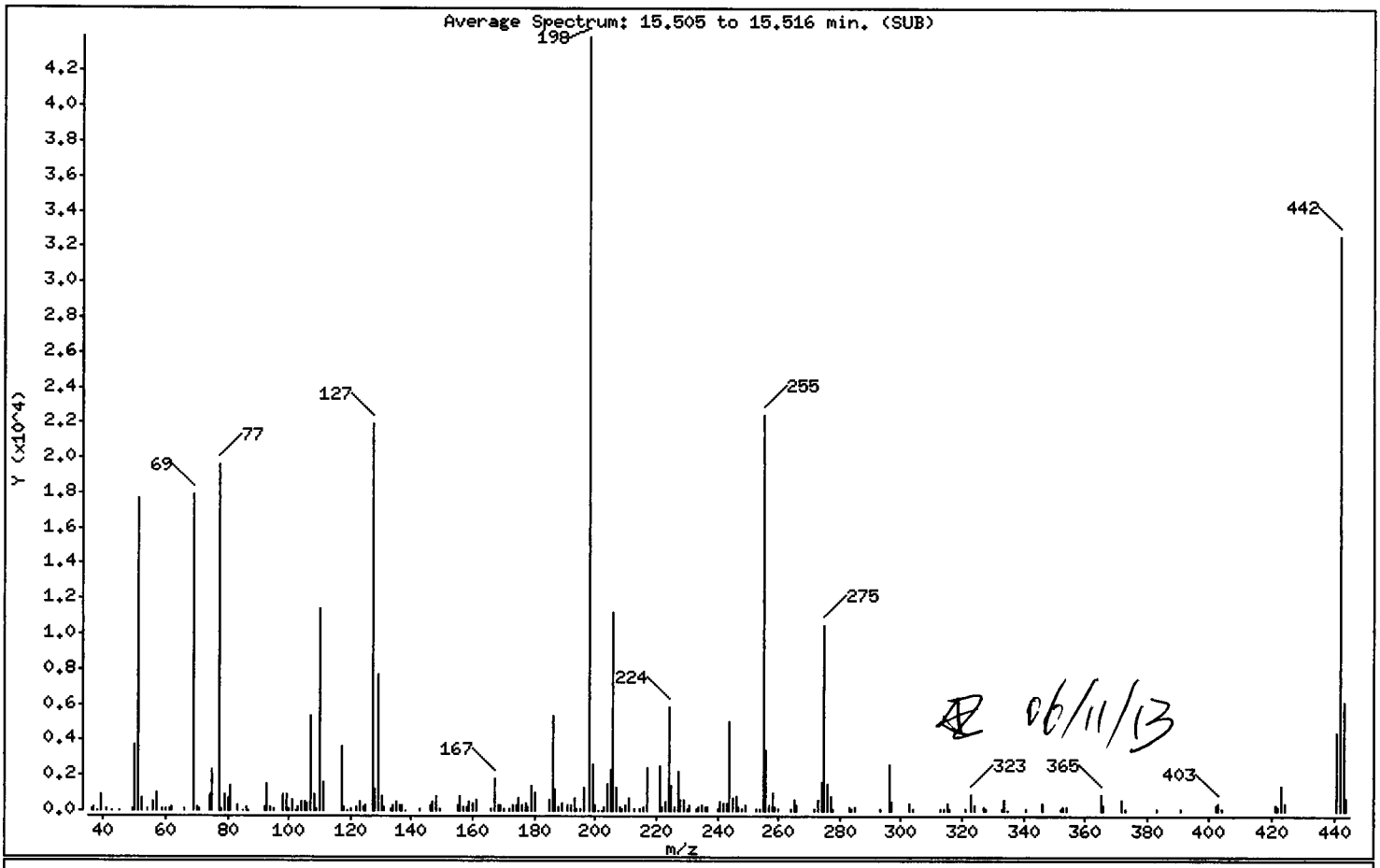
Sample Info: DFTPP0611

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.25
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	40.70
70	Less than 2.00% of mass 69	0.37 (0.91)
127	10.00 - 80.00% of mass 198	49.90
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.00
275	10.00 - 60.00% of mass 198	23.81
365	Greater than 1.00% of mass 198	2.10
441	0.01 - 24.00% of mass 442	10.18 (13.71)
442	50.00 - 200.00% of mass 198	74.27
443	15.00 - 24.00% of mass 442	13.92 (18.74)

Data File: /chem2/nt6.i/20130611.b/tune.b/06111301.d

Date : 11-JUN-2013 11:24

Client ID: DFTPP0611 Instrument: nt6.i

Sample Info: DFTPP0611

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 06111301.d
Spectrum: Average Spectrum: 15.505 to 15.516 min. (SUB)
Location of Maximum: 198.00
Number of points: 211

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	86	119.00	32	196.00	1299	264.00	64
37.00	153	120.00	117	198.00	43968	265.00	644
38.00	7	122.00	220	199.00	2638	266.00	286
39.00	959	123.00	489	200.00	336	272.00	108
41.00	62	124.00	198	201.00	15	273.00	592
43.00	35	125.00	291	202.00	26	274.00	1615
45.00	14	127.00	21936	203.00	185	275.00	10472
49.00	84	128.00	1252	204.00	1518	276.00	1487
50.00	3759	129.00	7676	205.00	2313	277.00	832
51.00	17696	130.00	816	206.00	11223	278.00	56
52.00	665	131.00	192	207.00	1354	283.00	154
54.00	68	133.00	141	208.00	209	284.00	54
56.00	464	134.00	274	209.00	118	285.00	187
57.00	967	135.00	551	210.00	265	293.00	126
59.00	144	136.00	293	211.00	693	296.00	2601
60.00	60	137.00	273	213.00	56	297.00	477
61.00	79	138.00	27	215.00	93	303.00	439
62.00	153	143.00	85	216.00	239	304.00	58
66.00	77	146.00	290	217.00	2445	313.00	64
69.00	17896	147.00	497	221.00	2495	314.00	131
70.00	162	148.00	847	222.00	171	315.00	408
71.00	94	149.00	86	223.00	466	316.00	68
74.00	959	155.00	265	224.00	5886	321.00	79
75.00	2285	156.00	833	225.00	1385	323.00	878
77.00	19576	157.00	226	226.00	250	324.00	306
78.00	111	158.00	212	227.00	2196	327.00	246
79.00	908	159.00	486	228.00	563	328.00	145
80.00	728	160.00	355	229.00	580	333.00	57
81.00	1377	161.00	562	230.00	112	334.00	608
83.00	271	166.00	120	231.00	265	335.00	45
85.00	2	167.00	1864	233.00	56	341.00	80
86.00	161	168.00	300	234.00	237	346.00	369
87.00	34	169.00	311	235.00	254	352.00	125
92.00	217	170.00	140	236.00	164	353.00	214
93.00	1472	172.00	121	237.00	161	354.00	213

Data File: /chem2/nt6.i/20130611.b/tune.b/06111301.d

Date : 11-JUN-2013 11:24

Client ID: DFTPP0611

Instrument: nt6.i

Sample Info: DFTPP0611

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 06111301.d

Spectrum: Average Spectrum: 15.505 to 15.516 min. (SUB)

Location of Maximum: 198.00

Number of points: 211

m/z	Y	m/z	Y	m/z	Y	m/z	Y
94.00	158	173.00	324	240.00	87	365.00	922
95.00	136	174.00	341	241.00	464	366.00	292
98.00	895	175.00	663	242.00	369	372.00	649
99.00	893	176.00	338	243.00	379	373.00	147
100.00	73	177.00	408	244.00	5049	383.00	140
101.00	556	178.00	178	245.00	742	391.00	56
102.00	2	179.00	1402	246.00	811	402.00	262
103.00	179	180.00	975	247.00	252	403.00	360
104.00	459	185.00	638	248.00	56	404.00	64
105.00	533	186.00	5318	249.00	291	421.00	298
106.00	366	187.00	1178	253.00	52	422.00	162
107.00	5315	188.00	240	254.00	73	423.00	1444
108.00	925	189.00	367	255.00	22416	424.00	391
109.00	87	191.00	288	256.00	3391	441.00	4476
110.00	11396	192.00	273	257.00	268	442.00	32656
111.00	1592	193.00	718	258.00	1039	443.00	6120
117.00	3644	194.00	51	259.00	160	444.00	663
118.00	220	195.00	138	260.00	55		

Data File: /chem2/nt6.i/20130611.b/tune.b/06111301.d

Date : 11-JUN-2013 11:24

Client ID: DFTPP0611

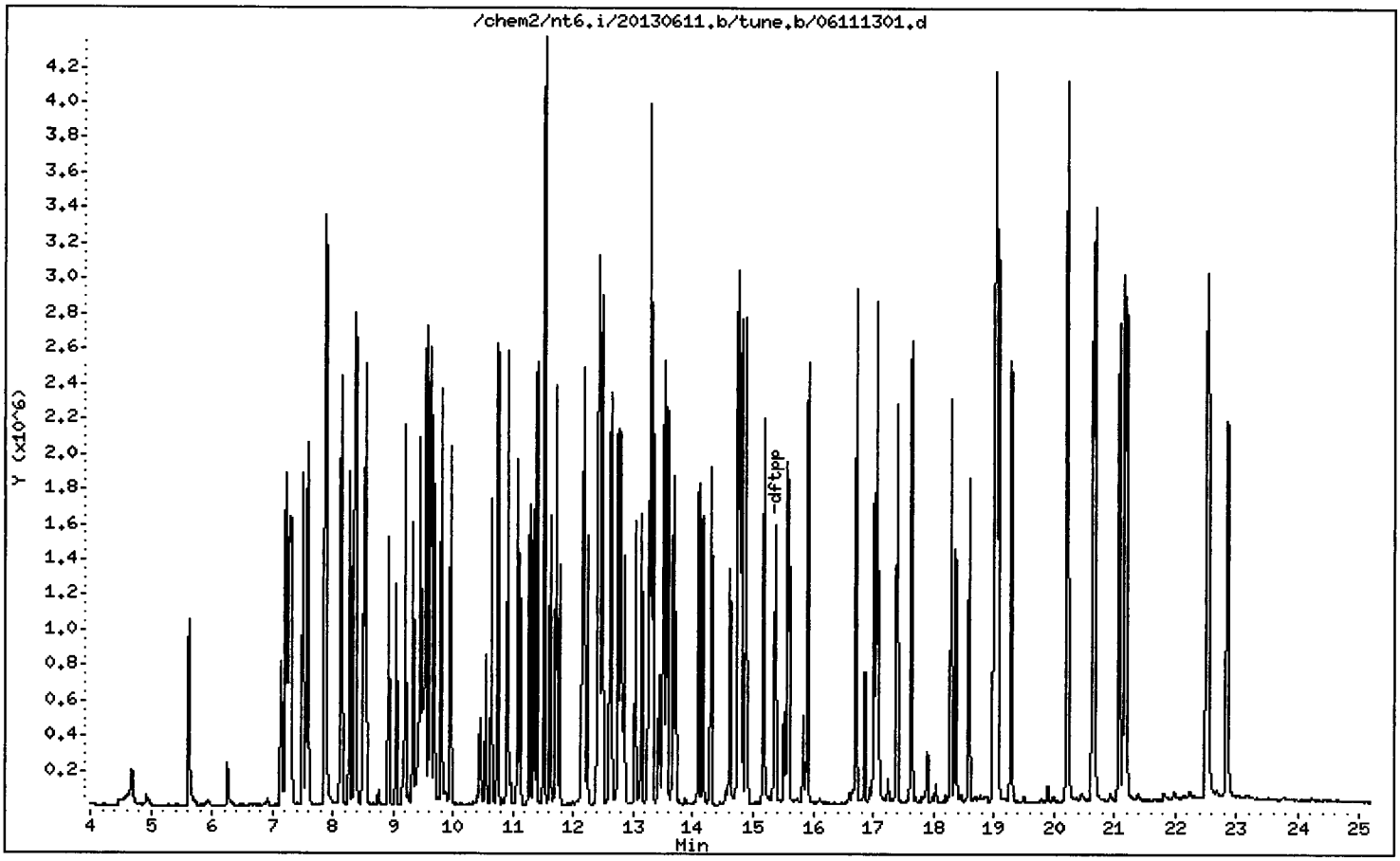
Instrument: nt6.i

Sample Info: DFTPP0611

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem2/nt6.i/20130611.b/ddt.b/06111301.d ARI ID: DDT0611
Method: /chem2/nt6.i/20130611.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 11-JUN-2013 11:24 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	14.613	289235
Benzidine	16.990	116325
4,4'-DDE	----	----
4,4'-DDD	17.898	95948
4,4'-DDT	18.363	531709

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

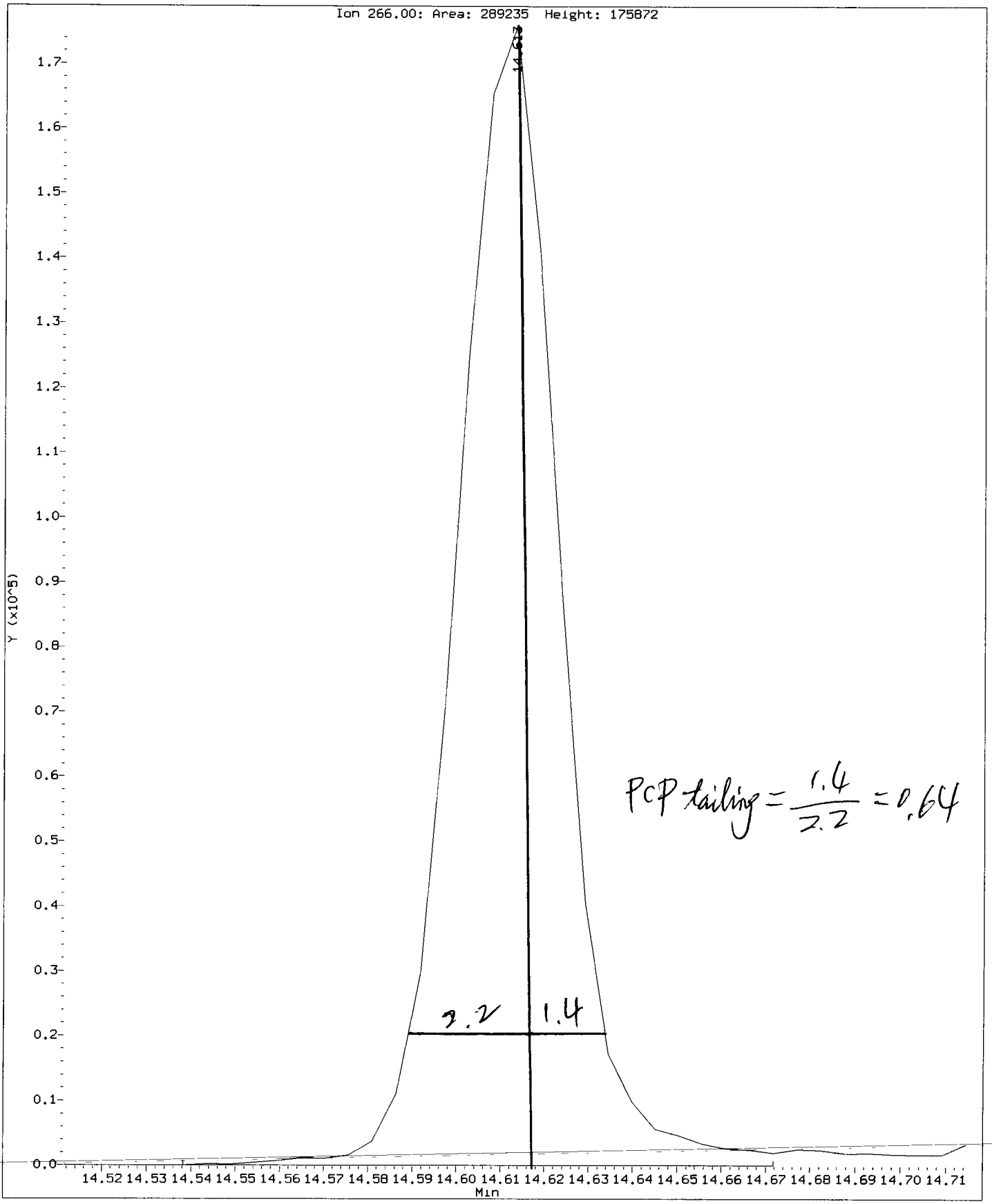
$$\text{DDT Percent Breakdown} = \frac{(\ 0 + 95948) * 100}{(\ 0 + 95948 + 531709)}$$

DDT Percent Breakdown = 15.3 %

06/11/13

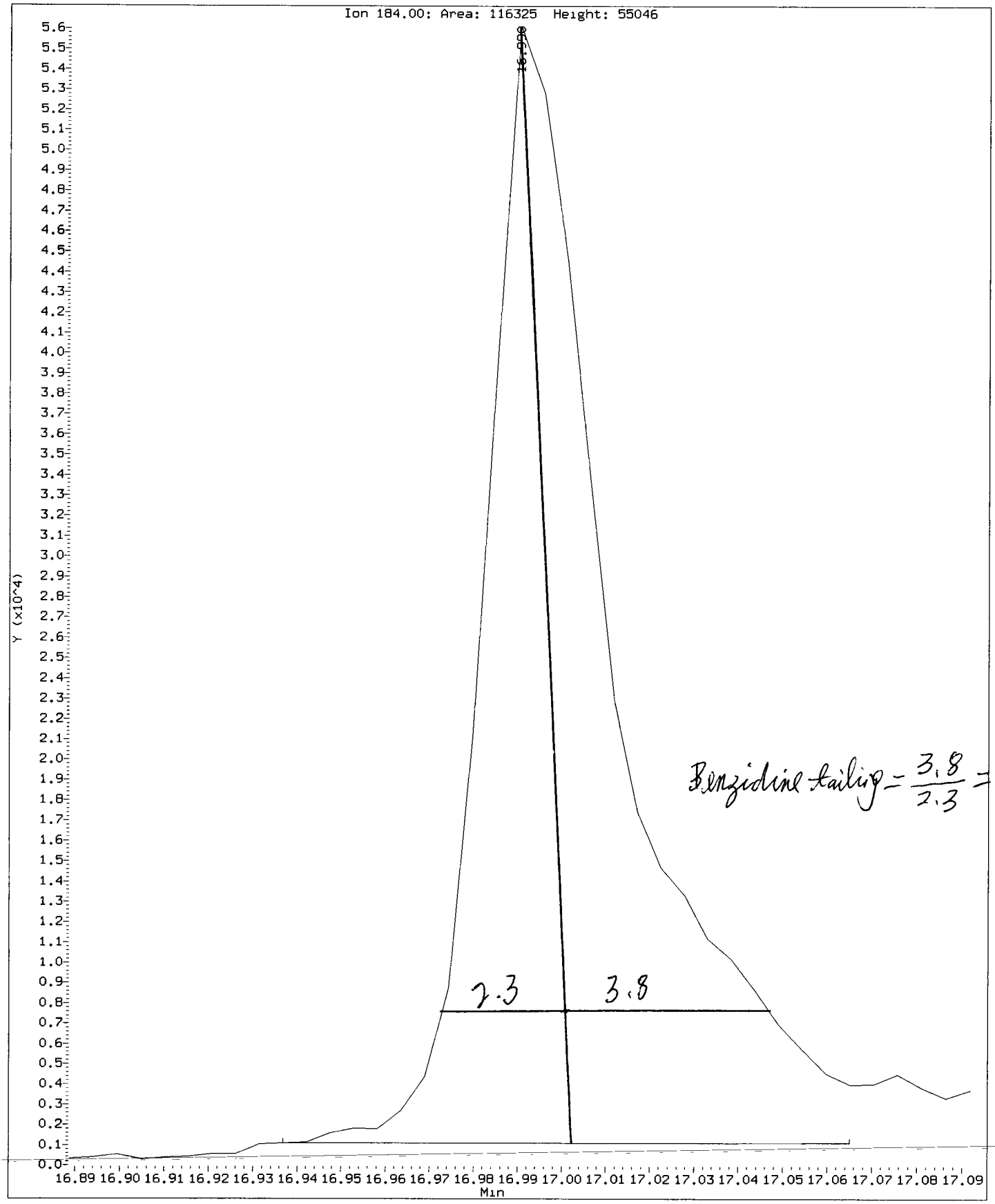
Data File: /chem2/nt6.i/20130611.b/ddt.b/06111301.d
Injection Date: 11-JUN-2013 11:24
Instrument: nt6.i
Client Sample ID: DDT0611

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.i/20130611.b/ddt.b/06111301.d
Injection Date: 11-JUN-2013 11:24
Instrument: nt6.i
Client Sample ID: DDT0611

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130611.b/06111302.d
Lab Smp Id: WR99MBW1 Client Smp ID: WR99MBW1
Inj Date : 11-JUN-2013 11:58
Operator : JZ Inst ID: nt6.i
Smp Info : WR99MBW1,
Misc Info : 13-11541
Comment : 1ul Injection
Method : /chem2/nt6.i/20130611.b/SW846030613.m
Meth Date : 12-Jun-2013 15:12 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

06/17/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$	1 2-Fluorophenol	112	5.615	5.617	(0.742)	340378	18.7373	18.74
$	2 Phenol-d5	99	7.202	7.209	(0.952)	305810	14.3811	14.38
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.277	7.284	(0.962)	527230	29.3308	29.33
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.565	7.567	(1.000)	280352	20.0000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	7.859	7.861	(1.039)	195424	15.4469	15.45
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.500	8.507	(0.886)	376369	18.5537	18.55
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	9.595	9.602	(1.000)	1010907	20.0000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	141	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	11.385	11.392	(0.917)	666226	17.9043	17.90
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	12.421	12.428	(1.000)	589498	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	13.703	13.710	(1.103)	164684	35.3298	35.33
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	14.761	14.773	(1.000)	955762	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	17.389	17.391	(0.915)	626977	17.0538	17.05
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.013	19.031	(1.000)	1047387	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134 Di-n-octylphthalate-d4	153	20.205	20.212	(1.000)	1190984	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	21.140	21.157	(1.000)	1131881	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06111302.d
Lab Smp Id: WR99MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130611.b/SW846030613.m
Misc Info: 13-11541

Calibration Date: 11-JUN-2013
Calibration Time: 11:24
Client Smp ID: WR99MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	280352	-38.80
27 Naphthalene-d8	1718341	859170	3436682	1010907	-41.17
42 Acenaphthene-d10	1010041	505020	2020082	589498	-41.64
59 Phenanthrene-d10	1666734	833367	3333468	955762	-42.66
69 Chrysene-d12	1675752	837876	3351504	1047387	-37.50
134 Di-n-octylphthala	2026355	1013178	4052710	1190984	-41.23
77 Perylene-d12	1637524	818762	3275048	1131881	-30.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.57	7.07	8.07	7.57	-0.02
27 Naphthalene-d8	9.60	9.10	10.10	9.60	-0.07
42 Acenaphthene-d10	12.43	11.93	12.93	12.42	-0.06
59 Phenanthrene-d10	14.77	14.27	15.27	14.76	-0.08
69 Chrysene-d12	19.03	18.53	19.53	19.01	-0.09
134 Di-n-octylphthala	20.21	19.71	20.71	20.20	-0.03
77 Perylene-d12	21.16	20.66	21.66	21.14	-0.08

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

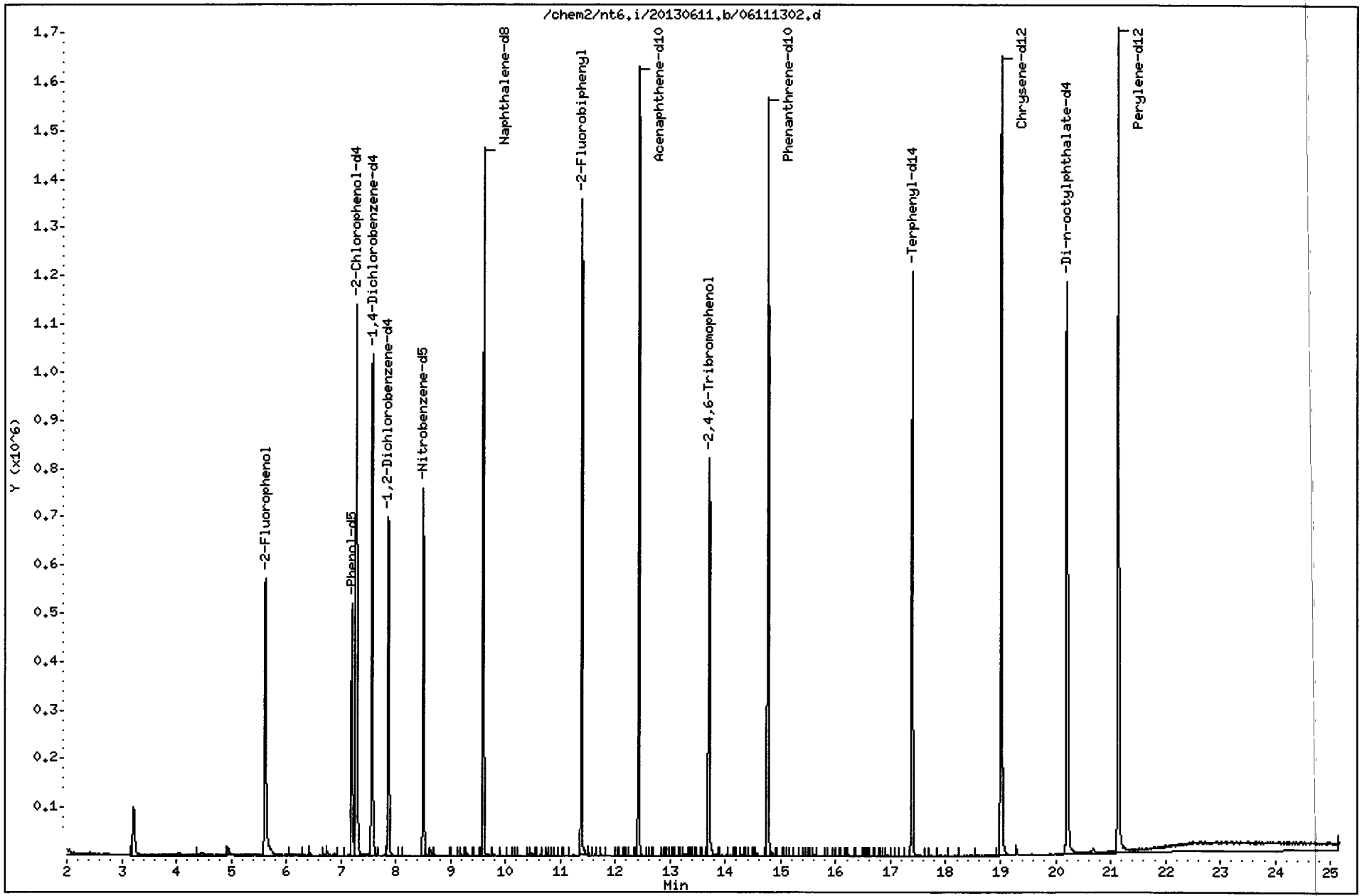
RECOVERY REPORT

Client Name: SAIC
Client SDG: WR99
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WR99MBW1
Client Smp ID: WR99MBW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130611.b/SW846030613.m
Misc Info: 13-11541

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	18.74	49.97	31-100
$ 2 Phenol-d5	37.50	14.38	38.35	19-100
$ 5 2-Chlorophenol-d4	37.50	29.33	78.22	49-101
$ 10 1,2-Dichlorobenzen	25.00	15.45	61.79	40-100
$ 18 Nitrobenzene-d5	25.00	18.55	74.21	46-101
$ 36 2-Fluorobiphenyl	25.00	17.90	71.62	49-103
$ 55 2,4,6-Tribromophen	37.50	35.33	94.21	51-122
$ 66 Terphenyl-d14	25.00	17.05	68.22	57-118

Data File: /chem2/nt6.i/20130611.b/06111302.d
Date : 11-JUN-2013 11:58
Client ID: WR99MBW1
Sample Info: WR99MBW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06111302.d

Lab ID: WR99MBW1, Method: SW846030613.m, Instrument: nt6.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130611.b/06111303.d
Lab Smp Id: WR99LCSW1 Client Smp ID: WR99LCSW1
Inj Date : 11-JUN-2013 12:32
Operator : JZ Inst ID: nt6.i
Smp Info : WR99LCSW1,
Misc Info : 13-11541
Comment : 1ul Injection
Method : /chem2/nt6.i/20130611.b/SW846030613.m
Meth Date : 12-Jun-2013 15:12 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

06/12/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	5.616	5.617	(0.742)	378958	18.5766	18.58
$ 2	Phenol-d5	99	7.202	7.209	(0.952)	339055	14.1984	14.20
3	Phenol	94	7.218	7.230	(0.954)	256650	10.2071	10.21
$ 5	2-Chlorophenol-d4	132	7.282	7.284	(0.963)	553998	27.4449	27.44
4	Bis(2-Chloroethyl)ether	93	7.261	7.262	(0.960)	391722	17.9388	17.94
6	2-Chlorophenol	128	7.304	7.305	(0.965)	396605	19.7144	19.71
7	1,3-Dichlorobenzene	146	7.501	7.503	(0.992)	369538	15.7279	15.73
* 8	1,4-Dichlorobenzene-d4	152	7.565	7.567	(1.000)	314829	20.0000	
9	1,4-Dichlorobenzene	146	7.592	7.593	(1.004)	378636	16.5577	16.56
$ 10	1,2-Dichlorobenzene-d4	152	7.865	7.861	(1.040)	239145	16.8327	16.83
12	1,2-Dichlorobenzene	146	7.886	7.882	(1.042)	351666	16.0865	16.09
11	Benzyl alcohol	108	7.875	7.882	(1.041)	240513	17.5582	17.56
14	2,2'-oxybis(1-Chloropropane)	45	8.126	8.128	(1.074)	505173	14.5605	14.56
13	2-Methylphenol	108	8.137	8.144	(1.076)	327386	17.1710	17.17
17	Hexachloroethane	117	8.367	8.363	(1.106)	129651	14.0167	14.02
16	N-Nitroso-di-n-propylamine	70	8.345	8.352	(1.103)	269365	16.4374	16.44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	8.377	8.379	(1.107)	647660	34.3515	34.35
$	18 Nitrobenzene-d5	82	8.500	8.507	(0.885)	413337	18.0561	18.06
	19 Nitrobenzene	77	8.527	8.534	(0.888)	412239	18.8145	18.81
	20 Isophorone	82	8.917	8.918	(0.929)	734711	19.2382	19.24
	21 2-Nitrophenol	139	9.045	9.046	(0.942)	222737	21.9698	21.97
	22 2,4-Dimethylphenol	107	9.195	9.196	(0.958)	853872	44.5350	44.54
	23 Bis(2-Chloroethoxy)methane	93	9.323	9.324	(0.971)	463540	18.4991	18.50
	24 Benzoic acid	105	9.499	9.549	(0.989)	765105	46.0995	46.10
	25 2,4-Dichlorophenol	162	9.441	9.442	(0.983)	984225	66.6667	66.67
	26 1,2,4-Trichlorobenzene	180	9.547	9.549	(0.994)	315815	17.1849	17.18
*	27 Naphthalene-d8	136	9.601	9.602	(1.000)	1140797	20.0000	
	28 Naphthalene	128	9.628	9.634	(1.003)	1028016	19.7627	19.76
	29 4-Chloroaniline	127	9.798	9.800	(1.021)	1274695	140.648	140.6(R)
	30 Hexachlorobutadiene	225	9.953	9.955	(1.037)	179355	16.0377	16.04
	31 4-Chloro-3-methylphenol	107	10.632	10.638	(1.107)	1012307	64.5532	64.55
	32 2-Methylnaphthalene	141	10.739	10.740	(1.119)	581833	20.9725	20.97
	33 Hexachlorocyclopentadiene	237	11.118	11.119	(0.895)	398742	38.7114	38.71
	34 2,4,6-Trichlorophenol	196	11.268	11.269	(0.907)	767431	71.2067	71.21
	35 2,4,5-Trichlorophenol	196	11.332	11.333	(0.912)	802089	75.4418	75.44
$	36 2-Fluorobiphenyl	172	11.390	11.392	(0.917)	838281	20.7143	20.71
	37 2-Chloronaphthalene	162	11.508	11.509	(0.926)	687270	25.0514	25.05
	38 2-Nitroaniline	65	11.770	11.766	(0.947)	669073	70.5925	70.59
	39 Dimethylphthalate	163	12.144	12.145	(0.977)	843089	21.8495	21.85
	40 Acenaphthylene	152	12.176	12.177	(0.980)	1164901	23.0354	23.04
	41 2,6-Dinitrotoluene	165	12.229	12.230	(0.984)	591668	71.7689	71.77
*	42 Acenaphthene-d10	164	12.427	12.428	(1.000)	641115	20.0000	
	43 3-Nitroaniline	138	12.443	12.444	(1.001)	602585	177.966	178.0(R)
	44 Acenaphthene	153	12.475	12.476	(1.004)	715570	21.8552	21.86
	45 2,4-Dinitrophenol	184	12.603	12.604	(1.014)	684288	116.213	116.2
	46 Dibenzofuran	168	12.737	12.743	(1.025)	1057139	24.6870	24.69
	47 4-Nitrophenol	109	12.790	12.802	(1.029)	136071	32.4894	32.49
	48 2,4-Dinitrotoluene	165	12.849	12.850	(1.034)	783114	70.2279	70.23
	50 Diethylphthalate	149	13.287	13.283	(1.069)	816557	22.8407	22.84
	49 Fluorene	166	13.287	13.288	(1.069)	786568	25.9285	25.93
	51 4-Chlorophenyl-phenylether	204	13.319	13.326	(1.072)	430731	22.9154	22.92
	52 4-Nitroaniline	138	13.436	13.432	(1.081)	624340	99.2892	99.29
	53 4,6-Dinitro-2-methylphenol	198	13.501	13.496	(0.914)	922027	116.840	116.8
	54 N-Nitrosodiphenylamine	169	13.533	13.539	(0.916)	605740	20.3307	20.33
$	55 2,4,6-Tribromophenol	330	13.709	13.710	(1.103)	204803	40.3992	40.40
	56 4-Bromophenyl-phenylether	248	14.088	14.095	(0.954)	259671	21.5897	21.59
	57 Hexachlorobenzene	284	14.297	14.298	(0.968)	255690	20.6202	20.62
	58 Pentachlorophenol	266	14.606	14.613	(0.989)	548504	74.9782	74.98
*	59 Phenanthrene-d10	188	14.767	14.773	(1.000)	1095892	20.0000	
	60 Phenanthrene	178	14.804	14.805	(1.003)	1210117	22.3189	22.32
	61 Anthracene	178	14.874	14.880	(1.007)	1171042	21.5708	21.57
	62 Carbazole	167	15.167	15.174	(1.027)	1061688	27.9896	27.99
	63 Di-n-butylphthalate	149	15.899	15.906	(1.077)	1377327	20.1240	20.12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	64 Fluoranthene	202	16.706	16.712	(1.131)	1374250	24.0940	24.09
	65 Pyrene	202	17.053	17.060	(0.897)	1425763	23.7372	23.74
$	66 Terphenyl-d14	244	17.390	17.391	(0.914)	864267	22.3876	22.39
	67 Butylbenzylphthalate	149	18.282	18.288	(0.961)	602352	20.5084	20.51
	68 Benzo(a)anthracene	228	18.992	19.004	(0.999)	1309439	26.1145	26.11
*	69 Chrysene-d12	240	19.019	19.031	(1.000)	1099808	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.030	19.031	(1.001)	1034200	74.9660	74.97
	71 Chrysene	228	19.056	19.068	(1.002)	1244597	24.3144	24.31
	72 bis(2-Ethylhexyl)phthalate	149	19.281	19.282	(0.954)	832283	21.7201	21.72
*	134 Di-n-octylphthalate-d4	153	20.205	20.212	(1.000)	1302204	20.0000	
	73 Di-n-octylphthalate	149	20.216	20.222	(1.001)	1393596	22.6655	22.67
	74 Benzo(b)fluoranthene	252	20.627	20.639	(0.975)	1372964	23.3265	23.33
	75 Benzo(k)fluoranthene	252	20.664	20.671	(0.977)	1541959	23.9500	23.95
	76 Benzo(a)pyrene	252	21.065	21.077	(0.996)	1284671	23.0919	23.09
*	77 Perylene-d12	264	21.145	21.157	(1.000)	1301594	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	22.497	22.514	(1.064)	1447192	21.6153	21.62
	79 Dibenzo(a,h)anthracene	278	22.523	22.535	(1.065)	1155874	21.9256	21.93
	80 Benzo(g,h,i)perylene	276	22.833	22.851	(1.080)	1152235	20.1239	20.12
	90 N-Nitrosodimethylamine	74	2.752	2.759	(0.364)	435253	29.3578	29.36
	91 Aniline	93	7.138	7.181	(0.944)	1454379	52.2035	52.20
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	2.709	2.716	(0.358)	735875	31.2969	31.30
	105 1-methylnaphthalene	141	10.910	10.911	(1.136)	590669	20.9584	20.96
	111 Azobenzene (1,2-DP-Hydrazine)	77	13.575	13.577	(1.092)	826751	20.3528	20.35
	120 2,3,4,6-Tetrachlorophenol	232	13.030	13.037	(1.049)	246372	26.9227	26.92
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	20.664	20.671	(0.977)	2737477	45.6821	45.68

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06111303.d
Lab Smp Id: WR99LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130611.b/SW846030613.m
Misc Info: 13-11541

Calibration Date: 11-JUN-2013
Calibration Time: 11:24
Client Smp ID: WR99LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	314829	-31.28
27 Naphthalene-d8	1718341	859170	3436682	1140797	-33.61
42 Acenaphthene-d10	1010041	505020	2020082	641115	-36.53
59 Phenanthrene-d10	1666734	833367	3333468	1095892	-34.25
69 Chrysene-d12	1675752	837876	3351504	1099808	-34.37
134 Di-n-octylphthala	2026355	1013178	4052710	1302204	-35.74
77 Perylene-d12	1637524	818762	3275048	1301594	-20.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.57	7.07	8.07	7.57	-0.02
27 Naphthalene-d8	9.60	9.10	10.10	9.60	-0.01
42 Acenaphthene-d10	12.43	11.93	12.93	12.43	-0.01
59 Phenanthrene-d10	14.77	14.27	15.27	14.77	-0.04
69 Chrysene-d12	19.03	18.53	19.53	19.02	-0.06
134 Di-n-octylphthala	20.21	19.71	20.71	20.20	-0.03
77 Perylene-d12	21.16	20.66	21.66	21.15	-0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WR99LCSW1
Level: LOW
Data Type: MS DATA
SpikeList File: SEPAtclpLCS.spk
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130611.b/SW846030613.m
Misc Info: 13-11541

Client SDG: WR99
Fraction: SV
Client Smp ID: WR99LCSW1
Operator: JZ
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3	Phenol	25.00	10.21	40.83	16-100
4	Bis(2-Chloroethyl)	25.00	17.94	71.76	41-112
6	2-Chlorophenol	25.00	19.71	78.86	43-111
7	1,3-Dichlorobenzen	25.00	15.73	62.91	32-100
9	1,4-Dichlorobenzen	25.00	16.56	66.23	32-100
11	Benzyl alcohol	25.00	17.56	70.23	22-100
12	1,2-Dichlorobenzen	25.00	16.09	64.35	34-100
13	2-Methylphenol	25.00	17.17	68.68	36-110
14	2,2'-oxybis(1-Chlo	25.00	14.56	58.24	29-118
15	4-Methylphenol	50.00	34.35	68.70	38-104
16	N-Nitroso-di-n-pro	25.00	16.44	65.75	38-115
17	Hexachloroethane	25.00	14.02	56.07	24-100
19	Nitrobenzene	25.00	18.81	75.26	45-106
20	Isophorone	25.00	19.24	76.95	55-119
21	2-Nitrophenol	25.00	21.97	87.88	46-118
22	2,4-Dimethylphenol	75.00	44.54	59.38	28-105
23	Bis(2-Chloroethoxy	25.00	18.50	74.00	44-118
24	Benzoic acid	137.5	46.10	33.53	11-100
25	2,4-Dichlorophenol	75.00	66.67	88.89	43-121
26	1,2,4-Trichloroben	25.00	17.18	68.74	35-100
28	Naphthalene	25.00	19.76	79.05	36-111
29	4-Chloroaniline	75.00	140.6	187.53*	10-153
30	Hexachlorobutadien	25.00	16.04	64.15	24-100
31	4-Chloro-3-methylp	75.00	64.55	86.07	45-122
32	2-Methylnaphthalen	25.00	20.97	83.89	45-103
33	Hexachlorocyclopen	75.00	38.71	51.62	23-108
34	2,4,6-Trichlorophe	75.00	71.21	94.94	48-122
35	2,4,5-Trichlorophe	75.00	75.44	100.59	48-122
37	2-Chloronaphthalen	25.00	25.05	100.21	39-118
38	2-Nitroaniline	75.00	70.59	94.12	48-118
39	Dimethylphthalate	25.00	21.85	87.40	50-120
40	Acenaphthylene	25.00	23.04	92.14	50-119
41	2,6-Dinitrotoluene	75.00	71.77	95.69	48-133

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	178.0	237.29*	10-208
44 Acenaphthene	25.00	21.86	87.42	41-120
45 2,4-Dinitrophenol	137.5	116.2	84.52	10-224
46 Dibenzofuran	25.00	24.69	98.75	51-114
47 4-Nitrophenol	75.00	32.49	43.32	10-103
48 2,4-Dinitrotoluene	75.00	70.23	93.64	51-134
49 Fluorene	25.00	25.93	103.71	50-120
50 Diethylphthalate	25.00	22.84	91.36	48-122
51 4-Chlorophenyl-phe	25.00	22.92	91.66	50-118
52 4-Nitroaniline	75.00	99.29	132.39	42-136
53 4,6-Dinitro-2-meth	125.0	116.8	93.47	10-190
54 N-Nitrosodiphenyla	25.00	20.33	81.32	58-141
56 4-Bromophenyl-phen	25.00	21.59	86.36	50-122
57 Hexachlorobenzene	25.00	20.62	82.48	47-125
58 Pentachlorophenol	75.00	74.98	99.97	35-130
60 Phenanthrene	25.00	22.32	89.28	49-120
61 Anthracene	25.00	21.57	86.28	53-116
62 Carbazole	25.00	27.99	111.96	57-122
63 Di-n-butylphthalat	25.00	20.12	80.50	57-121
64 Fluoranthene	25.00	24.09	96.38	56-119
65 Pyrene	25.00	23.74	94.95	37-143
67 Butylbenzylphthala	25.00	20.51	82.03	34-152
68 Benzo(a)anthracene	25.00	26.11	104.46	49-129
70 3,3'-Dichlorobenzi	75.00	74.97	99.95	50-128
71 Chrysene	25.00	24.31	97.26	45-128
72 bis(2-Ethylhexyl)p	25.00	21.72	86.88	57-133
73 Di-n-octylphthalat	25.00	22.67	90.66	52-120
74 Benzo(b)fluoranthe	25.00	23.33	93.31	50-126
75 Benzo(k)fluoranthe	25.00	23.95	95.80	49-126
76 Benzo(a)pyrene	25.00	23.09	92.37	46-109
78 Indeno(1,2,3-cd)py	25.00	21.62	86.46	34-136
79 Dibenzo(a,h)anthra	25.00	21.93	87.70	41-134
80 Benzo(g,h,i)peryle	25.00	20.12	80.50	41-133
91 Aniline	75.00	52.20	69.60	28-126
111 Azobenzene (1,2-DP	25.00	20.35	81.41	55-119
105 1-methylnaphthalen	25.00	20.96	83.83	43-115
90 N-Nitrosodimethyla	50.00	29.36	58.72	31-100
103 Pyridine	50.00	31.30	62.59	25-100
120 2,3,4,6-Tetrachlor	25.00	26.92	107.69	30-160
151 1,2,4,5-Tetrachlo	25.00	0.000	*	30-160
187 Total Benzofluoran	50.00	45.68	91.36	30-160

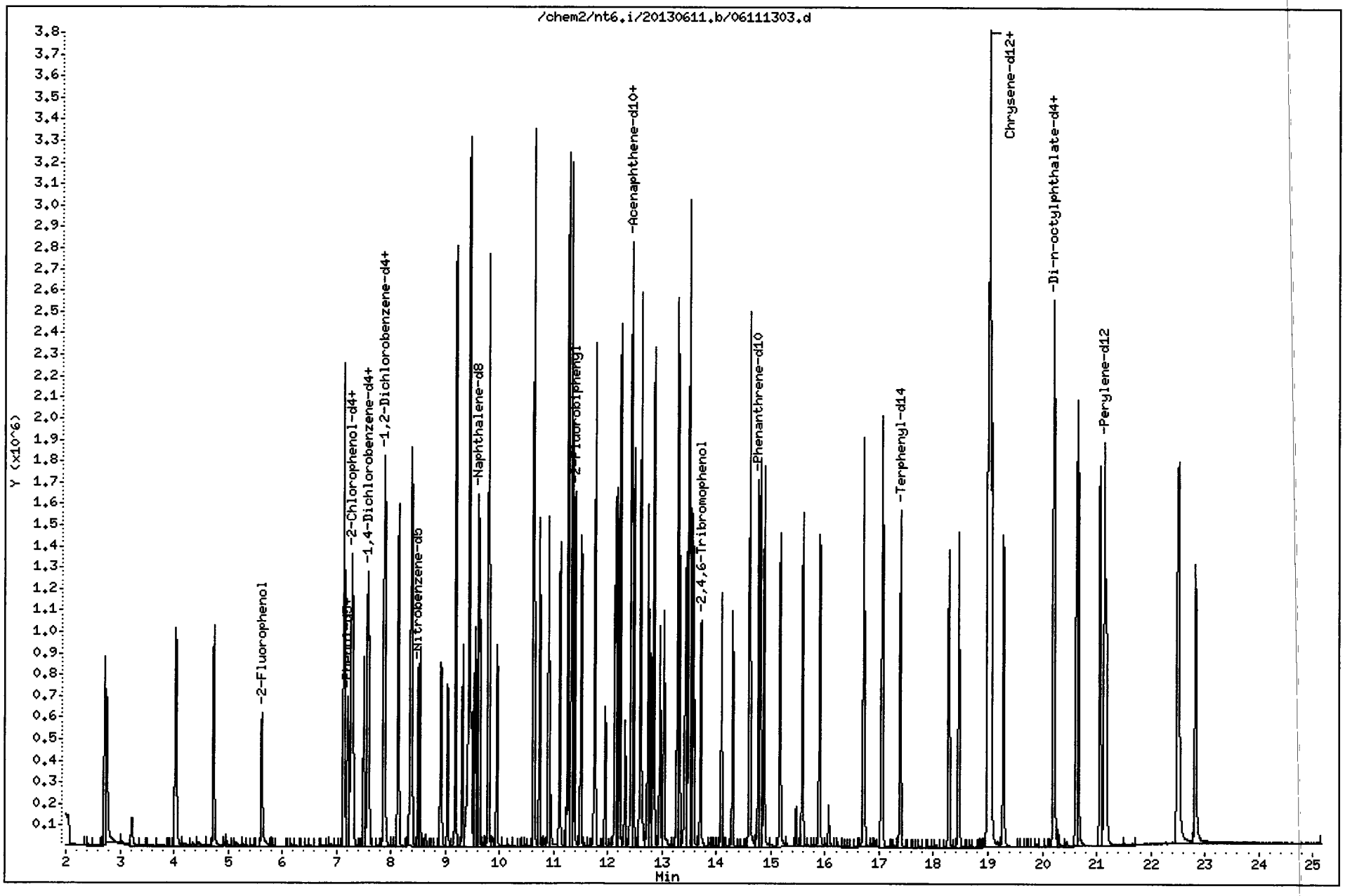
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	18.58	49.54	31-100

6/17/13

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	14.20	37.86	19-100
$ 5 2-Chlorophenol-d4	37.50	27.44	73.19	49-101
$ 10 1,2-Dichlorobenzen	25.00	16.83	67.33	40-100
$ 18 Nitrobenzene-d5	25.00	18.06	72.22	46-101
$ 36 2-Fluorobiphenyl	25.00	20.71	82.86	49-103
$ 55 2,4,6-Tribromophen	37.50	40.40	107.73	51-122
$ 66 Terphenyl-d14	25.00	22.39	89.55	57-118

Data File: /chem2/nt6.i/20130611.b/06111303.d
Date : 11-JUN-2013 12:32
Client ID: WR99LCSW1
Sample Info: WR99LCSW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06111303.d

Lab ID: WR99LCSW1, Method: SW846030613.m, Instrument: nt6.i, Date: 11-JUN-201

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130611.b/06111304.d
Lab Smp Id: WR99LCSDW1 Client Smp ID: WR99LCSDW1
Inj Date : 11-JUN-2013 13:07
Operator : JZ Inst ID: nt6.i
Smp Info : WR99LCSDW1,
Misc Info : 13-11541
Comment : 1ul Injection
Method : /chem2/nt6.i/20130611.b/SW846030613.m
Meth Date : 12-Jun-2013 15:17 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable 06/12/13

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$	1 2-Fluorophenol	112	5.615	5.617	(0.742)	361048	17.9842	17.98
$	2 Phenol-d5	99	7.202	7.209	(0.952)	333704	14.1998	14.20
	3 Phenol	94	7.223	7.230	(0.955)	270678	10.9387	10.94
$	5 2-Chlorophenol-d4	132	7.276	7.284	(0.962)	537444	27.0544	27.05
	4 Bis(2-Chloroethyl)ether	93	7.260	7.262	(0.960)	405208	18.8557	18.86
	6 2-Chlorophenol	128	7.303	7.305	(0.965)	409682	20.6930	20.69
	7 1,3-Dichlorobenzene	146	7.501	7.503	(0.992)	373217	16.1408	16.14
*	8 1,4-Dichlorobenzene-d4	152	7.565	7.567	(1.000)	309830	20.0000	
	9 1,4-Dichlorobenzene	146	7.591	7.593	(1.004)	377156	16.7591	16.76
$	10 1,2-Dichlorobenzene-d4	152	7.864	7.861	(1.040)	223851	16.0104	16.01
	12 1,2-Dichlorobenzene	146	7.880	7.882	(1.042)	358494	16.6635	16.66
	11 Benzyl alcohol	108	7.875	7.882	(1.041)	250337	18.5702	18.57
	14 2,2'-oxybis(1-Chloropropane)	45	8.131	8.128	(1.075)	511517	14.9812	14.98
	13 2-Methylphenol	108	8.136	8.144	(1.076)	338049	18.0164	18.02
	17 Hexachloroethane	117	8.361	8.363	(1.105)	129670	14.2449	14.24
	16 N-Nitroso-di-n-propylamine	70	8.345	8.352	(1.103)	269944	16.7385	16.74

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	8.377	8.379	(1.107)	675315	36.3963	36.40
$	18 Nitrobenzene-d5	82	8.500	8.507	(0.885)	399977	17.9269	17.93
	19 Nitrobenzene	77	8.526	8.534	(0.888)	419726	19.6544	19.65
	20 Isophorone	82	8.916	8.918	(0.929)	743856	19.9842	19.98
	21 2-Nitrophenol	139	9.045	9.046	(0.942)	229955	23.2717	23.27
	22 2,4-Dimethylphenol	107	9.194	9.196	(0.958)	890827	47.6709	47.67
	23 Bis(2-Chloroethoxy)methane	93	9.322	9.324	(0.971)	471440	19.3037	19.30
	24 Benzoic acid	105	9.499	9.549	(0.989)	807904	49.9444	49.94
	25 2,4-Dichlorophenol	162	9.440	9.442	(0.983)	976189	67.8422	67.84
	26 1,2,4-Trichlorobenzene	180	9.547	9.549	(0.994)	320257	17.8799	17.88
*	27 Naphthalene-d8	136	9.600	9.602	(1.000)	1111878	20.0000	
	28 Naphthalene	128	9.627	9.634	(1.003)	1038188	20.6832	20.68
	29 4-Chloroaniline	127	9.798	9.800	(1.021)	1284993	148.444	148.4(R)
	30 Hexachlorobutadiene	225	9.953	9.955	(1.037)	182716	16.7631	16.76
	31 4-Chloro-3-methylphenol	107	10.631	10.638	(1.107)	1001723	65.5397	65.54
	32 2-Methylnaphthalene	141	10.738	10.740	(1.119)	586647	21.6960	21.70
	33 Hexachlorocyclopentadiene	237	11.117	11.119	(0.895)	393182	39.3988	39.40
	34 2,4,6-Trichlorophenol	196	11.272	11.269	(0.907)	759461	72.7327	72.73
	35 2,4,5-Trichlorophenol	196	11.331	11.333	(0.912)	788708	76.5682	76.57
$	36 2-Fluorobiphenyl	172	11.390	11.392	(0.917)	790238	20.1550	20.15
	37 2-Chloronaphthalene	162	11.507	11.509	(0.926)	696008	26.2719	26.27
	38 2-Nitroaniline	65	11.769	11.766	(0.947)	665200	72.4403	72.44
	39 Dimethylphthalate	163	12.143	12.145	(0.977)	845108	22.6059	22.61
	40 Acenaphthylene	152	12.175	12.177	(0.980)	1176239	24.0074	24.01
	41 2,6-Dinitrotoluene	165	12.234	12.230	(0.985)	584930	73.2327	73.23
*	42 Acenaphthene-d10	164	12.426	12.428	(1.000)	621145	20.0000	
	43 3-Nitroaniline	138	12.442	12.444	(1.001)	597798	184.734	184.7(R)
	44 Acenaphthene	153	12.474	12.476	(1.004)	731340	23.0550	23.06
	45 2,4-Dinitrophenol	184	12.602	12.604	(1.014)	682193	119.582	119.6
	46 Dibenzofuran	168	12.736	12.743	(1.025)	1071918	25.8369	25.84
	47 4-Nitrophenol	109	12.789	12.802	(1.029)	137590	33.9083	33.91
	48 2,4-Dinitrotoluene	165	12.848	12.850	(1.034)	766292	70.9287	70.93
	50 Diethylphthalate	149	13.286	13.283	(1.069)	811399	23.4261	23.43
	49 Fluorene	166	13.281	13.288	(1.069)	795277	27.1815	27.18
	51 4-Chlorophenyl-phenylether	204	13.324	13.326	(1.072)	433718	23.8161	23.82
	52 4-Nitroaniline	138	13.436	13.432	(1.081)	601876	98.7941	98.79
	53 4,6-Dinitro-2-methylphenol	198	13.500	13.496	(0.914)	905117	116.200	116.2
	54 N-Nitrosodiphenylamine	169	13.532	13.539	(0.916)	616251	20.9547	20.95
$	55 2,4,6-Tribromophenol	330	13.708	13.710	(1.103)	192938	39.2823	39.28
	56 4-Bromophenyl-phenylether	248	14.088	14.095	(0.954)	263256	22.1747	22.17
	57 Hexachlorobenzene	284	14.296	14.298	(0.968)	262017	21.4074	21.41
	58 Pentachlorophenol	266	14.606	14.613	(0.989)	547503	75.8226	75.82
*	59 Phenanthrene-d10	188	14.766	14.773	(1.000)	1081710	20.0000	
	60 Phenanthrene	178	14.803	14.805	(1.003)	1208373	22.5789	22.58
	61 Anthracene	178	14.873	14.880	(1.007)	1183306	22.0825	22.08
	62 Carbazole	167	15.167	15.174	(1.027)	1098952	29.3304	29.33
	63 Di-n-butylphthalate	149	15.898	15.906	(1.077)	1364929	20.2043	20.20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	16.710	16.712	(1.132)	1388351	24.6604	24.66
	65 Pyrene	202	17.052	17.060	(0.897)	1431574	24.3183	24.32
$	66 Terphenyl-d14	244	17.389	17.391	(0.914)	812347	21.4702	21.47
	67 Butylbenzylphthalate	149	18.281	18.288	(0.961)	605959	21.0505	21.05
	68 Benzo(a)anthracene	228	18.997	19.004	(0.999)	1320020	26.8605	26.86
*	69 Chrysene-d12	240	19.018	19.031	(1.000)	1077904	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.034	19.031	(1.001)	1047378	77.4640	77.46
	71 Chrysene	228	19.061	19.068	(1.002)	1236162	24.6404	24.64
	72 bis(2-Ethylhexyl)phthalate	149	19.280	19.282	(0.954)	829703	22.4831	22.48
*	134 Di-n-octylphthalate-d4	153	20.204	20.212	(1.000)	1254108	20.0000	
	73 Di-n-octylphthalate	149	20.215	20.222	(1.001)	1400114	23.6448	23.64
	74 Benzo(b)fluoranthene	252	20.632	20.639	(0.975)	1343172	22.9122	22.91
	75 Benzo(k)fluoranthene	252	20.664	20.671	(0.977)	1617897	25.4572	25.46
	76 Benzo(a)pyrene	252	21.064	21.077	(0.996)	1334607	24.1142	24.11
*	77 Perylene-d12	264	21.150	21.157	(1.000)	1294859	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	22.501	22.514	(1.064)	1495995	22.4604	22.46
	79 Dibenzo(a,h)anthracene	278	22.523	22.535	(1.065)	1202449	22.9277	22.93
	80 Benzo(g,h,i)perylene	276	22.833	22.851	(1.080)	1193683	20.9563	20.96
	90 N-Nitrosodimethylamine	74	2.752	2.759	(0.364)	420607	28.8276	28.83
	91 Aniline	93	7.137	7.181	(0.944)	1428278	52.0938	52.09
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	2.709	2.716	(0.358)	746817	32.2748	32.27
	105 1-methylnaphthalene	141	10.909	10.911	(1.136)	585134	21.3020	21.30
	111 Azobenzene (1,2-DP-Hydrazine)	77	13.575	13.577	(1.092)	833981	21.1909	21.19
	120 2,3,4,6-Tetrachlorophenol	232	13.030	13.037	(1.049)	240686	27.1470	27.15
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	20.664	20.671	(0.977)	2787292	46.7553	46.76

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06111304.d
Lab Smp Id: WR99LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130611.b/SW846030613.m
Misc Info: 13-11541

Calibration Date: 11-JUN-2013
Calibration Time: 11:24
Client Smp ID: WR99LCSDW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	309830	-32.37
27 Naphthalene-d8	1718341	859170	3436682	1111878	-35.29
42 Acenaphthene-d10	1010041	505020	2020082	621145	-38.50
59 Phenanthrene-d10	1666734	833367	3333468	1081710	-35.10
69 Chrysene-d12	1675752	837876	3351504	1077904	-35.68
134 Di-n-octylphthala	2026355	1013178	4052710	1254108	-38.11
77 Perylene-d12	1637524	818762	3275048	1294859	-20.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.57	7.07	8.07	7.56	-0.03
27 Naphthalene-d8	9.60	9.10	10.10	9.60	-0.02
42 Acenaphthene-d10	12.43	11.93	12.93	12.43	-0.02
59 Phenanthrene-d10	14.77	14.27	15.27	14.77	-0.05
69 Chrysene-d12	19.03	18.53	19.53	19.02	-0.07
134 Di-n-octylphthala	20.21	19.71	20.71	20.20	-0.04
77 Perylene-d12	21.16	20.66	21.66	21.15	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WR99
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WR99LCSDW1
Client Smp ID: WR99LCSDW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCSD
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130611.b/SW846030613.m
Misc Info: 13-11541

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3	Phenol	25.00	10.94	43.75	16-100
4	Bis(2-Chloroethyl)	25.00	18.86	75.42	41-112
6	2-Chlorophenol	25.00	20.69	82.77	43-111
7	1,3-Dichlorobenzen	25.00	16.14	64.56	32-100
9	1,4-Dichlorobenzen	25.00	16.76	67.04	32-100
11	Benzyl alcohol	25.00	18.57	74.28	22-100
12	1,2-Dichlorobenzen	25.00	16.66	66.65	34-100
13	2-Methylphenol	25.00	18.02	72.07	36-110
14	2,2'-oxybis(1-Chlo	25.00	14.98	59.92	29-118
15	4-Methylphenol	50.00	36.40	72.79	38-104
16	N-Nitroso-di-n-pro	25.00	16.74	66.95	38-115
17	Hexachloroethane	25.00	14.24	56.98	24-100
19	Nitrobenzene	25.00	19.65	78.62	45-106
20	Isophorone	25.00	19.98	79.94	55-119
21	2-Nitrophenol	25.00	23.27	93.09	46-118
22	2,4-Dimethylphenol	75.00	47.67	63.56	28-105
23	Bis(2-Chloroethoxy	25.00	19.30	77.21	44-118
24	Benzoic acid	137.5	49.94	36.32	11-100
25	2,4-Dichlorophenol	75.00	67.84	90.46	43-121
26	1,2,4-Trichloroben	25.00	17.88	71.52	35-100
28	Naphthalene	25.00	20.68	82.73	36-111
29	4-Chloroaniline	75.00	148.4	197.93*	10-153
30	Hexachlorobutadien	25.00	16.76	67.05	24-100
31	4-Chloro-3-methylp	75.00	65.54	87.39	45-122
32	2-Methylnaphthalen	25.00	21.70	86.78	45-103
33	Hexachlorocyclopen	75.00	39.40	52.53	23-108
34	2,4,6-Trichlorophe	75.00	72.73	96.98	48-122
35	2,4,5-Trichlorophe	75.00	76.57	102.09	48-122
37	2-Chloronaphthalen	25.00	26.27	105.09	39-118
38	2-Nitroaniline	75.00	72.44	96.59	48-118
39	Dimethylphthalate	25.00	22.61	90.42	50-120
40	Acenaphthylene	25.00	24.01	96.03	50-119
41	2,6-Dinitrotoluene	75.00	73.23	97.64	48-133

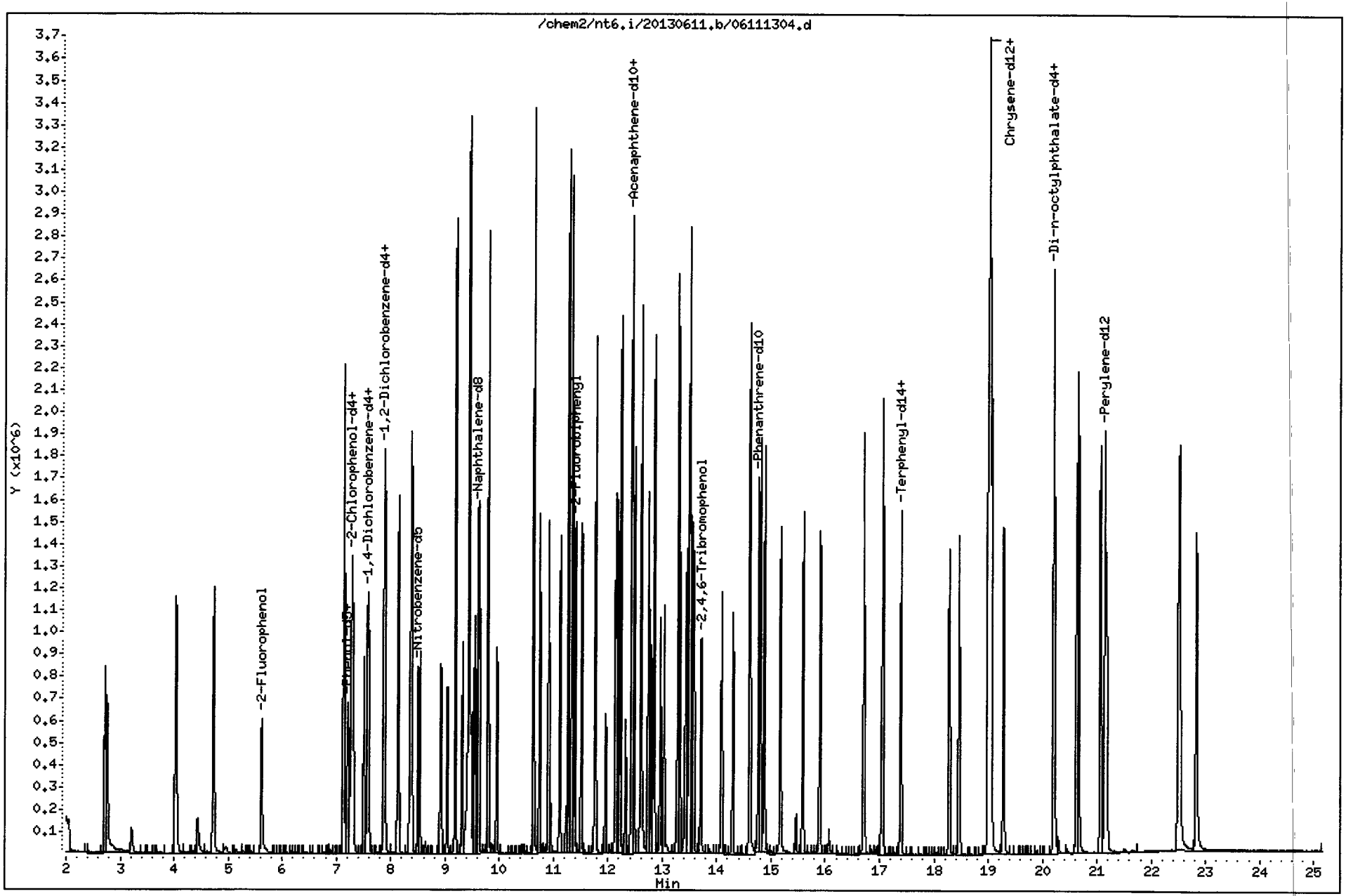
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	184.7	246.31*	10-208
44 Acenaphthene	25.00	23.06	92.22	41-120
45 2,4-Dinitrophenol	137.5	119.6	86.97	10-224
46 Dibenzofuran	25.00	25.84	103.35	51-114
47 4-Nitrophenol	75.00	33.91	45.21	10-103
48 2,4-Dinitrotoluene	75.00	70.93	94.57	51-134
49 Fluorene	25.00	27.18	108.73	50-120
50 Diethylphthalate	25.00	23.43	93.70	48-122
51 4-Chlorophenyl-phe	25.00	23.82	95.26	50-118
52 4-Nitroaniline	75.00	98.79	131.73	42-136
53 4,6-Dinitro-2-meth	125.0	116.2	92.96	10-190
54 N-Nitrosodiphenyla	25.00	20.95	83.82	58-141
56 4-Bromophenyl-phen	25.00	22.17	88.70	50-122
57 Hexachlorobenzene	25.00	21.41	85.63	47-125
58 Pentachlorophenol	75.00	75.82	101.10	35-130
60 Phenanthrene	25.00	22.58	90.32	49-120
61 Anthracene	25.00	22.08	88.33	53-116
62 Carbazole	25.00	29.33	117.32	57-122
63 Di-n-butylphthalat	25.00	20.20	80.82	57-121
64 Fluoranthene	25.00	24.66	98.64	56-119
65 Pyrene	25.00	24.32	97.27	37-143
67 Butylbenzylphthala	25.00	21.05	84.20	34-152
68 Benzo(a)anthracene	25.00	26.86	107.44	49-129
70 3,3'-Dichlorobenzi	75.00	77.46	103.29	50-128
71 Chrysene	25.00	24.64	98.56	45-128
72 bis(2-Ethylhexyl)p	25.00	22.48	89.93	57-133
73 Di-n-octylphthalat	25.00	23.64	94.58	52-120
74 Benzo(b)fluoranthe	25.00	22.91	91.65	50-126
75 Benzo(k)fluoranthe	25.00	25.46	101.83	49-126
76 Benzo(a)pyrene	25.00	24.11	96.46	46-109
78 Indeno(1,2,3-cd)py	25.00	22.46	89.84	34-136
79 Dibenzo(a,h)anthra	25.00	22.93	91.71	41-134
80 Benzo(g,h,i)peryle	25.00	20.96	83.83	41-133
91 Aniline	75.00	52.09	69.46	28-126
111 Azobenzene (1,2-DP	25.00	21.19	84.76	55-119
105 1-methylnaphthalen	25.00	21.30	85.21	43-115
90 N-Nitrosodimethyla	50.00	28.83	57.66	31-100
103 Pyridine	50.00	32.27	64.55	25-100
120 2,3,4,6-Tetrachlor	25.00	27.15	108.59	30-160
151 1,2,4,5-Tetrachlo	25.00	0.000	*	30-160
187 Total Benzofluoran	50.00	46.76	93.51	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	17.98	47.96	31-100

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	14.20	37.87	19-100
$ 5 2-Chlorophenol-d4	37.50	27.05	72.14	49-101
$ 10 1,2-Dichlorobenzen	25.00	16.01	64.04	40-100
$ 18 Nitrobenzene-d5	25.00	17.93	71.71	46-101
$ 36 2-Fluorobiphenyl	25.00	20.15	80.62	49-103
$ 55 2,4,6-Tribromophen	37.50	39.28	104.75	51-122
$ 66 Terphenyl-d14	25.00	21.47	85.88	57-118

Data File: /chem2/nt6.i/20130611.b/06111304.d
Date : 11-JUN-2013 13:07
Client ID: WR99LCSDW1
Sample Info: WR99LCSDW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06111304.d

Lab ID: WR99LCSDW1, Method: SW846030613.m, Instrument: nt6.i, Date: 11-JUN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130611.b/06111305.d
Lab Smp Id: WR99A Client Smp ID: KC-VT-1593-20130530
Inj Date : 11-JUN-2013 13:41
Operator : JZ Inst ID: nt6.i
Smp Info : WR99A
Misc Info : 13-11541
Comment : 1ul Injection
Method : /chem2/nt6.i/20130611.b/SW846030613.m
Meth Date : 12-Jun-2013 15:17 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclp.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable 06/12/13

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	5.611	5.617	(0.742)	311385	15.3500	15.35
$ 2	Phenol-d5	99	7.203	7.209	(0.953)	280974	11.8324	11.83
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	7.278	7.284	(0.963)	482323	24.0286	24.03
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	7.561	7.567	(1.000)	313067	20.0000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	7.860	7.861	(1.040)	225865	15.9874	15.99
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.501	8.507	(0.886)	346820	15.6773	15.68
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	9.596	9.602	(1.000)	1102454	20.0000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	141	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	11.386	11.392	(0.917)	725879	18.0196	18.02
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	12.422	12.428	(1.000)	638169	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	12.470	12.476	(1.004)	113107	3.47051	3.471
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	12.727	12.743	(1.024)	30838	0.72347	0.7235
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	13.277	13.288	(1.069)	34714	1.03487	1.035
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	13.699	13.710	(1.103)	174450	34.5707	34.57
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	14.762	14.773	(1.000)	1044049	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	17.390	17.391	(0.915)	769572	18.7875	18.79
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.014	19.031	(1.000)	1166961	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134 Di-n-octylphthalate-d4	153	20.200	20.212	(1.000)	1321023	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	21.146	21.157	(1.000)	1251862	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06111305.d
Lab Smp Id: WR99A
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130611.b/SW846030613.m
Misc Info: 13-11541

Calibration Date: 11-JUN-2013
Calibration Time: 11:24
Client Smp ID: KC-VT-1593-20130
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	313067	-31.66
27 Naphthalene-d8	1718341	859170	3436682	1102454	-35.84
42 Acenaphthene-d10	1010041	505020	2020082	638169	-36.82
59 Phenanthrene-d10	1666734	833367	3333468	1044049	-37.36
69 Chrysene-d12	1675752	837876	3351504	1166961	-30.36
134 Di-n-octylphthala	2026355	1013178	4052710	1321023	-34.81
77 Perylene-d12	1637524	818762	3275048	1251862	-23.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.57	7.07	8.07	7.56	-0.08
27 Naphthalene-d8	9.60	9.10	10.10	9.60	-0.06
42 Acenaphthene-d10	12.43	11.93	12.93	12.42	-0.05
59 Phenanthrene-d10	14.77	14.27	15.27	14.76	-0.08
69 Chrysene-d12	19.03	18.53	19.53	19.01	-0.09
134 Di-n-octylphthala	20.21	19.71	20.71	20.20	-0.06
77 Perylene-d12	21.16	20.66	21.66	21.15	-0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

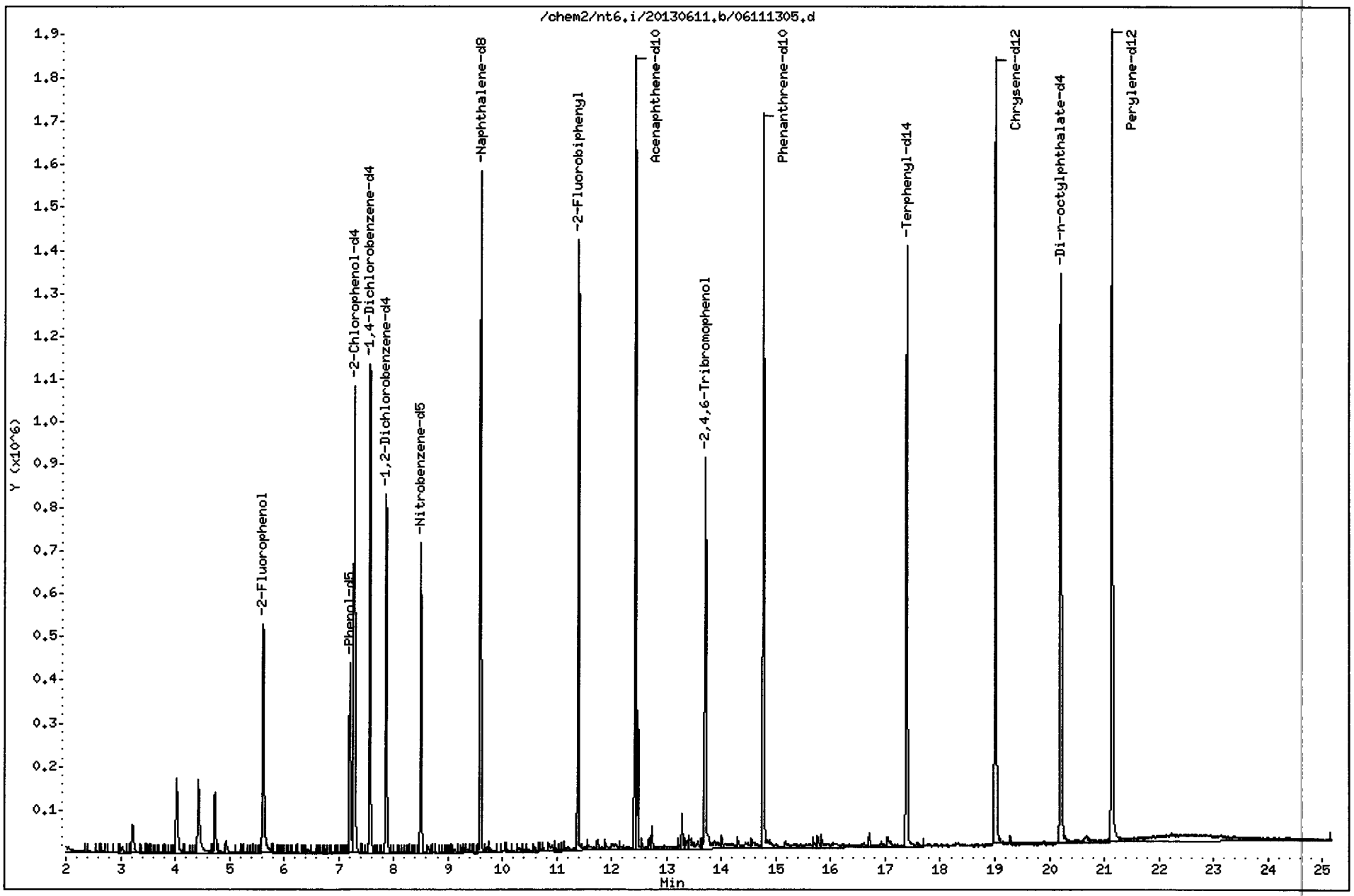
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WR99
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WR99A
Client Smp ID: KC-VT-1593-20130530
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclp.sub
Method File: /chem2/nt6.i/20130611.b/SW846030613.m
Misc Info: 13-11541

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	15.35	40.93	31-100
$ 2 Phenol-d5	37.50	11.83	31.55	19-100
$ 5 2-Chlorophenol-d4	37.50	24.03	64.08	49-101
$ 10 1,2-Dichlorobenzen	25.00	15.99	63.95	40-100
$ 18 Nitrobenzene-d5	25.00	15.68	62.71	46-101
$ 36 2-Fluorobiphenyl	25.00	18.02	72.08	49-103
$ 55 2,4,6-Tribromophen	37.50	34.57	92.19	51-122
$ 66 Terphenyl-d14	25.00	18.79	75.15	57-118

Data File: /chem2/nt6.i/20130611.b/06111305.d
Date : 11-JUN-2013 13:41
Client ID: KC-VT-1593-20130530
Instrument: nt6.i
Sample Info: WR99A
Volume Injected (uL): 1.0
Operator: JZ
Column phase: ZB-5msi
Column diameter: 0.32



Data File: /chem2/nt6.i/20130611.b/06111305.d

Date : 11-JUN-2013 13:41

Client ID: KC-VT-1593-20130530

Instrument: nt6.i

Sample Info: WR99A

Volume Injected (uL): 1.0

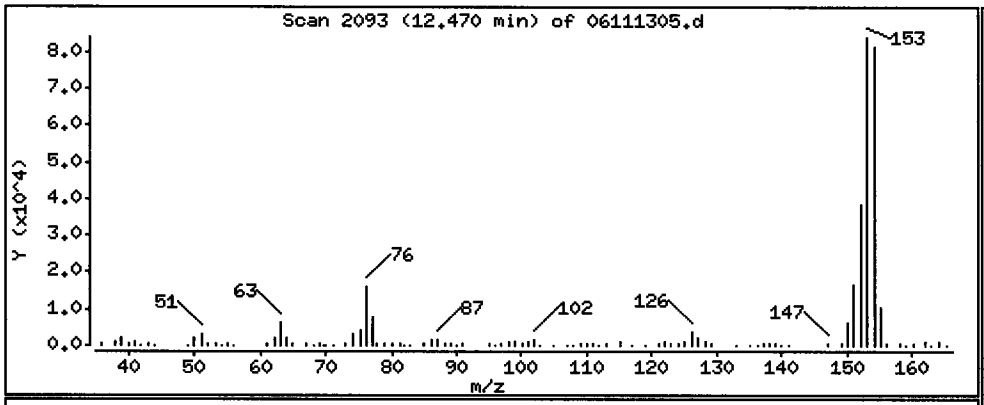
Operator: JZ

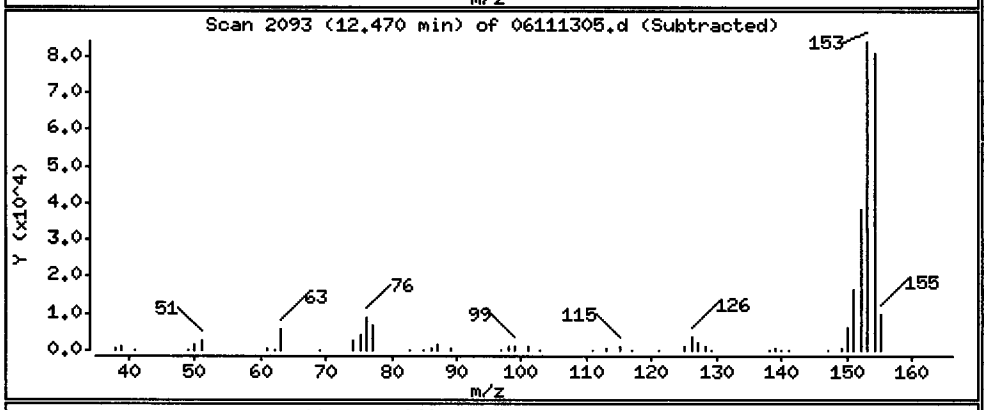
Column phase: ZB-5msi

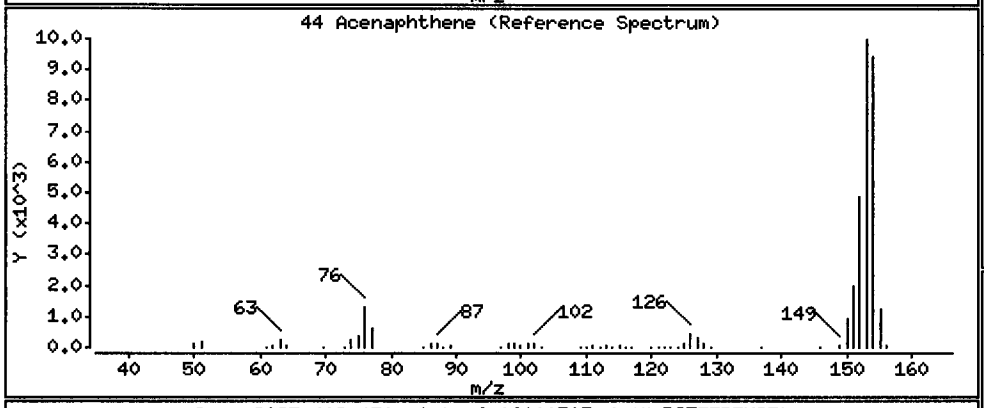
Column diameter: 0.32

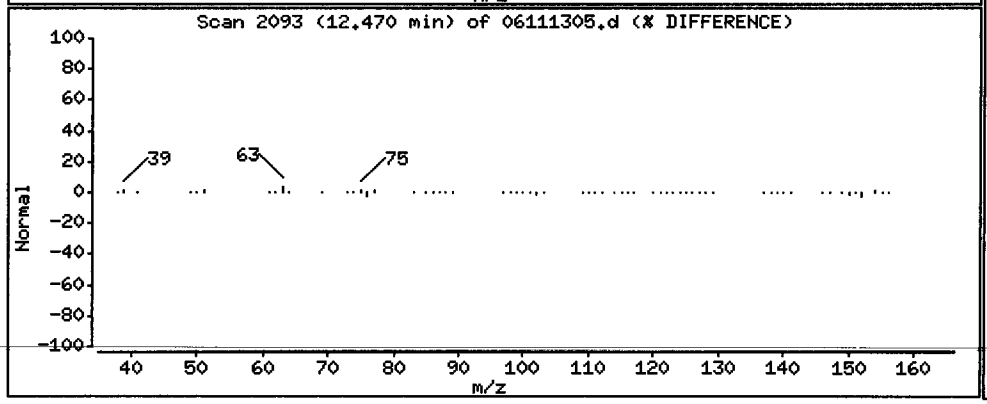
44 Acenaphthene

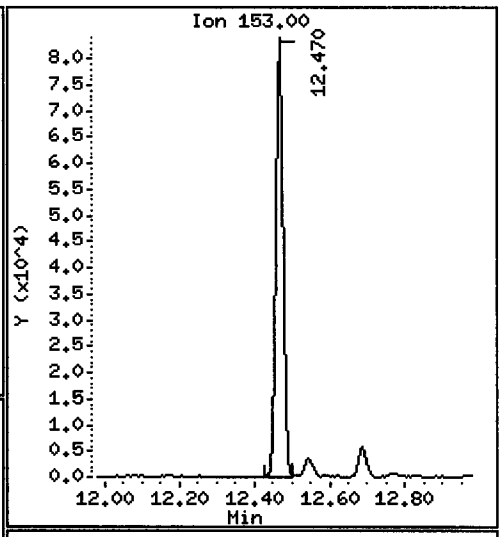
Concentration: 3.471 ug/L

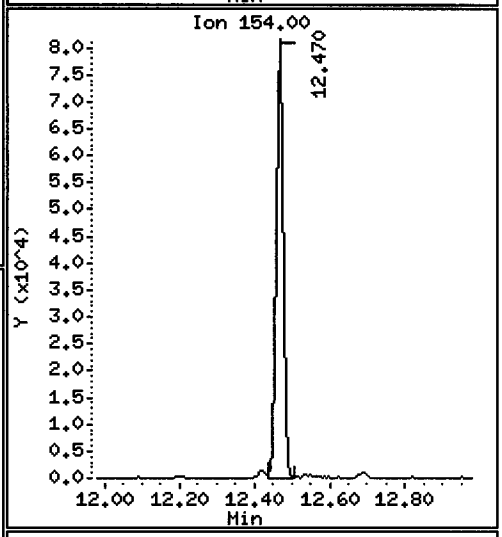


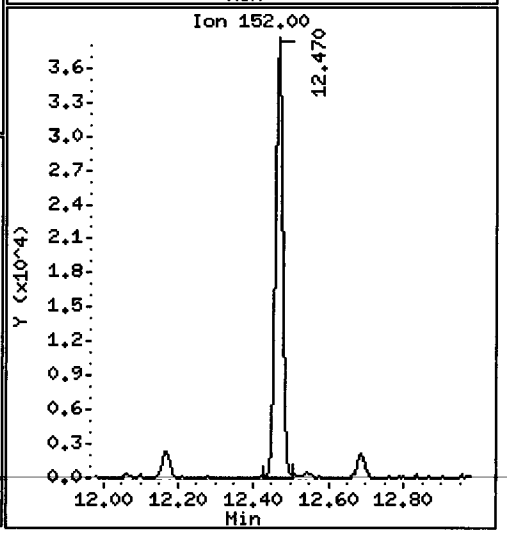












Data File: /chem2/nt6.i/20130611.b/06111305.d

Date : 11-JUN-2013 13:41

Client ID: KC-VT-1593-20130530

Instrument: nt6.i

Sample Info: WR99A

Volume Injected (uL): 1.0

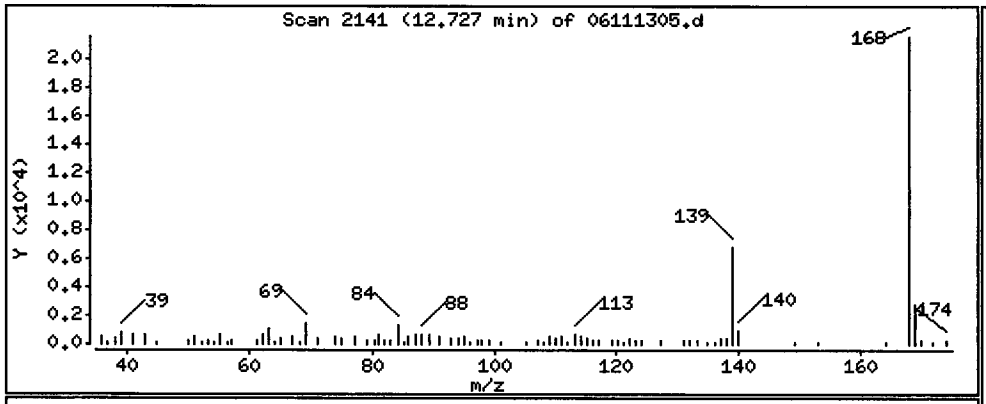
Operator: JZ

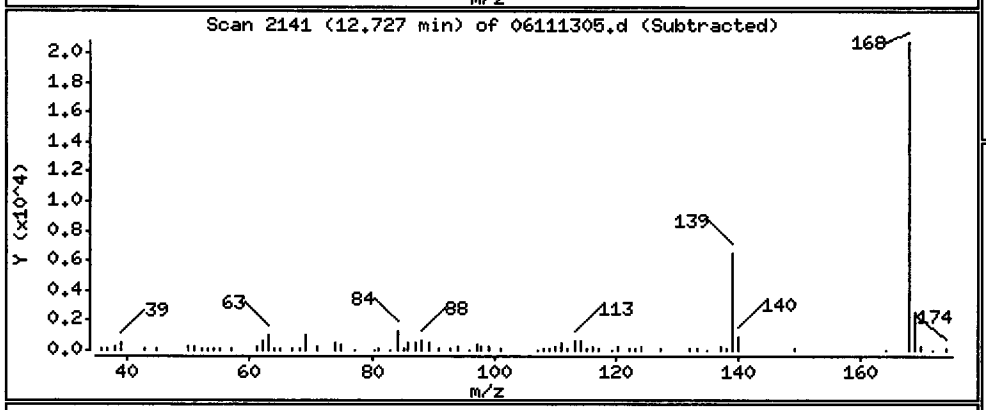
Column phase: ZB-5msi

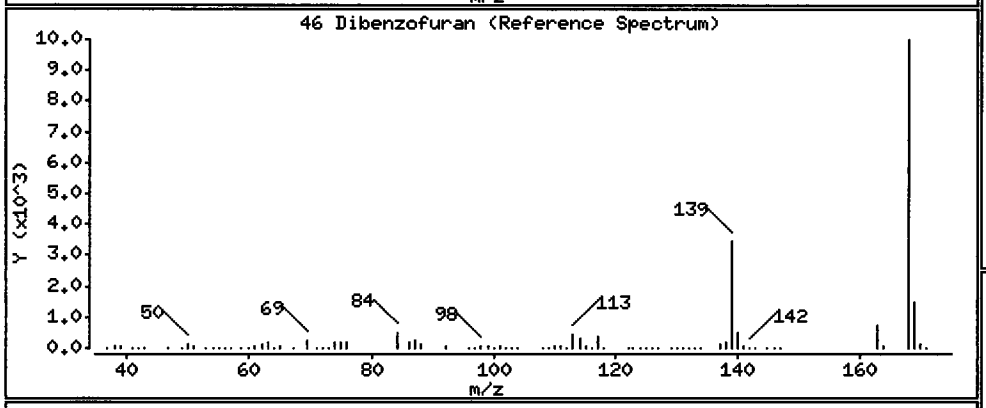
Column diameter: 0.32

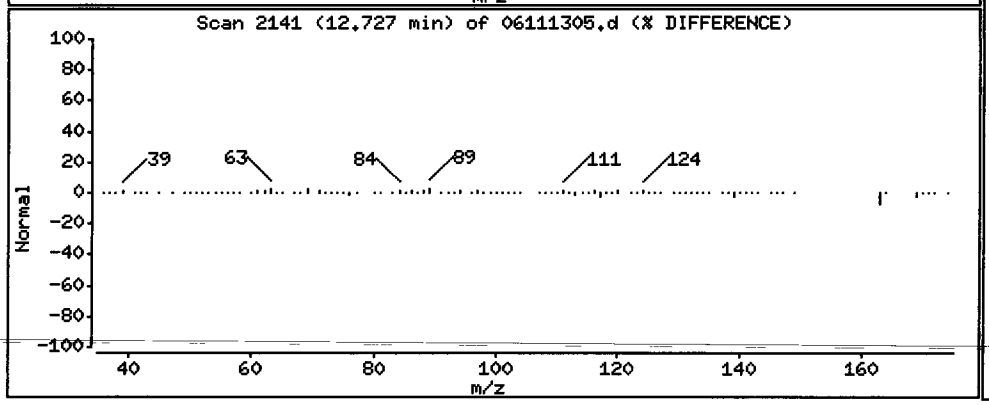
46 Dibenzofuran

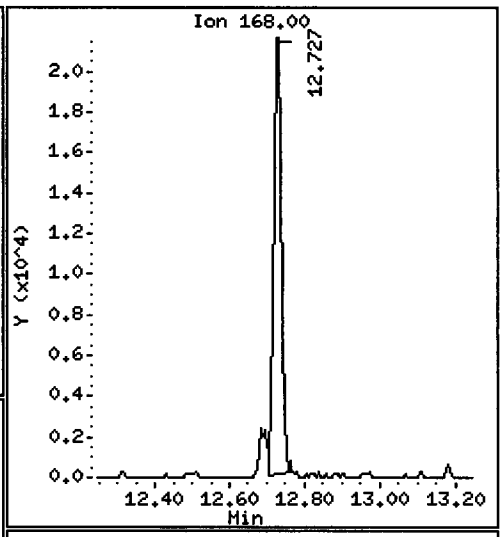
Concentration: 0.7235 ug/L

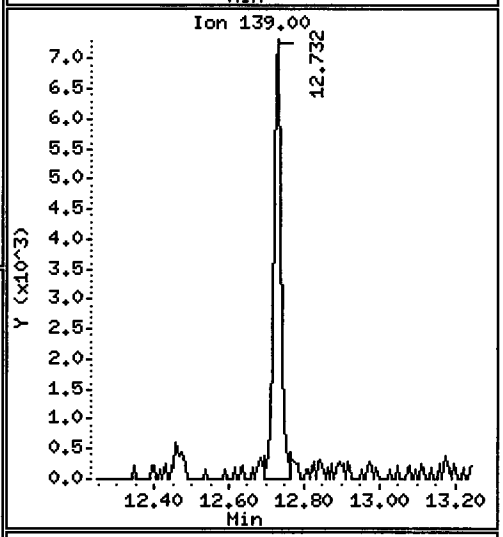


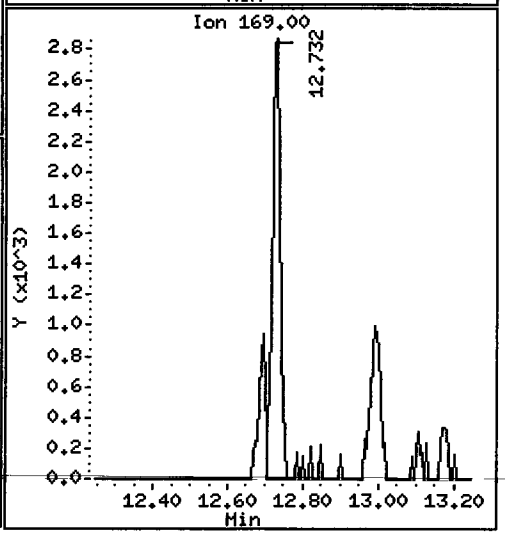












Data File: /chem2/nt6.i/20130611.b/06111305.d

Date : 11-JUN-2013 13:41

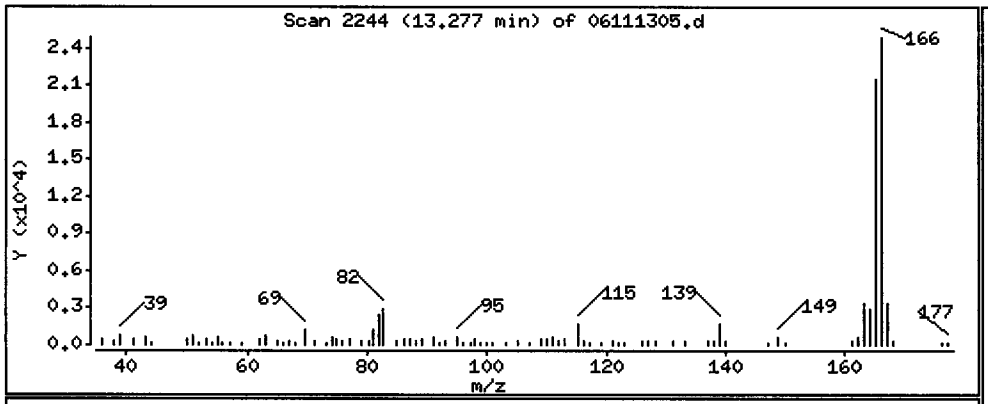
Client ID: KC-VT-1593-20130530 Instrument: nt6.i

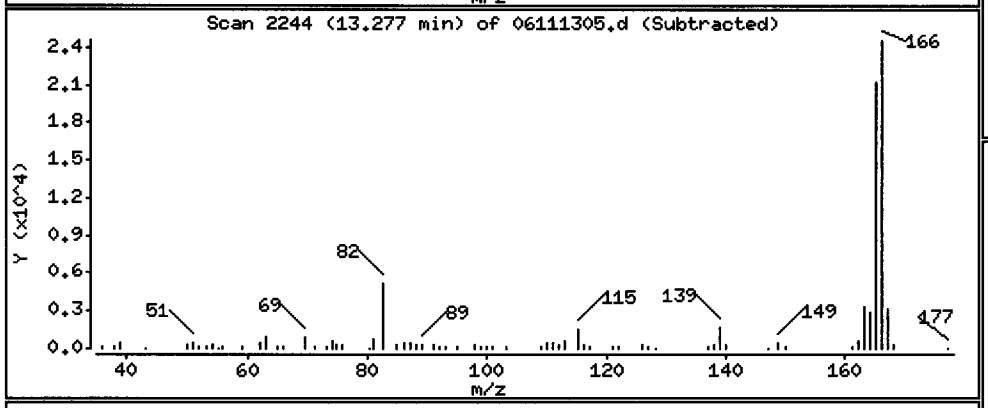
Sample Info: WR99A

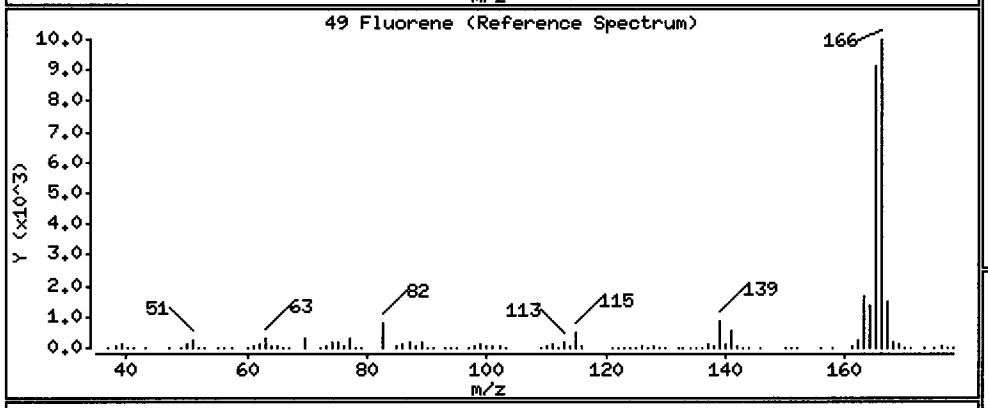
Volume Injected (uL): 1.0 Operator: JZ

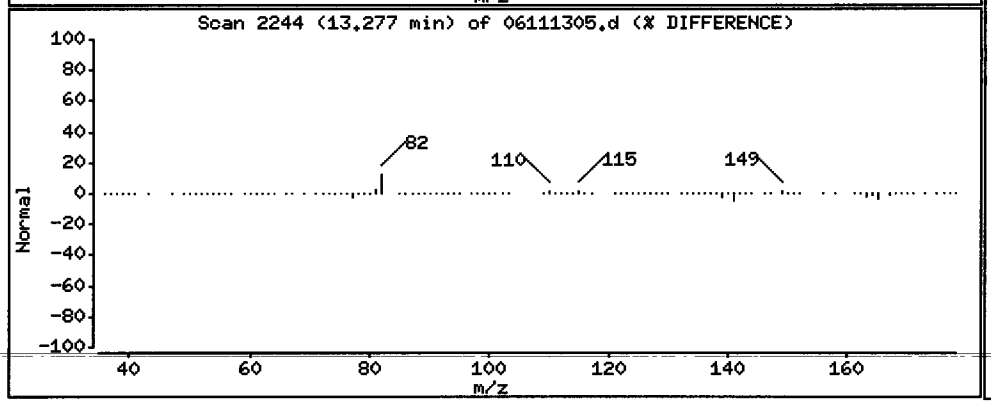
Column phase: ZB-5msi Column diameter: 0.32

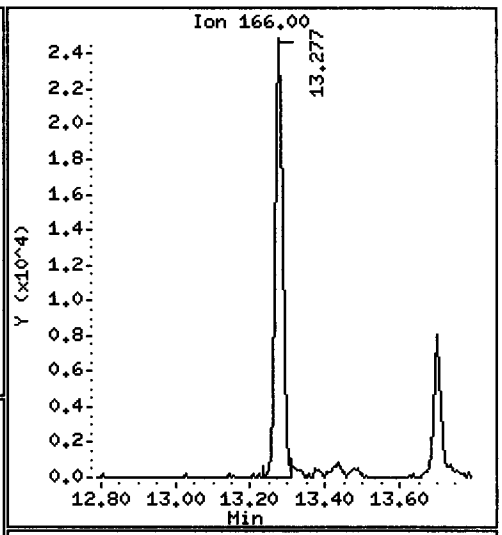
49 Fluorene Concentration: 1.035 ug/L

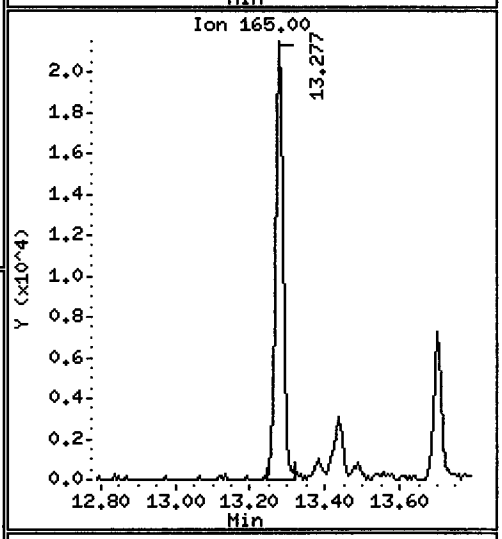


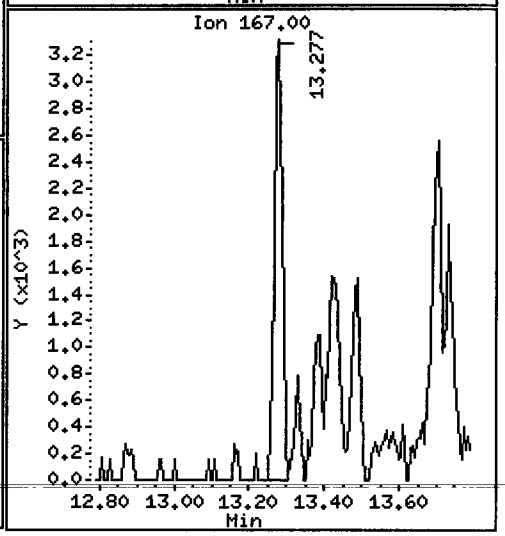












CO-ELUTION SUMMARY FOR FILE - 06111305.d

Lab ID: WR99A, Method: SW846030613.m, Instrument: nt6.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WR99 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 04/29/13 Analysis Start Date: 06/13/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N /	Internal Standard within 50-200%?	Y / N /
DDT Breakdown <20%?	Y / N /	Retention Times within Windows?	Y / N /
Peak Tailing Factor ≤2?	Y / N /	Method Blank in Control?	Y / N /
CCAL Meets %D?	Y / N /	LCS / LCSD Recovery in Control?	Y / N /
ICAL Q Flag applied?	Y / N /	LCS / LCSD RPD ≤30%?	NA /
CCAL Q flag applied?	Y / N /	MS / MSD Recovery in Control?	Y / N /
Surrogate Recovery met?	Y / N /	MS / MSD RPD ≤30%? Except 2,4'-DDT Perform Bound Add. - 2,4'-DDT & BK6 Outl.	NA /
Manual Integrations?	Y / N /	Samples Diluted?	Y / N / 2x (D)
Integration Summary?	Y / N /	Special Analysis Request?	Y / N /

Detail problems, corrective actions and/or other pertinent information below.

- Sample D was re-run @ 2x dilution on 6/14/13.

(Review 1) Analyst: YZ **Date:** 6/17/13

(Review 2) Reviewer: [signature] **Date:** 6/18/13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 6.14.13 Analysis: ABN Analyst: YZ

GC Program: ABN2 Column No: 252947 Column Type: ZB-5ms

Instrument Tune (.U or .CT.): 130228.U EM Voltage: 1729

Calibration File: df0614 Curve Date: 4.29.13 Injection Vol.: 1 ul

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 B000112	
	2073-1 1998-4	
	2064-2	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130614.b

	Time	Filename	LabID	ClientId	DF											
1	1238	df0614.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1253	cc0614.d	CC0614		1	7.95	38921	10.56	147394	14.39	93424	17.62	157890	22.86	168131	25.16	148837	24.07	210456
3	1329	ws42mb.d	WS42MBS1	WS42MBS1	1	7.95	46262	10.55	180474	14.39	107951	17.62	180282	22.86	189199	25.17	164890	24.09	230943
4	1406	ws42sb.d	WS42LCSS1	WS42LCSS1	1	7.95	42405	10.56	155791	14.40	96014	17.63	159604	22.88	173619	25.19	158240	24.10	220432
5	1443	ws42sbd.d	WS42LCSDS1	WS42LCSDS1	1	7.96	42446	10.57	156300	14.43	98149	17.67	163098	22.92	180885	25.23	165750	24.14	225777
6	1520	ws42a.d	WS42A	SL4-T6-05281	5	7.95	49387	10.56	182968	14.40	107087	17.65	173902	22.90	164135	25.23	164618	24.13	212745
7	1557	ws42b.d	WS42B	NST5-052813	5	7.95	48134	10.57	184261	14.40	107651	17.65	170311	22.90	164025	25.21	161659	24.13	215731
8	1634	ws42d.d	WS42D	NST2-052813	5	7.95	49762	10.57	186786	14.41	113204	17.66	182120	22.92	161705	25.23	165149	24.14	212654
9	1710	ws42e.d	WS42E	NST1-052813	5	7.95	44620	10.57	172239	14.41	97522	17.66	154511	22.92	145109	25.23	148897	24.14	190819
10	1747	ws42f.d	WS42F	NST3-052813	5	7.95	46513	10.57	167150	14.41	103651	17.66	164208	22.93	157691	25.24	161518	24.15	204984
11	1824	ws61a.d	WS61A	CS-060413	5	7.95	44340	10.57	171770	14.41	98274	17.66	151713	22.91	147598	25.23	148394	24.13	194945
12	1900	ws61b.d	WS61B	HL-060413	5	7.96	47158	10.57	181033	14.41	105693	17.66	165474	22.92	156617	25.23	157556	24.14	207071
13	1937	wr99d.d	WR99D	KC-VT-1593-2	2	7.96	51803	10.57	200423	14.41	119167	17.66	190945	22.92	177051	25.23	171951	24.14	235826

6.20.13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In Element

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130613.b

ARI Job No.: WS49 Method: ABN.m Instrument: nt10.i Date: 13-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1345	ws49mb.d	WS49MBS1	WS49MBS1	1	NO MANUAL INTEGRATION
1421	ws49sb.d	WS49LCSS1	WS49LCSS1	1	3-Nitroaniline,
1458	ws49sbd.d	WS49LCSDS1	WS49LCSDS1	1	3-Nitroaniline,
1840	wr99dms.d	WR99DMS	KC-VT-1593	1	3-Nitroaniline,
1916	wr99dmsd.d	WR99DMSD	KC-VT-1593	1	3-Nitroaniline,
1953	wr99e.d	WR99E	KC-CB-01-2	1	Benzo(k)fluoranthene,
2030	wr99f.d	WR99F	KC-DD-2009	1	Di-n-octylphthalate, Benzo(k)fluoranthene,
2107	ws21a.d	WS21A	KC-IV-SPS-	1	Phenanthrene, Benzo(k)fluoranthene,
1535	ws49a.d	WS49A	FA-1-S	1	Benzo(k)fluoranthene,
1612	ws49b.d	WS49B	FA-2-4	1	Benzo(k)fluoranthene,
1649	ws49c.d	WS49C	FA-3-2	1	NO MANUAL INTEGRATION
1726	ws49d.d	WS49D	FA-4-3	1	NO MANUAL INTEGRATION
1937	wr99d.d	WR99D	KC-VT-1593	2	Benzo(k)fluoranthene,

SCS GOS : SCS 214

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130614.b

Instrument: nt10.i Date: 14-JUN-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 14-JUN-2013

Compound	%D
Phenol	21.3
Benzyl alcohol	-22.9
Hexachlorocyclopentadiene	-21.0
3-Nitroaniline	-28.3
2,4-Dinitrophenol	-29.2
Carbazole	-35.2
3,3'-Dichlorobenzidine	-22.9
~~Benzidine~~	~~61.8~~

Data File: /chem1/nt10.i/20130614.b/df0614.d

Date : 14-JUN-2013 12:38

Client ID: DFTPP

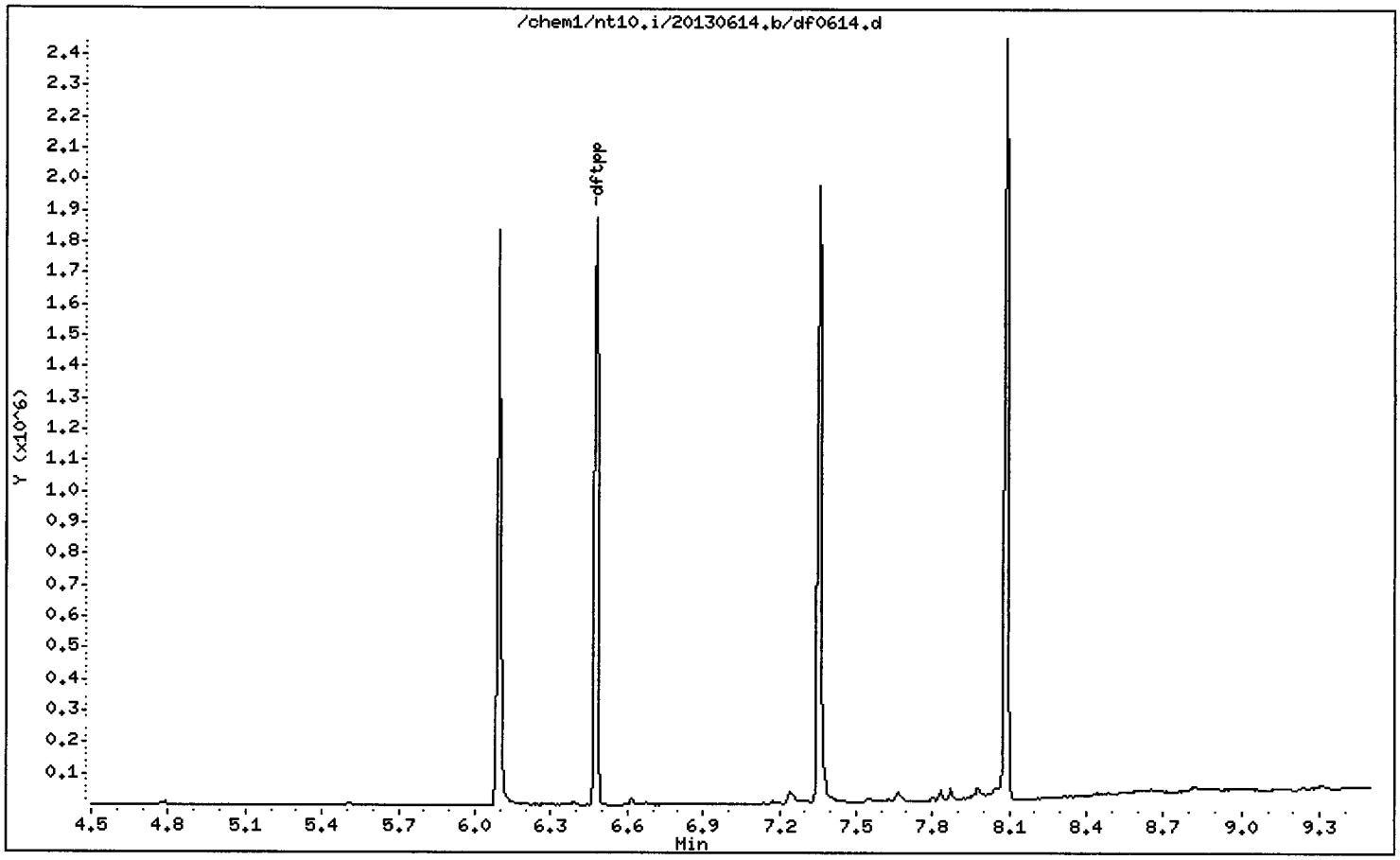
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130614.b/df0614.d

Date : 14-JUN-2013 12:38

Client ID: DFTPP

Instrument: nt10.i

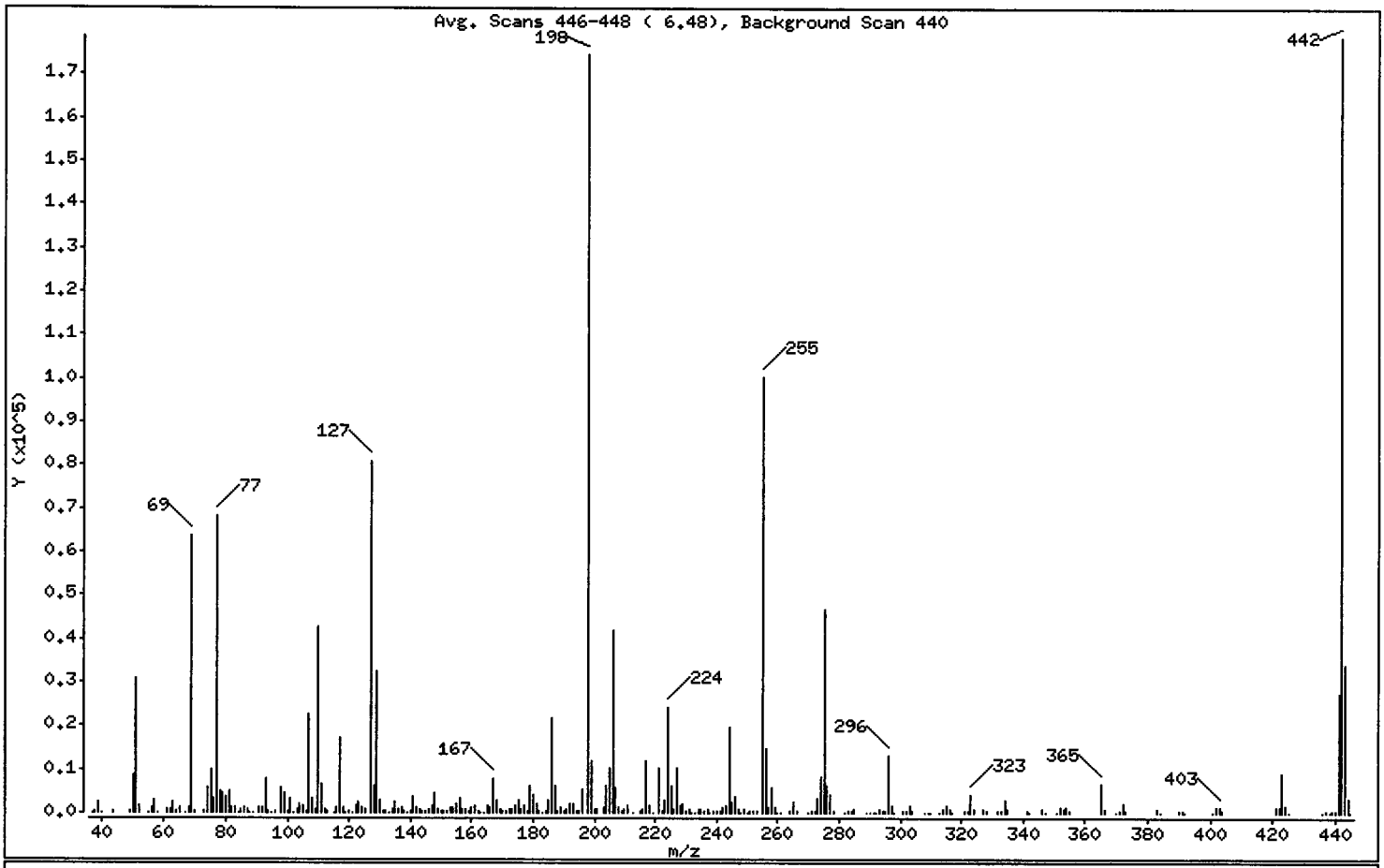
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.55
68	Less than 2.00% of mass 69	0.61 (1.68)
69	Mass 69 relative abundance	36.38
70	Less than 2.00% of mass 69	0.17 (0.48)
127	10.00 - 80.00% of mass 198	46.36
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 60.00% of mass 198	26.77
365	Greater than 1.00% of mass 198	3.75
441	0.01 - 24.00% of mass 442	15.67 (15.32)
442	50.00 - 200.00% of mass 198	102.23
443	15.00 - 24.00% of mass 442	19.58 (19.16)

Data File: /chem1/nt10.i/20130614.b/df0614.d

Date : 14-JUN-2013 12:38

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0614.d

Spectrum: Avg. Scans 446-448 (6.48), Background Scan 440

Location of Maximum: 442.00

Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	122	128.00	6292	203.00	1213	291.00	133
38.00	397	129.00	32296	204.00	6291	292.00	205
39.00	2289	130.00	2708	205.00	10346	293.00	787
40.00	139	131.00	485	206.00	42096	294.00	264
44.00	221	132.00	261	207.00	5706	295.00	256
49.00	231	133.00	189	208.00	1432	296.00	13011
50.00	8426	134.00	895	209.00	470	297.00	1824
51.00	30688	135.00	2554	210.00	874	298.00	51
52.00	1500	136.00	925	211.00	1702	301.00	219
55.00	77	137.00	1206	213.00	51	302.00	292
56.00	1362	138.00	287	215.00	512	303.00	1515
57.00	2927	139.00	75	216.00	963	304.00	403
58.00	122	140.00	383	217.00	11888	308.00	81
61.00	648	141.00	3789	218.00	1473	309.00	62
62.00	807	142.00	1333	219.00	120	310.00	87
63.00	2310	143.00	906	221.00	10276	313.00	56
64.00	284	144.00	233	222.00	418	314.00	711
65.00	1252	145.00	231	223.00	2770	315.00	1630
67.00	182	146.00	648	224.00	24352	316.00	817
68.00	1067	147.00	1739	225.00	6074	317.00	110
69.00	63616	148.00	4380	226.00	647	321.00	404
70.00	305	149.00	861	227.00	10253	322.00	224
73.00	494	150.00	294	228.00	1544	323.00	4215
74.00	5822	151.00	546	229.00	2143	324.00	721
75.00	9831	152.00	373	230.00	326	327.00	802
76.00	3217	153.00	1237	231.00	935	328.00	431
77.00	68216	154.00	1028	232.00	172	332.00	342
78.00	4749	155.00	2207	233.00	133	333.00	429
79.00	4469	156.00	3115	234.00	667	334.00	2672
80.00	3586	157.00	622	235.00	707	335.00	737
81.00	4864	158.00	699	236.00	509	341.00	510
82.00	1243	159.00	541	237.00	751	342.00	101
83.00	1062	160.00	1217	238.00	53	346.00	929
84.00	134	161.00	1710	239.00	457	347.00	149
85.00	898	162.00	553	240.00	299	351.00	55

Data File: /chem1/nt10.i/20130614.b/df0614.d

Date : 14-JUN-2013 12:38

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0614.d

Spectrum: Avg. Scans 446-448 (6.48), Background Scan 440

Location of Maximum: 442.00

Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1381	163.00	165	241.00	601	352.00	1406
87.00	675	164.00	193	242.00	1345	353.00	907
88.00	189	165.00	1518	243.00	1541	354.00	1289
89.00	70	166.00	1151	244.00	19856	355.00	285
91.00	1266	167.00	7619	245.00	2597	365.00	6553
92.00	1303	168.00	3077	246.00	3784	366.00	814
93.00	7989	169.00	651	247.00	747	370.00	56
94.00	611	170.00	214	248.00	190	371.00	371
95.00	144	171.00	302	249.00	766	372.00	2240
96.00	264	172.00	704	250.00	154	373.00	566
98.00	5835	173.00	961	251.00	232	383.00	708
99.00	4661	174.00	1680	252.00	248	384.00	187
100.00	431	175.00	3048	253.00	549	390.00	319
101.00	3089	176.00	1011	255.00	100392	391.00	253
102.00	149	177.00	1450	256.00	14795	392.00	119
103.00	949	178.00	517	257.00	1192	401.00	135
104.00	1897	179.00	6033	258.00	5788	402.00	1030
105.00	1800	180.00	4085	259.00	1051	403.00	1389
106.00	575	181.00	2045	260.00	112	404.00	432
107.00	22440	182.00	321	261.00	136	421.00	1287
108.00	3295	183.00	170	264.00	235	422.00	1168
109.00	733	184.00	446	265.00	2378	423.00	9052
110.00	42696	185.00	3064	266.00	408	424.00	1733
111.00	6622	186.00	21776	270.00	58	425.00	81
112.00	766	187.00	6349	271.00	467	436.00	55
113.00	230	188.00	589	272.00	354	437.00	218
115.00	52	189.00	1380	273.00	3473	438.00	164
116.00	1272	190.00	216	274.00	8105	439.00	309
117.00	17176	191.00	722	275.00	46800	440.00	222
118.00	1178	192.00	1959	276.00	6127	441.00	27392
119.00	169	193.00	2181	277.00	3912	442.00	178752
120.00	295	194.00	423	278.00	607	443.00	34240
121.00	113	195.00	430	282.00	50	444.00	3304
122.00	1466	196.00	5451	283.00	441	445.00	131
123.00	2387	198.00	174848	284.00	336		

Data File: /chem1/nt10.i/20130614.b/df0614.d

Date : 14-JUN-2013 12:38

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

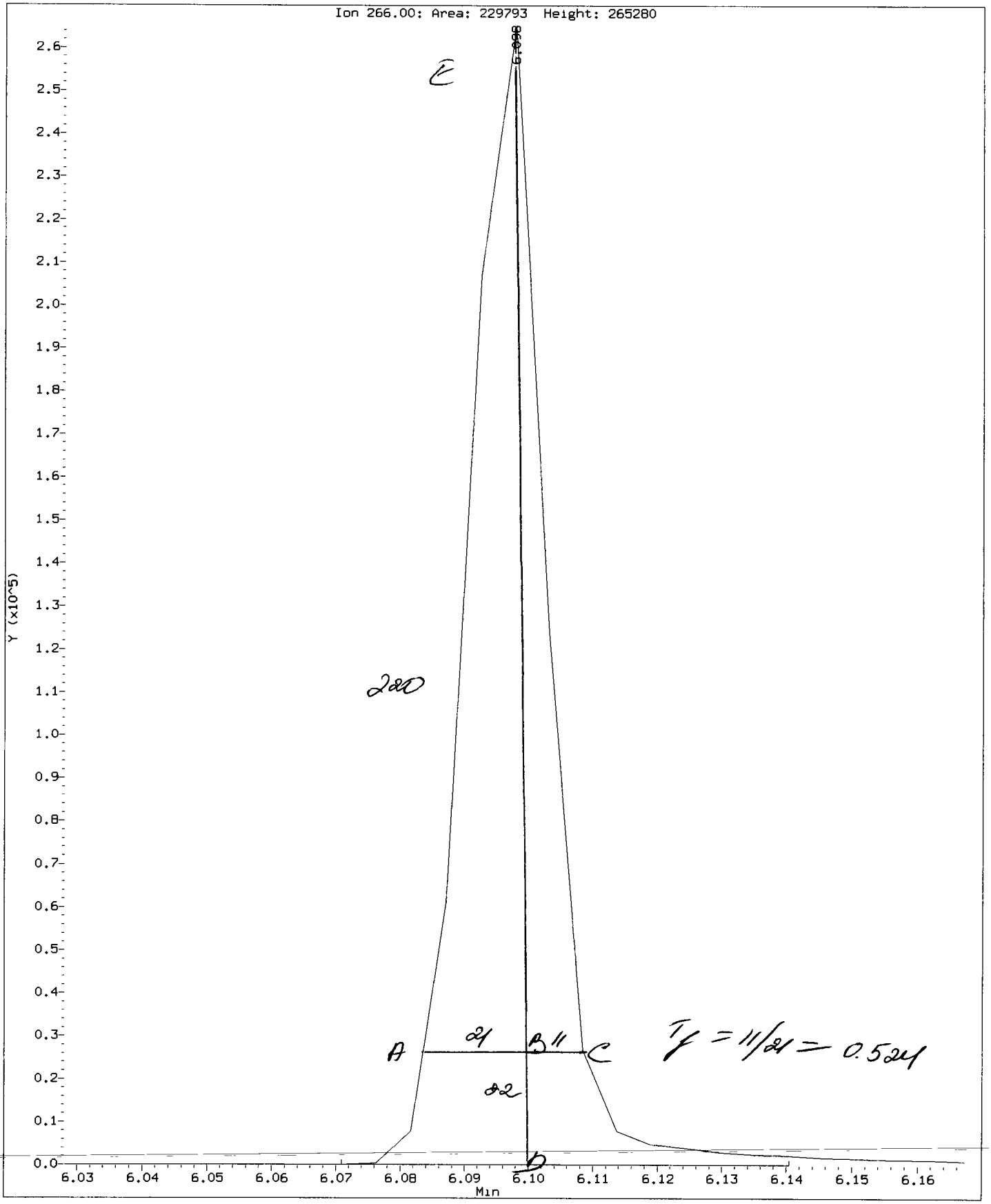
Column diameter: 0.25

Data File: df0614.d
Spectrum: Avg. Scans 446-448 (6.48), Background Scan 440
Location of Maximum: 442.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1039	199.00	11810	285.00	711		
125.00	932	200.00	936	289.00	69		
127.00	81064	201.00	964	290.00	58		

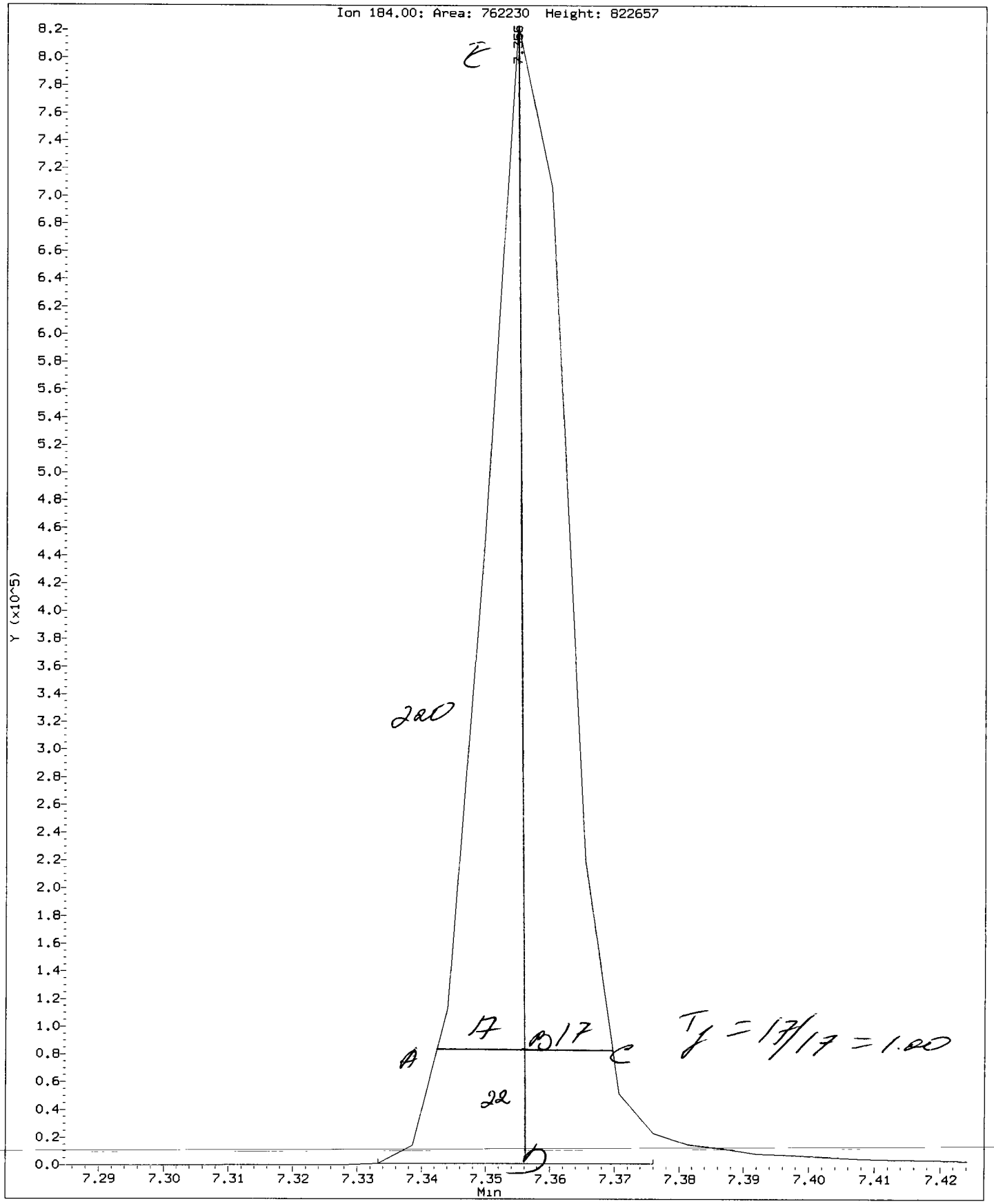
Data File: /chem1/nt10.i/20130614.b/ddt.b/df0614.d
Injection Date: 14-JUN-2013 12:38
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130614.b/ddt.b/df0614.d
Injection Date: 14-JUN-2013 12:38
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130614.b/ddt.b/df0614.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130614.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 14-JUN-2013 12:38 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.098	229793
Benzidine	7.355	762230
4,4'-DDE	7.547	1097
4,4'-DDD	7.831	6625
4,4'-DDT	8.087	450485

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 1097 + 6625) * 100}{(\ 1097 + 6625 + 450485)}$$

DDT Percent Breakdown = 1.7 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 14-JUN-2013 12:53
Lab File ID: cc0614.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0614 Quant Type: ISTD
Method: /chem1/nt10.i/20130614.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.42771	1.52750	1.52750	0.010	6.98983	20.00000	Averaged	
$ 2 Phenol-d5	1.84748	1.99906	1.99906	0.010	8.20504	20.00000	Averaged	
3 Phenol	2.06794	2.50779	2.50779	0.100	21.26969	20.00000	Averaged	<-
$ 5 2-Chlorophenol-d4	1.40240	1.45651	1.45651	0.010	3.85816	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.48709	1.47881	1.47881	0.700	-0.55697	20.00000	Averaged	
6 2-Chlorophenol	1.59477	1.59840	1.59840	0.800	0.22769	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.60030	1.57182	1.57182	0.010	-1.77989	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.57739	1.55383	1.55383	0.010	-1.49342	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	1.00879	1.02813	1.02813	0.010	1.91769	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.51024	1.50833	1.50833	0.010	-0.12690	20.00000	Averaged	
11 Benzyl alcohol	0.86989	0.67045	0.67045	0.010	-22.92716	20.00000	Averaged	<-
14 2,2'-oxybis(1-Chloropropane	0.45898	0.46796	0.46796	0.010	1.95803	20.00000	Averaged	
13 2-Methylphenol	1.48808	1.56413	1.56413	0.700	5.11086	20.00000	Averaged	
17 Hexachloroethane	0.65999	0.64407	0.64407	0.300	-2.41209	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.92905	0.99806	0.99806	0.500	7.42822	20.00000	Averaged	
15 4-Methylphenol	1.51729	1.62210	1.62210	0.600	6.90758	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.42210	0.42935	0.42935	0.010	1.71639	20.00000	Averaged	
19 Nitrobenzene	0.38970	0.39312	0.39312	0.200	0.87843	20.00000	Averaged	
20 Isophorone	0.73300	0.73807	0.73807	0.300	0.69041	20.00000	Averaged	
21 2-Nitrophenol	0.21847	0.23990	0.23990	0.100	9.81084	20.00000	Averaged	
22 2,4-Dimethylphenol	0.40172	0.39235	0.39235	0.200	-2.33172	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.43229	0.44662	0.44662	0.050	3.31638	20.00000	Averaged	
24 Benzoic acid	17.29771	20.00000	0.30457	0.010	-13.51146	20.00000	Quadratic	
25 2,4-Dichlorophenol	0.36979	0.34239	0.34239	0.100	-7.40894	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.36143	0.34902	0.34902	0.010	-3.43176	20.00000	Averaged	
28 Naphthalene	1.06494	1.00905	1.00905	0.100	-5.24869	20.00000	Averaged	
29 4-Chloroaniline	0.41634	0.39917	0.39917	0.010	-4.12381	20.00000	Averaged	
30 Hexachlorobutadiene	0.21470	0.20960	0.20960	0.010	-2.37560	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.32531	0.37130	0.37130	0.200	14.13603	20.00000	Averaged	
32 2-Methylnaphthalene	0.70737	0.68994	0.68994	0.300	-2.46358	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.44016	0.34761	0.34761	0.001	-21.02664	20.00000	Averaged	<-
34 2,4,6-Trichlorophenol	0.42101	0.43272	0.43272	0.200	2.77947	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.43401	0.47991	0.47991	0.200	10.57642	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.39609	1.32883	1.32883	0.010	-4.81735	20.00000	Averaged	
37 2-Chloronaphthalene	1.11145	1.07002	1.07002	0.700	-3.72765	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0614.d
Analysis Type:
Lab Sample ID: CC0614
Method: /chem1/nt10.i/20130614.b/ABN.m

Injection Date: 14-JUN-2013 12:53
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.26826	0.31081	0.31081	0.010	15.86113	20.00000	Averaged	
39 Dimethylphthalate	1.20078	1.18483	1.18483	0.010	-1.32779	20.00000	Averaged	
40 Acenaphthylene	1.88508	1.72980	1.72980	0.900	-8.23736	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.28135	0.29223	0.29223	0.100	3.86752	20.00000	Averaged	
43 3-Nitroaniline	0.23227	0.16652	0.16652	0.010	-28.30516	20.00000	Averaged	<-
44 Acenaphthene	1.13602	1.08216	1.08216	0.100	-4.74069	20.00000	Averaged	
45 2,4-Dinitrophenol	14.15374	20.00000	0.17692	0.030	-29.23128	20.00000	Quadratic	<-
46 Dibenzofuran	1.55334	1.49603	1.49603	0.800	-3.68942	20.00000	Averaged	
47 4-Nitrophenol	10.28202	10.00000	0.18014	0.010	2.82025	20.00000	Quadratic	
48 2,4-Dinitrotoluene	0.36288	0.39889	0.39889	0.200	9.92303	20.00000	Averaged	
50 Diethylphthalate	1.20662	1.19425	1.19425	0.010	-1.02464	20.00000	Averaged	
49 Fluorene	1.32546	1.23648	1.23648	0.100	-6.71293	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.65156	0.57644	0.57644	0.100	-11.52853	20.00000	Averaged	
52 4-Nitroaniline	0.24126	0.20249	0.20249	0.010	-16.07060	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	18.00935	20.00000	0.17281	0.001	-9.95326	20.00000	Quadratic	
54 N-Nitrosodiphenylamine	0.46304	0.45105	0.45105	0.010	-2.59076	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.21154	0.21532	0.21532	0.010	1.78896	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22633	0.22547	0.22547	0.100	-0.37930	20.00000	Averaged	
57 Hexachlorobenzene	0.27006	0.25932	0.25932	0.100	-3.97431	20.00000	Averaged	
58 Pentachlorophenol	0.18956	0.19358	0.19358	0.010	2.11806	20.00000	Averaged	
60 Phenanthrene	1.09106	1.05955	1.05955	0.700	-2.88778	20.00000	Averaged	
61 Anthracene	1.11776	1.07817	1.07817	0.700	-3.54192	20.00000	Averaged	
62 Carbazole	0.67896	0.44020	0.44020	0.010	-35.16592	20.00000	Averaged	<-
63 Di-n-butylphthalate	1.15386	1.19179	1.19179	0.010	3.28717	20.00000	Averaged	
64 Fluoranthene	1.28413	1.27666	1.27666	0.600	-0.58182	20.00000	Averaged	
65 Pyrene	1.23758	1.23871	1.23871	0.600	0.09105	20.00000	Averaged	
$ 66 Terphenyl-d14	0.77864	0.75203	0.75203	0.010	-3.41820	20.00000	Averaged	
67 Butylbenzylphthalate	0.42263	0.46635	0.46635	0.010	10.34498	20.00000	Averaged	
68 Benzo(a)anthracene	1.11989	1.10821	1.10821	0.700	-1.04288	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.42653	0.32894	0.32894	0.010	-22.87967	20.00000	Averaged	<-
71 Chrysene	1.01345	0.96043	0.96043	0.700	-5.23199	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.53180	0.52251	0.52251	0.010	-1.74610	20.00000	Averaged	
73 Di-n-octylphthalate	0.92098	0.86092	0.86092	0.010	-6.52205	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.18784	1.20019	1.20019	0.700	1.03900	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25114	1.23249	1.23249	0.700	-1.49043	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 14-JUN-2013 12:53
Lab File ID: cc0614.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0614 Quant Type: ISTD
Method: /chem1/nt10.i/20130614.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
76 Benzo(a)pyrene	1.01481	1.02191	1.02191	0.700	0.70012	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.16916	1.19934	1.19934	0.500	2.58172	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.89686	0.92570	0.92570	0.400	3.21528	20.00000	Averaged	
80 Benzo(g,h,i)perylene	1.01156	1.02606	1.02606	0.500	1.43381	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.91125	0.90527	0.90527	0.010	-0.65680	20.00000	Averaged	
91 Aniline	4.01210	4.25950	4.25950	0.010	6.16627	20.00000	Averaged	
93 Benzidine	3.81945	10.00000	0.04750	0.010	-61.80550	20.00000	Quadratic	<-
103 Pyridine	0.80099	0.78983	0.78983	0.010	-1.39371	20.00000	Averaged	
105 1-methylnaphthalene	0.64873	0.63257	0.63257	0.010	-2.49071	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.23715	1.21256	1.21256	0.010	-1.98708	20.00000	Averaged	
187 Total Benzofluoranthenes	1.15343	1.13988	1.13988	0.010	-1.17480	20.00000	Averaged	
99 Perylene	1.16006	1.07200	1.07200	0.010	-7.59054	20.00000	Averaged	
98 Retene	0.46838	0.46406	0.46406	0.010	-0.92198	20.00000	Averaged	
120 2,3,4,6-Tetrachlorophenol	0.32282	0.34278	0.34278	0.010	6.18192	20.00000	Averaged	

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130614.b/cc0614.d
Lab Smp Id: CC0614
Inj Date : 14-JUN-2013 12:53
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0614
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130614.b/ABN.m
Meth Date : 17-Jun-2013 13:35 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	5.698	5.698	(0.716)	74315	5.00000	5.349
$ 2	Phenol-d5	99	7.405	7.405	(0.931)	97257	5.00000	5.410
3	Phenol	94	7.421	7.421	(0.933)	122007	5.00000	6.063
$ 5	2-Chlorophenol-d4	132	7.583	7.583	(0.953)	70861	5.00000	5.193
4	Bis(2-Chloroethyl)ether	93	7.537	7.537	(0.947)	71946	5.00000	4.972
6	2-Chlorophenol	128	7.614	7.614	(0.957)	77764	5.00000	5.011
7	1,3-Dichlorobenzene	146	7.877	7.877	(0.990)	76471	5.00000	4.911
* 8	1,4-Dichlorobenzene-d4	152	7.954	7.954	(1.000)	38921	4.00000	
9	1,4-Dichlorobenzene	146	7.986	7.986	(1.004)	75596	5.00000	4.925
$ 10	1,2-Dichlorobenzene-d4	152	8.319	8.319	(1.046)	50020	5.00000	5.096
12	1,2-Dichlorobenzene	146	8.350	8.350	(1.050)	73382	5.00000	4.994
11	Benzyl alcohol	108	8.296	8.296	(1.043)	32618	5.00000	3.854(M)
14	2,2'-oxybis(1-Chloropropane)	121	8.614	8.614	(1.083)	22767	5.00000	5.098
13	2-Methylphenol	108	8.575	8.575	(1.078)	76097	5.00000	5.256
17	Hexachloroethane	117	8.964	8.964	(1.127)	31335	5.00000	4.879
16	N-Nitroso-di-n-propylamine	70	8.886	8.886	(1.117)	48557	5.00000	5.371
15	4-Methylphenol	108	8.878	8.878	(1.116)	78917	5.00000	5.345
$ 18	Nitrobenzene-d5	82	9.111	9.111	(0.863)	79104	5.00000	5.086
19	Nitrobenzene	77	9.150	9.150	(0.867)	72430	5.00000	5.044
20	Isophorone	82	9.639	9.639	(0.913)	135983	5.00000	5.035
21	2-Nitrophenol	139	9.809	9.809	(0.929)	44200	5.00000	5.491
22	2,4-Dimethylphenol	107	9.964	9.964	(0.944)	144576	10.0000	9.767
23	Bis(2-Chloroethoxy)methane	93	10.149	10.149	(0.961)	82287	5.00000	5.166
24	Benzoic acid	105	10.249	10.249	(0.971)	224461	20.0000	17.30
25	2,4-Dichlorophenol	162	10.311	10.311	(0.977)	126165	10.0000	9.259
26	1,2,4-Trichlorobenzene	180	10.481	10.481	(0.993)	64305	5.00000	4.828

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
*	27 Naphthalene-d8	136	10.558	10.558	(1.000)	147394	4.00000	
	28 Naphthalene	128	10.596	10.596	(1.004)	185909	5.00000	4.738
	29 4-Chloroaniline	127	10.797	10.797	(1.023)	147088	10.0000	9.588
	30 Hexachlorobutadiene	225	11.021	11.021	(1.044)	38617	5.00000	4.881
	31 4-Chloro-3-methylphenol	107	11.888	11.888	(1.126)	136817	10.0000	11.41
	32 2-Methylnaphthalene	142	12.089	12.089	(1.145)	127116	5.00000	4.877
	33 Hexachlorocyclopentadiene	237	12.600	12.600	(0.876)	81188	10.0000	7.897
	34 2,4,6-Trichlorophenol	196	12.786	12.786	(0.889)	101065	10.0000	10.28
	35 2,4,5-Trichlorophenol	196	12.863	12.863	(0.894)	112088	10.0000	11.06
$	36 2-Fluorobiphenyl	172	12.956	12.956	(0.900)	155181	5.00000	4.759
	37 2-Chloronaphthalene	162	13.126	13.126	(0.912)	124957	5.00000	4.814
	38 2-Nitroaniline	65	13.451	13.451	(0.935)	72592	10.0000	11.59
	39 Dimethylphthalate	163	13.970	13.970	(0.971)	138365	5.00000	4.934
	40 Acenaphthylene	152	14.039	14.039	(0.976)	202006	5.00000	4.588
	41 2,6-Dinitrotoluene	165	14.086	14.086	(0.979)	68253	10.0000	10.39
*	42 Acenaphthene-d10	164	14.388	14.388	(1.000)	93424	4.00000	
	43 3-Nitroaniline	138	14.372	14.372	(0.999)	38893	10.0000	7.169(M)
	44 Acenaphthene	153	14.457	14.457	(1.005)	126375	5.00000	4.763
	45 2,4-Dinitrophenol	184	14.596	14.596	(1.014)	82642	20.0000	14.15
	46 Dibenzofuran	168	14.813	14.813	(1.030)	174706	5.00000	4.816
	47 4-Nitrophenol	109	14.820	14.820	(1.030)	42074	10.0000	10.28
	48 2,4-Dinitrotoluene	165	14.936	14.936	(1.038)	93164	10.0000	10.99
	50 Diethylphthalate	149	15.547	15.547	(1.081)	139465	5.00000	4.949
	49 Fluorene	166	15.570	15.570	(1.082)	144396	5.00000	4.664
	51 4-Chlorophenyl-phenylether	204	15.617	15.617	(1.085)	67317	5.00000	4.424
	52 4-Nitroaniline	138	15.733	15.733	(1.093)	47294	10.0000	8.393
	53 4,6-Dinitro-2-methylphenol	198	15.825	15.825	(0.898)	136423	20.0000	18.01
	54 N-Nitrosodiphenylamine	169	15.895	15.895	(0.902)	89020	5.00000	4.870
$	55 2,4,6-Tribromophenol	330	16.149	16.149	(1.122)	25145	5.00000	5.089
	56 4-Bromophenyl-phenylether	248	16.681	16.681	(0.947)	44500	5.00000	4.981
	57 Hexachlorobenzene	284	16.967	16.967	(0.963)	51181	5.00000	4.801
	58 Pentachlorophenol	266	17.385	17.385	(0.987)	76410	10.0000	10.21
*	59 Phenanthrene-d10	188	17.617	17.617	(1.000)	157890	4.00000	
	60 Phenanthrene	178	17.671	17.671	(1.003)	209115	5.00000	4.856
	61 Anthracene	178	17.772	17.772	(1.009)	212790	5.00000	4.823
	62 Carbazole	167	18.166	18.166	(1.031)	86878	5.00000	3.242
	63 Di-n-butylphthalate	149	19.157	19.157	(1.087)	235215	5.00000	5.164
	64 Fluoranthene	202	20.194	20.194	(1.146)	251964	5.00000	4.971
	65 Pyrene	202	20.619	20.619	(0.902)	260331	5.00000	5.005
$	66 Terphenyl-d14	244	20.998	20.998	(0.919)	158049	5.00000	4.829
	67 Butylbenzylphthalate	149	21.997	21.997	(0.962)	98009	5.00000	5.517
	68 Benzo(a)anthracene	228	22.826	22.826	(0.999)	232905	5.00000	4.948
*	69 Chrysene-d12	240	22.856	22.856	(1.000)	168131	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.841	22.841	(0.999)	138264	10.0000	7.712
	71 Chrysene	228	22.903	22.903	(1.002)	201847	5.00000	4.738
	72 bis(2-Ethylhexyl)phthalate	149	23.089	23.089	(0.959)	137458	5.00000	4.913
*	134 Di-n-octylphthalate-d4	153	24.072	24.072	(1.000)	210456	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
73	Di-n-octylphthalate	149	24.080	24.080	(1.000)	226481	5.00000	4.674
74	Benzo(b)fluoranthene	252	24.598	24.598	(0.978)	223290	5.00000	5.052
75	Benzo(k)fluoranthene	252	24.629	24.629	(0.979)	229301	5.00000	4.925
76	Benzo(a)pyrene	252	25.071	25.071	(0.997)	190123	5.00000	5.035
* 77	Perylene-d12	264	25.156	25.156	(1.000)	148837	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.924	26.924	(1.070)	223133	5.00000	5.129
79	Dibenzo(a,h)anthracene	278	26.956	26.956	(1.072)	172223	5.00000	5.161
80	Benzo(g,h,i)perylene	276	27.429	27.429	(1.090)	190895	5.00000	5.072
90	N-Nitrosodimethylamine	74	3.450	3.450	(0.434)	88085	10.0000	9.934
91	Aniline	93	7.405	7.405	(0.931)	207230	5.00000	5.308
93	Benzidine	184	20.511	20.511	(0.897)	19965	10.0000	3.819
103	Pyridine	79	3.466	3.466	(0.436)	76852	10.0000	9.861
105	1-methylnaphthalene	142	12.314	12.314	(1.166)	116547	5.00000	4.875
111	Azobenzene (1,2-DP-Hydrazine)	77	15.956	15.956	(1.109)	141603	5.00000	4.901
187	Total Benzofluoranthenes	252	24.629	24.629	(0.979)	424142	10.0000	9.883
99	Perylene	252	25.187	25.187	(1.001)	199442	5.00000	4.620
98	Retene	219	21.285	21.285	(0.931)	97529	5.00000	4.954
120	2,3,4,6-Tetrachlorophenol	232	15.207	15.207	(1.057)	40030	5.00000	5.309

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0614.d
Lab Smp Id: CC0614
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130614.b/ABN.m
Misc Info:

Calibration Date: 14-JUN-2013
Calibration Time: 11:45
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	38921	-13.99
27 Naphthalene-d8	166754	83377	333508	147394	-11.61
42 Acenaphthene-d10	106910	53455	213820	93424	-12.61
59 Phenanthrene-d10	179783	89892	359566	157890	-12.18
69 Chrysene-d12	192841	96420	385682	168131	-12.81
134 Di-n-octylphthala	229567	114784	459134	210456	-8.32
77 Perylene-d12	184310	92155	368620	148837	-19.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.95	7.45	8.45	7.95	0.00
27 Naphthalene-d8	10.56	10.06	11.06	10.56	0.00
42 Acenaphthene-d10	14.39	13.89	14.89	14.39	0.00
59 Phenanthrene-d10	17.62	17.12	18.12	17.62	0.00
69 Chrysene-d12	22.86	22.36	23.36	22.86	0.00
134 Di-n-octylphthala	24.07	23.57	24.57	24.07	0.00
77 Perylene-d12	25.16	24.66	25.66	25.16	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130614.b/cc0614.d

Date : 14-JUN-2013 12:53

Client ID:

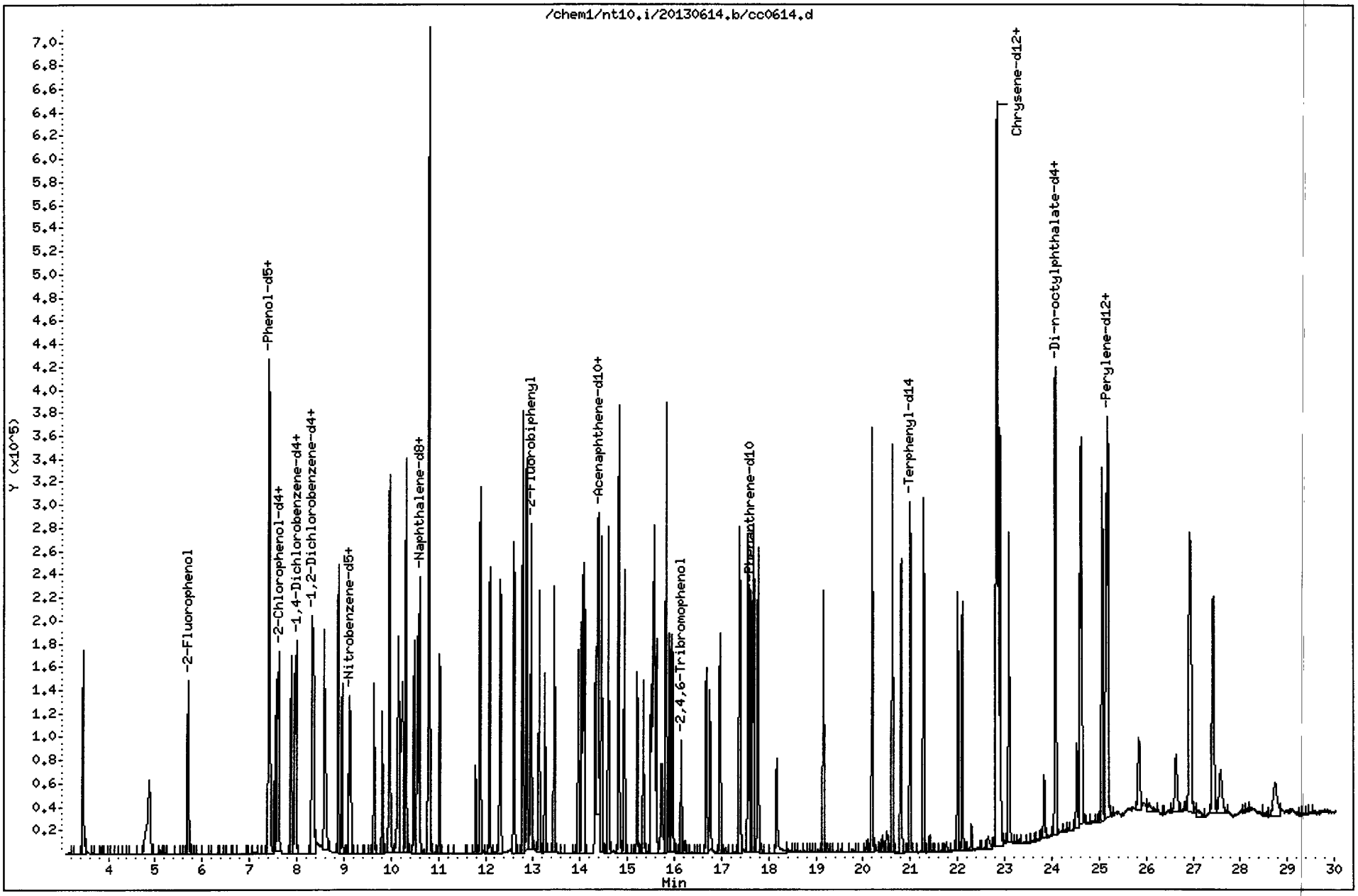
Sample Info: CC0614

Instrument: nt10.i

Operator: VTS/YZ

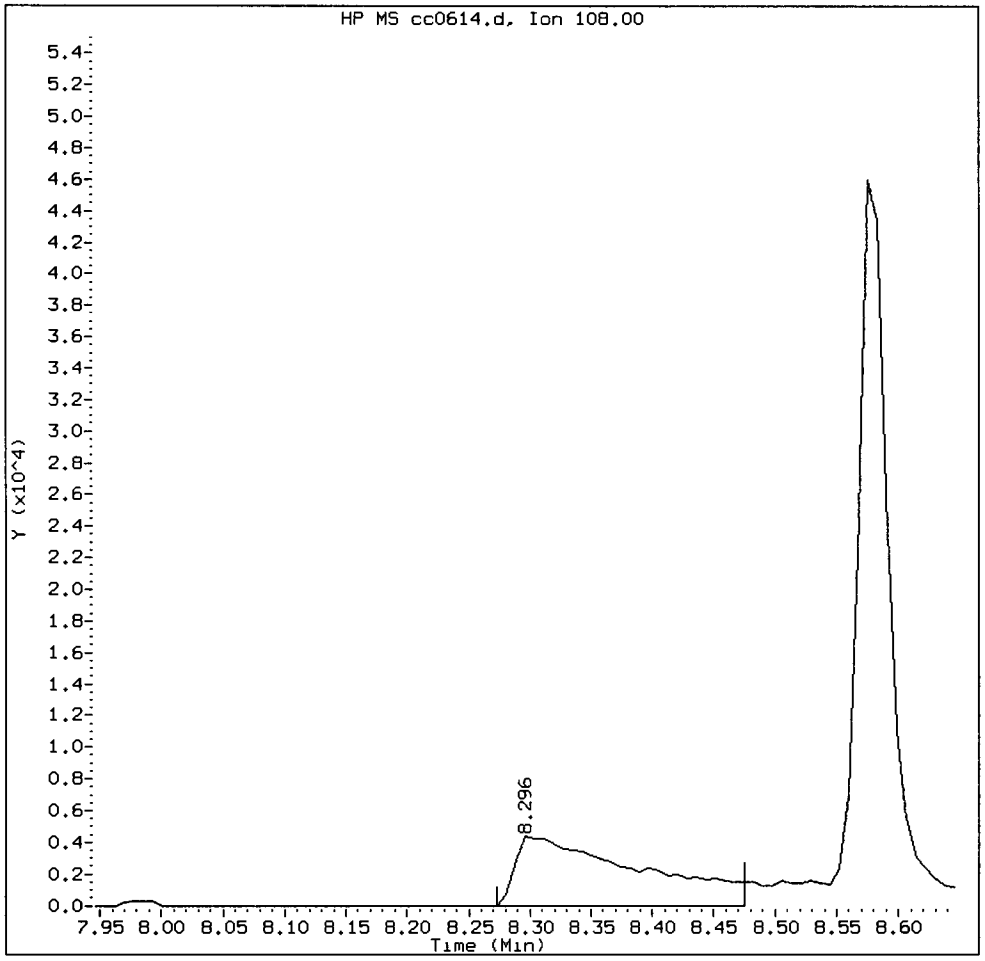
Column phase: ZB-5msi

Column diameter: 0.25



CC0614, /chem1/nt10.i/20130614.b/cc0614.d

Benzyl alcohol Amount: 3.85 Area: 32618



MANUAL INTEGRATION for Benzyl alcohol

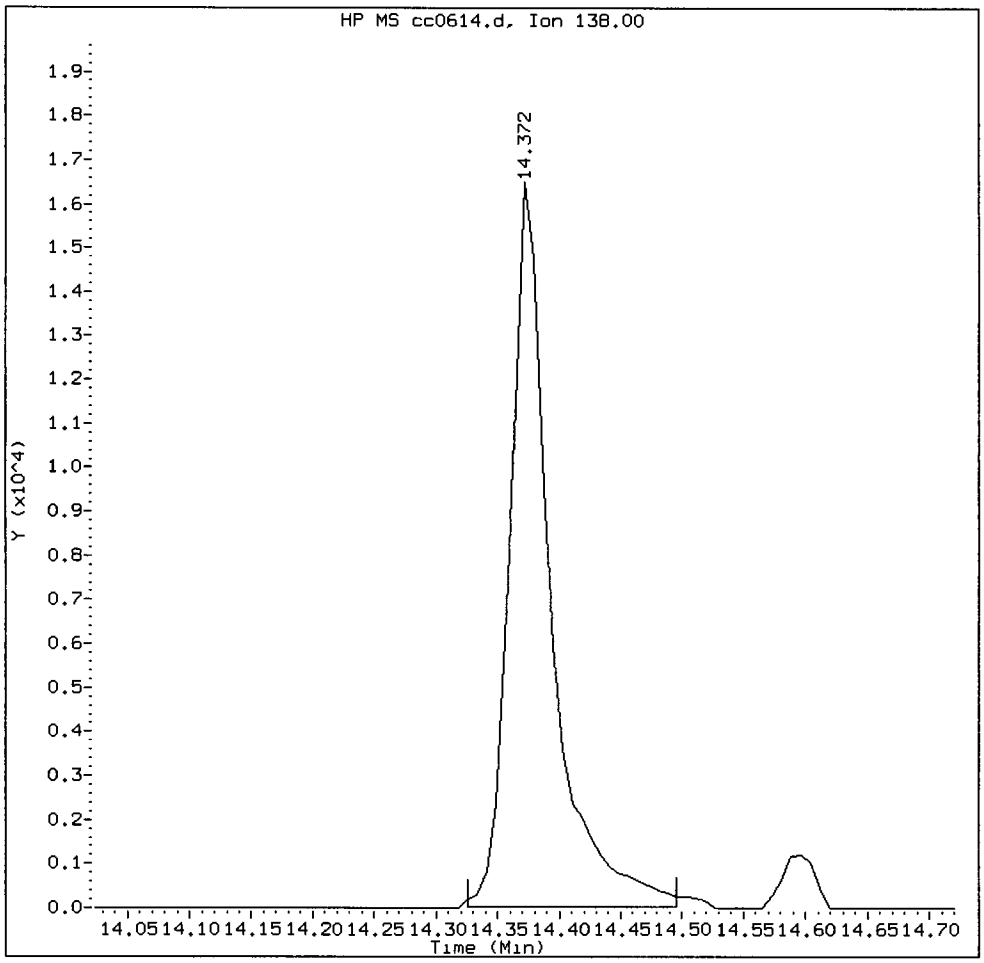
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 6/13/13

CC0614, /chem1/nt10.i/20130614.b/cc0614.d

3-Nitroaniline Amount: 7.17 Area: 38893



MANUAL INTEGRATION for 3-Nitroaniline

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/17/13

CO-ELUTION SUMMARY FOR FILE - cc0614.d

Lab ID: CC0614, Method: ABN.m, Instrument: nt10.i, Date: 14-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

JZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/ws49mb.d
Lab Smp Id: WS49MBS1 Client Smp ID: WS49MBS1
Inj Date : 13-JUN-2013 13:45
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS49MBS1
Misc Info : 13-11813
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 13-Jun-2013 13:32 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.836	5.820	(0.724)	82183	4.77551	477.6
$	2 Phenol-d5	99	7.497	7.497	(0.930)	115537	5.18823	518.8
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.698	7.690	(0.955)	85225	5.04164	504.2
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.062	8.054	(1.000)	48215	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.426	8.426	(1.045)	38728	3.18495	318.5
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.203	9.203	(0.865)	65813	3.26376	326.4
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.634	10.634	(1.000)	191089	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.009	13.009	(0.901)	128235	3.24995	325.0
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.433	14.433	(1.000)	113052	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.171	16.171	(1.120)	32128	5.37382	537.4
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.631	17.631	(1.000)	194526	4.00000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	20.958	20.958	(0.919)	158673	4.18670	418.7
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	22.801	22.801	(1.000)	194694	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134 Di-n-octylphthalate-d4	153	23.978	23.977	(1.000)	236085	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	25.077	25.069	(1.000)	173223	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					
	99 Perylene	252	Compound Not Detected.					
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49mb.d
Lab Smp Id: WS49MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: WS49MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	48215	6.55
27 Naphthalene-d8	166754	83377	333508	191089	14.59
42 Acenaphthene-d10	106910	53455	213820	113052	5.75
59 Phenanthrene-d10	179783	89892	359566	194526	8.20
69 Chrysene-d12	192841	96420	385682	194694	0.96
134 Di-n-octylphthala	229567	114784	459134	236085	2.84
77 Perylene-d12	184310	92155	368620	173223	-6.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.06	0.10
27 Naphthalene-d8	10.63	10.13	11.13	10.63	0.00
42 Acenaphthene-d10	14.43	13.93	14.93	14.43	0.00
59 Phenanthrene-d10	17.63	17.13	18.13	17.63	0.00
69 Chrysene-d12	22.80	22.30	23.30	22.80	0.00
134 Di-n-octylphthala	23.98	23.48	24.48	23.98	0.00
77 Perylene-d12	25.07	24.57	25.57	25.08	0.03

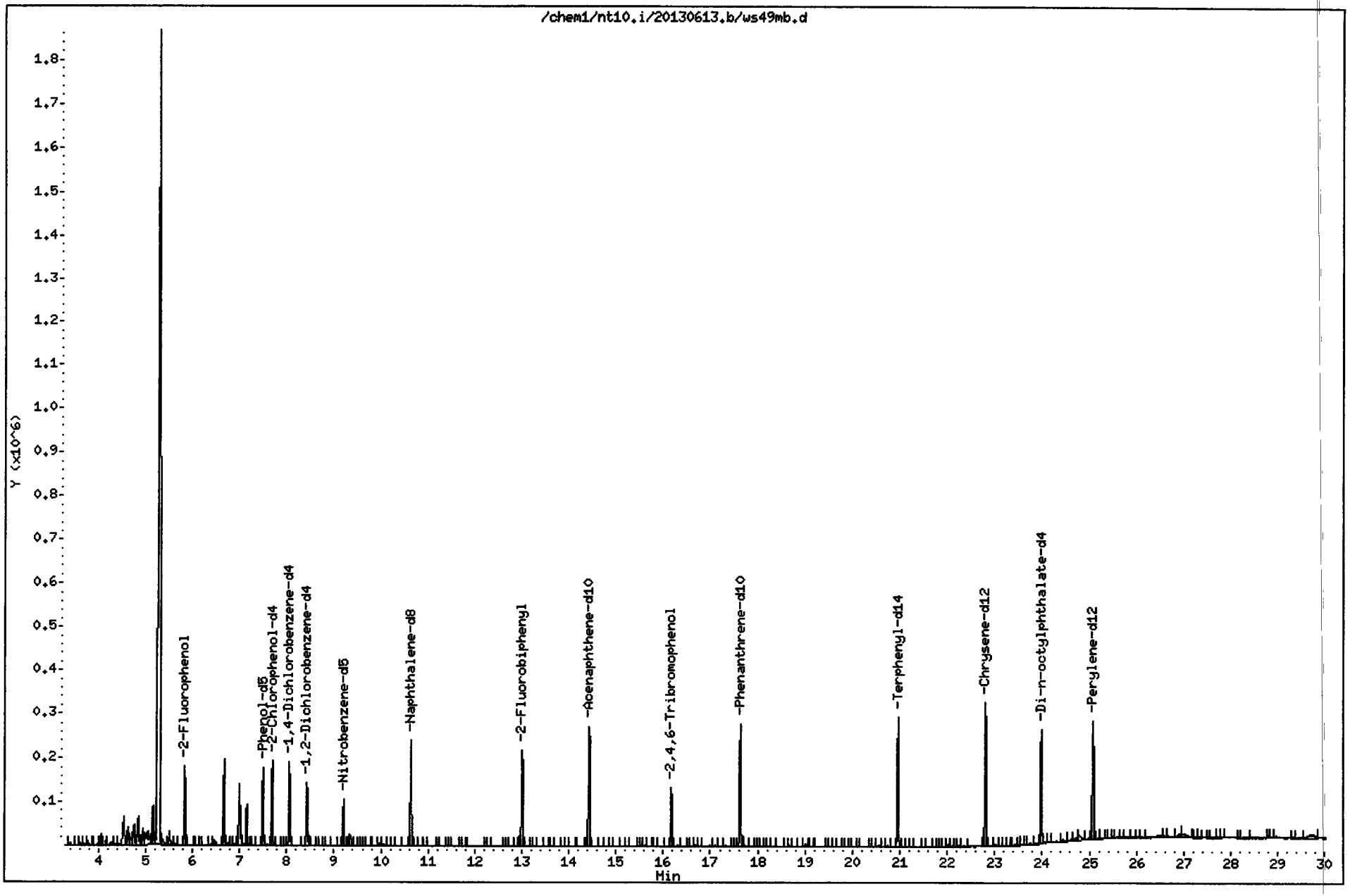
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	0.000	*	42-113
78 Indeno(1,2,3-cd)p	500.0	0.000	*	42-123
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-133
80 Benzo(g,h,i)peryl	500.0	0.000	*	38-126
105 1-methylnaphthale	500.0	0.000	*	42-100
187 Total Benzofluora	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	477.6	63.67	27-120
$ 2 Phenol-d5	750.0	518.8	69.18	29-120
$ 5 2-Chlorophenol-d4	750.0	504.2	67.22	31-120
$ 10 1,2-Dichlorobenzen	500.0	318.5	63.70	32-120
$ 18 Nitrobenzene-d5	500.0	326.4	65.28	30-120
$ 36 2-Fluorobiphenyl	500.0	325.0	65.00	35-120
$ 55 2,4,6-Tribromophen	750.0	537.4	71.65	24-134
$ 66 Terphenyl-d14	500.0	418.7	83.73	37-120

Data File: /chem1/nt10.i/20130613.b/ws49mb.d
Date : 13-JUN-2013 13:45
Client ID: WS49MBS1
Sample Info: WS49MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ws49mb.d

Lab ID: WS49MBS1, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/ws49sb.d
Lab Smp Id: WS49LCSS1 Client Smp ID: WS49LCSS1
Inj Date : 13-JUN-2013 14:21
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS49LCSS1
Misc Info : 13-11813
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 17-Jun-2013 13:58 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.836	5.820	(0.724)	93716	5.31526	531.5
$	2 Phenol-d5	99	7.497	7.497	(0.930)	127116	5.57149	557.1
	3 Phenol	94	7.520	7.512	(0.933)	97542	3.81948	381.9
$	5 2-Chlorophenol-d4	132	7.698	7.690	(0.955)	91411	5.27809	527.8
	4 Bis(2-Chloroethyl)ether	93	7.636	7.636	(0.947)	67962	3.70065	370.1
	6 2-Chlorophenol	128	7.729	7.721	(0.959)	61964	3.14625	314.6
	7 1,3-Dichlorobenzene	146	7.992	7.984	(0.991)	64520	3.26470	326.5
*	8 1,4-Dichlorobenzene-d4	152	8.062	8.054	(1.000)	49398	4.00000	
	9 1,4-Dichlorobenzene	146	8.093	8.085	(1.004)	64677	3.32017	332.0
$	10 1,2-Dichlorobenzene-d4	152	8.427	8.426	(1.045)	41917	3.36466	336.5
	12 1,2-Dichlorobenzene	146	8.458	8.450	(1.049)	63006	3.37820	337.8
	11 Benzyl alcohol	108	8.395	8.387	(1.041)	26088	2.42845	242.8
	14 2,2'-oxybis(1-Chloropropane)	121	8.706	8.698	(1.080)	20372	3.59413	359.4
	13 2-Methylphenol	108	8.667	8.659	(1.075)	54182	2.94835	294.8

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	9.063	9.063	(1.124)	27385	3.35988	336.0
	16 N-Nitroso-di-n-propylamine	70	8.970	8.970	(1.113)	43410	3.78356	378.4
	15 4-Methylphenol	108	8.962	8.947	(1.112)	115281	6.15234	615.2
$	18 Nitrobenzene-d5	82	9.203	9.203	(0.865)	68576	3.53033	353.0
	19 Nitrobenzene	77	9.242	9.234	(0.868)	66298	3.69684	369.7
	20 Isophorone	82	9.723	9.723	(0.914)	117368	3.47939	347.9
	21 2-Nitrophenol	139	9.901	9.893	(0.930)	41064	4.08446	408.4
	22 2,4-Dimethylphenol	107	10.033	10.025	(0.943)	98107	5.30686	530.7
	23 Bis(2-Chloroethoxy)methane	93	10.225	10.217	(0.961)	78416	3.94179	394.2
	24 Benzoic acid	105	10.310	10.294	(0.969)	250809	15.5100	1551
	25 2,4-Dichlorophenol	162	10.395	10.387	(0.977)	175793	10.3303	1033
	26 1,2,4-Trichlorobenzene	180	10.564	10.557	(0.993)	56984	3.42604	342.6
*	27 Naphthalene-d8	136	10.642	10.634	(1.000)	184077	4.00000	
	28 Naphthalene	128	10.680	10.672	(1.004)	155972	3.18260	318.3
	29 4-Chloroaniline	127	10.866	10.858	(1.021)	102971	5.37438	537.4
	30 Hexachlorobutadiene	225	11.097	11.089	(1.043)	34072	3.44848	344.8
	31 4-Chloro-3-methylphenol	107	11.941	11.933	(1.122)	171273	11.4407	1144
	32 2-Methylnaphthalene	142	12.158	12.150	(1.142)	111599	3.42829	342.8
	33 Hexachlorocyclopentadiene	237	12.668	12.660	(0.877)	102526	8.42232	842.2
	34 2,4,6-Trichlorophenol	196	12.846	12.838	(0.890)	126274	10.8450	1084
	35 2,4,5-Trichlorophenol	196	12.916	12.916	(0.894)	136375	11.3618	1136
$	36 2-Fluorobiphenyl	172	13.009	13.009	(0.901)	135146	3.50027	350.0
	37 2-Chloronaphthalene	162	13.195	13.187	(0.914)	115907	3.77077	377.1
	38 2-Nitroaniline	65	13.504	13.496	(0.935)	104656	14.1066	1411
	39 Dimethylphthalate	163	14.007	13.999	(0.970)	140570	4.23292	423.3
	40 Acenaphthylene	152	14.100	14.092	(0.976)	173359	3.32527	332.5
	41 2,6-Dinitrotoluene	165	14.131	14.123	(0.979)	99191	12.7479	1275
*	42 Acenaphthene-d10	164	14.440	14.433	(1.000)	110624	4.00000	
	43 3-Nitroaniline	138	14.410	14.409	(0.998)	65397	10.1808	1018 (M)
	44 Acenaphthene	153	14.502	14.502	(1.004)	110917	3.53040	353.0
	45 2,4-Dinitrophenol	184	14.634	14.626	(1.013)	96614	13.9778	1398
	46 Dibenzofuran	168	14.858	14.850	(1.029)	161633	3.76249	376.2
	47 4-Nitrophenol	109	14.842	14.835	(1.028)	49778	10.2735	1027
	48 2,4-Dinitrotoluene	165	14.974	14.966	(1.037)	134643	13.4163	1342
	50 Diethylphthalate	149	15.569	15.561	(1.078)	143705	4.30638	430.6
	49 Fluorene	166	15.608	15.600	(1.081)	128904	3.51651	351.7
	51 4-Chlorophenyl-phenylether	204	15.646	15.639	(1.083)	78752	4.37038	437.0
	52 4-Nitroaniline	138	15.755	15.747	(1.091)	84021	12.5923	1259
	53 4,6-Dinitro-2-methylphenol	198	15.855	15.847	(0.899)	167791	19.0219	1902
	54 N-Nitrosodiphenylamine	169	15.916	15.916	(0.902)	91580	4.30546	430.5
$	55 2,4,6-Tribromophenol	330	16.179	16.171	(1.120)	35391	6.04952	605.0
	56 4-Bromophenyl-phenylether	248	16.695	16.695	(0.946)	42831	4.11959	412.0
	57 Hexachlorobenzene	284	16.989	16.989	(0.963)	46519	3.74987	375.0
	58 Pentachlorophenol	266	17.391	17.391	(0.986)	99553	11.4326	1143
*	59 Phenanthrene-d10	188	17.639	17.631	(1.000)	183746	4.00000	
	60 Phenanthrene	178	17.685	17.685	(1.003)	196250	3.91566	391.6
	61 Anthracene	178	17.786	17.778	(1.008)	183476	3.57333	357.3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	18.173	18.165	(1.030)	174046	5.58039	558.0
63	Di-n-butylphthalate	149	19.132	19.124	(1.085)	251480	4.74451	474.5
64	Fluoranthene	202	20.177	20.177	(1.144)	239146	4.05413	405.4
65	Pyrene	202	20.594	20.594	(0.903)	240317	4.03854	403.9
$ 66	Terphenyl-d14	244	20.958	20.958	(0.919)	158957	4.24575	424.6
67	Butylbenzylphthalate	149	21.942	21.941	(0.962)	105838	5.20834	520.8
68	Benzo(a)anthracene	228	22.778	22.778	(0.999)	213438	3.96379	396.4
* 69	Chrysene-d12	240	22.809	22.801	(1.000)	192330	4.00000	
70	3,3'-Dichlorobenzidine	252	22.785	22.778	(0.999)	76271	3.71895	371.9
71	Chrysene	228	22.847	22.847	(1.002)	187783	3.85360	385.4
72	bis(2-Ethylhexyl)phthalate	149	23.010	23.002	(0.960)	133783	4.17722	417.7
* 134	Di-n-octylphthalate-d4	153	23.978	23.977	(1.000)	240893	4.00000	
73	Di-n-octylphthalate	149	23.985	23.985	(1.000)	216697	3.90695	390.7
74	Benzo(b)fluoranthene	252	24.527	24.519	(0.978)	205488	3.97725	397.7
75	Benzo(k)fluoranthene	252	24.566	24.558	(0.980)	228832	4.20500	420.5
76	Benzo(a)pyrene	252	25.000	24.992	(0.997)	173168	3.92319	392.3
* 77	Perylene-d12	264	25.077	25.069	(1.000)	173982	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.814	26.814	(1.069)	214526	4.21854	421.9
79	Dibenzo(a,h)anthracene	278	26.838	26.830	(1.070)	150079	3.84724	384.7
80	Benzo(g,h,i)perylene	276	27.319	27.304	(1.089)	179079	4.07014	407.0
90	N-Nitrosodimethylamine	74	3.650	3.635	(0.453)	113180	10.0573	1006
91	Aniline	93	7.520	7.512	(0.933)	118133	2.38424	238.4
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.658	3.643	(0.454)	117107	11.8388	1184
105	1-methylnaphthalene	142	12.382	12.382	(1.164)	109095	3.65426	365.4
111	Azobenzene (1,2-DP-Hydrazine)	77	15.986	15.978	(1.107)	130923	3.82654	382.7
187	Total Benzofluoranthenes	252	24.527	24.558	(0.978)	407217	8.11688	811.7
99	Perylene	252	25.116	25.108	(1.002)	90837	1.80028	180.0
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	15.244	15.236	(1.056)	37164	4.16262	416.3

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49sb.d
Lab Smp Id: WS49LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: WS49LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	49398	9.17
27 Naphthalene-d8	166754	83377	333508	184077	10.39
42 Acenaphthene-d10	106910	53455	213820	110624	3.47
59 Phenanthrene-d10	179783	89892	359566	183746	2.20
69 Chrysene-d12	192841	96420	385682	192330	-0.26
134 Di-n-octylphthala	229567	114784	459134	240893	4.93
77 Perylene-d12	184310	92155	368620	173982	-5.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.06	0.10
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.07
42 Acenaphthene-d10	14.43	13.93	14.93	14.44	0.05
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.05
69 Chrysene-d12	22.80	22.30	23.30	22.81	0.03
134 Di-n-octylphthala	23.98	23.48	24.48	23.98	0.00
77 Perylene-d12	25.07	24.57	25.57	25.08	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WS49
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WS49LCSS1
Client Smp ID: WS49LCSS1
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: LCS
SpikeList File: SHORTPSDDA.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11813

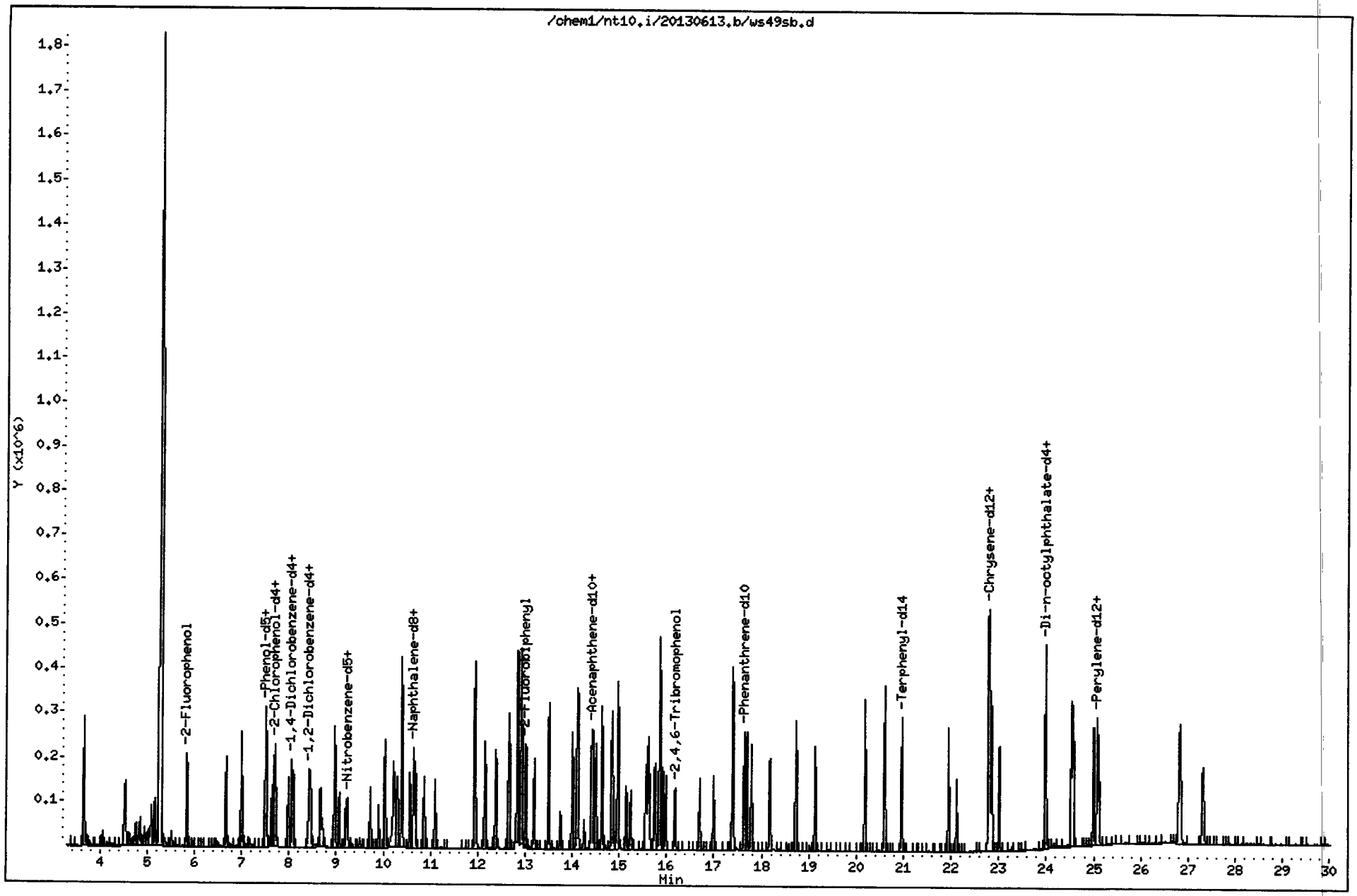
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	381.9	76.39	34-105
7 1,3-Dichlorobenzen	500.0	326.5	65.29	40-100
9 1,4-Dichlorobenzen	500.0	332.0	66.40	39-100
11 Benzyl alcohol	500.0	242.8	48.57	19-117
12 1,2-Dichlorobenzen	500.0	337.8	67.56	40-100
13 2-Methylphenol	500.0	294.8	58.97	28-100
15 4-Methylphenol	1000	615.2	61.52	29-100
17 Hexachloroethane	500.0	336.0	67.20	38-100
22 2,4-Dimethylphenol	1500	530.7	35.38	10-100
24 Benzoic acid	2750	1551	56.40	10-107
26 1,2,4-Trichloroben	500.0	342.6	68.52	35-103
28 Naphthalene	500.0	318.3	63.65	43-100
30 Hexachlorobutadien	500.0	344.8	68.97	37-100
32 2-Methylnaphthalen	500.0	342.8	68.57	43-100
39 Dimethylphthalate	500.0	423.3	84.66	43-114
40 Acenaphthylene	500.0	332.5	66.51	42-102
44 Acenaphthene	500.0	353.0	70.61	45-100
46 Dibenzofuran	500.0	376.2	75.25	43-103
49 Fluorene	500.0	351.7	70.33	45-107
50 Diethylphthalate	500.0	430.6	86.13	50-120
54 N-Nitrosodiphenyla	500.0	430.5	86.11	36-111
57 Hexachlorobenzene	500.0	375.0	75.00	33-113
58 Pentachlorophenol	1500	1143	76.22	16-120
60 Phenanthrene	500.0	391.6	78.31	49-112
61 Anthracene	500.0	357.3	71.47	45-106
63 Di-n-butylphthalat	500.0	474.5	94.89	48-126
64 Fluoranthene	500.0	405.4	81.08	53-118
65 Pyrene	500.0	403.9	80.77	48-121
67 Butylbenzylphthala	500.0	520.8	104.17	45-132
68 Benzo(a)anthracene	500.0	396.4	79.28	49-115
71 Chrysene	500.0	385.4	77.07	47-115
72 bis(2-Ethylhexyl)p	500.0	417.7	83.54	34-130
73 Di-n-octylphthalat	500.0	390.7	78.14	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	392.3	78.46	42-113
78 Indeno(1,2,3-cd)py	500.0	421.9	84.37	42-123
79 Dibenzo(a,h)anthra	500.0	384.7	76.94	30-133
80 Benzo(g,h,i)peryle	500.0	407.0	81.40	38-126
105 1-methylnaphthalen	500.0	365.4	73.09	42-100
187 Total Benzofluoran	1000	811.7	81.17	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	531.5	70.87	27-120
$ 2 Phenol-d5	750.0	557.1	74.29	29-120
$ 5 2-Chlorophenol-d4	750.0	527.8	70.37	31-120
$ 10 1,2-Dichlorobenzen	500.0	336.5	67.29	32-120
$ 18 Nitrobenzene-d5	500.0	353.0	70.61	30-120
$ 36 2-Fluorobiphenyl	500.0	350.0	70.01	35-120
$ 55 2,4,6-Tribromophen	750.0	605.0	80.66	24-134
$ 66 Terphenyl-d14	500.0	424.6	84.91	37-120

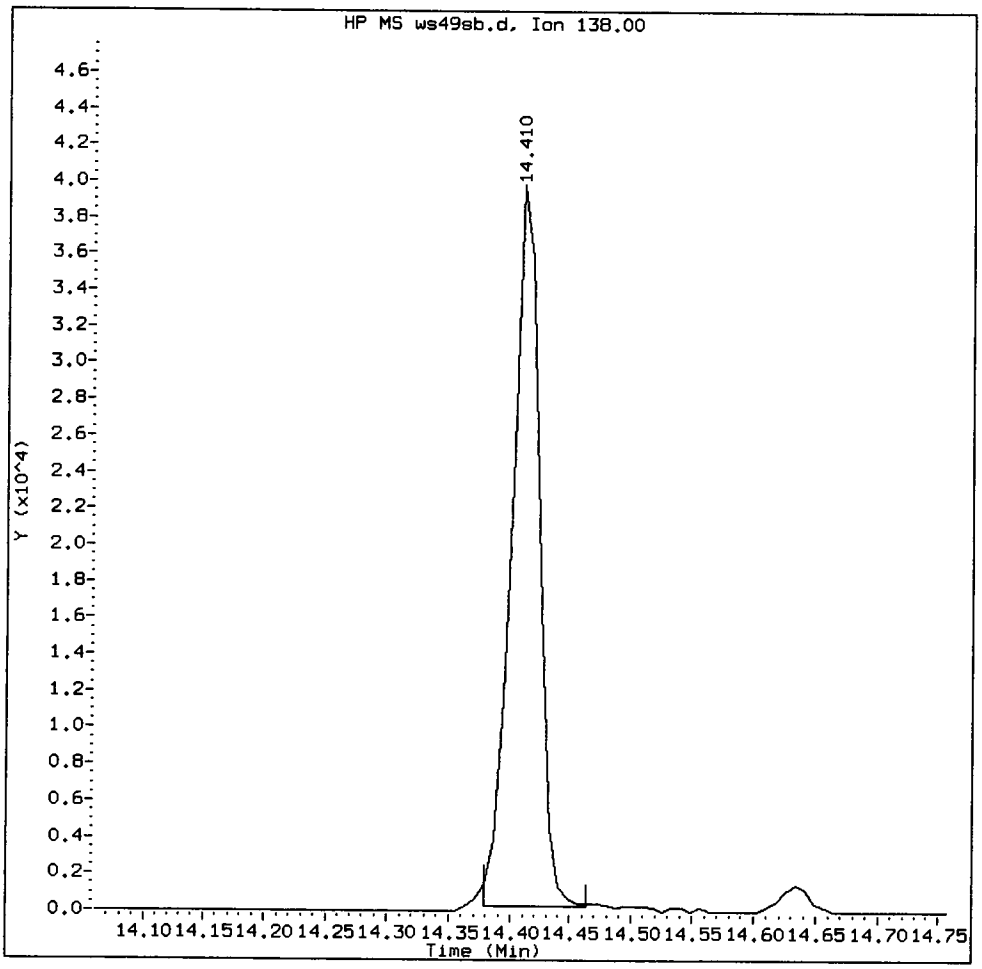
Data File: /chem1/nt10.i/20130613.b/ws49sb.d
Date : 13-JUN-2013 14:21
Client ID: WS49LCSS1
Sample Info: WS49LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WS49LCSS1, /chem1/nt10.i/20130613.b/ws49sb.d

3-Nitroaniline Amount: 10.18 Area: 65397



MANUAL INTEGRATION for 3-Nitroaniline

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 1/2 Date: 6/17/13

CO-ELUTION SUMMARY FOR FILE - ws49sb.d

Lab ID: WS49LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

YZ 6/17/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130613.b/ws49sbd.d
Lab Smp Id: WS49LCSDS1 Client Smp ID: WS49LCSDS1
Inj Date : 13-JUN-2013 14:58
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS49LCSDS1
Misc Info : 13-11813
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 17-Jun-2013 13:58 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	5.835	5.820	(0.724)	88269	5.07318	507.3
$ 2	Phenol-d5	99	7.505	7.497	(0.931)	119216	5.29502	529.5
3	Phenol	94	7.520	7.512	(0.933)	94554	3.75192	375.2
$ 5	2-Chlorophenol-d4	132	7.698	7.690	(0.955)	85702	5.01453	501.5
4	Bis(2-Chloroethyl)ether	93	7.644	7.636	(0.948)	64315	3.54884	354.9
6	2-Chlorophenol	128	7.729	7.721	(0.959)	59527	3.06287	306.3
7	1,3-Dichlorobenzene	146	7.992	7.984	(0.991)	62371	3.19810	319.8
* 8	1,4-Dichlorobenzene-d4	152	8.061	8.054	(1.000)	48747	4.00000	
9	1,4-Dichlorobenzene	146	8.092	8.085	(1.004)	63175	3.28638	328.6
$ 10	1,2-Dichlorobenzene-d4	152	8.426	8.426	(1.045)	38935	3.16703	316.7
12	1,2-Dichlorobenzene	146	8.457	8.450	(1.049)	61323	3.33187	333.2
11	Benzyl alcohol	108	8.403	8.387	(1.042)	19399	1.82991	183.0
14	2,2'-oxybis(1-Chloropropane)	121	8.706	8.698	(1.080)	20033	3.58152	358.2
13	2-Methylphenol	108	8.667	8.659	(1.075)	52784	2.91064	291.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	9.063	9.063	(1.124)	26447	3.28813	328.8
	16 N-Nitroso-di-n-propylamine	70	8.977	8.970	(1.114)	41422	3.65851	365.9
	15 4-Methylphenol	108	8.962	8.947	(1.112)	113301	6.12742	612.7
$	18 Nitrobenzene-d5	82	9.202	9.203	(0.865)	64264	3.44027	344.0
	19 Nitrobenzene	77	9.241	9.234	(0.868)	64521	3.74122	374.1
	20 Isophorone	82	9.722	9.723	(0.914)	112896	3.48028	348.0
	21 2-Nitrophenol	139	9.901	9.893	(0.930)	39169	4.05133	405.1
	22 2,4-Dimethylphenol	107	10.032	10.025	(0.943)	111724	6.28443	628.4
	23 Bis(2-Chloroethoxy)methane	93	10.225	10.217	(0.961)	74455	3.89192	389.2
	24 Benzoic acid	105	10.310	10.294	(0.969)	257295	16.5253	1653
	25 2,4-Dichlorophenol	162	10.394	10.387	(0.977)	165862	10.1354	1014
	26 1,2,4-Trichlorobenzene	180	10.564	10.557	(0.993)	55515	3.47082	347.1
*	27 Naphthalene-d8	136	10.641	10.634	(1.000)	177018	4.00000	
	28 Naphthalene	128	10.680	10.672	(1.004)	152418	3.23410	323.4
	29 4-Chloroaniline	127	10.865	10.858	(1.021)	98745	5.35934	535.9
	30 Hexachlorobutadiene	225	11.097	11.089	(1.043)	32877	3.46023	346.0
	31 4-Chloro-3-methylphenol	107	11.941	11.933	(1.122)	168519	11.7056	1171
	32 2-Methylnaphthalene	142	12.157	12.150	(1.142)	109658	3.50299	350.3
	33 Hexachlorocyclopentadiene	237	12.668	12.660	(0.877)	98568	8.38365	838.4
	34 2,4,6-Trichlorophenol	196	12.846	12.838	(0.890)	124508	11.0716	1107
	35 2,4,5-Trichlorophenol	196	12.916	12.916	(0.894)	136092	11.7394	1174
$	36 2-Fluorobiphenyl	172	13.016	13.009	(0.901)	126163	3.38321	338.3
	37 2-Chloronaphthalene	162	13.194	13.187	(0.914)	112774	3.79864	379.9
	38 2-Nitroaniline	65	13.504	13.496	(0.935)	99865	13.9370	1394
	39 Dimethylphthalate	163	14.007	13.999	(0.970)	139569	4.35147	435.1
	40 Acenaphthylene	152	14.100	14.092	(0.976)	165435	3.28554	328.6
	41 2,6-Dinitrotoluene	165	14.131	14.123	(0.979)	98090	13.0524	1305
*	42 Acenaphthene-d10	164	14.440	14.433	(1.000)	106844	4.00000	
	43 3-Nitroaniline	138	14.409	14.409	(0.998)	66280	10.6833	1068 (M)
	44 Acenaphthene	153	14.510	14.502	(1.005)	105364	3.47230	347.2
	45 2,4-Dinitrophenol	184	14.633	14.626	(1.013)	102376	15.3034	1530
	46 Dibenzofuran	168	14.858	14.850	(1.029)	155298	3.74292	374.3
	47 4-Nitrophenol	109	14.842	14.835	(1.028)	48966	10.4606	1046
	48 2,4-Dinitrotoluene	165	14.974	14.966	(1.037)	132504	13.6703	1367
	50 Diethylphthalate	149	15.569	15.561	(1.078)	140515	4.35976	436.0
	49 Fluorene	166	15.607	15.600	(1.081)	125825	3.55395	355.4
	51 4-Chlorophenyl-phenylether	204	15.646	15.639	(1.084)	74904	4.30390	430.4
	52 4-Nitroaniline	138	15.754	15.747	(1.091)	83799	13.0034	1300
	53 4,6-Dinitro-2-methylphenol	198	15.854	15.847	(0.899)	170290	20.0965	2010
	54 N-Nitrosodiphenylamine	169	15.924	15.916	(0.903)	89701	4.39277	439.3
$	55 2,4,6-Tribromophenol	330	16.178	16.171	(1.120)	33408	5.91259	591.3
	56 4-Bromophenyl-phenylether	248	16.695	16.695	(0.946)	42120	4.21994	422.0
	57 Hexachlorobenzene	284	16.996	16.989	(0.964)	44543	3.74013	374.0
	58 Pentachlorophenol	266	17.399	17.391	(0.986)	97326	11.6423	1164
*	59 Phenanthrene-d10	188	17.639	17.631	(1.000)	176399	4.00000	
	60 Phenanthrene	178	17.685	17.685	(1.003)	193817	4.02818	402.8
	61 Anthracene	178	17.786	17.778	(1.008)	179627	3.64408	364.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	62 Carbazole	167	18.172	18.165	(1.030)	173135	5.78238	578.2
	63 Di-n-butylphthalate	149	19.132	19.124	(1.085)	250861	4.92996	493.0
	64 Fluoranthene	202	20.176	20.177	(1.144)	243413	4.29833	429.8
	65 Pyrene	202	20.594	20.594	(0.903)	242740	4.25725	425.7
$	66 Terphenyl-d14	244	20.966	20.958	(0.919)	153981	4.29229	429.2
	67 Butylbenzylphthalate	149	21.941	21.941	(0.962)	105287	5.40729	540.7
	68 Benzo(a)anthracene	228	22.777	22.778	(0.999)	217002	4.20582	420.6
*	69 Chrysene-d12	240	22.808	22.801	(1.000)	184289	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.785	22.778	(0.999)	87676	4.46158	446.2
	71 Chrysene	228	22.847	22.847	(1.002)	187922	4.02472	402.5
	72 bis(2-Ethylhexyl)phthalate	149	23.010	23.002	(0.959)	123734	4.02858	402.9
*	134 Di-n-octylphthalate-d4	153	23.985	23.977	(1.000)	231019	4.00000	
	73 Di-n-octylphthalate	149	23.993	23.985	(1.000)	192587	3.62066	362.1
	74 Benzo(b)fluoranthene	252	24.527	24.519	(0.978)	202408	4.02317	402.3
	75 Benzo(k)fluoranthene	252	24.566	24.558	(0.980)	237048	4.47332	447.3
	76 Benzo(a)pyrene	252	24.999	24.992	(0.997)	174979	4.07101	407.1
*	77 Perylene-d12	264	25.077	25.069	(1.000)	169418	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	26.822	26.814	(1.070)	215356	4.34895	434.9
	79 Dibenzo(a,h)anthracene	278	26.837	26.830	(1.070)	151880	3.99829	399.8
	80 Benzo(g,h,i)perylene	276	27.311	27.304	(1.089)	182885	4.26862	426.9
	90 N-Nitrosodimethylamine	74	3.650	3.635	(0.453)	108637	9.78250	978.3
	91 Aniline	93	7.520	7.512	(0.933)	133283	2.72593	272.6
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	3.658	3.643	(0.454)	113448	11.6220	1162
	105 1-methylnaphthalene	142	12.382	12.382	(1.164)	104313	3.63342	363.3
	111 Azobenzene (1,2-DP-Hydrazine)	77	15.986	15.978	(1.107)	129391	3.91555	391.6
	187 Total Benzofluoranthenes	252	24.566	24.558	(0.980)	409959	8.39167	839.2
	99 Perylene	252	25.116	25.108	(1.002)	91978	1.87200	187.2
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	15.244	15.236	(1.056)	36304	4.21015	421.0

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49sbd.d
Lab Smp Id: WS49LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: WS49LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	48747	7.73
27 Naphthalene-d8	166754	83377	333508	177018	6.16
42 Acenaphthene-d10	106910	53455	213820	106844	-0.06
59 Phenanthrene-d10	179783	89892	359566	176399	-1.88
69 Chrysene-d12	192841	96420	385682	184289	-4.43
134 Di-n-octylphthala	229567	114784	459134	231019	0.63
77 Perylene-d12	184310	92155	368620	169418	-8.08

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.06	0.09
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.07
42 Acenaphthene-d10	14.43	13.93	14.93	14.44	0.05
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.04
69 Chrysene-d12	22.80	22.30	23.30	22.81	0.03
134 Di-n-octylphthala	23.98	23.48	24.48	23.99	0.03
77 Perylene-d12	25.07	24.57	25.57	25.08	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS49LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11813

Client SDG: WS49
Fraction: SV
Client Smp ID: WS49LCSDS1
Operator: VTS/YZ
SampleType: LCSD
Quant Type: ISTD

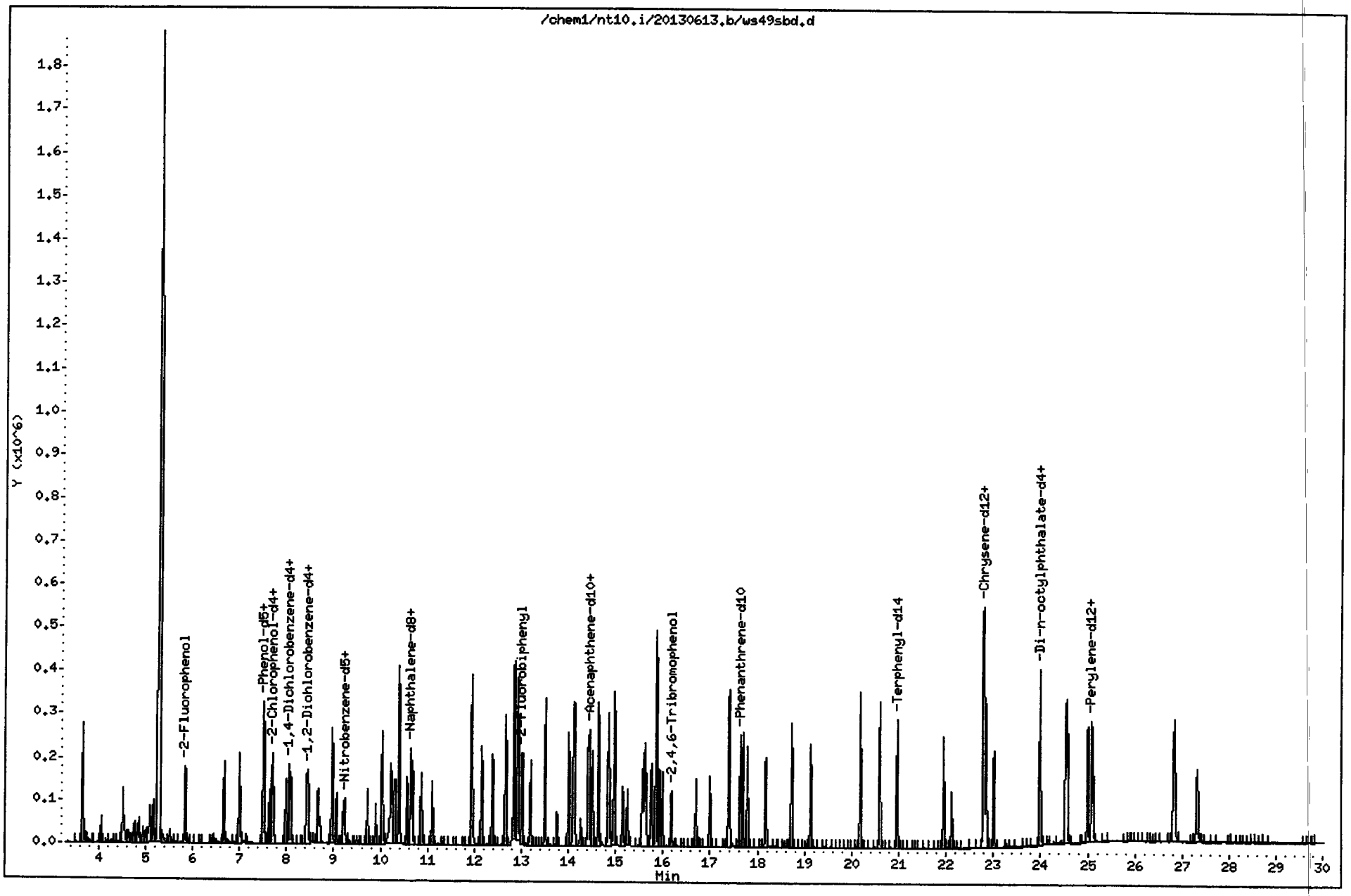
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	375.2	75.04	34-105
7	1,3-Dichlorobenzen	500.0	319.8	63.96	40-100
9	1,4-Dichlorobenzen	500.0	328.6	65.73	39-100
11	Benzyl alcohol	500.0	183.0	36.60	19-117
12	1,2-Dichlorobenzen	500.0	333.2	66.64	40-100
13	2-Methylphenol	500.0	291.1	58.21	28-100
15	4-Methylphenol	1000	612.7	61.27	29-100
17	Hexachloroethane	500.0	328.8	65.76	38-100
22	2,4-Dimethylphenol	1500	628.4	41.90	10-100
24	Benzoic acid	2750	1653	60.09	10-107
26	1,2,4-Trichloroben	500.0	347.1	69.42	35-103
28	Naphthalene	500.0	323.4	64.68	43-100
30	Hexachlorobutadien	500.0	346.0	69.20	37-100
32	2-Methylnaphthalen	500.0	350.3	70.06	43-100
39	Dimethylphthalate	500.0	435.1	87.03	43-114
40	Acenaphthylene	500.0	328.6	65.71	42-102
44	Acenaphthene	500.0	347.2	69.45	45-100
46	Dibenzofuran	500.0	374.3	74.86	43-103
49	Fluorene	500.0	355.4	71.08	45-107
50	Diethylphthalate	500.0	436.0	87.20	50-120
54	N-Nitrosodiphenyla	500.0	439.3	87.86	36-111
57	Hexachlorobenzene	500.0	374.0	74.80	33-113
58	Pentachlorophenol	1500	1164	77.62	16-120
60	Phenanthrene	500.0	402.8	80.56	49-112
61	Anthracene	500.0	364.4	72.88	45-106
63	Di-n-butylphthalat	500.0	493.0	98.60	48-126
64	Fluoranthene	500.0	429.8	85.97	53-118
65	Pyrene	500.0	425.7	85.14	48-121
67	Butylbenzylphthala	500.0	540.7	108.15	45-132
68	Benzo(a)anthracene	500.0	420.6	84.12	49-115
71	Chrysene	500.0	402.5	80.49	47-115
72	bis(2-Ethylhexyl)p	500.0	402.9	80.57	34-130
73	Di-n-octylphthalat	500.0	362.1	72.41	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	407.1	81.42	42-113
78 Indeno(1,2,3-cd)py	500.0	434.9	86.98	42-123
79 Dibenzo(a,h)anthra	500.0	399.8	79.97	30-133
80 Benzo(g,h,i)peryle	500.0	426.9	85.37	38-126
105 1-methylnaphthalen	500.0	363.3	72.67	42-100
187 Total Benzofluoran	1000	839.2	83.92	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	507.3	67.64	27-120
$ 2 Phenol-d5	750.0	529.5	70.60	29-120
$ 5 2-Chlorophenol-d4	750.0	501.5	66.86	31-120
$ 10 1,2-Dichlorobenzen	500.0	316.7	63.34	32-120
$ 18 Nitrobenzene-d5	500.0	344.0	68.81	30-120
$ 36 2-Fluorobiphenyl	500.0	338.3	67.66	35-120
$ 55 2,4,6-Tribromophen	750.0	591.3	78.83	24-134
$ 66 Terphenyl-d14	500.0	429.2	85.85	37-120

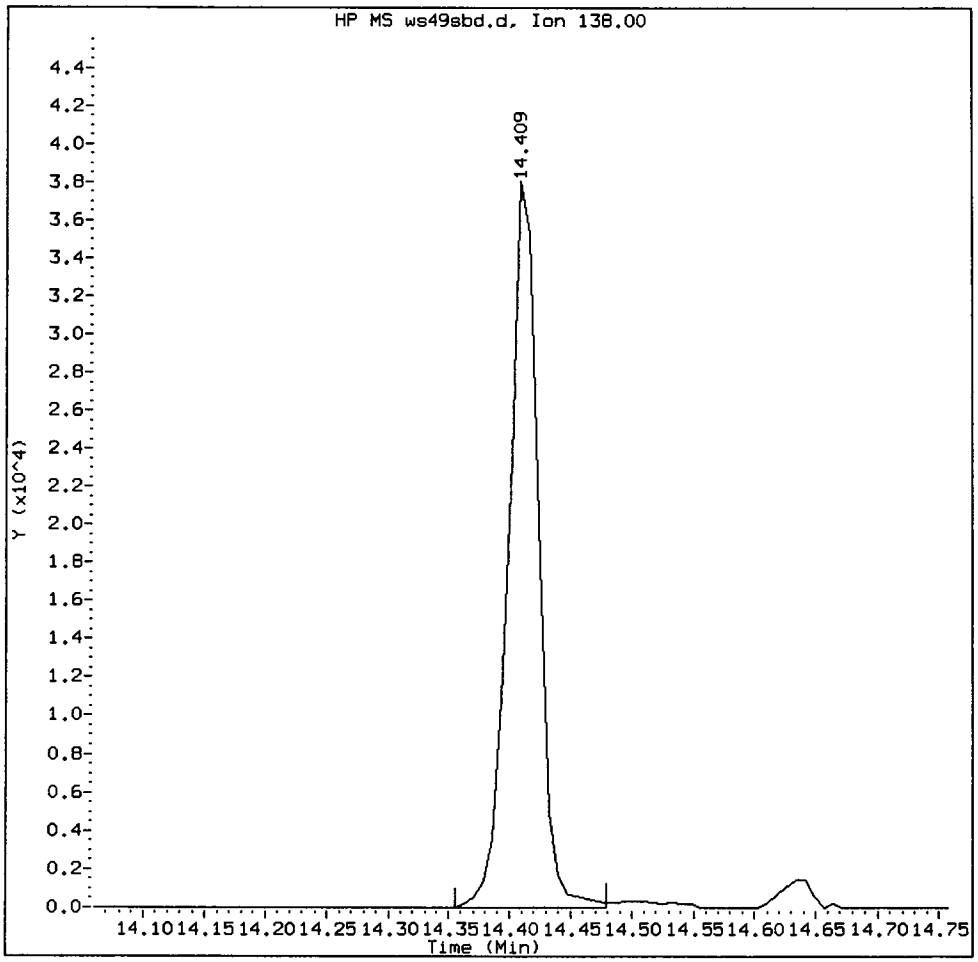
Data File: /chem1/nt10.i/20130613.b/ws49sbd.d
Date : 13-JUN-2013 14:58
Client ID: WS49LCSDS1
Sample Info: WS49LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WS49LCSDS1, /chem1/nt10.i/20130613.b/ws49sbd.d

3-Nitroaniline Amount: 10.68 Area: 66280



MANUAL INTEGRATION for 3-Nitroaniline

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/17/13

CO-ELUTION SUMMARY FOR FILE - ws49sbd.d

Lab ID: WS49LCSDS1, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/wr99dms.d
Lab Smp Id: WR99DMS Client Smp ID: KC-VT-1593-2013 MS
Inj Date : 13-JUN-2013 18:40
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WR99DMS
Misc Info : 13-11544
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 17-Jun-2013 13:58 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	21.90000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.851	5.820	(0.725)	73811	4.64010	457.0
$	2 Phenol-d5	99	7.520	7.497	(0.932)	105326	5.11685	504.0
	3 Phenol	94	7.543	7.512	(0.935)	76798	3.33317	328.3
$	5 2-Chlorophenol-d4	132	7.705	7.690	(0.955)	77699	4.97267	489.8
	4 Bis(2-Chloroethyl)ether	93	7.644	7.636	(0.947)	57340	3.46072	340.9
	6 2-Chlorophenol	128	7.736	7.721	(0.959)	54343	3.05839	301.2
	7 1,3-Dichlorobenzene	146	8.000	7.984	(0.991)	53935	3.02493	297.9
*	8 1,4-Dichlorobenzene-d4	152	8.069	8.054	(1.000)	44567	4.00000	
	9 1,4-Dichlorobenzene	146	8.100	8.085	(1.004)	52956	3.01316	296.8
$	10 1,2-Dichlorobenzene-d4	152	8.434	8.426	(1.045)	34235	3.04591	300.0
	12 1,2-Dichlorobenzene	146	8.465	8.450	(1.049)	54680	3.24959	320.1
	11 Benzyl alcohol	108	8.457	8.387	(1.048)	37890	3.90939	385.0
	14 2,2'-oxybis(1-Chloropropane)	121	8.714	8.698	(1.080)	17271	3.37733	332.6
	13 2-Methylphenol	108	8.683	8.659	(1.076)	45872	2.76674	272.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	9.071	9.063	(1.124)	23049	3.13443	308.7
	16 N-Nitroso-di-n-propylamine	70	8.985	8.970	(1.113)	39807	3.84562	378.8
	15 4-Methylphenol	108	8.978	8.947	(1.113)	103938	6.14827	605.6
$	18 Nitrobenzene-d5	82	9.210	9.203	(0.865)	56785	3.24843	319.9
	19 Nitrobenzene	77	9.249	9.234	(0.869)	57913	3.58842	353.4
	20 Isophorone	82	9.738	9.723	(0.914)	103048	3.39462	334.3
	21 2-Nitrophenol	139	9.909	9.893	(0.930)	35739	3.95015	389.1
	22 2,4-Dimethylphenol	107	10.048	10.025	(0.944)	62721	3.77006	371.3
	23 Bis(2-Chloroethoxy)methane	93	10.233	10.217	(0.961)	69601	3.88778	382.9
	24 Benzoic acid	105	10.341	10.294	(0.971)	234260	16.0865	1584
	25 2,4-Dichlorophenol	162	10.410	10.387	(0.978)	160234	10.4632	1031
	26 1,2,4-Trichlorobenzene	180	10.572	10.557	(0.993)	51064	3.41155	336.0
*	27 Naphthalene-d8	136	10.649	10.634	(1.000)	165654	4.00000	
	28 Naphthalene	128	10.688	10.672	(1.004)	147901	3.35354	330.3
	29 4-Chloroaniline	127	10.927	10.858	(1.026)	5660	0.32827	32.33
	30 Hexachlorobutadiene	225	11.105	11.089	(1.043)	28762	3.23480	318.6
	31 4-Chloro-3-methylphenol	107	11.956	11.933	(1.123)	166267	12.3415	1216
	32 2-Methylnaphthalene	142	12.165	12.150	(1.142)	109140	3.72562	366.9
	33 Hexachlorocyclopentadiene	237	12.676	12.660	(0.877)	32452	3.00312	295.8
	34 2,4,6-Trichlorophenol	196	12.854	12.838	(0.890)	121844	11.7883	1161
	35 2,4,5-Trichlorophenol	196	12.939	12.916	(0.896)	139563	13.0983	1290
$	36 2-Fluorobiphenyl	172	13.024	13.009	(0.901)	120762	3.52340	347.0
	37 2-Chloronaphthalene	162	13.202	13.187	(0.914)	107007	3.92162	386.3
	38 2-Nitroaniline	65	13.519	13.496	(0.936)	95553	14.5089	1429
	39 Dimethylphthalate	163	14.015	13.999	(0.970)	132316	4.48842	442.1
	40 Acenaphthylene	152	14.108	14.092	(0.976)	168554	3.64211	358.7
	41 2,6-Dinitrotoluene	165	14.139	14.123	(0.979)	92102	13.3343	1313
*	42 Acenaphthene-d10	164	14.448	14.433	(1.000)	98201	4.00000	
	43 3-Nitroaniline	138	14.425	14.409	(0.998)	22096	3.87501	381.7(M)
	44 Acenaphthene	153	14.518	14.502	(1.005)	115263	4.13284	407.1
	45 2,4-Dinitrophenol	184	14.649	14.626	(1.014)	73535	12.0215	1184
	46 Dibenzofuran	168	14.865	14.850	(1.029)	174712	4.58143	451.2
	47 4-Nitrophenol	109	14.865	14.835	(1.029)	46568	10.8183	1066
	48 2,4-Dinitrotoluene	165	14.989	14.966	(1.037)	122697	13.7726	1357
	50 Diethylphthalate	149	15.569	15.561	(1.078)	144704	4.88489	481.1
	49 Fluorene	166	15.615	15.600	(1.081)	160580	4.93481	486.0
	51 4-Chlorophenyl-phenylether	204	15.654	15.639	(1.083)	72849	4.55423	448.6
	52 4-Nitroaniline	138	15.762	15.747	(1.091)	30777	5.19609	511.8
	53 4,6-Dinitro-2-methylphenol	198	15.870	15.847	(0.899)	114480	16.2378	1599
	54 N-Nitrosodiphenylamine	169	15.932	15.916	(0.902)	88029	5.16942	509.2
$	55 2,4,6-Tribromophenol	330	16.186	16.171	(1.120)	32947	6.34421	624.9
	56 4-Bromophenyl-phenylether	248	16.710	16.695	(0.947)	39395	4.73297	466.2
	57 Hexachlorobenzene	284	17.004	16.989	(0.963)	42054	4.23437	417.1
	58 Pentachlorophenol	266	17.414	17.391	(0.986)	84669	12.1453	1196
*	59 Phenanthrene-d10	188	17.654	17.631	(1.000)	147103	4.00000	
	60 Phenanthrene	178	17.701	17.685	(1.003)	846011	21.0847	2077(R)
	61 Anthracene	178	17.801	17.778	(1.008)	219800	5.34710	526.7(R)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	18.188	18.165	(1.030)	253408	10.1489	999.6
63	Di-n-butylphthalate	149	19.140	19.124	(1.084)	205400	4.84044	476.7
64	Fluoranthene	202	20.207	20.177	(1.145)	1593837	33.7500	3324(R)
65	Pyrene	202	20.625	20.594	(0.903)	1272946	25.9217	2553(R)
$ 66	Terphenyl-d14	244	20.973	20.958	(0.919)	120583	3.90277	384.4
67	Butylbenzylphthalate	149	21.957	21.941	(0.962)	86196	5.13993	506.2
68	Benzo(a)anthracene	228	22.801	22.778	(0.999)	583440	13.1295	1293(R)
* 69	Chrysene-d12	240	22.832	22.801	(1.000)	158721	4.00000	
70	3,3'-Dichlorobenzidine	252	22.925	22.778	(1.004)	3002	0.17737	17.47
71	Chrysene	228	22.870	22.847	(1.002)	752738	18.7183	1844(R)
72	bis(2-Ethylhexyl)phthalate	149	23.025	23.002	(0.959)	111018	4.03223	397.1
* 134	Di-n-octylphthalate-d4	153	24.001	23.977	(1.000)	207090	4.00000	
73	Di-n-octylphthalate	149	24.008	23.985	(1.000)	149542	3.13627	308.9
74	Benzo(b)fluoranthene	252	24.566	24.519	(0.978)	928819	20.7760	2046
75	Benzo(k)fluoranthene	252	24.597	24.558	(0.980)	763839	16.2213	1598
76	Benzo(a)pyrene	252	25.038	24.992	(0.997)	662992	17.3586	1710(R)
* 77	Perylene-d12	264	25.108	25.069	(1.000)	150546	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.884	26.814	(1.071)	558858	12.7005	1251(R)
79	Dibenzo(a,h)anthracene	278	26.892	26.830	(1.071)	261818	7.75647	764.0(R)
80	Benzo(g,h,i)perylene	276	27.389	27.304	(1.091)	465624	12.2302	1205(R)
90	N-Nitrosodimethylamine	74	3.658	3.635	(0.453)	89088	8.77457	864.2
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	20.447	20.471	(0.896)	1004	0.20677	20.37
103	Pyridine	79	3.681	3.643	(0.456)	105939	11.8707	1169
105	1-methylnaphthalene	142	12.397	12.382	(1.164)	104955	3.90657	384.8
111	Azobenzene (1,2-DP-Hydrazine)	77	15.993	15.978	(1.107)	120451	3.96583	390.6
187	Total Benzofluoranthenes	252	24.597	24.558	(0.980)	1529365	35.2297	3470(R)
99	Perylene	252	25.147	25.108	(1.002)	206411	4.72764	465.6
98	Retene	219	21.260	21.237	(0.931)	13584	0.73089	71.99
120	2,3,4,6-Tetrachlorophenol	232	15.260	15.236	(1.056)	38348	4.83861	476.6

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wr99dms.d
Lab Smp Id: WR99DMS
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11544

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: KC-VT-1593-2013
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	44567	-1.51
27 Naphthalene-d8	166754	83377	333508	165654	-0.66
42 Acenaphthene-d10	106910	53455	213820	98201	-8.15
59 Phenanthrene-d10	179783	89892	359566	147103	-18.18
69 Chrysene-d12	192841	96420	385682	158721	-17.69
134 Di-n-octylphthala	229567	114784	459134	207090	-9.79
77 Perylene-d12	184310	92155	368620	150546	-18.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.07	0.19
27 Naphthalene-d8	10.63	10.13	11.13	10.65	0.14
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.11
59 Phenanthrene-d10	17.63	17.13	18.13	17.65	0.13
69 Chrysene-d12	22.80	22.30	23.30	22.83	0.14
134 Di-n-octylphthala	23.98	23.48	24.48	24.00	0.10
77 Perylene-d12	25.07	24.57	25.57	25.11	0.15

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WR99DMS
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11544

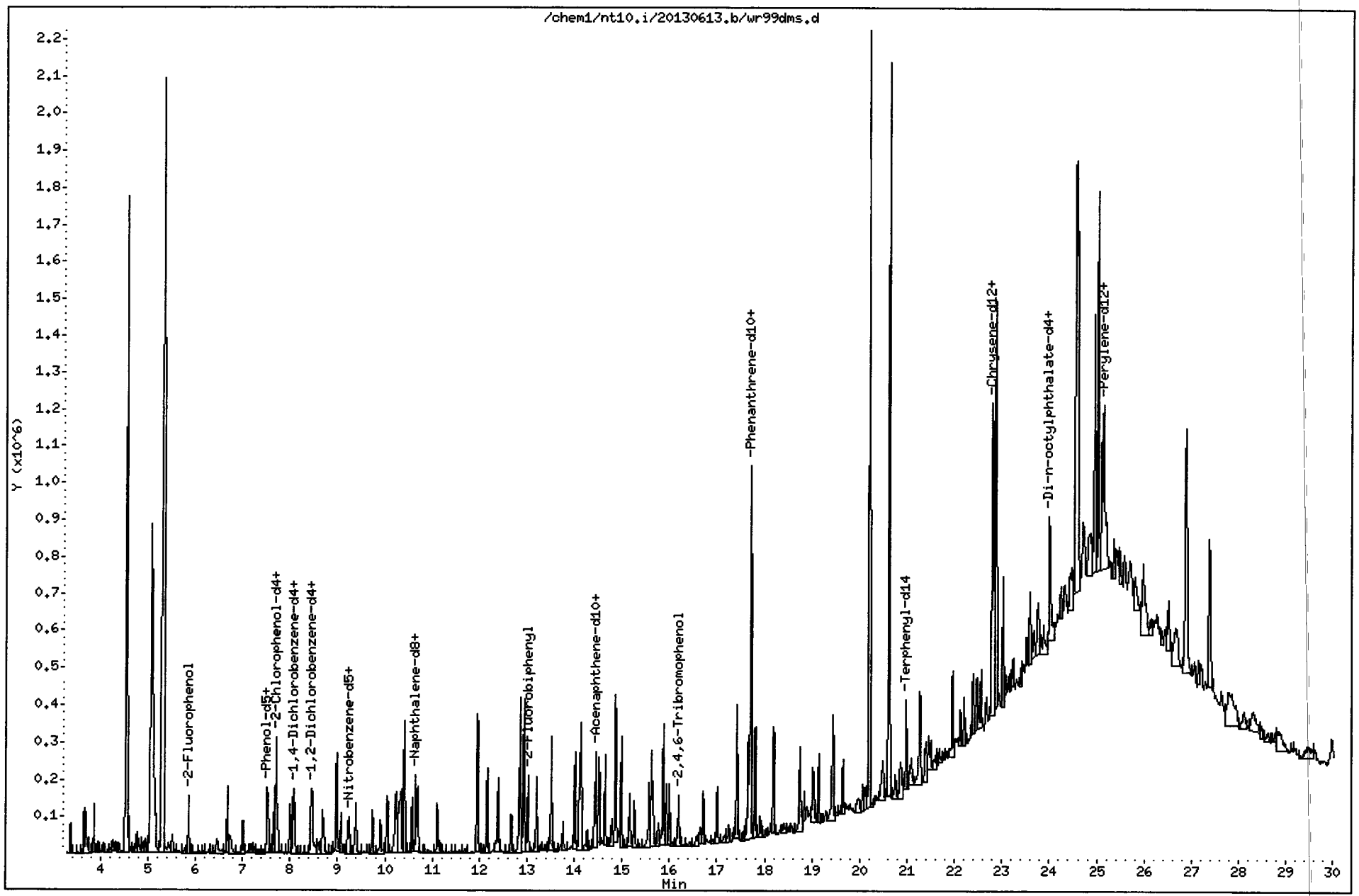
Client SDG: WR99
Fraction: SV
Client Smp ID: KC-VT-1593-2013 MS
Operator: VTS/YZ
SampleType: MS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	492.5	328.3	66.66	34-105
7	1,3-Dichlorobenzen	492.5	297.9	60.50	40-100
9	1,4-Dichlorobenzen	492.5	296.8	60.26	39-100
11	Benzyl alcohol	492.5	385.0	78.19	19-117
12	1,2-Dichlorobenzen	492.5	320.1	64.99	40-100
13	2-Methylphenol	492.5	272.5	55.33	28-100
15	4-Methylphenol	984.9	605.6	61.48	29-100
17	Hexachloroethane	492.5	308.7	62.69	38-100
22	2,4-Dimethylphenol	1477	371.3	25.13	10-100
24	Benzoic acid	2709	1584	58.50	10-107
26	1,2,4-Trichloroben	492.5	336.0	68.23	35-103
28	Naphthalene	492.5	330.3	67.07	43-100
30	Hexachlorobutadien	492.5	318.6	64.70	37-100
32	2-Methylnaphthalen	492.5	366.9	74.51	43-100
39	Dimethylphthalate	492.5	442.1	89.77	43-114
40	Acenaphthylene	492.5	358.7	72.84	42-102
44	Acenaphthene	492.5	407.1	82.66	45-100
46	Dibenzofuran	492.5	451.2	91.63	43-103
49	Fluorene	492.5	486.0	98.70	45-107
50	Diethylphthalate	492.5	481.1	97.70	50-120
54	N-Nitrosodiphenyla	492.5	509.2	103.39	36-111
57	Hexachlorobenzene	492.5	417.1	84.69	33-113
58	Pentachlorophenol	1477	1196	80.97	16-120
60	Phenanthrene	492.5	2077	421.69*	49-112
61	Anthracene	492.5	526.7	106.94*	45-106
63	Di-n-butylphthalat	492.5	476.7	96.81	48-126
64	Fluoranthene	492.5	3324	675.00*	53-118
65	Pyrene	492.5	2553	518.43*	48-121
67	Butylbenzylphthala	492.5	506.2	102.80	45-132
68	Benzo(a)anthracene	492.5	1293	262.59*	49-115
71	Chrysene	492.5	1844	374.37*	47-115
72	bis(2-Ethylhexyl)p	492.5	397.1	80.64	34-130
73	Di-n-octylphthalat	492.5	308.9	62.73	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	492.5	1710	347.17*	42-113
78 Indeno(1,2,3-cd)py	492.5	1251	254.01*	42-123
79 Dibenzo(a,h)anthra	492.5	764.0	155.13*	30-133
80 Benzo(g,h,i)peryle	492.5	1205	244.60*	38-126
105 1-methylnaphthalen	492.5	384.8	78.13	42-100
187 Total Benzofluoran	984.9	3470	352.30*	30-160

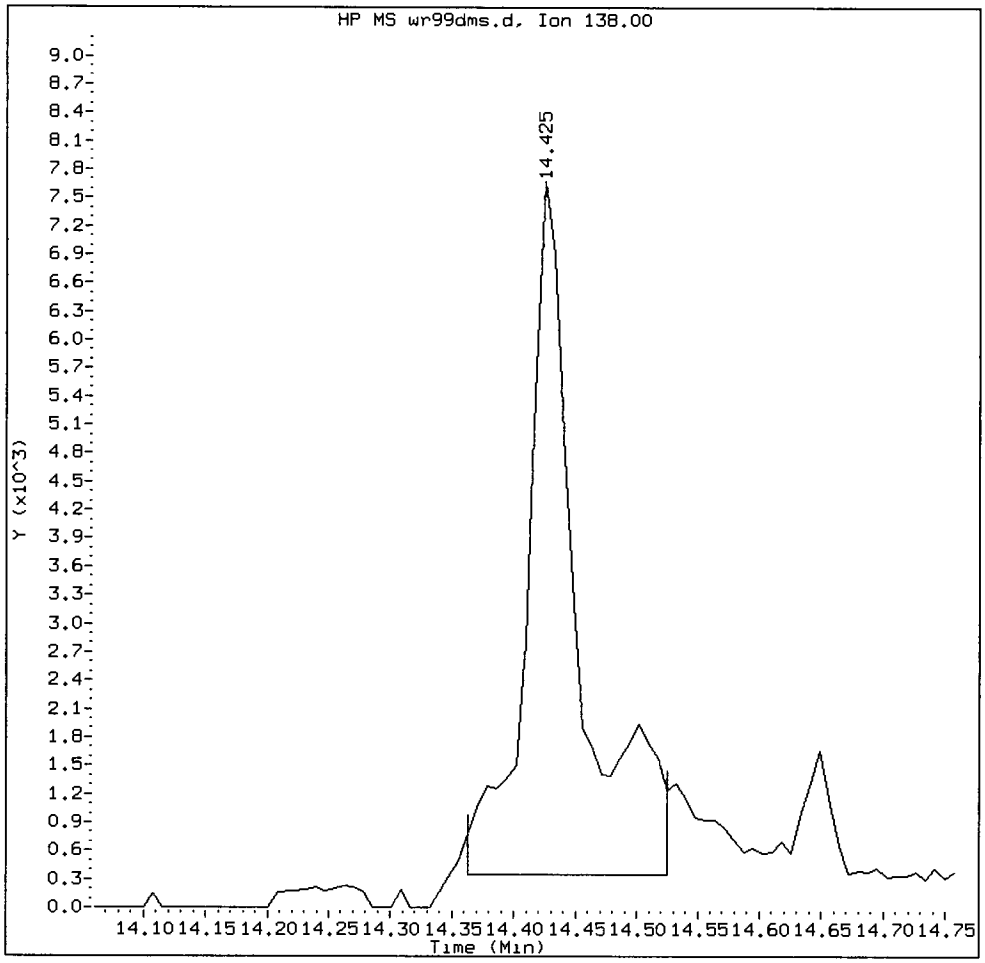
SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	738.7	457.0	61.87	27-120
$ 2 Phenol-d5	738.7	504.0	68.22	29-120
$ 5 2-Chlorophenol-d4	738.7	489.8	66.30	31-120
$ 10 1,2-Dichlorobenzen	492.5	300.0	60.92	32-120
$ 18 Nitrobenzene-d5	492.5	319.9	64.97	30-120
$ 36 2-Fluorobiphenyl	492.5	347.0	70.47	35-120
$ 55 2,4,6-Tribromophen	738.7	624.9	84.59	24-134
$ 66 Terphenyl-d14	492.5	384.4	78.06	37-120

Data File: /chem1/nt10.i/20130613.b/wr99dms.d
Date : 13-JUN-2013 18:40
Client ID: KC-VT-1593-2013 MS
Instrument: nt10.i
Sample Info: WR99DMS
Volume Injected (uL): 1.0
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



WR99DMS, /chem1/nt10.i/20130613.b/wr99dms.d

3-Nitroaniline Amount: 3.88 Area: 22096



MANUAL INTEGRATION for 3-Nitroaniline

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/17/13

CO-ELUTION SUMMARY FOR FILE - wr99dms.d

Lab ID: WR99DMS, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 6/17/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130613.b/wr99dmsd.d
Lab Smp Id: WR99DMSD Client Smp ID: KC-VT-1593-2013 MSD
Inj Date : 13-JUN-2013 19:16
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WR99DMSD
Misc Info : 13-11544
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 17-Jun-2013 13:58 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	21.90000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.851	5.820	(0.725)	72756	4.21487	415.1
$	2 Phenol-d5	99	7.520	7.497	(0.932)	102270	4.57851	451.0
	3 Phenol	94	7.543	7.512	(0.935)	75655	3.02590	298.0
$	5 2-Chlorophenol-d4	132	7.706	7.690	(0.955)	76552	4.51481	444.7
	4 Bis(2-Chloroethyl)ether	93	7.644	7.636	(0.947)	58702	3.26490	321.6
	6 2-Chlorophenol	128	7.736	7.721	(0.959)	53674	2.78370	274.2
	7 1,3-Dichlorobenzene	146	8.000	7.984	(0.991)	55333	2.85981	281.7
*	8 1,4-Dichlorobenzene-d4	152	8.069	8.054	(1.000)	48362	4.00000	
	9 1,4-Dichlorobenzene	146	8.100	8.085	(1.004)	55294	2.89931	285.6
$	10 1,2-Dichlorobenzene-d4	152	8.434	8.426	(1.045)	33506	2.74712	270.6
	12 1,2-Dichlorobenzene	146	8.465	8.450	(1.049)	53104	2.90828	286.4
	11 Benzyl alcohol	108	8.489	8.387	(1.052)	21047	2.00117	197.1
	14 2,2'-oxybis(1-Chloropropane)	121	8.714	8.698	(1.080)	17531	3.15916	311.2
	13 2-Methylphenol	108	8.675	8.659	(1.075)	47752	2.65412	261.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	9.071	9.063	(1.124)	23088	2.89336	285.0
	16 N-Nitroso-di-n-propylamine	70	8.978	8.970	(1.113)	39563	3.52213	346.9
	15 4-Methylphenol	108	8.978	8.947	(1.113)	104289	5.68494	559.9
$	18 Nitrobenzene-d5	82	9.210	9.203	(0.865)	55561	3.00522	296.0
	19 Nitrobenzene	77	9.249	9.234	(0.869)	55956	3.27823	322.9
	20 Isophorone	82	9.738	9.723	(0.914)	101927	3.17472	312.7
	21 2-Nitrophenol	139	9.909	9.893	(0.930)	34747	3.63123	357.7
	22 2,4-Dimethylphenol	107	10.048	10.025	(0.944)	95197	5.41033	532.9
	23 Bis(2-Chloroethoxy)methane	93	10.233	10.217	(0.961)	67672	3.57405	352.0
	24 Benzoic acid	105	10.341	10.294	(0.971)	230903	15.0115	1479
	25 2,4-Dichlorophenol	162	10.410	10.387	(0.978)	158260	9.77112	962.4
	26 1,2,4-Trichlorobenzene	180	10.572	10.557	(0.993)	49612	3.13393	308.7
*	27 Naphthalene-d8	136	10.649	10.634	(1.000)	175201	4.00000	
	28 Naphthalene	128	10.688	10.672	(1.004)	152204	3.26305	321.4
	29 4-Chloroaniline	127	10.912	10.858	(1.025)	9650	0.52918	52.12
	30 Hexachlorobutadiene	225	11.105	11.089	(1.043)	28926	3.07597	303.0
	31 4-Chloro-3-methylphenol	107	11.956	11.933	(1.123)	163750	11.4923	1132
	32 2-Methylnaphthalene	142	12.165	12.150	(1.142)	109919	3.54775	349.4
	33 Hexachlorocyclopentadiene	237	12.676	12.660	(0.877)	29892	2.56834	253.0
	34 2,4,6-Trichlorophenol	196	12.854	12.838	(0.890)	120708	10.8430	1068
	35 2,4,5-Trichlorophenol	196	12.939	12.916	(0.896)	135407	11.7992	1162
$	36 2-Fluorobiphenyl	172	13.024	13.009	(0.901)	116485	3.15550	310.8
	37 2-Chloronaphthalene	162	13.202	13.187	(0.914)	105055	3.57467	352.1
	38 2-Nitroaniline	65	13.519	13.496	(0.936)	93816	13.2262	1303
	39 Dimethylphthalate	163	14.015	13.999	(0.970)	124354	3.91658	385.8
	40 Acenaphthylene	152	14.108	14.092	(0.976)	164392	3.29808	324.8
	41 2,6-Dinitrotoluene	165	14.139	14.123	(0.979)	88319	11.8719	1169
*	42 Acenaphthene-d10	164	14.448	14.433	(1.000)	105767	4.00000	
	43 3-Nitroaniline	138	14.425	14.409	(0.998)	22238	3.62093	356.6(M)
	44 Acenaphthene	153	14.518	14.502	(1.005)	107828	3.58968	353.6
	45 2,4-Dinitrophenol	184	14.649	14.626	(1.014)	71761	10.9111	1075
	46 Dibenzofuran	168	14.865	14.850	(1.029)	165302	4.02460	396.4
	47 4-Nitrophenol	109	14.865	14.835	(1.029)	44023	9.51337	937.0
	48 2,4-Dinitrotoluene	165	14.989	14.966	(1.037)	115142	12.0000	1182
	50 Diethylphthalate	149	15.569	15.561	(1.078)	135734	4.25431	419.0
	49 Fluorene	166	15.615	15.600	(1.081)	131670	3.75692	370.0
	51 4-Chlorophenyl-phenylether	204	15.654	15.639	(1.083)	70209	4.07521	401.4
	52 4-Nitroaniline	138	15.762	15.747	(1.091)	30926	4.84775	477.5
	53 4,6-Dinitro-2-methylphenol	198	15.870	15.847	(0.899)	113159	14.7789	1456
	54 N-Nitrosodiphenylamine	169	15.932	15.916	(0.903)	75304	4.06832	400.7
$	55 2,4,6-Tribromophenol	330	16.186	16.171	(1.120)	31980	5.71749	563.1
	56 4-Bromophenyl-phenylether	248	16.711	16.695	(0.947)	36124	3.99273	393.3
	57 Hexachlorobenzene	284	17.004	16.989	(0.964)	40779	3.77746	372.1
	58 Pentachlorophenol	266	17.414	17.391	(0.987)	85173	11.2401	1107
*	59 Phenanthrene-d10	188	17.647	17.631	(1.000)	159897	4.00000	
	60 Phenanthrene	178	17.701	17.685	(1.003)	587334	13.4666	1326(R)
	61 Anthracene	178	17.794	17.778	(1.008)	200384	4.48471	441.7

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	18.188	18.165	(1.031)	209935	7.73504	761.8
63	Di-n-butylphthalate	149	19.148	19.124	(1.085)	199004	4.31447	424.9
64	Fluoranthene	202	20.207	20.177	(1.145)	1215191	23.6732	2332(R)
65	Pyrene	202	20.618	20.594	(0.903)	996880	18.6850	1840(R)
$ 66	Terphenyl-d14	244	20.974	20.958	(0.919)	116795	3.47943	342.7
67	Butylbenzylphthalate	149	21.957	21.941	(0.962)	83618	4.58951	452.0
68	Benzo(a)anthracene	228	22.801	22.778	(0.999)	484061	10.0265	987.5(R)
* 69	Chrysene-d12	240	22.832	22.801	(1.000)	172440	4.00000	
70	3,3'-Dichlorobenzidine	252	22.925	22.778	(1.004)	2121	0.11535	11.36
71	Chrysene	228	22.878	22.847	(1.002)	600059	13.7345	1353(R)
72	bis(2-Ethylhexyl)phthalate	149	23.025	23.002	(0.959)	119464	4.03442	397.4
* 134	Di-n-octylphthalate-d4	153	24.001	23.977	(1.000)	222724	4.00000	
73	Di-n-octylphthalate	149	24.009	23.985	(1.000)	161429	3.14792	310.0
74	Benzo(b)fluoranthene	252	24.566	24.519	(0.978)	768904	15.7602	1552
75	Benzo(k)fluoranthene	252	24.597	24.558	(0.980)	592205	11.5243	1135
76	Benzo(a)pyrene	252	25.031	24.992	(0.997)	537280	12.8904	1270(R)
* 77	Perylene-d12	264	25.108	25.069	(1.000)	164290	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.876	26.814	(1.070)	470581	9.79964	965.2(R)
79	Dibenzo(a,h)anthracene	278	26.892	26.830	(1.071)	229999	6.24379	615.0
80	Benzo(g,h,i)perylene	276	27.381	27.304	(1.091)	366916	8.83130	869.8(R)
90	N-Nitrosodimethylamine	74	3.650	3.635	(0.452)	87658	7.95623	783.6
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	20.416	20.471	(0.894)	1260	0.23882	23.52
103	Pyridine	79	3.674	3.643	(0.455)	115124	11.8876	1171
105	1-methylnaphthalene	142	12.390	12.382	(1.163)	105115	3.69933	364.4
111	Azobenzene (1,2-DP-Hydrazine)	77	15.993	15.978	(1.107)	115941	3.54426	349.1
187	Total Benzofluoranthenes	252	24.597	24.558	(0.980)	1223069	25.8171	2543(R)
99	Perylene	252	25.147	25.108	(1.002)	169272	3.55267	349.9
98	Retene	219	21.260	21.237	(0.931)	108387	5.36785	528.7
120	2,3,4,6-Tetrachlorophenol	232	15.260	15.236	(1.056)	36636	4.29192	422.7

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wr99dmsd.d
Lab Smp Id: WR99DMSD
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11544

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: KC-VT-1593-2013
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	48362	6.88
27 Naphthalene-d8	166754	83377	333508	175201	5.07
42 Acenaphthene-d10	106910	53455	213820	105767	-1.07
59 Phenanthrene-d10	179783	89892	359566	159897	-11.06
69 Chrysene-d12	192841	96420	385682	172440	-10.58
134 Di-n-octylphthala	229567	114784	459134	222724	-2.98
77 Perylene-d12	184310	92155	368620	164290	-10.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.07	0.19
27 Naphthalene-d8	10.63	10.13	11.13	10.65	0.15
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.11
59 Phenanthrene-d10	17.63	17.13	18.13	17.65	0.09
69 Chrysene-d12	22.80	22.30	23.30	22.83	0.14
134 Di-n-octylphthala	23.98	23.48	24.48	24.00	0.10
77 Perylene-d12	25.07	24.57	25.57	25.11	0.15

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WR99DMSD
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11544

Client SDG: WR99
Fraction: SV
Client Smp ID: KC-VT-1593-2013 MSD
Operator: VTS/YZ
SampleType: MSD
Quant Type: ISTD

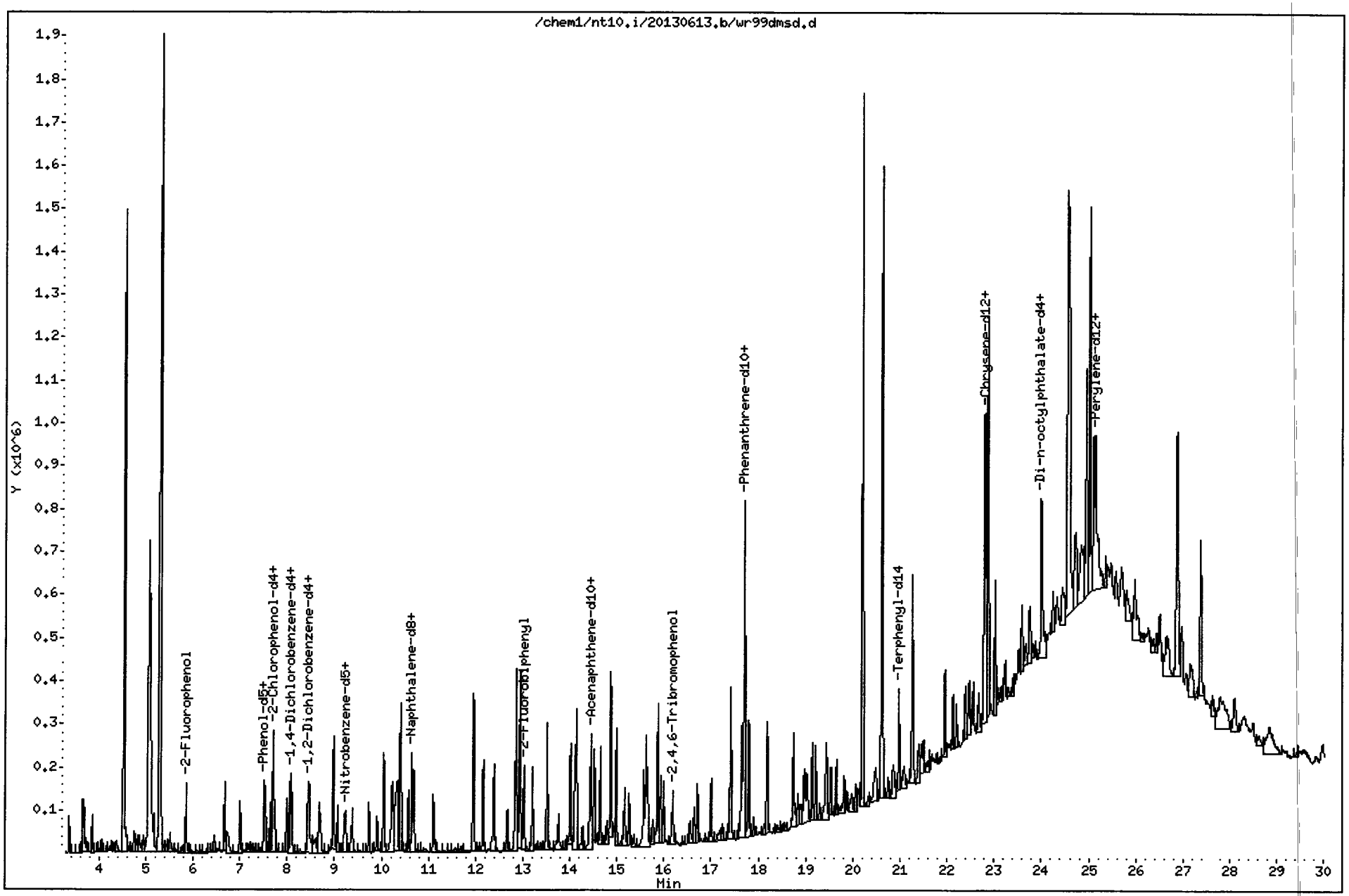
	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	492.5	298.0	60.52	34-105
7	1,3-Dichlorobenzen	492.5	281.7	57.20	40-100
9	1,4-Dichlorobenzen	492.5	285.6	57.99	39-100
11	Benzyl alcohol	492.5	197.1	40.02	19-117
12	1,2-Dichlorobenzen	492.5	286.4	58.17	40-100
13	2-Methylphenol	492.5	261.4	53.08	28-100
15	4-Methylphenol	984.9	559.9	56.85	29-100
17	Hexachloroethane	492.5	285.0	57.87	38-100
22	2,4-Dimethylphenol	1477	532.9	36.07	10-100
24	Benzoic acid	2709	1479	54.59	10-107
26	1,2,4-Trichloroben	492.5	308.7	62.68	35-103
28	Naphthalene	492.5	321.4	65.26	43-100
30	Hexachlorobutadien	492.5	303.0	61.52	37-100
32	2-Methylnaphthalen	492.5	349.4	70.95	43-100
39	Dimethylphthalate	492.5	385.8	78.33	43-114
40	Acenaphthylene	492.5	324.8	65.96	42-102
44	Acenaphthene	492.5	353.6	71.79	45-100
46	Dibenzofuran	492.5	396.4	80.49	43-103
49	Fluorene	492.5	370.0	75.14	45-107
50	Diethylphthalate	492.5	419.0	85.09	50-120
54	N-Nitrosodiphenyla	492.5	400.7	81.37	36-111
57	Hexachlorobenzene	492.5	372.1	75.55	33-113
58	Pentachlorophenol	1477	1107	74.93	16-120
60	Phenanthrene	492.5	1326	269.33*	49-112
61	Anthracene	492.5	441.7	89.69	45-106
63	Di-n-butylphthalat	492.5	424.9	86.29	48-126
64	Fluoranthene	492.5	2332	473.46*	53-118
65	Pyrene	492.5	1840	373.70*	48-121
67	Butylbenzylphthala	492.5	452.0	91.79	45-132
68	Benzo(a)anthracene	492.5	987.5	200.53*	49-115
71	Chrysene	492.5	1353	274.69*	47-115
72	bis(2-Ethylhexyl)p	492.5	397.4	80.69	34-130
73	Di-n-octylphthalat	492.5	310.0	62.96	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	492.5	1270	257.81*	42-113
78 Indeno(1,2,3-cd)py	492.5	965.2	195.99*	42-123
79 Dibenzo(a,h)anthra	492.5	615.0	124.88	30-133
80 Benzo(g,h,i)peryle	492.5	869.8	176.63*	38-126
105 1-methylnaphthalen	492.5	364.4	73.99	42-100
187 Total Benzofluoran	984.9	2543	258.17*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	738.7	415.1	56.20	27-120
$ 2 Phenol-d5	738.7	451.0	61.05	29-120
$ 5 2-Chlorophenol-d4	738.7	444.7	60.20	31-120
$ 10 1,2-Dichlorobenzen	492.5	270.6	54.94	32-120
$ 18 Nitrobenzene-d5	492.5	296.0	60.10	30-120
$ 36 2-Fluorobiphenyl	492.5	310.8	63.11	35-120
$ 55 2,4,6-Tribromophen	738.7	563.1	76.23	24-134
$ 66 Terphenyl-d14	492.5	342.7	69.59	37-120

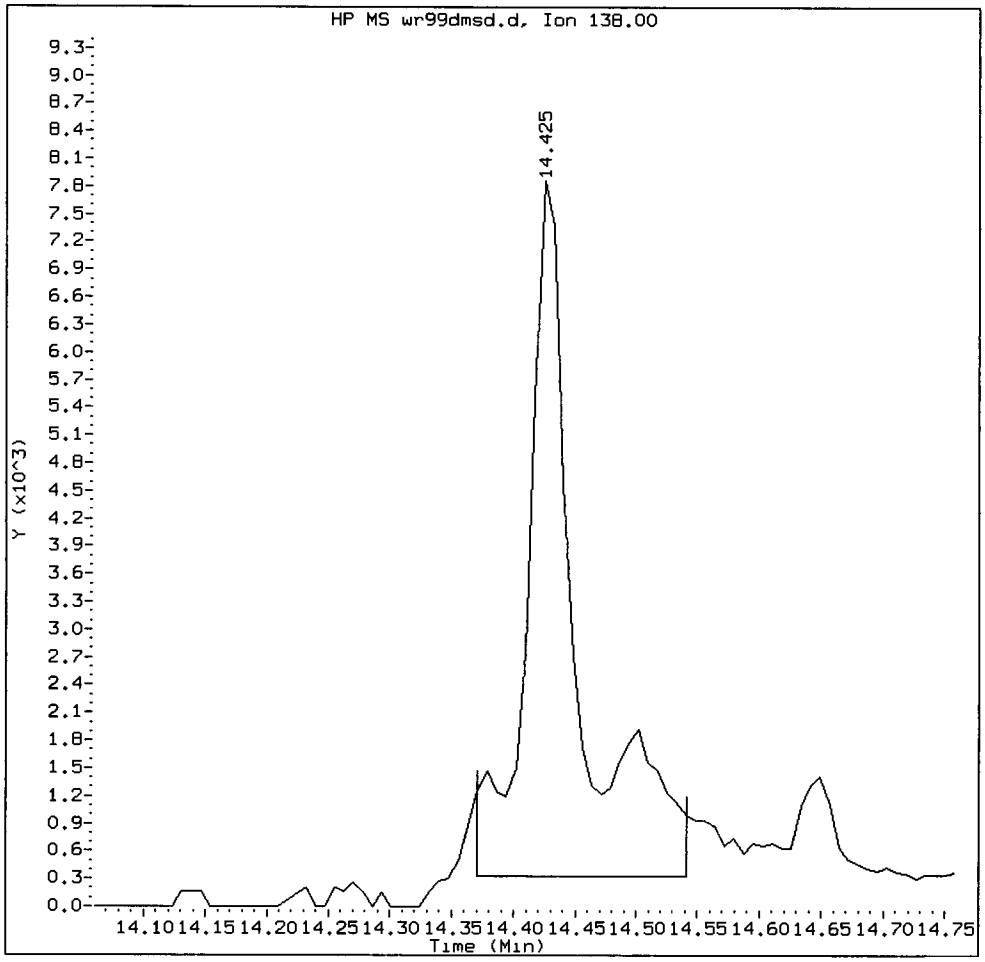
Data File: /chem1/nt10.i/20130613.b/wr99dmsd.d
Date : 13-JUN-2013 19:16
Client ID: KC-VT-1593-2013 MSD
Sample Info: WR99DMSD
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WR99DMSD, /chem1/nt10.i/20130613.b/wr99dmsd.d

3-Nitroaniline Amount: 3.62 Area: 22238



MANUAL INTEGRATION for 3-Nitroaniline

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/14/13

CO-ELUTION SUMMARY FOR FILE - wr99dmsd.d

Lab ID: WR99DMSD, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

yc 6/17/13

Data file : /chem1/nt10.i/20130614.b/wr99d.d
Lab Smp Id: WR99D Client Smp ID: KC-VT-1593-20130530
Inj Date : 14-JUN-2013 19:37
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WR99D,2
Misc Info : 13-11544
Comment : 1ul Injection
Method : /chem1/nt10.i/20130614.b/ABN.m
Meth Date : 17-Jun-2013 13:35 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 13
Dil Factor: 2.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	2.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	21.90000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1	2-Fluorophenol	112	5.728	5.698	(0.719)	40544	2.19276	431.9
$	2	Phenol-d5	99	7.420	7.405	(0.932)	57026	2.38341	469.5
	3	Phenol	94	Compound Not Detected.					
$	5	2-Chlorophenol-d4	132	7.598	7.583	(0.954)	43362	2.38749	470.3
	4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6	2-Chlorophenol	128	Compound Not Detected.					
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	7.962	7.954	(1.000)	51803	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	8.334	8.319	(1.047)	18600	1.42370	280.4
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	108	Compound Not Detected.					
	14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.118	9.111	(0.863)	31858	1.50631	296.7
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.565	10.558	(1.000)	200423	4.00000	
	28 Naphthalene	128	10.604	10.596	(1.004)	6064	0.11364 J	22.39
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	12.104	12.089	(1.146)	4034	0.11382 J	22.42
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	12.971	12.956	(0.900)	68280	1.64167	323.4
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.410	14.388	(1.000)	119167	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	14.480	14.457	(1.005)	5298	0.15654 J	30.84
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	14.836	14.813	(1.030)	11911	0.25739	50.70
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	15.601	15.570	(1.083)	12497	0.31648	62.34
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.180	16.149	(1.123)	20461	3.24675	639.6
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.656	17.617	(1.000)	190945	4.00000	
	60 Phenanthrene	178	17.710	17.671	(1.003)	368522	7.07568	1394
	61 Anthracene	178	17.803	17.772	(1.008)	37914	0.71056	140.0

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	18.213	18.166	(1.032)	59636	1.84000	362.5
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	20.247	20.194	(1.147)	825425	13.4655	2653
65	Pyrene	202	20.673	20.619	(0.902)	638047	11.6477	2294
$ 66	Terphenyl-d14	244	21.052	20.998	(0.919)	68377	1.98396	390.8
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	22.887	22.826	(0.999)	258601	5.21696	1028
* 69	Chrysene-d12	240	22.918	22.856	(1.000)	177051	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	22.957	22.903	(1.002)	337816	7.53076	1483
72	bis(2-Ethylhexyl)phthalate	149	23.143	23.089	(0.959)	13001	0.41466	81.68
* 134	Di-n-octylphthalate-d4	153	24.141	24.072	(1.000)	235826	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	24.675	24.598	(0.978)	405514	7.94149	1564
75	Benzo(k)fluoranthene	252	24.706	24.629	(0.979)	331301	6.15987	1213 (M)
76	Benzo(a)pyrene	252	25.148	25.071	(0.997)	290289	6.65430	1311
* 77	Perylene-d12	264	25.233	25.156	(1.000)	171951	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.056	26.924	(1.072)	249170	4.95768	976.6
79	Dibenzo(a,h)anthracene	278	27.072	26.956	(1.073)	73327	1.90192	374.7
80	Benzo(g,h,i)perylene	276	27.569	27.429	(1.093)	218610	5.02730	990.3
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	24.675	24.629	(0.978)	656897	13.2483	2610
99	Perylene	252	25.272	25.187	(1.002)	74894	1.50184	295.8
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wr99d.d
Lab Smp Id: WR99D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130614.b/ABN.m
Misc Info: 13-11544

Calibration Date: 14-JUN-2013
Calibration Time: 12:53
Client Smp ID: KC-VT-1593-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	51803	14.48
27 Naphthalene-d8	166754	83377	333508	200423	20.19
42 Acenaphthene-d10	106910	53455	213820	119167	11.46
59 Phenanthrene-d10	179783	89892	359566	190945	6.21
69 Chrysene-d12	192841	96420	385682	177051	-8.19
134 Di-n-octylphthala	229567	114784	459134	235826	2.73
77 Perylene-d12	184310	92155	368620	171951	-6.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.95	7.45	8.45	7.96	0.09
27 Naphthalene-d8	10.56	10.06	11.06	10.57	0.07
42 Acenaphthene-d10	14.39	13.89	14.89	14.41	0.16
59 Phenanthrene-d10	17.62	17.12	18.12	17.66	0.22
69 Chrysene-d12	22.86	22.36	23.36	22.92	0.27
134 Di-n-octylphthala	24.07	23.57	24.57	24.14	0.29
77 Perylene-d12	25.16	24.66	25.66	25.23	0.31

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

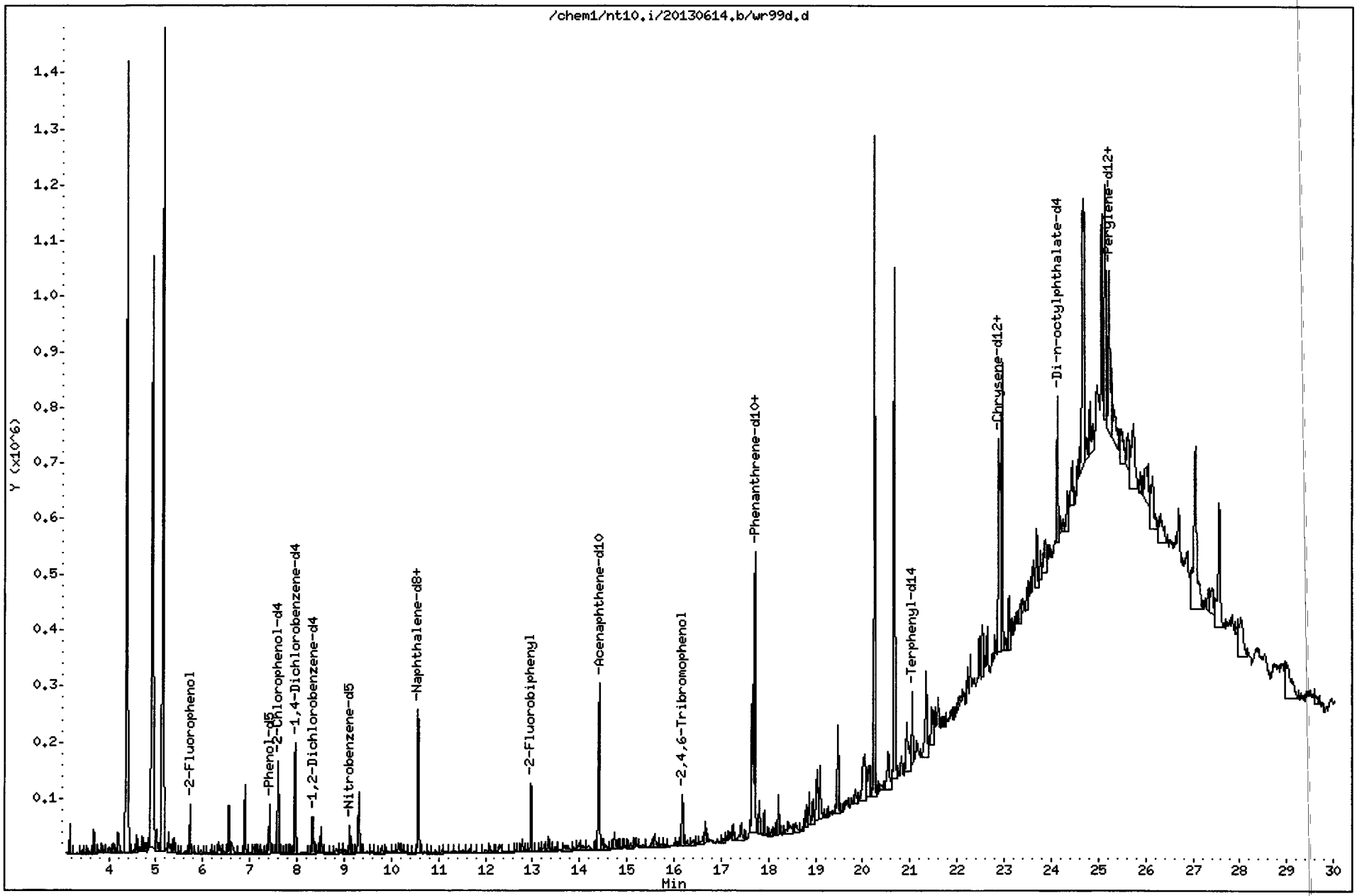
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WR99D
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130614.b/ABN.m
Misc Info: 13-11544

Client SDG: WR99
Fraction: SV
Client Smp ID: KC-VT-1593-20130530
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	738.7	431.9	58.47	27-120
$ 2 Phenol-d5	738.7	469.5	63.56	29-120
$ 5 2-Chlorophenol-d4	738.7	470.3	63.67	31-120
$ 10 1,2-Dichlorobenzen	492.5	280.4	56.95	32-120
$ 18 Nitrobenzene-d5	492.5	296.7	60.25	30-120
$ 36 2-Fluorobiphenyl	492.5	323.4	65.67	35-120
$ 55 2,4,6-Tribromophen	738.7	639.6	86.58	24-134
$ 66 Terphenyl-d14	492.5	390.8	79.36	37-120

Data File: /chem1/nt10.i/20130614.b/wr99d.d
Date : 14-JUN-2013 19:37
Client ID: KC-VT-1593-20130530
Sample Info: WR99D,2
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

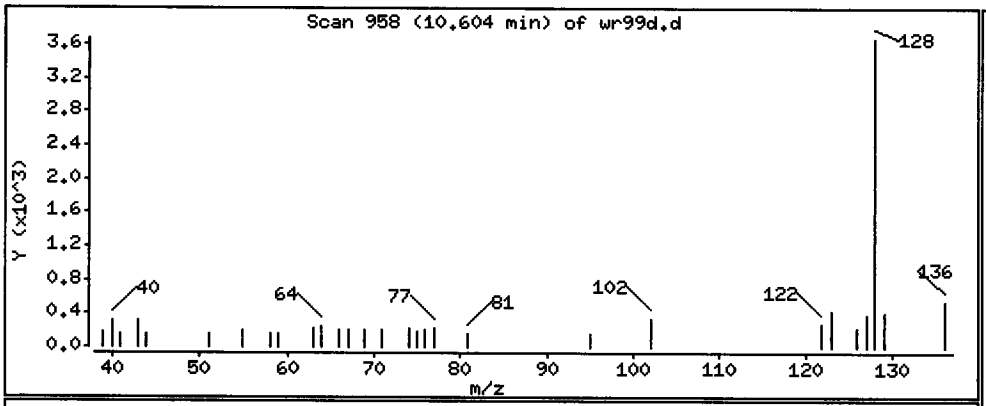
Operator: VTS/YZ

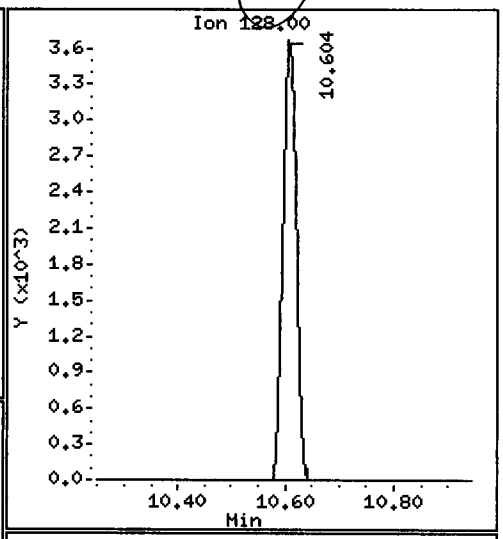
Column phase: ZB-5msi

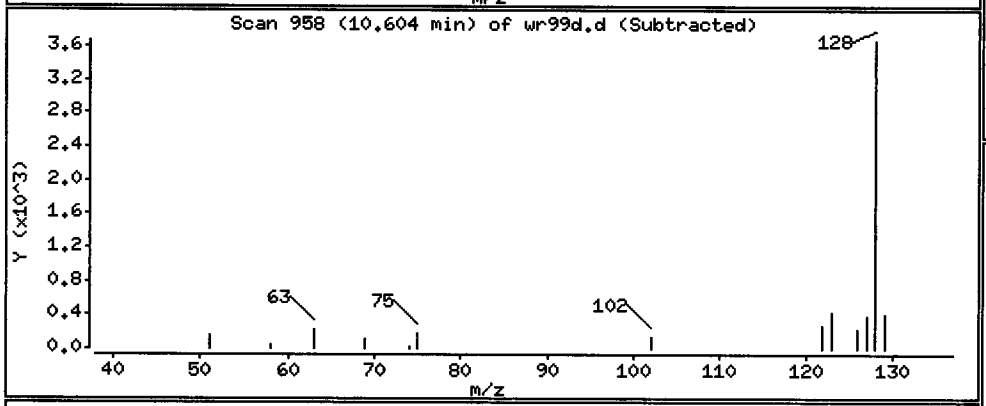
Column diameter: 0.25

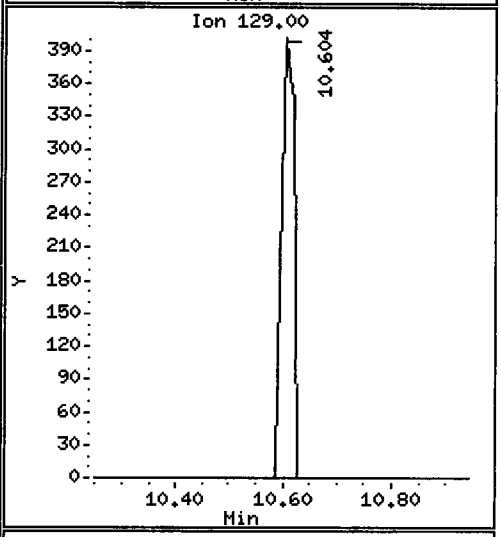
28 Naphthalene

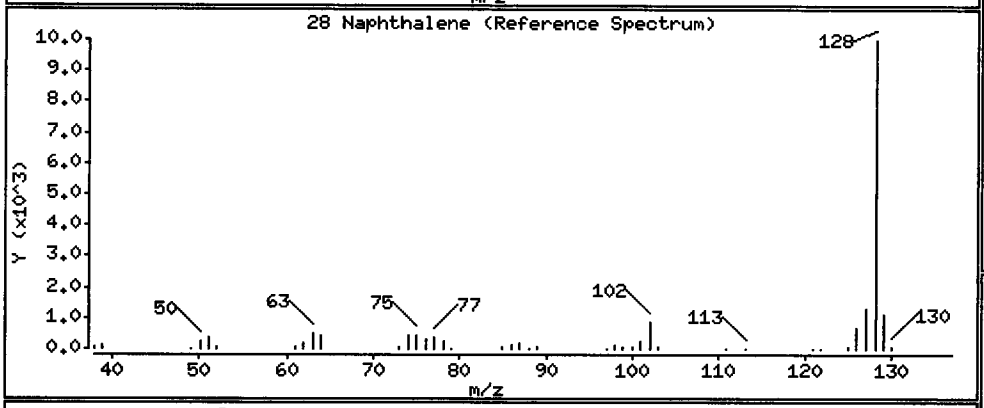
Concentration: 22.39 ug/kg

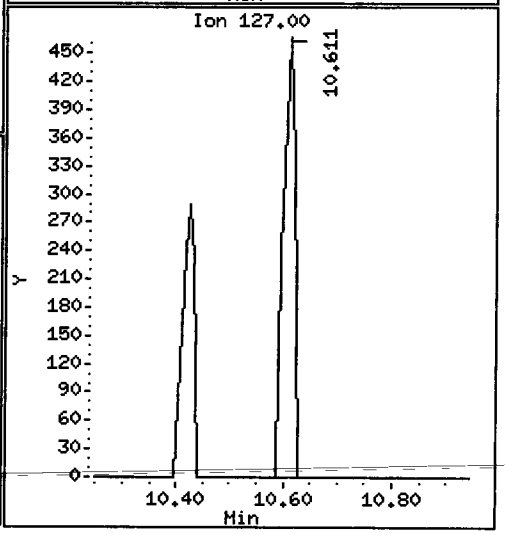


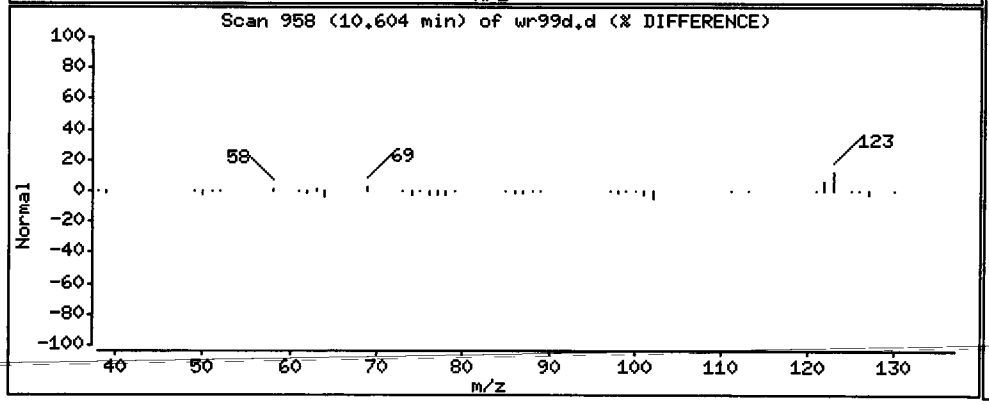












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

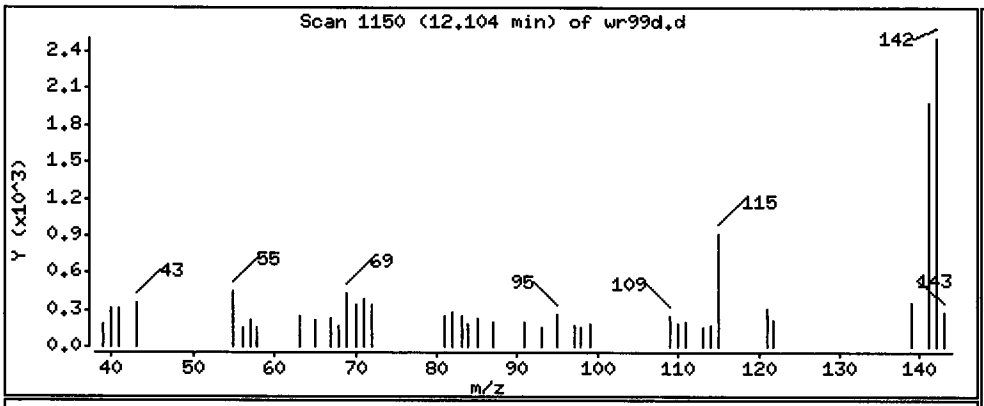
Operator: VTS/YZ

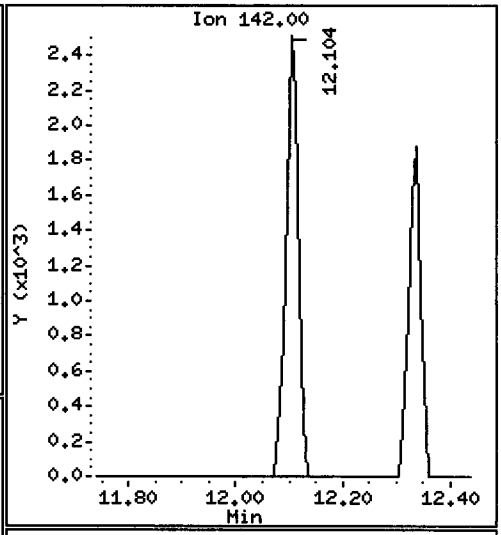
Column phase: ZB-5msi

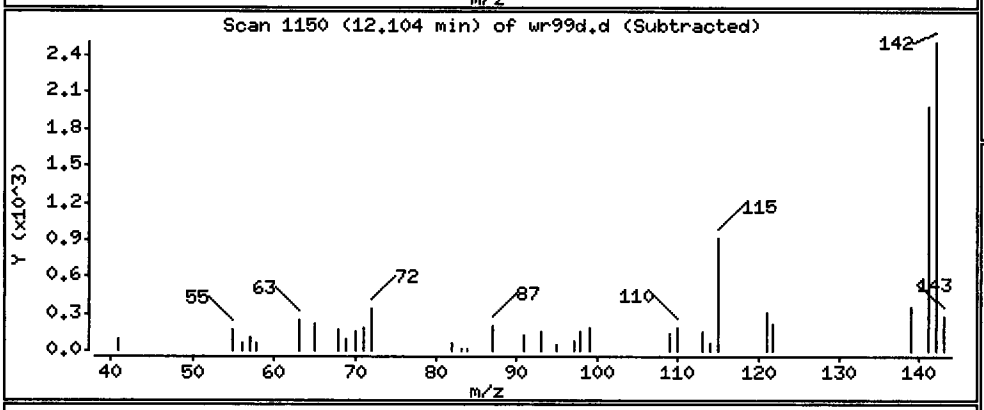
Column diameter: 0.25

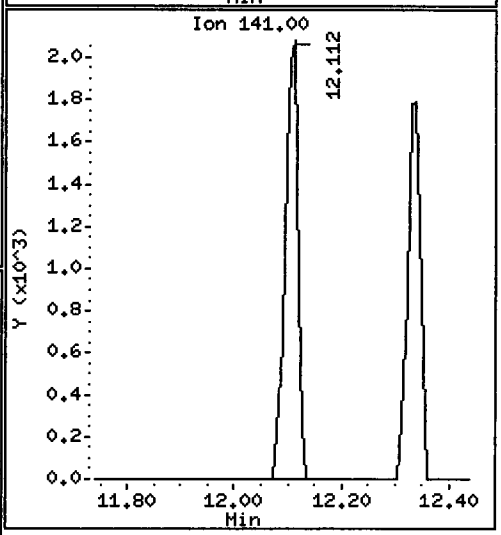
32 2-Methylnaphthalene

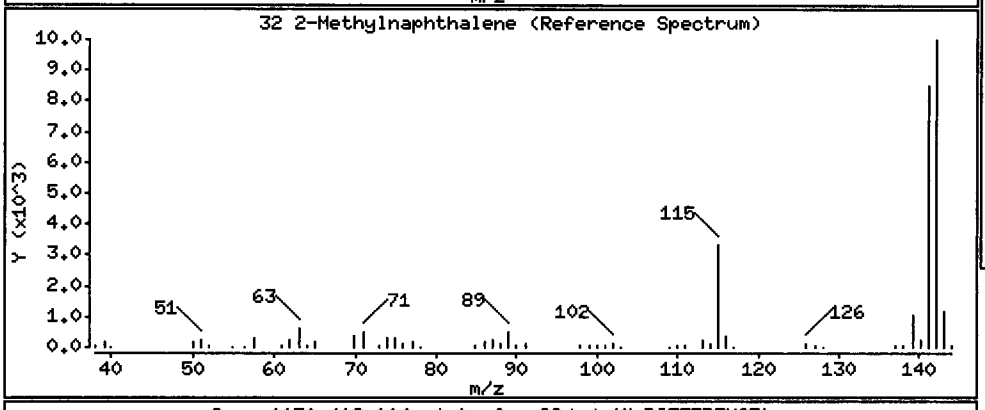
Concentration: 22.42 ug/kg

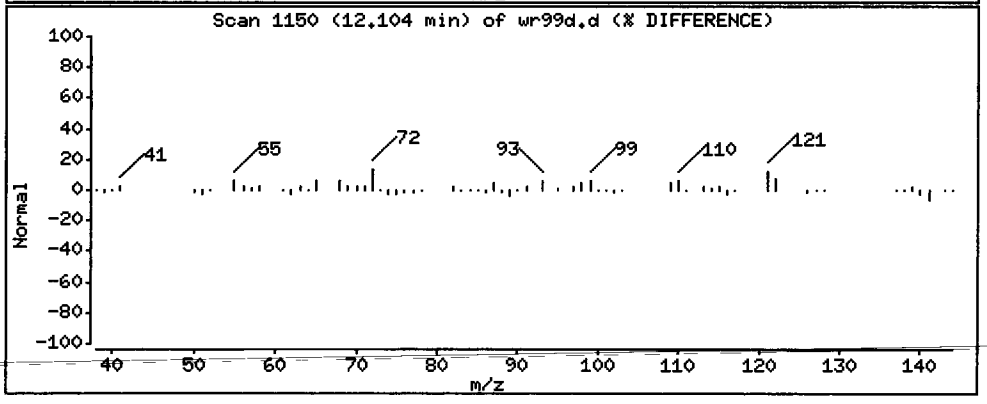












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

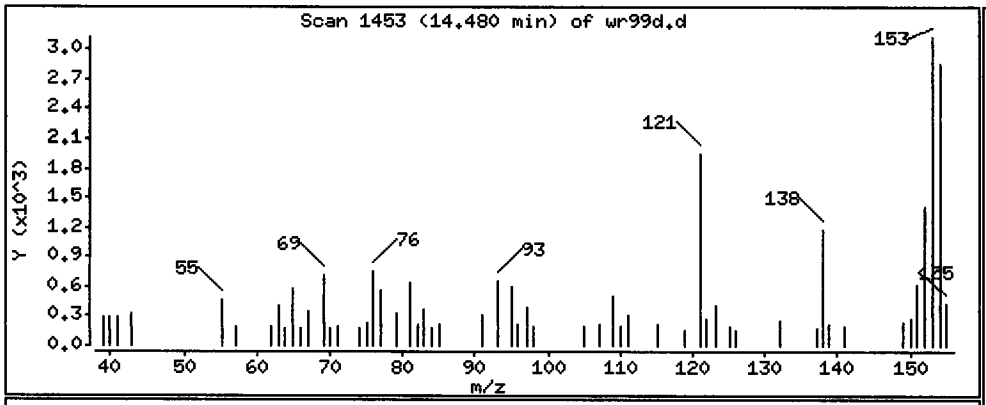
Operator: VTS/YZ

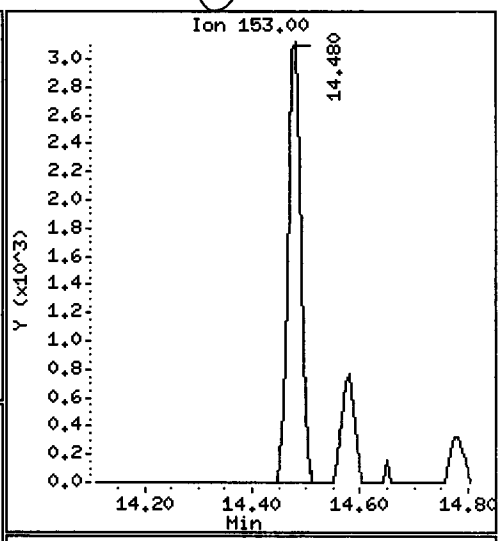
Column phase: ZB-5msi

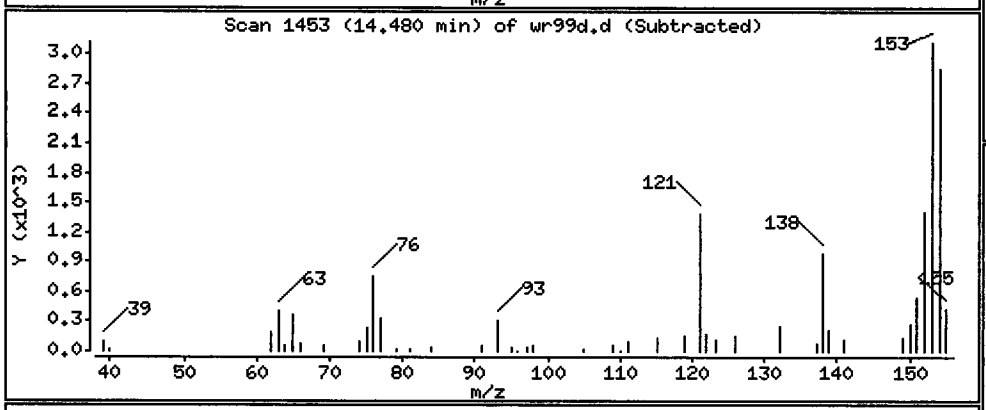
Column diameter: 0.25

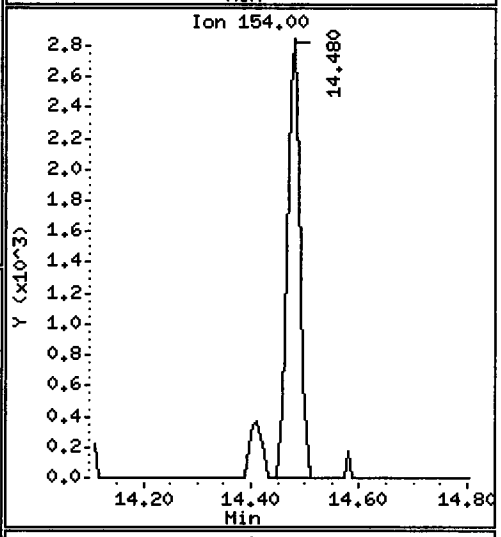
44 Acenaphthene

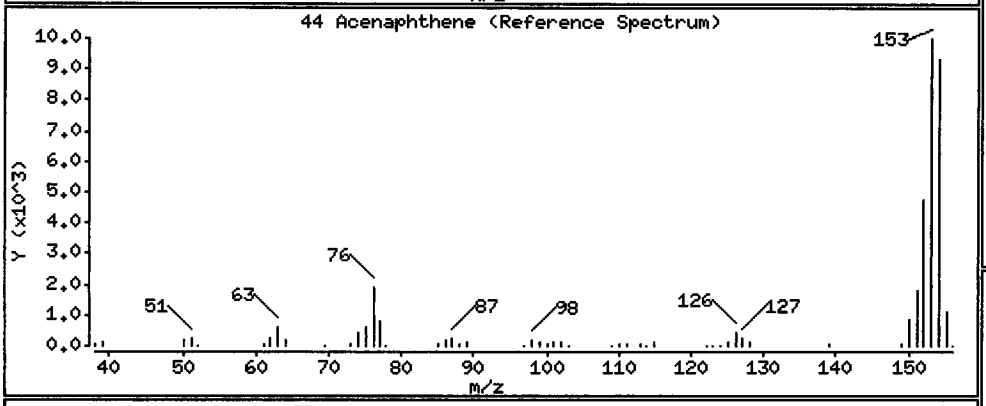
Concentration: 30.84 ug/kg

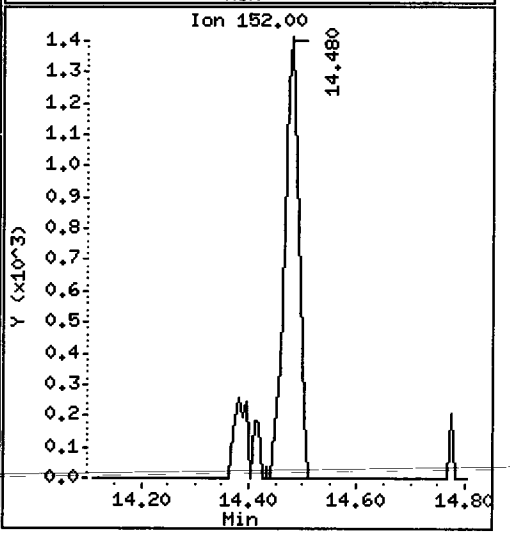


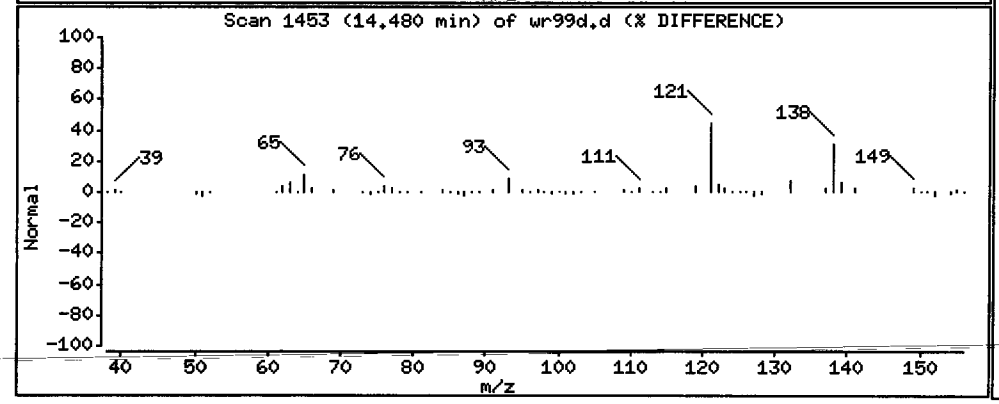












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

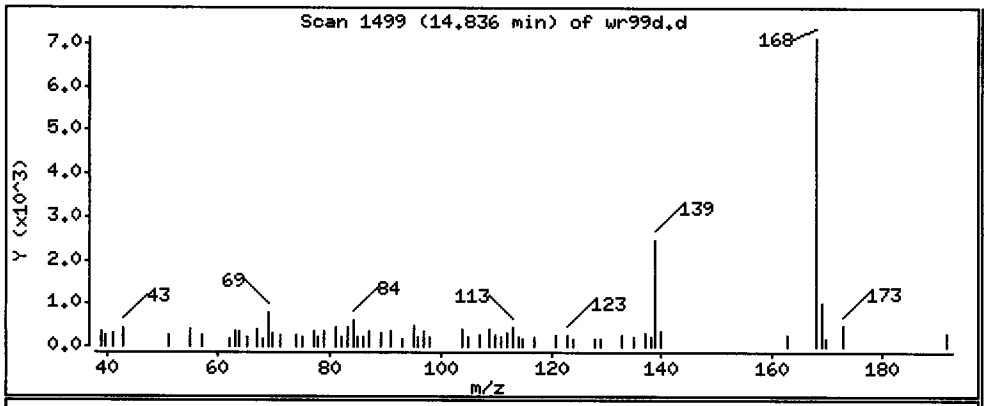
Operator: VTS/YZ

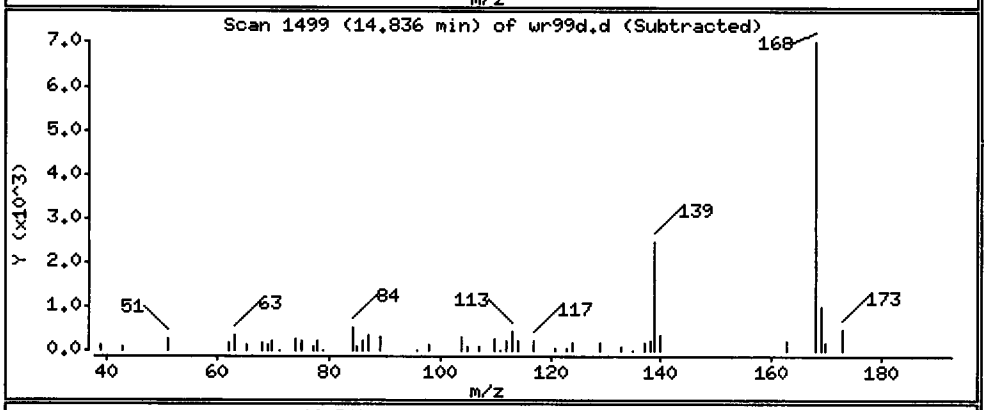
Column phase: ZB-5msi

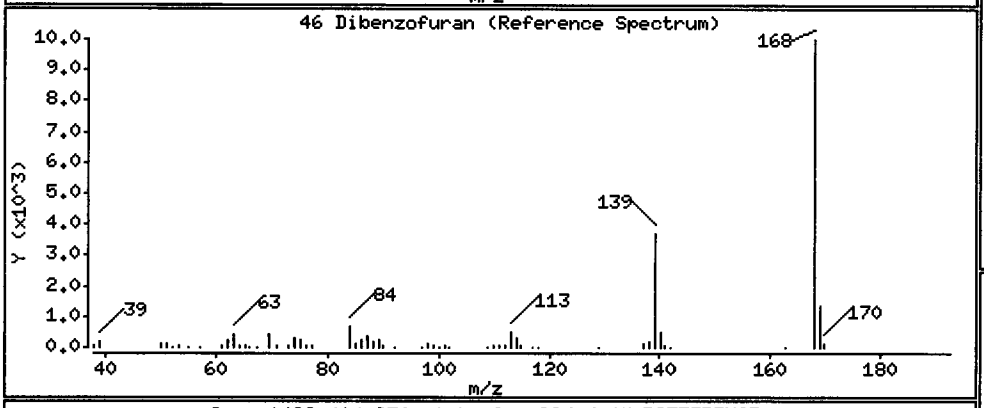
Column diameter: 0.25

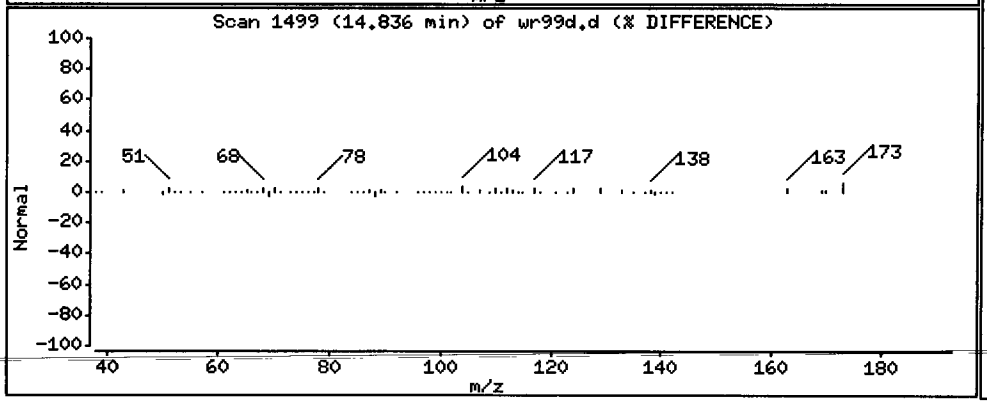
46 Dibenzofuran

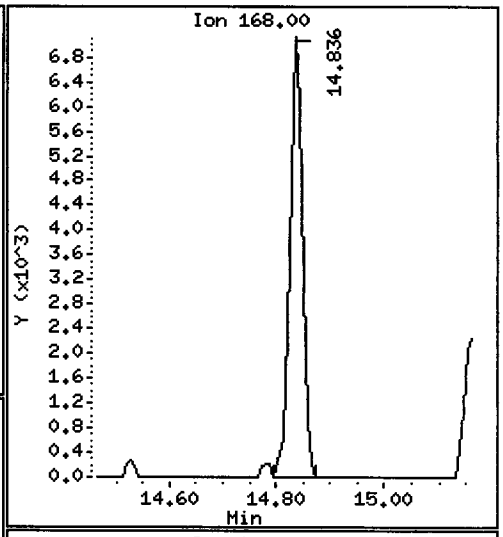
Concentration: 50.70 ug/kg

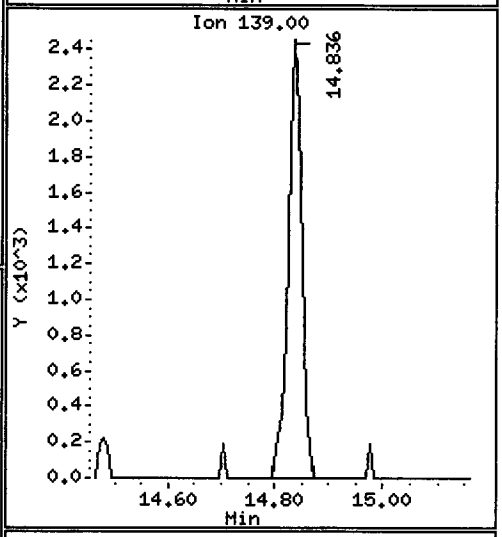


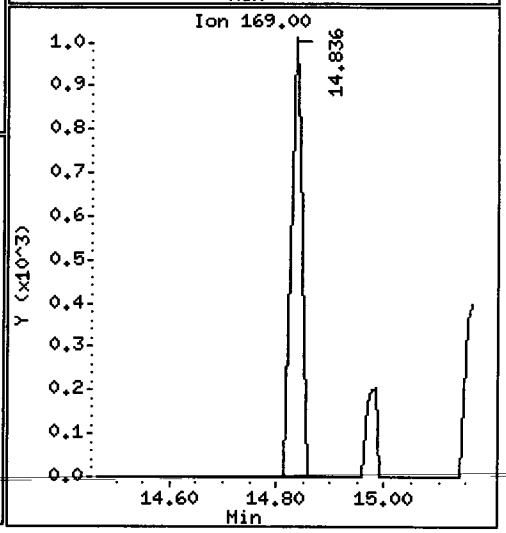












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

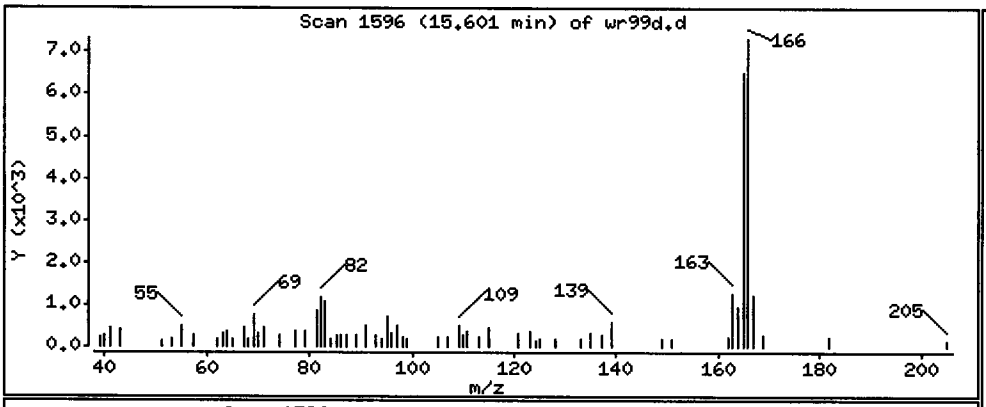
Operator: VTS/YZ

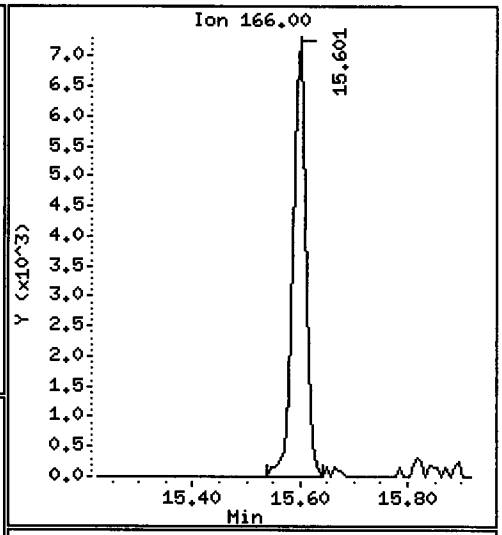
Column phase: ZB-5msi

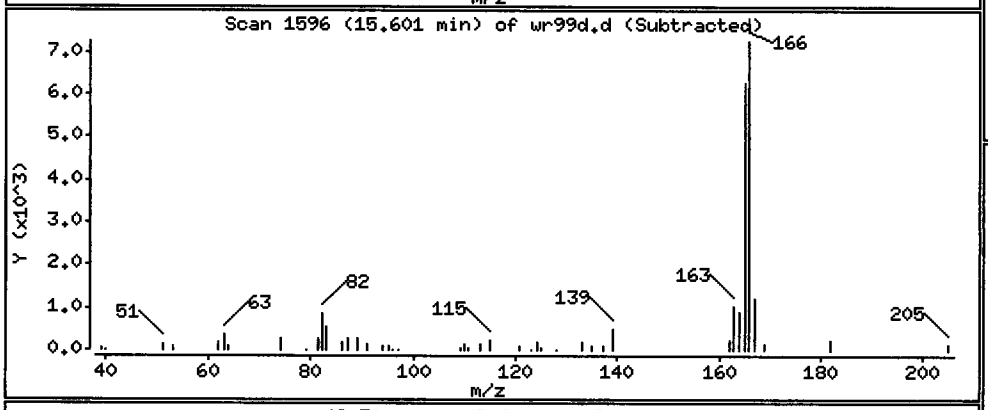
Column diameter: 0.25

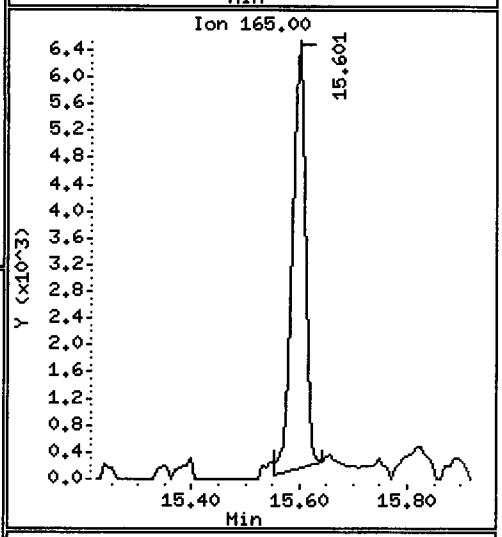
49 Fluorene

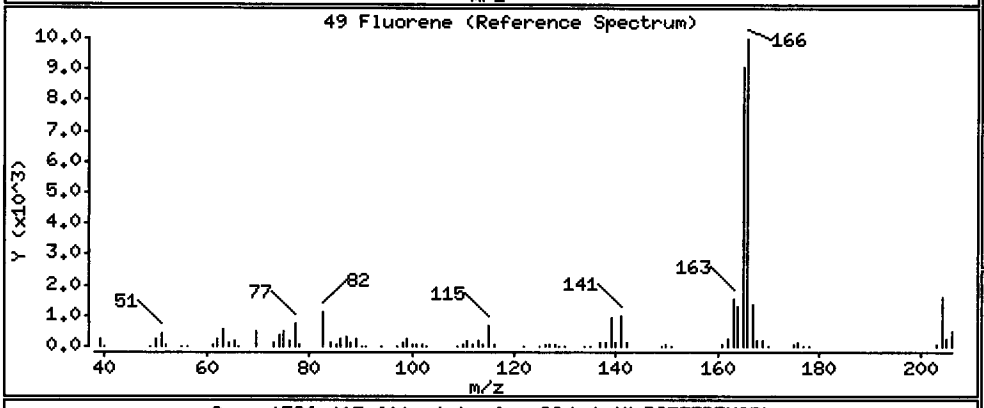
Concentration: 62.34 ug/kg

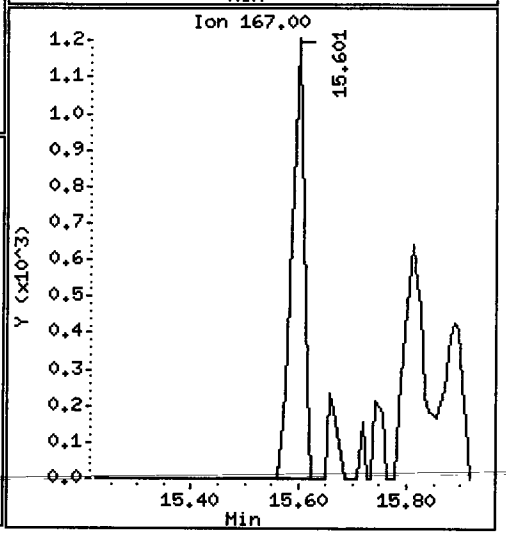


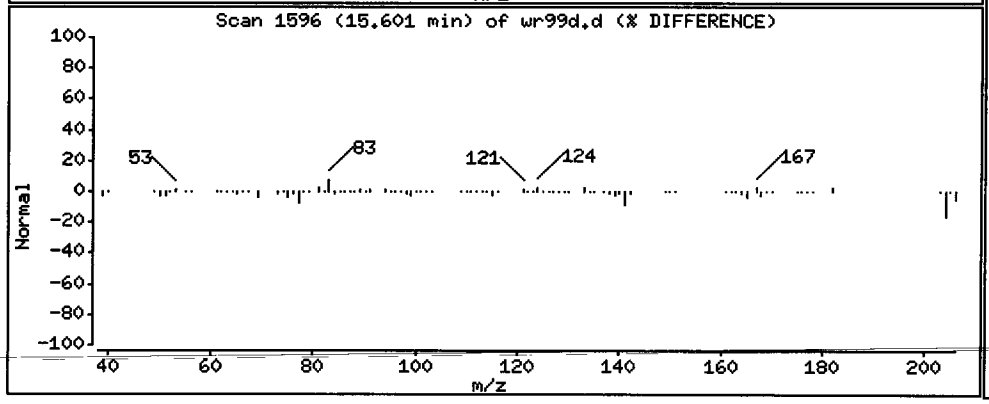












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

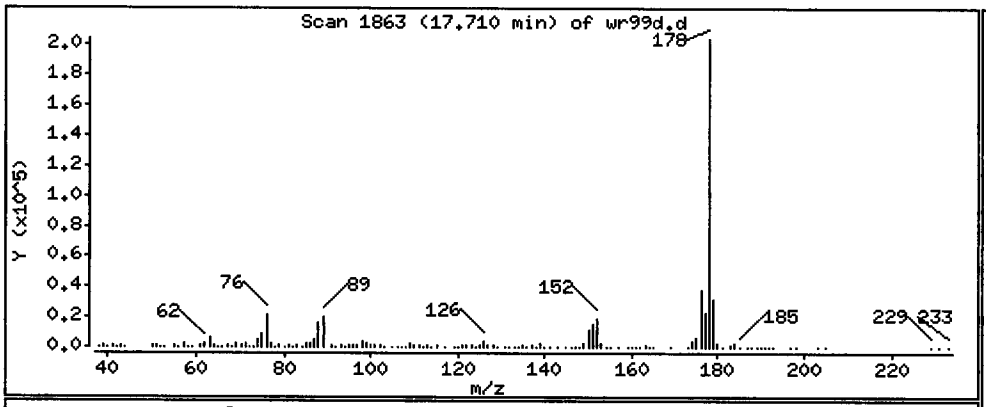
Operator: VTS/YZ

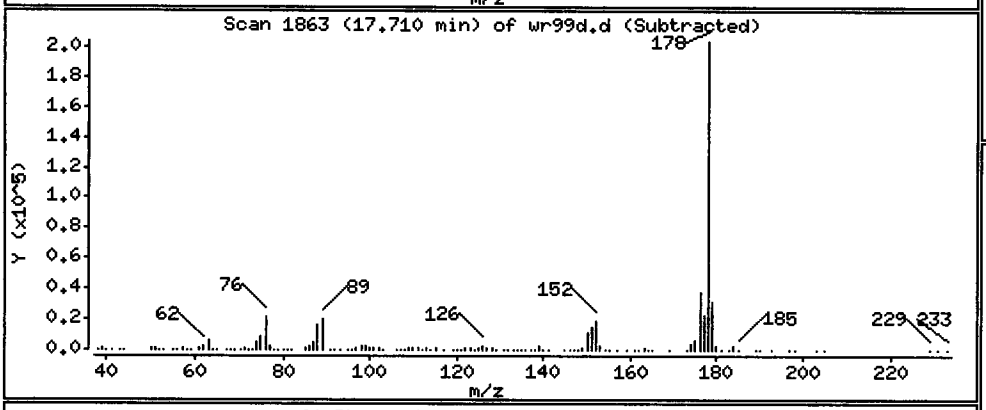
Column phase: ZB-5ms

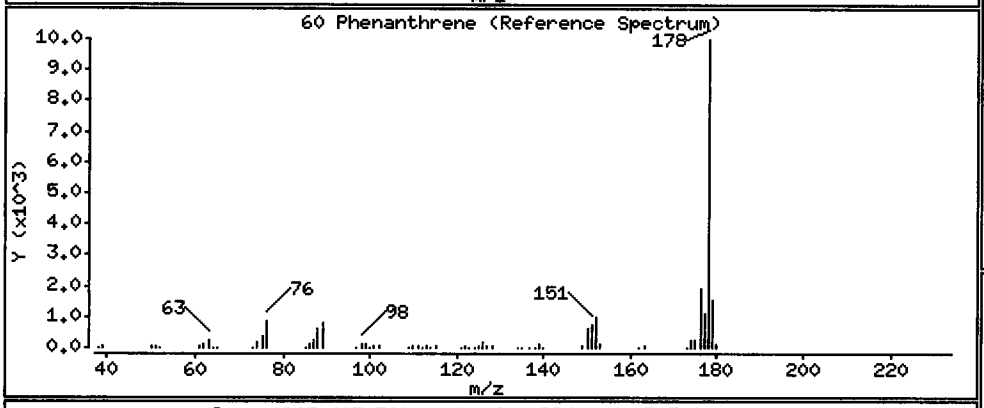
Column diameter: 0.25

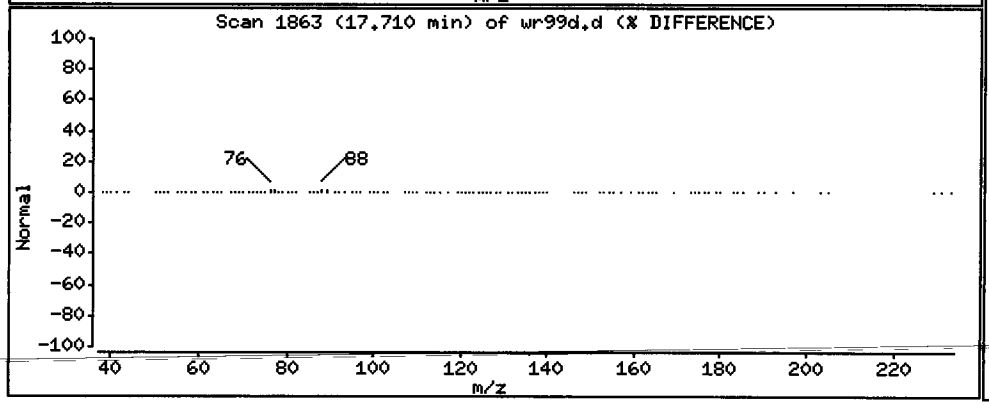
60 Phenanthrene

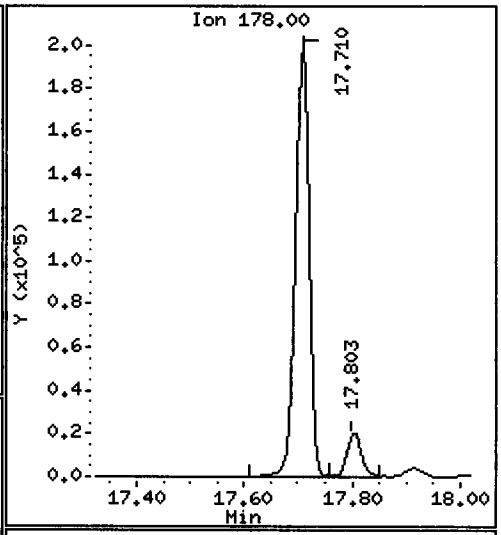
Concentration: 1394 ug/kg

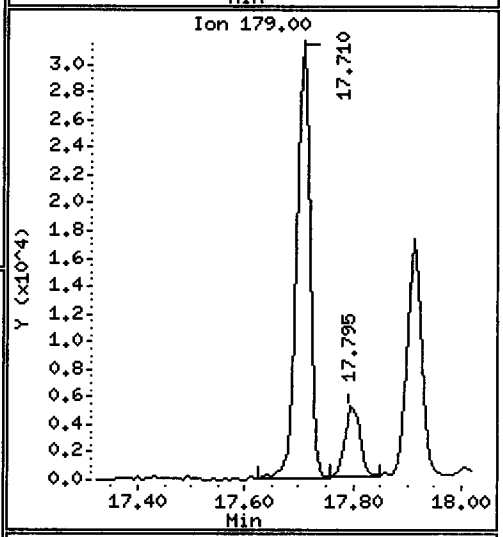


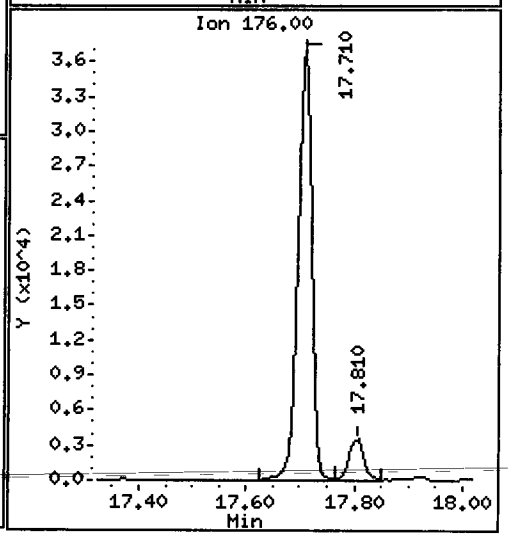












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

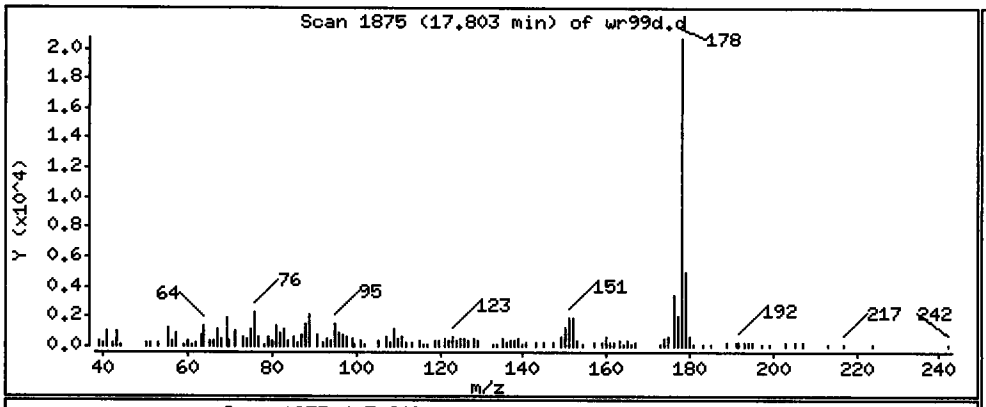
Operator: VTS/YZ

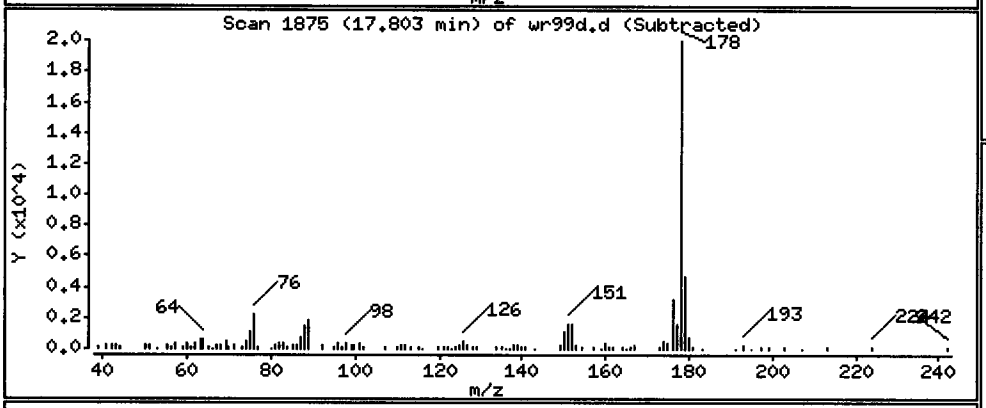
Column phase: ZB-5msi

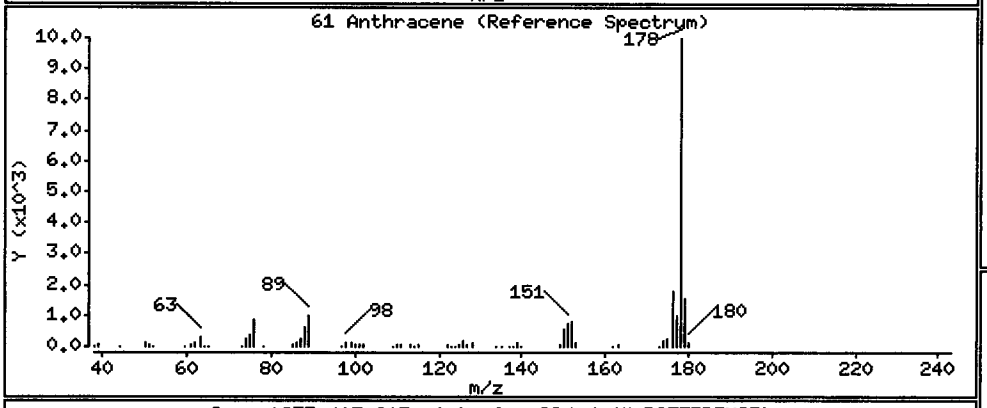
Column diameter: 0.25

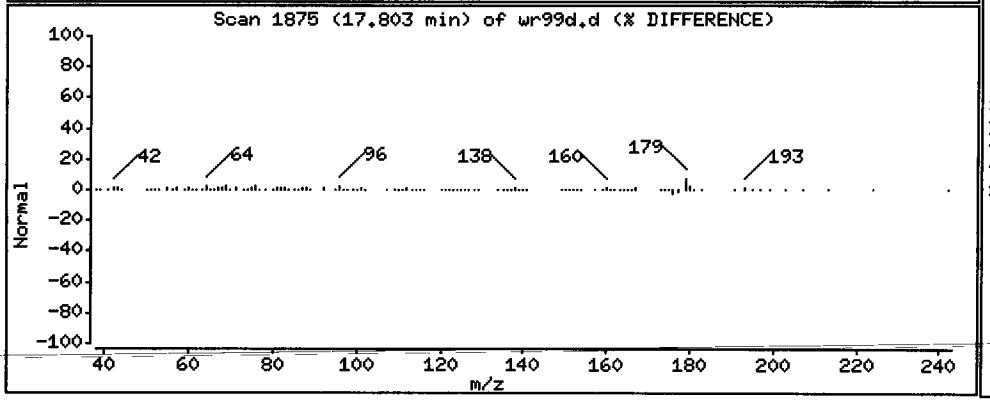
61 Anthracene

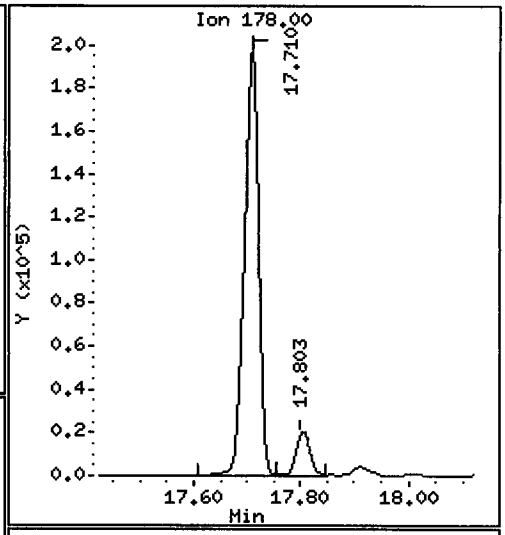
Concentration: 140.0 ug/kg

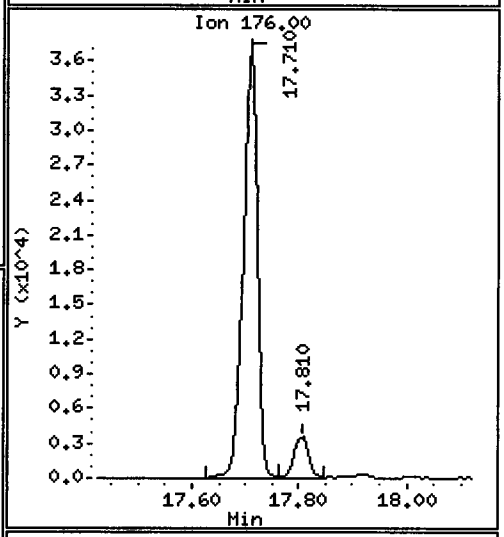


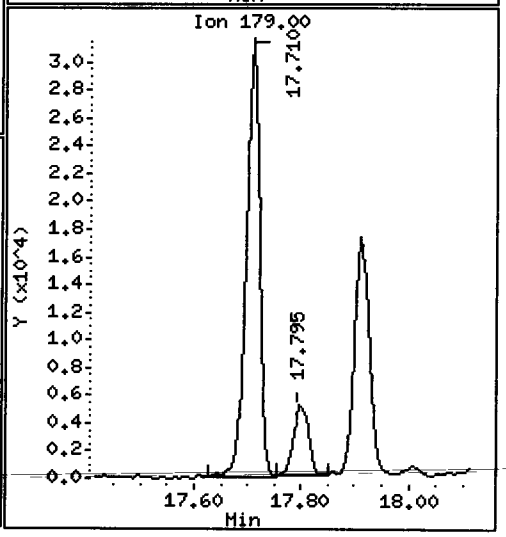












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

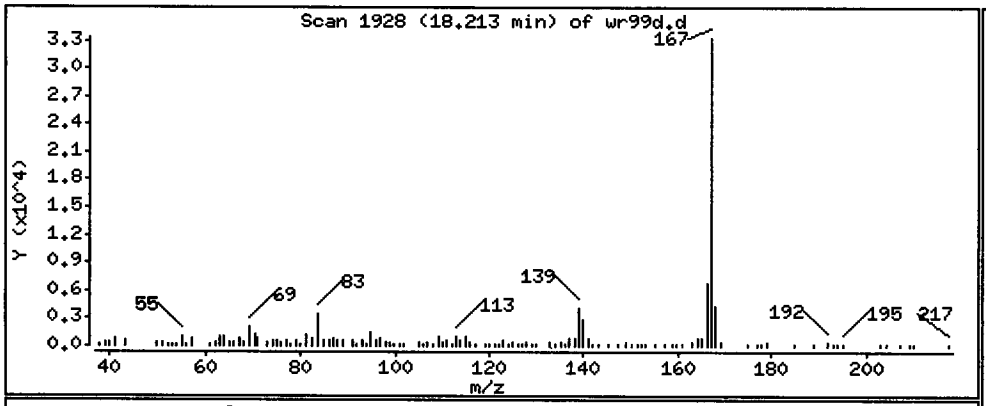
Operator: VTS/YZ

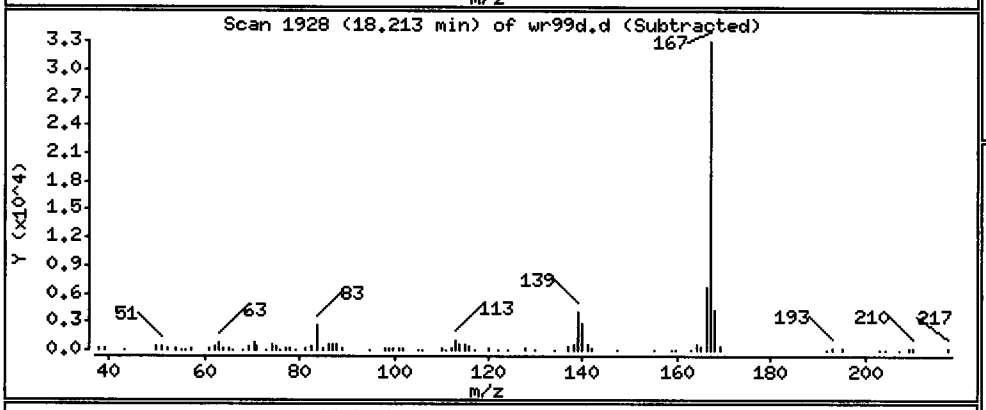
Column phase: ZB-5msi

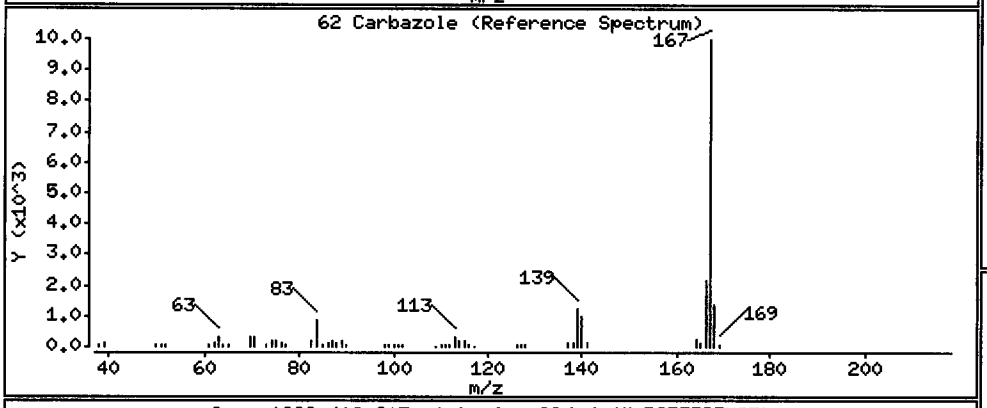
Column diameter: 0.25

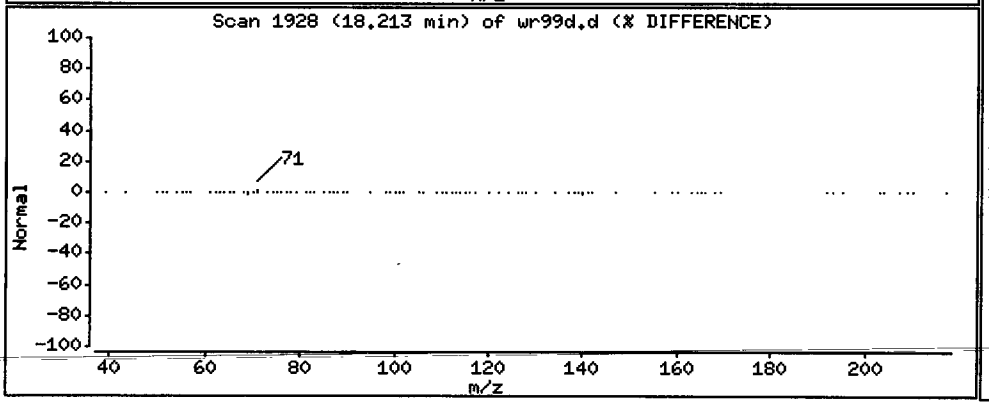
62 Carbazole

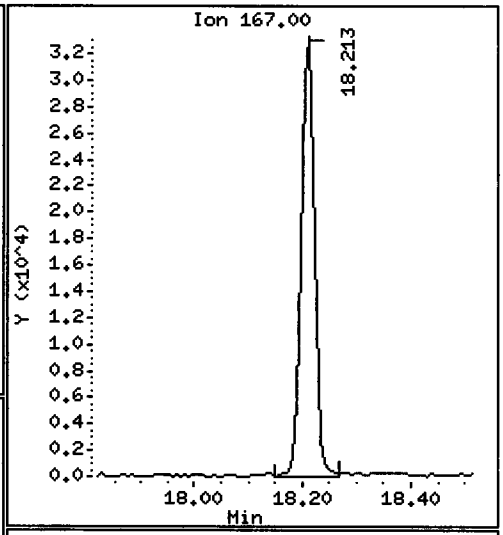
Concentration: 362.5 ug/kg

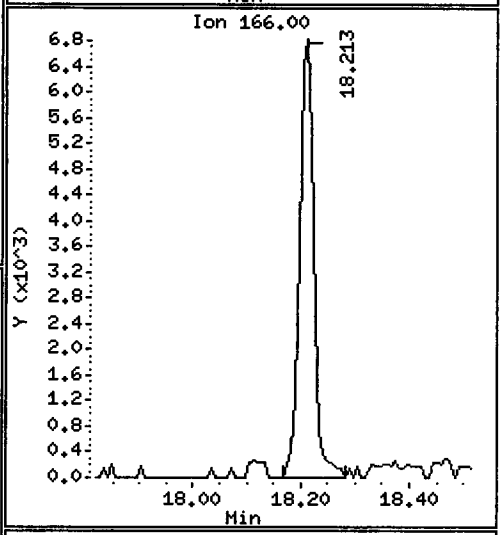


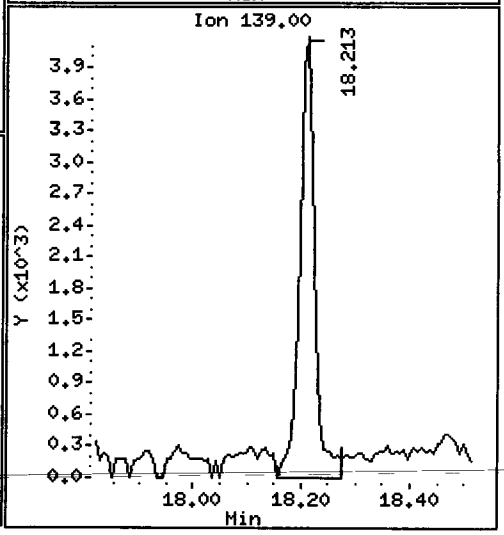












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

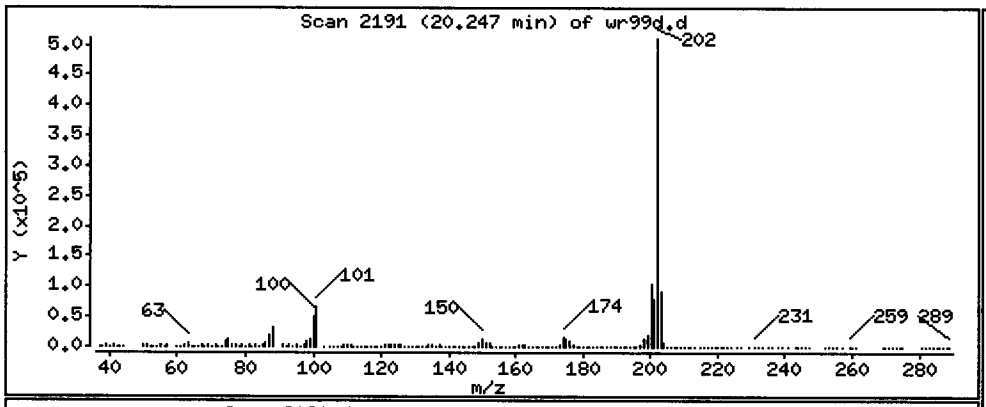
Operator: VTS/YZ

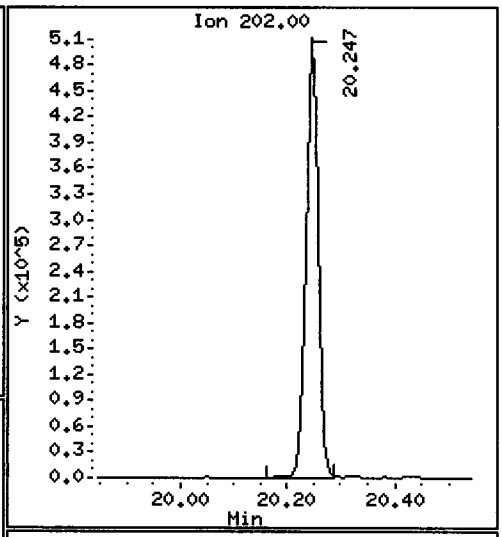
Column phase: ZB-5msi

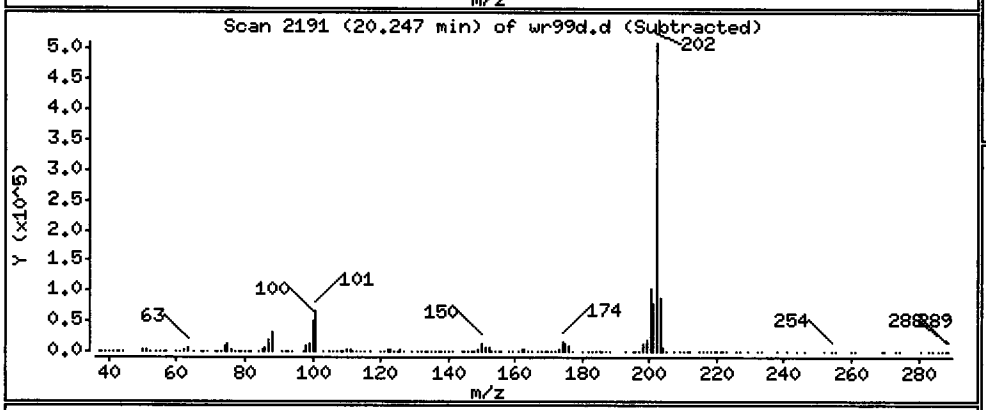
Column diameter: 0.25

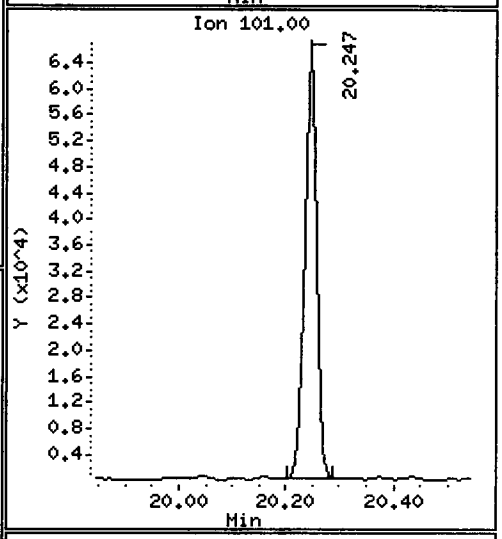
64 Fluoranthene

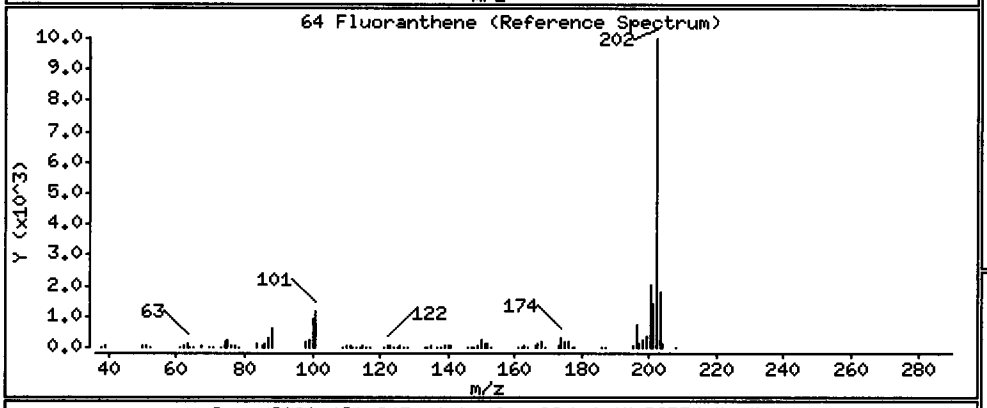
Concentration: 2653 ug/kg

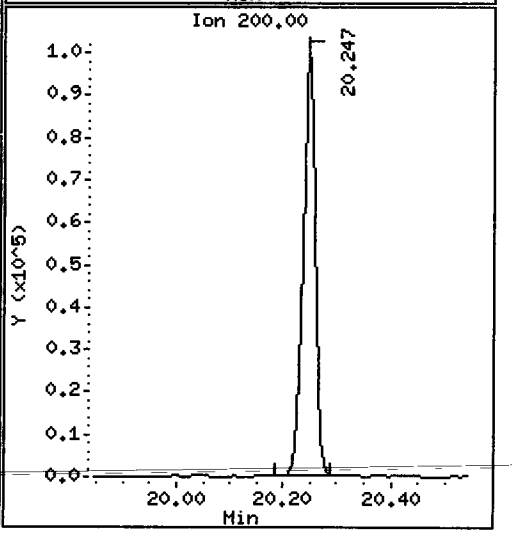


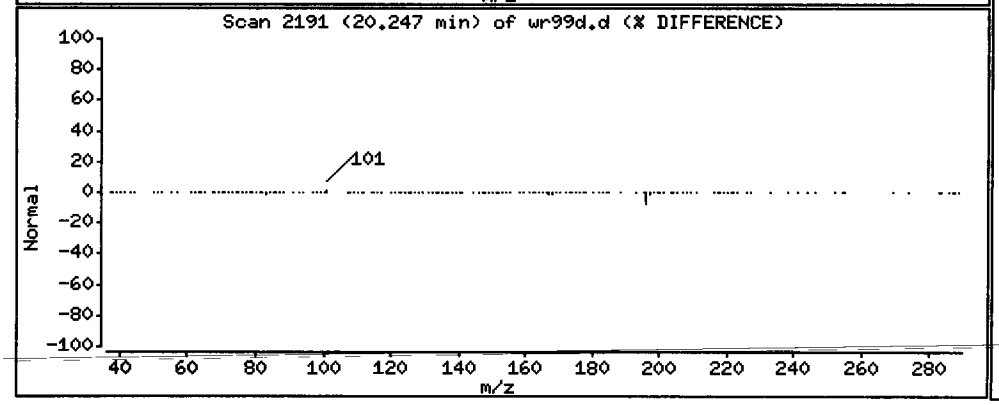












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

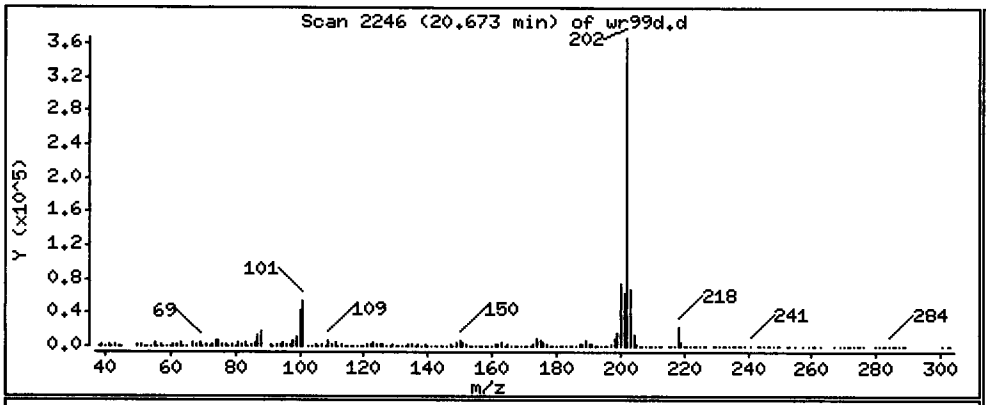
Operator: VTS/YZ

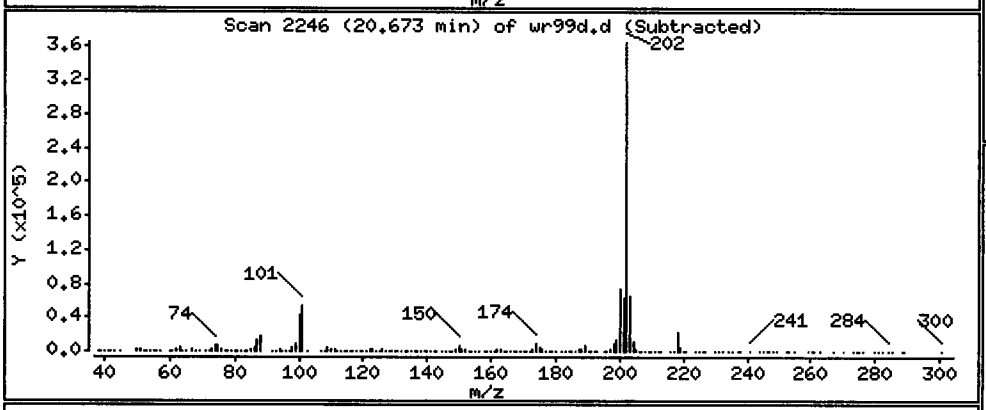
Column phase: ZB-5msi

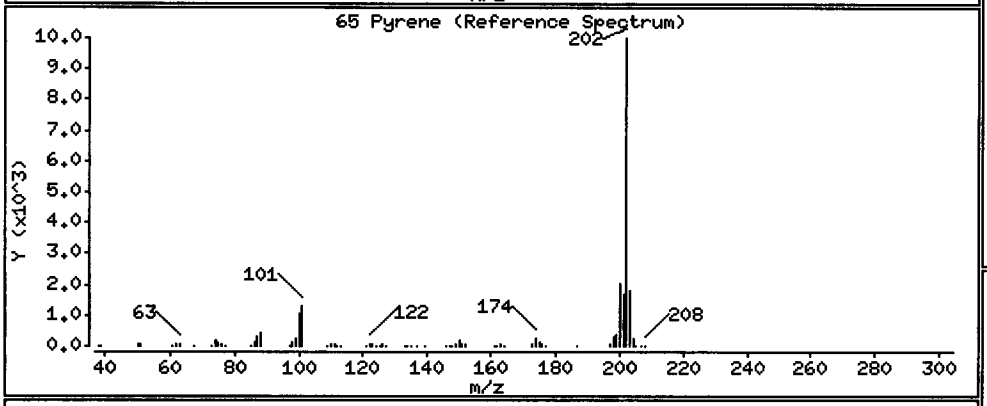
Column diameter: 0.25

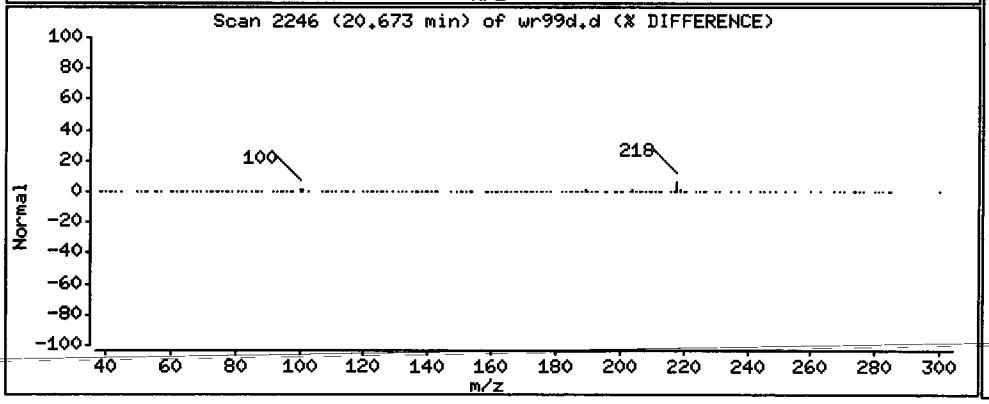
65 Pyrene

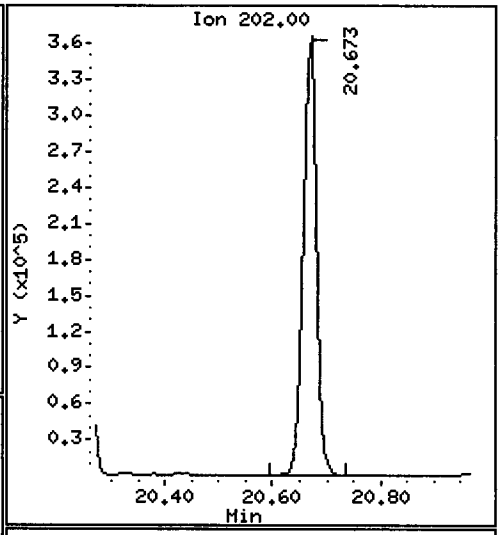
Concentration: 2294 ug/kg

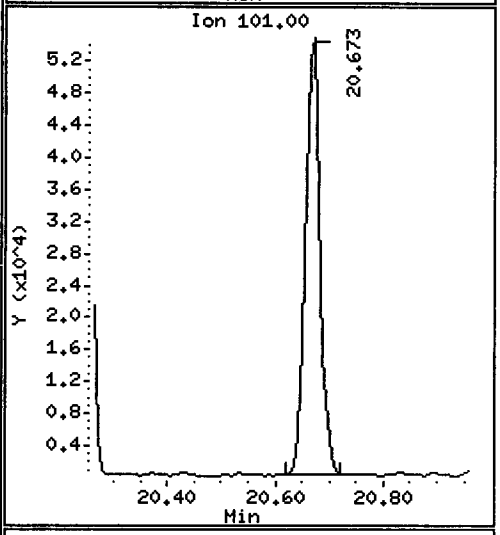


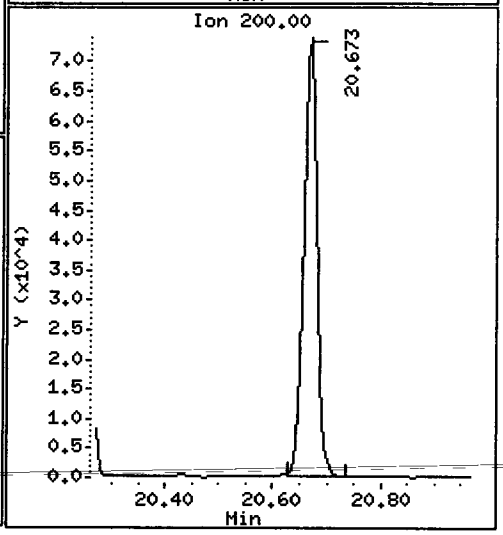












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

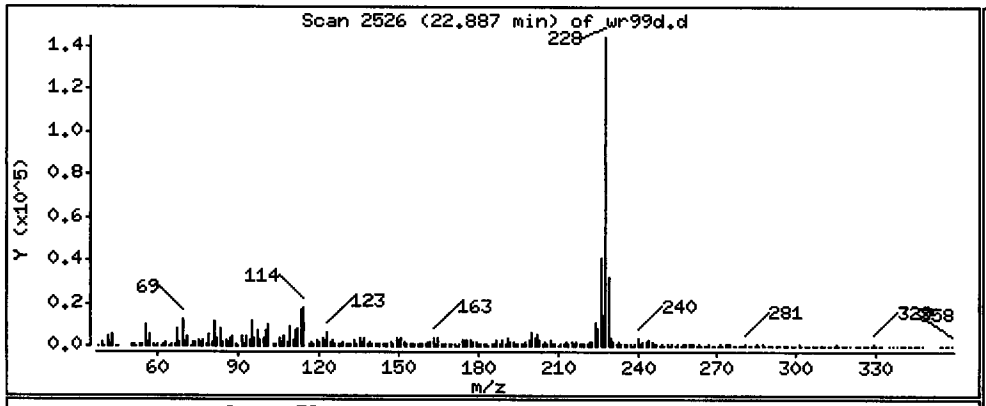
Operator: VTS/YZ

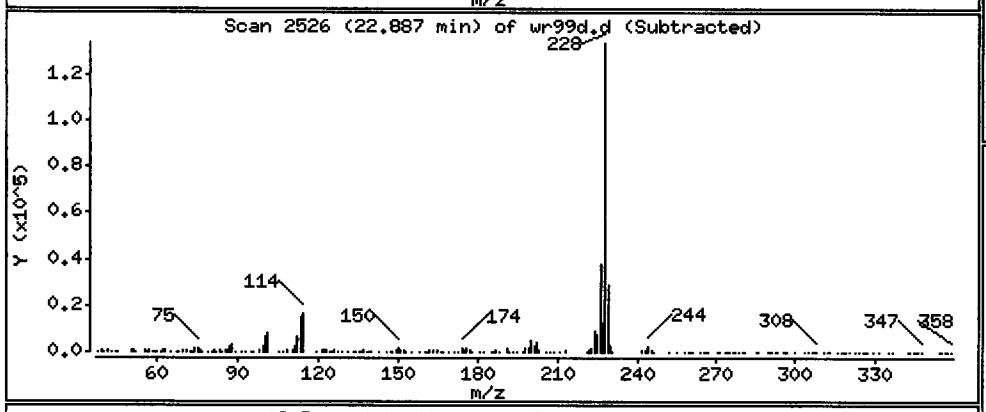
Column phase: ZB-5msi

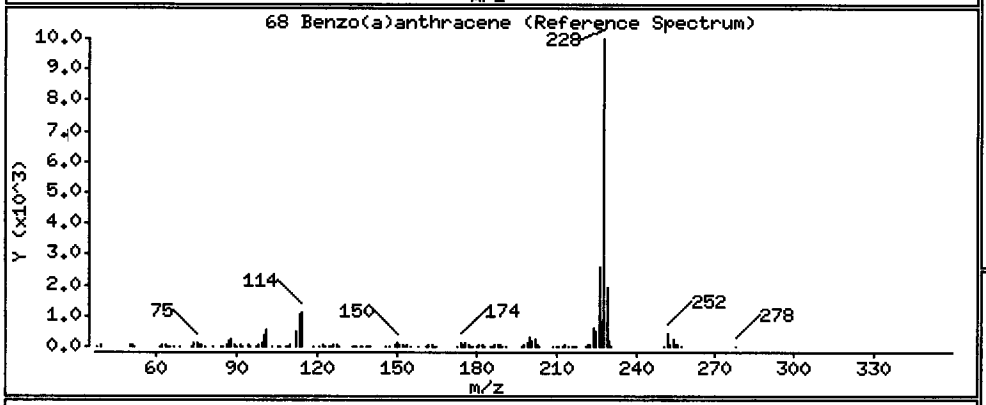
Column diameter: 0.25

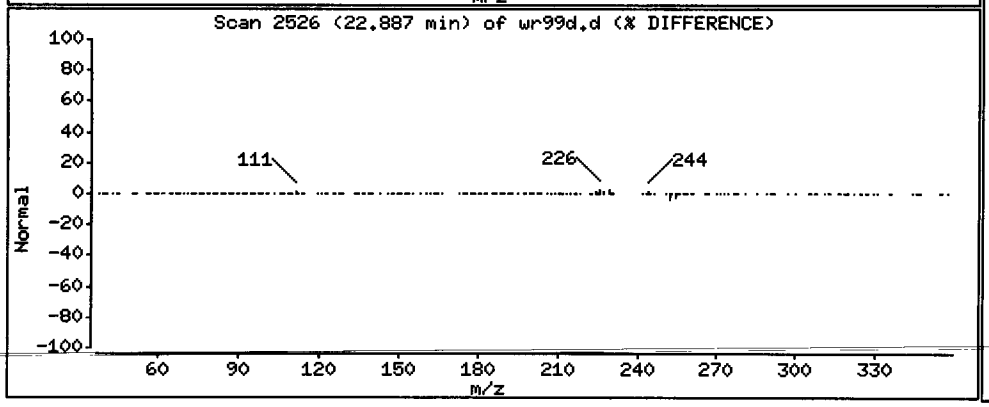
68 Benzo(a)anthracene

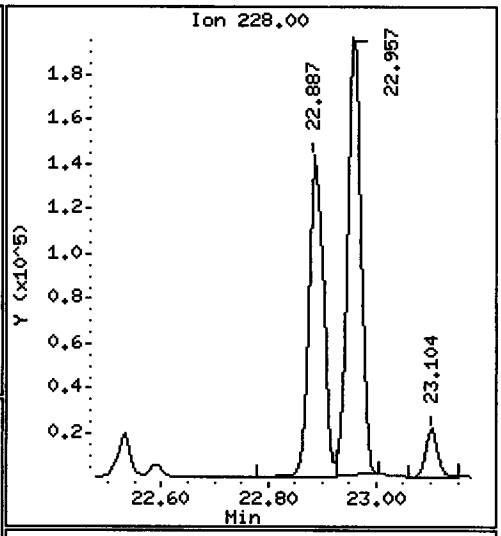
Concentration: 1028 ug/kg

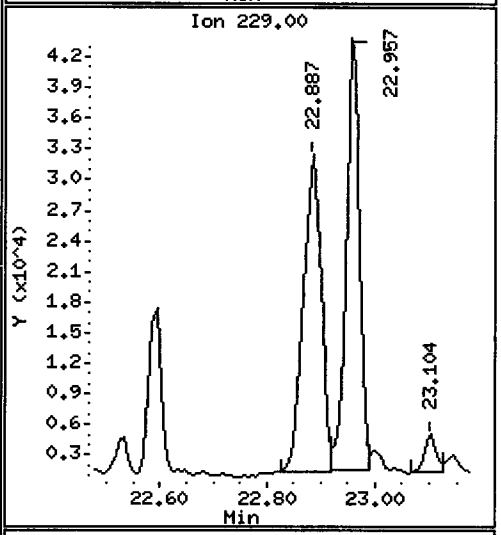


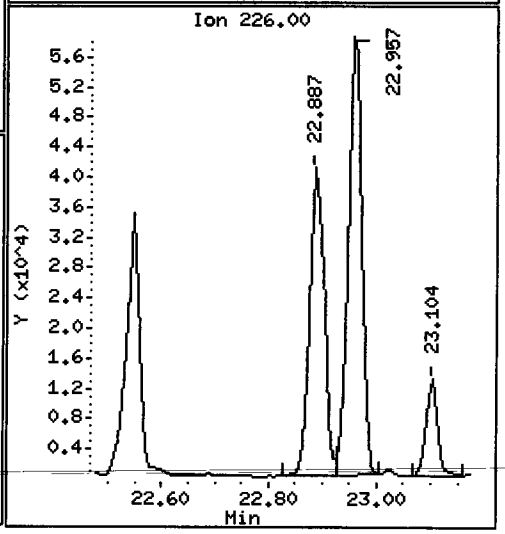












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

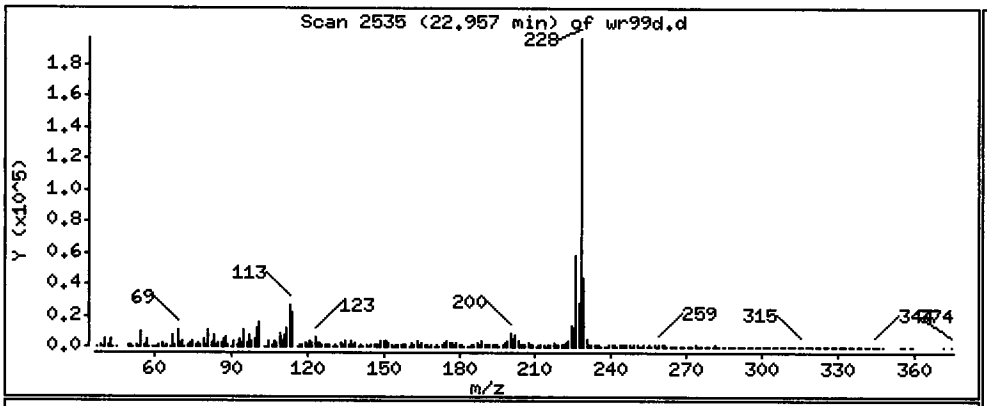
Operator: VTS/YZ

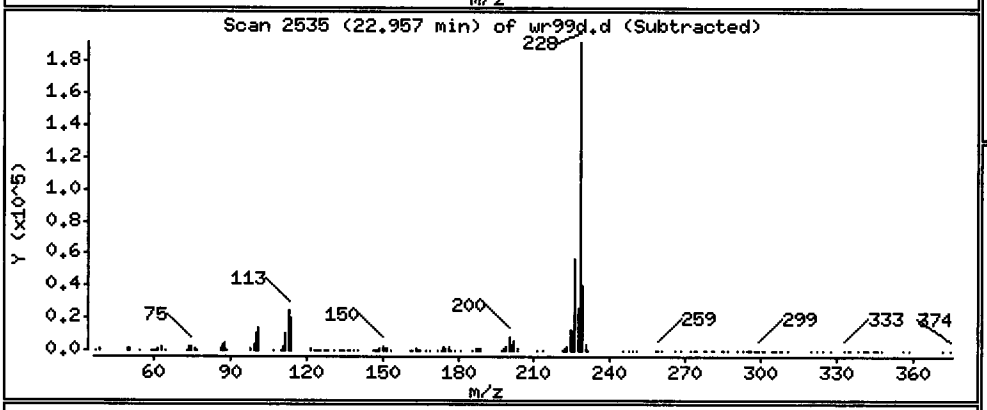
Column phase: ZB-5msi

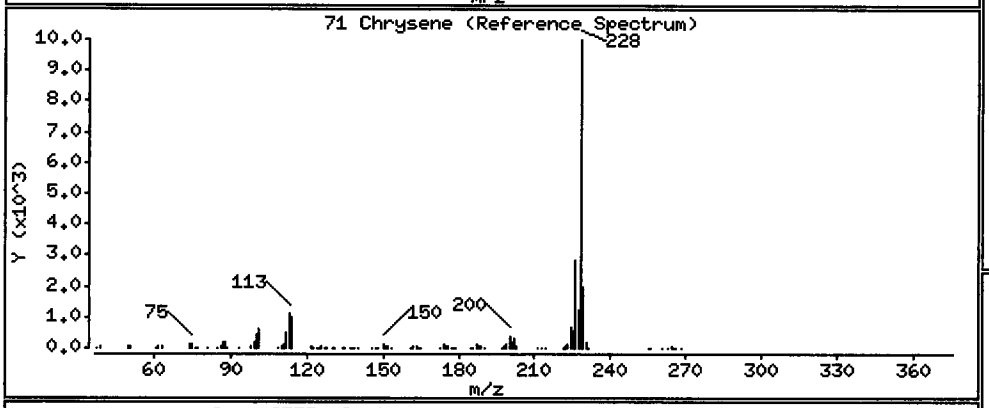
Column diameter: 0.25

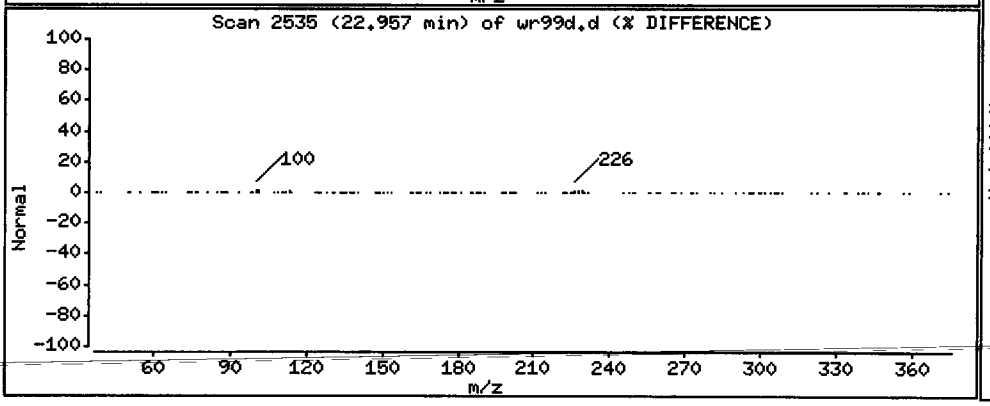
71 Chrysene

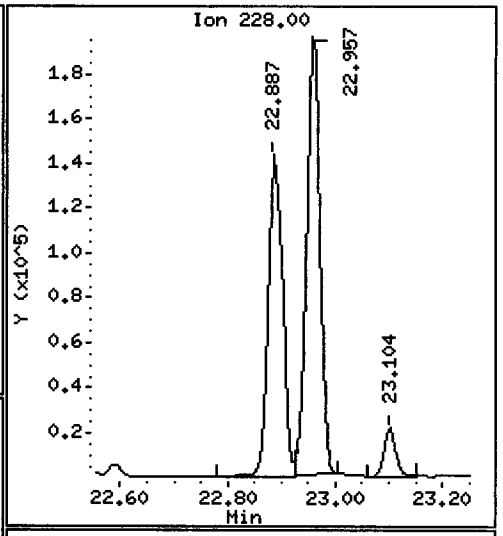
Concentration: 1483 ug/kg

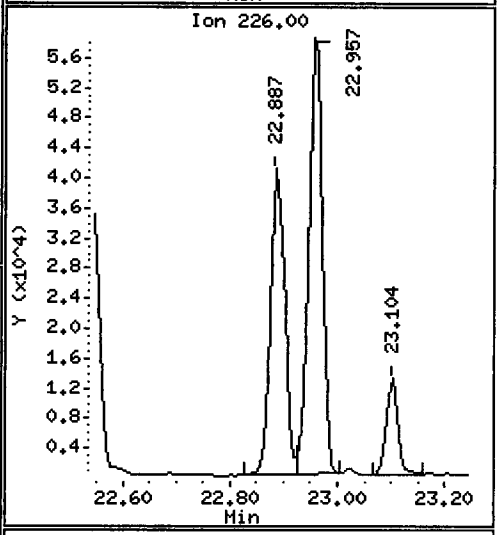


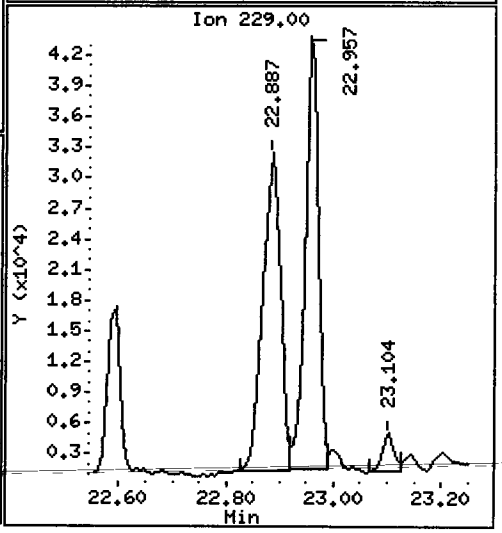












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

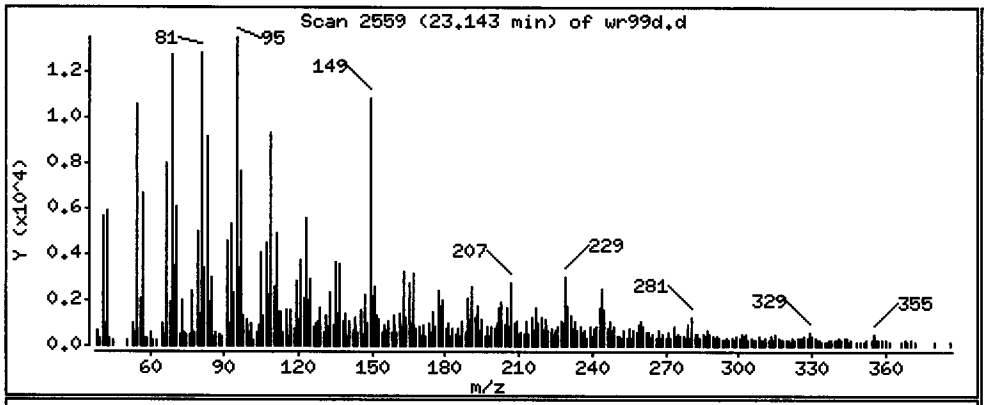
Operator: VTS/YZ

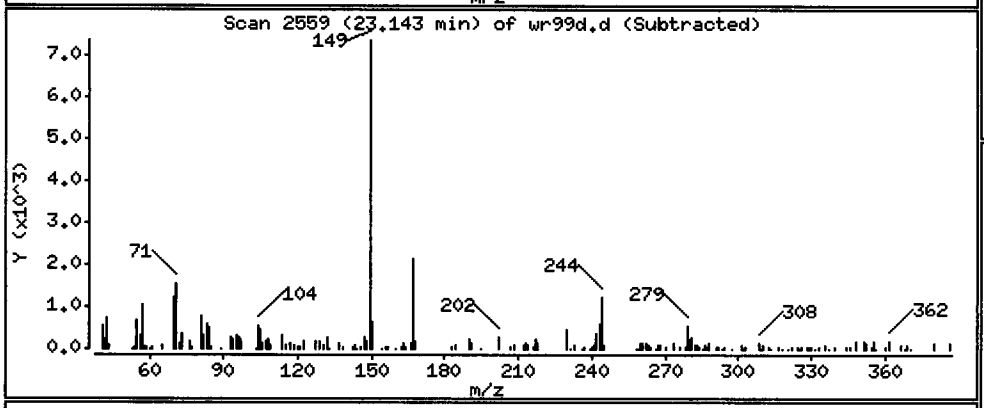
Column phase: ZB-5msi

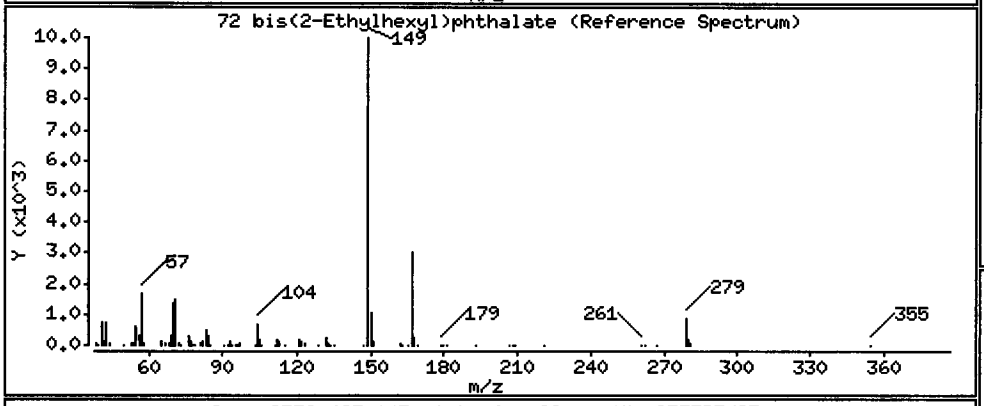
Column diameter: 0.25

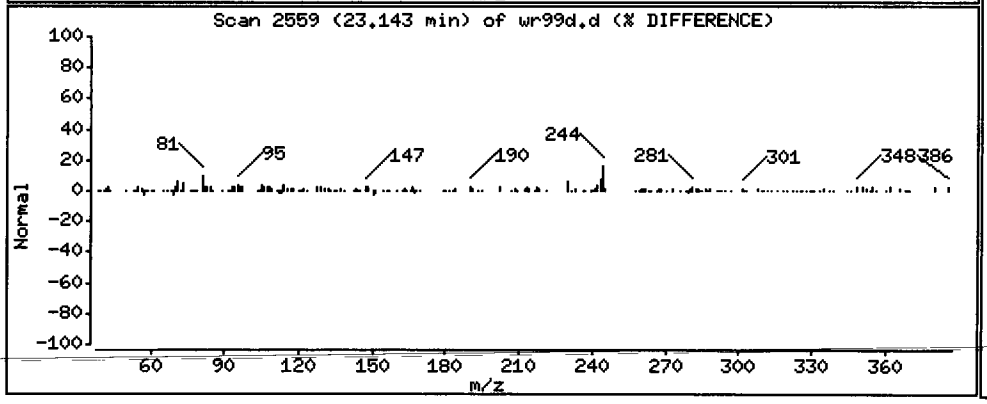
72 bis(2-Ethylhexyl)phthalate

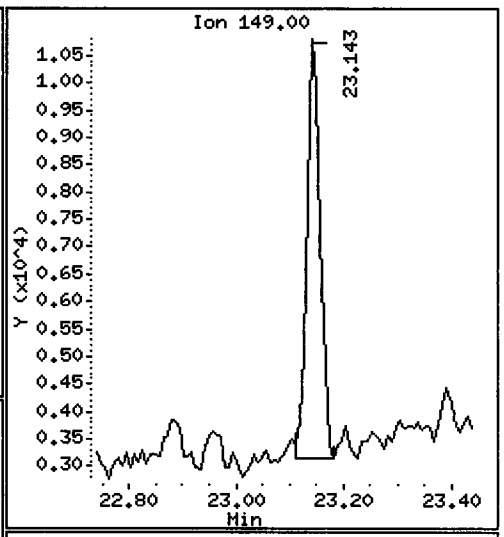
Concentration: 81.68 ug/kg

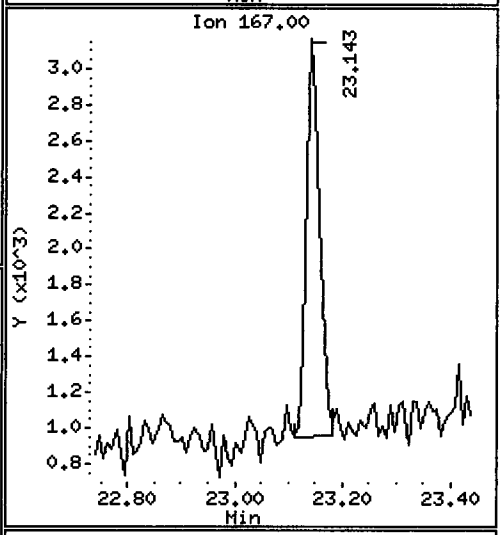


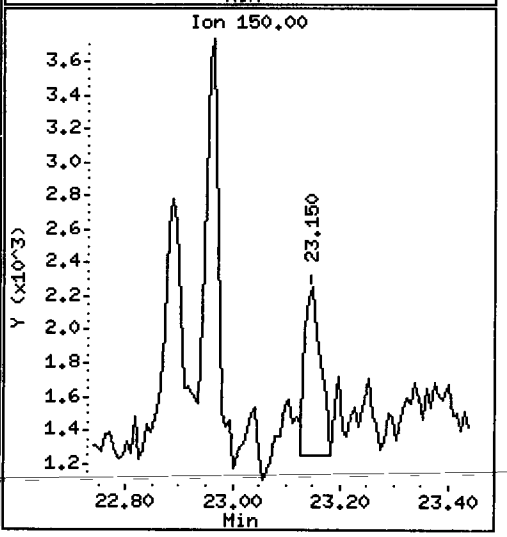












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

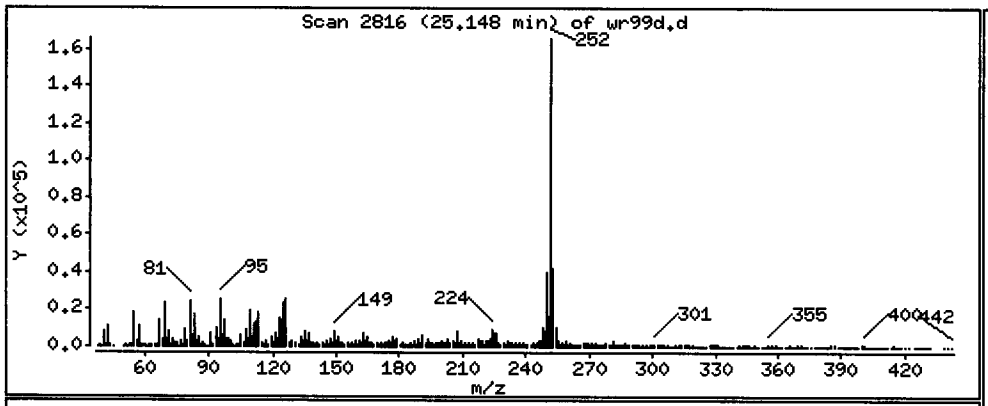
Operator: VTS/YZ

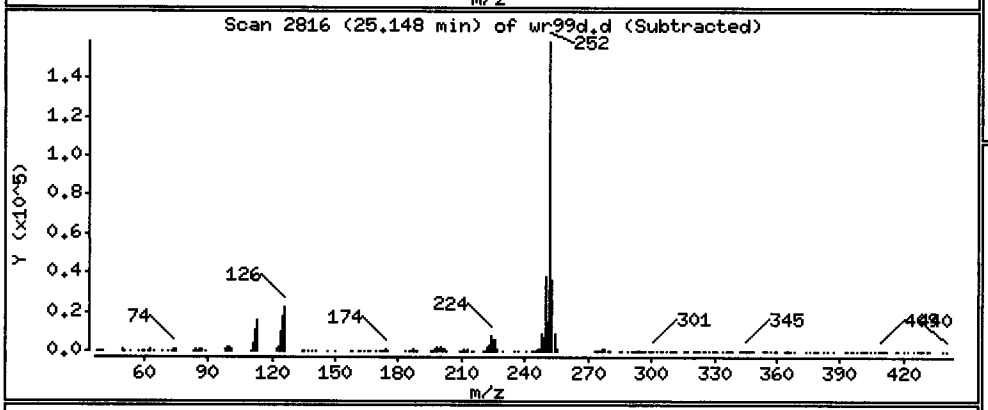
Column phase: ZB-5msi

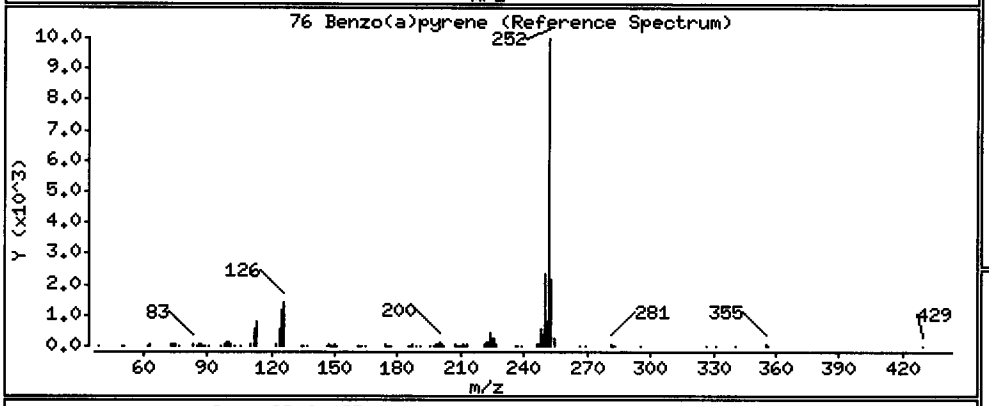
Column diameter: 0.25

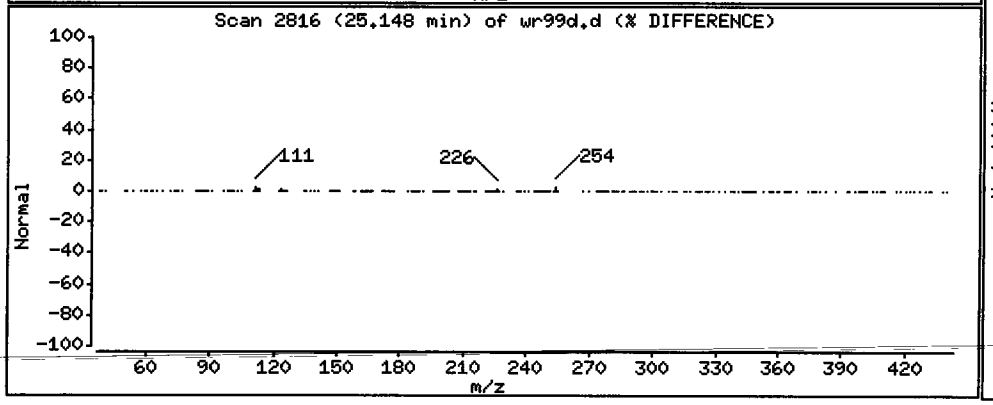
76 Benzo(a)pyrene

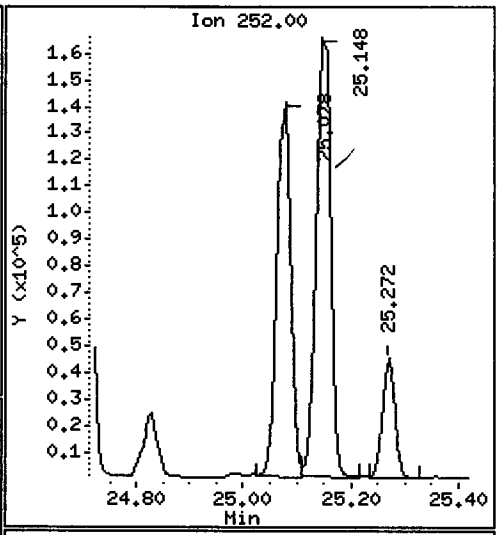
Concentration: 1311 ug/kg

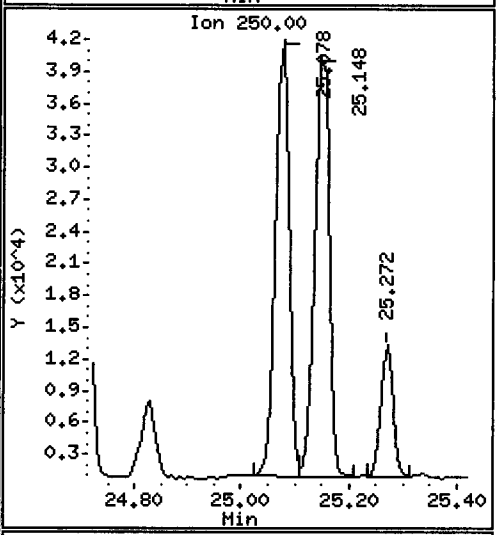


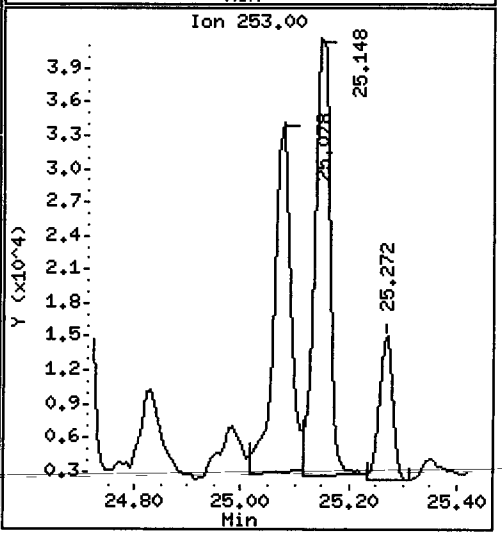












WR99:61613

Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

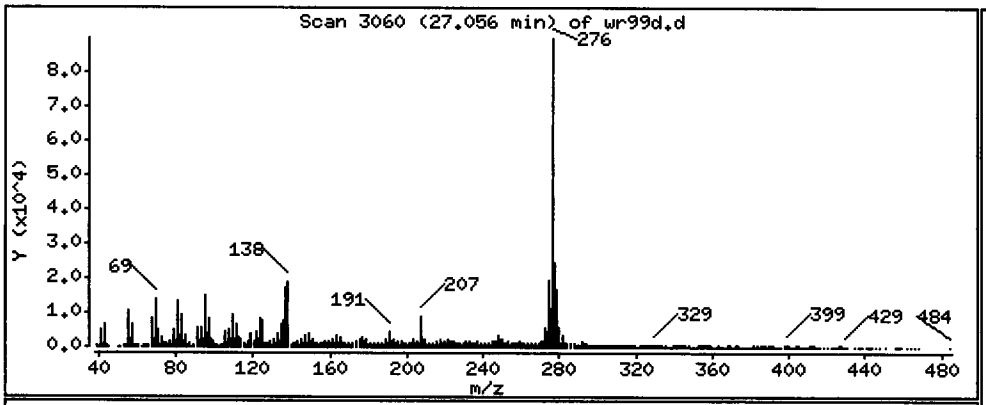
Operator: VTS/YZ

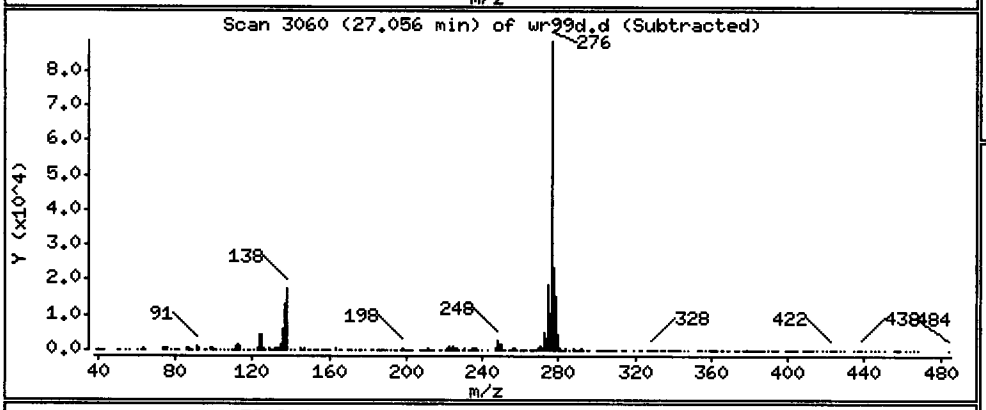
Column phase: ZB-5msi

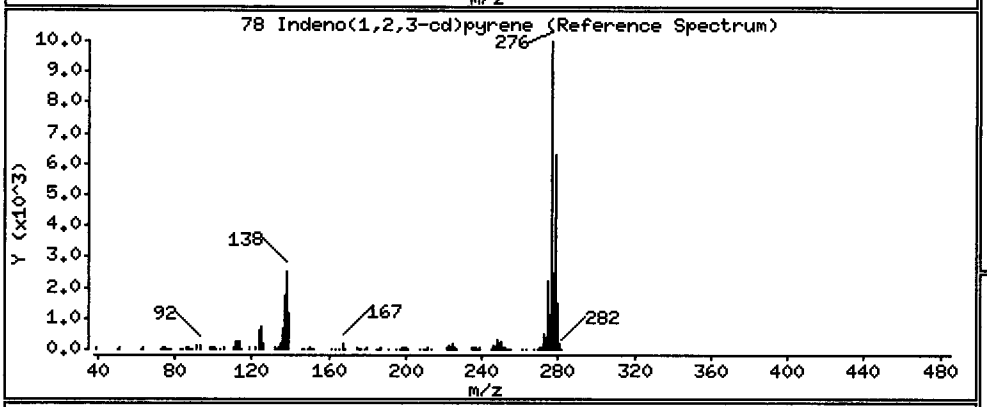
Column diameter: 0.25

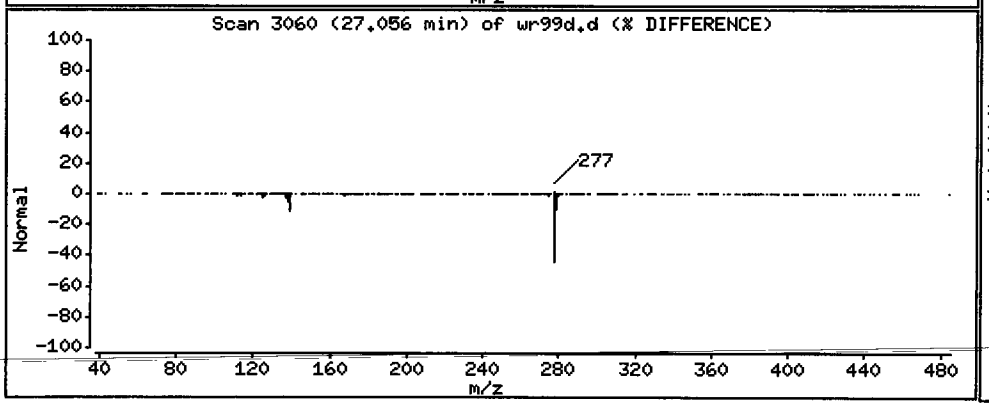
78 Indeno(1,2,3-cd)pyrene

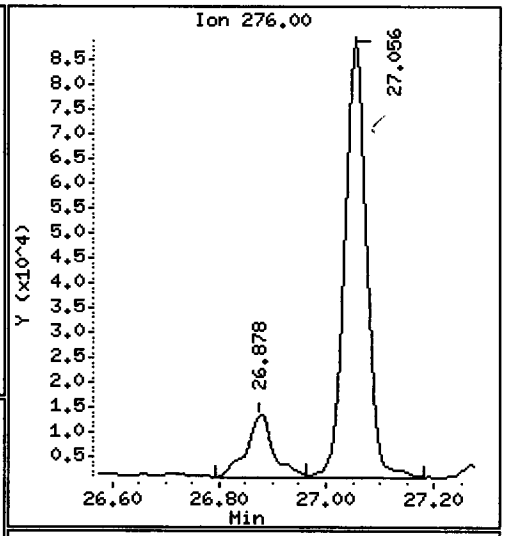
Concentration: 976.6 ug/kg

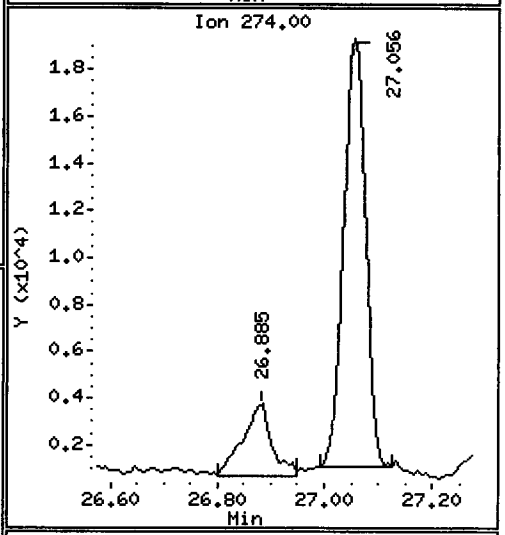


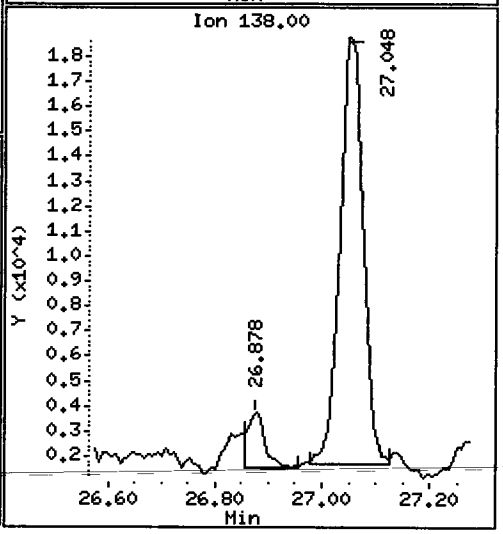












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

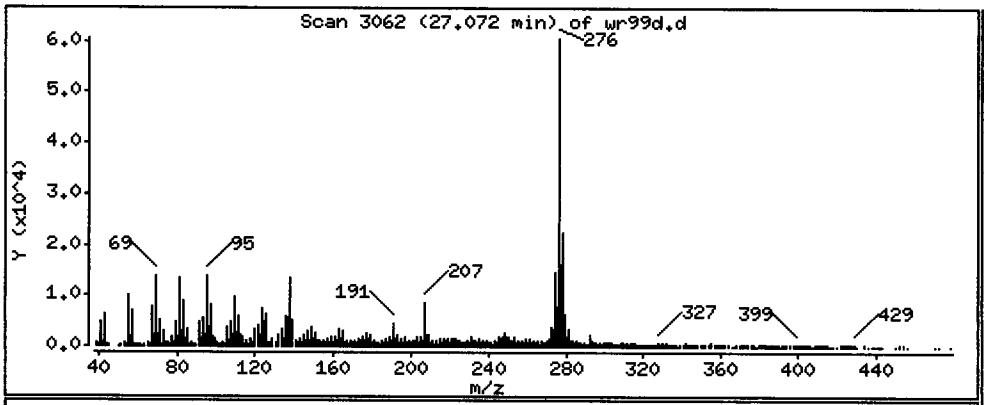
Operator: VTS/YZ

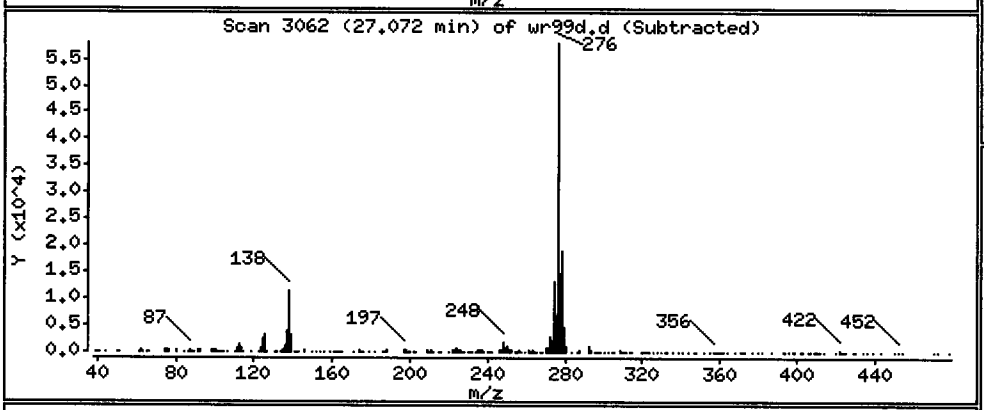
Column phase: ZB-5msi

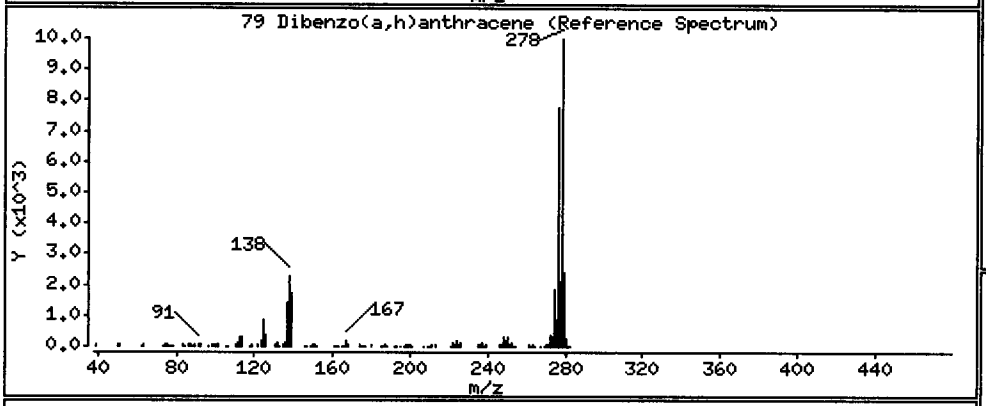
Column diameter: 0.25

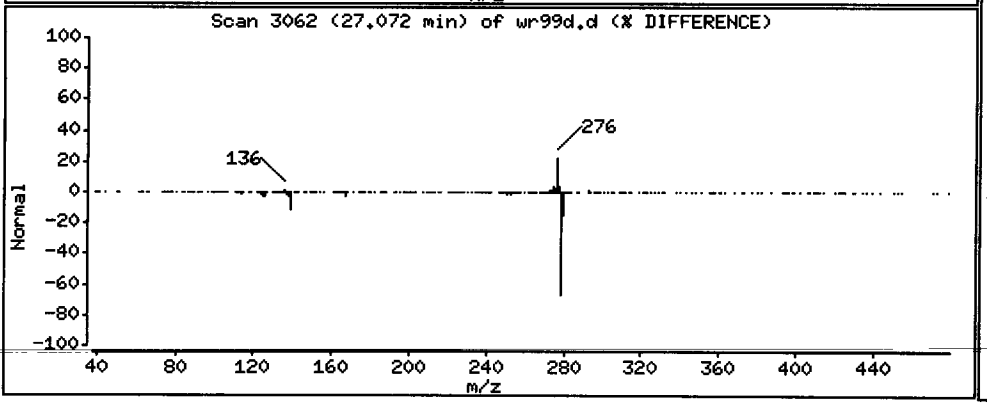
79 Dibenzo(a,h)anthracene

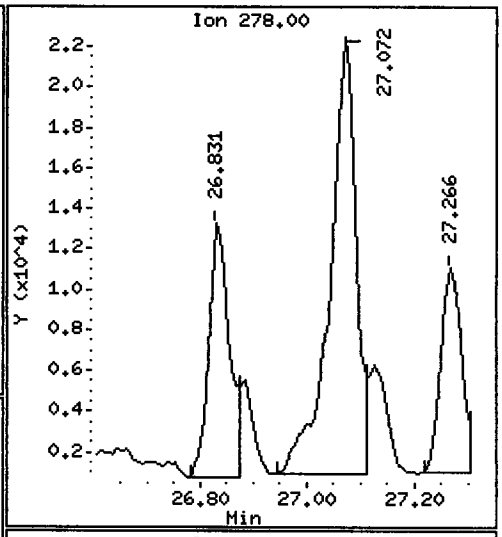
Concentration: 374.7 ug/kg

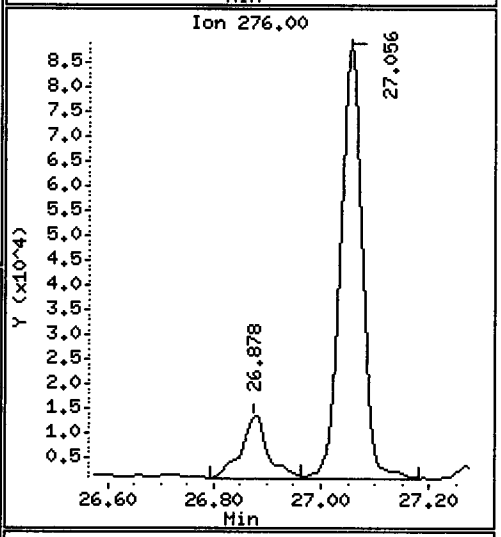


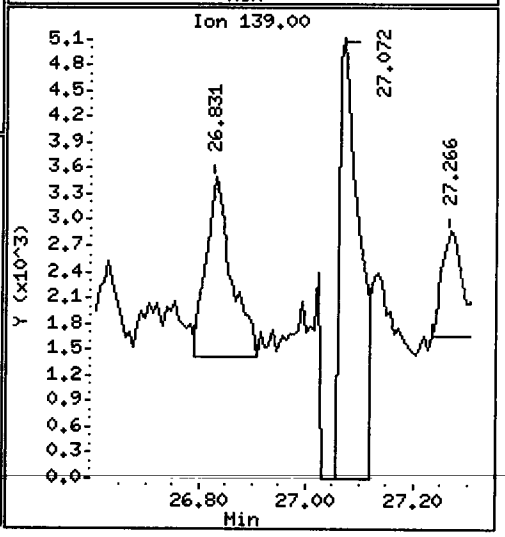












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

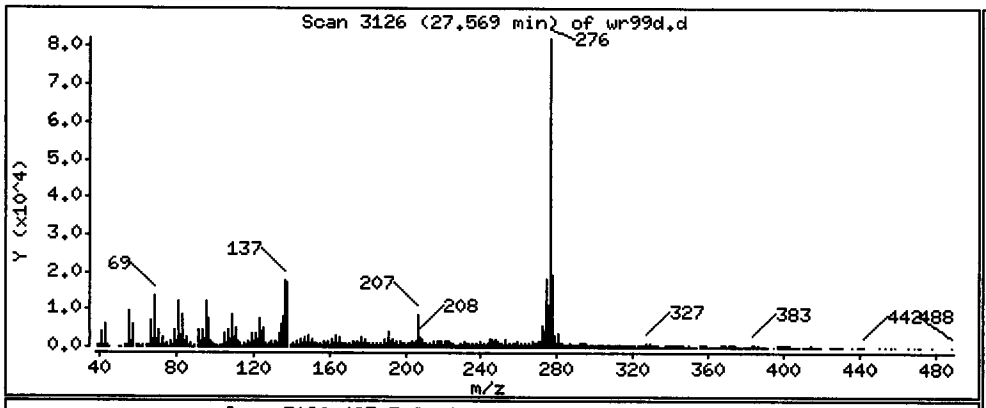
Operator: VTS/YZ

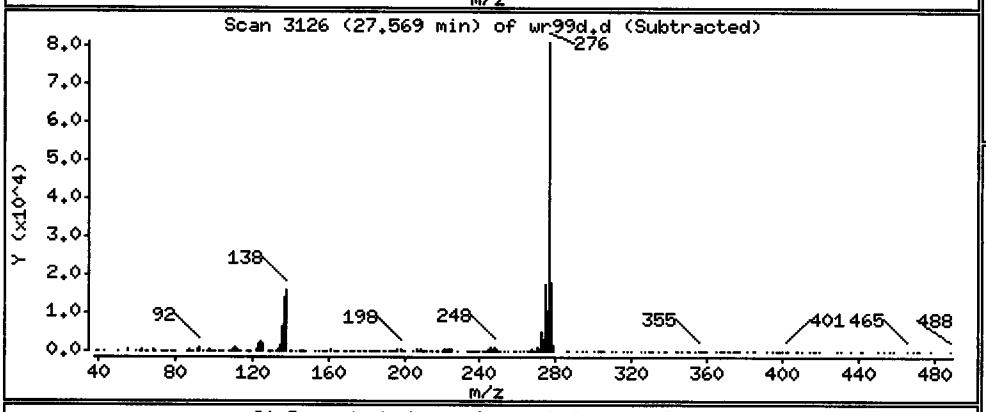
Column phase: ZB-5msi

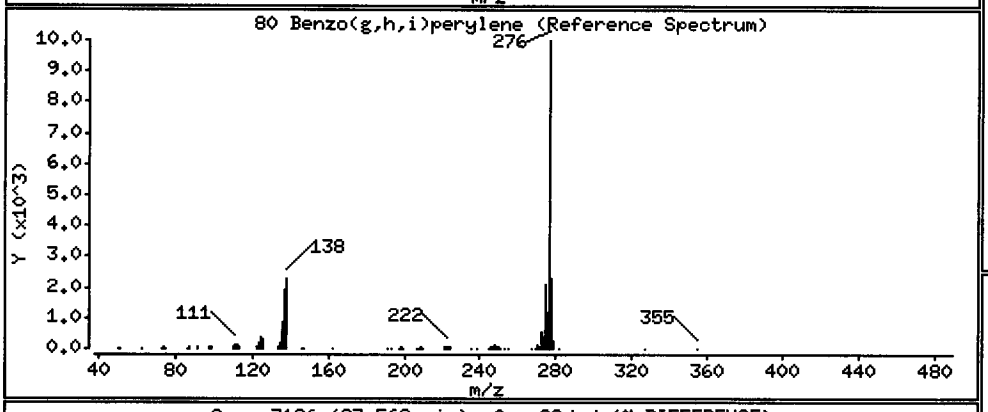
Column diameter: 0.25

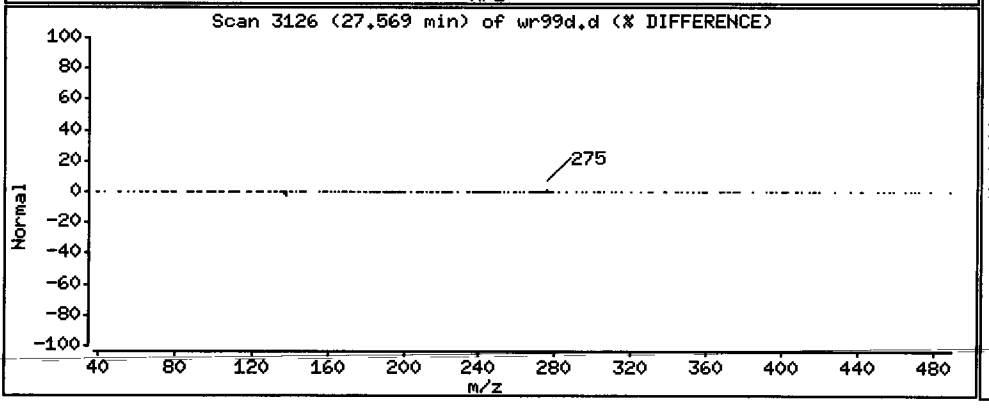
80 Benzo(g,h,i)perylene

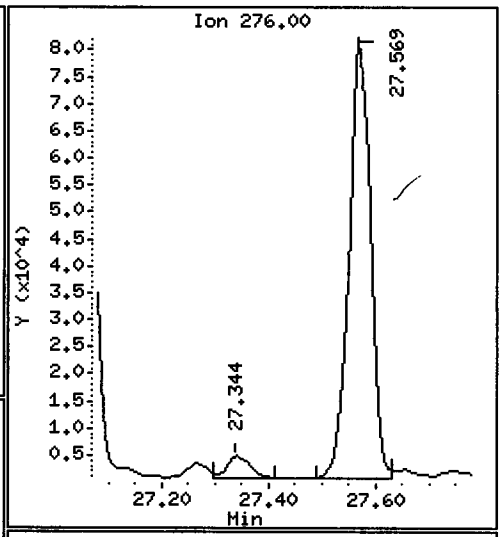
Concentration: 990.3 ug/kg

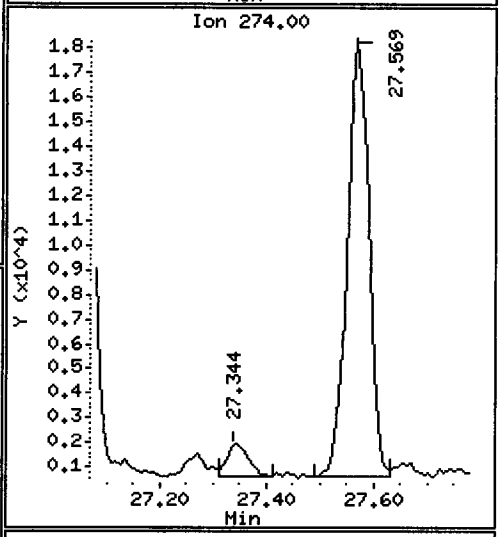


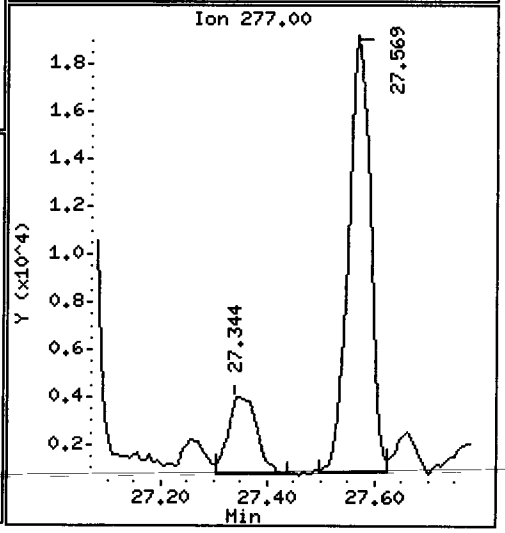












Data File: /chem1/nt10.i/20130614.b/wr99d.d

Date : 14-JUN-2013 19:37

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D,2

Volume Injected (uL): 1.0

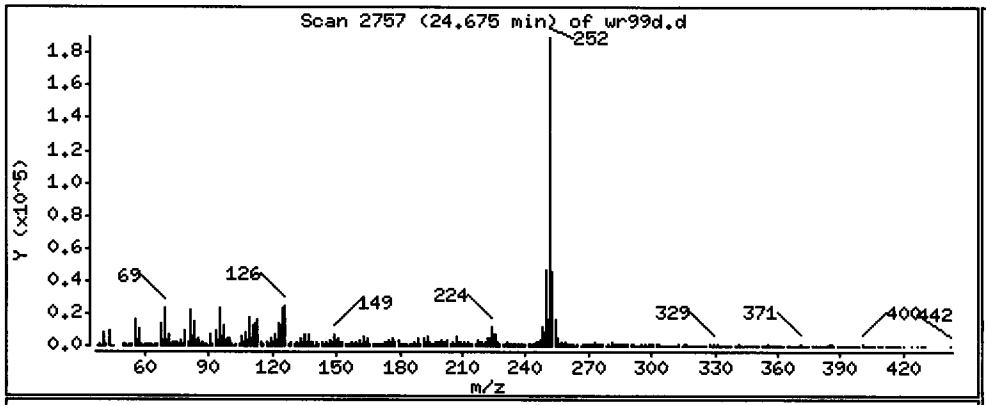
Operator: VTS/YZ

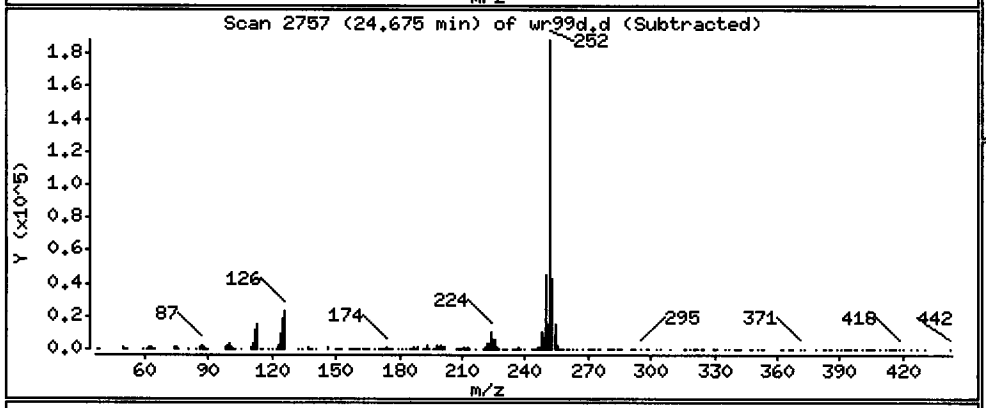
Column phase: ZB-5msi

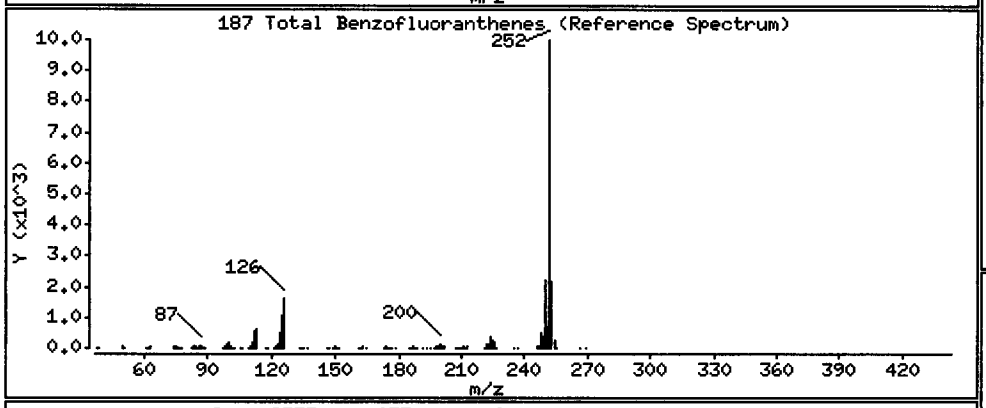
Column diameter: 0.25

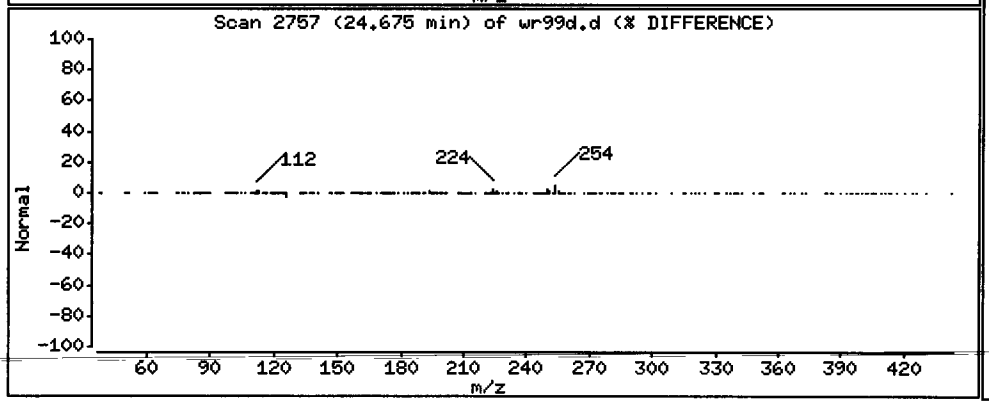
187 Total Benzofluoranthenes

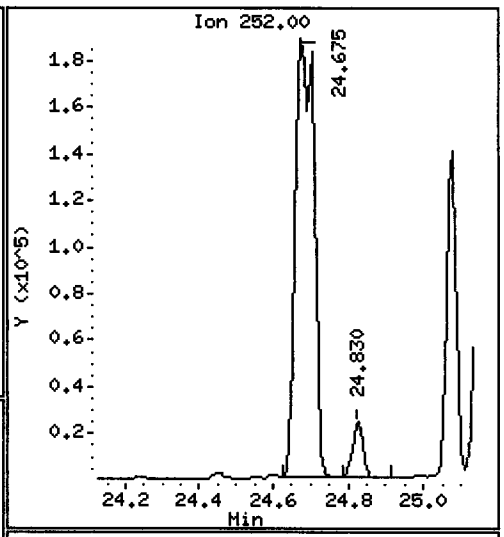
Concentration: 2610 ug/kg

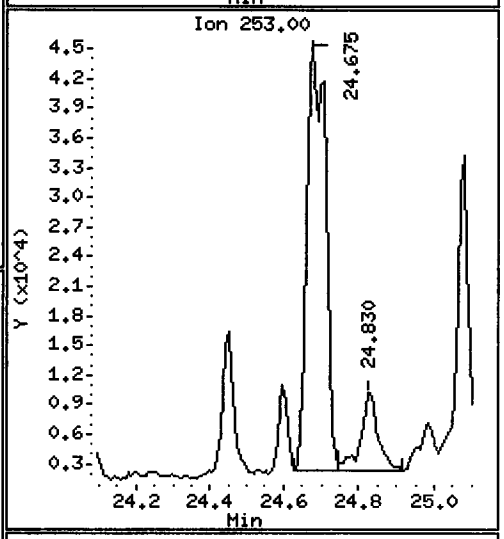


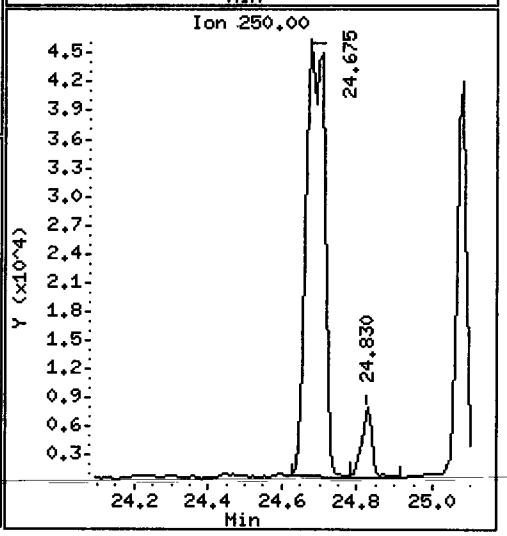












CO-ELUTION SUMMARY FOR FILE - wr99d.d

Lab ID: WR99D, Method: ABN.m, Instrument: nt10.i, Date: 14-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

2 6/17/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130613.b/wr99e.d
Lab Smp Id: WR99E Client Smp ID: KC-CB-01-20130530-S
Inj Date : 13-JUN-2013 19:53
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WR99E
Misc Info : 13-11545
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 13-Jun-2013 13:32 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	21.80000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.851	5.820	(0.725)	79893	4.60349	452.8
$	2 Phenol-d5	99	7.520	7.497	(0.932)	113108	5.03654	495.4
	3 Phenol	94	7.543	7.512	(0.935)	6228	0.24776	24.37
$	5 2-Chlorophenol-d4	132	7.706	7.690	(0.955)	84007	4.92789	484.7
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.069	8.054	(1.000)	48623	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.434	8.426	(1.045)	36591	2.98396	293.5
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.210	9.203	(0.865)	62614	3.18290	313.1
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	10.225	10.294	(0.960)	20383	1.26572	124.5
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.649	10.634	(1.000)	186419	4.00000	
	28 Naphthalene	128	10.688	10.672	(1.004)	11795	0.23765	23.38
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	12.165	12.150	(1.142)	10610	0.32184	31.66
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.024	13.009	(0.901)	131295	3.41200	335.6
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	14.108	14.092	(0.976)	14866	0.28611	28.14
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.448	14.433	(1.000)	110252	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	14.510	14.502	(1.004)	3352	0.10705	10.53
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	14.866	14.850	(1.029)	5634	0.13159	12.94
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	15.569	15.561	(1.078)	9873	0.29686	29.20
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.186	16.171	(1.120)	37677	6.46201	635.6
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.647	17.631	(1.000)	177509	4.00000	
	60 Phenanthrene	178	17.693	17.685	(1.003)	65371	1.35014	132.8
	61 Anthracene	178	17.794	17.778	(1.008)	10133	0.20428	20.09

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	18.188	18.165	(1.031)	11618	0.38559	37.93
63	Di-n-butylphthalate	149	19.140	19.124	(1.085)	69990	1.36685	134.5
64	Fluoranthene	202	20.192	20.177	(1.144)	136276	2.39139	235.2
65	Pyrene	202	20.610	20.594	(0.903)	126803	2.34803	231.0
$ 66	Terphenyl-d14	244	20.974	20.958	(0.919)	127184	3.74319	368.2
67	Butylbenzylphthalate	149	21.949	21.941	(0.962)	4851	0.26304	25.87
68	Benzo(a)anthracene	228	22.793	22.778	(0.999)	51326	1.05029	103.3
* 69	Chrysene-d12	240	22.824	22.801	(1.000)	174547	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	22.863	22.847	(1.002)	85259	1.92790	189.6
72	bis(2-Ethylhexyl)phthalate	149	23.025	23.002	(0.960)	529781	18.0138	1772
* 134	Di-n-octylphthalate-d4	153	23.993	23.977	(1.000)	221209	4.00000	
73	Di-n-octylphthalate	149	24.009	23.985	(1.001)	11557	0.22691	22.32
74	Benzo(b)fluoranthene	252	24.550	24.519	(0.978)	145928	3.05948	301.0
75	Benzo(k)fluoranthene	252	24.574	24.558	(0.979)	128105	2.54993	250.8(M)
76	Benzo(a)pyrene	252	25.023	24.992	(0.997)	93991	2.30659	226.9
* 77	Perylene-d12	264	25.100	25.069	(1.000)	160617	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.869	26.814	(1.070)	118086	2.51532	247.4
79	Dibenzo(a,h)anthracene	278	26.876	26.830	(1.071)	33646	0.93428	91.90
80	Benzo(g,h,i)perylene	276	27.366	27.304	(1.090)	99472	2.44894	240.9
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	12.390	12.382	(1.163)	5051	0.16706	16.43
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	24.550	24.558	(0.978)	241051	5.20457	512.0
99	Perylene	252	25.139	25.108	(1.002)	29413	0.63143	62.11
98	Retene	219	21.260	21.237	(0.931)	25009	1.22362	120.4
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wr99e.d
Lab Smp Id: WR99E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11545

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: KC-CB-01-2013053
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	48623	7.45
27 Naphthalene-d8	166754	83377	333508	186419	11.79
42 Acenaphthene-d10	106910	53455	213820	110252	3.13
59 Phenanthrene-d10	179783	89892	359566	177509	-1.26
69 Chrysene-d12	192841	96420	385682	174547	-9.49
134 Di-n-octylphthala	229567	114784	459134	221209	-3.64
77 Perylene-d12	184310	92155	368620	160617	-12.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.07	0.19
27 Naphthalene-d8	10.63	10.13	11.13	10.65	0.15
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.11
59 Phenanthrene-d10	17.63	17.13	18.13	17.65	0.09
69 Chrysene-d12	22.80	22.30	23.30	22.82	0.10
134 Di-n-octylphthala	23.98	23.48	24.48	23.99	0.06
77 Perylene-d12	25.07	24.57	25.57	25.10	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

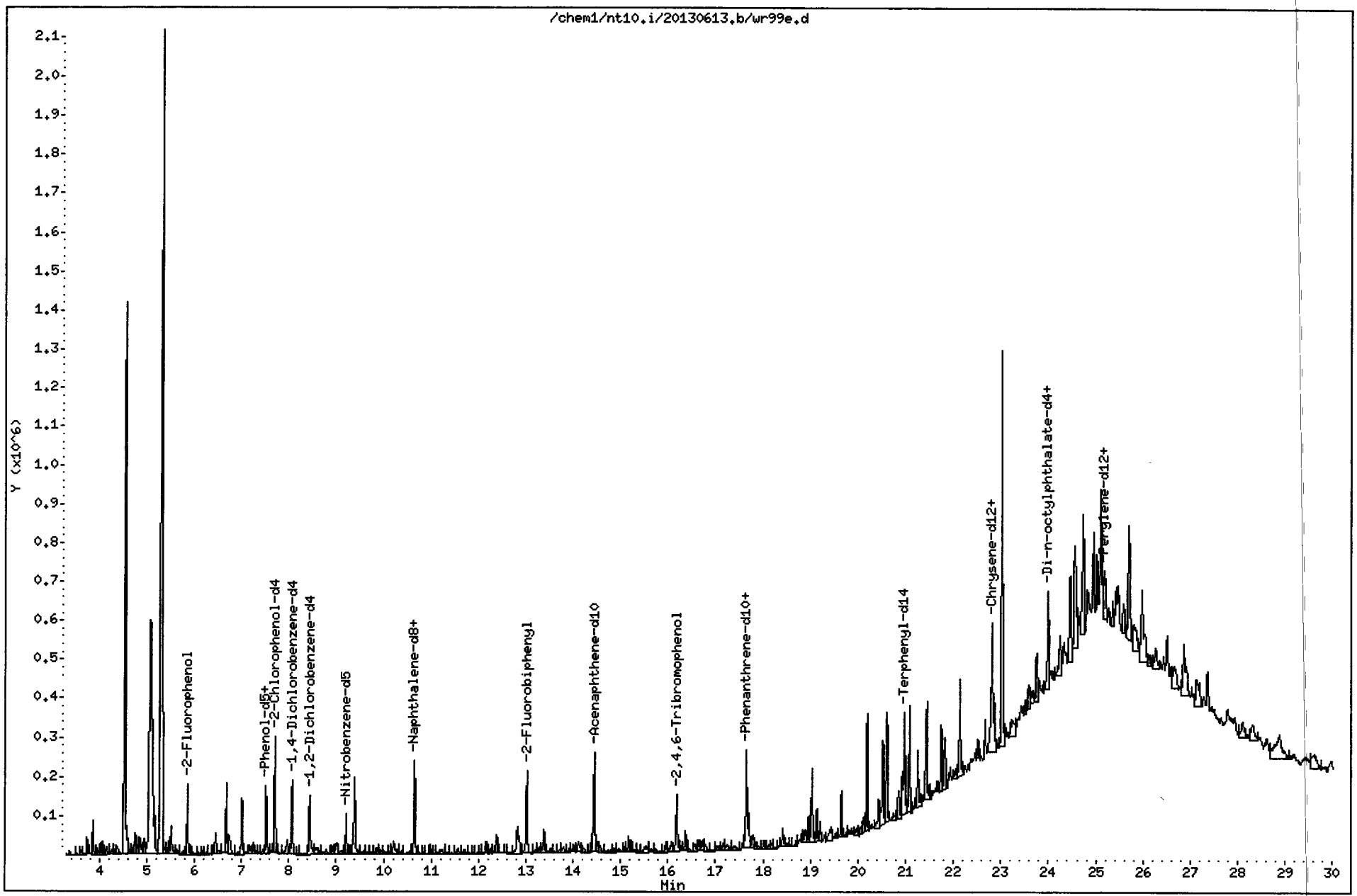
RECOVERY REPORT

Client Name: SAIC
Client SDG: WR99
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WR99E
Client Smp ID: KC-CB-01-20130530-S
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SHORTPSDDA.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11545

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	737.8	452.8	61.38	27-120
$ 2 Phenol-d5	737.8	495.4	67.15	29-120
$ 5 2-Chlorophenol-d4	737.8	484.7	65.71	31-120
$ 10 1,2-Dichlorobenzen	491.8	293.5	59.68	32-120
$ 18 Nitrobenzene-d5	491.8	313.1	63.66	30-120
$ 36 2-Fluorobiphenyl	491.8	335.6	68.24	35-120
$ 55 2,4,6-Tribromophen	737.8	635.6	86.16	24-134
$ 66 Terphenyl-d14	491.8	368.2	74.86	37-120

Data File: /chem1/nt10.i/20130613.b/wr99e.d
Date : 13-JUN-2013 19:53
Client ID: KC-CB-01-20130530-S
Sample Info: WR99E
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

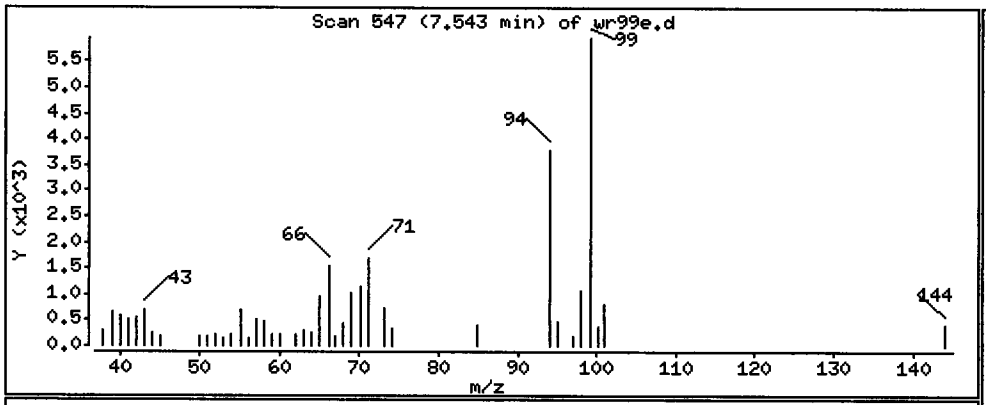
Operator: VTS/YZ

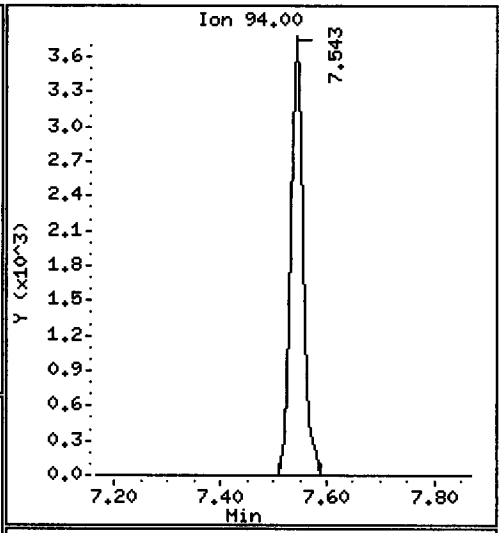
Column phase: ZB-5msi

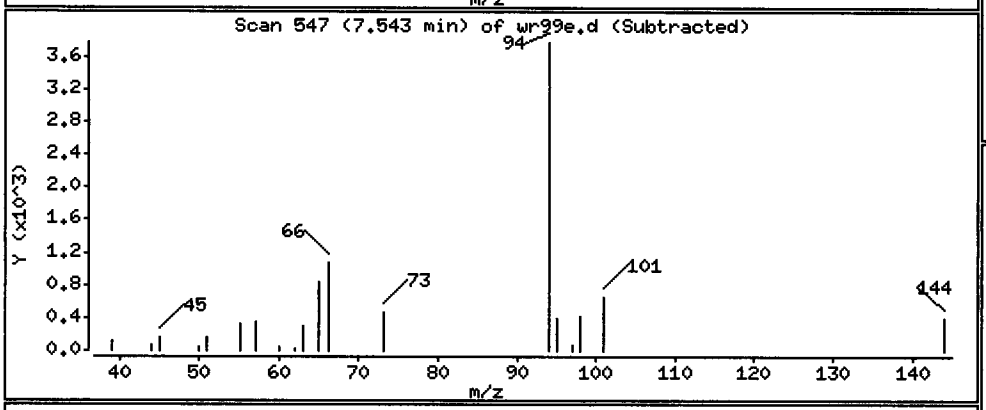
Column diameter: 0.25

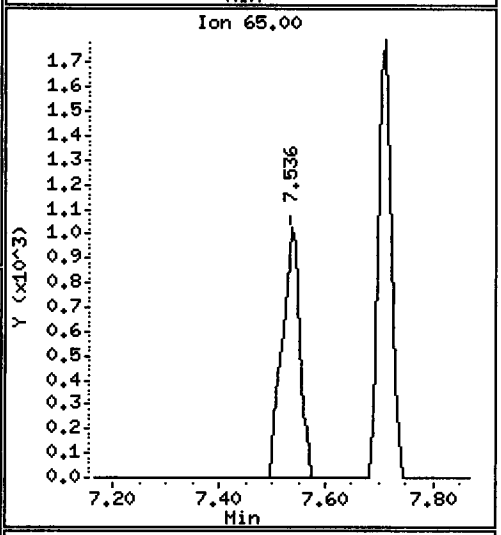
3 Phenol

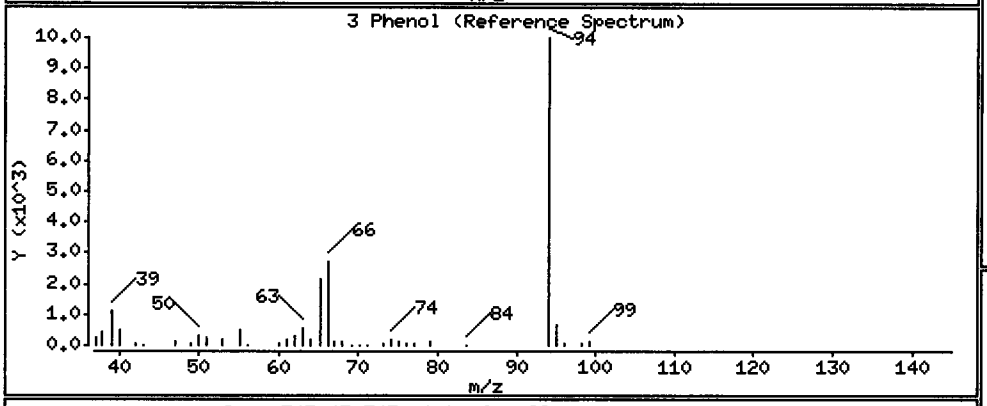
Concentration: 24.37 ug/kg

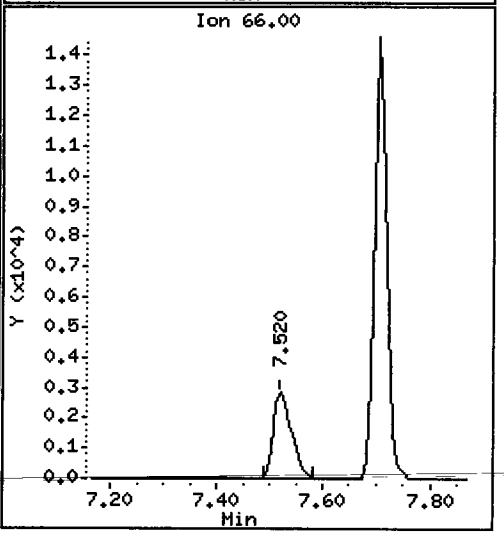


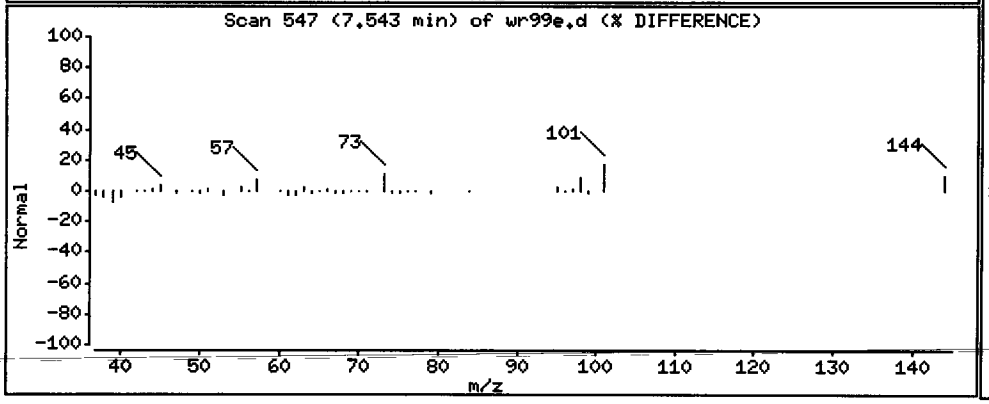












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

Operator: VTS/YZ

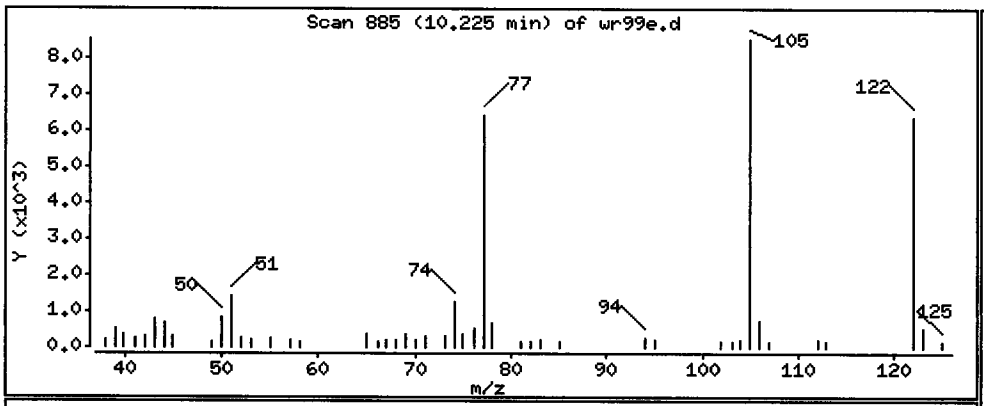
Column phase: ZB-5msi

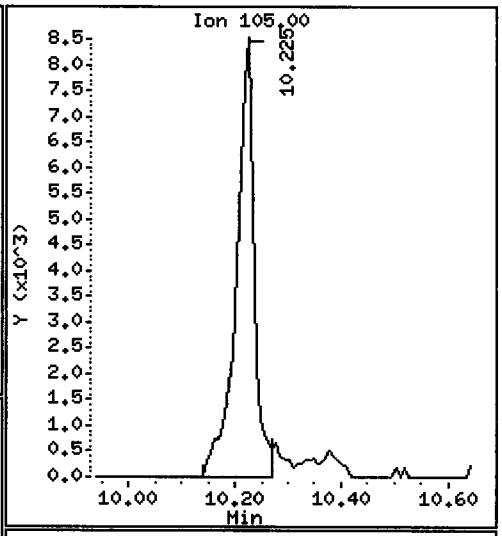
Column diameter: 0.25

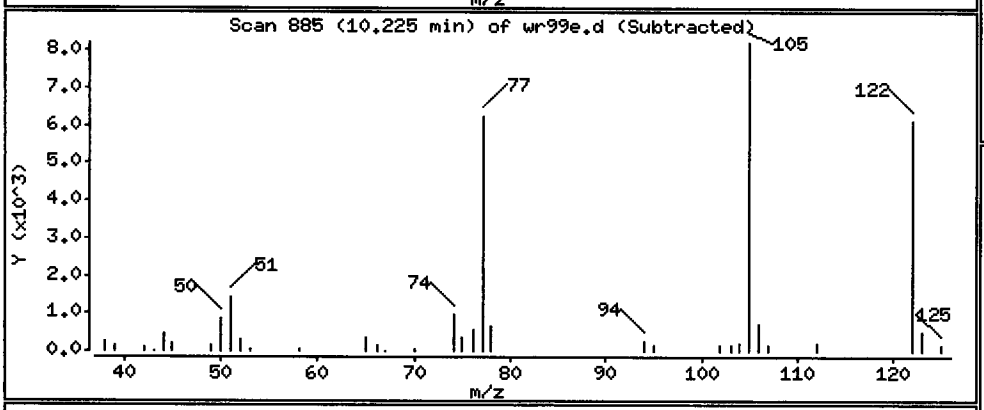
COAL

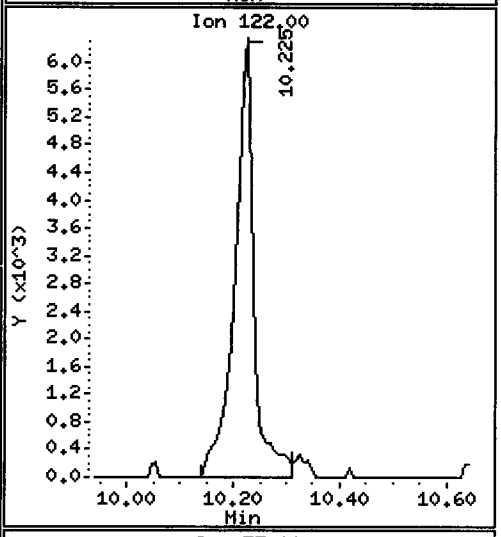
24 Benzoic acid

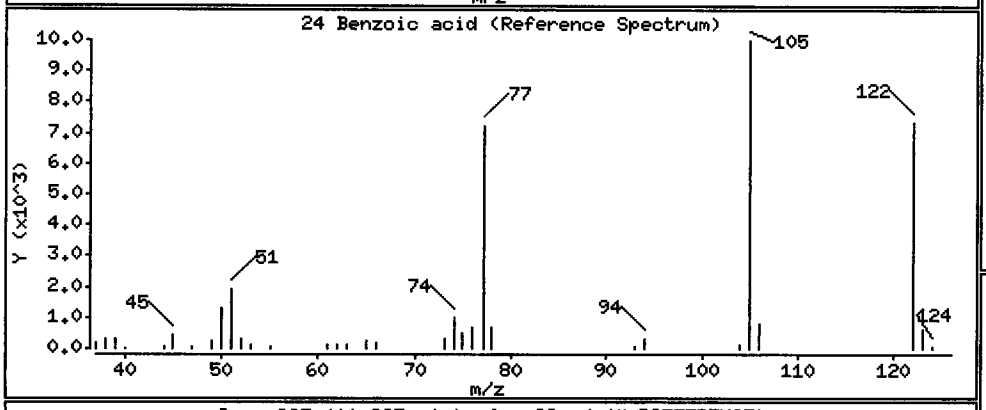
Concentration: 124.5 ug/kg

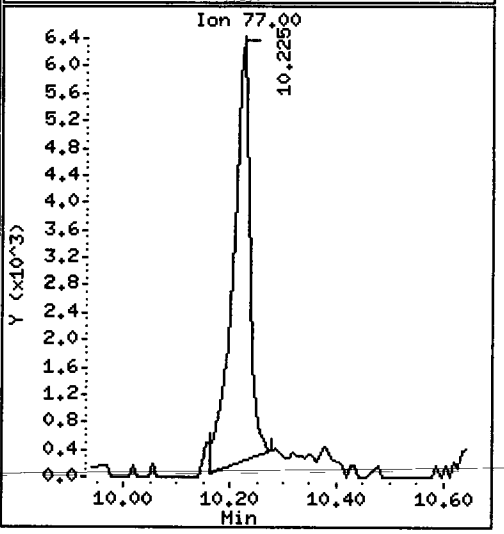


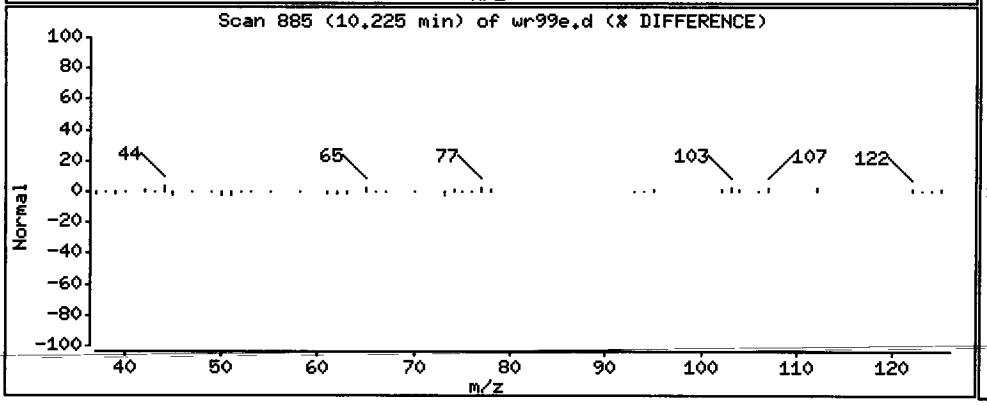












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

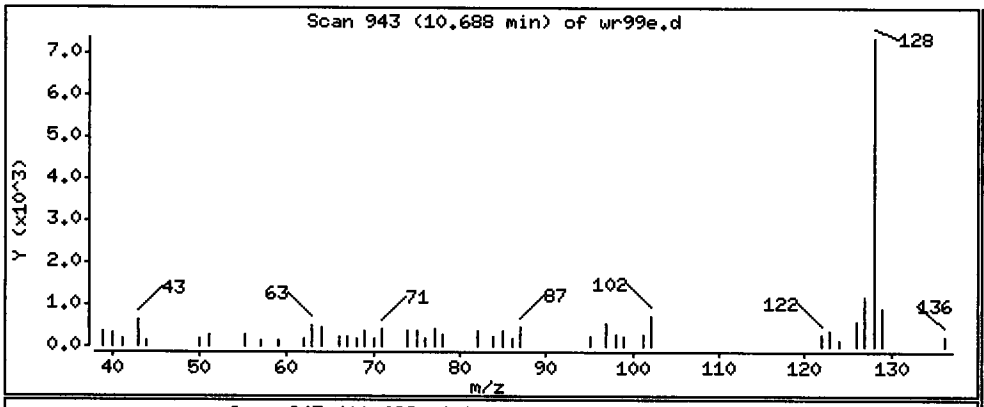
Operator: VTS/YZ

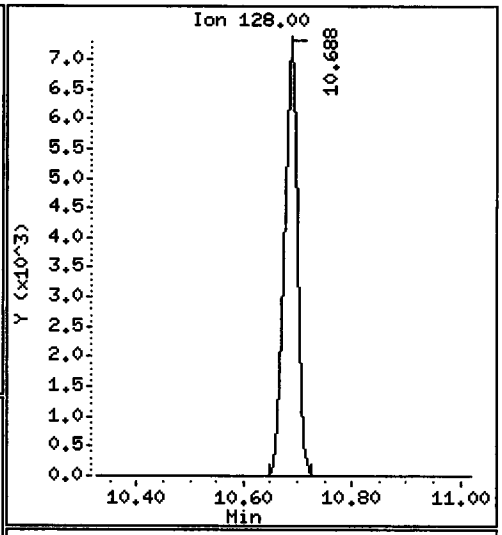
Column phase: ZB-5msi

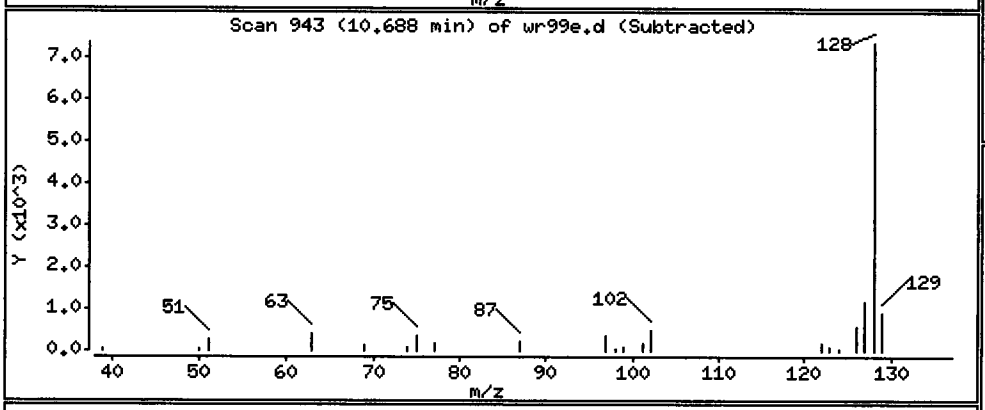
Column diameter: 0.25

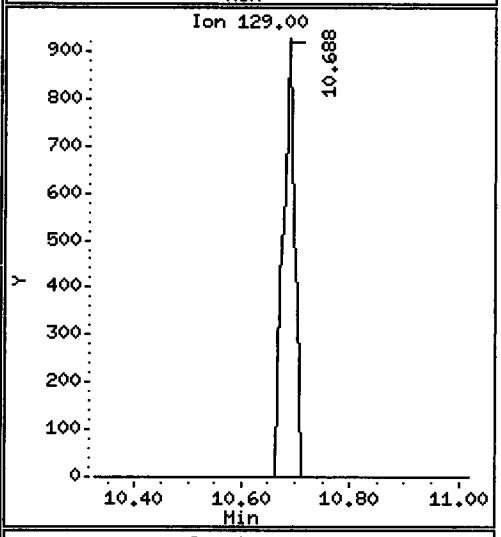
28 Naphthalene

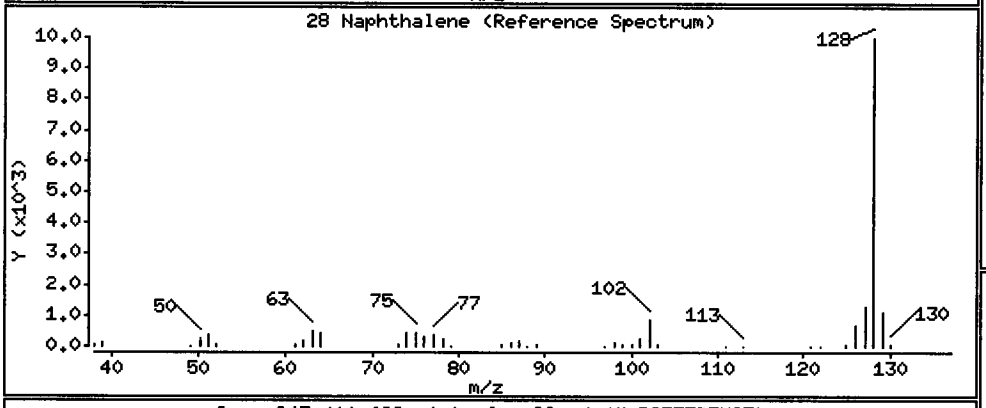
Concentration: 23.38 ug/kg

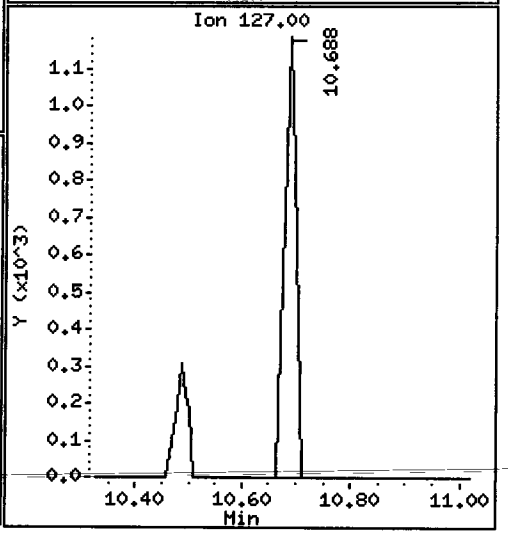


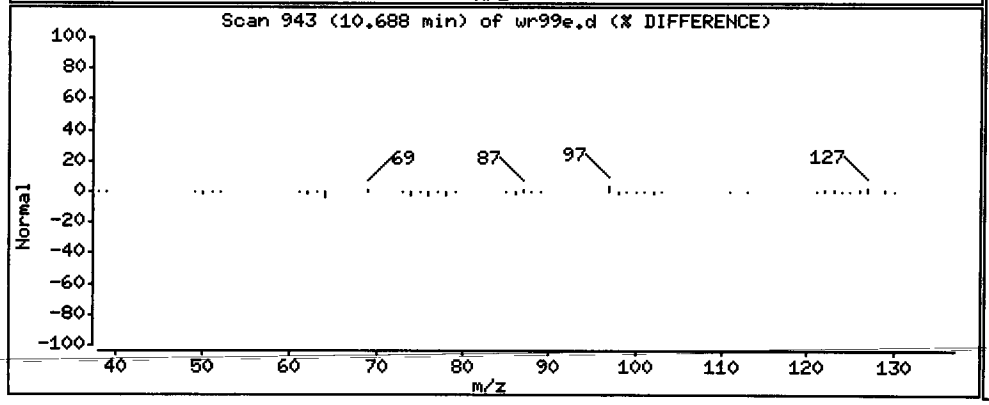












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

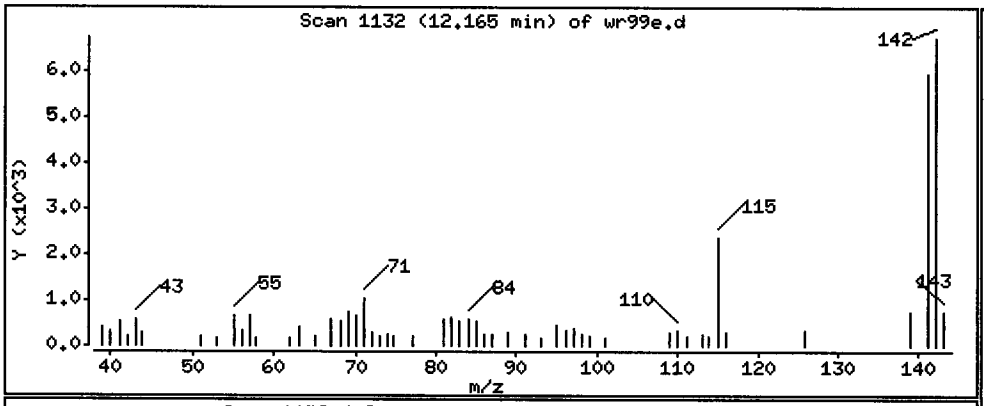
Operator: VTS/YZ

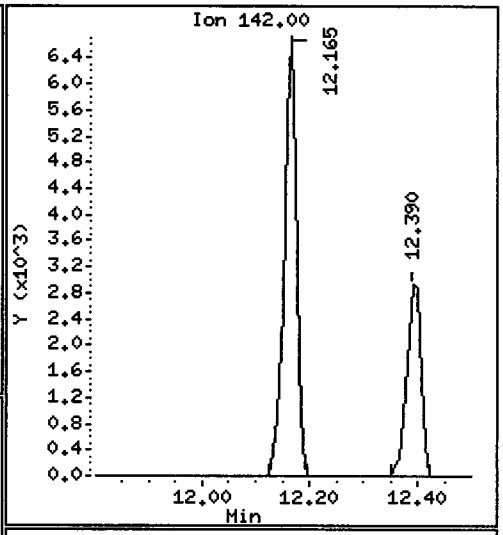
Column phase: ZB-5msi

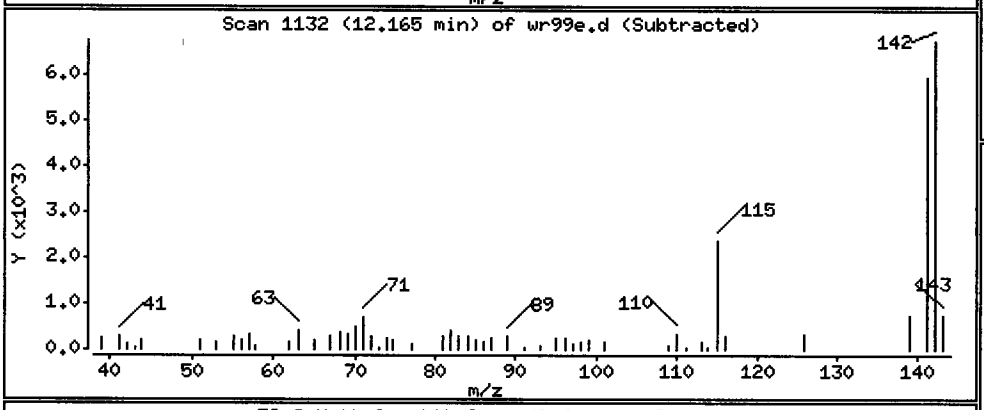
Column diameter: 0.25

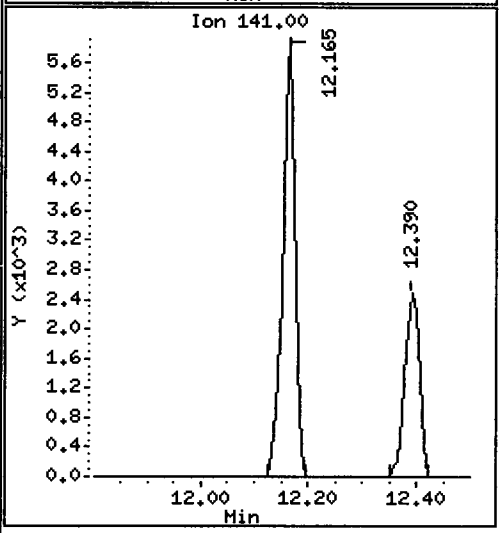
32 2-Methylnaphthalene

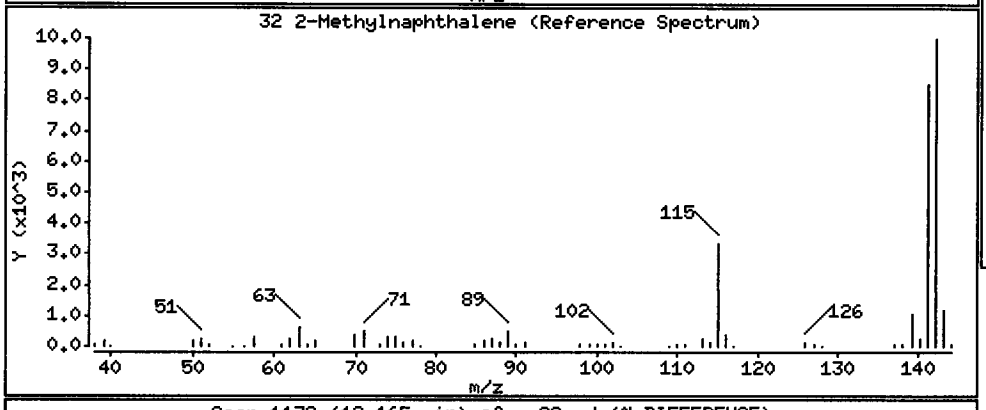
Concentration: 31.66 ug/kg

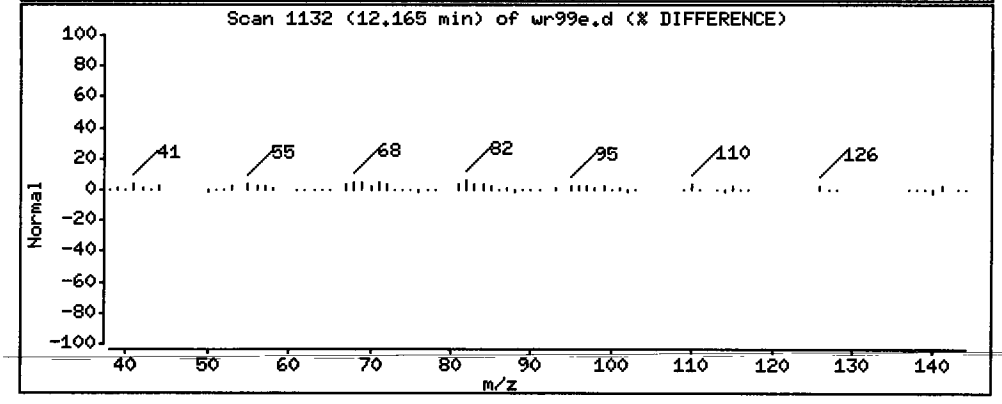












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

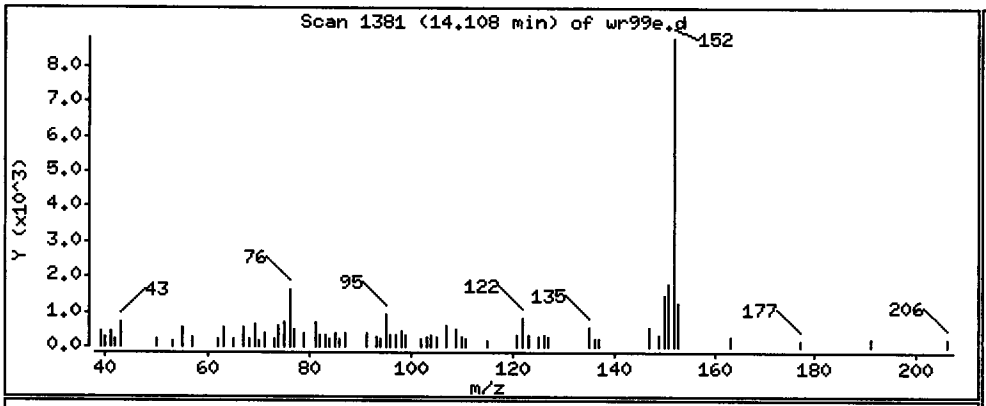
Operator: VTS/YZ

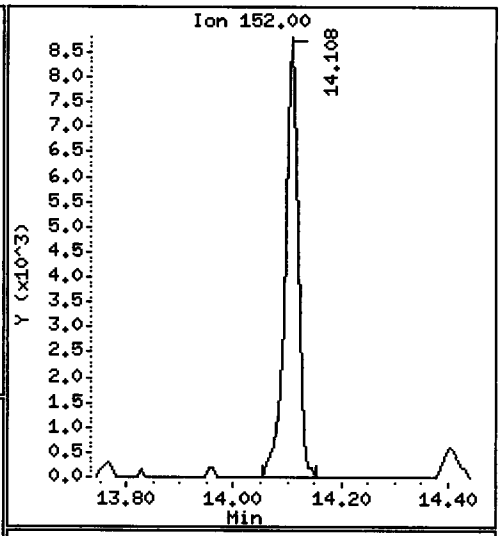
Column phase: ZB-5msi

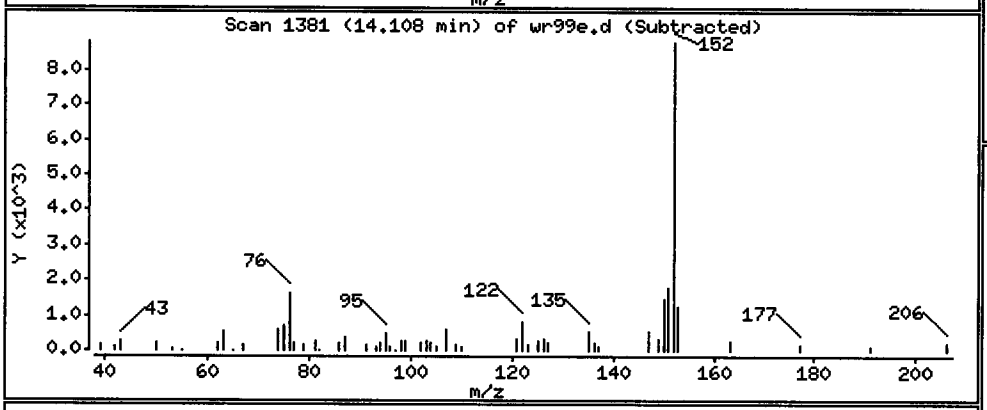
Column diameter: 0.25

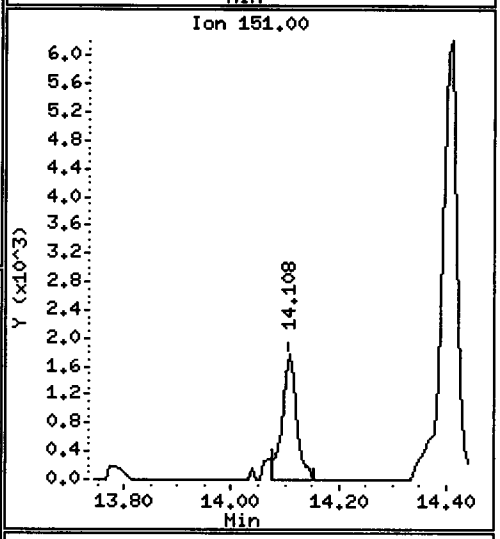
40 Acenaphthylene

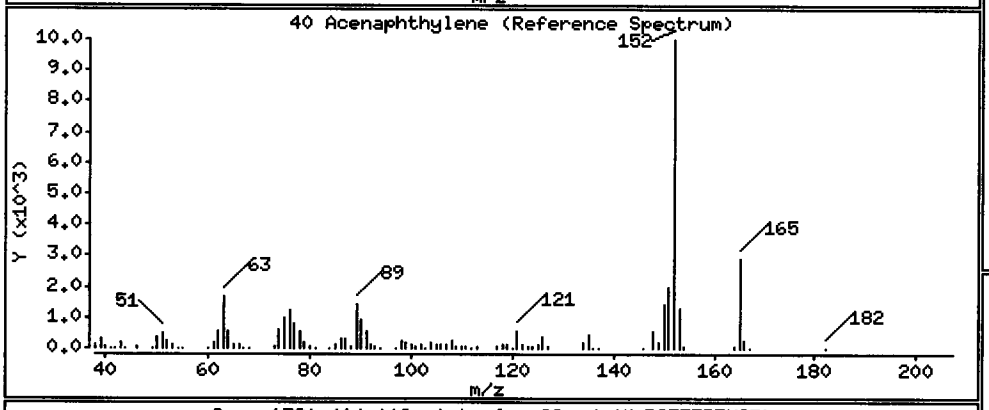
Concentration: 28.14 ug/kg

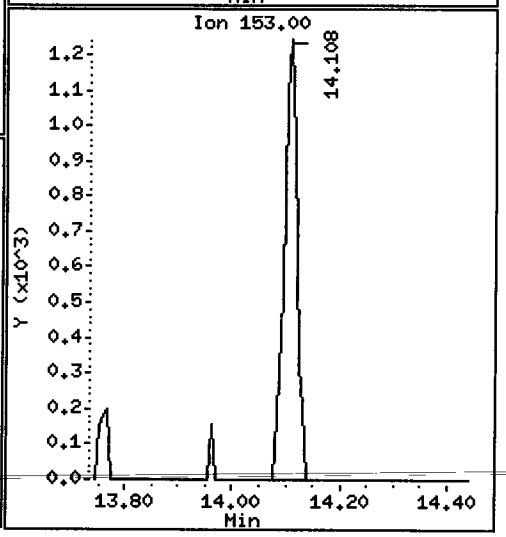


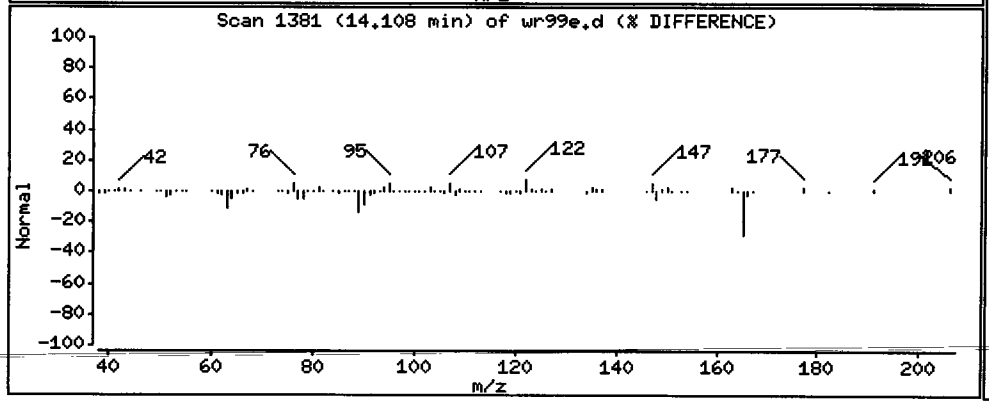












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

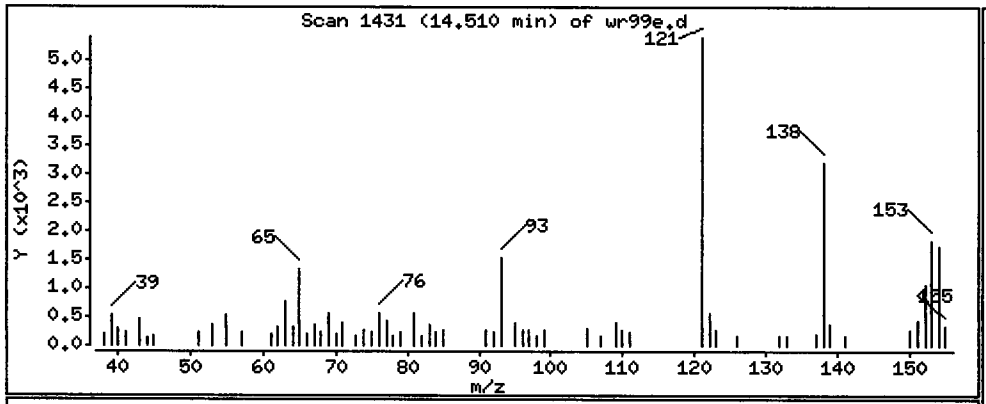
Operator: VTS/YZ

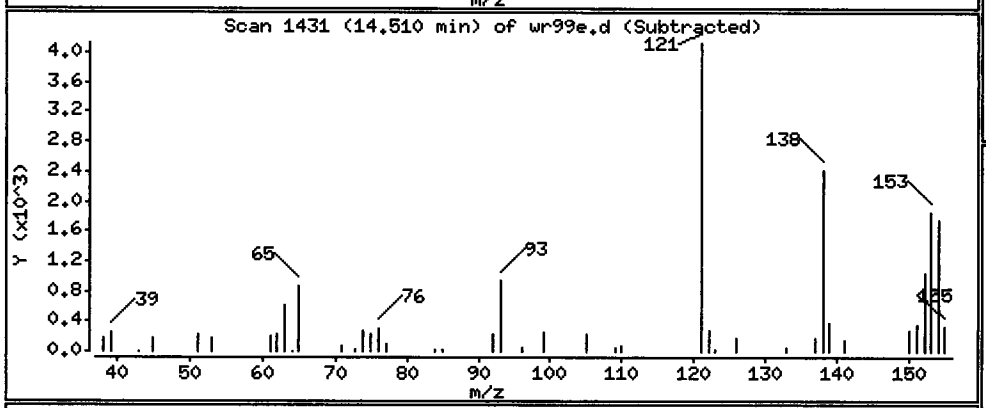
Column phase: ZB-5msi

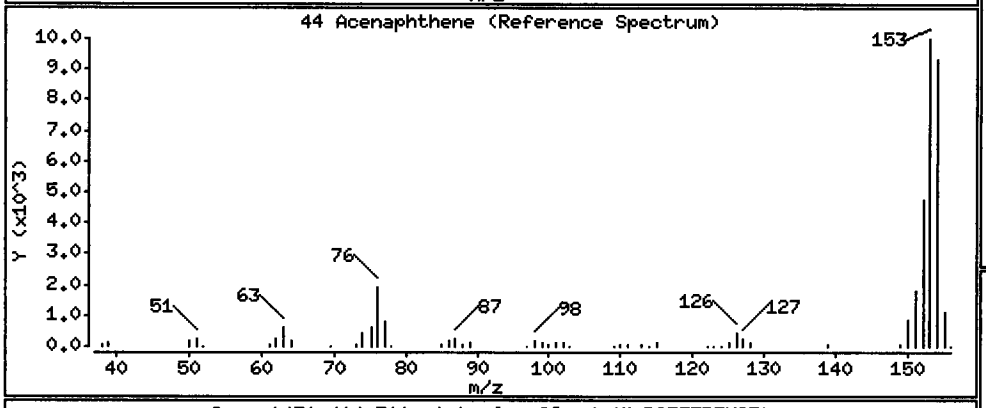
Column diameter: 0.25

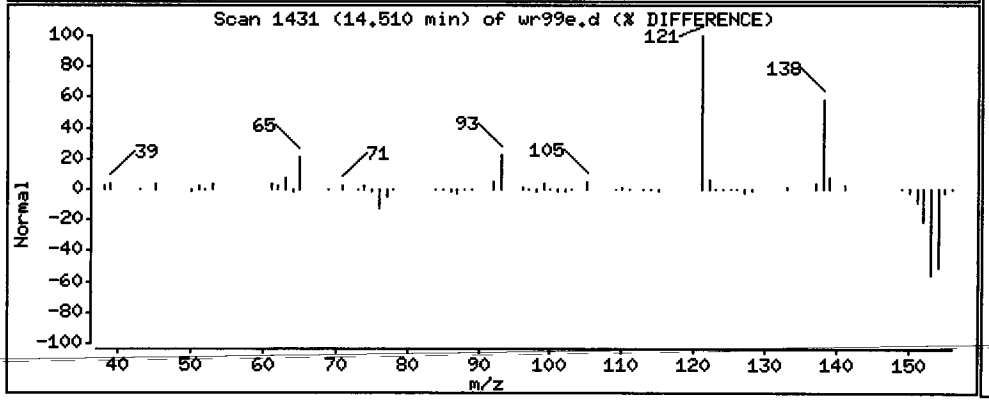
44 Acenaphthene

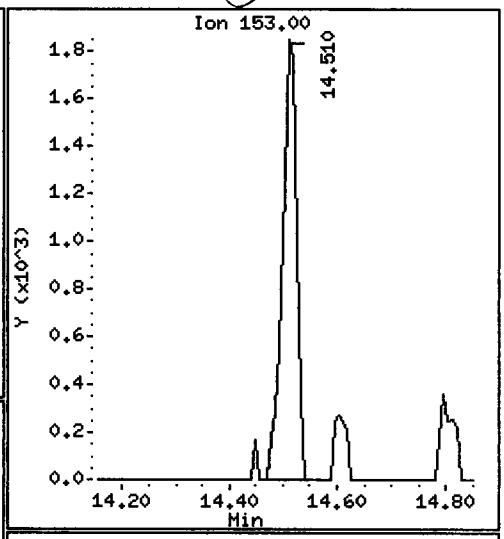
Concentration: 10.53 ug/kg

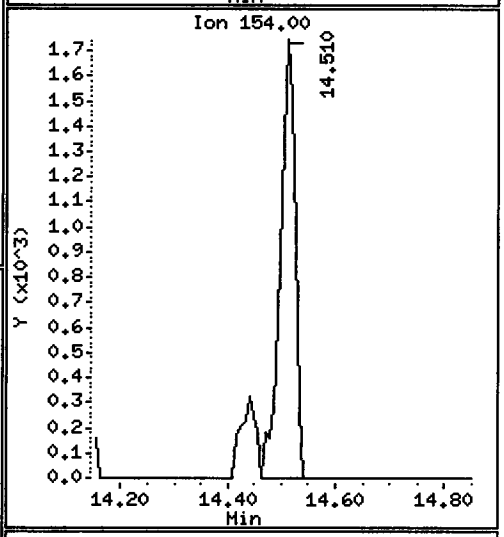


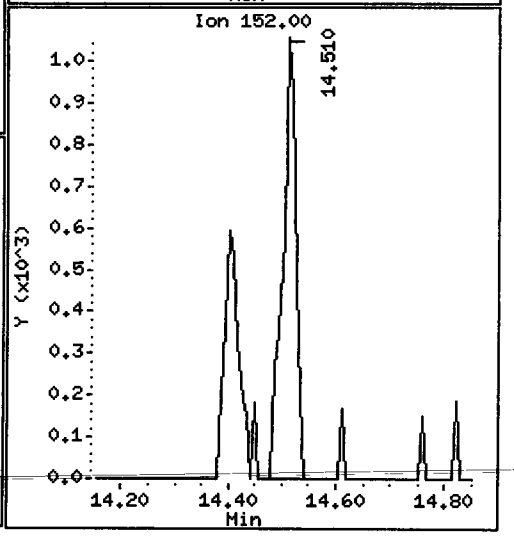












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

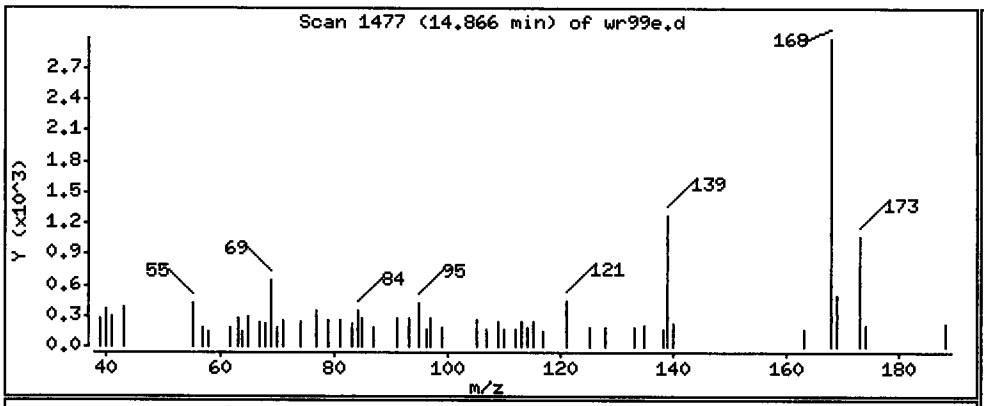
Operator: VTS/YZ

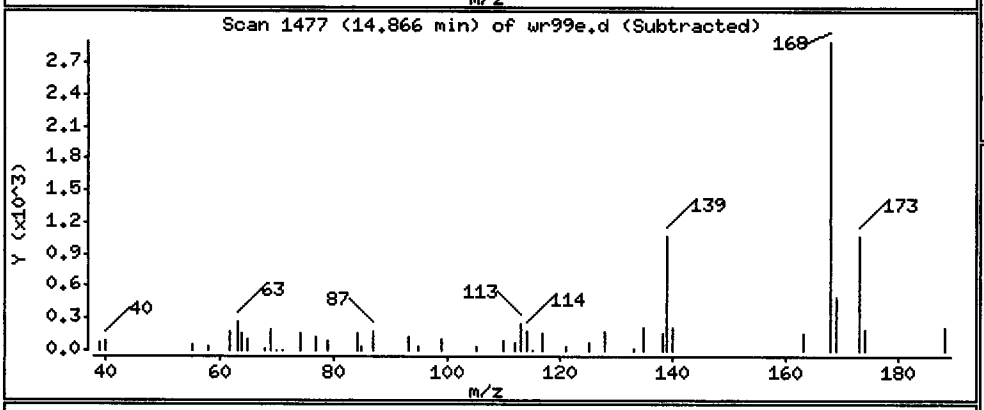
Column phase: ZB-5msi

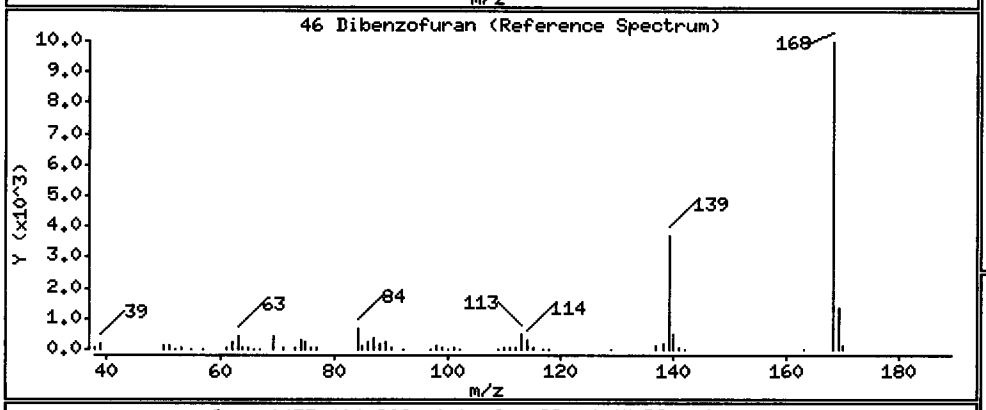
Column diameter: 0.25

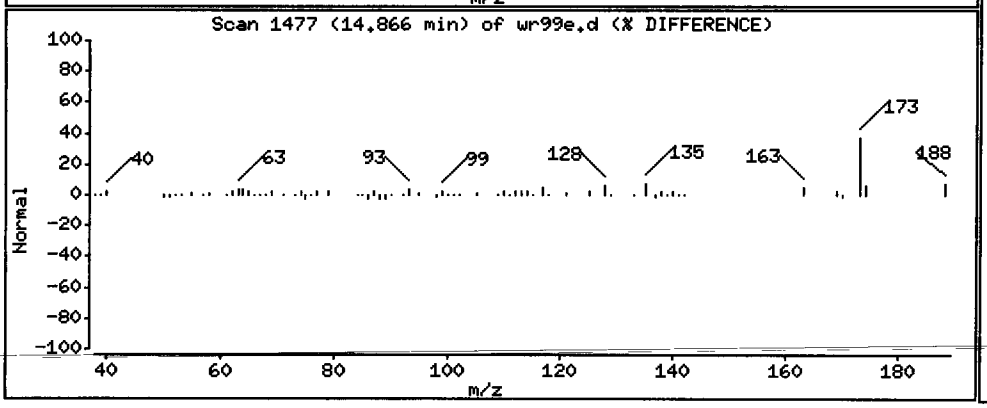
46 Dibenzofuran

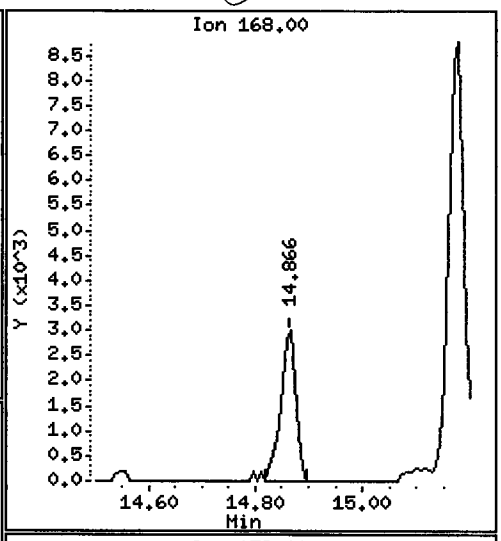
Concentration: 12.94 ug/kg

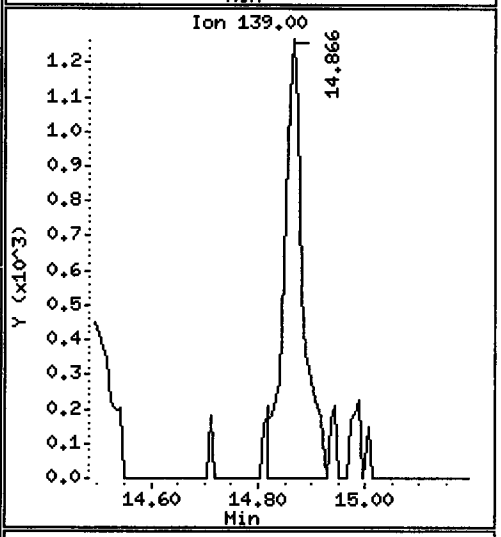


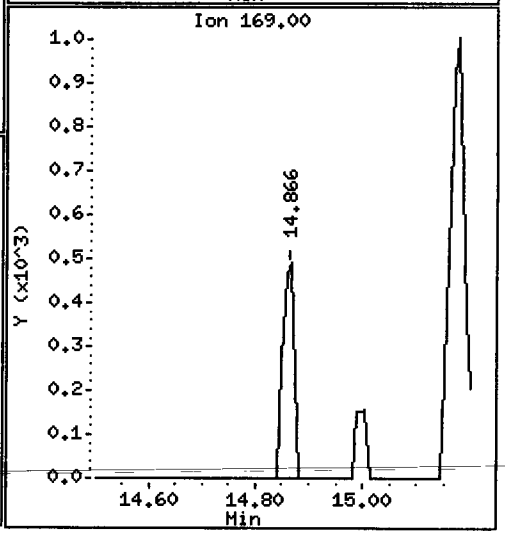












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

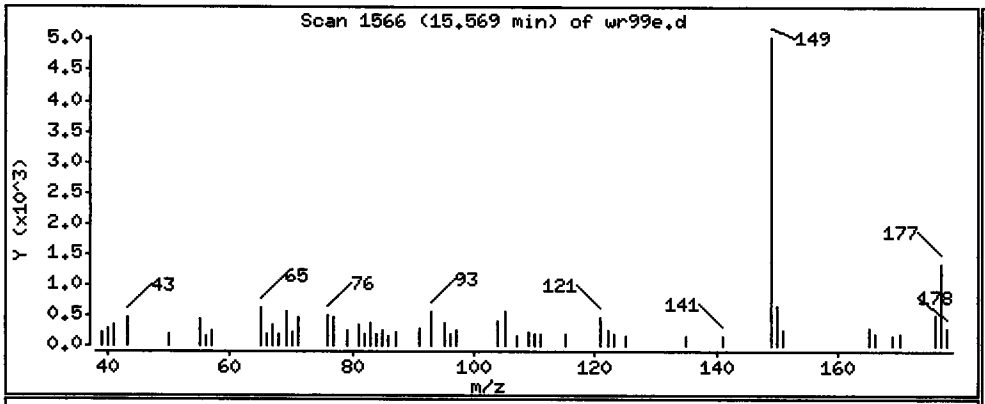
Operator: VTS/YZ

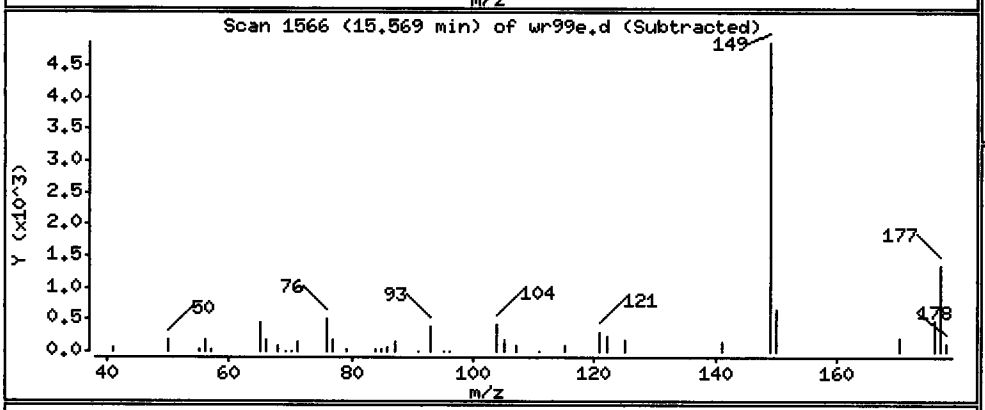
Column phase: ZB-5msi

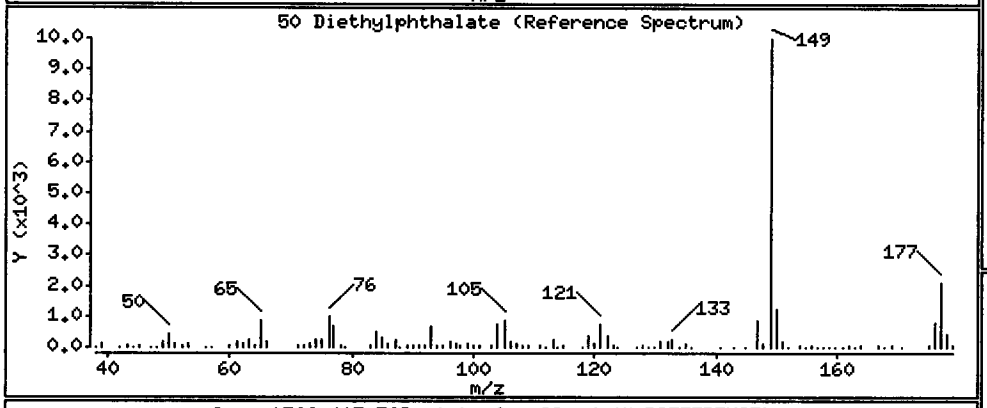
Column diameter: 0.25

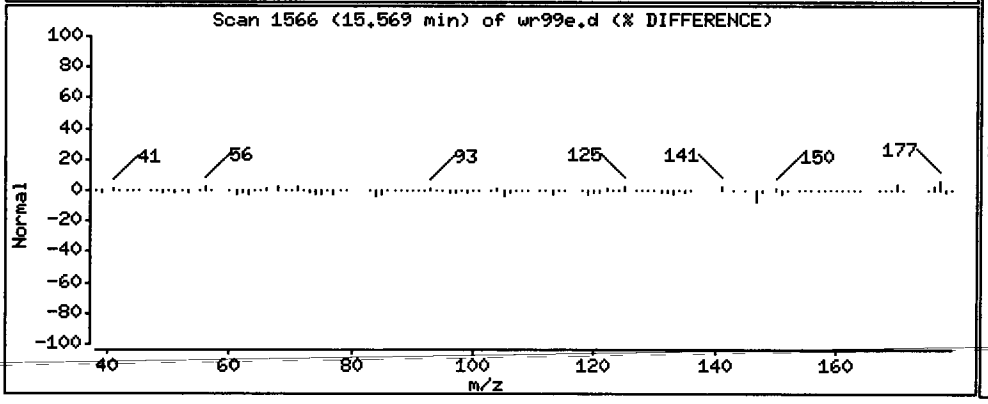
50 Diethylphthalate

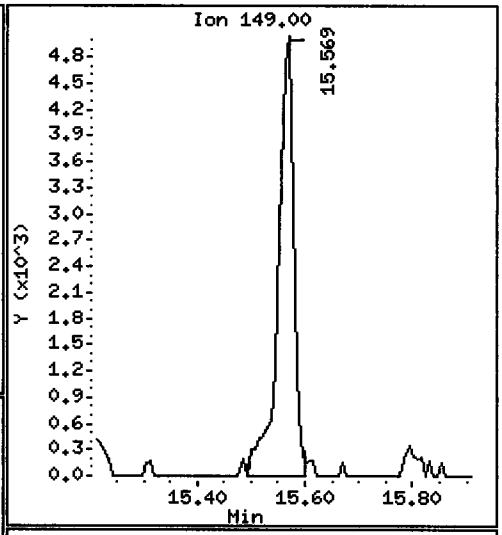
Concentration: 29.20 ug/kg

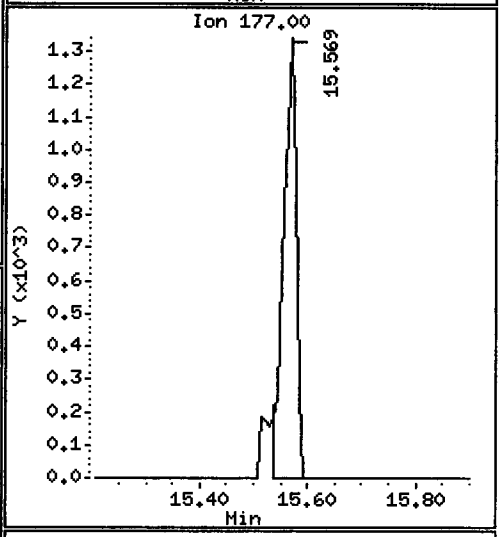


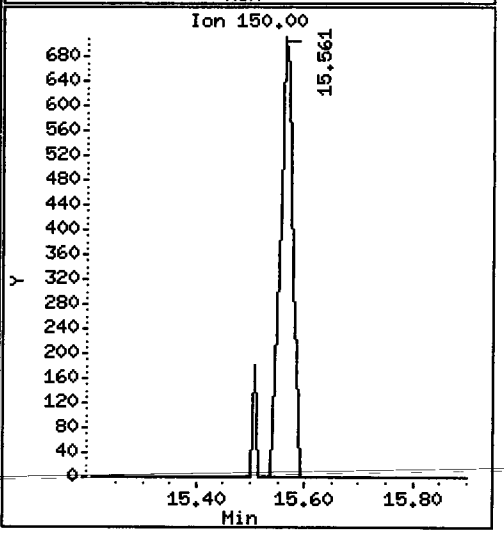












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

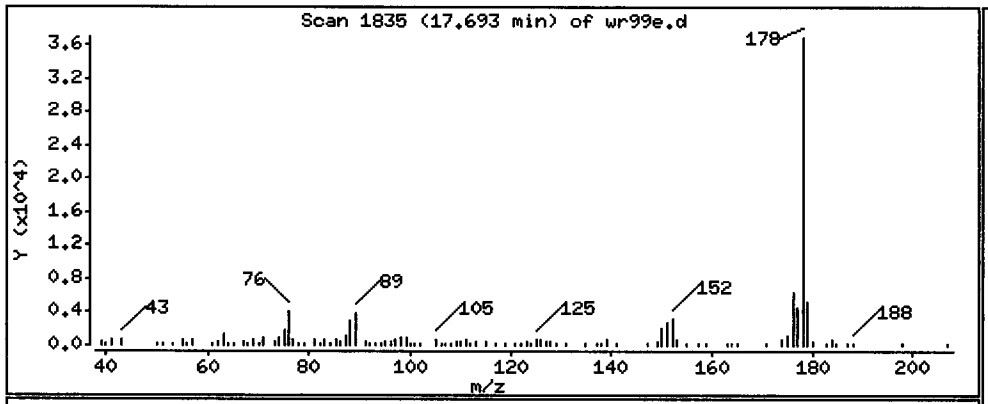
Operator: VTS/YZ

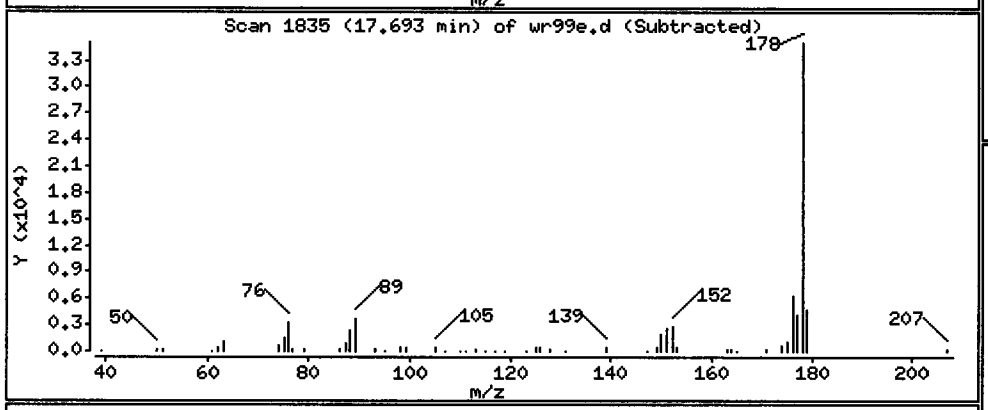
Column phase: ZB-5msi

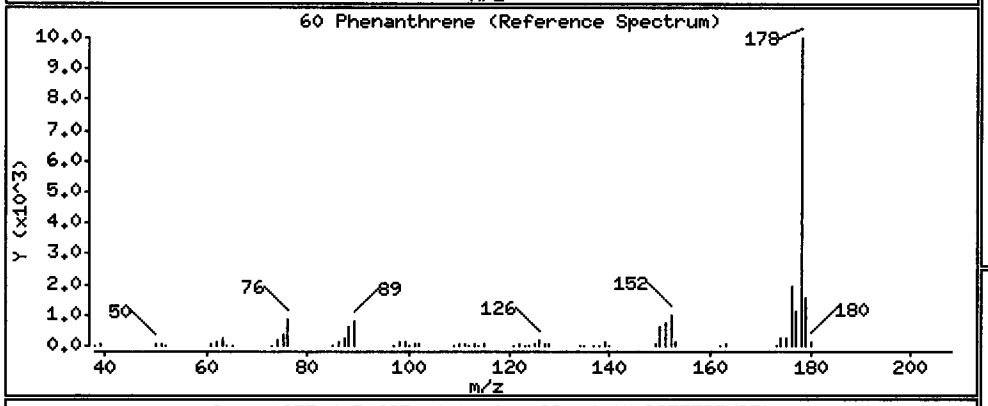
Column diameter: 0.25

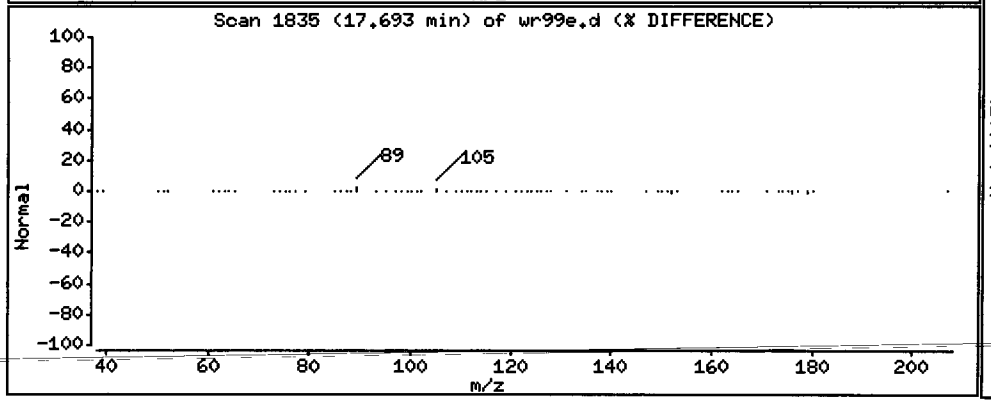
60 Phenanthrene

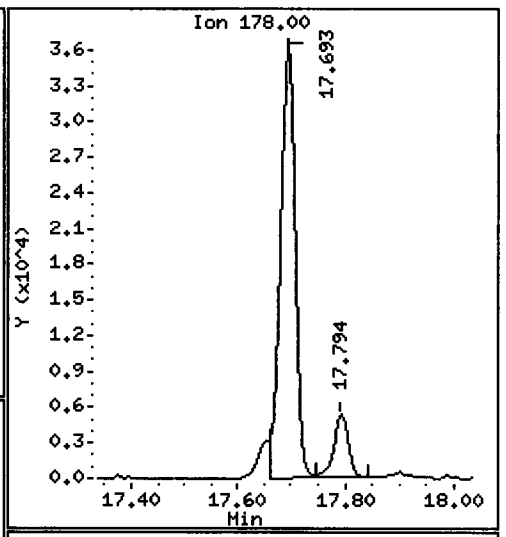
Concentration: 132.8 ug/kg

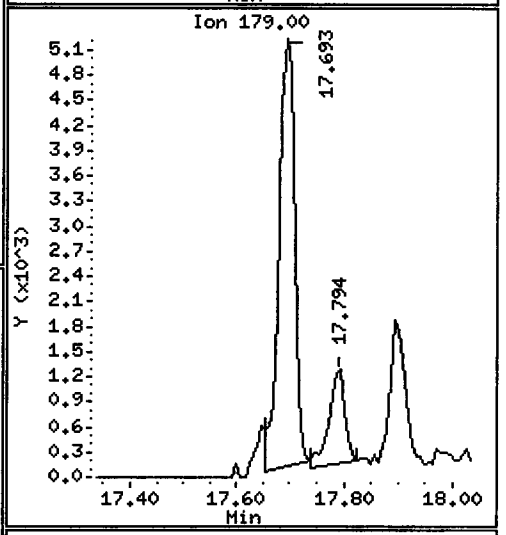


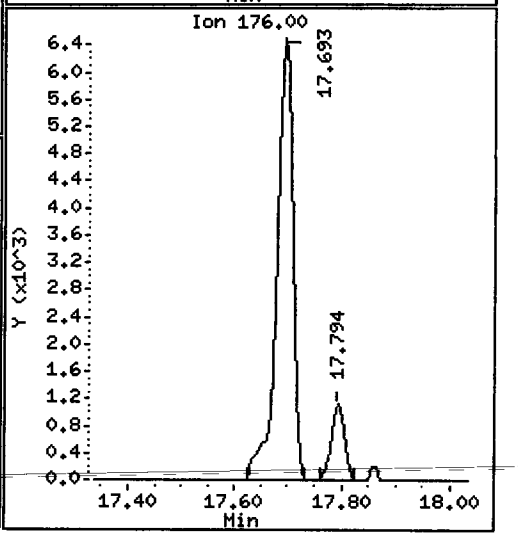












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

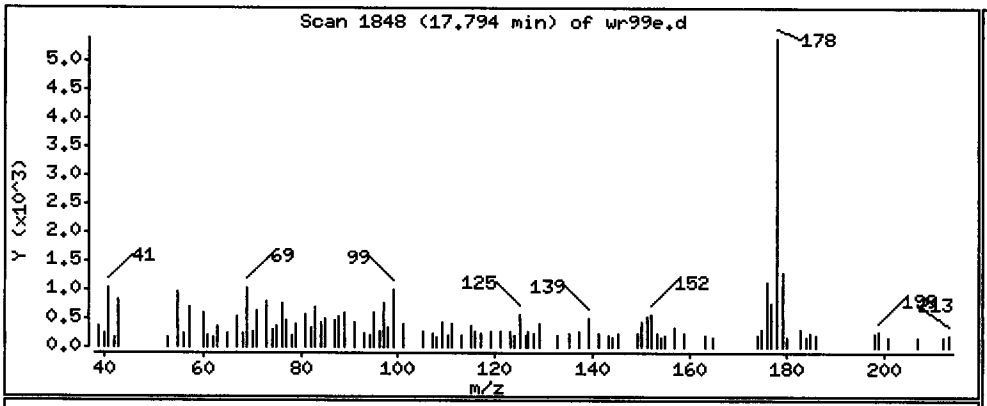
Operator: VTS/YZ

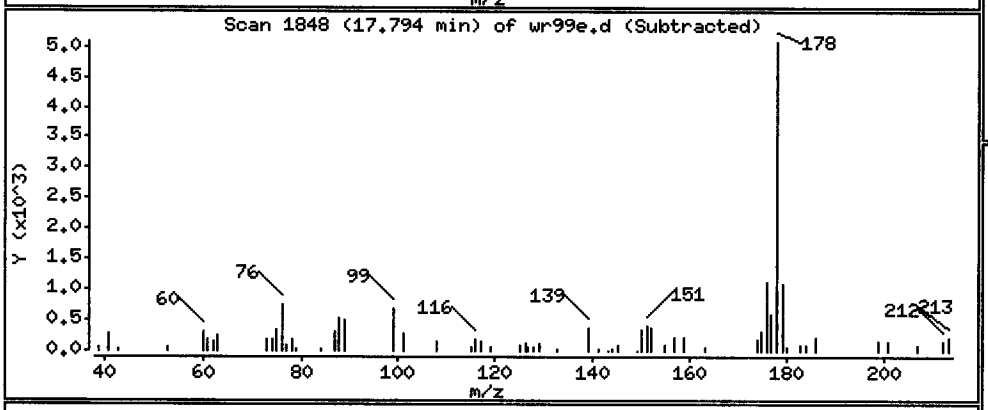
Column phase: ZB-5msi

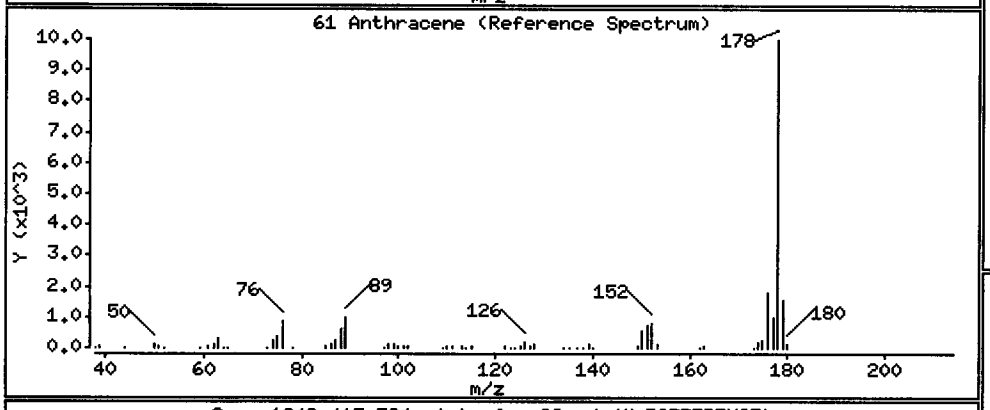
Column diameter: 0.25

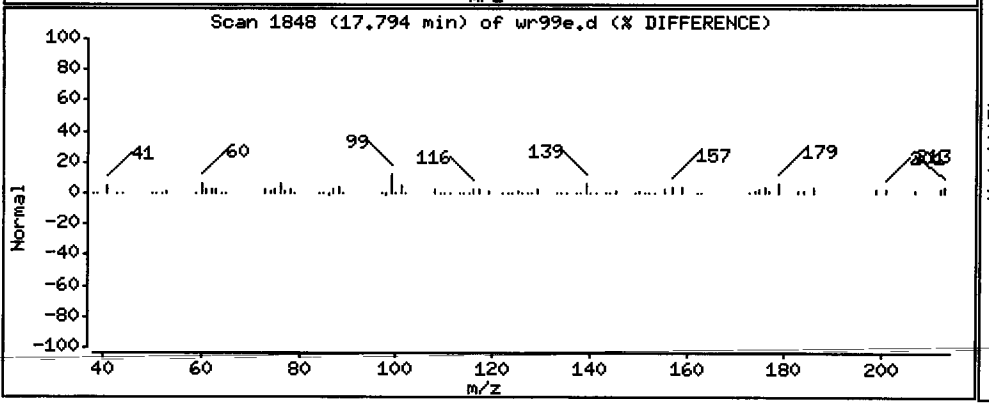
61 Anthracene

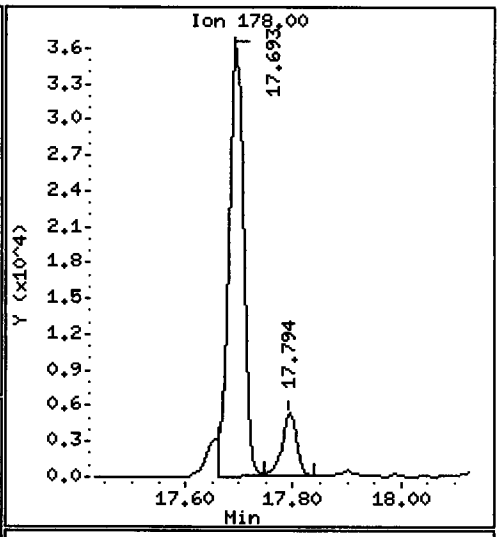
Concentration: 20.09 ug/kg

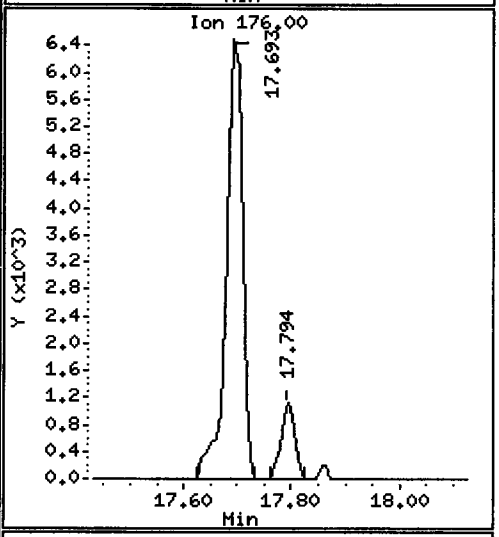


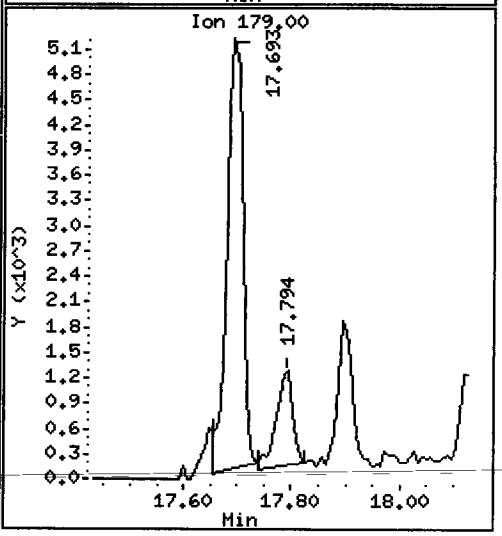












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

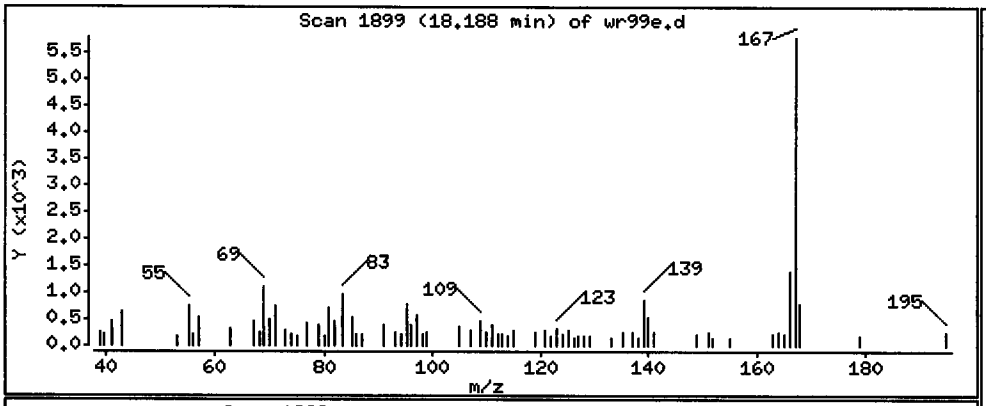
Operator: VTS/YZ

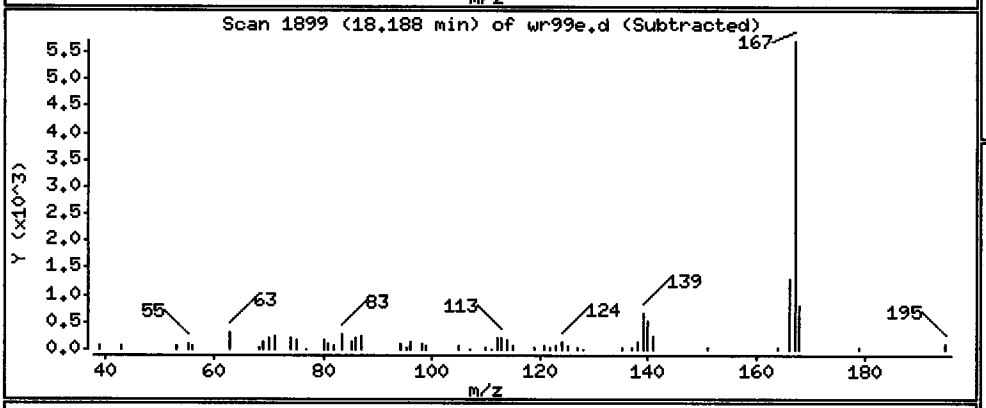
Column phase: ZB-5msi

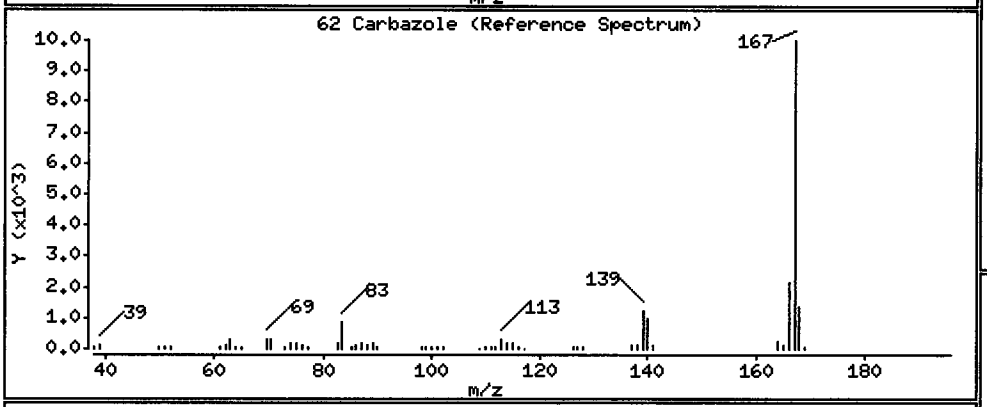
Column diameter: 0.25

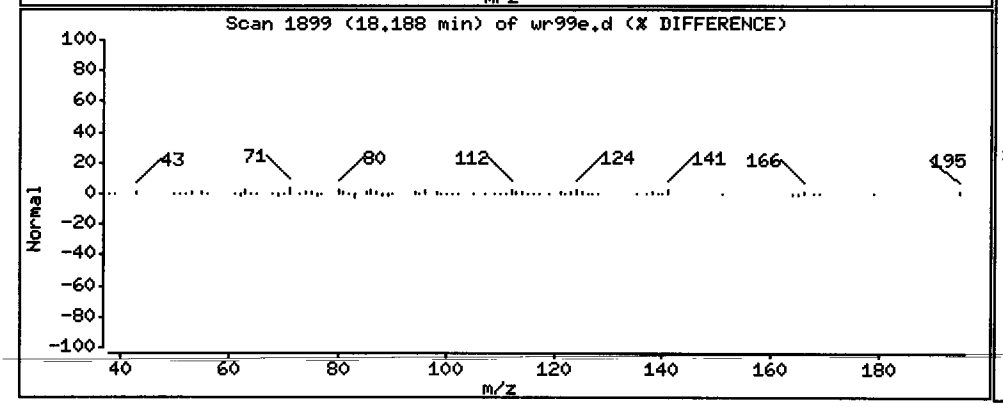
62 Carbazole

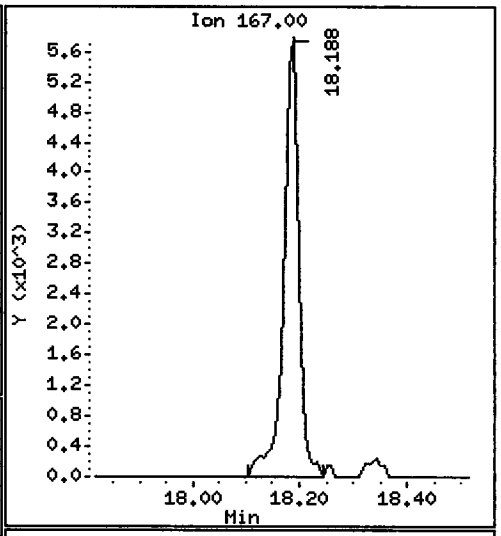
Concentration: 37.93 ug/kg

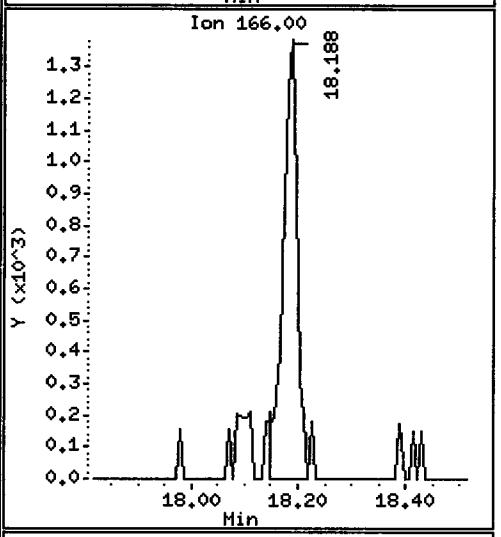


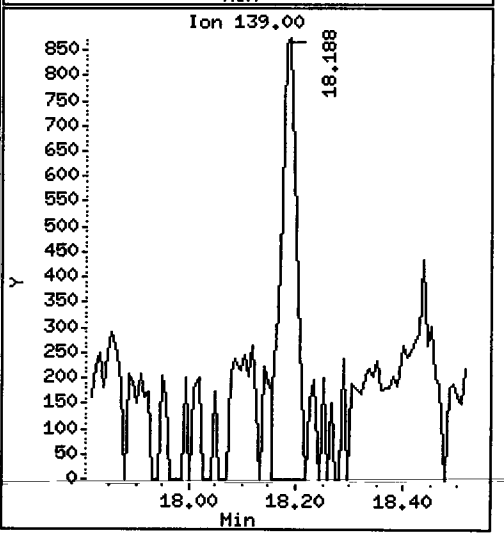












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

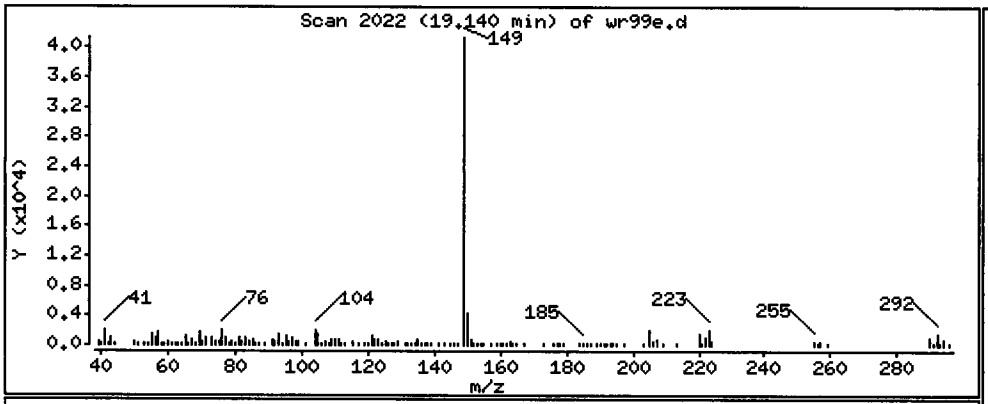
Operator: VTS/YZ

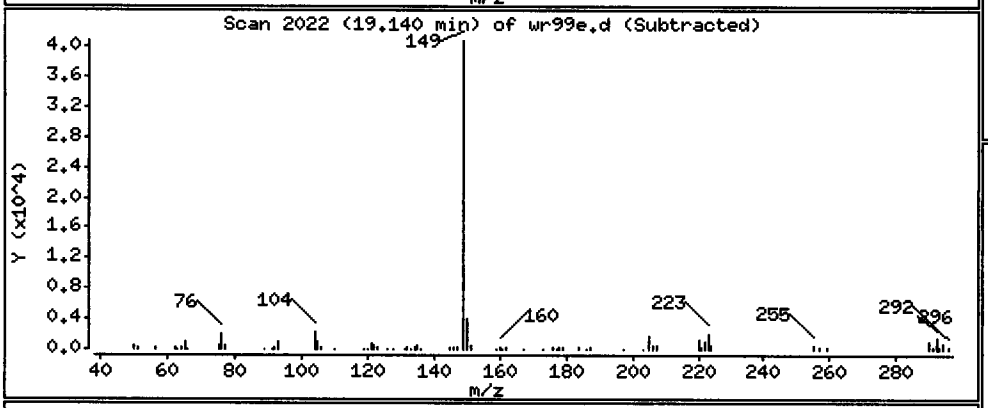
Column phase: ZB-5msi

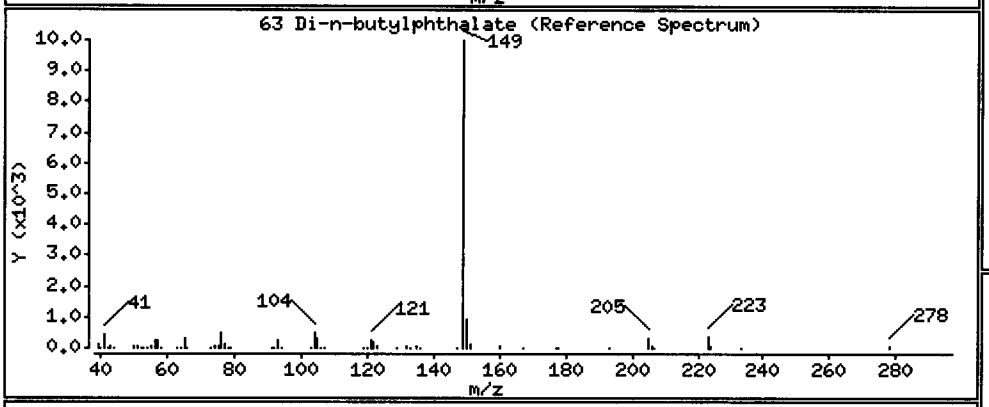
Column diameter: 0.25

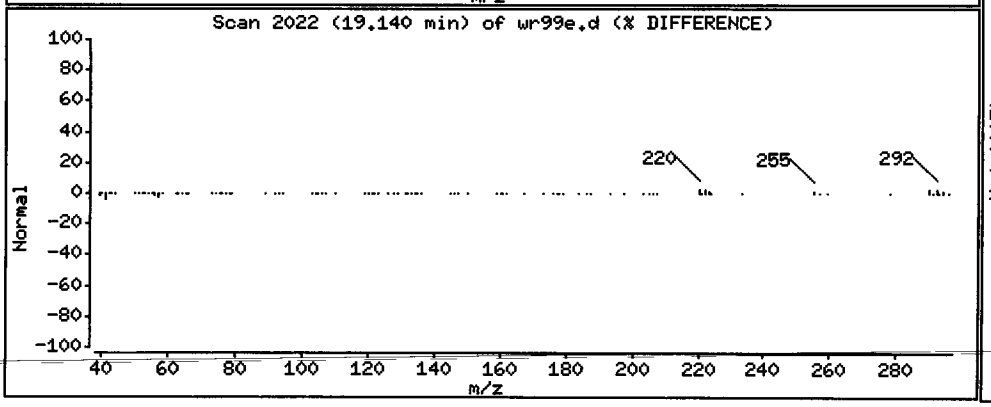
63 Di-n-butylphthalate

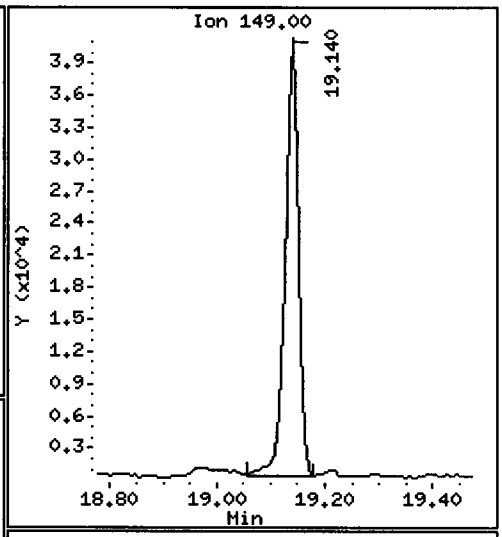
Concentration: 134.5 ug/kg

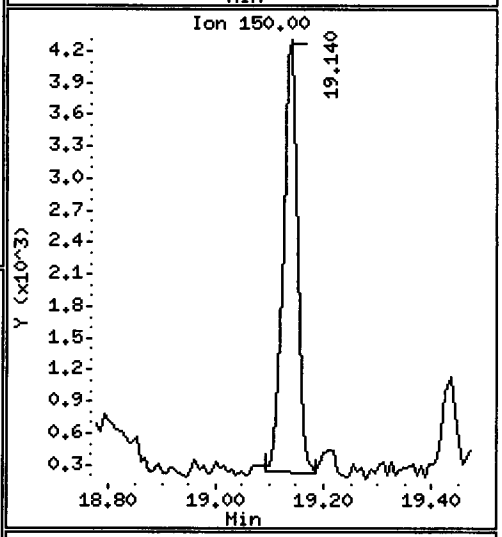


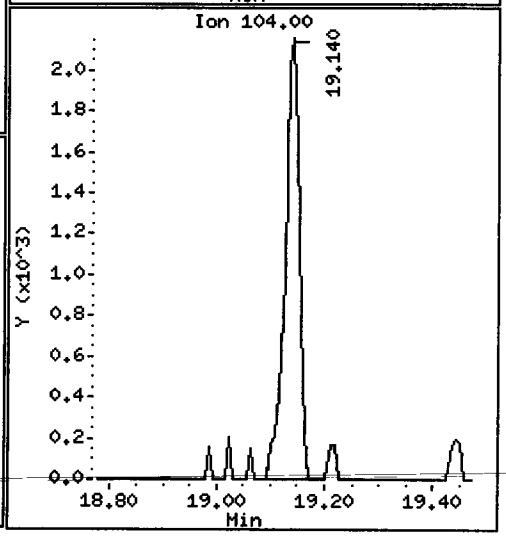












WR99 : 01035

Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

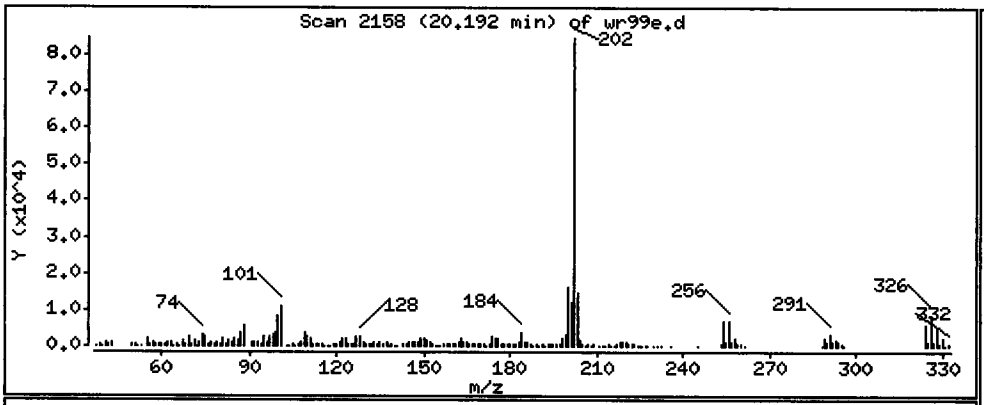
Operator: VTS/YZ

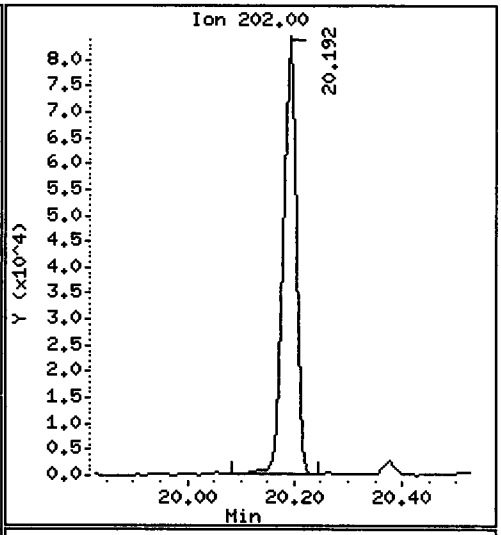
Column phase: ZB-5msi

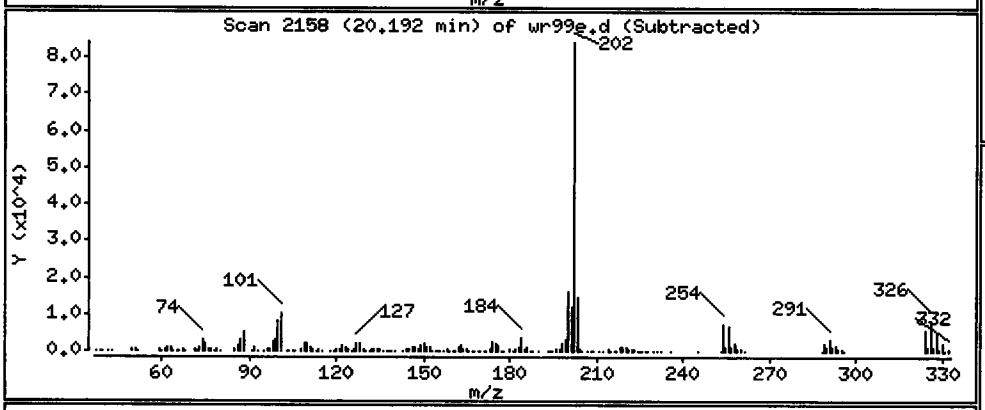
Column diameter: 0.25

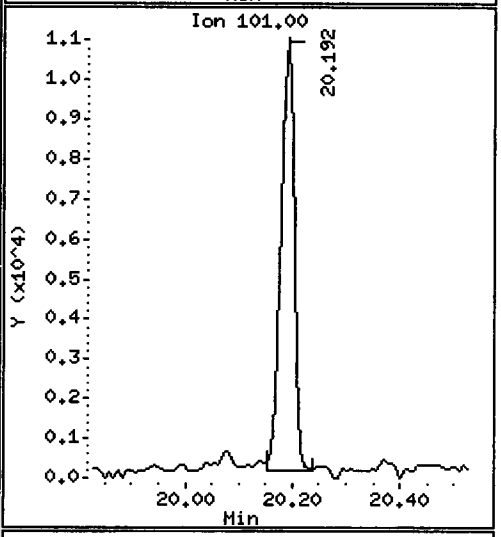
64 Fluoranthene

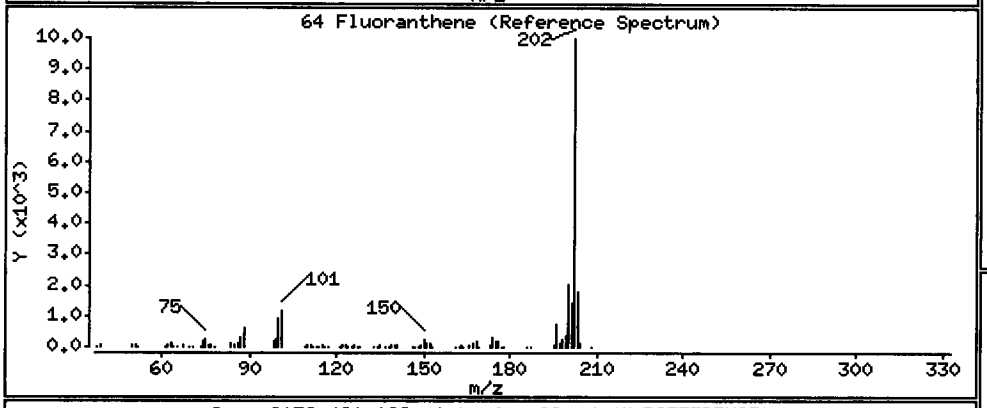
Concentration: 235.2 ug/kg

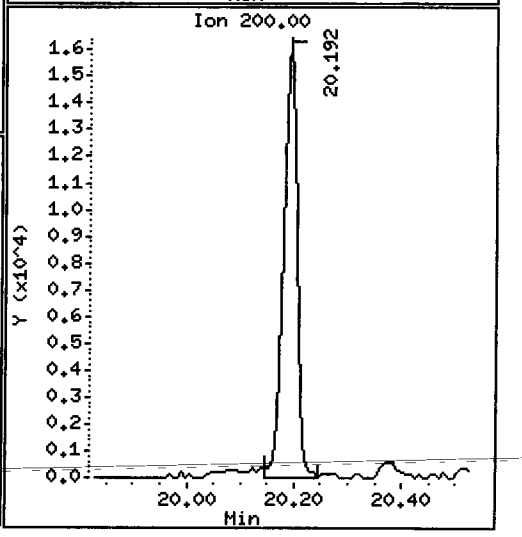


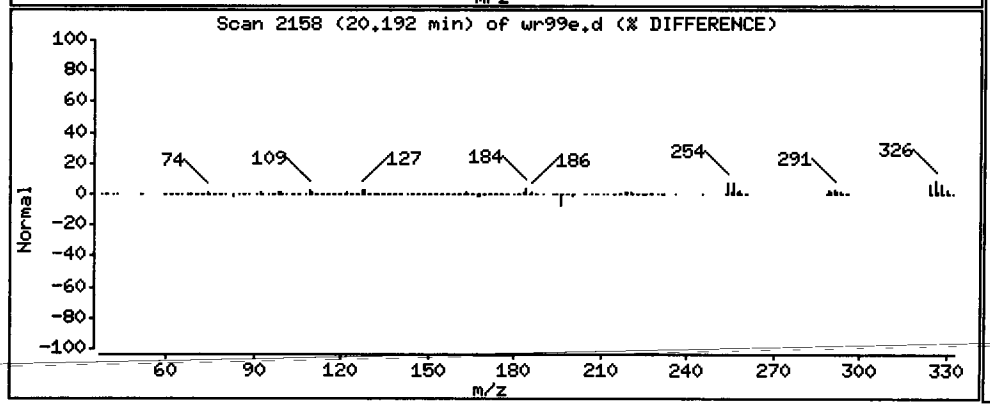












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

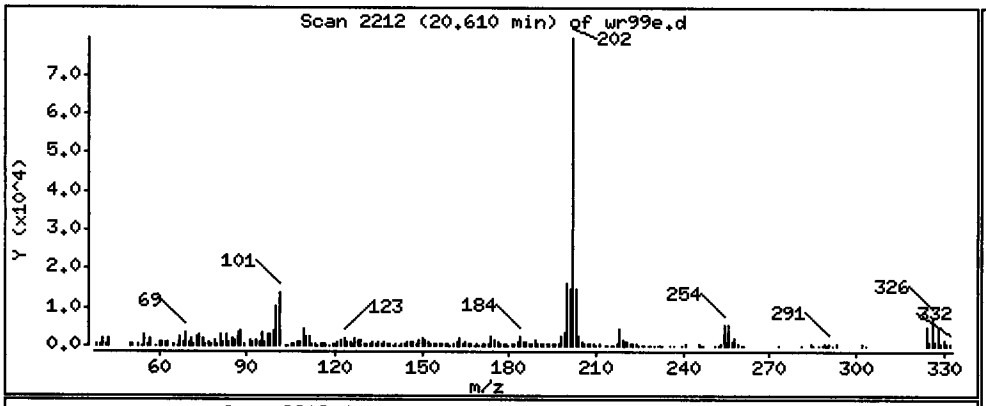
Operator: VTS/YZ

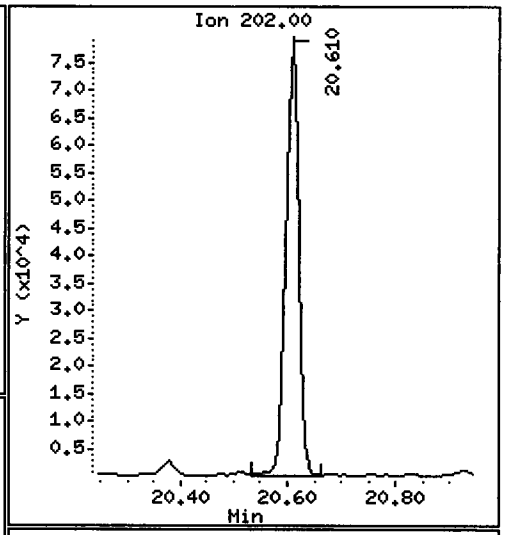
Column phase: ZB-5msi

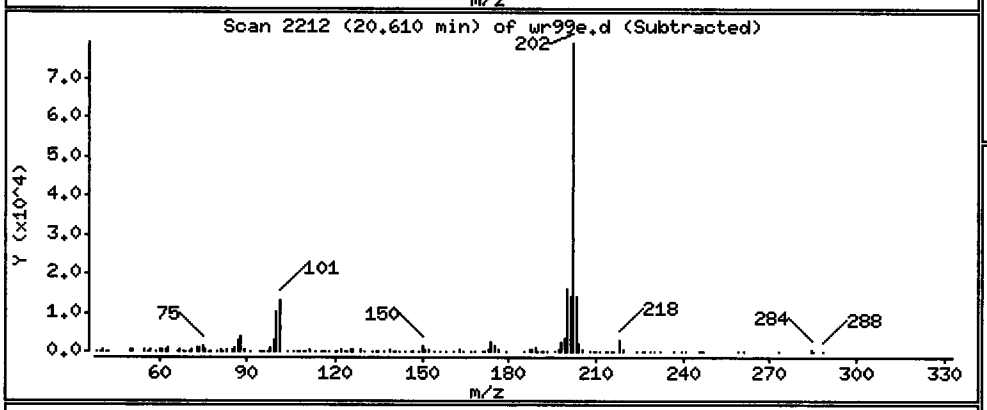
Column diameter: 0.25

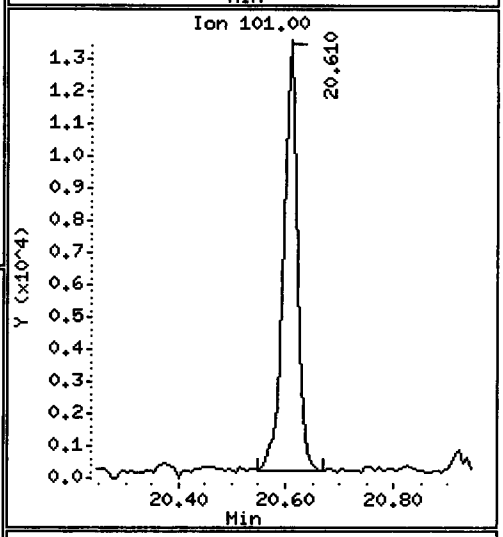
65 Pyrene

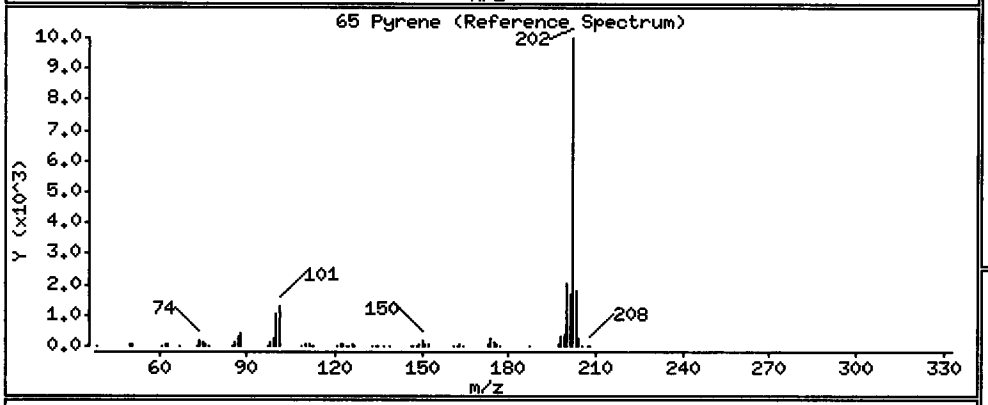
Concentration: 231.0 ug/kg

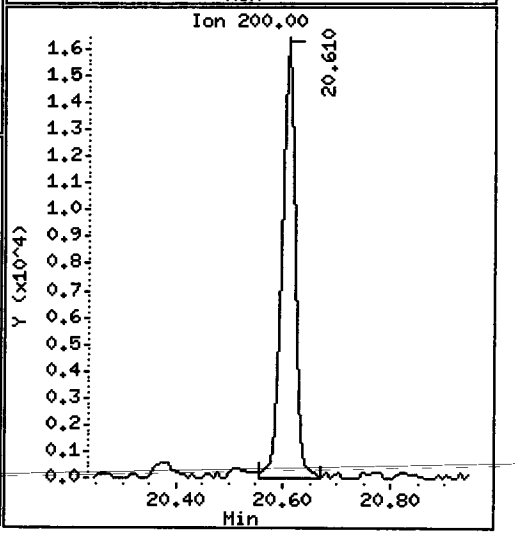


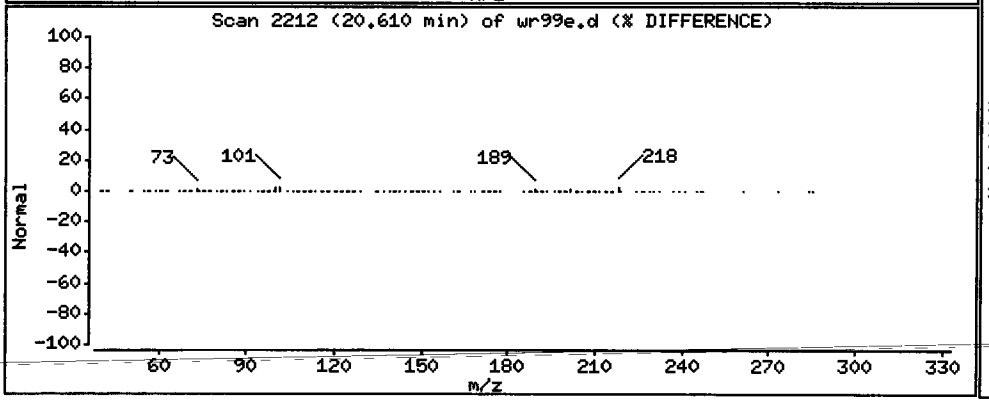












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

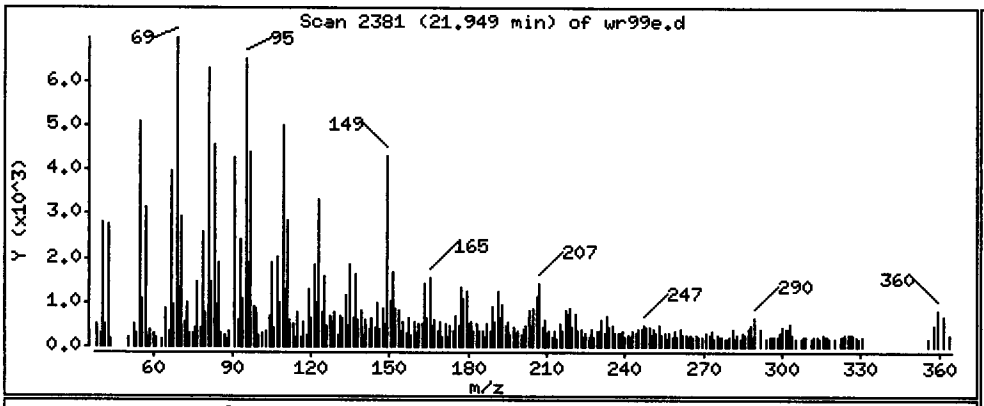
Operator: VTS/YZ

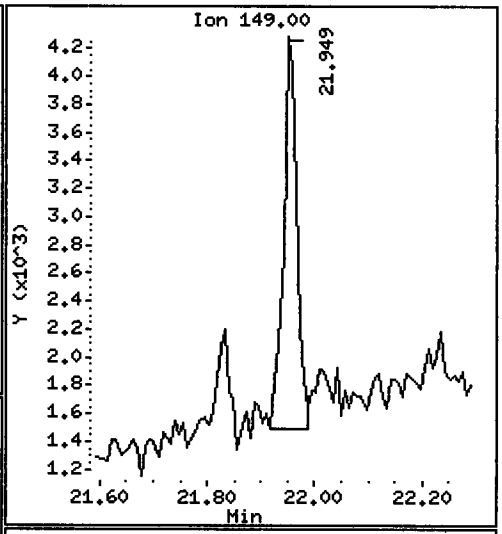
Column phase: ZB-5msi

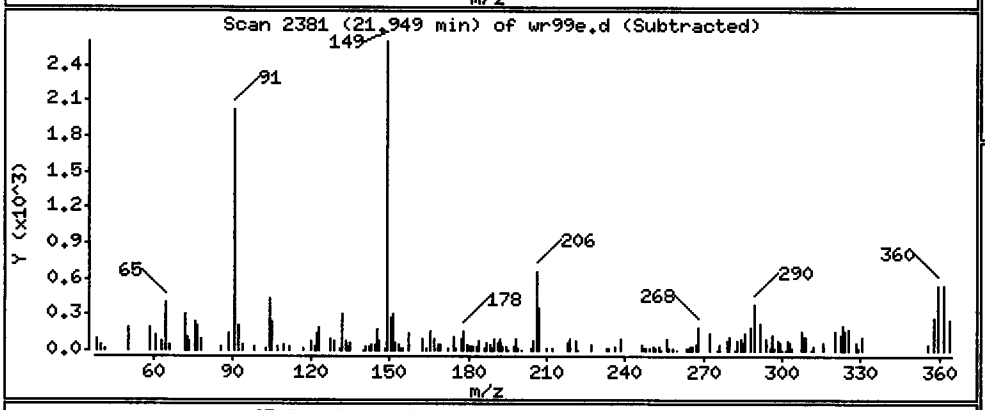
Column diameter: 0.25

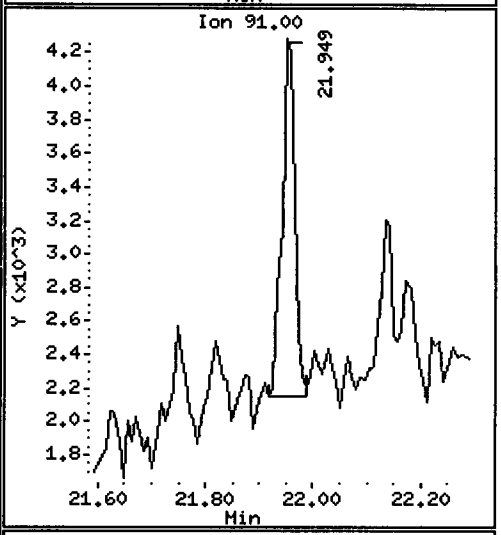
67 Butylbenzylphthalate

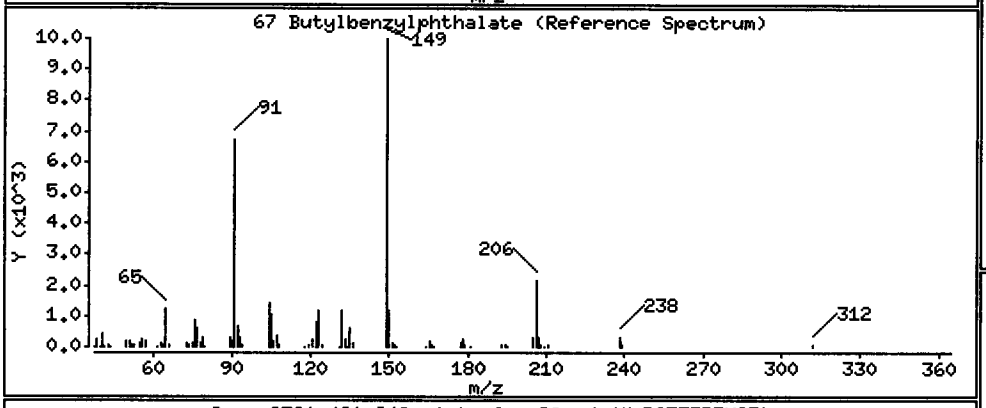
Concentration: 25.87 ug/kg

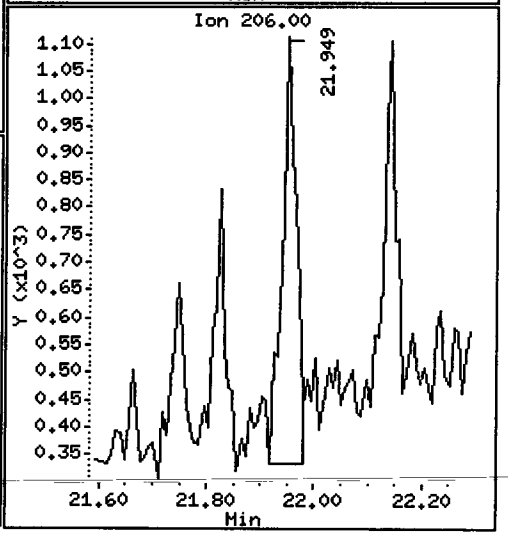


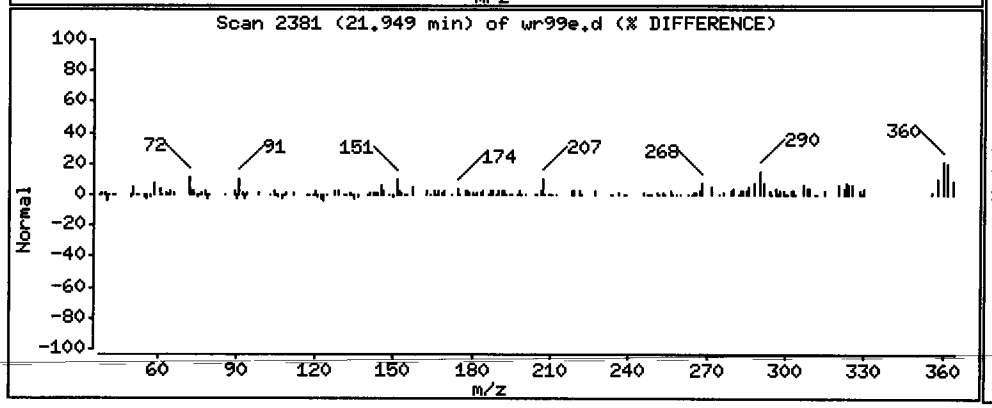












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

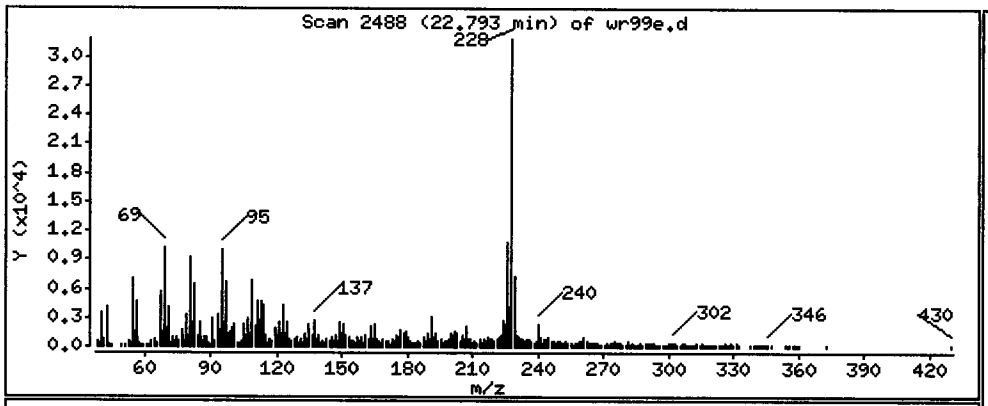
Operator: VTS/YZ

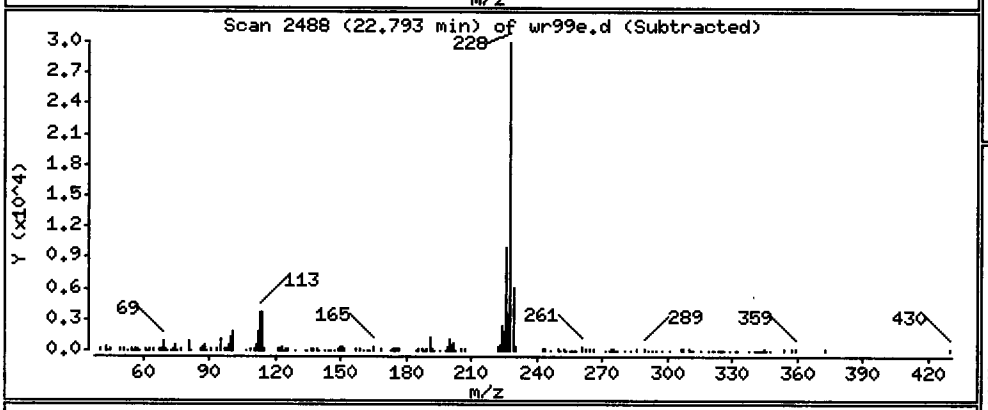
Column phase: ZB-5msi

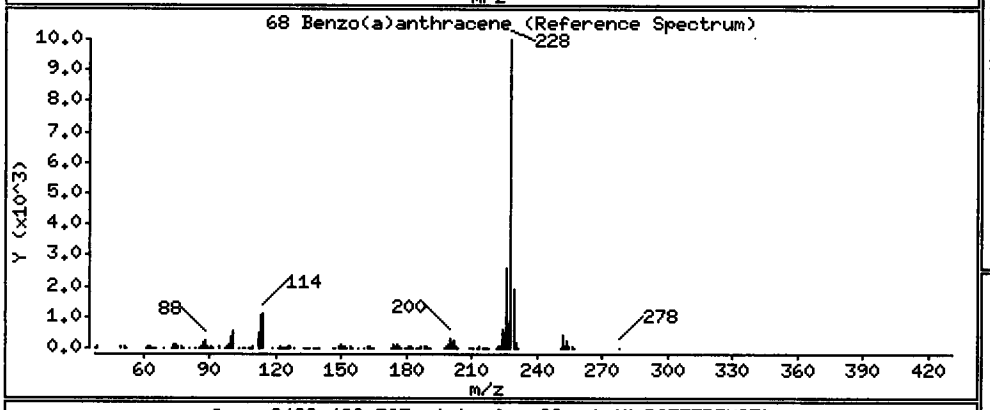
Column diameter: 0.25

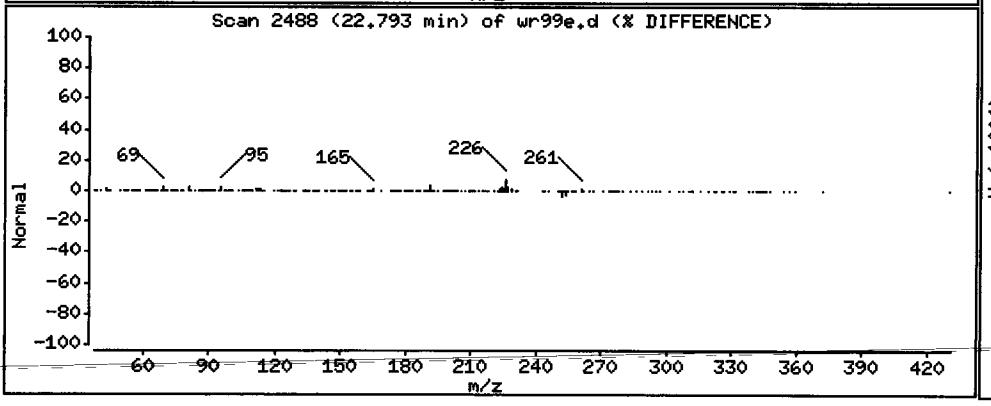
68 Benzo(a)anthracene

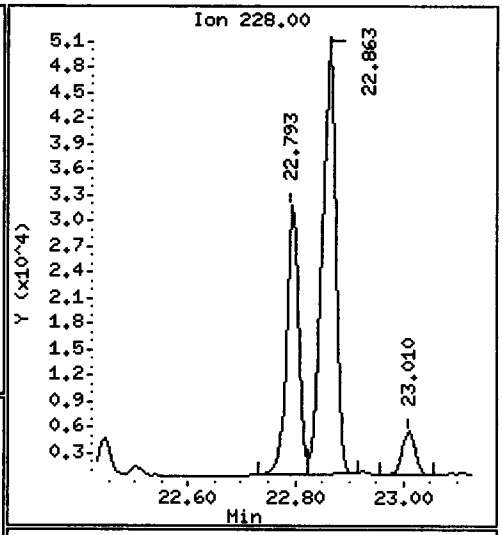
Concentration: 103.3 ug/kg

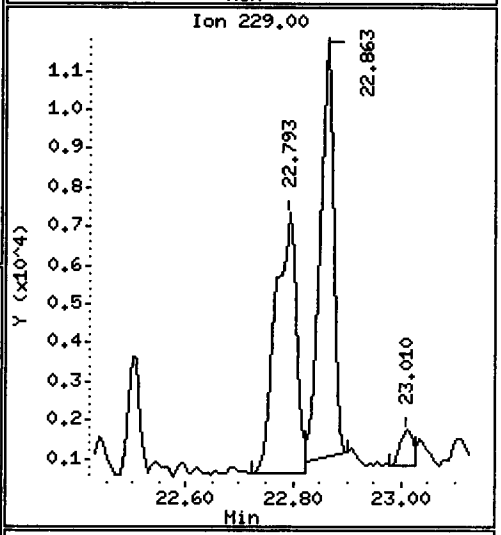


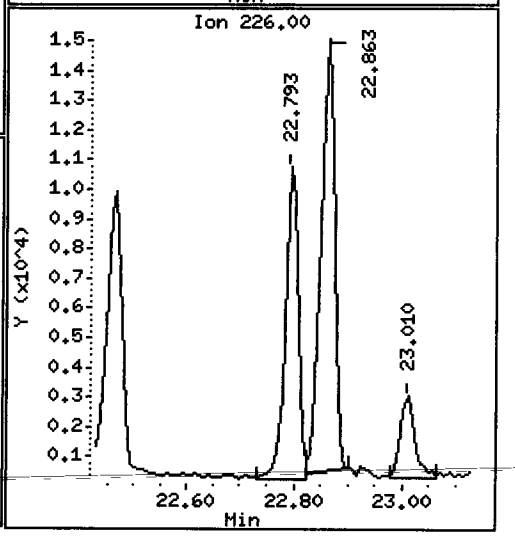












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

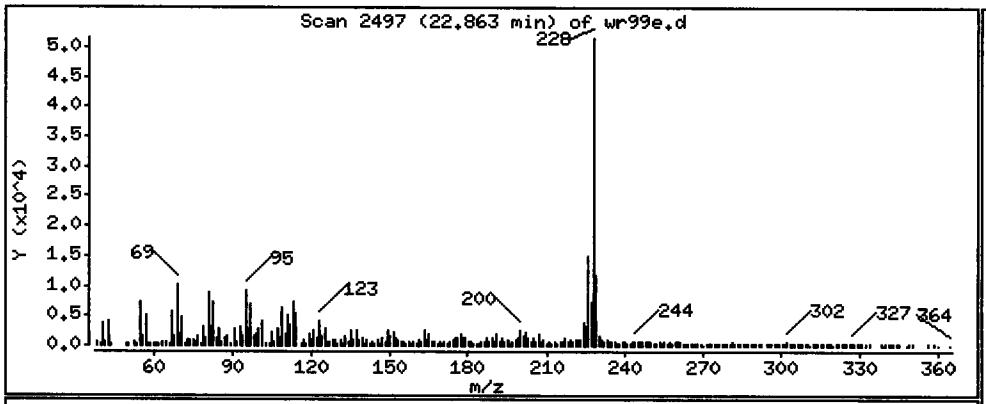
Operator: VTS/YZ

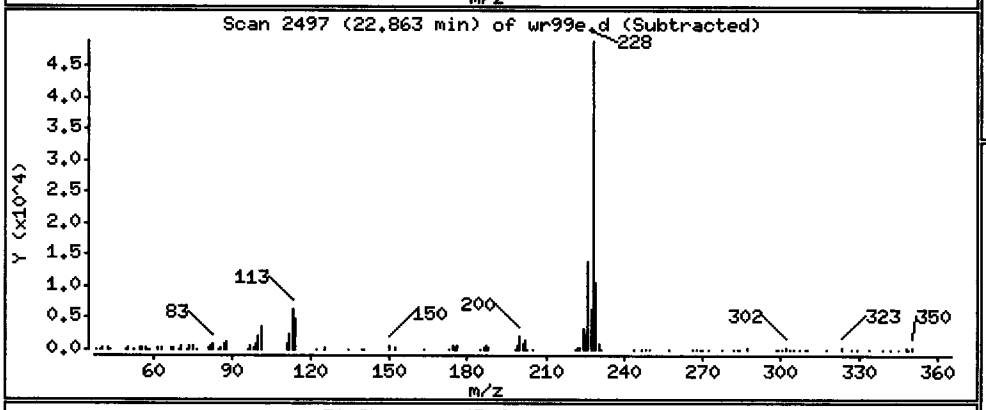
Column phase: ZB-5msi

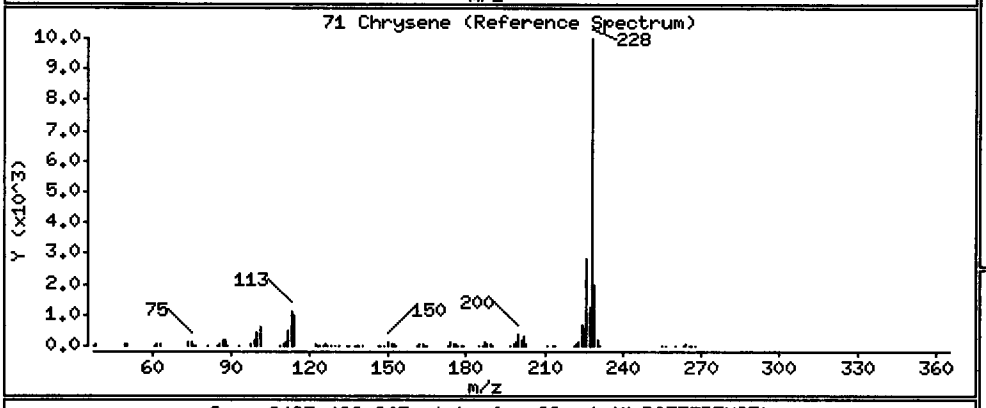
Column diameter: 0.25

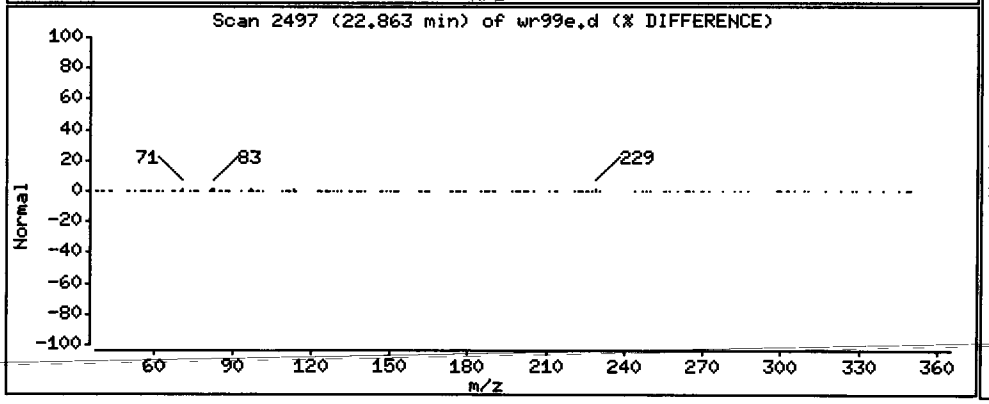
71 Chrysene

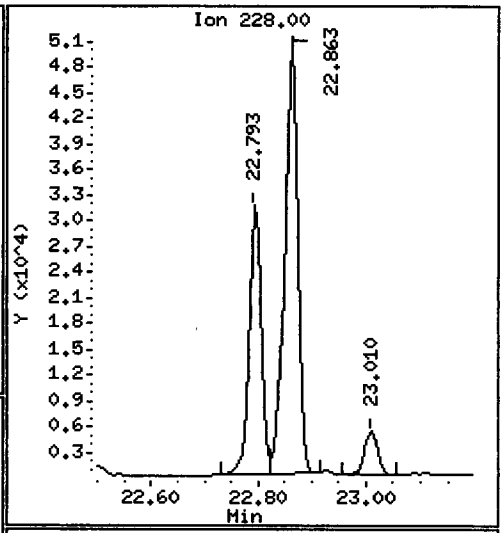
Concentration: 189.6 ug/kg

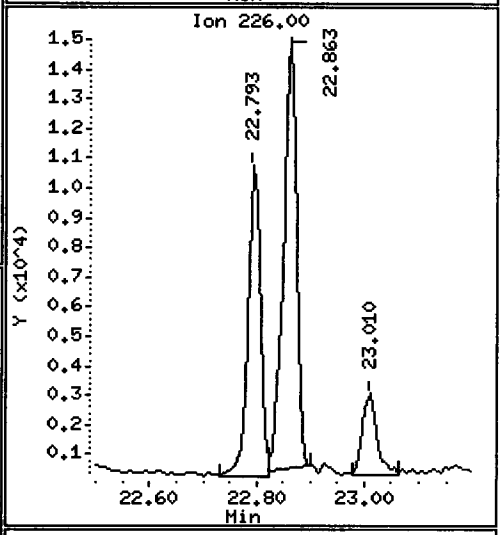


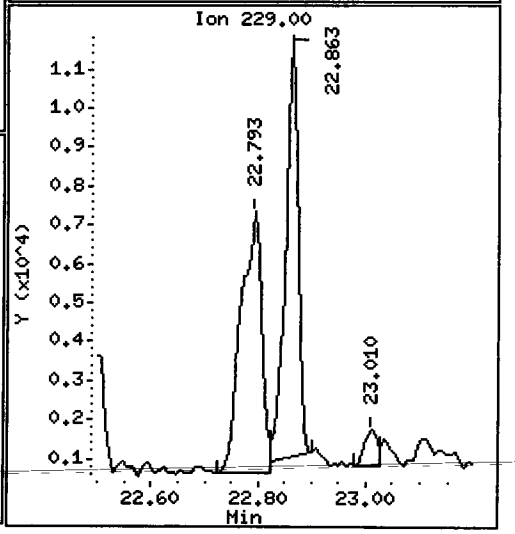












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

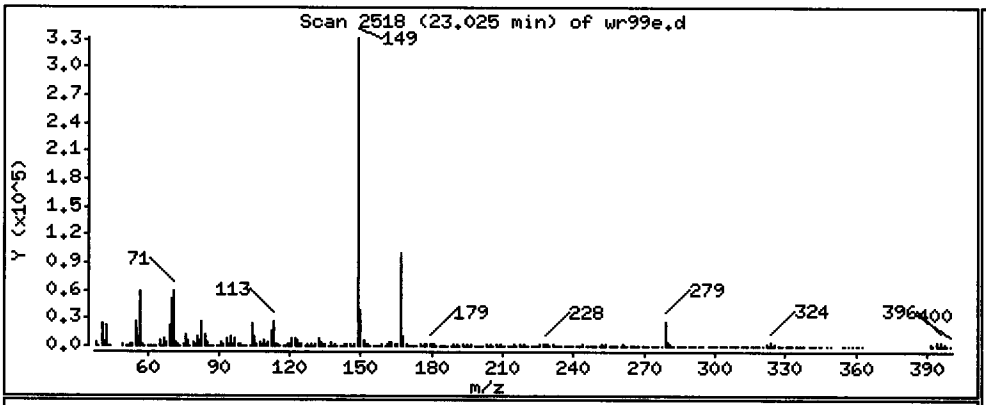
Operator: VTS/YZ

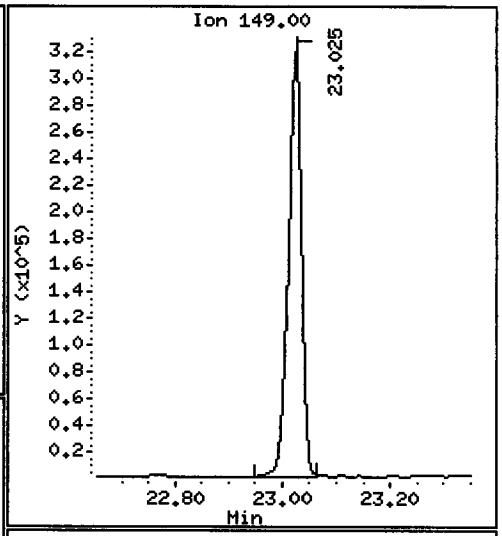
Column phase: ZB-5msi

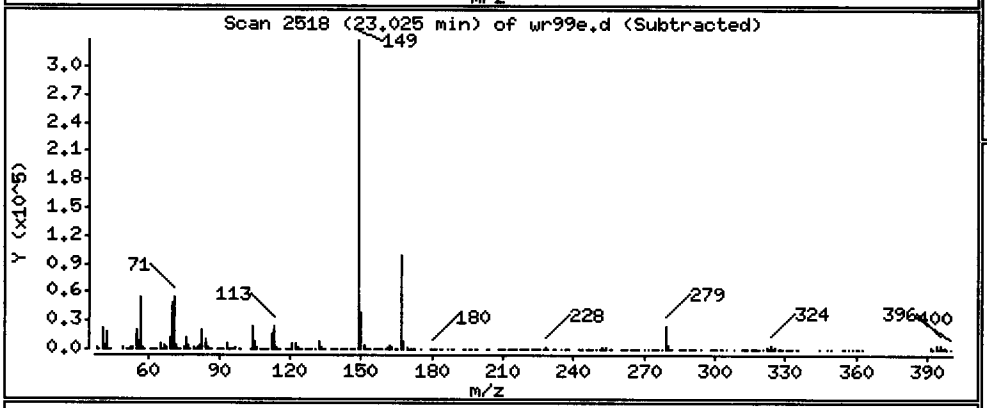
Column diameter: 0.25

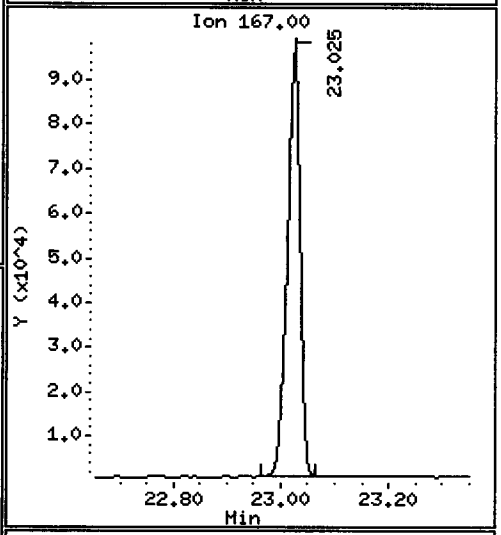
72 bis(2-Ethylhexyl)phthalate

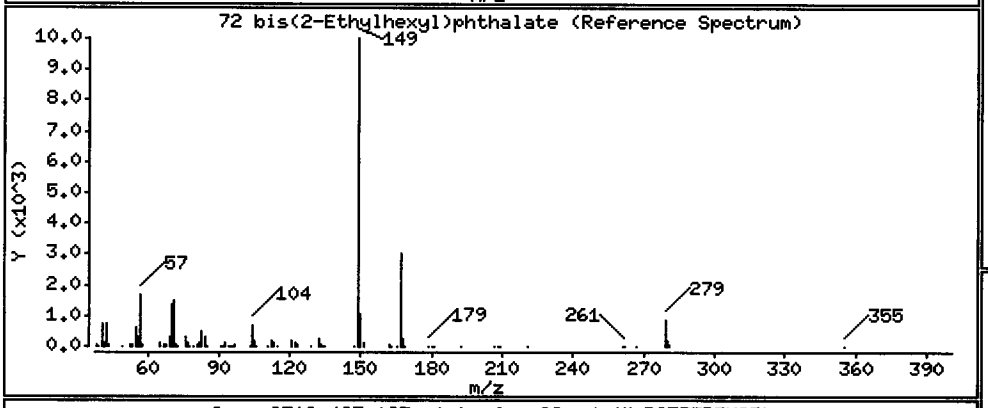
Concentration: 1772 ug/kg

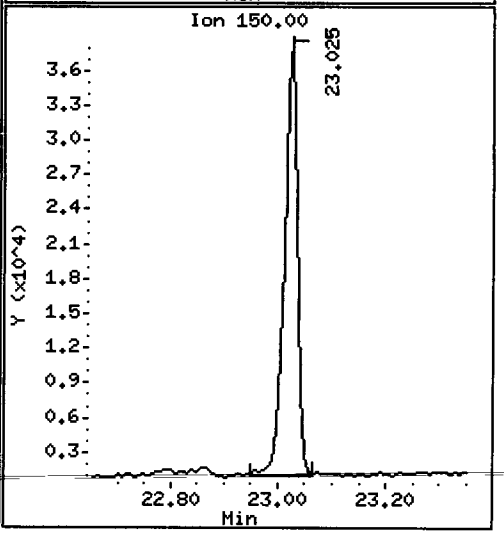


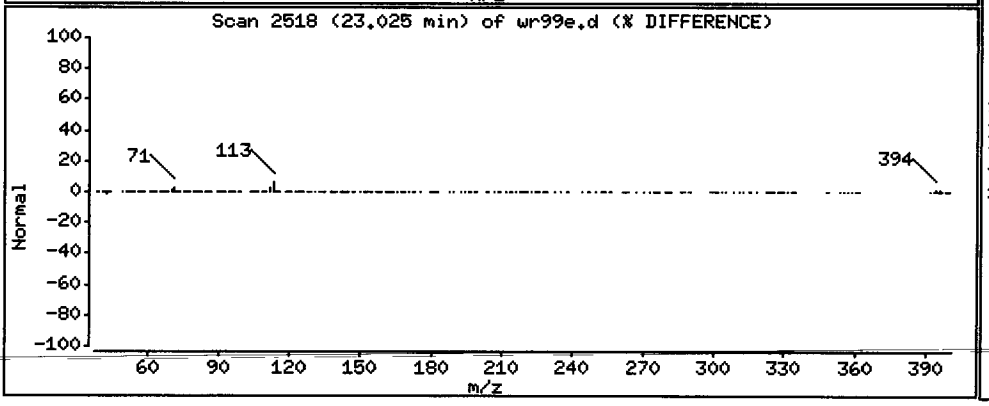












WR99-01812

Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

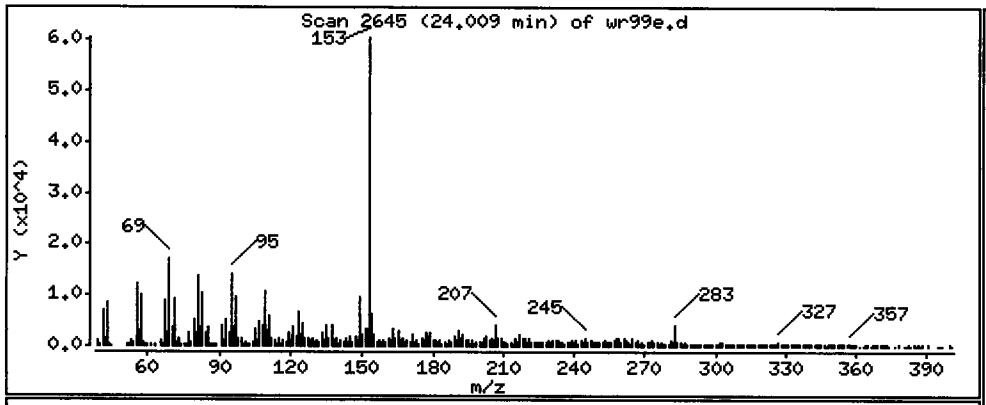
Operator: VTS/YZ

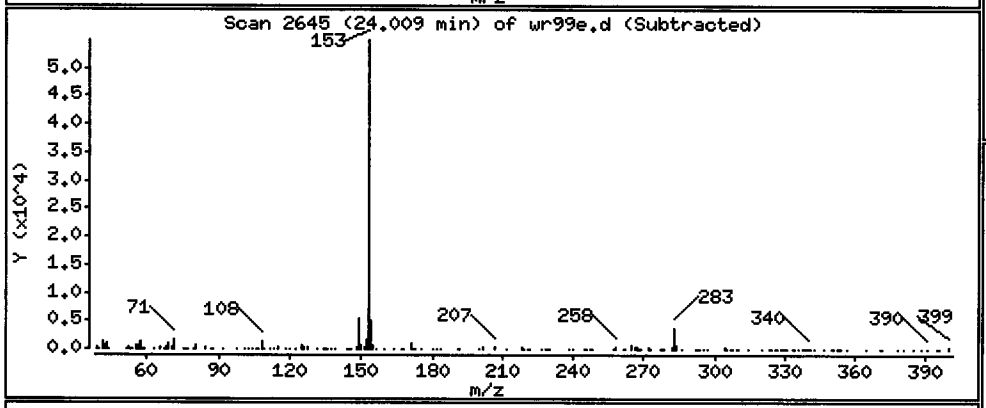
Column phase: ZB-5msi

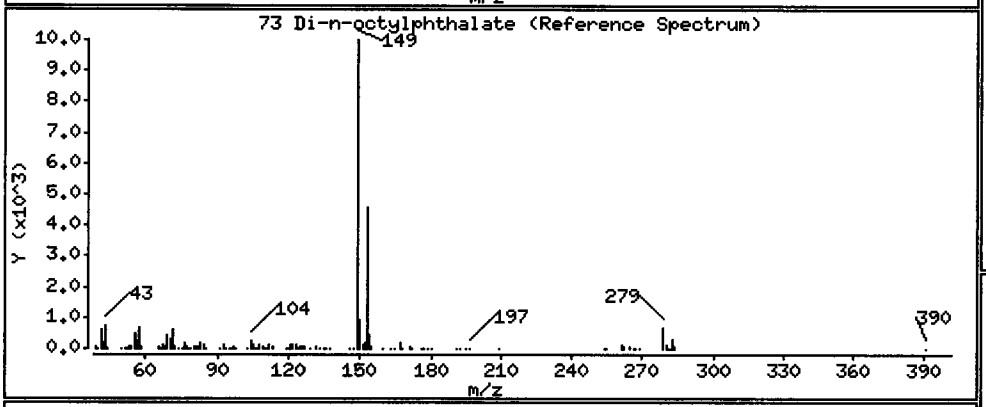
Column diameter: 0.25

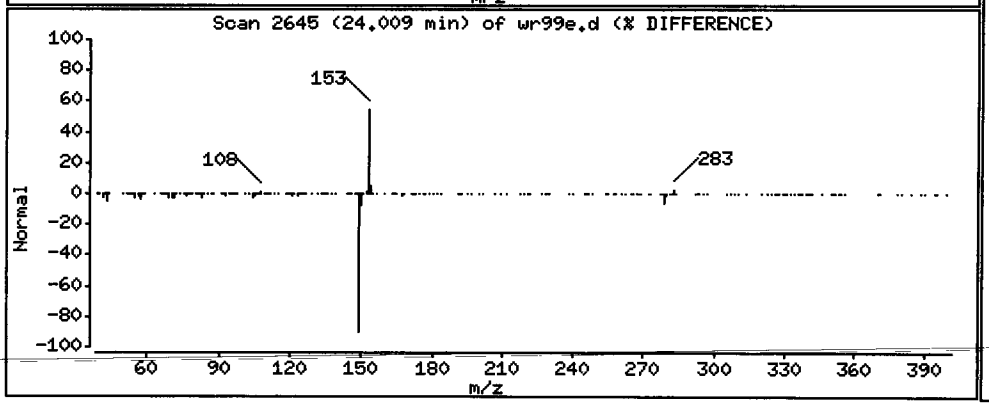
73 Di-n-octylphthalate

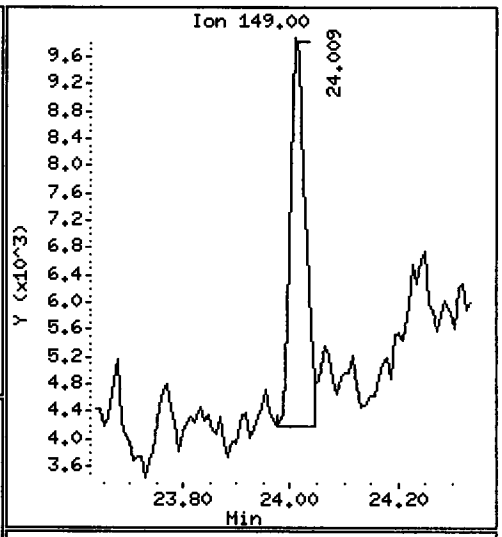
Concentration: 22.32 ug/kg

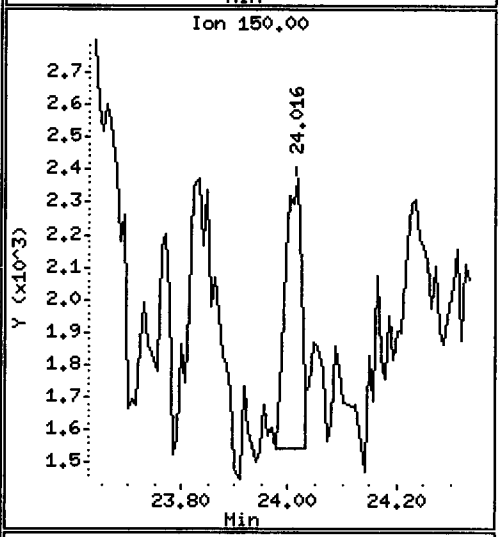


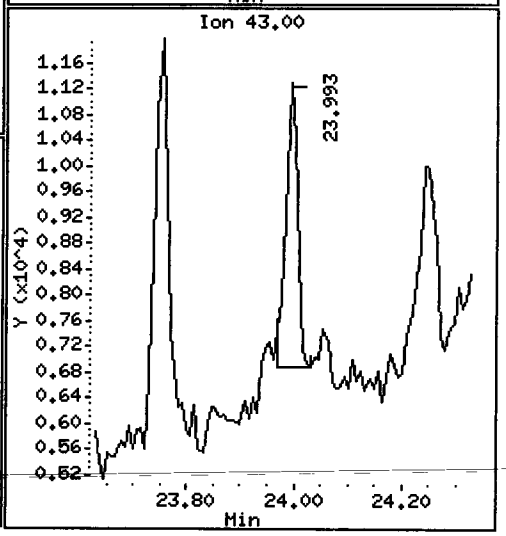












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

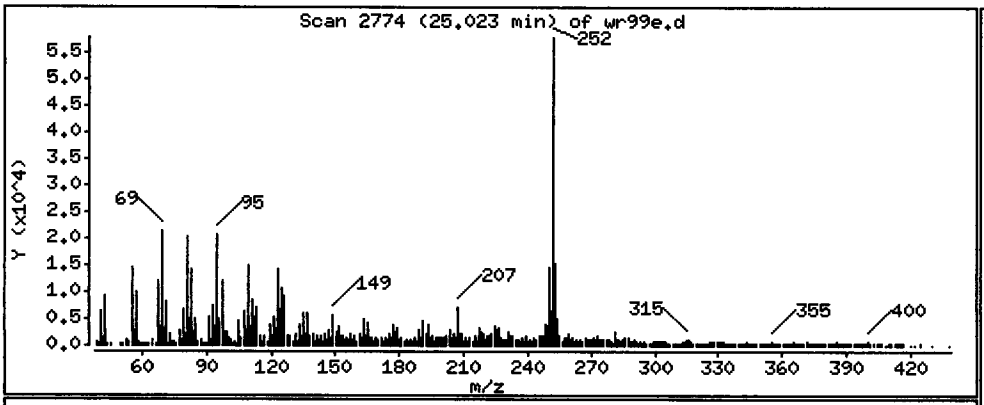
Operator: VTS/YZ

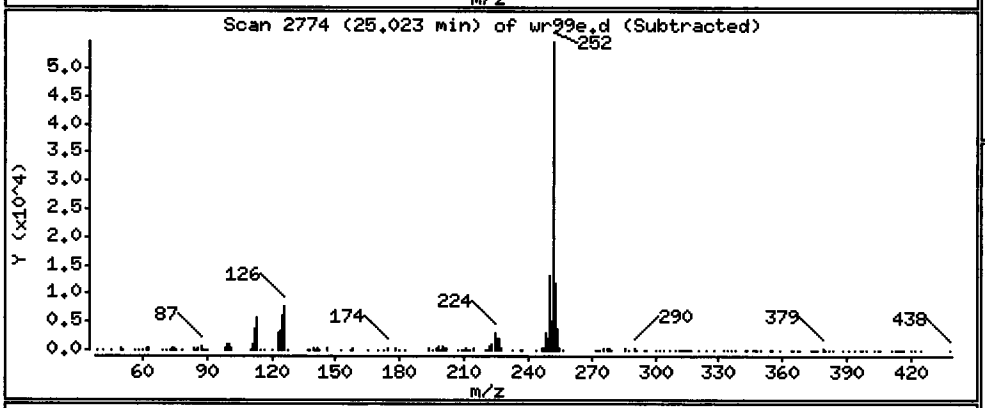
Column phase: ZB-5msi

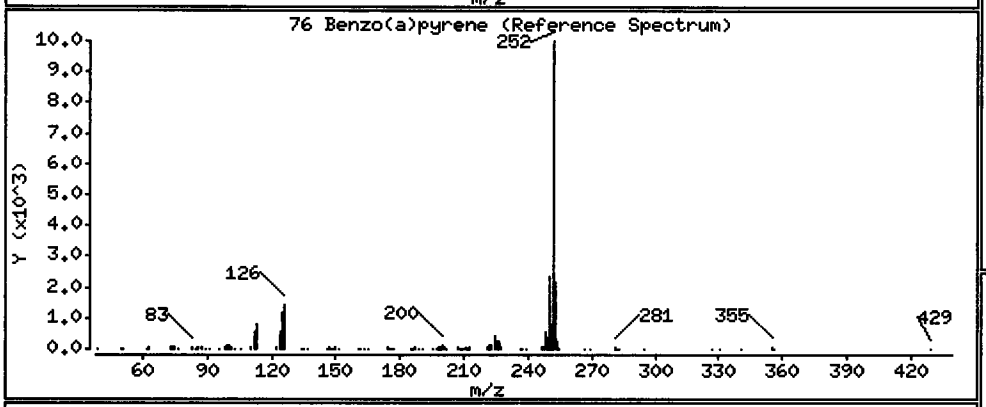
Column diameter: 0.25

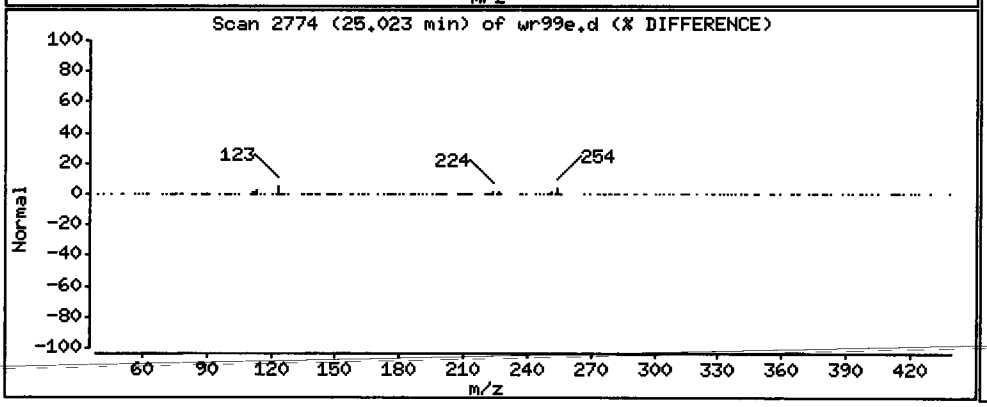
76 Benzo(a)pyrene

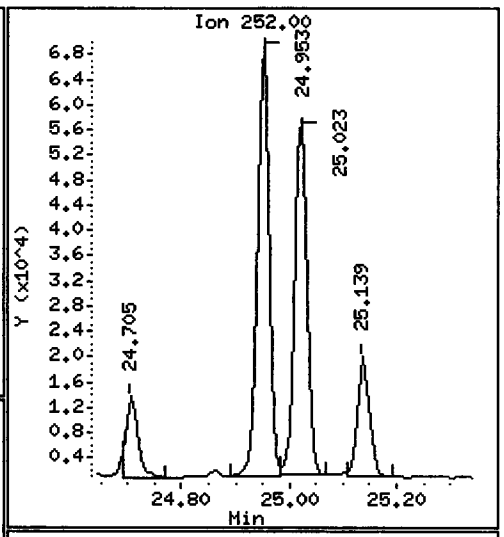
Concentration: 226.9 ug/kg

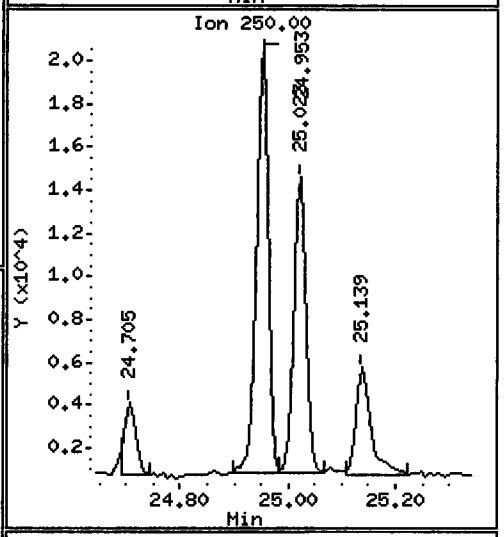


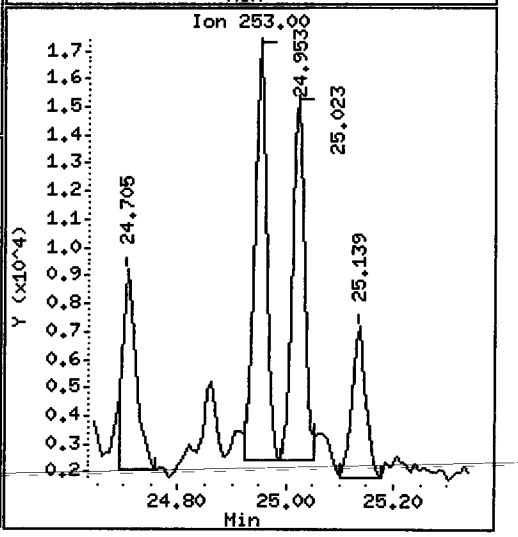












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

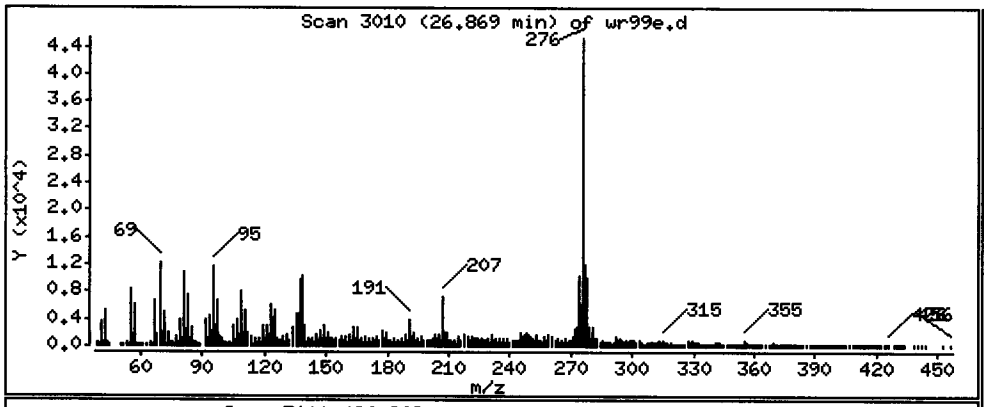
Operator: VTS/YZ

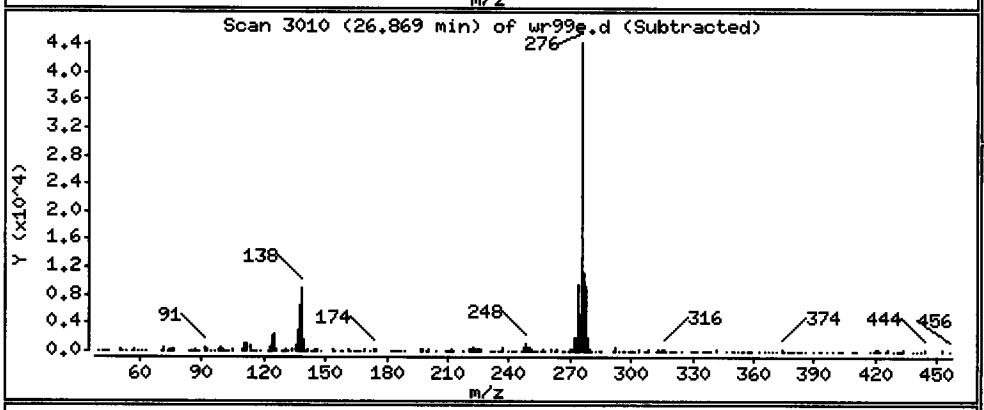
Column phase: ZB-5msi

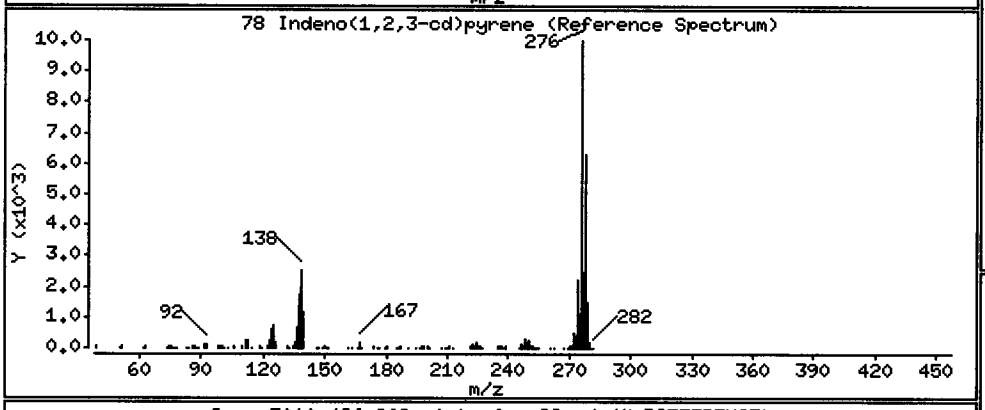
Column diameter: 0.25

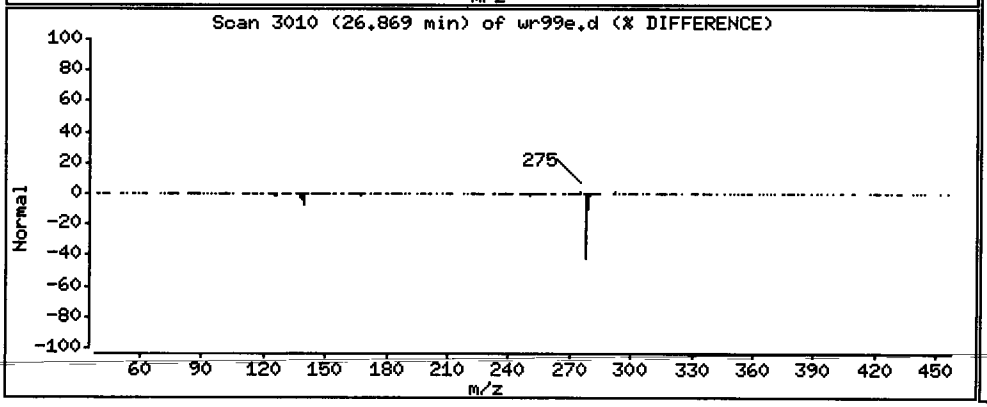
78 Indeno(1,2,3-cd)pyrene

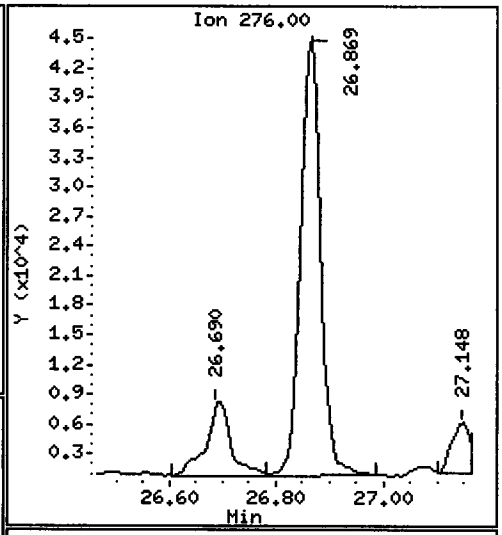
Concentration: 247.4 ug/kg

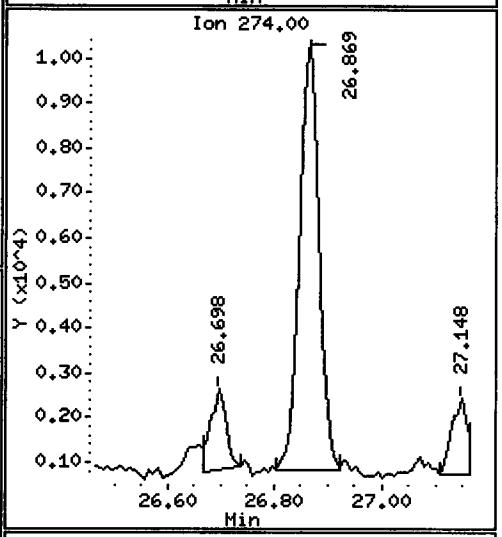


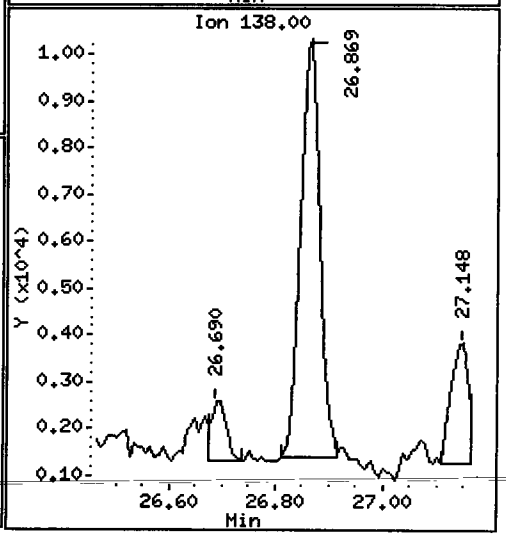












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

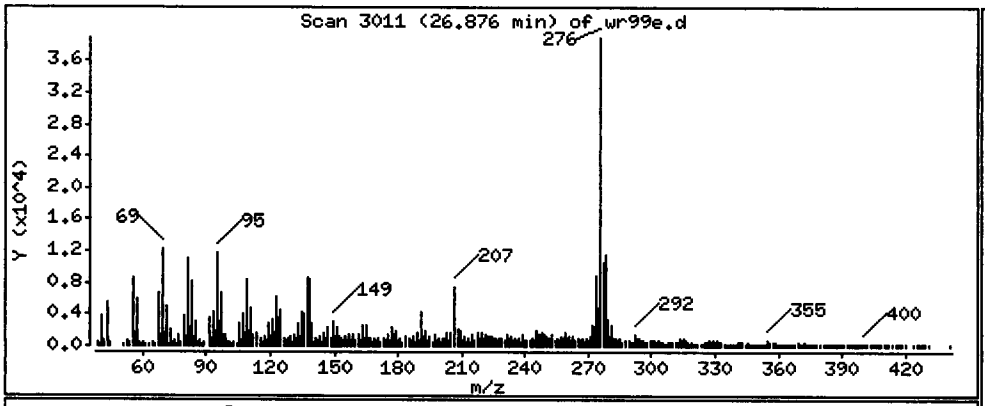
Operator: VTS/YZ

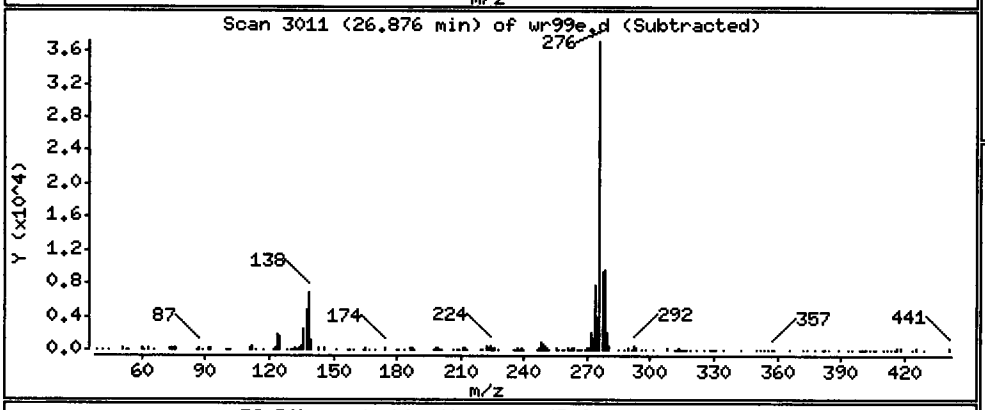
Column phase: ZB-5msi

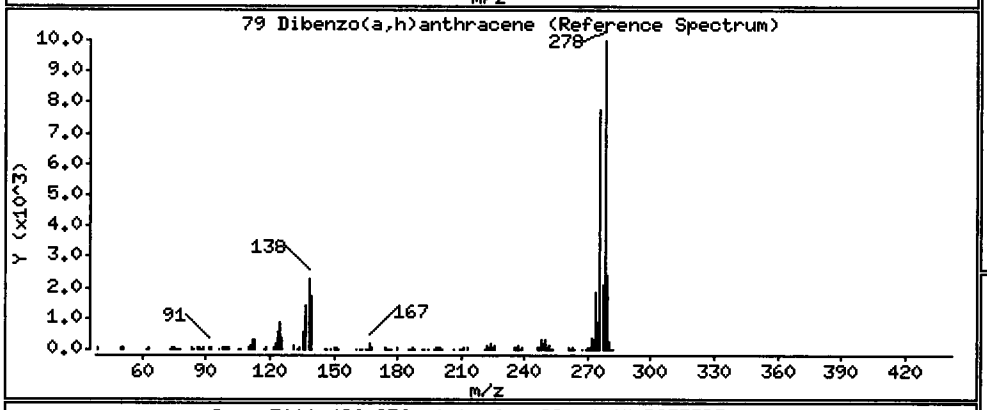
Column diameter: 0.25

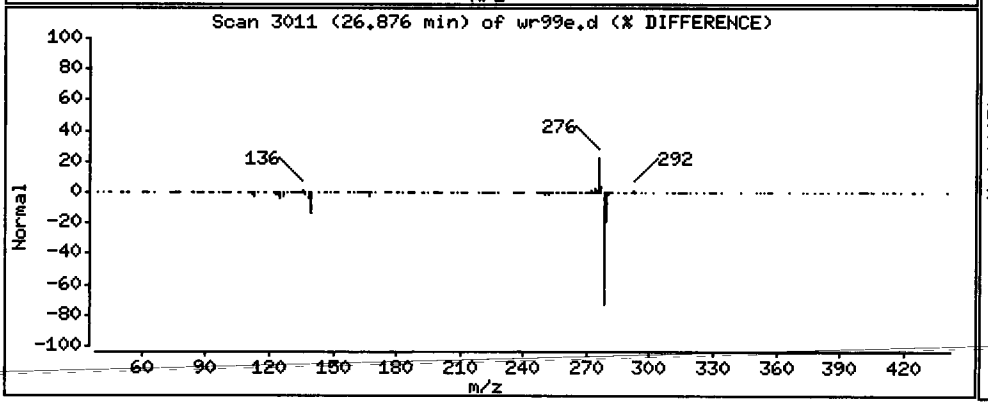
79 Dibenzo(a,h)anthracene

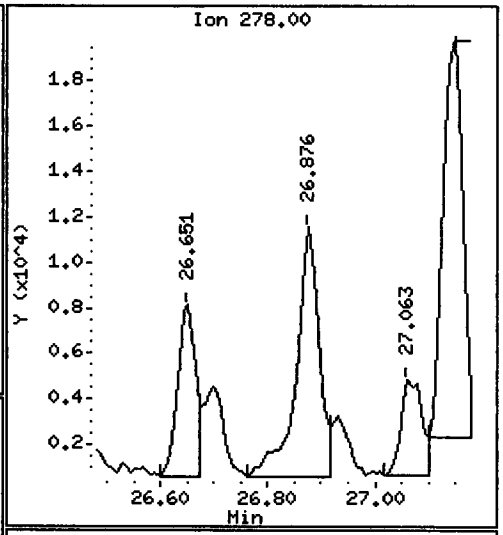
Concentration: 91.90 ug/kg

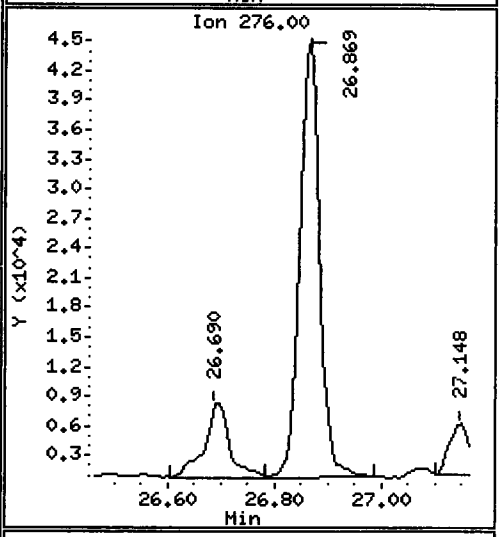


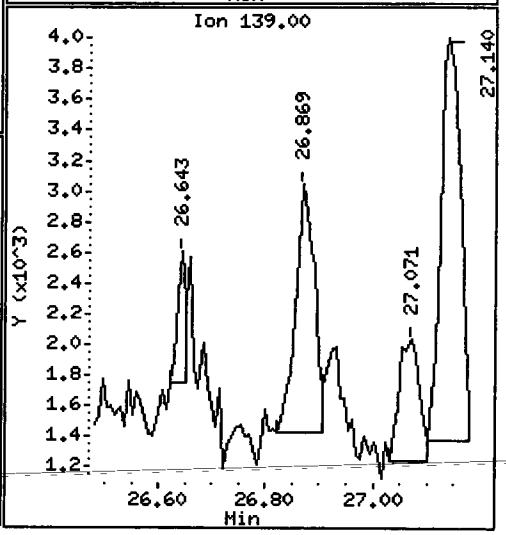












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

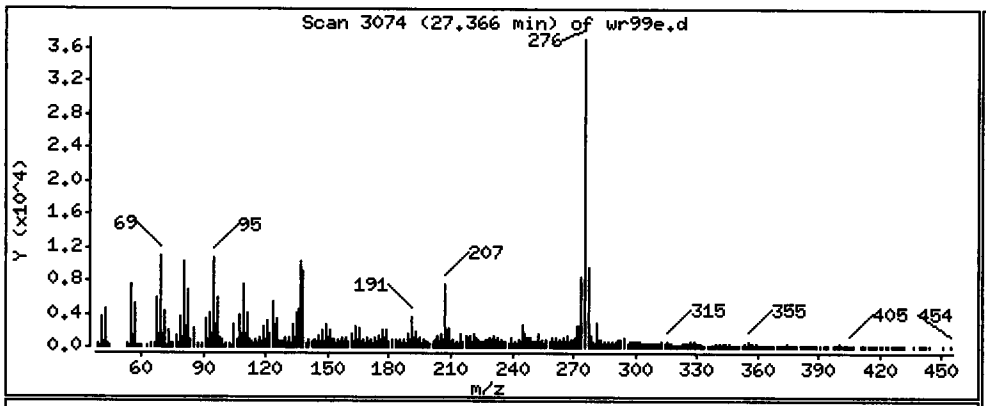
Operator: VTS/YZ

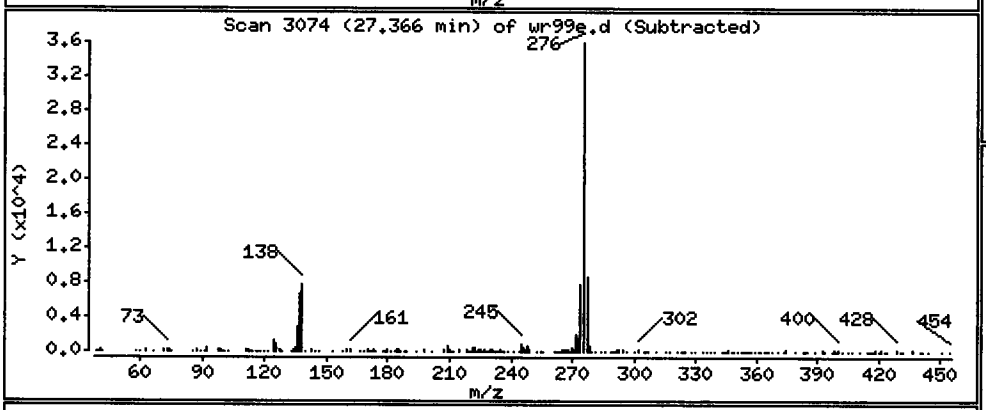
Column phase: ZB-5msi

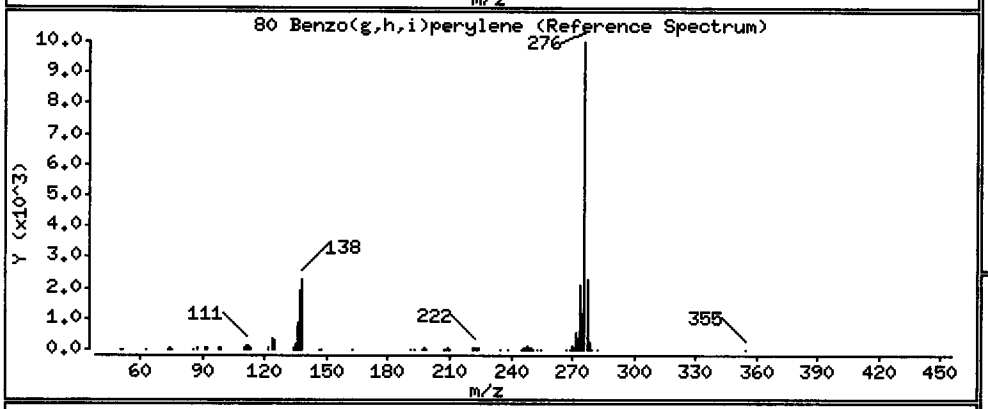
Column diameter: 0.25

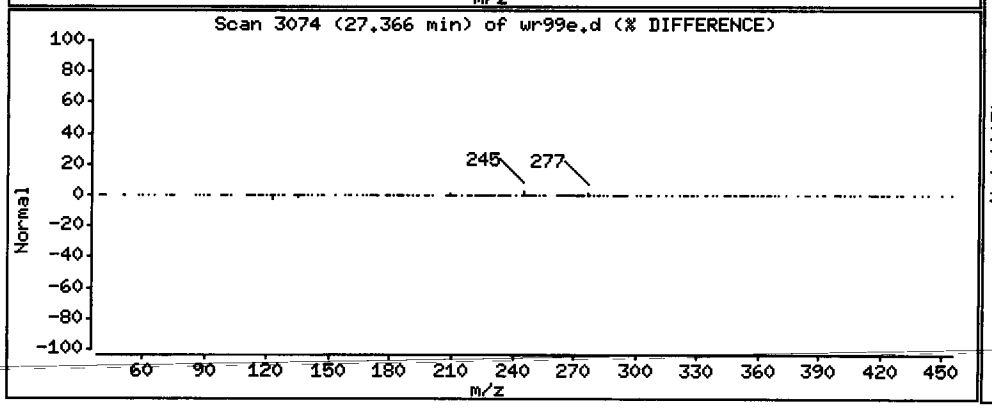
80 Benzo(g,h,i)perylene

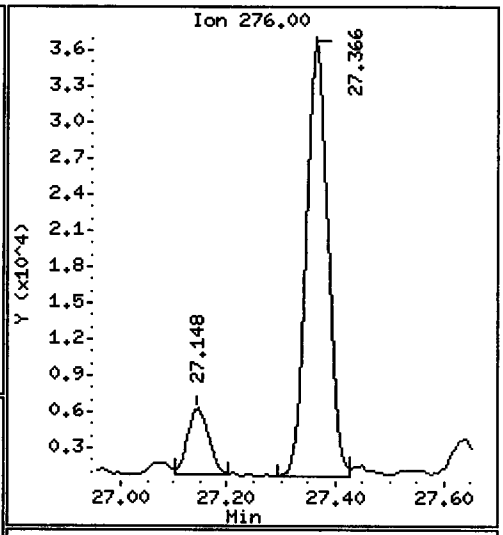
Concentration: 240.9 ug/kg

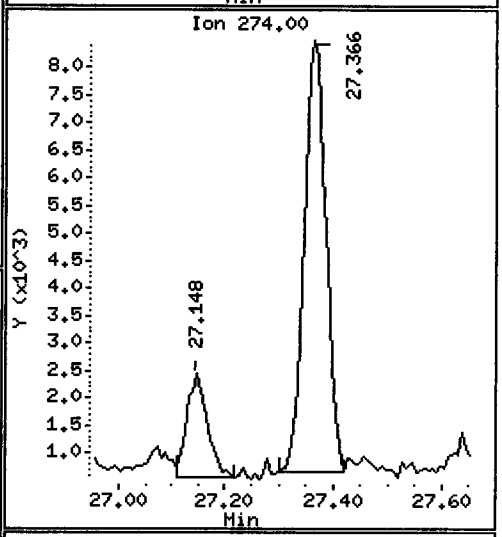


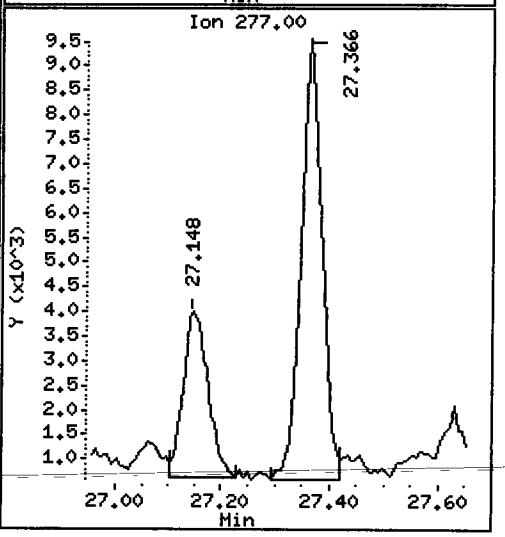












WR99 : 81017

Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

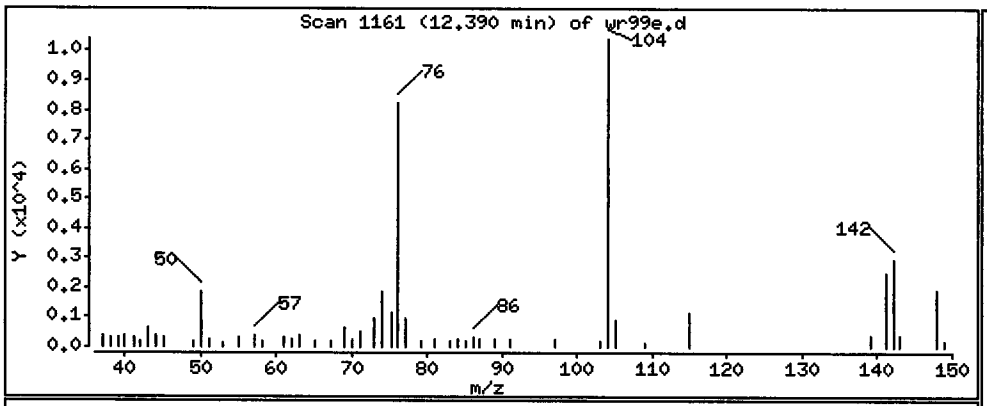
Operator: VTS/YZ

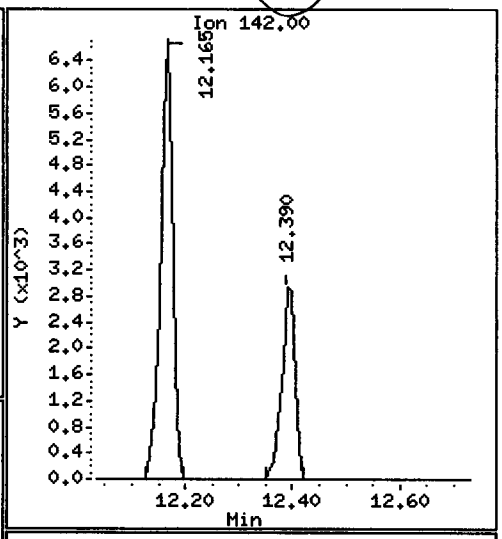
Column phase: ZB-5msi

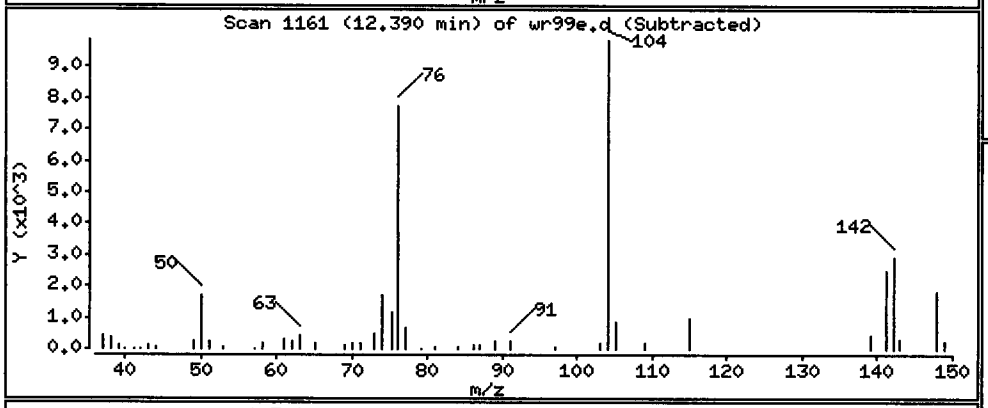
Column diameter: 0.25

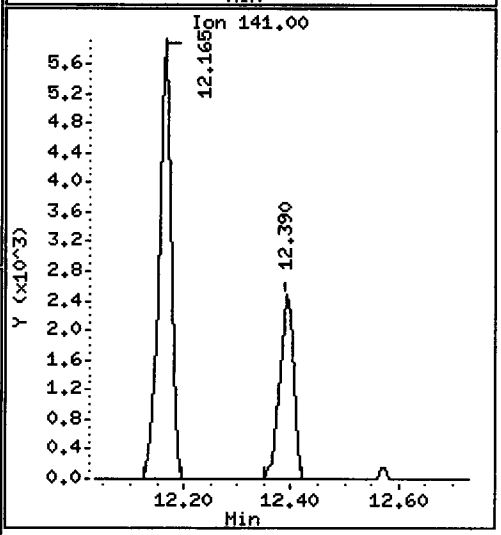
105 1-methylnaphthalene

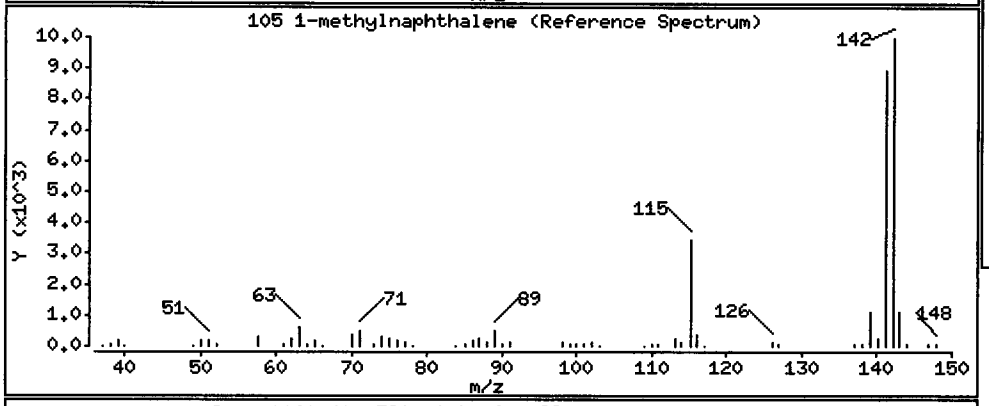
Concentration: 16.43 ug/kg

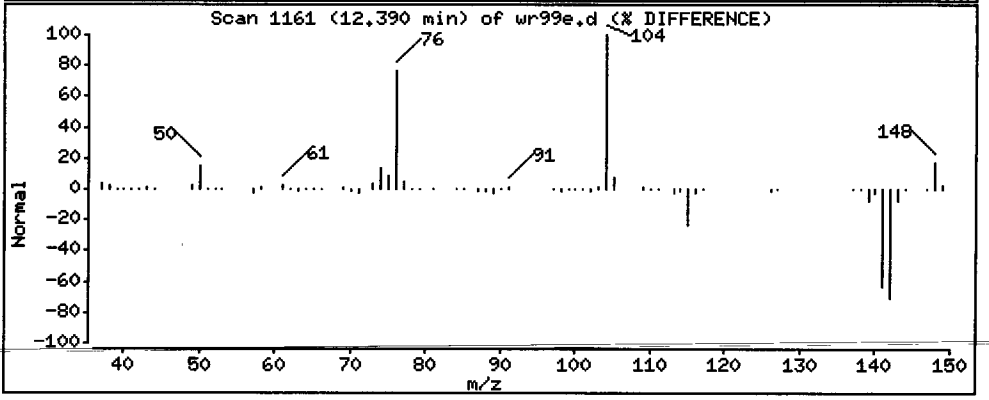












Data File: /chem1/nt10.i/20130613.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

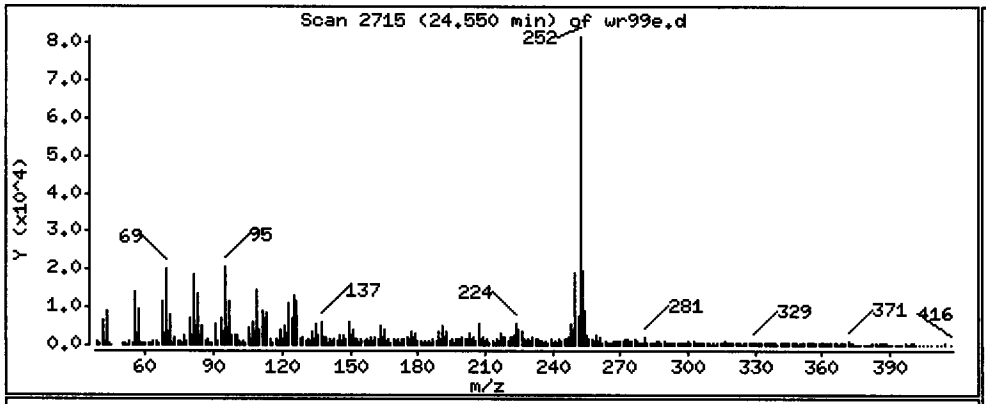
Operator: VTS/YZ

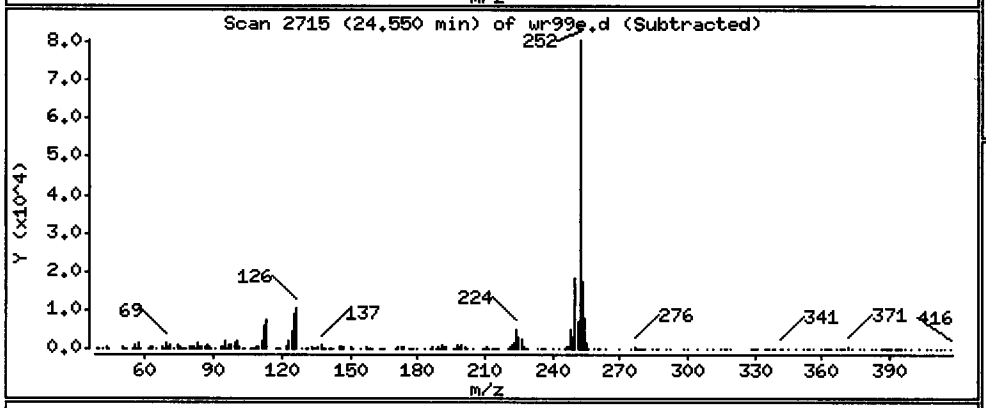
Column phase: ZB-5msi

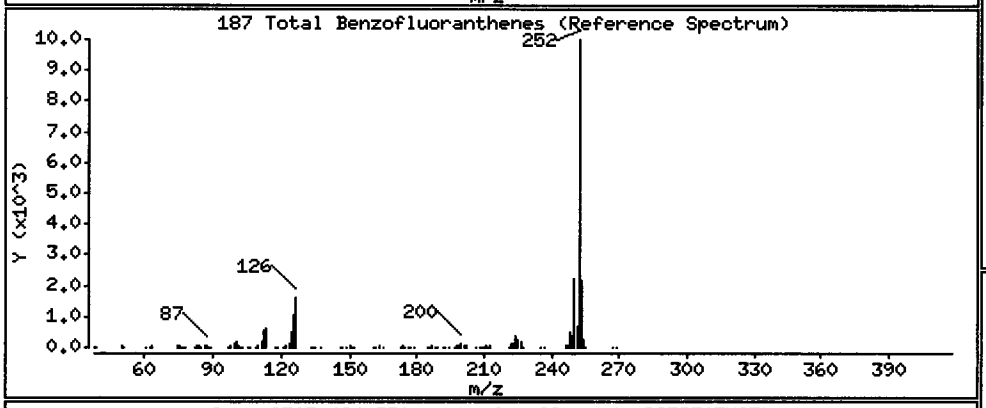
Column diameter: 0.25

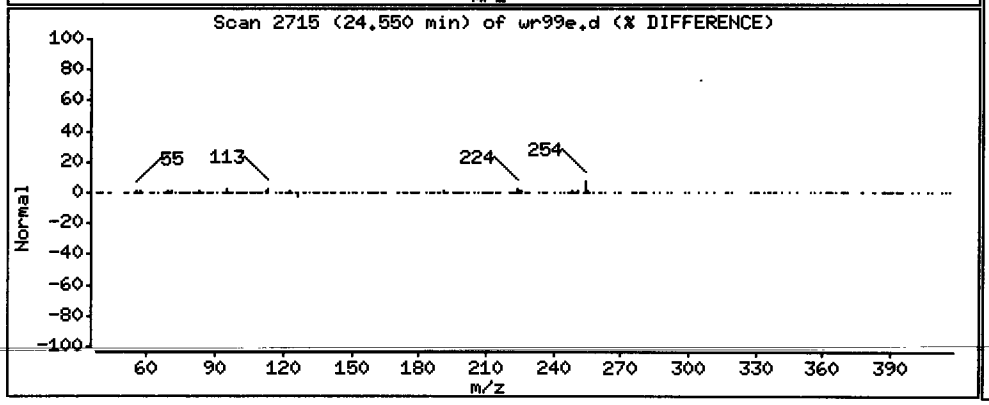
187 Total Benzofluoranthenes

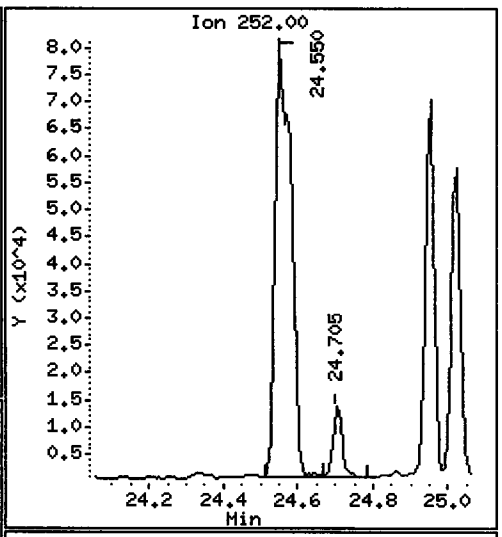
Concentration: 512.0 ug/kg

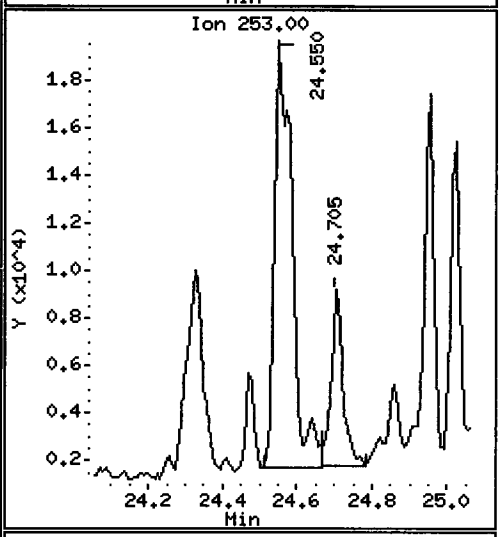


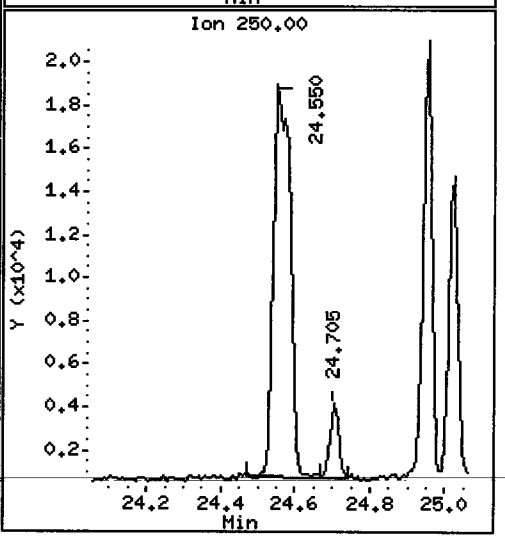












CO-ELUTION SUMMARY FOR FILE - wr99e.d

Lab ID: WR99E, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130613.b/wr99f.d
Lab Smp Id: WR99F
Client Smp ID: KC-DD-2009-20130530
Inj Date : 13-JUN-2013 20:30
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : WR99F
Misc Info : 13-11546
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 13-Jun-2013 13:32 yev
Quant Type: ISTD
Cal Date : 29-APR-2013 21:47
Cal File: ic0429i.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	6.01000	Weight of sample extracted (g)
M	38.10000	% Moisture

Cpnd Variable — Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.851	5.820	(0.725)	69726	4.15958	1118
$	2 Phenol-d5	99	7.520	7.497	(0.932)	100136	4.61642	1241
	3 Phenol	94	7.536	7.512	(0.934)	18344	0.75553	203.1
$	5 2-Chlorophenol-d4	132	7.706	7.690	(0.955)	73115	4.44047	1194
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.069	8.054	(1.000)	46964	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.434	8.426	(1.045)	31001	2.61740	703.6
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	8.985	8.947	(1.113)	4076	0.22880	61.50
$	18 Nitrobenzene-d5	82	9.210	9.203	(0.865)	54436	2.89280	777.6
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	10.241	10.294	(0.962)	38688	2.50786	674.1
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.649	10.634	(1.000)	178324	4.00000	
	28 Naphthalene	128	10.688	10.672	(1.004)	11204	0.23599	63.44
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	12.165	12.150	(1.142)	5840	0.18519 J	49.78
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.024	13.009	(0.901)	119864	3.21066	863.0
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	14.015	13.999	(0.970)	3257	0.10143 J	27.27
	40 Acenaphthylene	152	14.108	14.092	(0.976)	21159	0.41974	112.8
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.448	14.433	(1.000)	106965	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	14.510	14.502	(1.004)	27334	0.89978	241.9
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	14.866	14.850	(1.029)	13553	0.32628	87.70
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	15.569	15.561	(1.078)	4151	0.12865 J	34.58
	49 Fluorene	166	15.615	15.600	(1.081)	16841	0.47514	127.7
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.186	16.171	(1.120)	35807	6.33000	1702
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.647	17.631	(1.000)	163111	4.00000	
	60 Phenanthrene	178	17.701	17.685	(1.003)	303847	6.82944	1836
	61 Anthracene	178	17.794	17.778	(1.008)	38053	0.83487	224.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	18.188	18.165	(1.031)	34673	1.25235	336.6
63	Di-n-butylphthalate	149	19.140	19.124	(1.085)	24493	0.52055	139.9
64	Fluoranthene	202	20.192	20.177	(1.144)	484714	9.25666	2488
65	Pyrene	202	20.618	20.594	(0.903)	429170	8.16678	2195
$ 66	Terphenyl-d14	244	20.981	20.958	(0.919)	116965	3.53762	950.9
67	Butylbenzylphthalate	149	21.957	21.941	(0.962)	27290	1.52070	408.8
68	Benzo(a)anthracene	228	22.801	22.778	(0.999)	148440	3.12156	839.1
* 69	Chrysene-d12	240	22.824	22.801	(1.000)	169850	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	22.871	22.847	(1.002)	262573	6.10157	1640
72	bis(2-Ethylhexyl)phthalate	149	23.002	23.002	(0.958)	361154	12.5486	3373
* 134	Di-n-octylphthalate-d4	153	24.001	23.977	(1.000)	216475	4.00000	
73	Di-n-octylphthalate	149	24.016	23.985	(1.001)	19528	0.39179	105.3 (M)
74	Benzo(b)fluoranthene	252	24.566	24.519	(0.978)	273774	5.85584	1574
75	Benzo(k)fluoranthene	252	24.589	24.558	(0.979)	219689	4.46126 MFD	1199 (M)
76	Benzo(a)pyrene	252	25.031	24.992	(0.997)	178329	4.46472	1200
* 77	Perylene-d12	264	25.116	25.069	(1.000)	157436	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.876	26.814	(1.070)	157004	3.41188	917.1
79	Dibenzo(a,h)anthracene	278	26.892	26.830	(1.071)	44740	1.26744	340.7
80	Benzo(g,h,i)perylene	276	27.381	27.304	(1.090)	137049	3.44224	925.3
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	~~Benzidine~~	~~184~~	~~20.532~~	~~20.471~~	~~(0.900)~~	~~77715~~	~~13.9952~~	~~3762~~
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	12.390	12.382	(1.163)	3095	0.10702	28.77
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	24.566	24.558	(0.978)	494122	10.8842	2926
99	Perylene	252	25.147	25.108	(1.001)	52080	1.14064	306.6
98	Retene	219	21.260	21.237	(0.931)	10668	0.53639	144.2
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wr99f.d
Lab Smp Id: WR99F
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11546

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: KC-DD-2009-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	46964	3.79
27 Naphthalene-d8	166754	83377	333508	178324	6.94
42 Acenaphthene-d10	106910	53455	213820	106965	0.05
59 Phenanthrene-d10	179783	89892	359566	163111	-9.27
69 Chrysene-d12	192841	96420	385682	169850	-11.92
134 Di-n-octylphthala	229567	114784	459134	216475	-5.70
77 Perylene-d12	184310	92155	368620	157436	-14.58

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.07	0.19
27 Naphthalene-d8	10.63	10.13	11.13	10.65	0.15
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.11
59 Phenanthrene-d10	17.63	17.13	18.13	17.65	0.09
69 Chrysene-d12	22.80	22.30	23.30	22.82	0.10
134 Di-n-octylphthala	23.98	23.48	24.48	24.00	0.10
77 Perylene-d12	25.07	24.57	25.57	25.12	0.19

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

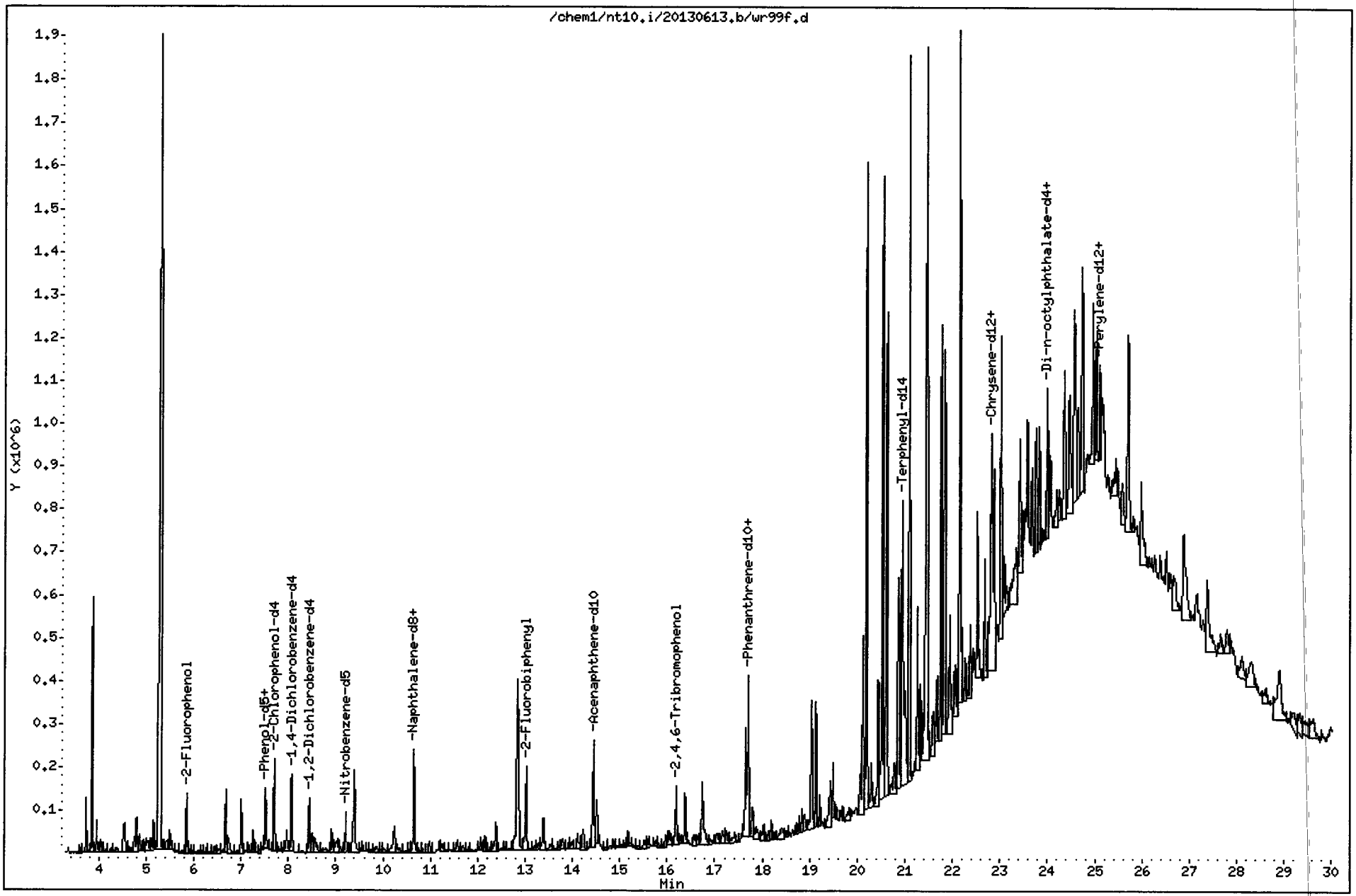
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WR99F
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11546

Client SDG: WR99
Fraction: SV
Client Smp ID: KC-DD-2009-20130530
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	2016	1118	55.46	27-120
$ 2 Phenol-d5	2016	1241	61.55	29-120
$ 5 2-Chlorophenol-d4	2016	1194	59.21	31-120
$ 10 1,2-Dichlorobenzen	1344	703.6	52.35	32-120
$ 18 Nitrobenzene-d5	1344	777.6	57.86	30-120
$ 36 2-Fluorobiphenyl	1344	863.0	64.21	35-120
$ 55 2,4,6-Tribromophen	2016	1702	84.40	24-134
$ 66 Terphenyl-d14	1344	950.9	70.75	37-120

Data File: /chem1/nt10.i/20130613.b/wr99f.d
Date : 13-JUN-2013 20:30
Client ID: KC-DD-2009-20130530
Sample Info: WR99F
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

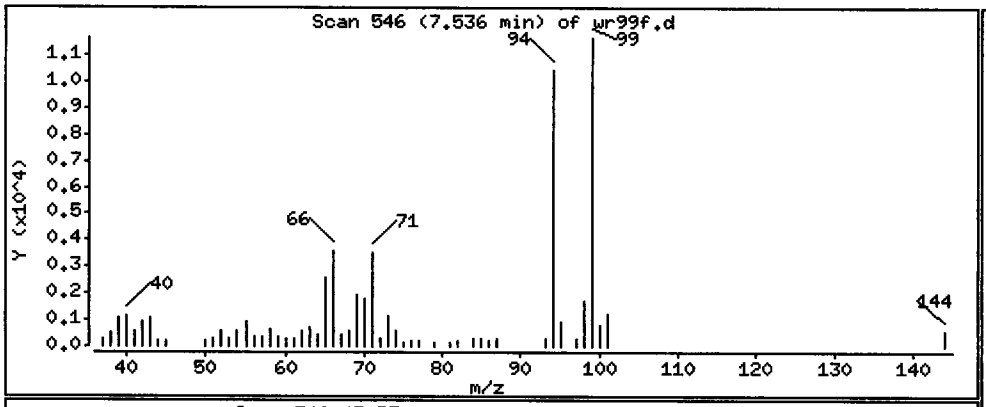
Operator: VTS/YZ

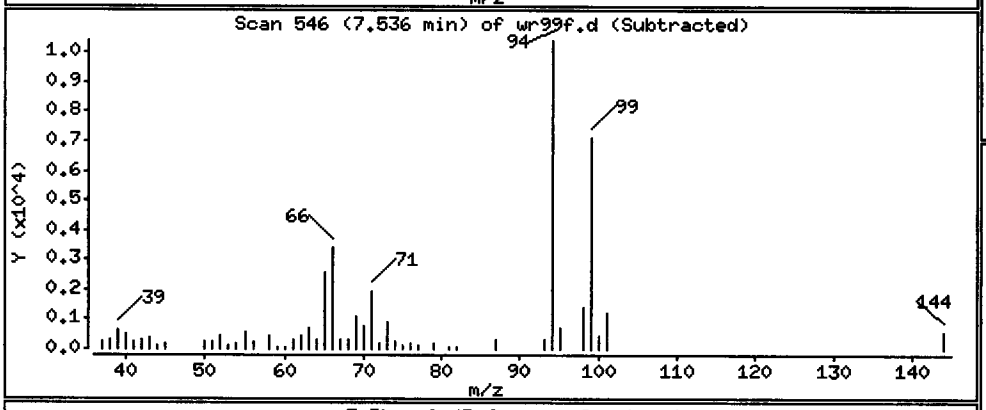
Column phase: ZB-5msi

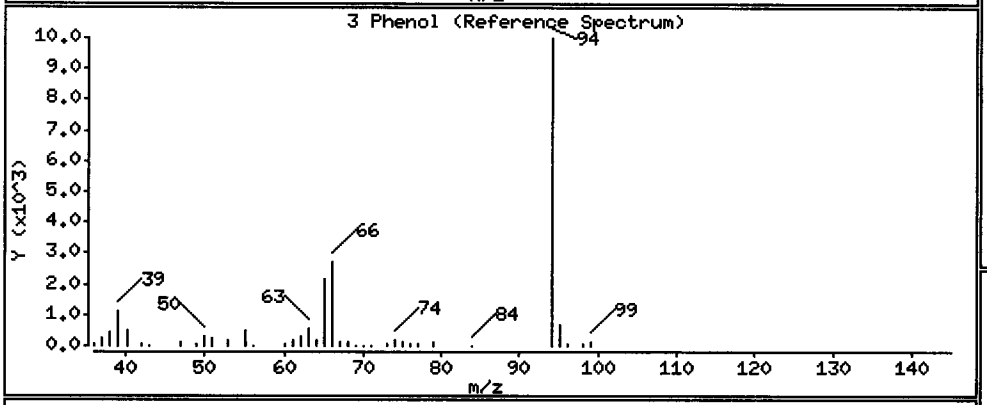
Column diameter: 0.25

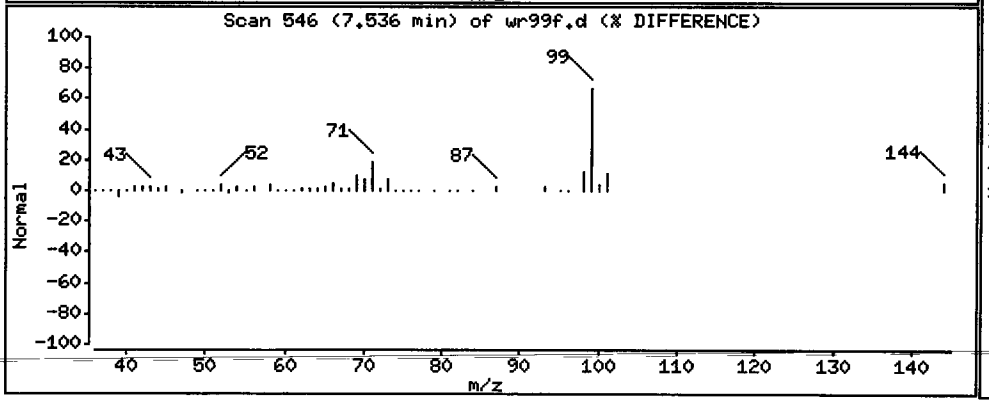
3 Phenol

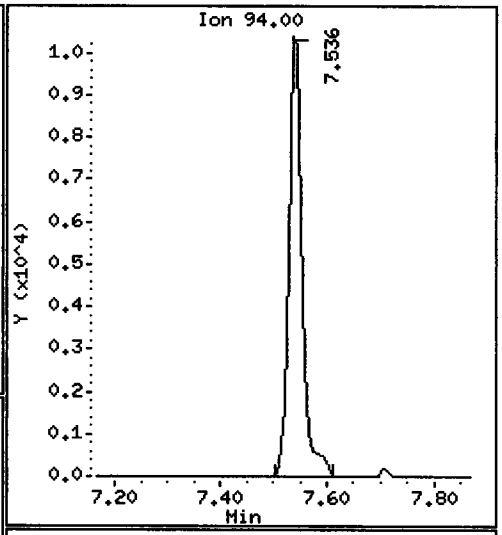
Concentration: 203.1 ug/kg

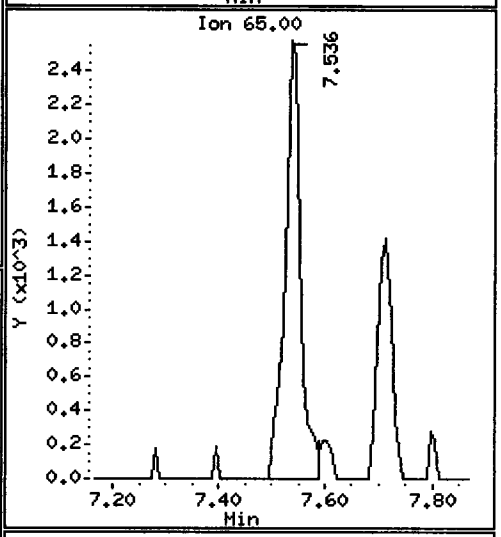


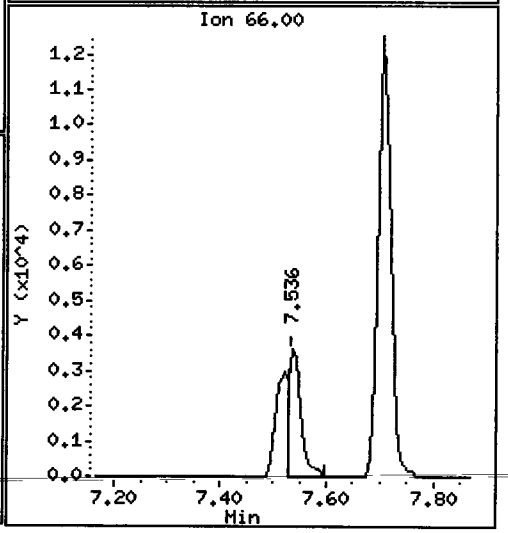












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

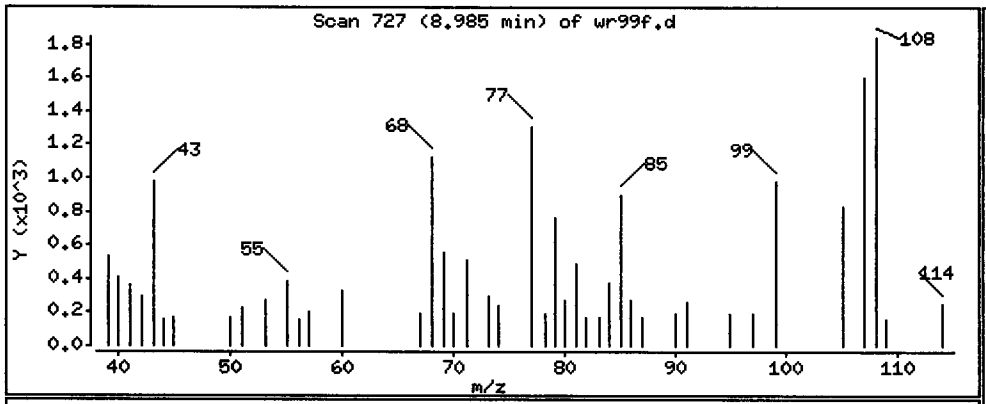
Client ID: KC-DD-2009-20130530 Instrument: nt10.i

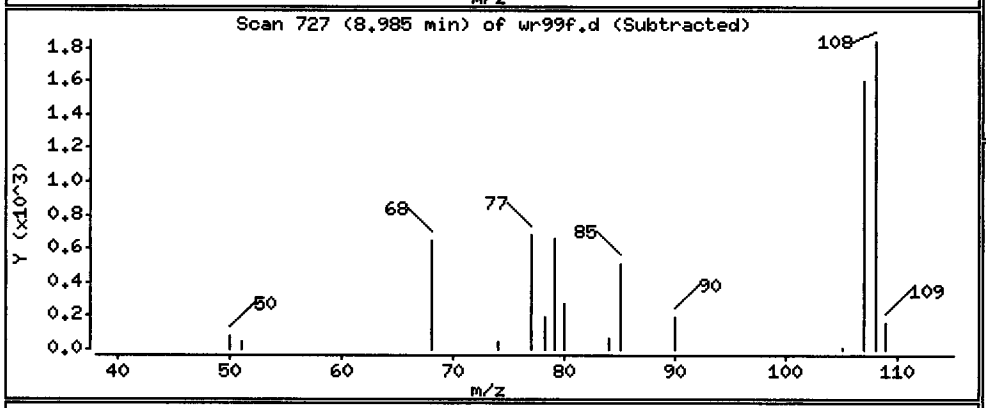
Sample Info: WR99F

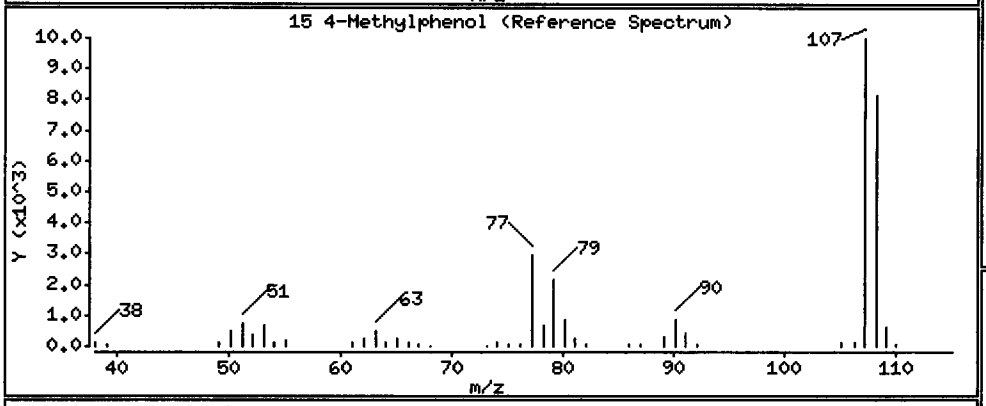
Volume Injected (uL): 1.0 Operator: VTS/YZ

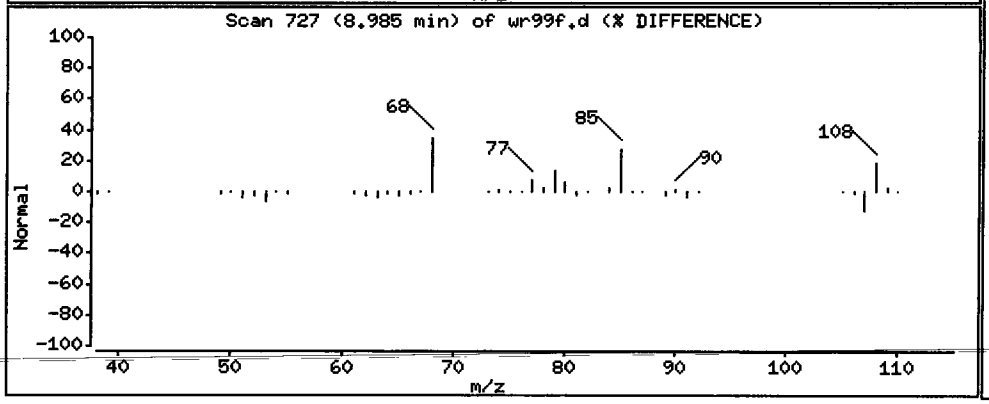
Column phase: ZB-5msi Column diameter: 0.25

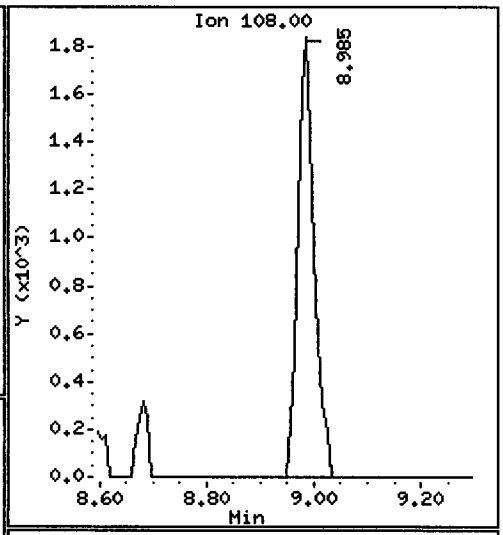
15 4-Methylphenol Concentration: 61.50 ug/kg

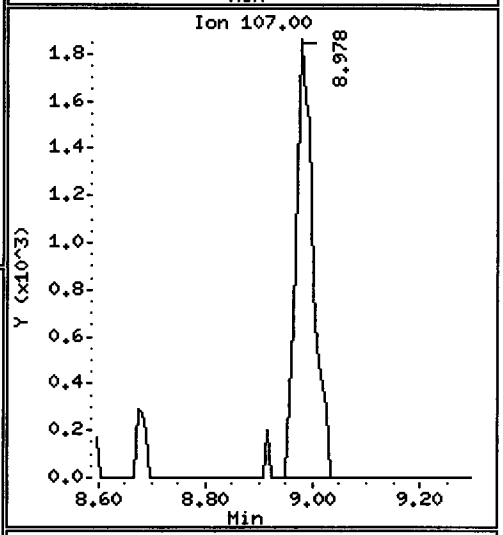


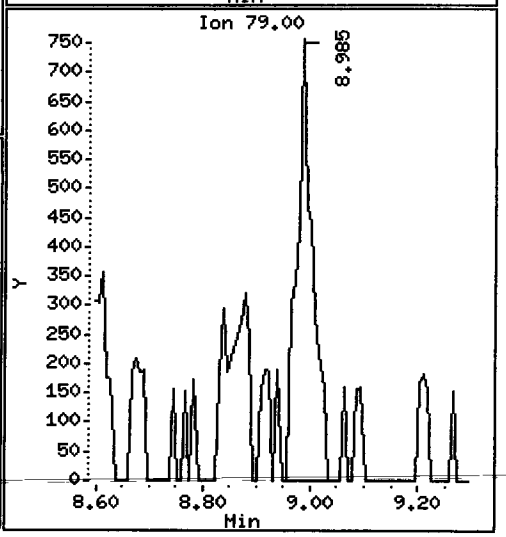












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

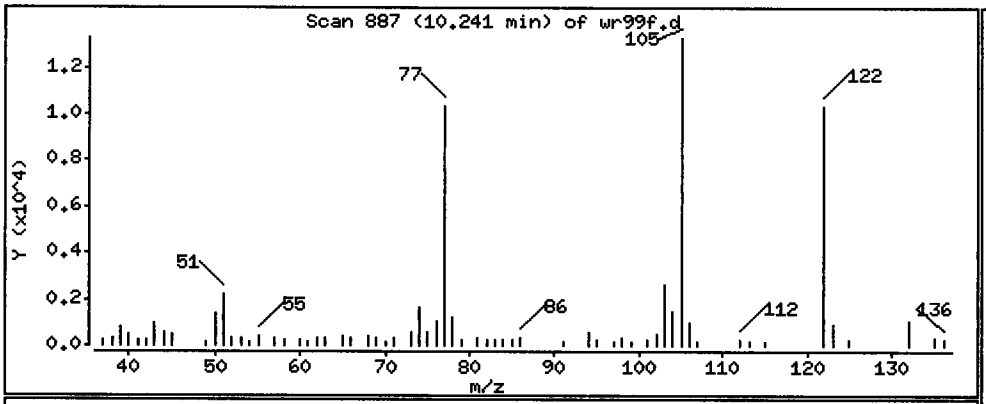
Operator: VTS/YZ

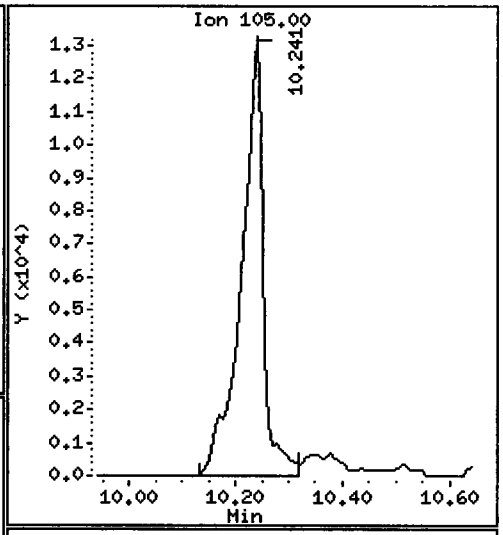
Column phase: ZB-5msi

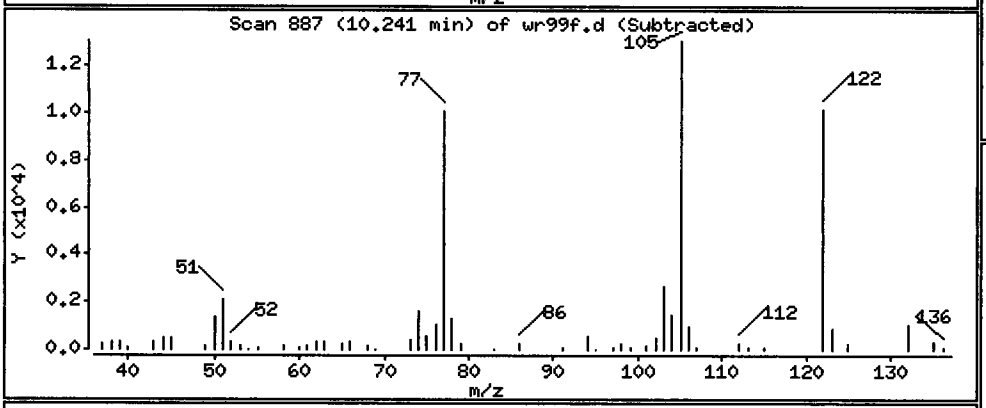
Column diameter: 0.25

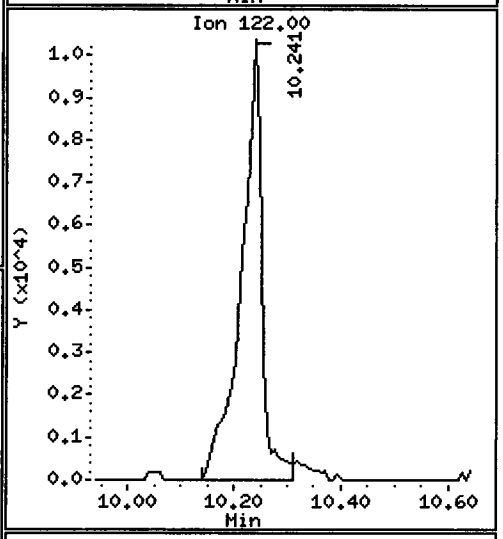
24 Benzoic acid

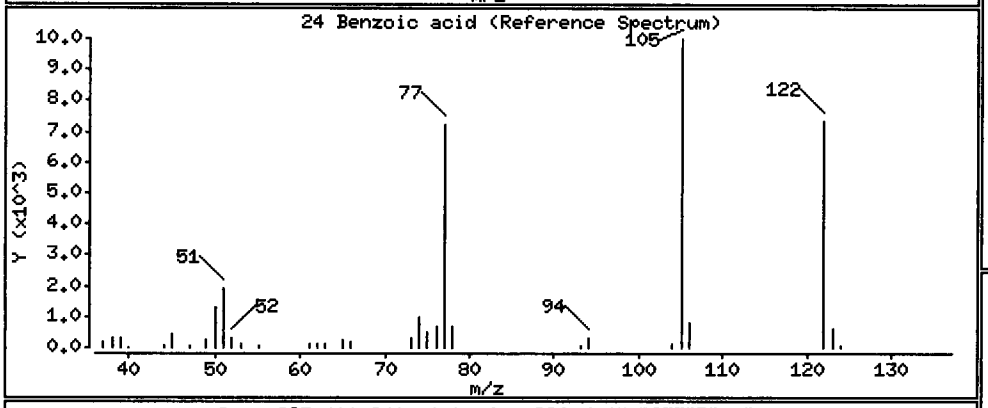
Concentration: 674.1 ug/kg

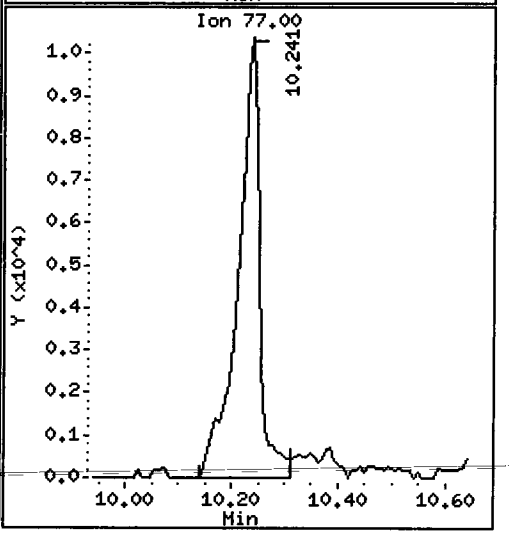


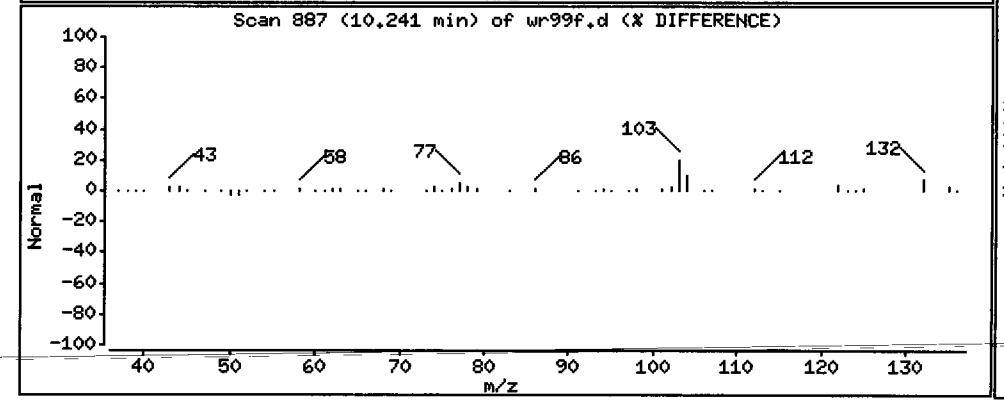












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

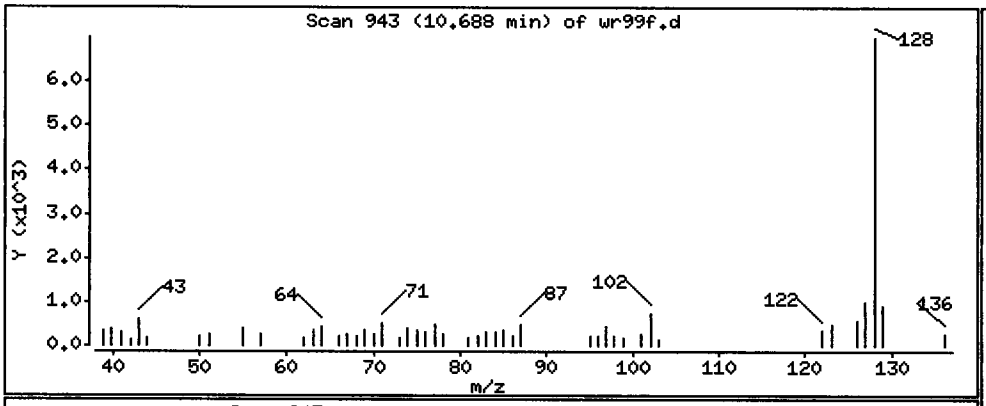
Operator: VTS/YZ

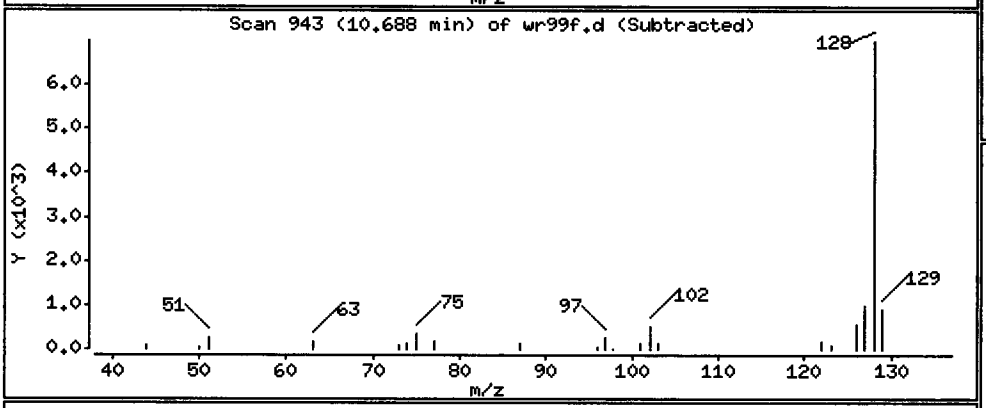
Column phase: ZB-5msi

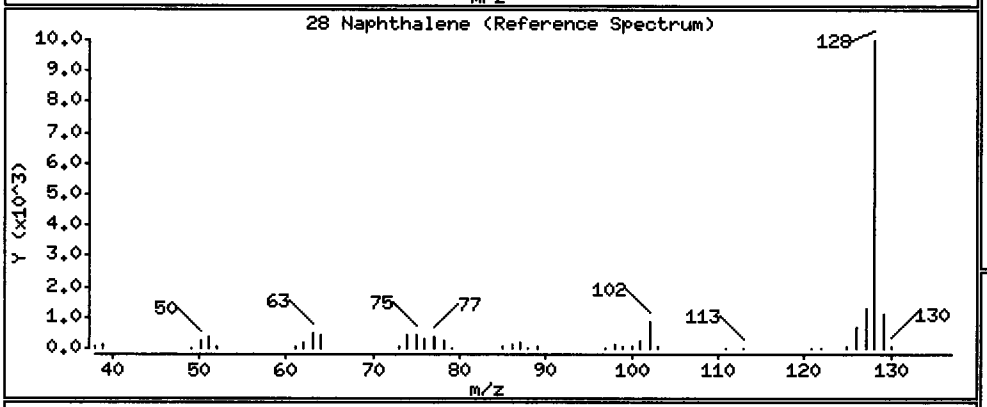
Column diameter: 0.25

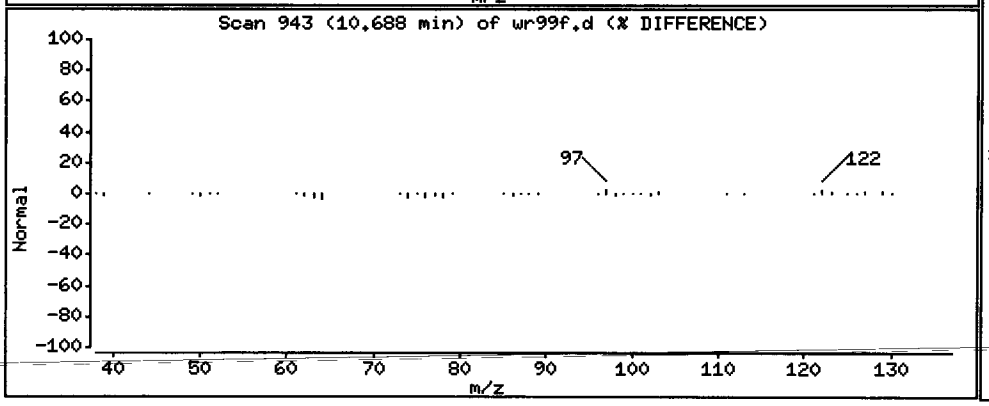
28 Naphthalene

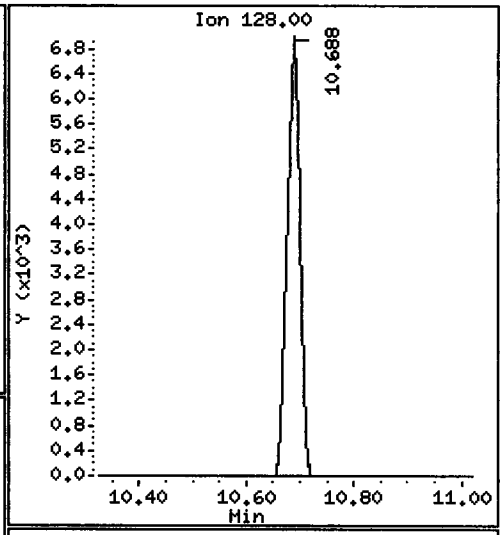
Concentration: 63.44 ug/kg

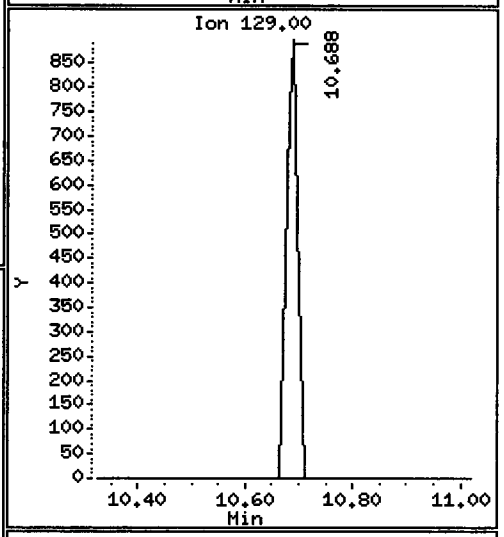


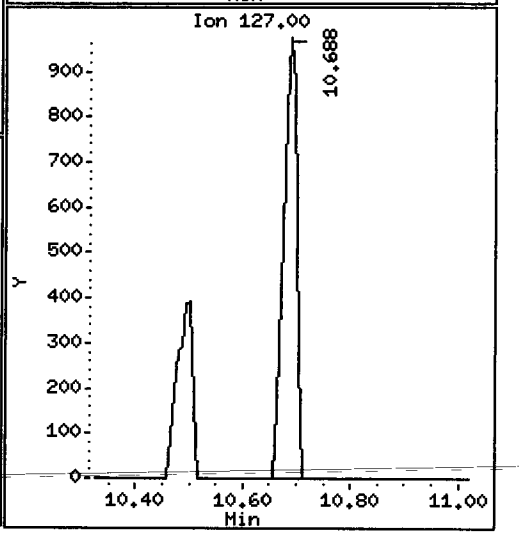












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

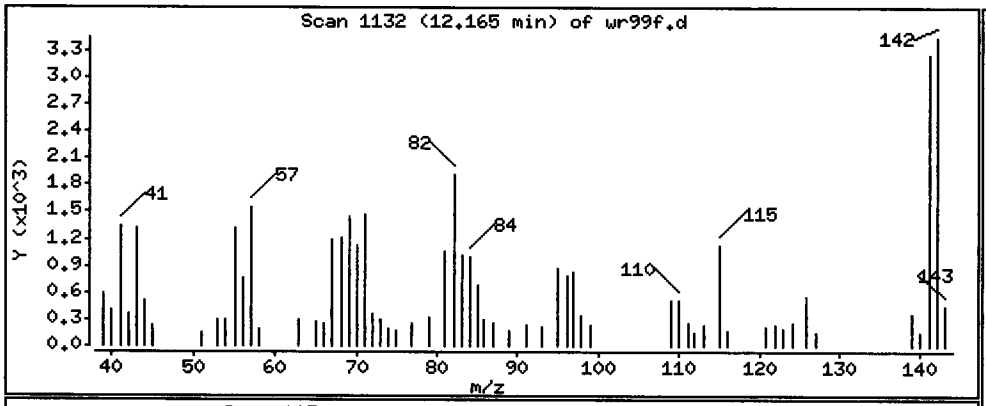
Operator: VTS/YZ

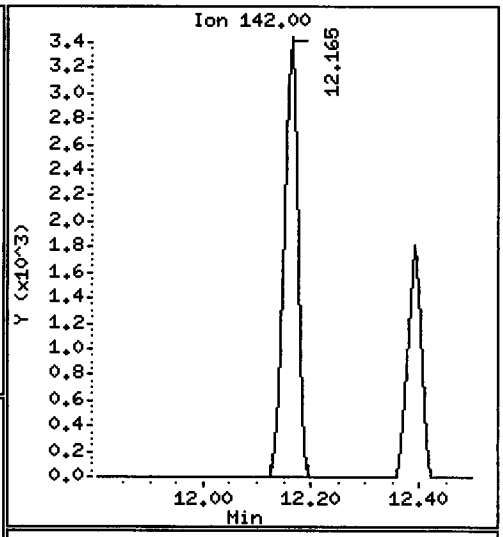
Column phase: ZB-5msi

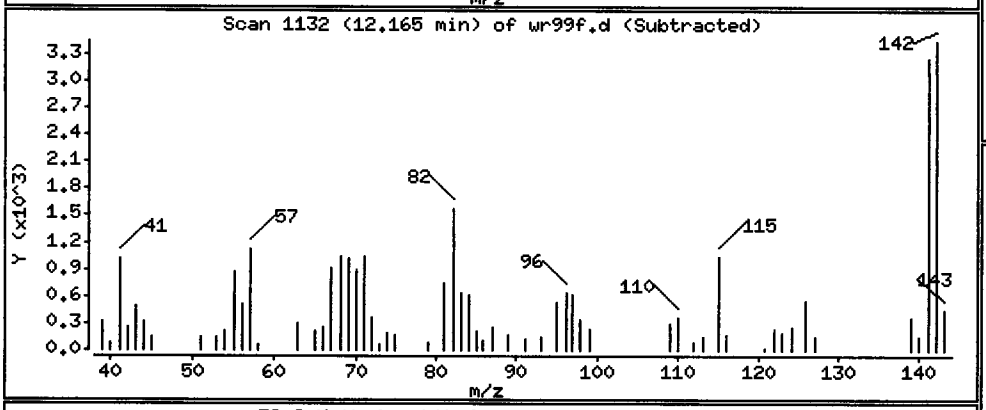
Column diameter: 0.25

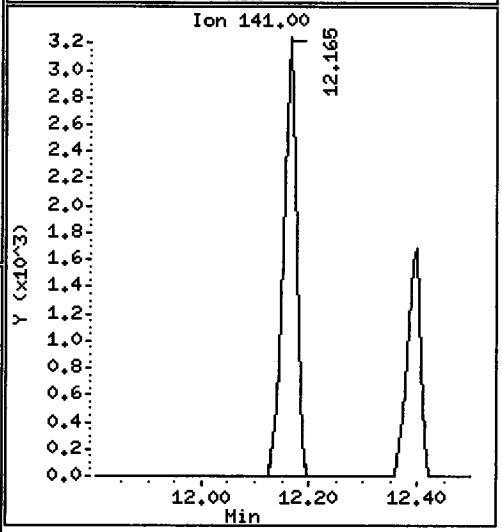
32 2-Methylnaphthalene

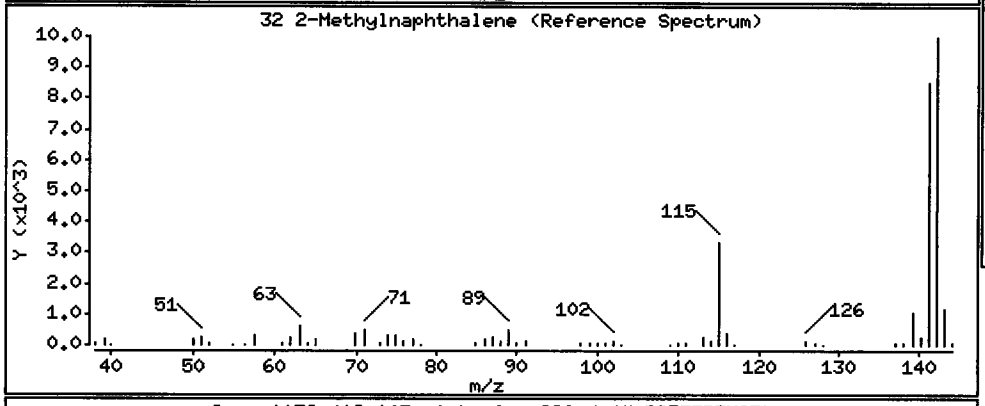
Concentration: 49.78 ug/kg

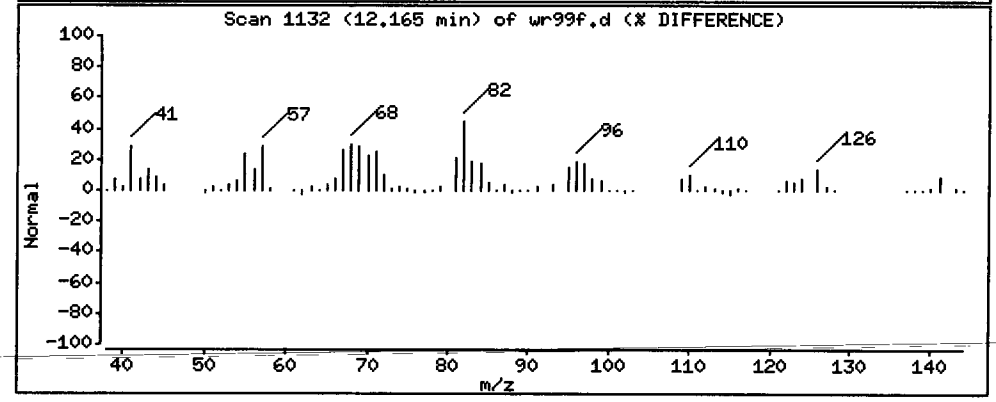












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

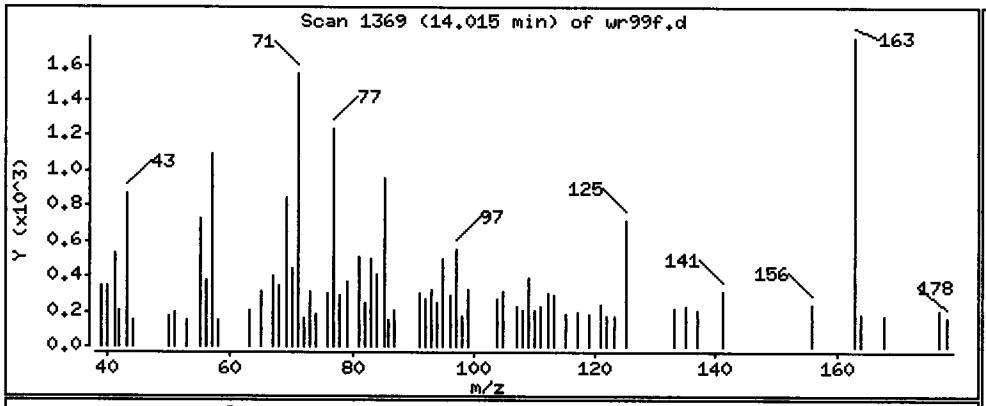
Operator: VTS/YZ

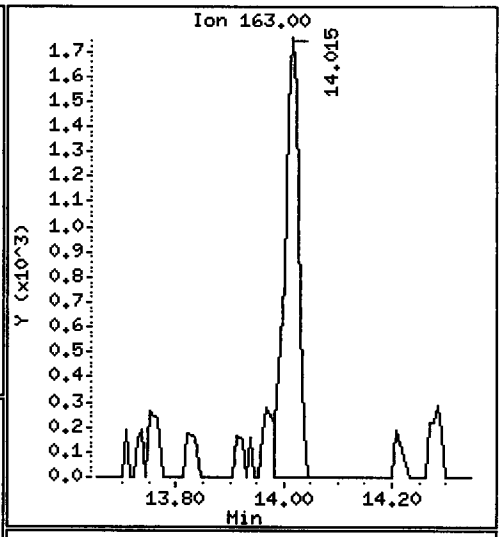
Column phase: ZB-5msi

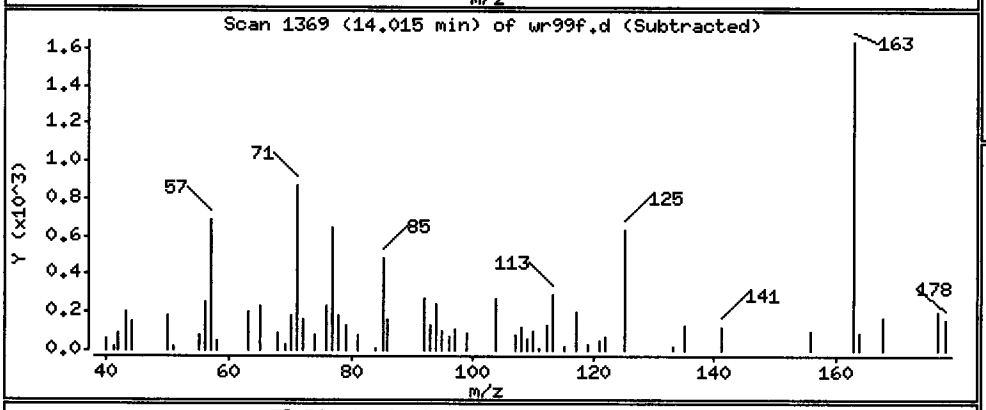
Column diameter: 0.25

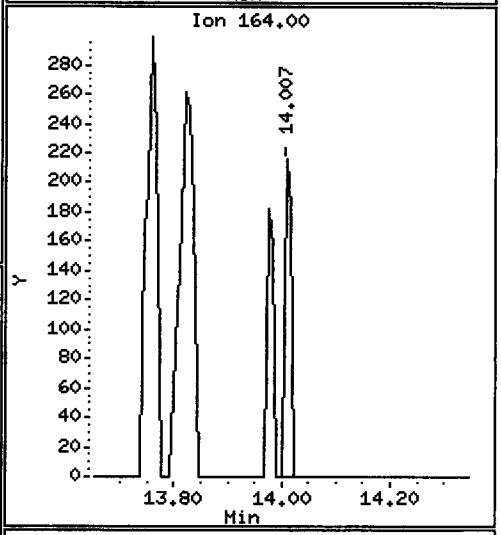
39 Dimethylphthalate

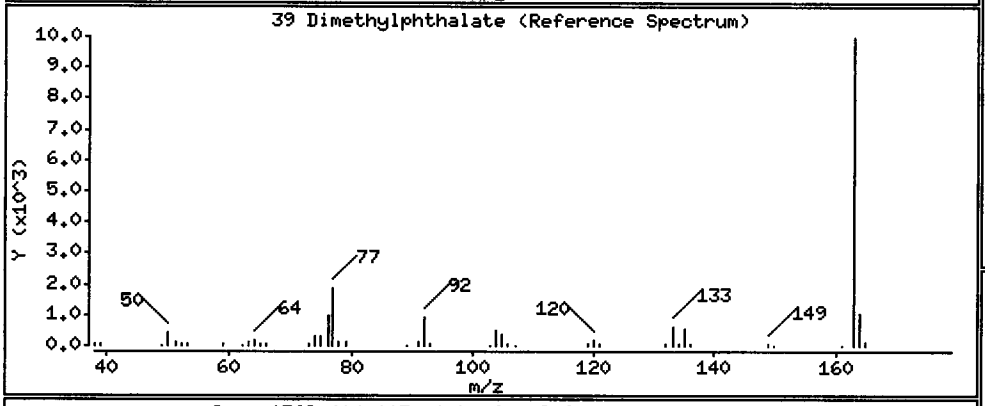
Concentration: 27.27 ug/kg

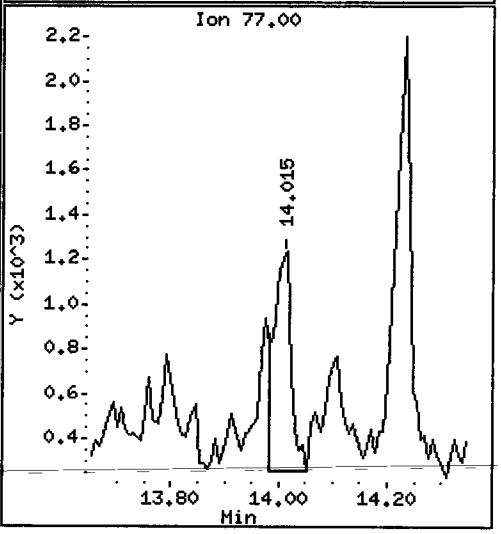


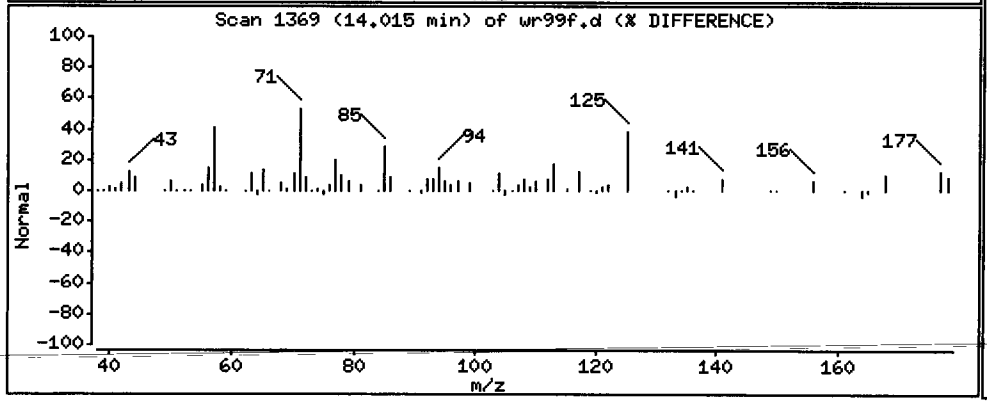












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

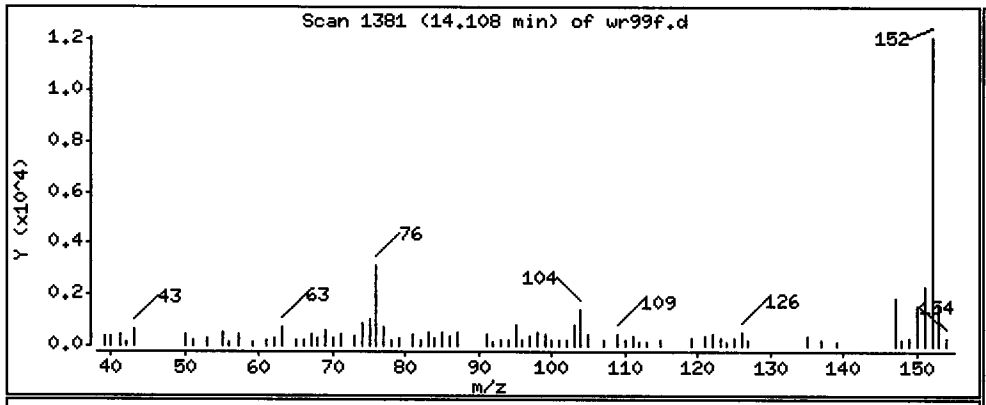
Operator: VTS/YZ

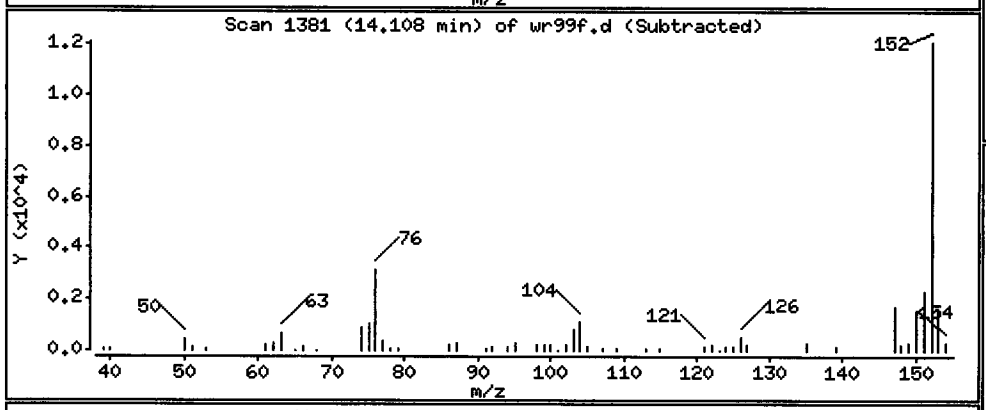
Column phase: ZB-5msi

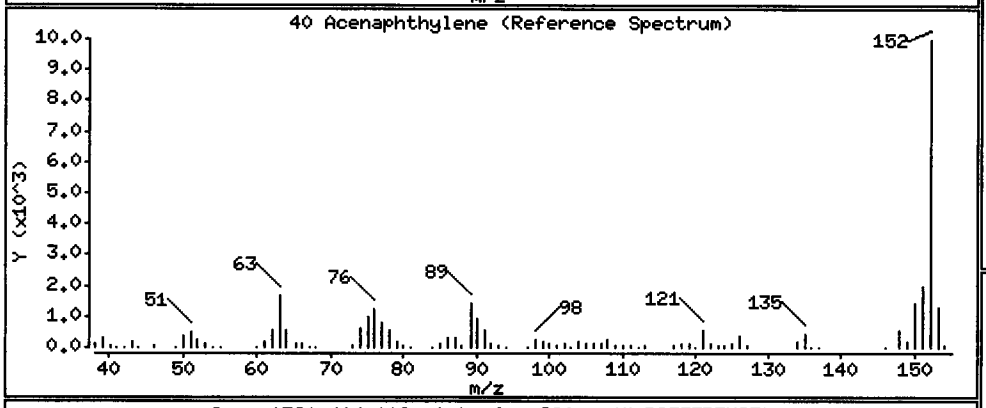
Column diameter: 0.25

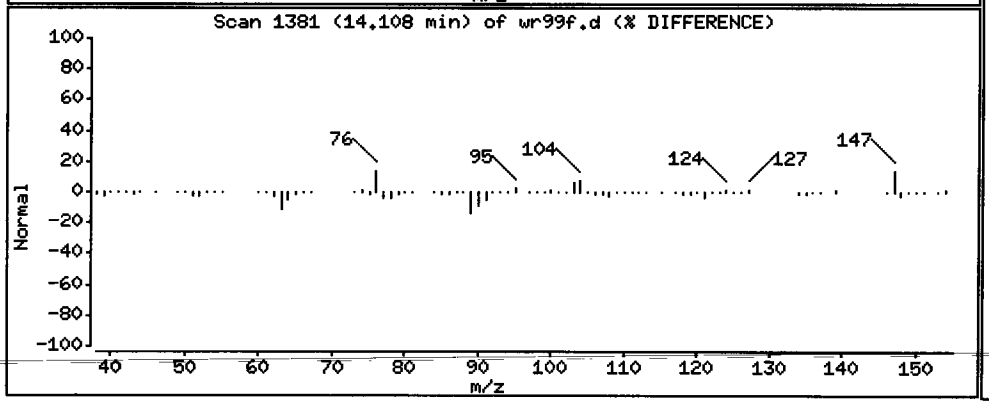
40 Acenaphthylene

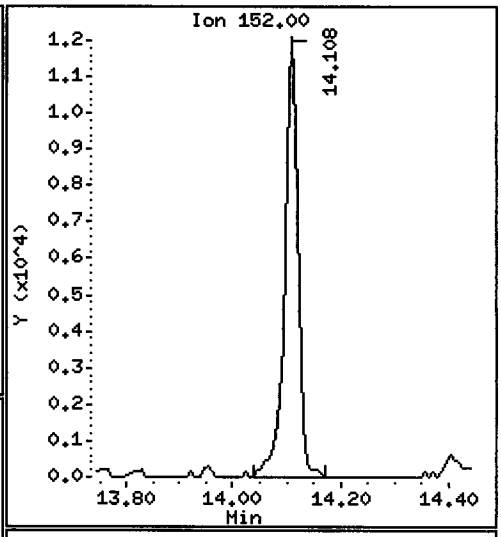
Concentration: 112.8 ug/kg

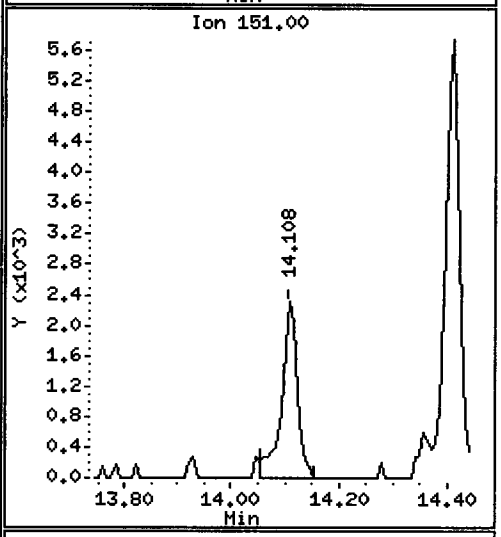


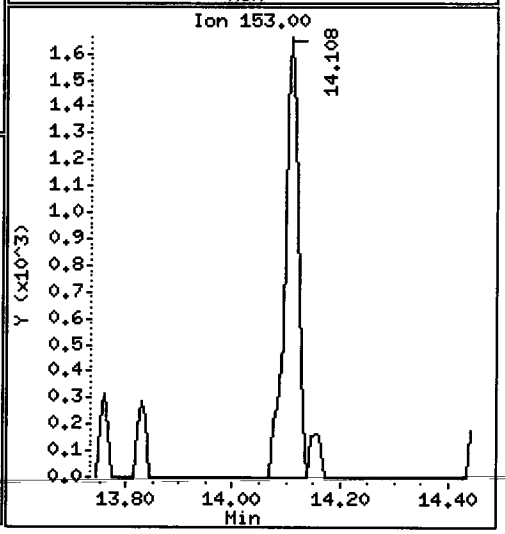












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

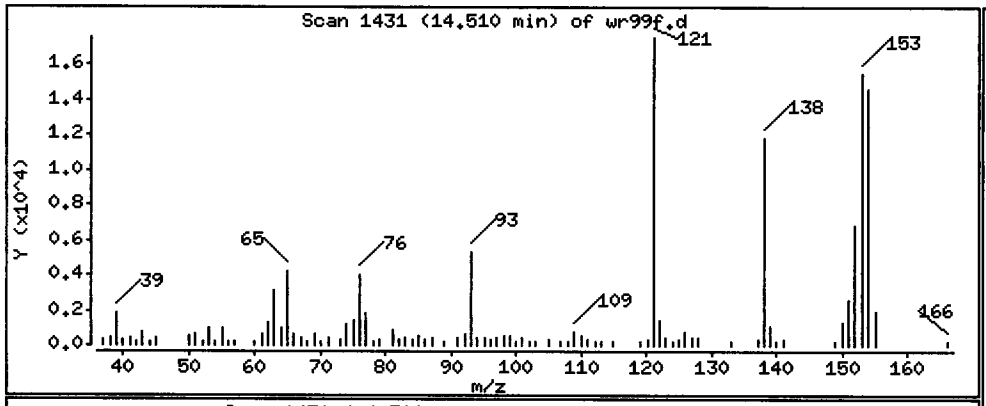
Operator: VTS/YZ

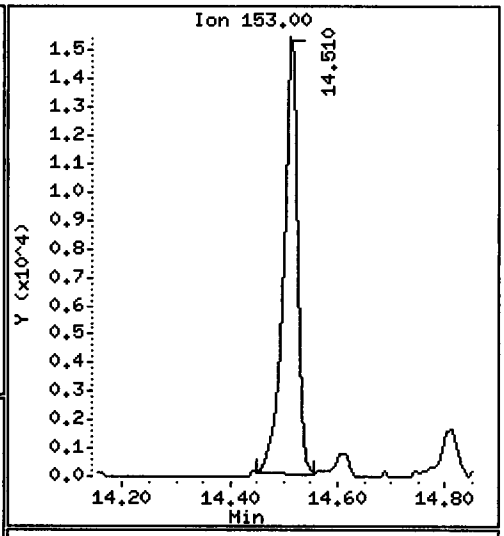
Column phase: ZB-5msi

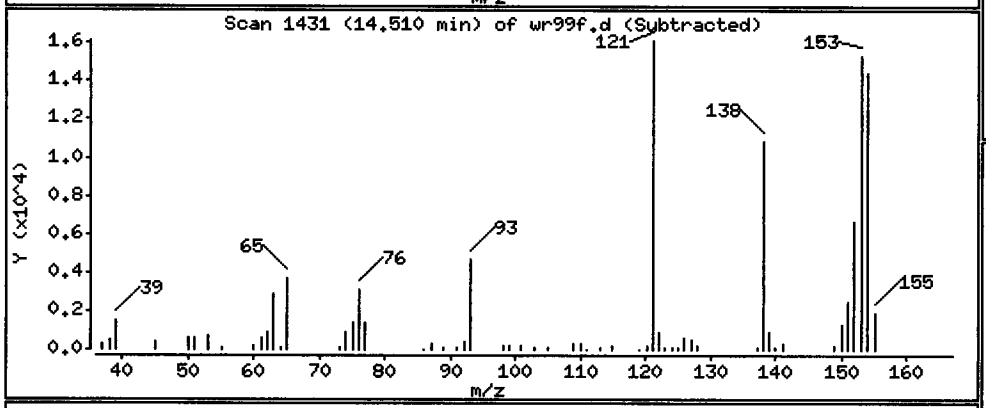
Column diameter: 0.25

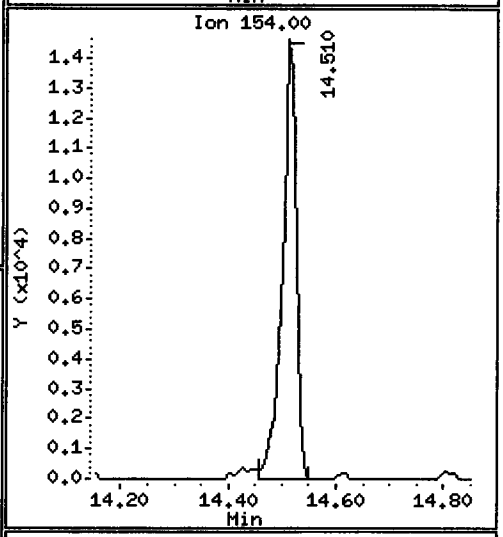
44 Acenaphthene

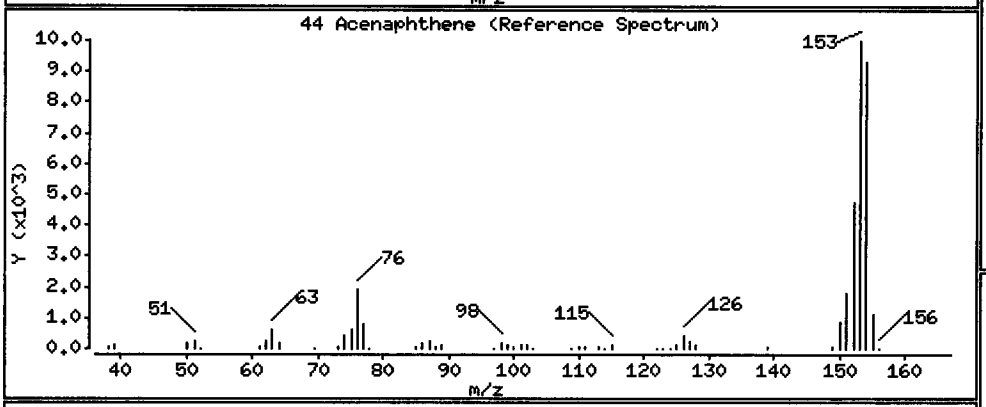
Concentration: 241.9 ug/kg

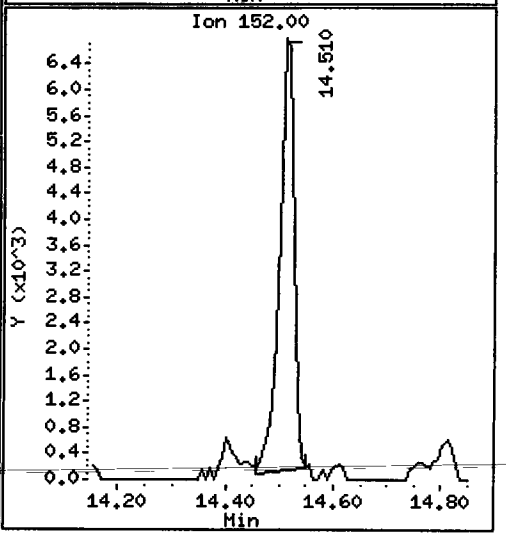


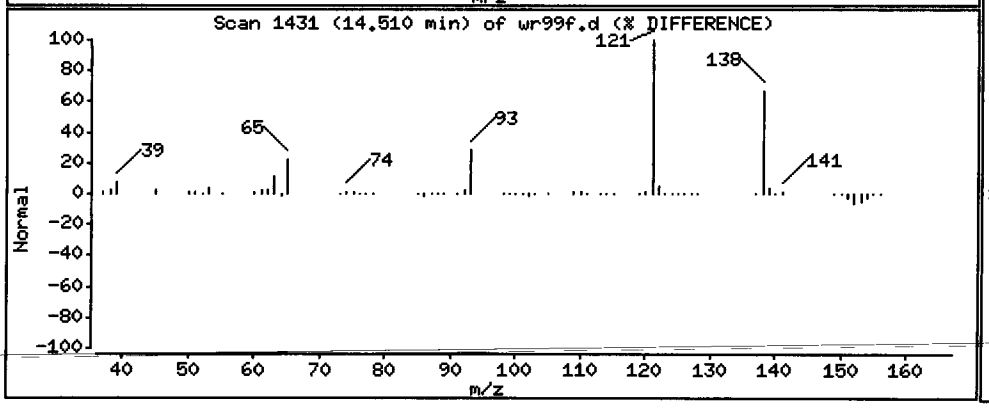












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

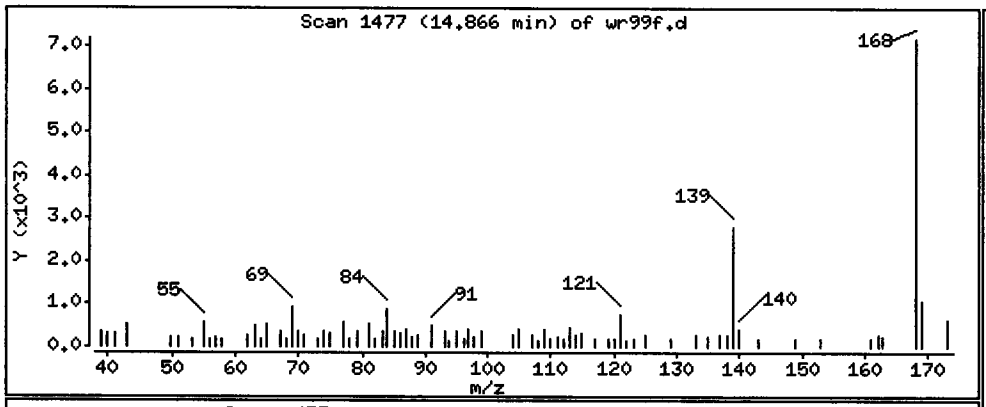
Operator: VTS/YZ

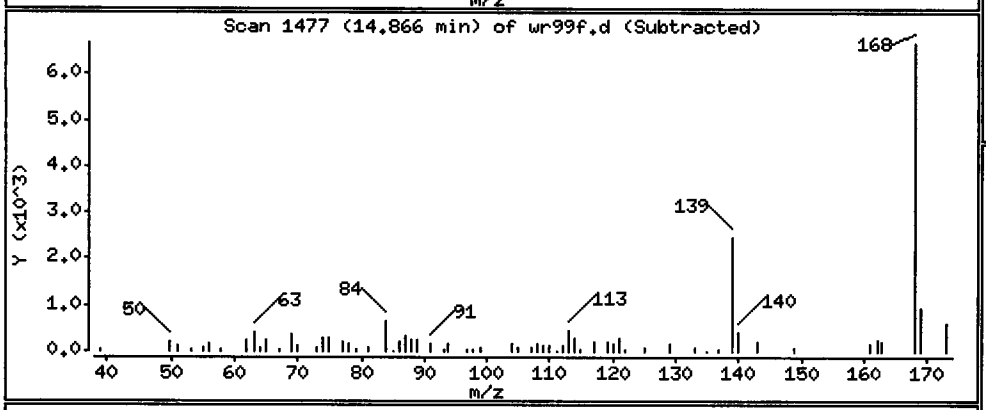
Column phase: ZB-5msi

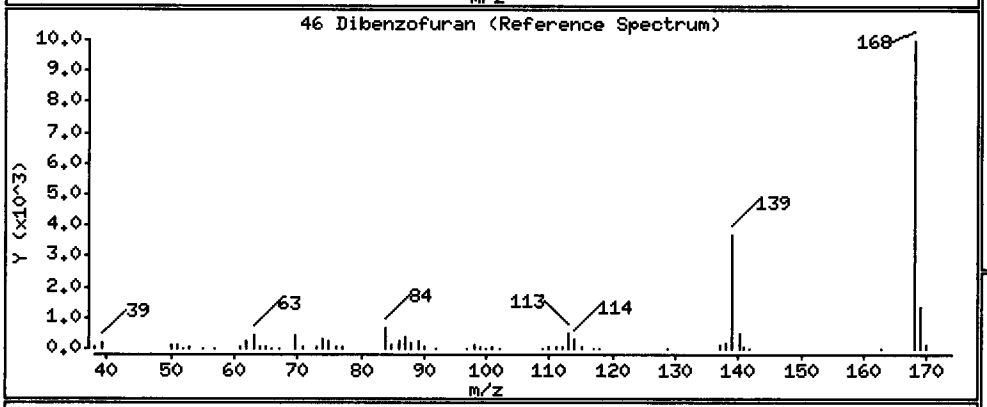
Column diameter: 0.25

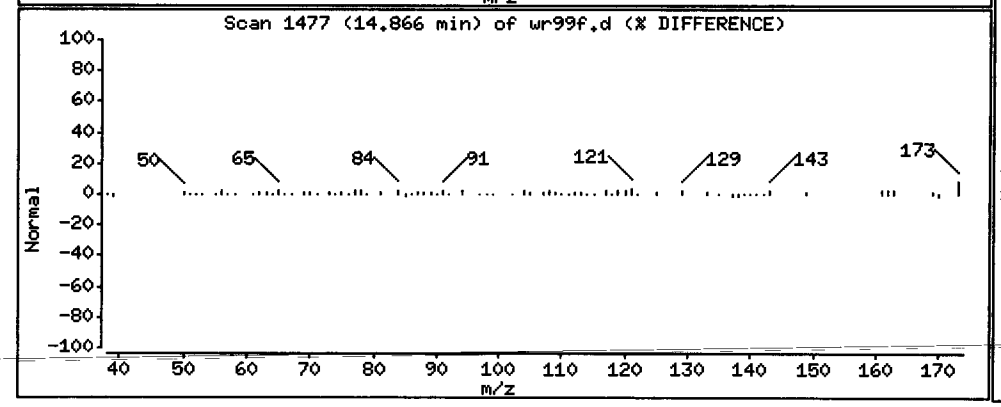
46 Dibenzofuran

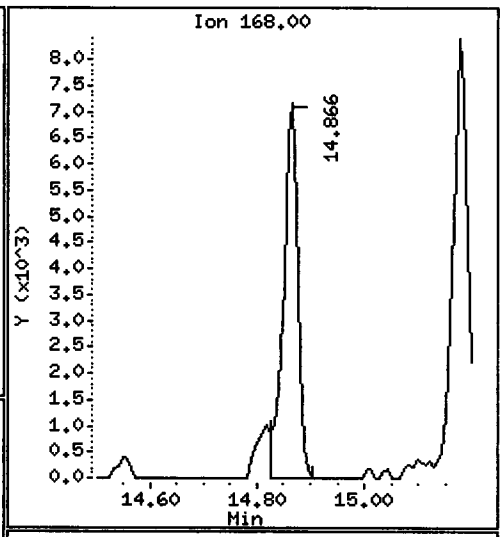
Concentration: 87.70 ug/kg

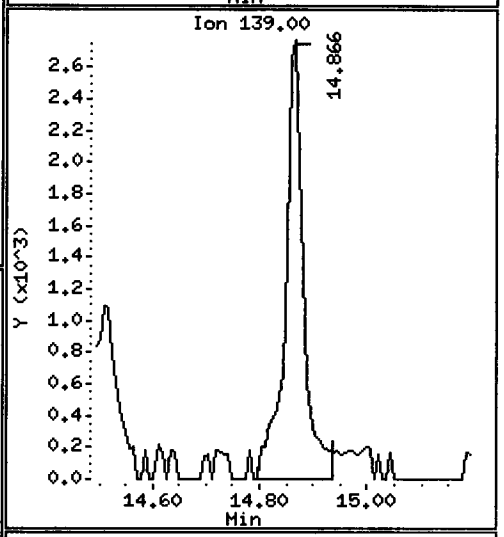


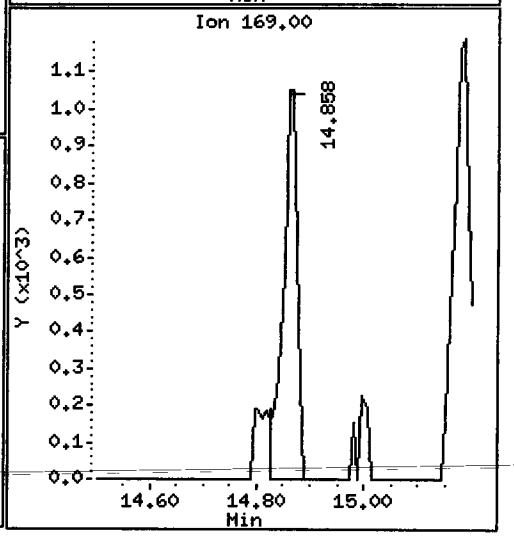












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

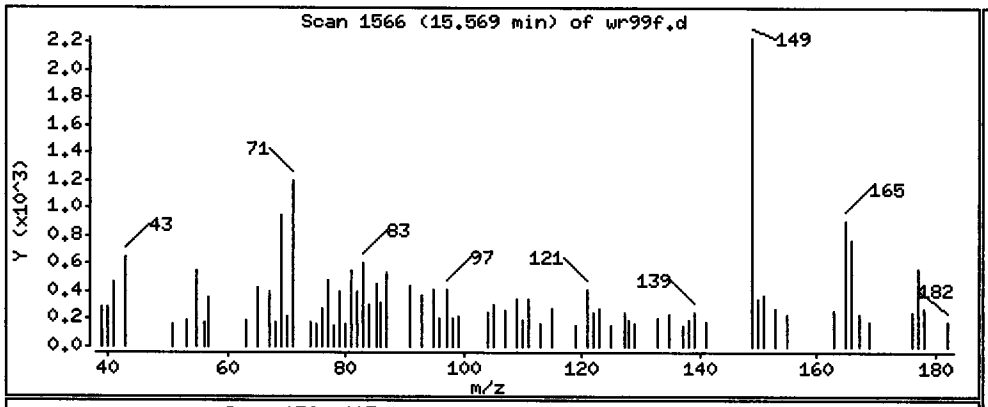
Operator: VTS/YZ

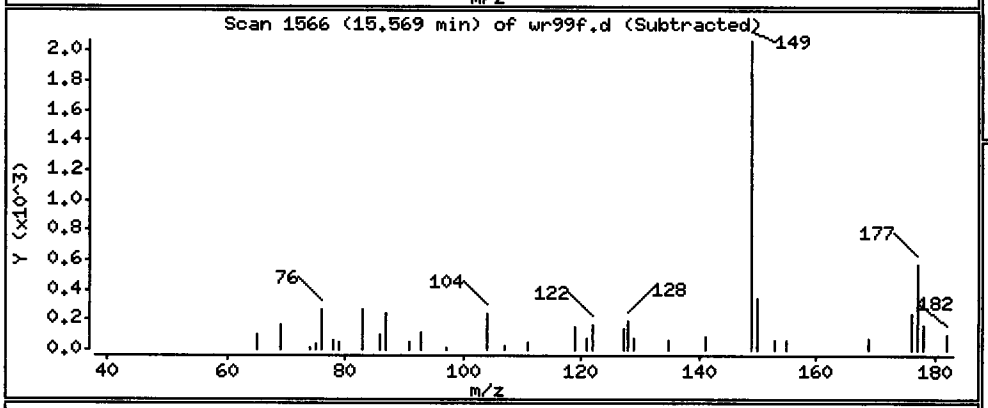
Column phase: ZB-5msi

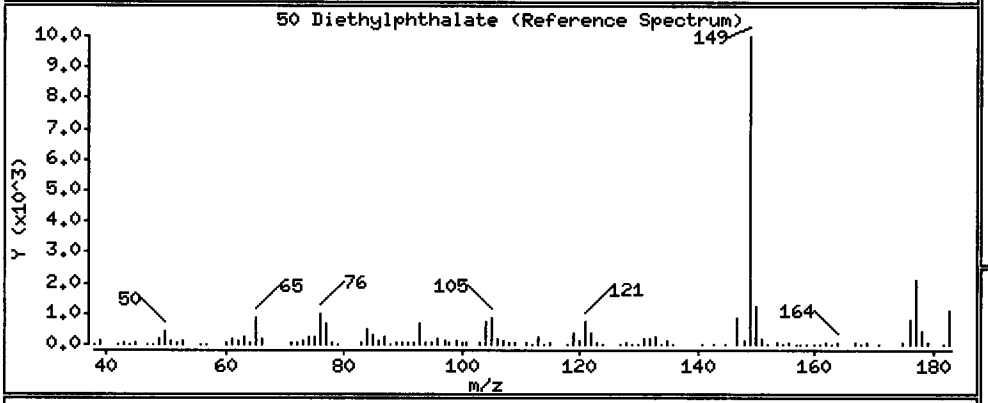
Column diameter: 0.25

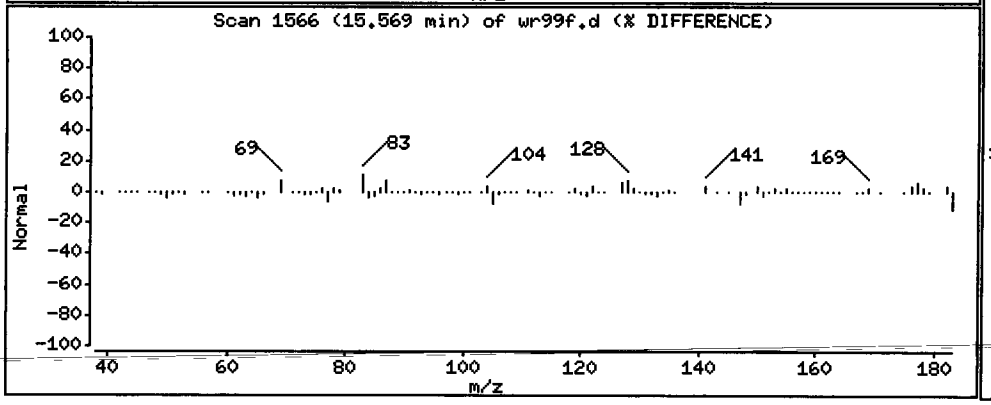
50 Diethylphthalate

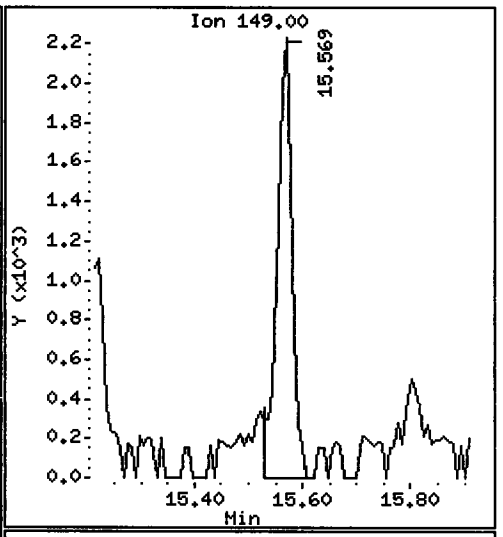
Concentration: 34.58 ug/kg

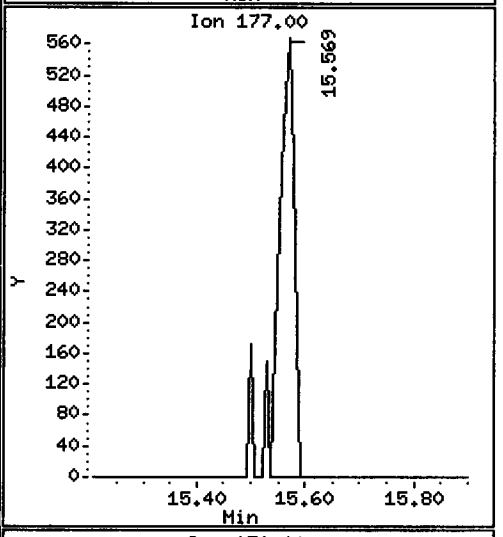


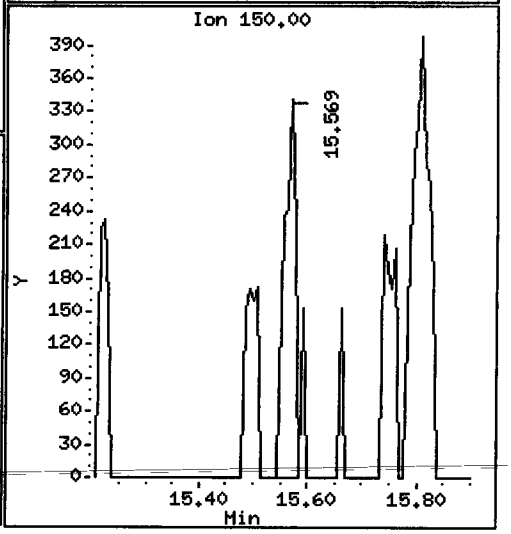












WR99-01966

Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

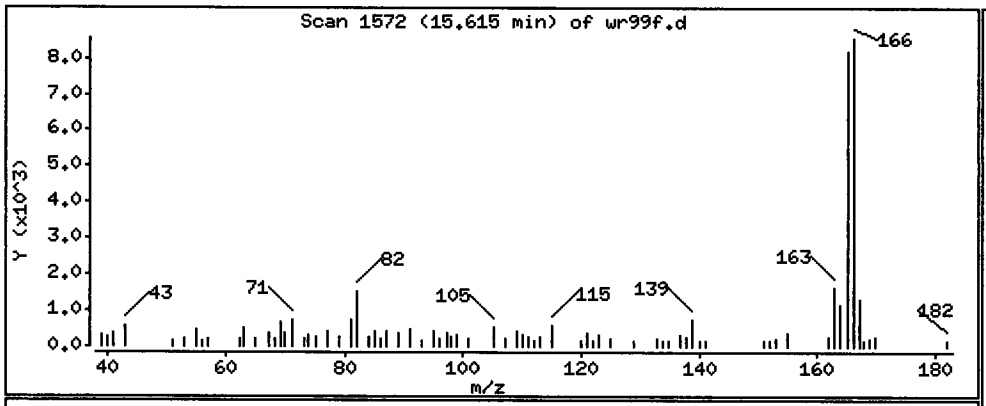
Operator: VTS/YZ

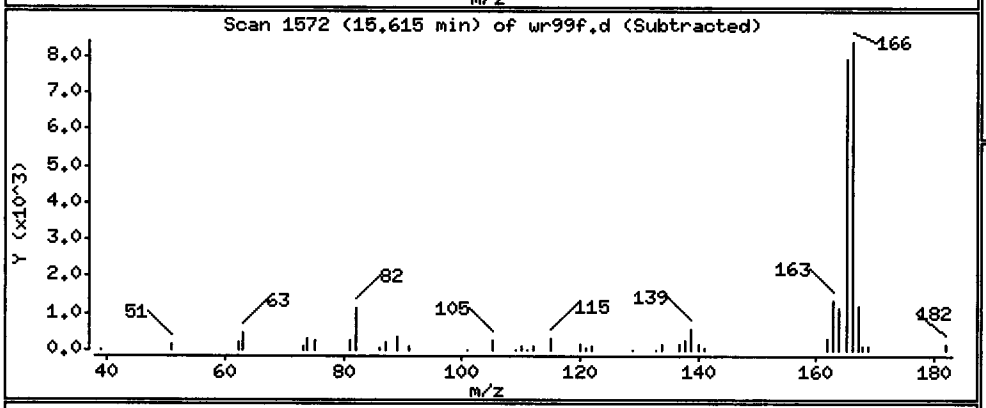
Column phase: ZB-5msi

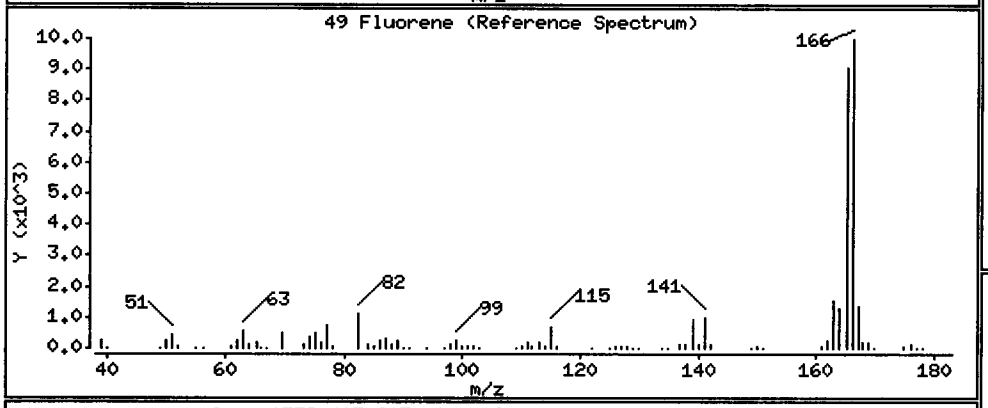
Column diameter: 0.25

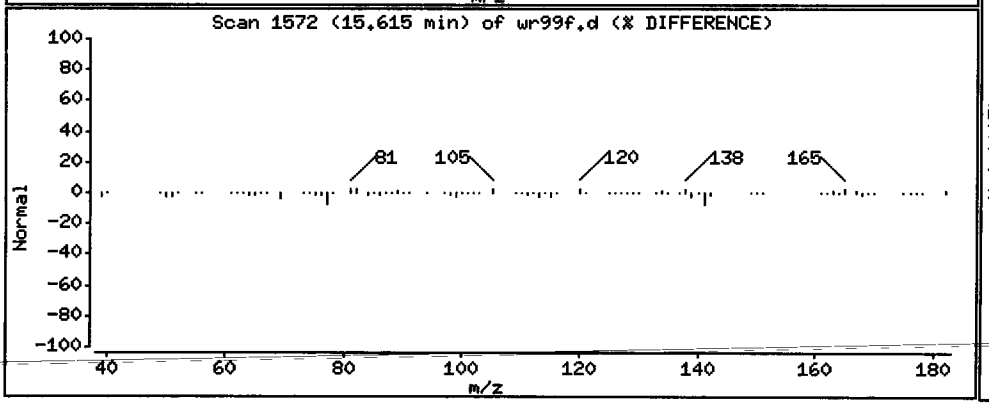
49 Fluorene

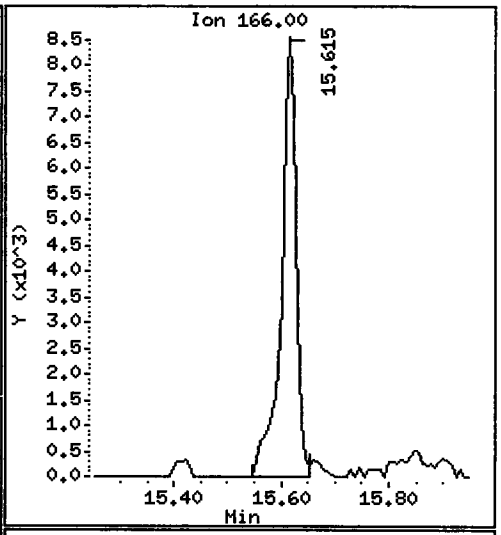
Concentration: 127.7 ug/kg

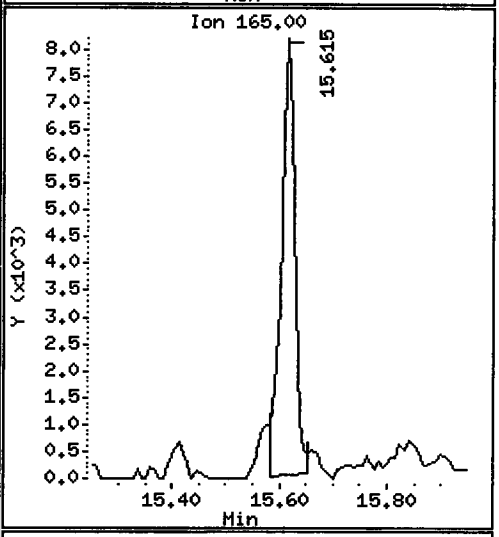


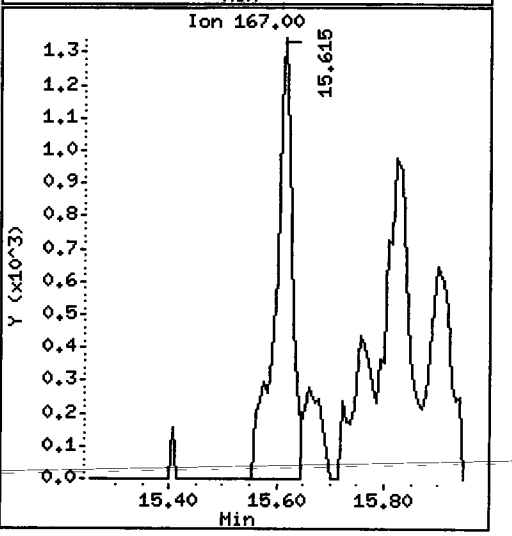












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

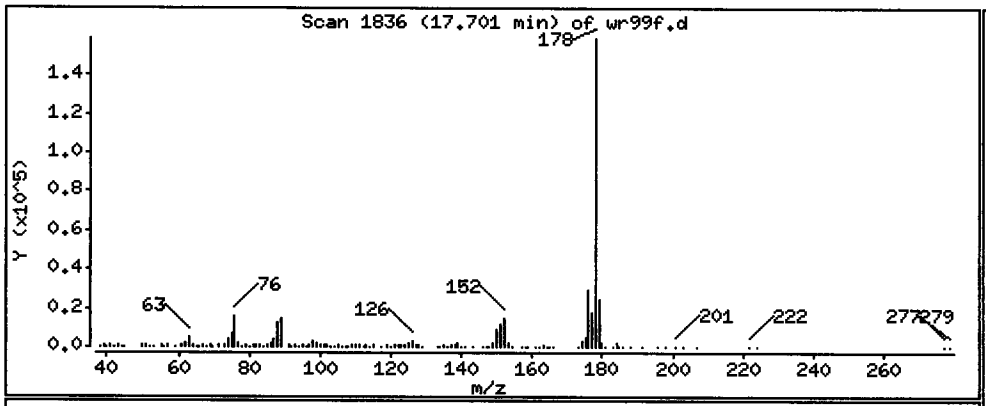
Operator: VTS/YZ

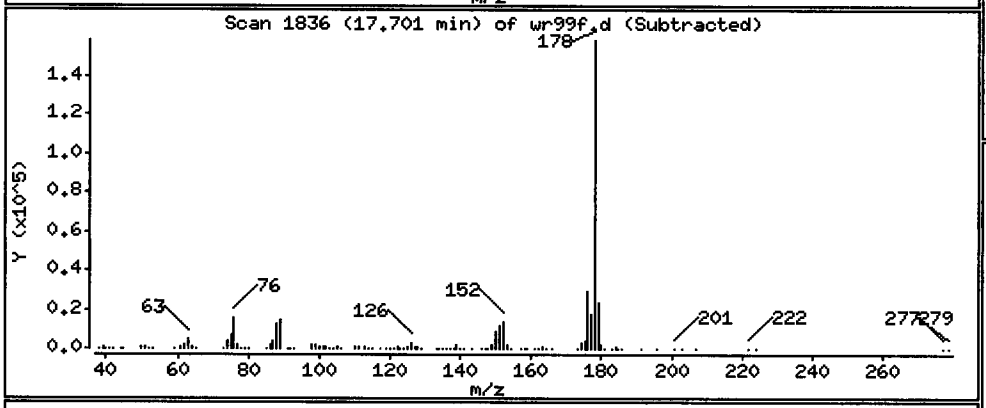
Column phase: ZB-5msi

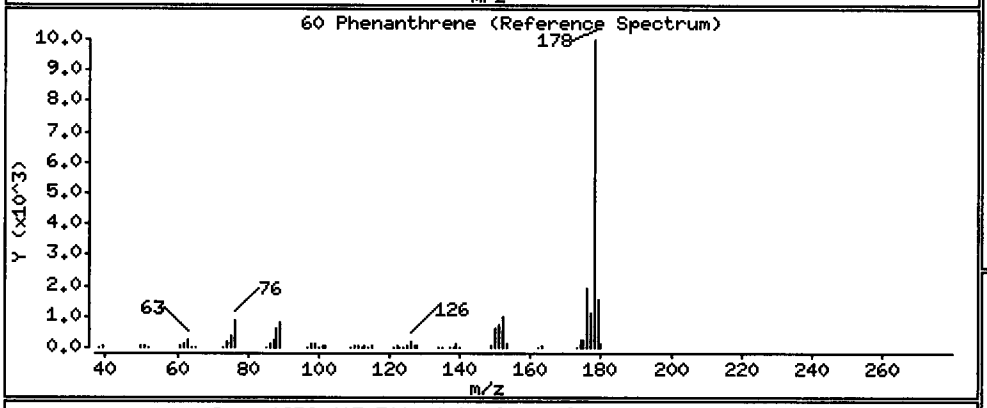
Column diameter: 0.25

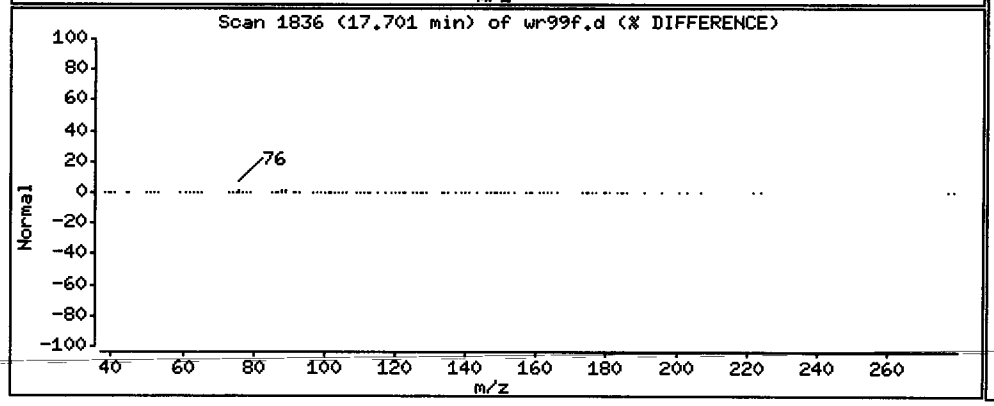
60 Phenanthrene

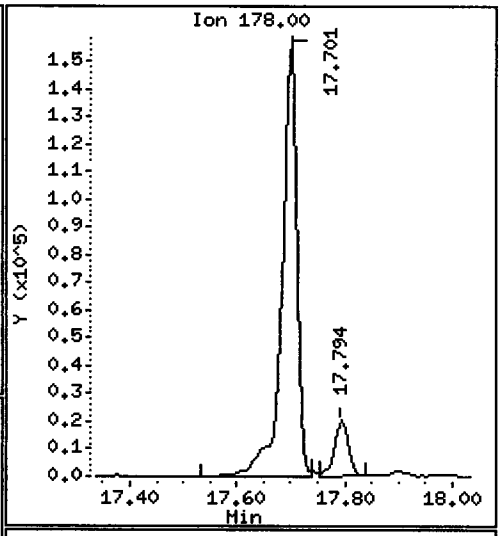
Concentration: 1836 ug/kg

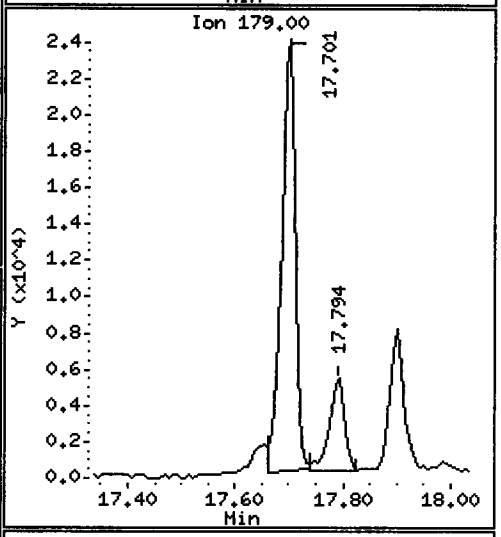


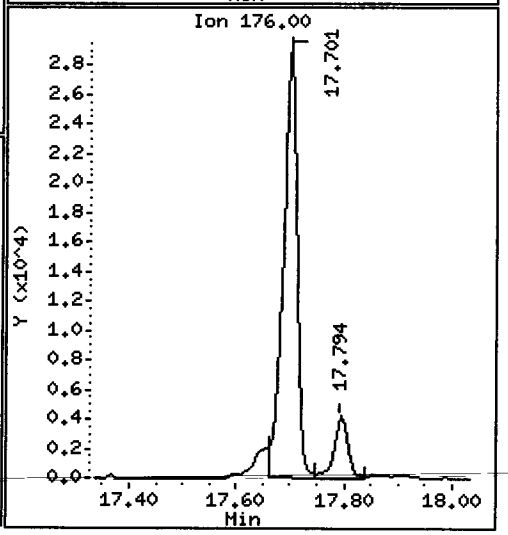












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

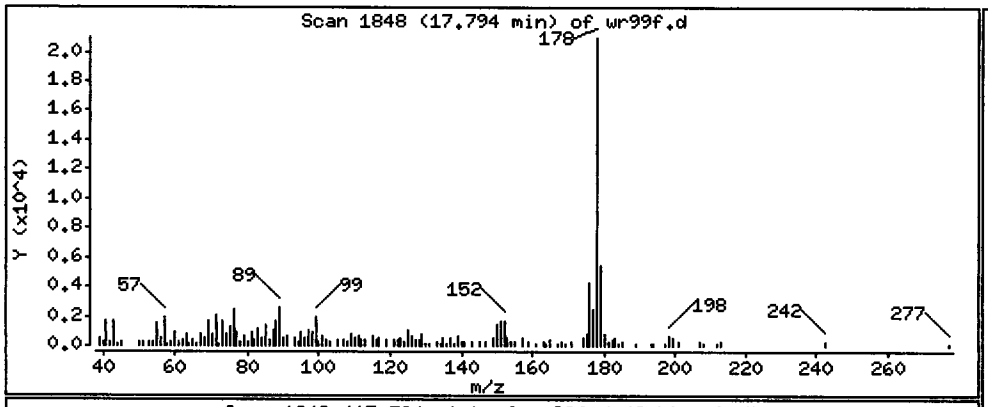
Operator: VTS/YZ

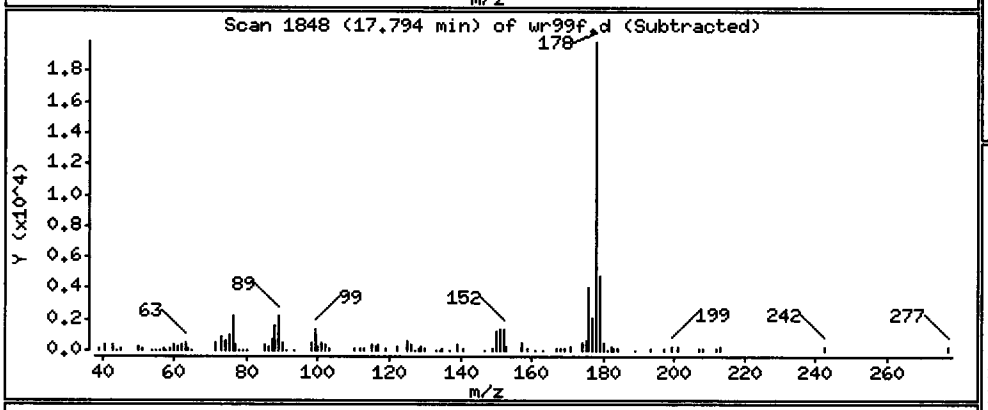
Column phase: ZB-5msi

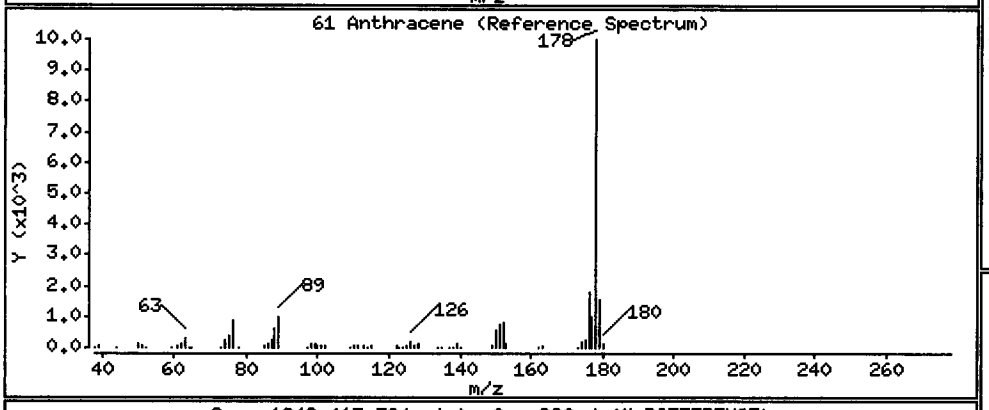
Column diameter: 0.25

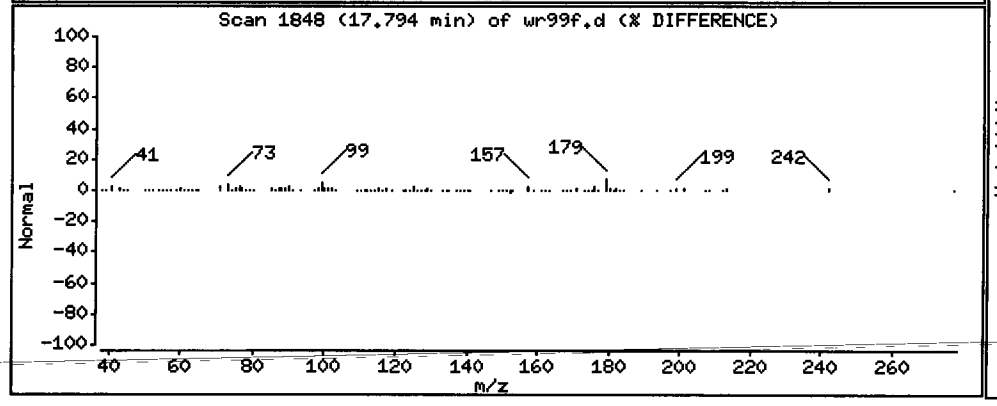
61 Anthracene

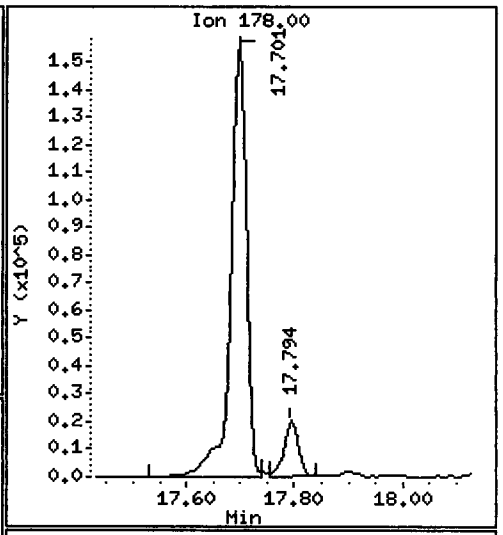
Concentration: 224.4 ug/kg

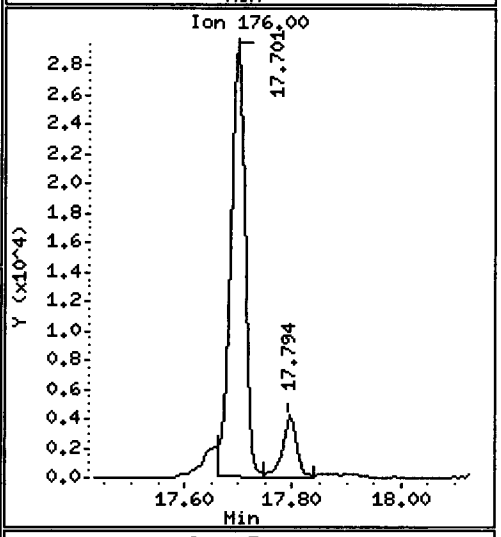


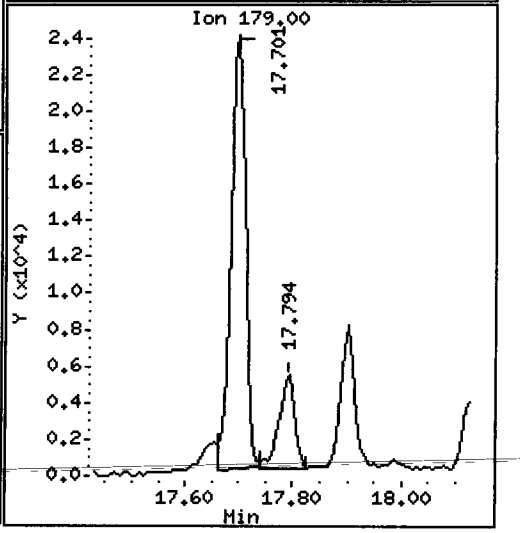












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

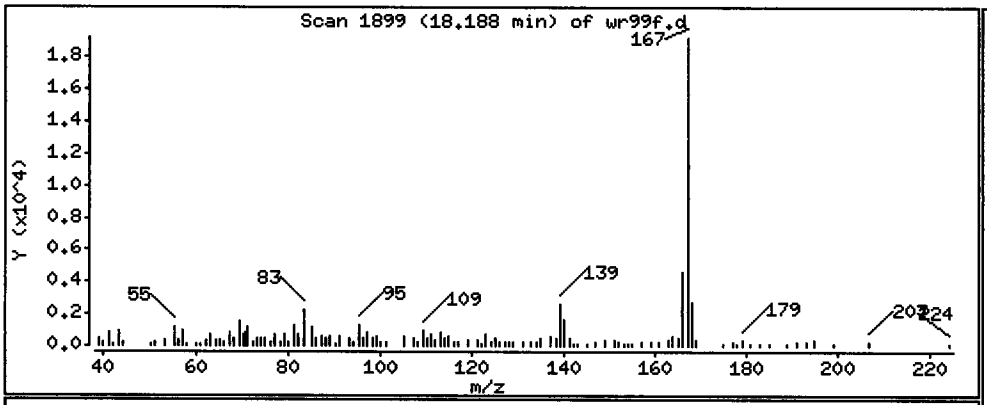
Operator: VTS/YZ

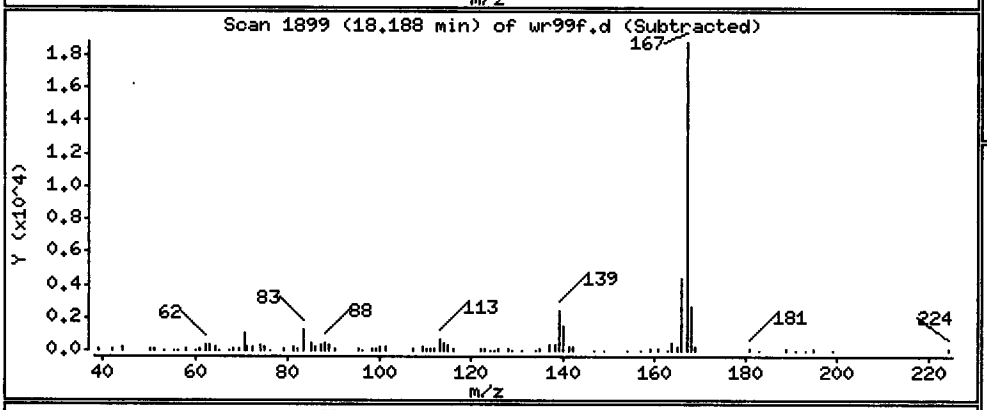
Column phase: ZB-5msi

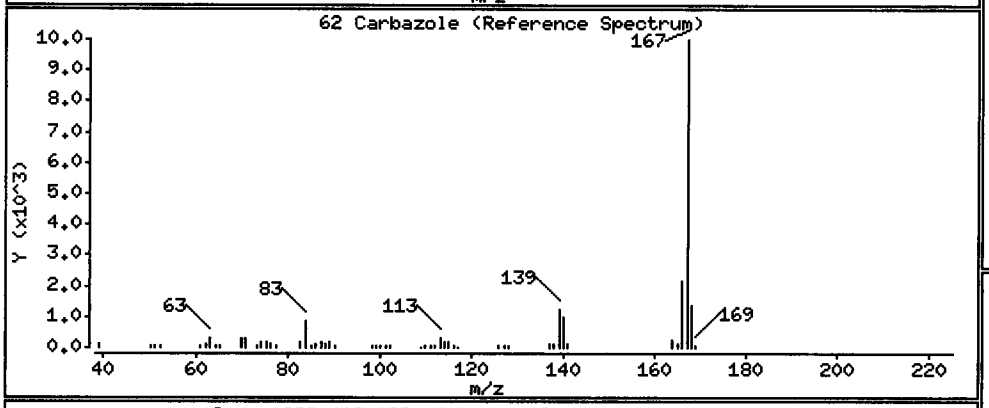
Column diameter: 0.25

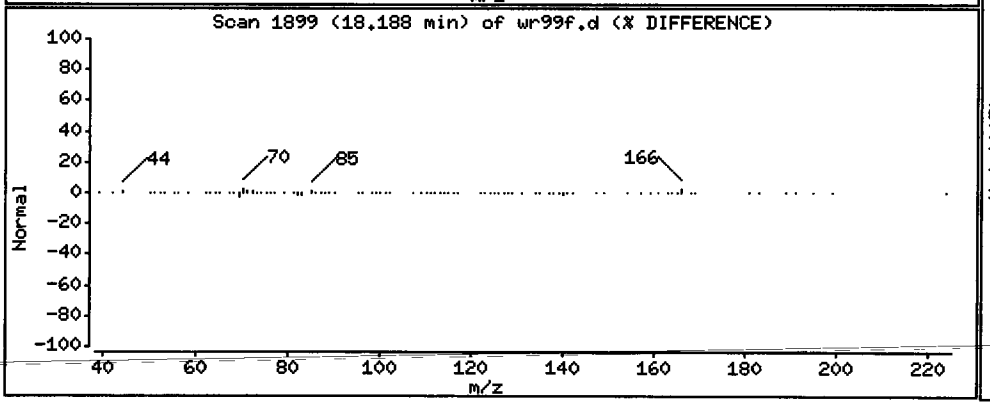
62 Carbazole

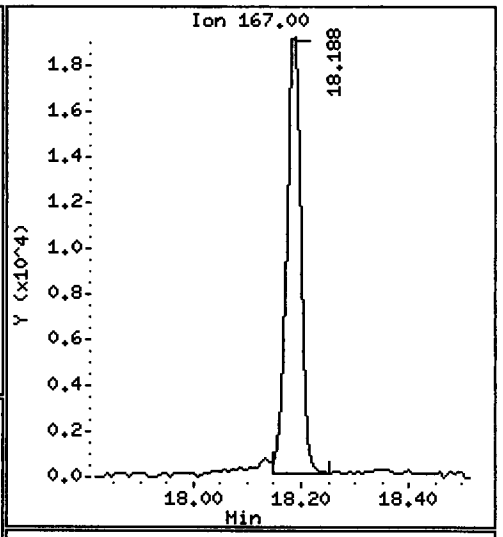
Concentration: 336.6 ug/kg

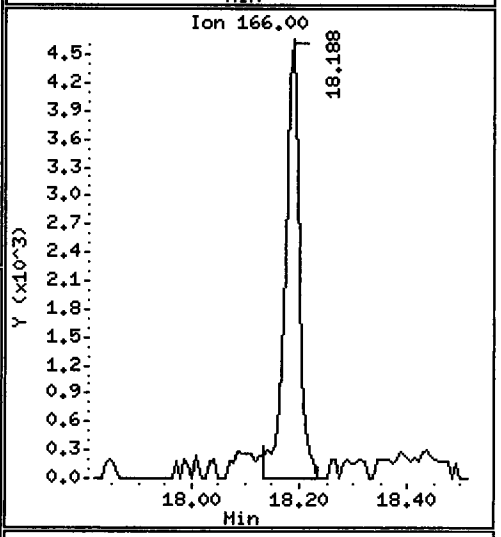


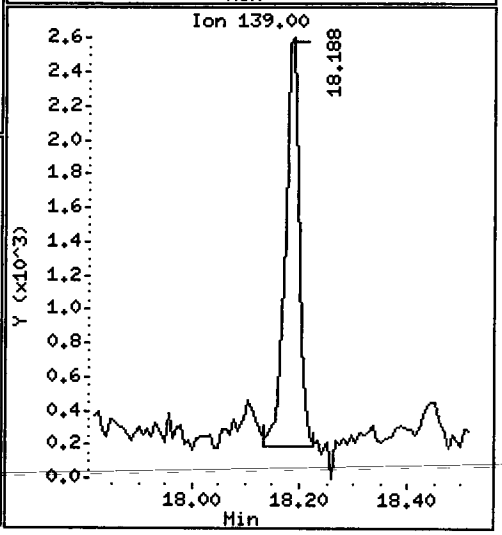












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

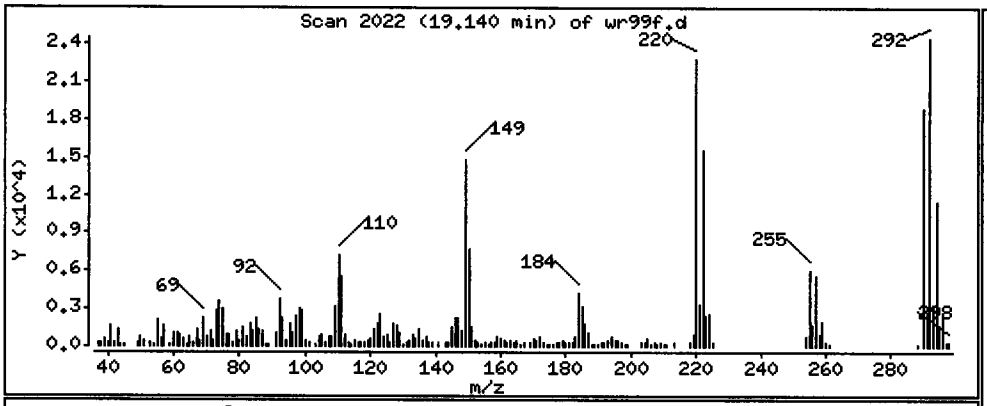
Operator: VTS/YZ

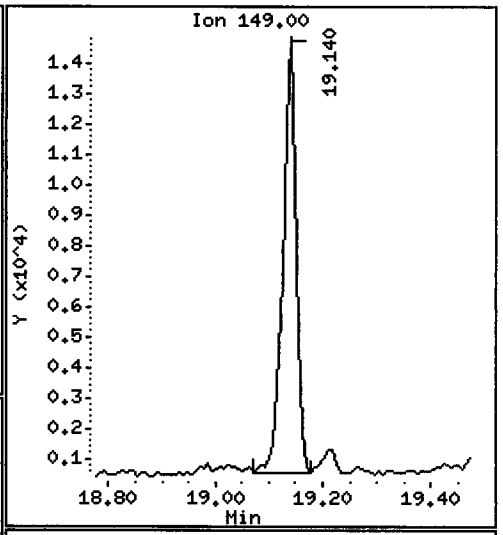
Column phase: ZB-5msi

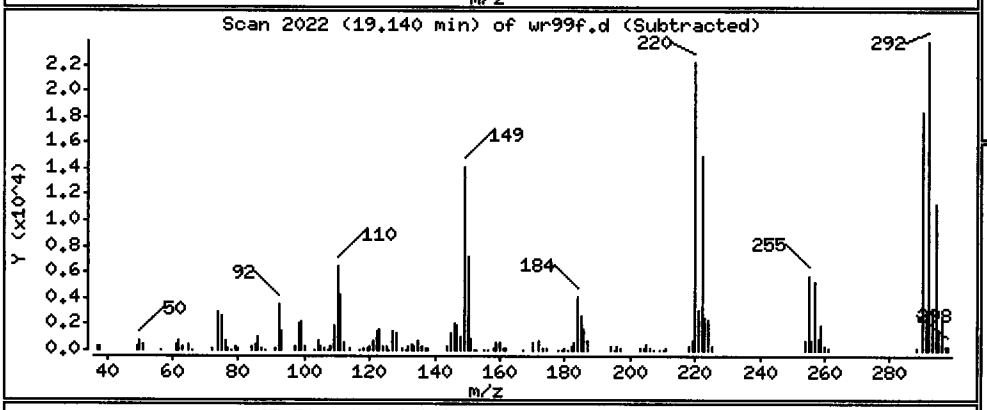
Column diameter: 0.25

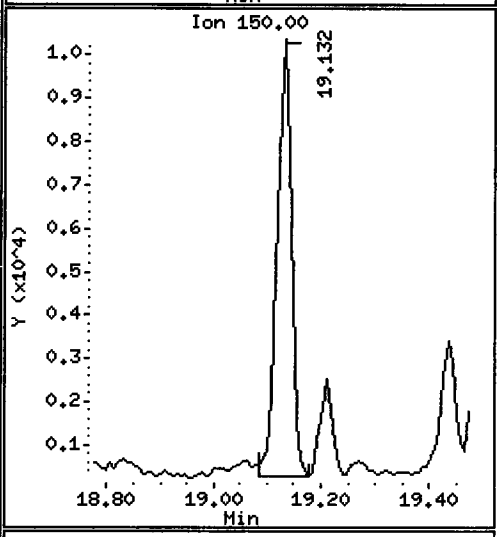
63 Di-n-butylphthalate

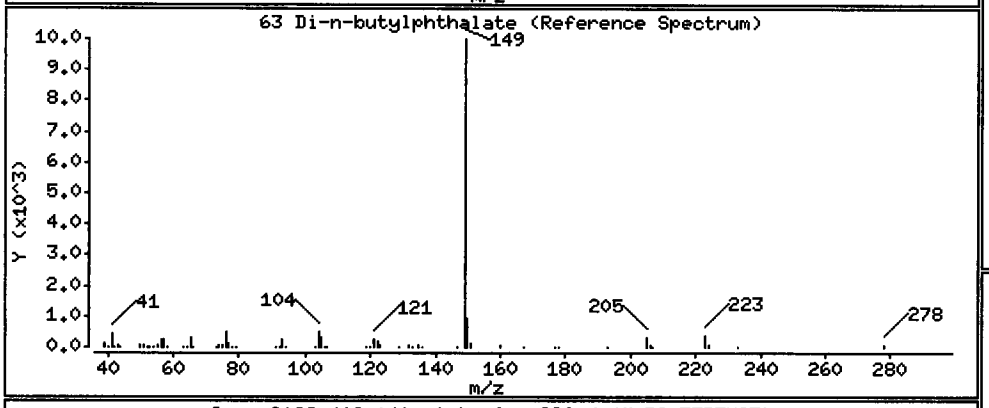
Concentration: 139.9 ug/kg

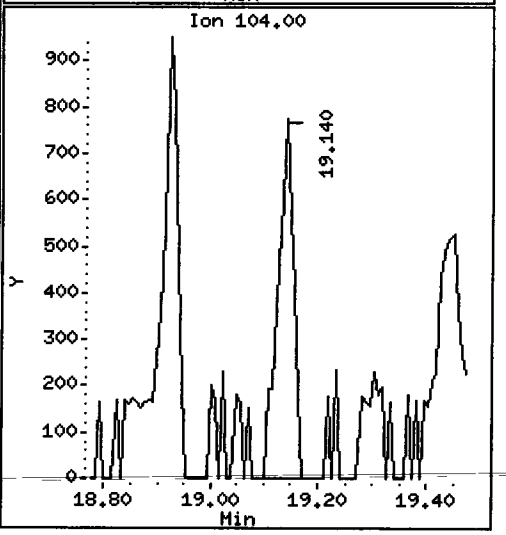


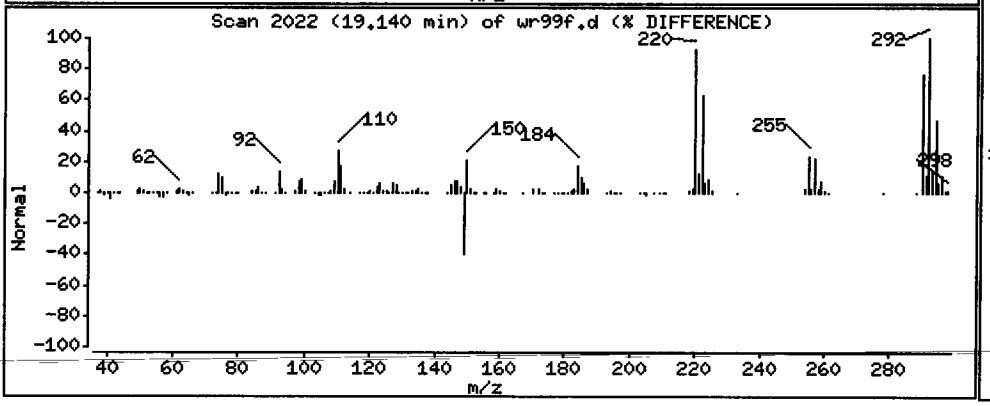












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

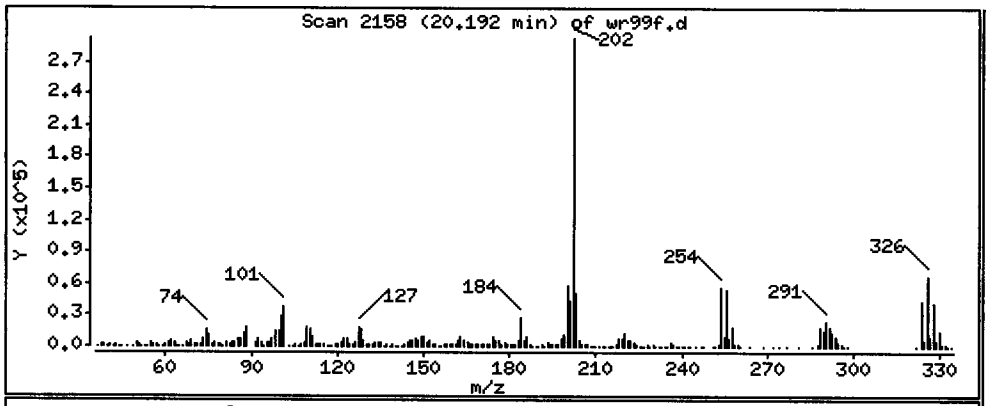
Operator: VTS/YZ

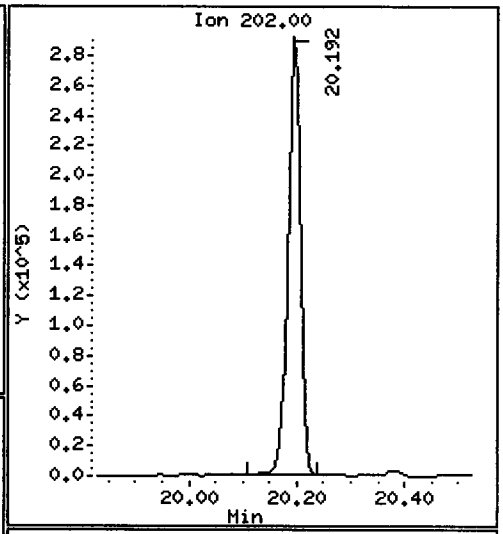
Column phase: ZB-5msi

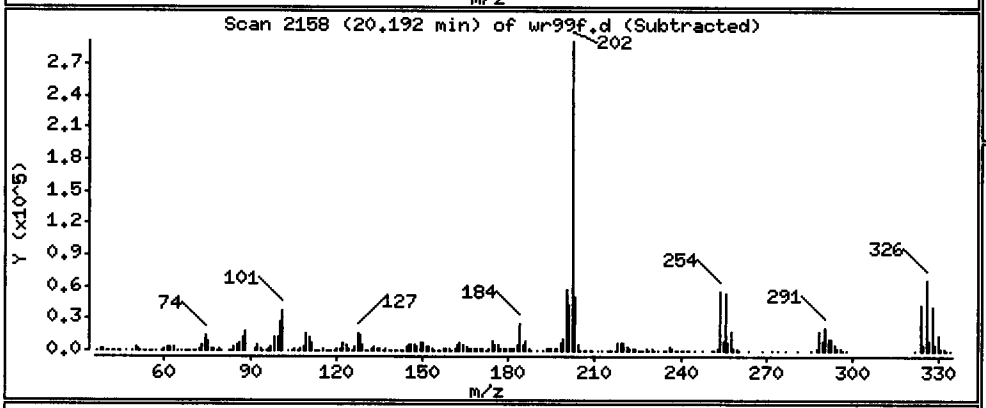
Column diameter: 0.25

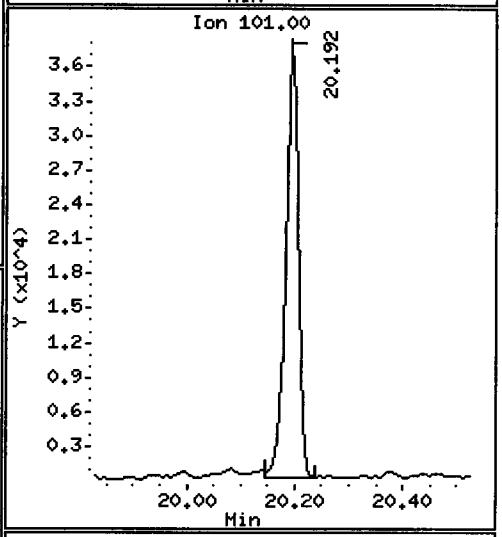
64 Fluoranthene

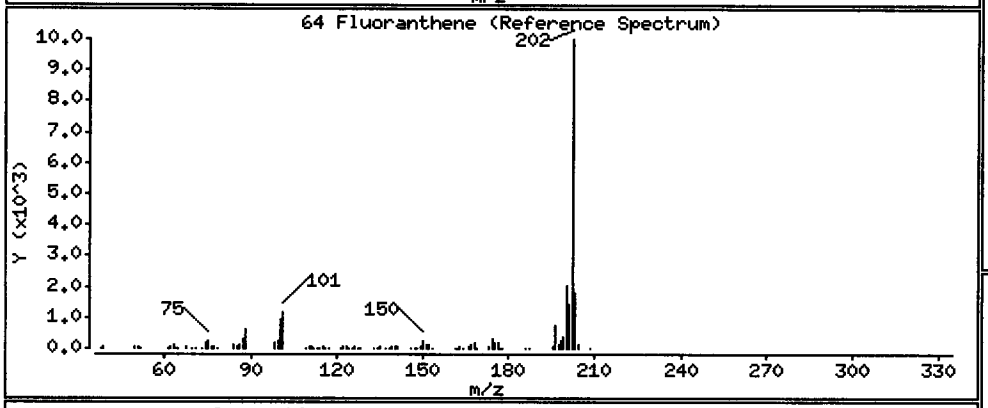
Concentration: 2488 ug/kg

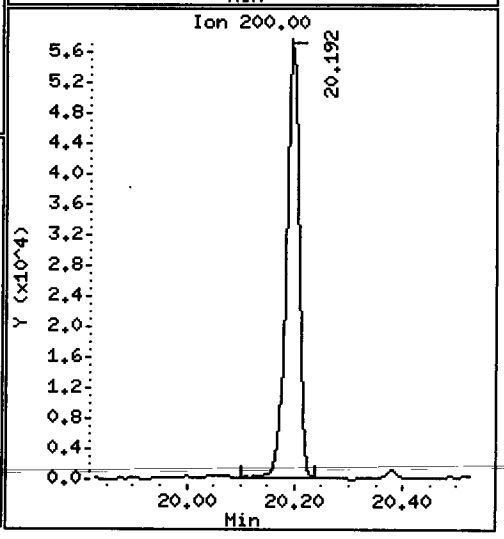


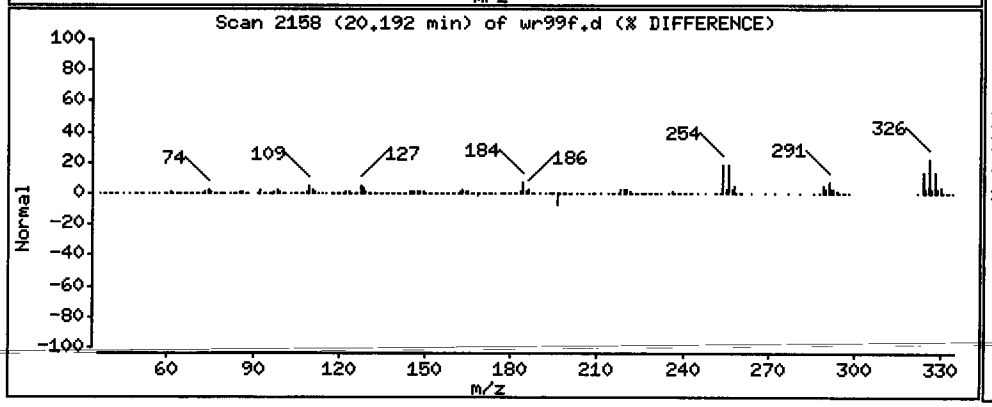












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

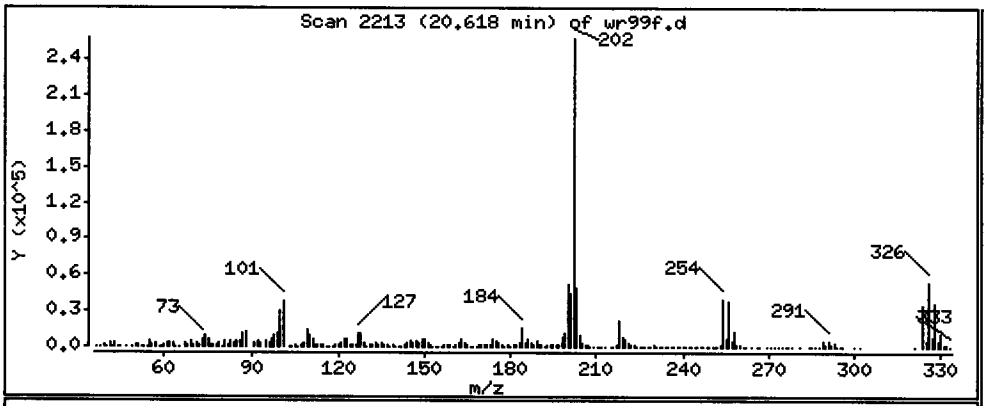
Operator: VTS/YZ

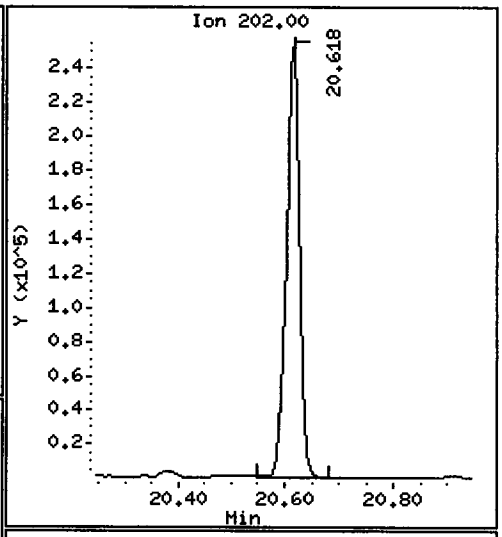
Column phase: ZB-5msi

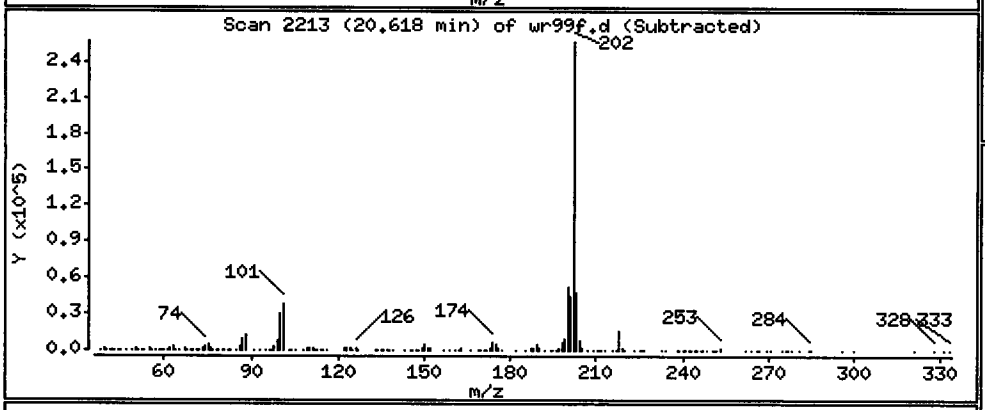
Column diameter: 0.25

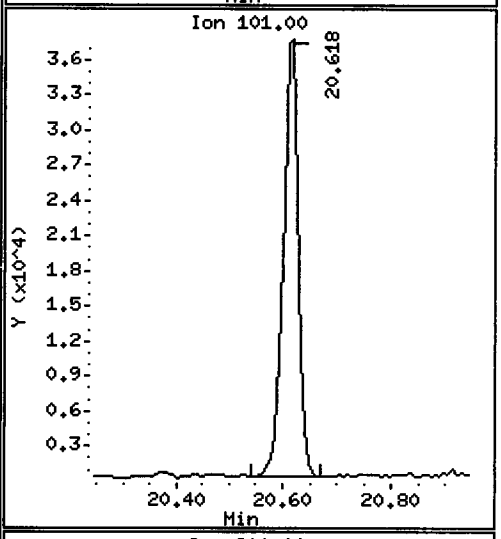
65 Pyrene

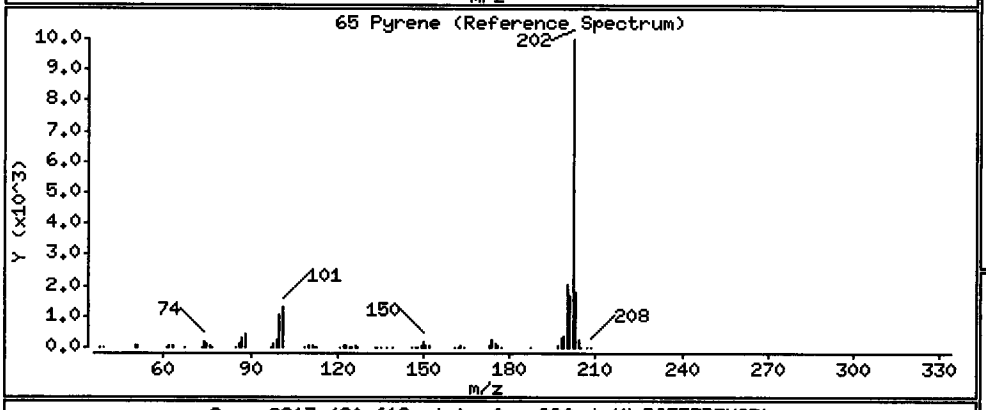
Concentration: 2195 ug/kg

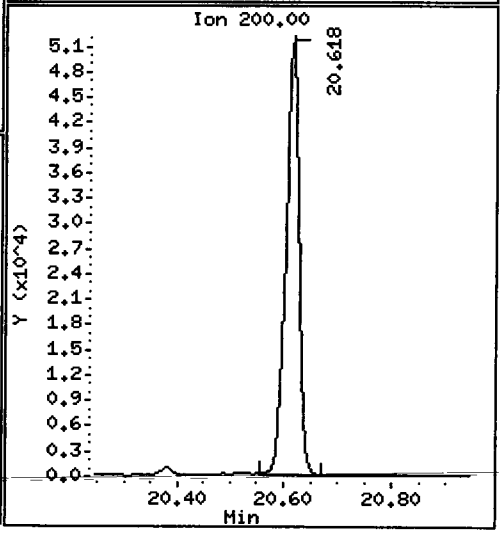


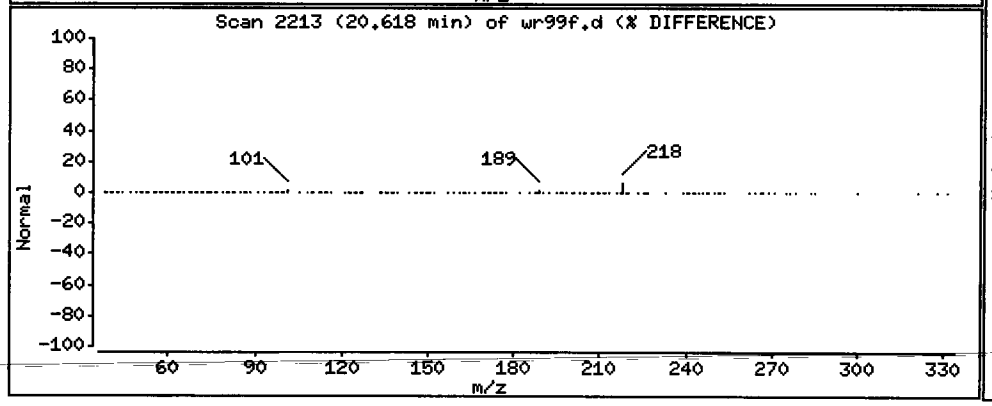












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

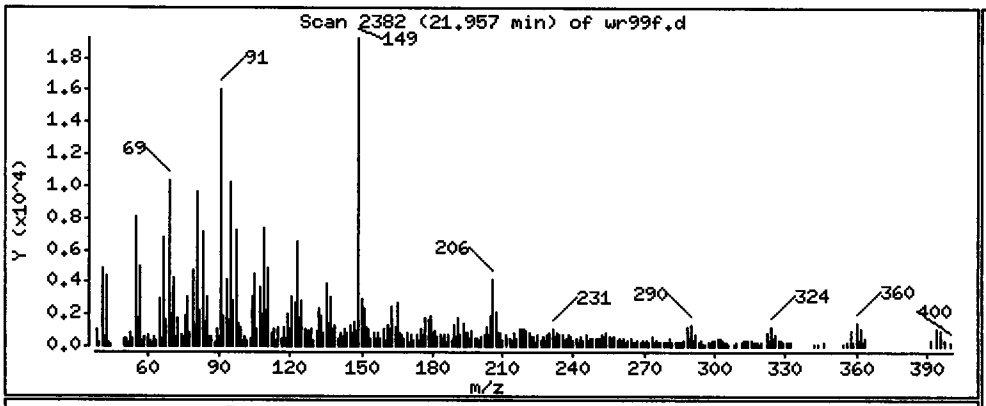
Operator: VTS/YZ

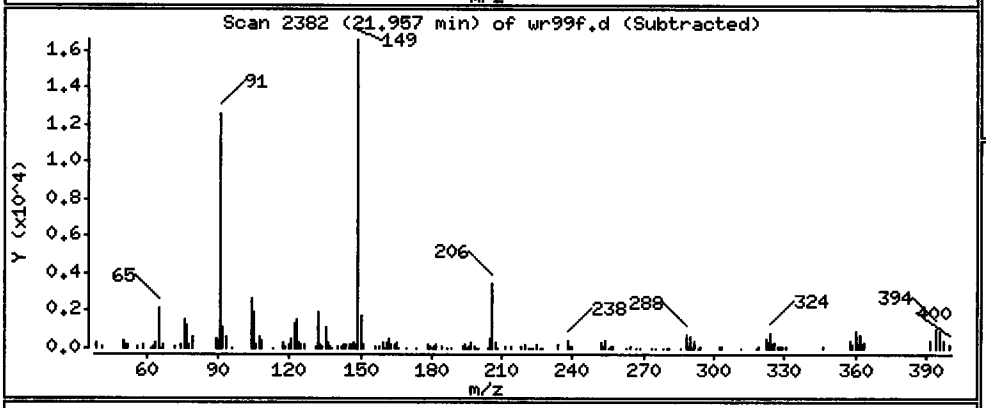
Column phase: ZB-5msi

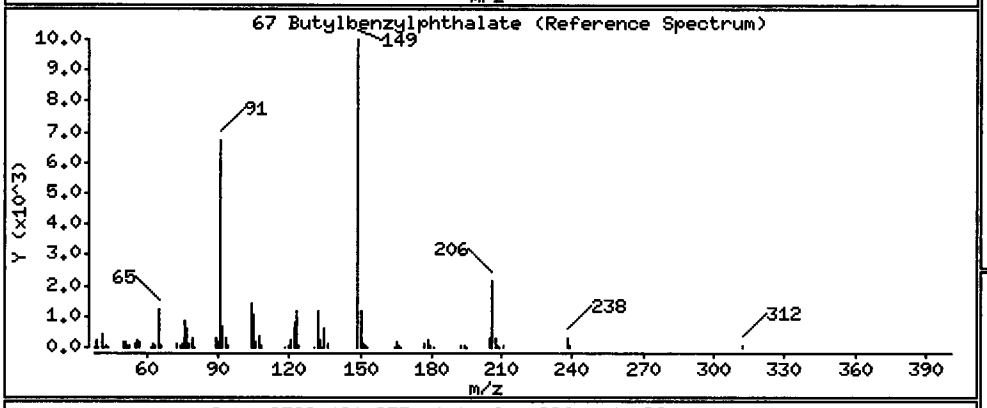
Column diameter: 0.25

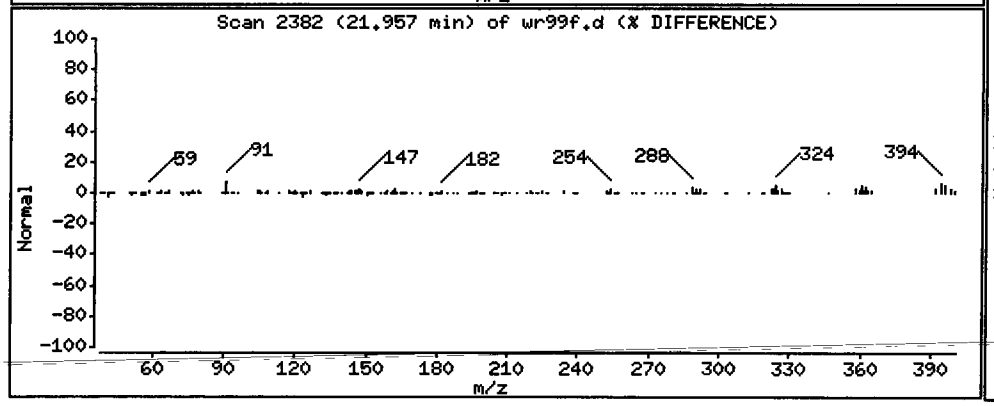
67 Butylbenzylphthalate

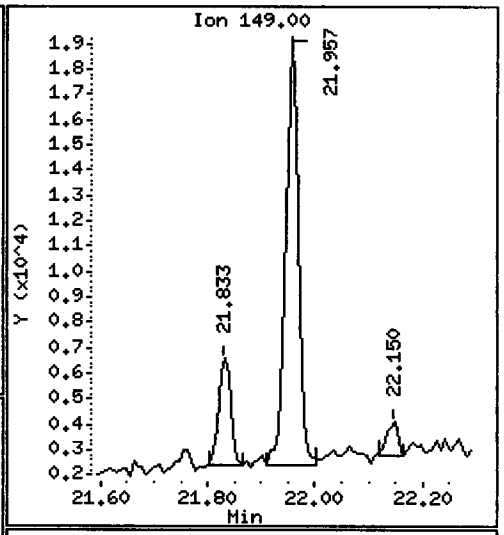
Concentration: 408.8 ug/kg

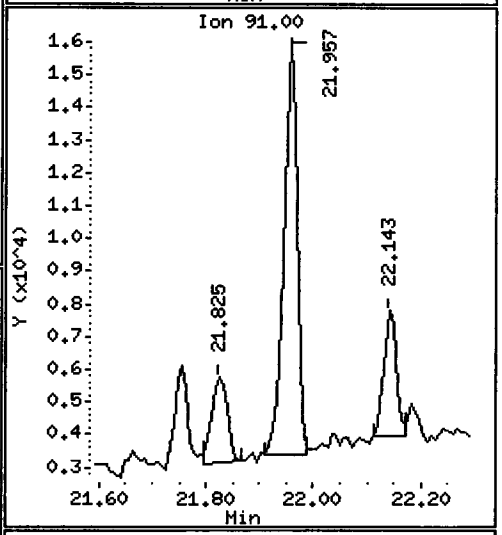


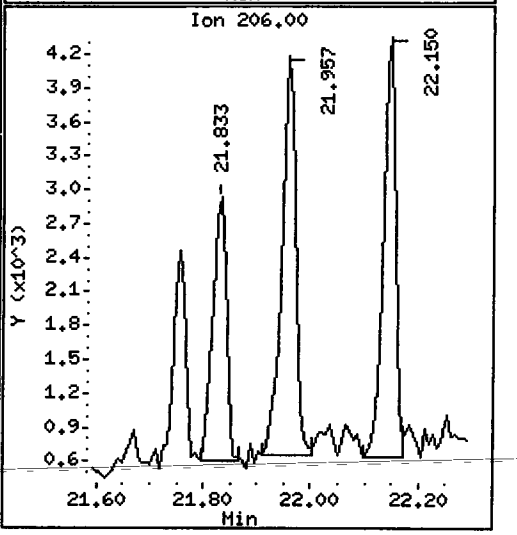












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

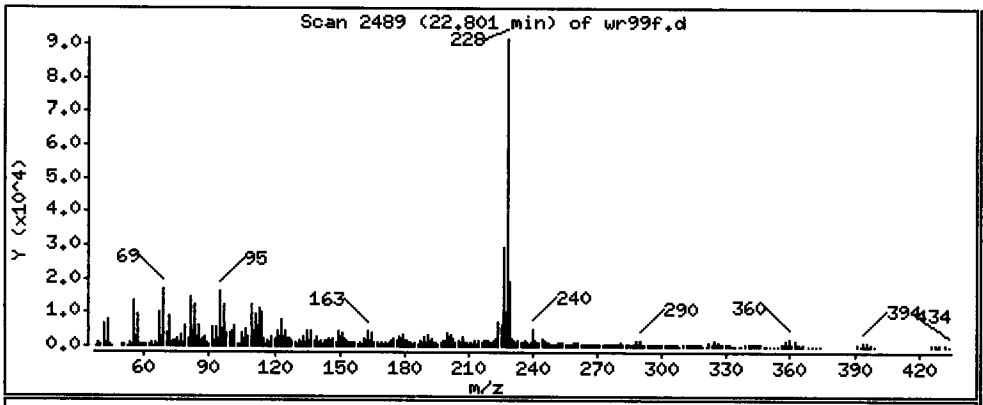
Operator: VTS/YZ

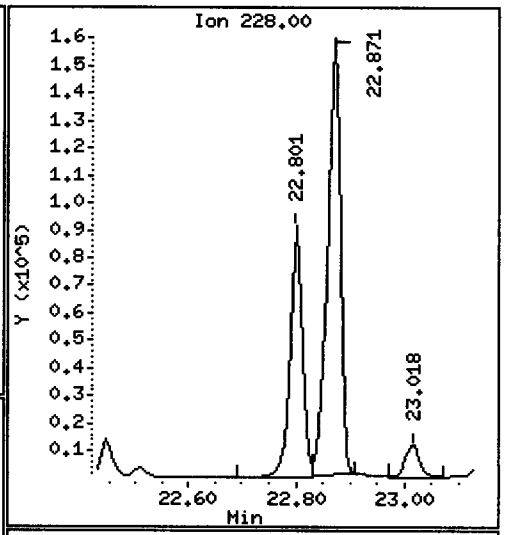
Column phase: ZB-5msi

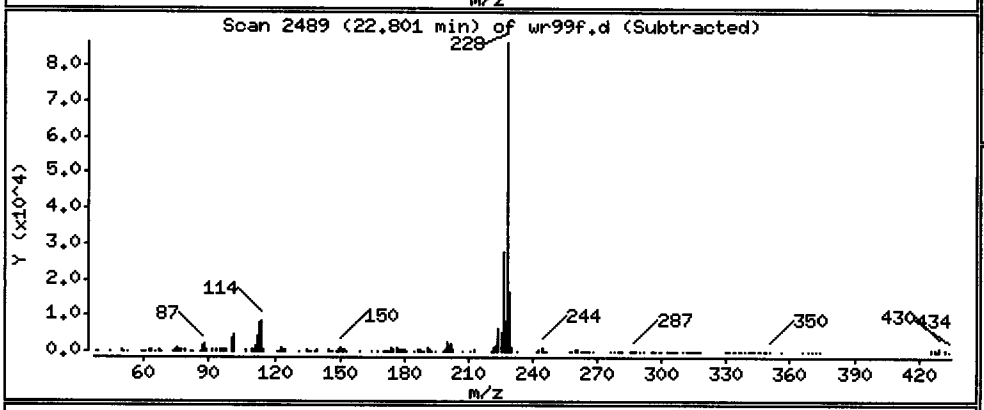
Column diameter: 0.25

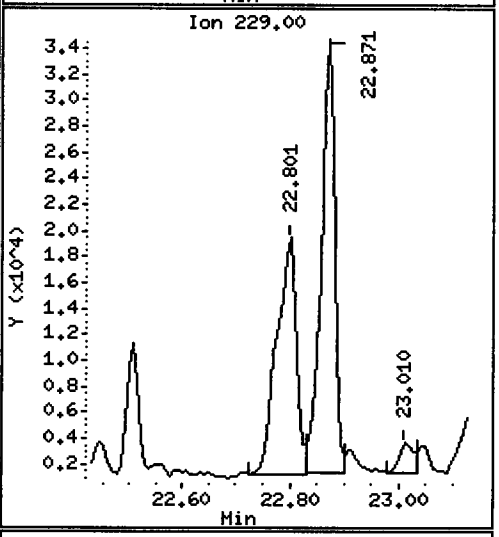
68 Benzo(a)anthracene

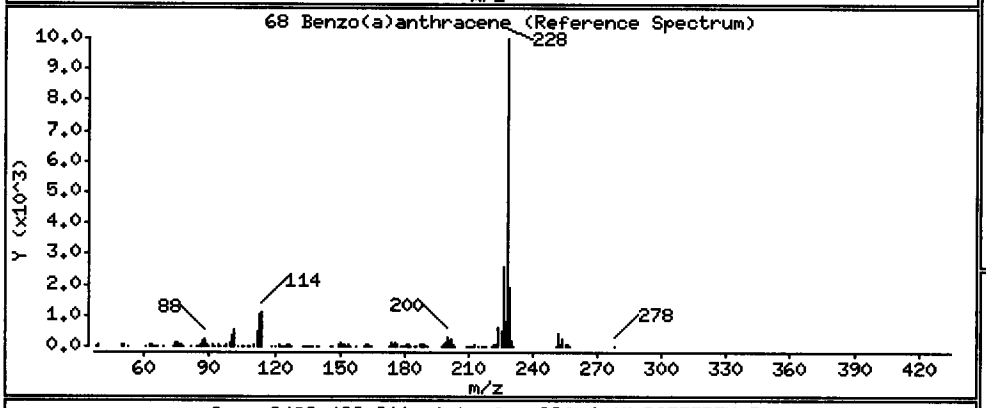
Concentration: 839.1 ug/kg

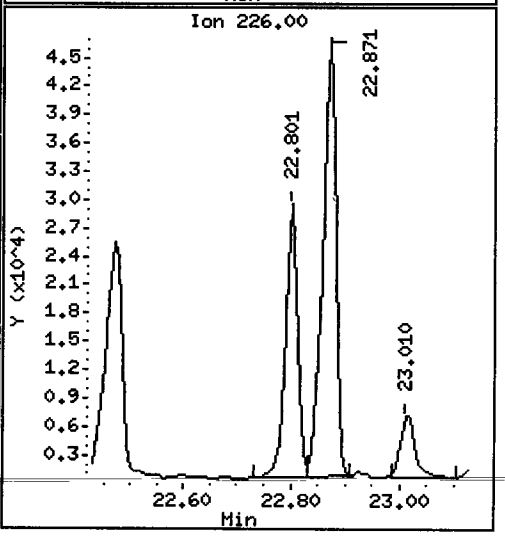


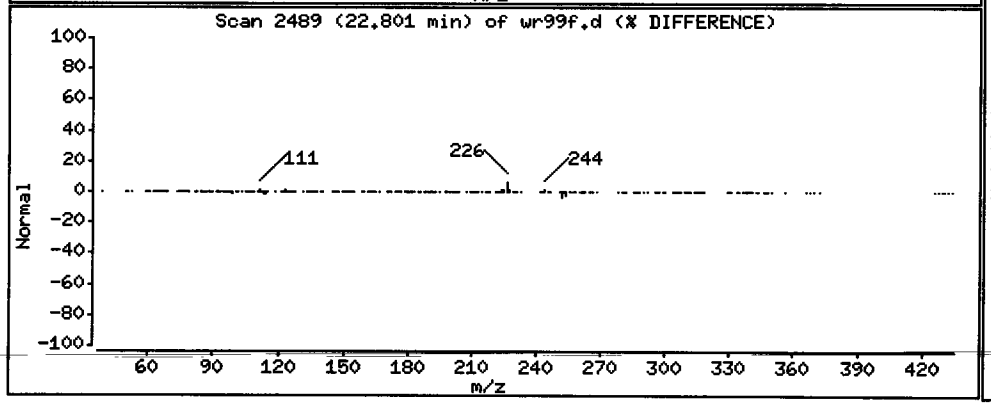












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

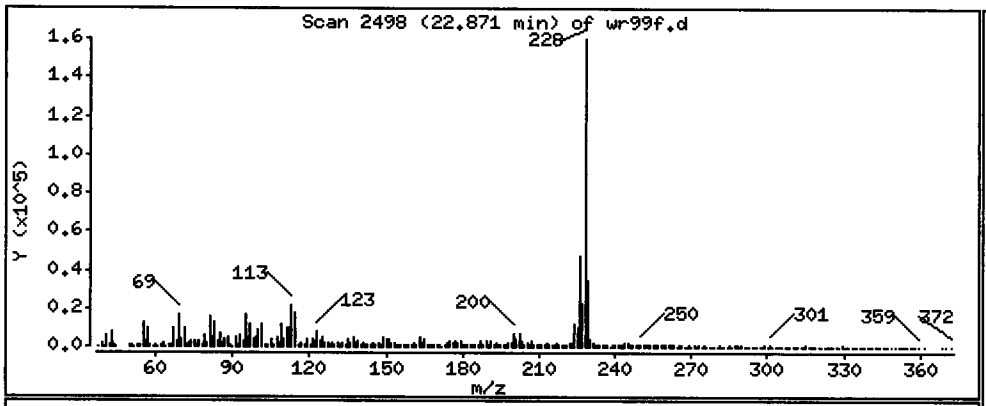
Operator: VTS/YZ

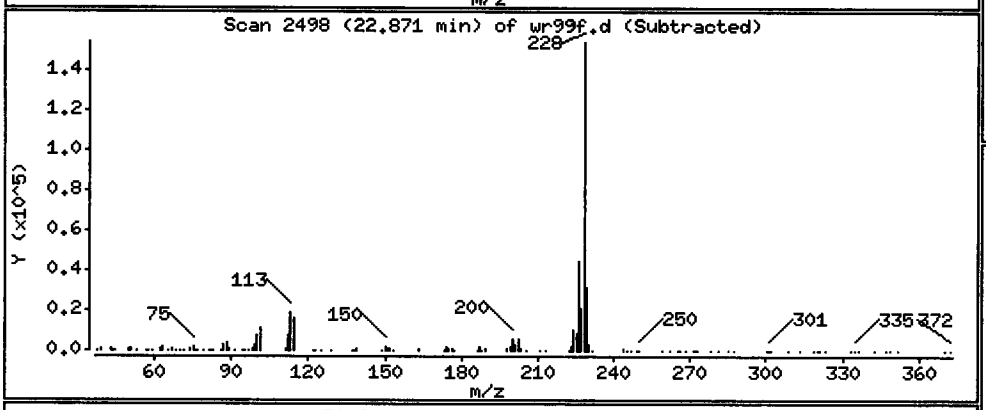
Column phase: ZB-5msi

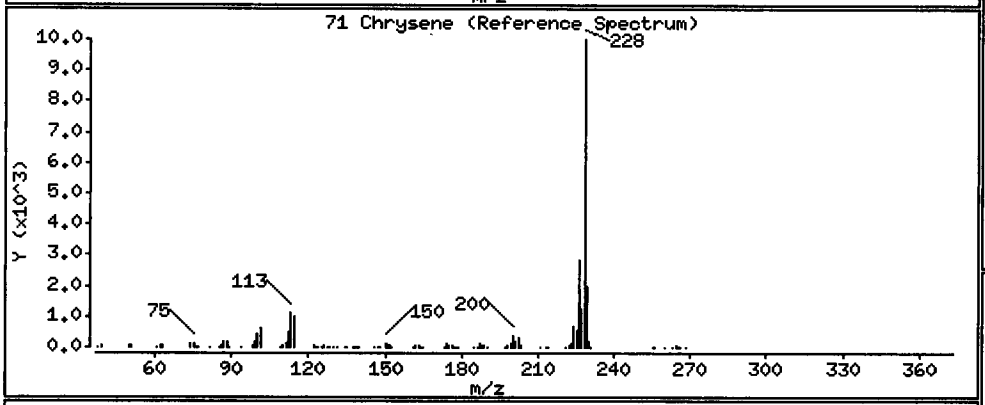
Column diameter: 0.25

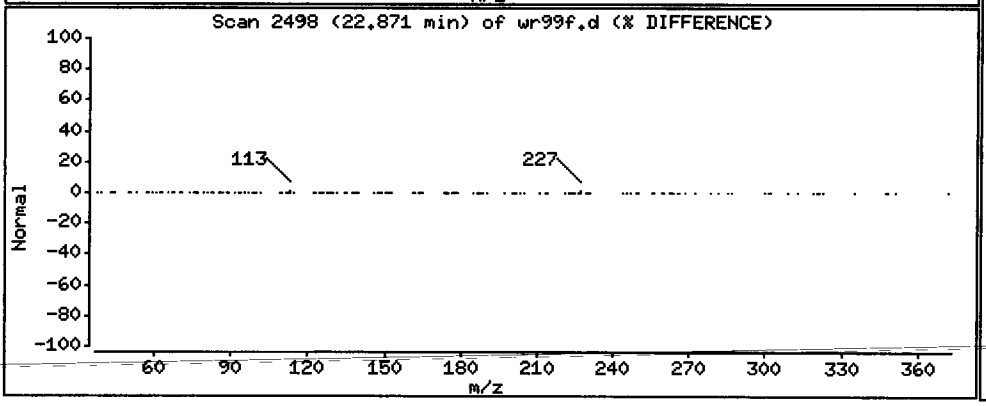
71 Chrysene

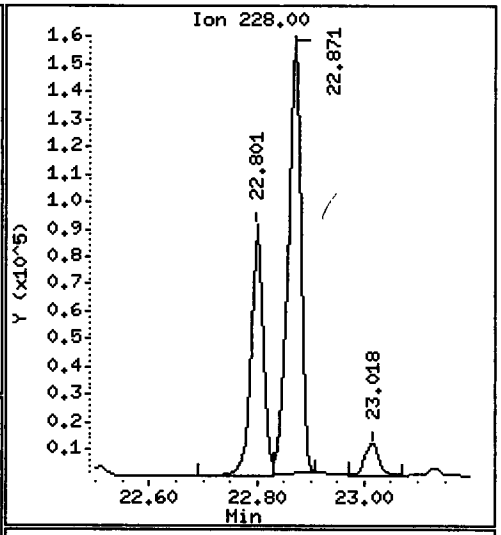
Concentration: 1640 ug/kg

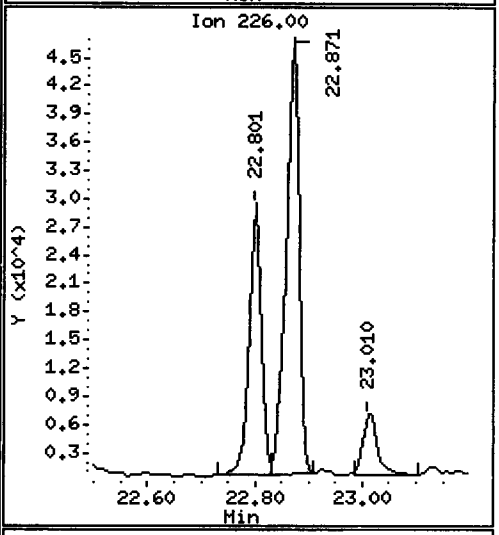


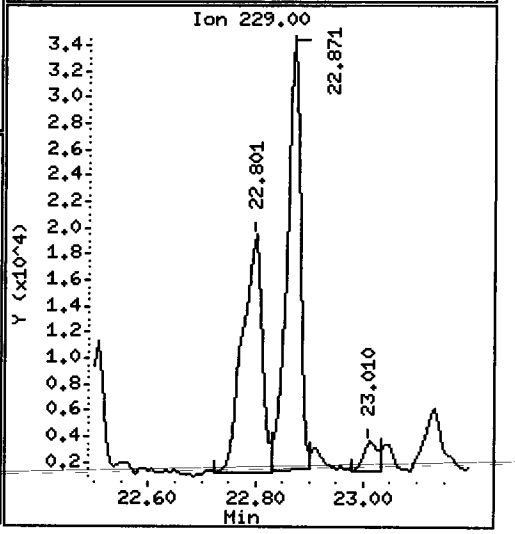












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

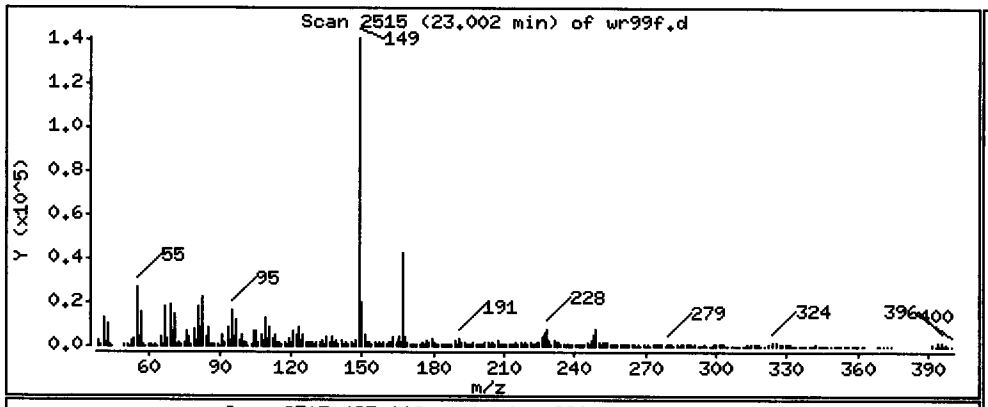
Operator: VTS/YZ

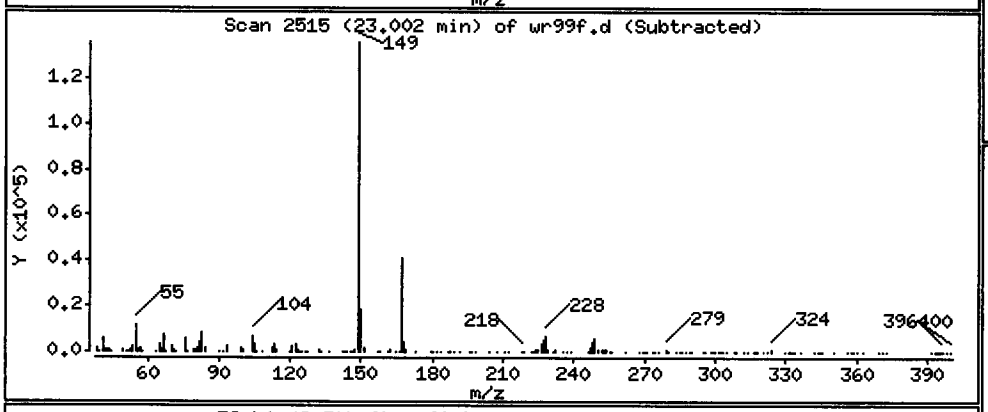
Column phase: ZB-5msi

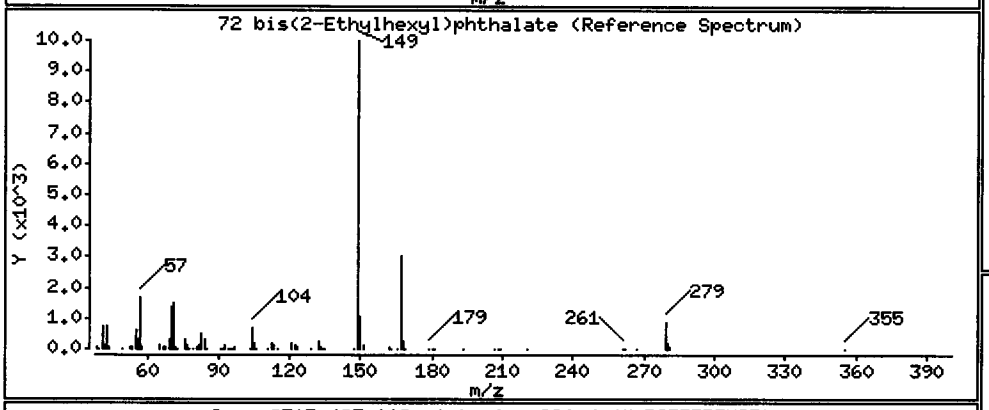
Column diameter: 0.25

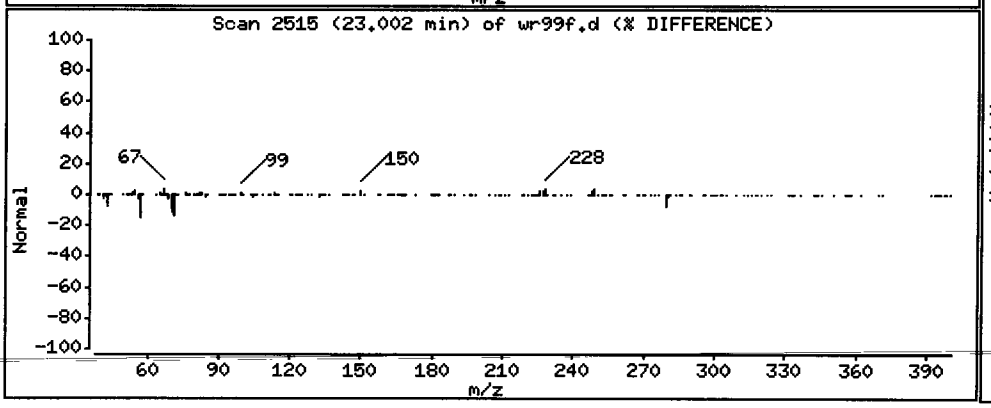
72 bis(2-Ethylhexyl)phthalate

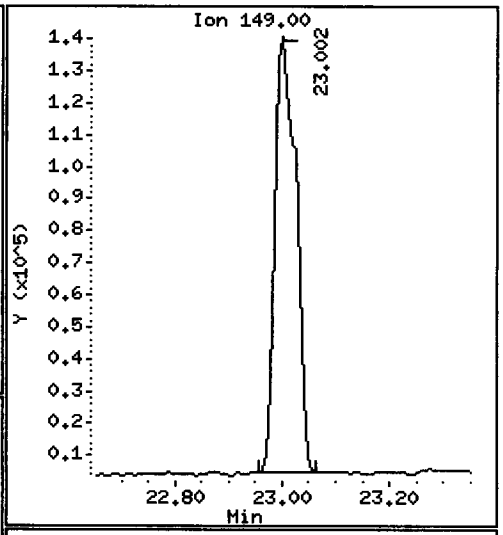
Concentration: 3373 ug/kg

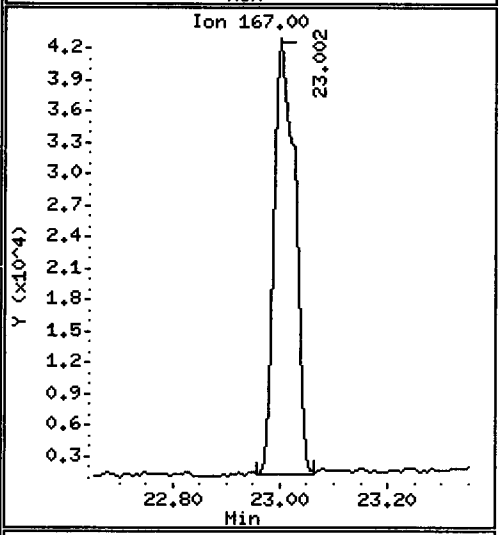


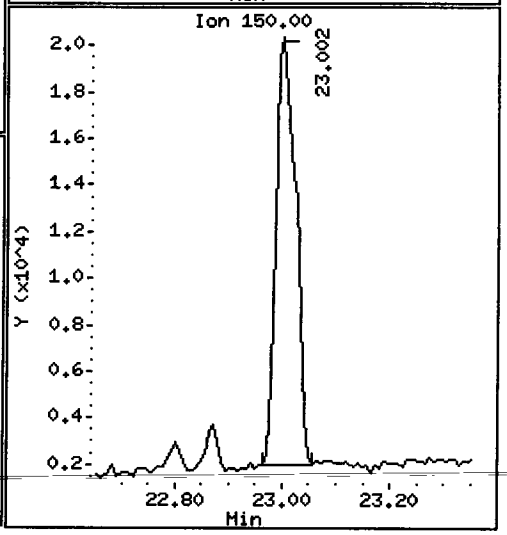












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

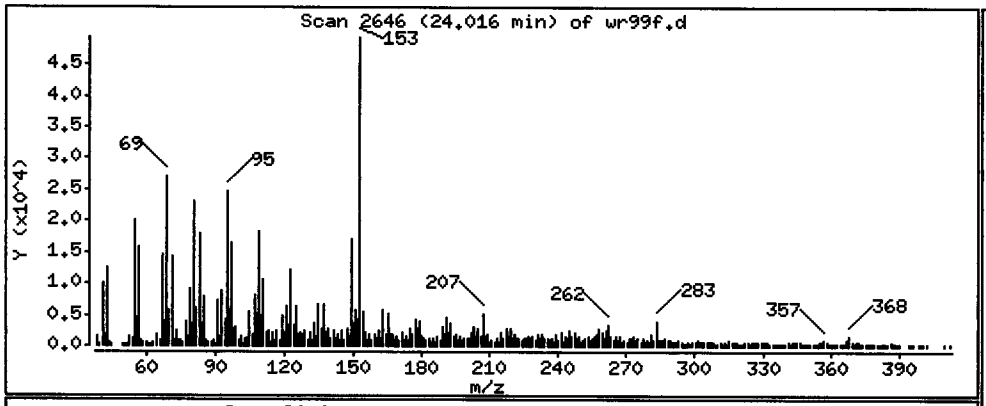
Operator: VTS/YZ

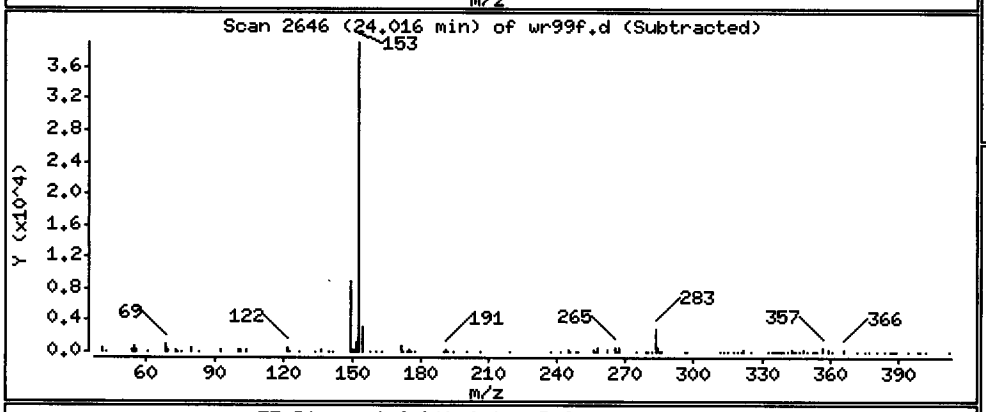
Column phase: ZB-5msi

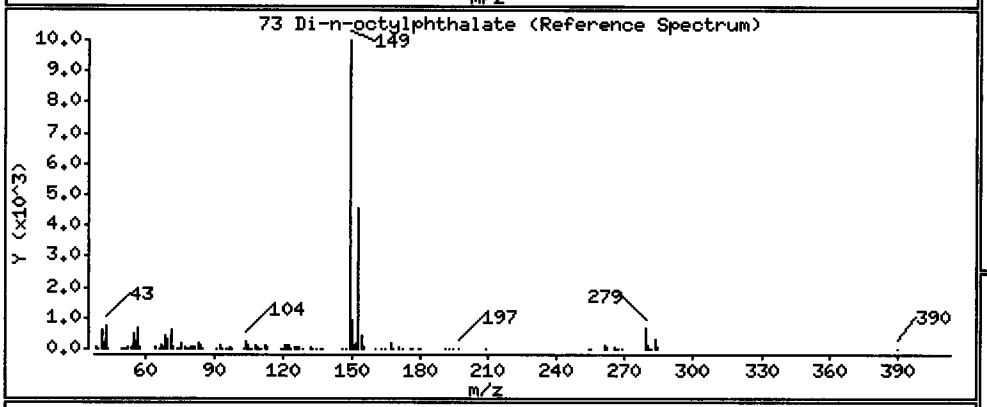
Column diameter: 0.25

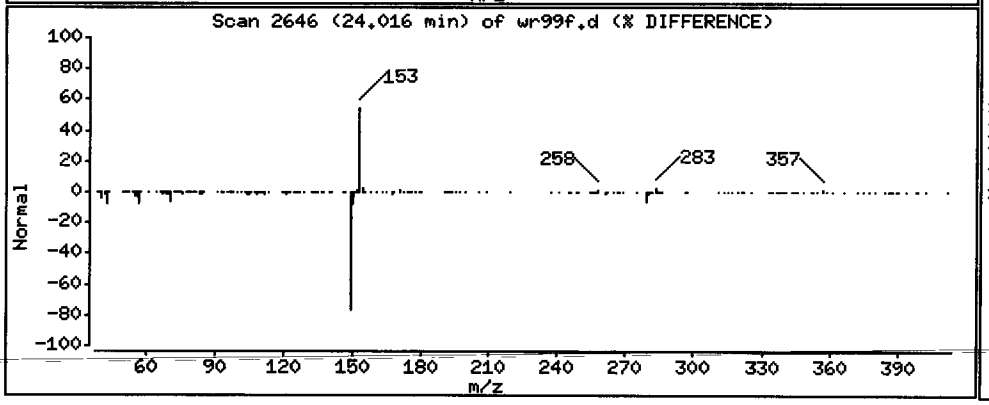
73 Di-n-octylphthalate

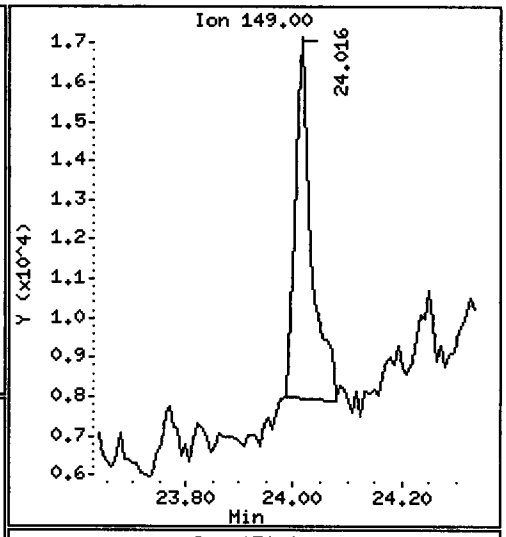
Concentration: 105.3 ug/kg

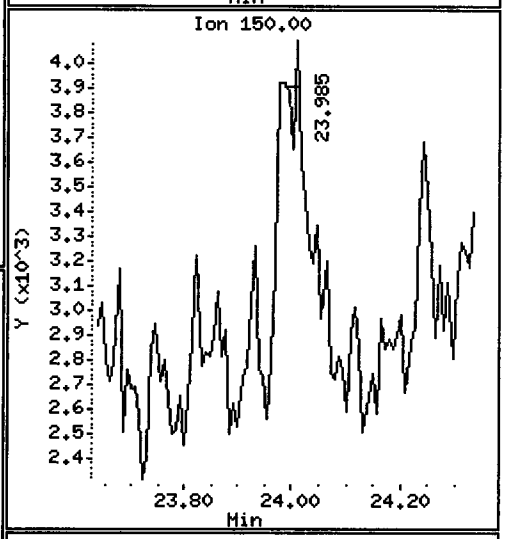


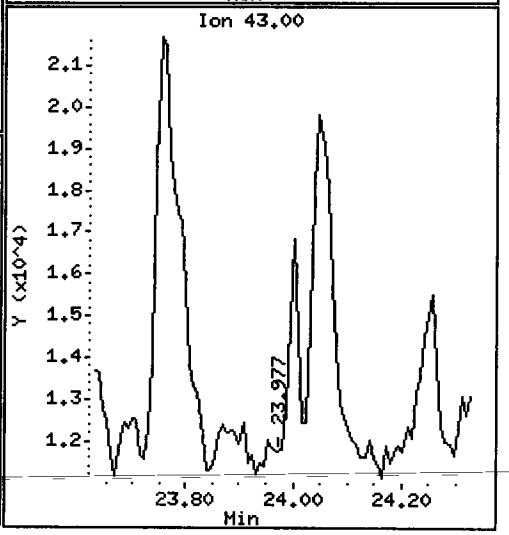












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

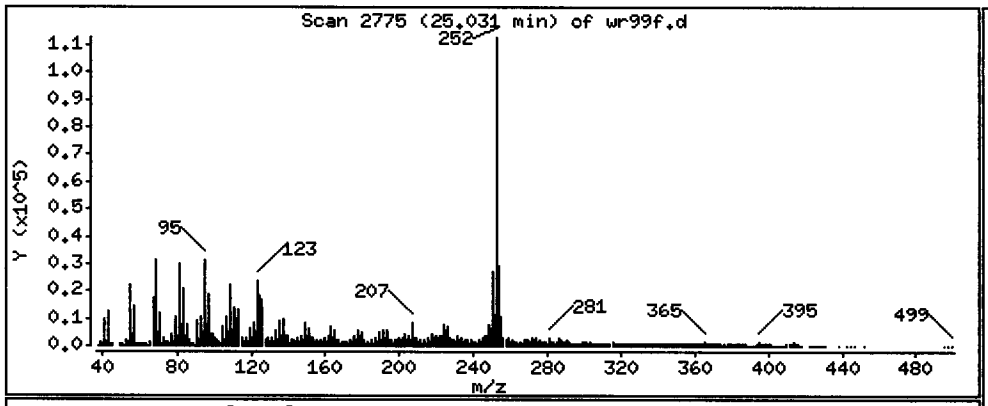
Operator: VTS/YZ

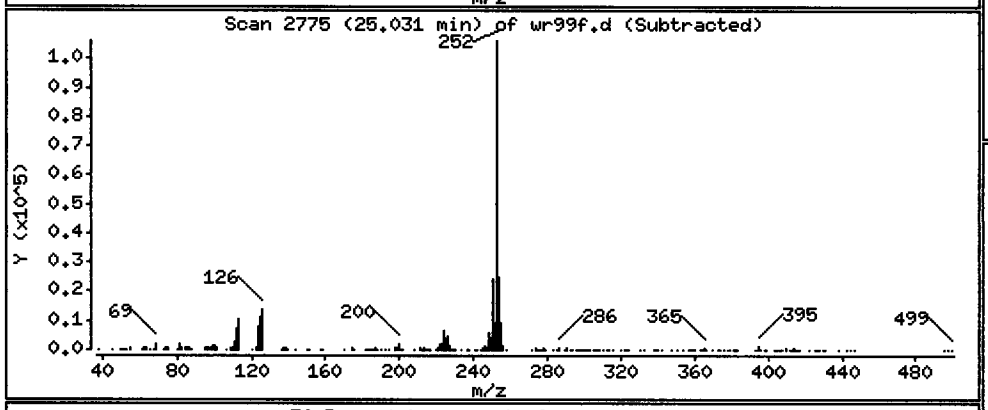
Column phase: ZB-5msi

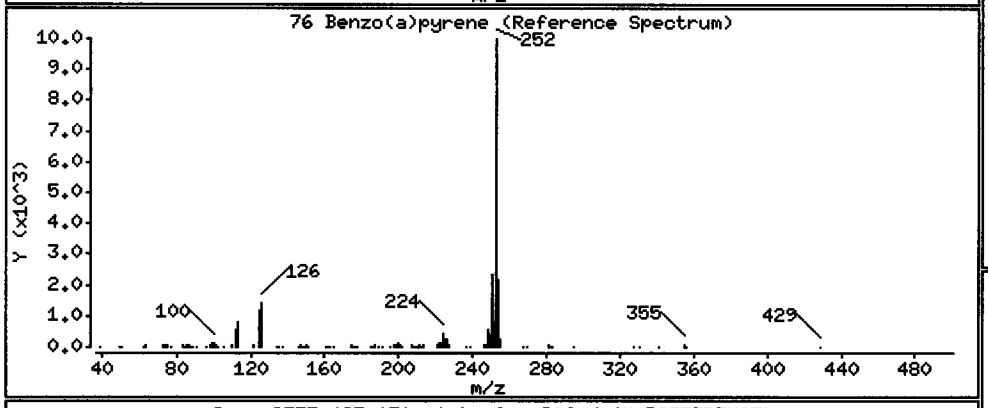
Column diameter: 0.25

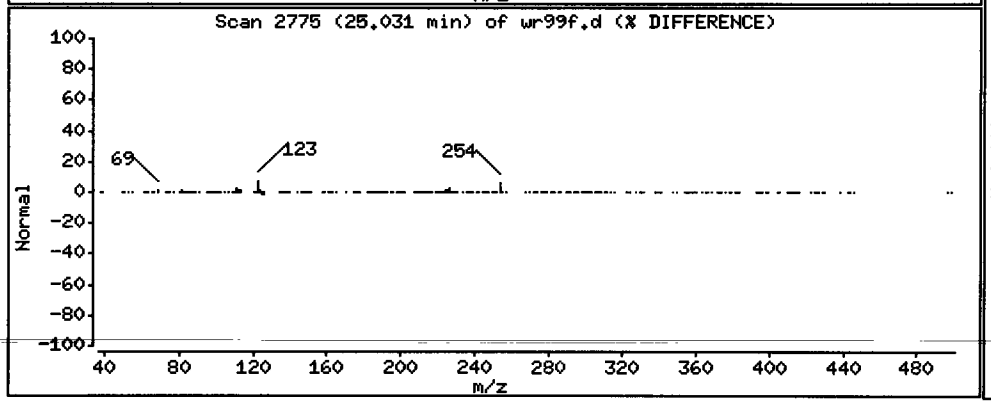
76 Benzo(a)pyrene

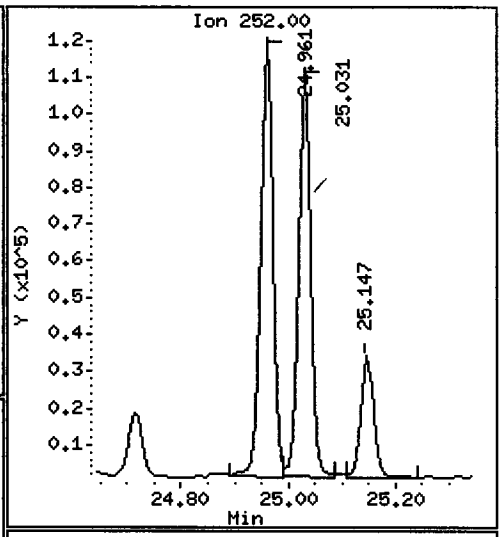
Concentration: 1200 ug/kg

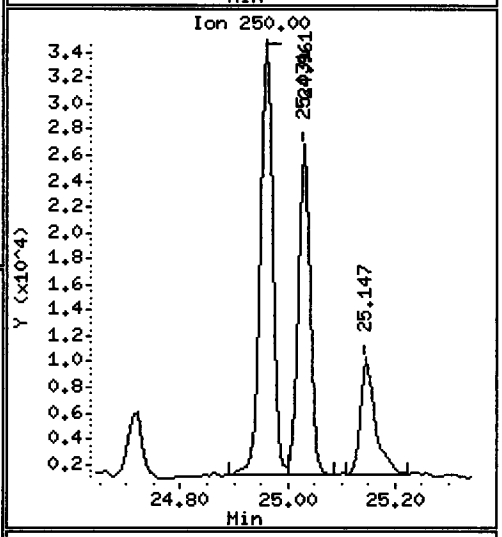


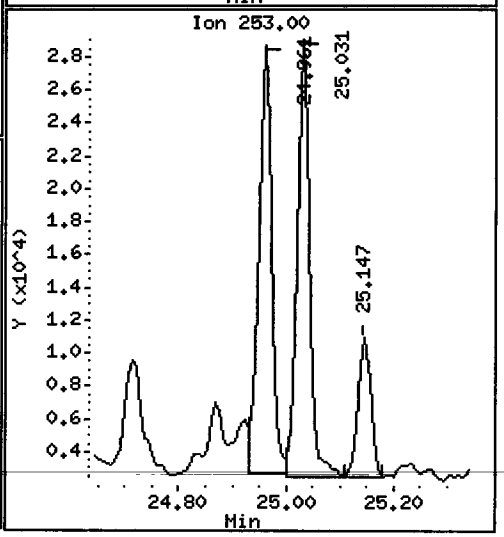












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

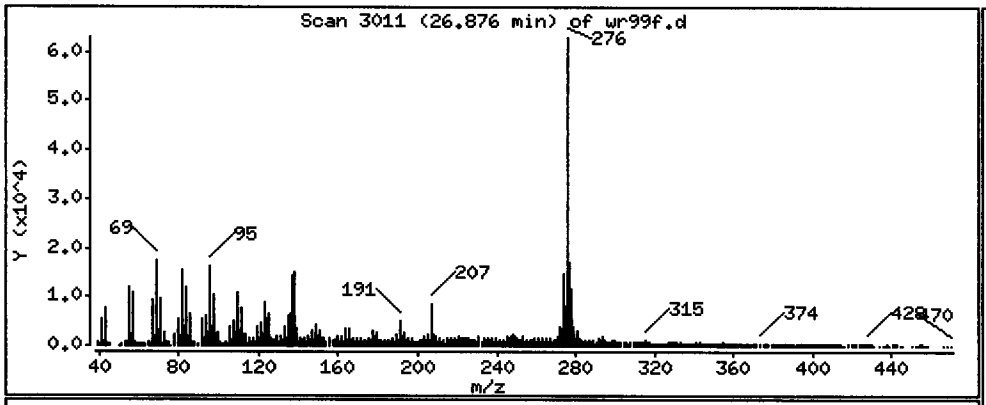
Operator: VTS/YZ

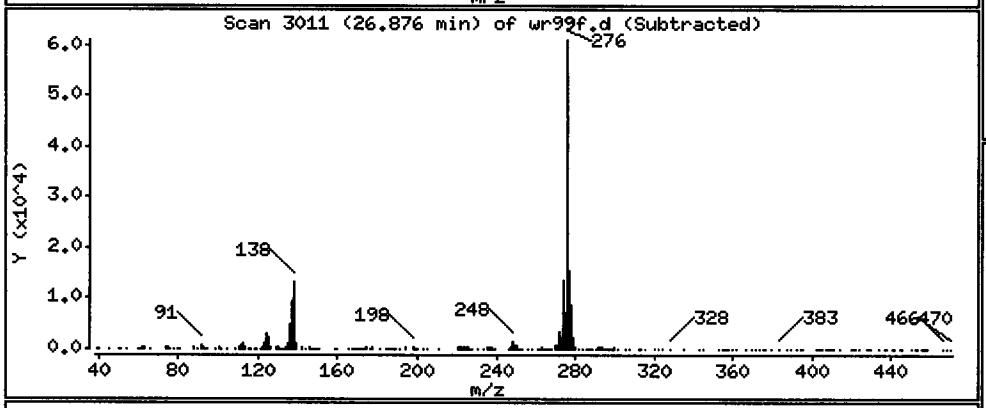
Column phase: ZB-5msi

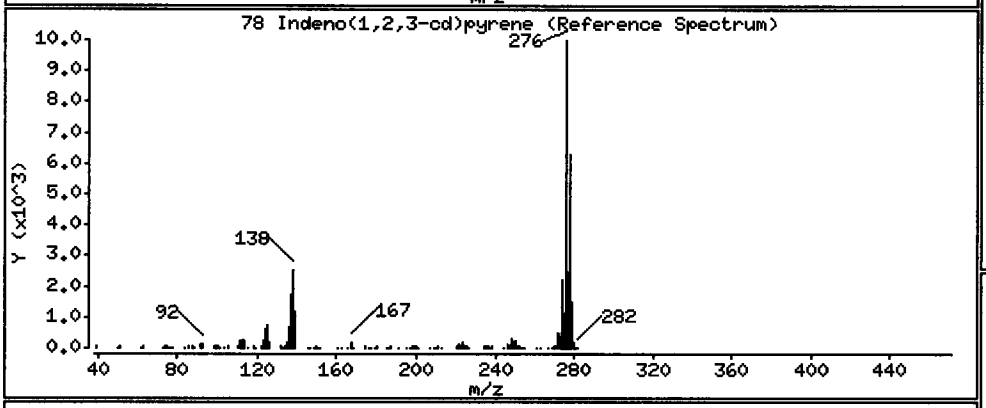
Column diameter: 0.25

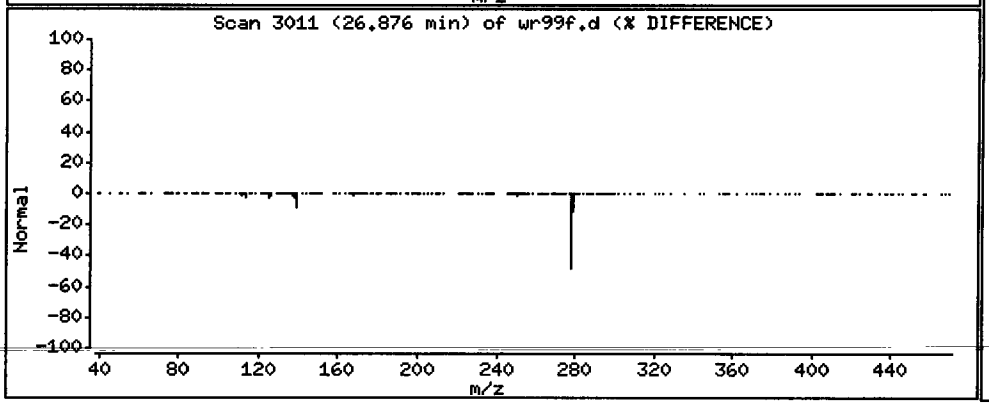
78 Indeno(1,2,3-cd)pyrene

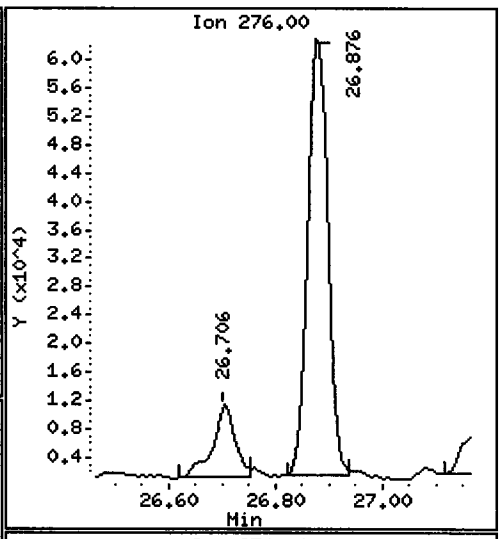
Concentration: 917.1 ug/kg

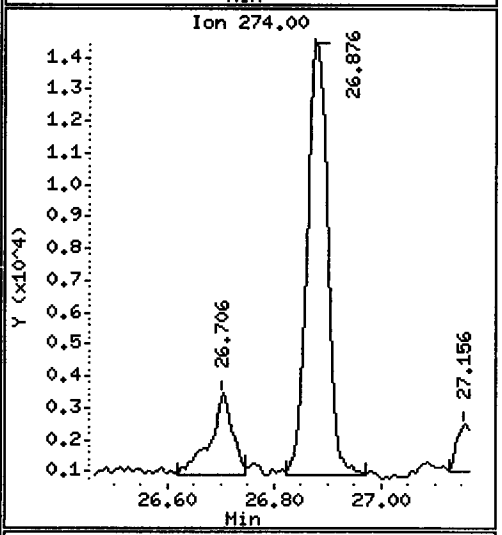


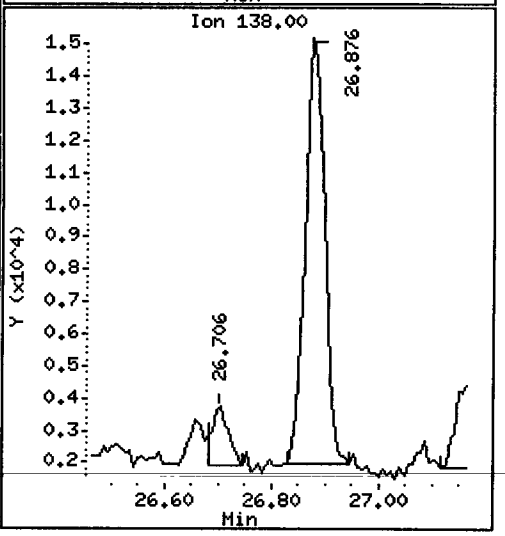












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

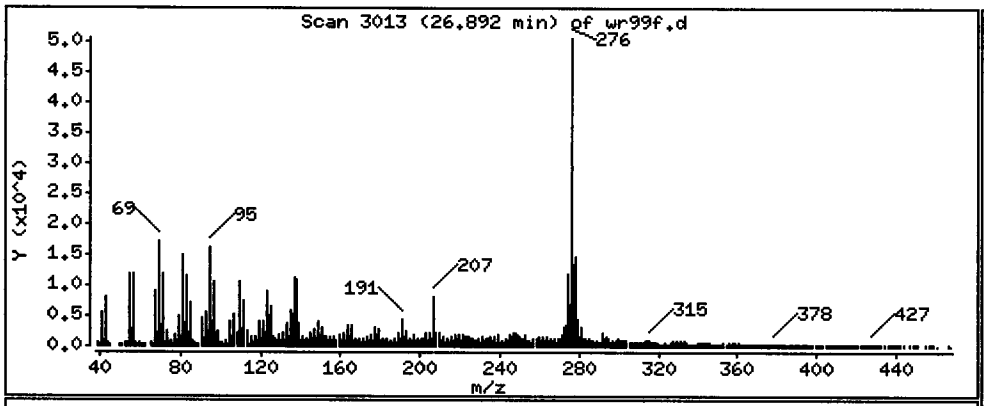
Operator: VTS/YZ

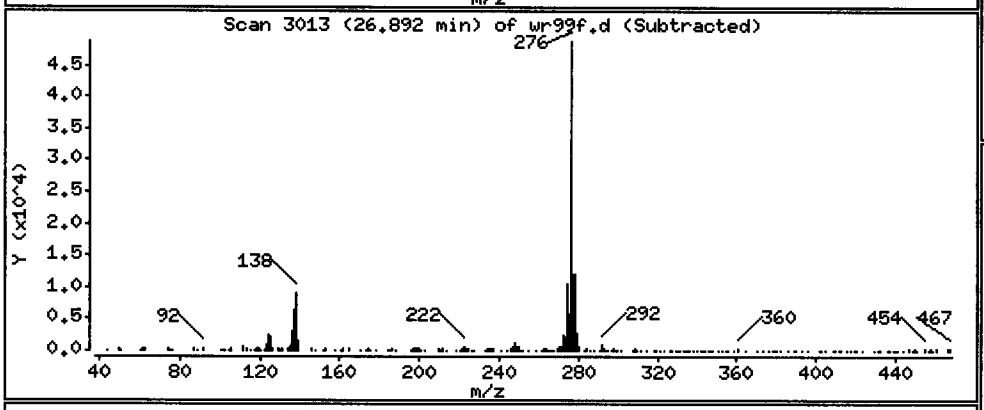
Column phase: ZB-5msi

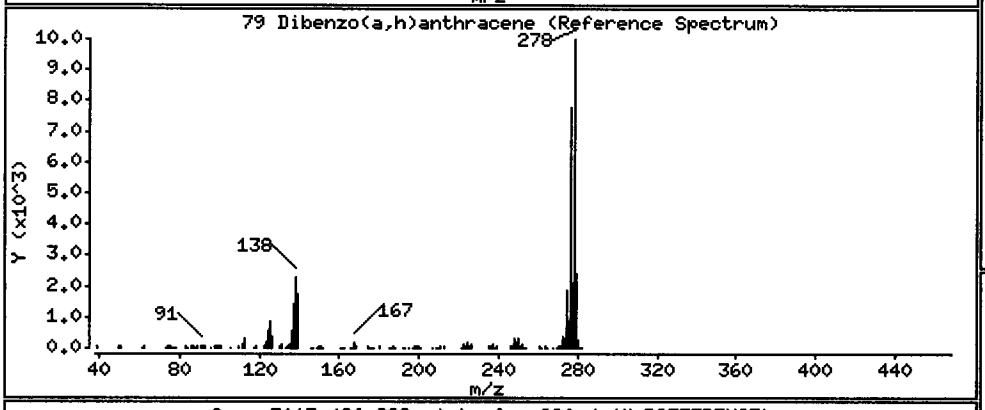
Column diameter: 0.25

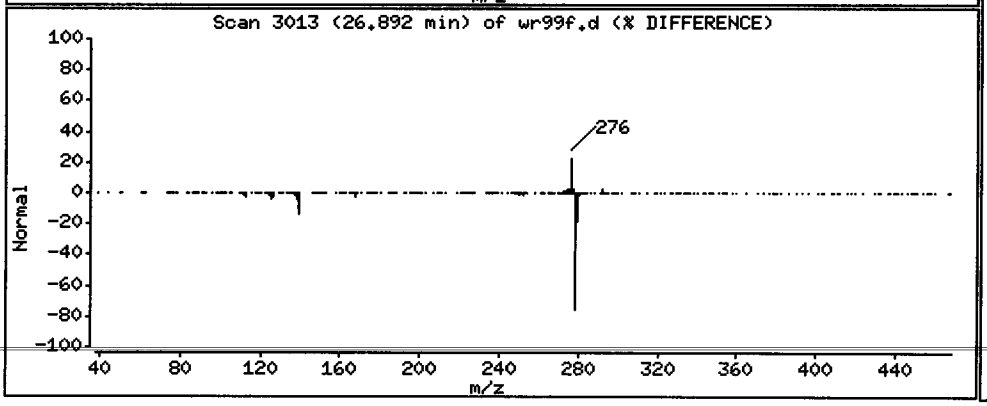
79 Dibenzo(a,h)anthracene

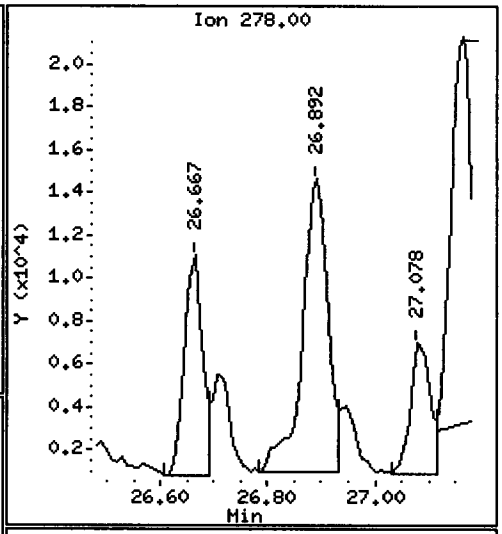
Concentration: 340.7 ug/kg

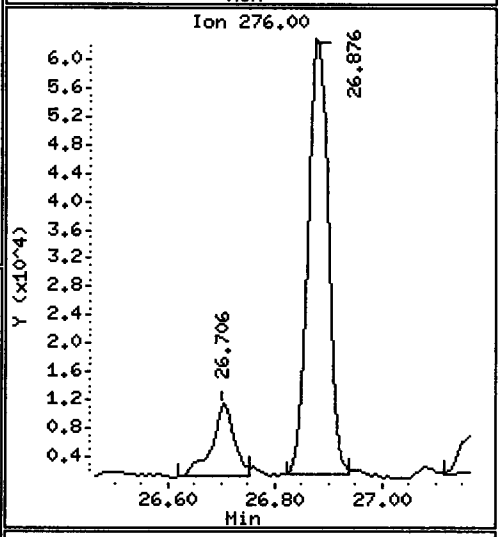


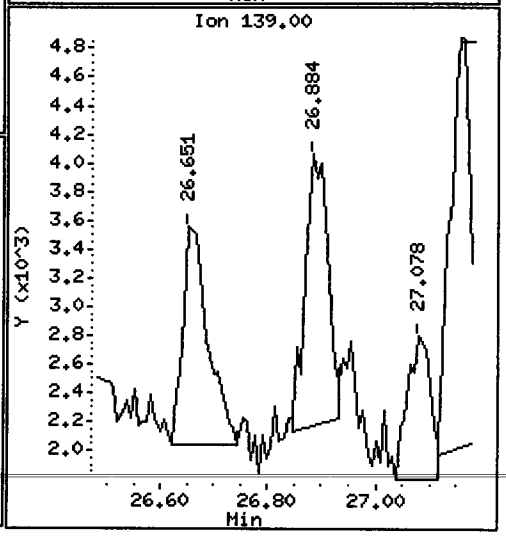












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

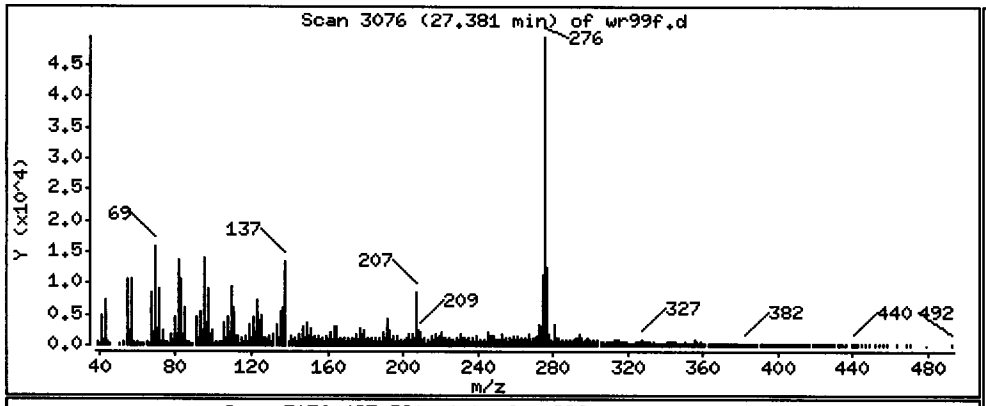
Operator: VTS/YZ

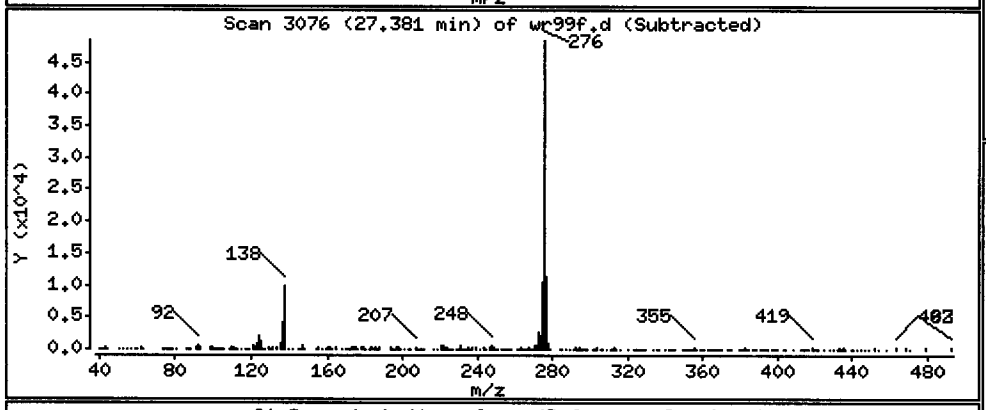
Column phase: ZB-5msi

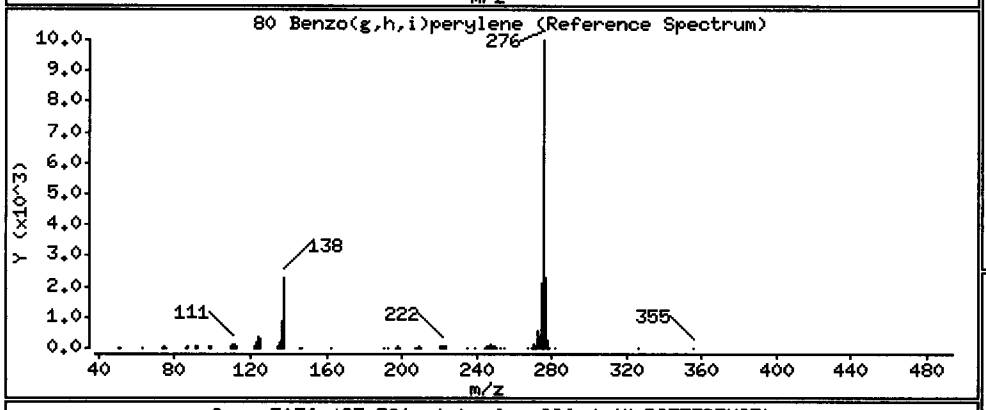
Column diameter: 0.25

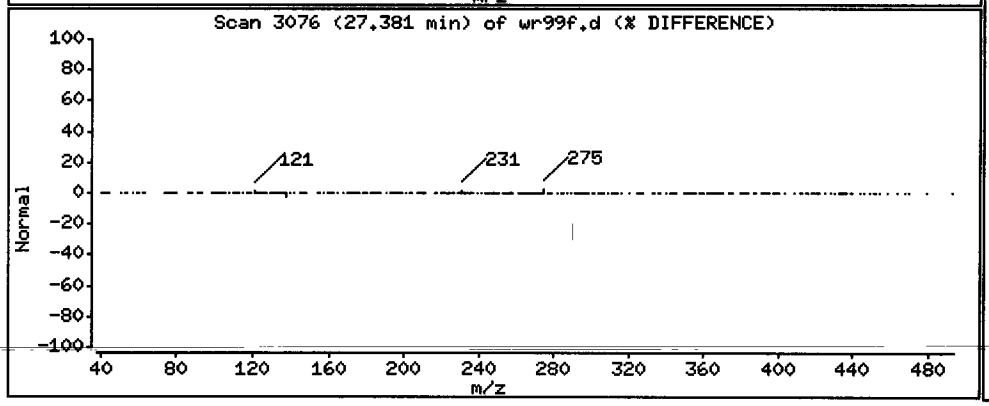
80 Benzo(g,h,i)perylene

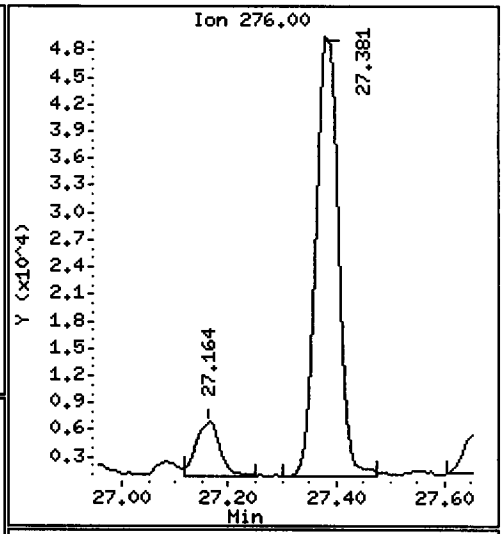
Concentration: 925.3 ug/kg

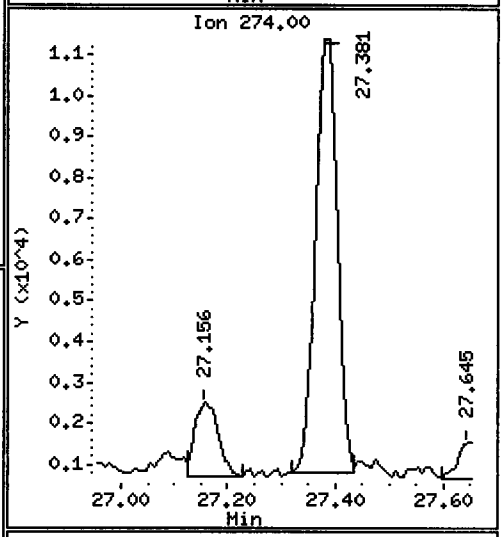


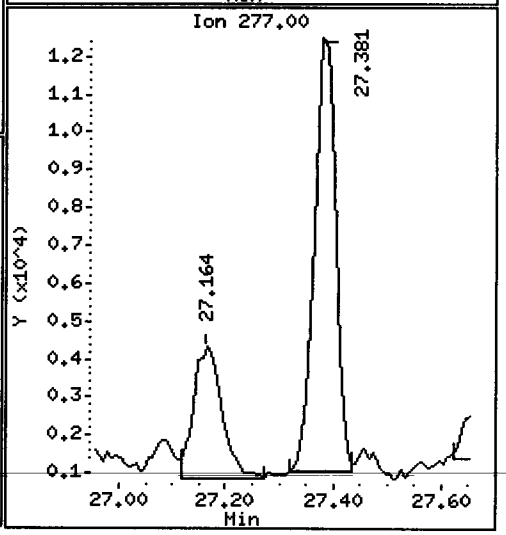












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

Operator: VTS/YZ

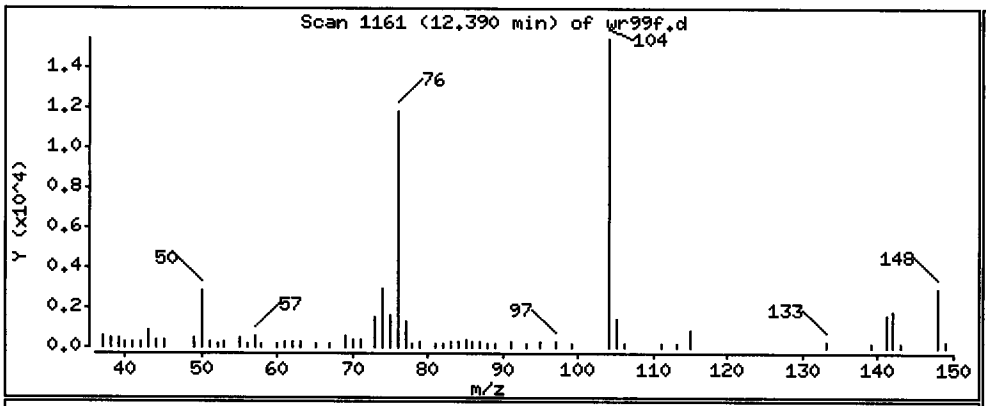
Column phase: ZB-5msi

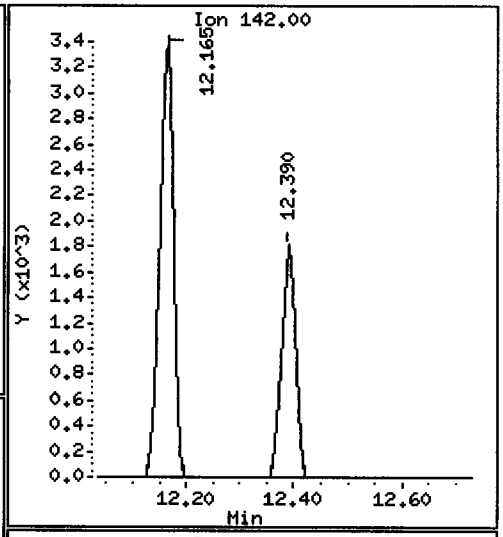
Column diameter: 0.25

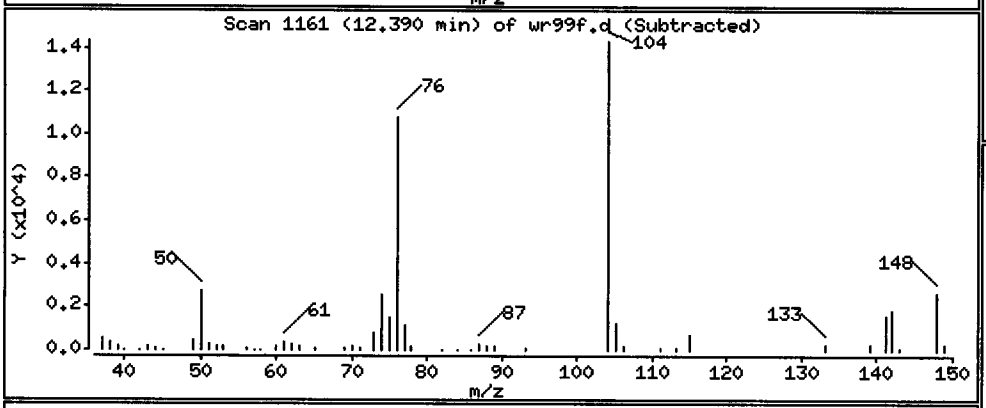
6 uL

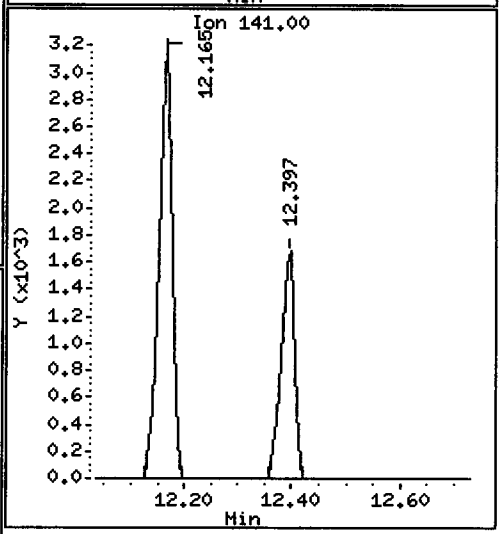
105 1-methylnaphthalene

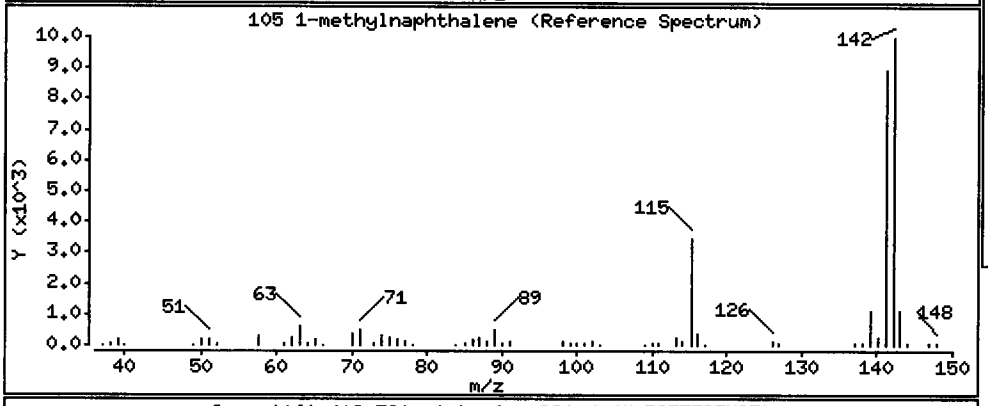
Concentration: 28.77 ug/kg

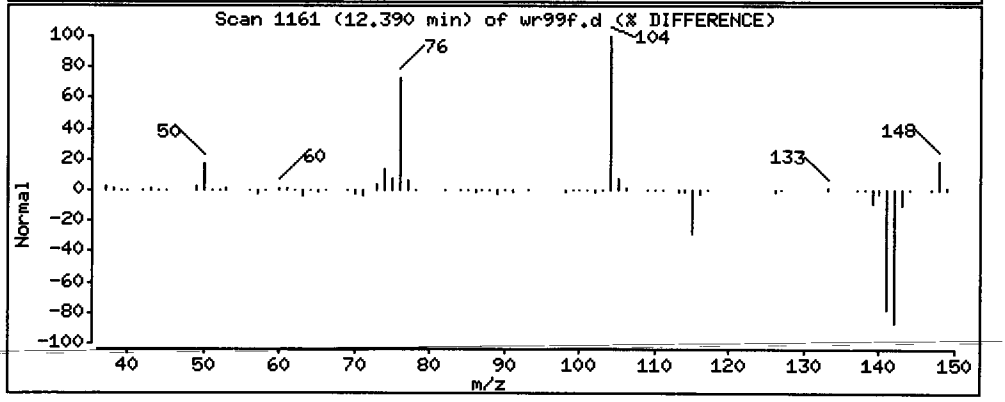












Data File: /chem1/nt10.i/20130613.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

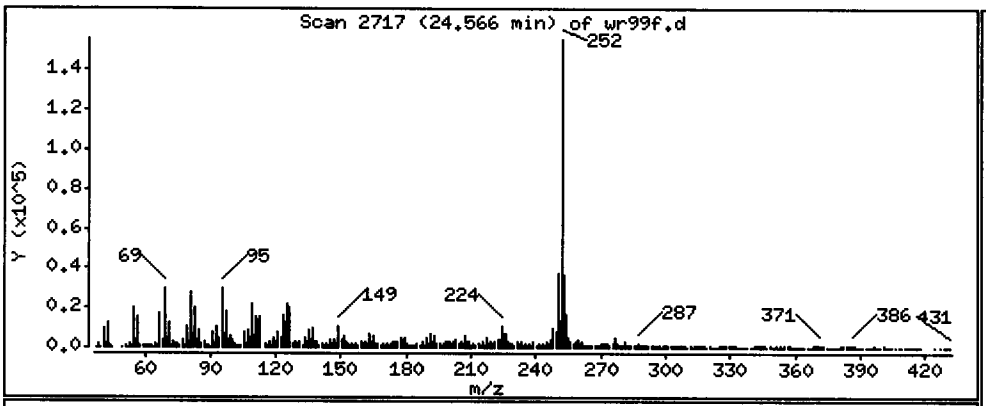
Operator: VTS/YZ

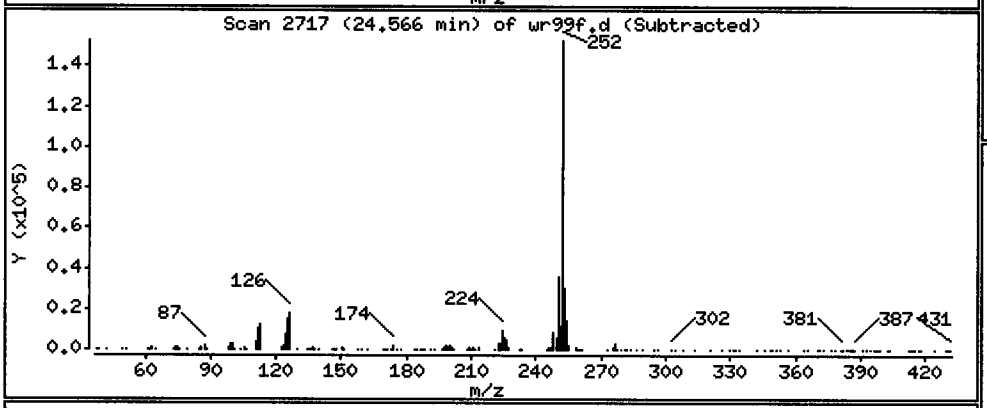
Column phase: ZB-5msi

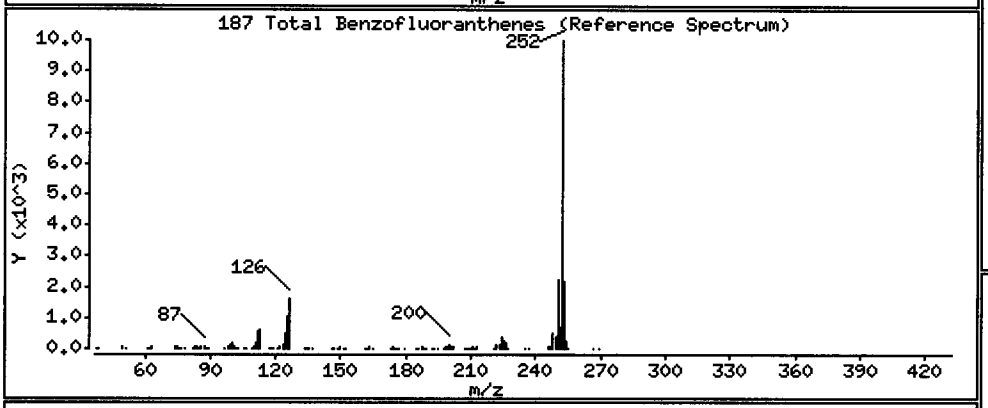
Column diameter: 0.25

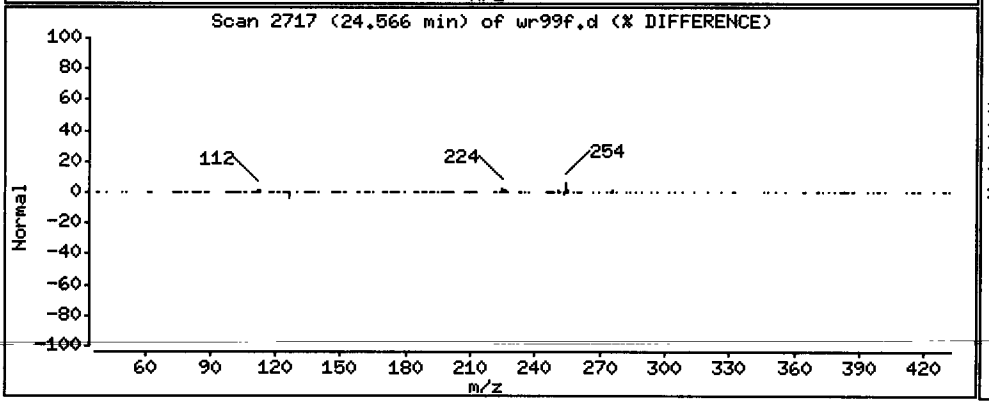
187 Total Benzofluoranthenes

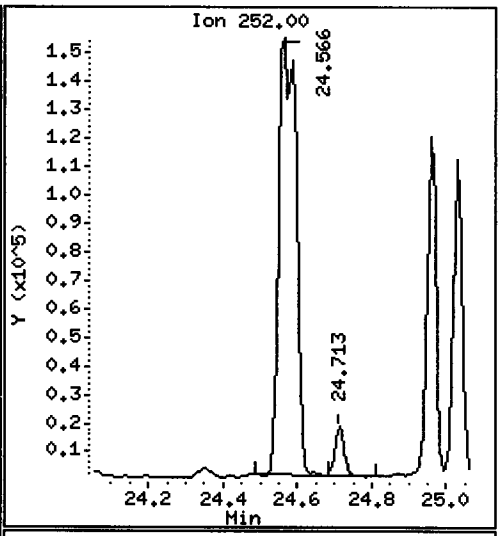
Concentration: 2926 ug/kg

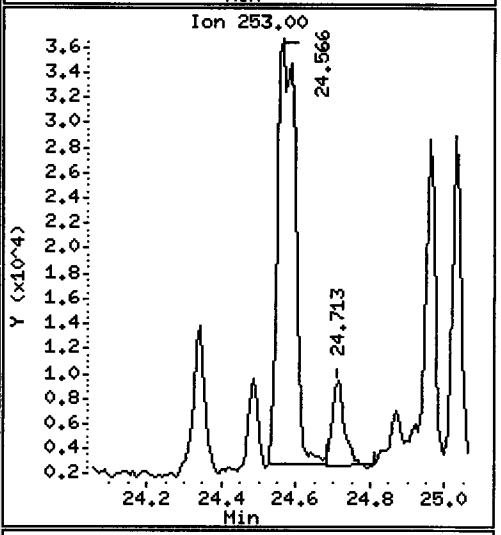


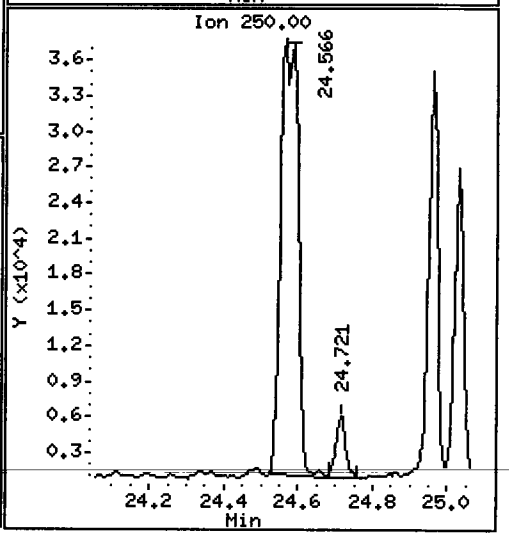






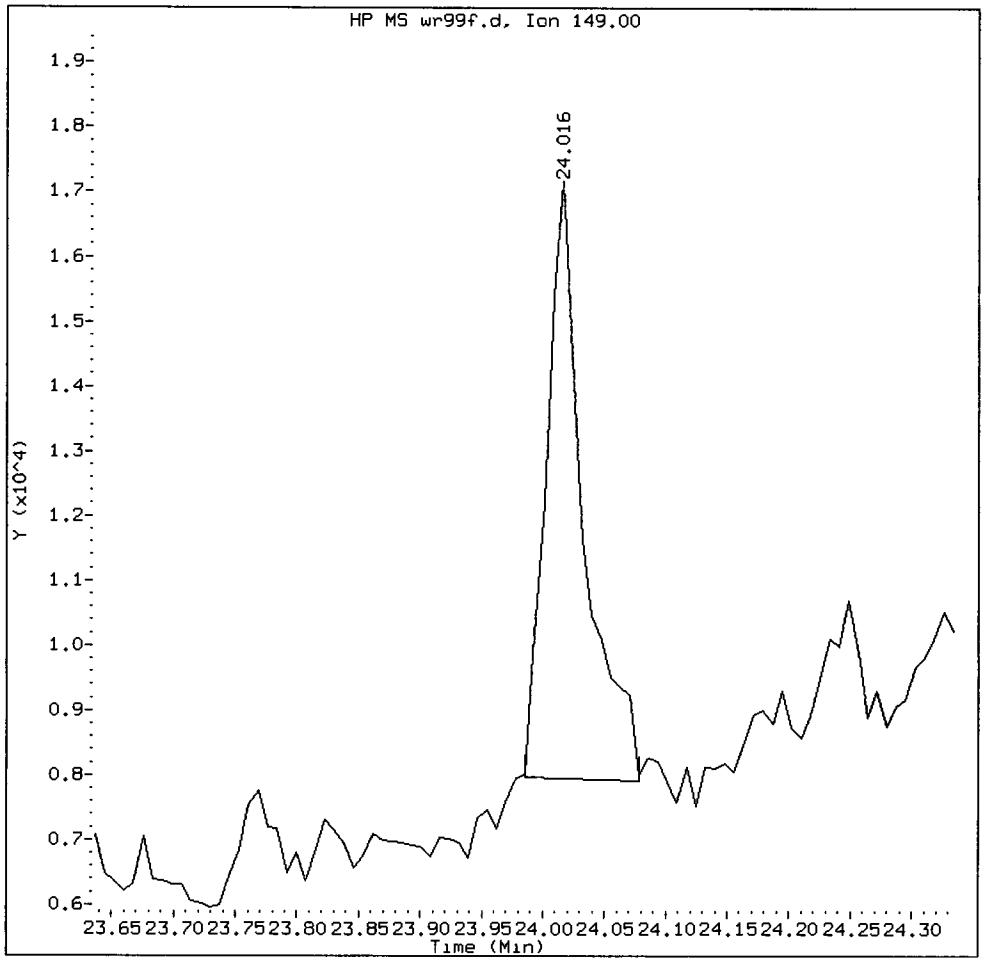






WR99F, /chem1/nt10.i/20130613.b/wr99f.d

Di-n-octylphthalate Amount: 0.39 Area: 19528



MANUAL INTEGRATION for Di-n-octylphthalate

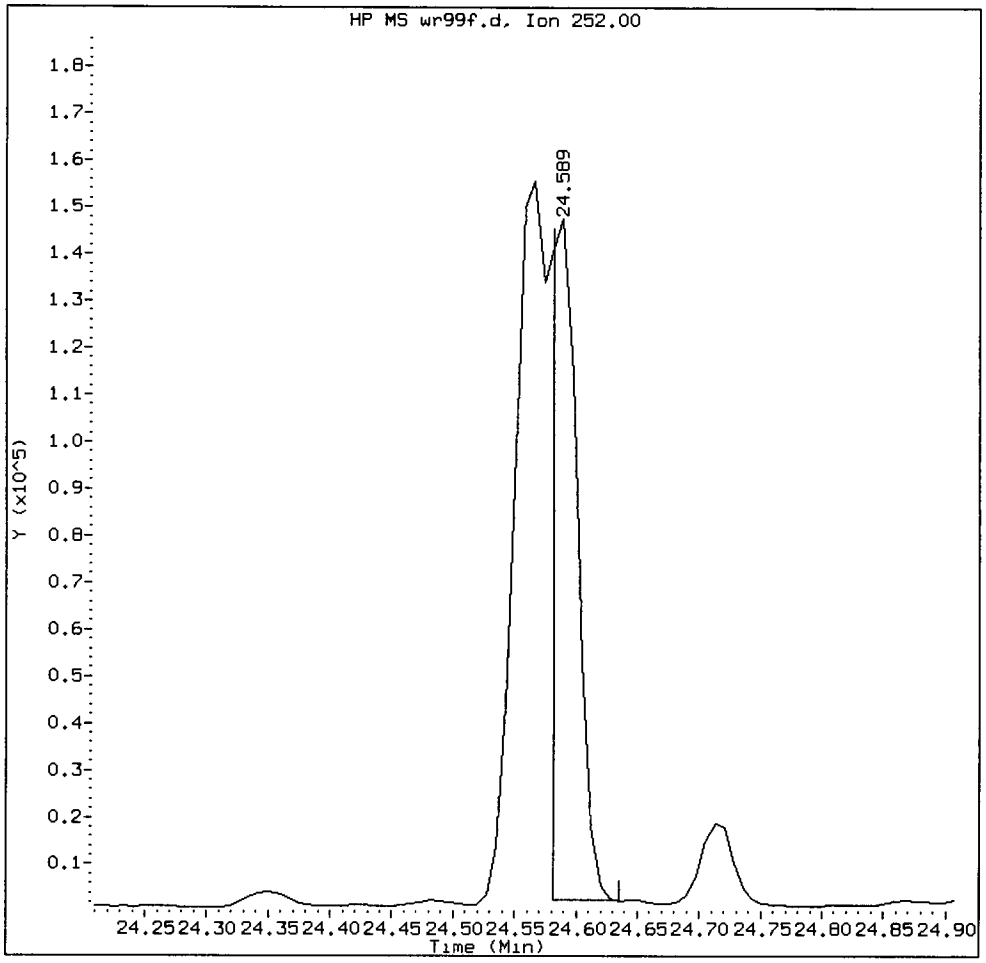
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/17/13

WR99F, /chem1/nt10.i/20130613.b/wr99f.d

Benzo(k)fluoranthene Amount: 4.46 Area: 219689



MANUAL INTEGRATION for Benzo(k)fluoranthene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

CO-ELUTION SUMMARY FOR FILE - wr99f.d

Lab ID: WR99F, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WR99, WS01

Incorporated
Analytical Chemists and Consultants

(8270D) BAN/SIM SVOA PSDDA–Soil/ Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (5-20ppb)

ARI Job No(s) W549, WR99, W521 Page 1 of 1 Batch set up by: ~~SP~~

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	W549 MBS	10.00g	(1:1) (Y)/ N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	YL 06/08/13 Analyst/Date
	SBS	10.00g	(1:1) (Y)/ N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 (2) 3 YL/CJ 06/08/13 Analyst/Date
	SBS Dup.	10.00g	(1:1) (Y)/ N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C 1 2 3 4 5 6
2	~~QLS~~ A	~~10.00g~~ 11.07	(1:1) (Y)/ N	1mL	1mL	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	JR Analyst/Date 06/10/13
2	~~QLS (SIM)~~ B	~~10.00g~~ 11.01	(1:1) (Y)/ N	1mL	1mL	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 (2) 3
2	C	11.04	(1:1) (Y)/ N	1mL	1mL		CJZ 6/10/13 Analyst/Date
2	D	12.01	(1:1) (Y)/ N	1mL	1mL		GPC Prep Filter (1:1)
8	WR99 D	13.04	(1:1) (Y)/ N	1mL	1mL		CJZ 6/10/13 Analyst/Date
8	DMS	13.04	(1:1) (Y)/ N	1mL	1mL		
8	DMS2	13.01	(1:1) (Y)/ N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6
3	E	13.01	(1:1) (Y)/ N	1mL	1mL	See Analyst Notes	YL 6/11/13 Analyst/Date
3	F	6.01	(1:1) (Y)/ N	1mL	1mL	↓	
8	W521 A	13.04	(1:1) (Y)/ N	1mL	1mL	Reviewed by	TurboVap 1 2 3
Analyst/Date	YL 06/08/13		CJZ 6/10/13	SP 6/11/13	SP 6/11/13	SP 6/11/13	SP 6/11/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2093-4)	100/150µg/mL	50µL	7/02/13	YL	
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/29/14	YL	
Base Spike	56 (2065-2)	200µg/mL	50µL	7/31/13	YL	
Acid Spike	38 (2091-4)	100/150µg/mL	50µL	2/28/14	YL	
~~QLS Spike (14 in Freezer)~~	~~14( )~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25( )~~	~~1µg/mL~~	~~50µL~~			
Extraction Time: 12:45			Balance ID: B146426			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~or large~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y /(N) B. Archive/Freeze Y /(N)

WR99 : 61865

Reagent and Solutions Identification

(8270D) BAN/SIM SVOA PSDDA-Soil/ Sediment/
Microwave (3546) (SOP # 3304S)

ARI Job No(s) W549, WR99, W521

(8270D) BAN/SIM SVOA PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Pre-Deactivated Sodium Sulfate: (H# 157) Anhydrous Sodium Sulfate: (I# 8134 jar date 5-24-13) 1:1 Methylene Chloride/Acetone: (H# 195) Methylene Chloride: (I# 8249) Pre-Deactivated Glasswool: (H# 180)	Microwave CT 6-8-13 YC
Pre-GPC KD Station: Pre-Deactivated Glasswool: (H# 180) Anhydrous Sodium Sulfate: (I# 8134 jar date 5/24/13) Methylene Chloride: (I# 8249)	~~Pre-~~GPC KD KR 06/10/13
GPC Filter Prep: Methylene Chloride: (I# 8270)	GPC Filter Prep CSZ 6/10/13
GPC Station: Acetone: (I# 8218) Methylene Chloride: (I# 8270)	GPC CSZ 6/10/13
Post GPC KD Station: Methylene Chloride: (I# 8270)	Post GPC KD YC 06/11/13
Vialing Station: Methylene Chloride: (I# 8270) Hexane: (I# N/A)	Vialing SP 6/11/13

WR99 : 01888

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: 801S(SIM-PNA) 802S(Butyl Tins) 804S(SVOA-8270D) SIM 805S(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 04/29/13 Internal Standard ID 1998-2 Expiration 07/03/13

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%? see Full scan	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	2072-1	6/3/13	UCTG	2055-1	12/05/13
	2073-1	6/3/13	Full	2054-1	6/3/13
	2064-1	01/25/14	scan	2053-2	08/13/13
	B000112	10/15/13			
	1998-4	7/03/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YB Date: 5/3/13

Reviewer: VD Date: 5.4.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/29/13 Analysis: ABN/SIMABN Analyst: YZ

GC Program: ABN2 Column No: 252945 Column Type: ZB5-MSI

Instrument Tune (.U or .CT.): 130284 EM Voltage: 1652

Calibration File: DF 0429 Curve Date: 04/29/13 Injection Vol.: 1uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 BCOMB2	
	2073-1 1998-4	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130429.b

	Time	Filename	LabID	ClientId	DF											
1	1637	df0429.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1653	ic0429a.d	ICD429A		1	8.99	53090	11.65	194944	15.55	113450	18.82	212689	23.90	235045	26.35	227736
3	1807	ic0429c.d	ICD429C		1	8.98	58845	11.65	217141	15.54	121711	18.82	222131	23.89	244600	26.35	221779
4	1844	ic0429d.d	IC0429D		1	8.98	52658	11.65	192325	15.54	109274	18.82	203933	23.90	223647	26.35	211919
5	1957	ic0429f.d	IC0429F		1	8.98	52849	11.65	195311	15.54	106586	18.82	192165	23.90	215273	26.35	195976
6	2034	ic0429g.d	IC0429G		1	8.98	43709	11.65	160165	15.54	95179	18.82	178699	23.90	199199	26.36	191024
7	2111	ic0429h.d	IC0429H		1	8.98	51614	11.65	193559	15.54	107939	18.82	194268	23.89	211275	26.35	196007
8	2147	ic04291.d	IC0429I		1	8.98	49468	11.64	182546	15.54	105486	18.82	191121	23.90	208500	26.35	197777

YZ 5/03/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

WR99 : 01093

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0429a	ic0429c	ic0429d	ic0429f	ic0429g	ic0429h	ic0429i
INJ.DATE:	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013
INJ.TIME:	16:53	18:07	18:44	19:57	20:34	21:11	21:47

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$	1 2-Fluorophenol	+++++	6.641	6.634	6.634	6.633	6.633	6.634	6.634	6.134-7.134	6.635	0.003
	138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
	139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
	140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
	141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
	142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
	135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
	136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
	137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.828	7.328-8.328	+++++	+++++
*	134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.900	16.400-17.400	+++++	+++++
	133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
	132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
	131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.954	29.454-30.454	+++++	+++++
	146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.752	23.252-24.252	+++++	+++++
	130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.717	27.217-28.217	+++++	+++++
	129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
	128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.796	19.296-20.296	+++++	+++++

Reviewer 1 _____ Date: 5/3/13
Reviewer 2 _____ Date: 5.4.13

ARS9 : 9SRM

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
	107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
	105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
$	2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.886	6.386-7.386	+++++	+++++
	3 Phenol	8.365	8.365	8.357	8.365	8.364	8.365	8.365	8.365	7.865-8.865	8.364	0.003
	4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.268	7.768-8.768	+++++	+++++
$	5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.087	6.587-7.587	+++++	+++++
	6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.592	8.092-9.092	+++++	+++++
	7 1,3-Dichlorobenzene	8.914	8.914	8.914	8.914	8.914	8.914	8.914	8.914	8.414-9.414	8.914	0.000
*	8 1,4-Dichlorobenzene-d4	8.991	8.984	8.984	8.984	8.983	8.984	8.984	8.991	8.491-9.491	8.985	0.003
	9 1,4-Dichlorobenzene	9.015	9.015	9.015	9.015	9.015	9.015	9.015	9.015	8.515-9.515	9.015	0.000
$	10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
	11 Benzyl alcohol	9.294	9.294	9.286	9.294	9.294	9.294	9.294	9.294	8.794-9.794	9.293	0.003
	12 1,2-Dichlorobenzene	9.395	9.395	9.395	9.395	9.395	9.395	9.395	9.395	8.895-9.895	9.395	0.000
	13 2-Methylphenol	9.558	9.550	9.550	9.550	9.550	9.550	9.551	9.558	9.058-10.058	9.551	0.003
	14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.998	8.498-9.498	+++++	+++++
	15 4-Methylphenol	9.853	9.845	9.845	9.845	9.845	9.845	9.846	9.853	9.353-10.353	9.846	0.003
	16 N-Nitroso-di-n-propyla	9.900	9.900	9.900	9.900	9.899	9.899	9.900	9.900	9.400-10.400	9.900	0.000
	17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.363	8.863-9.863	+++++	+++++
$	18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.237	7.737-8.737	+++++	+++++
	19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.696	8.196-9.196	+++++	+++++
	20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.987	8.487-9.487	+++++	+++++
	21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	10.969	10.969	10.961	10.962	10.969	10.961	10.962	10.969	10.469-11.469	10.965	0.004
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.557	9.057-10.057	+++++	+++++
	24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.500	9.000-10.000	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.563	11.563	11.563	11.563	11.563	11.563	11.563	11.563	11.063-12.063	11.563	0.000
*	27 Naphthalene-d8	11.648	11.648	11.648	11.648	11.647	11.647	11.640	11.648	11.148-12.148	11.647	0.003
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.518	9.018-10.018	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
	30 Hexachlorobutadiene	12.103	12.103	12.103	12.104	12.103	12.103	12.104	12.103	11.603-12.603	12.103	0.000
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.194	10.694-11.694	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.019	10.519-11.519	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.386	10.886-11.886	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.091	10.591-11.591	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.600	11.100-12.100	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.805	11.305-12.305	+++++	+++++
	39 Dimethylphthalate	15.060	15.052	15.052	15.052	15.060	15.052	15.052	15.060	14.560-15.560	15.054	0.004
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
*	42 Acenaphthene-d10	15.547	15.539	15.539	15.540	15.539	15.539	15.540	15.547	15.047-16.047	15.540	0.003
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.508	12.008-13.008	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.578	12.078-13.078	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.660	12.160-13.160	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.756	12.256-13.256	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.867	12.367-13.367	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.031	12.531-13.531	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.248	12.748-13.748	+++++	+++++
	50 Diethylphthalate	16.645	16.637	16.637	16.637	16.645	16.637	16.637	16.645	16.145-17.145	16.639	0.004
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	13.868-14.868	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.510	13.010-14.010	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.340	12.840-13.840	+++++	+++++
	54 N-Nitrosodiphenylamine	17.031	17.023	17.031	17.031	17.031	17.023	17.023	17.031	16.531-17.531	17.028	0.004
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.476	12.976-13.976	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.191	13.691-14.691	+++++	+++++
	57 Hexachlorobenzene	18.158	18.150	18.158	18.150	18.157	18.157	18.158	18.158	17.658-18.658	18.155	0.004
	58 Pentachlorophenol	18.552	18.545	18.552	18.553	18.552	18.552	18.553	18.552	18.052-19.052	18.551	0.003
*	59 Phenanthrene-d10	18.816	18.816	18.815	18.816	18.815	18.815	18.816	18.816	18.316-19.316	18.816	0.000
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.290	14.790-15.790	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.986	15.486-16.486	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.867	16.367-17.367	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.445	16.945-17.945	+++++	+++++
$	66 Terphenyl-d14	22.026	22.026	22.026	22.027	22.026	22.026	22.027	22.026	21.526-22.526	22.026	0.000
	67 Butylbenzylphthalate	22.979	22.971	22.979	22.979	22.979	22.971	22.971	22.979	22.479-23.479	22.975	0.004
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	23.900	23.892	23.900	23.900	23.900	23.892	23.900	23.900	23.400-24.400	23.898	0.004
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.276	19.776-20.776	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.339	19.839-20.839	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.411	18.911-19.911	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.324	19.824-20.824	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.373	21.873-22.873	+++++	+++++
*	77 Perylene-d12	26.355	26.347	26.354	26.355	26.362	26.347	26.347	26.355	25.855-26.855	26.352	0.006
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
	79 Dibenzo(a,h)anthracene	28.718	28.703	28.710	28.726	28.718	28.710	28.703	28.718	28.218-29.218	28.713	0.009
	80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.408	24.908-25.908	+++++	+++++
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.597	16.097-17.097	+++++	+++++
	90 N-Nitrosodimethylamine	4.371	4.387	4.371	4.387	4.356	4.386	4.371	4.371	3.871-4.871	4.376	0.012
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.413-8.413	+++++	+++++
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.089	14.589-15.589	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Level 2: /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Level 3: /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Level 4: /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Level 5: /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Level 6: /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Level 7: /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
142 1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Phenol	2.19342	1.93668	2.06101	1.92949	1.94728	2.08759	1.98249	2.01971	4.874
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 1,3-Dichlorobenzene	1.87553	1.75224	1.72793	1.58761	1.57264	1.59509	1.53900	1.66429	7.407
9 1,4-Dichlorobenzene	1.91943	1.70341	1.73949	1.57791	1.55213	1.57844	1.52865	1.65707	8.453
11 Benzyl alcohol	1.01421	0.92378	0.95981	0.91615	0.94937	1.02397	0.99327	0.96865	4.413
12 1,2-Dichlorobenzene	1.80136	1.61817	1.67423	1.49430	1.47632	1.51145	1.44728	1.57473	8.180
13 2-Methylphenol	1.59549	1.39187	1.48696	1.36428	1.39709	1.47085	1.40118	1.44396	5.556
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 4-Methylphenol	1.58792	1.37715	1.51721	1.38530	1.44358	1.52071	1.46089	1.47039	5.215
16 N-Nitroso-di-n-propylamine	0.91430	0.80598	0.85037	0.79906	0.80117	0.85017	0.78320	0.82918	5.500

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 2,4-Dimethylphenol	0.40571	0.35657	0.40416	0.37154	0.38512	0.40380	0.38544	0.38748	4.824
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 1,2,4-Trichlorobenzene	0.44278	0.39385	0.40914	0.36326	0.36118	0.36604	0.34742	0.38338	8.776

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Hexachlorobutadiene	0.27157	0.23723	0.24399	0.22079	0.21930	0.22590	0.21485	0.23337	8.466
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Dimethylphthalate	1.29548	1.18474	1.22635	1.06304	1.10760	1.11120	1.09034	1.15411	7.293
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Diethylphthalate	1.48913	1.22551	1.39412	1.18097	1.28213	1.30160	1.27512	1.30694	7.961
51 4-Chlorophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 N-Nitrosodiphenylamine	0.39424	0.38298	0.48476	0.43332	0.46296	0.45890	0.45294	0.43858	8.547
56 4-Bromophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 Hexachlorobenzene	0.37593	0.30103	0.32963	0.26764	0.27658	0.27272	0.27374	0.29961	13.400

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
58 Pentachlorophenol	0.14488	0.13785	0.18228	0.16591	0.19052	0.20510	0.22038	0.17813	17.090
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Butylbenzylphthalate	0.36122	0.29118	0.41472	0.31985	0.38893	0.40240	0.41936	0.37109	13.311
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
79 Dibenzo(a,h)anthracene	0.97359	0.78303	0.98900	0.78861	0.87907	0.89559		
	0.93233						0.89160	9.207

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
80 Benzo(g,h,i)perylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
90 N-Nitrosodimethylamine	0.90219 / 0.81542	0.86023	0.85122	0.86270	0.83980	0.90195	0.86193	3.667
91 Aniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
92 1,2-Diphenylhydrazine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
93 Benzidine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
96 p-Cymene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
97 Caffeine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
98 Retene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
99 Perylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 2-Fluorophenol	1.51980	1.35157	1.44617	1.31204	1.36686	1.43403	1.39600	1.40378	4.930
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 66 Terphenyl-d14	0.56524	0.46461	0.53843	0.44428	0.47993	0.47146	0.47799	0.49170	8.830
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d
Lab Smp Id: IC0429A
Inj Date : 29-APR-2013 16:53
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:18 yev Quant Type: ISTD
Cal Date : 29-APR-2013 16:53 Cal File: ic0429a.d
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	92642	5.00000	4.972 (M)
	3 Phenol	94	8.365	8.365	(0.930)	131563	5.00000	4.908
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.991)	102132	5.00000	4.624
*	8 1,4-Dichlorobenzene-d4	152	8.991	8.984	(1.000)	53090	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	101445	5.00000	4.613
	11 Benzyl alcohol	79	9.294	9.294	(1.034)	65916	5.00000	5.127
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.045)	96045	5.00000	4.595
	13 2-Methylphenol	108	9.558	9.551	(1.063)	92986	5.00000	4.852
	15 4-Methylphenol	108	9.853	9.846	(1.096)	96948	5.00000	4.968
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.101)	51975	5.00000	4.723
	22 2,4-Dimethylphenol	107	10.969	10.962	(0.942)	187850	10.0000	9.948
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	84659	5.00000	4.531
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	194944	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	52354	5.00000	4.603
	39 Dimethylphthalate	163	15.060	15.052	(0.969)	154624	5.00000	4.724
*	42 Acenaphthene-d10	162	15.547	15.540	(1.000)	113450	4.00000	
	50 Diethylphthalate	149	16.645	16.637	(1.071)	180828	5.00000	4.878
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	120418	5.00000	5.164
	57 Hexachlorobenzene	284	18.158	18.158	(0.965)	72778	5.00000	4.568
	58 Pentachlorophenol	266	18.552	18.553	(0.986)	117179	10.0000	12.37
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	212689	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	140436	5.00000	4.861
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	123210	5.00000	5.650
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	235045	4.00000	
*	77 Perylene-d12	264	26.355	26.347	(1.000)	227736	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.718	28.703	(1.090)	265405	5.00000	5.228
	90 N-Nitrosodimethylamine	74	4.371	4.371	(0.486)	108227	10.0000	9.460

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429a.d
Lab Smp Id: IC0429A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	53090	0.82
27 Naphthalene-d8	192325	96162	384650	194944	1.36
42 Acenaphthene-d10	109274	54637	218548	113450	3.82
59 Phenanthrene-d10	203933	101966	407866	212689	4.29
69 Chrysene-d12	223647	111824	447294	235045	5.10
77 Perylene-d12	211919	105960	423838	227736	7.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.99	0.09
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.55	0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

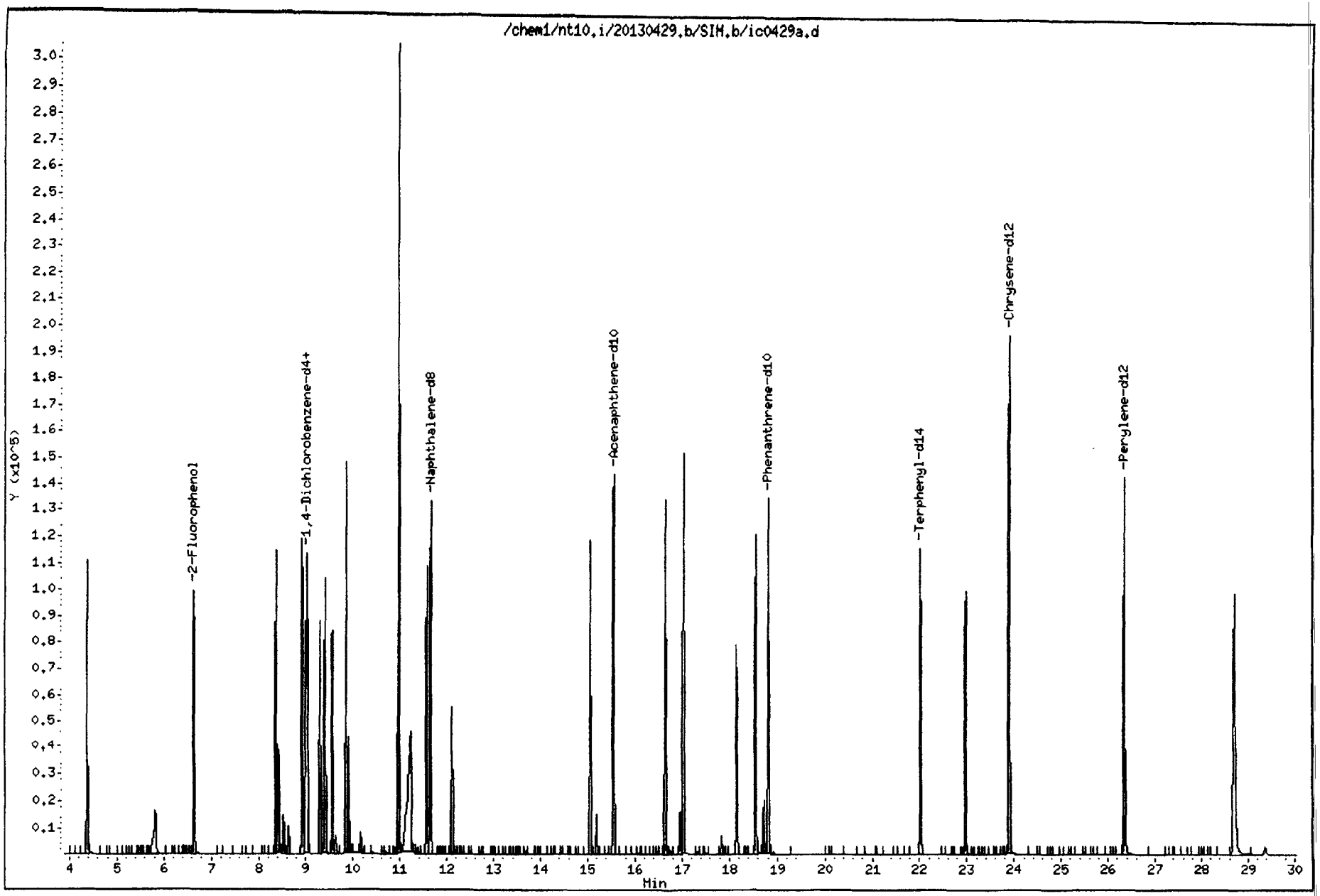
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d
Date : 29-APR-2013 16:53
Client ID:
Sample Info: IC0429A

Instrument: nt10.i

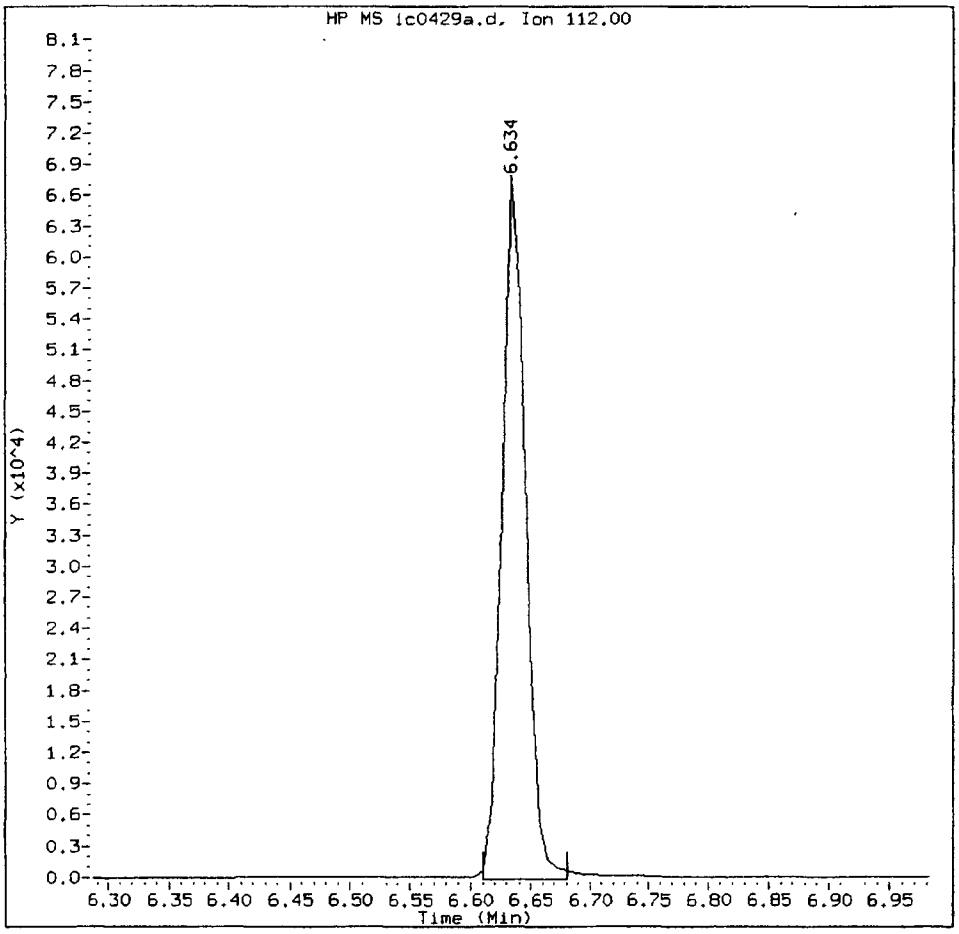
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5ms1



IC0429A, /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d

2-Fluorophenol Amount: 4.97 Area: 92642



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 1/2 Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429a.d

Lab ID: IC0429A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2(

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Lab Smp Id: IC0429C
Inj Date : 29-APR-2013 18:07
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429C
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:07 Cal File: ic0429c.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.641	6.634	(0.739)	4255	0.20000	0.2058 (M)
	3 Phenol	94	8.365	8.365	(0.931)	6064	0.20000	0.2041
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	5084	0.20000	0.2076
*	8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	58845	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	5118	0.20000	0.2099
	11 Benzyl alcohol	79	9.294	9.294	(1.035)	2824	0.20000	0.1982
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	4926	0.20000	0.2126
	13 2-Methylphenol	108	9.550	9.551	(1.063)	4375	0.20000	0.2060
	15 4-Methylphenol	108	9.845	9.846	(1.096)	4464	0.20000	0.2064
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	2502	0.20000	0.2051
	22 2,4-Dimethylphenol	107	10.969	10.962	(0.942)	8776	0.40000	0.4172
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	4442	0.20000	0.2134
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	217141	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	2649	0.20000	0.2091
	39 Dimethylphthalate	163	15.052	15.052	(0.969)	7463	0.20000	0.2125
*	42 Acenaphthene-d10	162	15.539	15.540	(1.000)	121711	4.00000	
	50 Diethylphthalate	149	16.637	16.637	(1.071)	8484	0.20000	0.2133
	54 N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	5384	0.20000	0.2211
	57 Hexachlorobenzene	284	18.150	18.158	(0.965)	3661	0.20000	0.2200
	58 Pentachlorophenol	266	18.545	18.553	(0.986)	4049	0.40000	0.3970
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	222131	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	6585	0.20000	0.2190
	67 Butylbenzylphthalate	149	22.971	22.971	(0.961)	5072	0.20000	0.2235
*	69 Chrysene-d12	240	23.892	23.900	(1.000)	244600	4.00000	
*	77 Perylene-d12	264	26.347	26.347	(1.000)	221779	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.703	28.703	(1.089)	10967	0.20000	0.2218
	90 N-Nitrosodimethylamine	74	4.387	4.371	(0.488)	5009	0.40000	0.3950

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429c.d
Lab Smp Id: IC0429C
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	58845	11.75
27 Naphthalene-d8	192325	96162	384650	217141	12.90
42 Acenaphthene-d10	109274	54637	218548	121711	11.38
59 Phenanthrene-d10	203933	101966	407866	222131	8.92
69 Chrysene-d12	223647	111824	447294	244600	9.37
77 Perylene-d12	211919	105960	423838	221779	4.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.89	-0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d

Date : 29-APR-2013 18:07

Client ID:

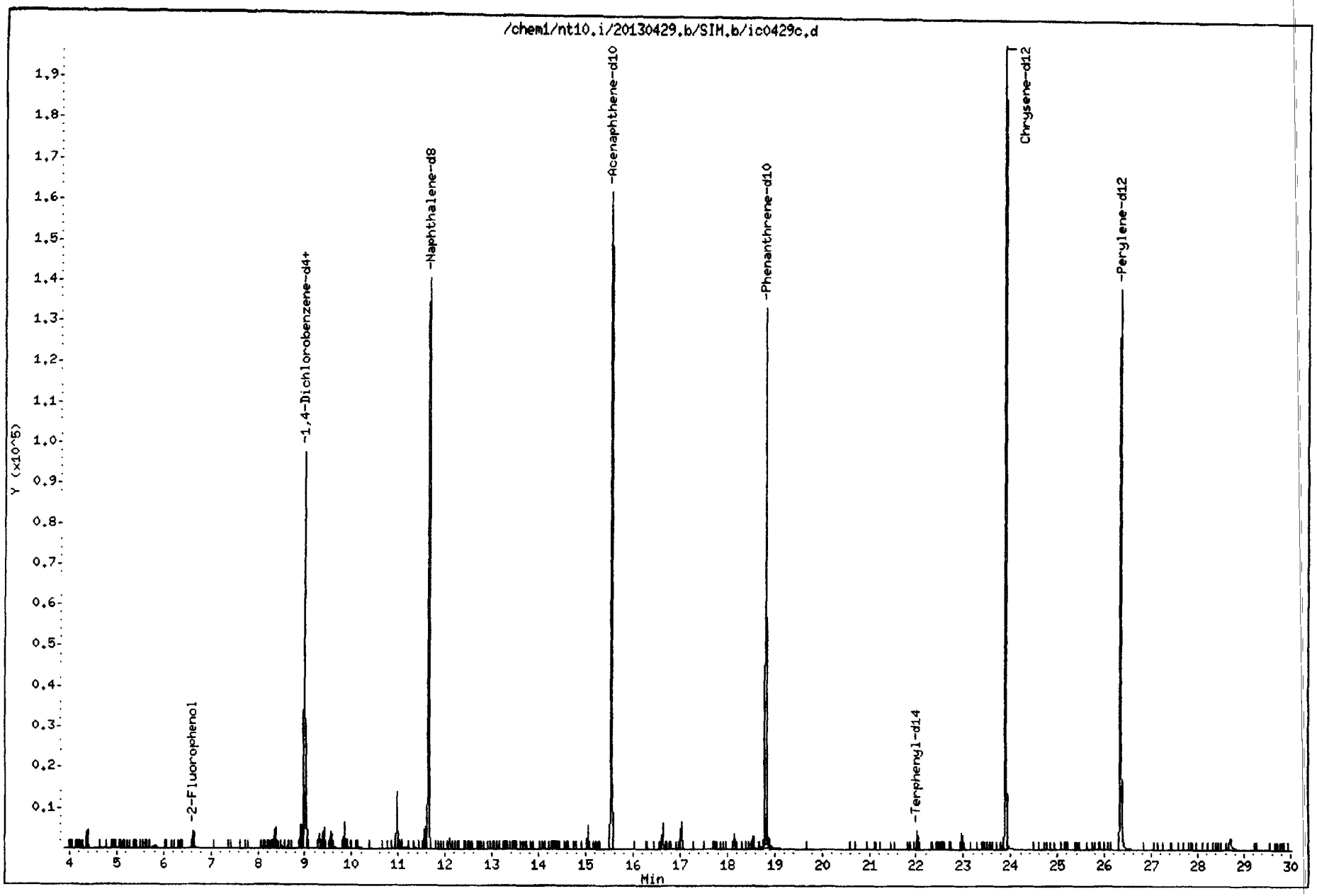
Sample Info: IC0429C

Column phase: ZB-5ms1

Instrument: nt10.i

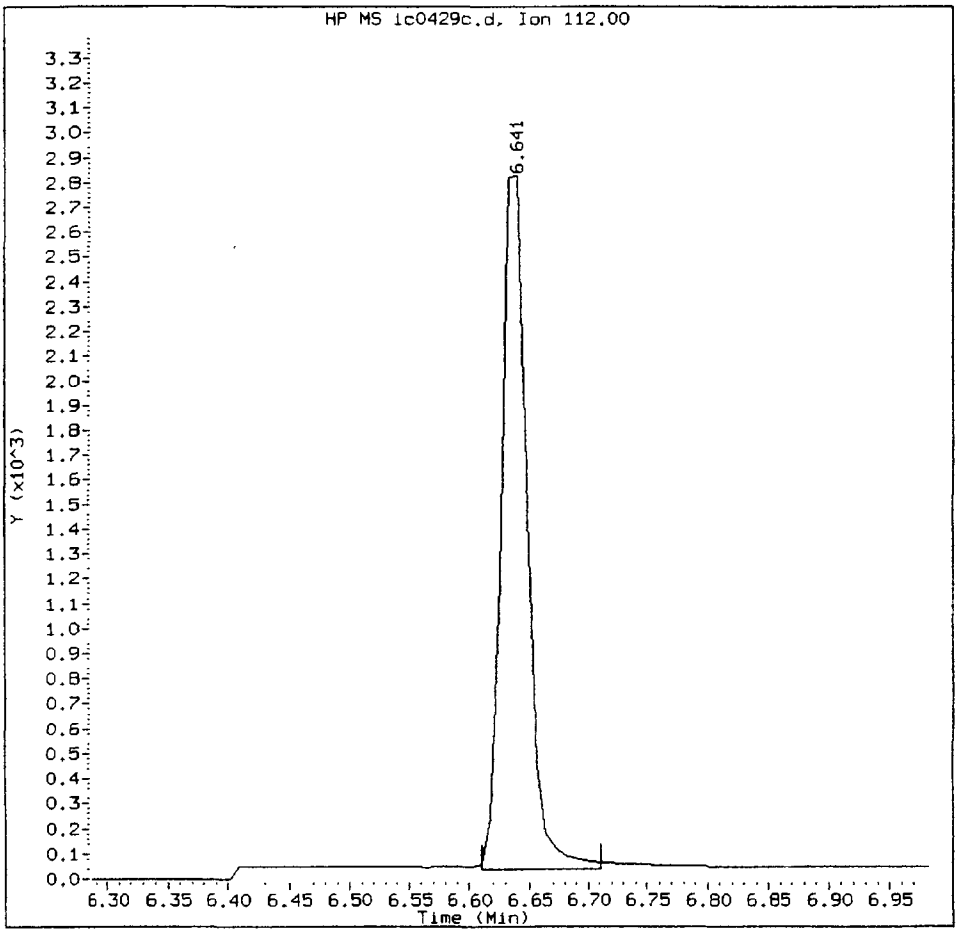
Operator: YZ

Column diameter: 0.25



IC0429C, /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d

2-Fluorophenol Amount: 0.21 Area: 4255



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 1/2 Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429c.d

Lab ID: IC0429C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2(

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/3/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Lab Smp Id: IC0429D
Inj Date : 29-APR-2013 18:44
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429D
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:44 Cal File: ic0429d.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	17994	1.00000	0.9728 (M)
	3 Phenol	94	8.357	8.365	(0.930)	25635	1.00000	0.9641
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	20703	1.00000	0.9449
*	8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	52658	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	20433	1.00000	0.9367
	11 Benzyl alcohol	79	9.286	9.294	(1.034)	12498	1.00000	0.9801
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	19435	1.00000	0.9375
	13 2-Methylphenol	108	9.550	9.551	(1.063)	18392	1.00000	0.9675
	15 4-Methylphenol	108	9.845	9.846	(1.096)	19004	1.00000	0.9818
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	10547	1.00000	0.9662
	22 2,4-Dimethylphenol	107	10.961	10.962	(0.941)	37034	2.00000	1.988
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	17366	1.00000	0.9421
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	192325	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	10544	1.00000	0.9397
	39 Dimethylphthalate	163	15.052	15.052	(0.969)	30258	1.00000	0.9597
*	42 Acenaphthene-d10	162	15.539	15.540	(1.000)	109274	4.00000	
	50 Diethylphthalate	149	16.637	16.637	(1.071)	35026	1.00000	0.9810
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	23603	1.00000	1.056
	57 Hexachlorobenzene	284	18.158	18.158	(0.965)	14101	1.00000	0.9231
	58 Pentachlorophenol	266	18.552	18.553	(0.986)	19427	2.00000	2.075
*	59 Phenanthrene-d10	188	18.815	18.816	(1.000)	203933	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	26834	1.00000	0.9761
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	21746	1.00000	1.048
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	223647	4.00000	
*	77 Perylene-d12	264	26.354	26.347	(1.000)	211919	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.710	28.703	(1.089)	46573	1.00000	0.9859
	90 N-Nitrosodimethylamine	74	4.371	4.371	(0.487)	22111	2.00000	1.949

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429d.d
Lab Smp Id: IC0429D
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	52658	0.00
27 Naphthalene-d8	192325	96162	384650	192325	0.00
42 Acenaphthene-d10	109274	54637	218548	109274	0.00
59 Phenanthrene-d10	203933	101966	407866	203933	0.00
69 Chrysene-d12	223647	111824	447294	223647	0.00
77 Perylene-d12	211919	105960	423838	211919	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

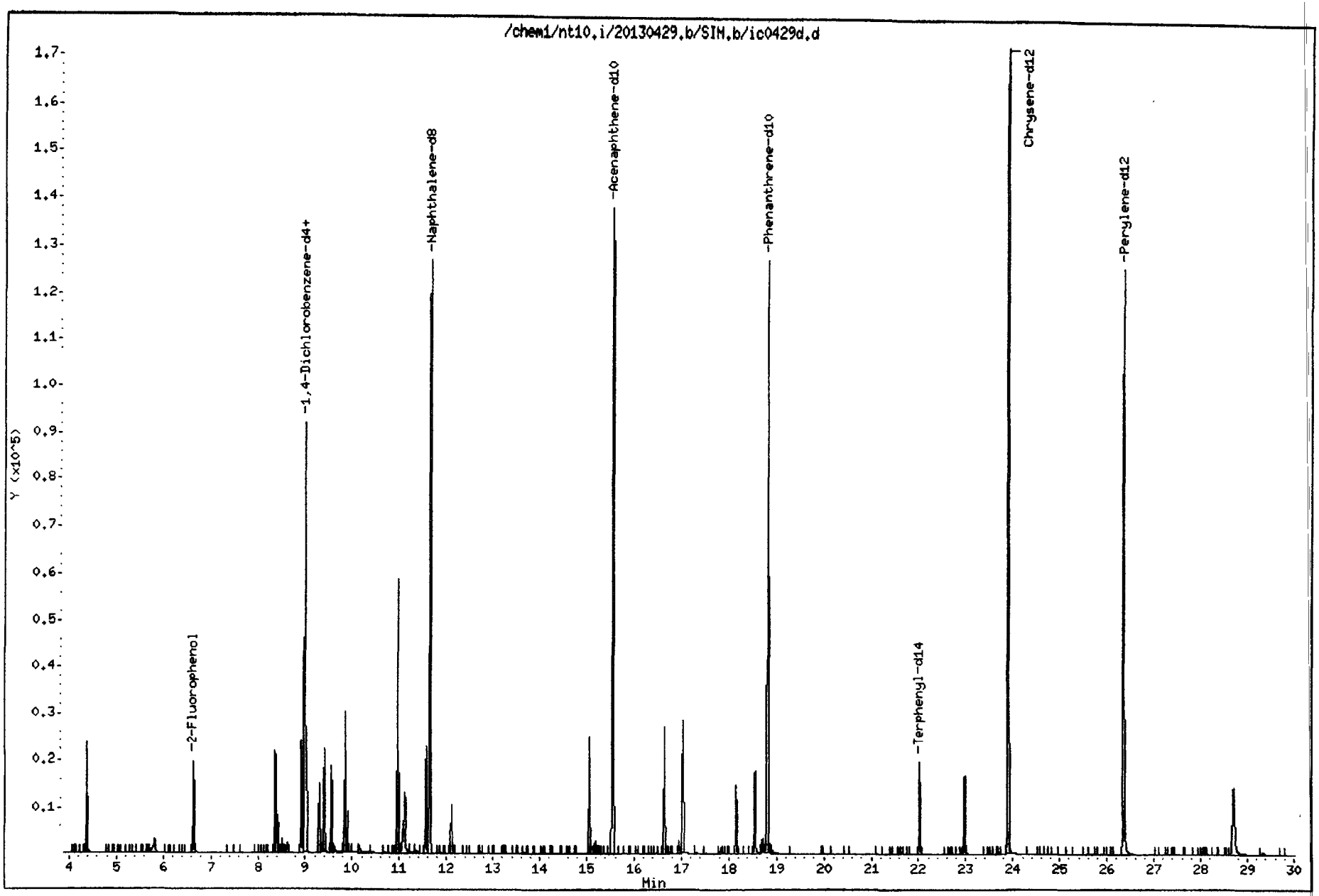
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Date : 29-APR-2013 18:44
Client ID:
Sample Info: IC0429D

Column phase: ZB-5msi

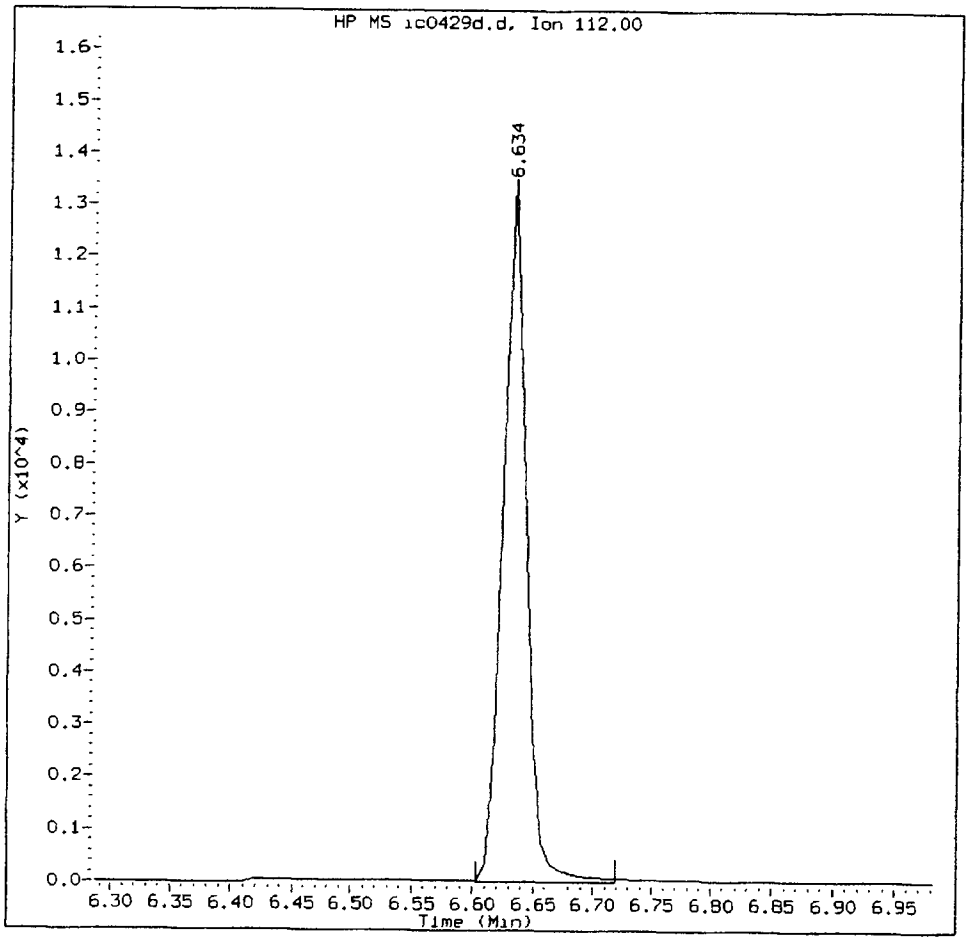
Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



IC0429D, /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d

2-Fluorophenol Amount: 0.97 Area: 17994



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KP Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429d.d

Lab ID: IC0429D, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Lab Smp Id: IC0429F
Inj Date : 29-APR-2013 19:57
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429F
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 19:57 Cal File: ic0429f.d
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.634	6.634	(0.738)	1004	0.05000	0.05408 (M)
	3	Phenol	94	8.365	8.365	(0.931)	1449	0.05000	0.05430
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	1239	0.05000	0.05635 (M)
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	52849	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	1268	0.05000	0.05792 (M)
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	670	0.05000	0.05235 (M)
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	1190	0.05000	0.05720
	13	2-Methylphenol	108	9.550	9.551	(1.063)	1054	0.05000	0.05525
	15	4-Methylphenol	108	9.845	9.846	(1.096)	1049	0.05000	0.05400
	16	N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	604	0.05000	0.05513 (M)
	22	2,4-Dimethylphenol	107	10.962	10.962	(0.941)	1981	0.10000	0.1047
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	1081	0.05000	0.05775
*	27	Naphthalene-d8	136	11.648	11.640	(1.000)	195311	4.00000	
	30	Hexachlorobutadiene	225	12.104	12.104	(1.039)	663	0.05000	0.05818 (M)
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	1726	0.05000	0.05612
*	42	Acenaphthene-d10	162	15.540	15.540	(1.000)	106586	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	1984	0.05000	0.05697
	54	N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	947	0.05000	0.04495 (M)
	57	Hexachlorobenzene	284	18.150	18.158	(0.965)	903	0.05000	0.06274 (M)
	58	Pentachlorophenol	266	18.553	18.553	(0.986)	696	0.10000	0.07888
*	59	Phenanthrene-d10	188	18.816	18.816	(1.000)	192165	4.00000	
$	66	Terphenyl-d14	244	22.027	22.027	(0.922)	1521	0.05000	0.05748
	67	Butylbenzylphthalate	149	22.979	22.971	(0.961)	972	0.05000	0.04867
*	69	Chrysene-d12	240	23.900	23.900	(1.000)	215273	4.00000	
*	77	Perylene-d12	264	26.355	26.347	(1.000)	195976	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.726	28.703	(1.090)	2385	0.05000	0.05460
	90	N-Nitrosodimethylamine	74	4.387	4.371	(0.488)	1192	0.10000	0.1047

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429f.d
Lab Smp Id: IC0429F
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	52849	0.36
27 Naphthalene-d8	192325	96162	384650	195311	1.55
42 Acenaphthene-d10	109274	54637	218548	106586	-2.46
59 Phenanthrene-d10	203933	101966	407866	192165	-5.77
69 Chrysene-d12	223647	111824	447294	215273	-3.74
77 Perylene-d12	211919	105960	423838	195976	-7.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

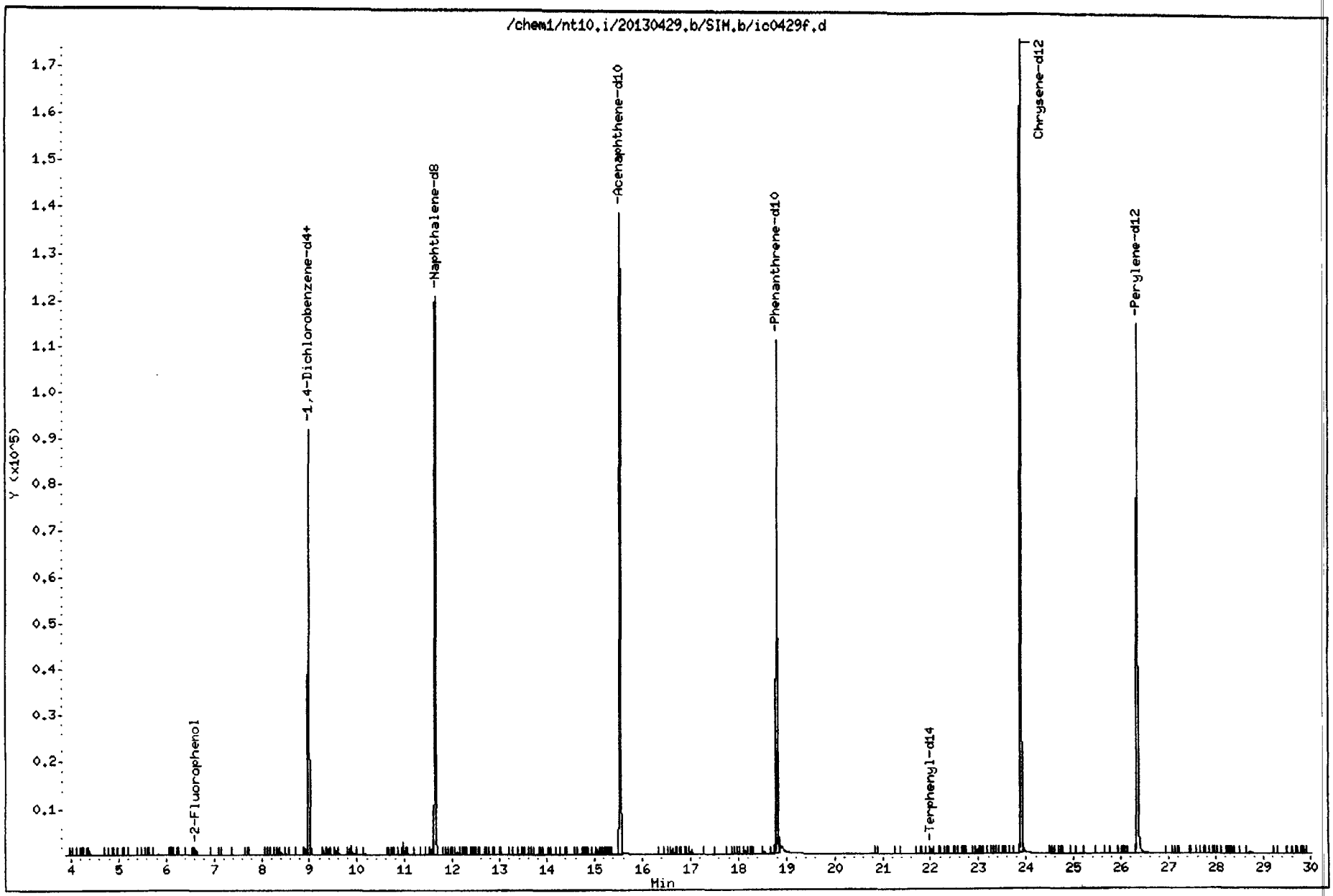
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Date : 29-APR-2013 19:57
Client ID:
Sample Info: IC0429F

Instrument: nt10.i

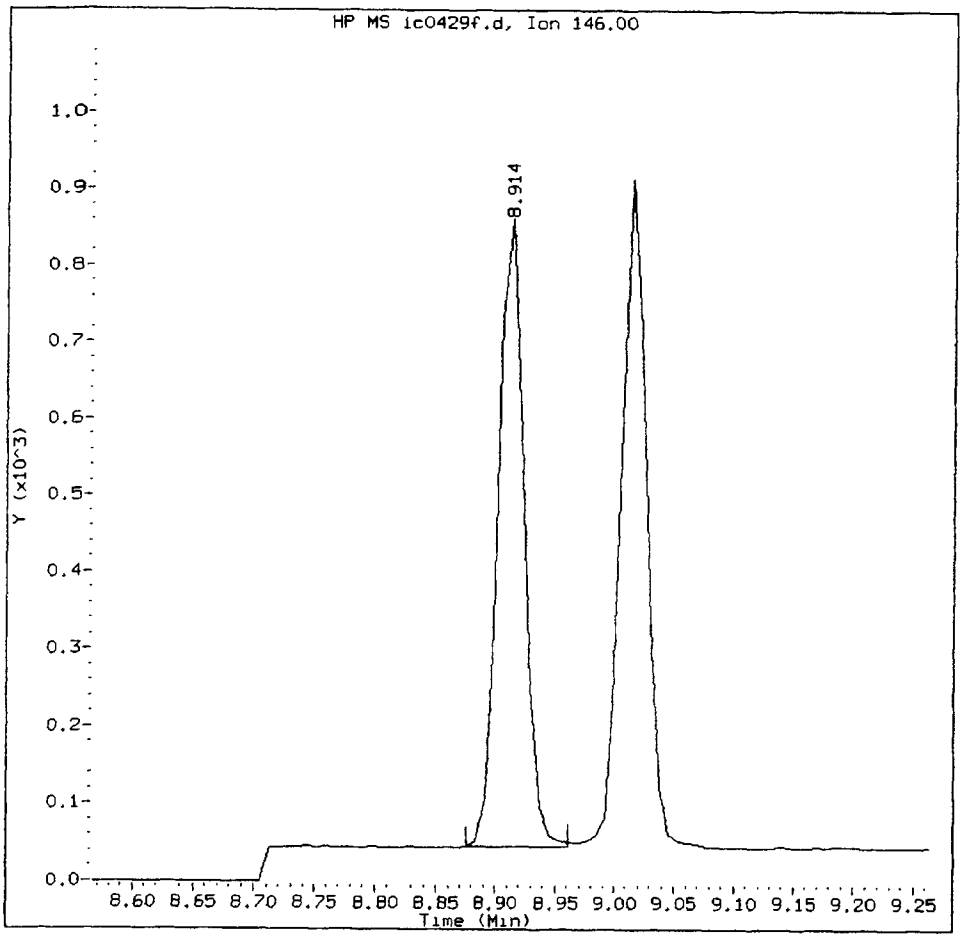
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

1,3-Dichlorobenzene Amount: 0.06 Area: 1239



MANUAL INTEGRATION for 1,3-Dichlorobenzene

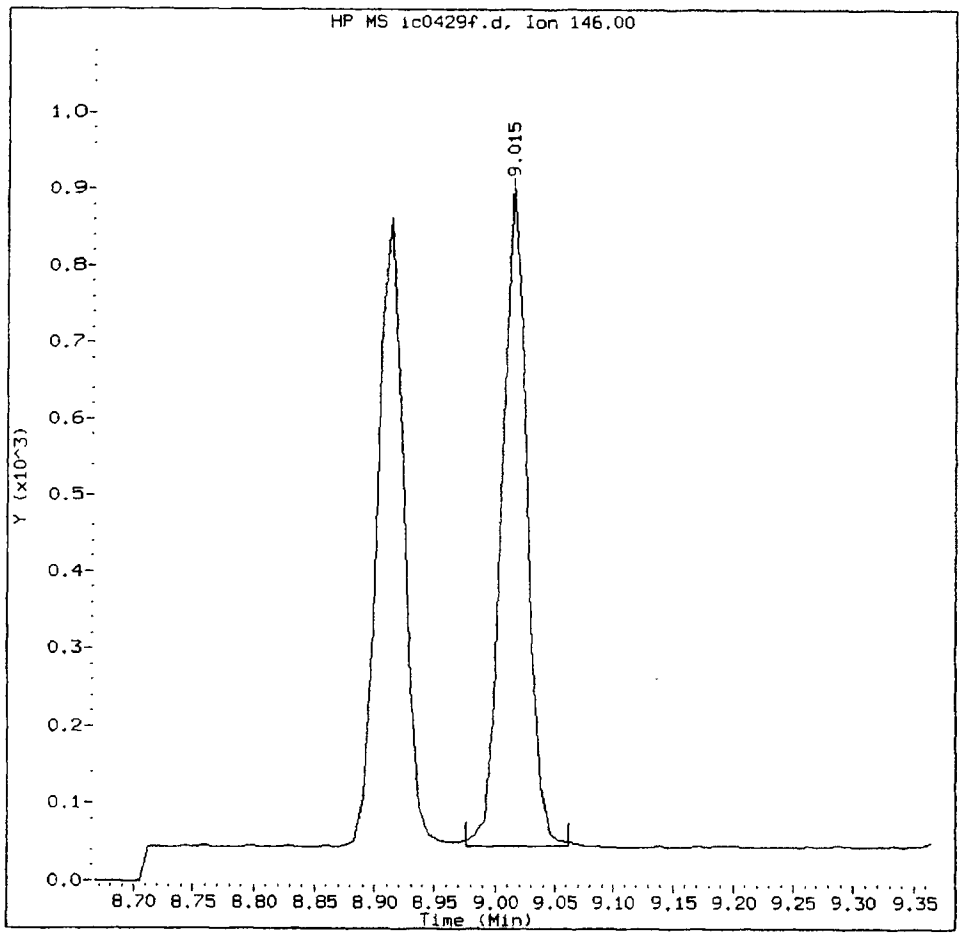
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

1,4-Dichlorobenzene Amount: 0.06 Area: 1268



MANUAL INTEGRATION for 1,4-Dichlorobenzene

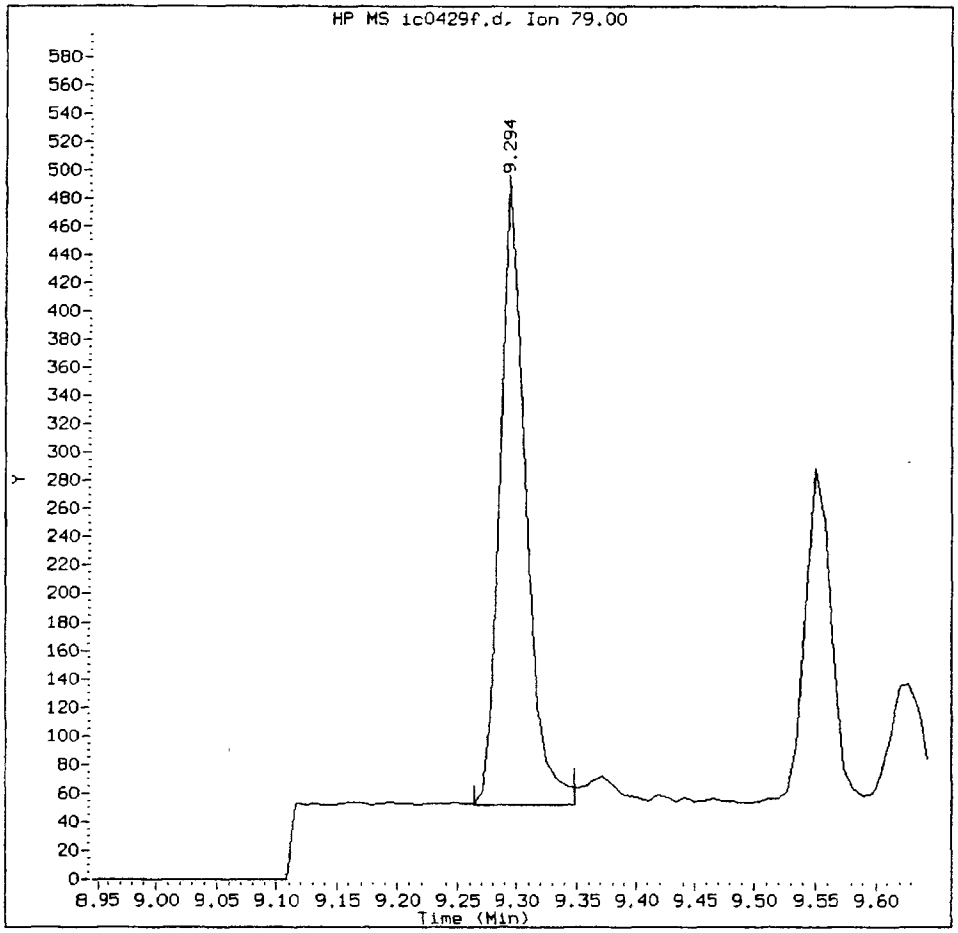
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/9/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Benzyl alcohol Amount: 0.05 Area: 670



MANUAL INTEGRATION for Benzyl alcohol

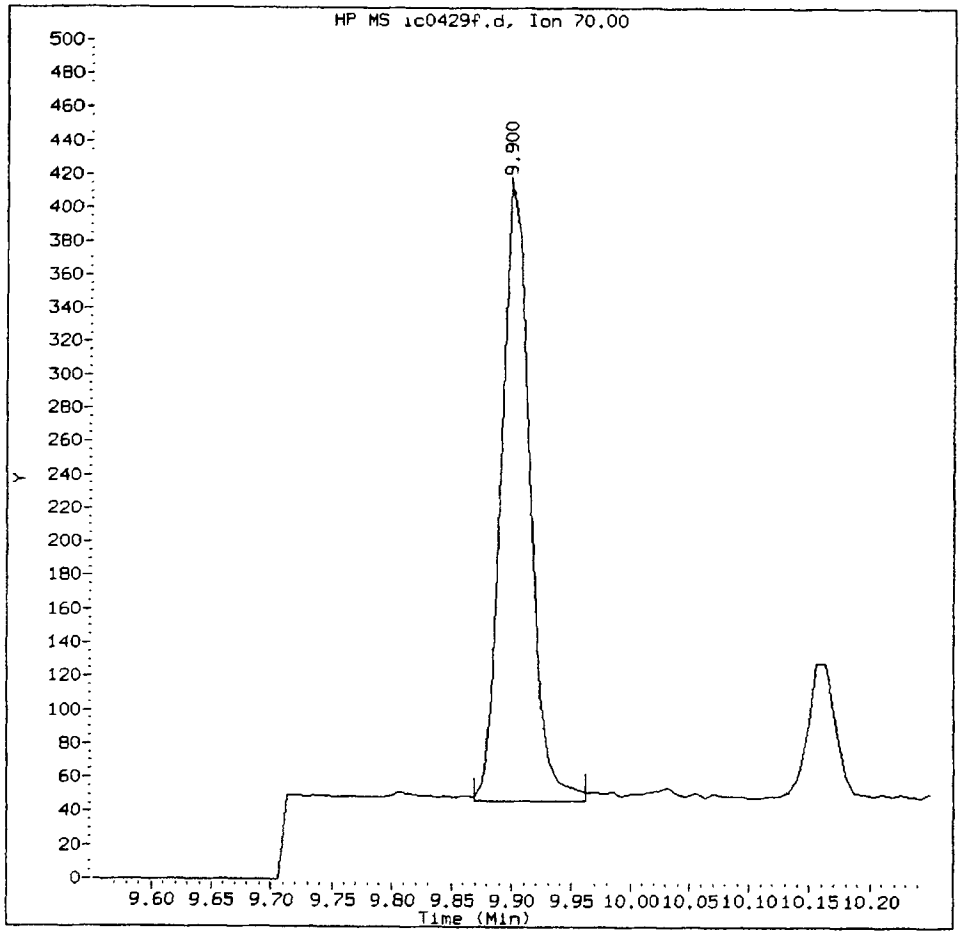
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ 1/2 Date: 5/9/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

N-Nitroso-di-n-propylamine Amount: 0.06 Area: 604



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

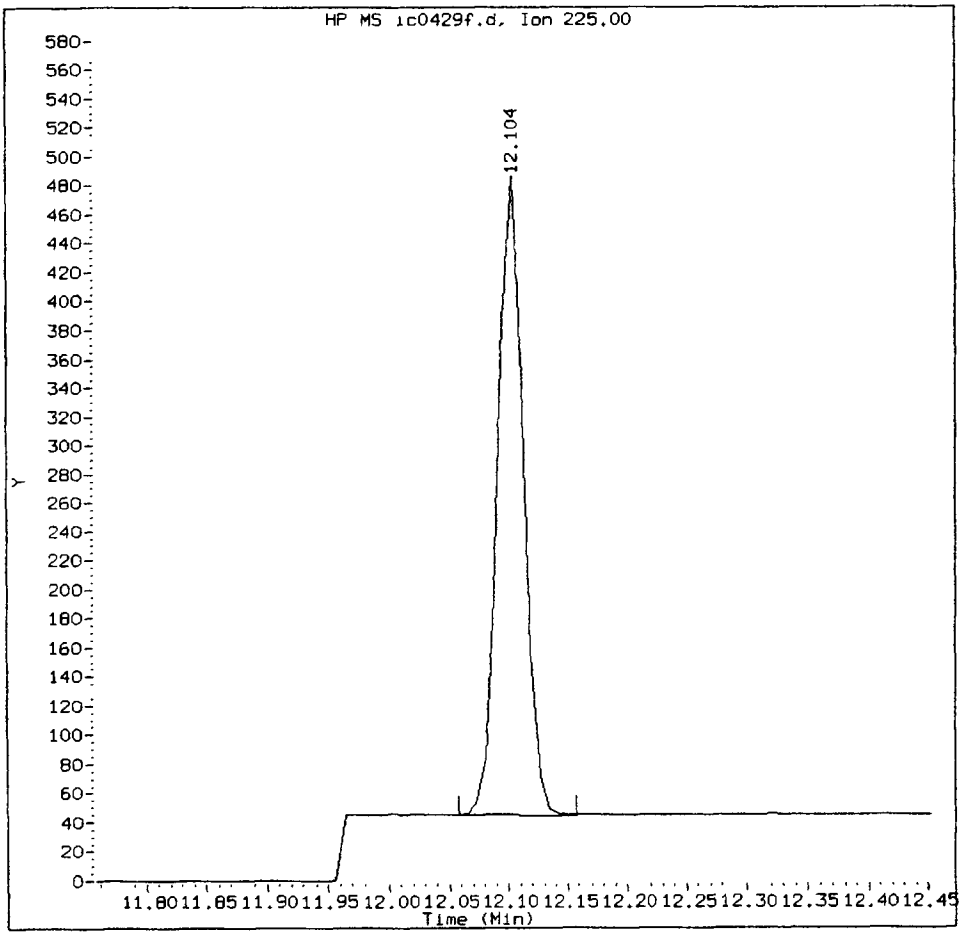
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Hexachlorobutadiene Amount: 0.06 Area: 663



MANUAL INTEGRATION for Hexachlorobutadiene

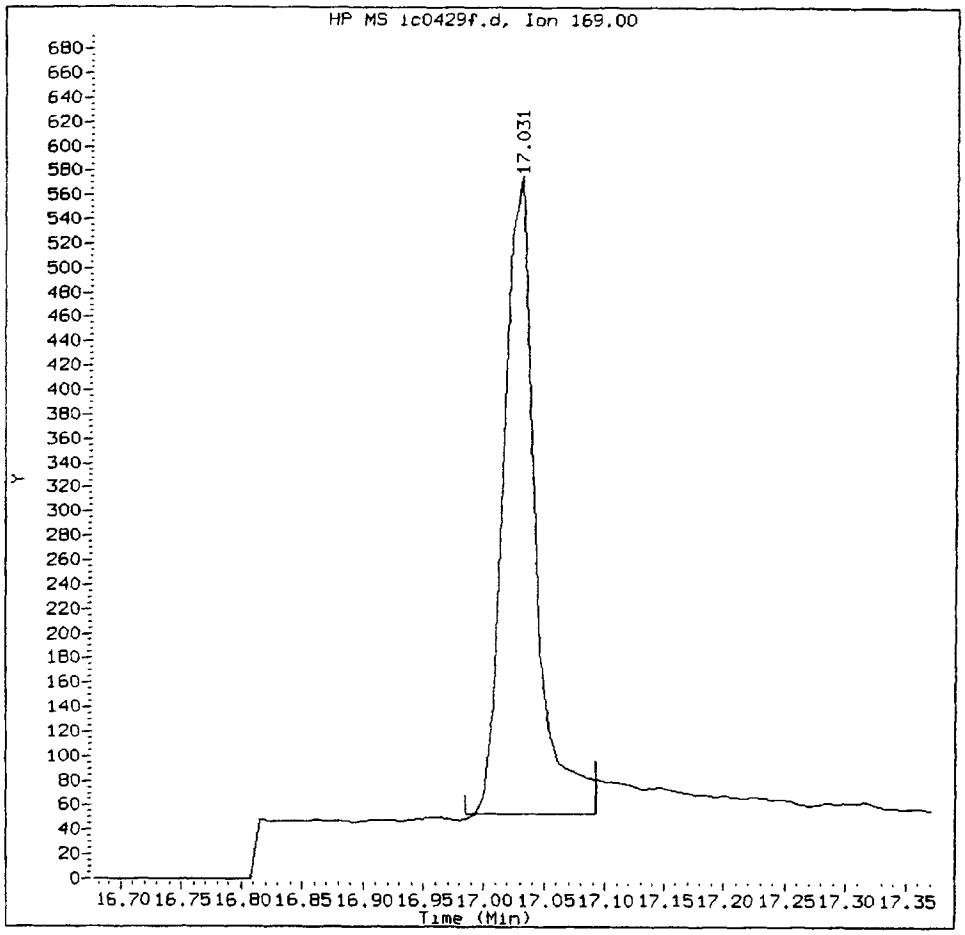
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

N-Nitrosodiphenylamine Amount: 0.04 Area: 947



MANUAL INTEGRATION for N-Nitrosodiphenylamine

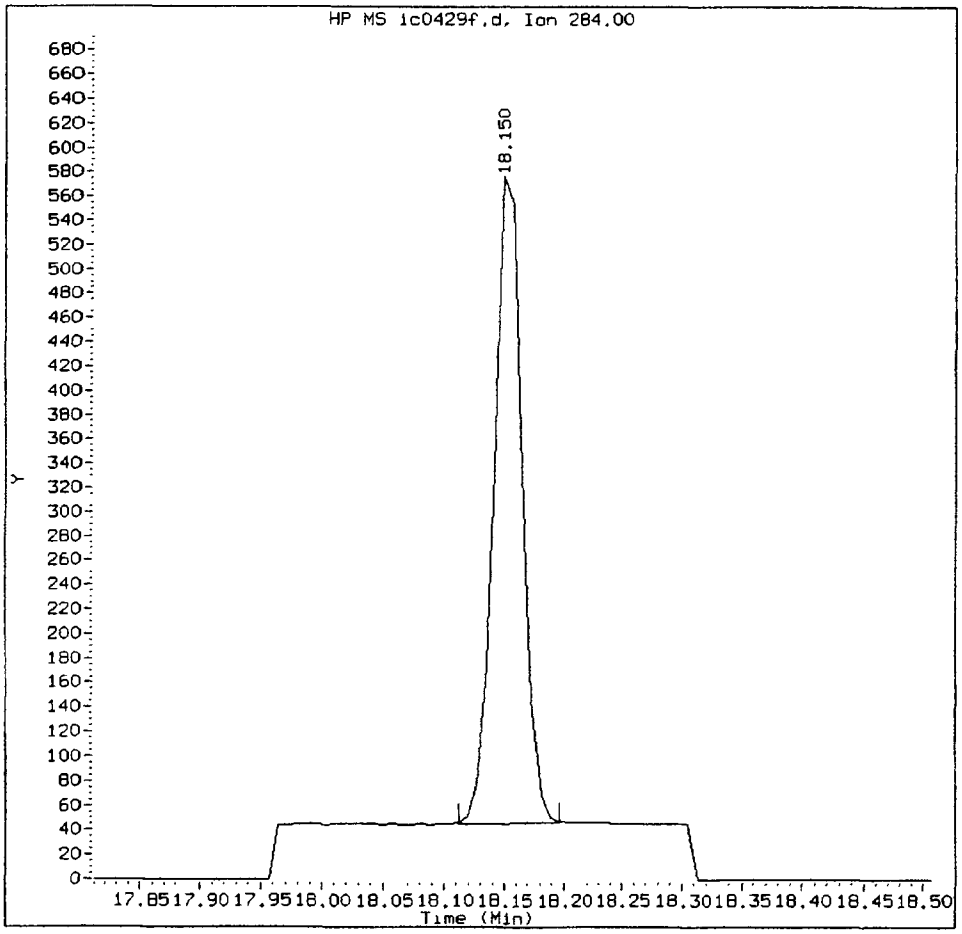
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: KE Date: 5/2/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Hexachlorobenzene Amount: 0.06 Area: 903



MANUAL INTEGRATION for Hexachlorobenzene

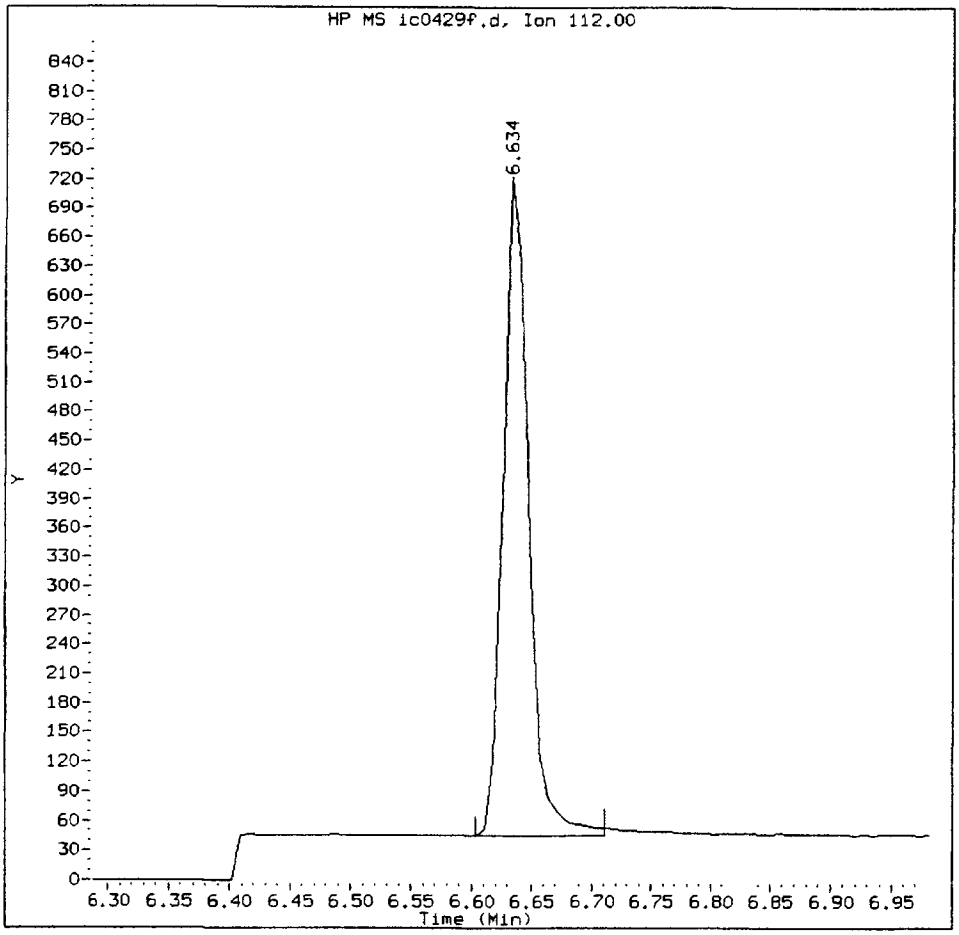
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/6/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

2-Fluorophenol Amount: 0.05 Area: 1004



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: KL Date: 5/8/13

CO-ELUTION SUMMARY FOR FILE - ic0429f.d

Lab ID: IC0429F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2(

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d YZ 5/3/13
Lab Smp Id: IC0429G
Inj Date : 29-APR-2013 20:34
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429G
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 20:34 Cal File: ic0429g.d
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.633	6.634	(0.738)	39175	2.50000	2.552 (M)
	3 Phenol	94	8.364	8.365	(0.931)	57029	2.50000	2.584
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	43575	2.50000	2.396
*	8 1,4-Dichlorobenzene-d4	152	8.983	8.984	(1.000)	43709	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	43120	2.50000	2.381
	11 Benzyl alcohol	79	9.294	9.294	(1.035)	27973	2.50000	2.643
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	41290	2.50000	2.400
	13 2-Methylphenol	108	9.550	9.551	(1.063)	40181	2.50000	2.547
	15 4-Methylphenol	108	9.845	9.846	(1.096)	41543	2.50000	2.586
	16 N-Nitroso-di-n-propylamine	70	9.899	9.900	(1.102)	23225	2.50000	2.563
	22 2,4-Dimethylphenol	107	10.969	10.962	(0.942)	80843	5.00000	5.211
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	36642	2.50000	2.387
*	27 Naphthalene-d8	136	11.647	11.640	(1.000)	160165	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	22613	2.50000	2.420
	39 Dimethylphthalate	163	15.060	15.052	(0.969)	66102	2.50000	2.407
*	42 Acenaphthene-d10	162	15.539	15.540	(1.000)	95179	4.00000	
	50 Diethylphthalate	149	16.645	16.637	(1.071)	77428	2.50000	2.490
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	51253	2.50000	2.616
	57 Hexachlorobenzene	284	18.157	18.158	(0.965)	30459	2.50000	2.276
	58 Pentachlorophenol	266	18.552	18.553	(0.986)	45814	5.00000	5.583
*	59 Phenanthrene-d10	188	18.815	18.816	(1 000)	178699	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	58696	2.50000	2.397
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	50099	2.50000	2.711
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	199199	4.00000	
*	77 Perylene-d12	264	26.362	26.347	(1.000)	191024	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.718	28.703	(1.089)	106924	2.50000	2.511
	90 N-Nitrosodimethylamine	74	4.356	4.371	(0.485)	49279	5.00000	5.232

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429g.d
Lab Smp Id: IC0429G
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	43709	-16.99
27 Naphthalene-d8	192325	96162	384650	160165	-16.72
42 Acenaphthene-d10	109274	54637	218548	95179	-12.90
59 Phenanthrene-d10	203933	101966	407866	178699	-12.37
69 Chrysene-d12	223647	111824	447294	199199	-10.93
77 Perylene-d12	211919	105960	423838	191024	-9.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

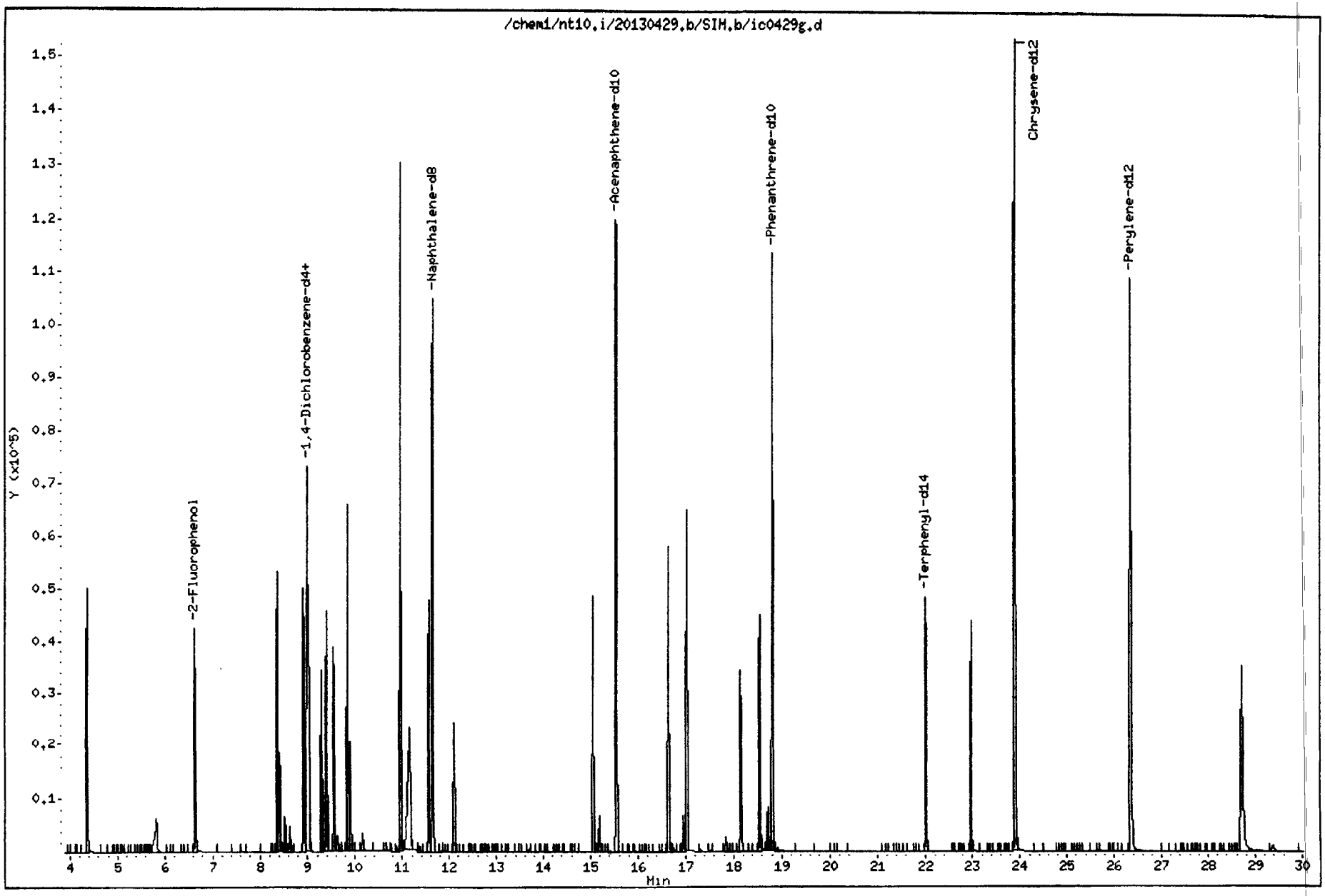
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Date : 29-APR-2013 20:34
Client ID:
Sample Info: IC0429C

Instrument: nt10.i

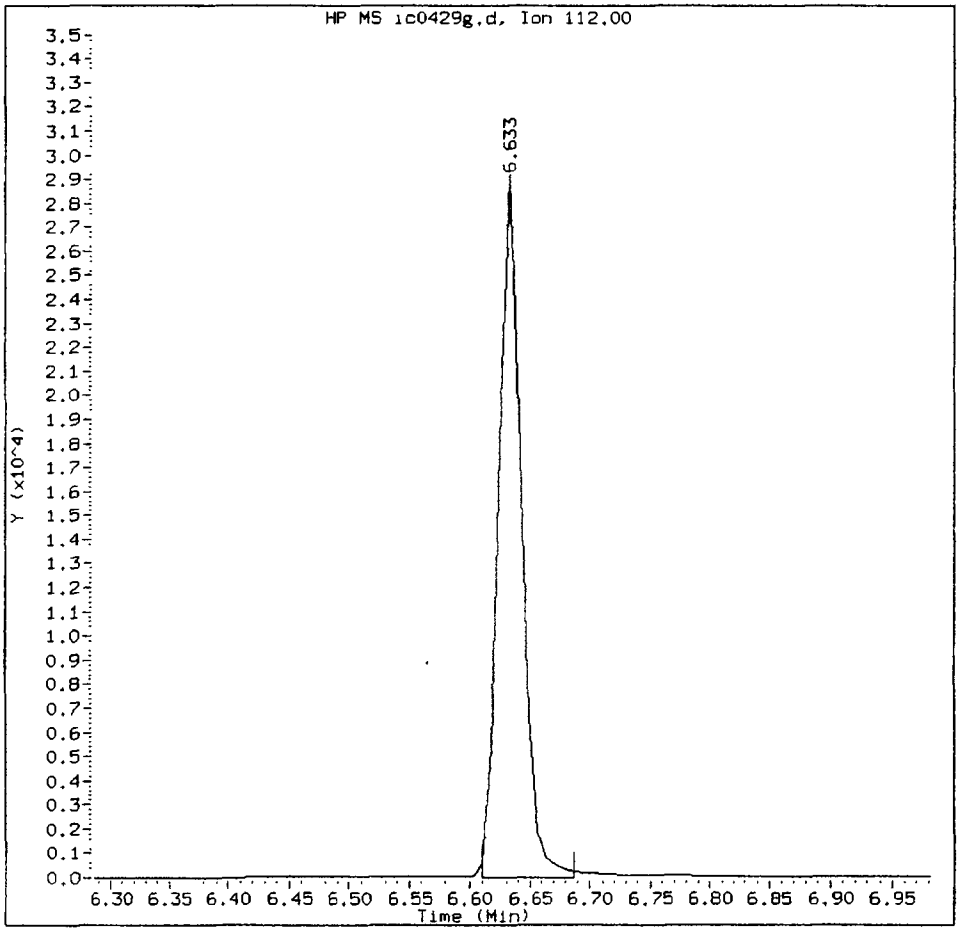
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429G, /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d

2-Fluorophenol Amount: 2.55 Area: 39175



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 5/9/13

CO-ELUTION SUMMARY FOR FILE - ic0429g.d

Lab ID: IC0429G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Lab Smp Id: IC0429H
Inj Date : 29-APR-2013 21:11
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429H
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:11 Cal File: ic0429h.d
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 5/3/13

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.633	6.634	(0.738)	1744	0.10000	0.09619 (M)
	3	Phenol	94	8.365	8.365	(0.931)	2499	0.10000	0.09589
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	2261	0.10000	0.1053
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	51614	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	2198	0.10000	0.1028 (M)
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	1192	0.10000	0.09537
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	2088	0.10000	0.1028
	13	2-Methylphenol	108	9.550	9.551	(1.063)	1796	0.10000	0.09639
	15	4-Methylphenol	108	9.845	9.846	(1.096)	1777	0.10000	0.09366
	16	N-Nitroso-di-n-propylamine	70	9.899	9.900	(1.102)	1040	0.10000	0.09720
	22	2,4-Dimethylphenol	107	10.961	10.962	(0.941)	3433	0.20000	0.1840
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	1896	0.10000	0.1027 (M)
*	27	Naphthalene-d8	136	11.647	11.640	(1.000)	192559	4.00000	
	30	Hexachlorobutadiene	225	12.103	12.104	(1.039)	1142	0.10000	0.1017 (M)
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	3197	0.10000	0.1027
*	42	Acenaphthene-d10	162	15.539	15.540	(1.000)	107939	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	3307	0.10000	0.09377
	54	N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	1860	0.10000	0.08732
	57	Hexachlorobenzene	284	18.157	18.158	(0.965)	1462	0.10000	0.1005
	58	Pentachlorophenol	266	18.552	18.553	(0.986)	1339	0.20000	0.1501 (M)
*	59	Phenanthrene-d10	188	18.815	18.816	(1.000)	194268	4.00000	
$	66	Terphenyl-d14	244	22.026	22.027	(0.922)	2454	0.10000	0.09449 (M)
	67	Butylbenzylphthalate	149	22.971	22.971	(0.961)	1538	0.10000	0.07847
*	69	Chrysene-d12	240	23.892	23.900	(1.000)	211275	4.00000	
*	77	Perylene-d12	264	26.347	26.347	(1.000)	196007	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.710	28.703	(1.090)	3837	0.10000	0.08782
	90	N-Nitrosodimethylamine	74	4.386	4.371	(0.488)	2220	0.20000	0.1996

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429h.d
Lab Smp Id: IC0429H
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	51614	-1.98
27 Naphthalene-d8	192325	96162	384650	192559	0.12
42 Acenaphthene-d10	109274	54637	218548	107939	-1.22
59 Phenanthrene-d10	203933	101966	407866	194268	-4.74
69 Chrysene-d12	223647	111824	447294	211275	-5.53
77 Perylene-d12	211919	105960	423838	196007	-7.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.89	-0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

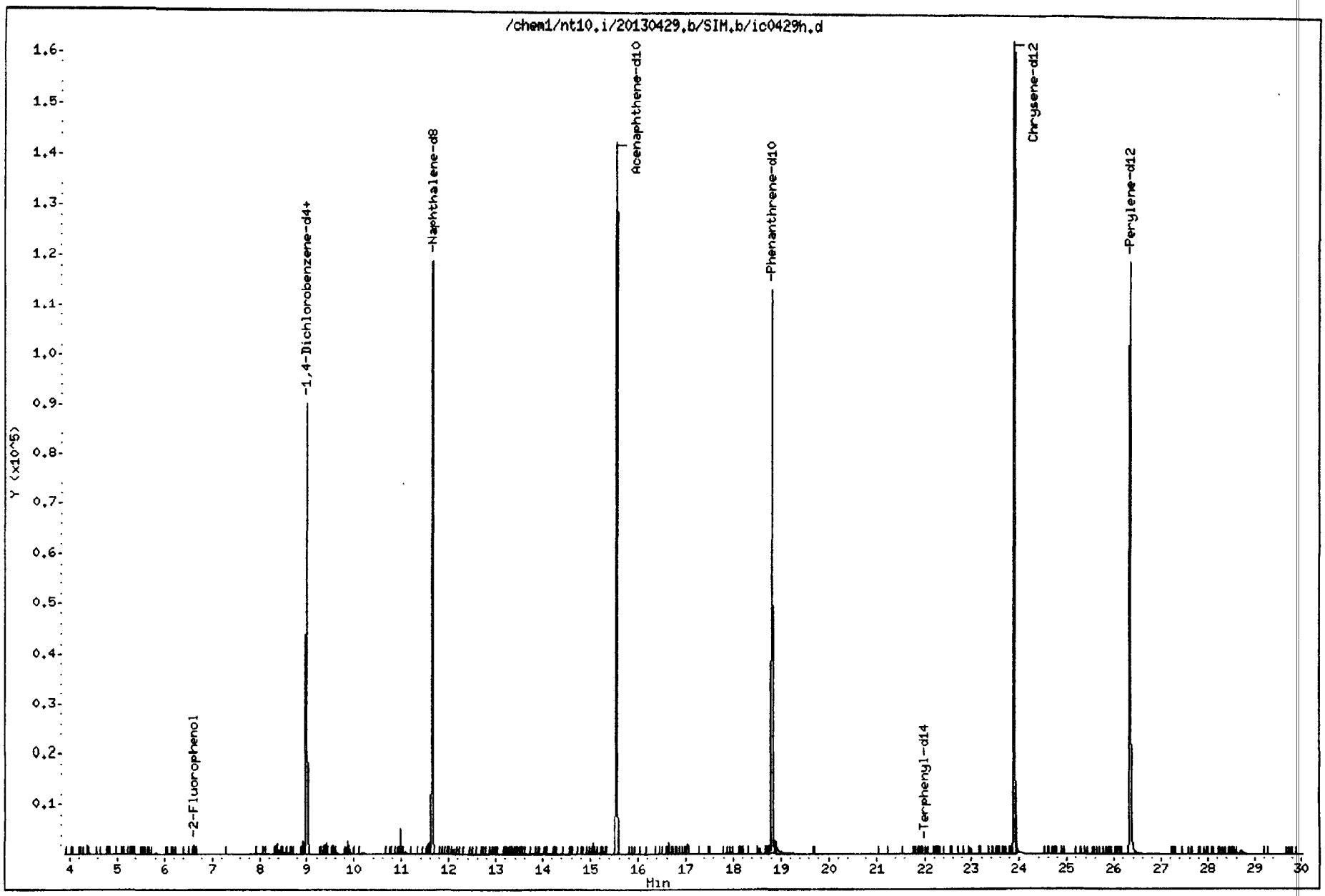
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Date : 29-APR-2013 21:11
Client ID:
Sample Info: IC0429H

Instrument: nt10.i

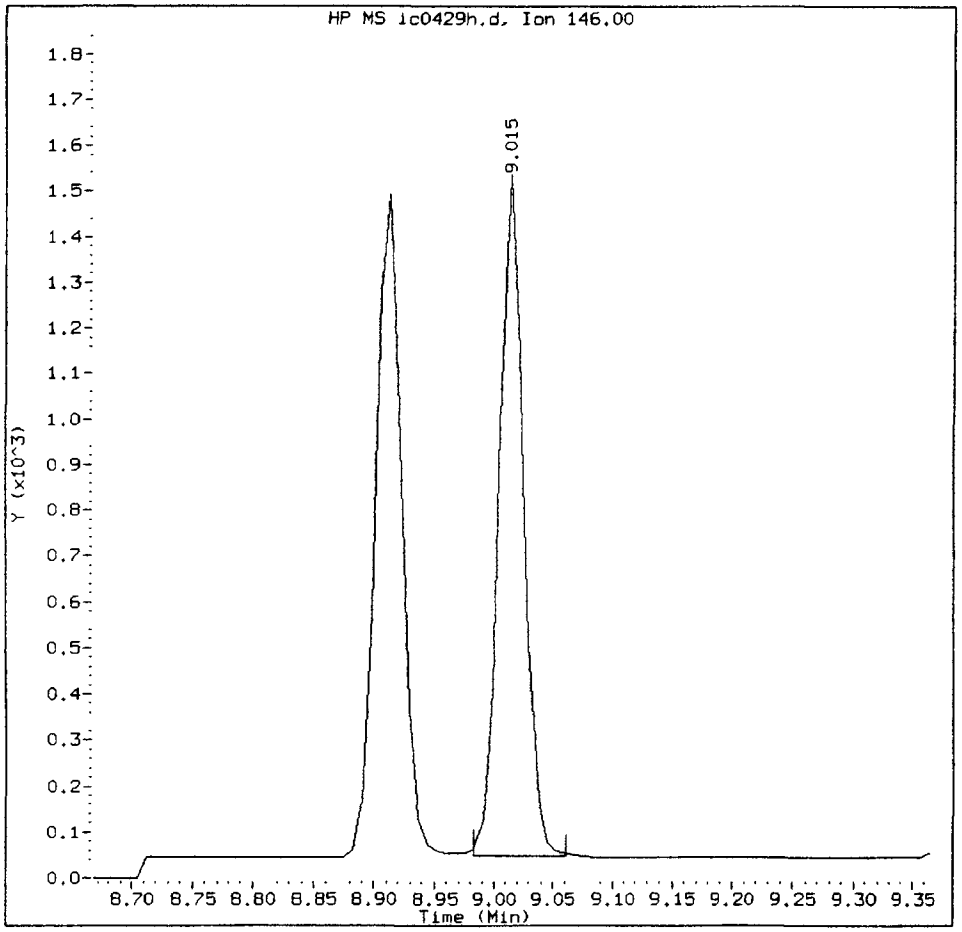
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

1,4-Dichlorobenzene Amount: 0.10 Area: 2198



MANUAL INTEGRATION for 1,4-Dichlorobenzene

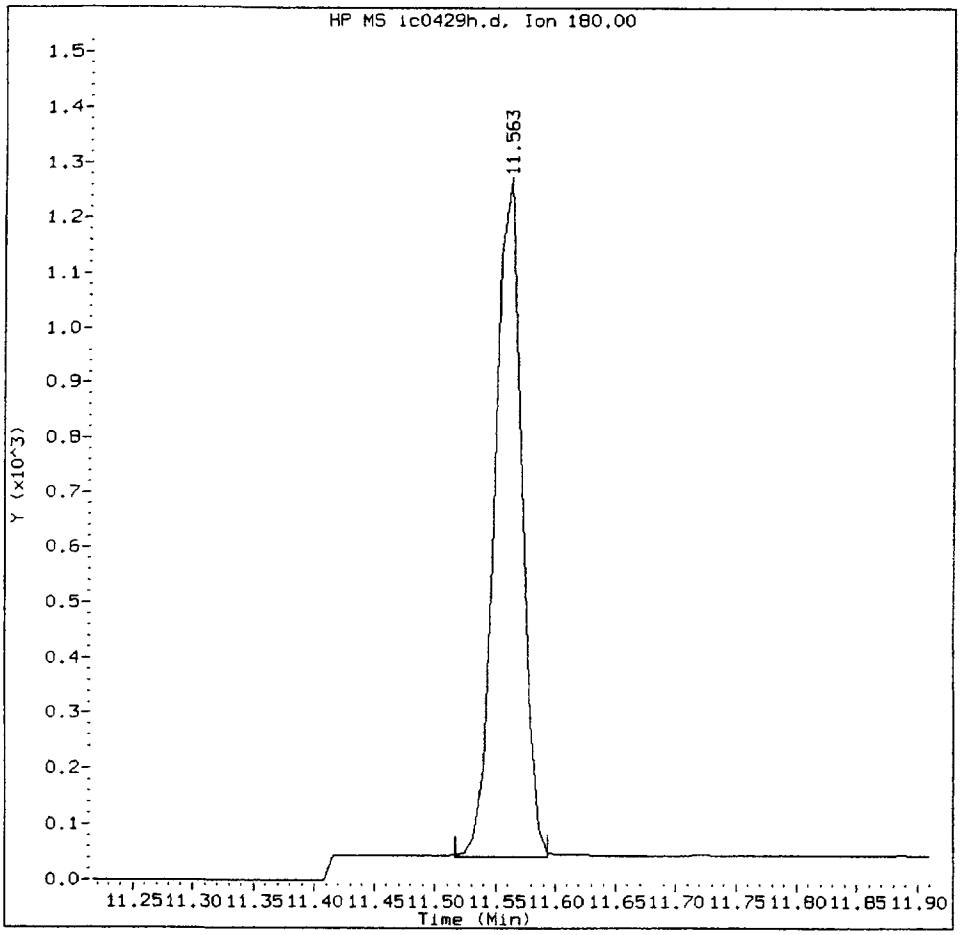
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YB **Date:** 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

1,2,4-Trichlorobenzene Amount: 0.10 Area: 1896



MANUAL INTEGRATION for 1,2,4-Trichlorobenzene

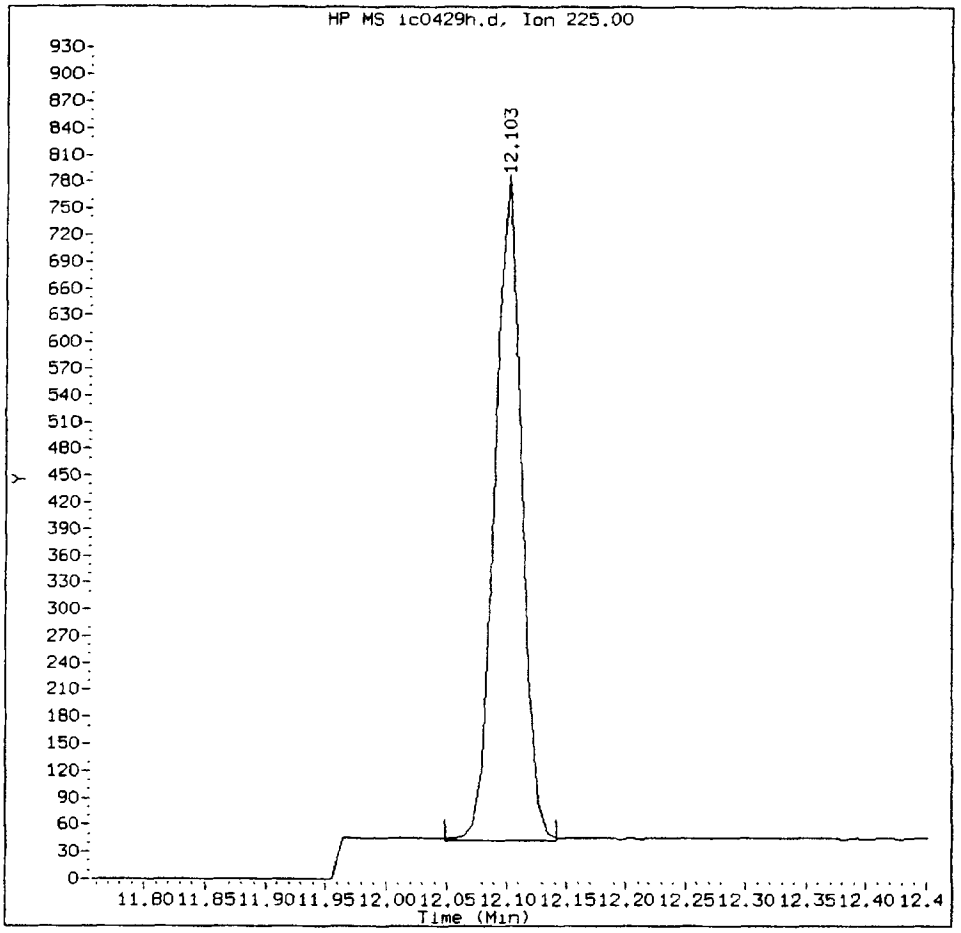
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/8/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Hexachlorobutadiene Amount: 0.10 Area: 1142



MANUAL INTEGRATION for Hexachlorobutadiene

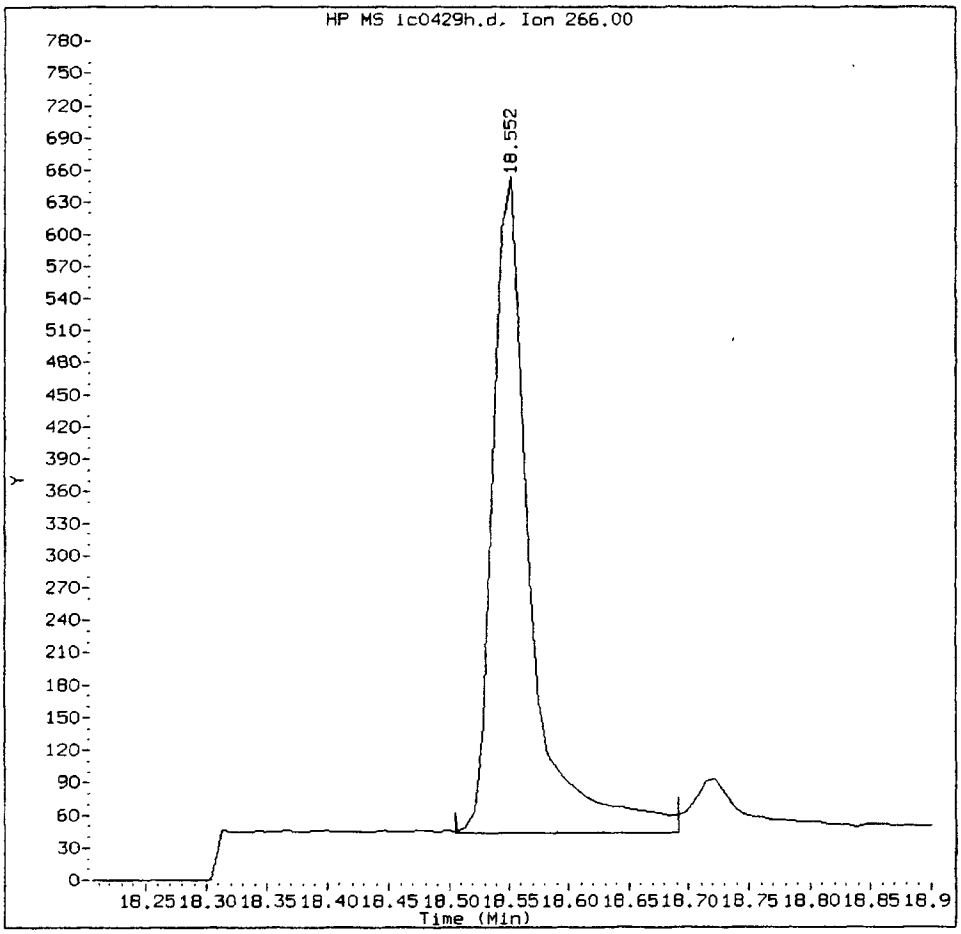
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Pentachlorophenol Amount: 0.15 Area: 1339



MANUAL INTEGRATION for Pentachlorophenol

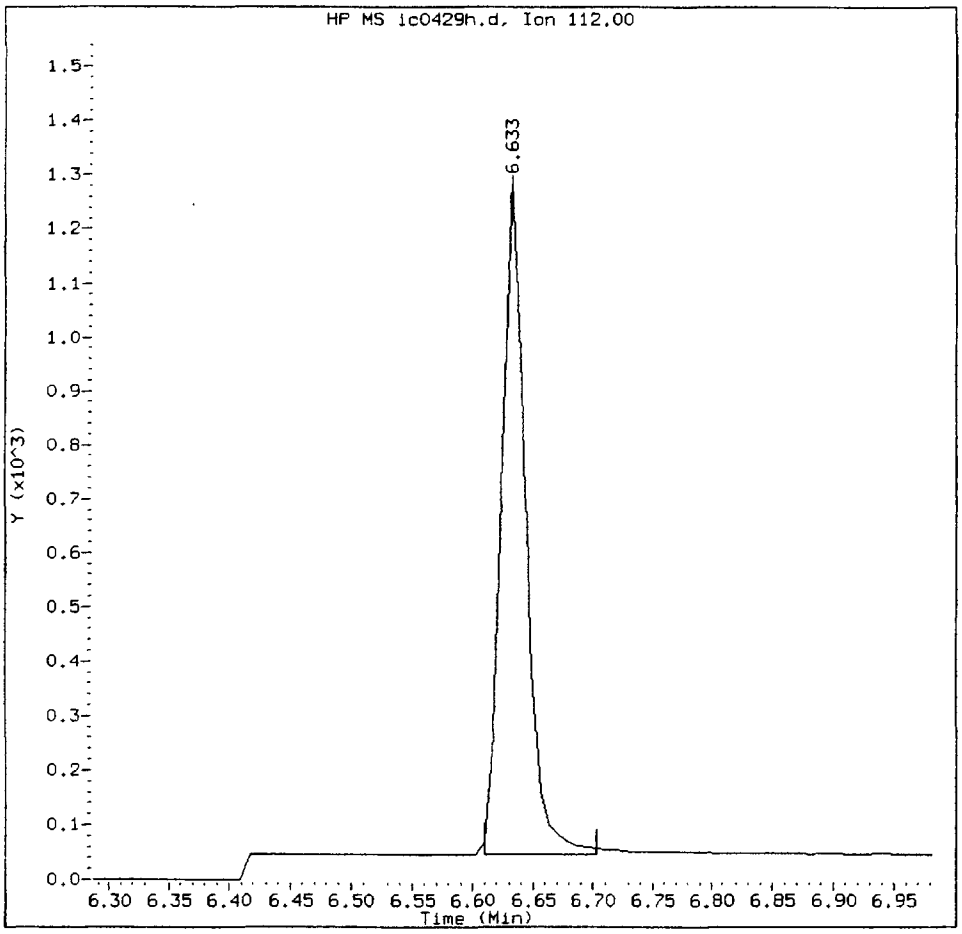
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

2-Fluorophenol Amount: 0.10 Area: 1744



MANUAL INTEGRATION for 2-Fluorophenol

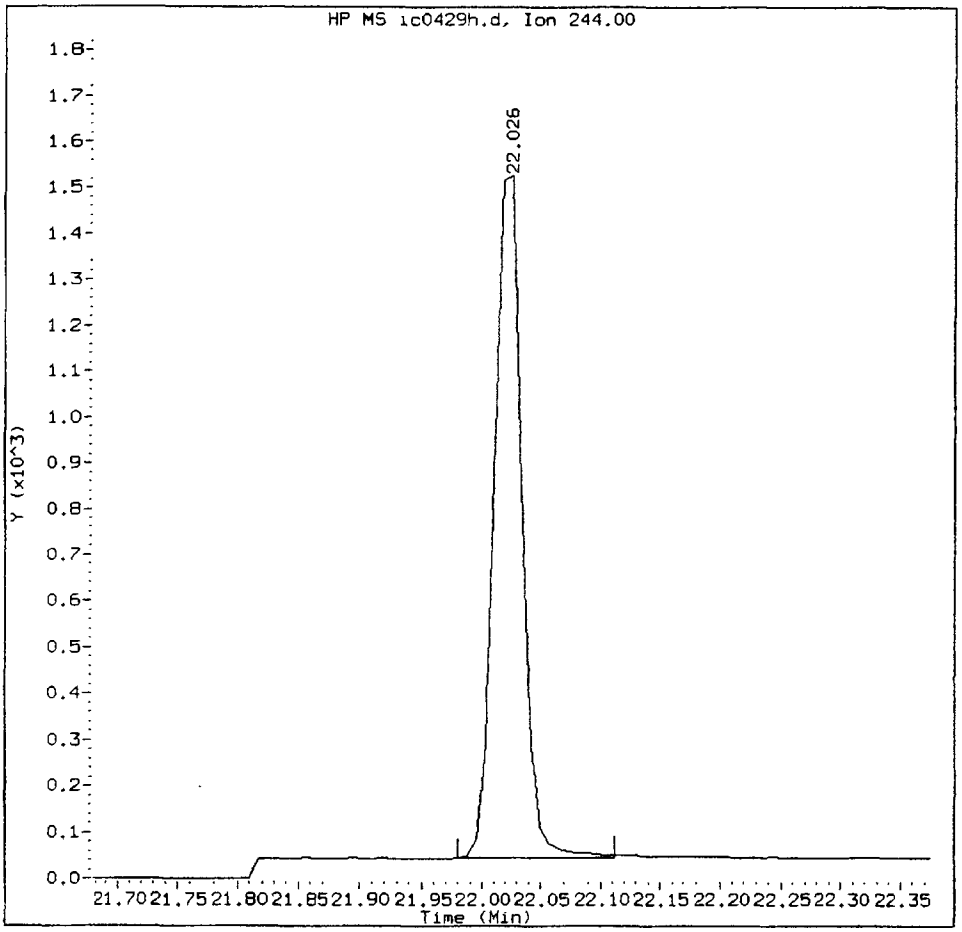
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Terphenyl-d14 Amount: 0.09 Area: 2454



MANUAL INTEGRATION for Terphenyl-d14

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429h.d

Lab ID: ICO429H, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Lab Smp Id: IC0429I
Inj Date : 29-APR-2013 21:47
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429I
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	8113	0.50000	0.4669 (M)
	3 Phenol	94	8.365	8.365	(0.931)	11931	0.50000	0.4777
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	9817	0.50000	0.4770
*	8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	49468	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	9757	0.50000	0.4761
	11 Benzyl alcohol	79	9.294	9.294	(1.035)	5665	0.50000	0.4729
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	9240	0.50000	0.4745
	13 2-Methylphenol	108	9.551	9.551	(1.063)	8436	0.50000	0.4724
	15 4-Methylphenol	108	9.846	9.846	(1.096)	8566	0.50000	0.4711
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	4941	0.50000	0.4818
	22 2,4-Dimethylphenol	107	10.962	10.962	(0.942)	16956	1.00000	0.9589
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	8289	0.50000	0.4738
*	27 Naphthalene-d8	136	11.640	11.640	(1.000)	182546	4.00000	
	30 Hexachlorobutadiene	225	12.104	12.104	(1.040)	5038	0.50000	0.4730
	39 Dimethylphthalate	163	15.052	15.052	(0.969)	14017	0.50000	0.4605
*	42 Acenaphthene-d10	162	15.540	15.540	(1.000)	105486	4.00000	
	50 Diethylphthalate	149	16.637	16.637	(1.071)	15572	0.50000	0.4518
	54 N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	10352	0.50000	0.4940
	57 Hexachlorobenzene	284	18.158	18.158	(0.965)	6394	0.50000	0.4467
	58 Pentachlorophenol	266	18.553	18.553	(0.986)	7927	1.00000	0.9033
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	191121	4.00000	
$	66 Terphenyl-d14	244	22.027	22.027	(0.922)	11579	0.50000	0.4518
	67 Butylbenzylphthalate	149	22.971	22.971	(0.961)	8336	0.50000	0.4310
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	208500	4.00000	
*	77 Perylene-d12	264	26.347	26.347	(1.000)	197777	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.703	28.703	(1.089)	19496	0.50000	0.4422
	90 N-Nitrosodimethylamine	74	4.371	4.371	(0.487)	10669	1.00000	1.001

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429i.d
Lab Smp Id: IC0429I
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	49468	-6.06
27 Naphthalene-d8	192325	96162	384650	182546	-5.08
42 Acenaphthene-d10	109274	54637	218548	105486	-3.47
59 Phenanthrene-d10	203933	101966	407866	191121	-6.28
69 Chrysene-d12	223647	111824	447294	208500	-6.77
77 Perylene-d12	211919	105960	423838	197777	-6.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.64	-0.06
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

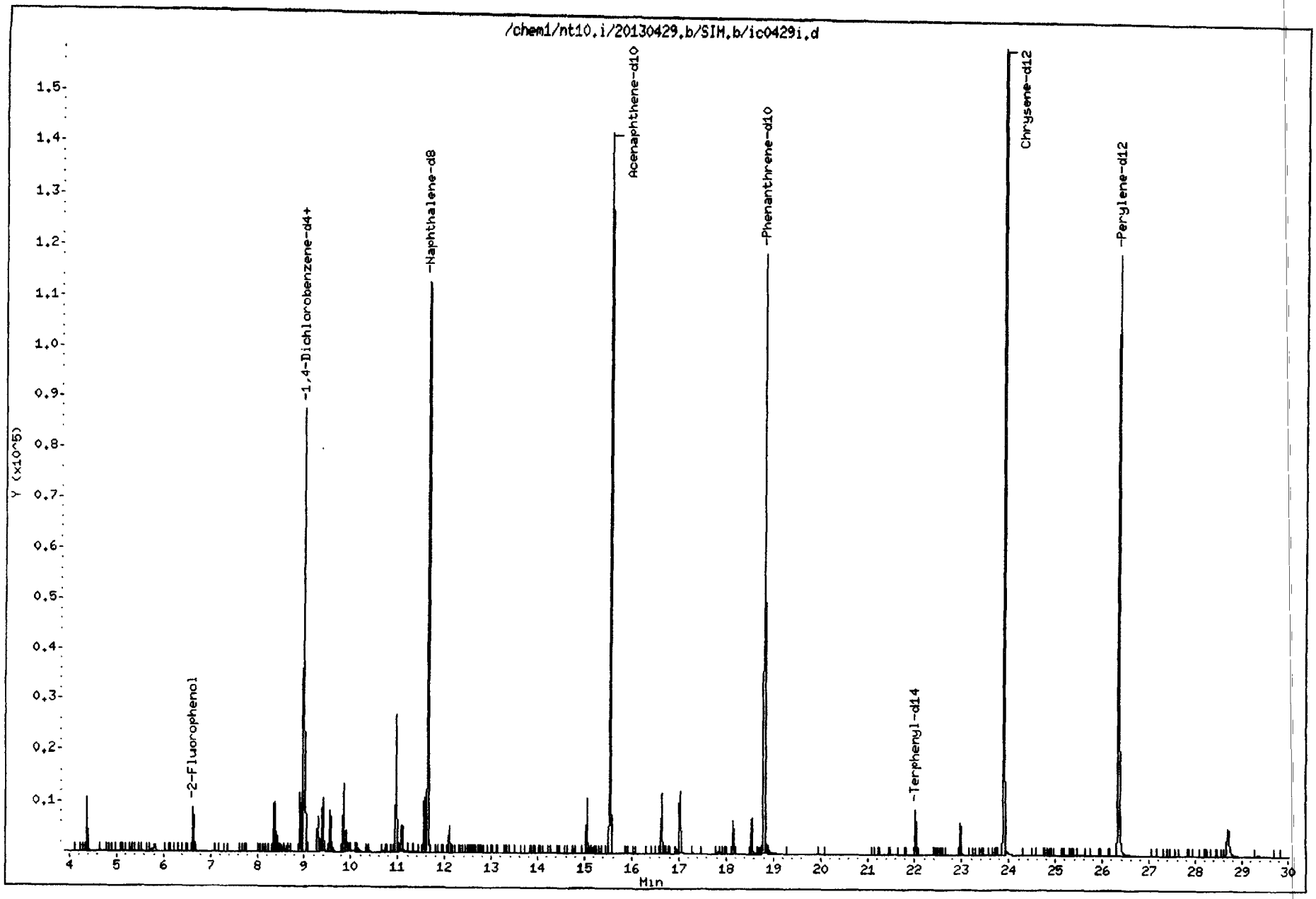
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Date : 29-APR-2013 21:47
Client ID:
Sample Info: IC0429I

Instrument: nt10.i

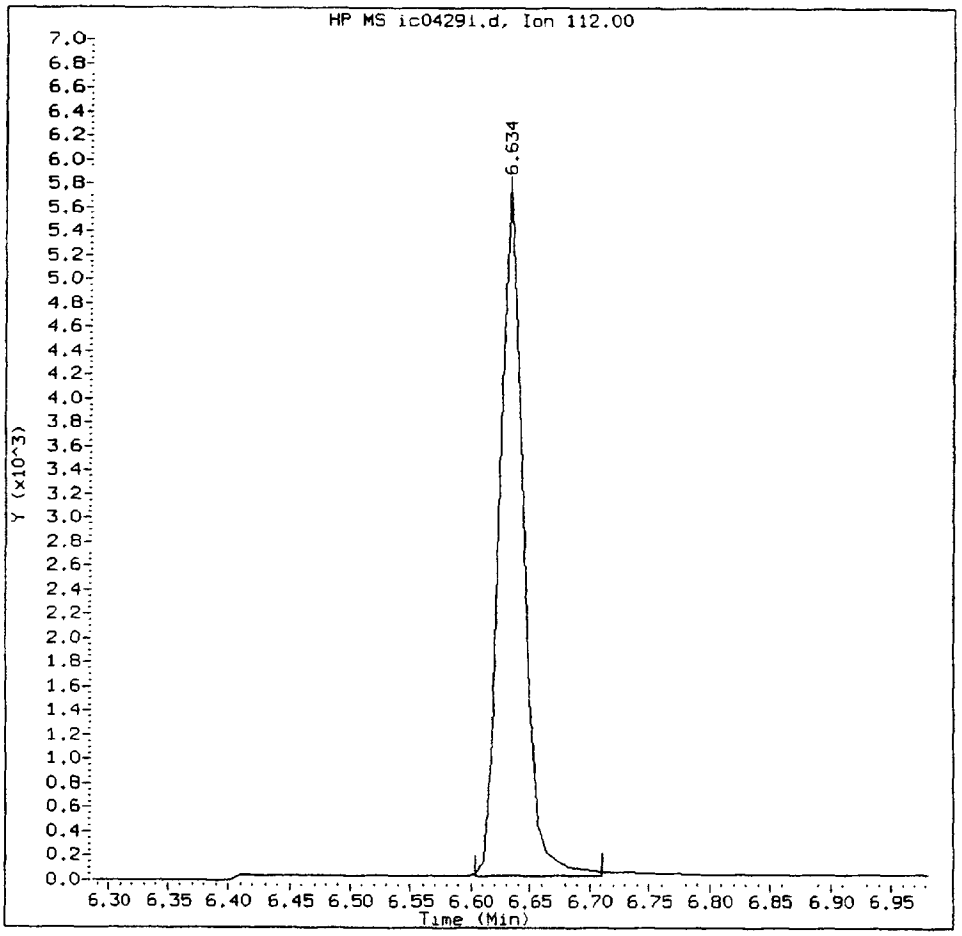
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5ms1



IC0429I, /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d

2-Fluorophenol Amount: 0.47 Area: 8113



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/9/13

CO-ELUTION SUMMARY FOR FILE - ic0429i.d

Lab ID: IC0429I, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2C

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

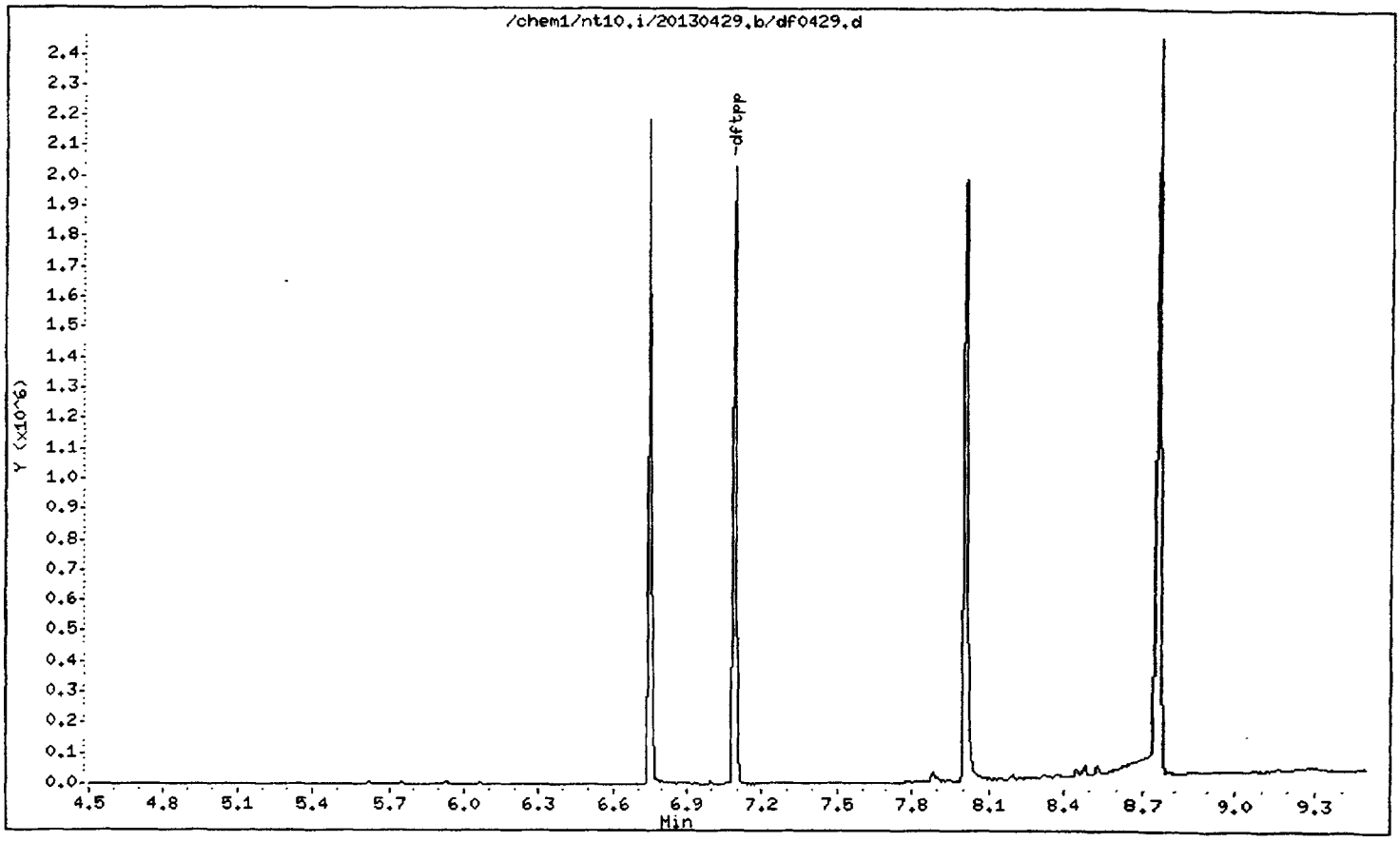
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

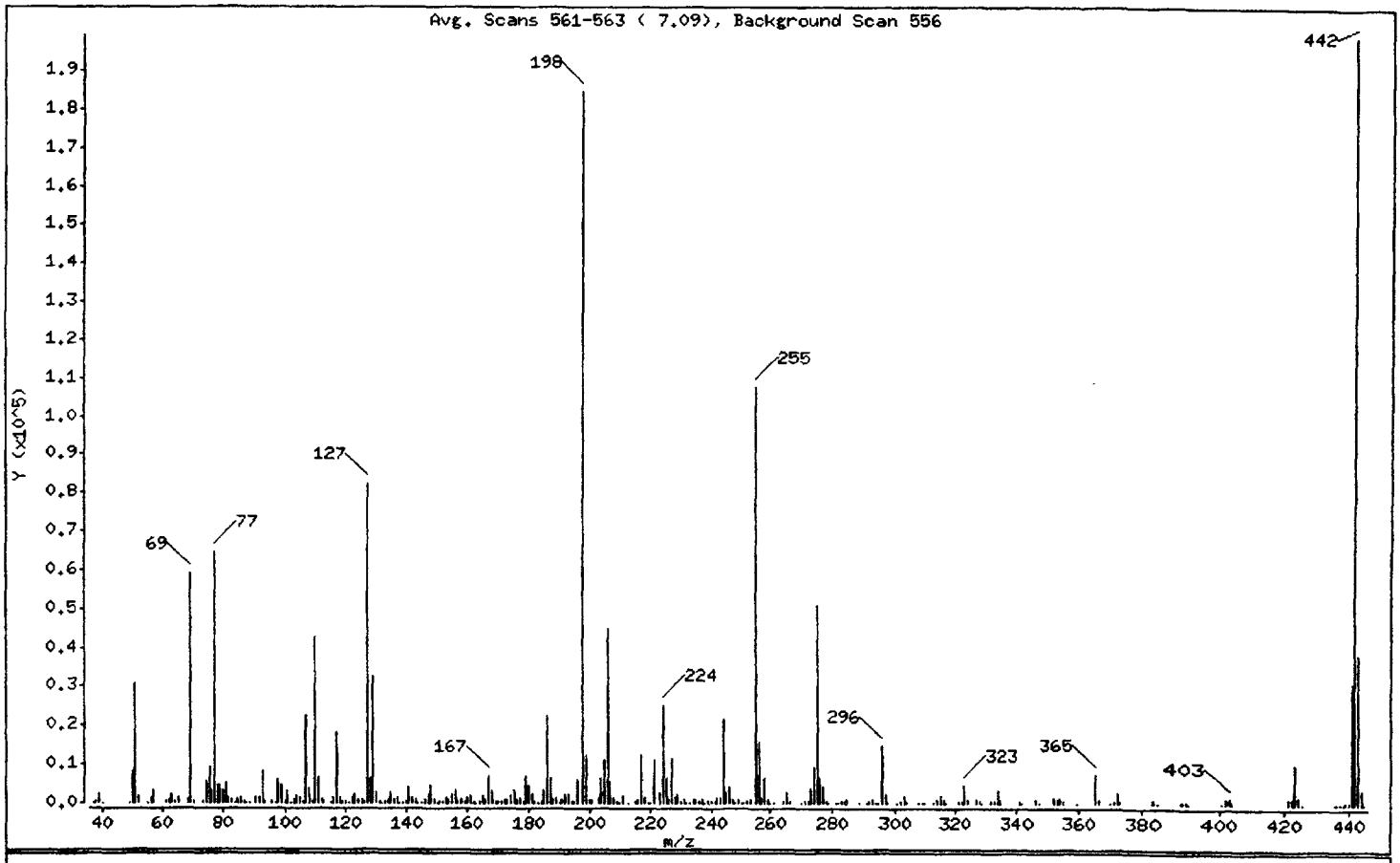
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	16.70
68	Less than 2.00% of mass 69	0.51 (1.60)
69	Mass 69 relative abundance	31.97
70	Less than 2.00% of mass 69	0.15 (0.46)
127	10.00 - 80.00% of mass 198	44.78
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	27.44
365	Greater than 1.00% of mass 198	4.00
441	0.01 - 24.00% of mass 442	16.80 (15.56)
442	50.00 - 200.00% of mass 198	107.98
443	15.00 - 24.00% of mass 442	20.84 (19.30)

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	119	128.00	6232	203.00	1259	289.00	149
38.00	415	129.00	32664	204.00	6492	291.00	55
39.00	2393	130.00	2738	205.00	11023	292.00	248
40.00	132	131.00	547	206.00	44808	293.00	944
44.00	78	132.00	207	207.00	5716	294.00	225
49.00	203	133.00	272	208.00	1602	295.00	86
50.00	8343	134.00	858	209.00	559	296.00	14604
51.00	30808	135.00	2801	210.00	130	297.00	2070
52.00	1637	136.00	916	211.00	1868	298.00	119
55.00	158	137.00	1248	213.00	64	301.00	172
56.00	1274	138.00	214	215.00	464	302.00	318
57.00	3130	139.00	128	216.00	999	303.00	1693
58.00	121	140.00	298	217.00	12350	304.00	431
61.00	576	141.00	4004	218.00	1562	308.00	140
62.00	758	142.00	1332	219.00	107	309.00	66
63.00	2110	143.00	918	220.00	86	310.00	122
64.00	365	144.00	184	221.00	10806	313.00	127
65.00	1151	145.00	229	223.00	2947	314.00	769
68.00	946	146.00	756	224.00	25312	315.00	1728
69.00	58984	147.00	2094	225.00	6355	316.00	922
70.00	271	148.00	4544	226.00	766	317.00	88
73.00	494	149.00	885	227.00	11288	321.00	436
74.00	5693	150.00	191	228.00	1533	322.00	230
75.00	9303	151.00	532	229.00	2272	323.00	4678
76.00	3182	152.00	251	230.00	340	324.00	920
77.00	64696	153.00	1367	231.00	1037	327.00	968
78.00	4399	154.00	1025	232.00	136	328.00	465
79.00	4595	155.00	2332	233.00	163	329.00	50
80.00	3355	156.00	3268	234.00	787	332.00	367
81.00	4879	157.00	652	235.00	849	333.00	490
82.00	1244	158.00	750	236.00	522	334.00	3152
83.00	1132	159.00	624	237.00	861	335.00	783
84.00	59	160.00	1324	238.00	117	341.00	568
85.00	783	161.00	1910	239.00	422	342.00	139
86.00	1346	162.00	596	240.00	404	346.00	1068

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	634	163.00	120	241.00	673	347.00	165
88.00	209	164.00	312	242.00	1491	352.00	1522
89.00	58	165.00	1684	243.00	1585	353.00	1048
91.00	1173	166.00	900	244.00	21560	354.00	1434
92.00	1265	167.00	7028	245.00	2828	355.00	307
93.00	8038	168.00	3167	246.00	4226	359.00	51
94.00	544	169.00	640	247.00	836	365.00	7383
96.00	486	170.00	289	248.00	173	366.00	950
97.00	173	171.00	367	249.00	766	370.00	83
98.00	5992	172.00	736	250.00	145	371.00	406
99.00	4376	173.00	984	251.00	198	372.00	2676
100.00	452	174.00	1650	252.00	278	373.00	680
101.00	3021	175.00	3419	253.00	722	383.00	692
102.00	131	176.00	1090	255.00	107624	384.00	117
103.00	907	177.00	1541	256.00	15761	390.00	337
104.00	1840	178.00	570	257.00	1160	391.00	291
105.00	1589	179.00	6738	258.00	6194	392.00	71
106.00	548	180.00	4416	259.00	1028	401.00	221
107.00	22656	181.00	2092	260.00	162	402.00	1163
108.00	3534	182.00	309	261.00	213	403.00	1545
109.00	609	183.00	166	264.00	253	404.00	599
110.00	42496	184.00	593	265.00	2547	421.00	1426
111.00	6272	185.00	3035	266.00	526	422.00	1250
112.00	744	186.00	22616	270.00	181	423.00	9992
113.00	246	187.00	6353	271.00	299	424.00	1966
115.00	56	188.00	695	272.00	416	425.00	183
116.00	1316	189.00	1391	273.00	3826	435.00	62
117.00	18496	190.00	224	274.00	8949	436.00	62
118.00	1424	191.00	864	275.00	50632	437.00	225
119.00	236	192.00	2063	276.00	6580	438.00	213
120.00	238	193.00	2223	277.00	4111	439.00	328
121.00	63	194.00	423	278.00	606	440.00	329
122.00	1437	195.00	416	279.00	122	441.00	31000
123.00	2280	196.00	5832	281.00	202	442.00	199232
124.00	999	198.00	184512	282.00	126	443.00	38448

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

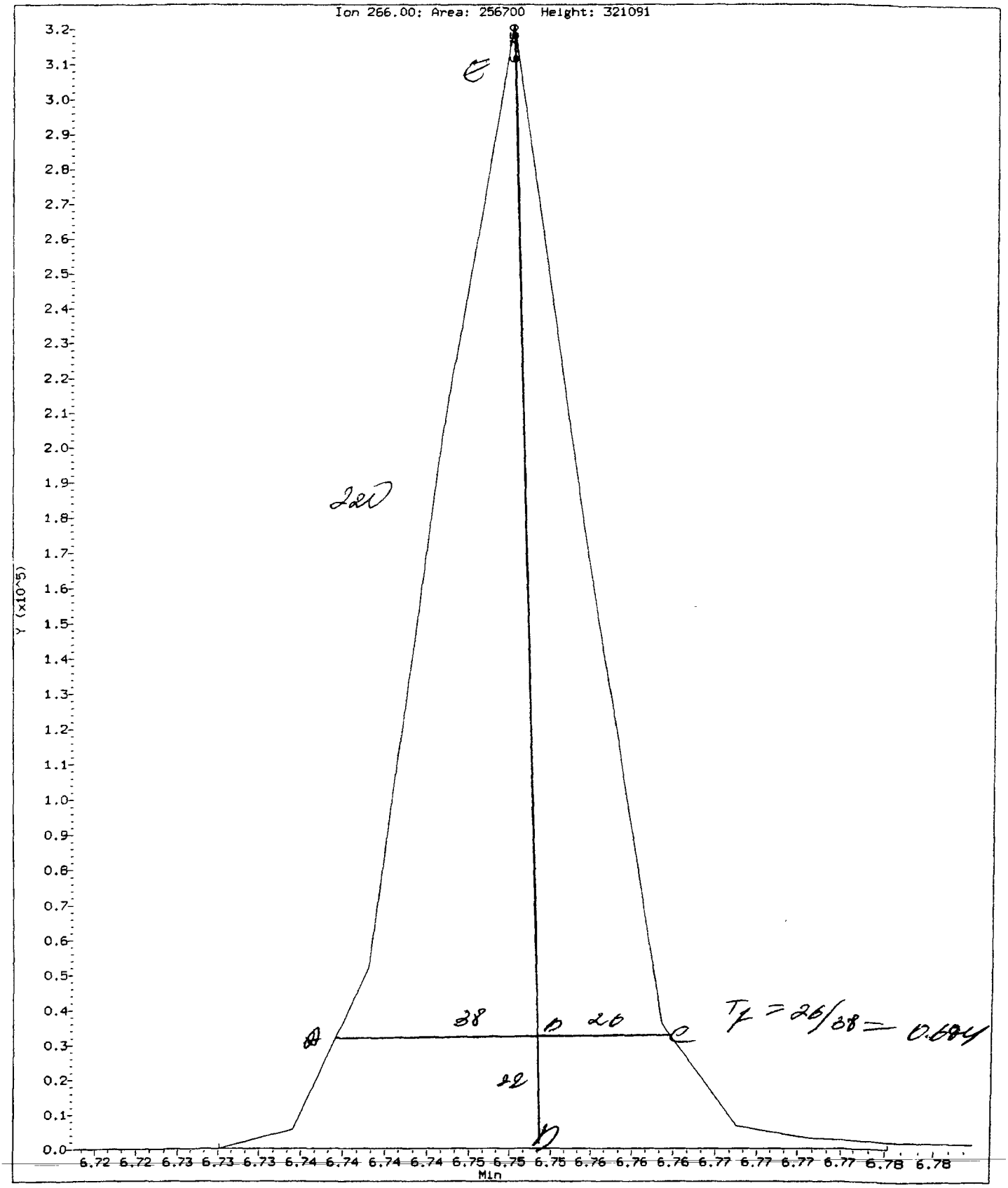
Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	975	199.00	12407	283.00	532	444.00	3455
126.00	347	200.00	963	284.00	335	445.00	131
127.00	82624	201.00	1058	285.00	774		

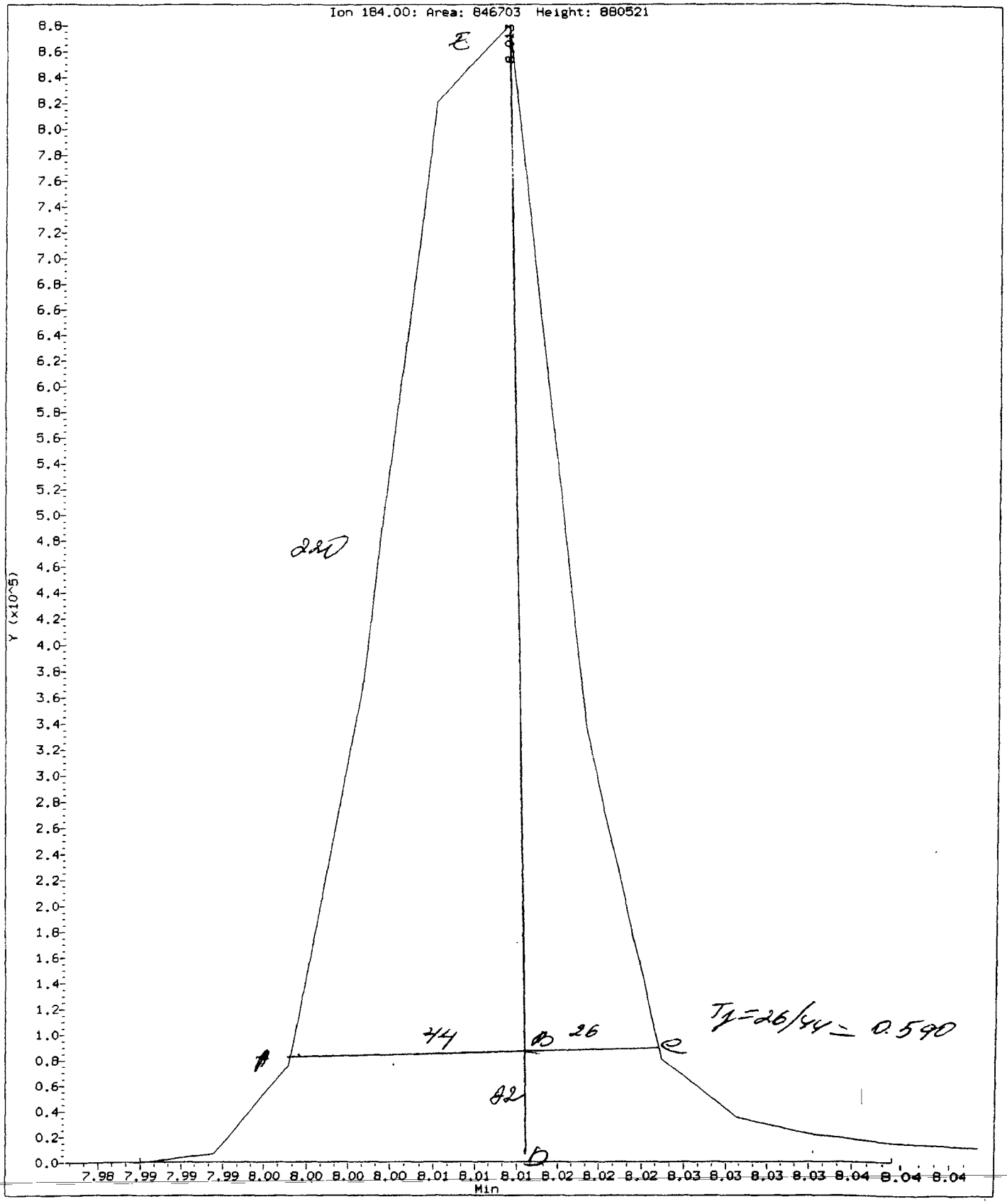
Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Method: /chem1/nt10.i/20130429.b/ddt.b/sw846ddt.m
Analysis Date: 29-APR-2013 16:37

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.750	256700
Benzidine	8.013	846703
4,4'-DDE	8.195	1804
4,4'-DDD	8.483	6740
4,4'-DDT	8.745	445165

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(1804 + 6740) * 100}{(1804 + 6740 + 445165)}$$

DDT Percent Breakdown = 1.9 %

SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WR99 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 4/29/13 Analysis Start Date: 6/13/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N / ✓	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
ICAL Q Flag applied?	~~Y~~ / N / ✓	LCS / LCSD RPD ≤ 30%?	NA / ✗ 45%
CCAL Q flag applied?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / ✓
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ ~~30%~~?	NA / ✗ 35%
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below.

(Review 1) Analyst: YZ **Date:** 6/17/13

(Review 2) Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 6/13/13 Analysis: ABN/SIM ABN Analyst: V2

GC Program: ABN2 Column No: 252947 Column Type: ZB 5 MS,

Instrument Tune (.U or .CT.): 13022846 EM Voltage: 1729

Calibration File: DF0613 Curve Date: 4/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 B000112	
	2073-1 1998-4	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130613.b

	Time	Filename	LabID	ClientId	DF									
1	1216	df0613.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1307	cc0613a.d	CC0613A		1	8 06	58483	10.64	213145	14 43	116288	17 63	220667	22 81	232122	25.07	213159
3	1345	ws49mb.d	WS49MBS1	WS49MBS1	1	8.07	56989	10 64	218544	14 44	119177	17 64	223736	22 81	232122	25 07	210573
4	1421	ws49sb d	WS49LCSS1	WS49LCSS1	1	8 07	57812	10.64	210144	14 44	114587	17 64	211440	22 81	228571	25.08	213817
5	1458	ws49sbd.d	WS49LCSDS1	WS49LCSDS1	1	8 07	55629	10 64	203083	14.44	112054	17 64	206704	22 81	218716	25 08	207476
6	1535	ws49a.d	WS49A	FA-1-S	1	8.07	51149	10.64	192718	14 44	102356	17 64	182203	22.82	184530	25.10	175902
7	1612	ws49b.d	WS49B	FA-2-4	1	8.07	51777	10 65	197537	14.45	104929	17 64	187131	22 82	183259	25 10	180421
8	1649	ws49c.d	WS49C	FA-3-2	1	8.07	55896	10.65	213575	14 45	114040	17 64	199383	22.82	198447	25 11	188502
9	1726	ws49d.d	WS49D	FA-4-3	1	8.07	48857	10.65	186953	14 45	97684	17 64	174407	22.82	174319	25.11	171345
10	1803	wr99d d	WR99D	KC-VT-1593-2	1	8.07	55422	10 65	212390	14 45	113058	17 65	203862	22 84	197388	25 12	188689
11	1840	wr99dms.d	WR99DMS	KC-VT-1593-2	1	8.07	51687	10.65	189590	14.45	102081	17 65	174416	22.83	187437	25 11	181554
12	1916	wr99dmsd d	WR99DMSD	KC-VT-1593-2	1	8.07	55494	10 65	202065	14.45	109663	17.65	185441	22.83	204036	25.11	198486
13	1953	wr99e.d	WR99E	KC-CB-01-201	1	8 07	56517	10.65	213384	14 45	114345	17.64	207913	22.82	204651	25 11	194068
14	2030	wr99f.d	WR99F	KC-DD-2009-2	1	8 07	54904	10.65	207233	14.45	112128	17.65	188798	22.83	199317	25 11	185586
15	2107	ws21a.d	WS21A	KC-IV-SPS-20	1	8 07	56710	10.65	214283	14 45	108036	17.65	198678	22.82	201377	25 10	192571

V2 6/17/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130613.b/SIM.b

ARI Job No.: WS49 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 13-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1345	ws49mb.d	WS49MBS1	WS49MBS1	1	Phenol, Diethylphthalate,
1421	ws49sb.d	WS49LCSS1	WS49LCSS1	1	NO MANUAL INTEGRATION
1458	ws49sbd.d	WS49LCSDS1	WS49LCSDS1	1	NO MANUAL INTEGRATION
1803	wr99d.d	WR99D	KC-VT-1593	1	Diethylphthalate,
1840	wr99dms.d	WR99DMS	KC-VT-1593	1	NO MANUAL INTEGRATION
1916	wr99dmsd.d	WR99DMSD	KC-VT-1593	1	NO MANUAL INTEGRATION
1953	wr99e.d	WR99E	KC-CB-01-2	1	Dimethylphthalate, N-Nitrosodiphenylamine,
2030	wr99f.d	WR99F	KC-DD-2009	1	2,4-Dimethylphenol, Dimethylphthalate, N-Nitrosodiphenylamine,
2107	ws21a.d	WS21A	KC-IV-SPS-	1	1,4-Dichlorobenzene, 4-Methylphenol,
1535	ws49a.d	WS49A	FA-1-S	1	Dimethylphthalate, Diethylphthalate, N-Nitrosodiphenylamine,
1612	ws49b.d	WS49B	FA-2-4	1	2,4-Dimethylphenol, Diethylphthalate, Pentachlorophenol,
1649	ws49c.d	WS49C	FA-3-2	1	2,4-Dimethylphenol, Dimethylphthalate, Diethylphthalate,
1726	ws49d.d	WS49D	FA-4-3	1	2,4-Dimethylphenol, Dimethylphthalate, Diethylphthalate,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130613.b/SIM.b

Instrument: nt10.i Date: 13-JUN-2013 Method: SIM.b/SIMABN2.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 13-JUN-2013

Compound	%D
Butylbenzylphthalate	22.2

Data File: /chem1/nt10.1/20130613.b/df0613.d

Date : 13-JUN-2013 12:16

Client ID: DFTPP

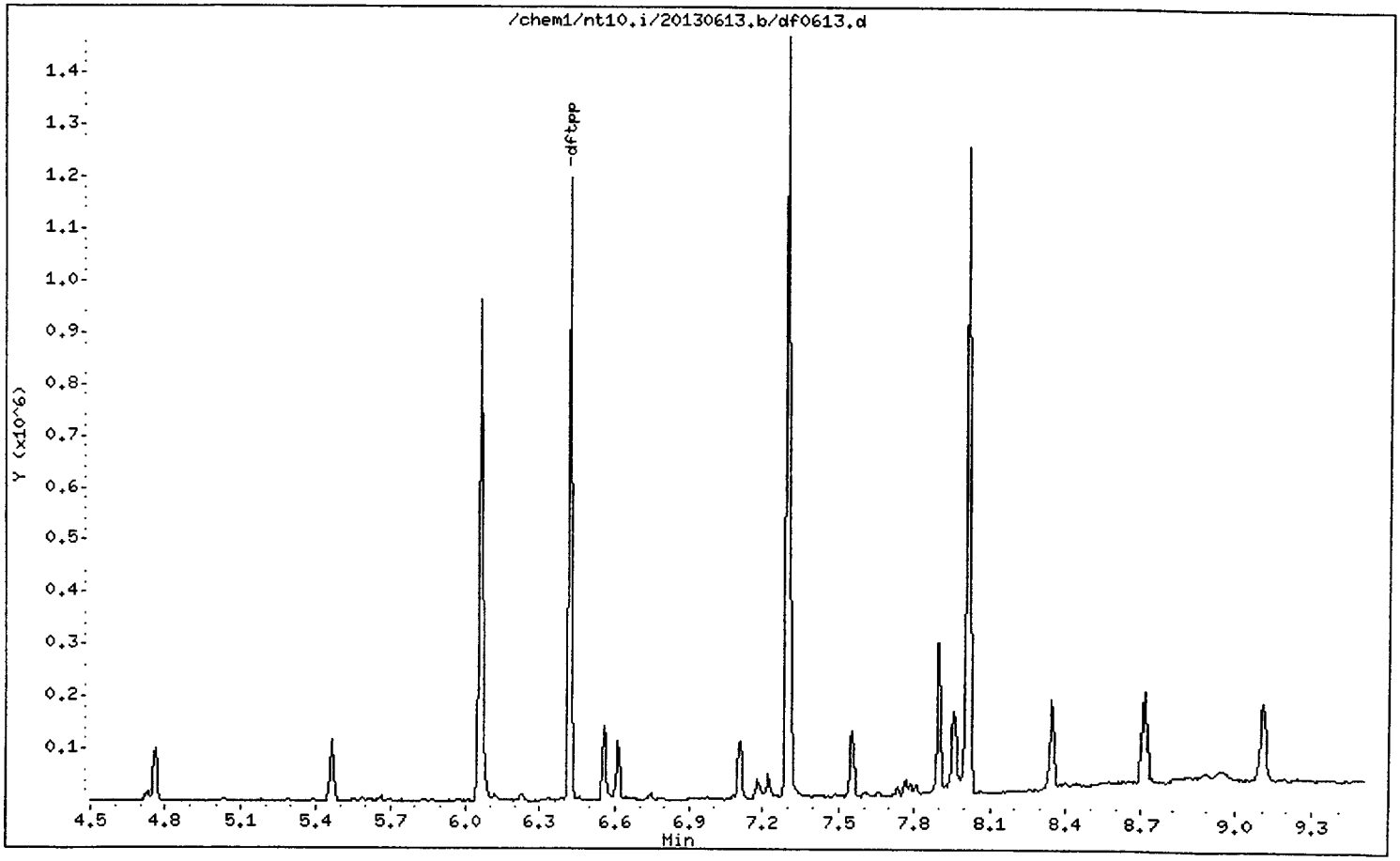
Instrument: nt10.1

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/df0613.d

Date : 13-JUN-2013 12:16

Client ID: DFTPP

Instrument: nt10.i

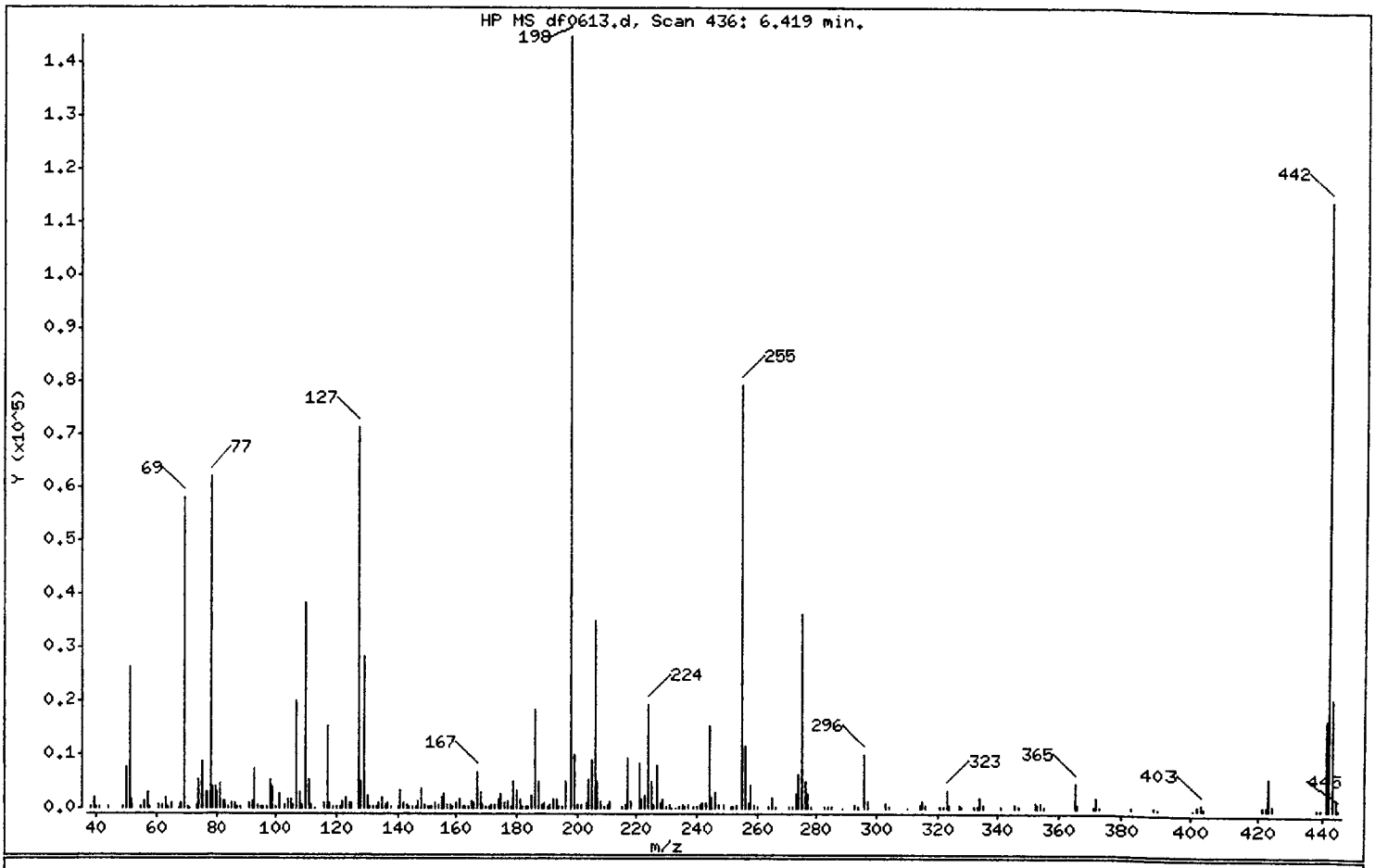
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	18.12
68	Less than 2.00% of mass 69	0.72 (1.80)
69	Mass 69 relative abundance	39.98
70	Less than 2.00% of mass 69	0.26 (0.66)
127	10.00 - 80.00% of mass 198	49.11
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 60.00% of mass 198	25.06
365	Greater than 1.00% of mass 198	3.19
441	0.01 - 24.00% of mass 442	11.63 (14.72)
442	50.00 - 200.00% of mass 198	79.01
443	15.00 - 24.00% of mass 442	14.60 (18.47)

Data File: /chem1/nt10.1/20130613.b/df0613.d

Date : 13-JUN-2013 12:16

Client ID: DFTPP

Instrument: nt10.1

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0613.d

Spectrum: HP MS df0613.d, Scan 436: 6.419 min.

Location of Maximum: 198.00

Number of points: 258

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	371	120.00	280	187.00	5106	265.90	283
39.10	2118	121.10	206	188.10	594	271.00	353
40.00	322	122.00	1315	188.90	993	272.10	328
41.10	192	123.00	1918	189.90	194	273.00	2623
44.00	285	124.00	984	191.00	634	274.00	6358
49.10	226	125.00	927	192.00	1703	275.00	36320
50.10	7518	127.00	71184	193.00	1701	276.00	4882
51.10	26264	128.00	5132	194.00	377	277.00	2797
52.10	1546	129.00	28456	195.00	384	278.00	368
55.00	456	130.00	2202	196.00	4853	282.90	343
56.00	1173	131.00	495	198.00	144960	284.00	280
57.00	2990	131.90	205	199.00	9914	285.00	443
57.90	177	132.90	213	200.00	714	288.90	163
61.00	678	133.90	840	201.40	664	293.00	691
62.00	785	135.00	2101	203.00	999	294.00	168
63.00	2121	136.00	829	204.00	5398	296.00	9969
64.00	395	137.00	1034	205.00	8931	297.00	1426
65.00	985	137.70	226	206.00	34904	303.00	1139
67.00	161	140.00	361	207.00	4968	304.00	295
68.00	1045	141.00	3354	208.00	1244	309.90	158
69.00	57952	142.00	1129	209.00	418	314.00	556
70.00	381	143.00	830	210.20	656	315.00	1198
71.00	164	144.00	259	211.10	1379	316.00	638
73.00	636	144.90	180	215.00	395	321.00	352
74.00	5234	146.00	468	216.00	815	321.90	190
75.00	8820	147.00	1415	217.00	9474	323.10	3206
76.00	3154	148.00	3710	218.00	1270	324.00	510
77.10	62144	149.00	714	221.00	8450	327.00	533
78.00	4064	150.10	214	221.80	1553	327.90	360
79.00	3917	151.20	466	223.00	2322	332.00	314
80.00	3066	151.80	302	224.00	19280	333.00	388
81.00	4625	153.00	1082	225.00	4878	334.00	1960
82.00	1362	154.00	748	226.00	607	335.00	536
83.00	1323	155.00	1914	227.00	7963	341.10	379
83.90	270	156.00	2727	228.00	1155	345.90	586

Data File: /chem1/nt10.1/20130613.b/df0613.d

Date : 13-JUN-2013 12:16

Client ID: DFTPP

Instrument: nt10.1

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0613.d

Spectrum: HP MS df0613.d, Scan 436: 6.419 min.

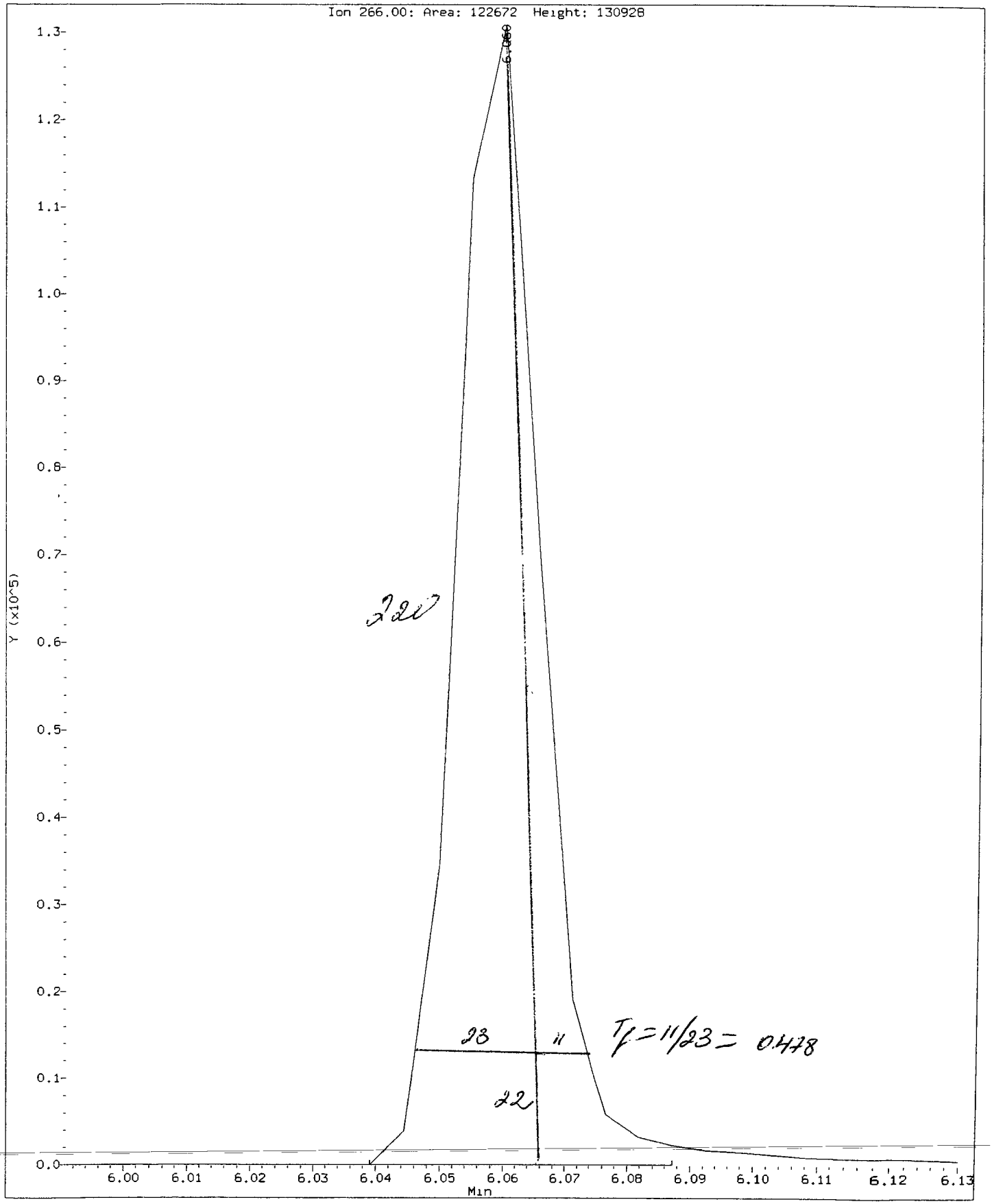
Location of Maximum: 198.00

Number of points: 258

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	870	157.00	614	229.00	1550	347.00	167
86.00	1074	157.90	601	230.10	181	352.00	926
87.00	494	158.90	445	231.00	705	353.00	552
88.00	233	160.00	1148	232.00	151	354.00	951
91.00	1078	161.00	1642	232.90	153	355.10	186
92.00	1207	162.00	386	234.00	450	365.00	4619
93.00	7286	162.90	170	235.00	570	366.00	621
93.90	519	163.90	213	236.00	405	371.10	299
95.00	222	165.00	1222	237.00	696	372.00	1842
96.00	360	166.00	1101	239.00	353	373.00	334
97.10	288	167.00	6631	240.00	222	383.00	476
98.00	5283	168.00	2861	241.00	520	389.90	214
99.00	4109	169.00	552	242.00	1076	390.90	154
99.90	354	169.90	224	243.10	1163	400.90	153
101.00	2545	170.90	370	244.00	15468	402.00	548
103.00	698	171.90	700	245.00	2139	403.00	924
104.00	1733	173.00	726	246.00	2873	404.00	413
105.00	1641	174.00	1548	247.00	618	421.00	752
106.00	535	175.00	2710	248.90	610	422.00	723
107.00	20056	176.00	999	251.00	180	423.10	5858
108.00	2983	177.00	1327	252.00	184	424.00	850
109.10	632	178.00	427	253.10	576	438.20	230
110.00	38192	179.00	5018	255.00	79432	439.40	402
111.00	5463	180.00	3407	256.00	11709	441.10	16856
112.00	754	181.00	1762	257.00	958	442.10	114536
112.80	157	181.90	227	258.00	4410	443.10	21160
116.00	920	182.90	180	259.00	742	444.10	2016
117.00	15485	183.90	455	260.00	188	445.00	175
117.90	1042	185.00	2461	263.90	222		
119.00	218	186.00	18264	265.00	2019		

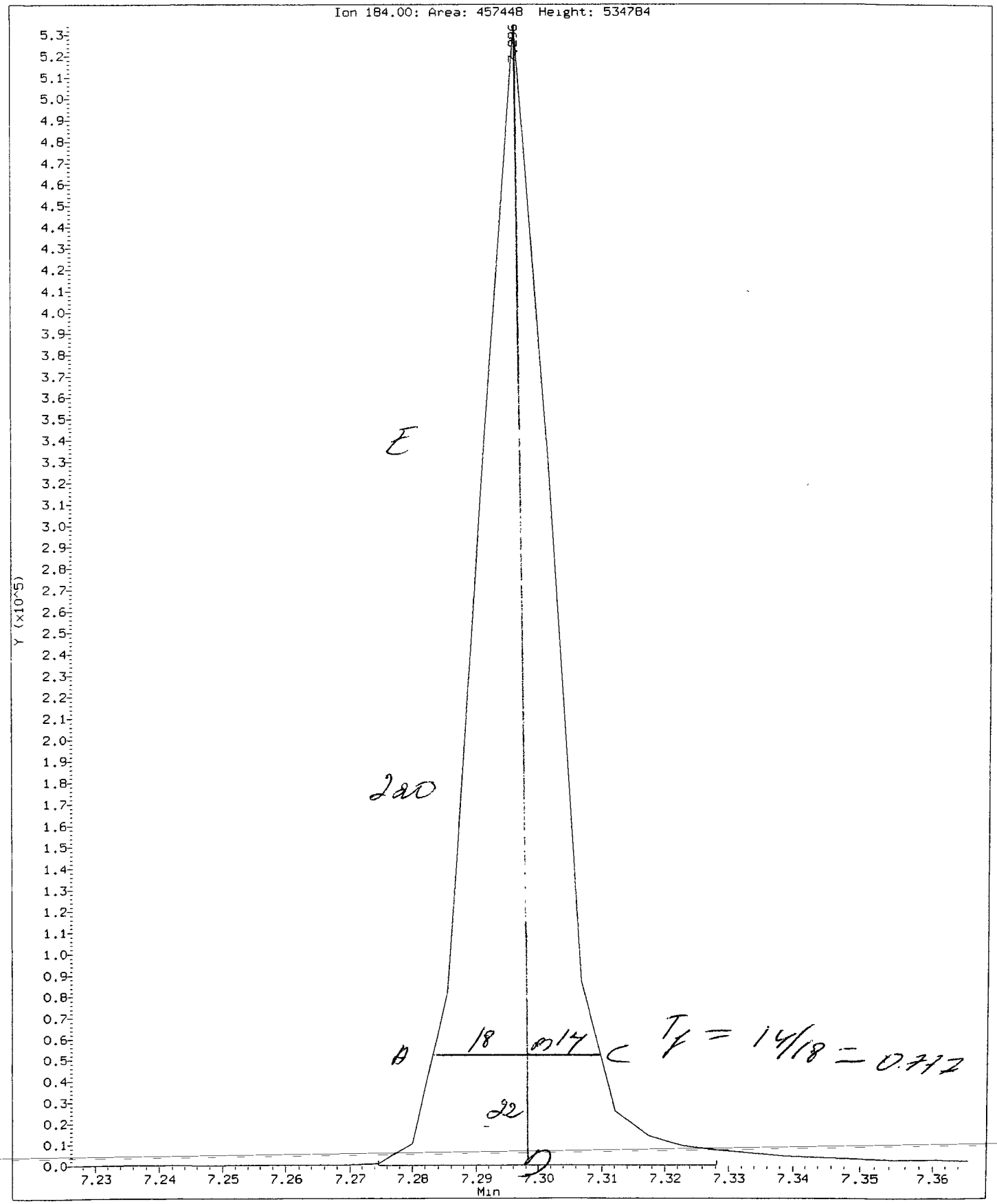
Data File: /chem1/nt10.1/20130613.b/ddt.b/df0613.d
Injection Date: 13-JUN-2013 12:16
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130613.b/ddt.b/df0613.d
Injection Date: 13-JUN-2013 12:16
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130613.b/ddt.b/df0613.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130613.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 13-JUN-2013 12:16 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.060	122672
Benzidine	7.296	457448
4,4'-DDE	7.483	660
4,4'-DDD	7.767	4908
4,4'-DDT	8.018	242365

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(660 + 4908) * 100}{(660 + 4908 + 242365)}$$

DDT Percent Breakdown = 2.2 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 13-JUN-2013 13:07
Lab File ID: cc0613a.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0613A Quant Type: ISTD
Method: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.40508	1.42867	0.010	1.67935	20.00000	Averaged	
3 Phenol	2.01971	2.38501	0.010	18.08682	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.66429	1.56172	0.010	-6.16313	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.65707	1.54710	0.010	-6.63584	20.00000	Averaged	
11 Benzyl alcohol	0.96865	0.83105	0.010	-14.20521	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.57473	1.50022	0.010	-4.73125	20.00000	Averaged	
13 2-Methylphenol	1.44396	1.62333	0.010	12.42225	20.00000	Averaged	
15 4-Methylphenol	1.47039	1.57036	0.010	6.79870	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.82918	0.85965	0.050	3.67508	20.00000	Averaged	
22 2,4-Dimethylphenol	0.38748	0.37970	0.010	-2.00619	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.38338	0.36563	0.010	-4.63033	20.00000	Averaged	
30 Hexachlorobutadiene	0.23337	0.21718	0.010	-6.93996	20.00000	Averaged	
39 Dimethylphthalate	1.15411	1.18187	0.010	2.40558	20.00000	Averaged	
50 Diethylphthalate	1.30694	1.36759	0.010	4.64025	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.43858	0.47914	0.010	9.24697	20.00000	Averaged	
57 Hexachlorobenzene	0.29961	0.28615	0.010	-4.49168	20.00000	Averaged	
58 Pentachlorophenol	0.17813	0.16653	0.005	-6.51053	20.00000	Averaged	
$ 66 Terphenyl-d14	0.49170	0.50776	0.010	3.26582	20.00000	Averaged	
67 Butylbenzylphthalate	0.37109	0.45337	0.010	22.17108	20.00000	Averaged	<-
79 Dibenzo(a,h)anthracene	0.89160	0.94431	0.010	5.91164	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.86193	0.84567	0.010	-1.88687	20.00000	Averaged	

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/SIM.b/cc0613a.d
Lab Smp Id: CC0613A
Inj Date : 13-JUN-2013 13:07
Operator : YZ Inst ID: nt10.i
Smp Info : CC0613A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 17-Jun-2013 10:13 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.825	5.825	(0.723)	20888	1.00000	1.017
	3 Phenol	94	7.518	7.518	(0.933)	34870	1.00000	1.181
	7 1,3-Dichlorobenzene	146	7.989	7.989	(0.991)	22833	1.00000	0.9384
*	8 1,4-Dichlorobenzene-d4	152	8.059	8.059	(1.000)	58483	4.00000	
	9 1,4-Dichlorobenzene	146	8.090	8.090	(1.004)	22619	1.00000	0.9336
	11 Benzyl alcohol	79	8.393	8.393	(1.041)	12150	1.00000	0.8579
	12 1,2-Dichlorobenzene	146	8.455	8.455	(1.049)	21934	1.00000	0.9527
	13 2-Methylphenol	108	8.664	8.664	(1.075)	23734	1.00000	1.124
	15 4-Methylphenol	108	8.952	8.952	(1.111)	22959	1.00000	1.068
	16 N-Nitroso-di-n-propylamine	70	8.975	8.975	(1.114)	12568	1.00000	1.037
	22 2,4-Dimethylphenol	107	10.030	10.030	(0.943)	40466	2.00000	1.960
	26 1,2,4-Trichlorobenzene	180	10.562	10.562	(0.993)	19483	1.00000	0.9537
*	27 Naphthalene-d8	136	10.639	10.639	(1.000)	213145	4.00000	
	30 Hexachlorobutadiene	225	11.095	11.095	(1.043)	11572	1.00000	0.9306
	39 Dimethylphthalate	163	14.005	14.005	(0.970)	34359	1.00000	1.024
*	42 Acenaphthene-d10	162	14.430	14.430	(1.000)	116288	4.00000	
	50 Diethylphthalate	149	15.559	15.559	(1.078)	39758	1.00000	1.046
	54 N-Nitrosodiphenylamine	169	15.914	15.914	(0.903)	26432	1.00000	1.092
	57 Hexachlorobenzene	284	16.986	16.986	(0.964)	15786	1.00000	0.9551
	58 Pentachlorophenol	266	17.389	17.389	(0.986)	18374	2.00000	1.870
*	59 Phenanthrene-d10	188	17.629	17.629	(1.000)	220667	4.00000	
$	66 Terphenyl-d14	244	20.955	20.955	(0.919)	29465	1.00000	1.033
	67 Butylbenzylphthalate	149	21.939	21.939	(0.962)	26309	1.00000	1.222
*	69 Chrysene-d12	240	22.806	22.806	(1.000)	232122	4.00000	
*	77 Perylene-d12	264	25.074	25.074	(1.000)	213159	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.827	26.827	(1.070)	50322	1.00000	1.059
	90 N-Nitrosodimethylamine	74	3.640	3.640	(0.452)	24728	2.00000	1.962

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0613a.d
Lab Smp Id: CC0613A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	58483	11.06
27 Naphthalene-d8	192325	96162	384650	213145	10.83
42 Acenaphthene-d10	109274	54637	218548	116288	6.42
59 Phenanthrene-d10	203933	101966	407866	220667	8.21
69 Chrysene-d12	223647	111824	447294	232122	3.79
77 Perylene-d12	211919	105960	423838	213159	0.59

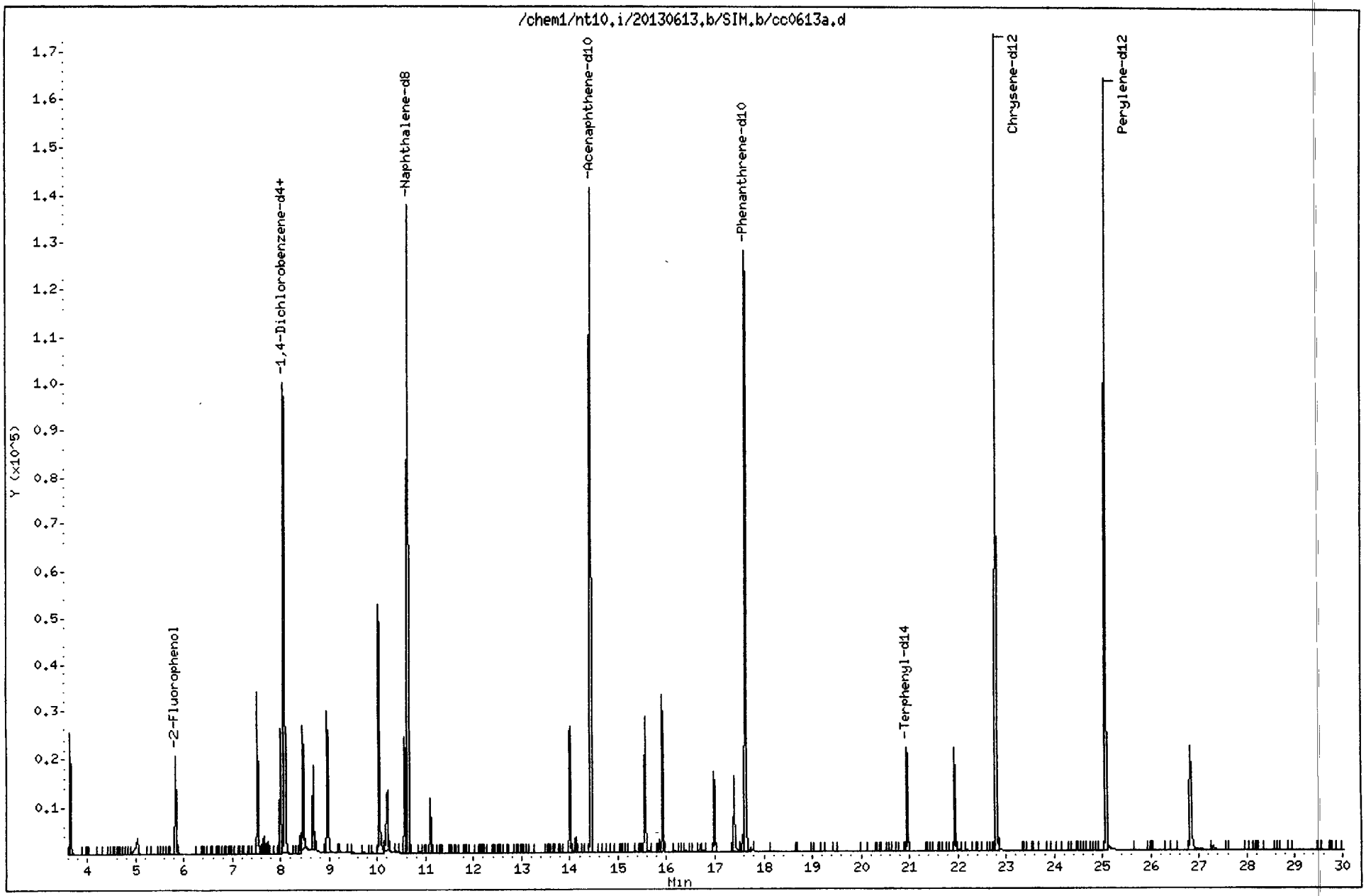
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.06	0.00
27 Naphthalene-d8	10.64	10.14	11.14	10.64	0.00
42 Acenaphthene-d10	14.43	13.93	14.93	14.43	0.00
59 Phenanthrene-d10	17.63	17.13	18.13	17.63	0.00
69 Chrysene-d12	22.81	22.31	23.31	22.81	0.00
77 Perylene-d12	25.07	24.57	25.57	25.07	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130613.b/SIM.b/cc0613a.d
Date : 13-JUN-2013 13:07
Client ID:
Sample Info: CC0613A

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0613a.d

Lab ID: CC0613A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 8/14/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130613.b/SIM.b/ws49mb.d
Lab Smp Id: WS49MBS1 Client Smp ID: WS49MBS1
Inj Date : 13-JUN-2013 13:45
Operator : YZ Inst ID: nt10.i
Smp Info : WS49MBS1
Misc Info : 13-11813
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 17-Jun-2013 10:13 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.841	5.825	(0.724)	93737	4.68252	468.3
	3 Phenol	94	7.525	7.518	(0.933)	821	0.02853 MB	2.853 (RM)
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.067	8.059	(1.000)	56989	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.639	10.639	(1.000)	218544	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
*	42 Acenaphthene-d10	162	14.438	14.430	(1.000)	119177	4.00000	
	50 Diethylphthalate	149	15.559	15.559	(1.078)	3299	0.08472	8.472 (RM)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.636	17.629	(1.000)	223736	4.00000	
$	66 Terphenyl-d14	244	20.963	20.955	(0.919)	117606	4.12163	412.2
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	22.806	22.806	(1.000)	232122	4.00000	
*	77 Perylene-d12	264	25.074	25.074	(1.000)	210573	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49mb.d
Lab Smp Id: WS49MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: WS49MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	56989	8.22
27 Naphthalene-d8	192325	96162	384650	218544	13.63
42 Acenaphthene-d10	109274	54637	218548	119177	9.06
59 Phenanthrene-d10	203933	101966	407866	223736	9.71
69 Chrysene-d12	223647	111824	447294	232122	3.79
77 Perylene-d12	211919	105960	423838	210573	-0.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.10
27 Naphthalene-d8	10.64	10.14	11.14	10.64	0.00
42 Acenaphthene-d10	14.43	13.93	14.93	14.44	0.05
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.04
69 Chrysene-d12	22.81	22.31	23.31	22.81	0.00
77 Perylene-d12	25.07	24.57	25.57	25.07	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

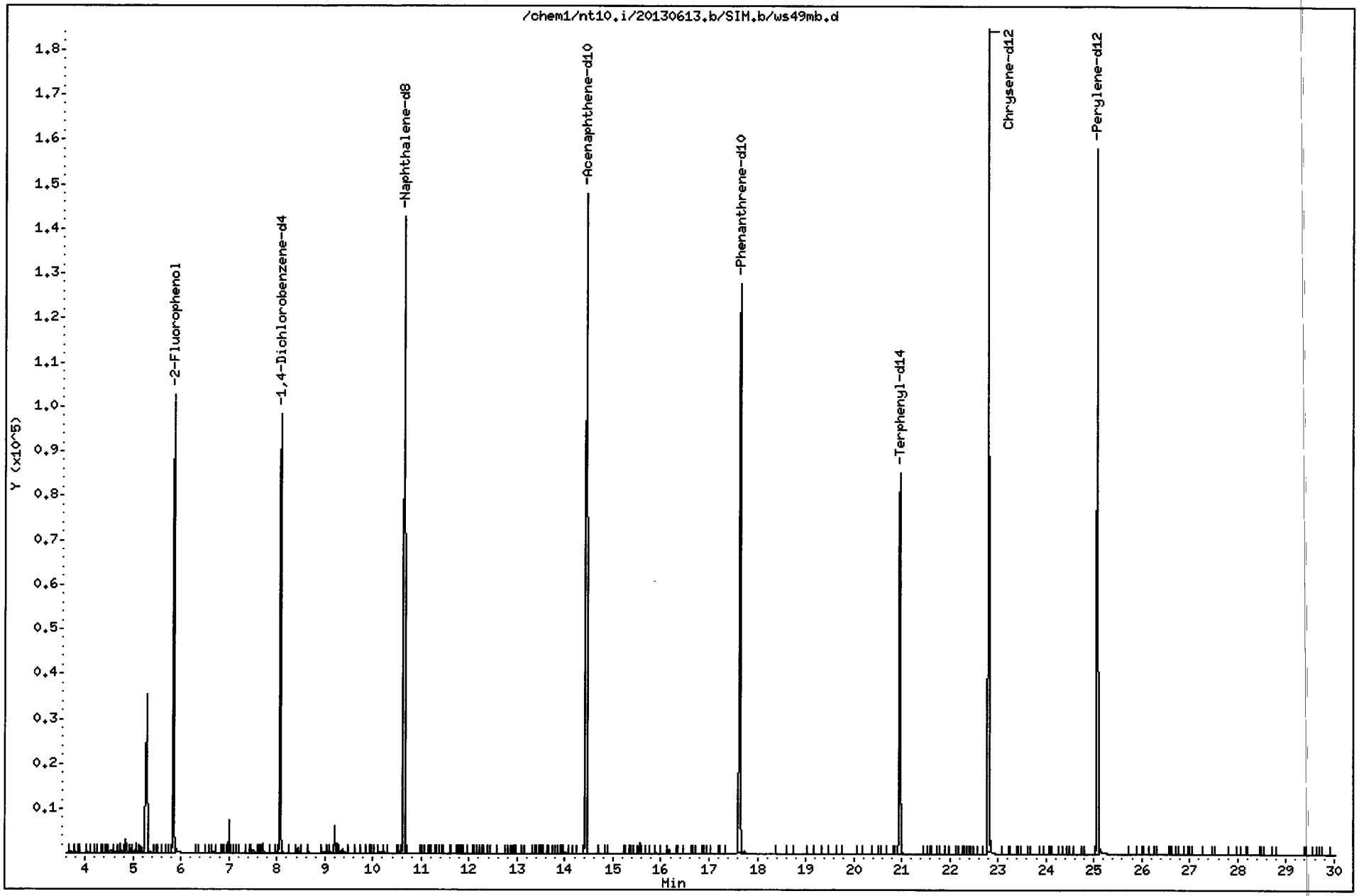
Client Name: SAIC
Client SDG: WS49
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WS49MBS1
Client Smp ID: WS49MBS1
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	2.853	0.57*	30-160
7 1,3-Dichlorobenze	500.0	0.000	*	30-160
9 1,4-Dichlorobenze	500.0	0.000	*	30-160
11 Benzyl alcohol	500.0	0.000	*	30-160
12 1,2-Dichlorobenze	500.0	0.000	*	30-160
13 2-Methylphenol	500.0	0.000	*	30-160
15 4-Methylphenol	1000	0.000	*	30-160
16 N-Nitroso-di-n-pr	500.0	0.000	*	30-160
22 2,4-Dimethylphenol	1000	0.000	*	30-160
26 1,2,4-Trichlorobe	500.0	0.000	*	30-160
30 Hexachlorobutadie	500.0	0.000	*	30-160
39 Dimethylphthalate	500.0	0.000	*	30-160
50 Diethylphthalate	500.0	8.472	1.69*	30-160
54 N-Nitrosodiphenyl	500.0	0.000	*	30-160
57 Hexachlorobenzene	500.0	0.000	*	30-160
58 Pentachlorophenol	1000	0.000	*	30-160
67 Butylbenzylphthal	500.0	0.000	*	30-160
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-160
90 N-Nitrosodimethyl	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	468.3	62.43	30-160
$ 66 Terphenyl-d14	500.0	412.2	82.43	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/ws49mb.d
Date : 13-JUN-2013 13:45
Client ID: WS49MBS1
Sample Info: WS49MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/SIM.b/ws49mb.d

Date : 13-JUN-2013 13:45

Client ID: WS49MBS1

Instrument: nt10.i

Sample Info: WS49MBS1

Volume Injected (uL): 1.0

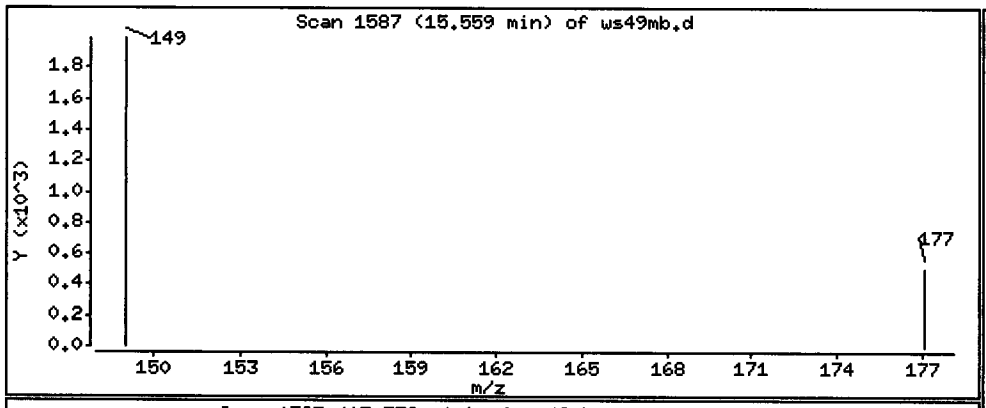
Operator: YZ

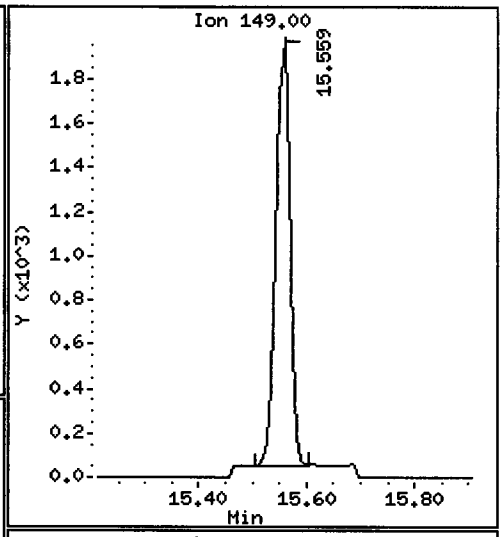
Column phase: ZB-5msi

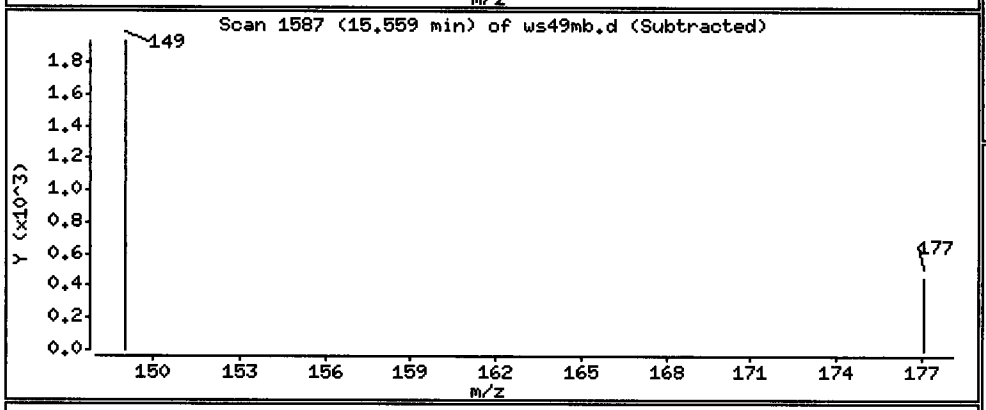
Column diameter: 0.25

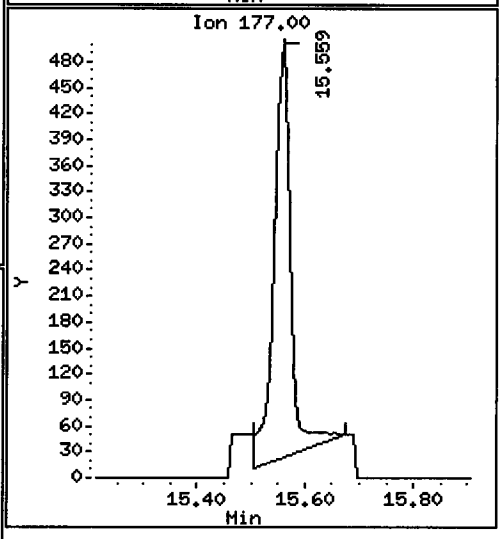
50 Diethylphthalate

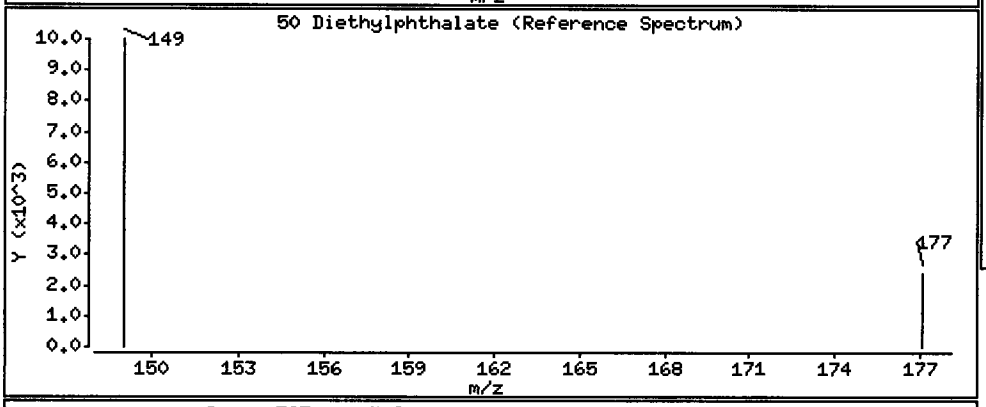
Concentration: 8.472 ug/kg

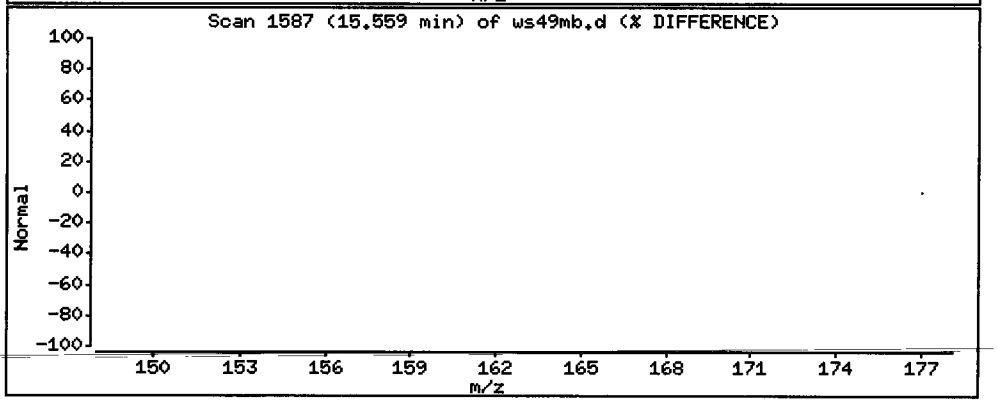






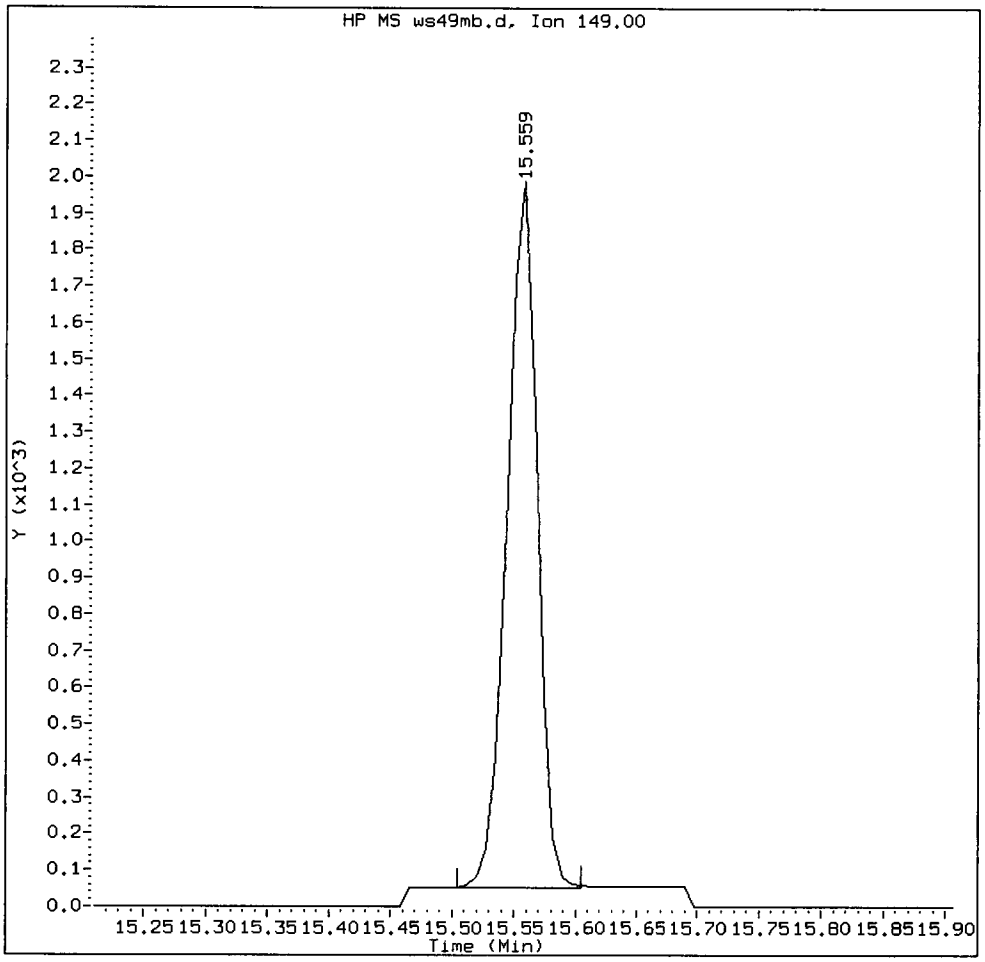






WS49MBS1, /chem1/nt10.i/20130613.b/SIM.b/ws49mb.d

Diethylphthalate Amount: 0.08 Area: 3299



MANUAL INTEGRATION for Diethylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/17/13

CO-ELUTION SUMMARY FOR FILE - ws49mb.d

Lab ID: WS49MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/SIM.b/ws49sb.d
Lab Smp Id: WS49LCSS1 Client Smp ID: WS49LCSS1
Inj Date : 13-JUN-2013 14:21
Operator : YZ Inst ID: nt10.i
Smp Info : WS49LCSS1
Misc Info : 13-11813
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 17-Jun-2013 09:43 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.841	5.825	(0.724)	106265	5.23277	523.3
	3 Phenol	94	7.525	7.518	(0.933)	110275	3.77772	377.8
	7 1,3-Dichlorobenzene	146	7.989	7.989	(0.990)	74922	3.11474	311.5
*	8 1,4-Dichlorobenzene-d4	152	8.067	8.059	(1.000)	57812	4.00000	
	9 1,4-Dichlorobenzene	146	8.098	8.090	(1.004)	74720	3.11989	312.0
	11 Benzyl alcohol	79	8.393	8.393	(1.040)	44573	3.18380	318.4
	12 1,2-Dichlorobenzene	146	8.455	8.455	(1.048)	72929	3.20432	320.4
	13 2-Methylphenol	108	8.665	8.664	(1.074)	64636	3.09714	309.7
	15 4-Methylphenol	108	8.967	8.952	(1.112)	132612	6.24010	624.0
	16 N-Nitroso-di-n-propylamine	70	8.975	8.975	(1.113)	44407	3.70549	370.5
	22 2,4-Dimethylphenol	107	10.038	10.030	(0.943)	111325	5.46876	546.9
	26 1,2,4-Trichlorobenzene	180	10.569	10.562	(0.993)	67227	3.33776	333.8
*	27 Naphthalene-d8	136	10.639	10.639	(1.000)	210144	4.00000	
	30 Hexachlorobutadiene	225	11.102	11.095	(1.044)	39409	3.21431	321.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.012	14.005	(0.971)	141373	4.27607	427.6
*	42 Acenaphthene-d10	162	14.438	14.430	(1.000)	114587	4.00000	
	50 Diethylphthalate	149	15.566	15.559	(1.078)	163692	4.37216	437.2
	54 N-Nitrosodiphenylamine	169	15.922	15.914	(0.903)	103880	4.48076	448.1
	57 Hexachlorobenzene	284	16.994	16.986	(0.964)	55432	3.50008	350.0
	58 Pentachlorophenol	266	17.396	17.389	(0.986)	121036	12.8543	1285
*	59 Phenanthrene-d10	188	17.636	17.629	(1.000)	211440	4.00000	
$	66 Terphenyl-d14	244	20.963	20.955	(0.919)	118600	4.22104	422.1
	67 Butylbenzylphthalate	149	21.947	21.939	(0.962)	122170	5.76128	576.1
*	69 Chrysene-d12	240	22.806	22.806	(1.000)	228571	4.00000	
*	77 Perylene-d12	264	25.082	25.074	(1.000)	213817	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.843	26.827	(1.070)	183358	3.84722	384.7
	90 N-Nitrosodimethylamine	74	3.656	3.640	(0.453)	123530	9.91614	991.6

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49sb.d
Lab Smp Id: WS49LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: WS49LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	57812	9.79
27 Naphthalene-d8	192325	96162	384650	210144	9.27
42 Acenaphthene-d10	109274	54637	218548	114587	4.86
59 Phenanthrene-d10	203933	101966	407866	211440	3.68
69 Chrysene-d12	223647	111824	447294	228571	2.20
77 Perylene-d12	211919	105960	423838	213817	0.90

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.10
27 Naphthalene-d8	10.64	10.14	11.14	10.64	0.00
42 Acenaphthene-d10	14.43	13.93	14.93	14.44	0.05
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.04
69 Chrysene-d12	22.81	22.31	23.31	22.81	0.00
77 Perylene-d12	25.07	24.57	25.57	25.08	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS49LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

Client SDG: WS49
Fraction: SV
Client Smp ID: WS49LCSS1
Operator: YZ
SampleType: LCS
Quant Type: ISTD

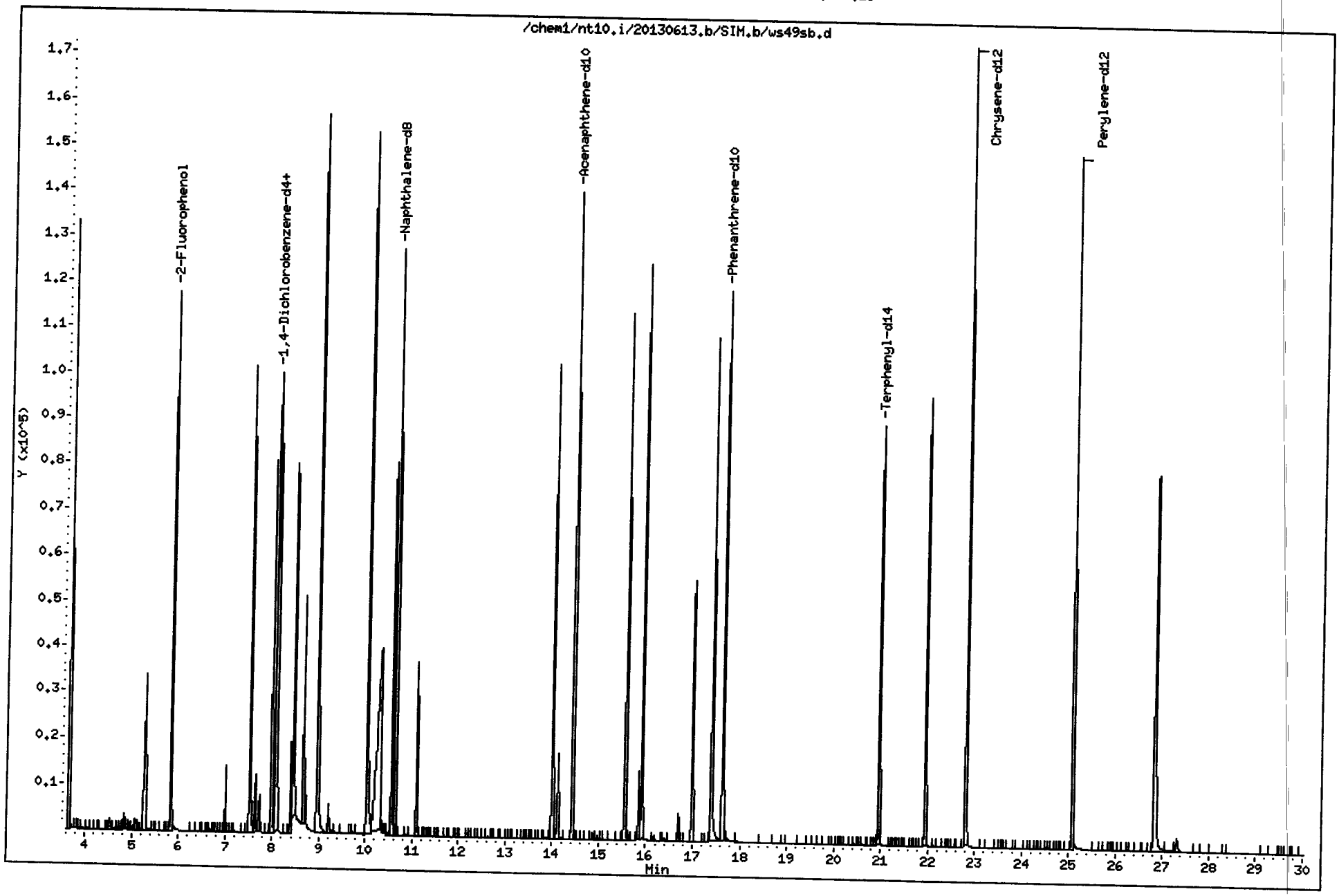
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	377.8	75.55	30-160
7 1,3-Dichlorobenzen	500.0	311.5	62.29	30-160
9 1,4-Dichlorobenzen	500.0	312.0	62.40	30-160
11 Benzyl alcohol	500.0	318.4	63.68	30-160
12 1,2-Dichlorobenzen	500.0	320.4	64.09	30-160
13 2-Methylphenol	500.0	309.7	61.94	30-160
15 4-Methylphenol	1000	624.0	62.40	30-160
16 N-Nitroso-di-n-pro	500.0	370.5	74.11	30-160
22 2,4-Dimethylphenol	1000	546.9	54.69	30-160
26 1,2,4-Trichloroben	500.0	333.8	66.76	30-160
30 Hexachlorobutadien	500.0	321.4	64.29	30-160
39 Dimethylphthalate	500.0	427.6	85.52	30-160
50 Diethylphthalate	500.0	437.2	87.44	30-160
54 N-Nitrosodiphenyla	500.0	448.1	89.62	30-160
57 Hexachlorobenzene	500.0	350.0	70.00	30-160
58 Pentachlorophenol	1000	1285	128.54	30-160
67 Butylbenzylphthala	500.0	576.1	115.23	30-160
79 Dibenzo(a,h)anthra	500.0	384.7	76.94	30-160
90 N-Nitrosodimethyla	1000	991.6	99.16	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	523.3	69.77	30-160
$ 66 Terphenyl-d14	500.0	422.1	84.42	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/ws49sb.d
Date : 13-JUN-2013 14:21
Client ID: WS49LCSS1
Sample Info: WS49LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ws49sb.d

Lab ID: WS49LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/13/13

Data file : /chem1/nt10.i/20130613.b/SIM.b/ws49sbd.d
Lab Smp Id: WS49LCSDS1 Client Smp ID: WS49LCSDS1
Inj Date : 13-JUN-2013 14:58
Operator : YZ Inst ID: nt10.i
Smp Info : WS49LCSDS1
Misc Info : 13-11813
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 17-Jun-2013 09:43 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.841	5.825	(0.724)	99752	5.10481	510.5
	3 Phenol	94	7.525	7.518	(0.933)	107382	3.82298	382.3
	7 1,3-Dichlorobenzene	146	7.997	7.989	(0.991)	71951	3.10861	310.9
*	8 1,4-Dichlorobenzene-d4	152	8.067	8.059	(1.000)	55629	4.00000	
	9 1,4-Dichlorobenzene	146	8.098	8.090	(1.004)	71650	3.10910	310.9
	11 Benzyl alcohol	79	8.400	8.393	(1.041)	37135	2.75660	275.7
	12 1,2-Dichlorobenzene	146	8.455	8.455	(1.048)	69751	3.18496	318.5
	13 2-Methylphenol	108	8.664	8.664	(1.074)	65413	3.25737	325.7
	15 4-Methylphenol	108	8.967	8.952	(1.112)	130049	6.35964	636.0
	16 N-Nitroso-di-n-propylamine	70	8.975	8.975	(1.113)	43126	3.73981	374.0
	22 2,4-Dimethylphenol	107	10.037	10.030	(0.943)	124193	6.31301	631.3
	26 1,2,4-Trichlorobenzene	180	10.569	10.562	(0.993)	64124	3.29439	329.4
*	27 Naphthalene-d8	136	10.639	10.639	(1.000)	203083	4.00000	
	30 Hexachlorobutadiene	225	11.102	11.095	(1.044)	37853	3.19475	319.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.012	14.005	(0.971)	138518	4.28442	428.4
*	42 Acenaphthene-d10	162	14.437	14.430	(1.000)	112054	4.00000	
	50 Diethylphthalate	149	15.566	15.559	(1.078)	160594	4.38638	438.6
	54 N-Nitrosodiphenylamine	169	15.921	15.914	(0.903)	103857	4.58241	458.2
	57 Hexachlorobenzene	284	16.994	16.986	(0.964)	54328	3.50897	350.9
	58 Pentachlorophenol	266	17.396	17.389	(0.986)	120390	13.0787	1308
*	59 Phenanthrene-d10	188	17.636	17.629	(1.000)	206704	4.00000	
$	66 Terphenyl-d14	244	20.963	20.955	(0.919)	114974	4.27637	427.6
	67 Butylbenzylphthalate	149	21.946	21.939	(0.962)	121167	5.97144	597.1
*	69 Chrysene-d12	240	22.813	22.806	(1.000)	218716	4.00000	
*	77 Perylene-d12	264	25.082	25.074	(1.000)	207476	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.842	26.827	(1.070)	186681	4.03665	403.7
	90 N-Nitrosodimethylamine	74	3.655	3.640	(0.453)	117130	9.77136	977.1

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49sbd.d
Lab Smp Id: WS49LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: WS49LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	55629	5.64
27 Naphthalene-d8	192325	96162	384650	203083	5.59
42 Acenaphthene-d10	109274	54637	218548	112054	2.54
59 Phenanthrene-d10	203933	101966	407866	206704	1.36
69 Chrysene-d12	223647	111824	447294	218716	-2.20
77 Perylene-d12	211919	105960	423838	207476	-2.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.09
27 Naphthalene-d8	10.64	10.14	11.14	10.64	0.00
42 Acenaphthene-d10	14.43	13.93	14.93	14.44	0.05
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.04
69 Chrysene-d12	22.81	22.31	23.31	22.81	0.03
77 Perylene-d12	25.07	24.57	25.57	25.08	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS49LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

Client SDG: WS49
Fraction: SV
Client Smp ID: WS49LCSDS1
Operator: YZ
SampleType: LCSD
Quant Type: ISTD

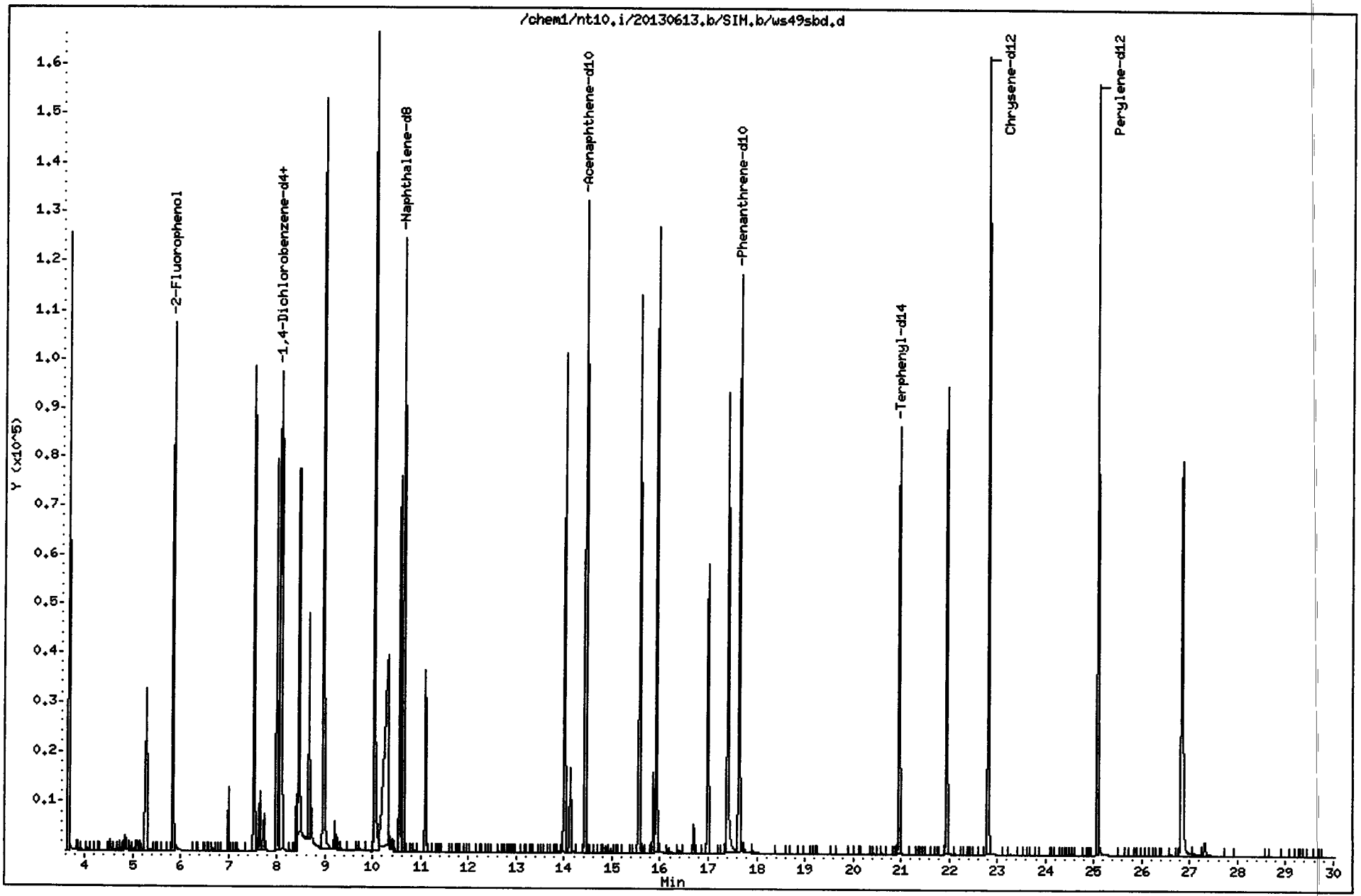
	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	382.3	76.46	30-160
7	1,3-Dichlorobenzen	500.0	310.9	62.17	30-160
9	1,4-Dichlorobenzen	500.0	310.9	62.18	30-160
11	Benzyl alcohol	500.0	275.7	55.13	30-160
12	1,2-Dichlorobenzen	500.0	318.5	63.70	30-160
13	2-Methylphenol	500.0	325.7	65.15	30-160
15	4-Methylphenol	1000	636.0	63.60	30-160
16	N-Nitroso-di-n-pro	500.0	374.0	74.80	30-160
22	2,4-Dimethylphenol	1000	631.3	63.13	30-160
26	1,2,4-Trichloroben	500.0	329.4	65.89	30-160
30	Hexachlorobutadien	500.0	319.5	63.89	30-160
39	Dimethylphthalate	500.0	428.4	85.69	30-160
50	Diethylphthalate	500.0	438.6	87.73	30-160
54	N-Nitrosodiphenyla	500.0	458.2	91.65	30-160
57	Hexachlorobenzene	500.0	350.9	70.18	30-160
58	Pentachlorophenol	1000	1308	130.79	30-160
67	Butylbenzylphthala	500.0	597.1	119.43	30-160
79	Dibenzo(a,h)anthra	500.0	403.7	80.73	30-160
90	N-Nitrosodimethyla	1000	977.1	97.71	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	510.5	68.06	30-160
$ 66	Terphenyl-d14	500.0	427.6	85.53	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/ws49sbd.d
Date : 13-JUN-2013 14:58
Client ID: WS49LCSDS1
Sample Info: WS49LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ws49sbd.d

Lab ID: WS49LCSDS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/14/13

Data file : /chem1/nt10.i/20130613.b/SIM.b/wr99d.d
Lab Smp Id: WR99D Client Smp ID: KC-VT-1593-20130530
Inj Date : 13-JUN-2013 18:03
Operator : YZ Inst ID: nt10.i
Smp Info : WR99D
Misc Info : 13-11544
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 13-Jun-2013 13:41 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.03000	Weight of sample extracted (g)
M	21.90000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.856	5.825	(0.725)	87621	4.50075	442.3
	3 Phenol	94	7.541	7.518	(0.934)	3552	0.12693	12.47
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.074	8.059	(1.000)	55422	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	8.983	8.952	(1.112)	1524	0.07480	7.351
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.053	10.030	(0.944)	798	0.03879 J	3.811
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.647	10.639	(1.000)	212390	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	14.445	14.430	(1.000)	113058	4.00000	
	50 Diethylphthalate	149	15.566	15.559	(1.078)	2311	0.06256	6.148(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.652	17.629	(1.000)	203862	4.00000	
$	66 Terphenyl-d14	244	20.979	20.955	(0.919)	97024	3.99866	392.9
	67 Butylbenzylphthalate	149	21.962	21.939	(0.962)	1360	0.07427 J	7.298
*	69 Chrysene-d12	240	22.837	22.806	(1.000)	197388	4.00000	
*	77 Perylene-d12	264	25.121	25.074	(1.000)	188689	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.897	26.827	(1.071)	155663	3.70107	363.7
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wr99d.d
Lab Smp Id: WR99D
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11544

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: KC-VT-1593-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	55422	5.25
27 Naphthalene-d8	192325	96162	384650	212390	10.43
42 Acenaphthene-d10	109274	54637	218548	113058	3.46
59 Phenanthrene-d10	203933	101966	407866	203862	-0.03
69 Chrysene-d12	223647	111824	447294	197388	-11.74
77 Perylene-d12	211919	105960	423838	188689	-10.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.19
27 Naphthalene-d8	10.64	10.14	11.14	10.65	0.07
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.11
59 Phenanthrene-d10	17.63	17.13	18.13	17.65	0.13
69 Chrysene-d12	22.81	22.31	23.31	22.84	0.14
77 Perylene-d12	25.07	24.57	25.57	25.12	0.18

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

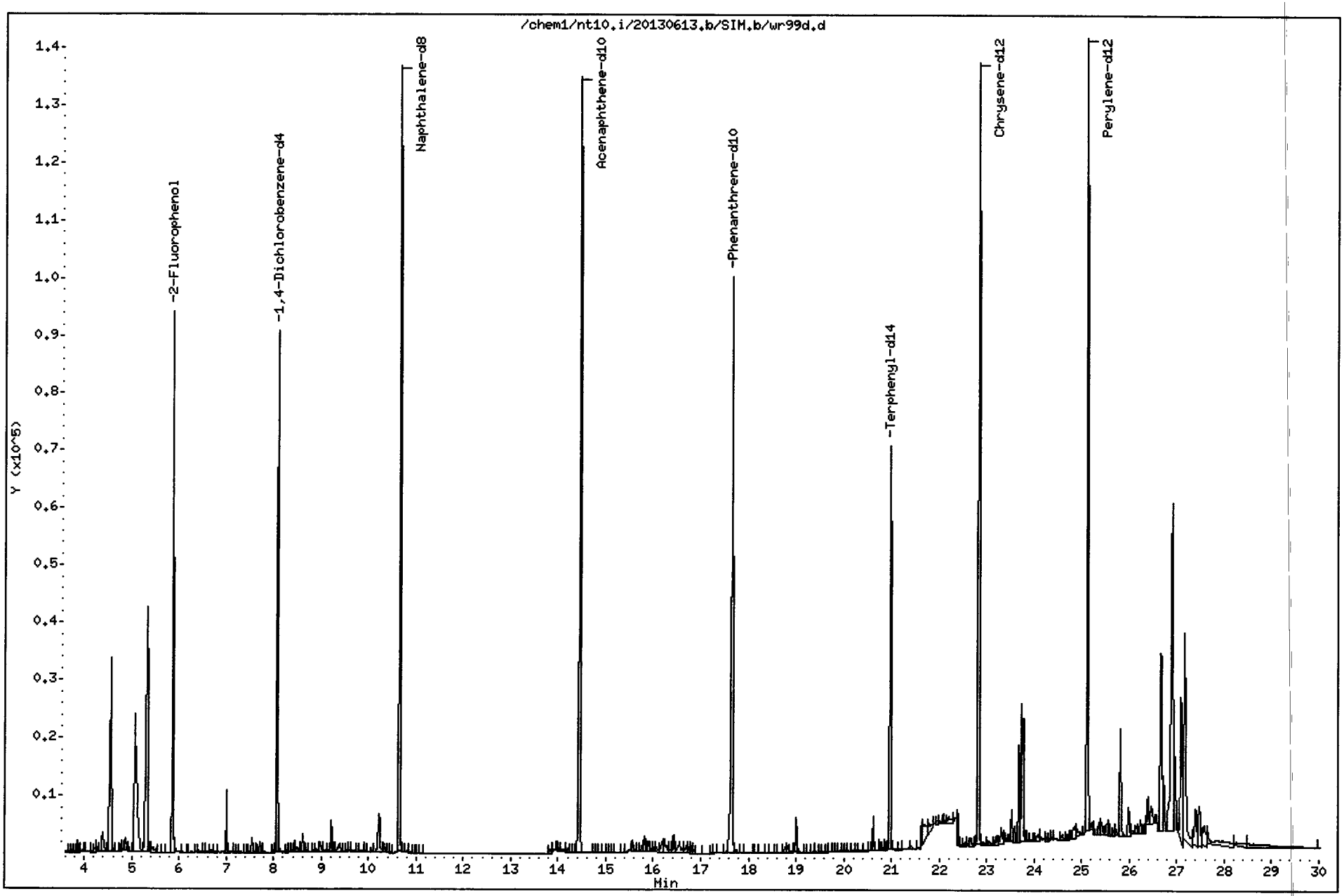
RECOVERY REPORT

Client Name: SAIC
Client SDG: WR99
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WR99D
Client Smp ID: KC-VT-1593-20130530
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11544

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	737.0	442.3	60.01	30-160
$ 66 Terphenyl-d14	491.3	392.9	79.97	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99d.d
Date : 13-JUN-2013 18:03
Client ID: KC-VT-1593-20130530
Sample Info: WR99D
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99d.d

Date : 13-JUN-2013 18:03

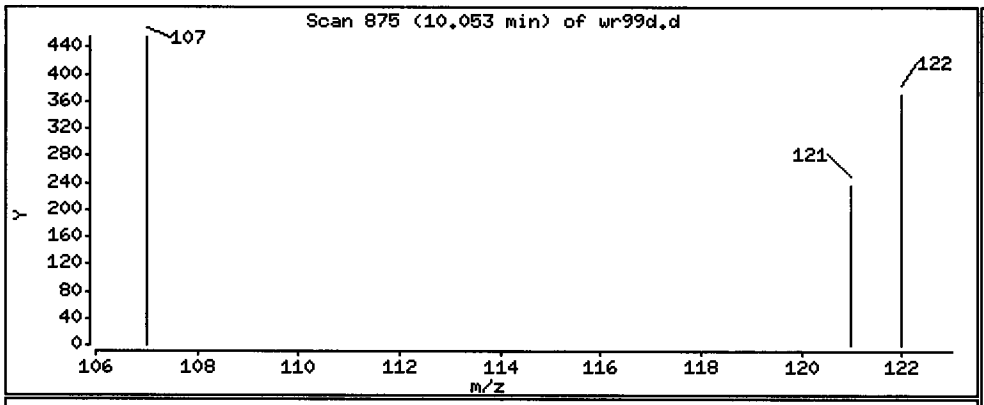
Client ID: KC-VT-1593-20130530 Instrument: nt10.i

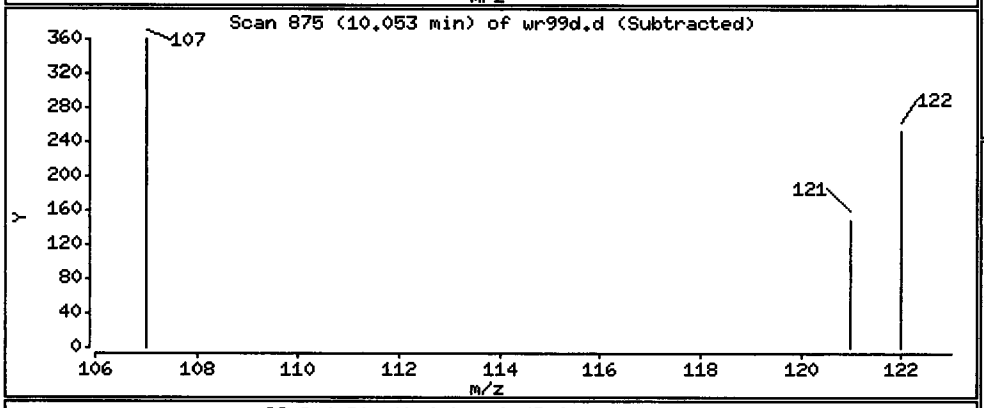
Sample Info: WR99D

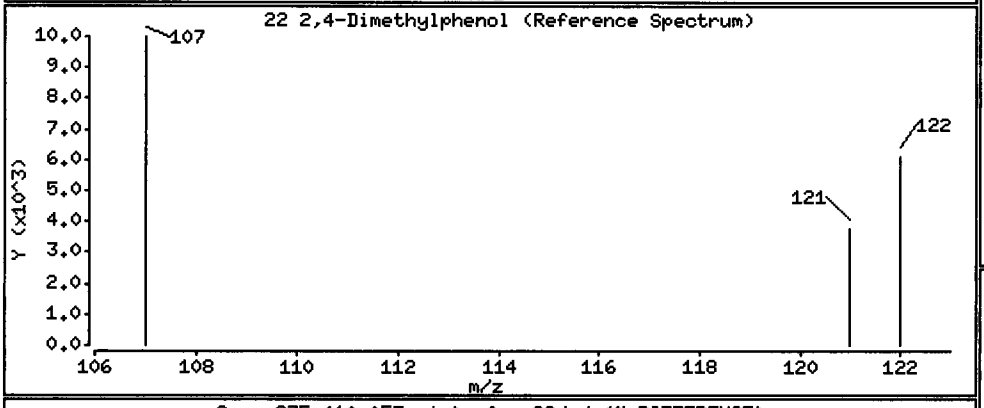
Volume Injected (uL): 1.0 Operator: YZ

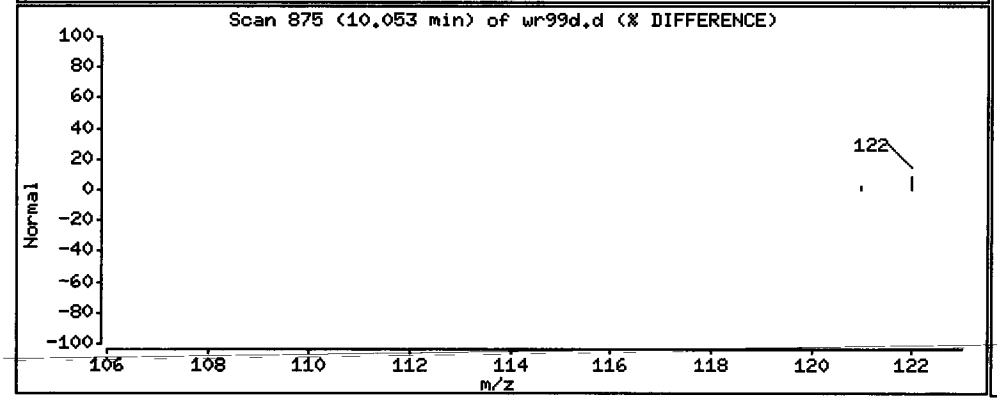
Column phase: ZB-5msi Column diameter: 0.25

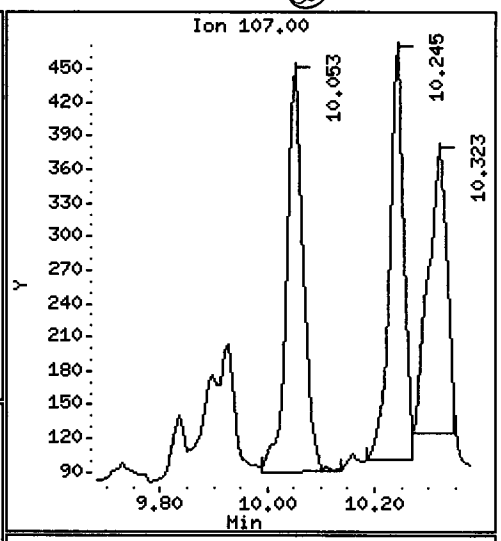
22 2,4-Dimethylphenol Concentration: 3.811 ug/kg

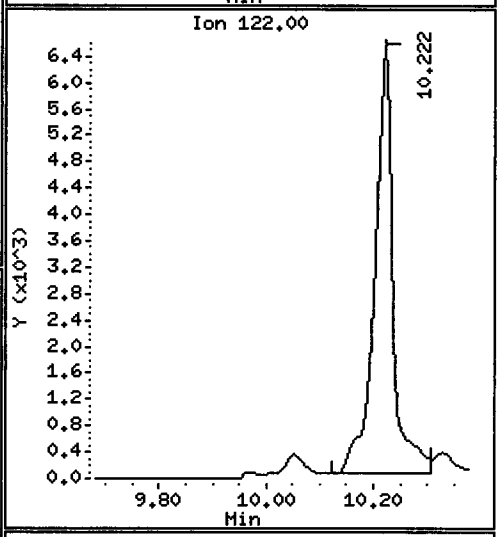


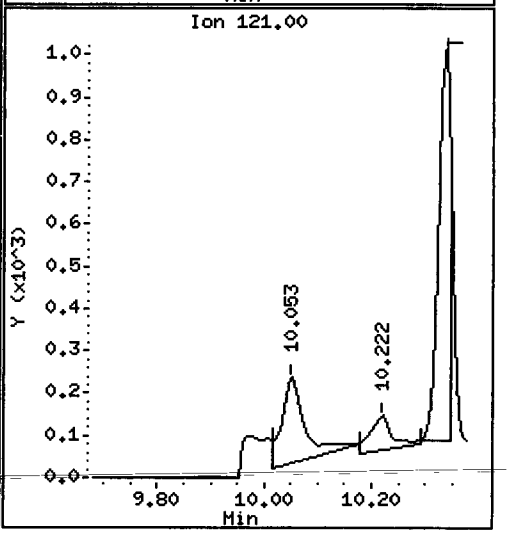












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99d.d

Date : 13-JUN-2013 18:03

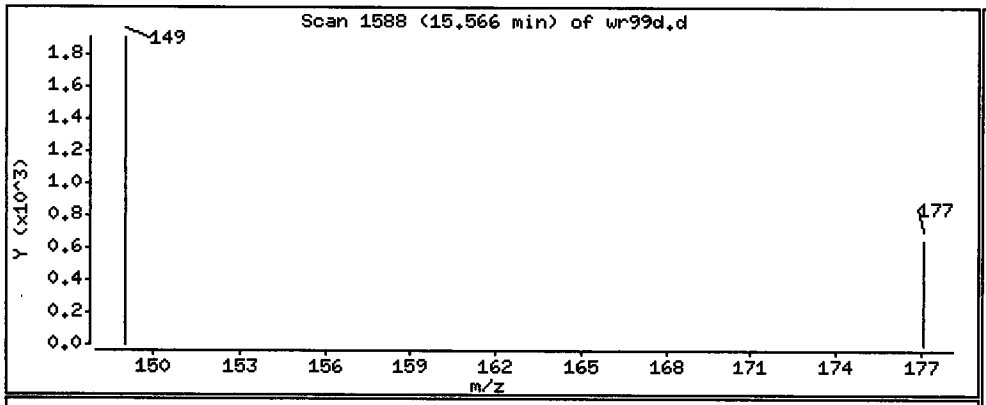
Client ID: KC-VT-1593-20130530 Instrument: nt10.i

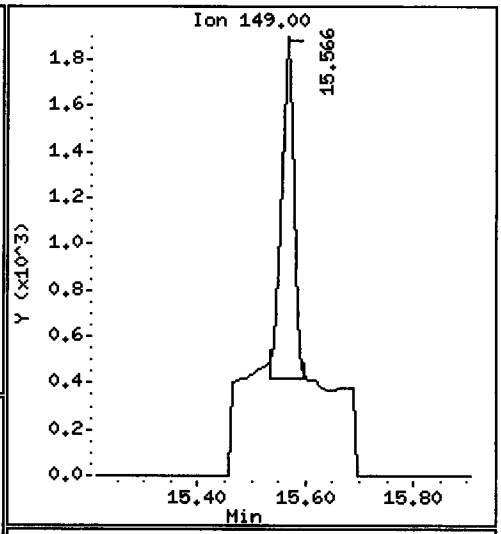
Sample Info: WR99D

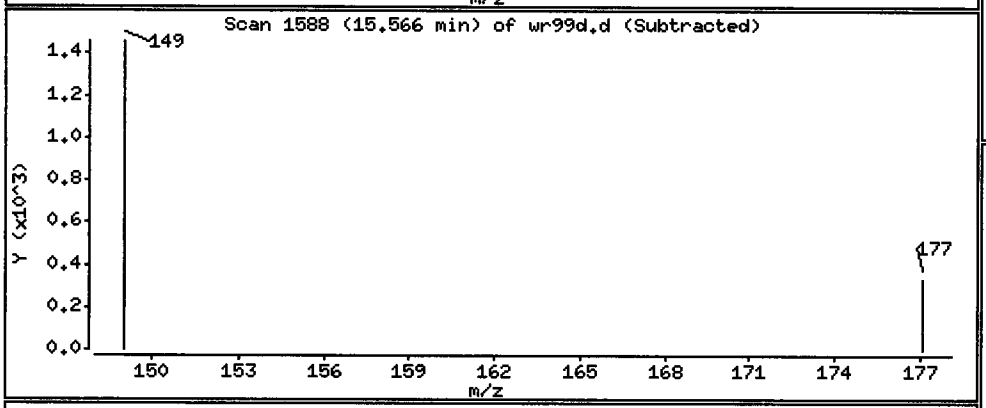
Volume Injected (uL): 1.0 Operator: YZ

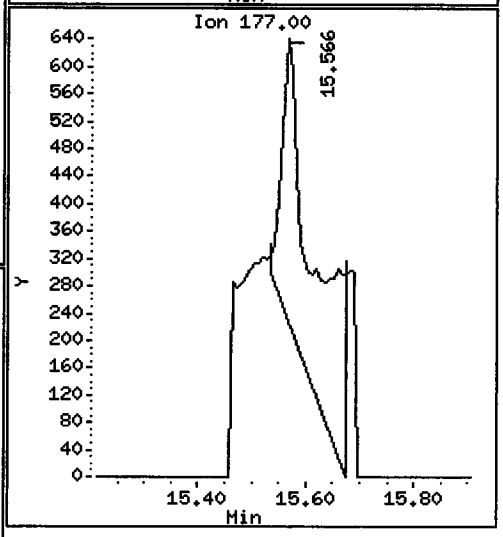
Column phase: ZB-5msi Column diameter: 0.25

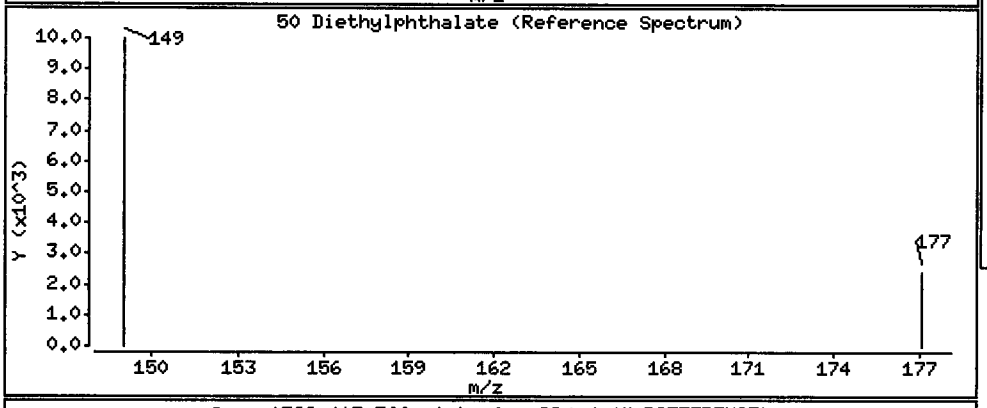
50 Diethylphthalate Concentration: 6.148 ug/kg

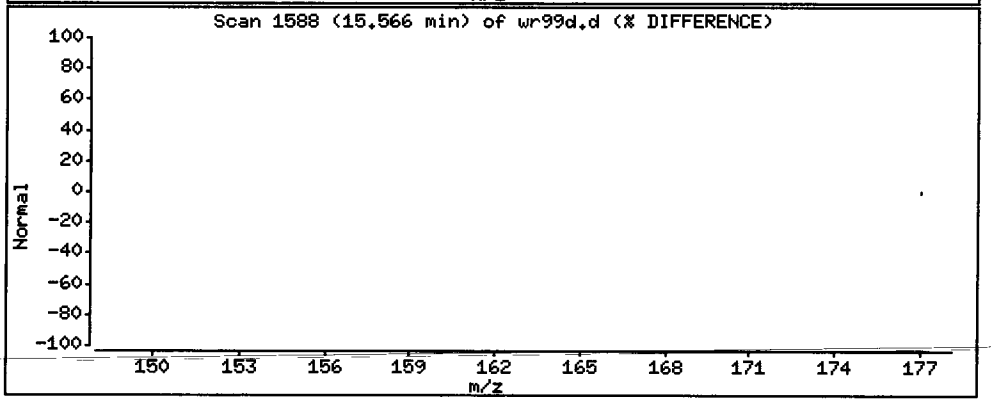












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99d.d

Date : 13-JUN-2013 18:03

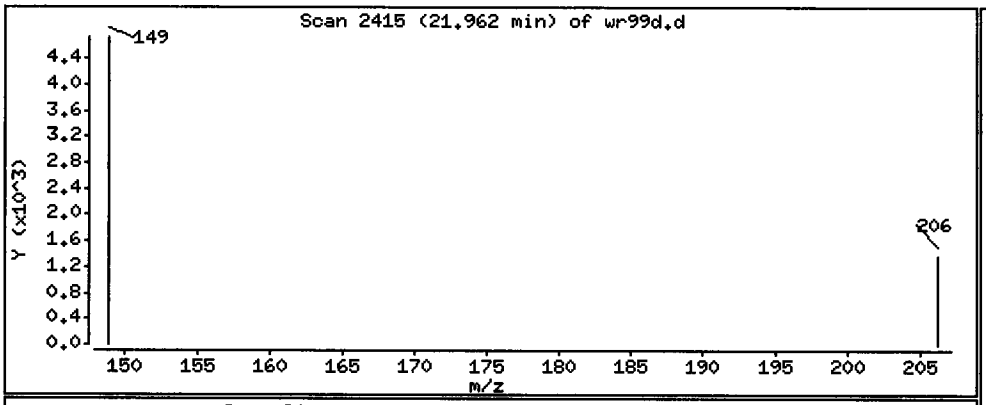
Client ID: KC-VT-1593-20130530 Instrument: nt10.i

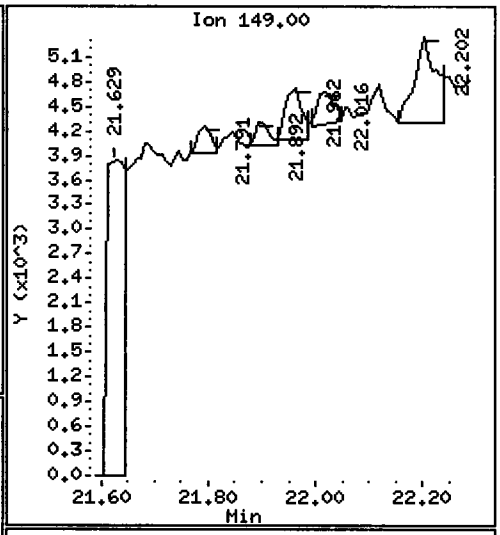
Sample Info: WR99D

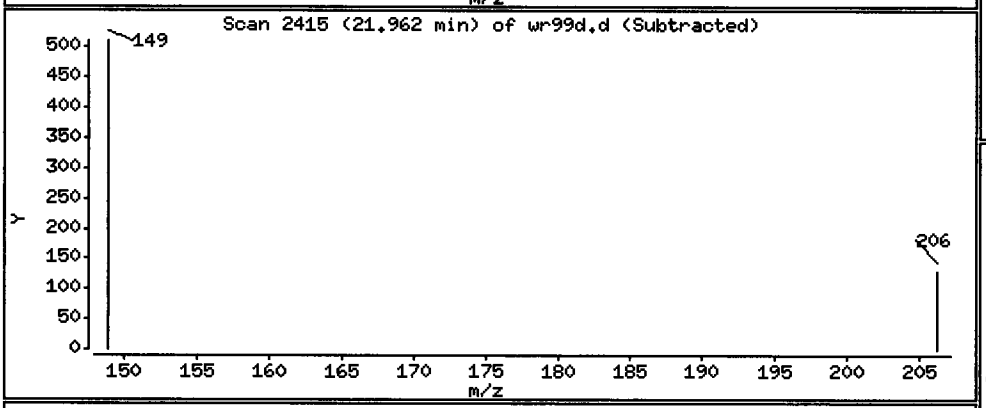
Volume Injected (uL): 1.0 Operator: YZ

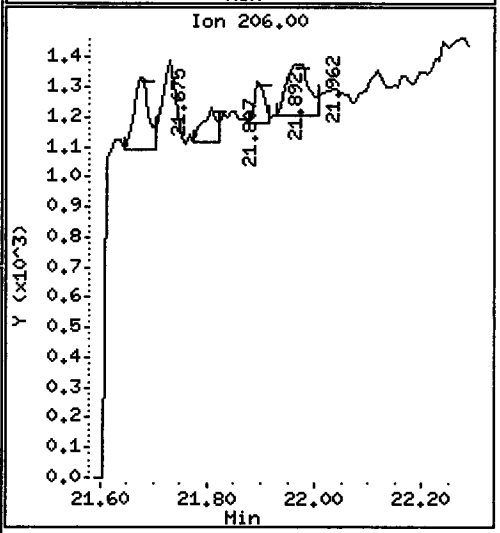
Column phase: ZB-5msi Column diameter: 0.25

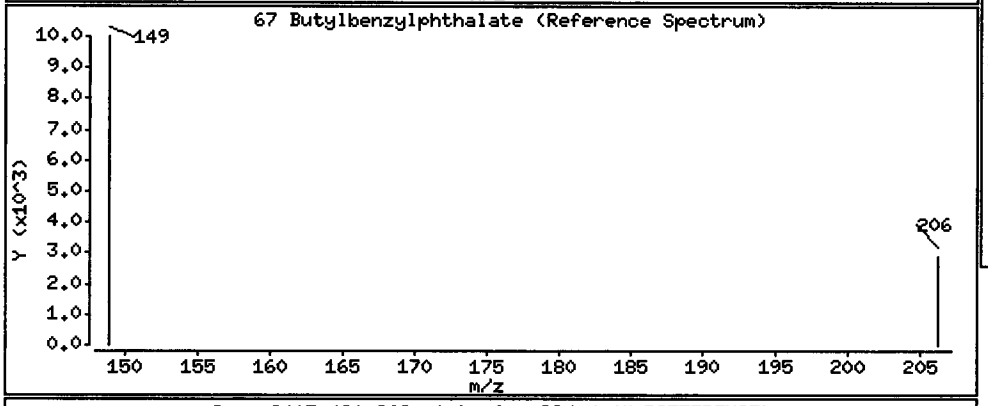
67 Butylbenzylphthalate Concentration: 7.298 ug/kg

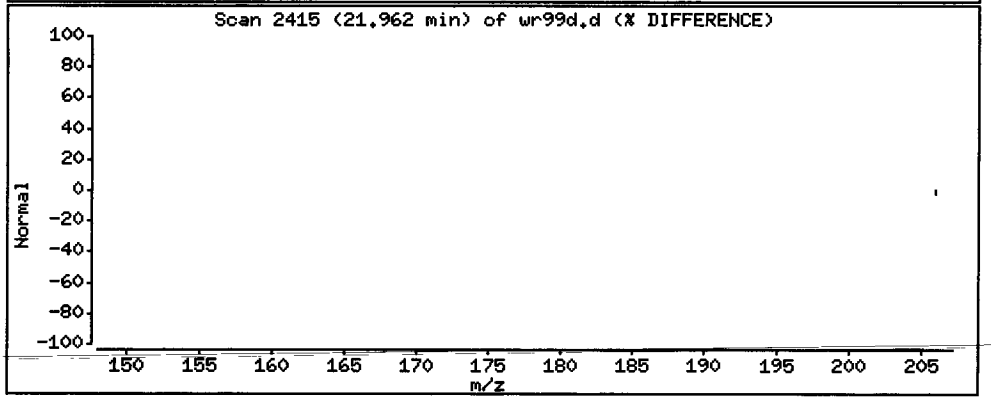












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99d.d

Date : 13-JUN-2013 18:03

Client ID: KC-VT-1593-20130530

Instrument: nt10.i

Sample Info: WR99D

Volume Injected (uL): 1.0

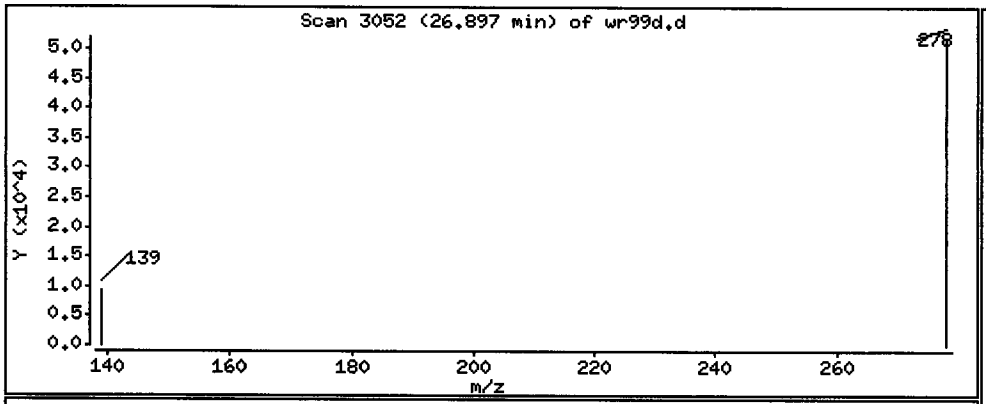
Operator: YZ

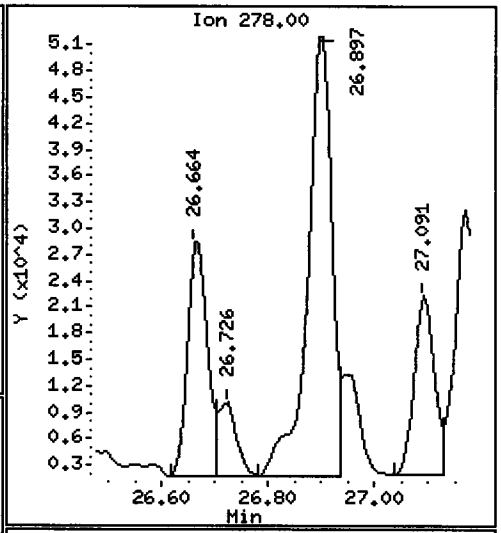
Column phase: ZB-5msi

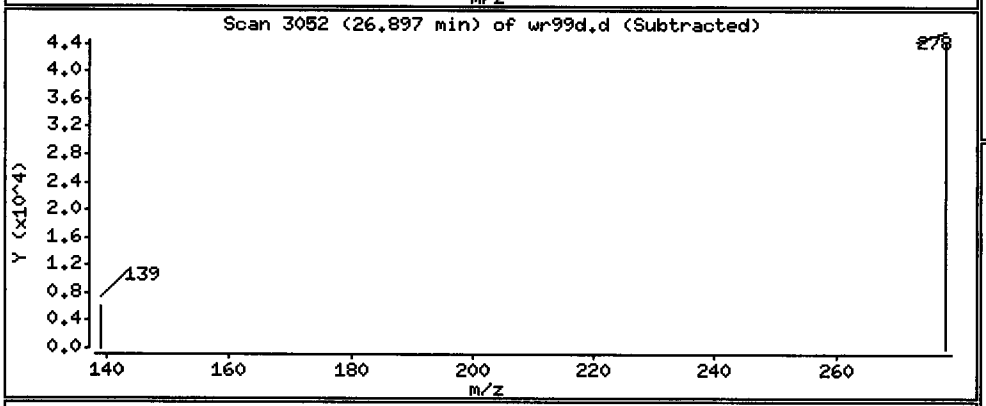
Column diameter: 0.25

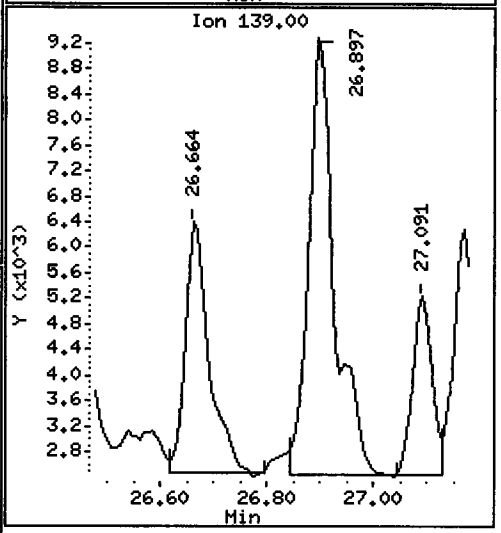
79 Dibenzo(a,h)anthracene

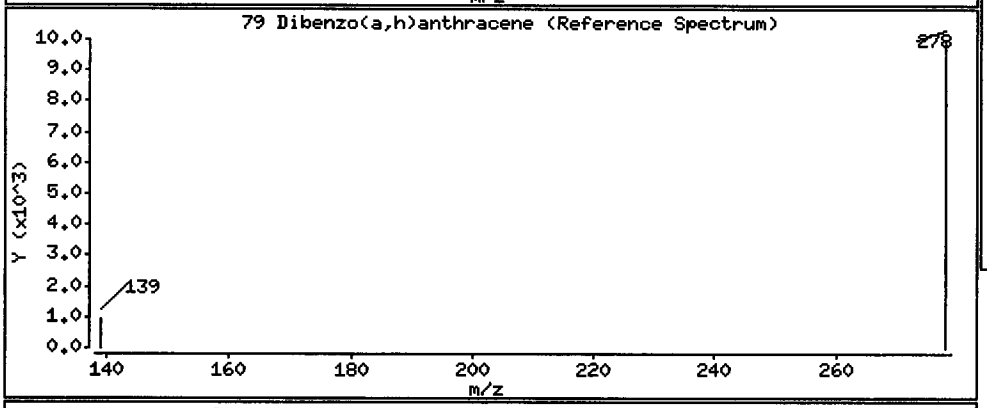
Concentration: 363.7 ug/kg

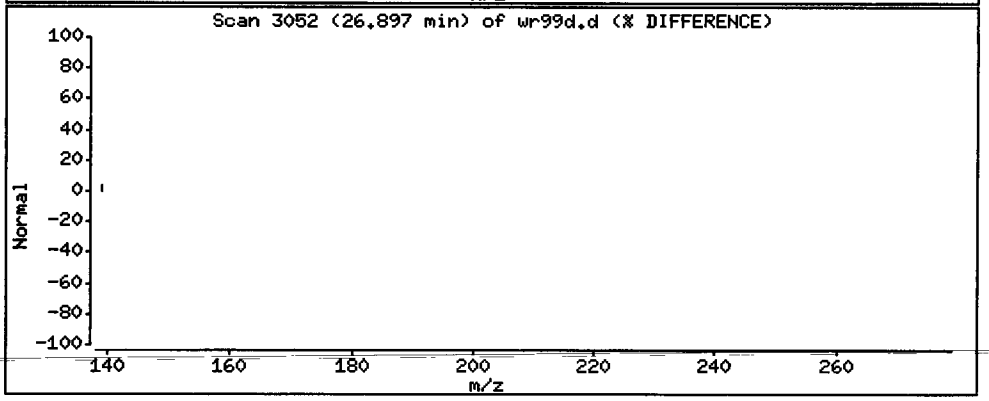












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99d.d

Date : 13-JUN-2013 18:03

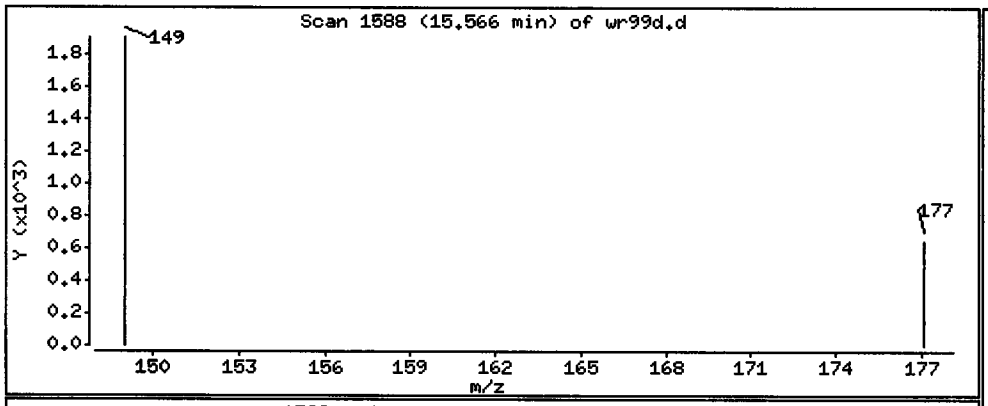
Client ID: KC-VT-1593-20130530 Instrument: nt10.i

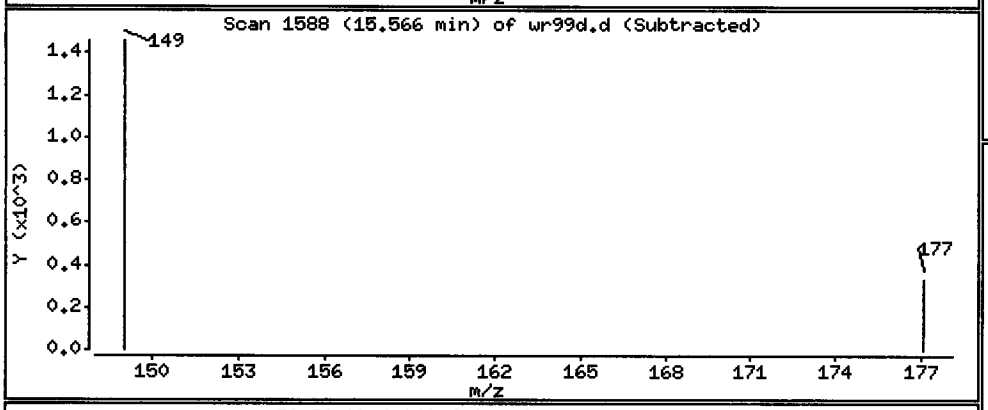
Sample Info: WR99D

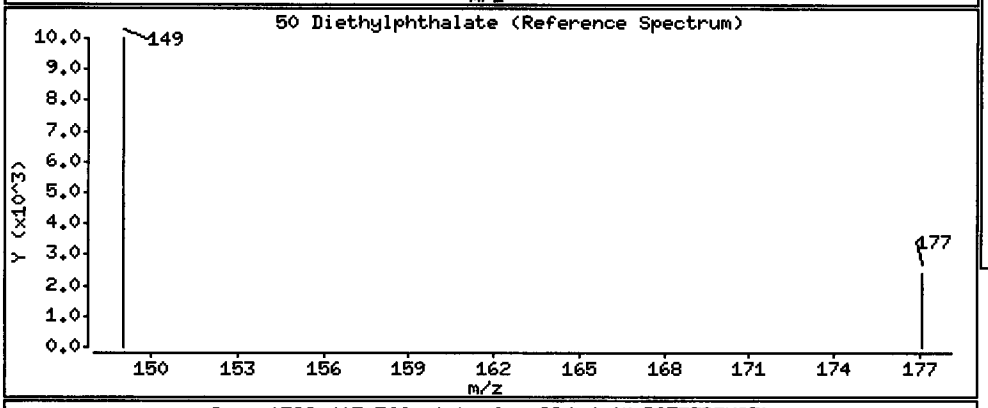
Volume Injected (uL): 1.0 Operator: YZ

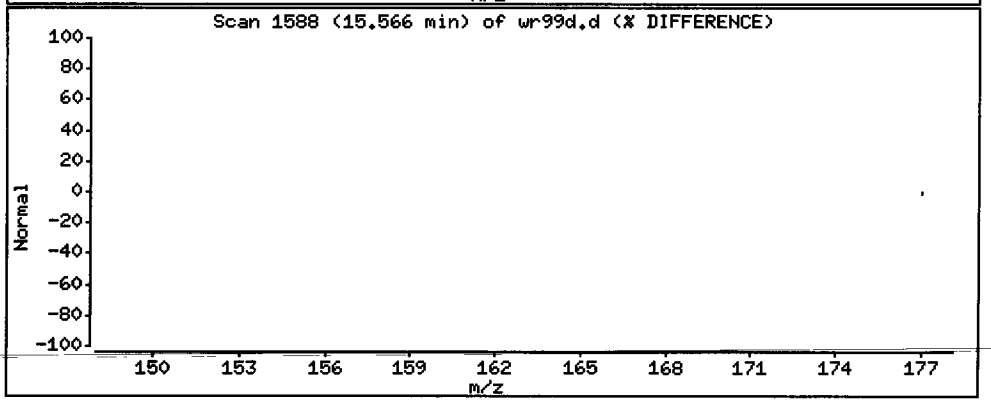
Column phase: ZB-5msi Column diameter: 0.25

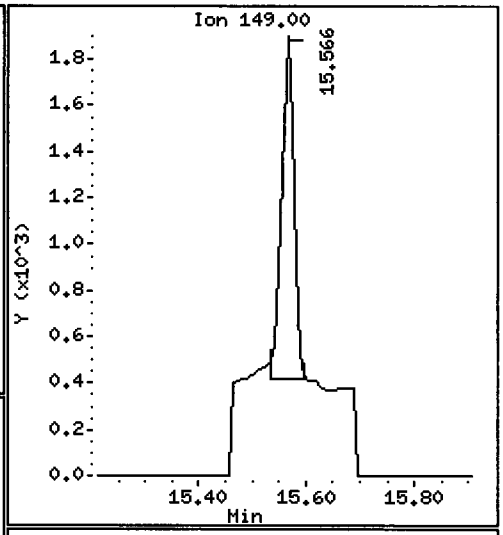
50 Diethylphthalate Concentration: 6.148 ug/kg

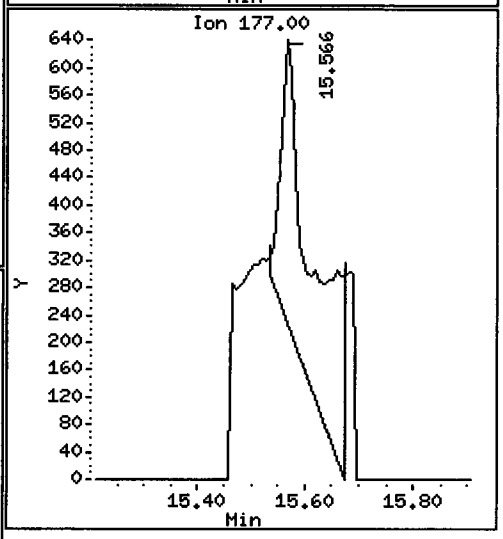






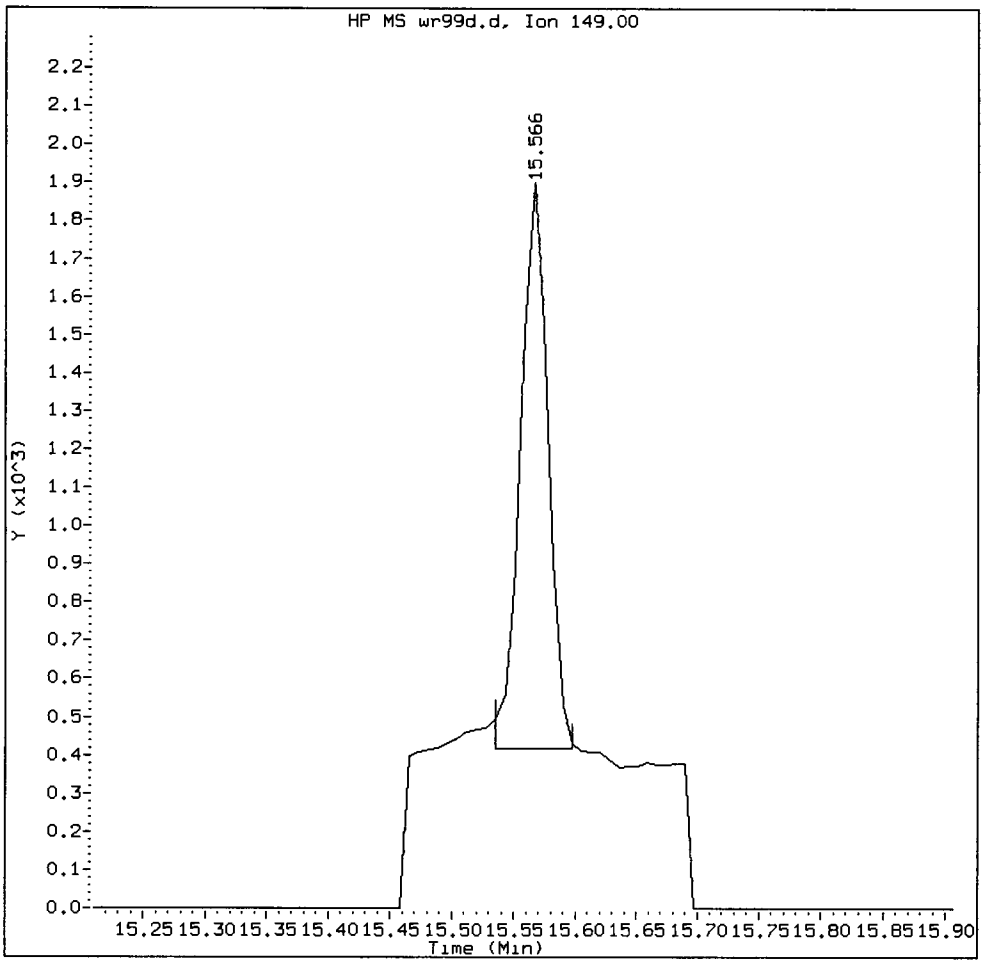






WR99D, /chem1/nt10.i/20130613.b/SIM.b/wr99d.d

Diethylphthalate Amount: 0.06 Area: 2311



MANUAL INTEGRATION for Diethylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YE Date: 6/12/13

CO-ELUTION SUMMARY FOR FILE - wr99d.d

Lab ID: WR99D, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc. YE 6/17/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130613.b/SIM.b/wr99dms.d
Lab Smp Id: WR99DMS Client Smp ID: KC-VT-1593-2013 MS
Inj Date : 13-JUN-2013 18:40
Operator : YZ Inst ID: nt10.i
Smp Info : WR99DMS
Misc Info : 13-11544
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 17-Jun-2013 09:43 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.03000	Weight of sample extracted (g)
M	21.90000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.856	5.825	(0.725)	84796	4.67039	458.9
	3 Phenol	94	7.548	7.518	(0.935)	85788	3.28713	323.0
	7 1,3-Dichlorobenzene	146	7.997	7.989	(0.990)	62704	2.91571	286.5
*	8 1,4-Dichlorobenzene-d4	152	8.074	8.059	(1.000)	51687	4.00000	
	9 1,4-Dichlorobenzene	146	8.105	8.090	(1.004)	63022	2.94328	289.2
	11 Benzyl alcohol	79	8.462	8.393	(1.048)	44171	3.52897	346.8
	12 1,2-Dichlorobenzene	146	8.462	8.455	(1.048)	61684	3.03142	297.9
	13 2-Methylphenol	108	8.680	8.664	(1.075)	52890	2.83463	278.5
	15 4-Methylphenol	108	8.983	8.952	(1.112)	118848	6.25514 E	614.7
	16 N-Nitroso-di-n-propylamine	70	8.983	8.975	(1.112)	40162	3.74840	368.3
	22 2,4-Dimethylphenol	107	10.053	10.030	(0.944)	69368	3.77709	371.2
	26 1,2,4-Trichlorobenzene	180	10.577	10.562	(0.993)	58177	3.20158	314.6
*	27 Naphthalene-d8	136	10.646	10.639	(1.000)	189590	4.00000	
	30 Hexachlorobutadiene	225	11.110	11.095	(1.044)	34169	3.08906	303.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.020	14.005	(0.970)	129689	4.40323	432.7
*	42 Acenaphthene-d10	162	14.453	14.430	(1.000)	102081	4.00000	
	50 Diethylphthalate	149	15.574	15.559	(1.078)	155131	4.65112	457.0
	54 N-Nitrosodiphenylamine	169	15.937	15.914	(0.903)	93621	4.89547	481.1
	57 Hexachlorobenzene	284	17.001	16.986	(0.963)	52907	4.04978	398.0
	58 Pentachlorophenol	266	17.419	17.389	(0.987)	103944	13.3824 E	1315
*	59 Phenanthrene-d10	188	17.652	17.629	(1.000)	174416	4.00000	
$	66 Terphenyl-d14	244	20.979	20.955	(0.919)	92881	4.03114	396.1
	67 Butylbenzylphthalate	149	21.954	21.939	(0.962)	100653	5.78825	568.8
*	69 Chrysene-d12	240	22.829	22.806	(1.000)	187437	4.00000	
*	77 Perylene-d12	264	25.113	25.074	(1.000)	181554	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.897	26.827	(1.071)	317763	7.85211 E	771.6
	90 N-Nitrosodimethylamine	74	3.663	3.640	(0.454)	98343	8.82979	867.7

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wr99dms.d
Lab Smp Id: WR99DMS
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11544

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: KC-VT-1593-2013
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	51687	-1.84
27 Naphthalene-d8	192325	96162	384650	189590	-1.42
42 Acenaphthene-d10	109274	54637	218548	102081	-6.58
59 Phenanthrene-d10	203933	101966	407866	174416	-14.47
69 Chrysene-d12	223647	111824	447294	187437	-16.19
77 Perylene-d12	211919	105960	423838	181554	-14.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.19
27 Naphthalene-d8	10.64	10.14	11.14	10.65	0.07
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.16
59 Phenanthrene-d10	17.63	17.13	18.13	17.65	0.13
69 Chrysene-d12	22.81	22.31	23.31	22.83	0.10
77 Perylene-d12	25.07	24.57	25.57	25.11	0.15

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WR99DMS
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11544

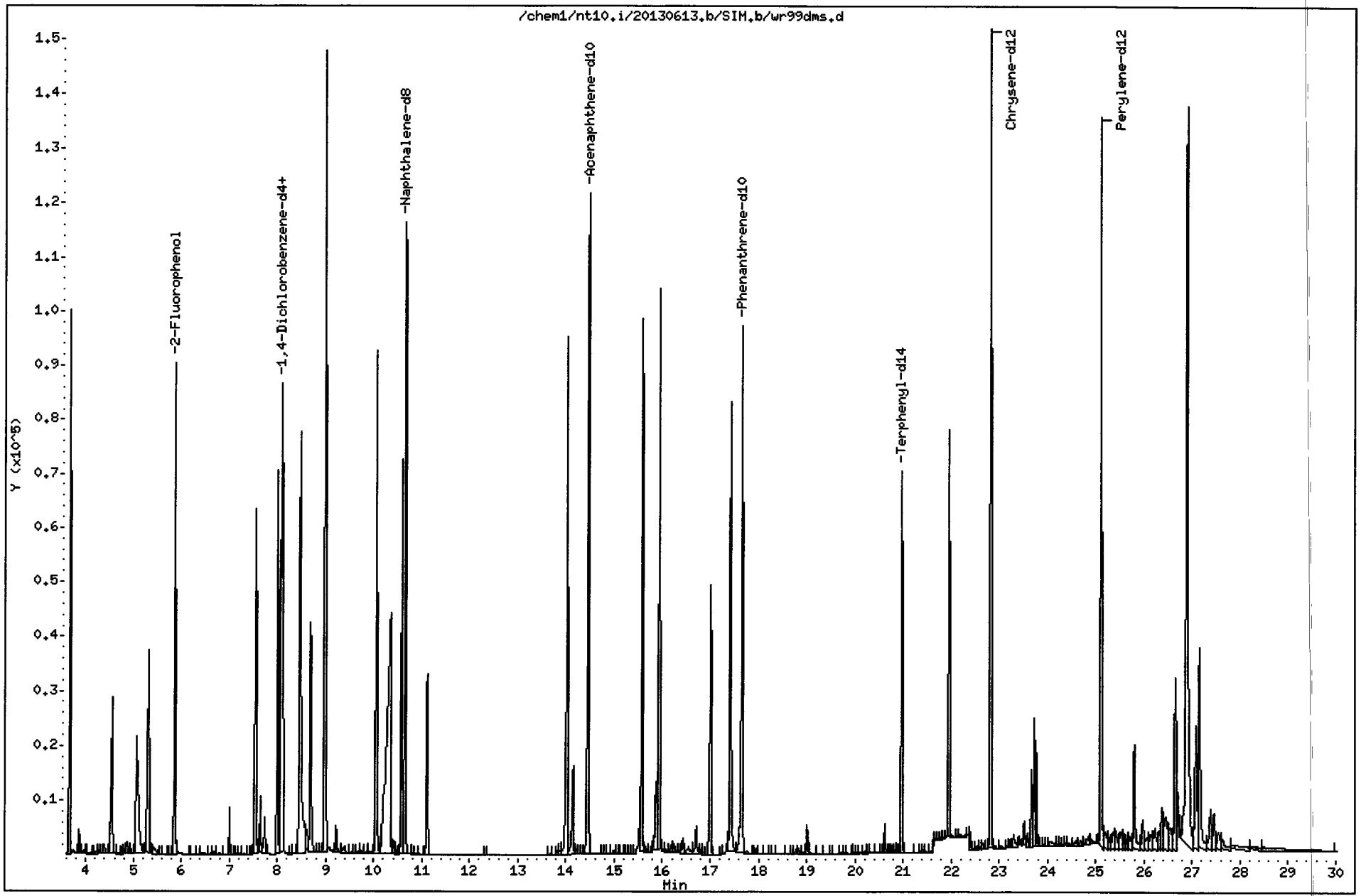
Client SDG: WR99
Fraction: SV
Client Smp ID: KC-VT-1593-2013 MS
Operator: YZ
SampleType: MS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	491.3	323.0	65.74	30-160
7	1,3-Dichlorobenzen	491.3	286.5	58.31	30-160
9	1,4-Dichlorobenzen	491.3	289.2	58.87	30-160
11	Benzyl alcohol	491.3	346.8	70.58	30-160
12	1,2-Dichlorobenzen	491.3	297.9	60.63	30-160
13	2-Methylphenol	491.3	278.5	56.69	30-160
15	4-Methylphenol	982.7	614.7	62.55	30-160
16	N-Nitroso-di-n-pro	491.3	368.3	74.97	30-160
22	2,4-Dimethylphenol	982.7	371.2	37.77	30-160
26	1,2,4-Trichloroben	491.3	314.6	64.03	30-160
30	Hexachlorobutadien	491.3	303.6	61.78	30-160
39	Dimethylphthalate	491.3	432.7	88.06	30-160
50	Diethylphthalate	491.3	457.0	93.02	30-160
54	N-Nitrosodiphenyla	491.3	481.1	97.91	30-160
57	Hexachlorobenzene	491.3	398.0	81.00	30-160
58	Pentachlorophenol	982.7	1315	133.82	30-160
67	Butylbenzylphthala	491.3	568.8	115.76	30-160
79	Dibenzo(a,h)anthra	491.3	771.6	157.04	30-160
90	N-Nitrosodimethyla	982.7	867.7	88.30	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	737.0	458.9	62.27	30-160
$ 66	Terphenyl-d14	491.3	396.1	80.62	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99dms.d
Date : 13-JUN-2013 18:40
Client ID: KC-VT-1593-2013 MS
Sample Info: WR99DMS
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wr99dms.d

Lab ID: WR99DMS, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-20

RT	CO-ELUTION COMPOUNDS
8.462	1,2-Dichlorobenzene and Benzyl alcohol

YZ 6/17/13

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130613.b/SIM.b/wr99dmsd.d
Lab Smp Id: WR99DMSD Client Smp ID: KC-VT-1593-2013 MSD
Inj Date : 13-JUN-2013 19:16
Operator : YZ Inst ID: nt10.i
Smp Info : WR99DMSD
Misc Info : 13-11544
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 17-Jun-2013 09:43 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.01000	Weight of sample extracted (g)
M	21.90000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.856	5.825	(0.725)	84886	4.35461	428.6
	3 Phenol	94	7.541	7.518	(0.934)	84356	3.01052	296.3
	7 1,3-Dichlorobenzene	146	7.997	7.989	(0.990)	63394	2.74557	270.2
*	8 1,4-Dichlorobenzene-d4	152	8.074	8.059	(1.000)	55494	4.00000	
	9 1,4-Dichlorobenzene	146	8.098	8.090	(1.003)	63395	2.75759	271.4
	11 Benzyl alcohol	79	8.486	8.393	(1.051)	40027	2.97851	293.1
	12 1,2-Dichlorobenzene	146	8.462	8.455	(1.048)	61740	2.82602	278.1
	13 2-Methylphenol	108	8.680	8.664	(1.075)	55821	2.78648	274.2
	15 4-Methylphenol	108	8.983	8.952	(1.112)	118509	5.80941	571.7
	16 N-Nitroso-di-n-propylamine	70	8.983	8.975	(1.112)	39731	3.45378	339.9
	22 2,4-Dimethylphenol	107	10.053	10.030	(0.944)	105096	5.36918	528.4
	26 1,2,4-Trichlorobenzene	180	10.577	10.562	(0.993)	57958	2.99261	294.5
*	27 Naphthalene-d8	136	10.647	10.639	(1.000)	202065	4.00000	
	30 Hexachlorobutadiene	225	11.110	11.095	(1.044)	33711	2.85950	281.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.020	14.005	(0.970)	126484	3.99750	393.4
*	42 Acenaphthene-d10	162	14.453	14.430	(1.000)	109663	4.00000	
	50 Diethylphthalate	149	15.574	15.559	(1.078)	147157	4.10700	404.2
	54 N-Nitrosodiphenylamine	169	15.937	15.914	(0.903)	87957	4.32586	425.7
	57 Hexachlorobenzene	284	17.001	16.986	(0.963)	51028	3.67373	361.6
	58 Pentachlorophenol	266	17.412	17.389	(0.986)	102280	12.3853	1219
*	59 Phenanthrene-d10	188	17.652	17.629	(1.000)	185441	4.00000	
$	66 Terphenyl-d14	244	20.979	20.955	(0.919)	89287	3.55990	350.4
	67 Butylbenzylphthalate	149	21.954	21.939	(0.962)	96608	5.10366	502.3
*	69 Chrysene-d12	240	22.829	22.806	(1.000)	204036	4.00000	
*	77 Perylene-d12	264	25.113	25.074	(1.000)	198486	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.889	26.827	(1.071)	286215	6.46921	636.7
	90 N-Nitrosodimethylamine	74	3.655	3.640	(0.453)	97108	8.12077	799.2

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wr99dmsd.d
Lab Smp Id: WR99DMSD
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11544

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: KC-VT-1593-2013
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	55494	5.39
27 Naphthalene-d8	192325	96162	384650	202065	5.06
42 Acenaphthene-d10	109274	54637	218548	109663	0.36
59 Phenanthrene-d10	203933	101966	407866	185441	-9.07
69 Chrysene-d12	223647	111824	447294	204036	-8.77
77 Perylene-d12	211919	105960	423838	198486	-6.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.19
27 Naphthalene-d8	10.64	10.14	11.14	10.65	0.07
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.16
59 Phenanthrene-d10	17.63	17.13	18.13	17.65	0.13
69 Chrysene-d12	22.81	22.31	23.31	22.83	0.10
77 Perylene-d12	25.07	24.57	25.57	25.11	0.15

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WR99DMSD
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11544

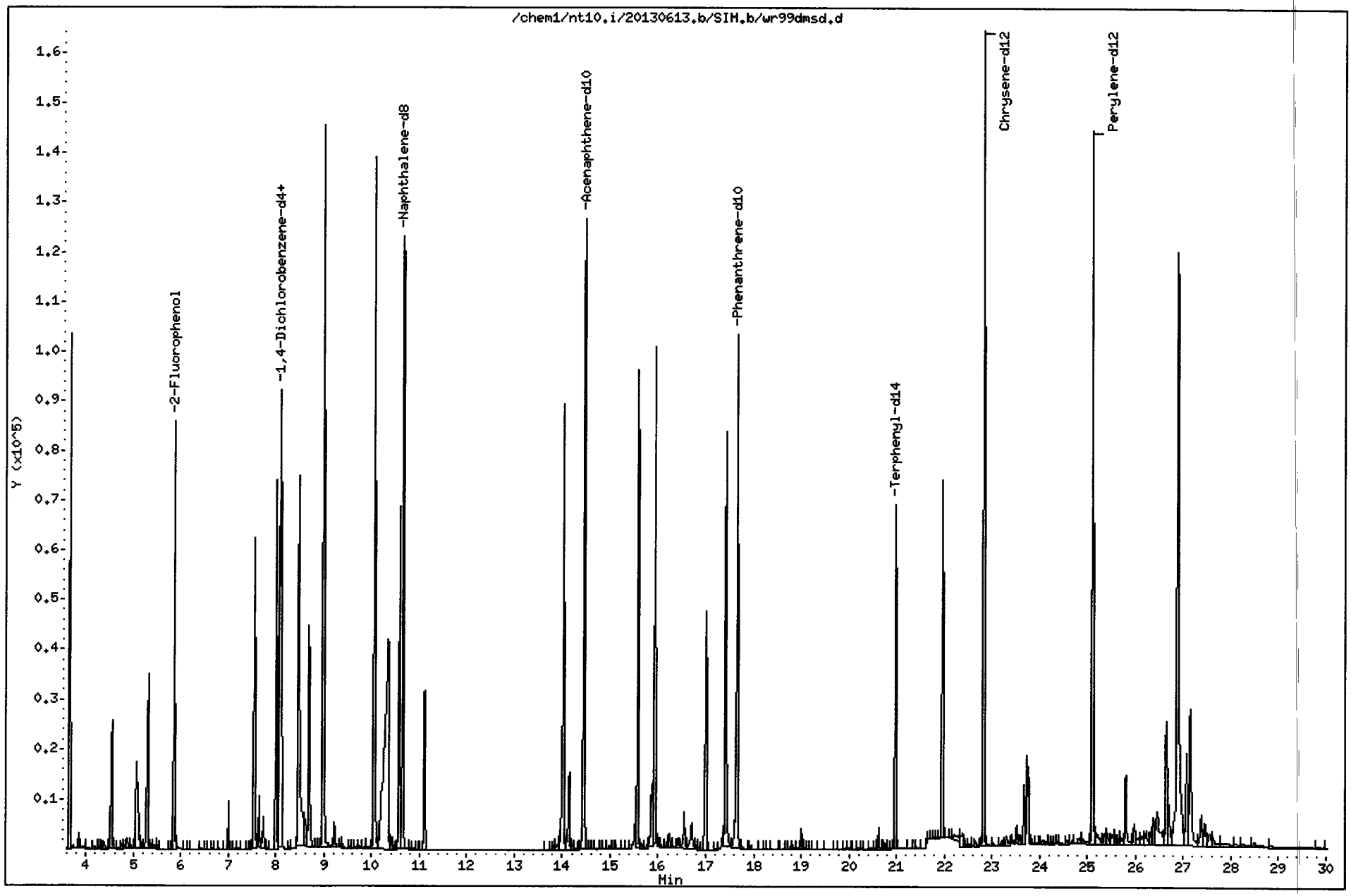
Client SDG: WR99
Fraction: SV
Client Smp ID: KC-VT-1593-2013 MSD
Operator: YZ
SampleType: MS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	492.1	296.3	60.21	30-160
7	1,3-Dichlorobenzen	492.1	270.2	54.91	30-160
9	1,4-Dichlorobenzen	492.1	271.4	55.15	30-160
11	Benzyl alcohol	492.1	293.1	59.57	30-160
12	1,2-Dichlorobenzen	492.1	278.1	56.52	30-160
13	2-Methylphenol	492.1	274.2	55.73	30-160
15	4-Methylphenol	984.2	571.7	58.09	30-160
16	N-Nitroso-di-n-pro	492.1	339.9	69.08	30-160
22	2,4-Dimethylphenol	984.2	528.4	53.69	30-160
26	1,2,4-Trichloroben	492.1	294.5	59.85	30-160
30	Hexachlorobutadien	492.1	281.4	57.19	30-160
39	Dimethylphthalate	492.1	393.4	79.95	30-160
50	Diethylphthalate	492.1	404.2	82.14	30-160
54	N-Nitrosodiphenyla	492.1	425.7	86.52	30-160
57	Hexachlorobenzene	492.1	361.6	73.47	30-160
58	Pentachlorophenol	984.2	1219	123.85	30-160
67	Butylbenzylphthala	492.1	502.3	102.07	30-160
79	Dibenzo(a,h)anthra	492.1	636.7	129.38	30-160
90	N-Nitrosodimethyla	984.2	799.2	81.21	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	738.1	428.6	58.06	30-160
$ 66	Terphenyl-d14	492.1	350.4	71.20	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99dmsd.d
Date : 13-JUN-2013 19:16
Client ID: KC-VT-1593-2013 MSD
Sample Info: WR99DMSD
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wr99dmsd.d

Lab ID: WR99DMSD, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/14/13

Data file : /chem1/nt10.i/20130613.b/SIM.b/wr99e.d
Lab Smp Id: WR99E Client Smp ID: KC-CB-01-20130530-S
Inj Date : 13-JUN-2013 19:53
Operator : YZ Inst ID: nt10.i
Smp Info : WR99E
Misc Info : 13-11545
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 13-Jun-2013 13:41 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.01000	Weight of sample extracted (g)
M	21.80000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1	2-Fluorophenol	112	5.856	5.825	(0.725)	91669	4.61746	453.9
	3	Phenol	94	7.548	7.518	(0.935)	7088	0.24838	24.41
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	8.075	8.059	(1.000)	56517	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	79	Compound Not Detected.					
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	15	4-Methylphenol	108	8.983	8.952	(1.112)	1056	0.05083	4.996
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	10.053	10.030	(0.944)	521	0.02521 J	2.477
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	10.647	10.639	(1.000)	213384	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.012	14.005	(0.970)	1451	0.04398	4.323(M)
*	42 Acenaphthene-d10	162	14.445	14.430	(1.000)	114345	4.00000	
	50 Diethylphthalate	149	15.566	15.559	(1.078)	10531	0.28188	27.71
	54 N-Nitrosodiphenylamine	169	15.929	15.914	(0.903)	828	0.03632	3.570(M)
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.644	17.629	(1.000)	207913	4.00000	
$	66 Terphenyl-d14	244	20.979	20.955	(0.919)	96285	3.82737	376.2
	67 Butylbenzylphthalate	149	21.954	21.939	(0.962)	5463	0.28774	28.28
*	69 Chrysene-d12	240	22.821	22.806	(1.000)	204651	4.00000	
*	77 Perylene-d12	264	25.105	25.074	(1.000)	194068	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.881	26.827	(1.071)	29934	0.69199	68.02(H)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wr99e.d
Lab Smp Id: WR99E
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11545

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: KC-CB-01-2013053
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	56517	7.33
27 Naphthalene-d8	192325	96162	384650	213384	10.95
42 Acenaphthene-d10	109274	54637	218548	114345	4.64
59 Phenanthrene-d10	203933	101966	407866	207913	1.95
69 Chrysene-d12	223647	111824	447294	204651	-8.49
77 Perylene-d12	211919	105960	423838	194068	-8.42

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.19
27 Naphthalene-d8	10.64	10.14	11.14	10.65	0.07
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.11
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.09
69 Chrysene-d12	22.81	22.31	23.31	22.82	0.07
77 Perylene-d12	25.07	24.57	25.57	25.11	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WR99E
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11545

Client SDG: WR99
Fraction: SV
Client Smp ID: KC-CB-01-20130530-S
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	737.2	453.9	61.57	30-160
$ 66 Terphenyl-d14	491.5	376.2	76.55	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99e.d

Page 5

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

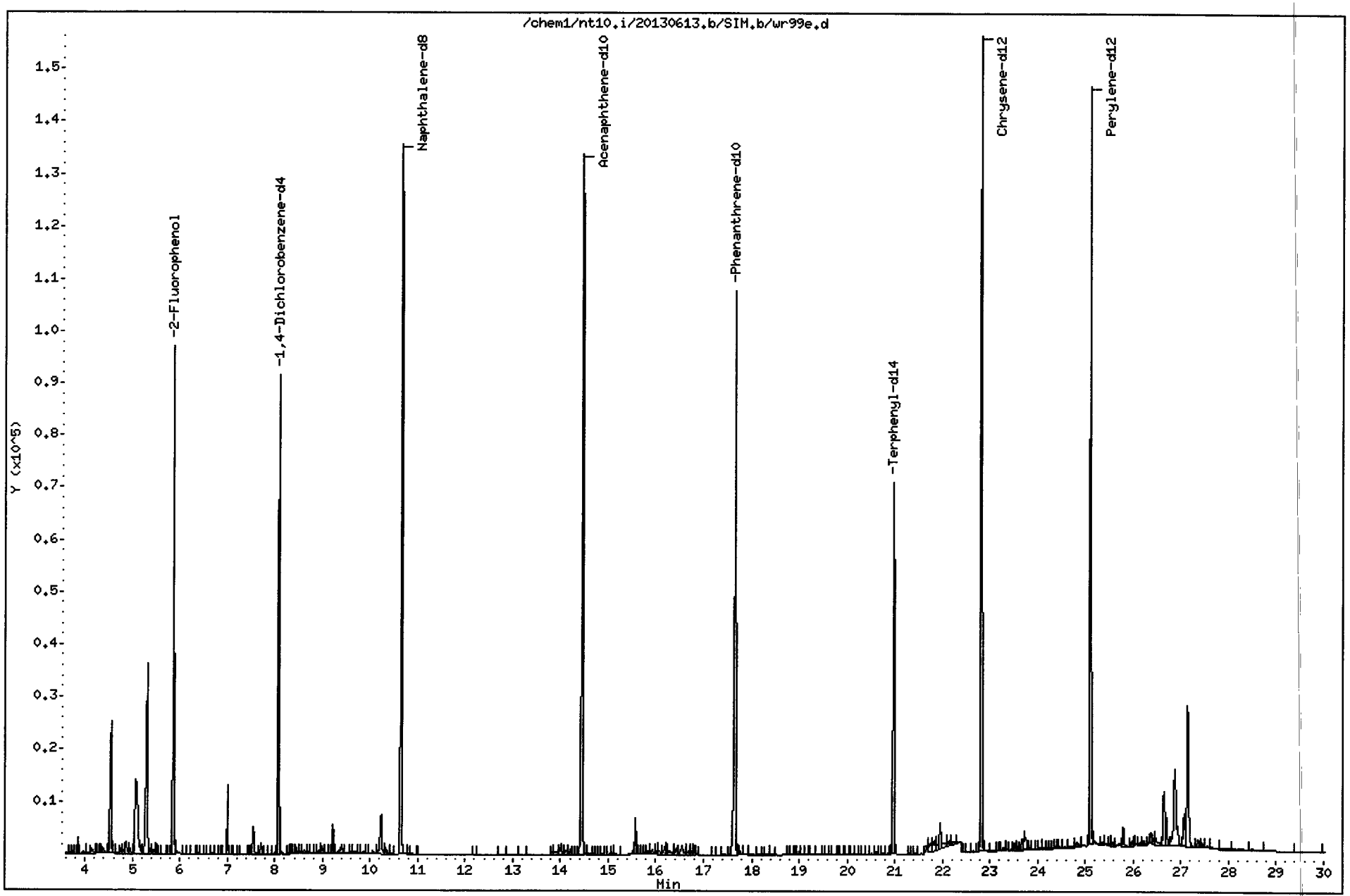
Sample Info: WR99E

Volume Injected (uL): 1.0

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

Operator: YZ

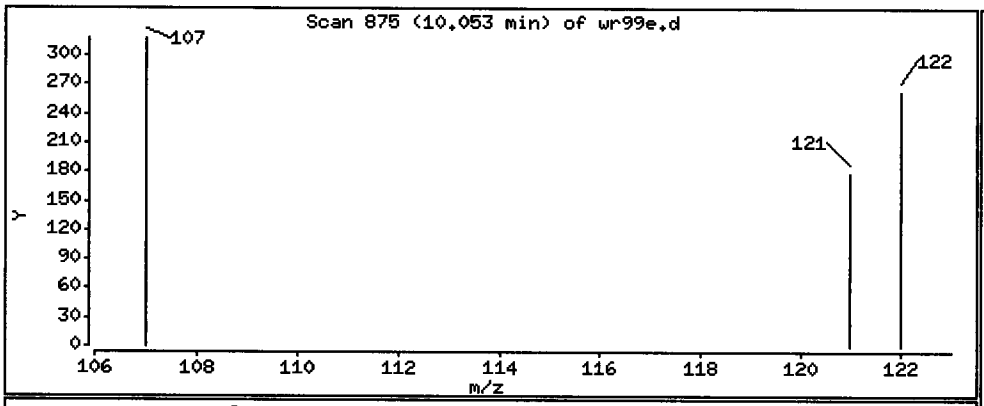
Column phase: ZB-5msi

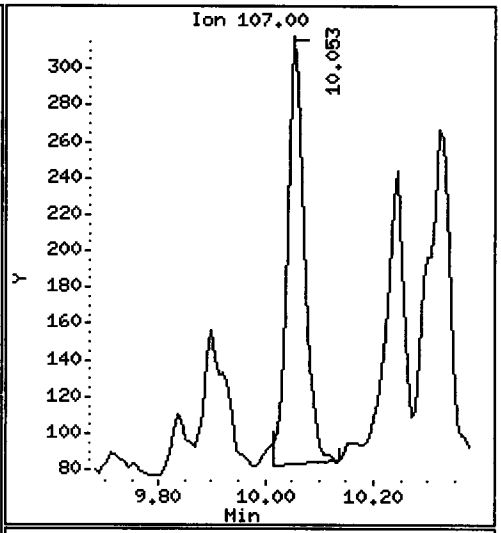
Column diameter: 0.25

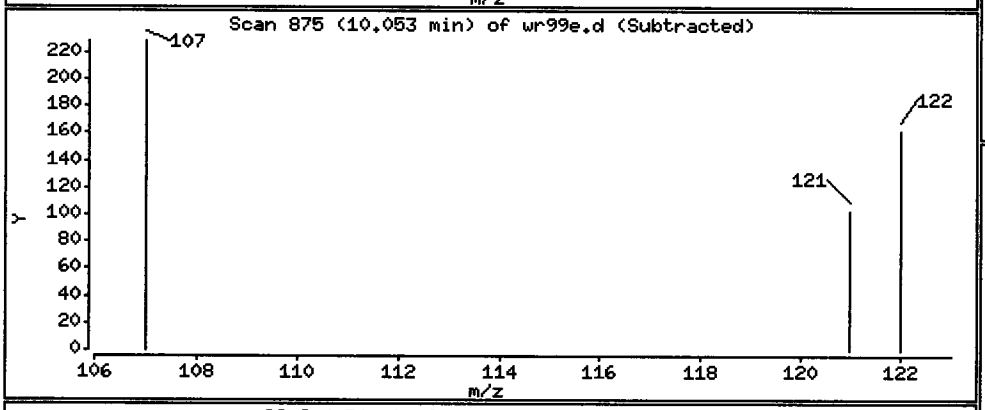
LML

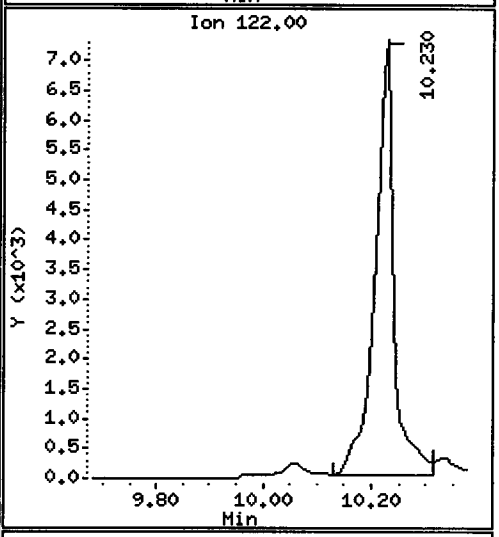
22 2,4-Dimethylphenol

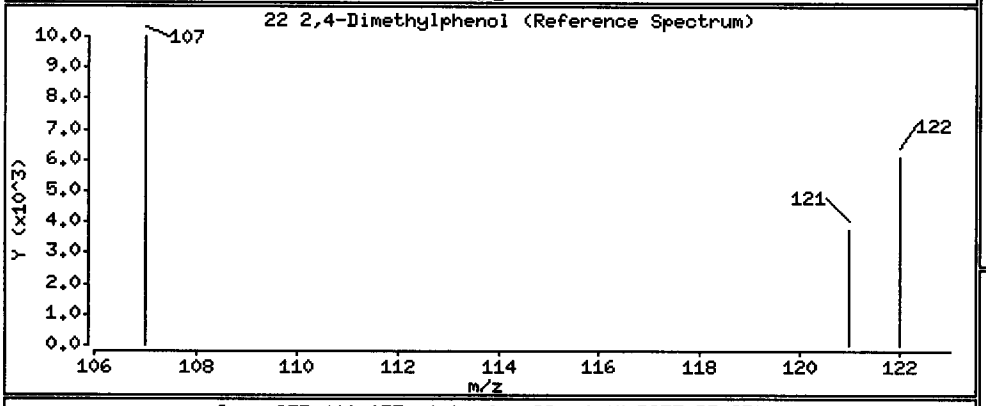
Concentration: 2.477 ug/kg

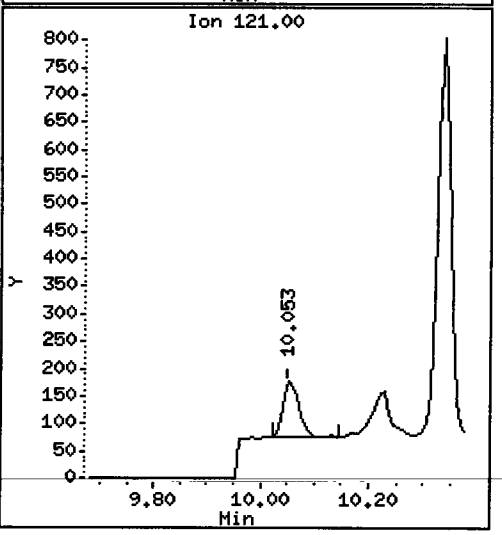


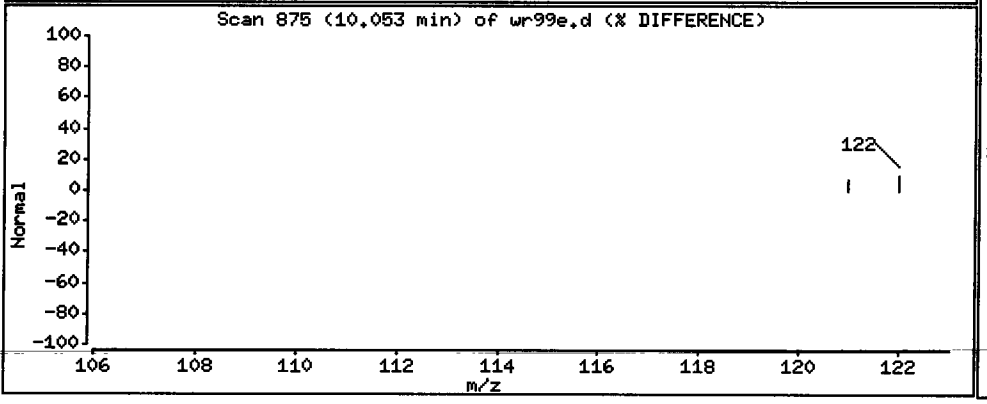












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

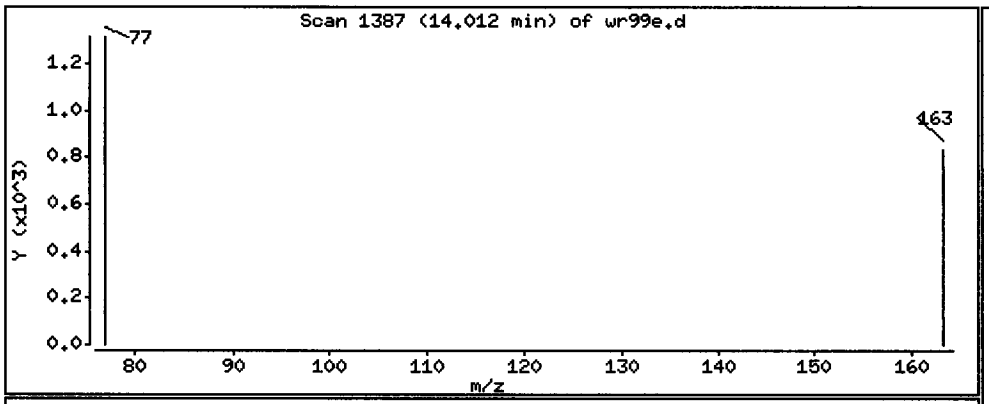
Operator: YZ

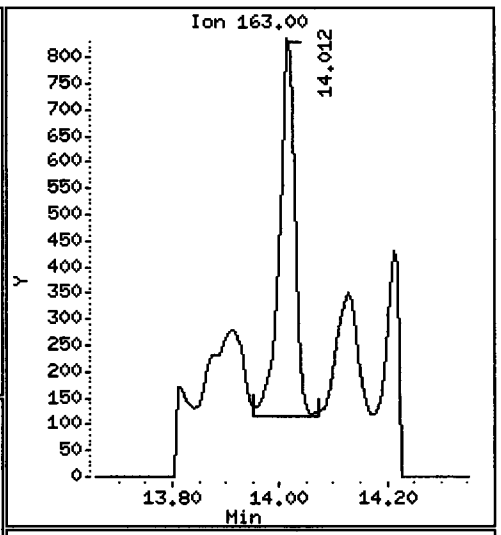
Column phase: ZB-5msi

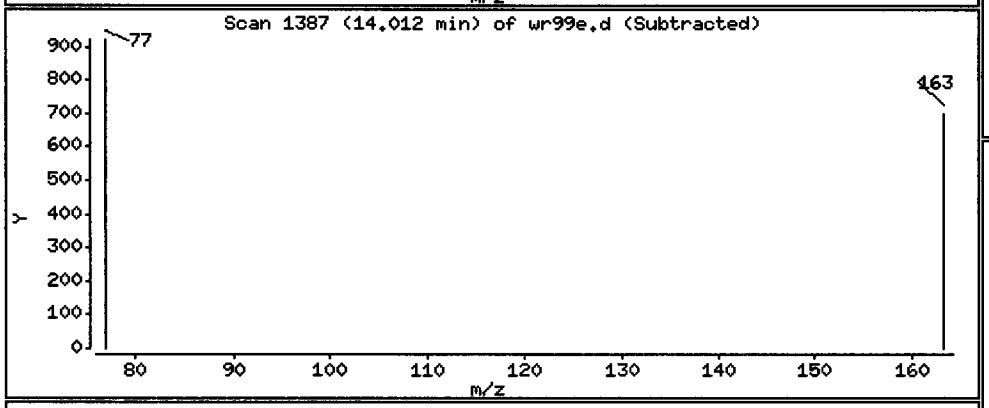
Column diameter: 0.25

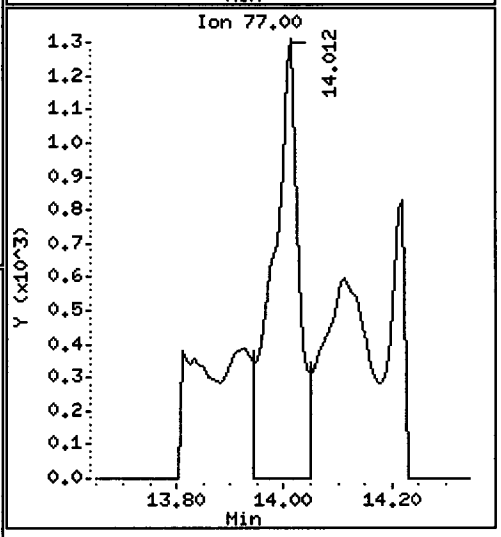
39 Dimethylphthalate

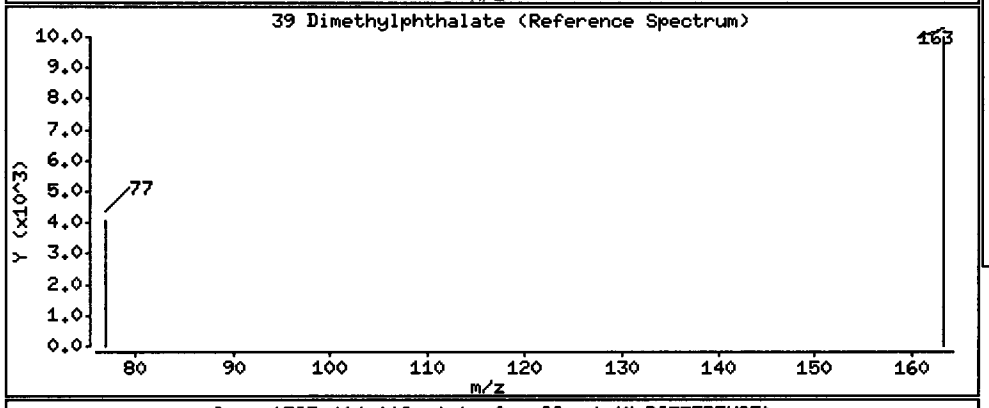
Concentration: 4.323 ug/kg

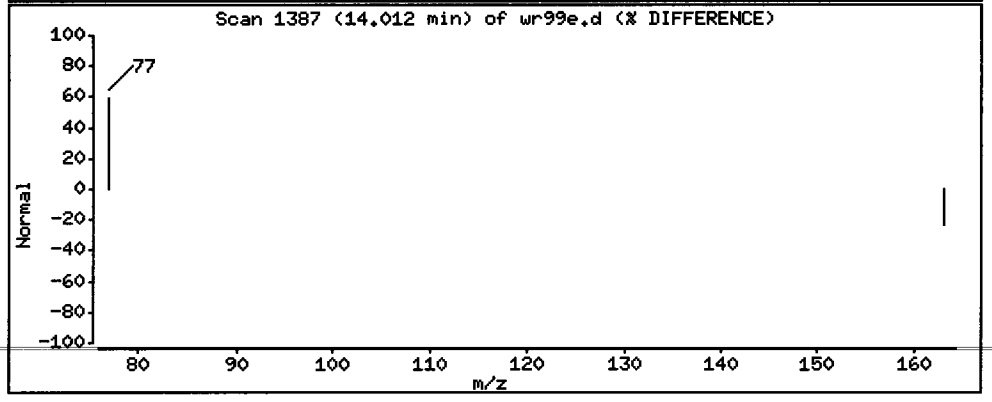












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

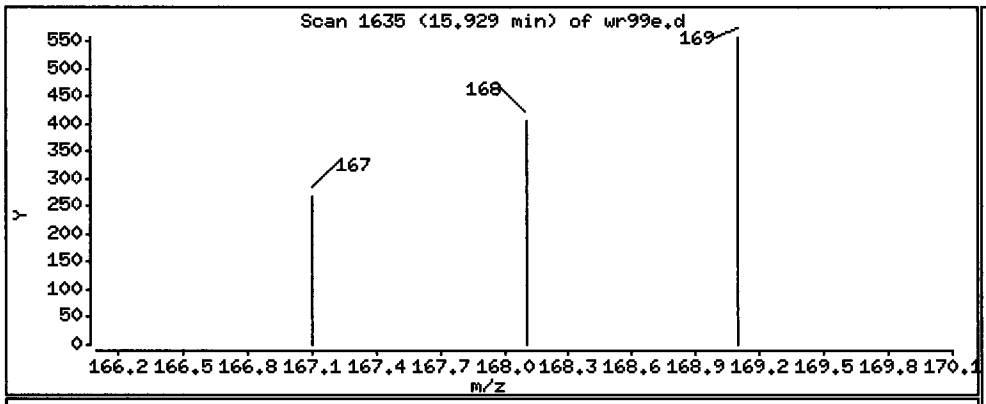
Operator: YZ

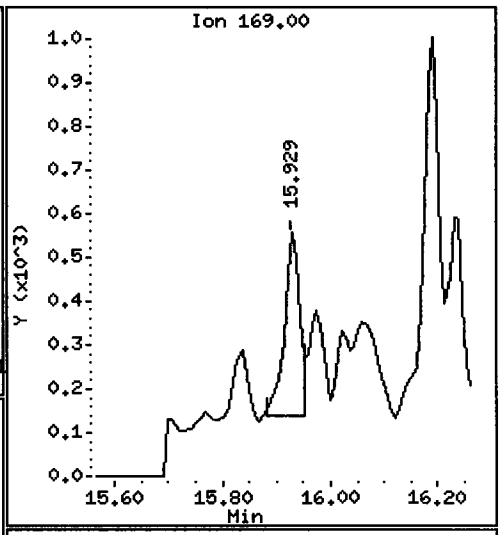
Column phase: ZB-5msi

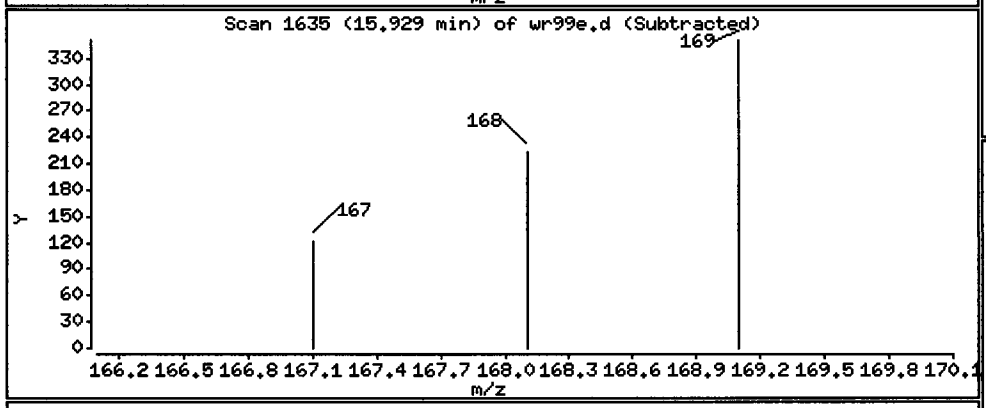
Column diameter: 0.25

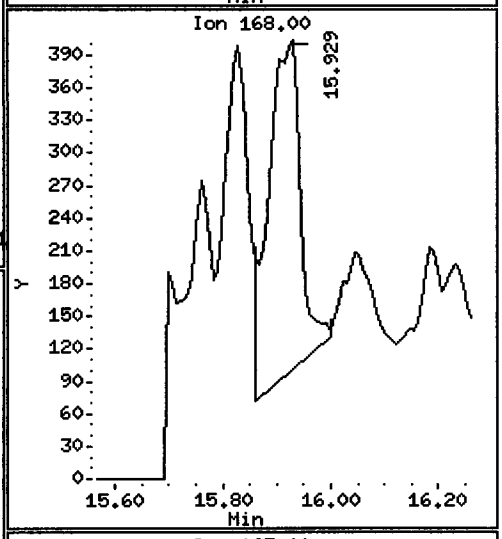
54 N-Nitrosodiphenylamine

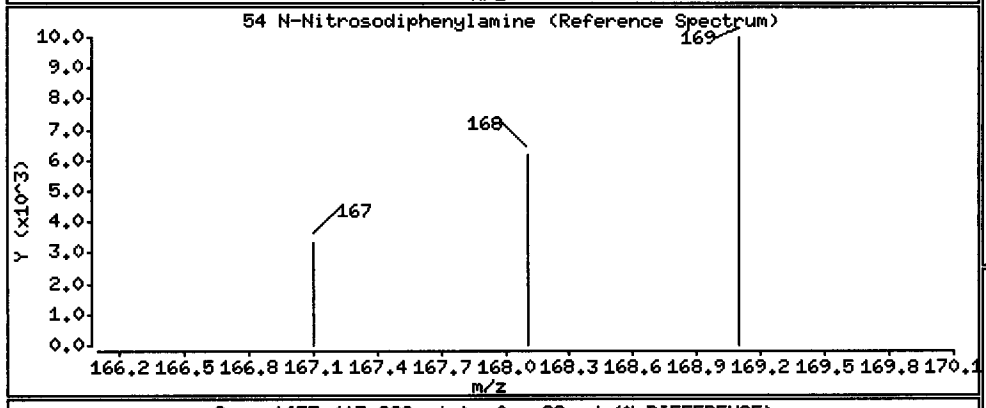
Concentration: 3.570 ug/kg

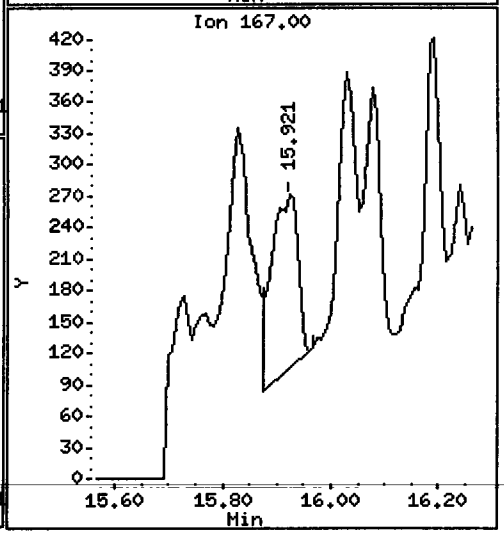


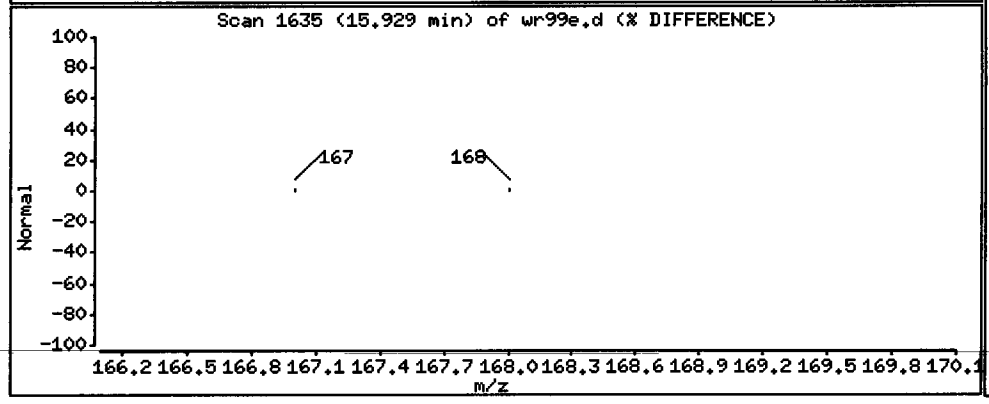












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

Operator: YZ

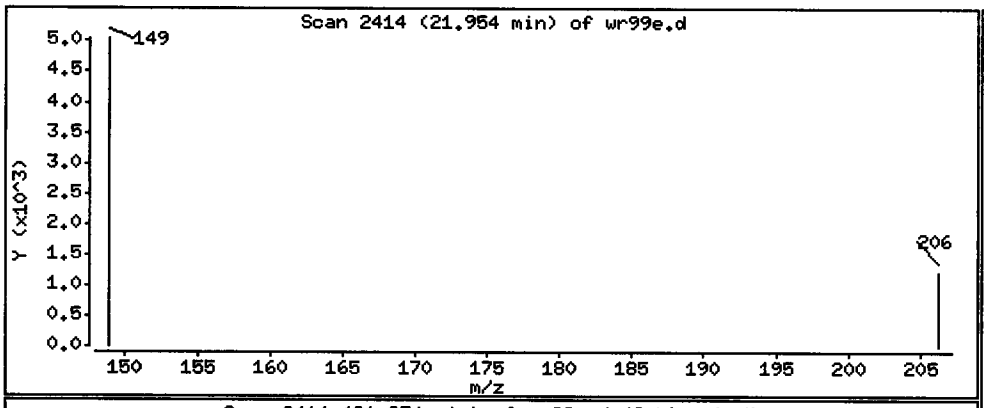
Column phase: ZB-5msi

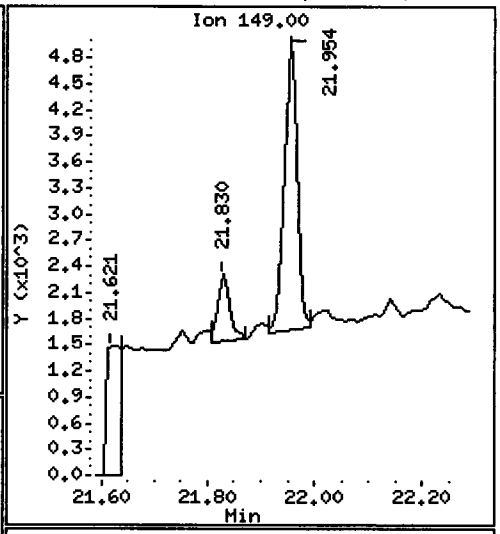
Column diameter: 0.25

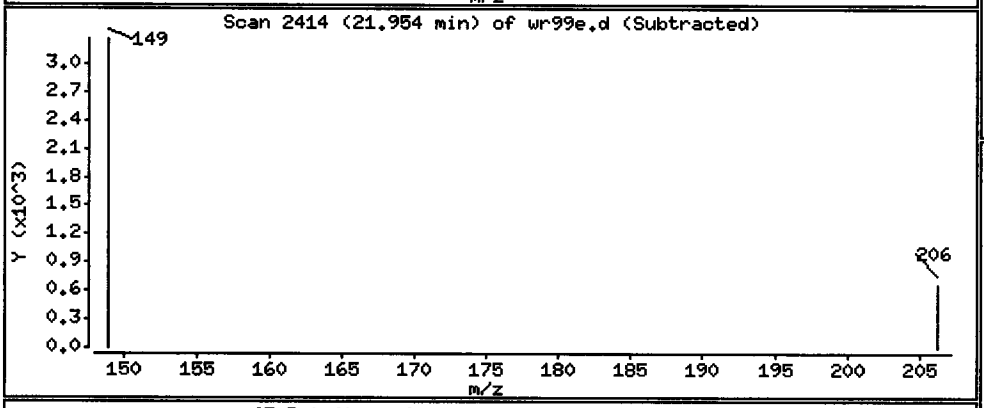
67 Butylbenzylphthalate

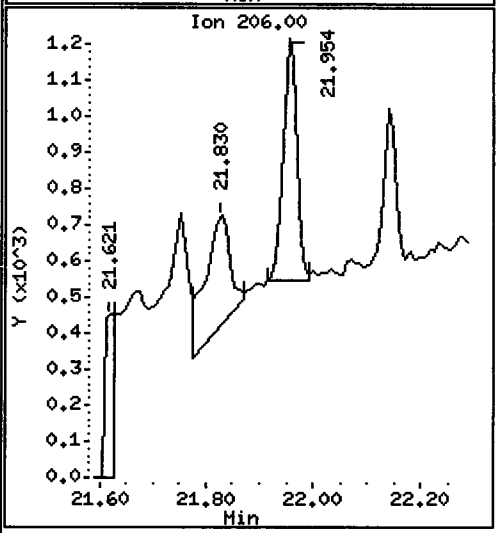
Concentration: 28.28 ug/kg

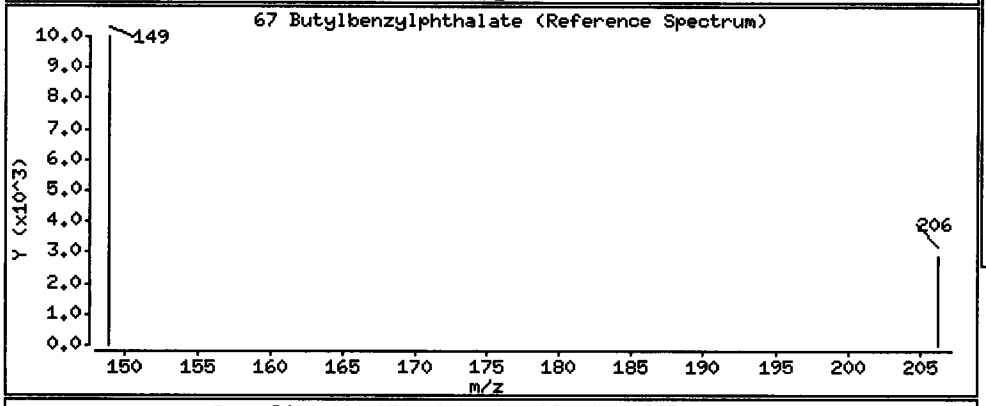
(Q) 9 B 6/17/13

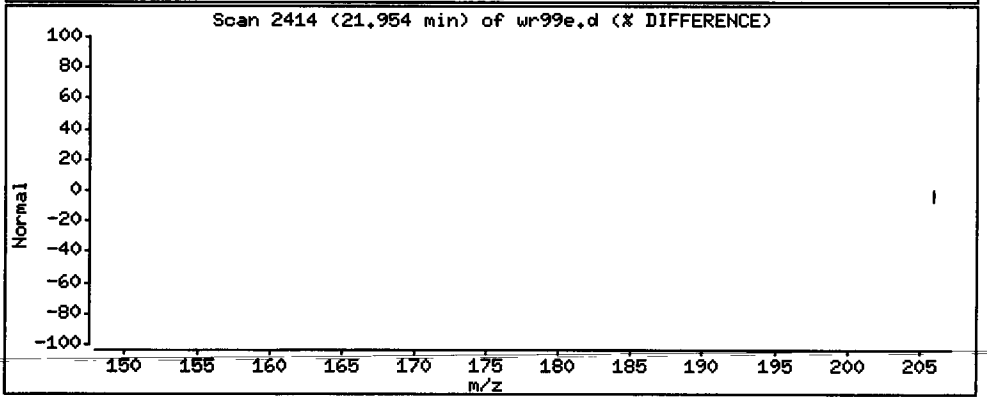












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

Operator: YZ

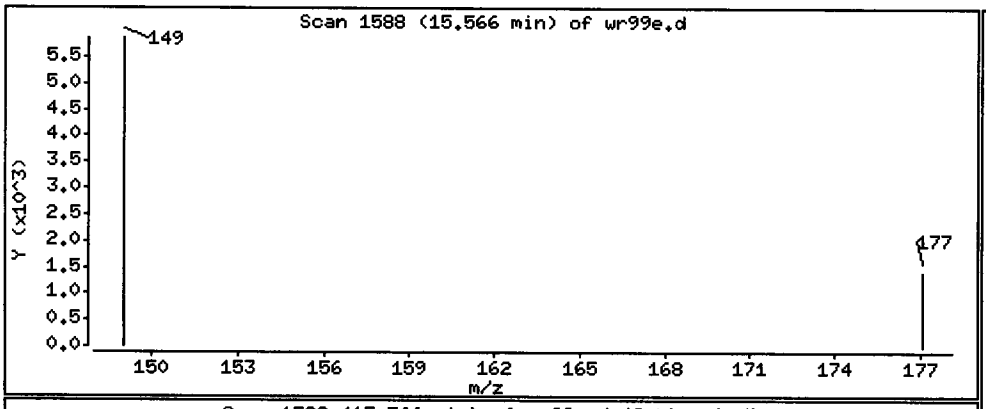
Column phase: ZB-5msi

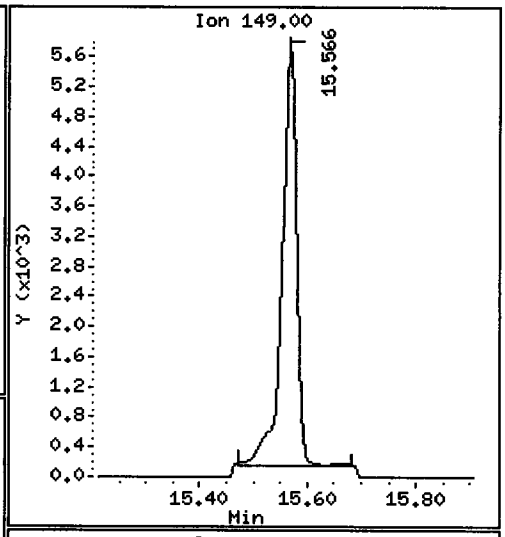
Column diameter: 0.25

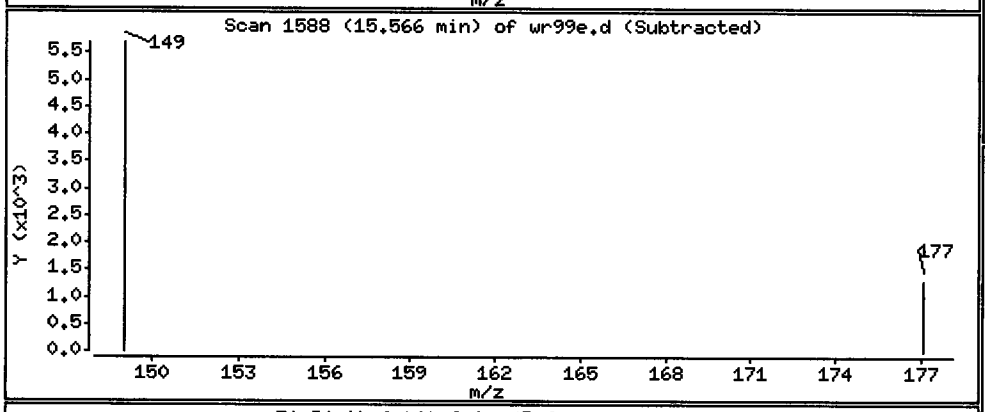
(B)

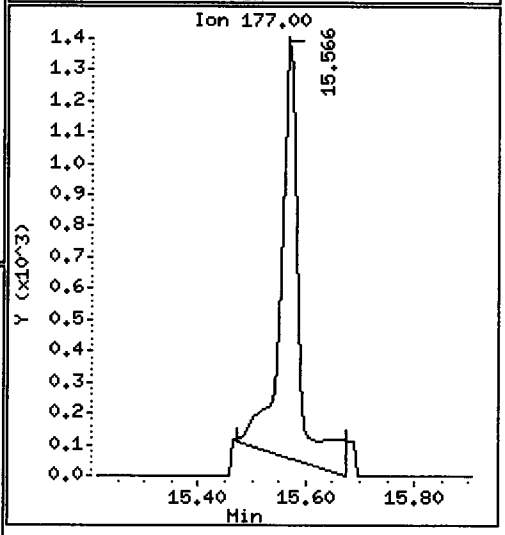
50 Diethylphthalate

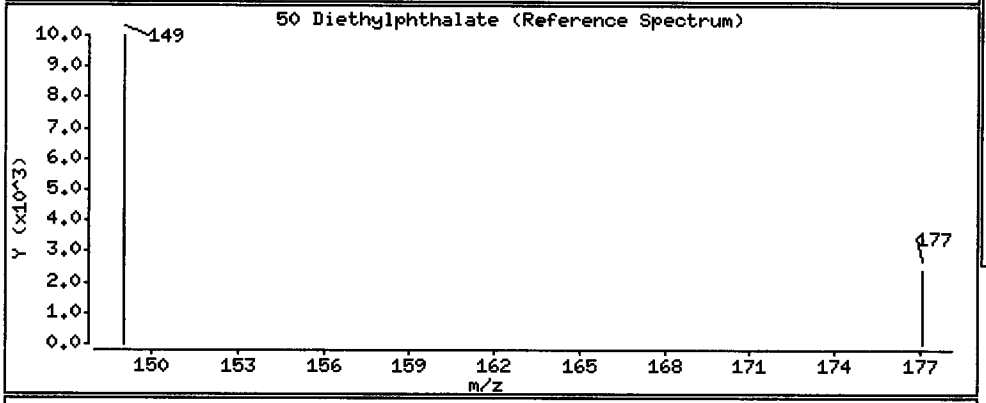
Concentration: 27.71 ug/kg

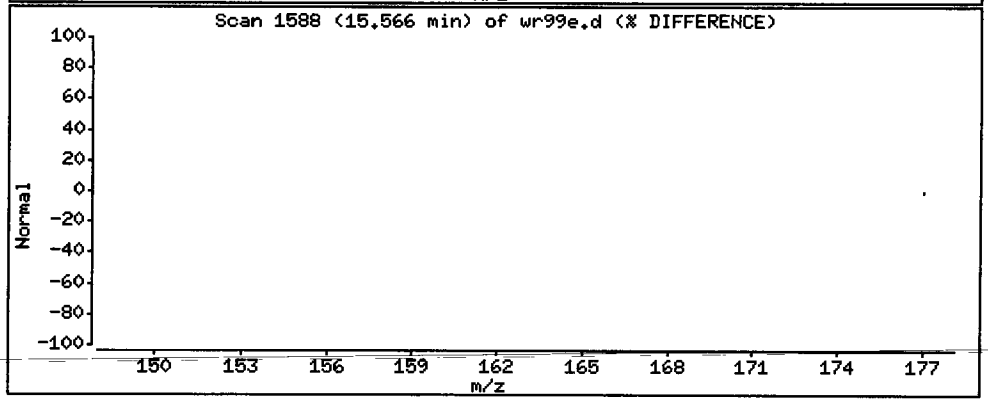












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99e.d

Date : 13-JUN-2013 19:53

Client ID: KC-CB-01-20130530-S

Instrument: nt10.i

Sample Info: WR99E

Volume Injected (uL): 1.0

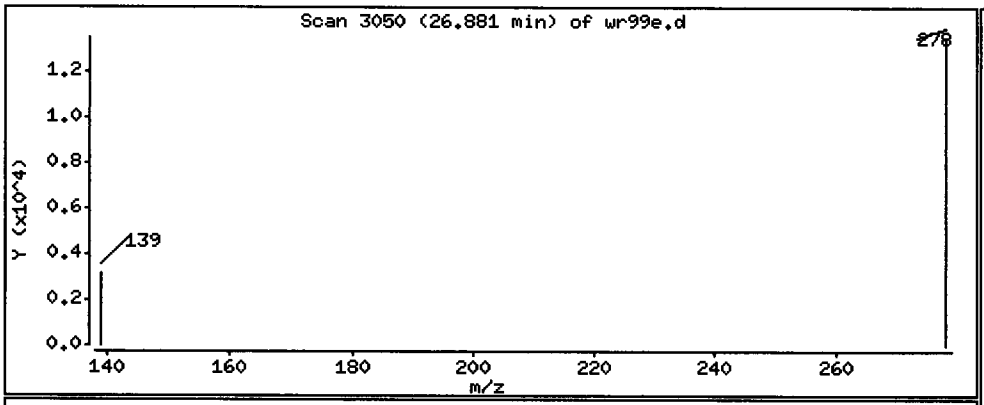
Operator: YZ

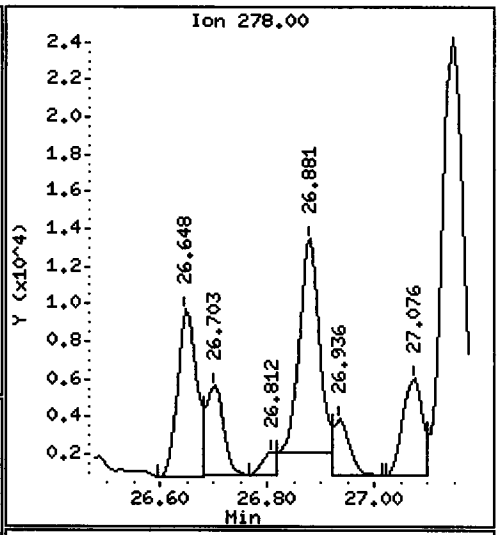
Column phase: ZB-5msi

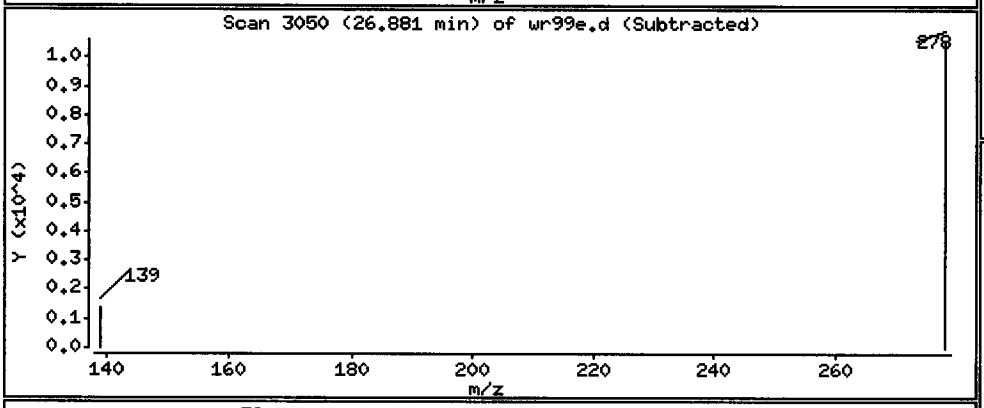
Column diameter: 0.25

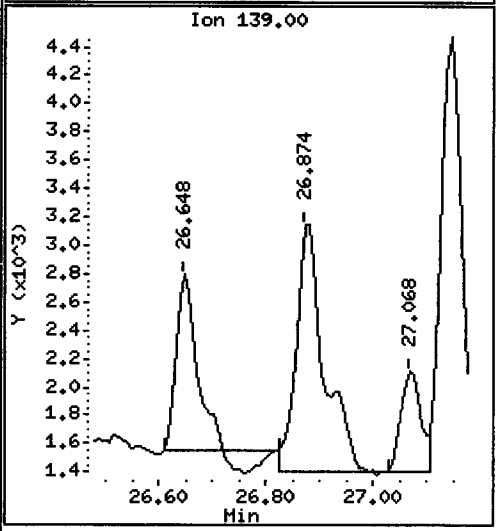
79 Dibenzo(a,h)anthracene

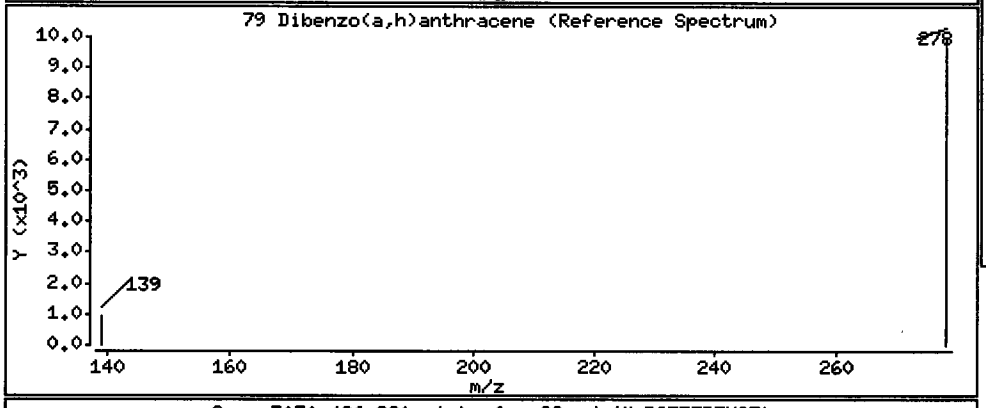
Concentration: 68.02 ug/kg

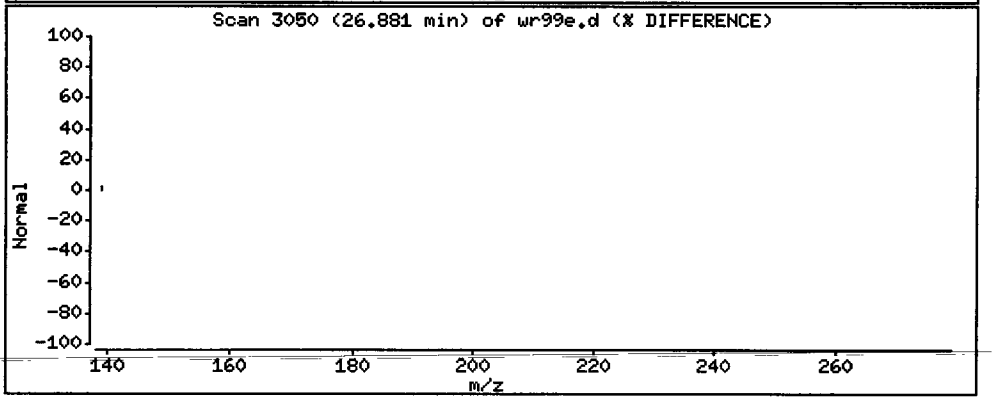






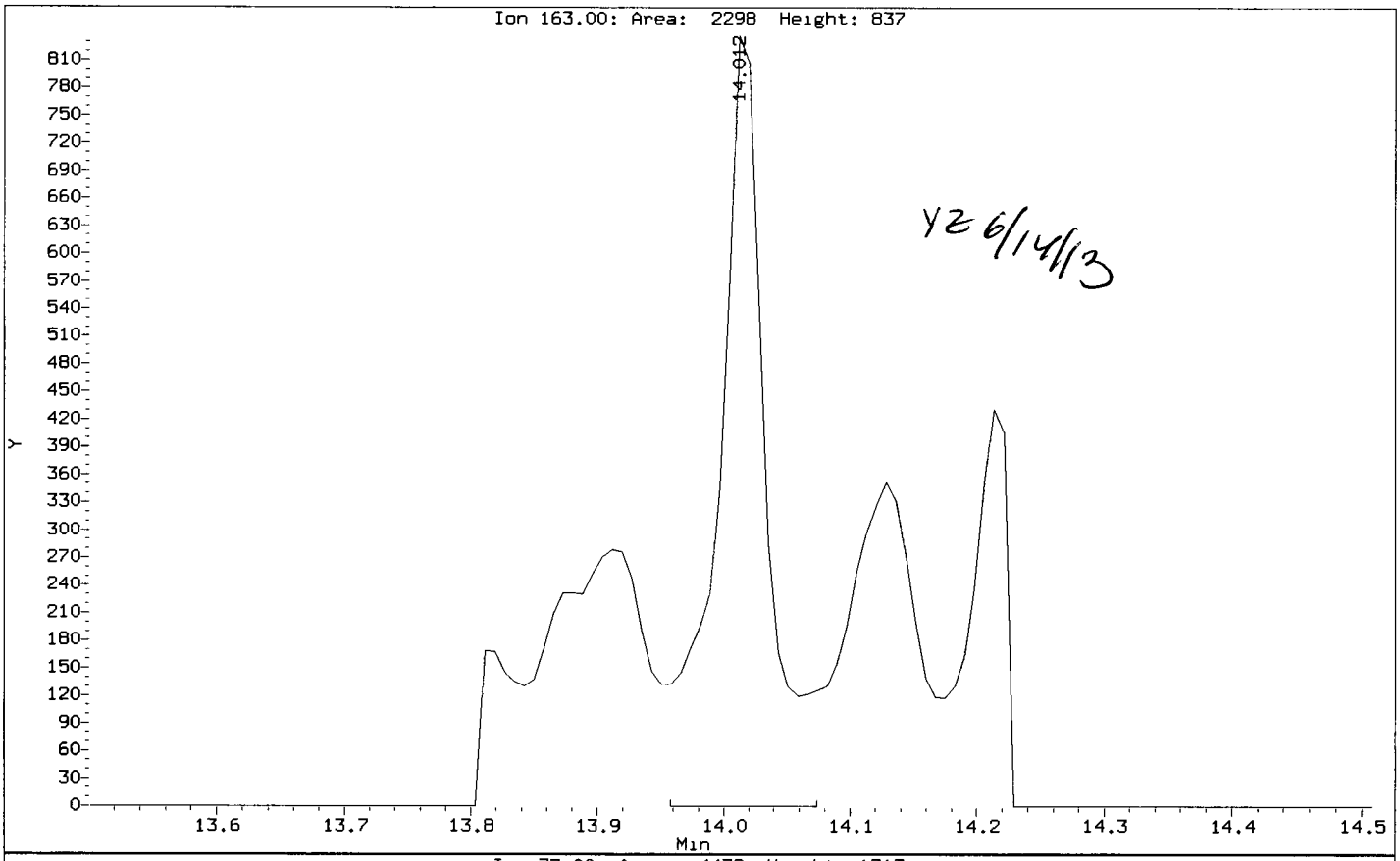




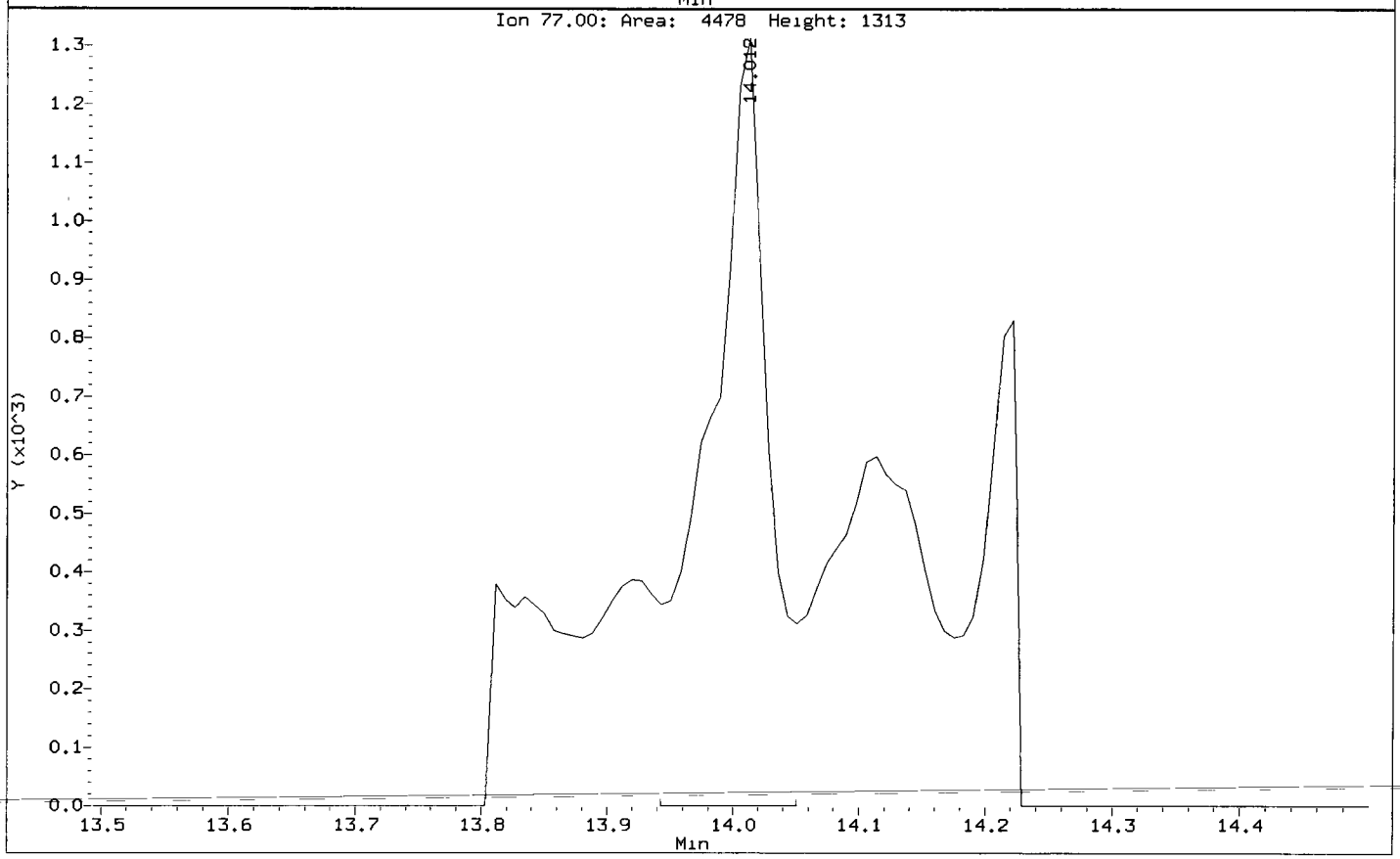


Data File: /chem1/nt10.1/20130613.b/SIM.b/wr99e.d
Injection Date: 13-JUN-2013 19:53
Instrument: nt10.1
Client Sample ID: KC-CB-01-20130530-S

Compound: Dimethylphthalate
CAS Number: 131-11-3



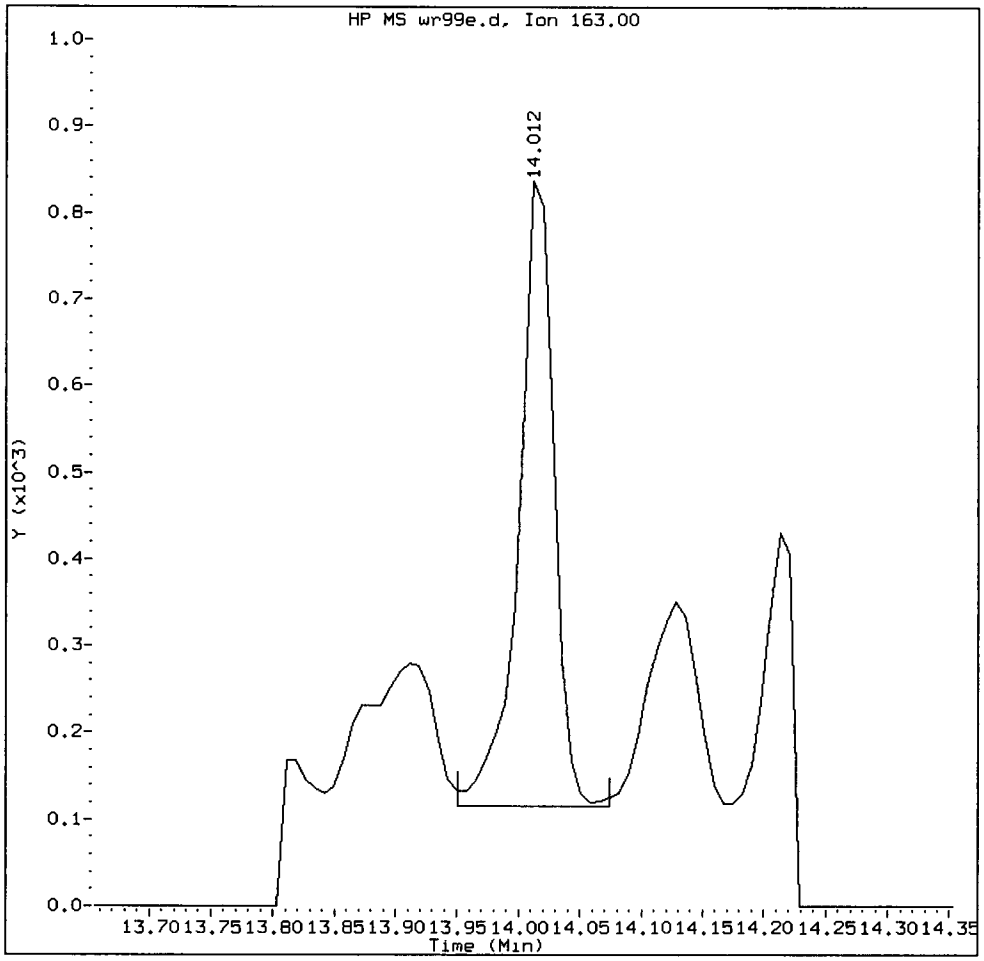
YZ 6/14/13



WR99 : 01215

WR99E, /chem1/nt10.i/20130613.b/SIM.b/wr99e.d

Dimethylphthalate Amount: 0.04 Area: 1451



MANUAL INTEGRATION for Dimethylphthalate

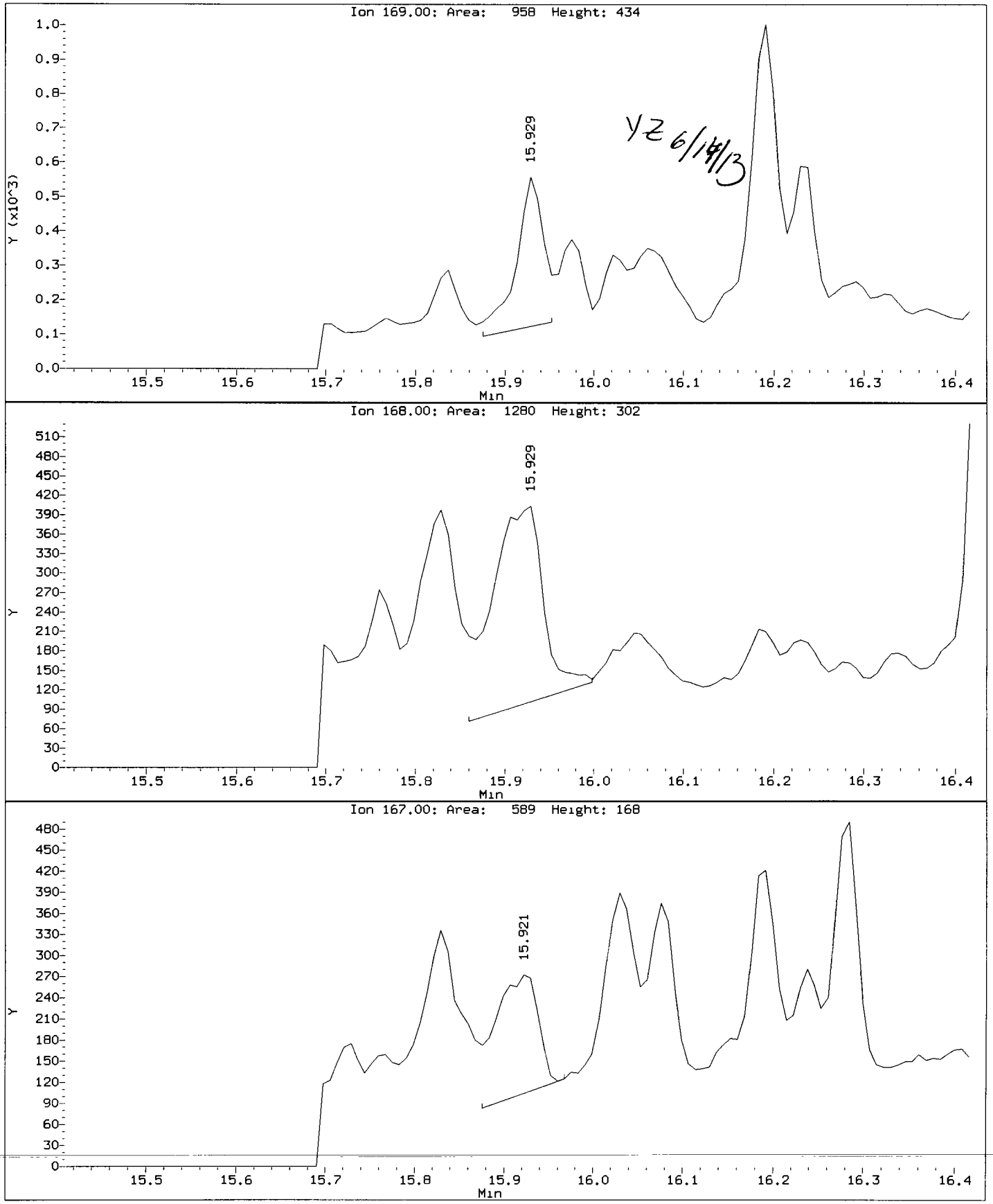
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/14/13

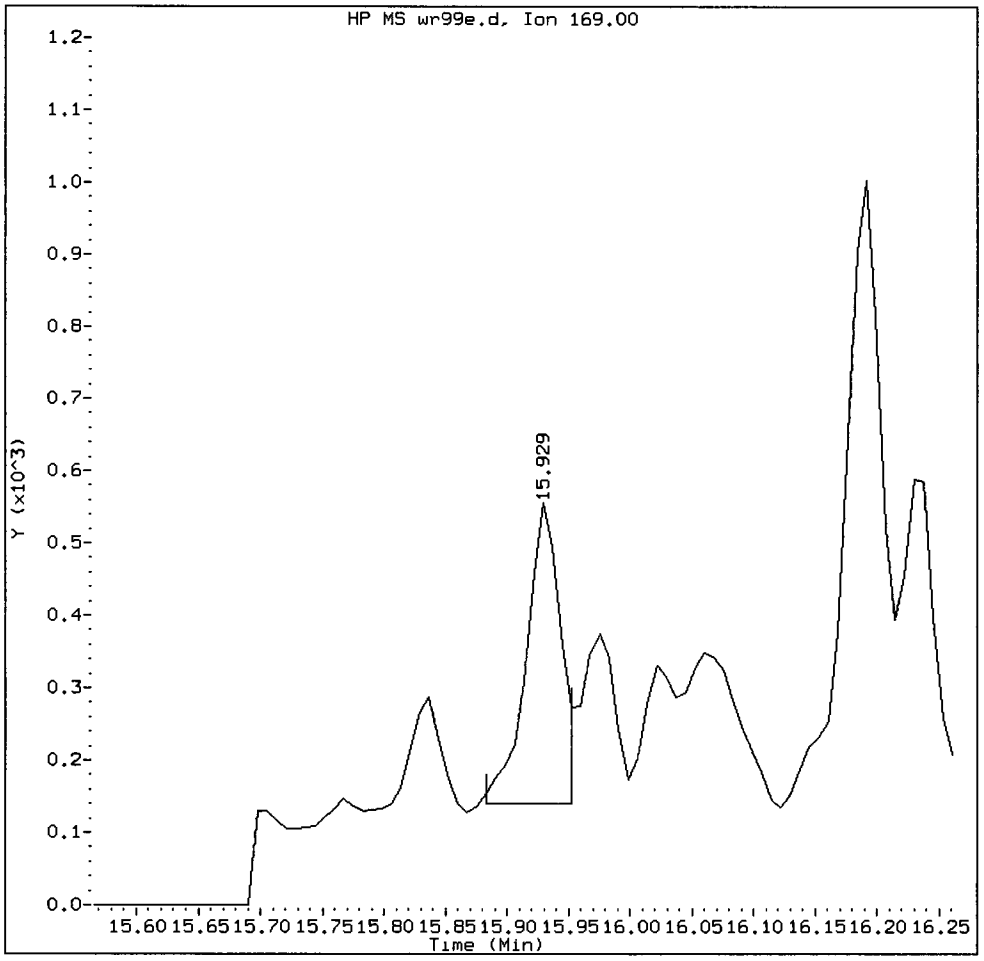
Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99e.d
Injection Date: 13-JUN-2013 19:53
Instrument: nt10.i
Client Sample ID: KC-CB-01-20130530-S

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



WR99E, /chem1/nt10.i/20130613.b/SIM.b/wr99e.d

N-Nitrosodiphenylamine Amount: 0.04 Area: 828



MANUAL INTEGRATION for N-Nitrosodiphenylamine

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/14/13

CO-ELUTION SUMMARY FOR FILE - wr99e.d

Lab ID: WR99E, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 6/19/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130613.b/SIM.b/wr99f.d
Lab Smp Id: WR99F Client Smp ID: KC-DD-2009-20130530
Inj Date : 13-JUN-2013 20:30
Operator : YZ Inst ID: nt10.i
Smp Info : WR99F
Misc Info : 13-11546
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 13-Jun-2013 13:41 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	6.01000	Weight of sample extracted (g)
M	38.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.848	5.825	(0.724)	79829	4.13920	1113
	3 Phenol	94	7.541	7.518	(0.934)	20663	0.74535	200.4
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.074	8.059	(1.000)	54904	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	8.688	8.664	(1.076)	523	0.02639 J	7.093
	15 4-Methylphenol	108	8.983	8.952	(1.112)	4636	0.22970	61.74
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.053	10.030	(0.944)	544	0.02710 J	7.284 (M)
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.647	10.639	(1.000)	207233	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	14.020	14.005	(0.971)	3152	0.09743	26.19(M)
*	42 Acenaphthene-d10	162	14.445	14.430	(1.000)	112128	4.00000	
	50 Diethylphthalate	149	15.566	15.559	(1.078)	3954	0.10793	29.01
	54 N-Nitrosodiphenylamine	169	15.929	15.914	(0.902)	1030	0.04976	13.37(M)
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.652	17.629	(1.000)	188798	4.00000	
$	66 Terphenyl-d14	244	20.979	20.955	(0.919)	89793	3.66483	985.1
	67 Butylbenzylphthalate	149	21.962	21.939	(0.962)	30899	1.67100	449.2
*	69 Chrysene-d12	240	22.829	22.806	(1.000)	199317	4.00000	
*	77 Perylene-d12	264	25.113	25.074	(1.000)	185586	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.889	26.827	(1.071)	54184	1.30983	352.1
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wr99f.d
Lab Smp Id: WR99F
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11546

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: KC-DD-2009-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	54904	4.27
27 Naphthalene-d8	192325	96162	384650	207233	7.75
42 Acenaphthene-d10	109274	54637	218548	112128	2.61
59 Phenanthrene-d10	203933	101966	407866	188798	-7.42
69 Chrysene-d12	223647	111824	447294	199317	-10.88
77 Perylene-d12	211919	105960	423838	185586	-12.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.19
27 Naphthalene-d8	10.64	10.14	11.14	10.65	0.07
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.11
59 Phenanthrene-d10	17.63	17.13	18.13	17.65	0.13
69 Chrysene-d12	22.81	22.31	23.31	22.83	0.10
77 Perylene-d12	25.07	24.57	25.57	25.11	0.15

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

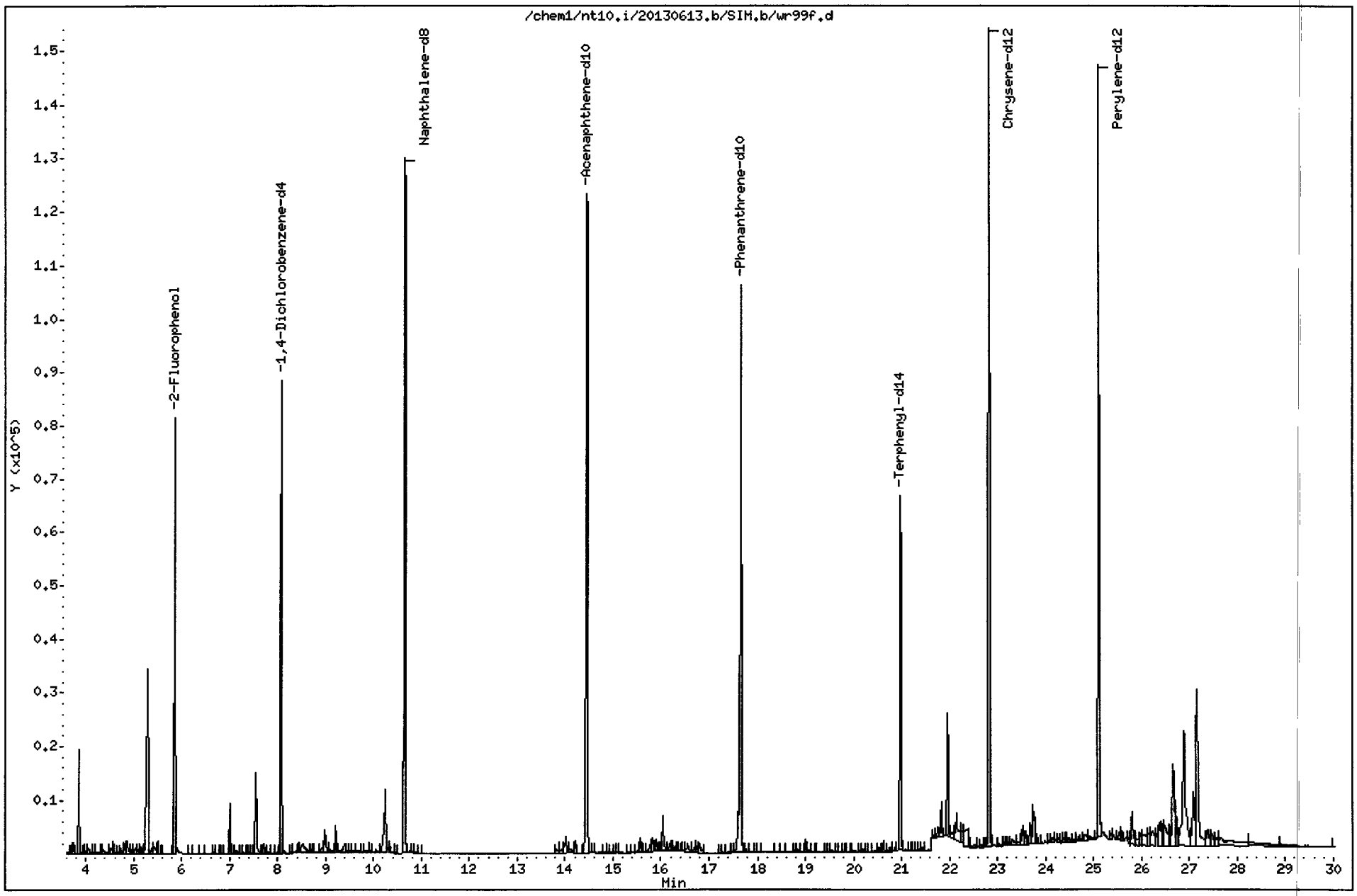
RECOVERY REPORT

Client Name: SAIC
Client SDG: WR99
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WR99F
Client Smp ID: KC-DD-2009-20130530
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11546

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	2016	1113	55.19	30-160
$ 66 Terphenyl-d14	1344	985.1	73.30	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99f.d
Date : 13-JUN-2013 20:30
Client ID: KC-DD-2009-20130530
Sample Info: WR99F
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

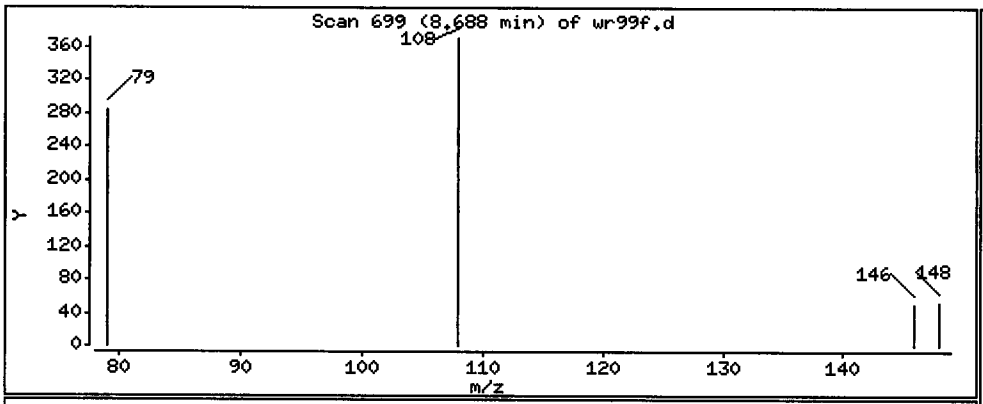
Operator: YZ

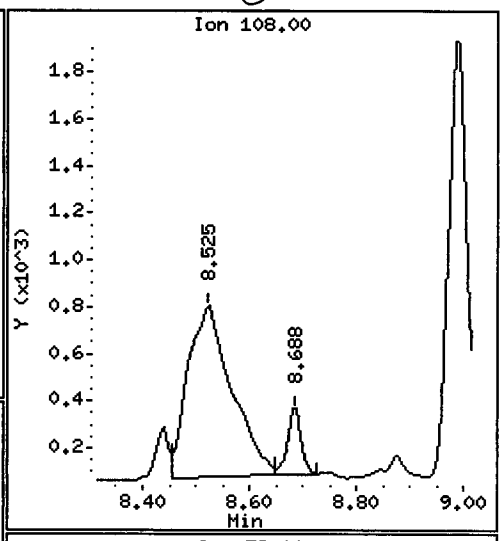
Column phase: ZB-5msi

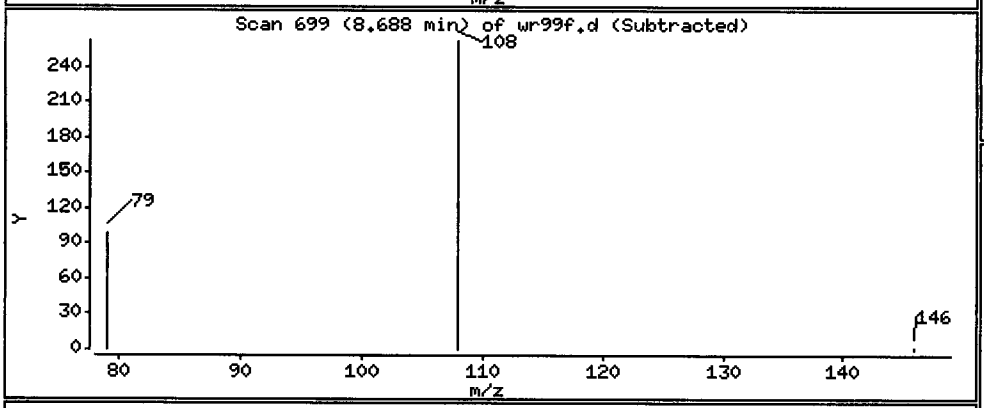
Column diameter: 0.25

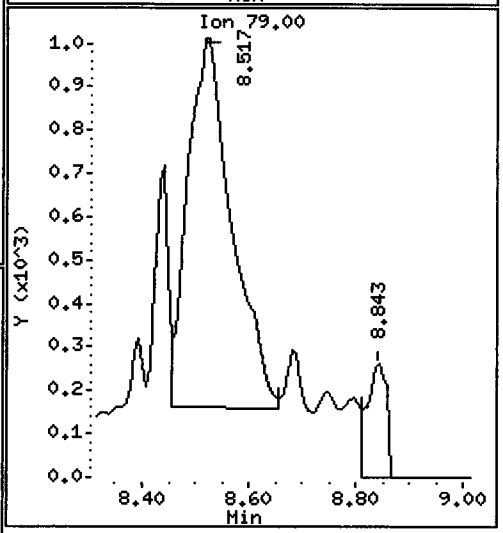
13 2-Methylphenol

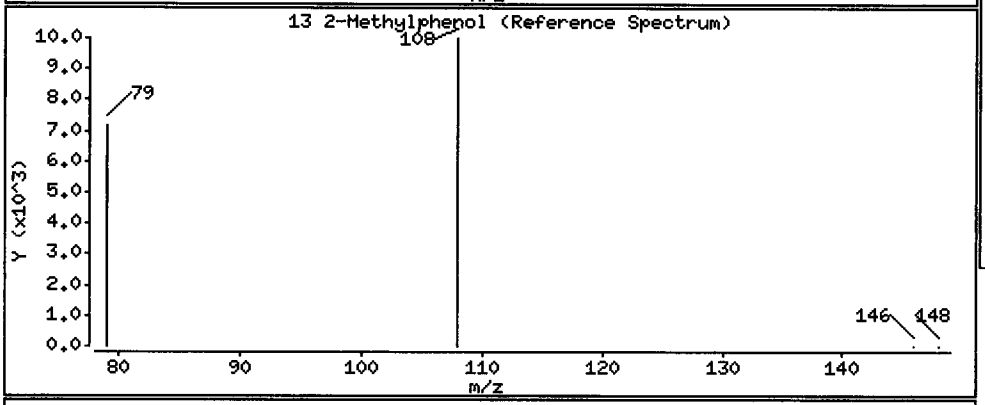
Concentration: 7.093 ug/kg

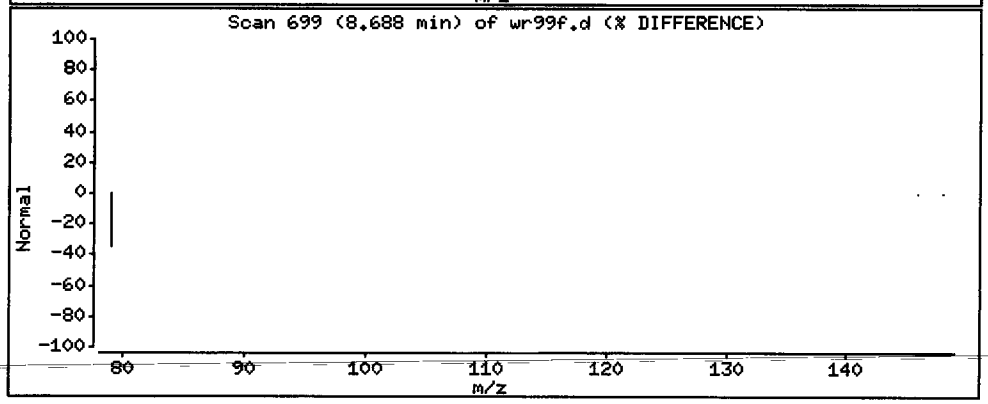












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

Operator: YZ

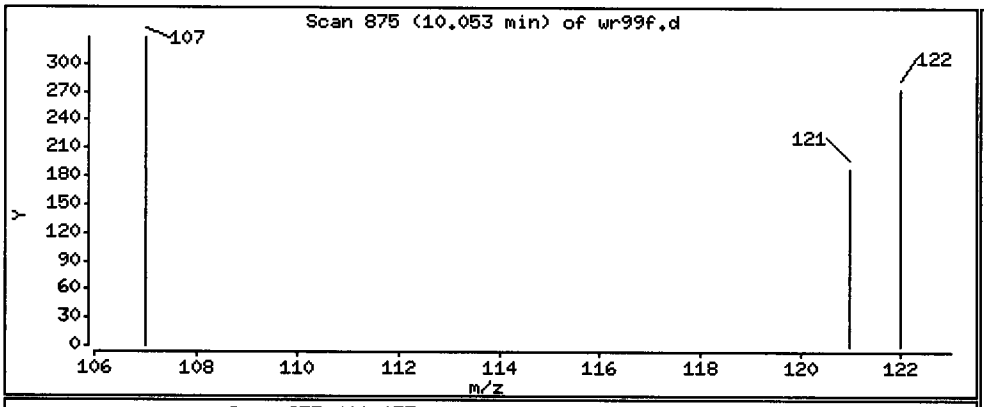
Column phase: ZB-5msi

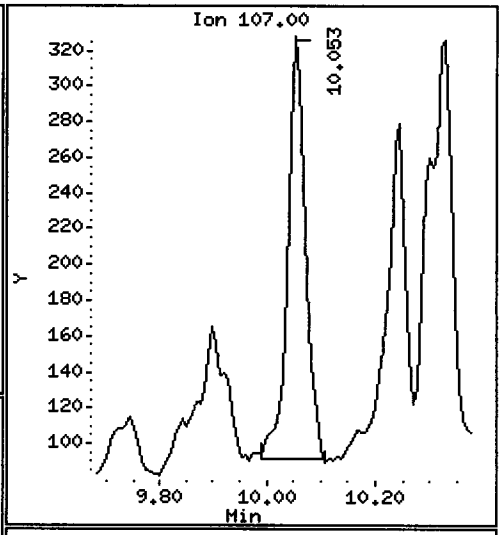
Column diameter: 0.25

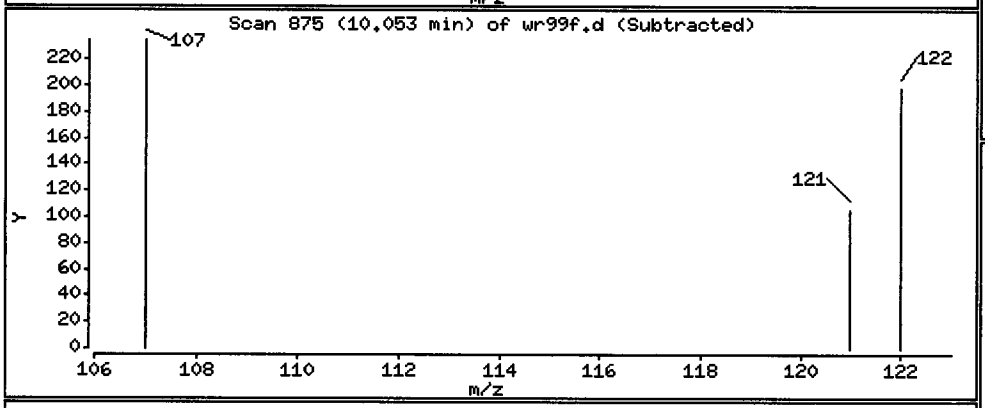
22 2,4-Dimethylphenol

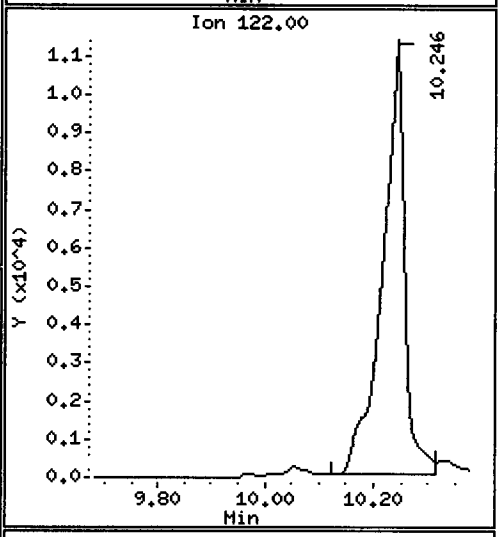
Concentration: 7.284 ug/kg

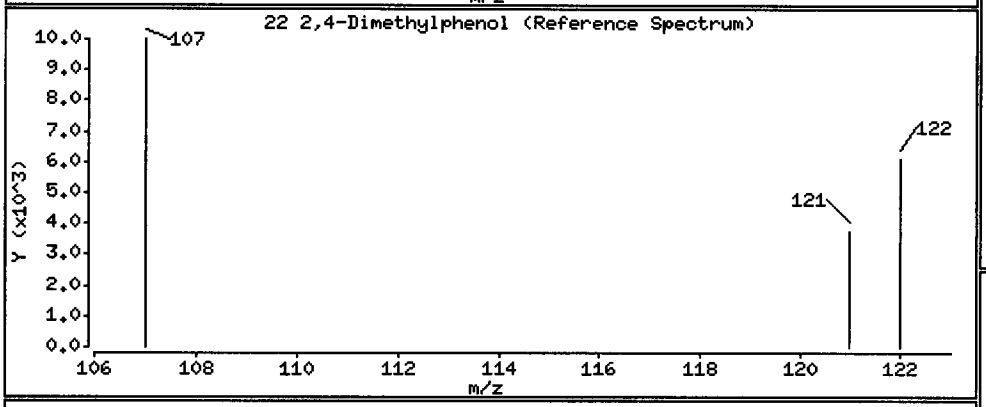
CMPL

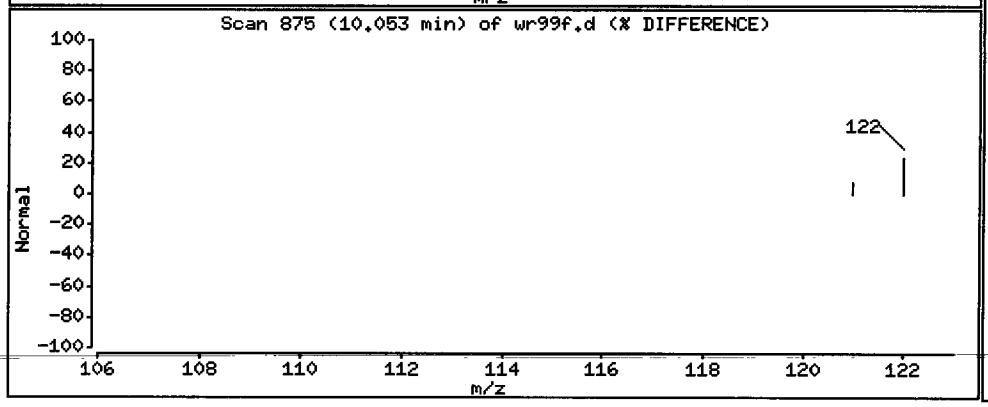


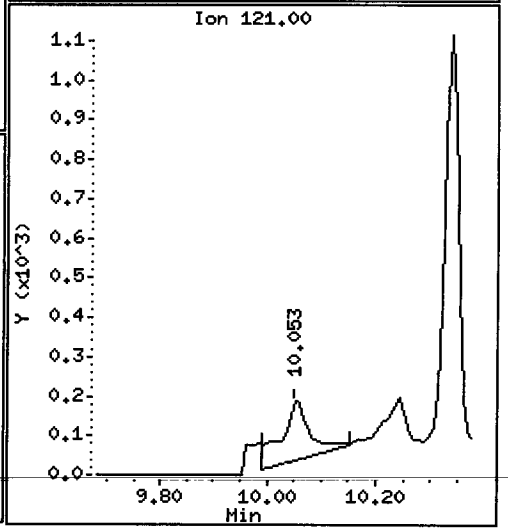












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99f.d

Date : 13-JUN-2013 20:30

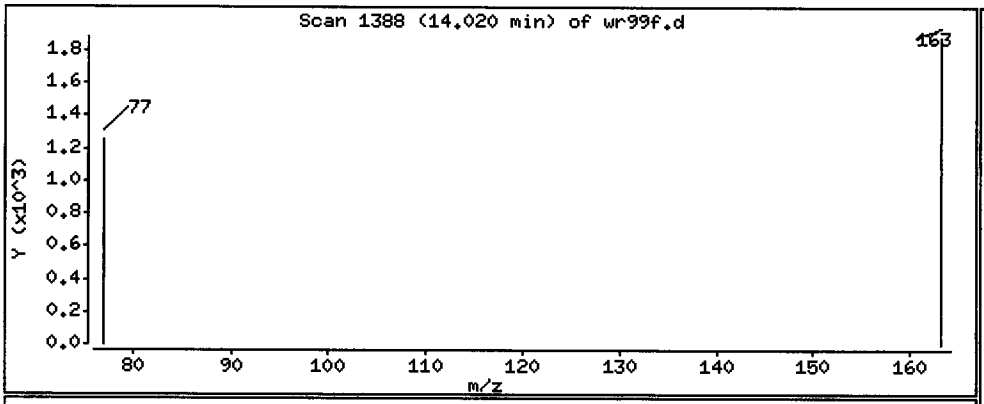
Client ID: KC-DD-2009-20130530 Instrument: nt10.i

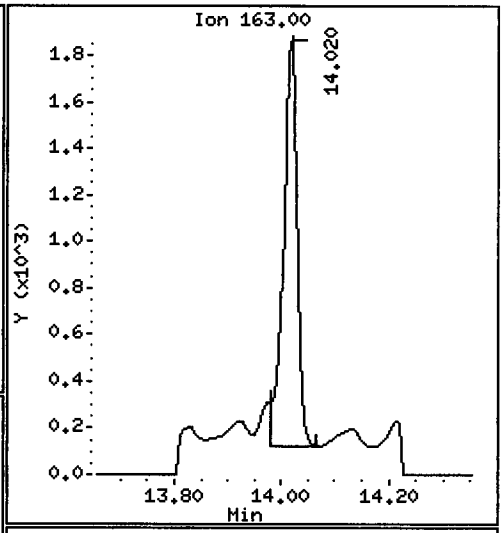
Sample Info: WR99F

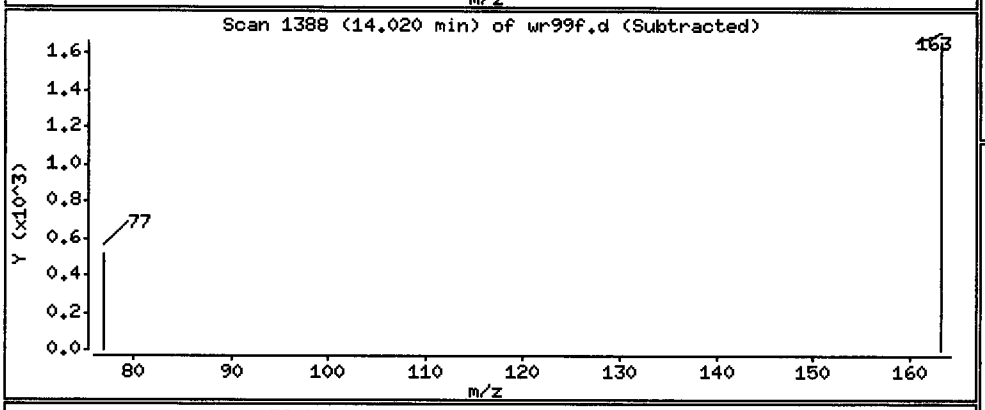
Volume Injected (uL): 1.0 Operator: YZ

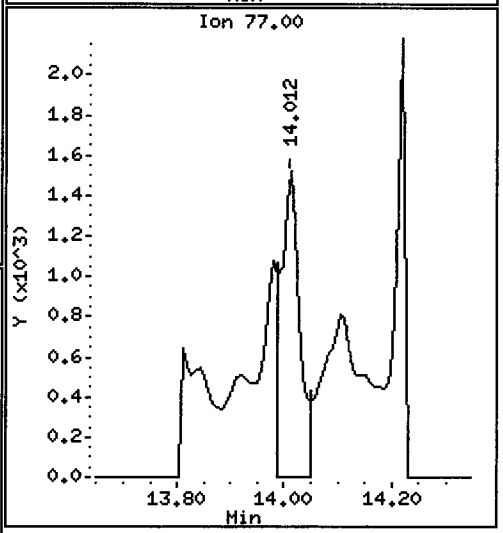
Column phase: ZB-5ms1 Column diameter: 0.25

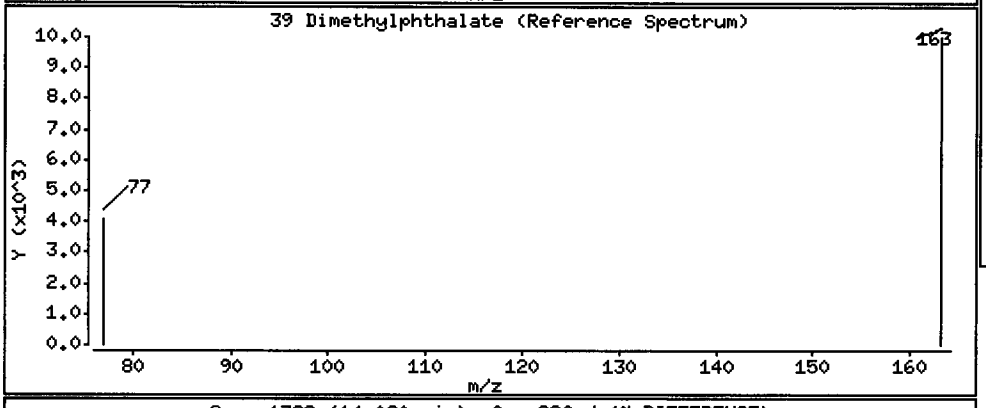
39 Dimethylphthalate Concentration: 26.19 ug/kg

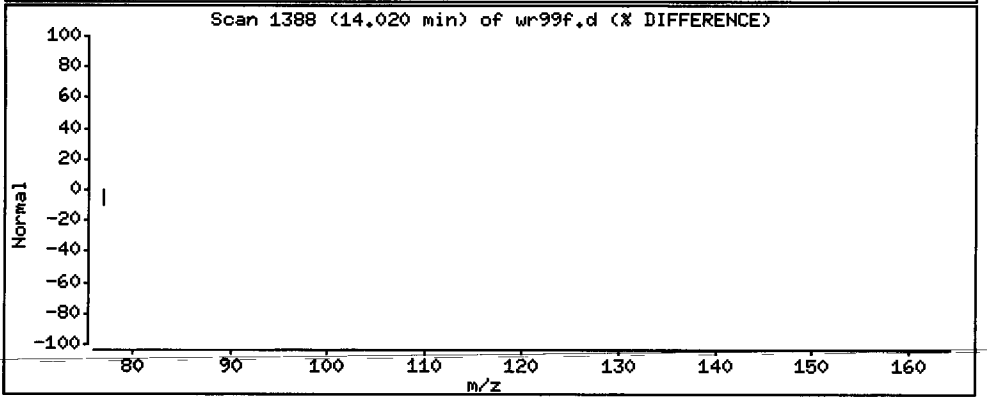












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

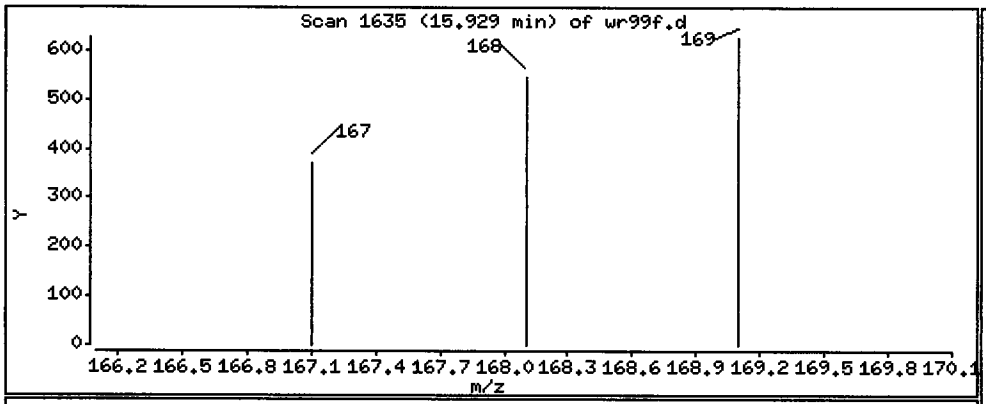
Operator: YZ

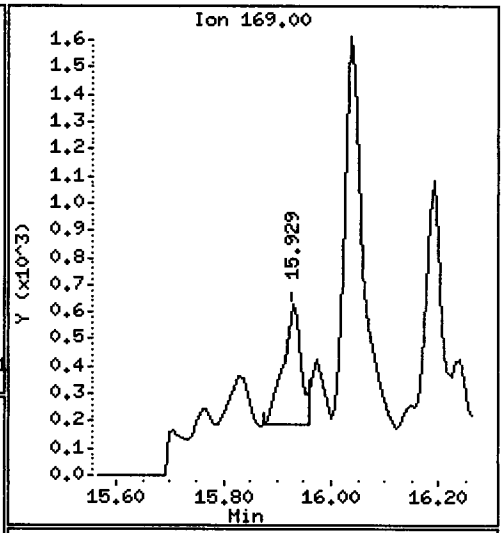
Column phase: ZB-5msi

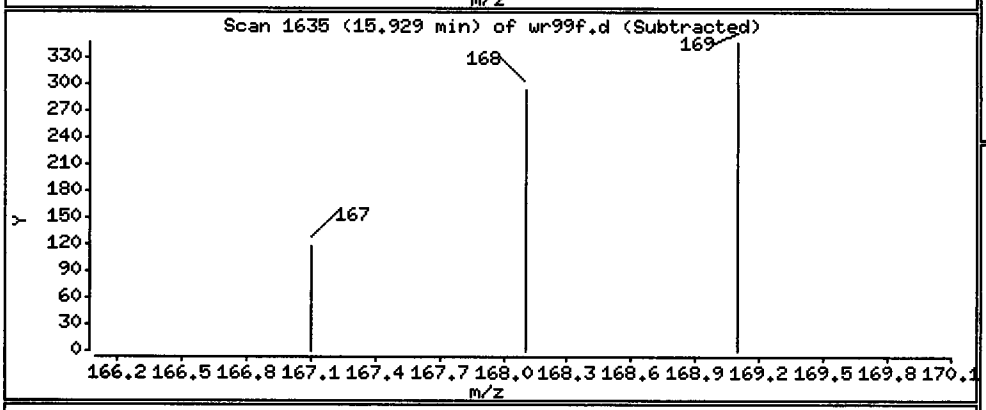
Column diameter: 0.25

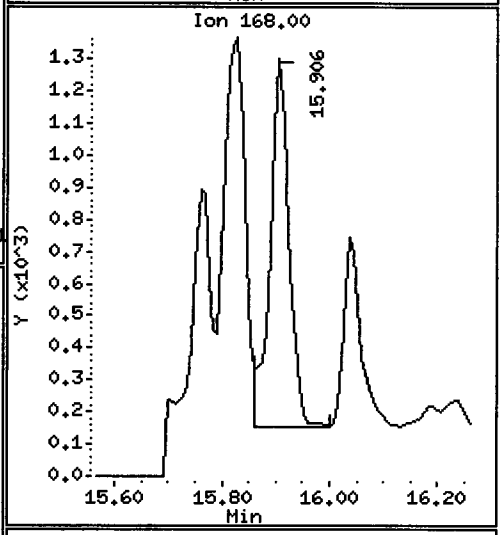
54 N-Nitrosodiphenylamine

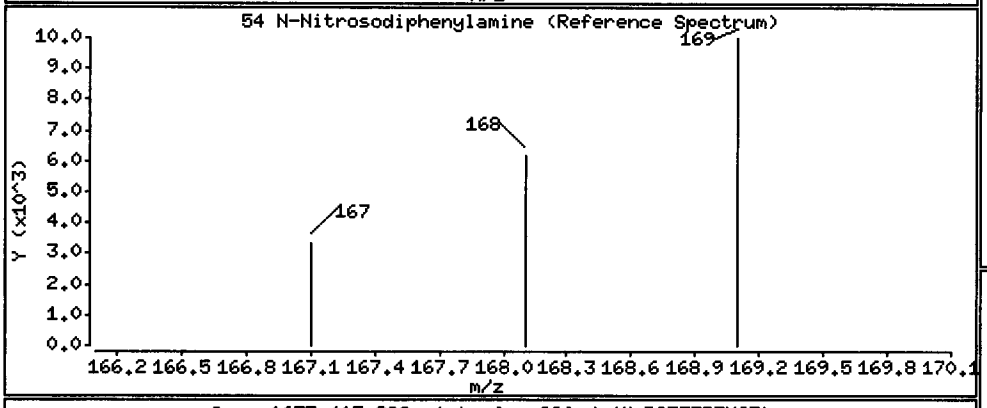
Concentration: 13.37 ug/kg

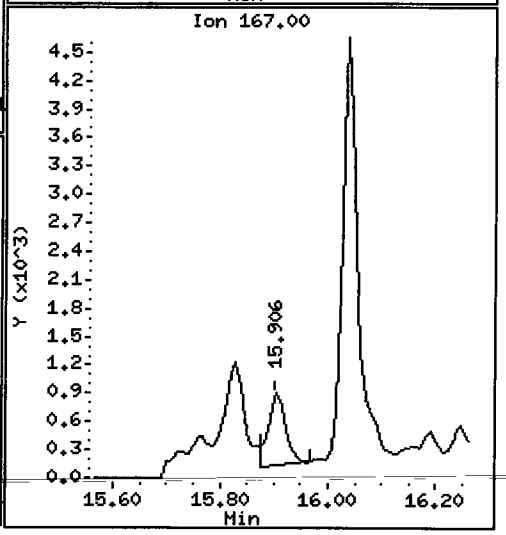


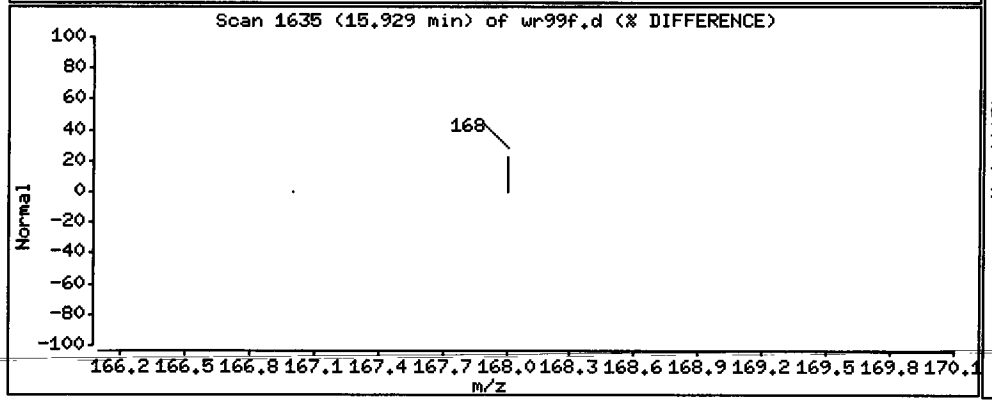












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

Operator: YZ

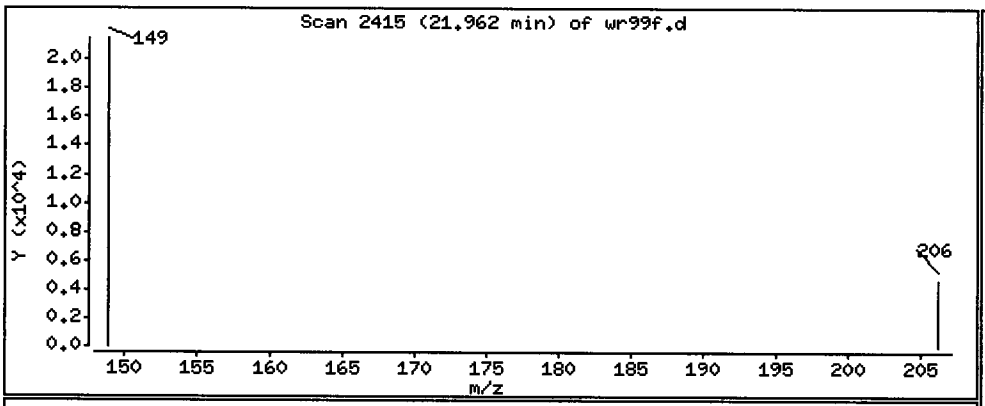
Column phase: ZB-5msi

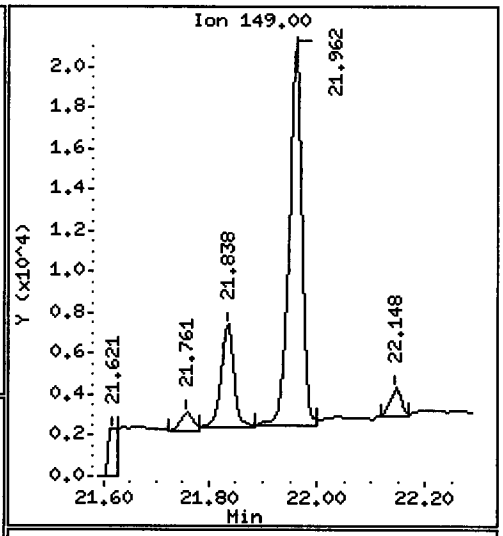
Column diameter: 0.25

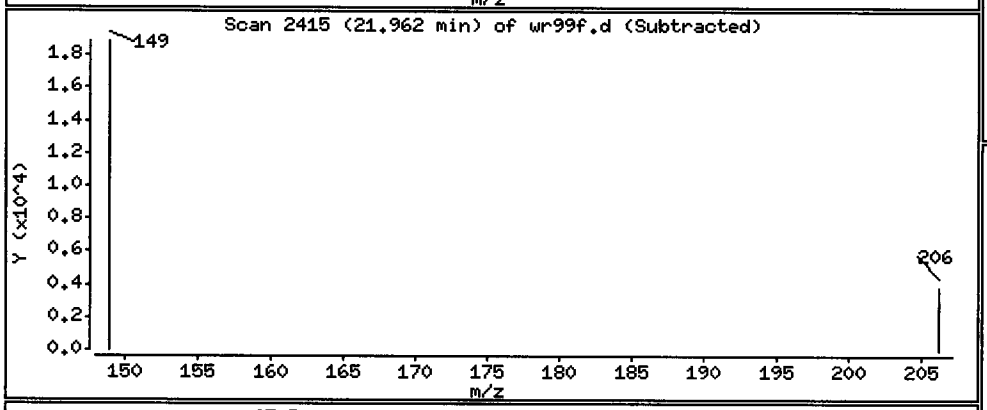
67 Butylbenzylphthalate

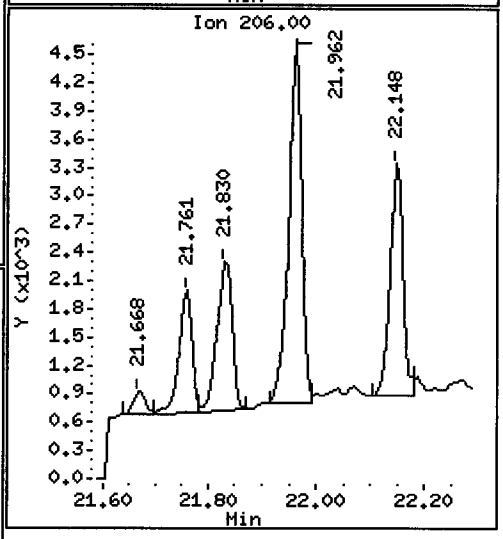
Concentration: 449.2 ug/kg

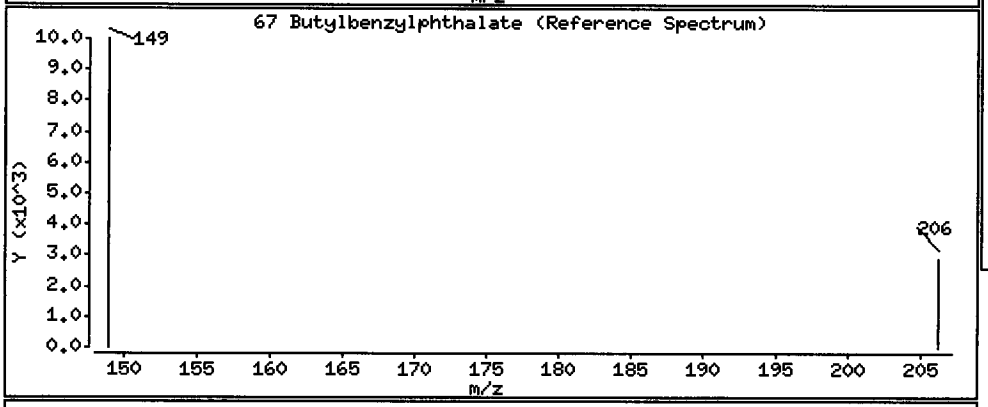
6/17/13

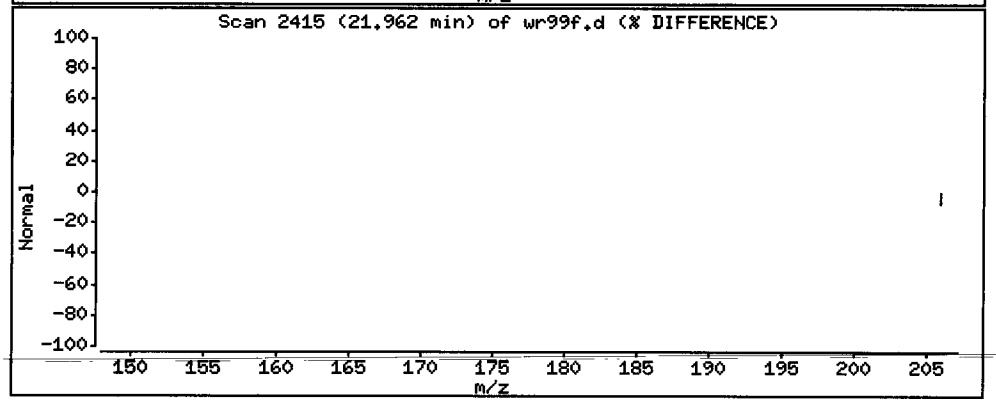












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530 Instrument: nt10.i

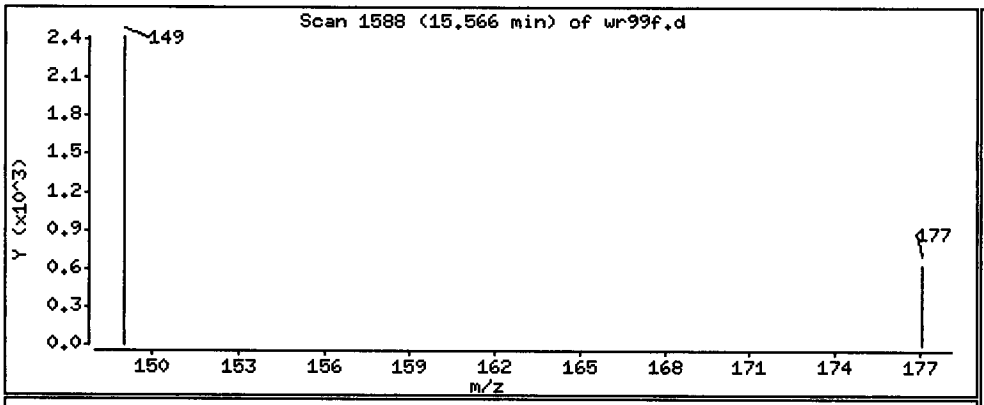
Sample Info: WR99F

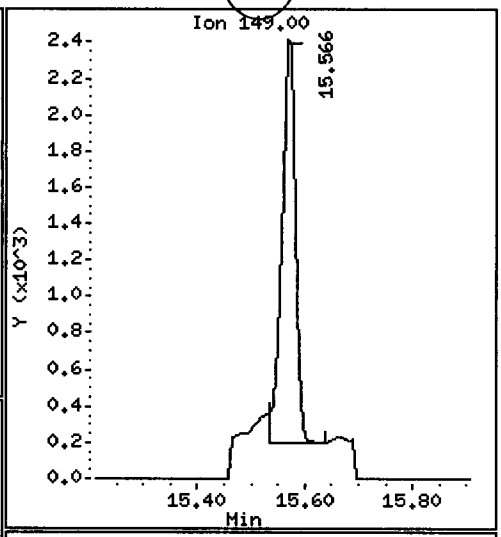
Volume Injected (uL): 1.0 Operator: YZ

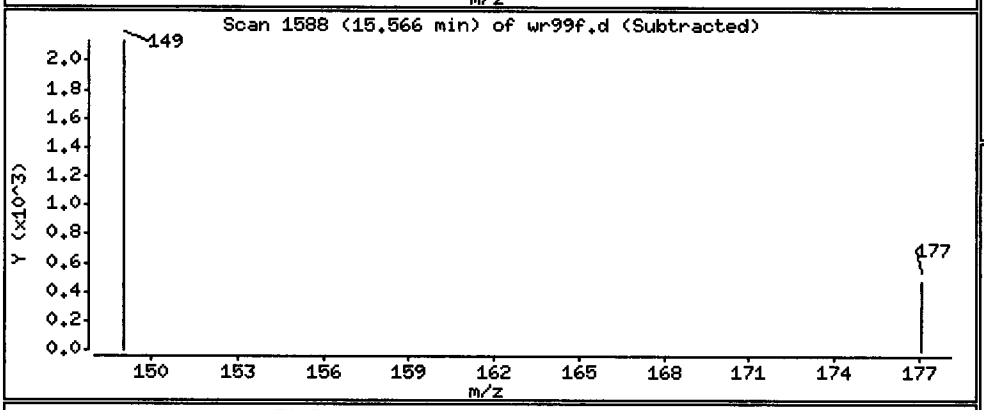
Column phase: ZB-5msi Column diameter: 0.25

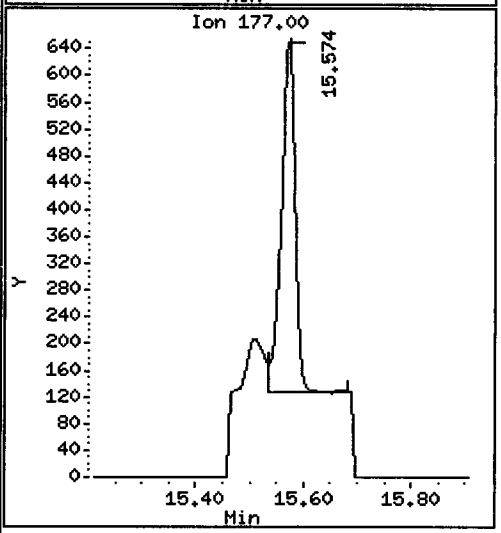
50 Diethylphthalate Concentration: 29.01 ug/kg

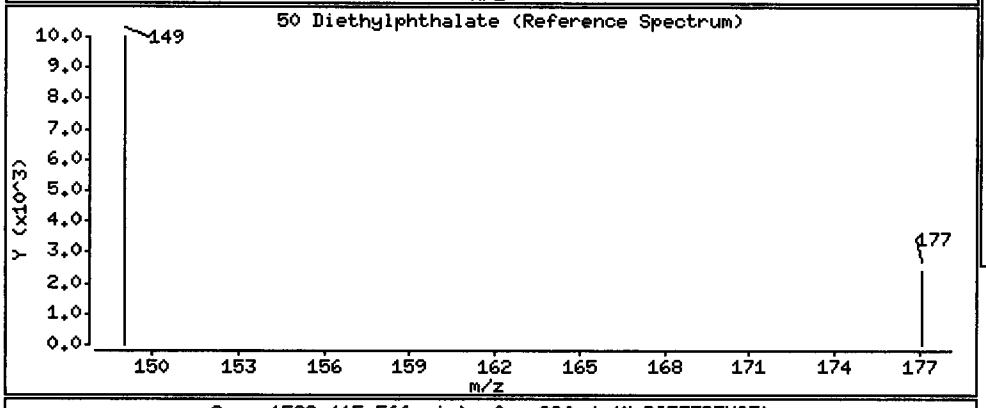
B

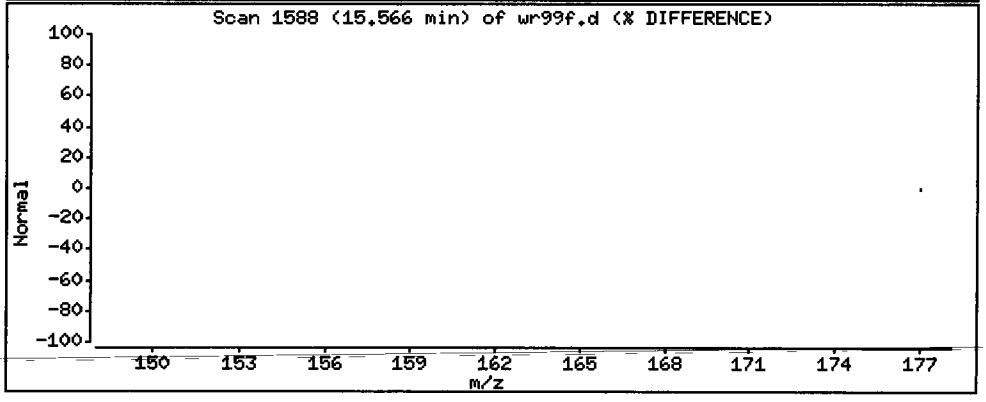












Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99f.d

Date : 13-JUN-2013 20:30

Client ID: KC-DD-2009-20130530

Instrument: nt10.i

Sample Info: WR99F

Volume Injected (uL): 1.0

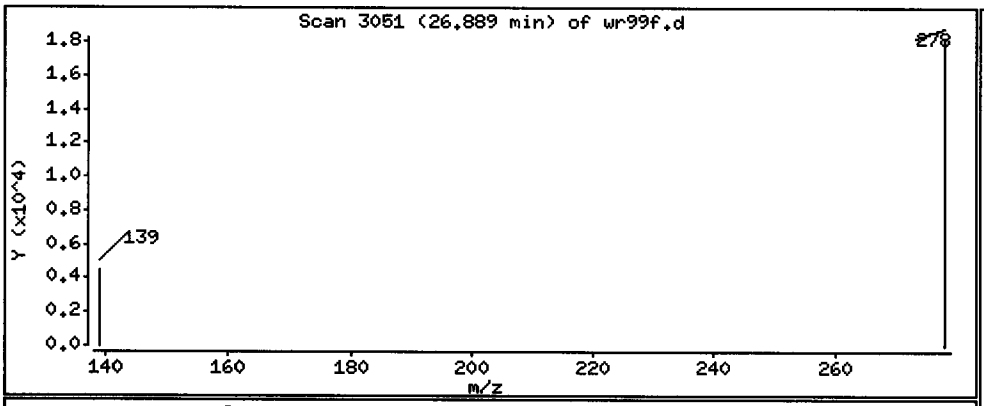
Operator: YZ

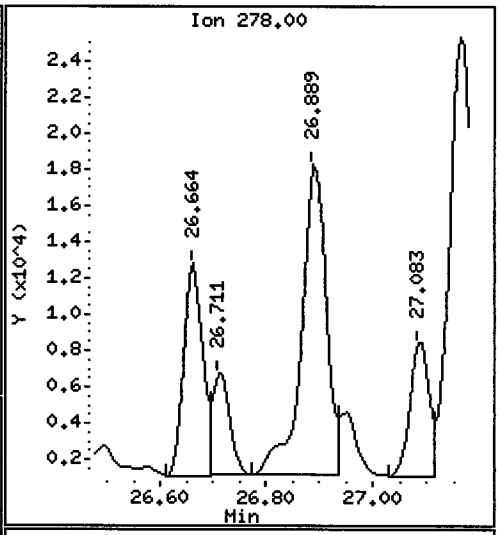
Column phase: ZB-5msi

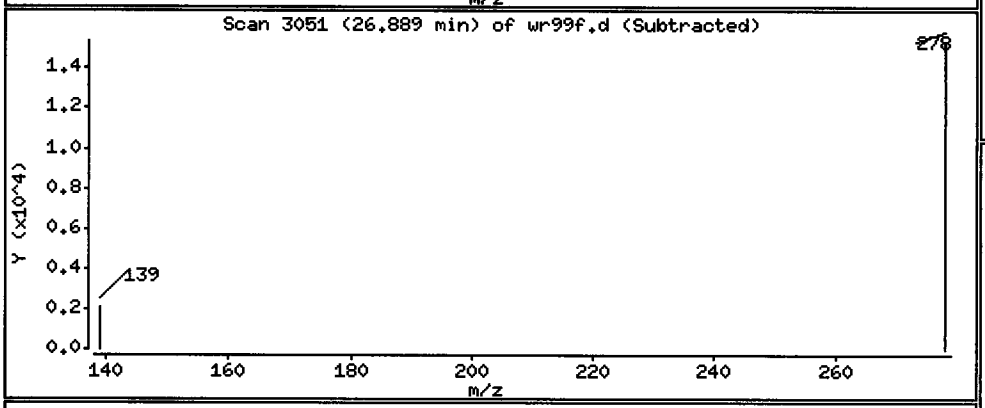
Column diameter: 0.25

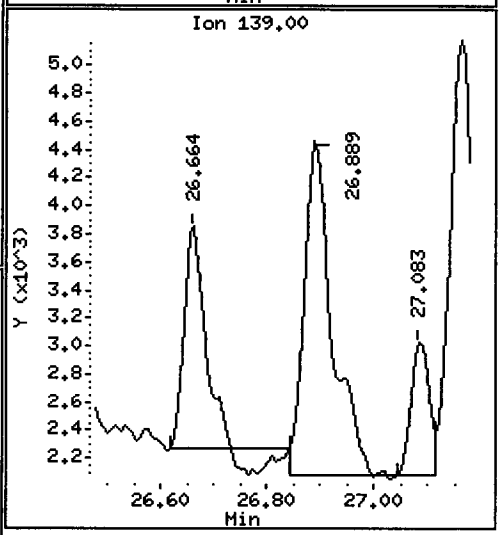
79 Dibenzo(a,h)anthracene

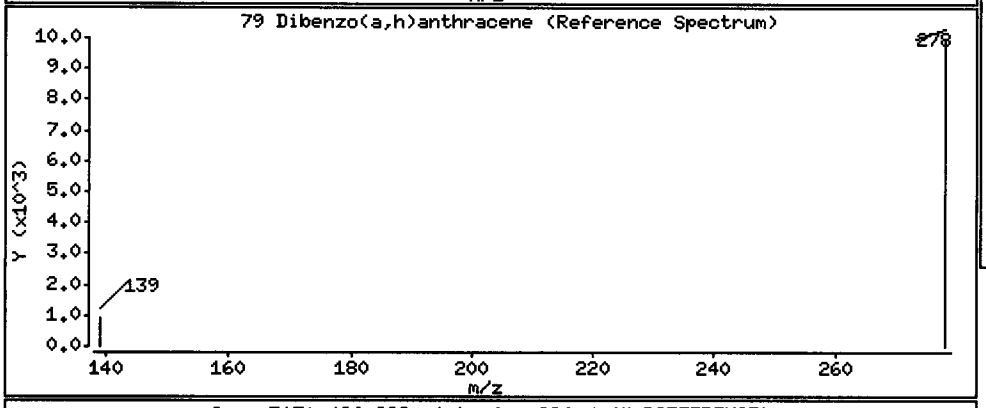
Concentration: 352.1 ug/kg

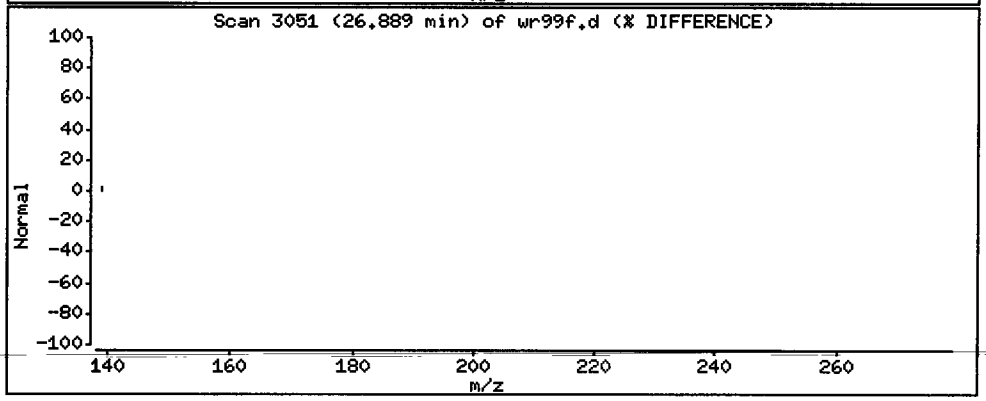






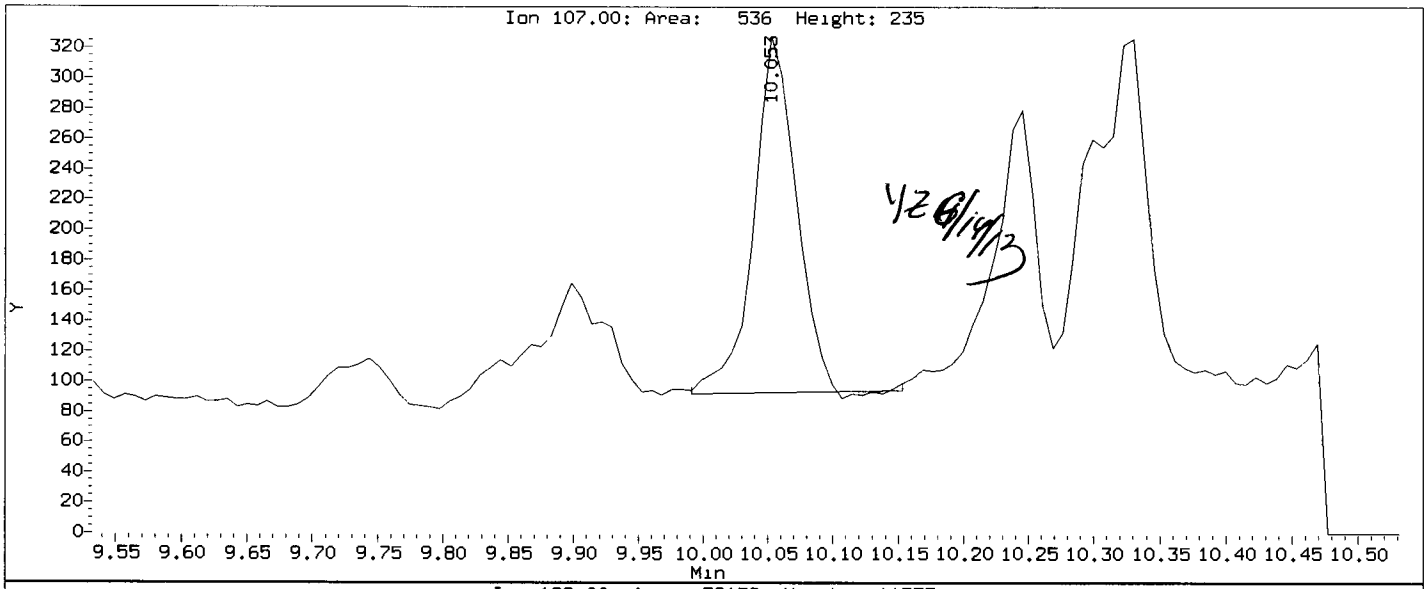


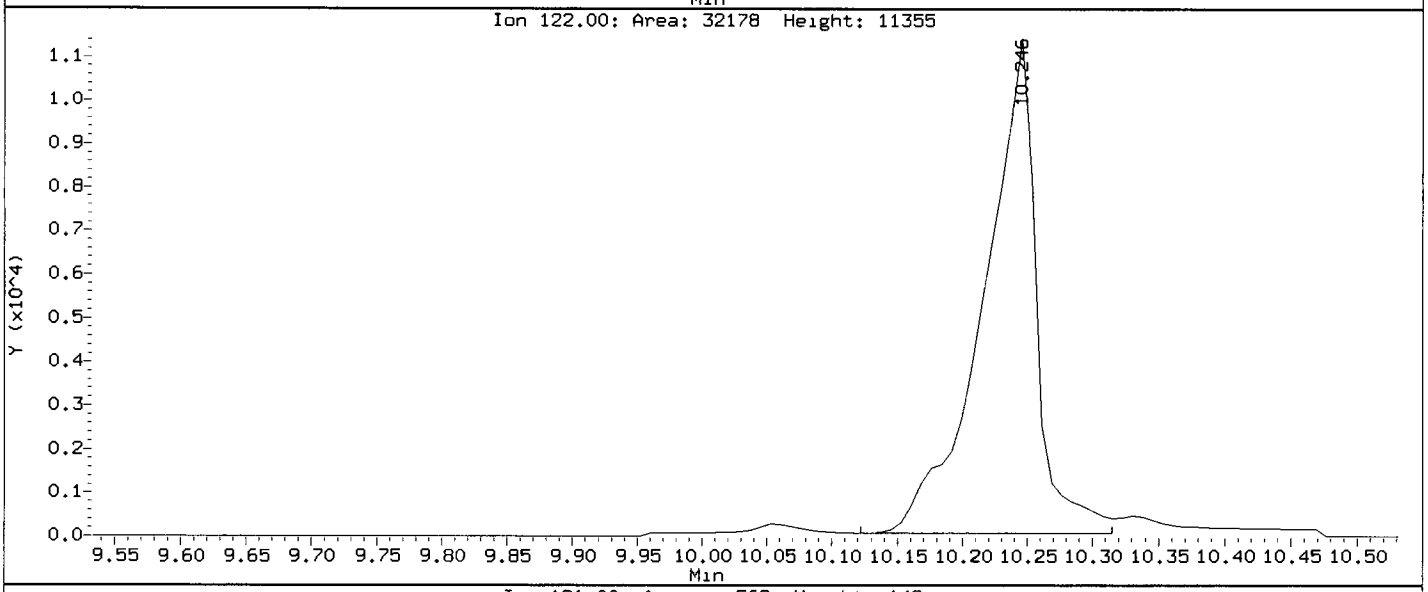


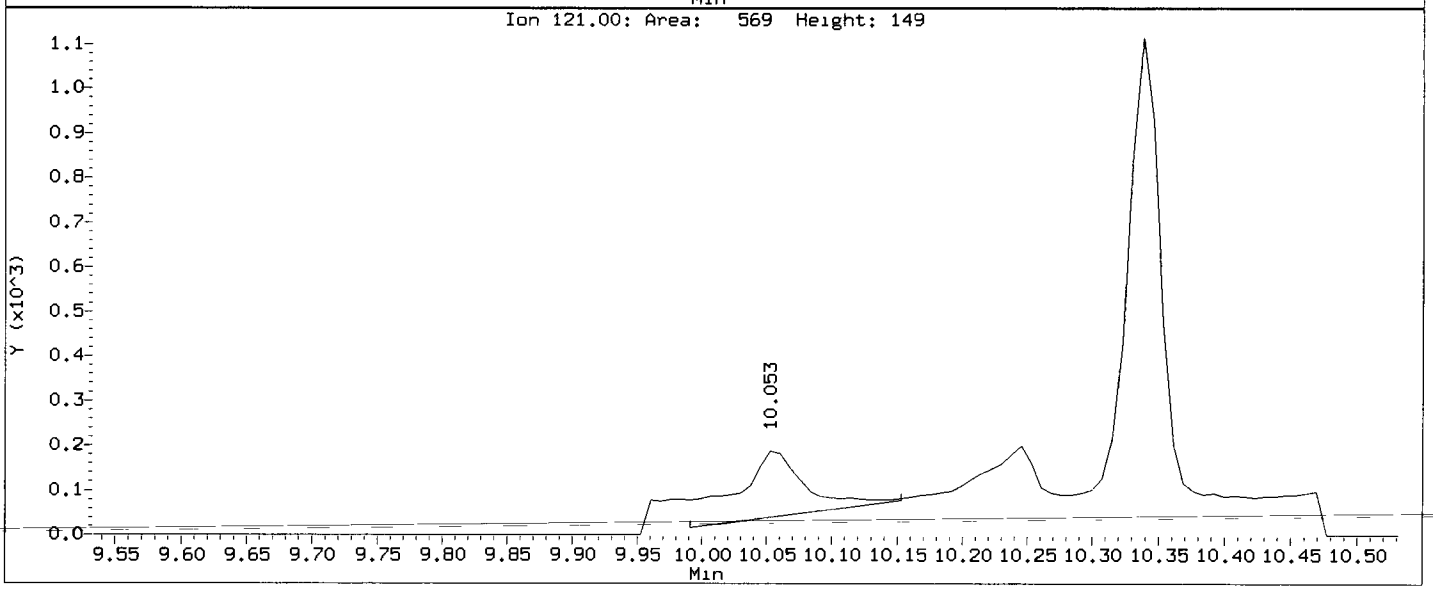


Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99f.d
Injection Date: 13-JUN-2013 20:30
Instrument: nt10.i
Client Sample ID: KC-DD-2009-20130530

Compound: 2,4-Dimethylphenol
CAS Number: 105-67-9



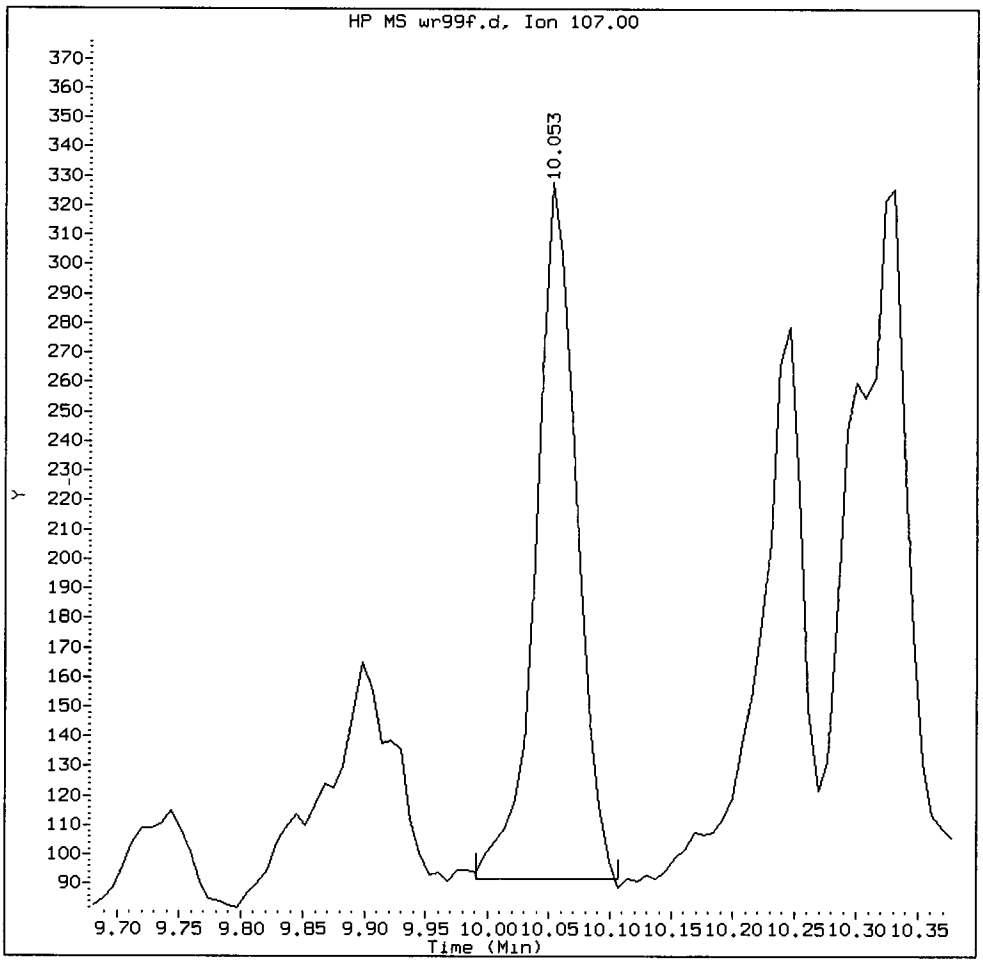




WR99 : 61268

WR99F, /chem1/nt10.i/20130613.b/SIM.b/wr99f.d

2,4-Dimethylphenol Amount: 0.03 Area: 544



MANUAL INTEGRATION for 2,4-Dimethylphenol

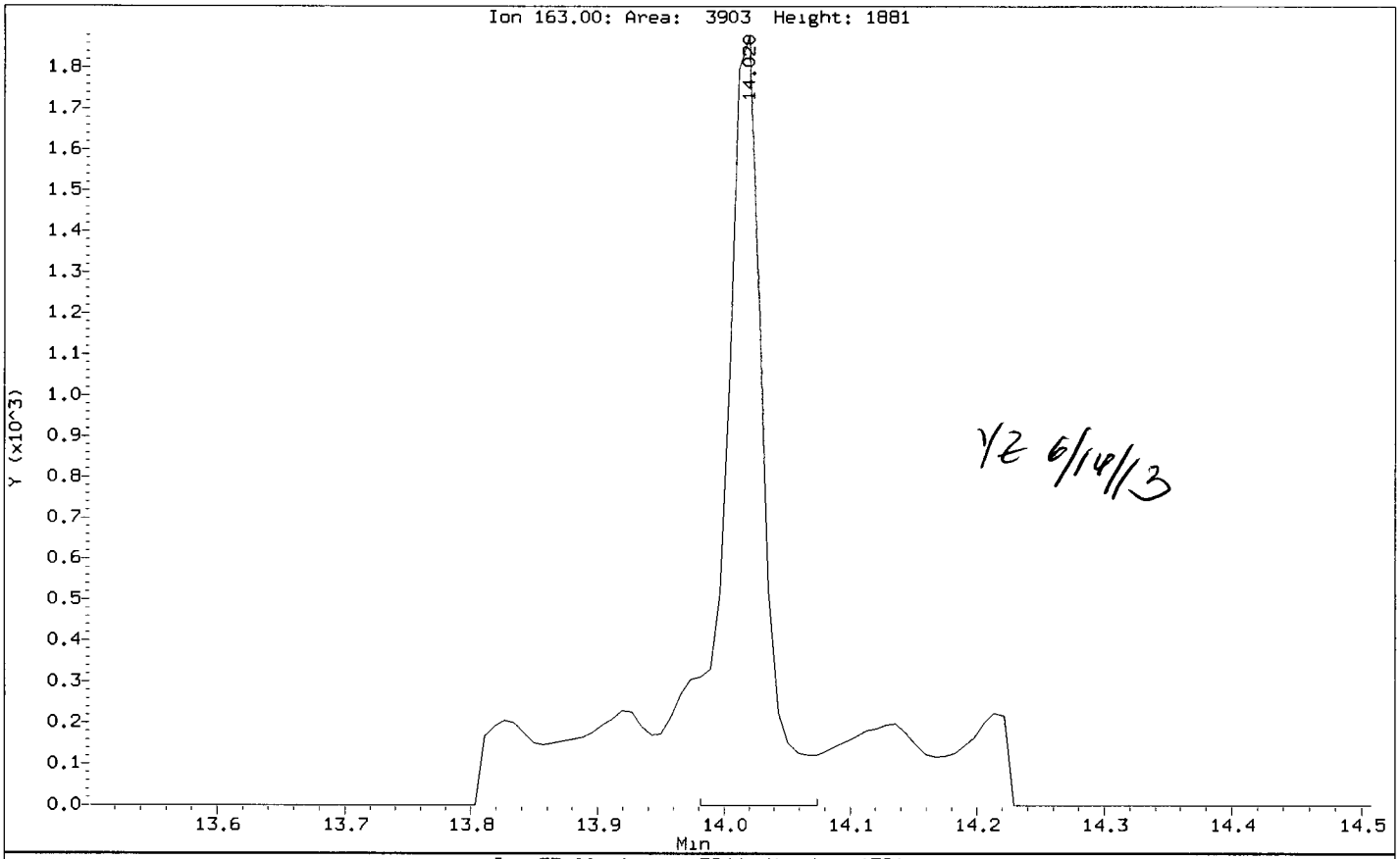
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

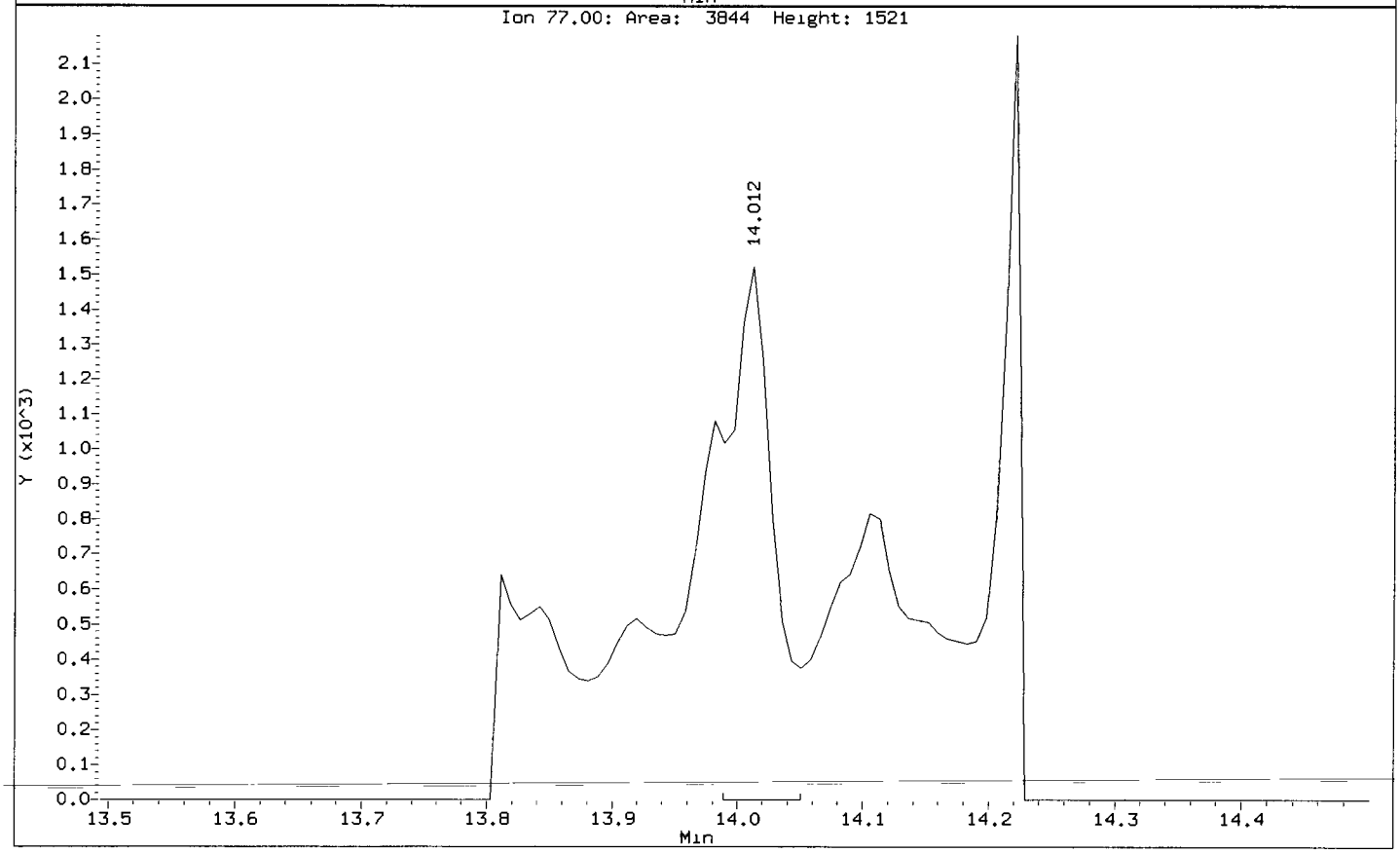
Analyst: YE Date: 6/14/13

Data File: /chem1/nt10.1/20130613.b/SIM.b/wr99f.d
Injection Date: 13-JUN-2013 20:30
Instrument: nt10.1
Client Sample ID: KC-DD-2009-20130530

Compound: Dimethylphthalate
CAS Number: 131-11-3

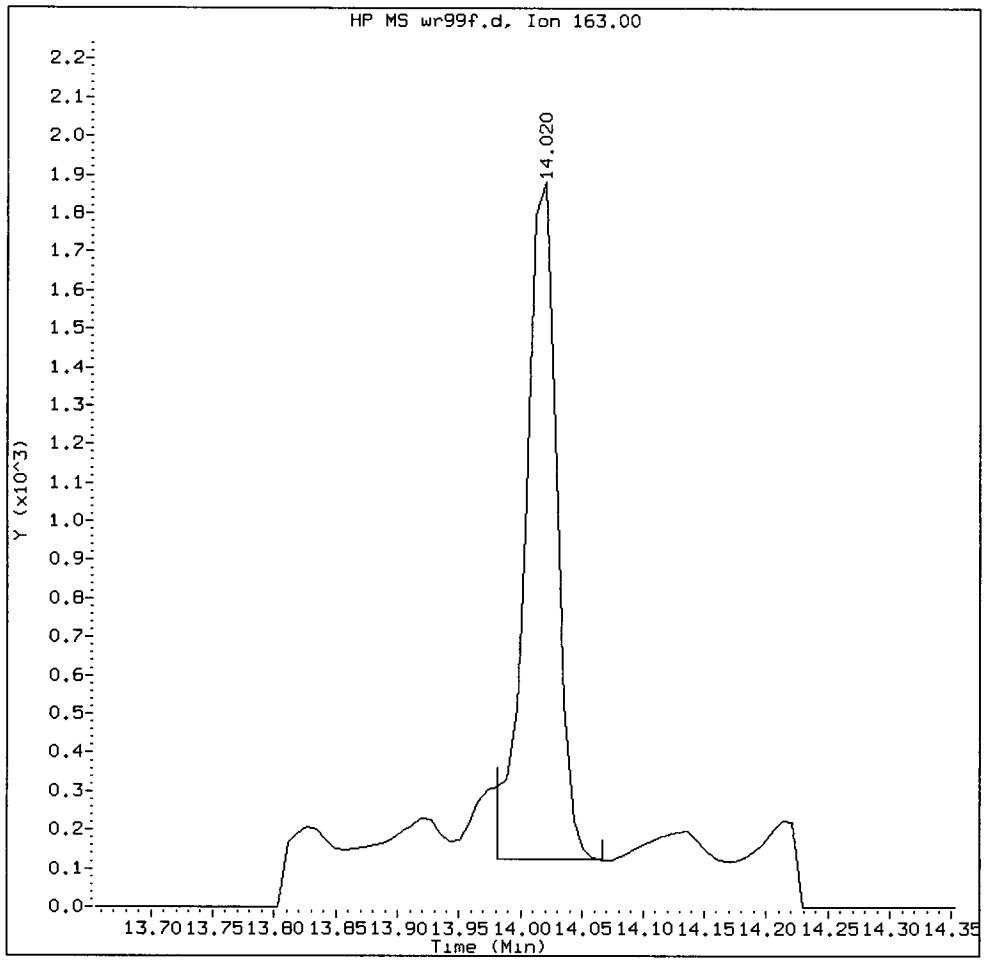


1/2 6/14/13



WR99F, /chem1/nt10.i/20130613.b/SIM.b/wr99f.d

Dimethylphthalate Amount: 0.10 Area: 3152



MANUAL INTEGRATION for Dimethylphthalate

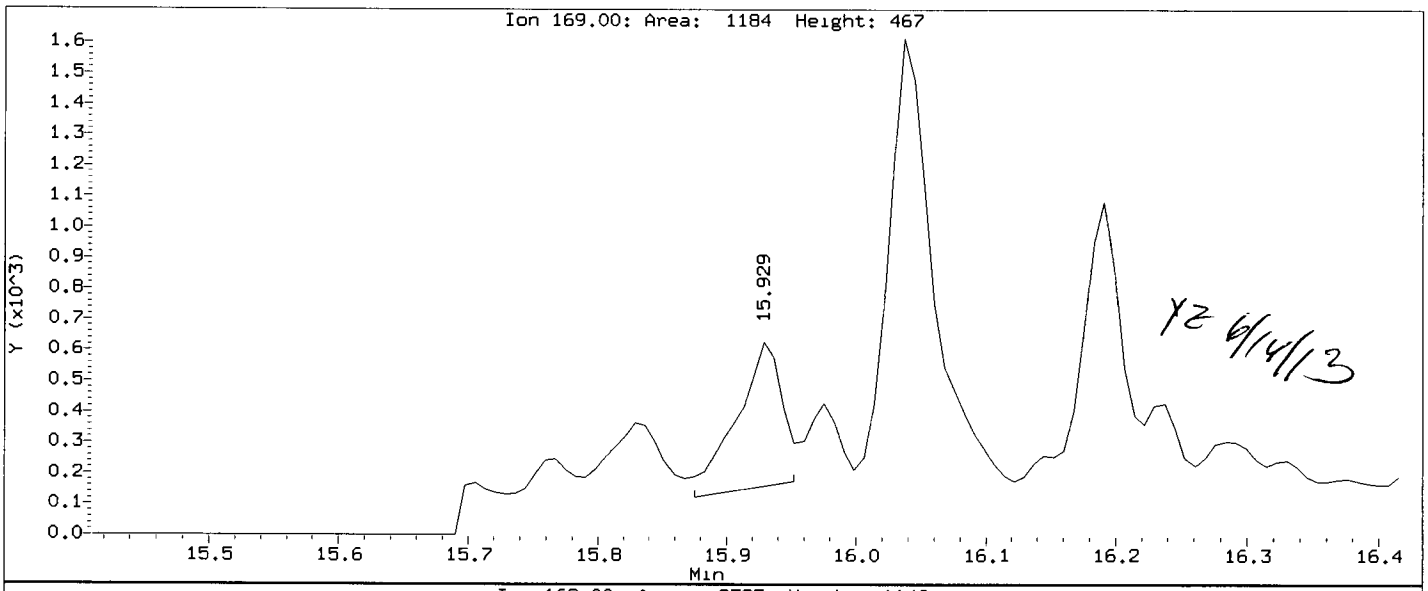
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

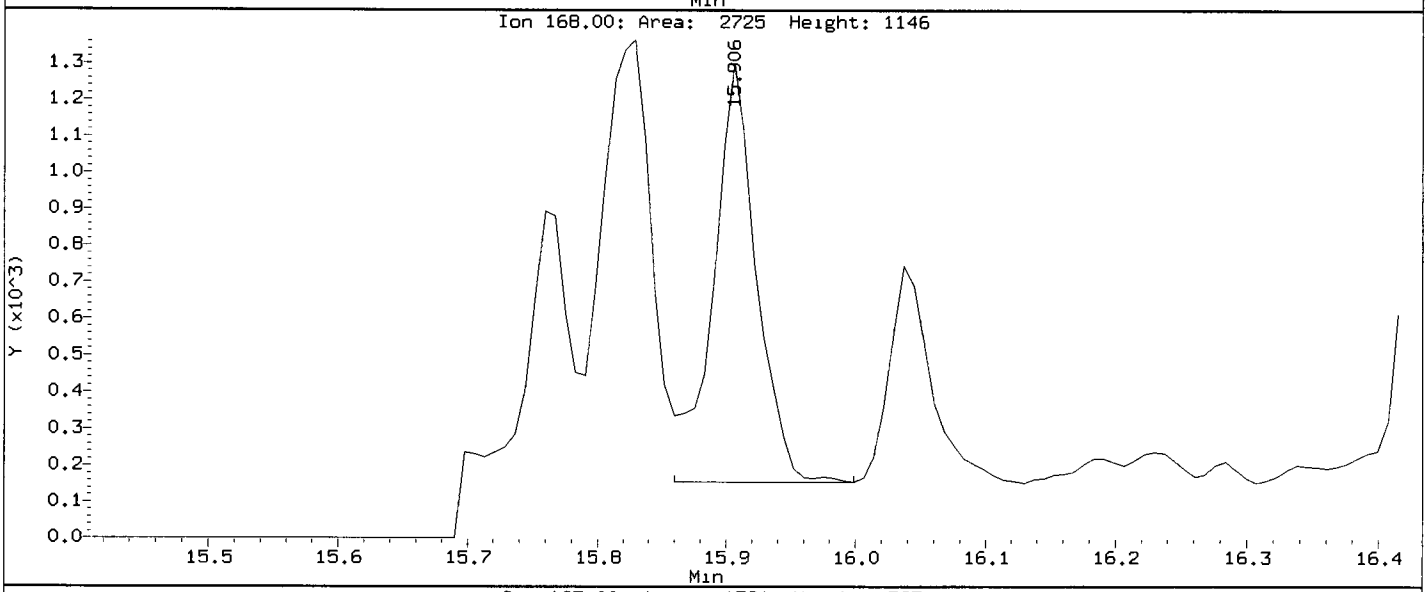
Analyst: VE Date: 6/14/13

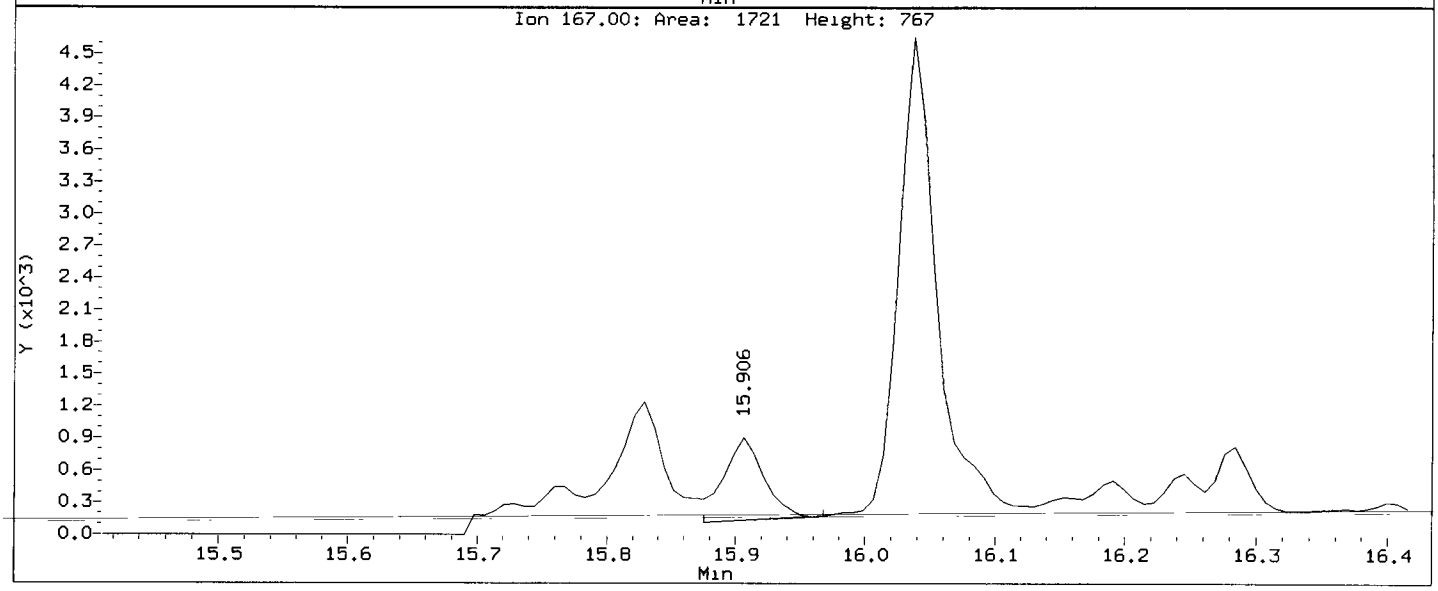
Data File: /chem1/nt10.i/20130613.b/SIM.b/wr99f.d
Injection Date: 13-JUN-2013 20:30
Instrument: nt10.i
Client Sample ID: KC-DD-2009-20130530

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



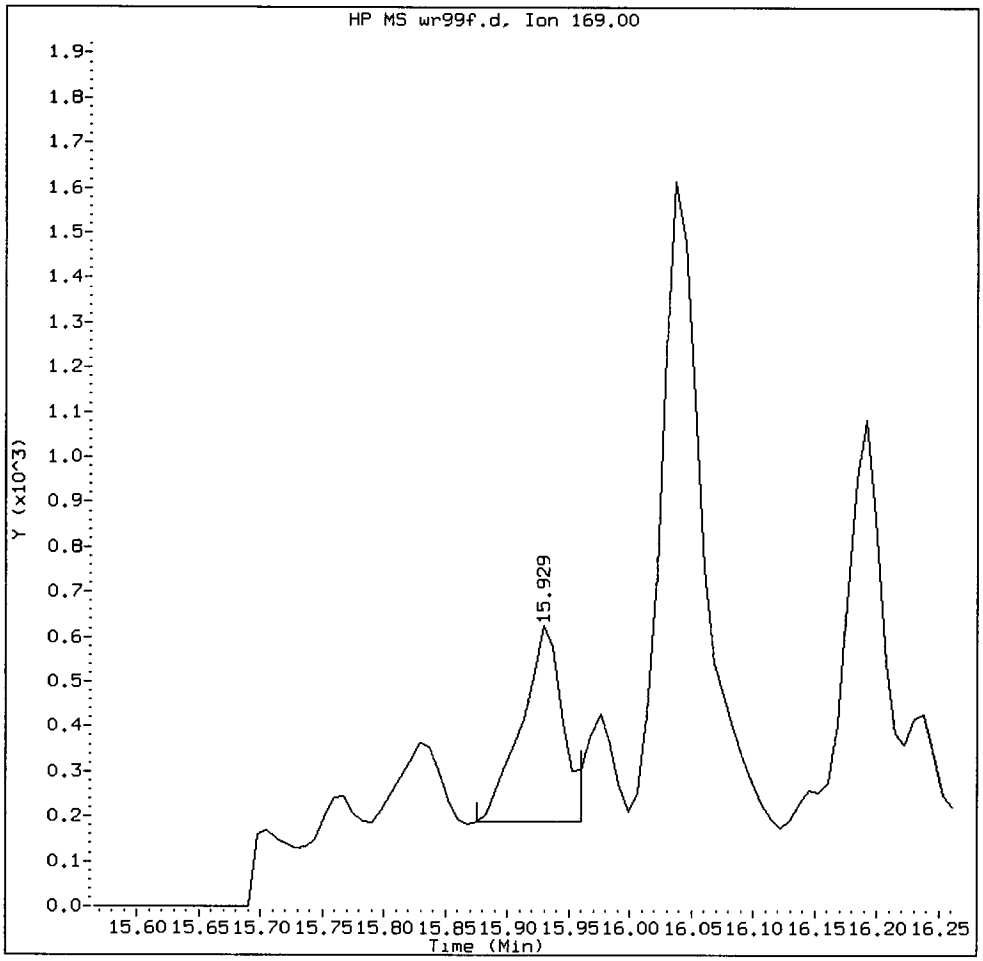
YZ 6/14/13





WR99F, /chem1/nt10.i/20130613.b/SIM.b/wr99f.d

N-Nitrosodiphenylamine Amount: 0.05 Area: 1030



MANUAL INTEGRATION for N-Nitrosodiphenylamine

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/14/13

CO-ELUTION SUMMARY FOR FILE - wr99f.d

Lab ID: WR99F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WR99, WS01

Incorporated
Analytical Chemists and

Organic Extractions Benchsheet

(8270D) SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)

Low Level (0.01ppb)

Preparation Test SIM PNA L-L # 6 (SPNALWSL)

ARI Job No(s) WR99 Page 1 of 1 Batch set up by: SA

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments
	WR99 MBW	500mL	0.5mL	0.5mL	
	SBW	500mL	0.5mL	0.5mL	
	SBW Dup.	500mL	0.5mL	0.5mL	
	~~QLS~~	~~500mL~~	~~0.5mL~~	~~0.5mL~~	
6rx	WR99 A	500mL	0.5mL	0.5mL	
		~~500mL~~	~~0.5mL~~	~~0.5mL~~	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		~~500mL~~	~~0.5mL~~	~~0.5mL~~	
Analyst/Date		M 6/5/13	ww 6/6/13	ww 6/6/13	Reviewed By ww 6/6/13

Verify Client ID: ww 6/5/13 — Analyst/Date

KD: 80°C 1 2 3 4 5 6 — RR 6/6/13 — Analyst/Date

TurboVap: 1 2 3 — Pre-Silica Gel Shakeout — ww 6/6/13 — Analyst/Date

(REQ) Silica Gel Clean Shakeout (1:1) — ww 6/6/13 — Analyst/Date

TurboVap: 1 2 3 — Post Silica Gel Shakeout — ww 6/6/13 — Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	I (2677-4)	1.5/7.5µg/mL	100µL	2/21/14	M	ww
Spike	18 (2677-2)	1.5/7.5µg/mL	100µL	10/13/13	M	ww
~~QLS Spike~~	~~2 ( )~~	~~0.1µg/mL~~	~~50µL~~			
Extraction Time:	3:20					

SPECIAL INSTRUCTIONS: Note: LOW LEVEL SIM PNA'S MUST BE COMPLETED WITHIN 48HRS!
1. USE ONLY NON-SCRATCHED GLASSWARE. 2. Rinse all glassware with Low Level DCM. 3. Extract 3X with 30mL Low Level DCM. 4. KD (no drying column) at 80°. (Thoroughly rinse Snyder Columns with Low Level DCM)! 5. TurboVap below 10mL. 6. Silica Gel Clean-up Shakeout=REQUIRED. (Scintillation vial shakeout): Add 1g of Silica Gel. Vortex for 1min. Pass thru turbo drying column with glass wool and sodium sulfate plug and Low Level DCM. 7. TurboVap. 8. Vial in Low Level DCM. (Pre-clean vialing syringes thoroughly)! 9. Post screen extracts with any color.

Organic Extractions
Reagent and Solutions Identification

(8270D)Low Level SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WR99

(8270D) Low Level SIM PNA Aqueous:	Analyst/Date
Separatory Funnel Station: Low Level Methylene Chloride: (I# 8214) Anhydrous Sodium Sulfate: (I# 8130 + jar date 6/5/13)	Sep. Funnel ML 6/5/13
KD Station: Low Level Methylene Chloride: (I# 8214)	KD RB 06/06/13
Vialing Station: Low Level Methylene Chloride: (I# 8214) 0% Silica Gel I 8835 Neutral Glass wool: (I# 7994 + jar date 5/7/13) Anhydrous Sodium Sulfate: (I# 7165 + jar date 2/6/13)	Vialing LW 6/6/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WR99

Client ID: SAIC

Parameter: SIM PNA Low lvl

Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	MW 6/5/13
☒ Turbid/Color= A~Yellow	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☒ Other (Details)= A~ Sample received in 1 L bottles for SemiL extraction, Meth~He Rinse	6/5/13 MW
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: WR99 Client ID: SPK

Analyst: MJ Date: 6.8.12

ARI Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Dilution Factor	Primary Dilution (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Final Dilution Factor
P	100	DCM	200	3X				

SIM PAH Raw Data
Initial Calibration

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: (801S(SIM-PNA)) 802S(Butyl Tins) 804S(SVOA-8270D) 805S(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 (NT11) NT12

Curve Date(s): 2·23·13 Internal Standard ID 2005-1 Expiration 7·3·13

DFTPP Tune Meets Criteria?	(YES) / NO	Minimum Response Factors Met/	(YES) / NO
DDT Breakdown <20%?	(YES) / NO	ICV Exceeding ±20%?	YES / (NO)
Peak Tailing Factor ≤2?	(YES) / NO	ICV Exceeding ±30%?	YES / (NO)
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	Linear Fits Used?	YES / (NO)
Q flag applied?	YES / (NO)	Quadratic Fits Used?	YES / (NO)
Manual Integrations for ICal?	YES / (NO)	Calibration Points Dropped?	YES / (NO)
Spectral Library Updated?	YES / (NO)		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	2077-1	10·13·13	Absolute	2079-01	

Detail problems, corrective actions and/or other pertinent information below:

- ICV run with curve ON 2/23 was also Supelco. ON 2/26 I made a New ICV From absolute which is presented with the ICAL

Analyst: VD Date: 2·27·13

Reviewer: [signature] Date: 2/27/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-FEB-2013 09:51
End Cal Date : 23-FEB-2013 12:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130223.b/lowsim.m
Cal Date : 26-Feb-2013 08:19 van
Curve Type : Average

Calibration File Names:
Level 1: /chem3/nt11.i/20130223.b/ic0223c.d
Level 2: /chem3/nt11.i/20130223.b/ic0223e.d
Level 3: /chem3/nt11.i/20130223.b/ic0223f.d
Level 4: /chem3/nt11.i/20130223.b/ic0223a.d
Level 5: /chem3/nt11.i/20130223.b/ic0223d.d
Level 6: /chem3/nt11.i/20130223.b/ic0223b.d

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
5 Naphthalene	1.17986	1.07038	1.12173	1.07243	1.05630	1.06975	1.09508	4.315
7 2-Methylnaphthalene	0.70009	0.65437	0.70055	0.68821	0.67773	0.69131	0.68537	2.535
8 1-Methylnaphthalene	0.73994	0.65390	0.70042	0.68367	0.67218	0.68373	0.68897	4.255
10 Acenaphthylene	1.84021	1.67975	1.75477	1.78640	1.78255	1.87074	1.78573	3.748
12 Acenaphthene	1.22752	1.13659	1.19934	1.16361	1.16498	1.18041	1.17874	2.683
14 Dibenzofuran	1.81808	1.67485	1.78559	1.66071	1.66927	1.69412	1.71710	3.921
15 Fluorene	1.33744	1.22307	1.28298	1.27056	1.27104	1.30630	1.28190	2.999
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.29147	1.19136	1.28319	1.20741	1.21515	1.22365	1.23537	3.376
20 Anthracene	1.16152	1.07209	1.18065	1.15970	1.15909	1.21883	1.15865	4.159
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.21654	1.13663	1.25125	1.23561	1.23597	1.25192	1.22132	3.559
25 Pyrene	1.74397	1.53685	1.69519	1.67448	1.70011	1.69862	1.67487	4.259
28 Benzo(a)anthracene	1.42951	1.29246	1.40124	1.39924	1.37922	1.40235	1.38400	3.441
30 Chrysene	1.51404	1.35660	1.48567	1.40588	1.41140	1.40779	1.43023	4.073
44 Benzo(b)fluoranthene	1.63909	1.53504	1.64903	1.50529	1.61012	1.57183	1.58507	3.644
45 Benzo(k)fluoranthene	1.82896	1.54799	1.66440	1.77352	1.75834	1.76863	1.72364	5.869
46 Benzo(j)fluoranthene	1.71085	1.80116	1.88590	1.70137	1.70454	1.69282	1.74944	4.451
34 Benzo(a)pyrene	1.37546	1.25064	1.35897	1.34791	1.34169	1.35196	1.33777	3.306
37 Indeno(1,2,3-cd)pyrene	1.64325	1.52366	1.70267	1.64740	1.67639	1.68623	1.64660	3.910
38 Dibenzo(a,h)anthracene	1.42304	1.20093	1.36598	1.30065	1.32370	1.32911	1.32390	5.580

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-FEB-2013 09:51
End Cal Date : 23-FEB-2013 12:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130223.b/lowsim.m
Cal Date : 26-Feb-2013 08:19 van
Curve Type : Average

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
39 Benzo(g,h,i)perylene	1.63740	1.39502	1.50380	1.42776	1.44835	1.42748	1.47330	5.978
47 Perylene	1.60629	1.44987	1.57488	1.50213	1.50270	1.50783	1.52395	3.718
$ 6 2-Methylnaphthalene-d10	0.62998	0.61614	0.64871	0.63509	0.62909	0.63828	0.63288	1.713
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 23 Fluoranthene-d10	0.99851	0.95924	1.04391	1.06478	1.05975	1.09373	1.03665	4.742
$ 36 Dibenzo(a,h)anthracene-d14	1.08287	1.08091	1.18009	1.16289	1.17177	1.17924	1.14296	4.174

WR99:01278

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 2.23.13 Analysis: low sim pnp Analyst: VD

GC Program: low sim Column No: 14123 Column Type: RXi-175ms

Instrument Tune (.U or .CT.): 121208.U EM Voltage: 2424

Calibration File: df0223 Curve Date: 2.23.13 Injection Vol.: 2ul

IS/SS	Ical/Ccal	LCS/ICV
2005-1	2077-1	2022-1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130223.b

	Time	Filename	LabID	ClientId	DF									
1	0936	df0223.d	DFTPP 10		1	NO ISTDS FOUND								
2	0951	ic0223a.d	SIM 250		1	6.13	255285	9.11	142891	11.76	220853	16.47	162525	19.06	139028
3	1020	ic0223b.d	SIM 1000		1	6.13	261768	9.11	147325	11.75	227826	16.47	167463	19.05	140589
4	1050	ic0223c.d	SIM 10		1	6.13	253912	9.11	139191	11.75	212997	16.46	154487	19.05	129877
5	1119	ic0223d.d	SIM 500		1	6.13	254492	9.11	141209	11.75	217906	16.46	157662	19.05	130994
6	1148	ic0223e.d	SIM 50		1	6.13	247866	9.11	133951	11.75	207726	16.46	153360	19.05	129383
7	1217	ic0223f.d	SIM 100		1	6.13	249926	9.11	136768	11.75	209065	16.46	152652	19.05	130359
8	1245	icv0223.d	SIM ICV 250		1	6.13	245685	9.11	134404	11.75	201765	16.46	150212	19.05	124288
9	1314	207702.d	207702		1	6.13	247833	9.11	133621	11.75	203907	16.46	148956	19.05	121045
10	1343	207704.d	207704		1	6.13	250225	9.11	134310	11.75	208929	16.46	148935	19.05	125260
11	1412	we13mb.d	WE13MBW1	WE13MBW1	1	6.13	253566	9.11	140998	11.75	223272	16.46	155284	19.05	132070
12	1440	we13sb.d	WE13LCSW1	WE13LCSW1	1	6.13	254711	9.11	142690	11.75	224772	16.46	161412	19.05	137437
13	1509	we13sbd.d	WE13LCSDW1	WE13LCSDW1	1	6.13	256385	9.11	144771	11.75	228325	16.46	161988	19.05	137063
14	1538	we13qls1.d	WE13QLS1		1	6.13	258780	9.11	142624	11.75	228782	16.46	159190	19.05	133513
15	1607	we13a.d	WE13A	MW-4	1	6.13	250542	9.11	138306	11.75	223123	16.46	160298	19.05	136521
16	1636	we13b.d	WE13B	MW-5	1	6.13	258018	9.11	141346	11.75	230923	16.46	164725	19.05	139916
17	1704	i8088.d	I8088		1	6.13	251254	9.11	139045	11.75	212859	16.46	149381	19.05	120565
18	1733	207104.d	207104		1	6.13	255407	9.11	139159	11.75	216546	16.46	154762	19.05	126731

2.26.13 VD

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130223.b

ARI Job No.: DFTP Method: DF8270.m Instrument: nt11.i Date: 23-FEB-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0936	df0223.d	DFTPP 10		1	NO MANUAL INTEGRATION
0951	ic0223a.d	SIM 250		1	NO MANUAL INTEGRATION
1020	ic0223b.d	SIM 1000		1	NO MANUAL INTEGRATION
1050	ic0223c.d	SIM 10		1	NO MANUAL INTEGRATION
1119	ic0223d.d	SIM 500		1	NO MANUAL INTEGRATION
1148	ic0223e.d	SIM 50		1	NO MANUAL INTEGRATION
1217	ic0223f.d	SIM 100		1	NO MANUAL INTEGRATION
1245	icv0223.d	SIM ICV 250		1	NO MANUAL INTEGRATION
1607	we13a.d	WE13A	MW-4	1	NO MANUAL INTEGRATION
1636	we13b.d	WE13B	MW-5	1	NO MANUAL INTEGRATION
1412	we13mb.d	WE13MBW1	WE13MBW1	1	NO MANUAL INTEGRATION
1538	we13qls1.d	WE13QLS1		1	NO MANUAL INTEGRATION
1440	we13sb.d	WE13LCSW1	WE13LCSW1	1	NO MANUAL INTEGRATION
1509	we13sbd.d	WE13LCSDW1	WE13LCSDW1	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130223.b/lowsim.m
Batch File: /chem3/nt11.i/20130223.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	ic0223a	ic0223b	ic0223c	ic0223d	ic0223e	ic0223f
INJ.DATE:	23-FEB-2013	23-FEB-2013	23-FEB-2013	23-FEB-2013	23-FEB-2013	23-FEB-2013
INJ.TIME:	09:51	10:20	10:50	11:19	11:48	12:17

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	4 Naphthalene-d8	6.134	6.134	6.134	6.134	6.134	6.134	6.134	5.884-6.384	6.134	0.000
	5 Naphthalene	6.176	6.165	6.176	6.165	6.165	6.165	6.176	5.926-6.426	6.169	0.005
$	6 2-Methylnaphthalene-d1	7.111	7.111	7.111	7.111	7.111	7.111	7.111	6.861-7.361	7.111	0.000
	7 2-Methylnaphthalene	7.163	7.163	7.163	7.163	7.163	7.163	7.163	6.913-7.413	7.163	0.000
	8 1-Methylnaphthalene	7.415	7.415	7.415	7.415	7.415	7.415	7.415	7.165-7.665	7.415	0.000
	10 Acenaphthylene	8.950	8.950	8.950	8.950	8.950	8.950	8.950	8.700-9.200	8.950	0.000
*	11 Acenaphthene-d10	9.105	9.105	9.105	9.105	9.105	9.105	9.105	8.855-9.355	9.105	0.000
	12 Acenaphthene	9.172	9.172	9.172	9.172	9.172	9.172	9.172	8.922-9.422	9.172	0.000
	14 Dibenzofuran	9.382	9.371	9.382	9.371	9.371	9.382	9.382	9.132-9.632	9.376	0.006
	15 Fluorene	9.991	9.991	9.991	9.991	9.991	9.991	9.991	9.741-10.241	9.991	0.000
$	16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
	17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	13.381	13.131-13.631	+++++	+++++
*	18 Phenanthrene-d10	11.762	11.751	11.751	11.751	11.751	11.751	11.762	11.512-12.012	11.753	0.004
	19 Phenanthrene	11.796	11.796	11.796	11.796	11.796	11.796	11.796	11.546-12.046	11.796	0.000
	20 Anthracene	11.851	11.851	11.851	11.851	11.851	11.851	11.851	11.601-12.101	11.851	0.000
	22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	14.533	14.283-14.783	+++++	+++++
$	23 Fluoranthene-d10	13.840	13.840	13.840	13.840	13.840	13.840	13.840	13.590-14.090	13.840	0.000

Reviewer 1 VD Date: 2.26.13

Reviewer 2 _____ Date: 2/27/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130223.b/lowsim.m
Batch File: /chem3/nt11.i/20130223.b
Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
24 Fluoranthene	13.868	13.868	13.869	13.868	13.869	13.869	13.868	13.618-14.118	13.869	0.000
25 Pyrene	14.358	14.358	14.359	14.358	14.359	14.359	14.358	14.108-14.608	14.359	0.000
28 Benzo(a)anthracene	16.375	16.367	16.367	16.367	16.367	16.367	16.375	16.125-16.625	16.368	0.003
* 29 Chrysene-d12	16.466	16.466	16.458	16.458	16.458	16.458	16.466	16.216-16.716	16.461	0.004
30 Chrysene	16.516	16.508	16.508	16.508	16.508	16.508	16.516	16.266-16.766	16.509	0.003
44 Benzo(b)fluoranthene	18.156	18.156	18.156	18.156	18.156	18.156	18.156	17.906-18.406	18.156	0.000
45 Benzo(k)fluoranthene	18.195	18.195	18.195	18.195	18.195	18.195	18.195	17.945-18.445	18.195	0.000
46 Benzo(j)fluoranthene	18.243	18.243	18.243	18.243	18.243	18.243	18.243	17.993-18.493	18.243	0.000
34 Benzo(a)pyrene	18.877	18.877	18.877	18.877	18.877	18.877	18.877	18.627-19.127	18.877	0.000
* 35 Perylene-d12	19.059	19.050	19.050	19.050	19.050	19.050	19.059	18.809-19.309	19.051	0.004
$ 36 Dibenzo(a,h)anthracene	21.096	21.096	21.096	21.096	21.096	21.096	21.096	20.846-21.346	21.096	0.000
37 Indeno(1,2,3-cd)pyrene	21.196	21.196	21.196	21.196	21.196	21.196	21.196	20.946-21.446	21.196	0.000
38 Dibenzo(a,h)anthracene	21.196	21.185	21.185	21.185	21.185	21.185	21.196	20.946-21.446	21.187	0.004
39 Benzo(g,h,i)perylene	22.104	22.104	22.093	22.093	22.093	22.093	22.104	21.854-22.354	22.097	0.006
47 Perylene	19.107	19.107	19.108	19.107	19.108	19.108	19.107	18.857-19.357	19.107	0.000

Data File: /chem3/nt11.i/20130223.b/df0223.d

Date : 23-FEB-2013 09:36

Client ID:

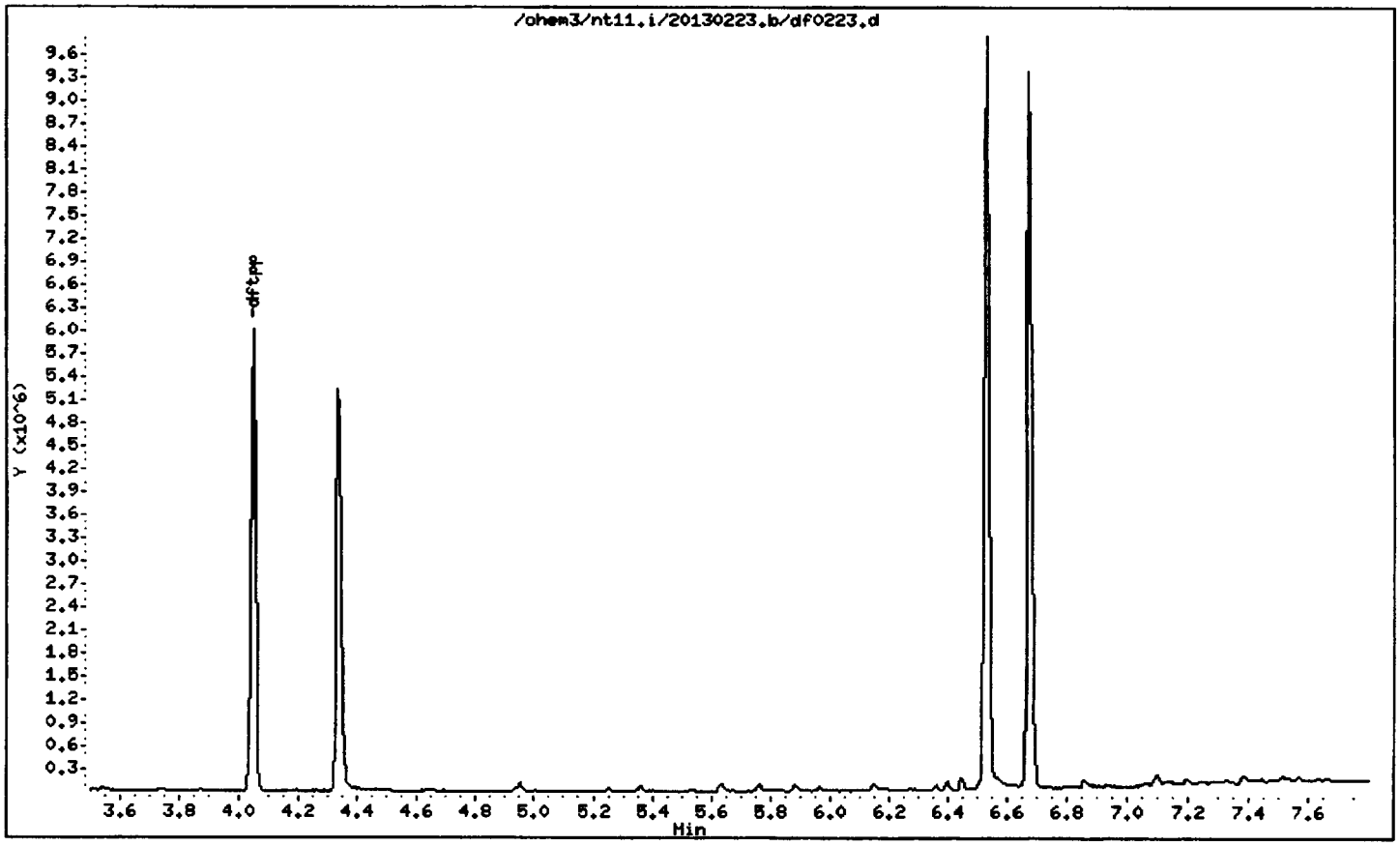
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rx1-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130223.b/df0223.d

Date : 23-FEB-2013 09:36

Client ID:

Instrument: nt11.i

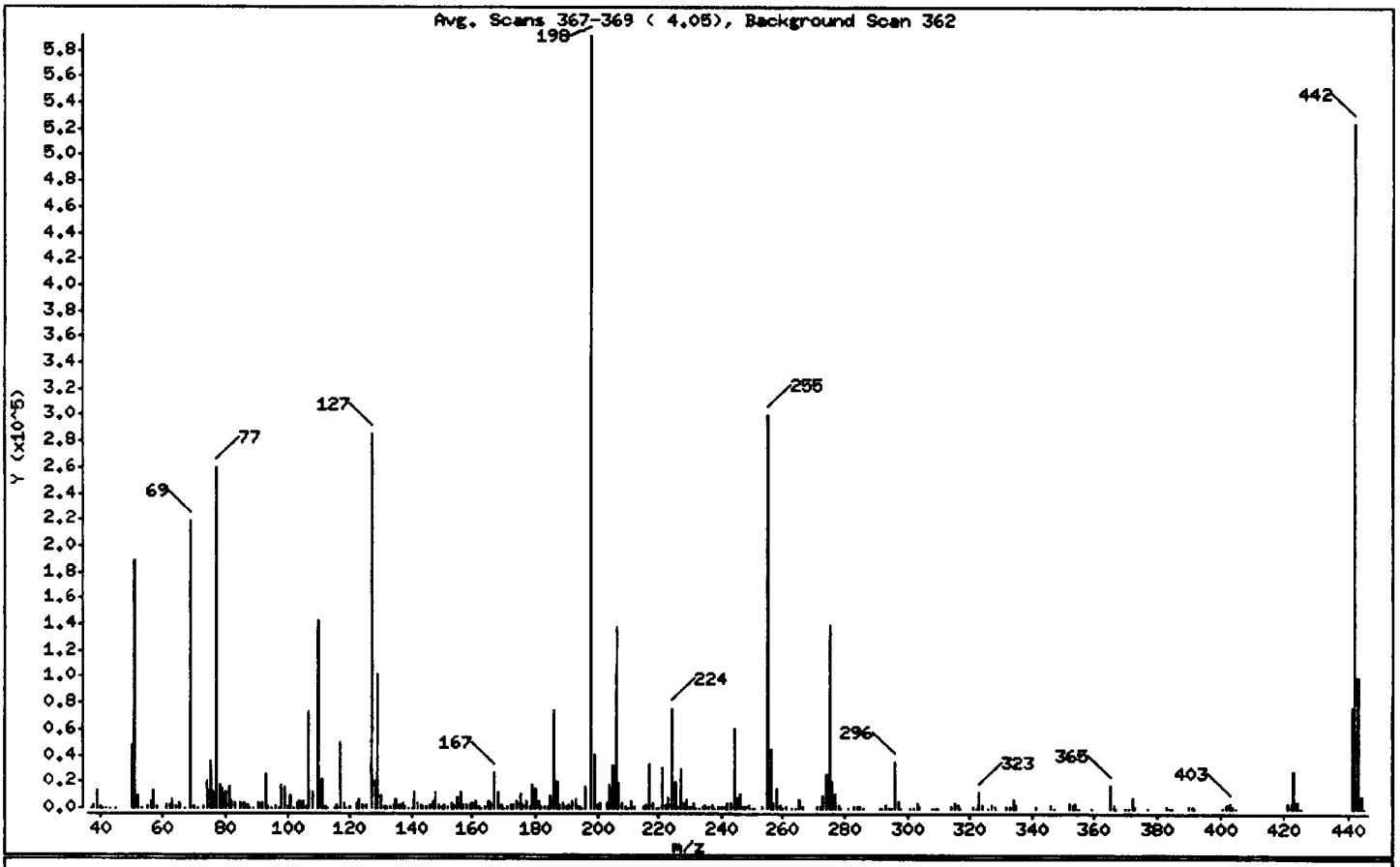
Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	31.97
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	37.09
70	Less than 2.00% of mass 69	0.20 (0.53)
127	10.00 - 80.00% of mass 198	48.29
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.85
275	10.00 - 60.00% of mass 198	23.58
365	Greater than 1.00% of mass 198	2.90
441	0.01 - 24.00% of mass 442	13.02 (14.69)
442	50.00 - 200.00% of mass 198	88.63
443	15.00 - 24.00% of mass 442	16.95 (19.13)

Data File: /ohem3/nt11.i/20130223.b/df0223.d

Date : 23-FEB-2013 09:36

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0223.d
Spectrum: Avg. Scans 367-369 (4.05), Background Scan 362
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	87	127.00	285696	201.00	3636	285.00	2018
38.00	2104	128.00	20472	203.00	3970	286.00	190
39.00	13694	129.00	102440	204.00	18320	291.00	440
40.00	781	130.00	8947	205.00	32432	292.00	491
41.00	369	131.00	1836	206.00	139008	293.00	2988
42.00	571	132.00	1093	207.00	18720	294.00	222
43.00	274	133.00	794	208.00	4468	295.00	393
45.00	525	134.00	2890	209.00	1199	296.00	35608
50.00	48064	135.00	7460	210.00	499	297.00	4935
51.00	189120	136.00	3328	211.00	5760	298.00	356
52.00	9614	137.00	4379	212.00	992	301.00	605
53.00	260	138.00	1207	215.00	1133	302.00	499
55.00	1592	139.00	232	216.00	2227	303.00	4743
56.00	5449	140.00	648	217.00	34312	304.00	1033
57.00	14123	141.00	11563	218.00	4578	308.00	363
58.00	761	142.00	3631	219.00	540	309.00	217
61.00	2804	143.00	2718	220.00	243	310.00	210
62.00	2969	144.00	867	221.00	31560	314.00	1587
63.00	7096	145.00	843	222.00	2462	315.00	4117
64.00	1390	146.00	2620	223.00	8679	316.00	2285
65.00	4494	147.00	5579	224.00	76032	317.00	381
67.00	663	148.00	12583	225.00	20592	321.00	1252
69.00	219456	149.00	3106	226.00	1391	322.00	301
70.00	1159	150.00	1303	227.00	29320	323.00	12190
71.00	394	151.00	2215	228.00	3953	324.00	2644
73.00	1075	152.00	1200	229.00	6381	326.00	176
74.00	21080	153.00	3757	230.00	873	327.00	2233
75.00	35568	154.00	3348	231.00	3573	328.00	1061
76.00	12220	155.00	7965	232.00	246	332.00	772
77.00	259264	156.00	11745	233.00	584	333.00	968
78.00	17496	157.00	2294	234.00	1734	334.00	7370
79.00	15272	158.00	2872	235.00	2209	335.00	2642
80.00	11616	159.00	2439	236.00	1621	341.00	1531
81.00	16672	160.00	4185	237.00	2569	346.00	2517
82.00	4861	161.00	5614	238.00	409	347.00	213

UR99:01285

Data File: /chem3/nt11.i/20130223.b/df0223.d

Date : 23-FEB-2013 09:36

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0223.d
Spectrum: Avg. Scans 367-369 (4.05), Background Scan 362
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	3674	162.00	1873	239.00	1453	352.00	4182
85.00	4045	163.00	588	240.00	1096	353.00	2655
86.00	3583	164.00	736	241.00	1902	354.00	4443
87.00	2329	165.00	4817	242.00	4204	355.00	584
88.00	556	166.00	4083	243.00	3830	359.00	312
89.00	209	167.00	26624	244.00	61184	365.00	17144
91.00	4040	168.00	12011	245.00	8071	366.00	2766
92.00	4309	169.00	2414	246.00	10664	367.00	168
93.00	25176	170.00	669	247.00	1812	370.00	257
94.00	1657	171.00	1064	248.00	754	371.00	670
95.00	532	172.00	2358	249.00	2141	372.00	7502
96.00	1439	173.00	3256	250.00	482	373.00	1640
97.00	436	174.00	5621	251.00	265	377.00	460
98.00	18032	175.00	10303	252.00	228	383.00	1904
99.00	15688	176.00	3308	253.00	1624	384.00	238
100.00	919	177.00	5015	255.00	300224	385.00	218
101.00	9474	178.00	1568	256.00	44856	390.00	907
102.00	554	179.00	18272	257.00	3564	391.00	784
103.00	3556	180.00	14686	258.00	14980	392.00	229
104.00	5899	181.00	5483	259.00	3086	401.00	423
105.00	5084	182.00	1421	260.00	589	402.00	2971
106.00	1322	183.00	772	261.00	718	403.00	4024
107.00	73912	184.00	1234	263.00	167	404.00	1453
108.00	11775	185.00	9615	264.00	610	405.00	392
110.00	143040	186.00	75216	265.00	6208	421.00	4156
111.00	21544	187.00	19976	266.00	806	422.00	3577
112.00	1985	188.00	2441	271.00	878	423.00	28360
113.00	528	189.00	3472	272.00	862	424.00	5622
115.00	234	190.00	828	273.00	9352	425.00	391
116.00	3241	191.00	2147	274.00	25336	441.00	77024
117.00	50824	192.00	6079	275.00	139456	442.00	524416
118.00	3973	193.00	6426	276.00	20216	443.00	100312
119.00	204	194.00	1474	277.00	10549	444.00	9753
120.00	911	195.00	609	278.00	2300	445.00	435
122.00	4758	196.00	16105	279.00	484		

Data File: /chem3/nt11.i/20130223.b/df0223.d

Date : 23-FEB-2013 09:36

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

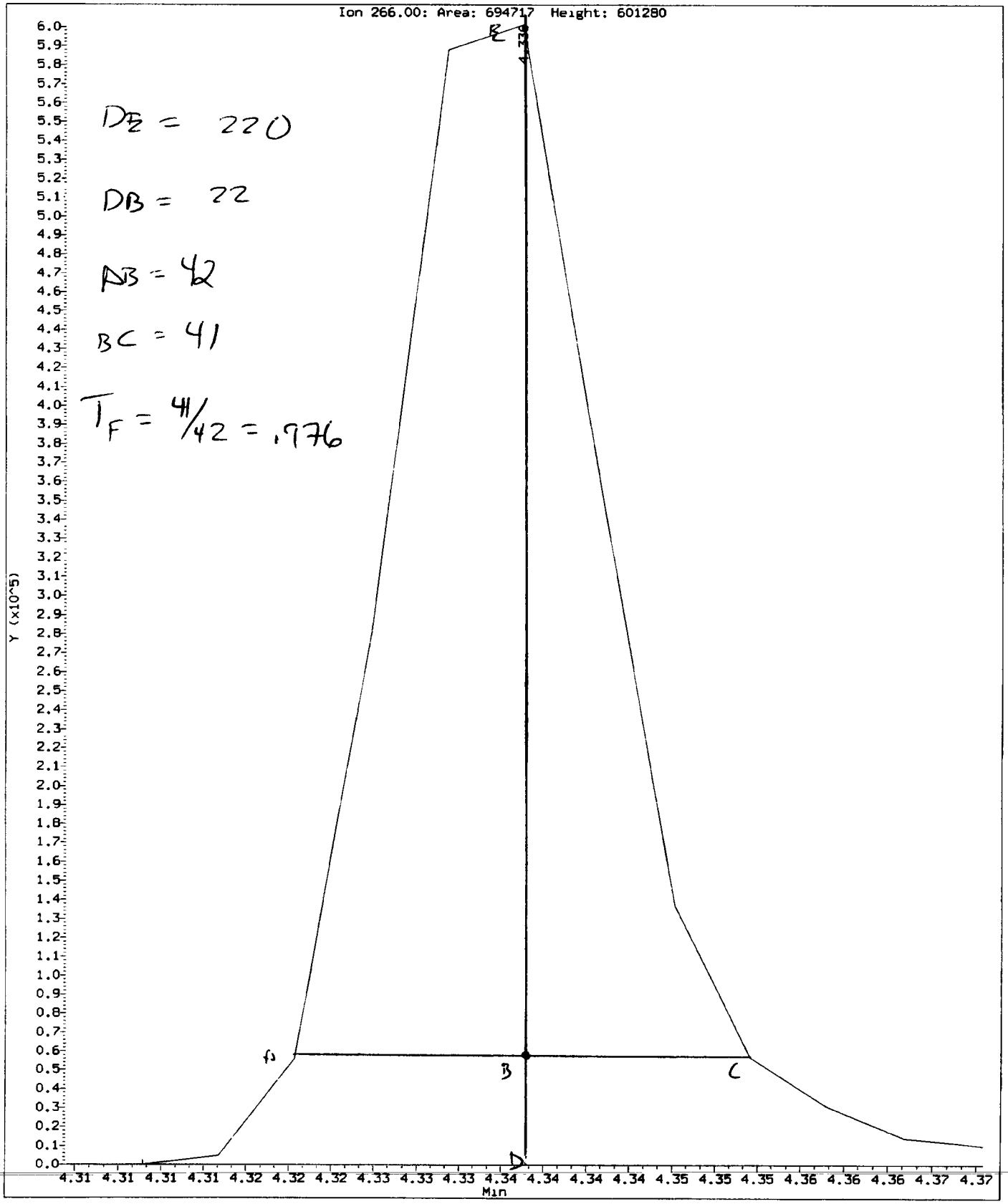
Column diameter: 0.25

Data File: df0223.d
Spectrum: Avg. Scans 367-369 (4.05), Background Scan 362
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
123.00	6967	198.00	591680	281.00	179		
124.00	3223	199.00	40652	283.00	1444		
125.00	3267	200.00	2987	284.00	926		

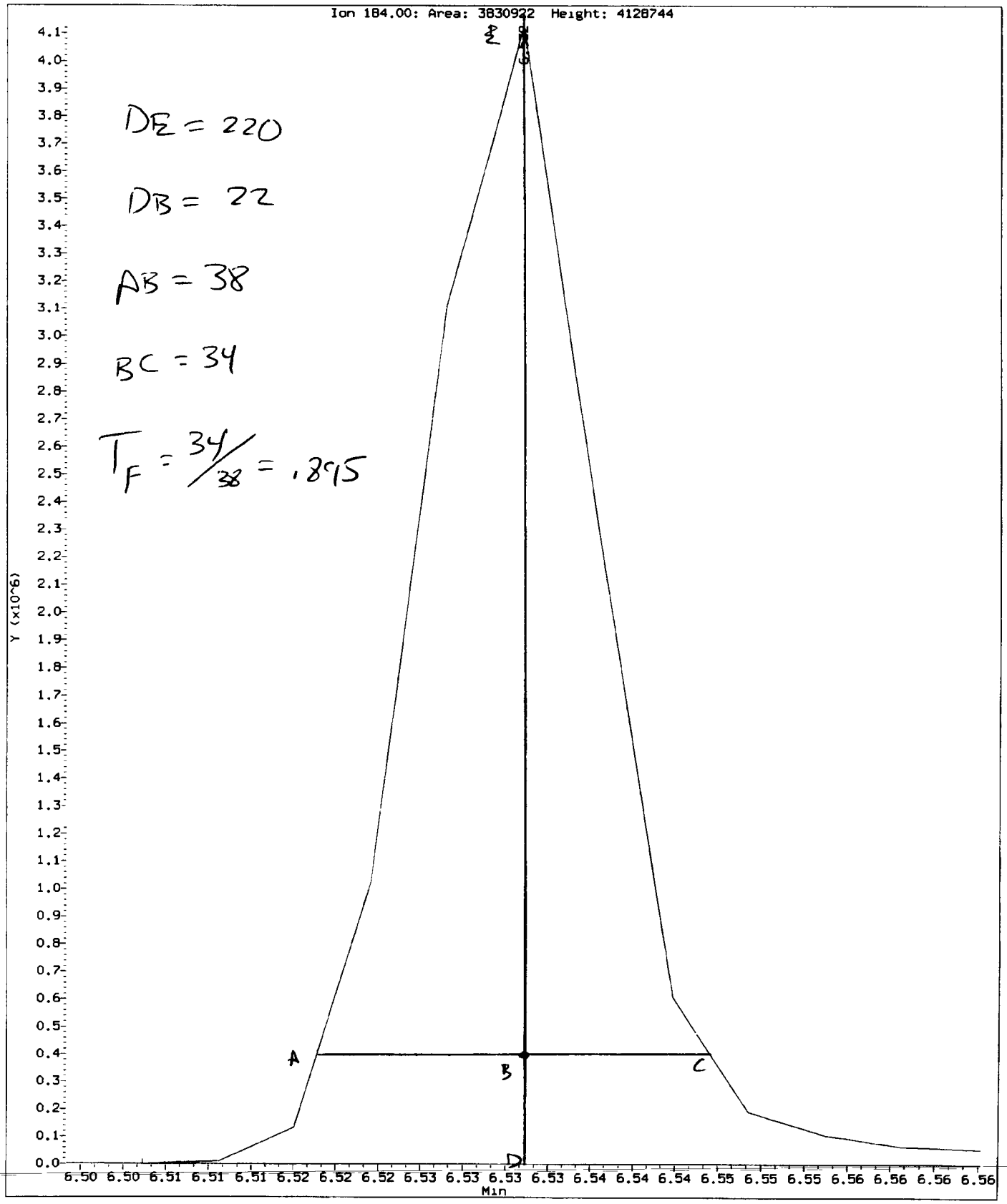
Data File: /chem3/nt11.i/20130223.b/DDT.b/df0223.d
Injection Date: 23-FEB-2013 09:36
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20130223.b/DDT.b/df0223.d
Injection Date: 23-FEB-2013 09:36
Instrument: nt11.i
Client Sample ID:

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130223.b/DDT.b/df0223.d ARI ID: DFTPP 10
Method: /chem3/nt11.i/20130223.b/DDT.b/sw846ddt.m Misc:
Analysis Date: 23-FEB-2013 09:36 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.336	694717
Benzidine	6.532	3830922
4,4'-DDE	5.966	4749
4,4'-DDD	6.447	30439
4,4'-DDT	6.671	1775888

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(4749 + 30439) * 100}{(4749 + 30439 + 1775888)}$$

DDT Percent Breakdown = 1.9 %

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130223.b

Instrument: nt11.i Date: 23-FEB-2013 Method: lowsim.m

INITIAL CAL: 23-FEB-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 23-FEB-2013

Compound	%D
NO Q-FLAGS	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-FEB-2013 09:51
End Cal Date : 23-FEB-2013 12:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130223.b/lowsim.m
Cal Date : 23-Feb-2013 12:48 van
Curve Type : Average

Calibration File Names:
Level 1: /chem3/nt11.i/20130223.b/ic0223c.d
Level 2: /chem3/nt11.i/20130223.b/ic0223e.d
Level 3: /chem3/nt11.i/20130223.b/ic0223f.d
Level 4: /chem3/nt11.i/20130223.b/ic0223a.d
Level 5: /chem3/nt11.i/20130223.b/ic0223d.d
Level 6: /chem3/nt11.i/20130223.b/ic0223b.d

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
5 Naphthalene	1.17986	1.07038	1.12173	1.07243	1.05630	1.06975	1.09508	4.315
7 2-Methylnaphthalene	0.70009	0.65437	0.70055	0.68821	0.67773	0.69131	0.68537	2.535
8 1-Methylnaphthalene	0.73994	0.65390	0.70042	0.68367	0.67218	0.68373	0.68897	4.255
10 Acenaphthylene	1.84021	1.67975	1.75477	1.78640	1.78255	1.87074	1.78573	3.748
12 Acenaphthene	1.22752	1.13659	1.19934	1.16361	1.16498	1.18041	1.17874	2.683
14 Dibenzofuran	1.81808	1.67485	1.78559	1.66071	1.66927	1.69412	1.71710	3.921
15 Fluorene	1.33744	1.22307	1.28298	1.27056	1.27104	1.30630	1.28190	2.999
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.29147	1.19136	1.28319	1.20741	1.21515	1.22365	1.23537	3.376
20 Anthracene	1.16152	1.07209	1.18065	1.15970	1.15909	1.21883	1.15865	4.159
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.21654	1.13663	1.25125	1.23561	1.23597	1.25192	1.22132	3.559
25 Pyrene	1.74397	1.53685	1.69519	1.67448	1.70011	1.69862	1.67487	4.259
28 Benzo(a)anthracene	1.42951	1.29246	1.40124	1.39924	1.37922	1.40235	1.38400	3.441
30 Chrysene	1.51404	1.35660	1.48567	1.40588	1.41140	1.40779	1.43023	4.073
44 Benzo(b)fluoranthene	1.63909	1.53504	1.64903	1.50529	1.61012	1.57183	1.58507	3.644
45 Benzo(k)fluoranthene	1.82896	1.54799	1.66440	1.77352	1.75834	1.76863	1.72364	5.869
46 Benzo(j)fluoranthene	1.71085	1.80116	1.88590	1.70137	1.70454	1.69282	1.74944	4.451
34 Benzo(a)pyrene	1.37546	1.25064	1.35897	1.34791	1.34169	1.35196	1.33777	3.306
37 Indeno(1,2,3-cd)pyrene	1.64325	1.52366	1.70267	1.64740	1.67639	1.68623	1.64660	3.910
38 Dibenzo(a,h)anthracene	1.42304	1.20093	1.36598	1.30065	1.32370	1.32911	1.32390	5.580

Analytical Resources, Inc.

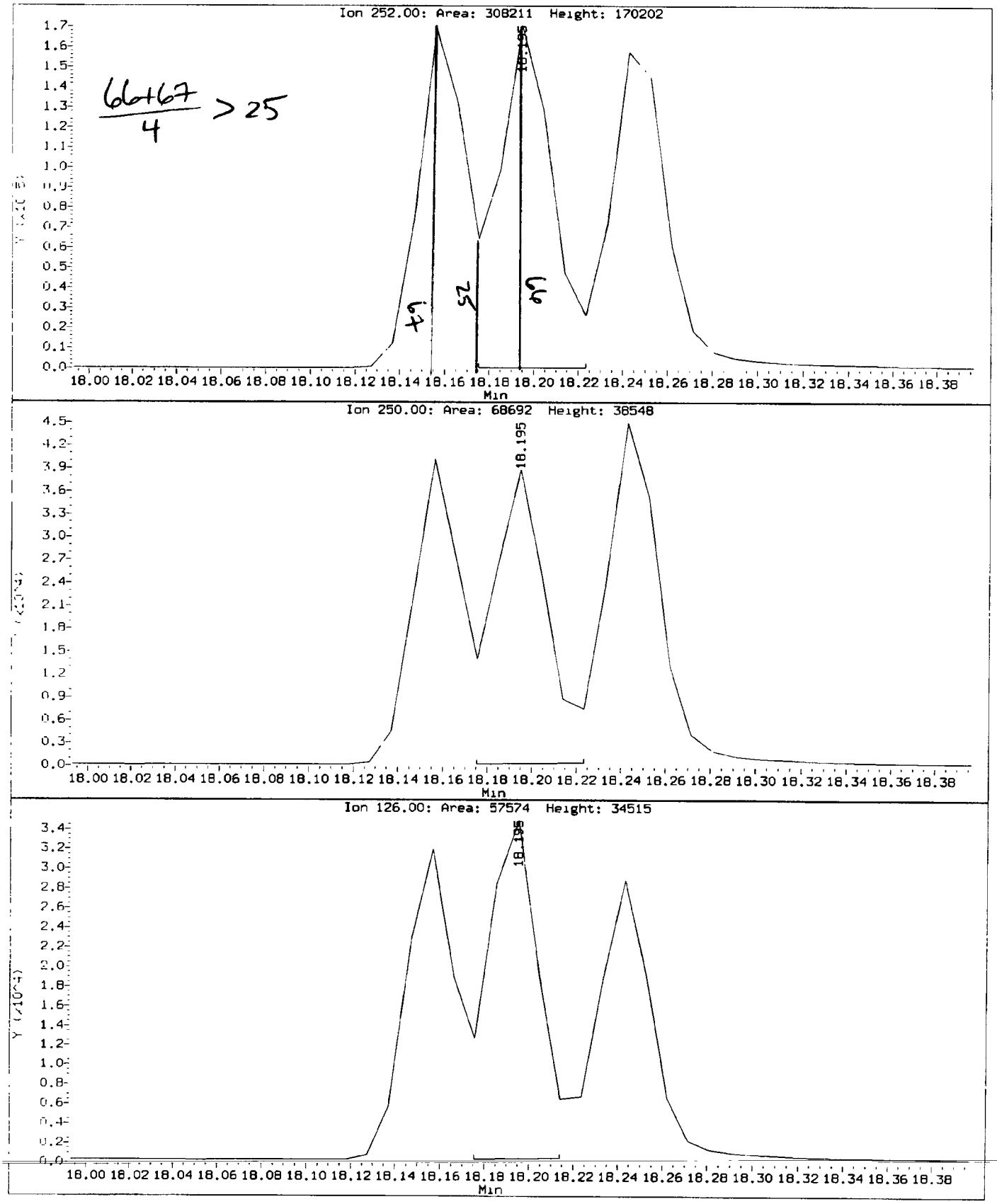
INITIAL CALIBRATION DATA

Start Cal Date : 23-FEB-2013 09:51
End Cal Date : 23-FEB-2013 12:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130223.b/lowsim.m
Cal Date : 23-Feb-2013 12:48 van
Curve Type : Average

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
39 Benzo(g,h,i)perylene	1.63740	1.39502	1.50380	1.42776	1.44835	1.42748	1.47330	5.978
47 Perylene	1.60629	1.44987	1.57488	1.50213	1.50270	1.50783	1.52395	3.718
$ 6 2-Methylnaphthalene-d10	0.62998	0.61614	0.64871	0.63509	0.62909	0.63828	0.63288	1.713
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 23 Fluoranthene-d10	0.99851	0.95924	1.04391	1.06478	1.05975	1.09373	1.03665	4.742
$ 36 Dibenzo(a,h)anthracene-d14	1.08287	1.08091	1.18009	1.16289	1.17177	1.17924	1.14296	4.174

Data File: /chem3/nt11.i/20130223.b/ic0223a.d
Injection Date: 23-FEB-2013 09:51
Instrument: nt11.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number:



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223a.d
Lab Smp Id: SIM 250
Inj Date : 23-FEB-2013 09:51
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4	Naphthalene-d8	136	6.134	6.134	(1.000)	255285	200 000	
	5	Naphthalene	128	6.176	6.165	(1.007)	342218	250.000	245
$	6	2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	202662	250.000	251
	7	2-Methylnaphthalene	142	7.163	7.163	(1.168)	219611	250.000	251
	8	1-methylnaphthalene	142	7.415	7.415	(1.209)	218163	250.000	248
	10	Acenaphthylene	152	8.950	8 950	(0.983)	319075	250.000	250
*	11	Acenaphthene-d10	164	9.105	9.105	(1.000)	142891	200.000	
	12	Acenaphthene	153	9.172	9.172	(1.007)	207836	250.000	247
	14	Dibenzofuran	168	9.382	9.382	(1.030)	296626	250.000	242
	15	Fluorene	166	9.991	9.991	(1.097)	226939	250 000	248
*	18	Phenanthrene-d10	188	11.762	11.751	(1.000)	220853	200.000	
	19	Phenanthrene	178	11.796	11.796	(1.003)	333326	250.000	244
	20	Anthracene	178	11 851	11.851	(1.008)	320155	250 000	250
$	23	Fluoranthene-d10	212	13.840	13.840	(1.177)	293951	250.000	257
	24	Fluoranthene	202	13.868	13.869	(1.179)	341109	250.000	253
	25	Pyrene	202	14.358	14.359	(0.872)	340181	250.000	250
	28	Benzo(a)anthracene	228	16 375	16.367	(0.994)	284264	250 000	253
*	29	Chrysene-d12	240	16.466	16.458	(1.000)	162525	200.000	
	30	Chrysene	228	16.516	16.508	(1.003)	285614	250.000	246
	44	Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	261597	250.000	237
	45	Benzo(k)fluoranthene	252	18.195	18.195	(0.955)	308211	250.000	257
	46	Benzo(j)fluoranthene	252	18.243	18.243	(0.957)	295672	250.000	243
	34	Benzo(a)pyrene	252	18.877	18.877	(0.990)	234246	250.000	252
*	35	Perylene-d12	264	19.059	19.050	(1.000)	139028	200.000	
	37	Indeno(1,2,3-cd)pyrene	276	21 196	21.196	(1.112)	286294	250.000	250
$	36	Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	202092	250.000	254

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.196	21.185	(1.112)	226033	250.000	246
39 Benzo(g,h,i)perylene	276	22 104	22.093	(1.160)	248124	250.000	242
47 Perylene	252	19 107	19.108	(1.003)	261047	250 000	246

2.23.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223a.d
Lab Smp Id: SIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	255285	0.00
11 Acenaphthene-d10	142891	71446	285782	142891	0.00
18 Phenanthrene-d10	220853	110426	441706	220853	0.00
29 Chrysene-d12	162525	81262	325050	162525	0.00
35 Perylene-d12	139028	69514	278056	139028	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.76	0.00
29 Chrysene-d12	16.47	15.97	16.97	16.47	0.00
35 Perylene-d12	19.06	18.56	19.56	19.06	0.00

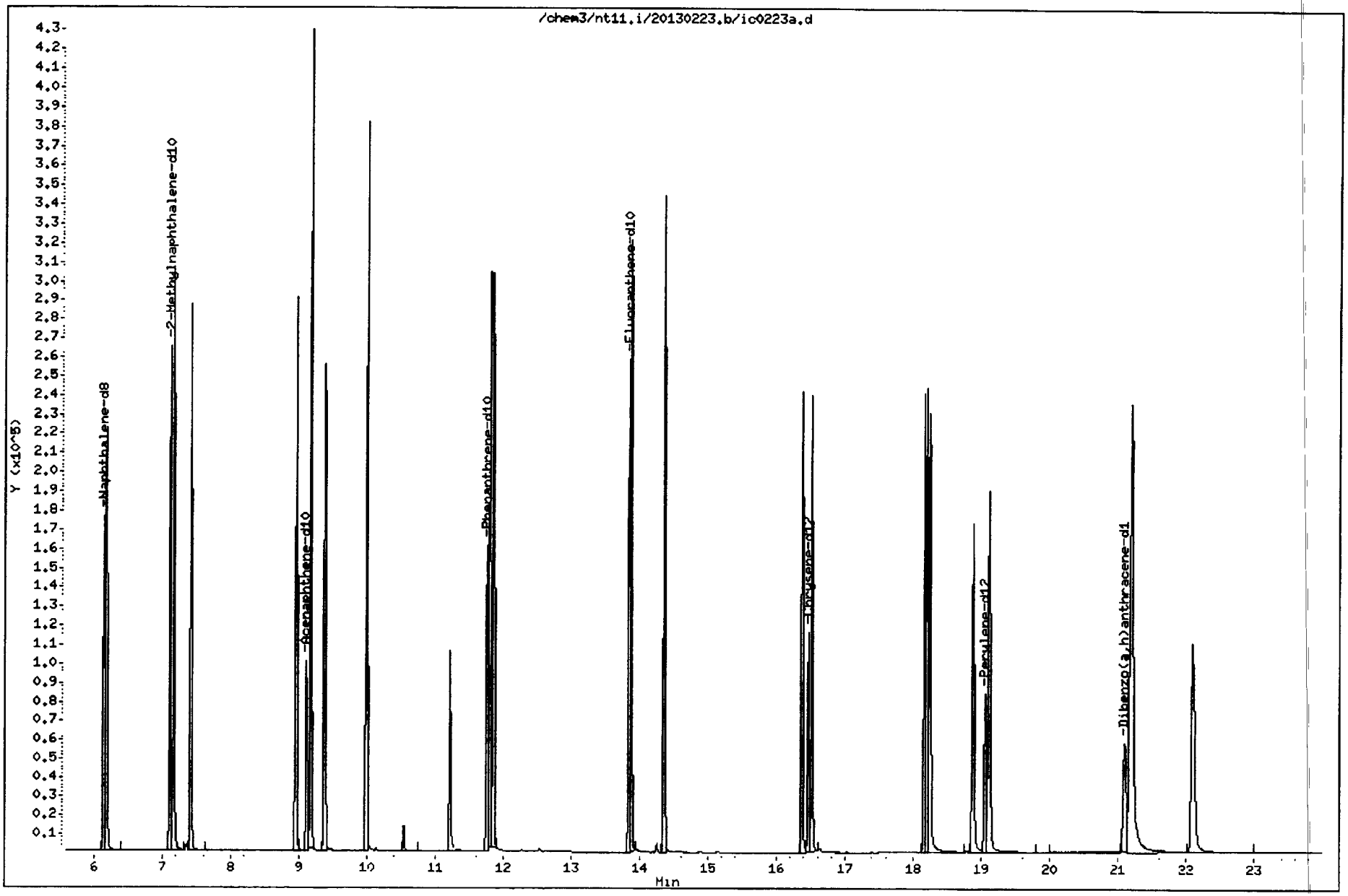
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130223.b/ic0223a.d
Date : 23-FEB-2013 09:51
Client ID:
Sample Info: SIM 250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0223a.d

Lab ID: SIM 250, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS
21.196	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
21.196	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223b.d
Lab Smp Id: SIM 1000
Inj Date : 23-FEB-2013 10:20
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 1000
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 3 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

		QUANT SIG					AMOUNTS	
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.134	6.134	(1.000)	261768	200.000	
	5 Naphthalene	128	6.165	6.165	(1.005)	1400135	1000.00	977
$	6 2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	835406	1000 00	1010
	7 2-Methylnaphthalene	142	7.163	7.163	(1.168)	904810	1000.00	1010
	8 1-methylnaphthalene	142	7.415	7.415	(1.209)	894890	1000.00	992
	10 Acenaphthylene	152	8.950	8.950	(0.983)	1378031	1000.00	1050
*	11 Acenaphthene-d10	164	9.105	9.105	(1.000)	147325	200.000	
	12 Acenaphthene	153	9.172	9.172	(1.007)	869519	1000.00	1000
	14 Dibenzofuran	168	9.371	9.382	(1.029)	1247933	1000.00	987
	15 Fluorene	166	9.991	9.991	(1.097)	962250	1000.00	1020
*	18 Phenanthrene-d10	188	11.751	11.751	(1.000)	227826	200.000	
	19 Phenanthrene	178	11.796	11.796	(1.004)	1393902	1000.00	991
	20 Anthracene	178	11.851	11.851	(1.008)	1388411	1000 00	1050
$	23 Fluoranthene-d10	212	13.840	13.840	(1 178)	1245902	1000.00	1060
	24 Fluoranthene	202	13.868	13.869	(1.180)	1426096	1000.00	1030
	25 Pyrene	202	14.358	14.359	(0.872)	1422284	1000.00	1010
	28 Benzo(a)anthracene	228	16.367	16.367	(0.994)	1174210	1000.00	1010
*	29 Chrysene-d12	240	16.466	16 458	(1.000)	167463	200.000	
	30 Chrysene	228	16.508	16.508	(1.003)	1178764	1000.00	984
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	1104910	1000.00	992
	45 Benzo(k)fluoranthene	252	18.195	18.195	(0.955)	1243248	1000.00	1030
	46 Benzo(j)fluoranthene	252	18.243	18.243	(0.958)	1189959	1000.00	968
	34 Benzo(a)pyrene	252	18.877	18.877	(0.991)	950356	1000 00	1010
*	35 Perylene-d12	264	19.050	19.050	(1.000)	140589	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.196	21.196	(1.113)	1185324	1000.00	1020
$	36 Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	828941	1000.00	1030

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	934294	1000.00	1000
39 Benzo(g,h,i)perylene	276	22.104	22.093	(1.160)	1003437	1000.00	969
47 Perylene	252	19.107	19.108	(1.003)	1059924	1000.00	989

2.23.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223b.d
Lab Smp Id: SIM 1000
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	261768	2.54
11 Acenaphthene-d10	142891	71446	285782	147325	3.10
18 Phenanthrene-d10	220853	110426	441706	227826	3.16
29 Chrysene-d12	162525	81262	325050	167463	3.04
35 Perylene-d12	139028	69514	278056	140589	1.12

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.75	-0.09
29 Chrysene-d12	16.47	15.97	16.97	16.47	0.00
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.1/20130223.b/1c0223b.d

Date : 23-FEB-2013 10:20

Client ID:

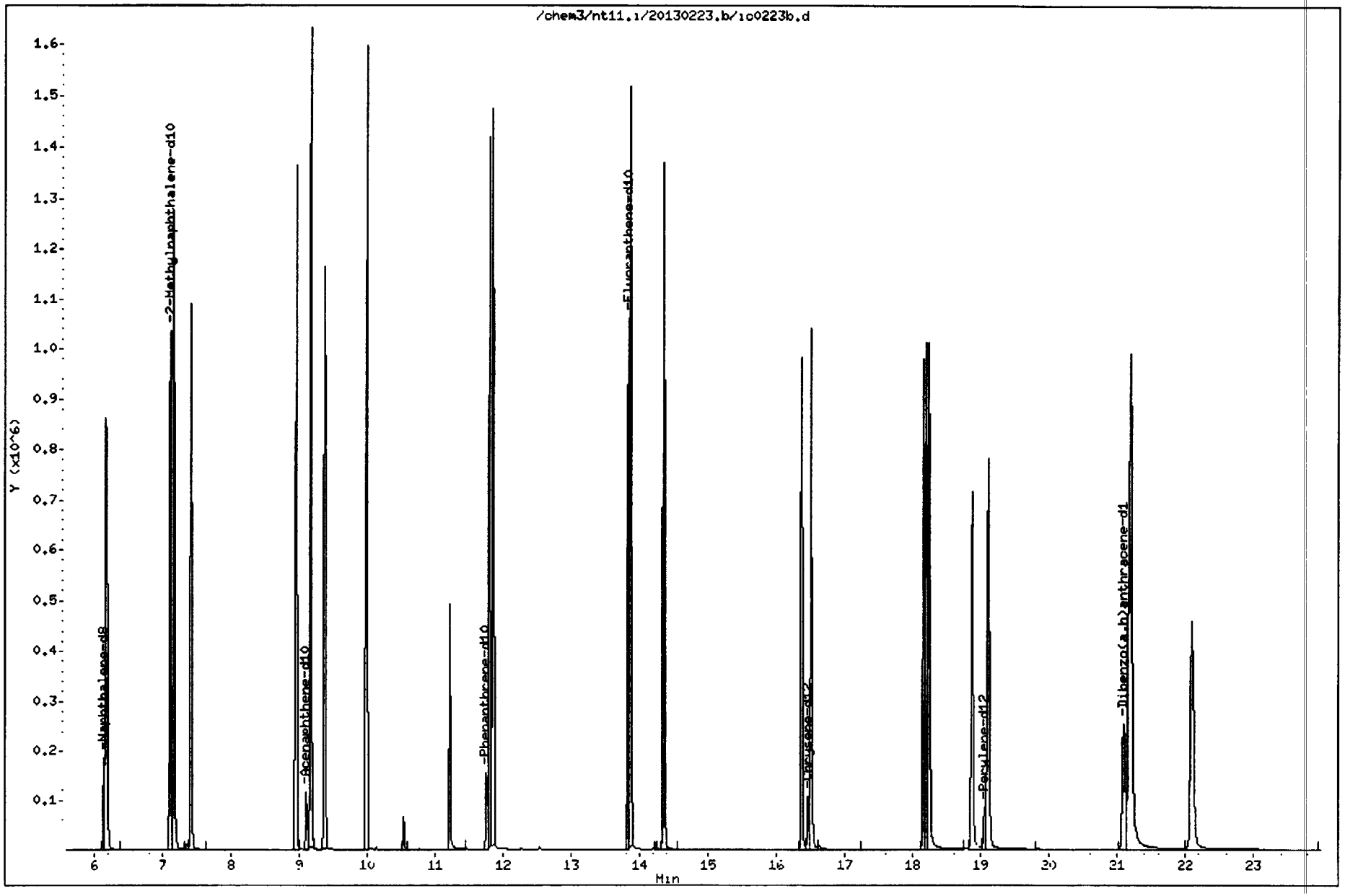
Sample Info: SIM 1000

Column phase: Rx1-17Sil MS

Instrument: nt11.1

Operator: WTS

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0223b.d

Lab ID: SIM 1000, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223c.d
Lab Smp Id: SIM 10
Inj Date : 23-FEB-2013 10:50
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 10
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.134	6.134	(1.000)	253912	200.000	
	5 Naphthalene	128	6.176	6.165	(1.007)	14979	10.0000	10.8
$	6 2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	7998	10.0000	9.95
	7 2-Methylnaphthalene	142	7.163	7.163	(1.168)	8888	10.0000	10.2
	8 1-methylnaphthalene	142	7.415	7 415	(1 209)	9394	10.0000	10.7
	10 Acenaphthylene	152	8 950	8.950	(0.983)	12807	10.0000	10.3
*	11 Acenaphthene-d10	164	9 105	9.105	(1.000)	139191	200.000	
	12 Acenaphthene	153	9.172	9.172	(1.007)	8543	10 0000	10 4
	14 Dibenzofuran	168	9.382	9.382	(1.030)	12653	10.0000	10.6
	15 Fluorene	166	9.991	9.991	(1.097)	9308	10.0000	10.4
*	18 Phenanthrene-d10	188	11.751	11.751	(1.000)	212997	200.000	
	19 Phenanthrene	178	11.796	11.796	(1.004)	13754	10.0000	10.5
	20 Anthracene	178	11.851	11.851	(1.008)	12370	10 0000	10 0
$	23 Fluoranthene-d10	212	13.840	13.840	(1.178)	10634	10.0000	9.63
	24 Fluoranthene	202	13.869	13.869	(1.180)	12956	10.0000	9.96
	25 Pyrene	202	14.359	14.359	(0.872)	13471	10.0000	10.4
	28 Benzo(a)anthracene	228	16.367	16.367	(0.994)	11042	10.0000	10.3
*	29 Chrysene-d12	240	16.458	16.458	(1.000)	154487	200.000	
	30 Chrysene	228	16.508	16.508	(1.003)	11695	10.0000	10 6
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	10644	10.0000	10.3
	45 Benzo(k)fluoranthene	252	18.195	18.195	(0.955)	11877	10.0000	10 6
	46 Benzo(j)fluoranthene	252	18.243	18.243	(0.958)	11110	10.0000	9.78
	34 Benzo(a)pyrene	252	18.877	18.877	(0.991)	8932	10.0000	10.3
*	35 Perylene-d12	264	19.050	19.050	(1.000)	129877	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.196	21 196	(1.113)	10671	10.0000	9.98
$	36 Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	7032	10.0000	9.47

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	9241	10.0000	10 7
39 Benzo(g,h,i)perylene	276	22.093	22.093	(1.160)	10633	10.0000	11.1
47 Perylene	252	19.108	19.108	(1.003)	10431	10.0000	10.5

SD 2.23.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223c.d
Lab Smp Id: SIM 10
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	253912	-0.54
11 Acenaphthene-d10	142891	71446	285782	139191	-2.59
18 Phenanthrene-d10	220853	110426	441706	212997	-3.56
29 Chrysene-d12	162525	81262	325050	154487	-4.95
35 Perylene-d12	139028	69514	278056	129877	-6.58

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.75	-0.09
29 Chrysene-d12	16.47	15.97	16.97	16.46	-0.05
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

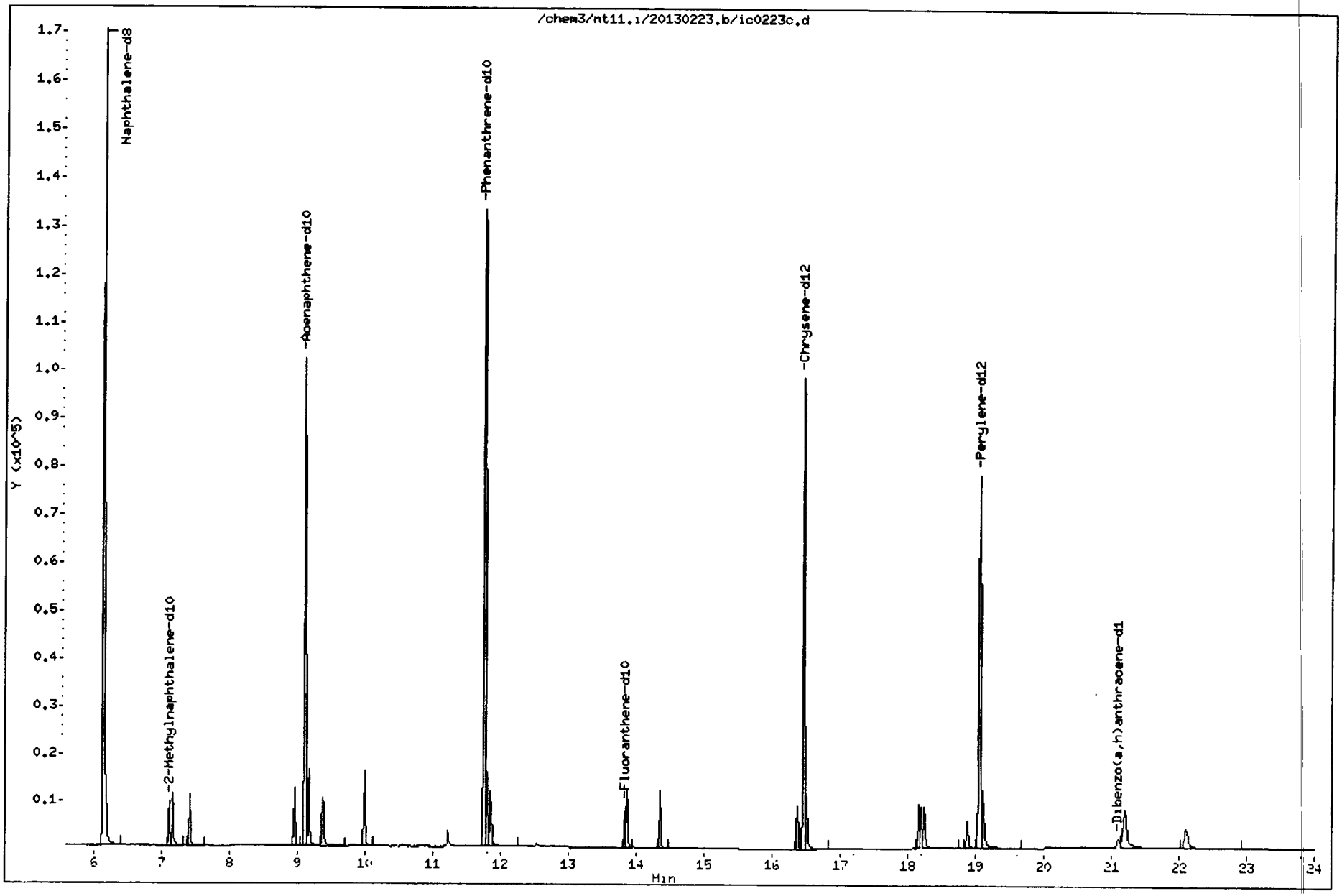
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130223.b/ic0223c.d
Date : 23-FEB-2013 10:50
Client ID:
Sample Info: SIM 10

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0223c.d

Lab ID: SIM 10, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223d.d
Lab Smp Id: SIM 500
Inj Date : 23-FEB-2013 11:19
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 500
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4	Naphthalene-d8	136	6.134	6.134	(1.000)	254492	200.000	
	5	Naphthalene	128	6.165	6.165	(1.005)	672050	500.000	482
$	6	2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	400247	500.000	497
	7	2-Methylnaphthalene	142	7.163	7.163	(1.168)	431191	500.000	494
	8	1-methylnaphthalene	142	7.415	7.415	(1.209)	427661	500.000	488
	10	Acenaphthylene	152	8.950	8.950	(0.983)	629280	500.000	499
*	11	Acenaphthene-d10	164	9.105	9.105	(1.000)	141209	200.000	
	12	Acenaphthene	153	9.172	9.172	(1.007)	411264	500.000	494
	14	Dibenzofuran	168	9.371	9.382	(1.029)	589291	500 000	486
	15	Fluorene	166	9.991	9.991	(1.097)	448706	500.000	496
*	18	Phenanthrene-d10	188	11.751	11.751	(1.000)	217906	200.000	
	19	Phenanthrene	178	11.796	11.796	(1.004)	661971	500.000	492
	20	Anthracene	178	11.851	11.851	(1.008)	631431	500 000	500
$	23	Fluoranthene-d10	212	13.840	13.840	(1.178)	577312	500.000	511
	24	Fluoranthene	202	13.868	13 869	(1.180)	673313	500.000	506
	25	Pyrene	202	14.358	14.359	(0.872)	670106	500.000	508
	28	Benzo(a)anthracene	228	16.367	16.367	(0.994)	543626	500.000	498
*	29	Chrysene-d12	240	16.458	16 458	(1.000)	157662	200 000	
	30	Chrysene	228	16 508	16.508	(1.003)	556309	500.000	493
	44	Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	527291	500.000	508
	45	Benzo(k)fluoranthene	252	18.195	18 195	(0.955)	575831	500.000	510
	46	Benzo(j)fluoranthene	252	18.243	18.243	(0.958)	558212	500.000	487
	34	Benzo(a)pyrene	252	18.877	18.877	(0 991)	439384	500.000	501
*	35	Perylene-d12	264	19.050	19.050	(1.000)	130994	200.000	
	37	Indeno(1,2,3-cd)pyrene	276	21 196	21.196	(1.113)	548992	500.000	509
$	36	Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	383736	500.000	513

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	433493	500.000	500
39 Benzo(g,h,i)perylene	276	22 093	22.093	(1.160)	474314	500.000	492
47 Perylene	252	19 107	19.108	(1.003)	492112	500.000	493

2.23.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223d.d
Lab Smp Id: SIM 500
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	254492	-0.31
11 Acenaphthene-d10	142891	71446	285782	141209	-1.18
18 Phenanthrene-d10	220853	110426	441706	217906	-1.33
29 Chrysene-d12	162525	81262	325050	157662	-2.99
35 Perylene-d12	139028	69514	278056	130994	-5.78

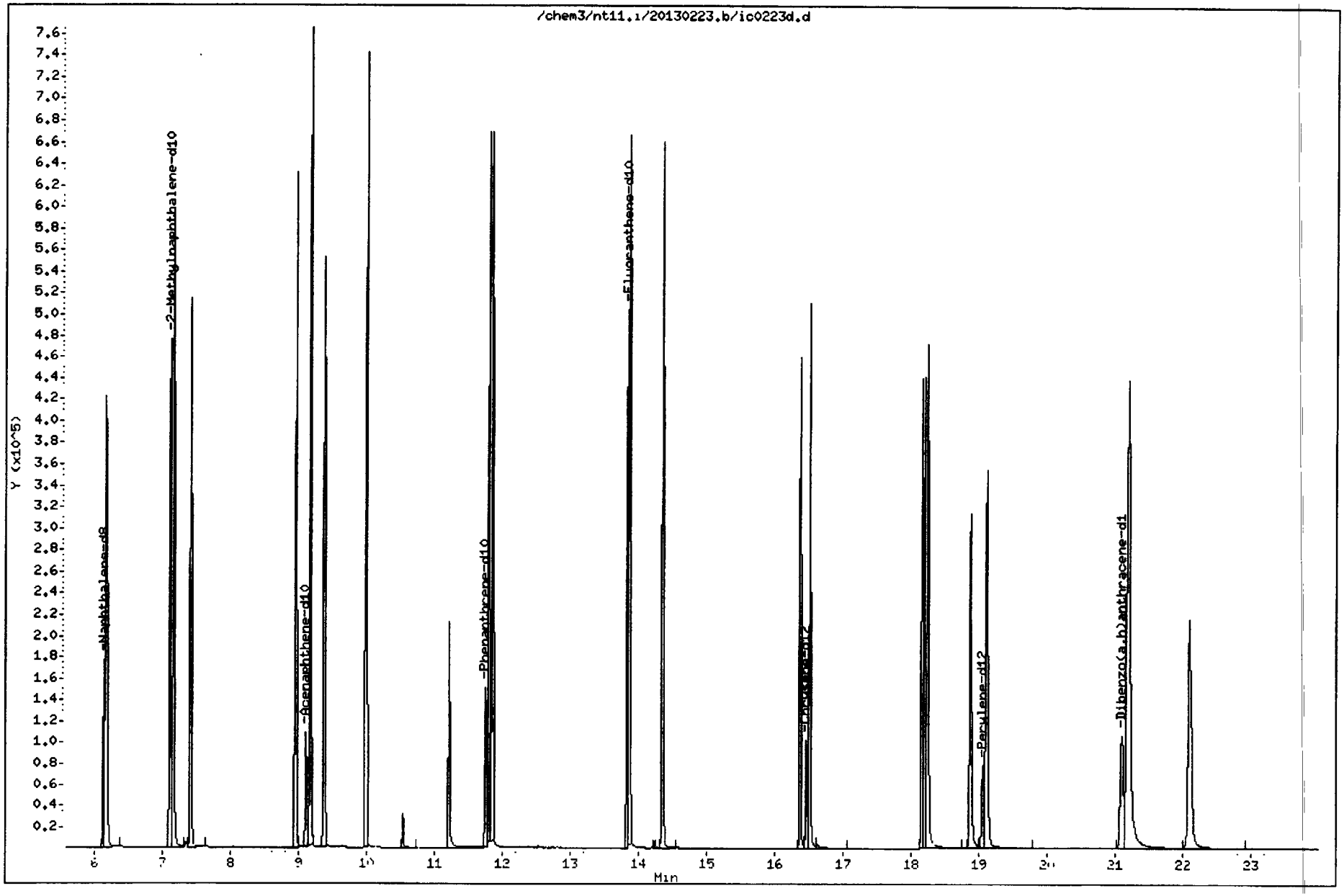
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.75	-0.09
29 Chrysene-d12	16.47	15.97	16.97	16.46	-0.05
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130223.b/ic0223d.d
Date : 23-FEB-2013 11:19
Client ID:
Sample Info: SIM 500

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0223d.d

Lab ID: SIM 500, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223e.d
Lab Smp Id: SIM 50
Inj Date : 23-FEB-2013 11:48
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 50
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.134	6.134	(1.000)	247866	200 000	
	5 Naphthalene	128	6.165	6.165	(1.005)	66328	50.0000	48.9
$	6 2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	38180	50.0000	48.7
	7 2-Methylnaphthalene	142	7.163	7.163	(1.168)	40549	50.0000	47.7
	8 1-methylnaphthalene	142	7.415	7.415	(1 209)	40520	50.0000	47 5
	10 Acenaphthylene	152	8.950	8.950	(0.983)	56251	50.0000	47.0
*	11 Acenaphthene-d10	164	9.105	9.105	(1.000)	133951	200.000	
	12 Acenaphthene	153	9.172	9.172	(1.007)	38062	50.0000	48 2
	14 Dibenzofuran	168	9.371	9.382	(1.029)	56087	50.0000	48.8
	15 Fluorene	166	9.991	9 991	(1.097)	40958	50.0000	47 7
*	18 Phenanthrene-d10	188	11.751	11.751	(1.000)	207726	200.000	
	19 Phenanthrene	178	11.796	11 796	(1.004)	61869	50.0000	48.2
	20 Anthracene	178	11.851	11.851	(1 008)	55675	50.0000	46.3
$	23 Fluoranthene-d10	212	13.840	13.840	(1.178)	49815	50.0000	46 3
	24 Fluoranthene	202	13.869	13.869	(1.180)	59027	50 0000	46.5
	25 Pyrene	202	14 359	14.359	(0.872)	58923	50.0000	45.9
	28 Benzo(a)anthracene	228	16.367	16.367	(0 994)	49553	50.0000	46.7
*	29 Chrysene-d12	240	16.458	16.458	(1.000)	153360	200.000	
	30 Chrysene	228	16.508	16.508	(1.003)	52012	50.0000	47.4
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	49652	50.0000	48.4
	45 Benzo(k)fluoranthene	252	18.195	18.195	(0.955)	50071	50.0000	44 9
	46 Benzo(j)fluoranthene	252	18.243	18.243	(0.958)	58260	50.0000	51 5
	34 Benzo(a)pyrene	252	18.877	18.877	(0.991)	40453	50.0000	46.7
*	35 Perylene-d12	264	19 050	19.050	(1.000)	129383	200 000	
	37 Indeno(1,2,3-cd)pyrene	276	21.196	21.196	(1.113)	49284	50.0000	46.3
$	36 Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	34963	50 0000	47.3

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	38845	50.0000	45.4
39 Benzo(g,h,i)perylene	276	22.093	22.093	(1.160)	45123	50.0000	47.3
47 Perylene	252	19 108	19.108	(1.003)	46897	50.0000	47 6

SD 2.23.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223e.d
Lab Smp Id: SIM 50
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	247866	-2.91
11 Acenaphthene-d10	142891	71446	285782	133951	-6.26
18 Phenanthrene-d10	220853	110426	441706	207726	-5.94
29 Chrysene-d12	162525	81262	325050	153360	-5.64
35 Perylene-d12	139028	69514	278056	129383	-6.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.75	-0.09
29 Chrysene-d12	16.47	15.97	16.97	16.46	-0.05
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

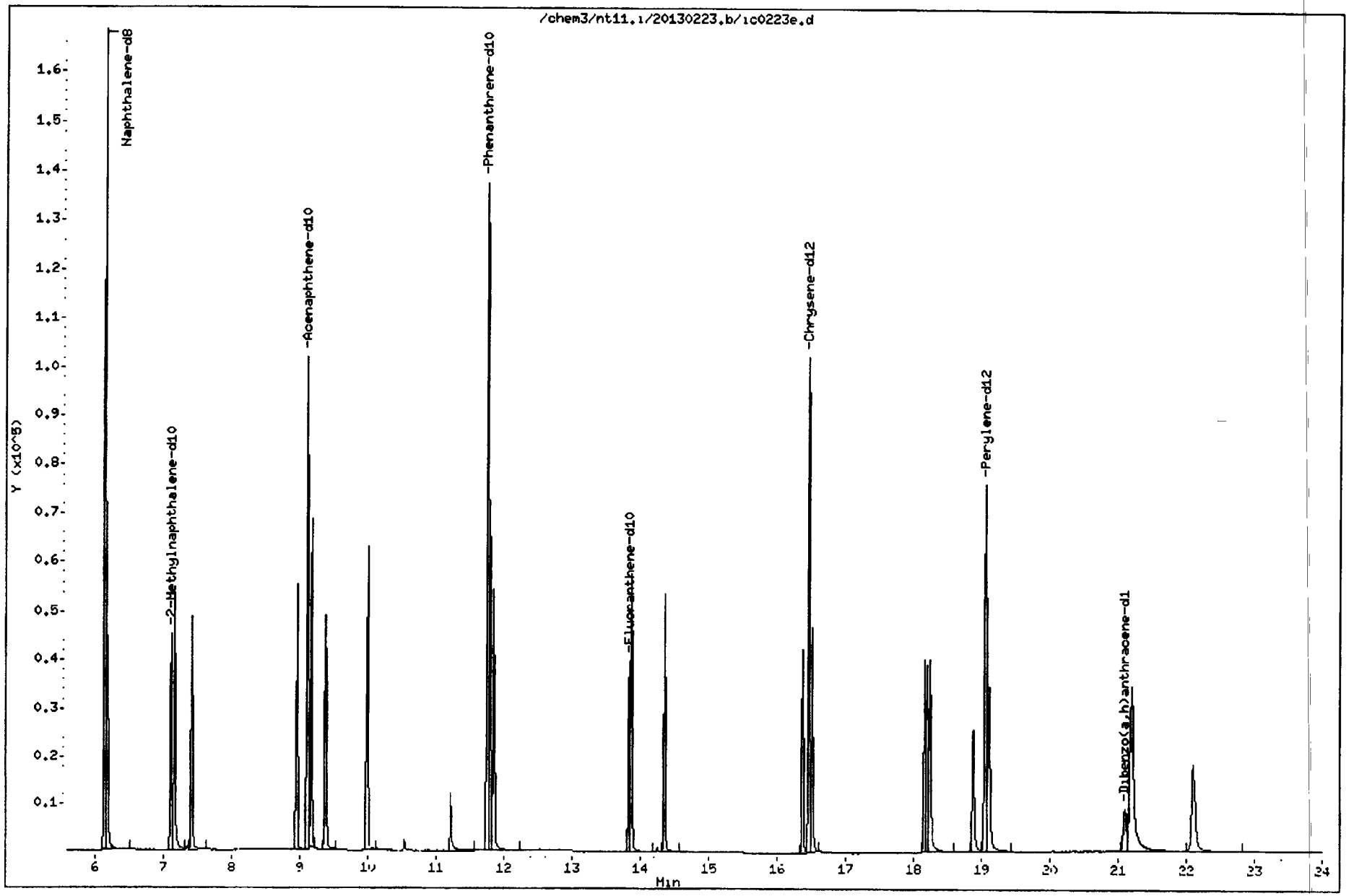
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.1/20130223.b/1c0223e.d
Date : 23-FEB-2013 11:48
Client ID:
Sample Info: SIM 50

Column phase: Rx1-17Sil MS

Instrument: nt11.1

Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0223e.d

Lab ID: SIM 50, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223f.d
Lab Smp Id: SIM 100
Inj Date : 23-FEB-2013 12:17
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 100
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.134	6.134	(1.000)	249926	200.000	
	5 Naphthalene	128	6.165	6.165	(1.005)	140175	100.000	102
$	6 2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	81065	100.000	103
	7 2-Methylnaphthalene	142	7.163	7.163	(1.168)	87543	100 000	102
	8 1-methylnaphthalene	142	7.415	7.415	(1.209)	87526	100 000	102
	10 Acenaphthylene	152	8.950	8 950	(0.983)	119998	100.000	98 3
*	11 Acenaphthene-d10	164	9.105	9.105	(1 000)	136768	200.000	
	12 Acenaphthene	153	9.172	9.172	(1 007)	82016	100.000	102
	14 Dibenzofuran	168	9.382	9.382	(1.030)	122106	100.000	104
	15 Fluorene	166	9.991	9.991	(1.097)	87735	100.000	100
*	18 Phenanthrene-d10	188	11.751	11.751	(1.000)	209065	200.000	
	19 Phenanthrene	178	11.796	11.796	(1.004)	134135	100.000	104
	20 Anthracene	178	11.851	11.851	(1.008)	123416	100.000	102
$	23 Fluoranthene-d10	212	13.840	13.840	(1.178)	109122	100.000	101
	24 Fluoranthene	202	13.869	13.869	(1.180)	130796	100.000	102
	25 Pyrene	202	14.359	14.359	(0.872)	129387	100.000	101
	28 Benzo(a)anthracene	228	16.367	16.367	(0.994)	106951	100 000	101
*	29 Chrysene-d12	240	16.458	16.458	(1.000)	152652	200.000	
	30 Chrysene	228	16 508	16 508	(1.003)	113395	100.000	104
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	107483	100.000	104
	45 Benzo(k)fluoranthene	252	18.195	18.195	(0.955)	108485	100.000	96.6
	46 Benzo(j)fluoranthene	252	18.243	18.243	(0.958)	122922	100.000	108
	34 Benzo(a)pyrene	252	18.877	18.877	(0.991)	88577	100.000	102
*	35 Perylene-d12	264	19 050	19.050	(1.000)	130359	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.196	21.196	(1 113)	110979	100 000	103
$	36 Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	76918	100.000	103

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	89034	100.000	103
39 Benzo(g,h,i)perylene	276	22.093	22.093	(1.160)	98017	100.000	102
47 Perylene	252	19.108	19.108	(1.003)	102650	100.000	103

2.23.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223f.d
Lab Smp Id: SIM 100
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	249926	-2.10
11 Acenaphthene-d10	142891	71446	285782	136768	-4.29
18 Phenanthrene-d10	220853	110426	441706	209065	-5.34
29 Chrysene-d12	162525	81262	325050	152652	-6.07
35 Perylene-d12	139028	69514	278056	130359	-6.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.75	-0.09
29 Chrysene-d12	16.47	15.97	16.97	16.46	-0.05
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

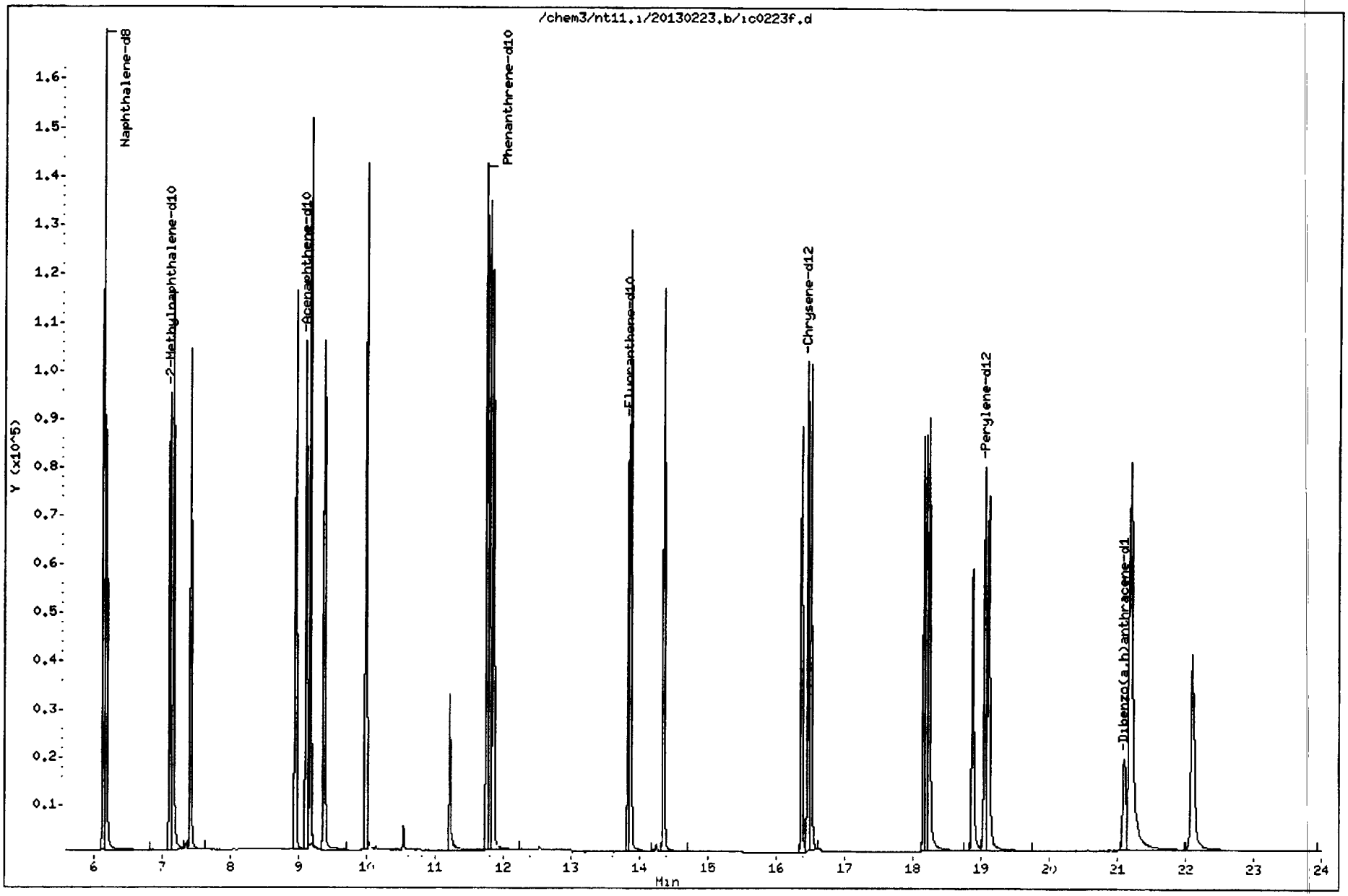
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.1/20130223.b/1c0223f.d
Date : 23-FEB-2013 12:17
Client ID:
Sample Info: SIM 100

Column phase: Rx1-17Sil MS

Instrument: nt11.1

Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0223f.d

Lab ID: SIM 100, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 2·26·13 Analysis: low sim PNA Analyst: VTB

GC Program: lowsim Column No: 14123 Column Type: RX.-175.1ms

Instrument Tune (.U or .CT.): df0226 EM Voltage: 2424

Calibration File: df0226 Curve Date: 2·23·13 Injection Vol.: 2ul

IS/SS	Ical/Ccal	LCS/ICV
2005-1	2077-1	2079-1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130226.b

	Time	Filename	LabID	ClientId	DF									
1	1503	df0226.d	DFTPP 10		1	NO ISTDS FOUND								
2	1519	cc0226.d	SIM 250		1	6.13	254099	9.10	140447	11.75	216415	16.46	161300	19.06	137382
3	1548	207901.d	SIM ICV-250		1	6.13	255409	9.11	140960	11.75	215819	16.46	154729	19.05	128752
4	1617	we64mb.d	WE64MBW1	WE64MBW1	1	6.13	261205	9.11	144571	11.75	230248	16.46	158259	19.05	127887
5	1645	we64sb.d	WE64LCSW1	WE64LCSW1	1	6.13	261298	9.11	150356	11.75	233636	16.47	164758	19.05	144129
6	1714	we64sbd.d	WE64LCSDW1	WE64LCSDW1	1	6.13	267291	9.11	153460	11.75	238537	16.46	168963	19.05	140625
7	1743	we64qls1.d	WE64QLS1		1	6.13	260997	9.11	145457	11.75	231073	16.46	159741	19.05	131463
8	1812	we64a.d	WE64A	JOR-EF-13022	1	6.13	263867	9.11	151805	11.75	235536	16.46	164860	19.05	140783

2·27·13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

Data File: /chem3/nt11.i/20130226.b/df0226.d

Date : 26-FEB-2013 15:03

Client ID:

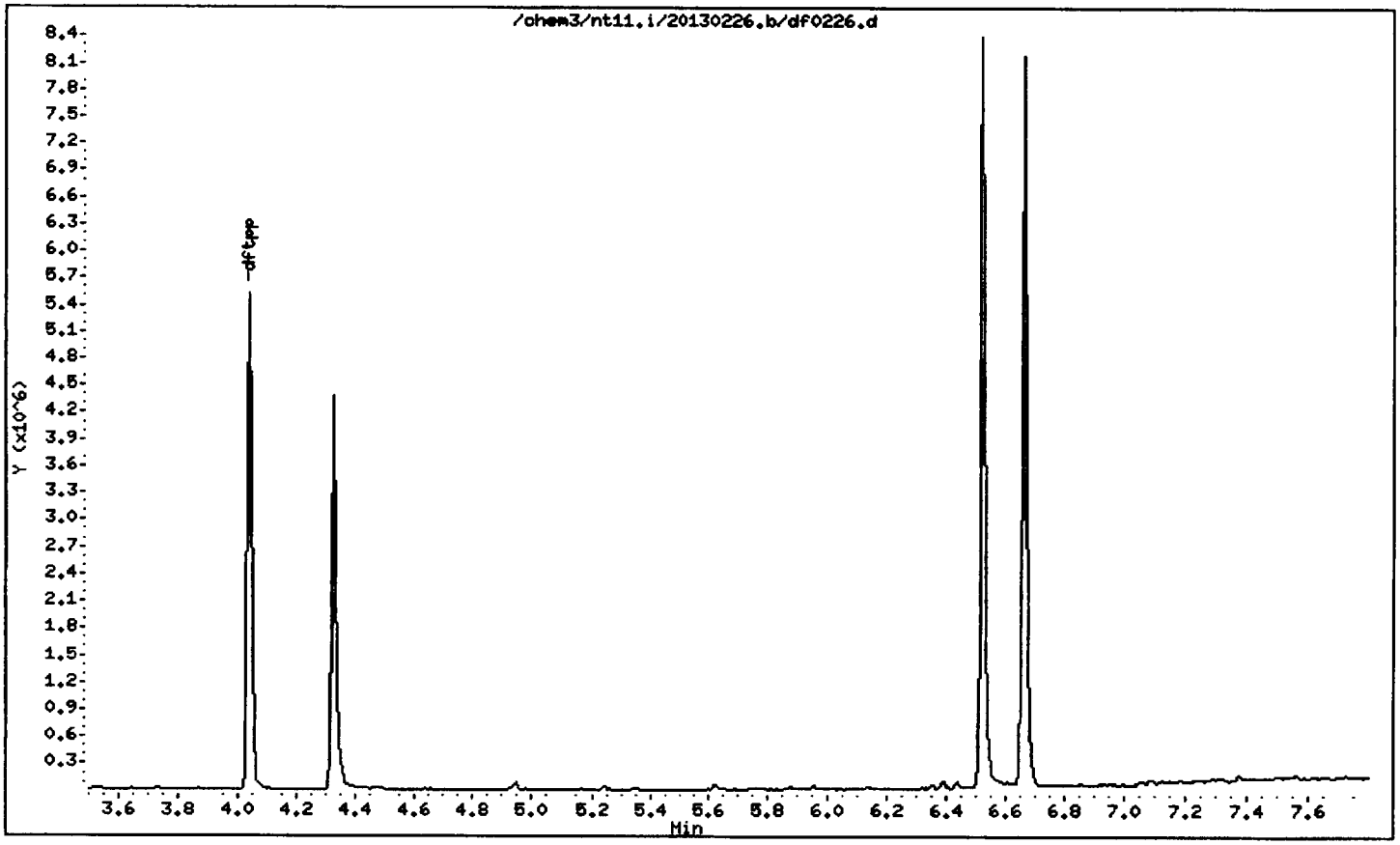
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130226.b/df0226.d

Date : 26-FEB-2013 15:03

Client ID:

Instrument: nt11.i

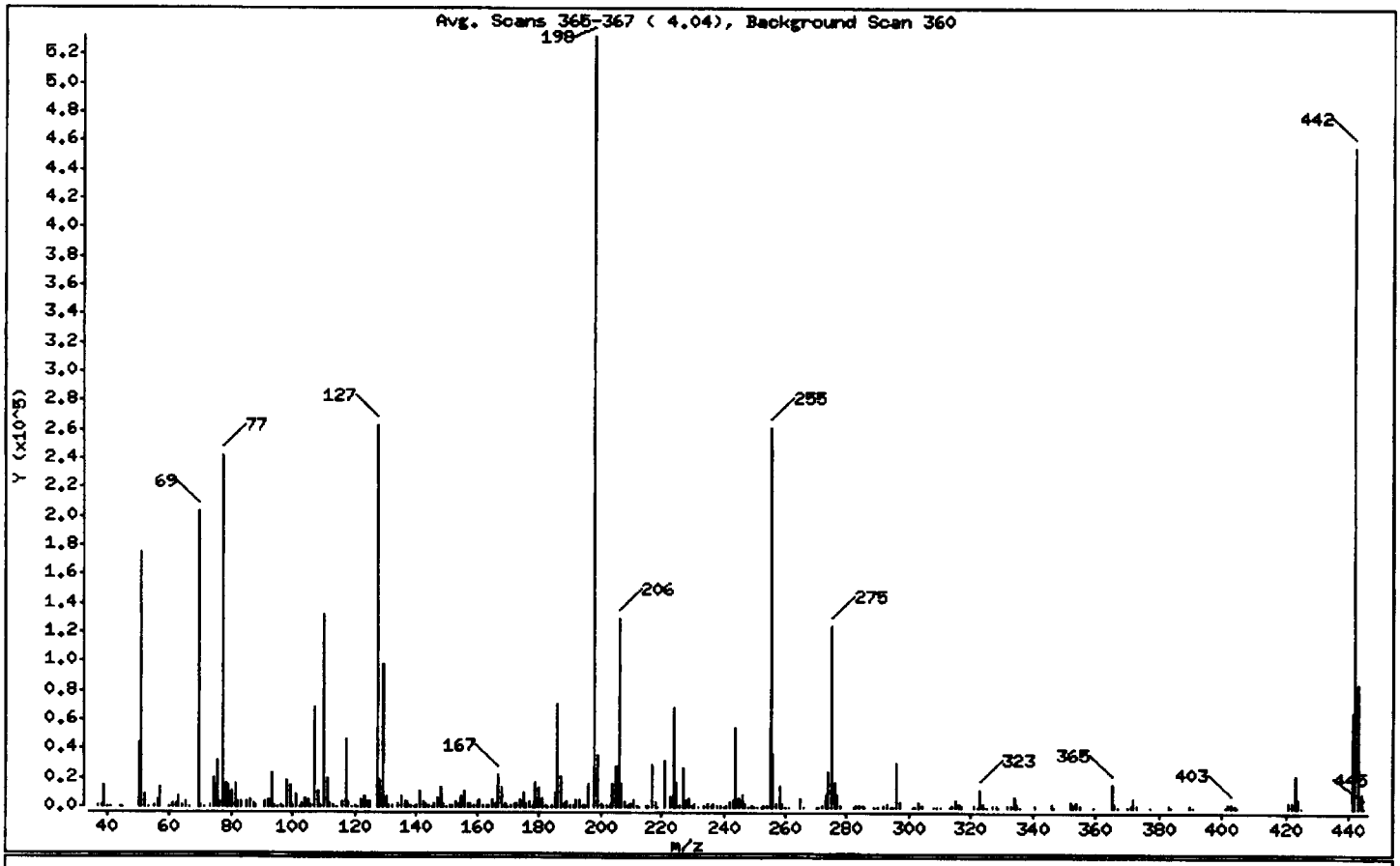
Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	32.87
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	38.21
70	Less than 2.00% of mass 69	0.24 (0.62)
127	10.00 - 80.00% of mass 198	49.53
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.71
275	10.00 - 60.00% of mass 198	23.38
365	Greater than 1.00% of mass 198	2.89
441	0.01 - 24.00% of mass 442	12.42 (14.48)
442	50.00 - 200.00% of mass 198	86.81
443	15.00 - 24.00% of mass 442	16.12 (18.79)

Data File: /chem3/nt11.i/20130226.b/df0226.d

Date : 26-FEB-2013 15:03

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0226.d

Spectrum: Avg. Scans 365-367 (4.04), Background Scan 360

Location of Maximum: 198.00

Number of points: 289

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	227	123.00	7385	199.00	35752	285.00	1818
37.00	633	124.00	3087	200.00	2183	286.00	327
38.00	1808	125.00	3154	201.00	1035	289.00	394
39.00	14814	127.00	263808	202.00	1782	290.00	234
40.00	116	128.00	18664	203.00	2945	292.00	848
41.00	184	129.00	97768	204.00	15926	293.00	2247
44.00	178	130.00	7525	205.00	28768	294.00	491
45.00	209	131.00	1287	206.00	130040	295.00	482
49.00	150	132.00	931	207.00	15715	296.00	30744
50.00	44144	134.00	2852	208.00	4245	297.00	4190
51.00	175040	135.00	7911	209.00	1279	301.00	174
52.00	8415	136.00	3095	210.00	2052	302.00	535
53.00	311	137.00	3313	211.00	4695	303.00	3449
55.00	1197	138.00	1387	212.00	955	304.00	1054
56.00	5058	139.00	596	213.00	174	308.00	398
57.00	13289	140.00	1075	215.00	1377	309.00	205
58.00	289	141.00	10651	216.00	1623	310.00	170
60.00	191	142.00	3981	217.00	29416	313.00	410
61.00	2226	143.00	2595	218.00	3979	314.00	1464
62.00	2344	144.00	968	219.00	327	315.00	4861
63.00	7517	145.00	308	221.00	32096	316.00	2273
64.00	1078	146.00	1857	223.00	7334	317.00	792
65.00	4246	147.00	5810	224.00	69048	321.00	838
66.00	394	148.00	13212	225.00	17256	322.00	483
69.00	203520	149.00	2616	226.00	1744	323.00	12291
70.00	1259	150.00	584	227.00	26808	324.00	2021
71.00	201	151.00	935	228.00	4572	325.00	185
73.00	1493	152.00	1720	229.00	6418	327.00	1781
74.00	19976	153.00	3434	230.00	957	328.00	774
75.00	31904	154.00	2942	231.00	2405	329.00	327
76.00	3906	155.00	6768	232.00	173	332.00	922
77.00	242432	156.00	10489	234.00	1824	333.00	1221
78.00	16504	157.00	2493	235.00	2419	334.00	7589
79.00	14521	158.00	2167	236.00	1541	335.00	2053
80.00	10671	159.00	1631	237.00	2783	336.00	348

UR09 : 01329

Data File: /ohem3/nt11.i/20130226.b/df0226.d

Date : 26-FEB-2013 15:03

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0226.d
Spectrum: Avg. Scans 365-367 (4.04), Background Scan 360
Location of Maximum: 198.00
Number of points: 289

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	16194	160.00	3556	238.00	631	341.00	1744
82.00	4145	161.00	4839	239.00	1140	346.00	2311
83.00	4191	162.00	1832	240.00	567	347.00	308
85.00	3076	163.00	616	241.00	1729	352.00	3526
86.00	4599	164.00	638	242.00	3422	353.00	2622
87.00	2703	165.00	4860	243.00	4292	354.00	3464
88.00	1209	166.00	2388	244.00	55288	355.00	687
91.00	3968	167.00	21720	245.00	5901	359.00	186
92.00	4324	168.00	13399	246.00	8596	365.00	15376
93.00	23304	169.00	1985	247.00	1876	366.00	2318
94.00	1784	170.00	602	248.00	558	367.00	247
95.00	607	171.00	831	249.00	1714	370.00	377
96.00	1216	172.00	2191	250.00	509	371.00	801
97.00	576	173.00	2318	251.00	279	372.00	5576
98.00	18440	174.00	5145	252.00	231	373.00	1467
99.00	14972	175.00	9497	253.00	1240	377.00	314
100.00	919	176.00	2939	254.00	1519	383.00	1766
101.00	8308	177.00	4182	255.00	261760	384.00	196
102.00	275	178.00	1093	256.00	36992	390.00	850
103.00	2808	179.00	17688	257.00	2713	391.00	465
104.00	5809	180.00	12963	258.00	14952	401.00	209
105.00	4723	181.00	6212	259.00	2065	402.00	2602
106.00	1340	182.00	998	260.00	183	403.00	2973
107.00	68008	183.00	226	261.00	234	404.00	1506
108.00	10887	184.00	1119	265.00	5607	405.00	168
109.00	864	185.00	9193	266.00	578	421.00	3675
110.00	132736	186.00	71232	270.00	191	422.00	3444
111.00	20040	187.00	20600	271.00	553	423.00	22080
112.00	2617	188.00	2429	272.00	922	424.00	5565
113.00	701	189.00	3467	273.00	8118	425.00	470
114.00	173	190.00	1080	274.00	24296	441.00	66168
116.00	3243	191.00	1632	275.00	124528	442.00	457024
117.00	46488	192.00	5208	276.00	16936	443.00	85872
118.00	3669	193.00	5379	277.00	8287	444.00	9260
119.00	480	194.00	1478	278.00	1578	445.00	188

Data File: /chem3/nt11.i/20130226.b/df0226.d

Date : 26-FEB-2013 15:03

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0226.d

Spectrum: Avg. Scans 365-367 (4.04), Background Scan 360

Location of Maximum: 198.00

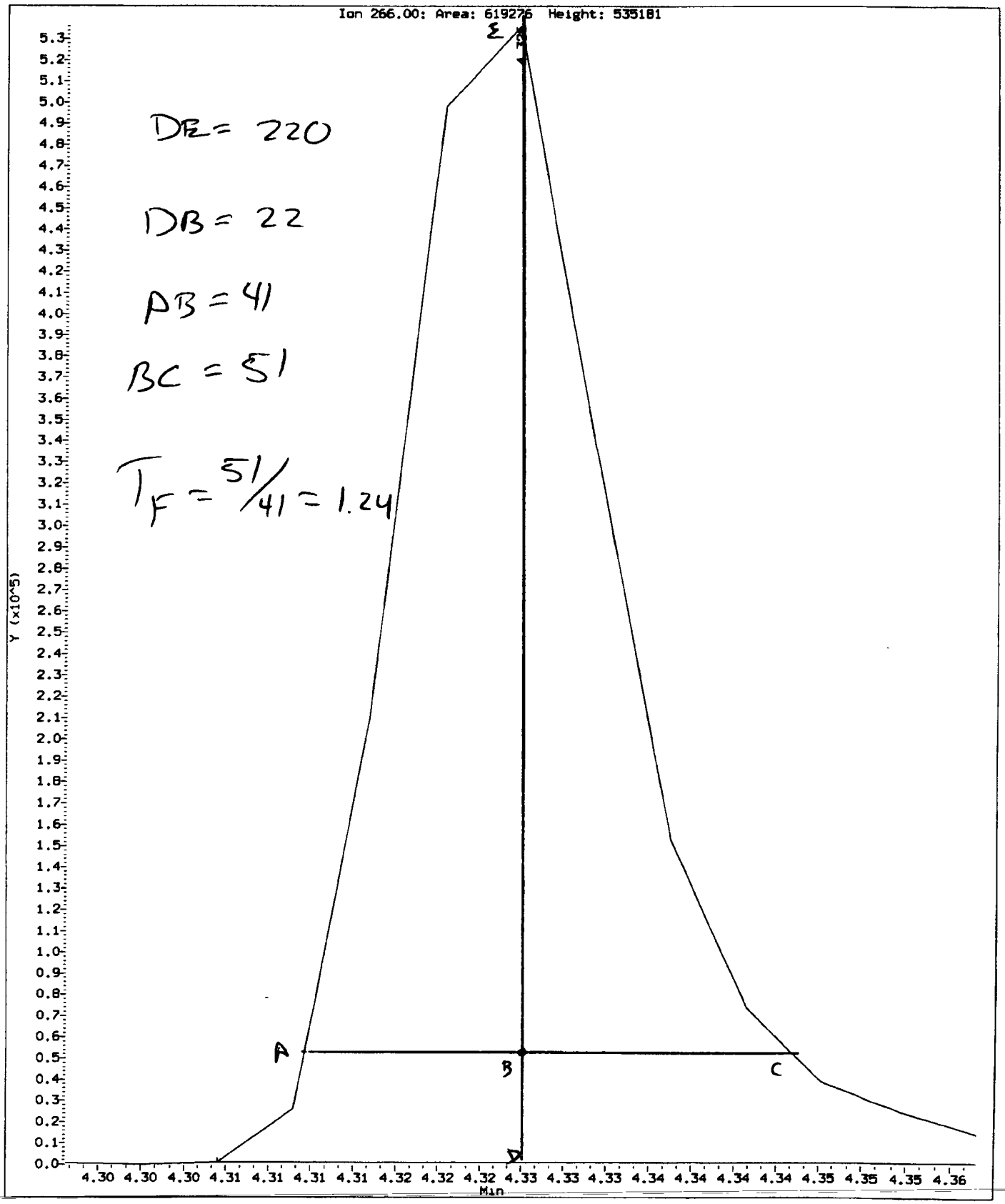
Number of points: 289

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	1054	195.00	822	282.00	195		
121.00	426	196.00	15742	283.00	1227		
122.00	4503	198.00	532608	284.00	688		

WR99:01330

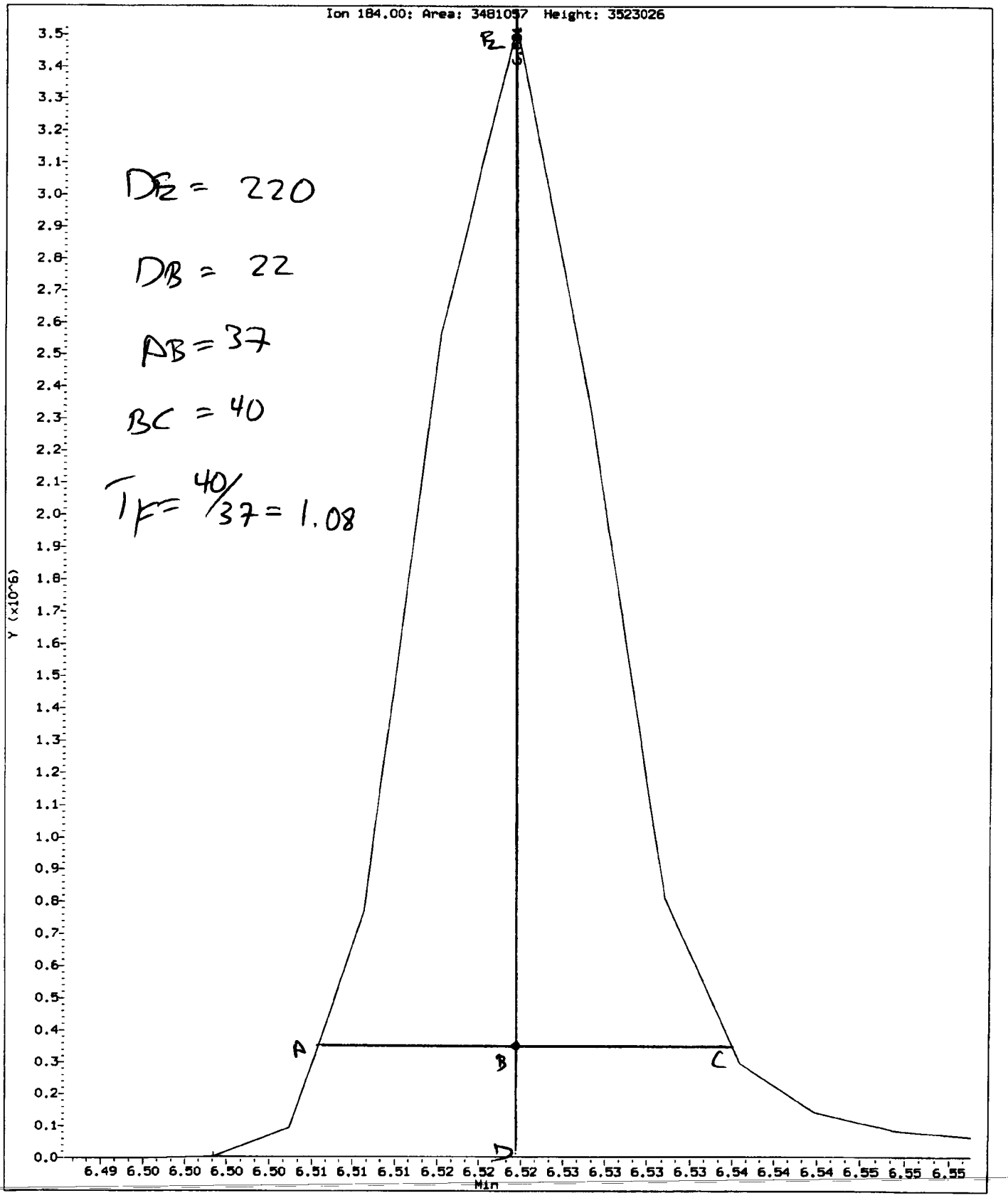
Data File: /chem3/nt11.i/20130226.b/DDT.b/df0226.d
Injection Date: 26-FEB-2013 15:03
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20130226.b/DDT.b/df0226.d
Injection Date: 26-FEB-2013 15:03
Instrument: nt11.i
Client Sample ID:

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130226.b/DDT.b/df0226.d
Method: /chem3/nt11.i/20130226.b/DDT.b/sw846ddt.m
Analysis Date: 26-FEB-2013 15:03

ARI ID: DFTPP 10
Misc:
Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.326	619276
Benzidine	6.521	3481057
4,4'-DDE	5.955	4773
4,4'-DDD	6.436	16258
4,4'-DDT	6.660	1666007

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(4773 + 16258) * 100}{(4773 + 16258 + 1666007)}$$

DDT Percent Breakdown = 1.2 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130226.b/207901.d
Lab Smp Id: SIM ICV-250
Inj Date : 26-FEB-2013 15:48
Operator : VTS Inst ID: nt11.i
Smp Info : SIM ICV-250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130226.b/lowsim.m
Meth Date : 26-Feb-2013 15:56 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/L)
* 4	Naphthalene-d8	136	6.134	6.133	(1.000)	255409	200.000	
5	Naphthalene	128	6.165	6.165	(1.005)	341054	243.878	244(R)
$ 6	2-Methylnaphthalene-d10	152	Compound Not Detected.					
7	2-Methylnaphthalene	142	7.163	7.163	(1.168)	227744	260.203	260(R)
8	1-methylnaphthalene	142	7.415	7 415	(1.209)	209111	237.667	238(R)
10	Acenaphthylene	152	8.950	8 950	(0.983)	305146	242.452	242(R)
* 11	Acenaphthene-d10	164	9.105	9.105	(1.000)	140960	200.000	
12	Acenaphthene	153	9.172	9.171	(1.007)	208708	251.220	251(R)
14	Dibenzofuran	168	9.371	9.371	(1.029)	299836	247.754	248(R)
15	Fluorene	166	9.991	9.991	(1.097)	230724	255.372	255(R)
* 18	Phenanthrene-d10	188	11.751	11.751	(1.000)	215819	200.000	
19	Phenanthrene	178	11.796	11.795	(1.004)	351113	263.384	263(R)
20	Anthracene	178	11.851	11.851	(1 008)	338584	270 804	271(R)
$ 23	Fluoranthene-d10	212	Compound Not Detected.					
24	Fluoranthene	202	13.868	13 868	(1.180)	329852	250 282	250

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/L)
	25 Pyrene	202	14.358	14.358	(0.872)	367313	283.474	283
	28 Benzo(a)anthracene	228	16.367	16.366	(0.994)	285167	266.330	266
*	29 Chrysene-d12	240	16.458	16.458	(1.000)	154729	200.000	
	30 Chrysene	228	16.508	16.508	(1.003)	293913	265.626	266(R)
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	269023	263.644	264
	45 Benzo(k)fluoranthene	252	18.195	18.194	(0 955)	311636	280.851	281
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	18.877	18.877	(0.991)	256553	297 900	298(R)
*	35 Perylene-d12	264	19.050	19.059	(1.000)	128752	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.196	21.196	(1.113)	273968	258.457	258
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	212584	249.431	249
	39 Benzo(g,h,i)perylene	276	22.093	22.093	(1.160)	245681	259.033	259
	47 Perylene	252	19.107	19.107	(1.003)	252923	257.806	258

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

VD
2.27.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 207901.d
Lab Smp Id: SIM ICV-250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130226.b/lowsim.m
Misc Info:

Calibration Date: 26-FEB-2013
Calibration Time: 15:19

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	255409	0.05
11 Acenaphthene-d10	142891	71446	285782	140960	-1.35
18 Phenanthrene-d10	220853	110426	441706	215819	-2.28
29 Chrysene-d12	162525	81262	325050	154729	-4.80
35 Perylene-d12	139028	69514	278056	128752	-7.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.10	8.60	9.60	9.11	0.00
18 Phenanthrene-d10	11.75	11.25	12.25	11.75	0.00
29 Chrysene-d12	16.46	15.96	16.96	16.46	0.00
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130226
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: SIM ICV-250
Level: LOW Operator: VTS
Data Type: MS DATA SampleType: LCS
SpikeList File: waterlcs.spk Quant Type: ISTD
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130226.b/lowsim.m
Misc Info:

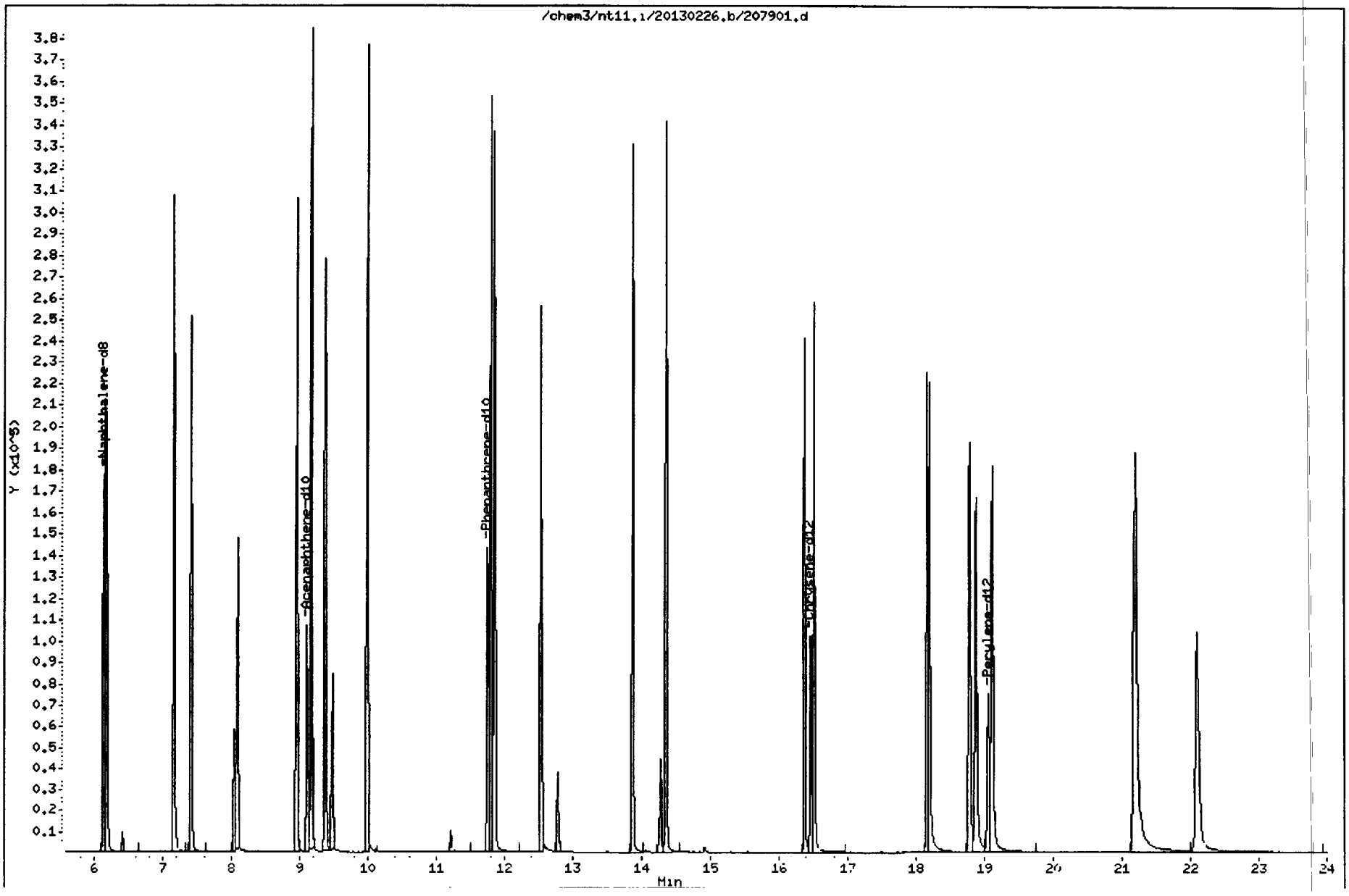
2/28/12
70-130

SPIKE	COMPOUND	CONC ADDED ng/L	CONC RECOVERED ng/L	% RECOVERED	LIMITS
5	Naphthalene	249	244	97.94*	37-90
7	2-Methylnaphthalen	249	260	104.50*	39-90
8	1-methylnaphthalen	249	238	95.45*	38-95
10	Acenaphthylene	249	242	97.37*	35-95
12	Acenaphthene	249	251	100.89*	38-94
14	Dibenzofuran	249	248	99.50*	36-94
15	Fluorene	249	255	102.56*	41-102
19	Phenanthrene	249	263	105.78*	41-101
20	Anthracene	249	271	108.76*	28-101
24	Fluoranthene	249	250	100.52	49-114
25	Pyrene	249	283	113.85	42-114
28	Benzo(a)anthracene	249	266	106.96	42-111
30	Chrysene	249	266	106.68*	46-106
44	Benzo(b)fluoranthe	249	264	105.88	30-160
45	Benzo(k)fluoranthe	249	281	112.79	30-160
46	Benzo(j)fluoranth	249	0.00	*	30-160
34	Benzo(a)pyrene	249	298	119.64*	20-99
37	Indeno(1,2,3-cd)py	249	258	103.80	32-113
38	Dibenzo(a,h)anthra	249	249	100.17	30-113
39	Benzo(g,h,i)peryle	249	259	104.03	27-113
47	Perylene	249	258	103.54	30-160

SURROGATE	COMPOUND	CONC ADDED ng/L	CONC RECOVERED ng/L	% RECOVERED	LIMITS
$ 6	2-Methylnaphthale	300	0.00	*	35-94
$ 23	Fluoranthene-d10	300	0.00	*	30-160
$ 36	Dibenzo(a,h)anthr	300	0.00	*	26-115

Data File: /chem3/nt11.i/20130226.b/207901.d
Date : 26-FEB-2013 15:48
Client ID:
Sample Info: SIM ICV-250
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: WTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - 207901.d

Lab ID: SIM ICV-250, Method: lowsim.m, Instrument: nt11.i, Date: 26-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM PAH Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WR99 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 2.23.13 Analysis Start Date: 6.8.13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N / ✓	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
ICAL Q Flag applied?	Y / N / ✓	LCS / LCSD RPD ≤ 30%?	NA / 4%
CCAL Q flag applied?	Y / N / ✓	~~MS / MSD Recovery~~ in Control?	Y / N / NA
Surrogate Recovery met?	Y / N / ✓	~~MS / MSD RPD~~ ≤ 30%?	NA / NA
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below.

- D reported at 1X and 3X
- level IV package

(Review 1) Analyst: [signature] **Date:** 6.8.13

(Review 2) Reviewer: [signature] **Date:** 6/10/13

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

6.8.13 Analysis: low sim pNP Analyst: VD

Program: low sim Column No: 14123 Column Type: Rx; -175; 1 ms

Instrument Tune (.U or .CT.): 130601.U EM Voltage: 1329

Calibration File: df0608 Curve Date: 2.23.13 Injection Vol.: 2 ul

IS/SS	Ical/Ccal	LCS/ICV
2005-1	2077-1	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130608.b

	Time	Filename	LabID	ClientId	DF								
1	1125	df0608.d	DFTPP 10		1	NO ISTDS FOUND							
2	1144	cc0608.d	SIM 250		1	5.99	347438	8.94	189057	11.59	238826	16.28	152482	18.81	143287
3	1219	wr99mb.d	WR99MBW1	WR99MBW1	1	5.99	321688	8.94	167973	11.59	223753	16.28	128263	18.81	115847
4	1252	wr99sb.d	WR99LCSW1	WR99LCSW1	1	5.99	308391	8.94	168261	11.59	230221	16.28	144124	18.81	128071
5	1323	wr99sbd.d	WR99LCSDW1	WR99LCSDW1	1	5.99	309684	8.94	169813	11.59	224578	16.28	134216	18.81	120366
6	1355	wr99a.d	WR99A	KC-VT-1593-2	1	5.98	339111	8.94	176688	11.59	238647	16.28	133547	18.81	118137
7	1449	wr99adl.d	WR99A	KC-VT-1593-2	3	5.98	302902	8.94	159634	11.59	216123	16.28	120145	18.82	108969
8	1614	ws34mb.d	WS34MBS1	WS34MBS1	1	5.98	306217	8.94	155832	11.59	197666	16.28	111943	18.82	99742
9	1646	ws34sb.d	WS34LCSS1	WS34LCSS1	1	5.98	297013	8.94	158776	11.59	204918	16.28	122098	18.81	109036
10	1718	ws34sbd.d	WS34LCSDS1	WS34LCSDS1	1	5.98	298579	8.94	154948	11.59	195151	16.28	113058	18.81	101433
11	1751	ws34a.d	WS34A	201305311030	1	5.98	312389	8.94	182223	11.59	229396	16.28	110934	18.82	113448
12	1823	ws35a.d	WS35A	201305311130	1	5.98	289341	8.94	159475	11.59	196701	16.28	97850	18.82	103353

6.11.13 VD

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130608.b

ARI Job No.: SIM Method: lowsim.m Instrument: nt11.i Date: 08-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1144	cc0608.d	SIM 250		1	NO MANUAL INTEGRATION
1125	df0608.d	DFTPP 10		1	NO MANUAL INTEGRATION
1355	wr99a.d	WR99A	KC-VT-1593	1	NO MANUAL INTEGRATION
1449	wr99adl.d	WR99A	KC-VT-1593	3	NO MANUAL INTEGRATION
1219	wr99mb.d	WR99MBW1	WR99MBW1	1	NO MANUAL INTEGRATION
1252	wr99sb.d	WR99LCSW1	WR99LCSW1	1	NO MANUAL INTEGRATION
1323	wr99sbd.d	WR99LCSDW1	WR99LCSDW1	1	NO MANUAL INTEGRATION

Accepted - 6/9/13

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130608.b

Instrument: nt11.i Date: 08-JUN-2013 Method: lowsim.m

INITIAL CAL: 23-FEB-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 08-JUN-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem3/nt11.i/20130608.b/df0608.d

Date : 08-JUN-2013 11:25

Client ID:

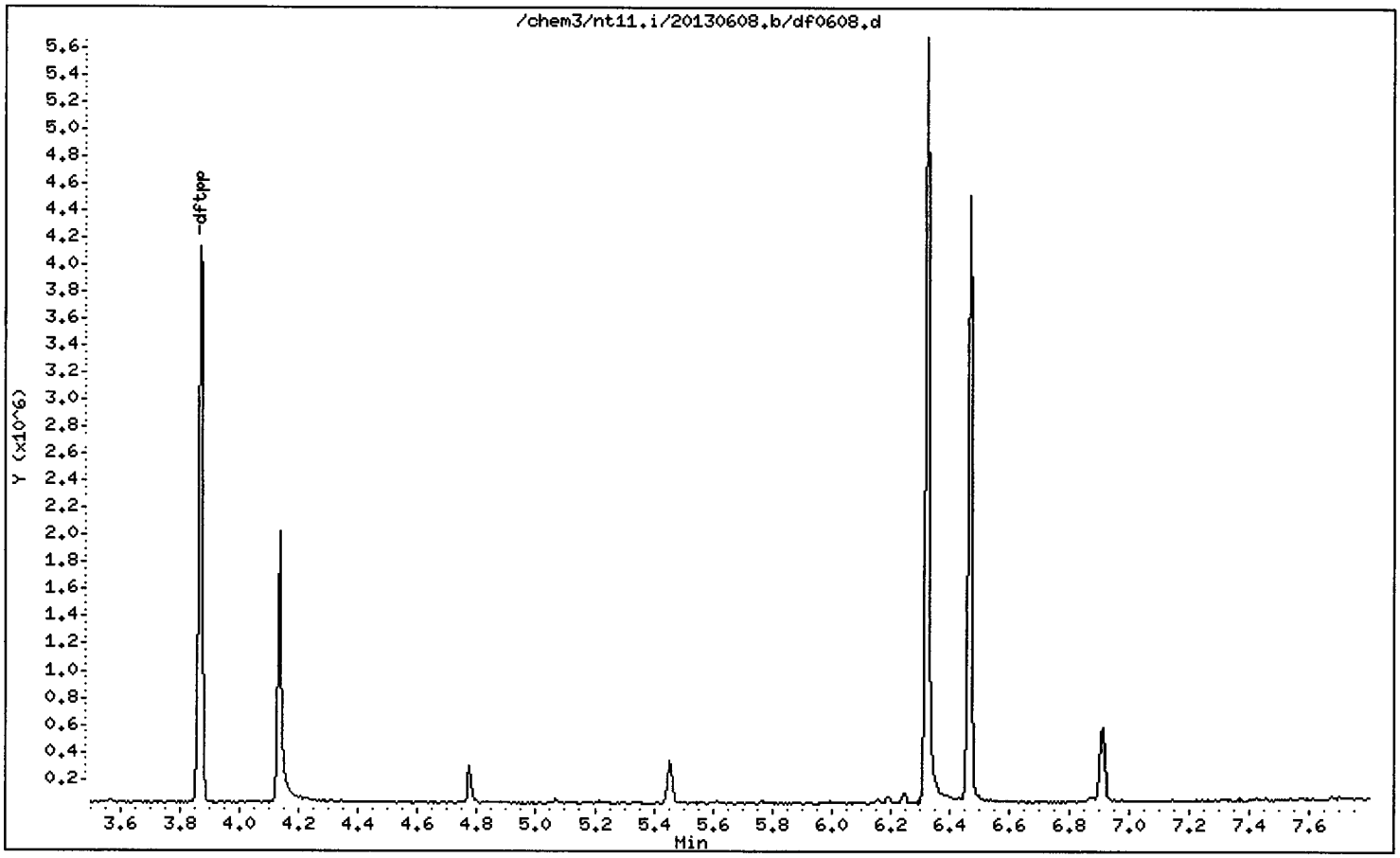
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130608.b/df0608.d

Date : 08-JUN-2013 11:25

Client ID:

Instrument: nt11.i

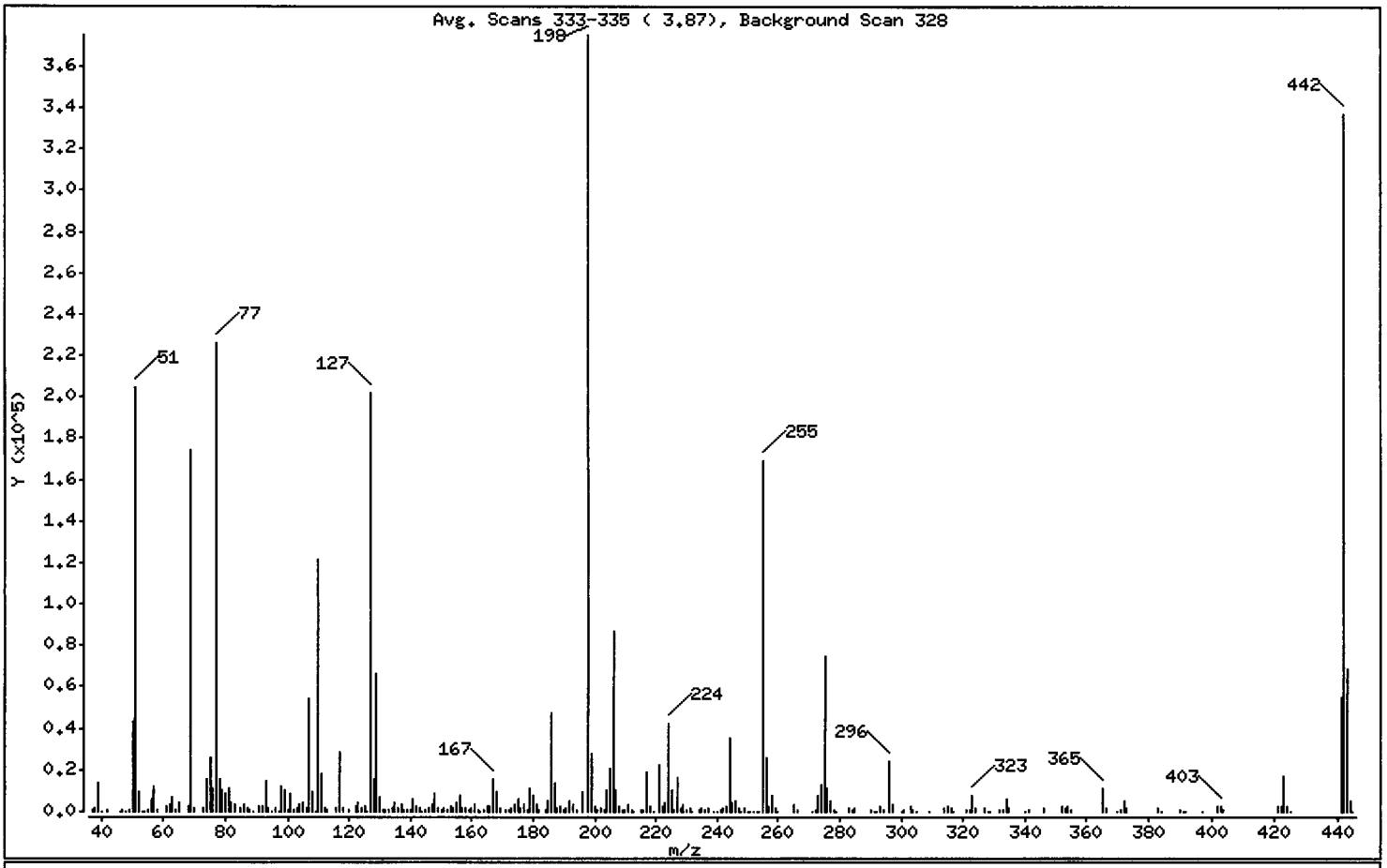
Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	54.39
68	Less than 2.00% of mass 69	0.64 (1.38)
69	Mass 69 relative abundance	46.34
70	Less than 2.00% of mass 69	0.35 (0.75)
127	10.00 - 80.00% of mass 198	53.83
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.28
275	10.00 - 60.00% of mass 198	20.00
365	Greater than 1.00% of mass 198	2.95
441	0.01 - 24.00% of mass 442	14.69 (16.35)
442	50.00 - 200.00% of mass 198	89.85
443	15.00 - 24.00% of mass 442	18.42 (20.51)

Data File: /chem3/nt11.i/20130608.b/df0608.d

Date : 08-JUN-2013 11:25

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0608.d
Spectrum: Avg. Scans 333-335 (3.87), Background Scan 328
Location of Maximum: 198.00
Number of points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	793	122.00	2918	193.00	3803	276.00	11136
38.00	2135	123.00	4136	194.00	738	277.00	5388
39.00	13842	124.00	1851	196.00	9405	278.00	842
40.00	258	125.00	2888	198.00	375488	279.00	174
42.00	438	126.00	401	199.00	27336	283.00	1402
46.00	266	127.00	202112	200.00	2165	284.00	556
47.00	601	128.00	15409	201.00	765	285.00	1341
48.00	167	129.00	66688	202.00	1320	290.00	482
49.00	1069	130.00	6611	203.00	1273	291.00	183
50.00	43464	131.00	851	204.00	10488	292.00	374
51.00	204224	132.00	722	205.00	21136	293.00	2214
52.00	9520	133.00	536	206.00	86792	294.00	488
53.00	169	134.00	1858	207.00	10217	296.00	23936
54.00	168	135.00	4656	208.00	2645	297.00	3476
55.00	970	136.00	2036	209.00	770	300.00	189
56.00	5870	137.00	3251	210.00	516	301.00	536
57.00	12128	138.00	694	211.00	3203	303.00	2475
58.00	653	139.00	649	212.00	461	304.00	471
61.00	2251	140.00	849	213.00	175	305.00	188
62.00	3044	141.00	5829	215.00	509	309.00	215
63.00	6579	142.00	2421	216.00	683	314.00	1602
64.00	864	143.00	1375	217.00	19384	315.00	2405
65.00	4721	144.00	370	218.00	2455	316.00	1932
68.00	2397	145.00	436	219.00	186	317.00	228
69.00	173952	146.00	1489	221.00	22256	321.00	724
70.00	1312	147.00	3493	222.00	2446	322.00	584
73.00	1762	148.00	8469	223.00	4012	323.00	7579
74.00	15627	149.00	1847	224.00	42464	324.00	1381
75.00	26184	150.00	799	225.00	10075	327.00	1371
76.00	10876	151.00	1496	226.00	596	328.00	373
77.00	225984	152.00	718	227.00	16792	329.00	234
78.00	15755	153.00	2226	228.00	1704	332.00	993
79.00	10207	154.00	1911	229.00	3800	333.00	650
80.00	8922	155.00	4180	230.00	540	334.00	5799
81.00	11316	156.00	7699	231.00	1823	335.00	1945

Date : 08-JUN-2013 11:25

Client ID: Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

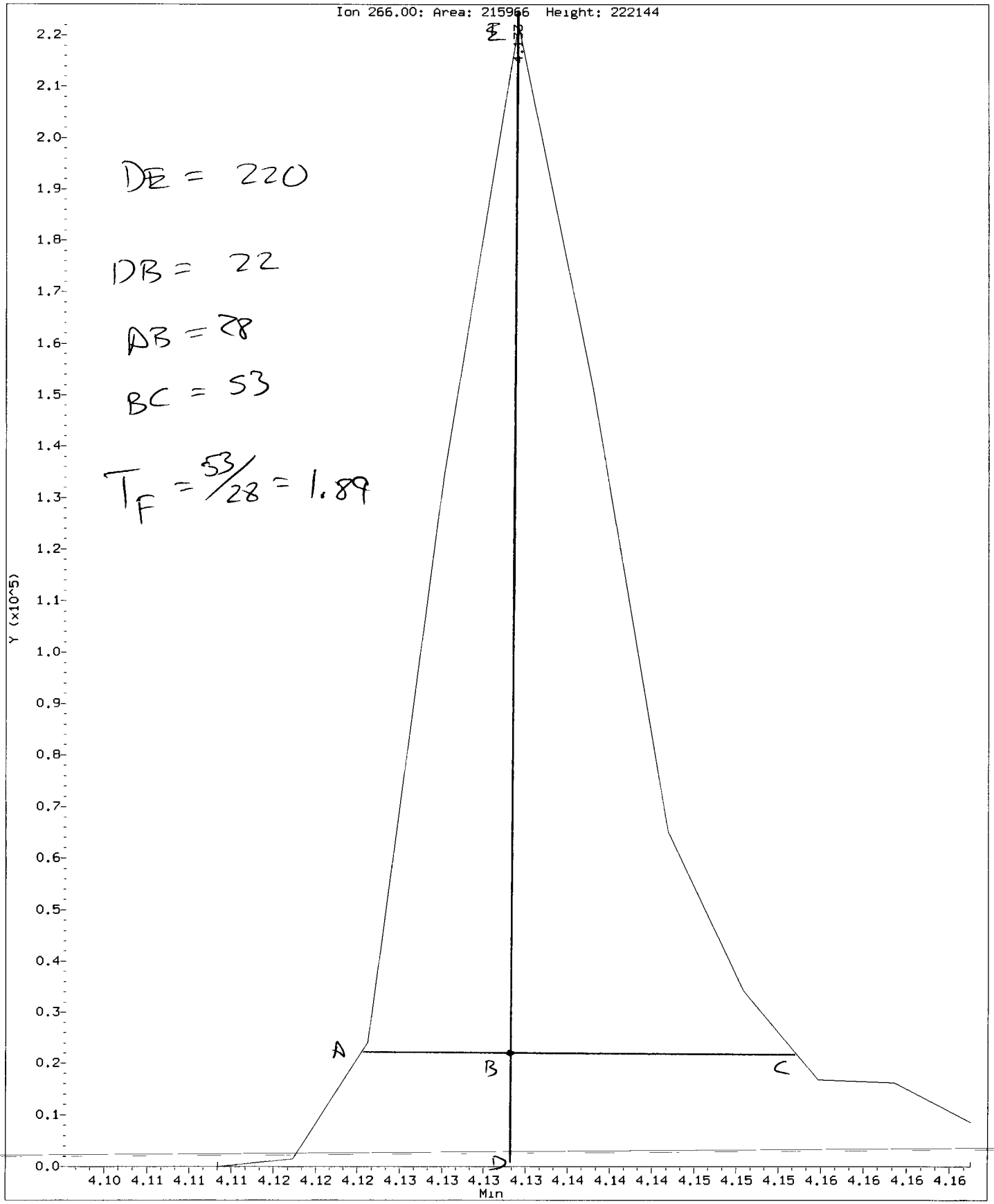
Column phase: Rxi-17silms Column diameter: 0.25

Data File: df0608.d
Spectrum: Avg. Scans 333-335 (3.87), Background Scan 328
Location of Maximum: 198.00
Number of points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	4381	157.00	1641	232.00	235	340.00	249
83.00	3342	158.00	2147	234.00	914	341.00	1041
85.00	1555	159.00	1151	235.00	1629	346.00	1557
86.00	3188	160.00	1966	236.00	966	352.00	2863
87.00	1543	161.00	3293	237.00	1492	353.00	2042
88.00	907	162.00	985	239.00	183	354.00	2681
89.00	168	163.00	224	240.00	203	355.00	1016
91.00	2824	164.00	607	241.00	1154	365.00	11090
92.00	2799	165.00	2561	242.00	1771	366.00	1898
93.00	14632	166.00	2351	243.00	2602	370.00	286
94.00	1716	167.00	15749	244.00	35560	371.00	583
95.00	403	168.00	9485	245.00	4147	372.00	5167
96.00	1446	169.00	1506	246.00	4955	373.00	2104
97.00	339	171.00	987	247.00	1402	383.00	1583
98.00	12372	172.00	1101	248.00	179	384.00	250
99.00	10706	173.00	1716	249.00	1453	390.00	822
100.00	950	174.00	3478	250.00	214	391.00	332
101.00	8452	175.00	6403	251.00	195	392.00	312
102.00	808	176.00	2129	252.00	173	397.00	167
103.00	2142	177.00	3126	253.00	381	402.00	2801
104.00	3426	178.00	795	254.00	257	403.00	2885
105.00	4077	179.00	10791	255.00	169280	404.00	1088
106.00	1593	180.00	7450	256.00	25680	421.00	2949
107.00	54576	181.00	3025	257.00	2390	422.00	2829
108.00	9785	182.00	690	258.00	7999	423.00	17104
109.00	283	184.00	994	259.00	1436	424.00	2637
110.00	122080	185.00	4946	260.00	383	425.00	424
111.00	18320	186.00	47656	265.00	3772	441.00	55160
112.00	1852	187.00	13665	266.00	435	442.00	337344
113.00	476	188.00	1654	271.00	182	443.00	69184
116.00	1652	189.00	2573	272.00	521	444.00	5324
117.00	28368	190.00	819	273.00	7530	445.00	250
118.00	1880	191.00	1631	274.00	13015		
120.00	489	192.00	5235	275.00	75104		

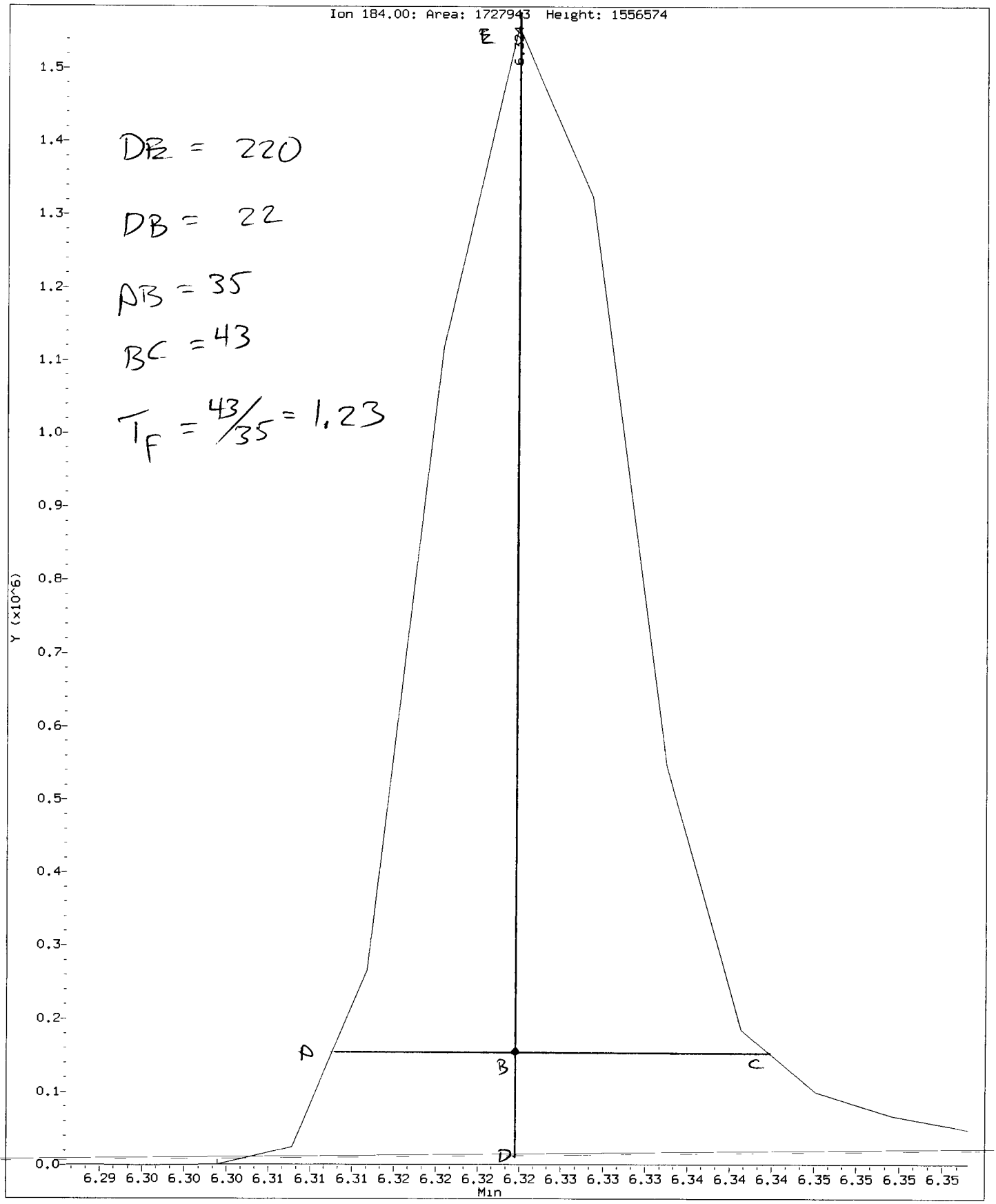
Data File: /chem3/nt11.i/20130608.b/DDT.b/df0608.d
Injection Date: 08-JUN-2013 11:25
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20130608.b/DDT.b/df0608.d
Injection Date: 08-JUN-2013 11:25
Instrument: nt11.i
Client Sample ID:

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130608.b/DDT.b/df0608.d
Method: /chem3/nt11.i/20130608.b/DDT.b/sw846ddt.m
Analysis Date: 08-JUN-2013 11:25

ARI ID: DFTPP 10
Misc:
Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.133	215966
Benzidine	6.324	1727943
4,4'-DDE	5.763	1985
4,4'-DDD	6.249	12880
4,4'-DDT	6.468	618481

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 1985 + 12880) * 100}{(\ 1985 + 12880 + 618481)}$$

DDT Percent Breakdown = 2.3 %

WR99:01351

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130608.b/cc0608.d
Lab Smp Id: SIM 250
Inj Date : 08-JUN-2013 11:44
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130608.b/lowsim.m
Meth Date : 06-Jun-2013 16:02 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.987	5.987	(1.000)	347438	200.000	
	5 Naphthalene	128	6.018	6.018	(1.005)	472631	250.000	248
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.161)	270245	250.000	246
	7 2-Methylnaphthalene	142	7.006	7.006	(1.170)	271837	250.000	228
	8 1-methylnaphthalene	142	7.258	7.258	(1.212)	272517	250.000	228
	10 Acenaphthylene	152	8.784	8.784	(0.983)	405829	250.000	240
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	189057	200.000	
	12 Acenaphthene	153	9.006	9.006	(1.007)	252654	250.000	227
	14 Dibenzofuran	168	9.205	9.205	(1.030)	365503	250.000	225
	15 Fluorene	166	9.825	9.825	(1.099)	264738	250.000	218
*	18 Phenanthrene-d10	188	11.585	11.585	(1.000)	238826	200.000	
	19 Phenanthrene	178	11.630	11.630	(1.004)	375090	250.000	254
	20 Anthracene	178	11.674	11.674	(1.008)	361634	250.000	261
$	23 Fluoranthene-d10	212	13.657	13.657	(1.179)	314529	250.000	254
	24 Fluoranthene	202	13.696	13.696	(1.182)	339014	250.000	232
	25 Pyrene	202	14.176	14.176	(0.871)	330230	250.000	259
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	265128	250.000	251
*	29 Chrysene-d12	240	16.276	16.276	(1.000)	152482	200.000	
	30 Chrysene	228	16.325	16.325	(1.003)	277464	250.000	254
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	273331	250.000	241
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	295666	250.000	239
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	319612	250.000	255
	34 Benzo(a)pyrene	252	18.646	18.646	(0.991)	243617	250.000	254
*	35 Perylene-d12	264	18.810	18.810	(1.000)	143287	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.864	20.864	(1.109)	298635	250.000	253
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	209978	250.000	256

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	231695	250.000	244
39 Benzo(g,h,i)perylene	276	21.706	21.706	(1.154)	257885	250.000	244
47 Perylene	252	18.867	18.867	(1.003)	275884	250.000	253

6.27.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: cc0608.d
Lab Smp Id: SIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info:

Calibration Date: 08-JUN-2013
Calibration Time: 10:36

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	347438	36.10
11 Acenaphthene-d10	142891	71446	285782	189057	32.31
18 Phenanthrene-d10	220853	110426	441706	238826	8.14
29 Chrysene-d12	162525	81262	325050	152482	-6.18
35 Perylene-d12	139028	69514	278056	143287	3.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.99	5.49	6.49	5.99	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.59	11.09	12.09	11.59	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i
Lab File ID: cc0608.d
Analysis Type:
Lab Sample ID: SIM 250
Method: /chem3/nt11.i/20130608.b/lowsim.m

Injection Date: 08-JUN-2013 11:44
Init. Cal. Date(s): 23-FEB-2013 23-FEB-2013
Init. Cal. Times: 09:51 12:17
Quant Type: ISTD

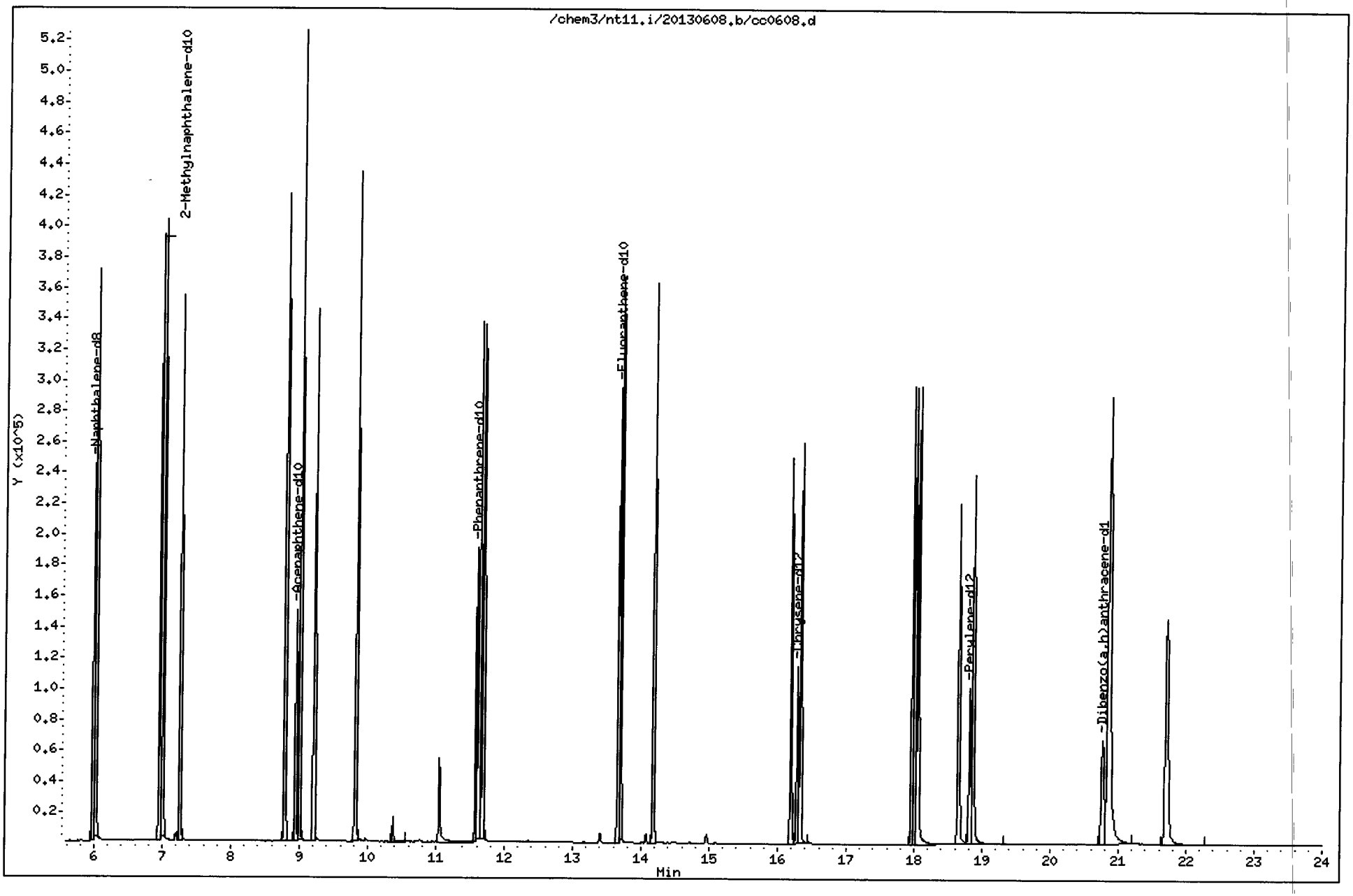
COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	1.09508	1.08827	0.010	-0.62178	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.63288	0.62226	0.010	-1.67873	20.00000	Averaged
7 2-Methylnaphthalene	0.68537	0.62592	0.010	-8.67407	20.00000	Averaged
8 1-Methylnaphthalene	0.68897	0.62749	0.010	-8.92361	20.00000	Averaged
10 Acenaphthylene	1.78573	1.71727	0.010	-3.83382	20.00000	Averaged
12 Acenaphthene	1.17874	1.06911	0.010	-9.30072	20.00000	Averaged
14 Dibenzofuran	1.71710	1.54663	0.010	-9.92800	20.00000	Averaged
15 Fluorene	1.28190	1.12024	0.010	-12.61072	20.00000	Averaged
19 Phenanthrene	1.23537	1.25645	0.010	1.70574	20.00000	Averaged
20 Anthracene	1.15865	1.21137	0.010	4.55046	20.00000	Averaged
$ 23 Fluoranthene-d10	1.03665	1.05358	0.200	1.63319	20.00000	Averaged
24 Fluoranthene	1.22132	1.13560	0.010	-7.01841	20.00000	Averaged
25 Pyrene	1.67487	1.73256	0.010	3.44423	20.00000	Averaged
28 Benzo(a)anthracene	1.38400	1.39100	0.010	0.50559	20.00000	Averaged
30 Chrysene	1.43023	1.45572	0.010	1.78231	20.00000	Averaged
44 Benzo(b)fluoranthene	1.58507	1.52605	0.200	-3.72301	20.00000	Averaged
45 Benzo(k)fluoranthene	1.72364	1.65075	0.200	-4.22870	20.00000	Averaged
46 Benzo(j)fluoranthene	1.74944	1.78445	0.200	2.00122	20.00000	Averaged
34 Benzo(a)pyrene	1.33777	1.36016	0.010	1.67324	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.64660	1.66733	0.010	1.25914	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	1.14296	1.17234	0.010	2.57057	20.00000	Averaged
38 Dibenzo(a,h)anthracene	1.32390	1.29359	0.010	-2.28934	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.47330	1.43982	0.010	-2.27271	20.00000	Averaged
47 Perylene	1.52395	1.54031	0.200	1.07342	20.00000	Averaged

Data File: /chem3/nt11.i/20130608.b/cc0608.d
Date : 08-JUN-2013 11:44
Client ID:
Sample Info: SIM 250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - cc0608.d

Lab ID: SIM 250, Method: lowsim.m, Instrument: nt11.i, Date: 08-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130608.b/wr99mb.d
Lab Smp Id: WR99MBW1 Client Smp ID: WR99MBW1
Inj Date : 08-JUN-2013 12:19
Operator : VTS Inst ID: nt11.i
Smp Info : WR99MBW1
Misc Info : 13-11541
Comment :
Method : /chem3/nt11.i/20130608.b/lowsim.m
Meth Date : 06-Jun-2013 16:02 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	5.987	5.987	(1.000)	321688	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.161)	225479	221.502	222
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	167973	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.585	11.585	(1.000)	223753	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.657	13.657	(1.179)	293444	253.019	253
	24 Fluoranthene	202	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	Compound Not Detected.					
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	16.275	16.276	(1.000)	128263	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	18.810	18.810	(1.000)	115847	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	180545	272.709	273
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					

6.8.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wr99mb.d
Lab Smp Id: WR99MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info: 13-11541

Calibration Date: 08-JUN-2013
Calibration Time: 11:44
Client Smp ID: WR99MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	321688	26.01
11 Acenaphthene-d10	142891	71446	285782	167973	17.55
18 Phenanthrene-d10	220853	110426	441706	223753	1.31
29 Chrysene-d12	162525	81262	325050	128263	-21.08
35 Perylene-d12	139028	69514	278056	115847	-16.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.99	5.49	6.49	5.99	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.59	11.09	12.09	11.59	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WR99MBW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info: 13-11541

Client SDG: WR99
Fraction: SV
Client Smp ID: WR99MBW1
Operator: VTS
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	222	73.83	35-94
$ 23 Fluoranthene-d10	300	253	84.34	30-160
$ 36 Dibenzo(a,h)anthra	300	273	90.90	26-115

Data File: /chem3/nt11.i/20130608.b/wr99mb.d

Date : 08-JUN-2013 12:19

Client ID: WR99MBW1

Sample Info: WR99MBW1

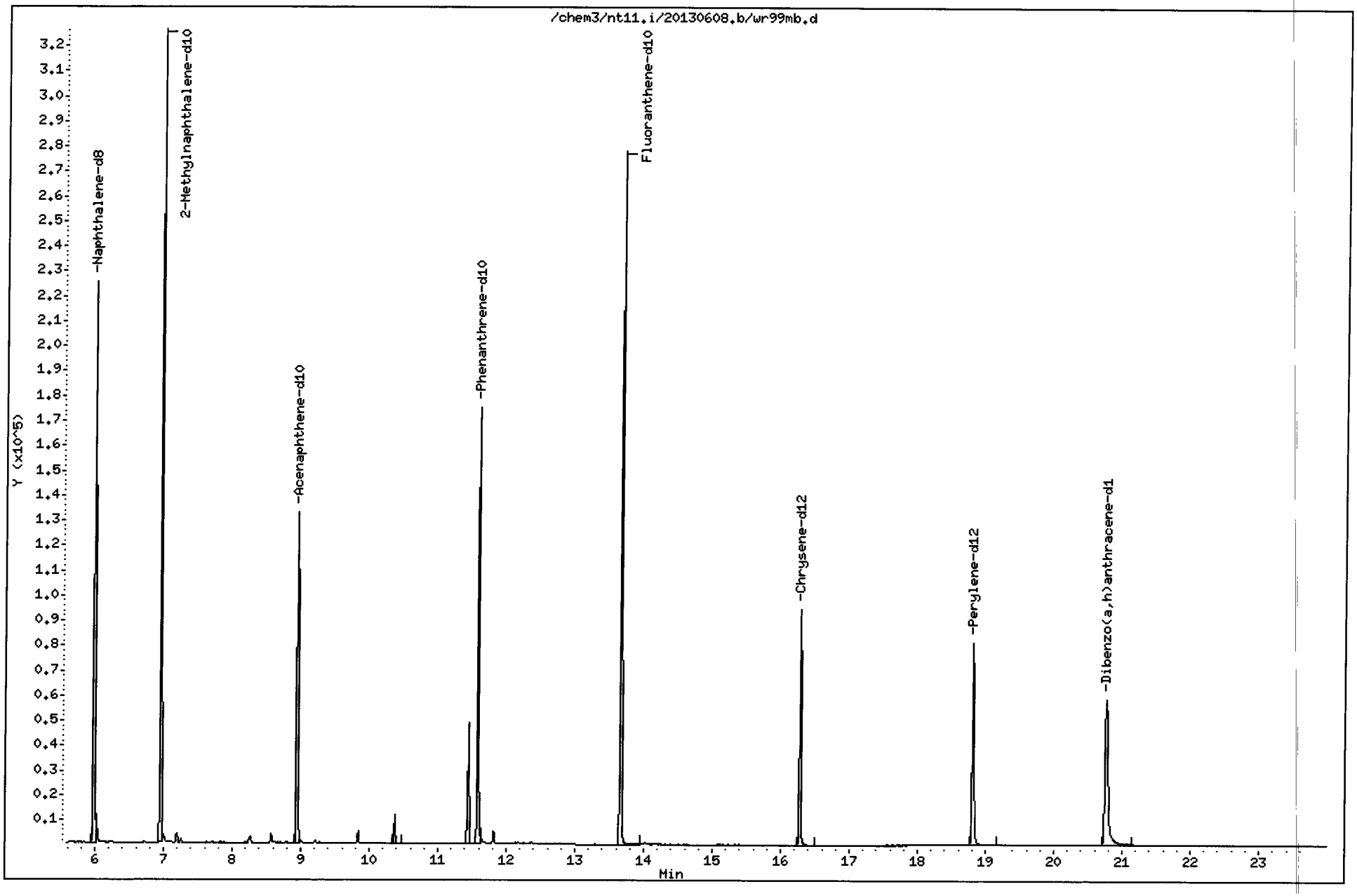
Volume Injected (uL): 2.0

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wr99mb.d

Lab ID: WR99MBW1, Method: lowsim.m, Instrument: nt11.i, Date: 08-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130608.b/wr99sb.d
Lab Smp Id: WR99LCSW1 Client Smp ID: WR99LCSW1
Inj Date : 08-JUN-2013 12:52
Operator : VTS Inst ID: nt11.i
Smp Info : WR99LCSW1
Misc Info : 13-11541
Comment :
Method : /chem3/nt11.i/20130608.b/lowsim.m
Meth Date : 06-Jun-2013 16:02 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4	Naphthalene-d8	136	5.987	5.987	(1.000)	308391	200.000	
	5	Naphthalene	128	6.018	6.018	(1.005)	386900	229.131	229
$	6	2-Methylnaphthalene-d10	152	6.953	6.953	(1.161)	239299	245.214	245
	7	2-Methylnaphthalene	142	7.006	7.006	(1.170)	220181	208.344	208
	8	1-methylnaphthalene	142	7.258	7.258	(1.212)	221481	208.479	208
	10	Acenaphthylene	152	8.784	8.784	(0.983)	337328	224.534	225
*	11	Acenaphthene-d10	164	8.939	8.939	(1.000)	168261	200.000	
	12	Acenaphthene	153	9.006	9.006	(1.007)	210546	212.312	212
	14	Dibenzofuran	168	9.205	9.205	(1.030)	311478	215.614	216
	15	Fluorene	166	9.825	9.825	(1.099)	230786	213.995	214
*	18	Phenanthrene-d10	188	11.585	11.585	(1.000)	230221	200.000	
	19	Phenanthrene	178	11.619	11.630	(1.003)	338637	238.134	238
	20	Anthracene	178	11.674	11.674	(1.008)	301630	226.156	226
$	23	Fluoranthene-d10	212	13.657	13.657	(1.179)	334866	280.622	281
	24	Fluoranthene	202	13.686	13.696	(1.181)	323545	230.139	230

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.176	14.176	(0.871)	332207	275.246	275
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	255899	256.582	257
*	29 Chrysene-d12	240	16.275	16.276	(1.000)	144124	200.000	
	30 Chrysene	228	16.325	16.325	(1.003)	265105	257.221	257
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	260390	256.540	257
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	271791	246.245	246
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	292507	261.106	261
	34 Benzo(a)pyrene	252	18.646	18.646	(0.991)	195173	227.833	228
*	35 Perylene-d12	264	18.810	18.810	(1.000)	128071	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.853	20.864	(1.109)	260323	246.890	247
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	197583	269.958	270
	38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	197836	233.361	233
	39 Benzo(g,h,i)perylene	276	21.705	21.706	(1.154)	224516	237.977	238
	47 Perylene	252	18.858	18.867	(1.003)	225461	231.036	231

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6-8-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wr99sb.d
Lab Smp Id: WR99LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info: 13-11541

Calibration Date: 08-JUN-2013
Calibration Time: 11:44
Client Smp ID: WR99LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	308391	20.80
11 Acenaphthene-d10	142891	71446	285782	168261	17.75
18 Phenanthrene-d10	220853	110426	441706	230221	4.24
29 Chrysene-d12	162525	81262	325050	144124	-11.32
35 Perylene-d12	139028	69514	278056	128071	-7.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.99	5.49	6.49	5.99	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.59	11.09	12.09	11.59	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WR99LCSW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info: 13-11541

Client SDG: WR99
Fraction: SV
Client Smp ID: WR99LCSW1
Operator: VTS
SampleType: LCS
Quant Type: ISTD

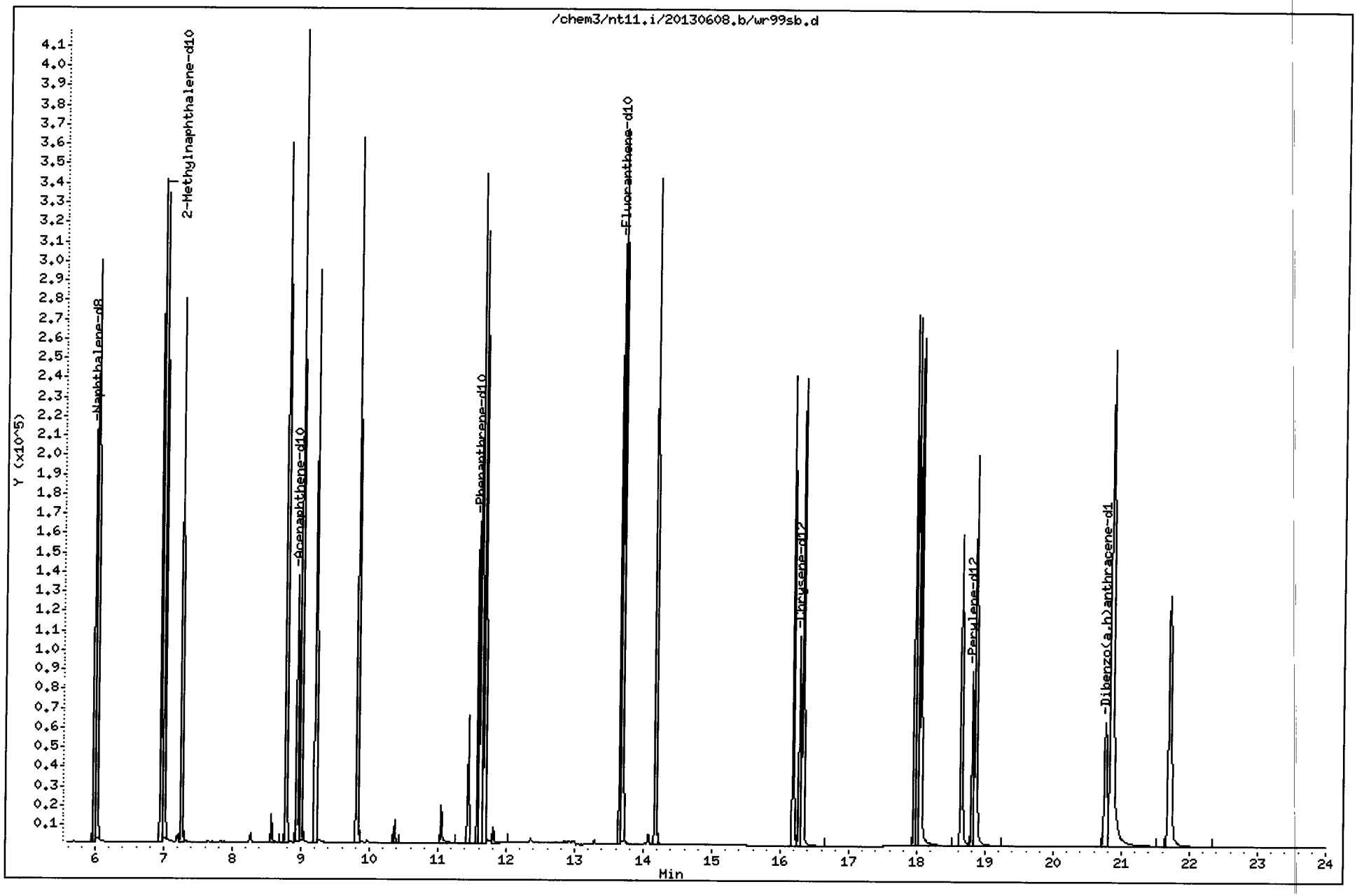
	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5	Naphthalene	300	229	76.38	37-90
7	2-Methylnaphthalen	300	208	69.45	39-90
8	1-methylnaphthalen	300	208	69.49	38-95
10	Acenaphthylene	300	225	74.84	35-95
12	Acenaphthene	300	212	70.77	38-94
14	Dibenzofuran	300	216	71.87	36-94
15	Fluorene	300	214	71.33	41-102
19	Phenanthrene	300	238	79.38	41-101
20	Anthracene	300	226	75.39	28-101
24	Fluoranthene	300	230	76.71	49-114
25	Pyrene	300	275	91.75	42-114
28	Benzo(a)anthracene	300	257	85.53	42-111
30	Chrysene	300	257	85.74	46-106
44	Benzo(b)fluoranthe	300	257	85.51	30-160
45	Benzo(k)fluoranthe	300	246	82.08	30-160
46	Benzo(j)fluoranthe	300	261	87.04	30-160
34	Benzo(a)pyrene	300	228	75.94	20-99
37	Indeno(1,2,3-cd)py	300	247	82.30	32-113
38	Dibenzo(a,h)anthra	300	233	77.79	30-113
39	Benzo(g,h,i)peryle	300	238	79.33	27-113
47	Perylene	300	231	77.01	30-160

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6	2-Methylnaphthalen	300	245	81.74	35-94
$ 23	Fluoranthene-d10	300	281	93.54	30-160
$ 36	Dibenzo(a,h)anthra	300	270	89.99	26-115

Data File: /chem3/nt11.i/20130608.b/wr99sb.d
Date : 08-JUN-2013 12:52
Client ID: WR99LCSW1
Sample Info: WR99LCSW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wr99sb.d

Lab ID: WR99LCSW1, Method: lowsim.m, Instrument: nt11.i, Date: 08-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130608.b/wr99sbd.d
Lab Smp Id: WR99LCSDW1 Client Smp ID: WR99LCSDW1
Inj Date : 08-JUN-2013 13:23
Operator : VTS Inst ID: nt11.i
Smp Info : WR99LCSDW1
Misc Info : 13-11541
Comment :
Method : /chem3/nt11.i/20130608.b/lowsim.m
Meth Date : 06-Jun-2013 16:02 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	5.987	5.987	(1.000)	309684	200.000	
	5 Naphthalene	128	6.018	6.018	(1.005)	423345	249.667	250
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.161)	249690	254.794	255
	7 2-Methylnaphthalene	142	7.006	7.006	(1.170)	241498	227.560	228
	8 1-methylnaphthalene	142	7.258	7.258	(1.212)	242172	227.004	227
	10 Acenaphthylene	152	8.784	8.784	(0.983)	364689	240.528	241
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	169813	200.000	
	12 Acenaphthene	153	9.006	9.006	(1.007)	227022	226.834	227
	14 Dibenzofuran	168	9.205	9.205	(1.030)	332852	228.304	228
	15 Fluorene	166	9.825	9.825	(1.099)	248930	228.709	229
*	18 Phenanthrene-d10	188	11.585	11.585	(1.000)	224578	200.000	
	19 Phenanthrene	178	11.618	11.630	(1.003)	359792	259.368	259
	20 Anthracene	178	11.674	11.674	(1.008)	320627	246.440	246
$	23 Fluoranthene-d10	212	13.657	13.657	(1.179)	329530	283.090	283
	24 Fluoranthene	202	13.686	13.696	(1.181)	334025	243.564	244

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
25 Pyrene	202	14.166	14.176	(0.870)	341546	303.874	304
28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	259530	279.432	279
* 29 Chrysene-d12	240	16.275	16.276	(1.000)	134216	200.000	
30 Chrysene	228	16.325	16.325	(1.003)	270133	281.448	281
44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	264549	277.322	277
45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	275315	265.405	265
46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	296357	281.477	281
34 Benzo(a)pyrene	252	18.646	18.646	(0.991)	200037	248.459	248
* 35 Perylene-d12	264	18.810	18.810	(1.000)	120366	200.000	
37 Indeno(1,2,3-cd)pyrene	276	20.853	20.864	(1.109)	265005	267.419	267
$ 36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	190369	276.752	277
38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	206488	259.158	259
39 Benzo(g,h,i)perylene	276	21.705	21.706	(1.154)	229589	258.932	259
47 Perylene	252	18.858	18.867	(1.003)	235547	256.823	257

6.2.0

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wr99sbd.d
Lab Smp Id: WR99LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info: 13-11541

Calibration Date: 08-JUN-2013
Calibration Time: 11:44
Client Smp ID: WR99LCSDW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	309684	21.31
11 Acenaphthene-d10	142891	71446	285782	169813	18.84
18 Phenanthrene-d10	220853	110426	441706	224578	1.69
29 Chrysene-d12	162525	81262	325050	134216	-17.42
35 Perylene-d12	139028	69514	278056	120366	-13.42

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.99	5.49	6.49	5.99	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.59	11.09	12.09	11.59	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WR99LCSDW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info: 13-11541

Client SDG: WR99
Fraction: SV
Client Smp ID: WR99LCSDW1
Operator: VTS
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	250	83.22	37-90
7 2-Methylnaphthalen	300	228	75.85	39-90
8 1-methylnaphthalen	300	227	75.67	38-95
10 Acenaphthylene	300	241	80.18	35-95
12 Acenaphthene	300	227	75.61	38-94
14 Dibenzofuran	300	228	76.10	36-94
15 Fluorene	300	229	76.24	41-102
19 Phenanthrene	300	259	86.46	41-101
20 Anthracene	300	246	82.15	28-101
24 Fluoranthene	300	244	81.19	49-114
25 Pyrene	300	304	101.29	42-114
28 Benzo(a)anthracene	300	279	93.14	42-111
30 Chrysene	300	281	93.82	46-106
44 Benzo(b)fluoranthe	300	277	92.44	30-160
45 Benzo(k)fluoranthe	300	265	88.47	30-160
46 Benzo(j)fluoranthe	300	281	93.83	30-160
34 Benzo(a)pyrene	300	248	82.82	20-99
37 Indeno(1,2,3-cd)py	300	267	89.14	32-113
38 Dibenzo(a,h)anthra	300	259	86.39	30-113
39 Benzo(g,h,i)peryle	300	259	86.31	27-113
47 Perylene	300	257	85.61	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	255	84.93	35-94
$ 23 Fluoranthene-d10	300	283	94.36	30-160
$ 36 Dibenzo(a,h)anthra	300	277	92.25	26-115

Data File: /chem3/nt11.i/20130608.b/wr99sbd.d

Date : 08-JUN-2013 13:23

Client ID: WR99LCSDW1

Sample Info: WR99LCSDW1

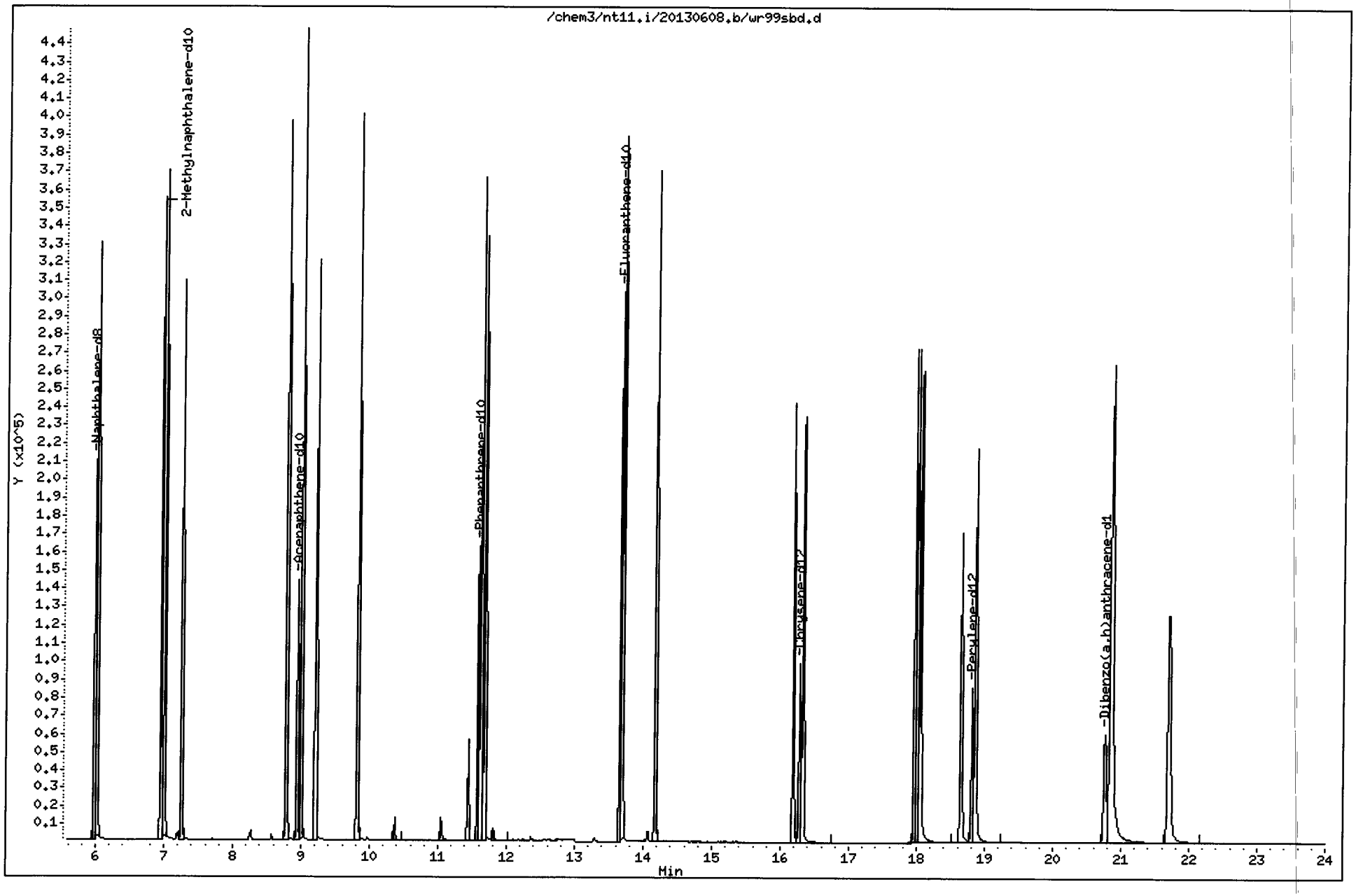
Volume Injected (uL): 2.0

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wr99sbd.d

Lab ID: WR99LCSDW1, Method: lowsim.m, Instrument: nt11.i, Date: 08-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130608.b/wr99a.d
Lab Smp Id: WR99A Client Smp ID: KC-VT-1593-20130530
Inj Date : 08-JUN-2013 13:55
Operator : VTS Inst ID: nt11.i
Smp Info : WR99A
Misc Info : 13-11541
Comment :
Method : /chem3/nt11.i/20130608.b/lowsim.m
Meth Date : 06-Jun-2013 16:02 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)	
*	4 Naphthalene-d8	136	5.976	5.987	(1.000)	339111	200.000		
	5 Naphthalene	128	6.018	6.018	(1.007)	134646	72.5166	72.5	
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	233882	217.952	218	
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	20390	17.5460	17.5	
	8 1-methylnaphthalene	142	7.258	7.258	(1.214)	102988	88.1603	88.2	
	10 Acenaphthylene	152	8.784	8.784	(0.983)	74728	47.3685	47.4	
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	176688	200.000		
	12 Acenaphthene	153	9.006	9.006	(1.007)	2270327	2180.18	2180	E
	14 Dibenzofuran	168	9.205	9.205	(1.030)	814975	537.243	537	
	15 Fluorene	166	9.825	9.825	(1.099)	864405	763.285	763	
*	18 Phenanthrene-d10	188	11.585	11.585	(1.000)	238647	200.000		
	19 Phenanthrene	178	11.619	11.630	(1.003)	121841	82.6550	82.7	
	20 Anthracene	178	11.674	11.674	(1.008)	102284	73.9828	74.0	
$	23 Fluoranthene-d10	212	13.657	13.657	(1.179)	315196	254.813	255	
	24 Fluoranthene	202	13.686	13.696	(1.181)	410253	281.512	282	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
25	Pyrene	202	14.176	14.176	(0.871)	226628	202.641	203
28	Benzo(a)anthracene	228	Compound Not Detected.					
* 29	Chrysene-d12	240	16.275	16.276	(1.000)	133547	200.000	
30	Chrysene	228	Compound Not Detected.					
44	Benzo(b)fluoranthene	252	Compound Not Detected.					
45	Benzo(k)fluoranthene	252	Compound Not Detected.					
46	Benzo(j)fluoranthene	252	Compound Not Detected.					
34	Benzo(a)pyrene	252	Compound Not Detected.					
* 35	Perylene-d12	264	18.810	18.810	(1.000)	118137	200.000	
37	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$ 36	Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	173492	256.975	257
38	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39	Benzo(g,h,i)perylene	276	Compound Not Detected.					
47	Perylene	252	Compound Not Detected.					

6.8.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wr99a.d
Lab Smp Id: WR99A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info: 13-11541

Calibration Date: 08-JUN-2013
Calibration Time: 11:44
Client Smp ID: KC-VT-1593-20130530
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	339111	32.84
11 Acenaphthene-d10	142891	71446	285782	176688	23.65
18 Phenanthrene-d10	220853	110426	441706	238647	8.06
29 Chrysene-d12	162525	81262	325050	133547	-17.83
35 Perylene-d12	139028	69514	278056	118137	-15.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.99	5.49	6.49	5.98	-0.18
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.59	11.09	12.09	11.59	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

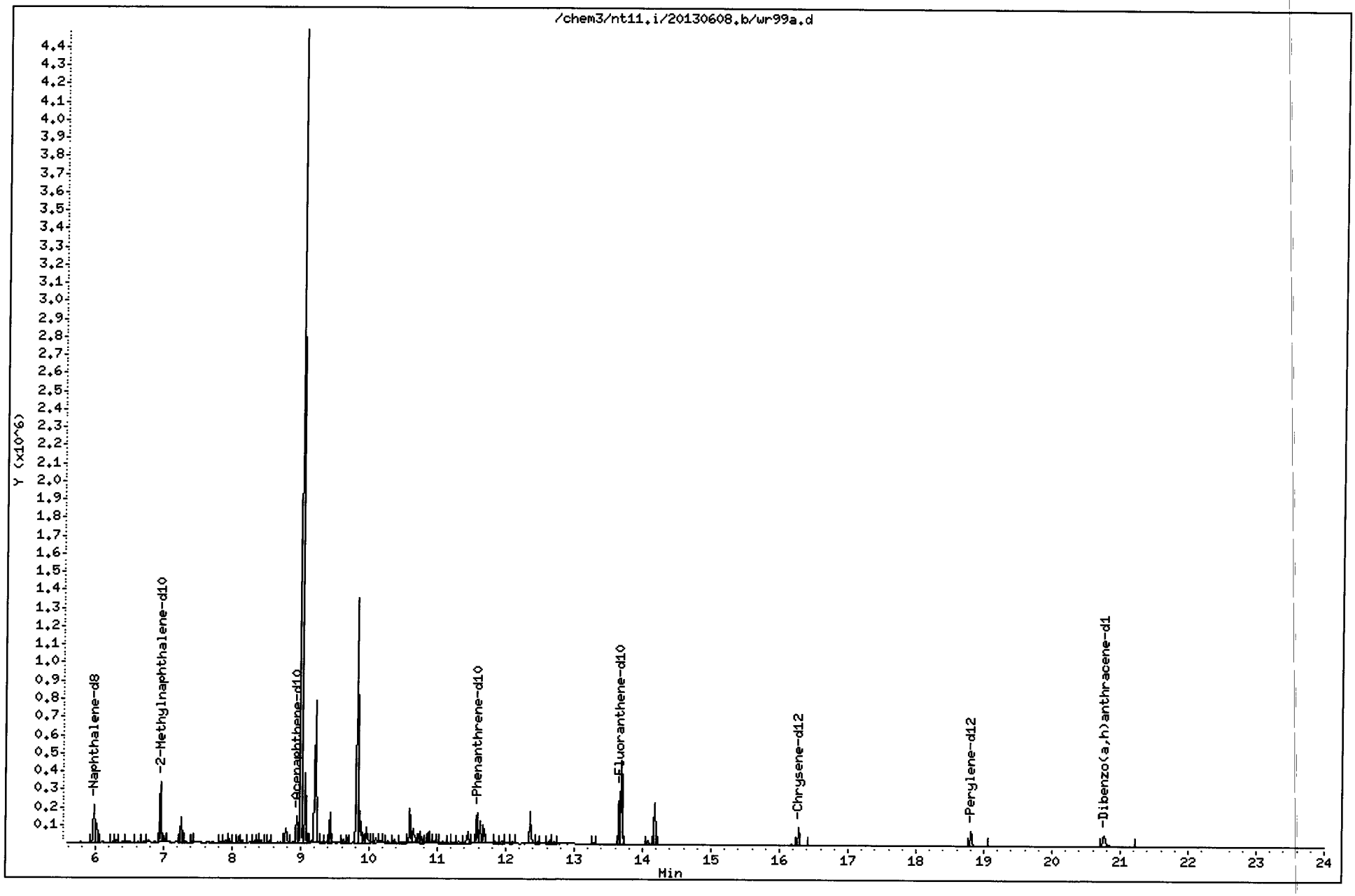
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WR99A
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info: 13-11541

Client SDG: WR99
Fraction: SV
Client Smp ID: KC-VT-1593-20130530
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	218	72.65	35-94
$ 23 Fluoranthene-d10	300	255	84.94	30-160
$ 36 Dibenzo(a,h)anthra	300	257	85.66	26-115

Data File: /chem3/nt11.i/20130608.b/wr99a.d
Date : 08-JUN-2013 13:55
Client ID: KC-VT-1593-20130530
Sample Info: WR99A
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

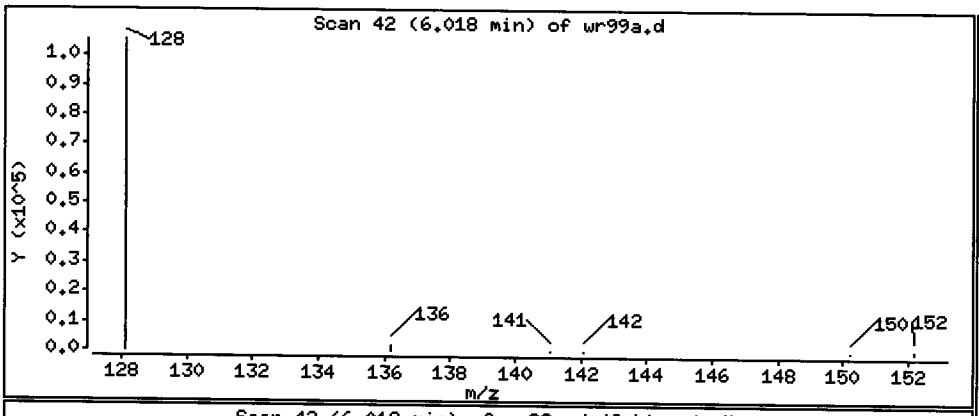
Operator: VTS

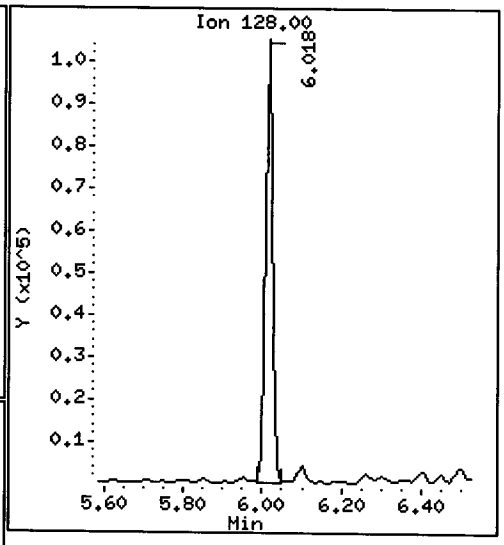
Column phase: Rxi-17Sil MS

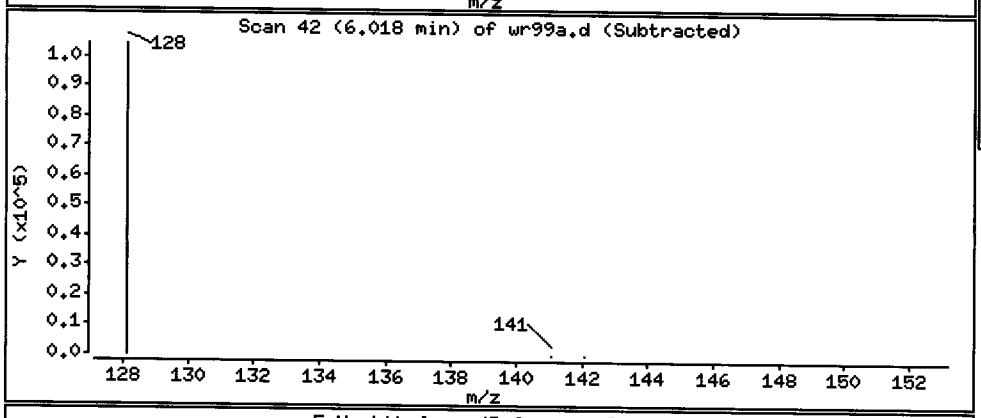
Column diameter: 0.25

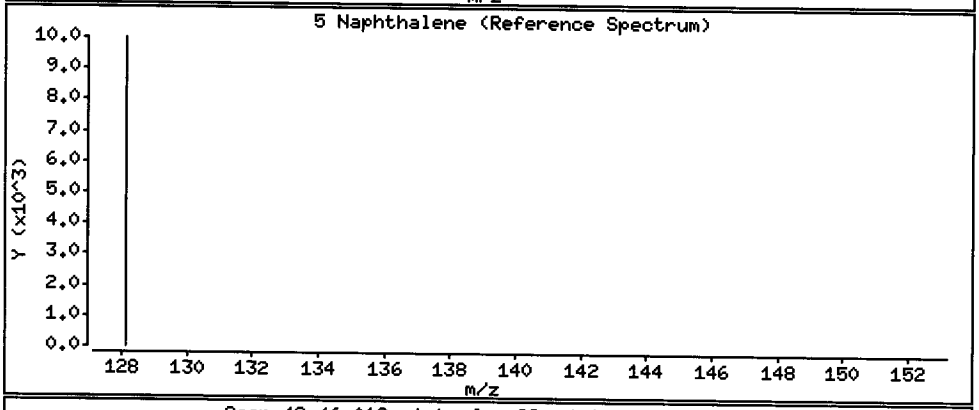
5 Naphthalene

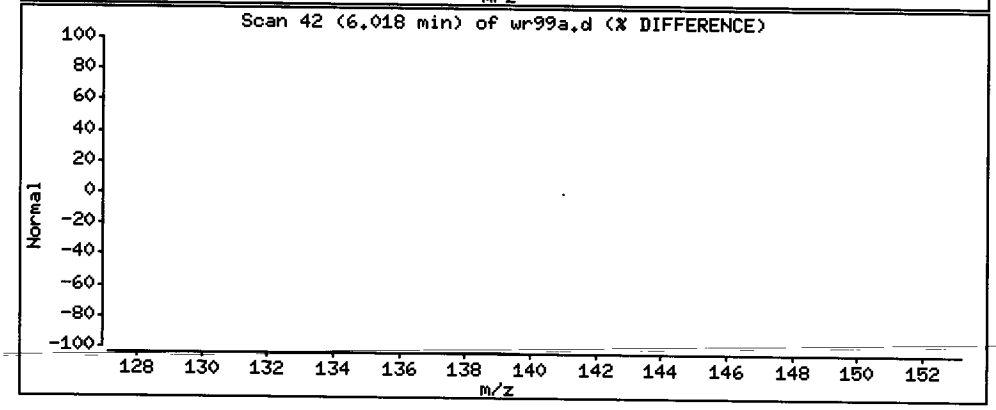
Concentration: 72.5 ug/L











Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

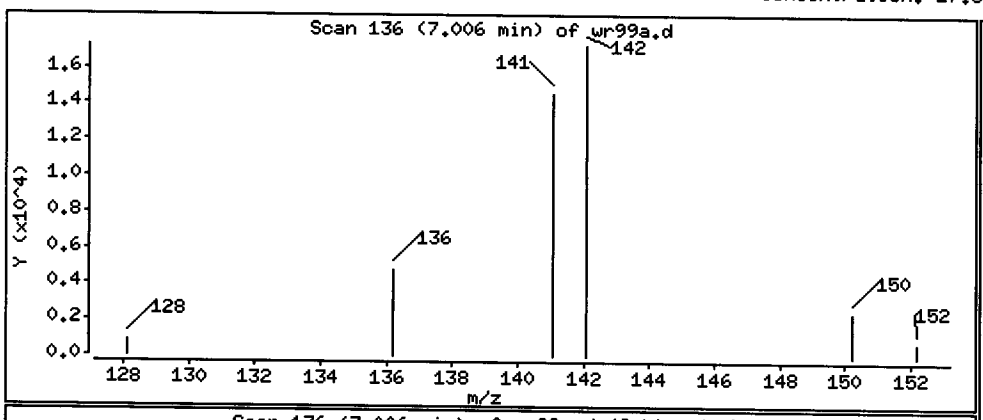
Operator: VTS

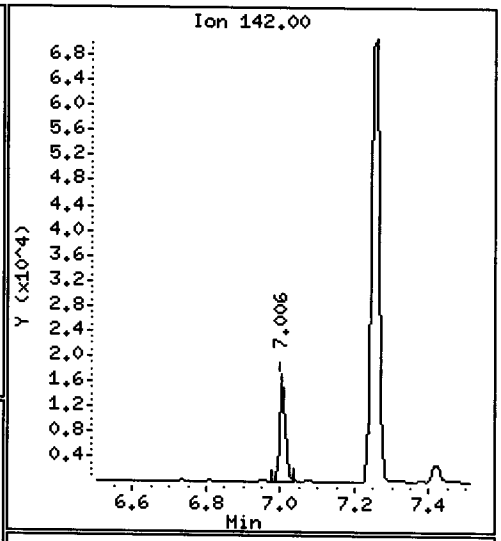
Column phase: Rxi-17Sil MS

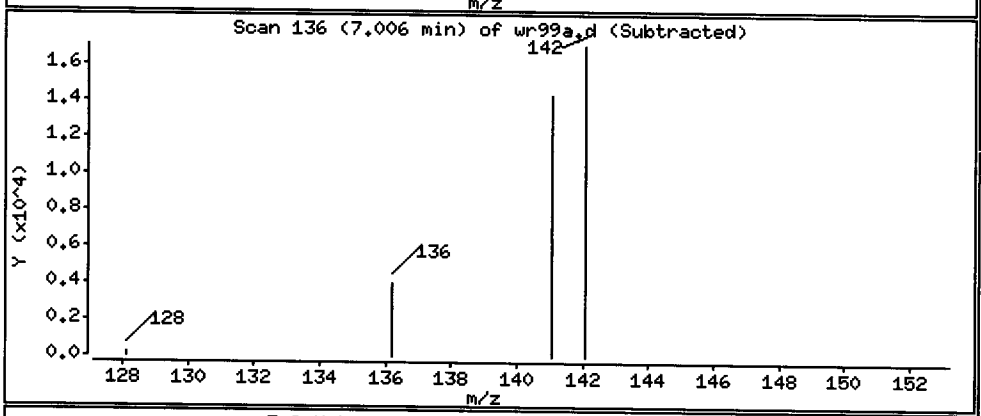
Column diameter: 0.25

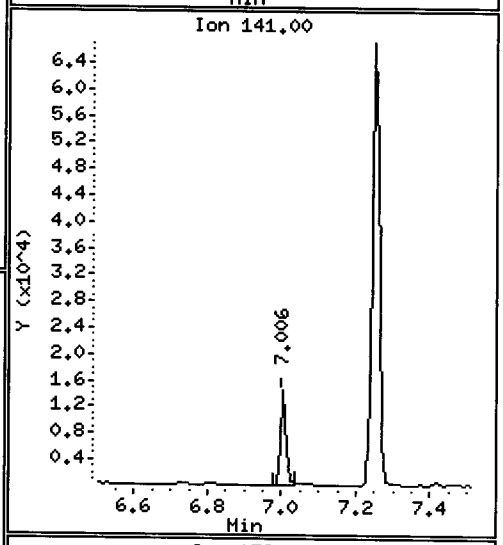
7 2-Methylnaphthalene

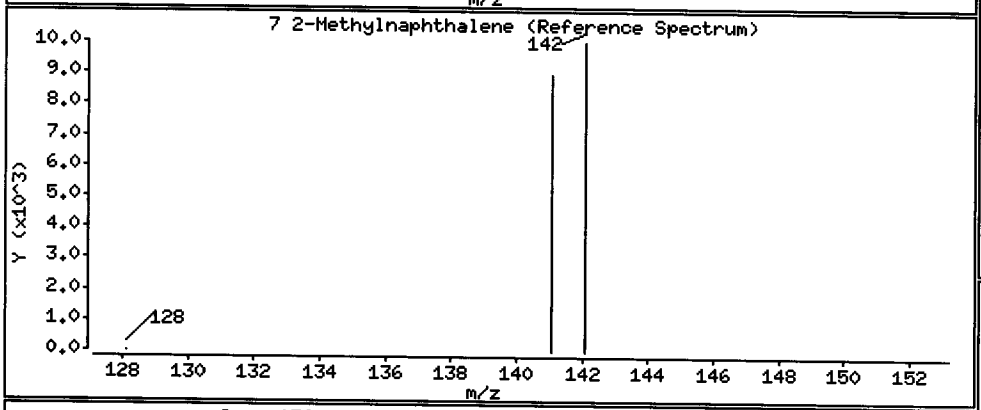
Concentration: 17.5 ug/L

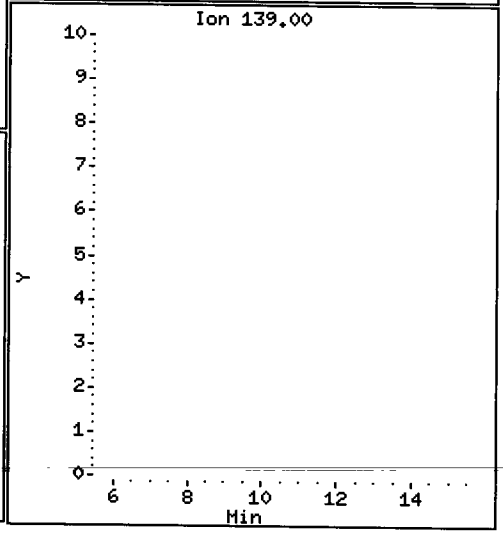


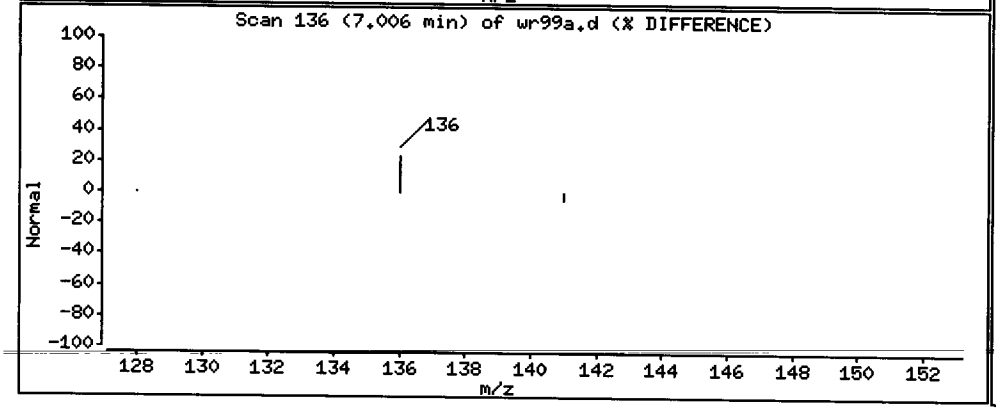












Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

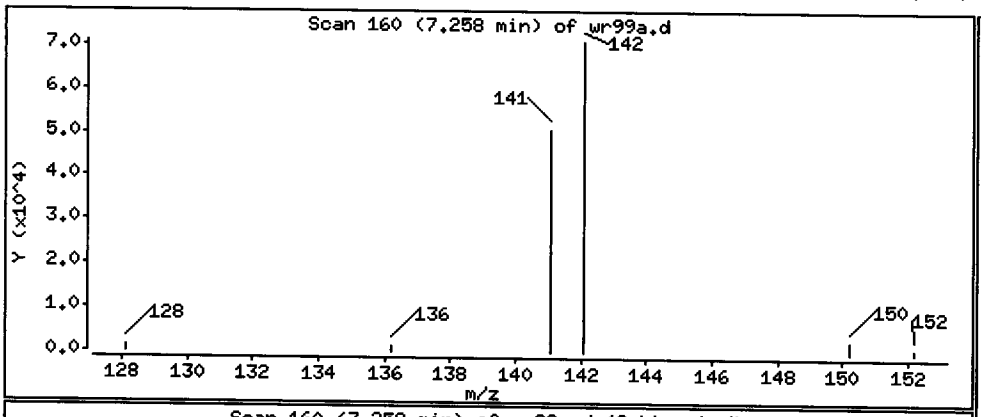
Operator: VTS

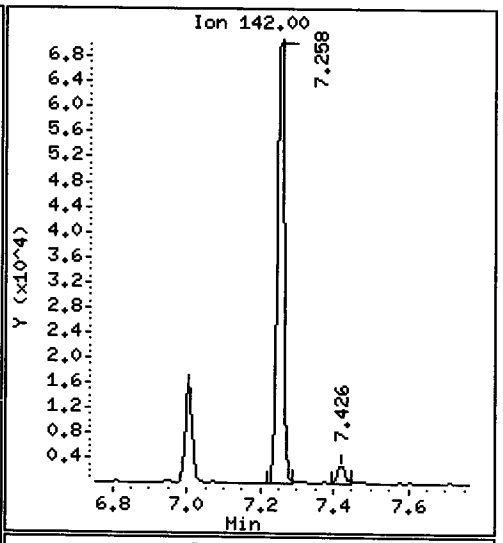
Column phase: Rxi-17Sil MS

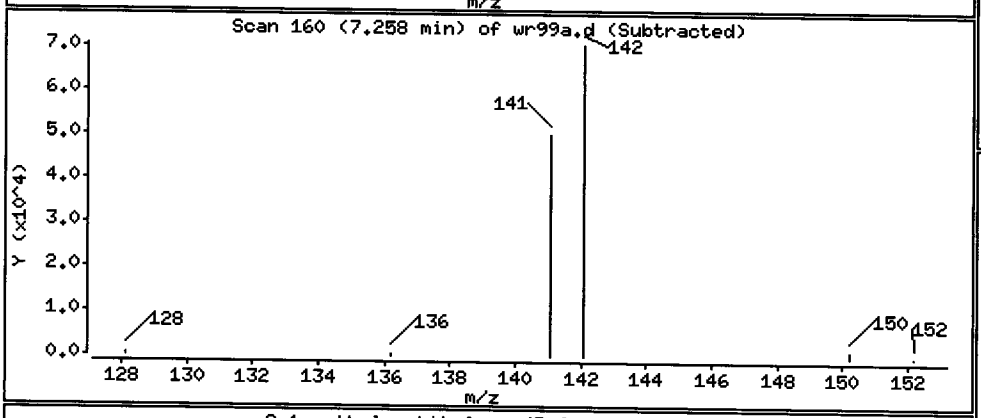
Column diameter: 0.25

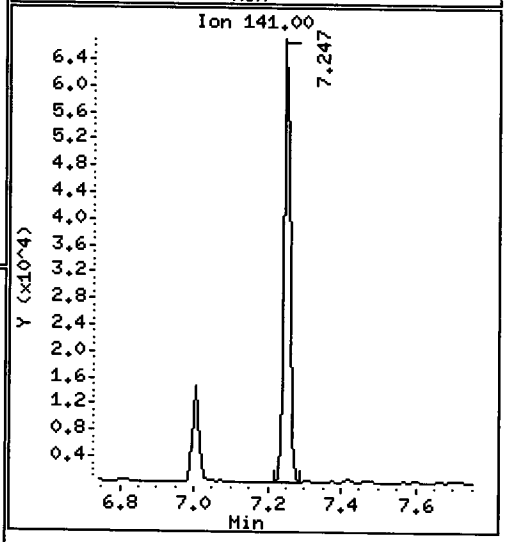
8 1-methylnaphthalene

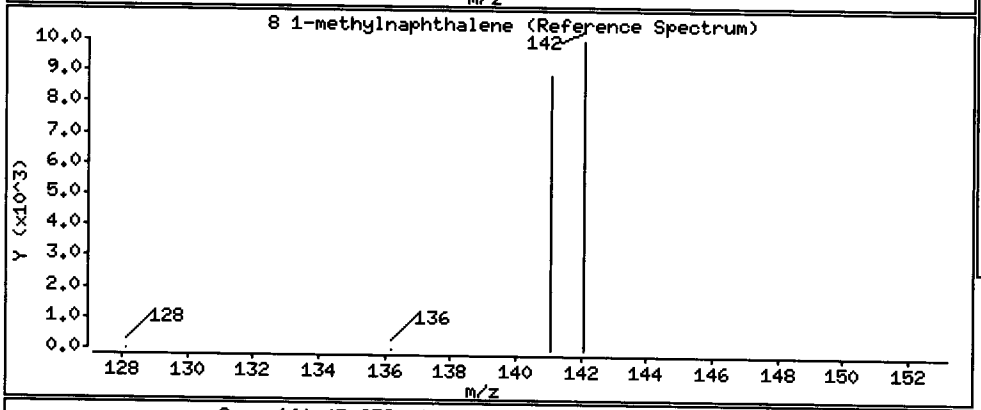
Concentration: 88.2 ug/L

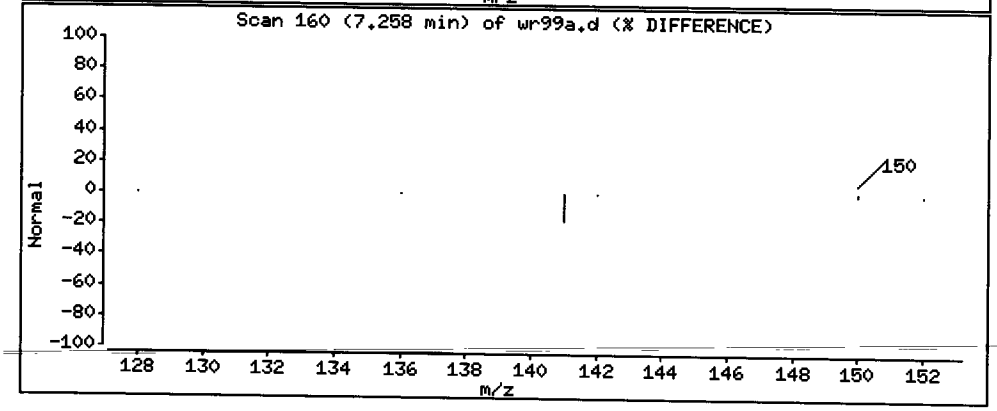












Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

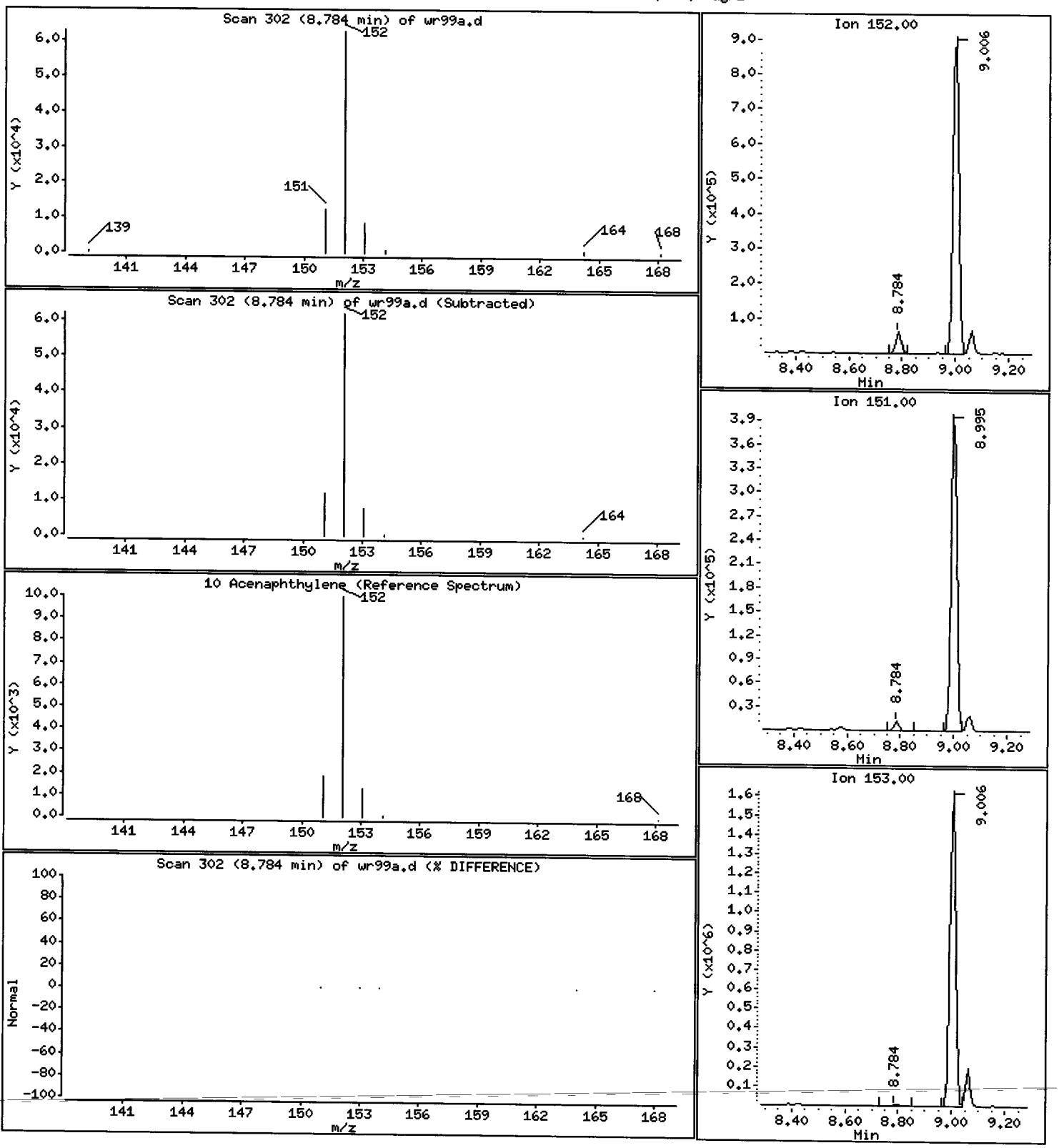
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

10 Acenaphthylene

Concentration: 47.4 ug/L



Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

Operator: VTS

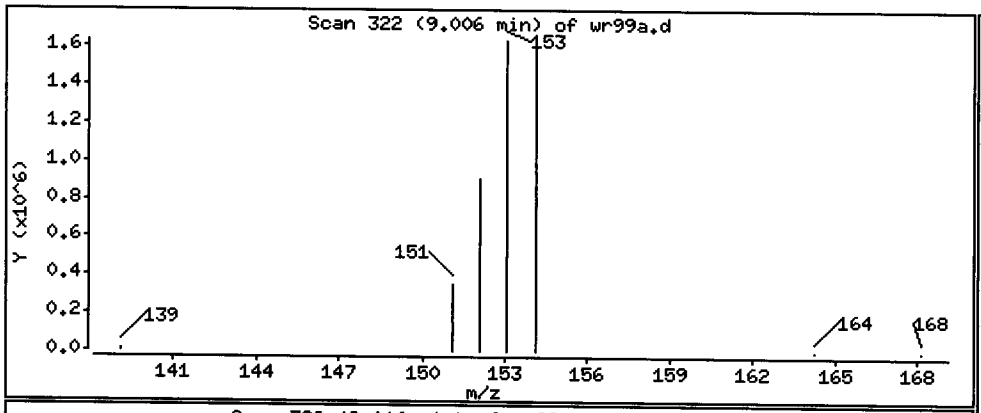
Column phase: Rxi-17Sil MS

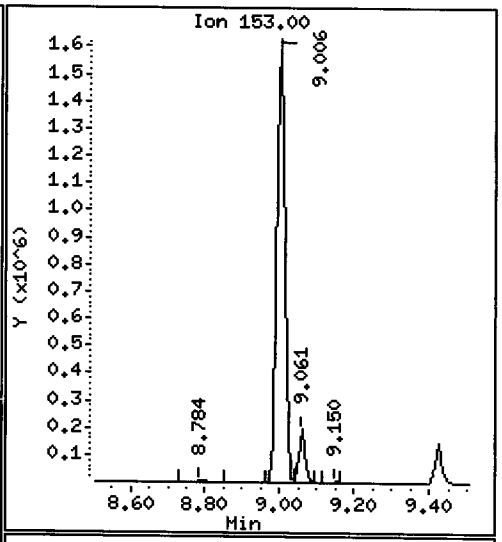
Column diameter: 0.25

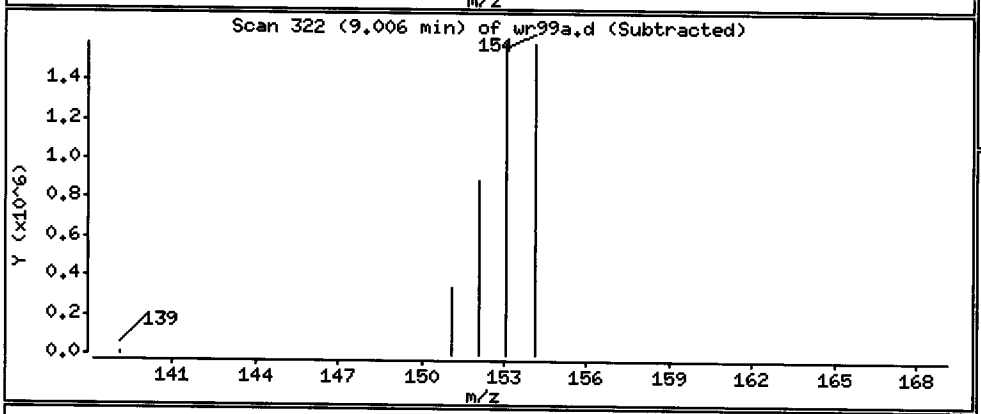
12 Acenaphthene

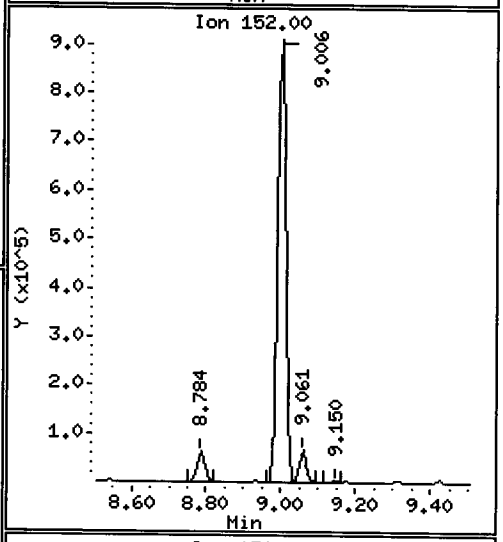
Concentration: 2180 ug/L

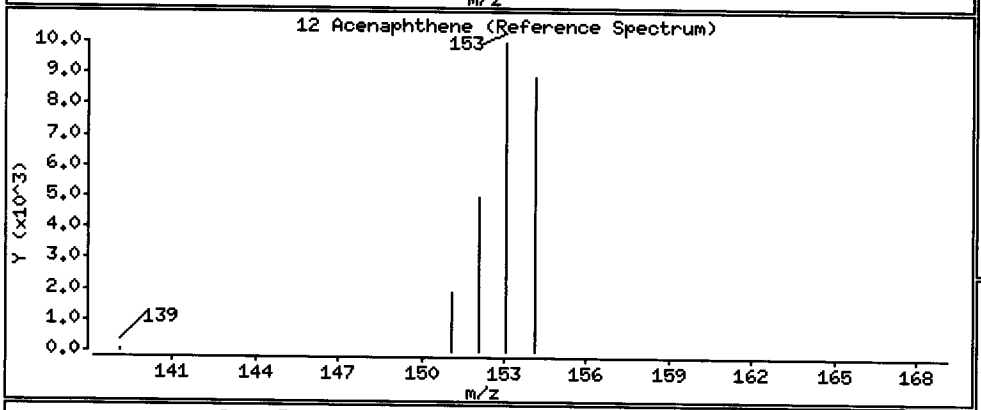
E

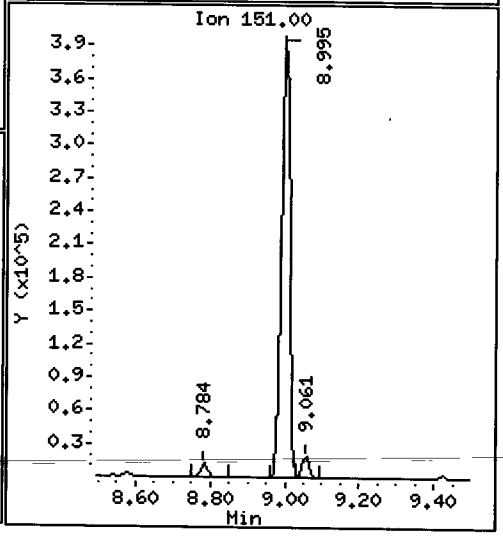


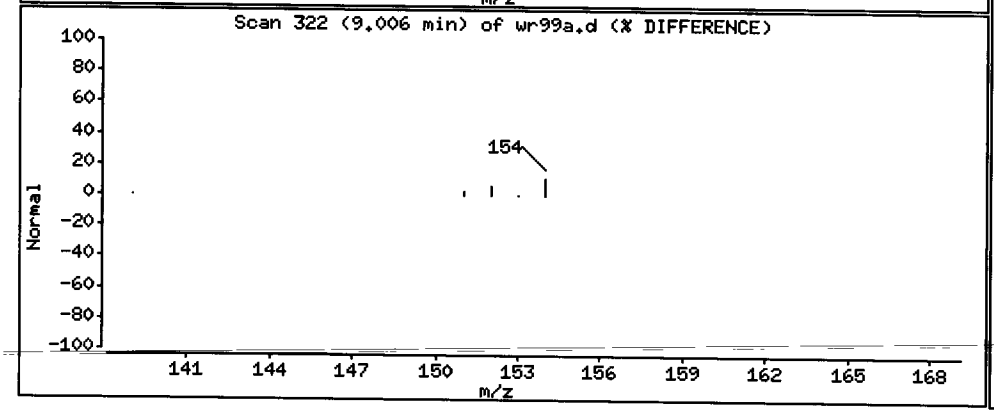












Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

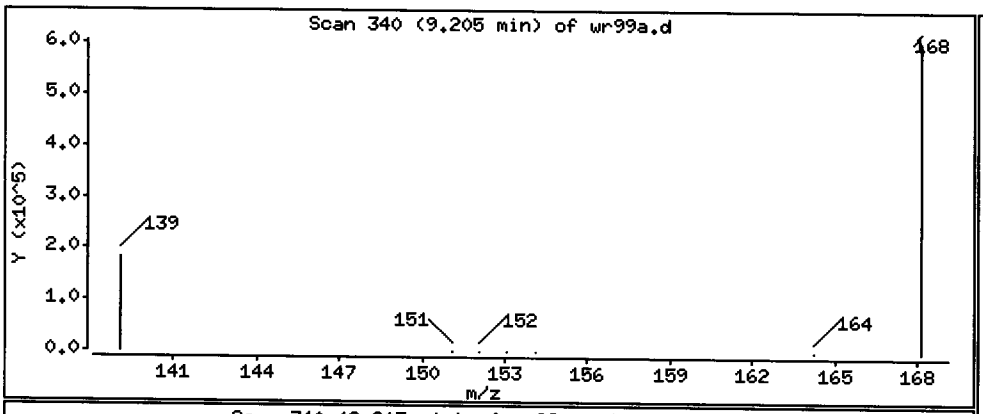
Operator: VTS

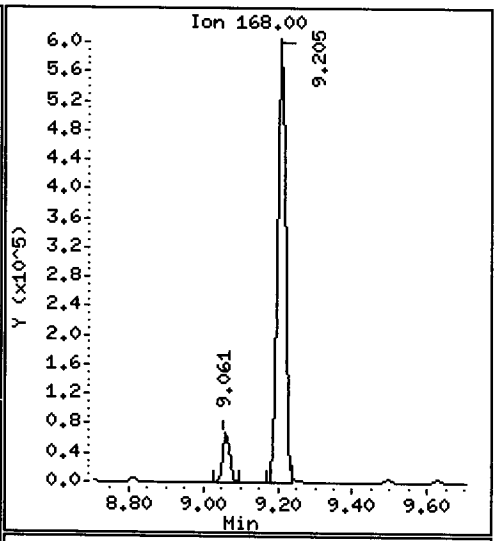
Column phase: Rxi-17Sil MS

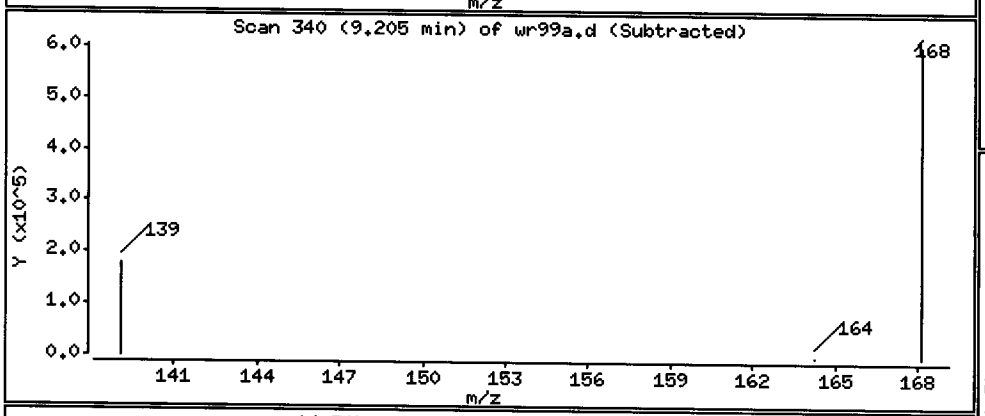
Column diameter: 0.25

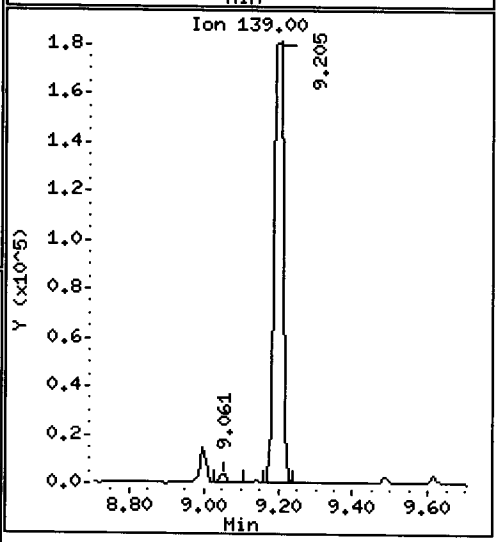
14 Dibenzofuran

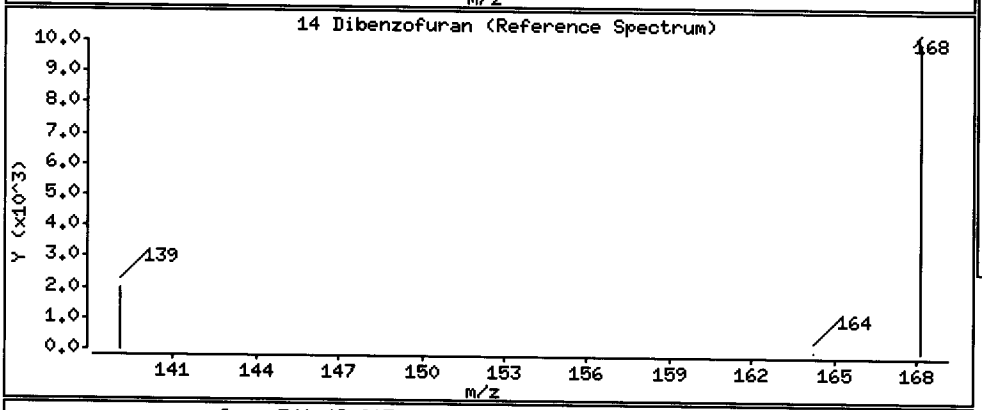
Concentration: 537 ug/L

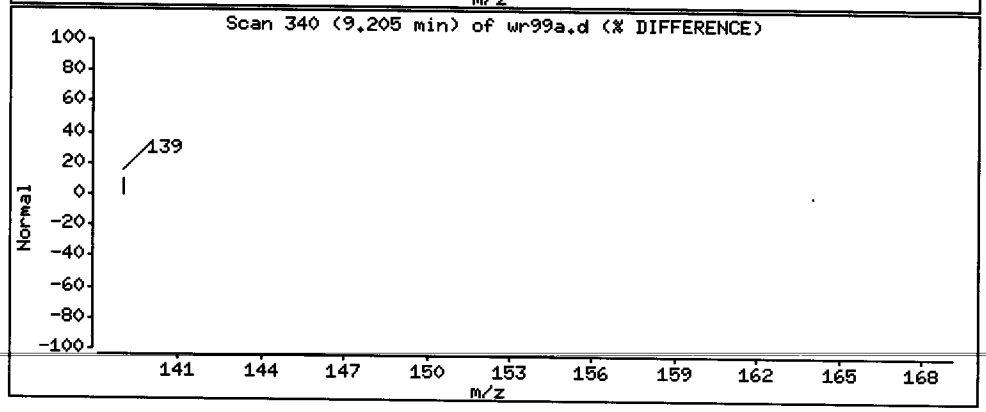












Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

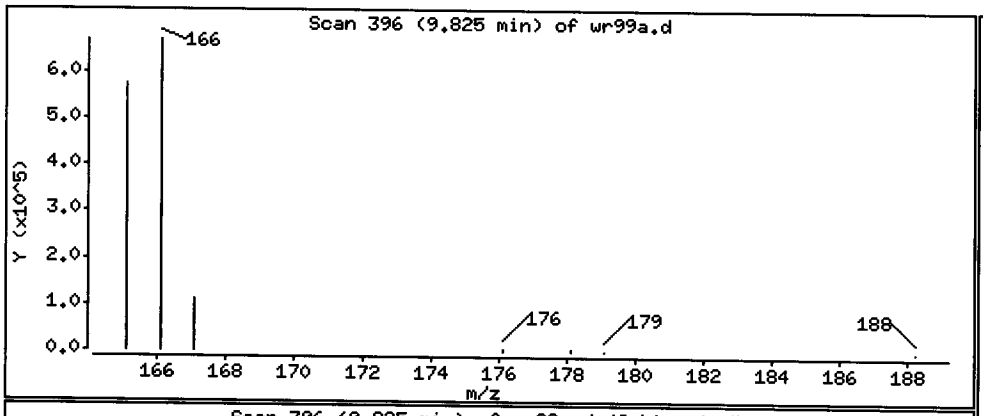
Operator: VTS

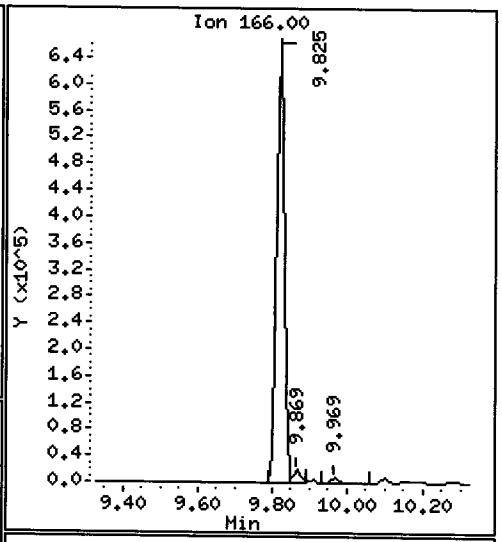
Column phase: Rxi-17Sil MS

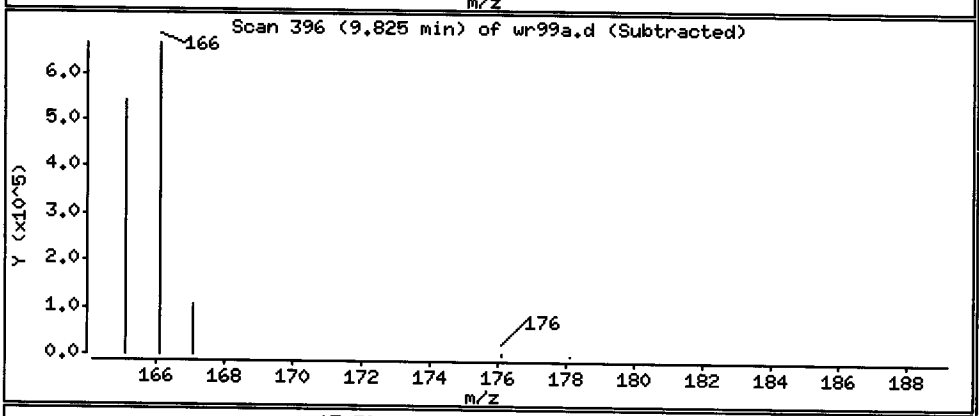
Column diameter: 0.25

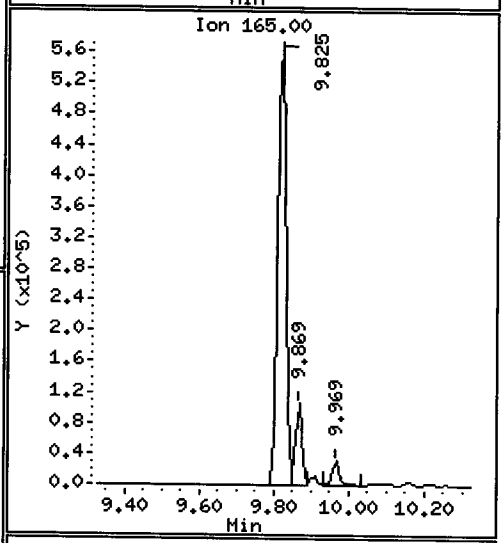
15 Fluorene

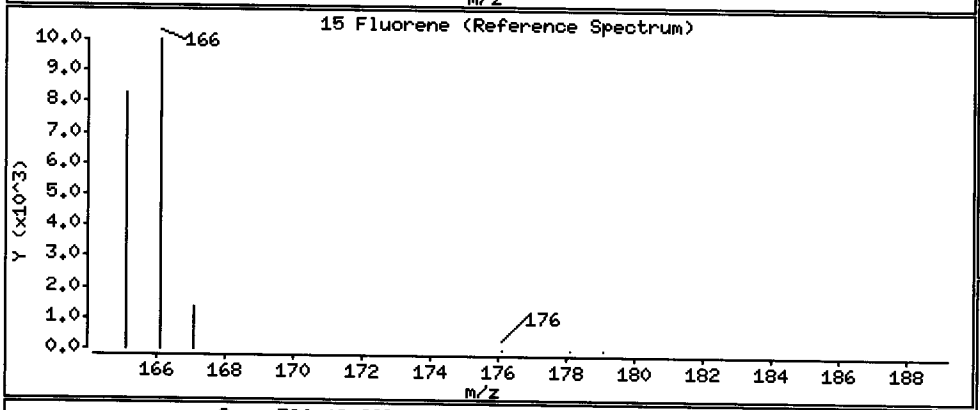
Concentration: 763 ug/L

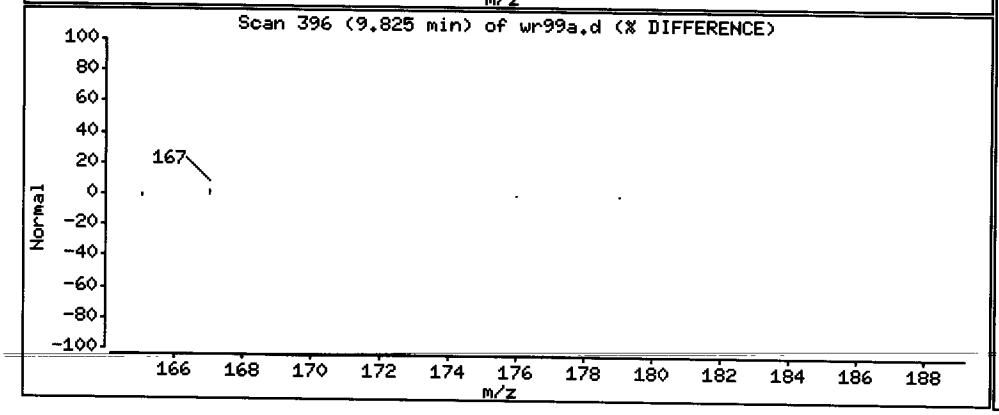


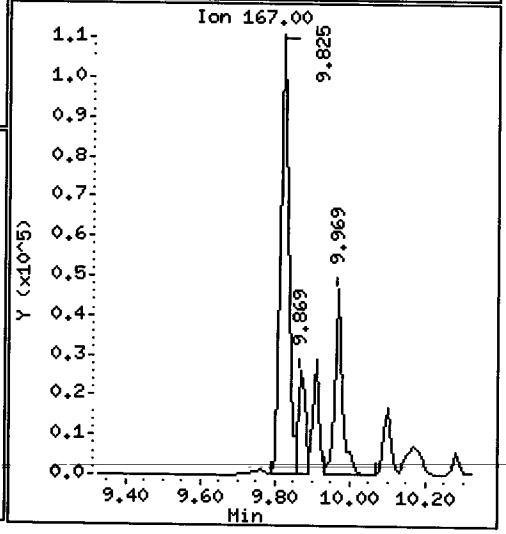












Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

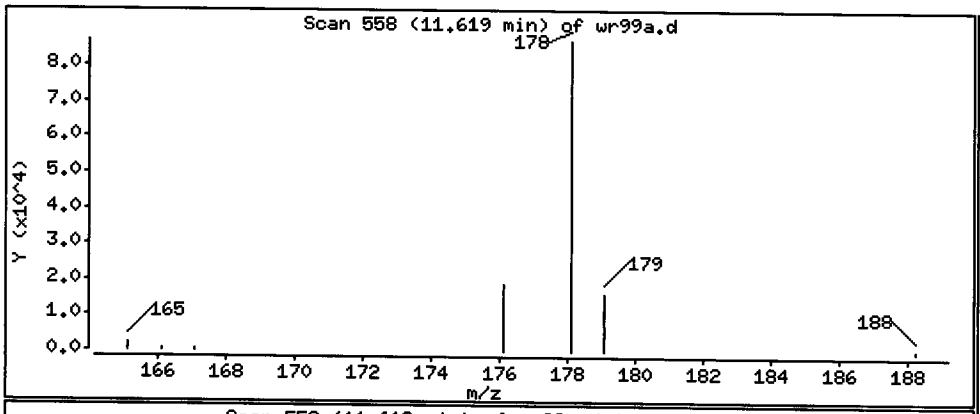
Operator: VTS

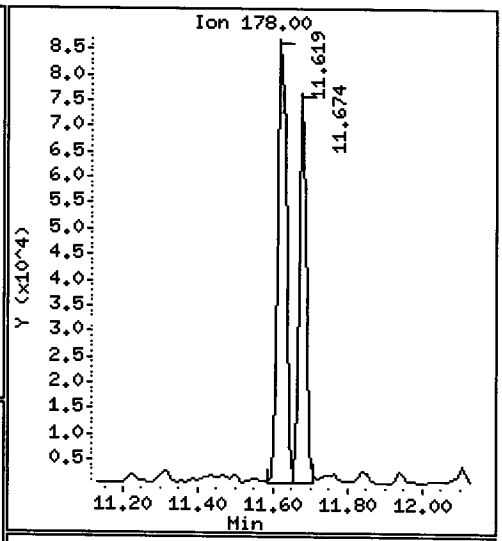
Column phase: Rxi-17Sil MS

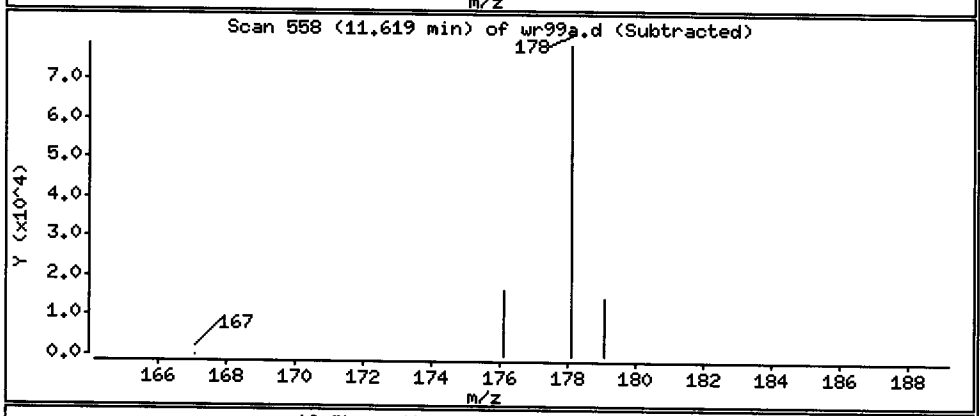
Column diameter: 0.25

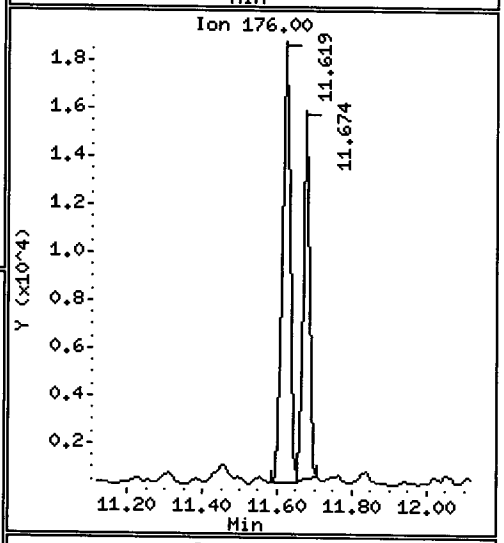
19 Phenanthrene

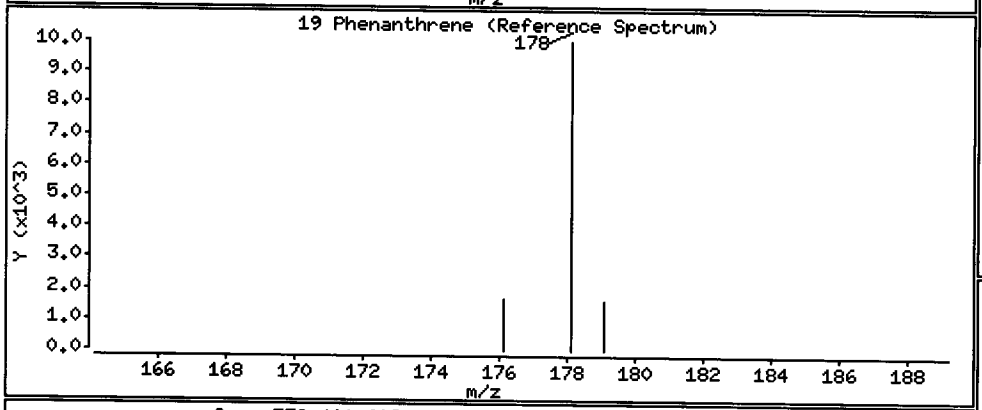
Concentration: 82.7 ug/L

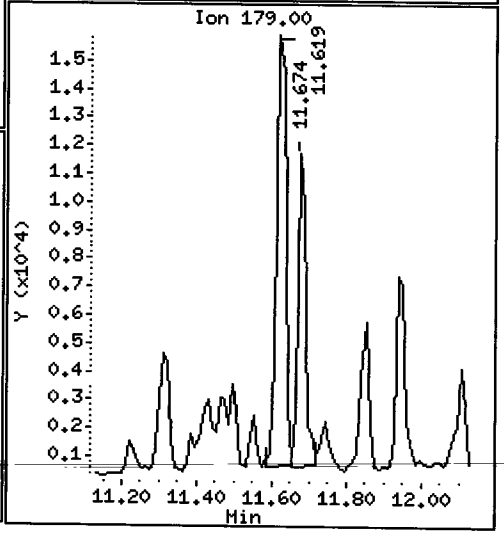


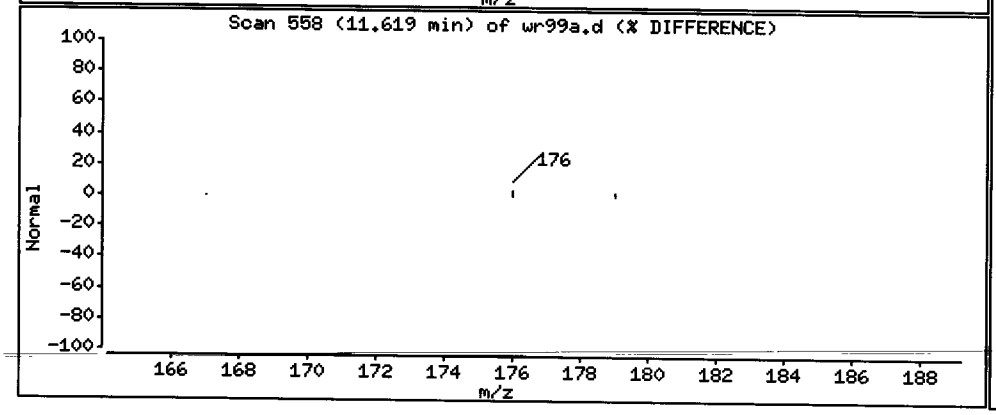












Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

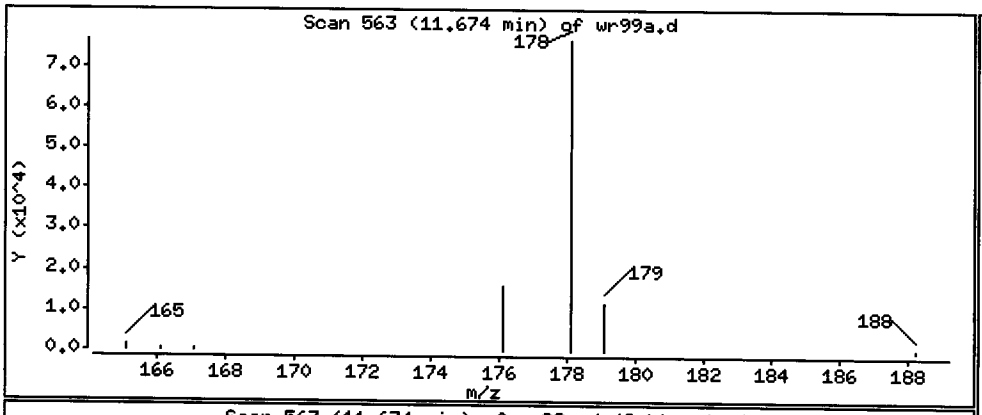
Operator: VTS

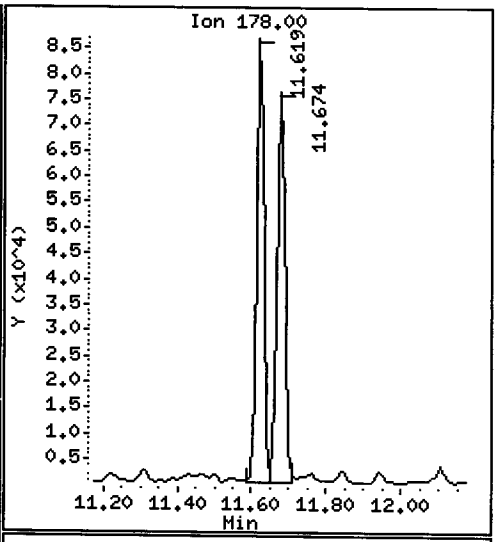
Column phase: Rxi-17Sil MS

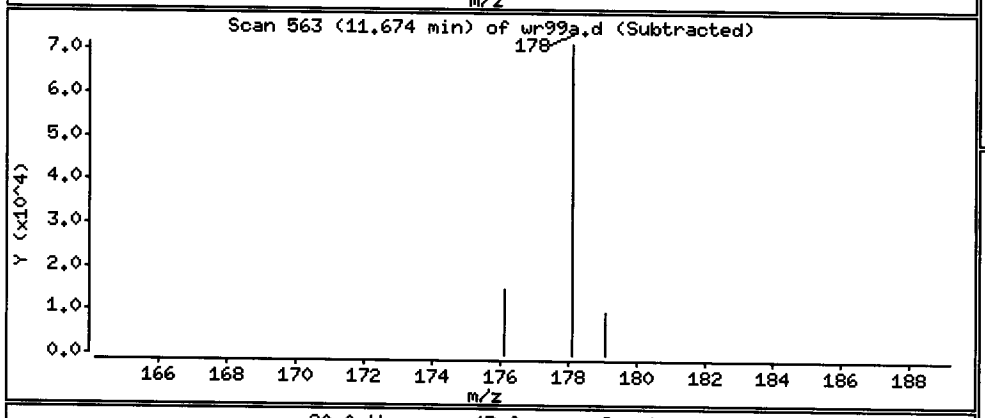
Column diameter: 0.25

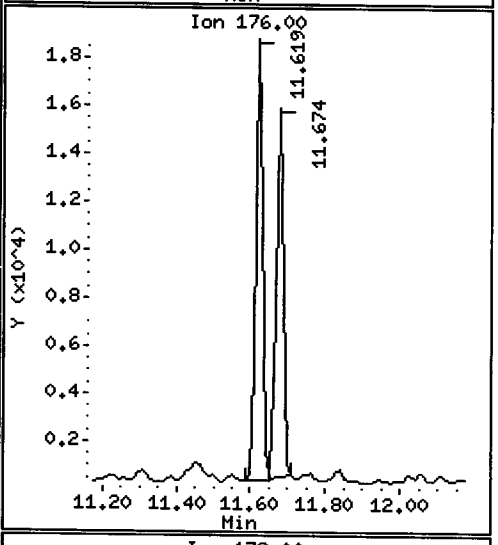
20 Anthracene

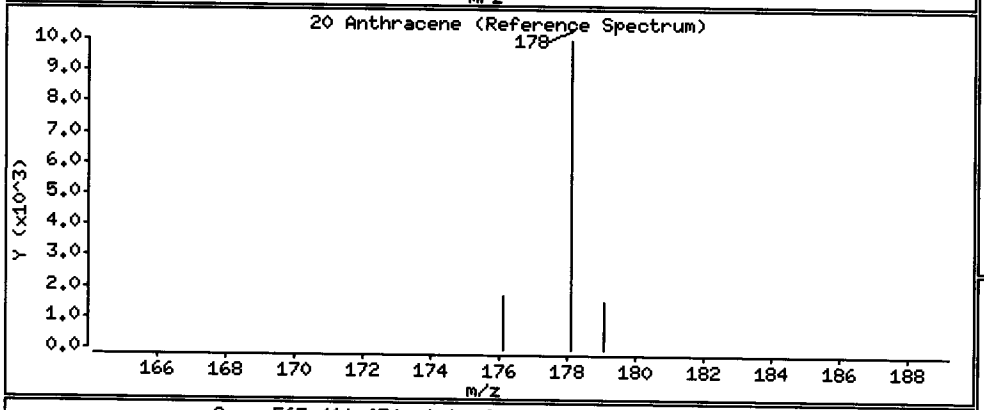
Concentration: 74.0 ug/L

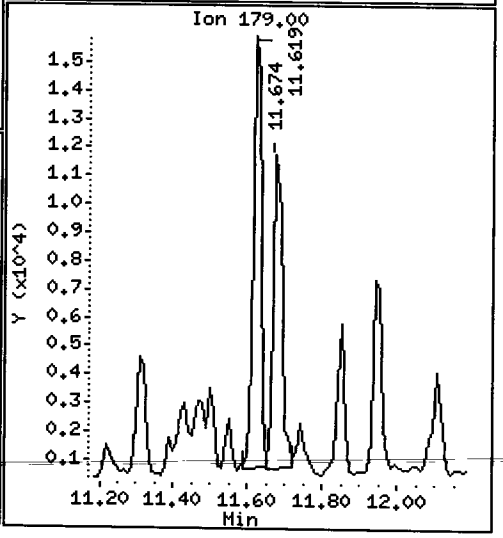


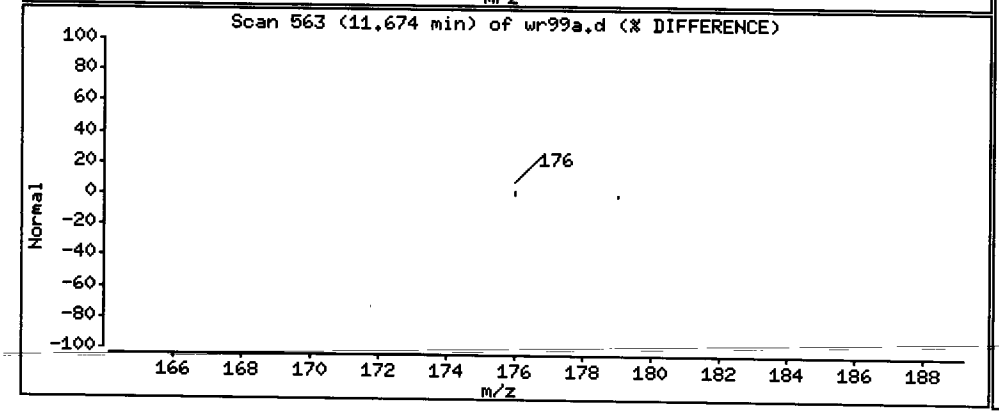












Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

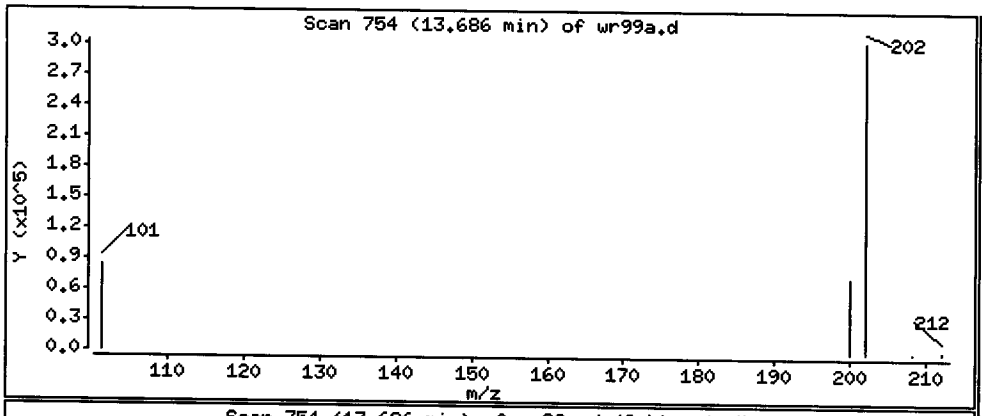
Operator: VTS

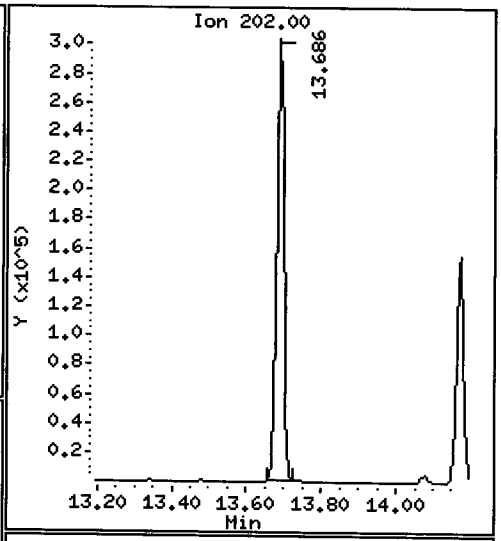
Column phase: Rxi-17Sil MS

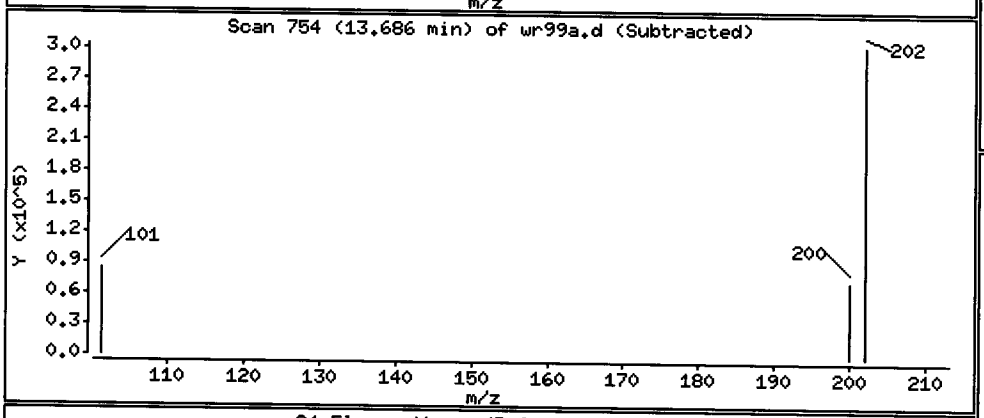
Column diameter: 0.25

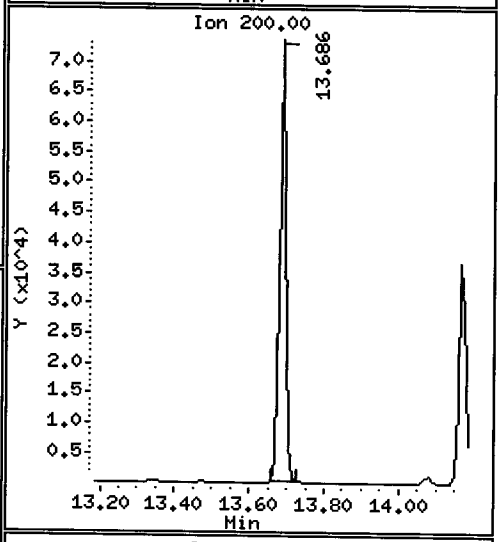
24 Fluoranthene

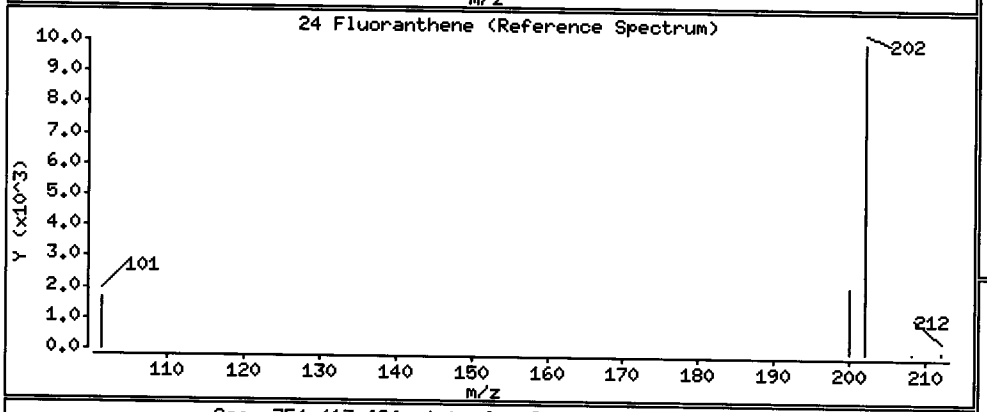
Concentration: 282 ug/L

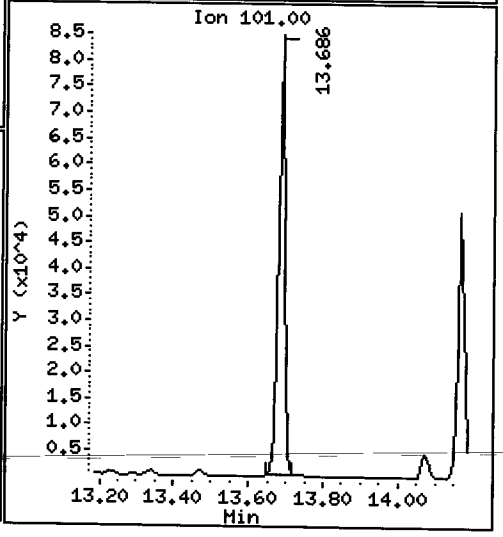


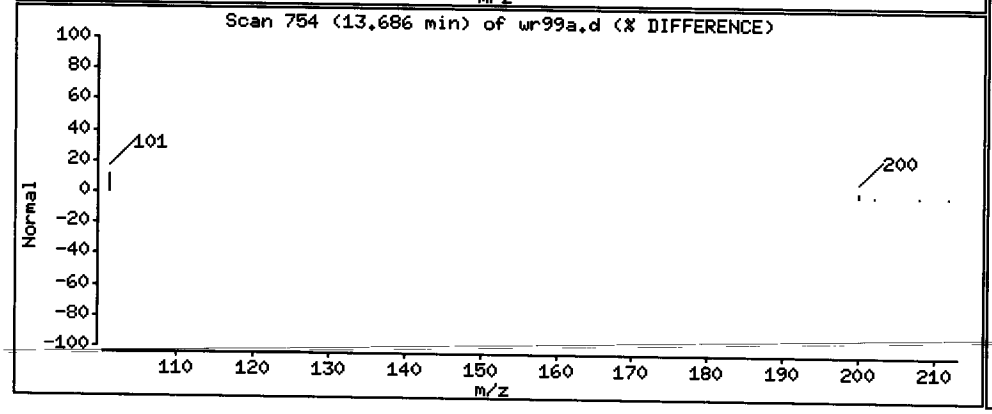












Data File: /chem3/nt11.i/20130608.b/wr99a.d

Date : 08-JUN-2013 13:55

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A

Volume Injected (uL): 2.0

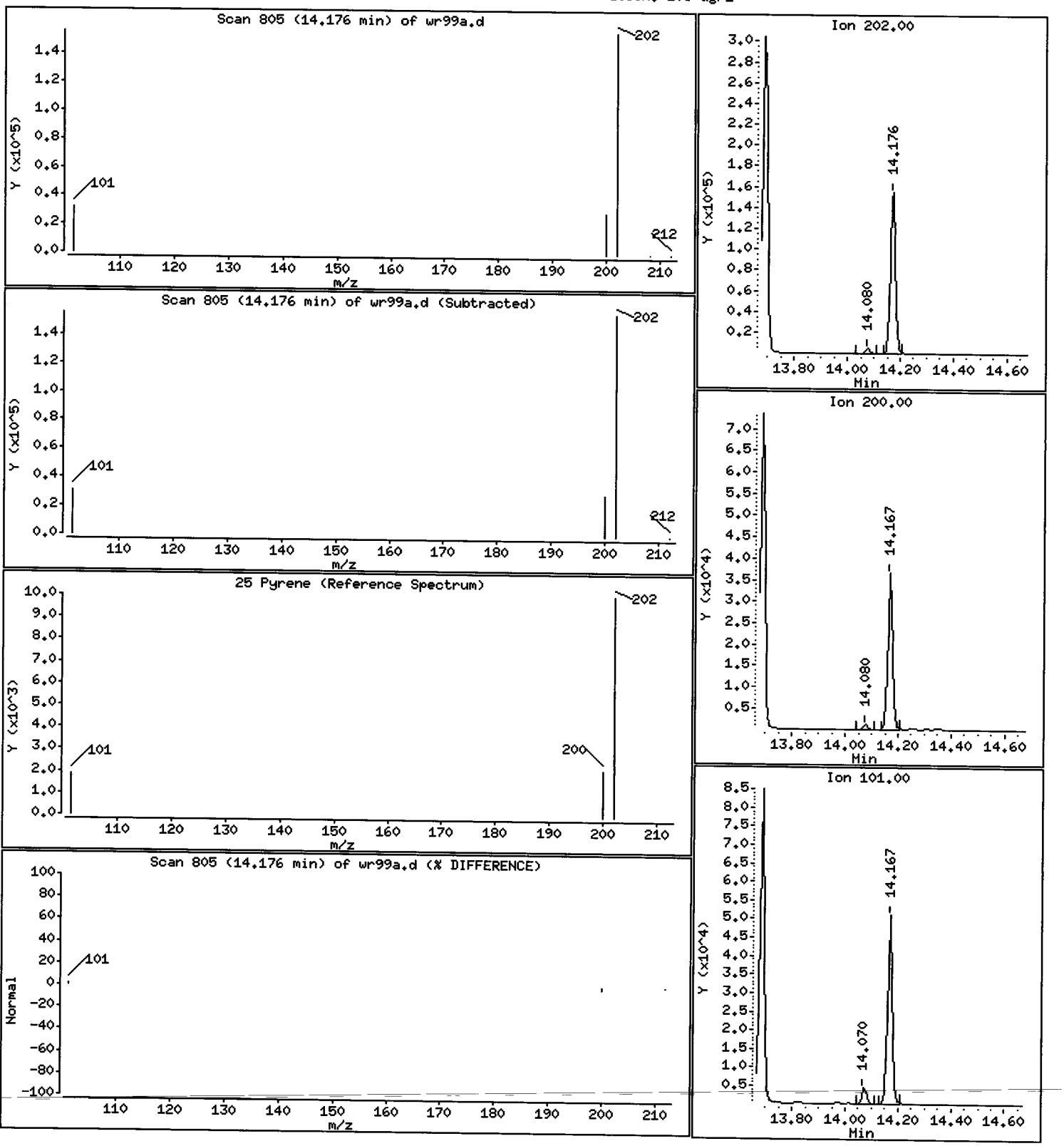
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

25 Pyrene

Concentration: 203 ug/L



CO-ELUTION SUMMARY FOR FILE - wr99a.d

Lab ID: WR99A, Method: lowsim.m, Instrument: nt11.i, Date: 08-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130608.b/wr99adl.d
Lab Smp Id: WR99A Client Smp ID: KC-VT-1593-20130530
Inj Date : 08-JUN-2013 14:49
Operator : VTS Inst ID: nt11.i
Smp Info : WR99A,3
Misc Info : 13-11541
Comment :
Method : /chem3/nt11.i/20130608.b/lowsim.m
Meth Date : 06-Jun-2013 16:02 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 8
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.987	(1.000)	302902	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	41159	24.8170	74.5
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	72603	75.7459	227
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	6020	5.79958	17.4
	8 1-methylnaphthalene	142	7.258	7.258	(1.214)	31043	29.7502	89.3
	10 Acenaphthylene	152	8.784	8.784	(0.983)	23181	16.2637	48.8
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	159634	200.000	
	12 Acenaphthene	153	9.005	9.006	(1.007)	858117	912.078	2740
	14 Dibenzofuran	168	9.216	9.205	(1.031)	253660	185.080	555
	15 Fluorene	166	9.825	9.825	(1.099)	269184	263.088	789
*	18 Phenanthrene-d10	188	11.585	11.585	(1.000)	216123	200.000	
	19 Phenanthrene	178	11.629	11.630	(1.004)	35151	26.3311	79.0
	20 Anthracene	178	11.685	11.674	(1.009)	28194	22.5183	67.6
$	23 Fluoranthene-d10	212	13.657	13.657	(1.179)	92291	82.3862	247
	24 Fluoranthene	202	13.695	13.696	(1.182)	121457	92.0285	276

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.176	14.176	(0.871)	64430	64.0370	192
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	16.275	16.276	(1.000)	120145	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	18.819	18.810	(1.000)	108969	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.775	20.764	(1.104)	48709	78.2176	235
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					

6.8.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wr99adl.d
Lab Smp Id: WR99A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info: 13-11541

Calibration Date: 08-JUN-2013
Calibration Time: 11:44
Client Smp ID: KC-VT-1593-20130530
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	302902	18.65
11 Acenaphthene-d10	142891	71446	285782	159634	11.72
18 Phenanthrene-d10	220853	110426	441706	216123	-2.14
29 Chrysene-d12	162525	81262	325050	120145	-26.08
35 Perylene-d12	139028	69514	278056	108969	-21.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.99	5.49	6.49	5.98	-0.18
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.59	11.09	12.09	11.59	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.82	0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WR99A
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130608.b/lowsim.m
Misc Info: 13-11541

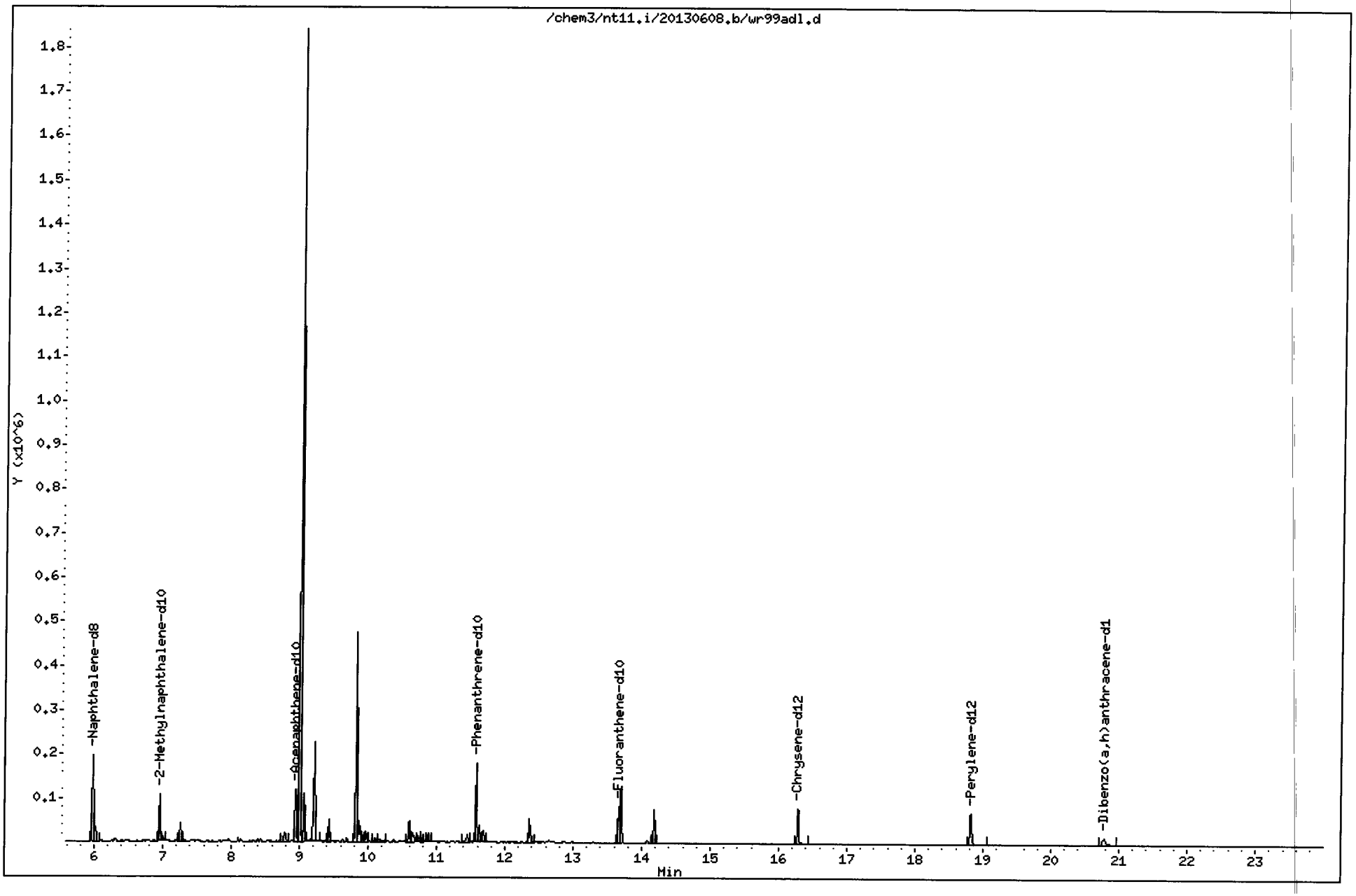
Client SDG: WR99
Fraction: SV
Client Smp ID: KC-VT-1593-20130530
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	227	75.75	35-94
$ 23 Fluoranthene-d10	300	247	82.39	30-160
$ 36 Dibenzo(a,h)anthra	300	235	78.22	26-115

Data File: /chem3/nt11.i/20130608.b/wr99ad1.d
Date : 08-JUN-2013 14:49
Client ID: KC-VT-1593-20130530
Sample Info: WR99A,3
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



Data File: /chem3/nt11.i/20130608.b/wr99ad1.d

Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

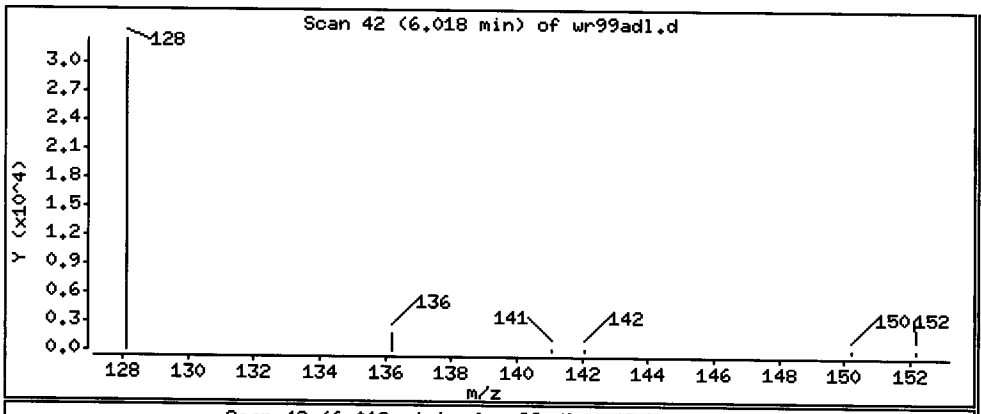
Operator: VTS

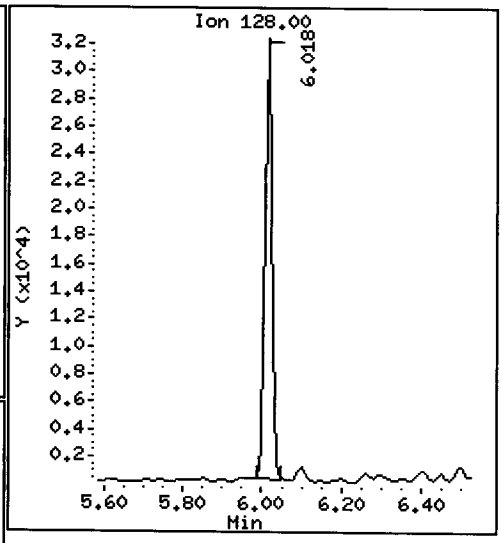
Column phase: Rxi-17Sil MS

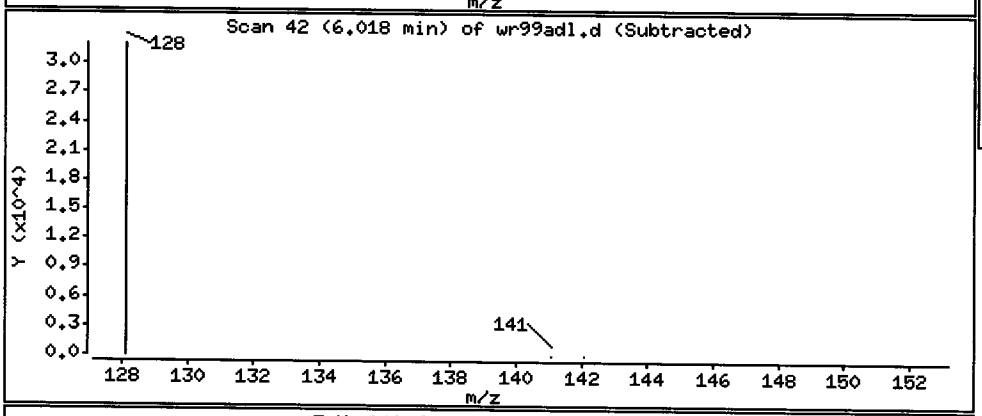
Column diameter: 0.25

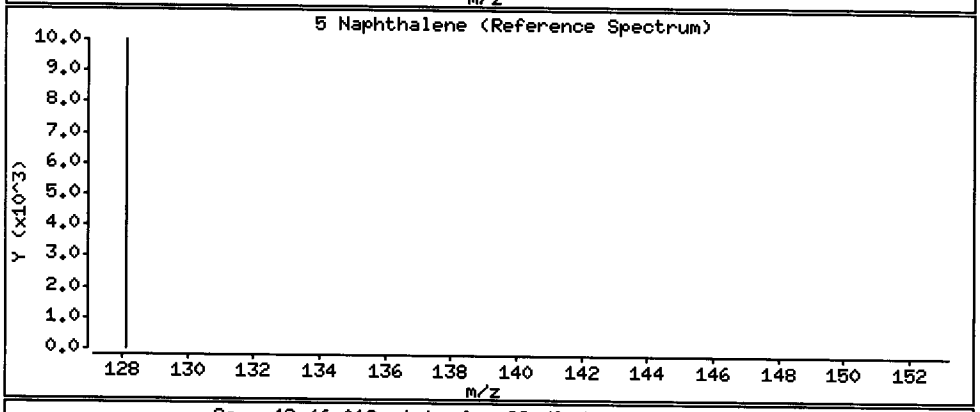
5 Naphthalene

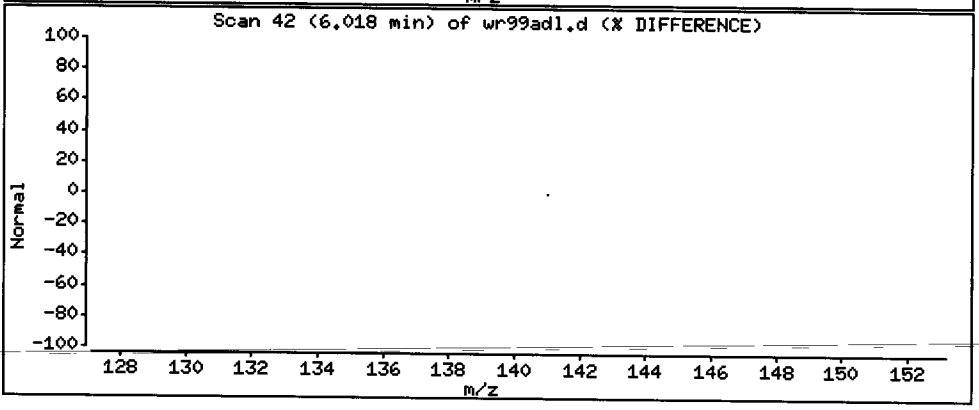
Concentration: 74.5 ug/L











Data File: /chem3/nt11.i/20130608.b/wr99ad1.d

Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

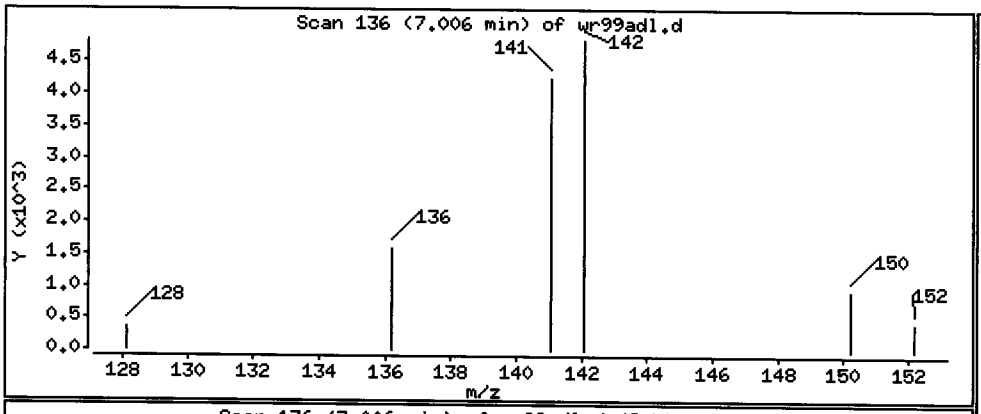
Operator: VTS

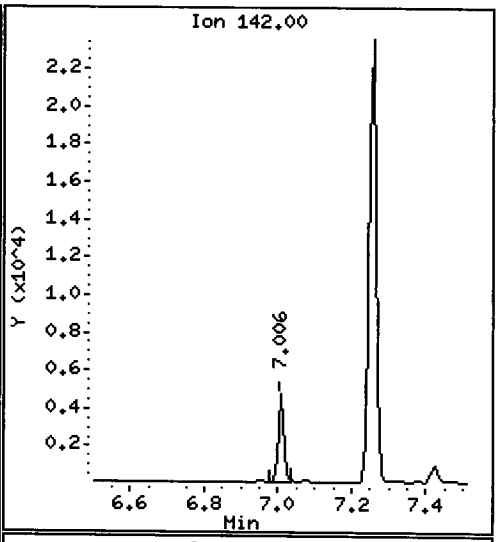
Column phase: Rxi-17Sil MS

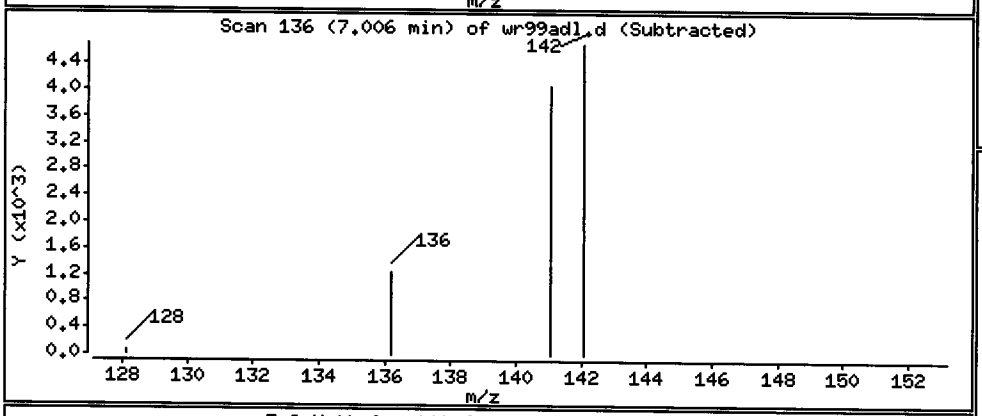
Column diameter: 0.25

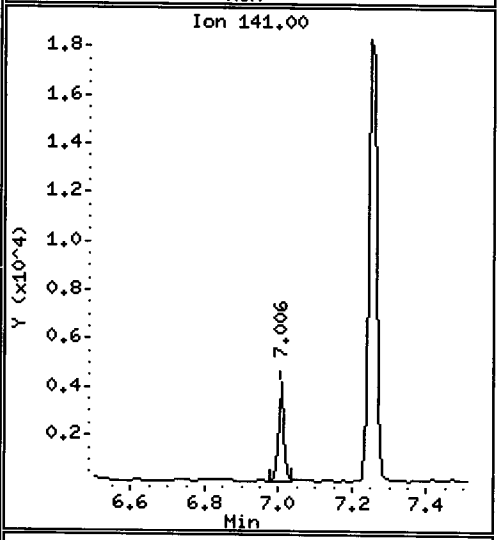
7 2-Methylnaphthalene

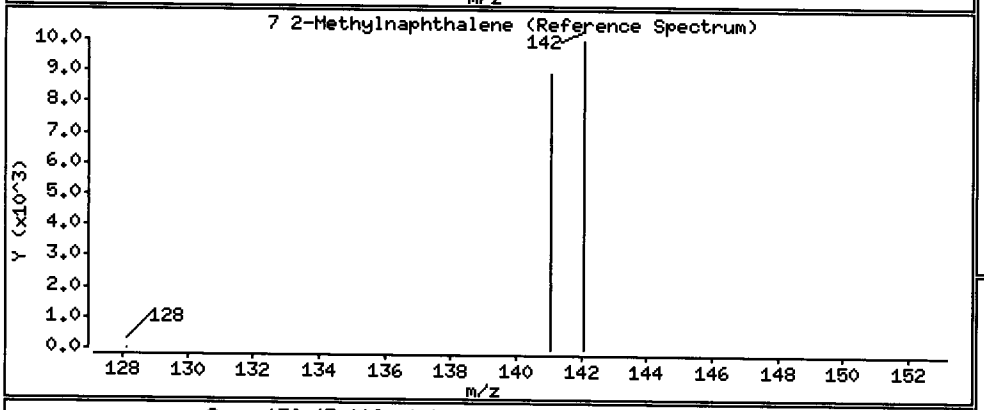
Concentration: 17.4 ug/L

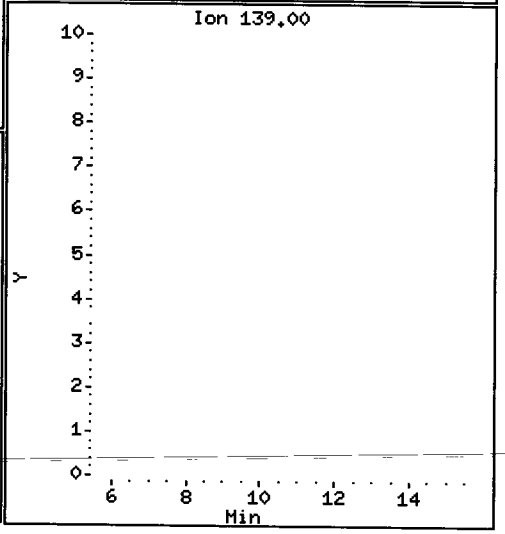


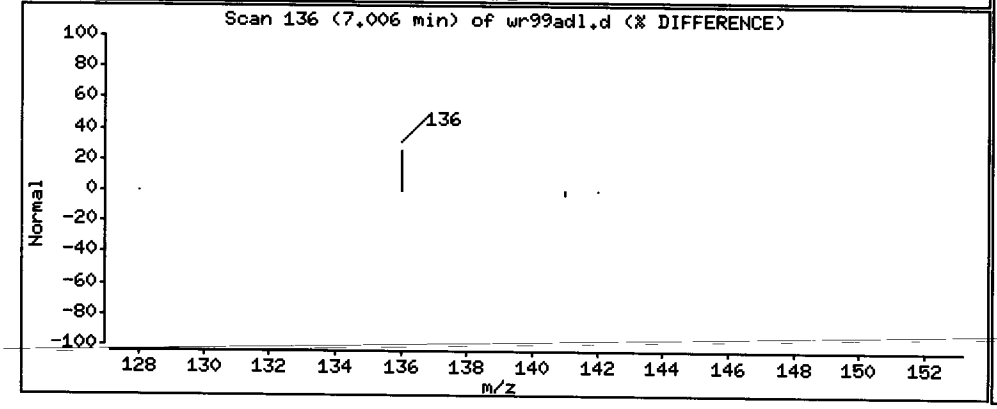












Data File: /chem3/nt11.i/20130608.b/wr99ad1.d

Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

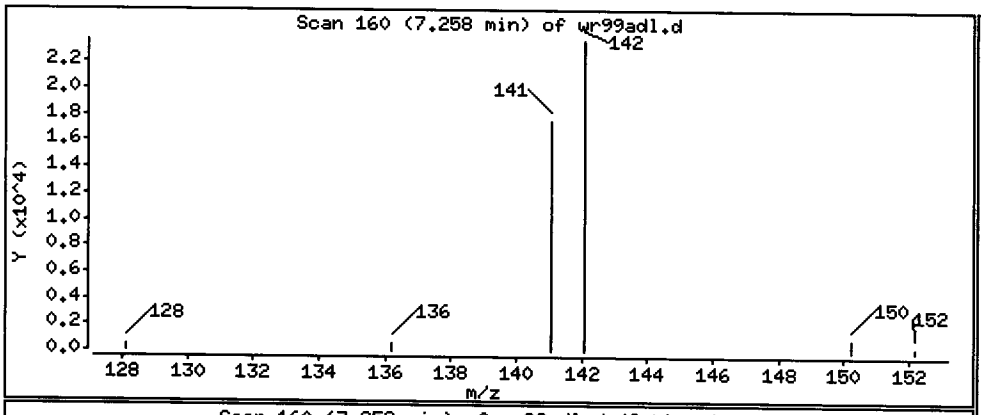
Operator: VTS

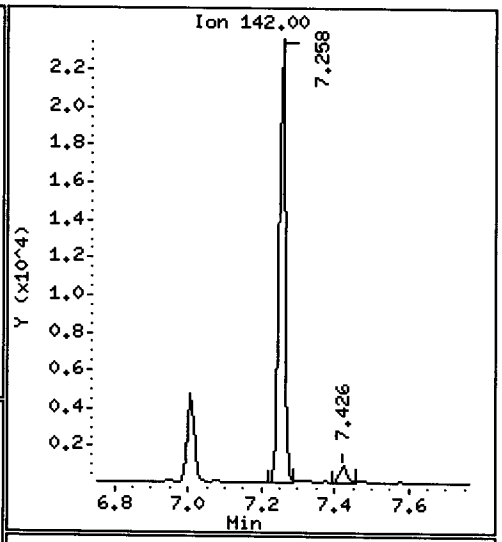
Column phase: Rxi-17Sil MS

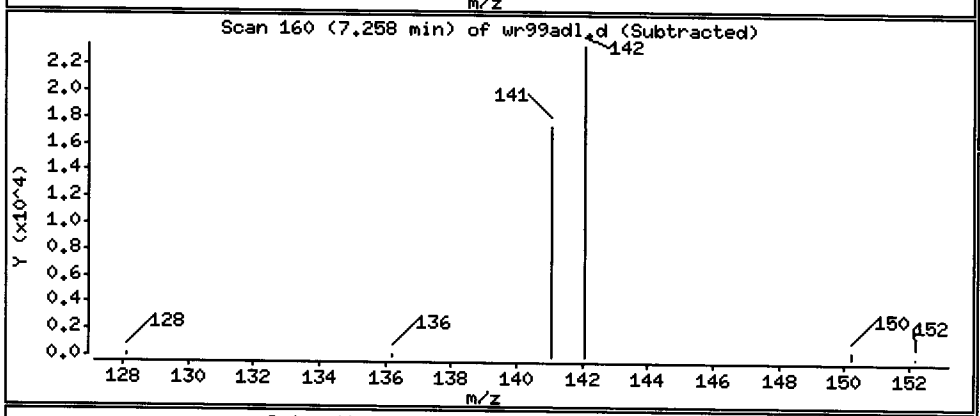
Column diameter: 0.25

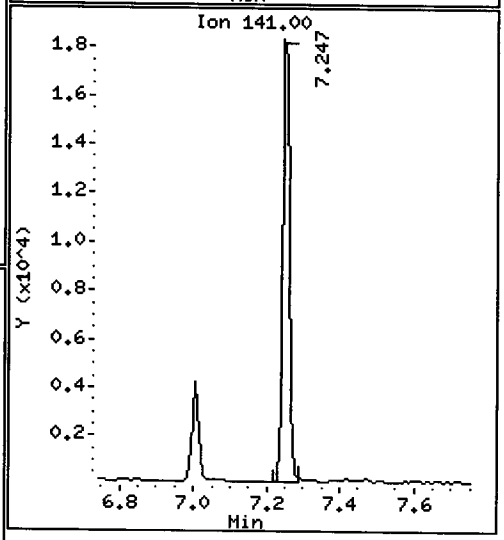
8 1-methylnaphthalene

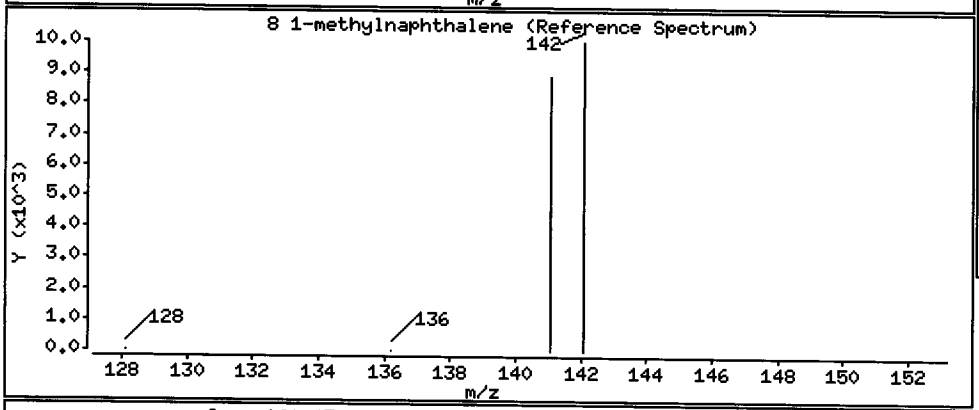
Concentration: 89.3 ug/L

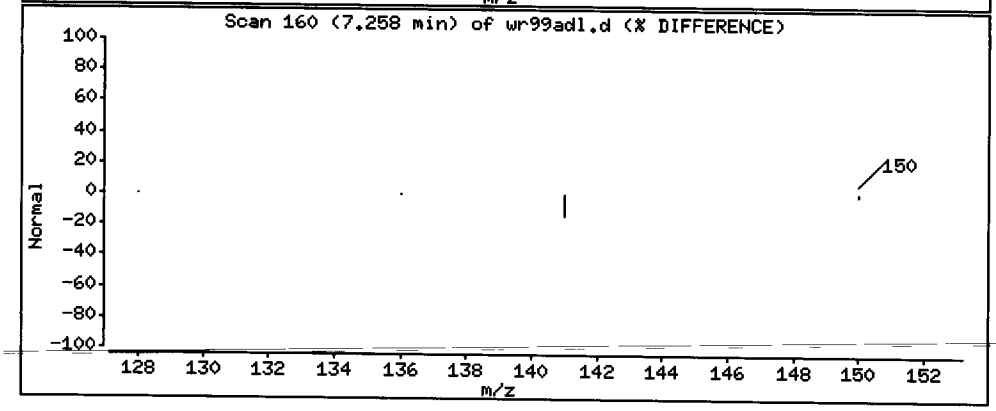












Data File: /chem3/nt11.i/20130608.b/wr99adl.d

Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

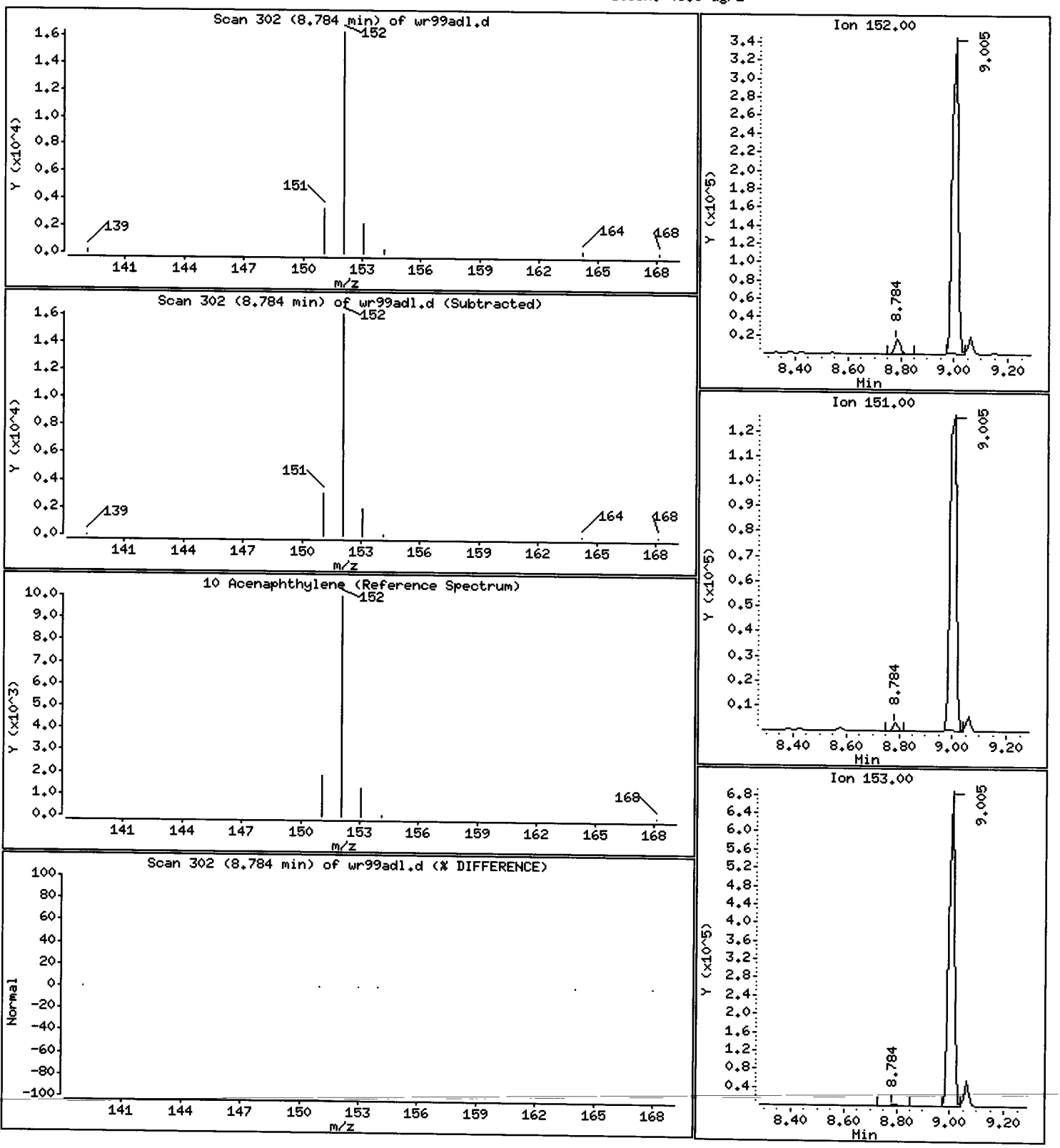
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

10 Acenaphthylene

Concentration: 48.8 ug/L



Data File: /chem3/nt11.i/20130608.b/wr99ad1.d

Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

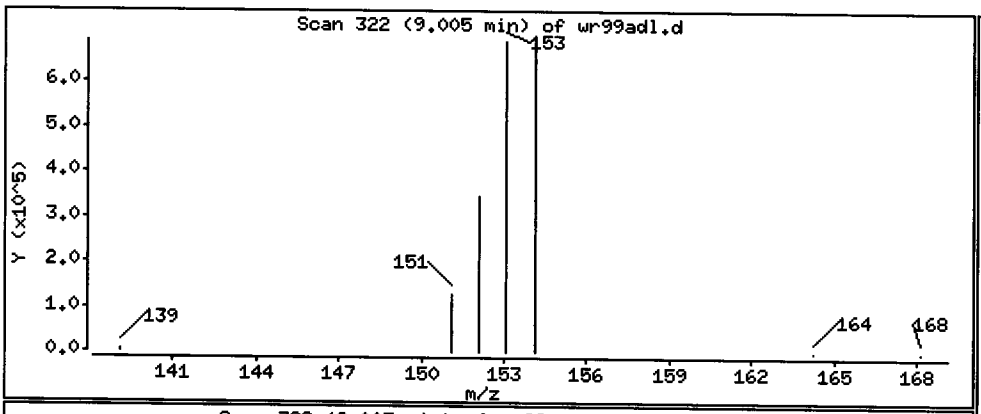
Operator: VTS

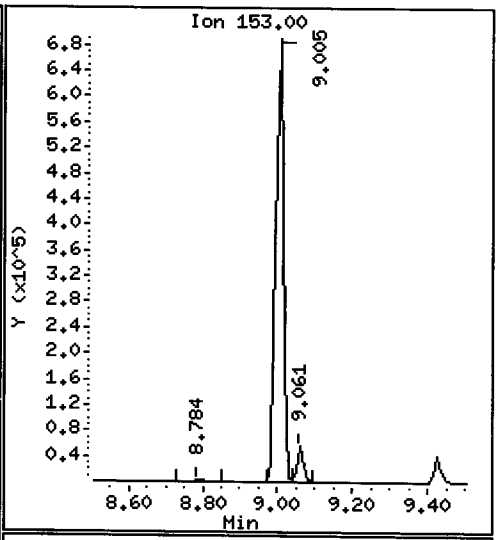
Column phase: Rxi-17Sil MS

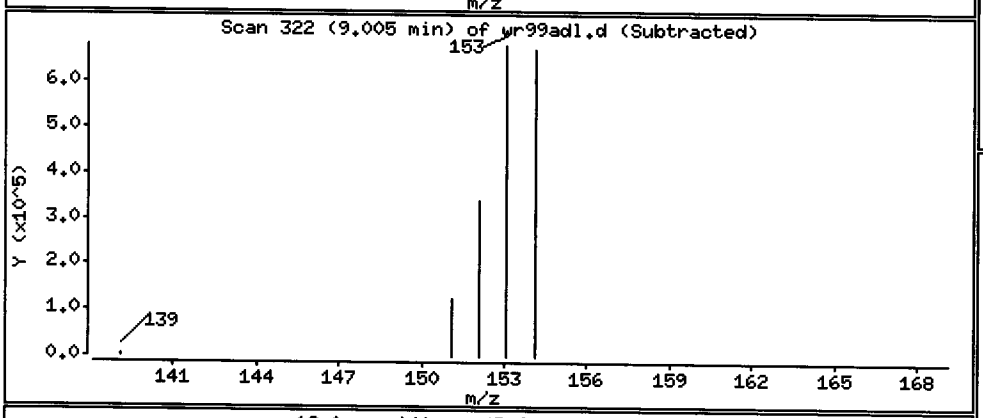
Column diameter: 0.25

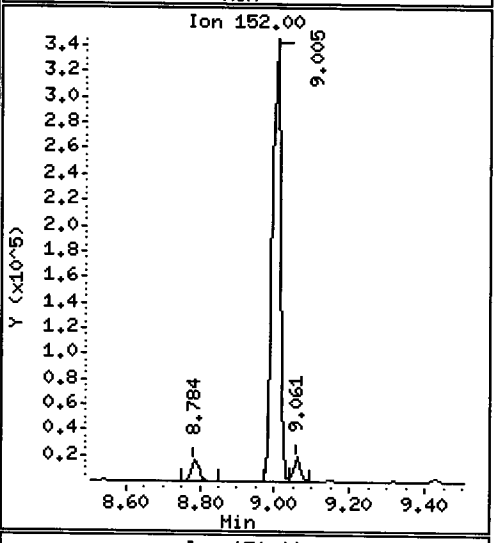
12 Acenaphthene

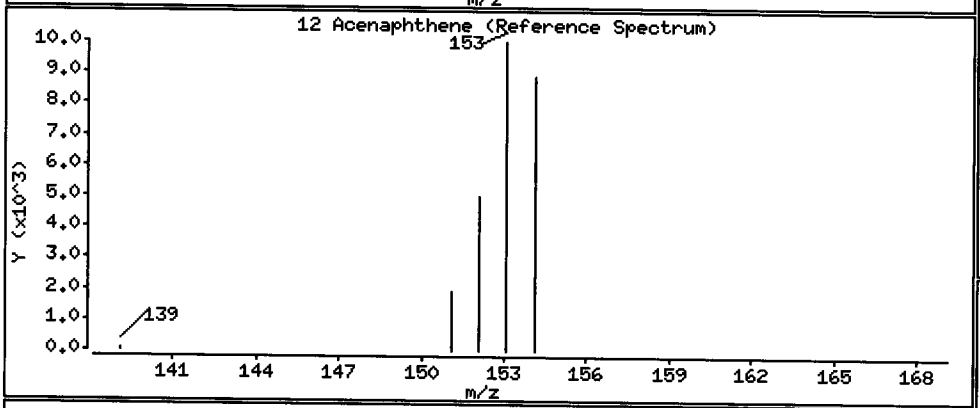
Concentration: 2740 ug/L

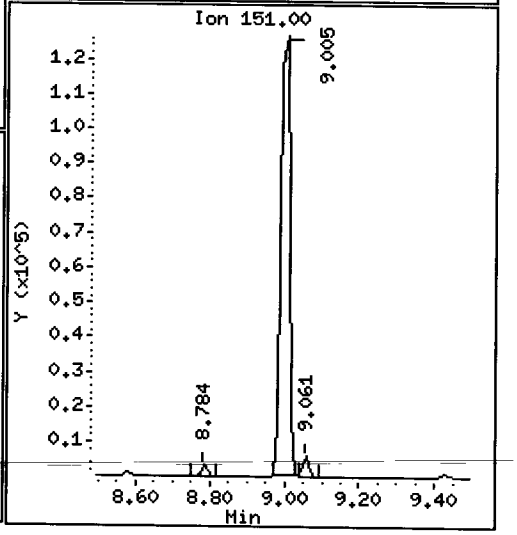


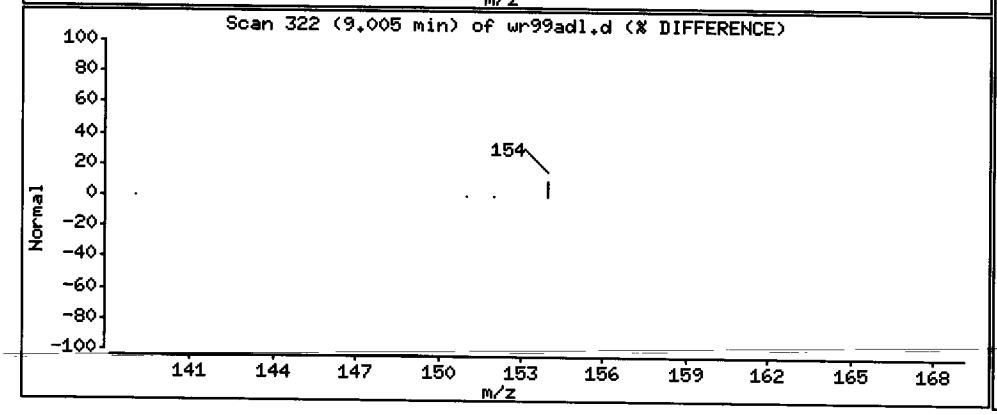












Data File: /chem3/nt11.i/20130608.b/wr99adl.d

Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

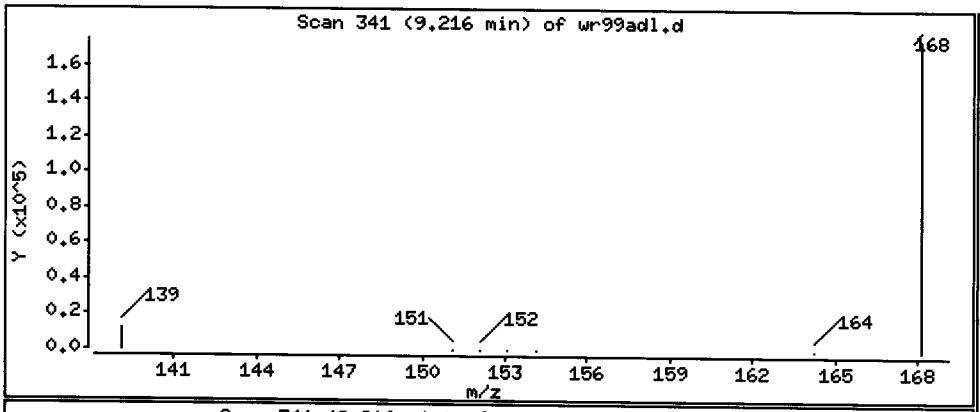
Operator: VTS

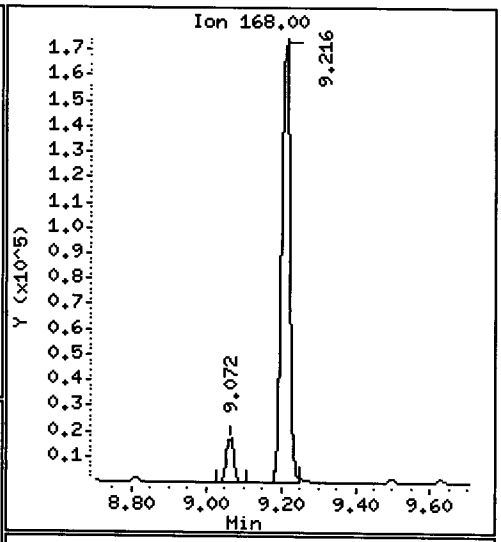
Column phase: Rxi-17Sil MS

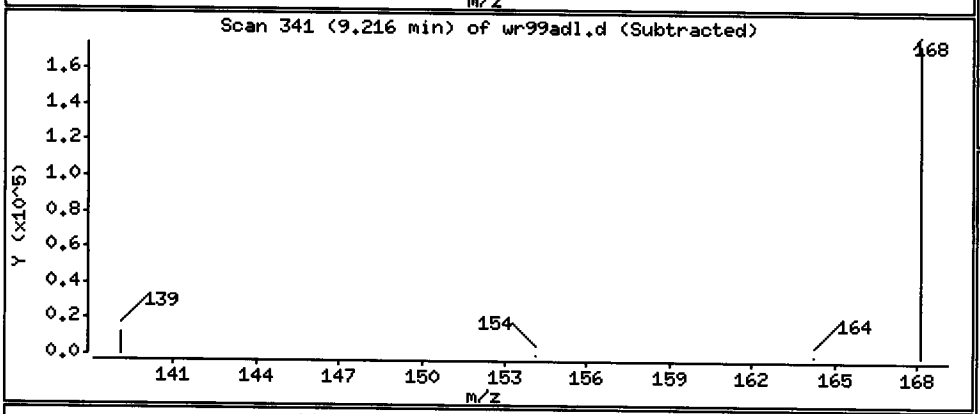
Column diameter: 0.25

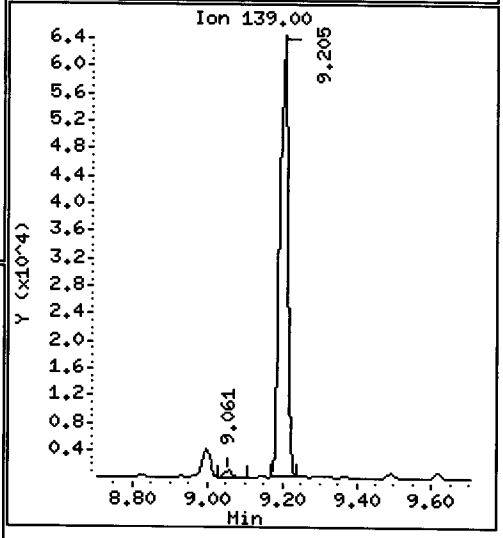
14 Dibenzofuran

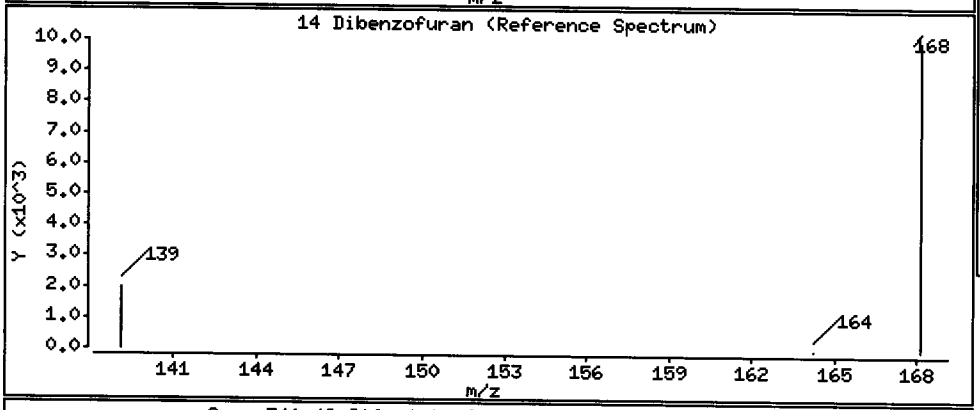
Concentration: 555 ug/L

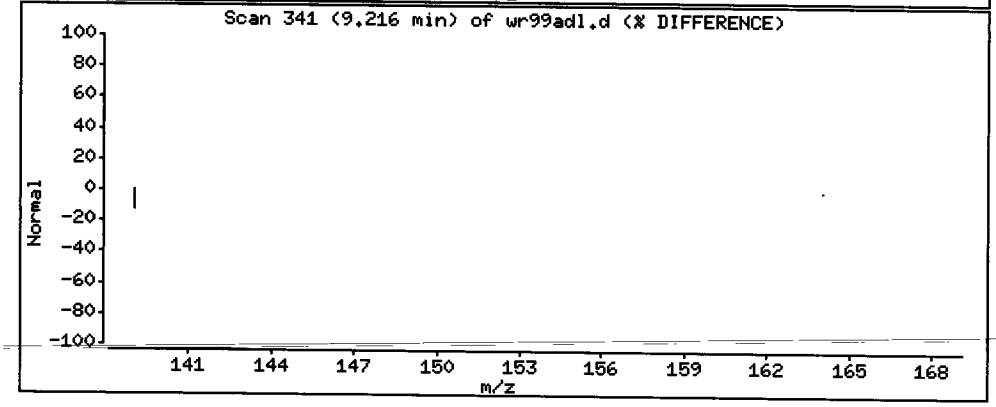












Data File: /chem3/nt11.i/20130608.b/wr99ad1.d

Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

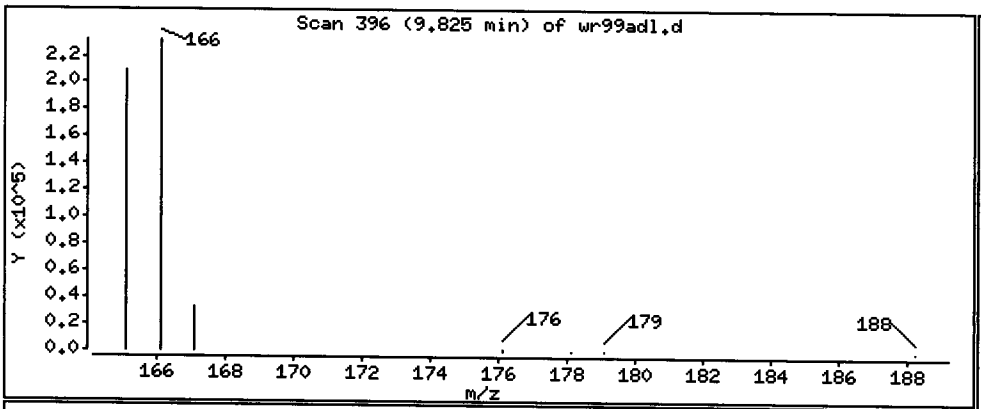
Operator: VTS

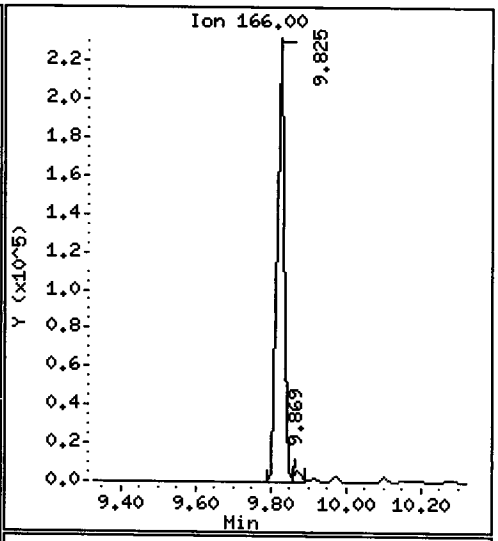
Column phase: Rxi-17Sil MS

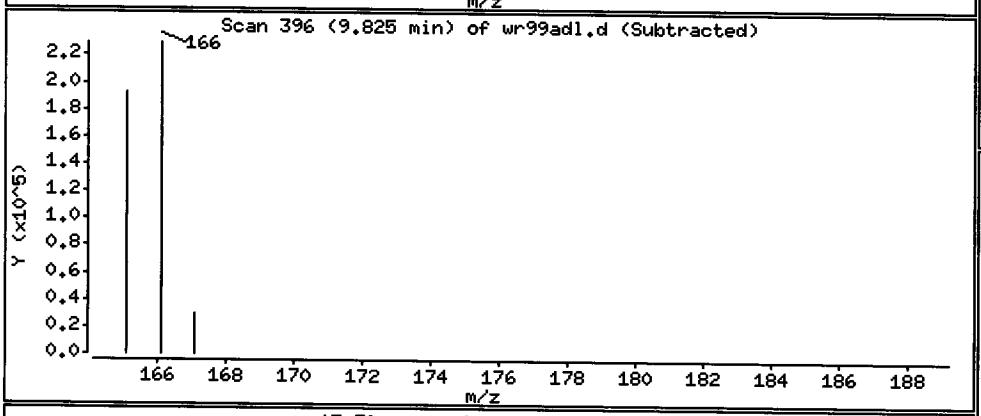
Column diameter: 0.25

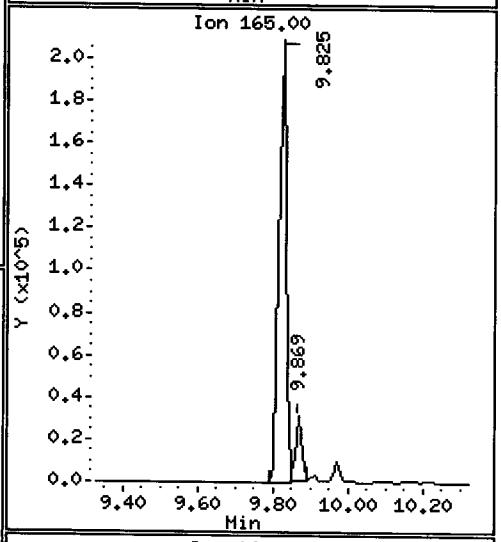
15 Fluorene

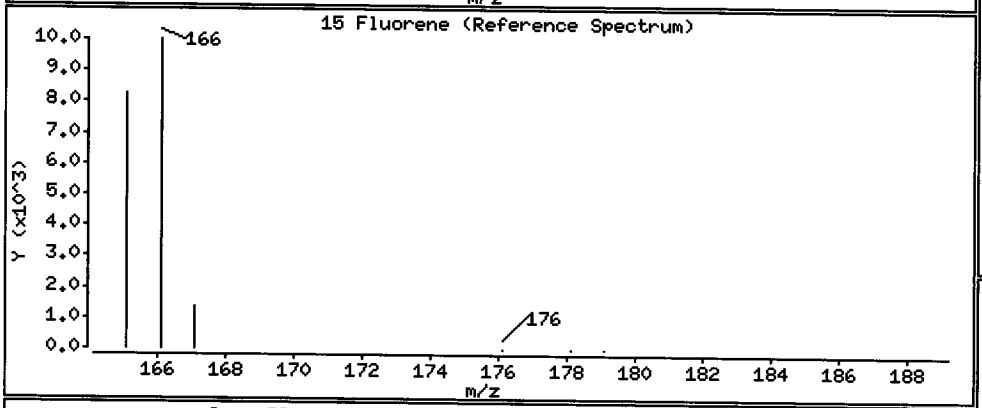
Concentration: 789 ug/L

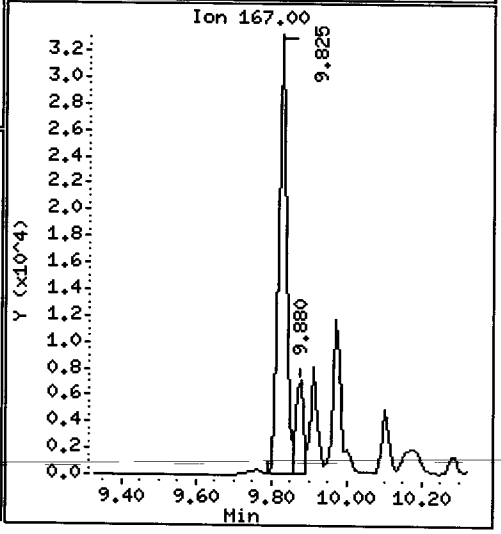


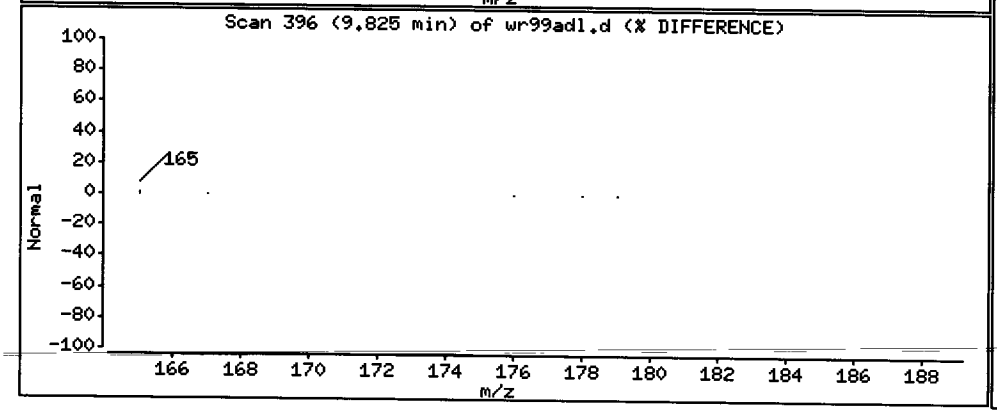












Data File: /chem3/nt11.i/20130608.b/wr99ad1.d

Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

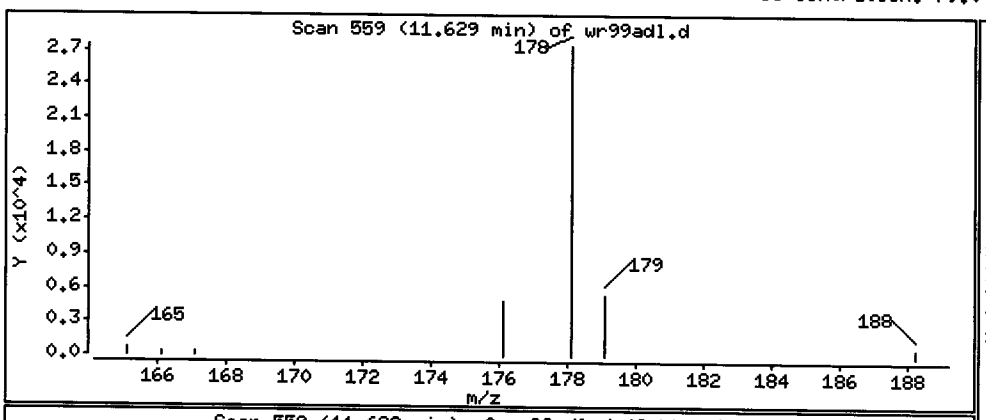
Operator: VTS

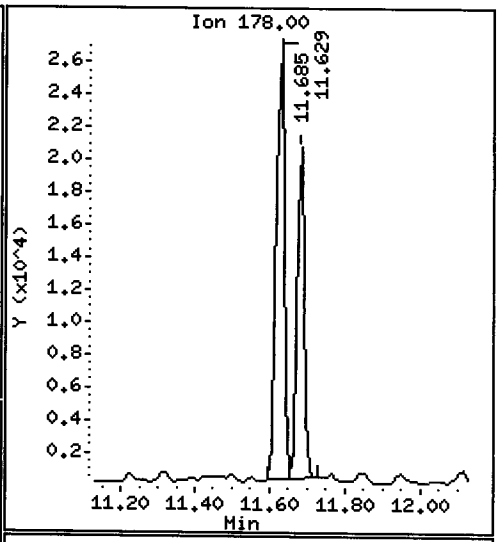
Column phase: Rxi-17Sil MS

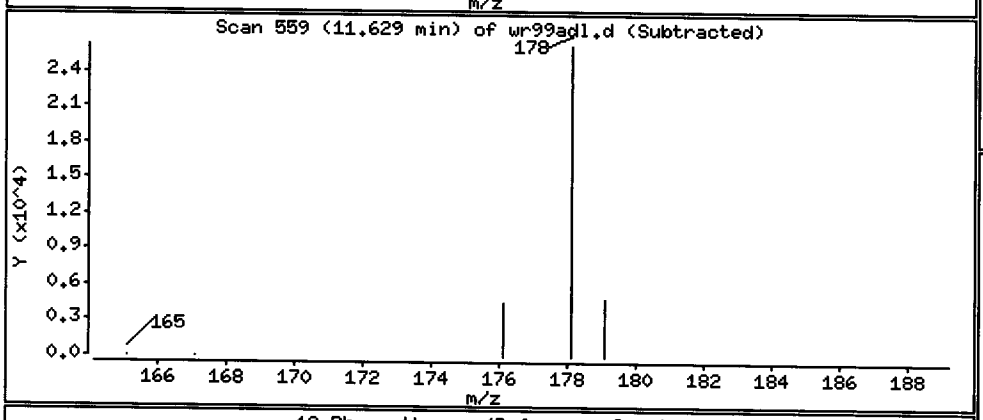
Column diameter: 0.25

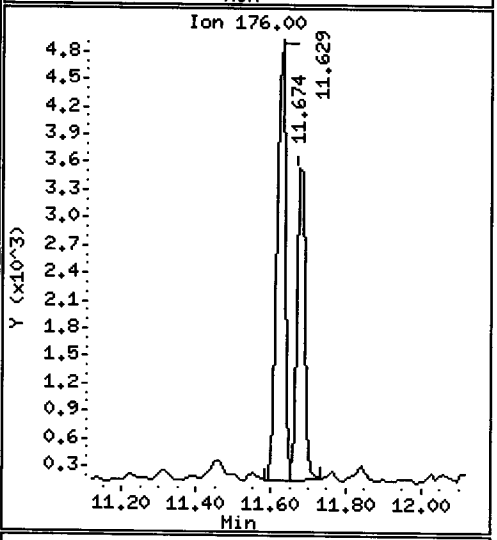
19 Phenanthrene

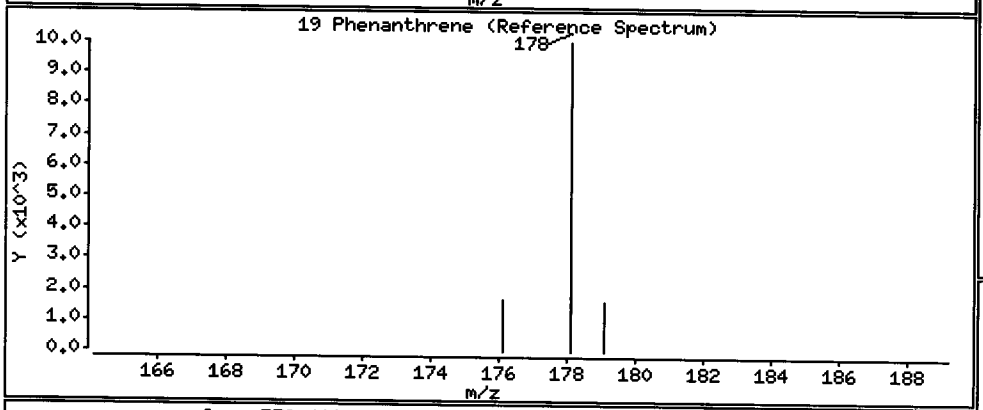
Concentration: 79.0 ug/L

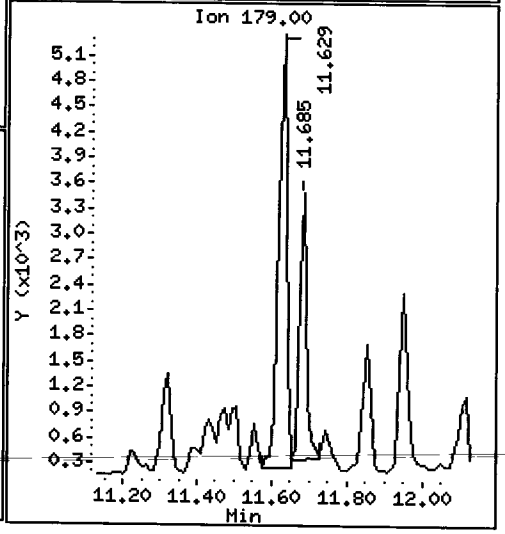


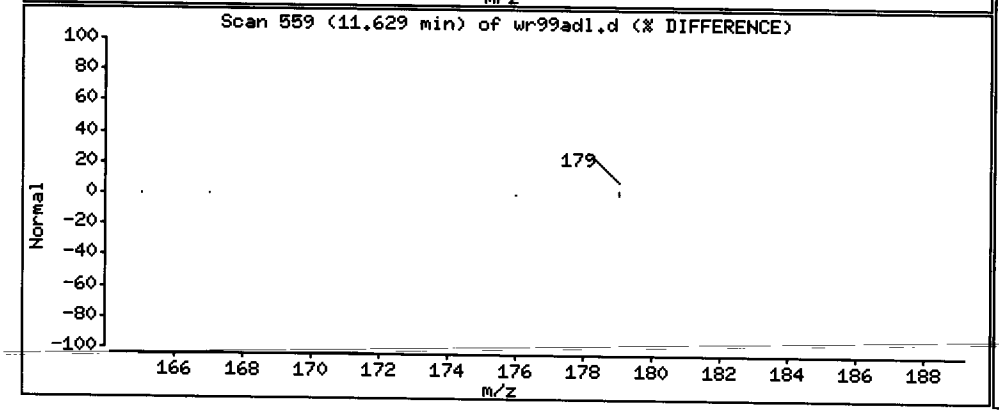












Data File: /chem3/nt11.i/20130608.b/wr99ad1.d

Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

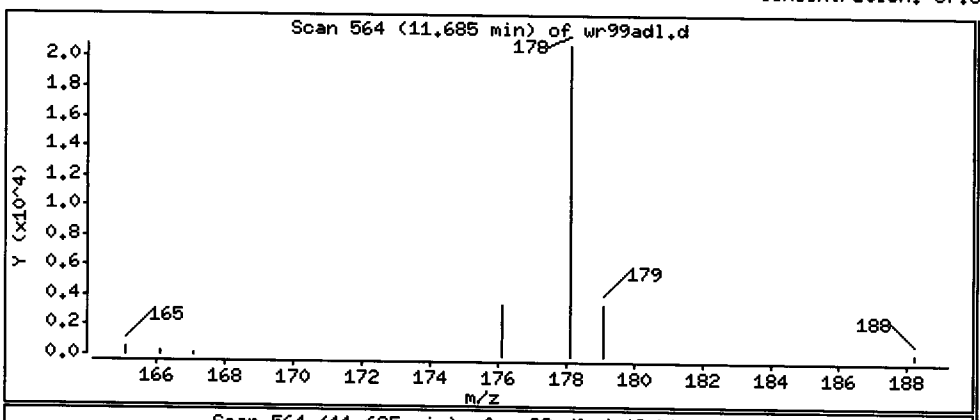
Operator: VTS

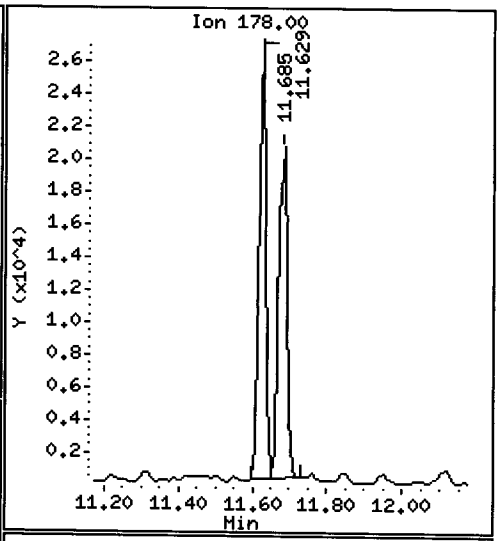
Column phase: Rxi-17Sil MS

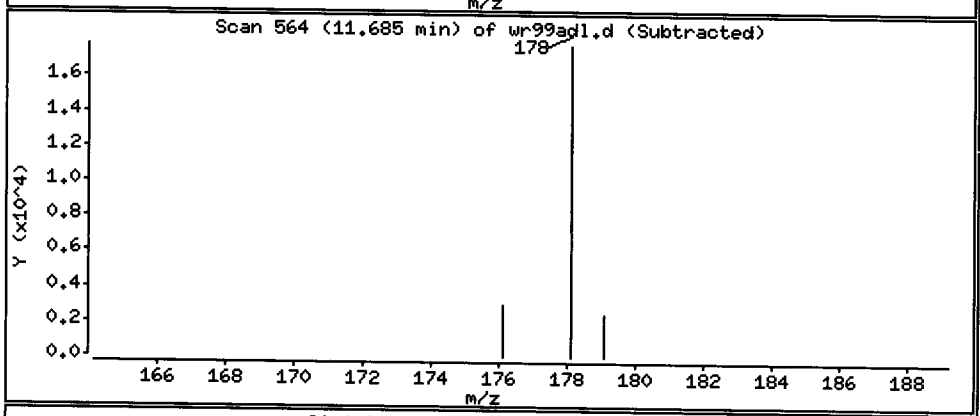
Column diameter: 0.25

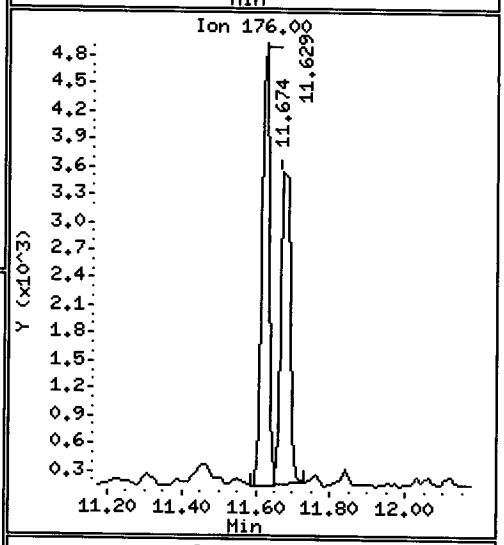
20 Anthracene

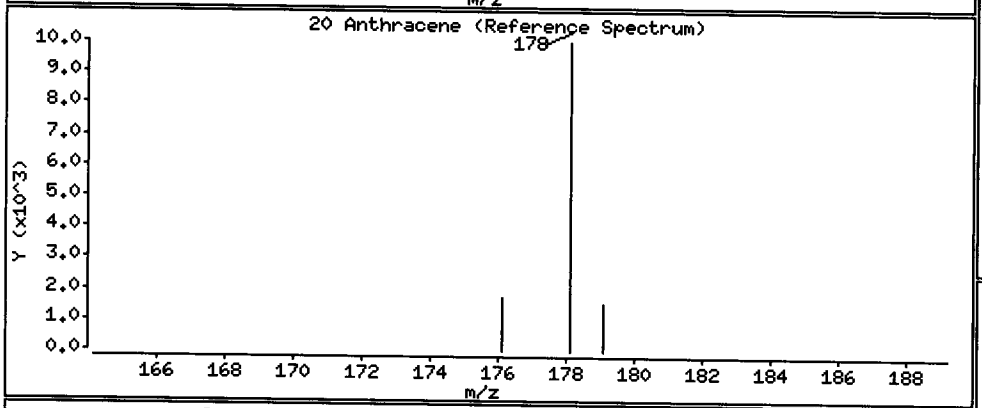
Concentration: 67.6 ug/L

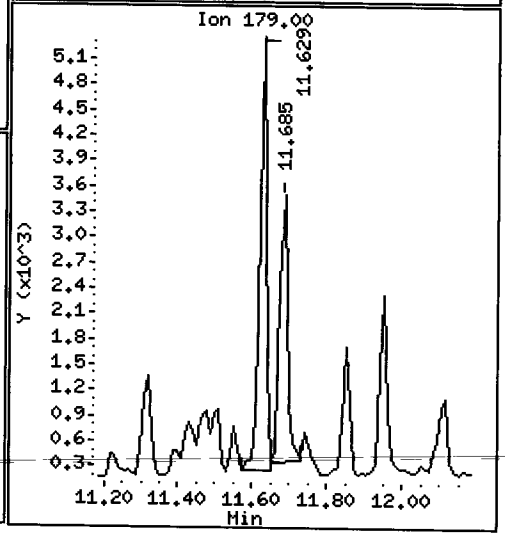


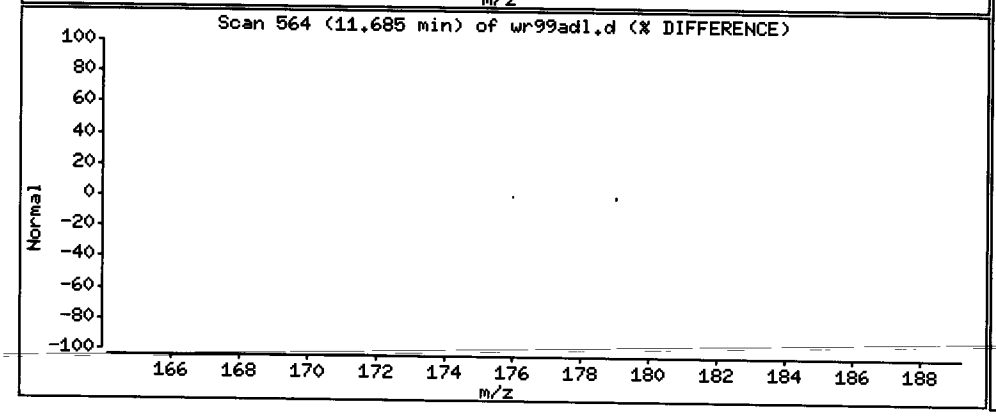












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Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

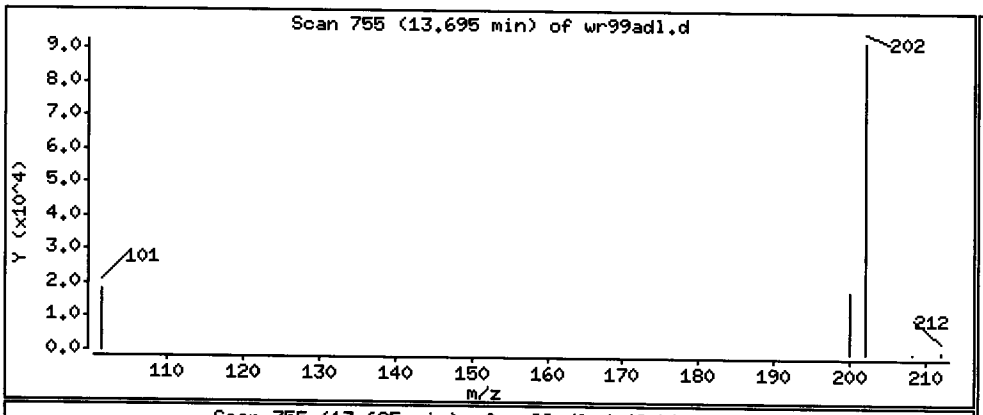
Operator: VTS

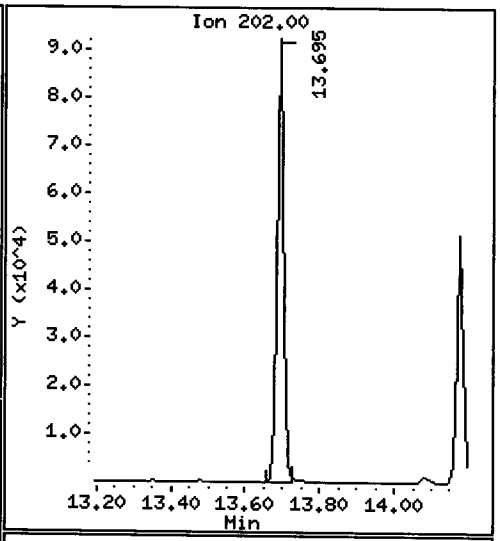
Column phase: Rxi-17Sil MS

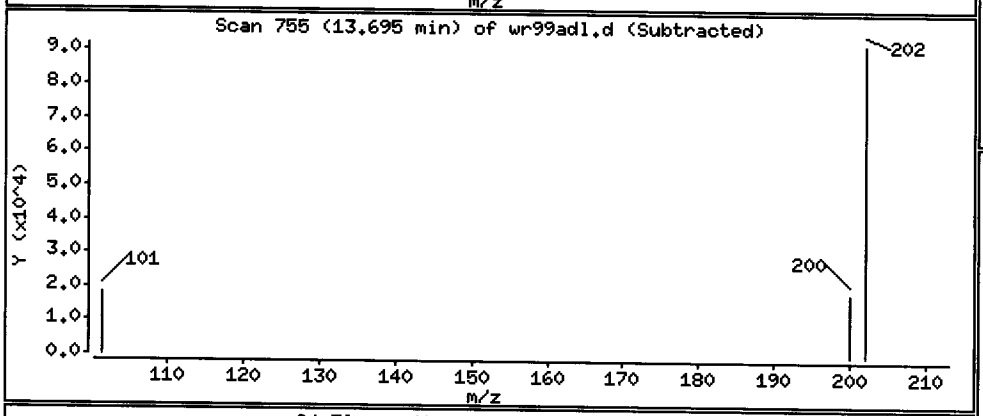
Column diameter: 0.25

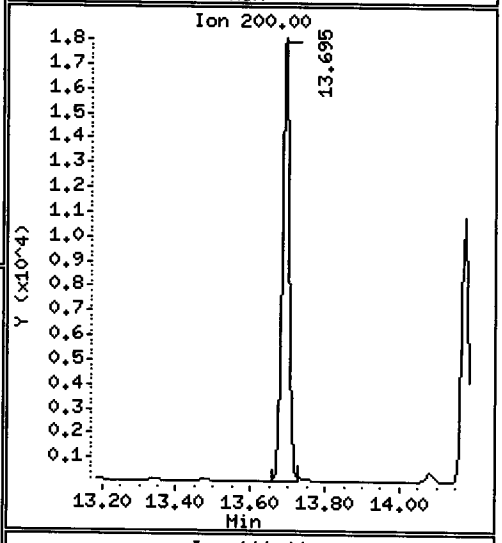
24 Fluoranthene

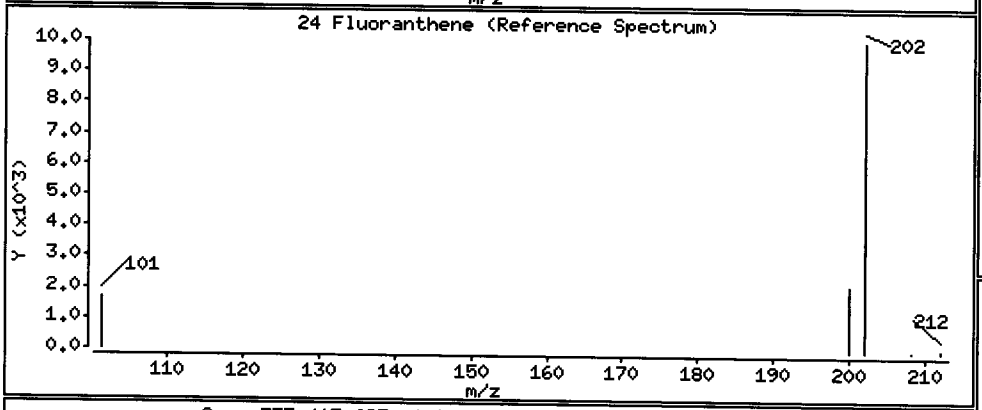
Concentration: 276 ug/L

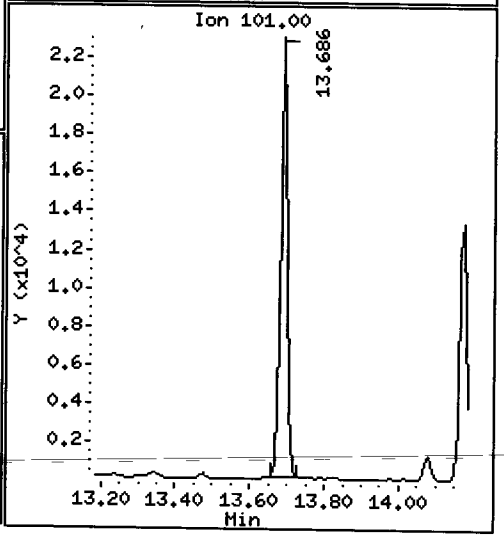


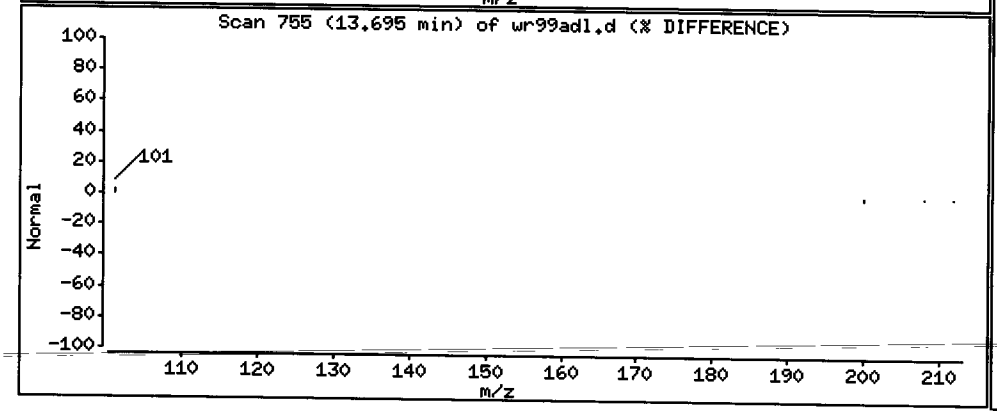












Data File: /chem3/nt11.i/20130608.b/wr99ad1.d

Date : 08-JUN-2013 14:49

Client ID: KC-VT-1593-20130530

Instrument: nt11.i

Sample Info: WR99A,3

Volume Injected (uL): 2.0

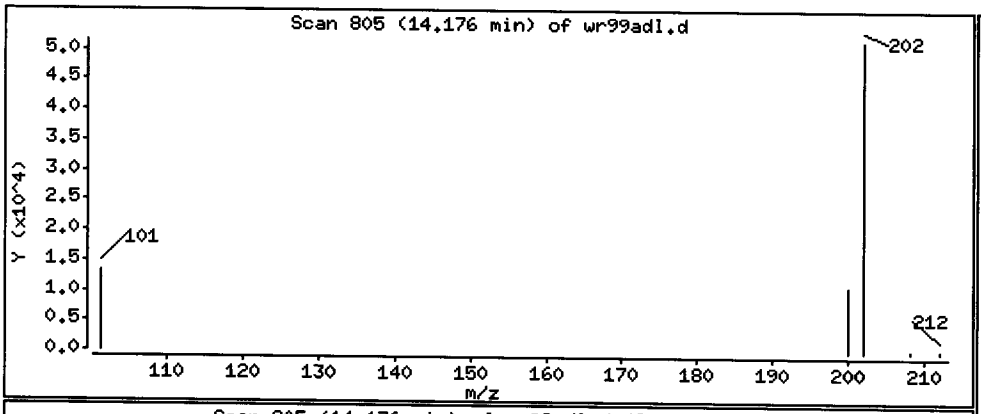
Operator: VTS

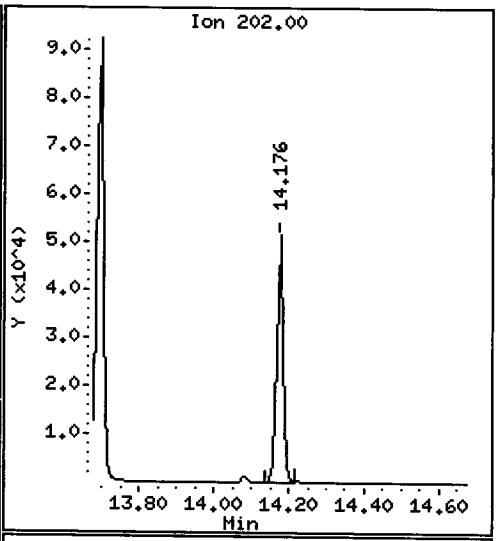
Column phase: Rxi-17Sil MS

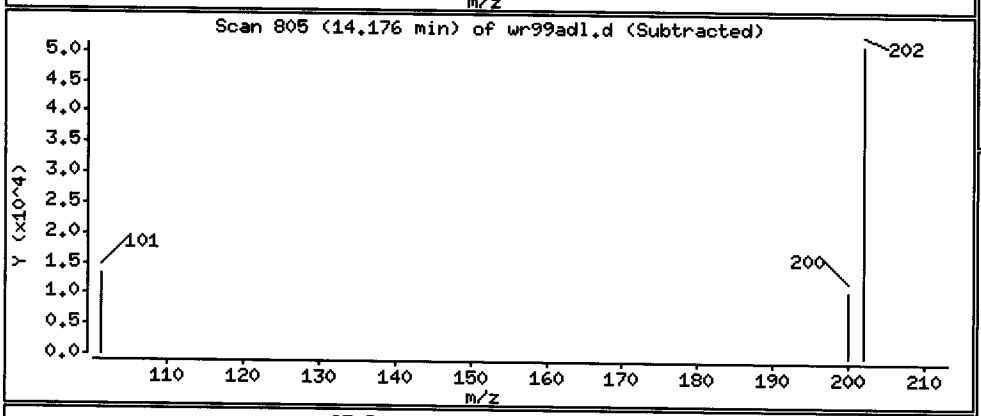
Column diameter: 0.25

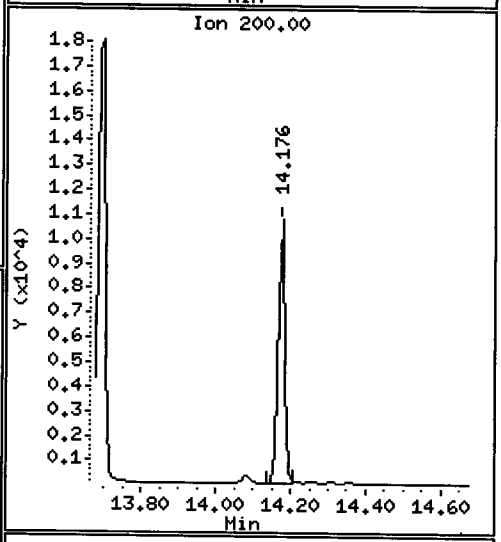
25 Pyrene

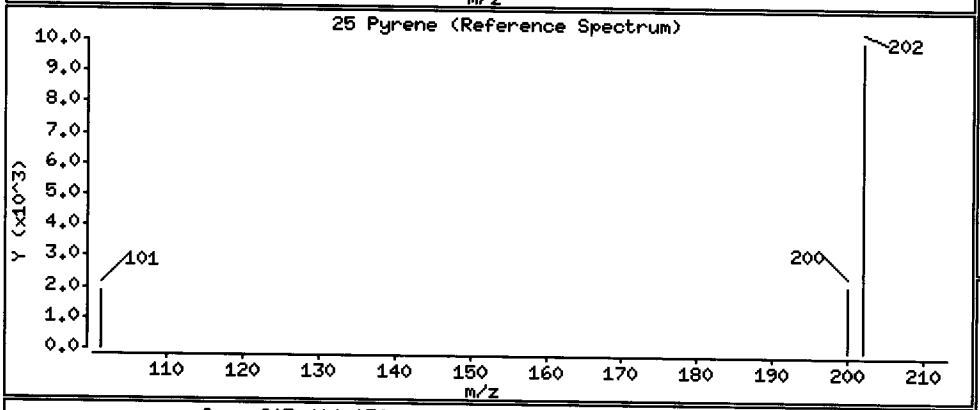
Concentration: 192 ug/L

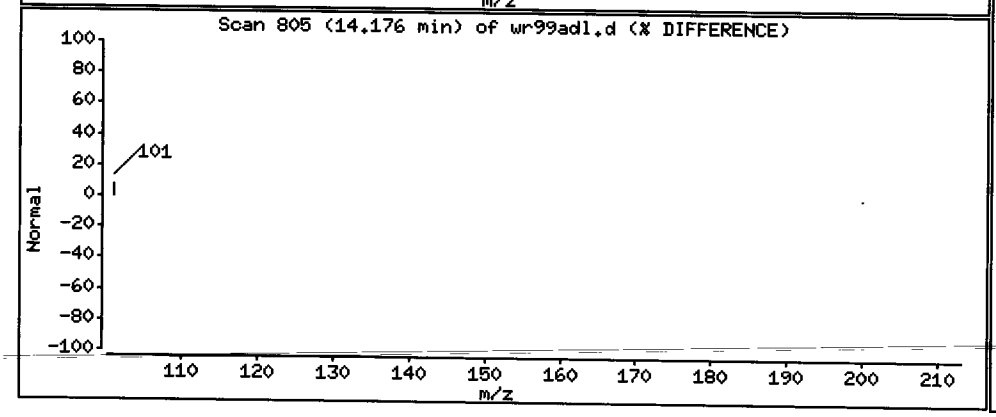


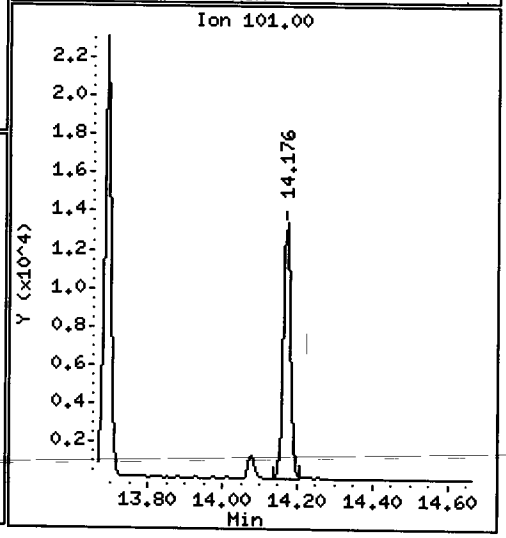












CO-ELUTION SUMMARY FOR FILE - wr99adl.d

Lab ID: WR99A, Method: lowsim.m, Instrument: nt11.i, Date: 08-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290A & 1613B
Solid Samples

ARI Job No(s) WS30, WS21, WS09, WR99

Matrix (circle one)	Soil	Sediment	Oil	Tissue
Extraction Method	Start Time/Date:		End Time/Date:	
Soxhlet	1309	6/5/13	0510	6/6/13

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	M	6/5/13
Purified Sand		I8025	M	6/5/13
Toluene		8142	M	6/5/13
Hexane		I8242/I8242	PD PD	6/5/13 6/10/13
CH_2Cl_2		I8214	PD	6/10/13
H_2SO_4		I8156	PD	6/6/13
Na_2SO_4		I8130	PD	6/10/13
Glasswool		I7958	PD	6/10/13
10 % $AgNO_3$	✓			
Basic Silica		H142	PD	6/10/13
Acid Silica		H166	PD	6/14/13
0% Silica		I8035/I8035	M/PD	6/5/13 6/14/13
Activated Florisil		H127	PD	6/10/13
Dual Carbon Column	✓			
Other (SRM)		I8235	M	6/5/13
Nonane		I5167	PD	6/11/13

Bottle ID	ARI Sample ID	Sample Weight (eq to dry wt)	Roto Vap 45 °C	Final Vol.	H20 Trap Vol (mL)	Comments
6/5/13	WS30 MB	10.00g	1 (2)	10uL	0.9	
6/6/13	OPR	10.00g	(1) 2	10uL	1.0	
~~QLS~~	~~QLS~~	~~10.00g~~	~~1/2~~	~~10uL~~		
1	SRM	10.00	1 (2)	10uL	0.2	
3	A	14.65	(1) 2	10uL	5.0	
3	B	13.16	1 (2)	10uL	4.0	
3	C	12.97	(1) 2	10uL	3.6	
3	D	13.86	(1) 2	10uL	4.6	
3	E	13.36	1 (2)	10uL	4.4	
3	F	13.59	(1) 2	10uL	3.4	
3	G	14.05	1 (2)	10uL	3.8	
3	H	13.75	(1) 2	10uL	4.2	
5	I	14.56	1 (2)	10uL	5.0	
5	IDup	14.57	1 (2)	10uL	5.0	
3	J	14.23	(1) 2	10uL	5.0	
10	WS21-A	12.50	1 (2)	10uL	3.8	
5	WS09-A	14.60	(1) 2	10uL	3.6	
10	WR99-D	13.26	1 (2)	10uL	0.6	
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
			1/2	10uL		
Prep Analyst/Date		M 6/5/13	PD 6/6/13	PD 6/11/13	PD 6/6/13	

Reagent / Standard	Vol.	ID / Lot Number	Solution Conc.	Expiration Date	Initials	Date	Witness
Recovery Standard	1.0 mL	B000395	2/4ng/mL	5/20/14	JW	~~6/6/13~~ 6/13 JW	M
Ongoing Precision /Recovery	20 µL	2069.3	10/50/100ng/mL	2/6/14	JW	~~6/6/13~~	M
~~QLS Standard~~	~~10 µL~~	211.	0.5/2.5/5ng/mL			6/5/13 SD	
Clean-up Standard	1.0 mL	B000394	0.8ng/mL	5/6/14	M	6/14/13	PD
Internal Standard	10 µL		200ng/mL				

Supervisor Review: 6/14/13

Bench Sheet No.: 00050

Verify Client ID	
Analyst/Date	M 6/5/13
Acid Clean	
(Y)N	
Analyst/Date	PD 6/6/13
Silica-Florisil	
(Y)N	
Analyst/Date	PD 6/10/13

Dioxin Raw Data
Initial Calibration

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: _____ Client ID: _____

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 6/6/13 Analysis Start Date: _____

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	(Y) / N / _____	Signal / Noise ≥ 2.5?	Y / N / _____
TCDD / TCDF Resolution ≤ 25%	(Y) / N / _____	Extraction STD Limits Met?	Y / N / _____
PCDF Windows Verified	(Y) / N / _____	Cleanup STD Limits Met?	Y / N / _____
CCV Meets %D Limits?	Y / N / _____	Method Blank in Control?	Y / N / _____
CCV Ion Ratios within Limits?	Y / N / _____	OPR Recovery Limits Met?	Y / N / _____
CCV RRT within Limits?	Y / N / _____	Values Exceeding Curve Range?	Y / N / _____
Manual Integrations for Samples?	Y / (N) _____	Samples Diluted?	Y / N / _____
Special Analysis Request?	Y / N / _____	Duplicate Sample RPD ≤ 25%?	NA / _____

Detail problems, corrective actions and/or other pertinent information below:

Dioxins Curve 6/6/13

- All cmpds % RSD < 20%
- TCDD/TCDF not calibrated in CSL. 5 pt curve w/ CS1 as low point (0.5).
- All others 6 pt. curve. CSL - CS5

(Review 1)Analyst: _____ Date: 6/10/13

(Review 2)Reviewer: _____ Date: _____

WR99-081413

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 6/6/13 Analysis: Dioxins Analyst: NL

GC Program: 8290C Column No: I7822 Column Type: RTX-Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): JUN0613_1-5 Detector Voltage: 350

Resolution Check Files: 11:00, 20:55 Curve Date: 6/6/13

IS/SS	Ical/Ccal	LCS/ICV
	I8145 - 8149	
I8144	I8155	I7383
	I7706	
	1997-2	

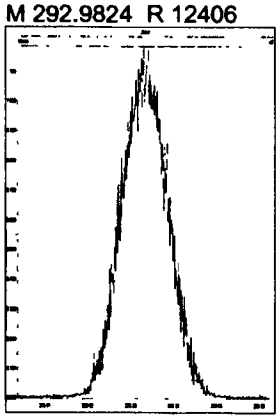
1	06-Jun-13	11:04:16	13060602	CS3WD	
2	06-Jun-13	11:58:30	13060603	ISC01	
3	06-Jun-13	14:34:26	13060604	CSL	
4	06-Jun-13	15:31:00	13060605	CS1	
5	06-Jun-13	16:22:19	13060606	CS2	
6	06-Jun-13	17:15:21	13060607	CS3	
7	06-Jun-13	18:08:22	13060608	CS4	
8	06-Jun-13	19:01:24	13060609	CS5	
9	06-Jun-13	19:54:25	13060610	ICV	
10	06-Jun-13	20:55:35	13060611	ISC02	

NL 6/10/13

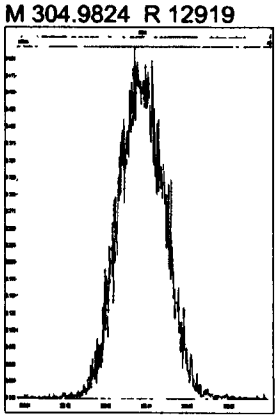
Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

Printed: Thursday, June 06, 2013 11:00:09 Pacific Daylight Time

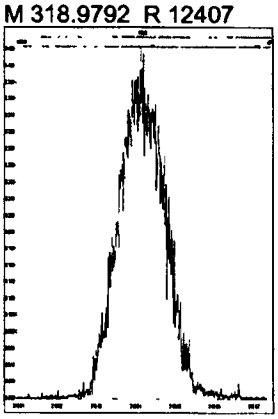
M 292.9824 R 12406



M 304.9824 R 12919



M 318.9792 R 12407



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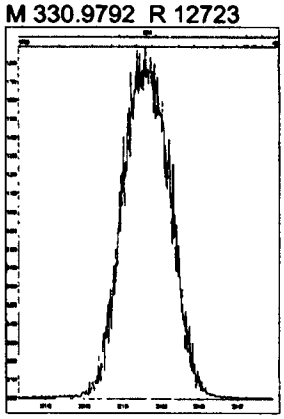

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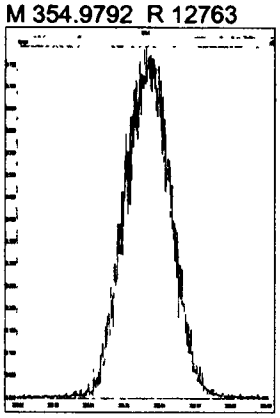

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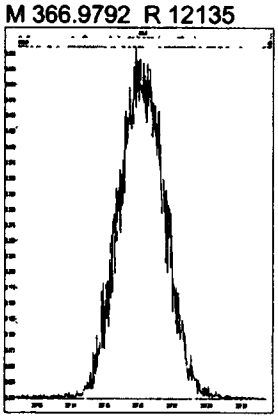
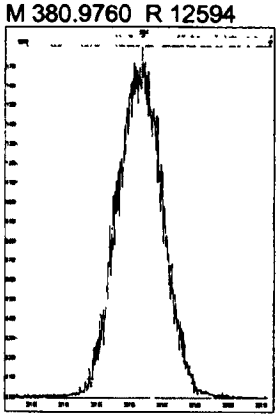
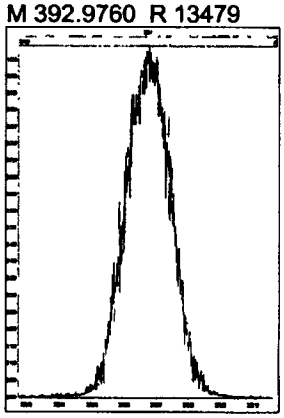


M 380.9760 R 12594



M 392.9760 R 13479



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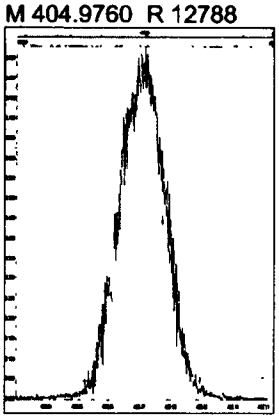

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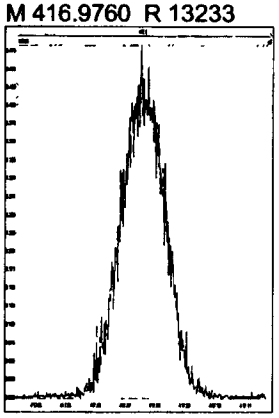
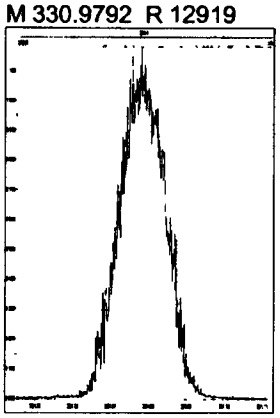


M 330.9792 R 12919



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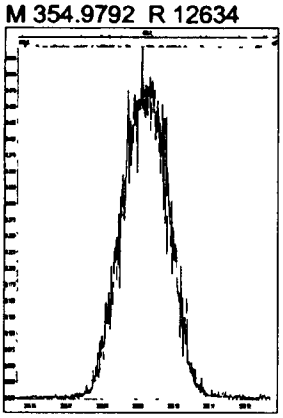
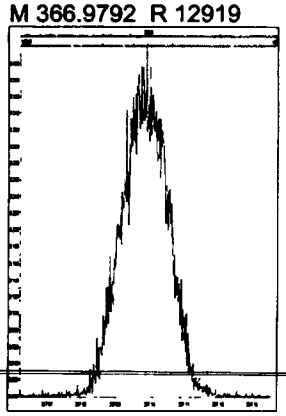


M 366.9792 R 12919



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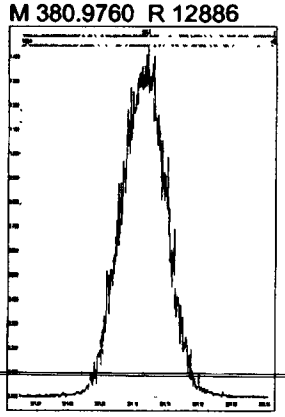
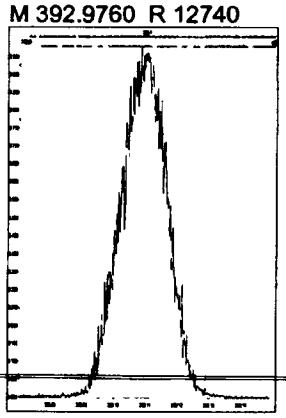


M 392.9760 R 12740



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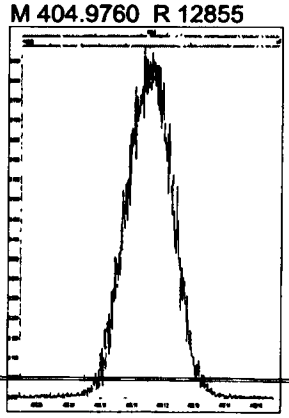

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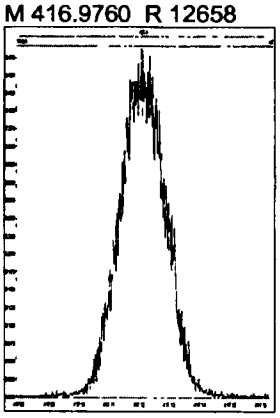

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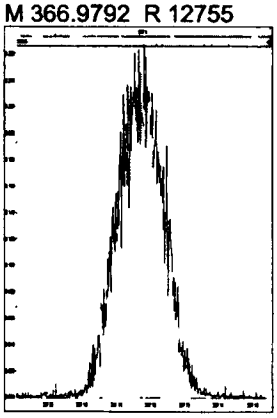

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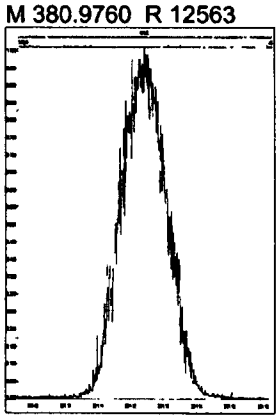

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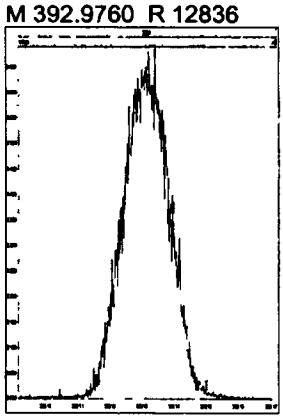

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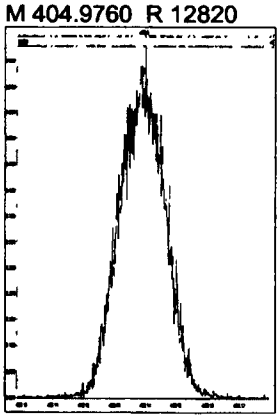

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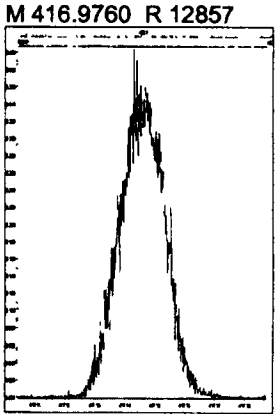
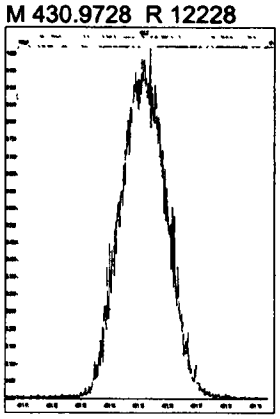
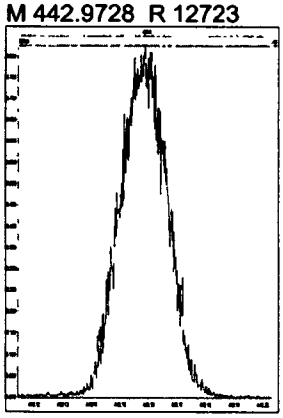


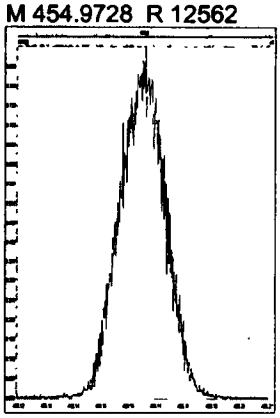
M 430.9728 R 12228



M 442.9728 R 12723



M 454.9728 R 12562



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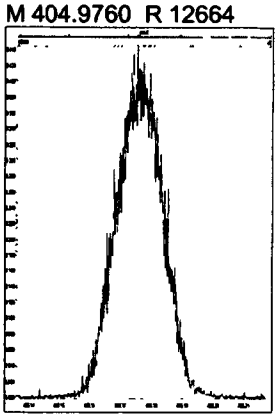

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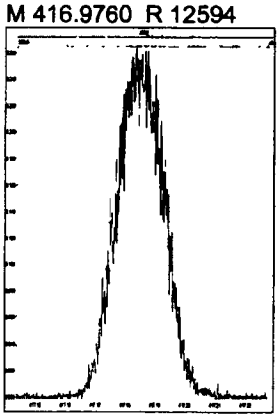

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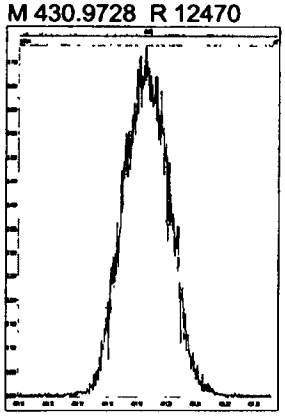

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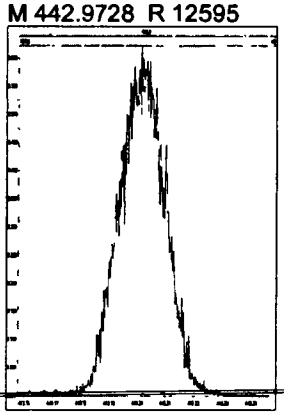

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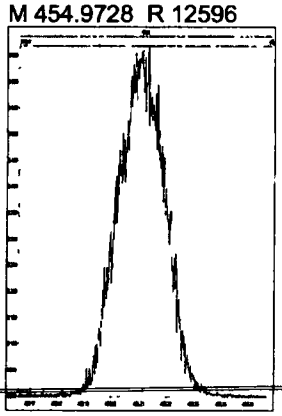

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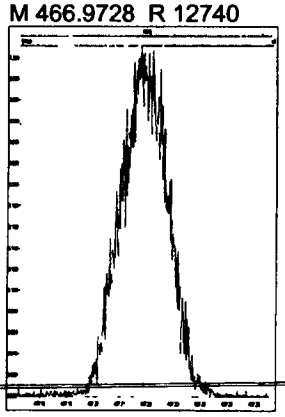
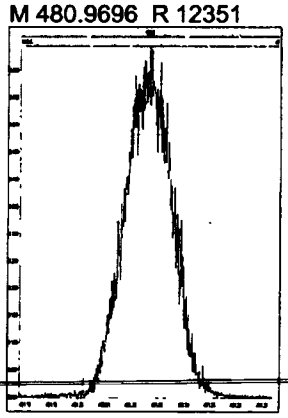
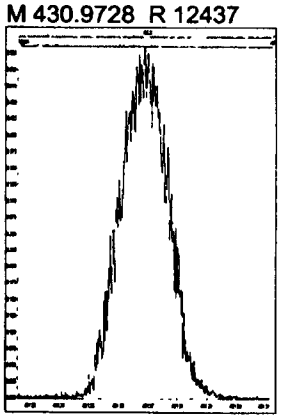


M 480.9696 R 12351



M 430.9728 R 12437



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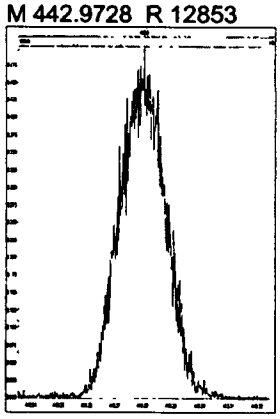

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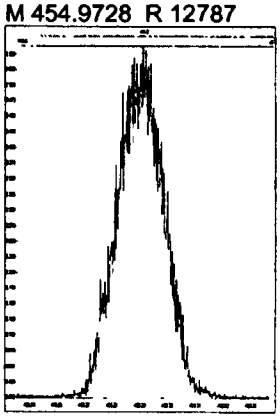

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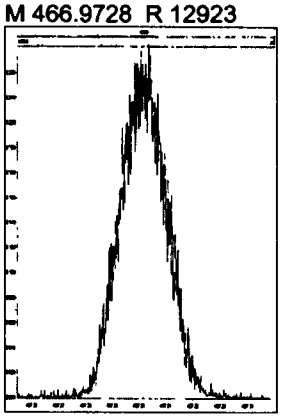
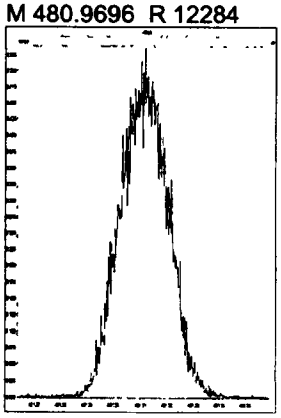


M 480.9696 R 12284



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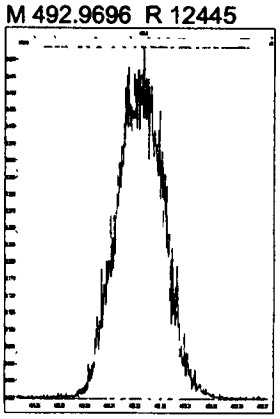

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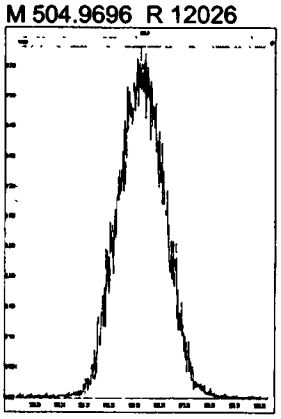

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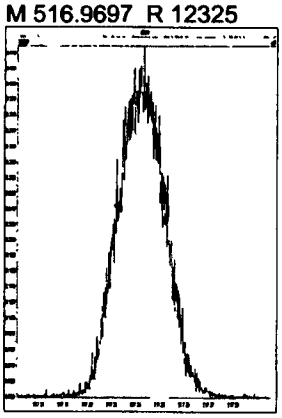

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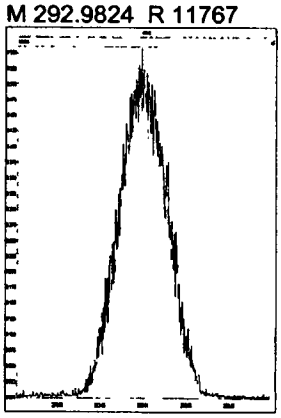

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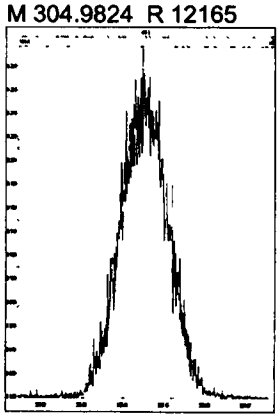

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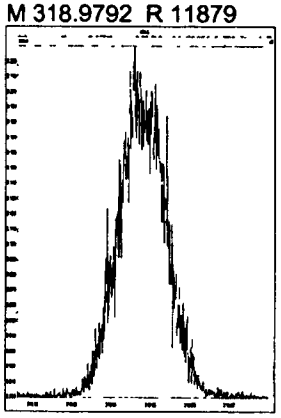

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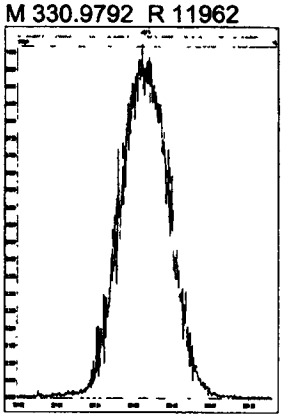

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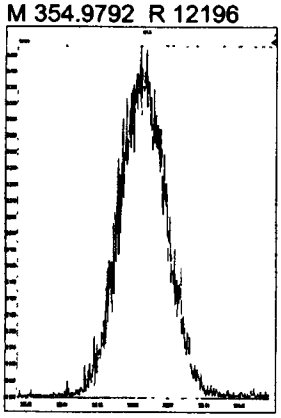
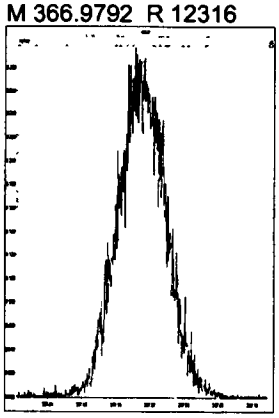


M 366.9792 R 12316



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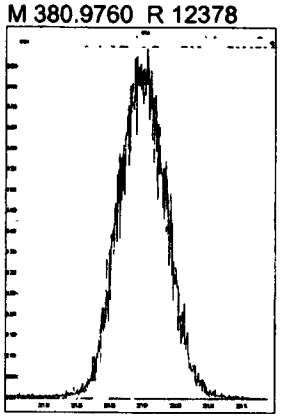

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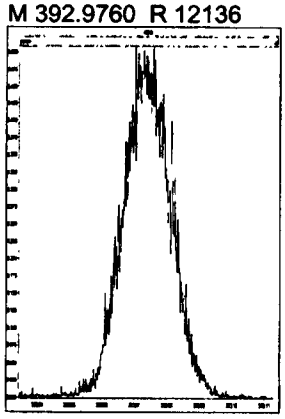
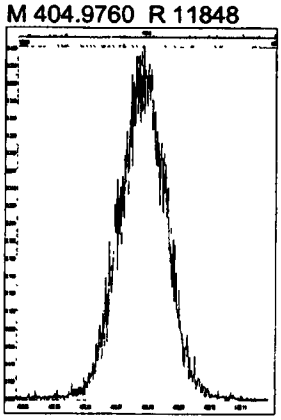
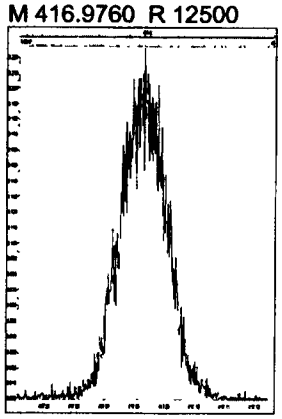


M 404.9760 R 11848



M 416.9760 R 12500



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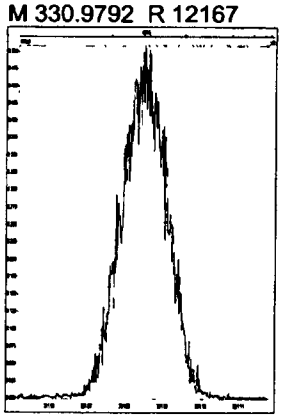

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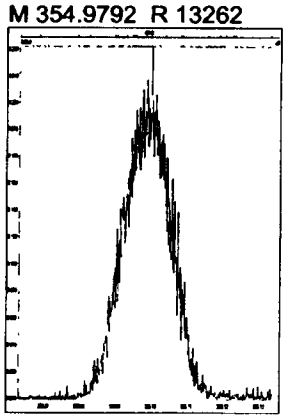

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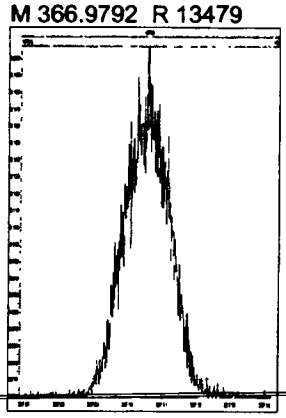

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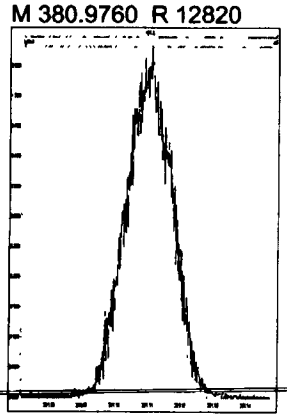

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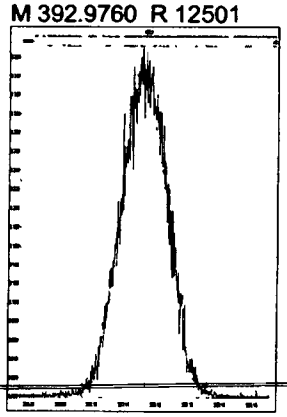

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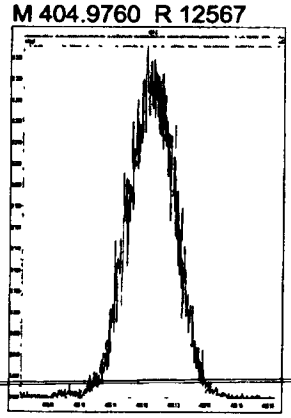

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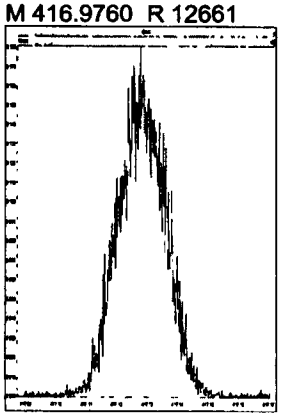

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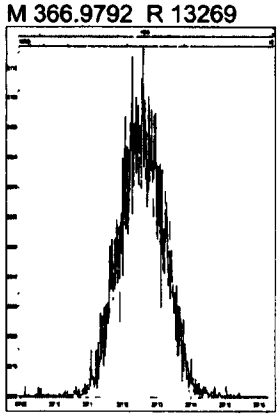

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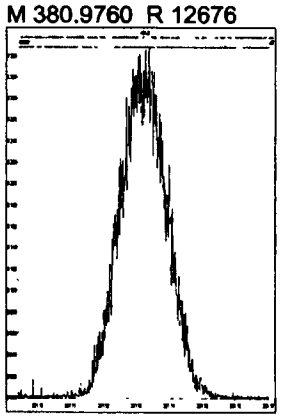

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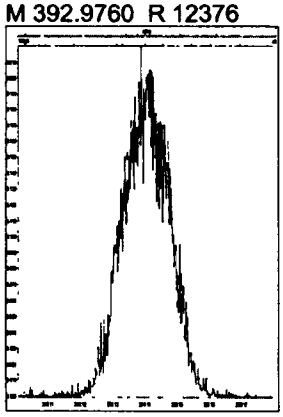
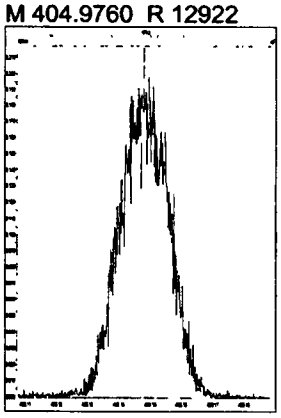
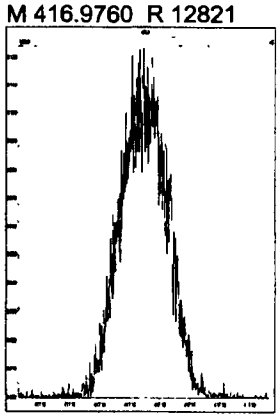


M 404.9760 R 12922



M 416.9760 R 12821



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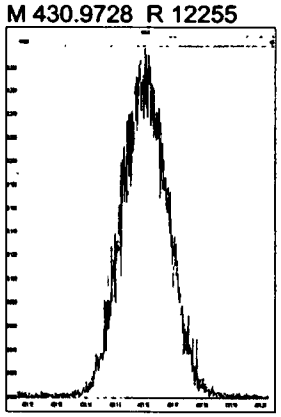
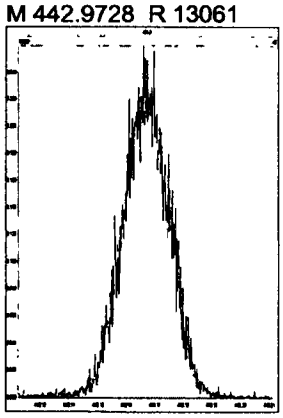


M 442.9728 R 13061



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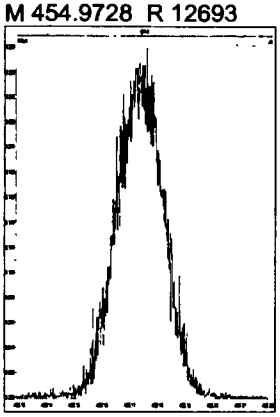
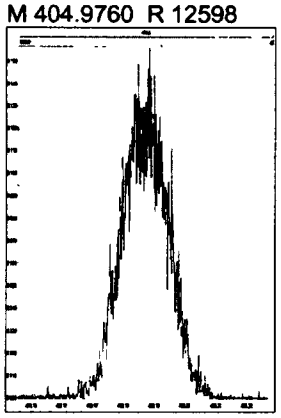
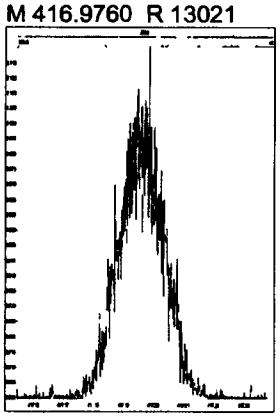


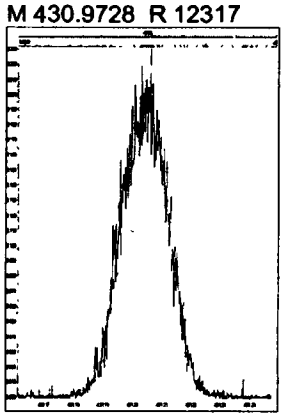
M 404.9760 R 12598



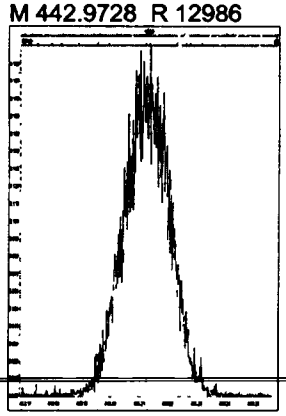
M 416.9760 R 13021



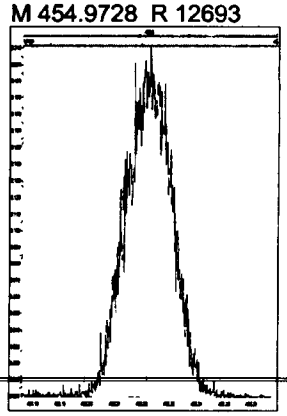
M 430.9728 R 12317



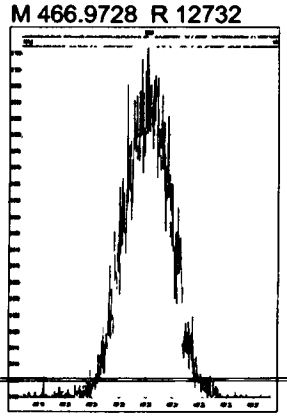
M 442.9728 R 12986



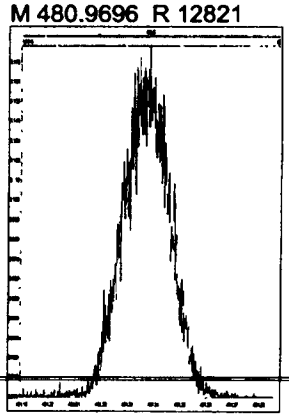
M 454.9728 R 12693



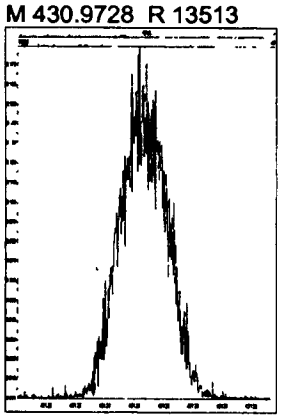
M 466.9728 R 12732



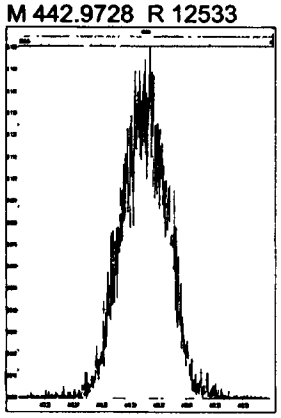
M 480.9696 R 12821



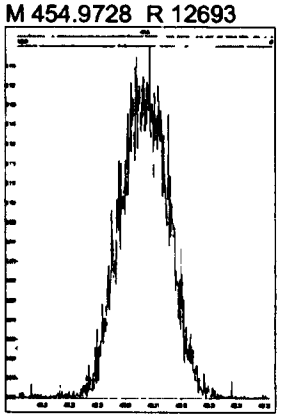
M 430.9728 R 13513



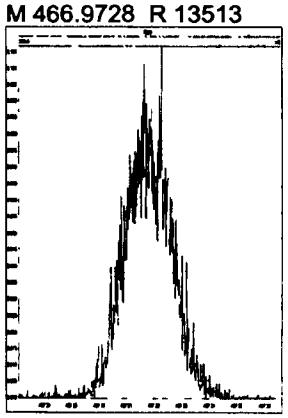
M 442.9728 R 12533



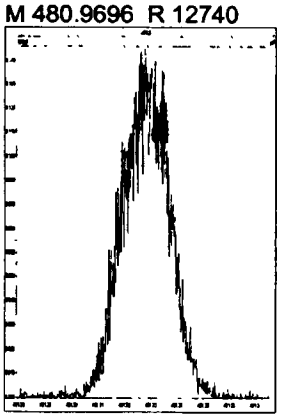
M 454.9728 R 12693



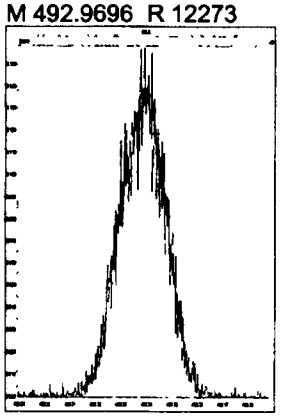
M 466.9728 R 13513



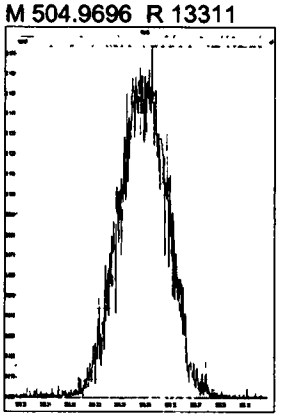
M 480.9696 R 12740



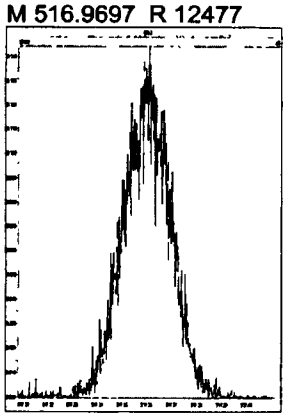
M 492.9696 R 12273

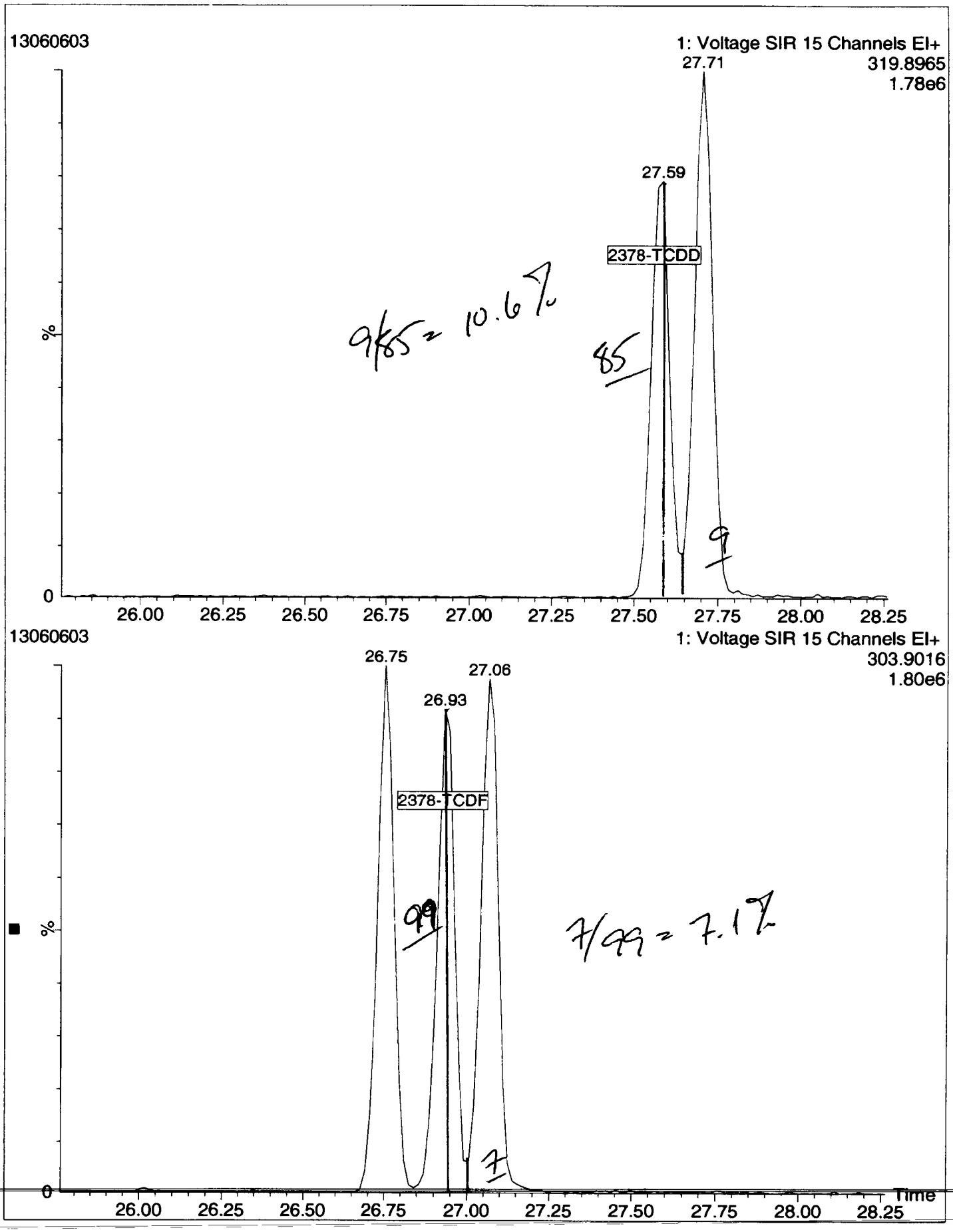


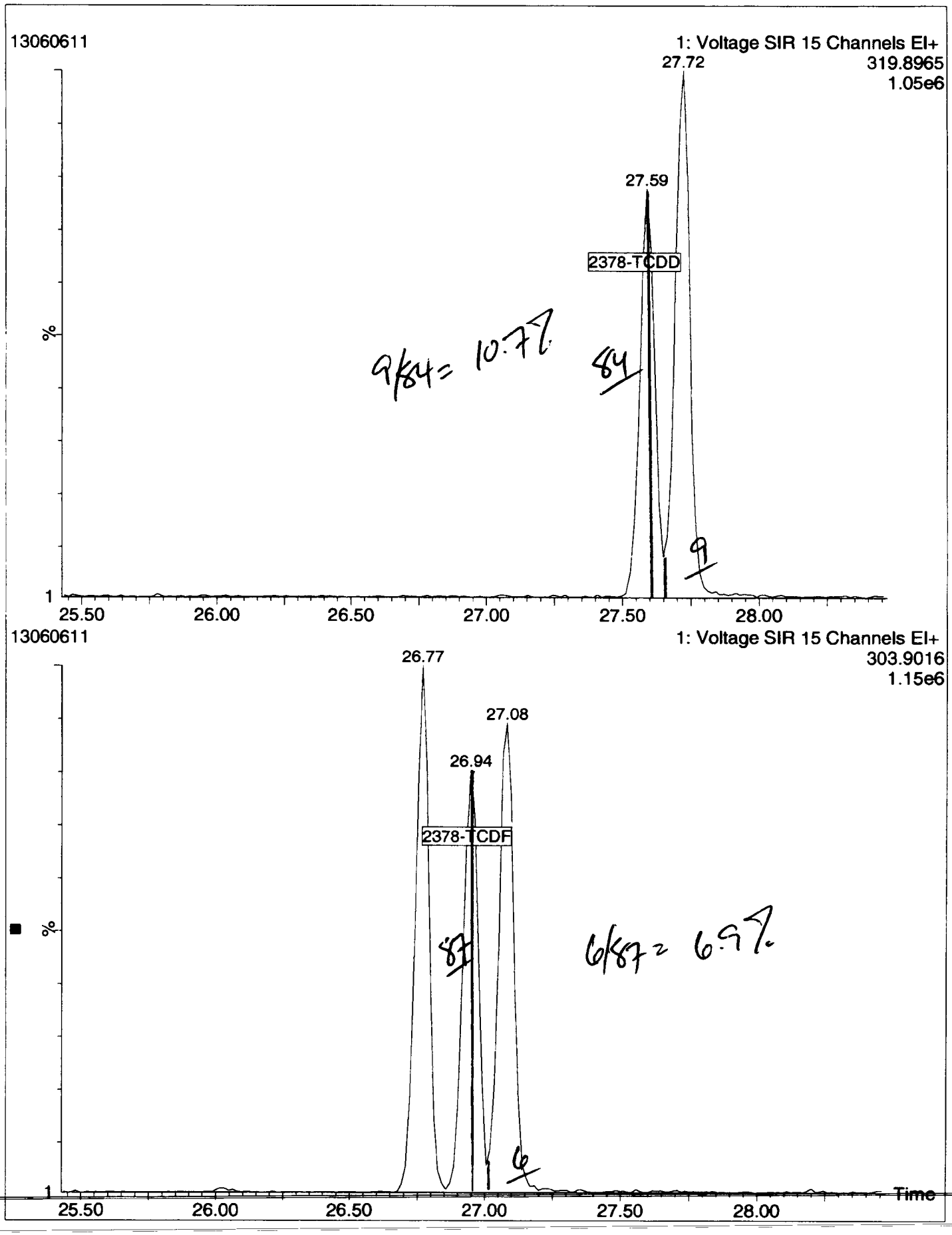
M 504.9696 R 13311

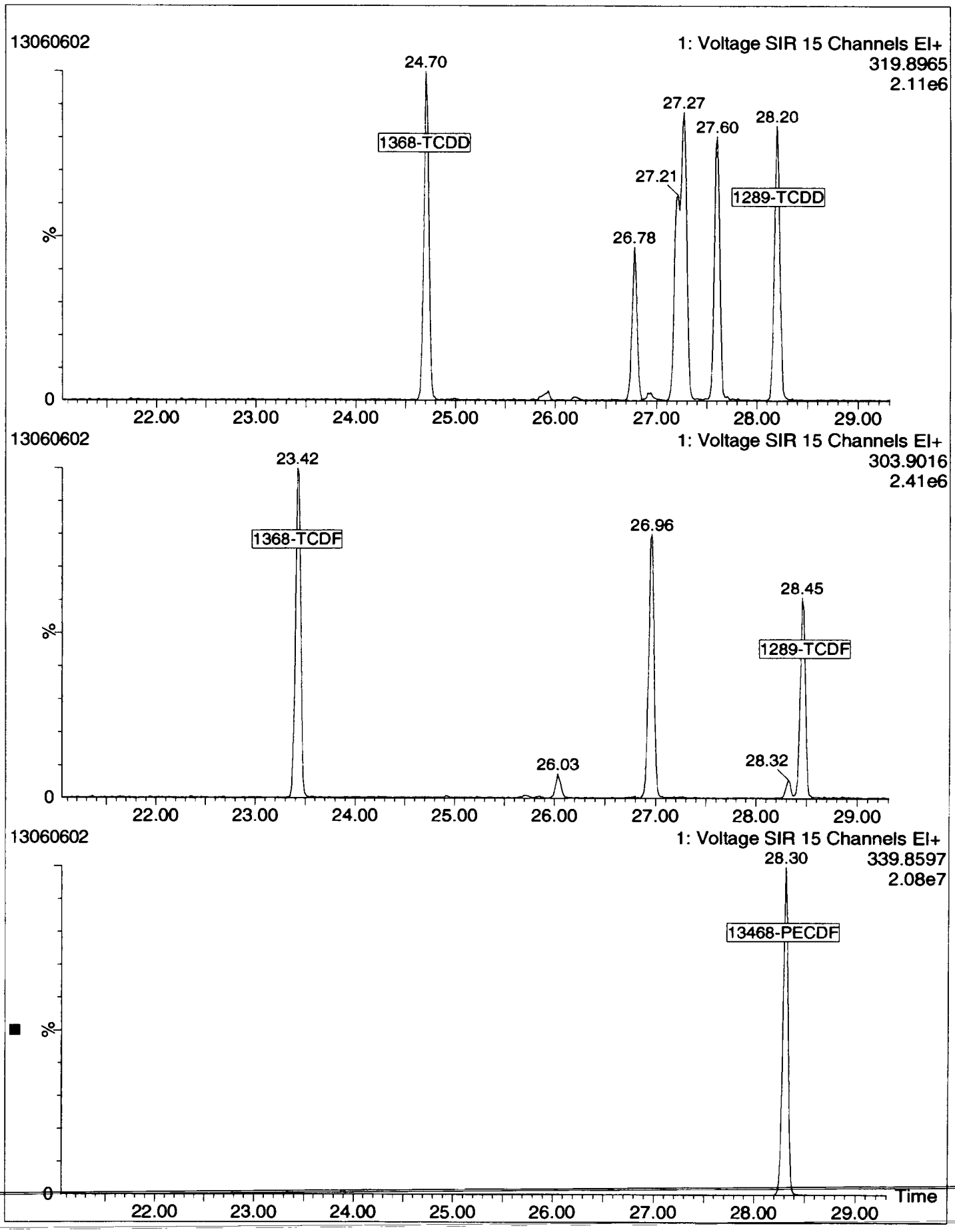


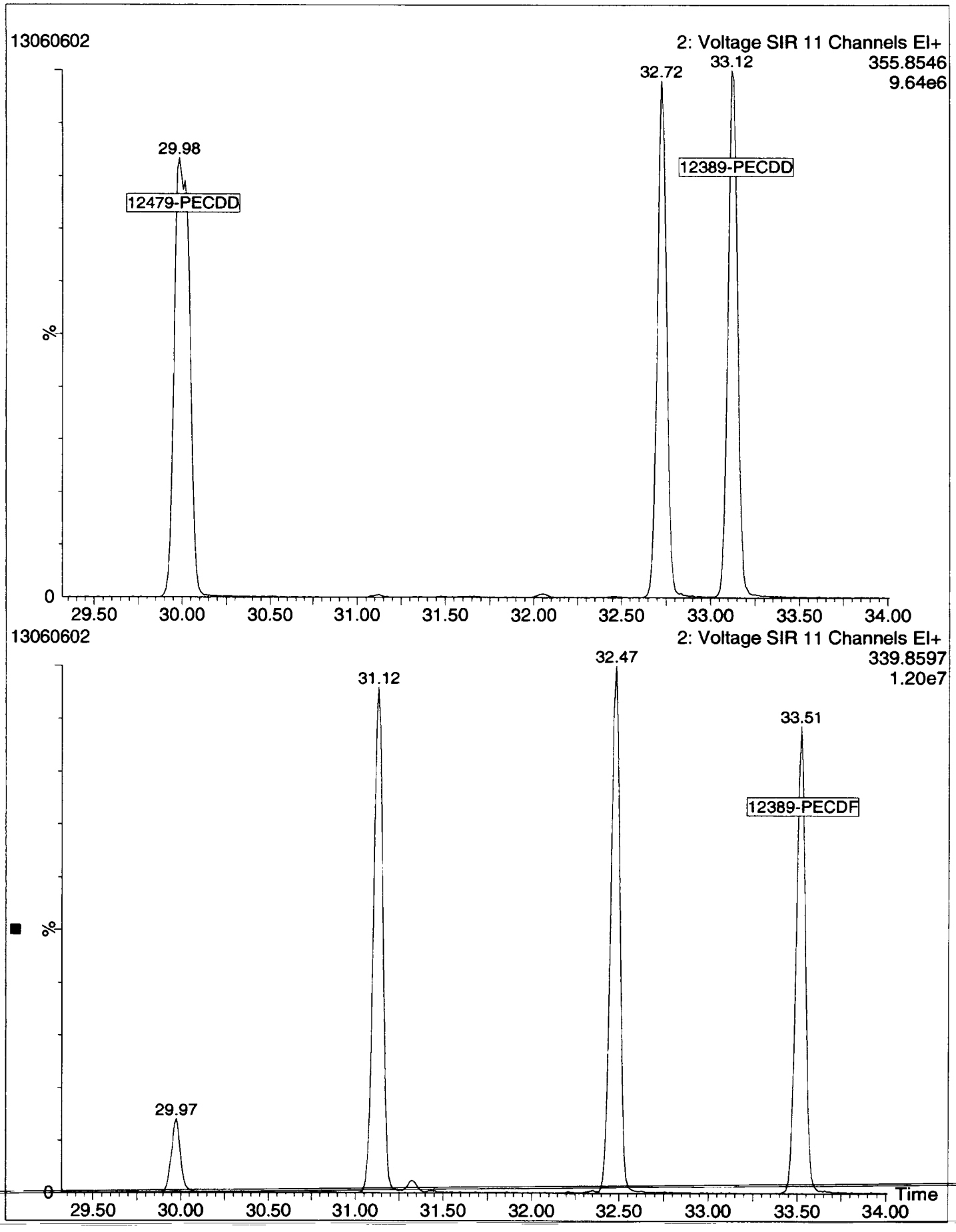
M 516.9697 R 12477

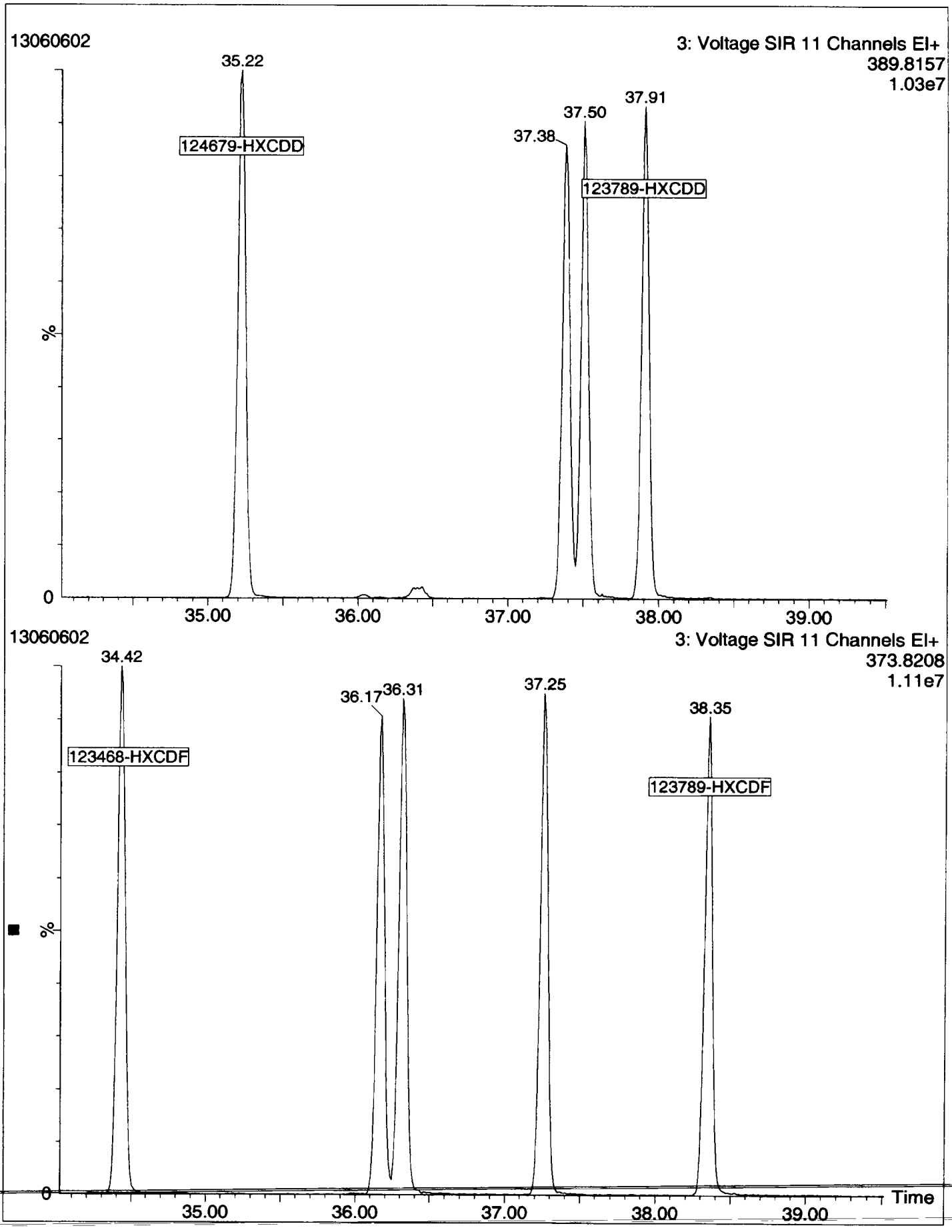


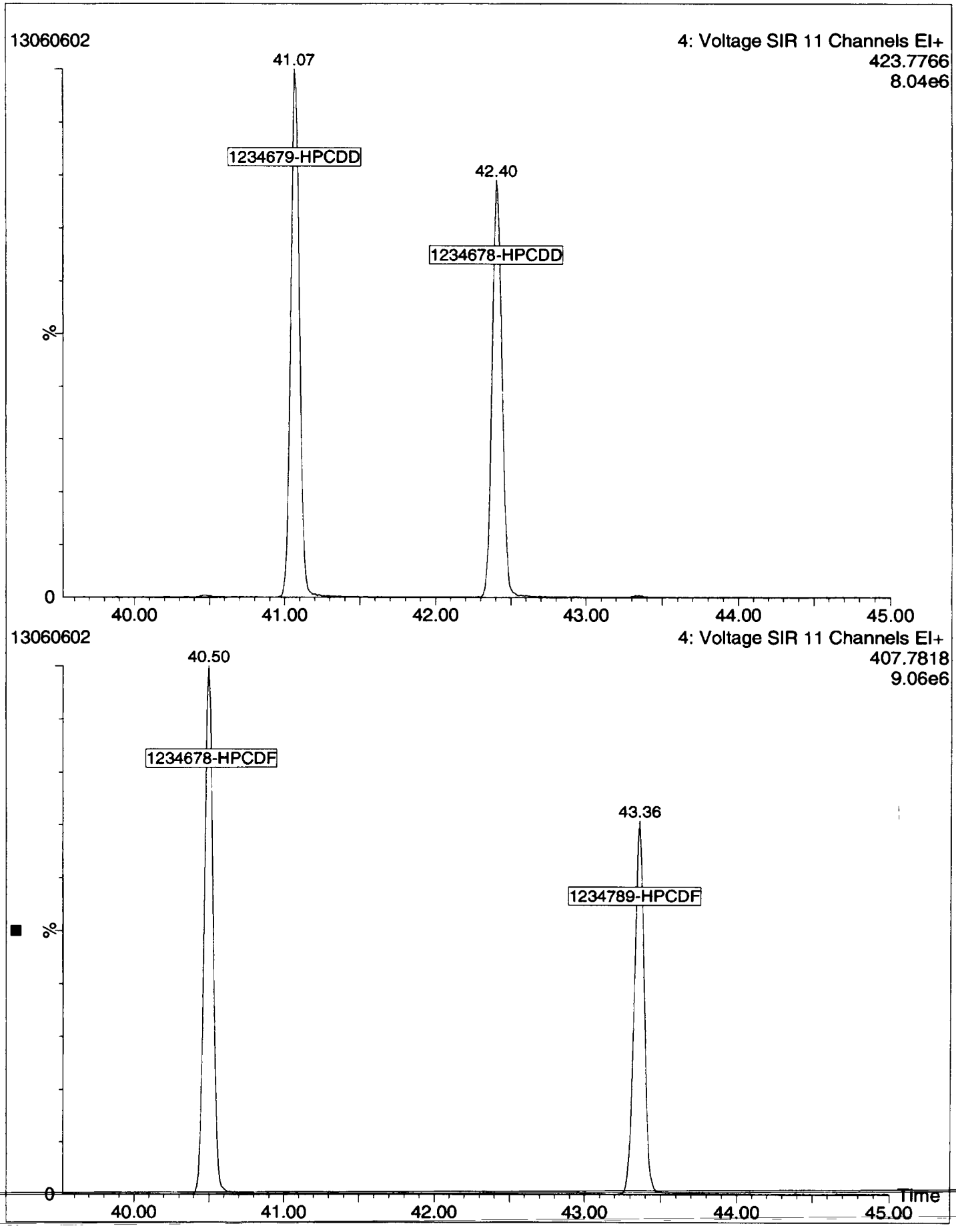

13060603
1: Voltage SIR 15 Channels EI+
27.71
319.8965
1.78e6
27.59
2378-TCDD
9/85 = 10.6%
85
9
%
0
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00
28.25
13060603
1: Voltage SIR 15 Channels EI+
303.9016
1.80e6
26.75
27.06
26.93
2378-TCDF
99
7/99 = 7.1%
7
%
0
Time
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00
28.25


13060611
1: Voltage SIR 15 Channels EI+
319.8965
1.05e6
27.72
27.59
2378-TCDD
%
9/84= 10.7%
84
9
1
25.50
26.00
26.50
27.00
27.50
28.00
13060611
1: Voltage SIR 15 Channels EI+
303.9016
1.15e6
26.77
27.08
26.94
2378-TCDF
%
87
6/87= 6.9%
6
1
Time
25.50
26.00
26.50
27.00
27.50
28.00


13060602
1: Voltage SIR 15 Channels EI+
319.8965
2.11e6
24.70
1368-TCDD
27.27
27.60
28.20
27.21
1289-TCDD
26.78
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
29.00
13060602
1: Voltage SIR 15 Channels EI+
303.9016
2.41e6
23.42
1368-TCDF
26.96
28.45
1289-TCDF
26.03
28.32
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
29.00
13060602
1: Voltage SIR 15 Channels EI+
339.8597
2.08e7
28.30
13468-PECDF
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00
29.00


13060602
2: Voltage SIR 11 Channels EI+
355.8546
9.64e6
29.98
12479-PECDD
32.72
33.12
12389-PECDD
%
0
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50
34.00
13060602
2: Voltage SIR 11 Channels EI+
339.8597
1.20e7
31.12
32.47
33.51
12389-PECDF
29.97
%
0
Time
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50
34.00


13060602
3: Voltage SIR 11 Channels EI+
389.8157
1.03e7
35.22
124679-HXCDD
37.91
37.50
37.38
123789-HXCDD
%
0
35.00
36.00
37.00
38.00
39.00
13060602
3: Voltage SIR 11 Channels EI+
373.8208
1.11e7
34.42
123468-HXCDF
36.17
36.31
37.25
38.35
123789-HXCDF
%
0
35.00
36.00
37.00
38.00
39.00
Time


13060602
4: Voltage SIR 11 Channels EI+
423.7766
8.04e6
41.07
1234679-HPCDD
42.40
1234678-HPCDD
%
0
40.00
41.00
42.00
43.00
44.00
45.00
13060602
4: Voltage SIR 11 Channels EI+
407.7818
9.06e6
40.50
1234678-HPCDF
43.36
1234789-HPCDF
%
0
Time
40.00
41.00
42.00
43.00
44.00
45.00

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:29 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

2378-TCDF					0.832		0.770				
12378-PeCDF	31.092	1.000	4.61e3	3.20e3	0.853	1.441	1.550	99.3	NO	0.489	0.489
23478-PeCDF	32.440	1.001	4.92e3	3.19e3	0.884	1.544	1.550	102.9	NO	0.510	0.510
123478-HxCDF	36.124	1.000	3.89e3	3.41e3	1.017	1.140	1.240	61.7	NO	0.511	0.511
234678-HxCDF	37.242	1.001	4.00e3	3.28e3	1.067	1.217	1.240	53.9	NO	0.473	0.473
123678-HxCDF	36.288	1.001	4.03e3	3.35e3	0.999	1.201	1.240	60.7	NO	0.497	0.497
123789-HxCDF	38.316	1.000	3.64e3	2.76e3	0.947	1.319	1.240	53.5	NO	0.506	0.506
1234678-HpCDF	40.465	1.000	3.19e3	3.56e3	1.151	0.895	1.050	81.3	NO	0.480	0.480
1234789-HpCDF	43.348	1.001	2.83e3	2.77e3	1.166	1.023	1.050	56.0	NO	0.490	0.490
OCDF	48.960	1.007	5.31e3	6.03e3	1.001	0.881	0.890	82.3	NO	1.057	1.057
2378-TCDD					0.939		0.770				
12378-PeCDD	32.693	1.001	3.60e3	2.29e3	0.930	1.569	1.550	43.2	NO	0.490	0.490
123478-HxCDD	37.351	1.000	3.35e3	2.82e3	0.930	1.191	1.240	61.6	NO	0.512	0.512
123678-HxCDD	37.483	1.001	3.31e3	2.73e3	0.854	1.211	1.240	59.1	NO	0.531	0.531
123789-HxCDD	37.877	1.011	3.12e3	2.78e3	0.885	1.124	1.240	50.6	NO	0.507	0.507
1234678-HpCDD	42.372	1.000	3.26e3	2.77e3	0.966	1.174	1.050	21.9	NO	0.554	0.554
OCDD	48.664	1.001	4.23e3	5.58e3	0.921	0.757	0.890	97.9	NO	0.994	0.994
13C-2378-TCDF	26.900	1.007	1.06e6	1.38e6	1.283	0.765	0.770	3648.1	NO		100.234
13C-12378-PeCDF	31.081	1.163	1.14e6	7.35e5	1.051	1.546	1.550	5117.8	NO		93.858
13C-23478-PeCDF	32.418	1.213	1.10e6	7.00e5	1.030	1.572	1.550	4914.9	NO		92.054
13C-123478-HxCDF	36.113	0.954	4.73e5	9.32e5	1.069	0.507	0.510	2315.9	NO		98.360
13C-123678-HxCDF	36.266	0.958	5.06e5	9.78e5	1.124	0.517	0.510	2458.3	NO		98.802
13C-234678-HxCDF	37.209	0.983	4.89e5	9.53e5	1.041	0.513	0.510	2488.4	NO		103.654
13C-123789-HxCDF	38.305	1.012	4.55e5	8.80e5	1.039	0.516	0.510	2328.6	NO		96.086
13C-1234678-HpCDF	40.454	1.068	3.80e5	8.40e5	0.965	0.452	0.440	2546.7	NO		94.619
13C-1234789-HpCDF	43.304	1.144	3.03e5	6.77e5	0.760	0.448	0.440	1681.2	NO		96.448
13C-1234-TCDD	26.721	0.000	8.30e5	1.07e6	1.000	0.778	0.770	1378.0	NO		100.000
13C-2378-TCDD	27.542	1.031	7.41e5	9.66e5	0.926	0.767	0.770	1204.8	NO		97.174
13C-12378-PeCDD	32.671	1.223	7.83e5	5.10e5	0.734	1.534	1.550	3159.3	NO		92.840
13C-123478-HxCDD	37.340	0.986	7.18e5	5.78e5	0.984	1.241	1.240	3546.7	NO		98.547
13C-123678-HxCDD	37.461	0.989	7.36e5	5.97e5	1.043	1.233	1.240	3732.4	NO		95.641
13C-1234678-HpCDD	42.361	1.119	5.72e5	5.55e5	0.891	1.032	1.050	3712.9	NO		94.608
13C-OCDD	48.637	1.284	1.01e6	1.13e6	0.849	0.892	0.890	5801.6	NO		188.917

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:29 Pacific Daylight Time

ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

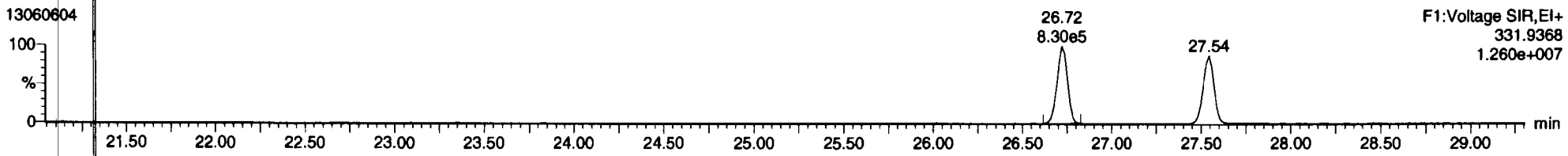
13C-123789-HxCDD	37.867	0.000	7.42e5	5.95e5	1.000	1.246	1.240	3788.8	NO	100.000
Total-tetrafurans			5.02e2		0.832					0.064
Total-penta1			9.66e1							0.010
Total-pentafurans			9.54e3		0.868					0.999
Total-hexafurans			1.56e4		1.008					1.989
Total-heptafurans			6.02e3		1.159					0.970
Total-Furans			3.72e4		0.992					5.116
Total-tetradioxins			3.11e3		0.939					0.250
Total-pentadioxins			3.73e3		0.930					0.507
Total-hexadioxins			1.30e4		0.890					1.891
Total-heptadioxins			3.26e3		0.966					0.554
Total-Dioxins			2.75e4		0.918					4.214
Total-TEQ			6.47e4							9.330
37CL-2378-TCDD	27.572	1.032	1.77e3		0.989			7.7		0.094
FUNCTION1 PFK			2.17e6							
FUNCTION2 PFK			4.48e5							0.000
FUNCTION3 PFK			8.45e5							0.000
FUNCTION4 PFK			1.79e5							
FUNCTION5 PFK			1.20e4							
FUNCTION1 HXCDPE			2.36e2							0.000
FUNCTION1 HPCDPE			1.31e3							0.000
FUNCTION2 HPCDPE			6.00e2							0.000
FUNCTION3 OCDPE			7.49e1							0.000
FUNCTION4 NCDPE			2.47e2							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:29 Pacific Daylight Time

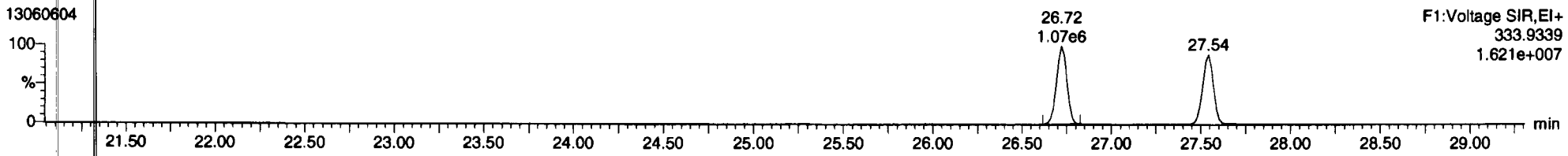
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

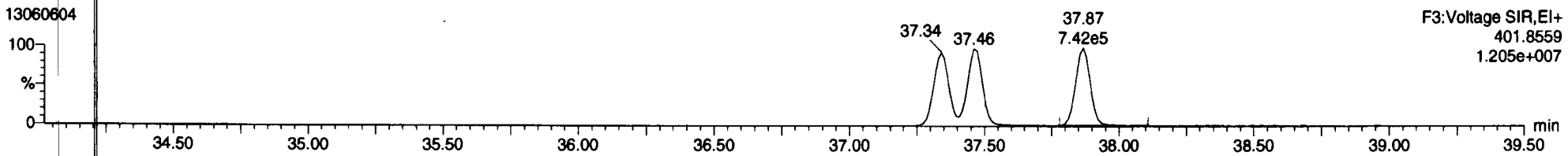
13C-1234-TCDD



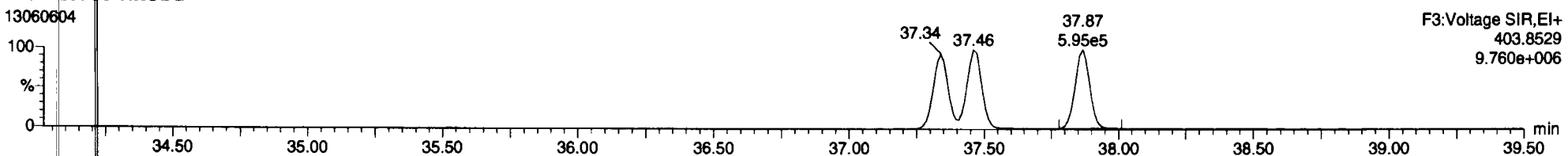
13C-1234-TCDD



13C-123789-HxCDD



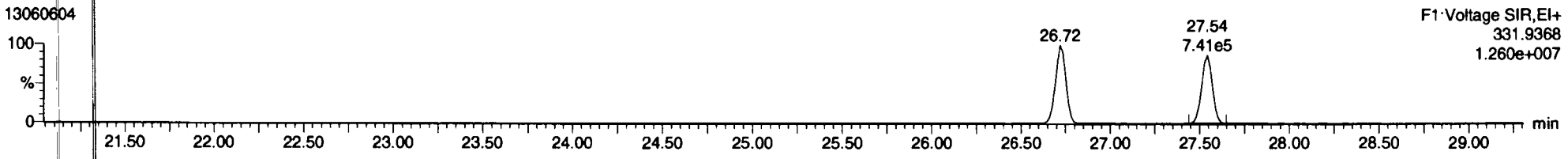
13C-123789-HxCDD



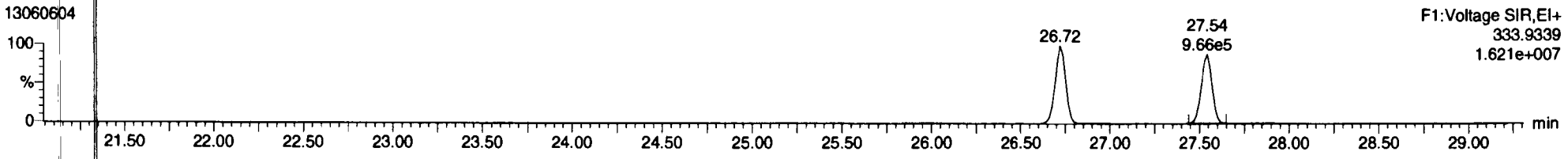
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:29 Pacific Daylight Time

ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

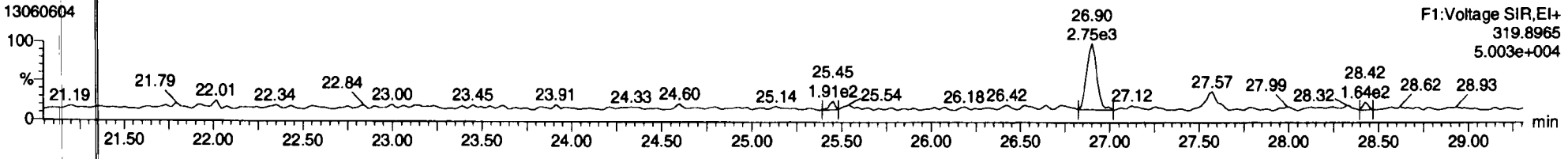
13C-2378-TCDD



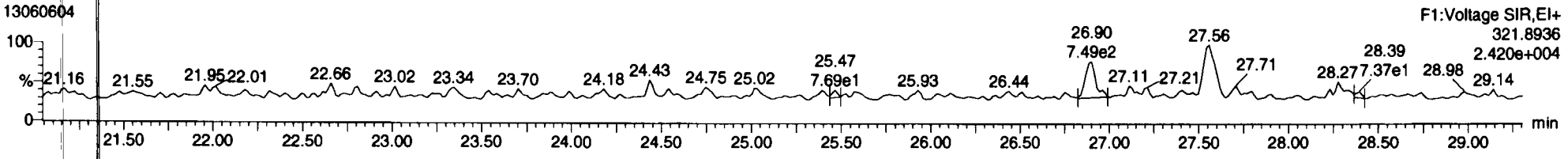
13C-2378-TCDD



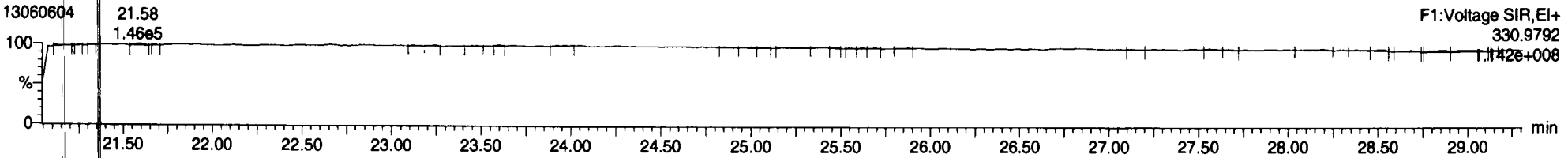
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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Printed: Monday, June 10, 2013 10:05:29 Pacific Daylight Time

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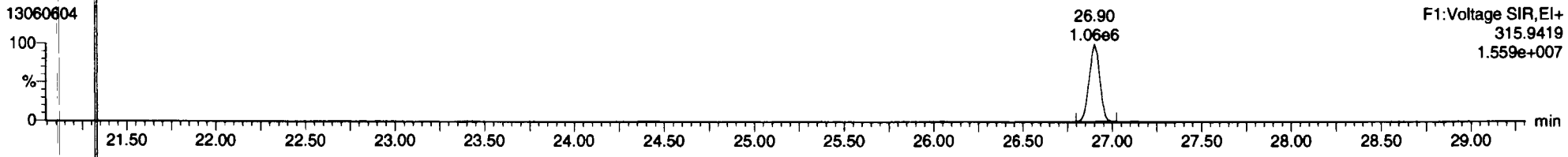
13C-2378-TCDF



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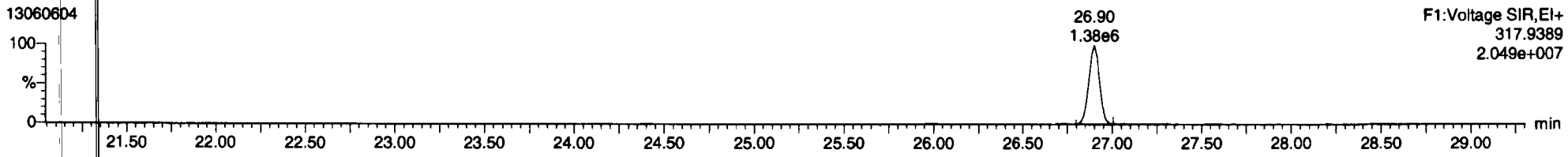
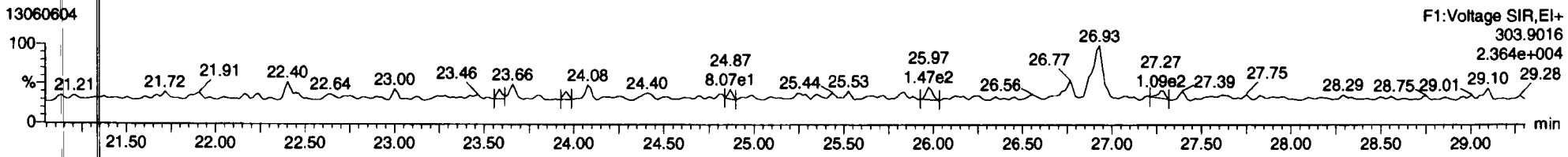
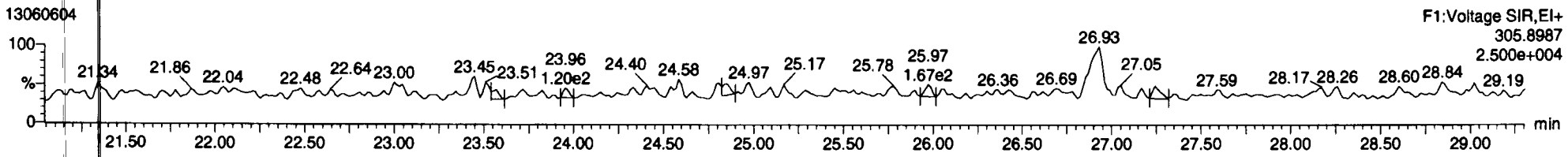


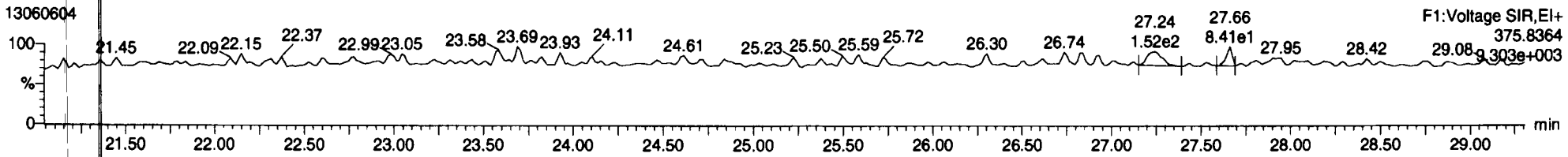
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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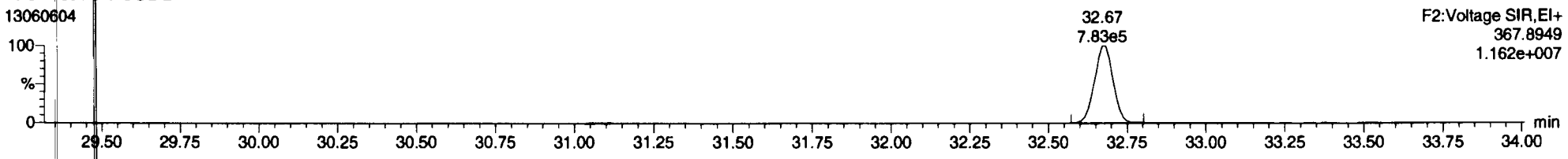
ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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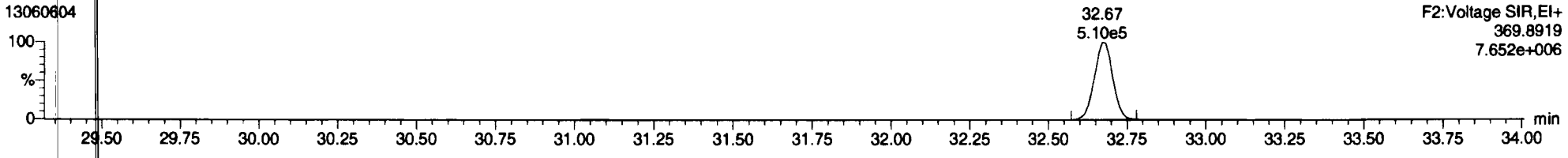
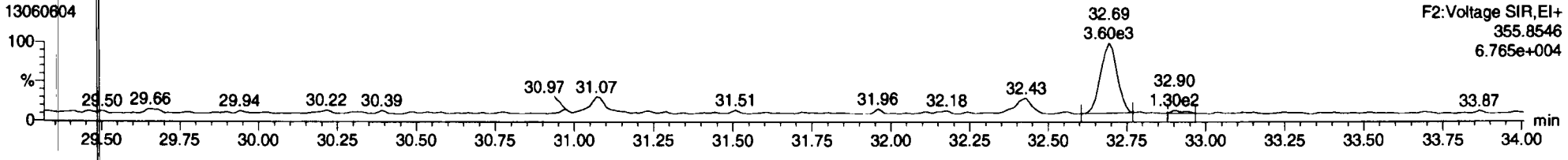
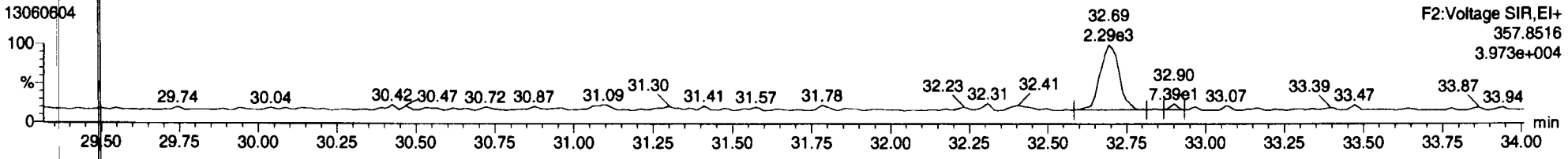


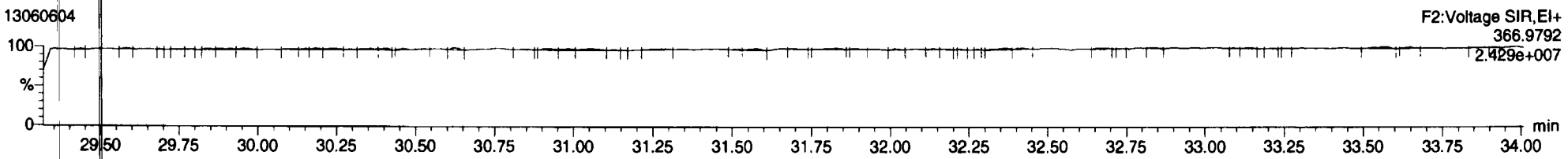
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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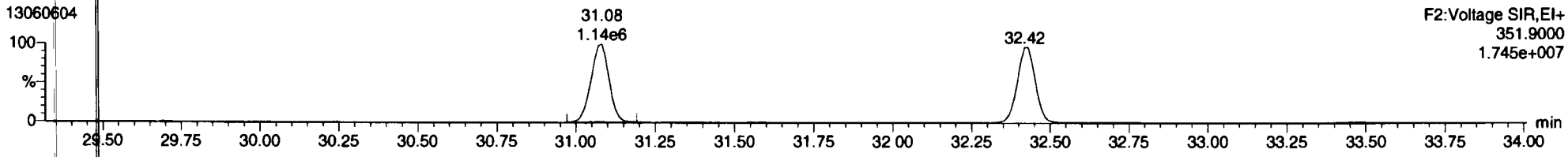
13C-12378-PeCDF



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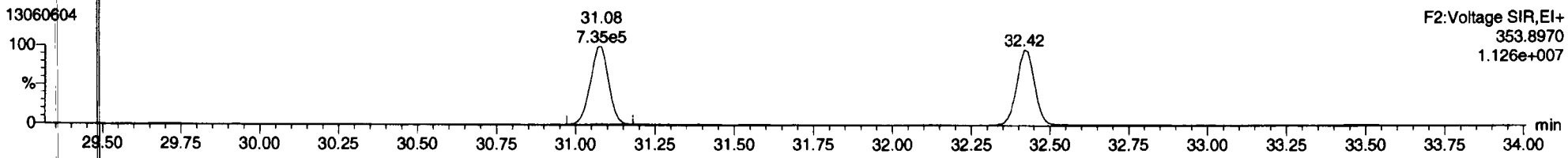

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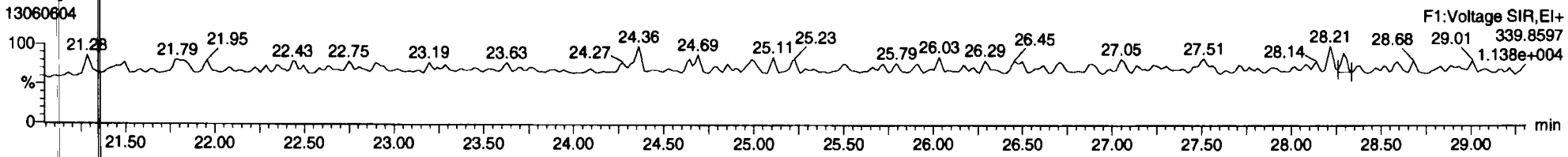

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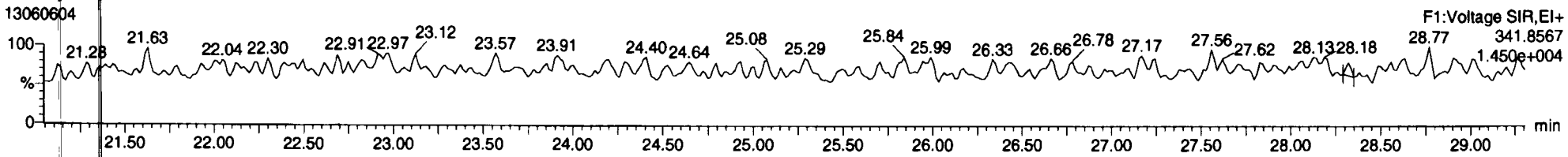
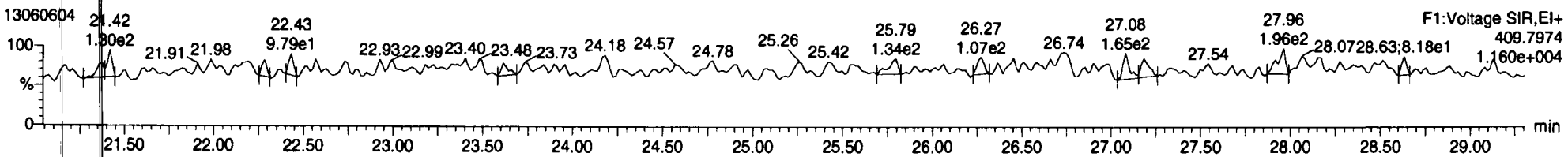


FUNCTION1 HPCDPE



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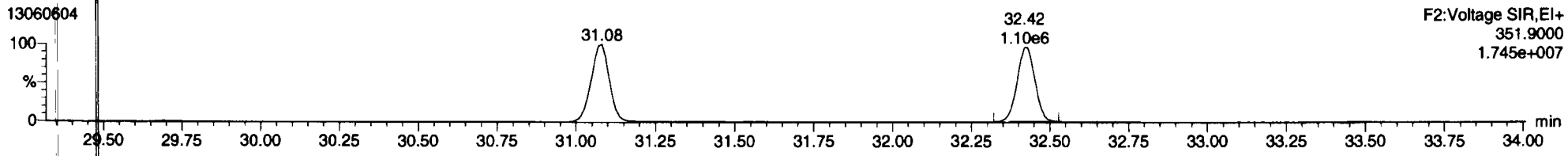
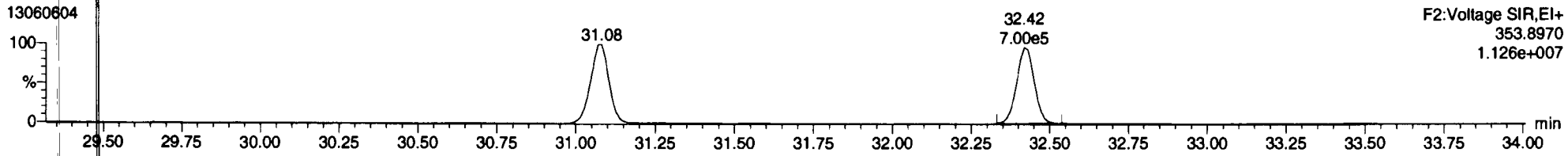
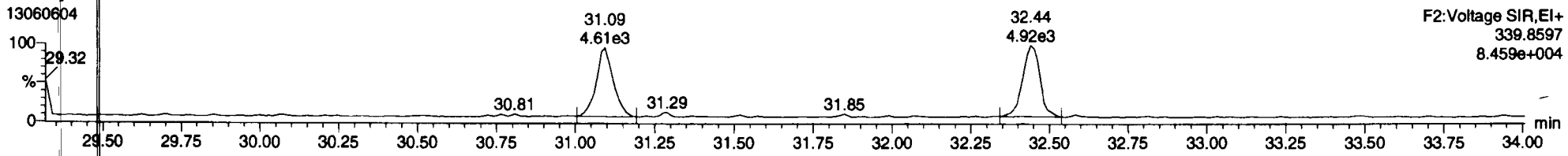
13C-23478-PeCDF



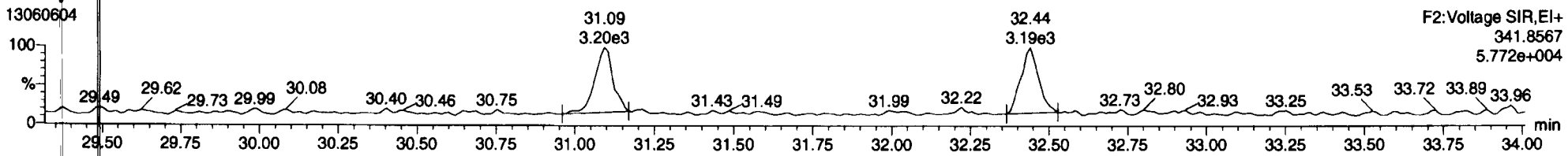
13C-23478-PeCDF



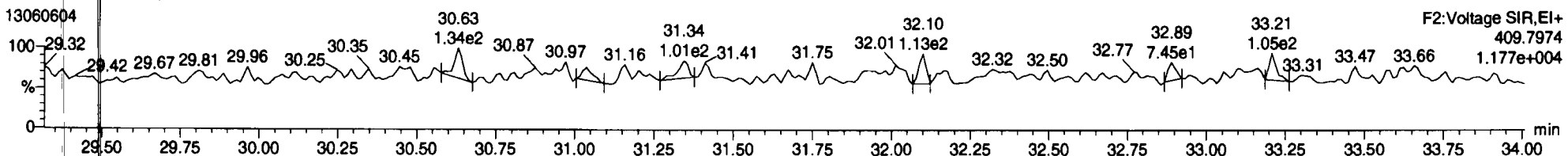
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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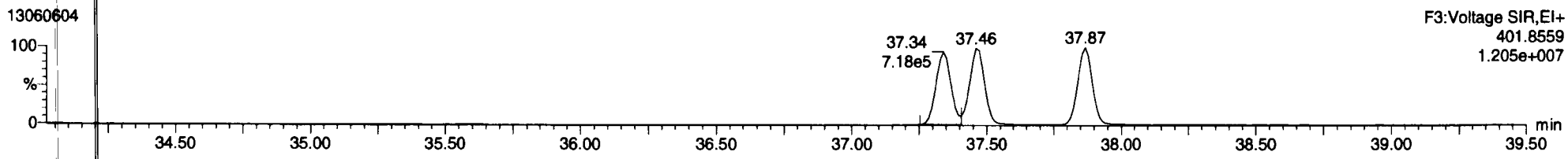
13C-123478-HxCDD



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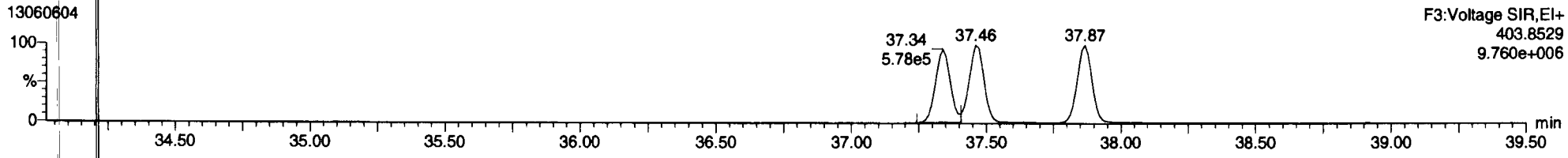
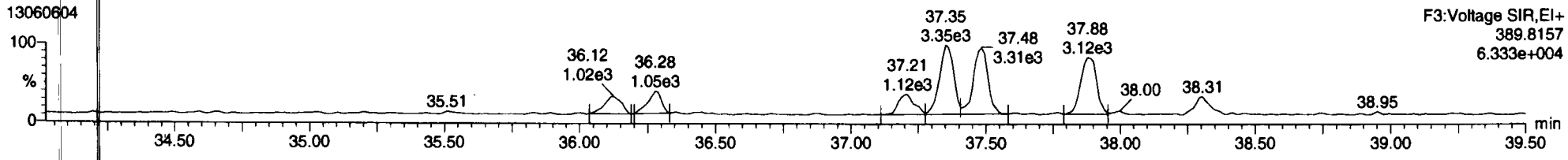
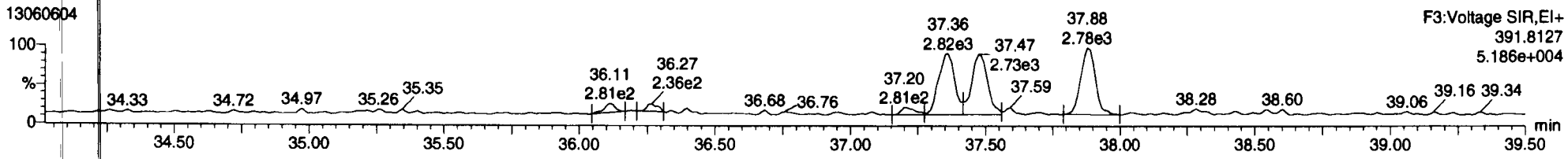


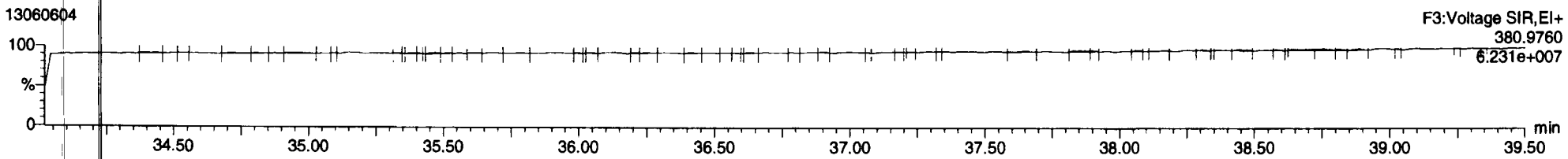
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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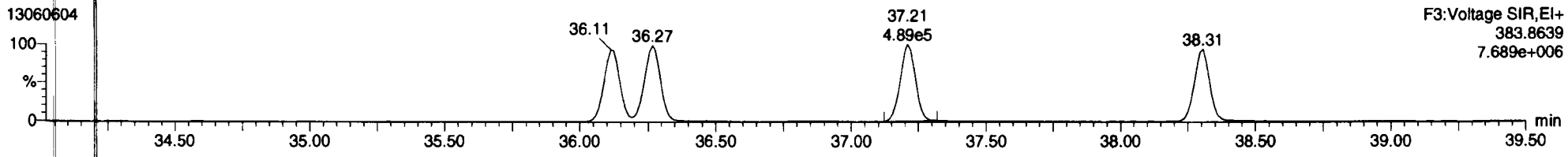
13C-234678-HxCDF



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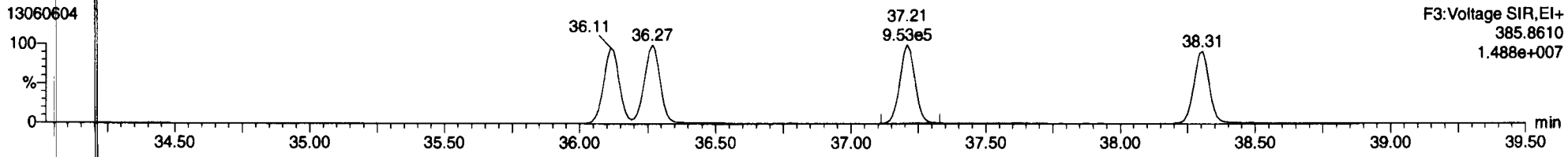
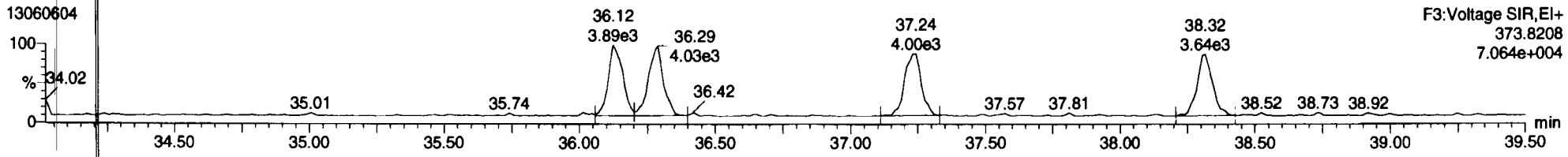


Total-hexafurans



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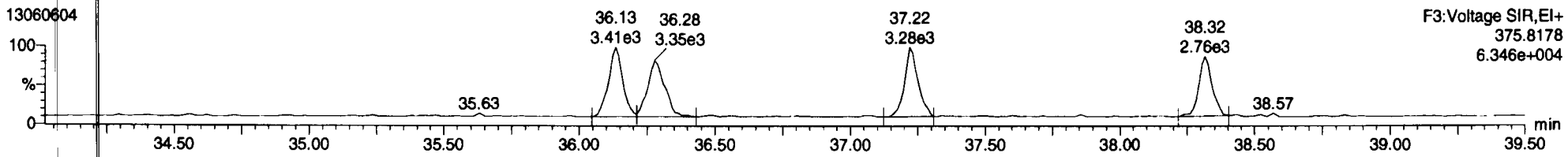
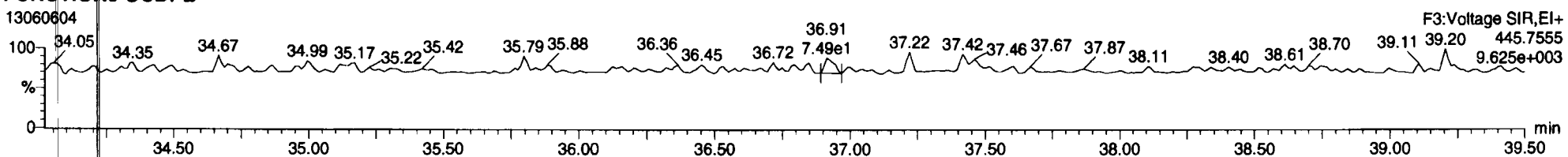


FUNCTION3 OCDPE



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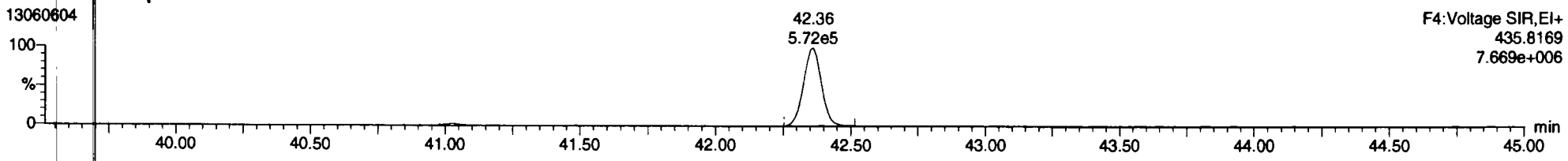
13C-1234678-HpCDD



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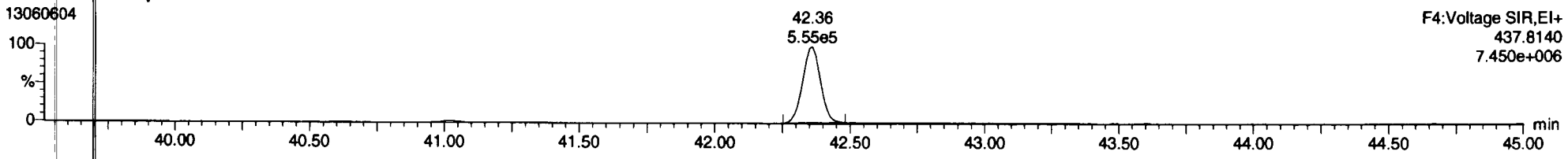
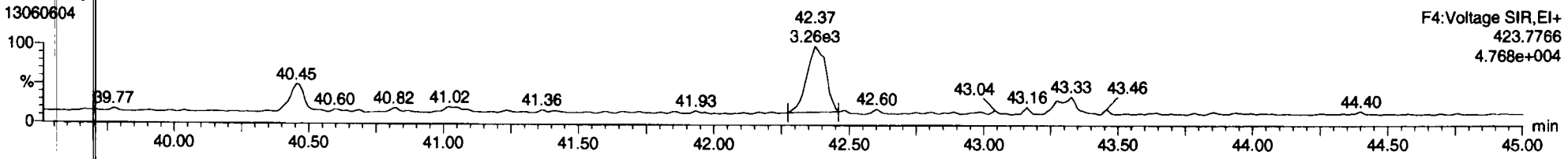
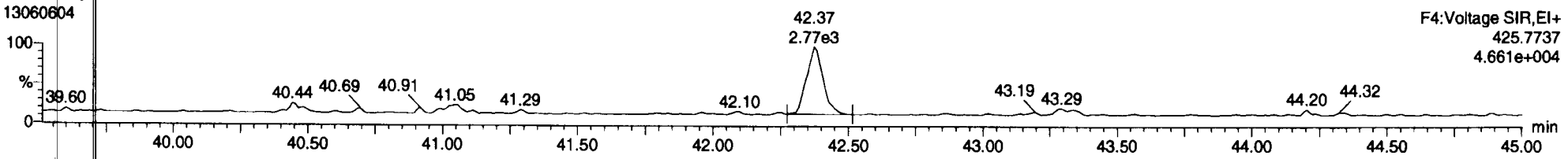


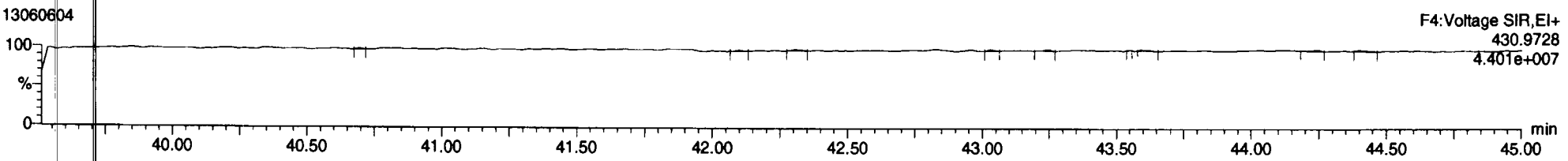
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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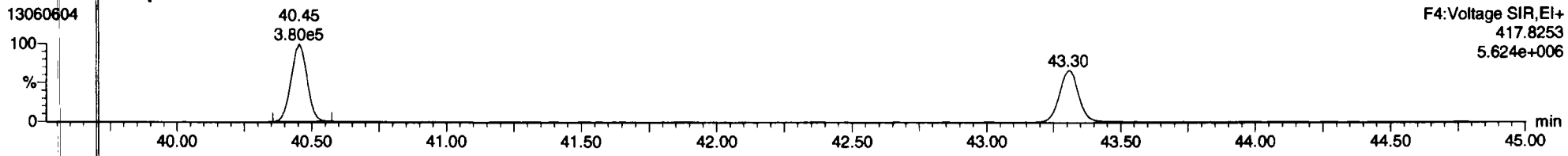
13C-1234678-HpCDF



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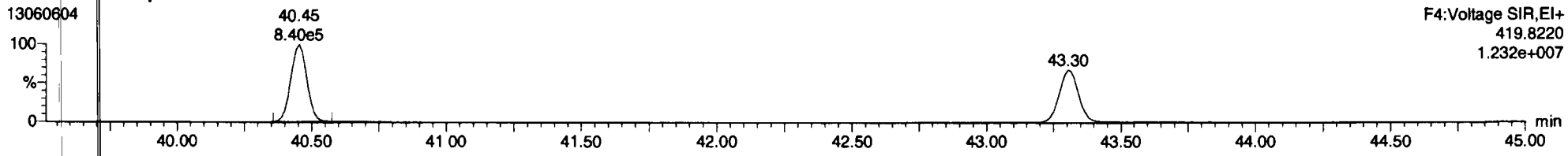
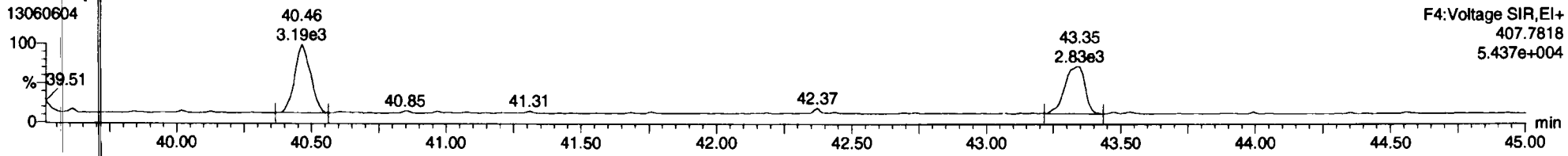
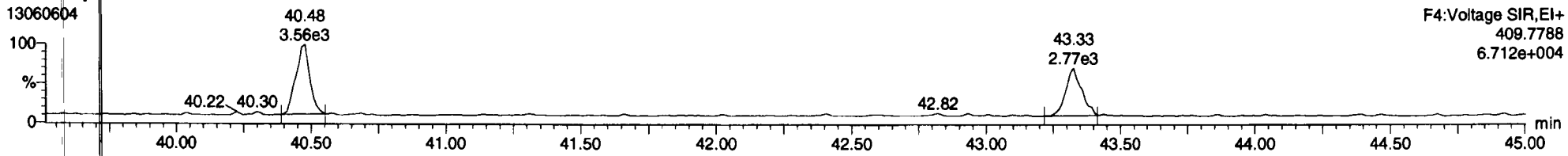


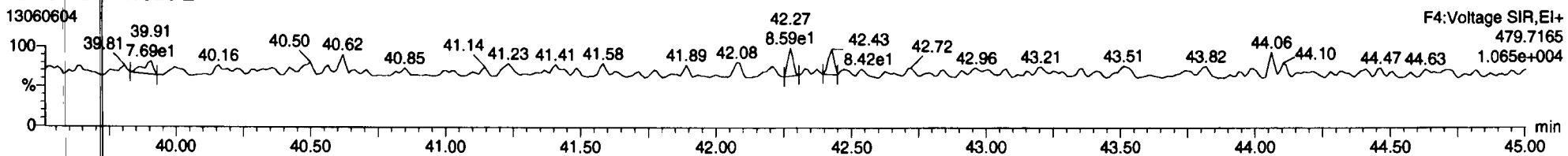
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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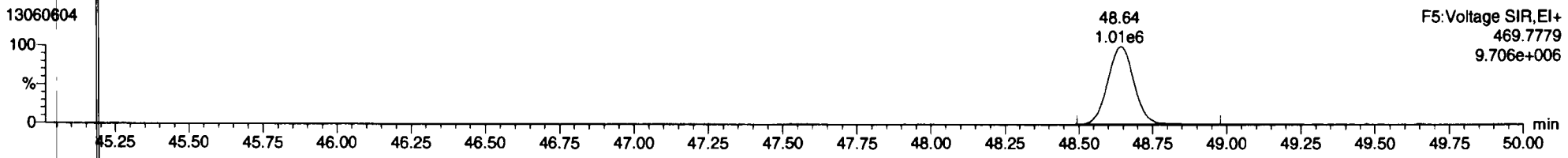
13C-OCDD



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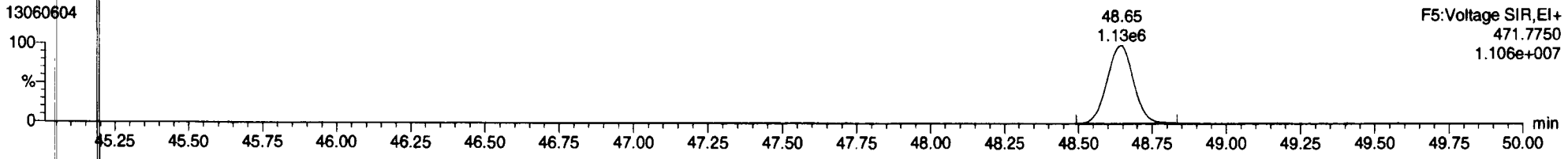
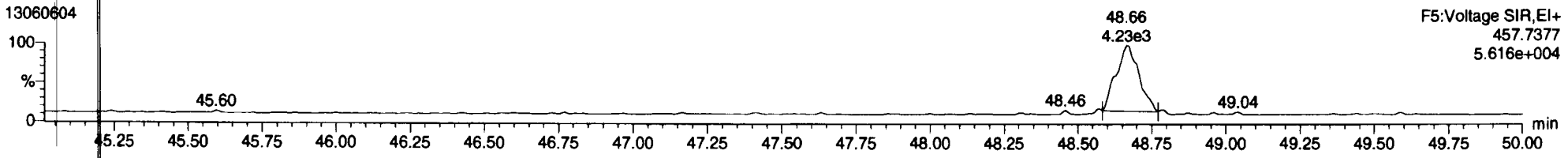
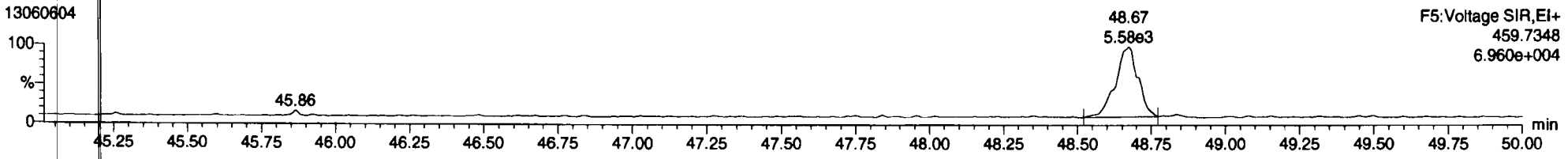


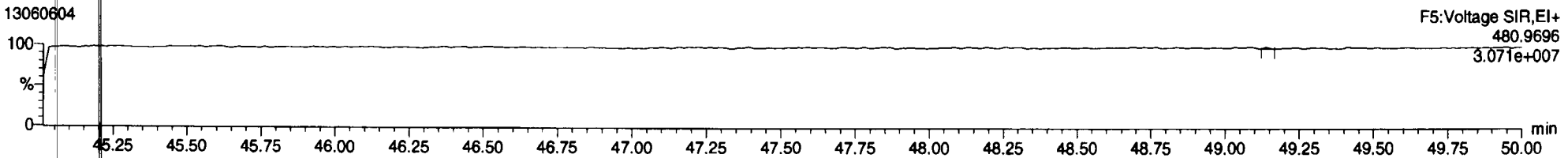
OCDD



OCDD



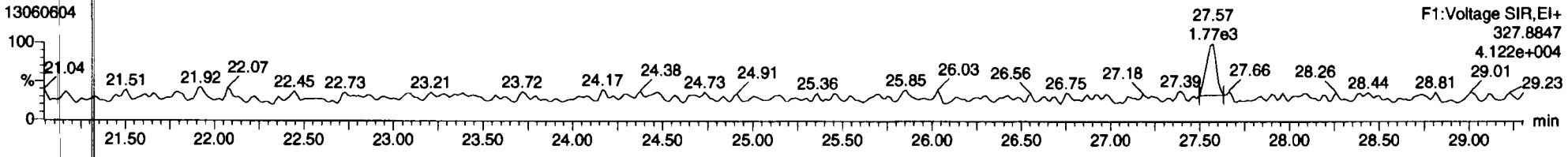
FUNCTION5 PFK



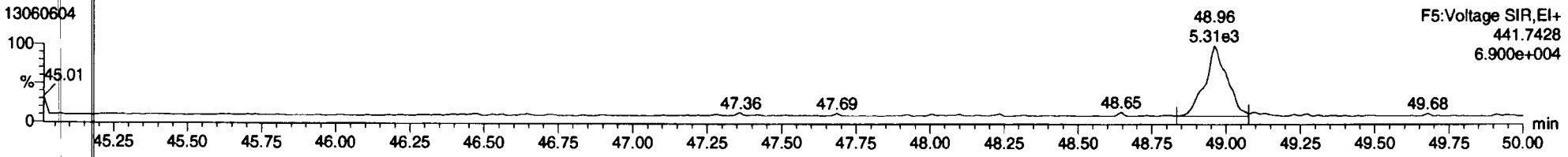
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:29 Pacific Daylight Time

ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

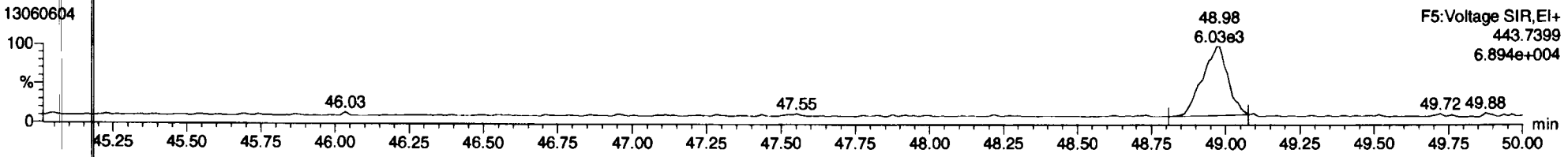
37CL-237B-TCDD



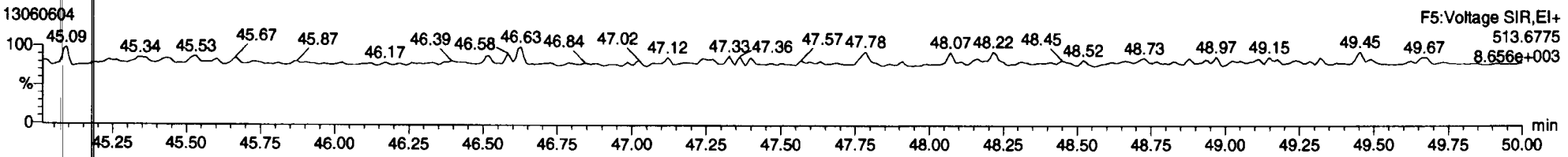
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.945	1.001	3.86e3	4.38e3	0.832	0.881	0.770	63.2	NO	0.493	0.493
12378-PeCDF	31.114	1.001	2.04e4	1.36e4	0.853	1.500	1.550	176.3	NO	2.463	2.463
23478-PeCDF	32.451	1.000	2.16e4	1.35e4	0.884	1.599	1.550	176.9	NO	2.505	2.505
123478-HxCDF	36.145	1.000	1.77e4	1.52e4	1.017	1.164	1.240	237.8	NO	2.475	2.475
234678-HxCDF	37.242	1.001	1.89e4	1.48e4	1.067	1.273	1.240	267.9	NO	2.496	2.496
123678-HxCDF	36.299	1.001	1.86e4	1.56e4	0.999	1.194	1.240	248.3	NO	2.498	2.498
123789-HxCDF	38.338	1.001	1.68e4	1.37e4	0.947	1.222	1.240	235.4	NO	2.517	2.517
1234678-HpCDF	40.475	1.000	1.61e4	1.79e4	1.151	0.899	1.050	383.1	NO	2.507	2.507
1234789-HpCDF	43.336	1.000	1.37e4	1.33e4	1.166	1.031	1.050	314.6	NO	2.494	2.494
OCDF	48.977	1.007	2.24e4	2.64e4	1.001	0.849	0.890	359.8	NO	4.765	4.765
2378-TCDD	27.587	1.001	2.59e3	3.73e3	0.939	0.693	0.770	28.7	NO	0.471	0.471
12378-PeCDD	32.714	1.001	1.53e4	1.09e4	0.930	1.411	1.550	188.1	NO	2.501	2.501
123478-HxCDD	37.373	1.001	1.58e4	1.19e4	0.930	1.334	1.240	245.8	NO	2.476	2.476
123678-HxCDD	37.494	1.000	1.39e4	1.24e4	0.854	1.124	1.240	217.7	NO	2.415	2.415
123789-HxCDD	37.888	1.011	1.46e4	1.28e4	0.885	1.142	1.240	218.6	NO	2.503	2.503
1234678-HpCDD	42.382	1.000	1.30e4	1.38e4	0.966	0.944	1.050	285.0	NO	2.502	2.502
OCDD	48.690	1.001	2.24e4	2.53e4	0.921	0.886	0.890	113.1	NO	5.058	5.058
13C-2378-TCDF	26.915	1.006	8.69e5	1.14e6	1.283	0.762	0.770	3008.6	NO		97.512
13C-12378-PeCDF	31.092	1.162	9.86e5	6.29e5	1.051	1.568	1.550	3979.5	NO		95.727
13C-23478-PeCDF	32.440	1.213	9.65e5	6.22e5	1.030	1.551	1.550	3952.3	NO		95.951
13C-123478-HxCDF	36.134	0.954	4.44e5	8.61e5	1.069	0.515	0.510	2161.8	NO		99.300
13C-123678-HxCDF	36.277	0.958	4.64e5	9.03e5	1.124	0.513	0.510	2283.7	NO		98.939
13C-234678-HxCDF	37.220	0.983	4.36e5	8.29e5	1.041	0.526	0.510	2161.7	NO		98.882
13C-123789-HxCDF	38.316	1.012	4.32e5	8.47e5	1.039	0.510	0.510	2233.4	NO		100.122
13C-1234678-HpCDF	40.464	1.068	3.61e5	8.15e5	0.965	0.443	0.440	2134.7	NO		99.198
13C-1234789-HpCDF	43.325	1.144	2.82e5	6.44e5	0.760	0.437	0.440	1413.3	NO		99.109
13C-1234-TCDD	26.750	0.000	7.03e5	9.02e5	1.000	0.780	0.770	1035.9	NO		100.000
13C-2378-TCDD	27.558	1.030	6.27e5	8.04e5	0.926	0.780	0.770	952.4	NO		96.282
13C-12378-PeCDD	32.693	1.222	6.85e5	4.40e5	0.734	1.556	1.550	3212.8	NO		95.477
13C-123478-HxCDD	37.351	0.986	6.67e5	5.35e5	0.984	1.246	1.240	3215.0	NO		99.417
13C-123678-HxCDD	37.483	0.990	6.93e5	5.84e5	1.043	1.187	1.240	3326.2	NO		99.595
13C-1234678-HpCDD	42.371	1.119	5.66e5	5.40e5	0.891	1.048	1.050	3899.4	NO		101.040
13C-OCDD	48.654	1.285	9.58e5	1.09e6	0.849	0.882	0.890	4728.4	NO		196.099

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

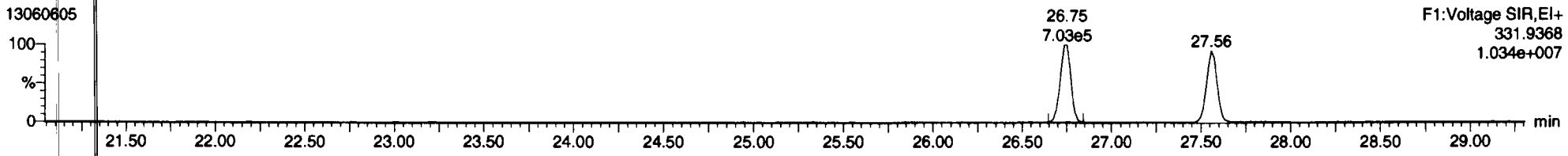
13C-123789-HxCDD	37.877	0.000	6.81e5	5.48e5	1.000	1.243	1.240	3339.6	NO	100.000
Total-tetrafurans			4.21e3		0.832					0.533
Total-penta1			0.00e0							
Total-pentafurans			4.25e4		0.868					5.052
Total-hexafurans			7.22e4		1.008					10.031
Total-heptafurans			2.97e4		1.159					5.002
Total-Furans			1.71e5		0.992					25.392
Total-tetradioxins			5.06e3		0.939					0.679
Total-pentadioxins			1.53e4		0.930					2.501
Total-hexadioxins			4.56e4		0.890					7.511
Total-heptadioxins			1.30e4		0.966					2.502
Total-Dioxins			1.02e5		0.918					18.302
Total-TEQ			2.73e5							43.695
37CL-2378-TCDD	27.572	1.031	7.56e3		0.989			35.1		0.476
FUNCTION1 PFK			6.04e5							
FUNCTION2 PFK			2.28e5							0.000
FUNCTION3 PFK			5.78e5							0.000
FUNCTION4 PFK			6.93e5							
FUNCTION5 PFK			4.55e5							
FUNCTION1 HXCDPE			1.51e2							0.000
FUNCTION1 HPCDPE			2.34e3							0.000
FUNCTION2 HPCDPE			8.25e2							0.000
FUNCTION3 OCDPE			0.00e0							
FUNCTION4 NCDPE			2.97e2							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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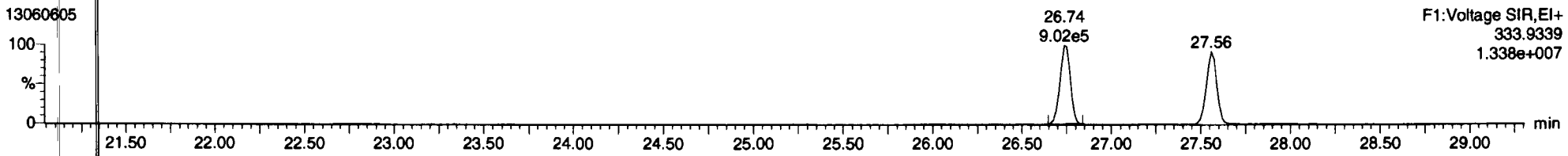
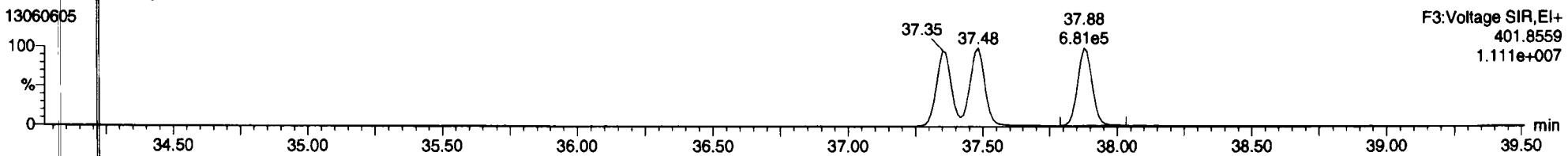


13C-123789-HxCDD



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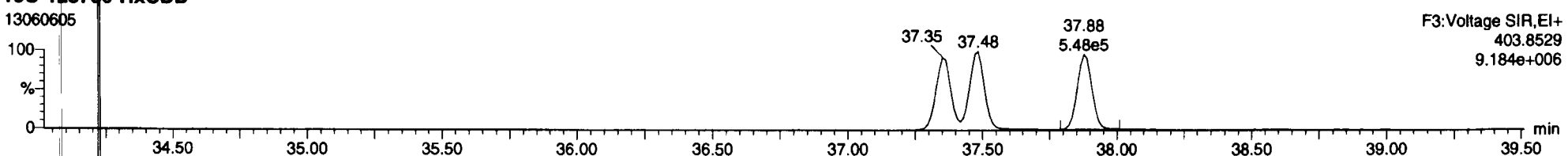

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Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
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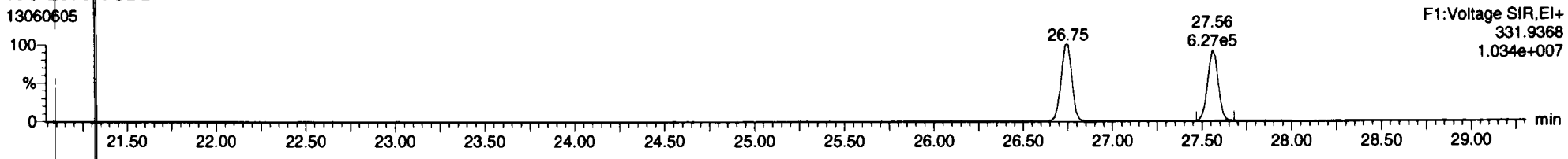
ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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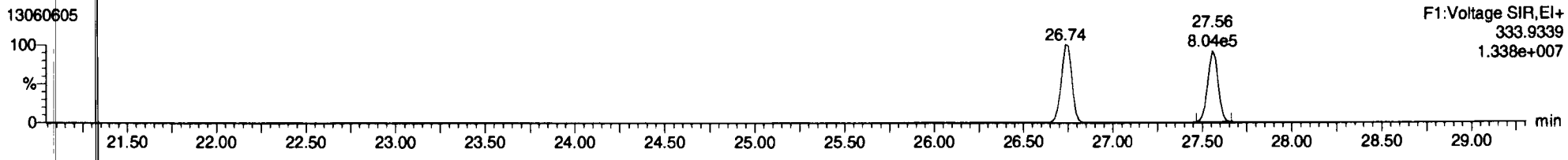
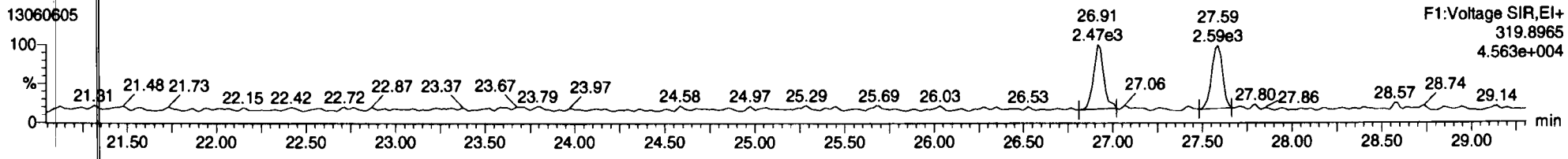
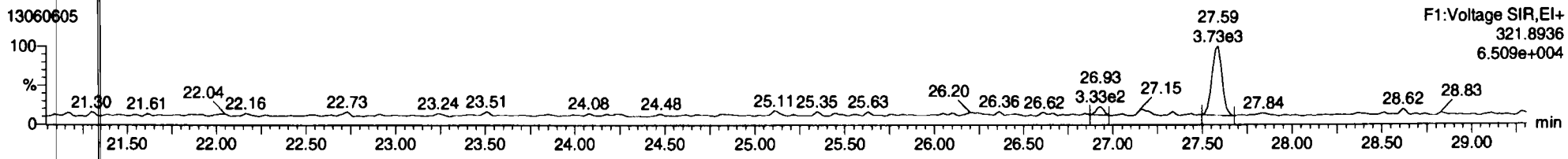


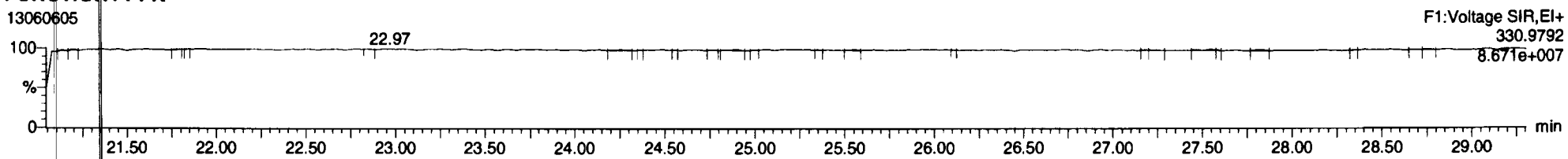
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
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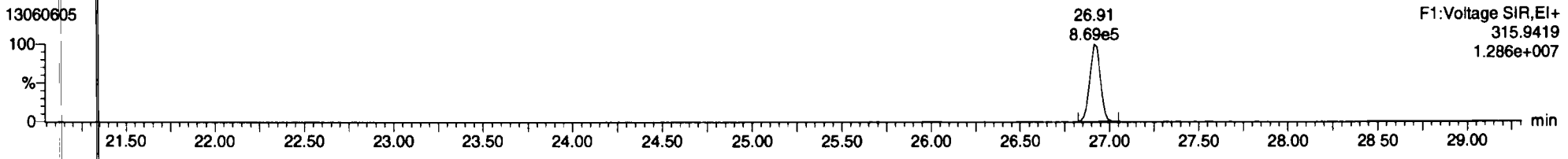
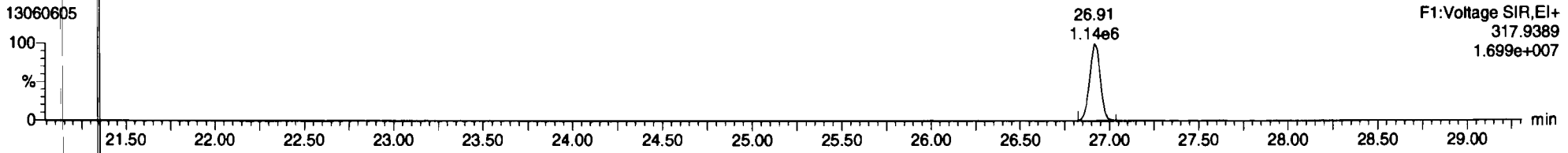
ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

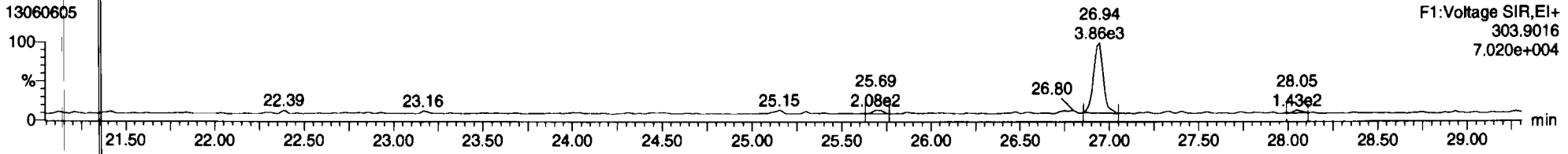
13C-2378-TCDF



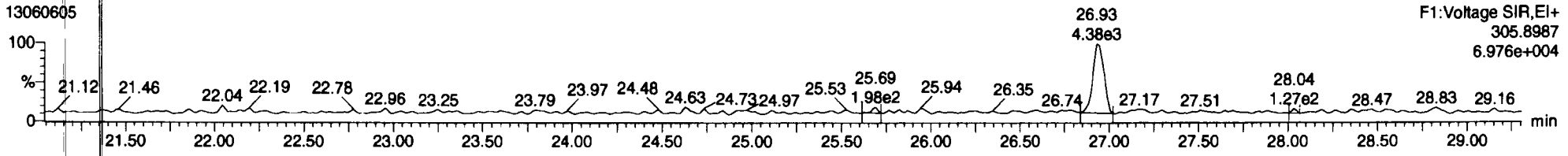
13C-2378-TCDF



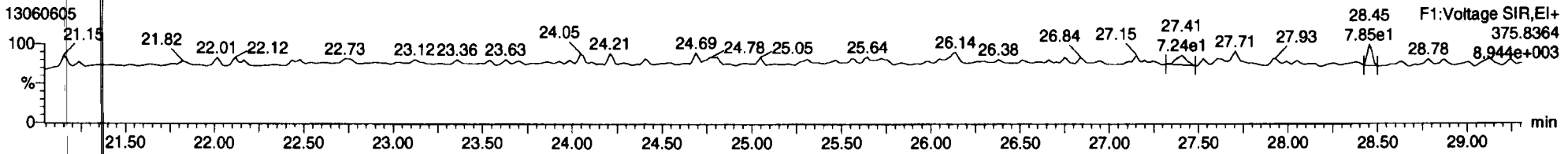
Total-tetrafurans



Total-tetrafurans



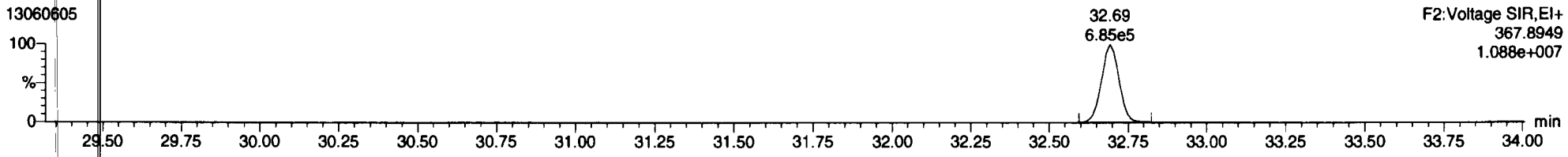
FUNCTION1 HXCDPE



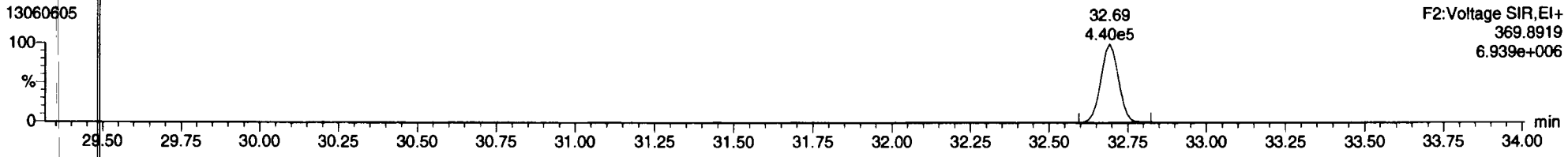
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

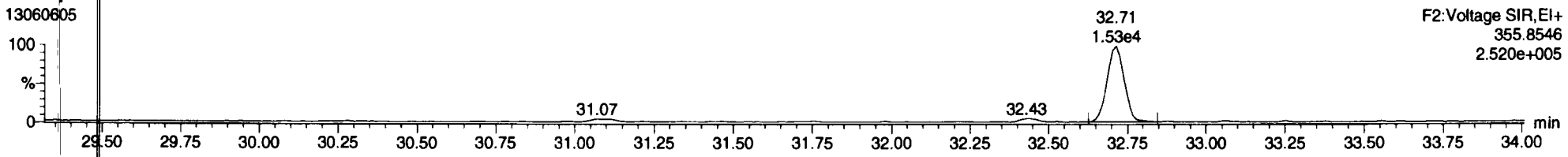
13C-12378-PeCDD



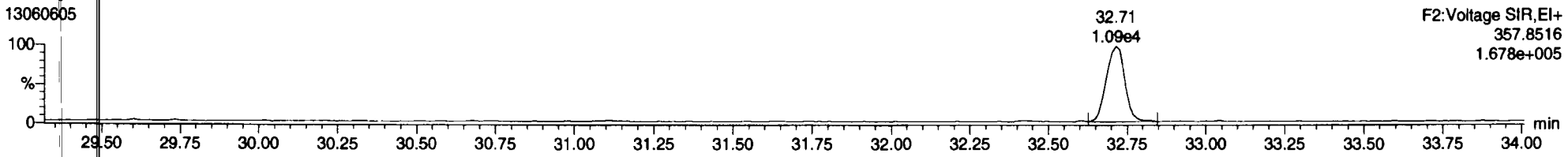
13C-12378-PeCDD



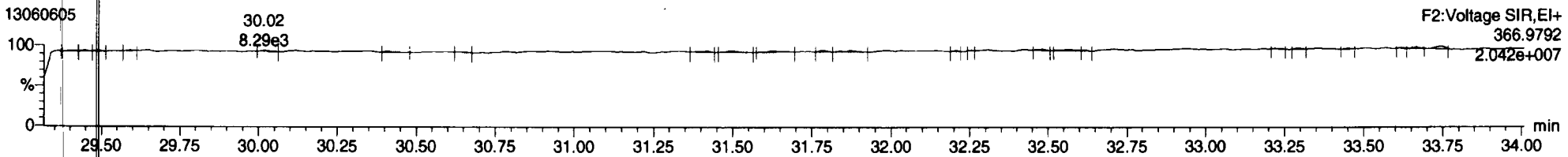
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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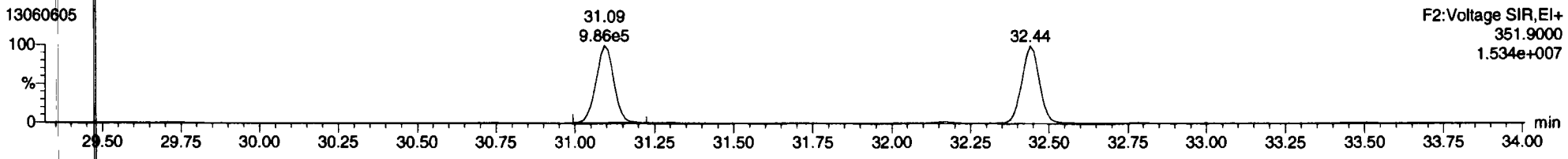
ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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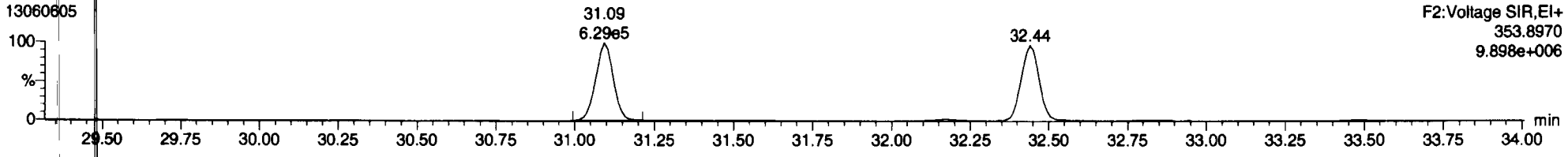
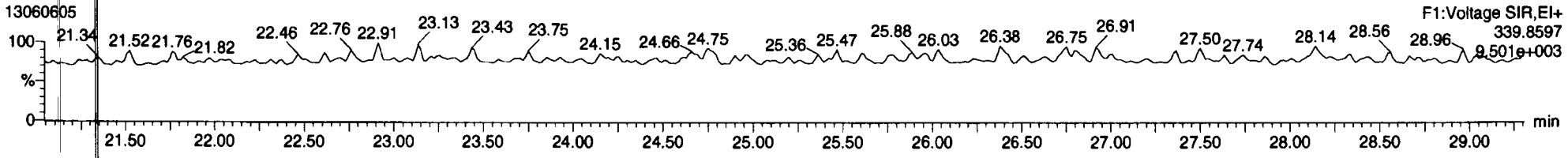
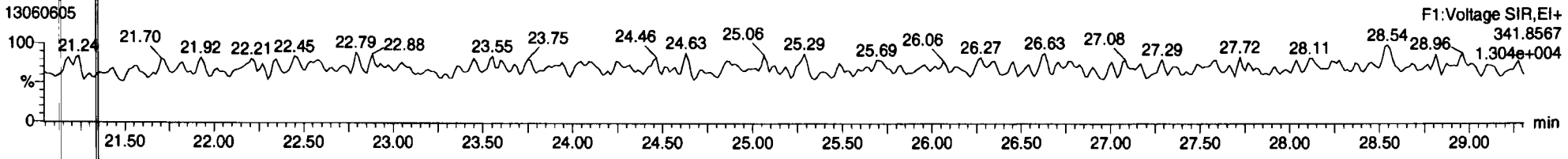


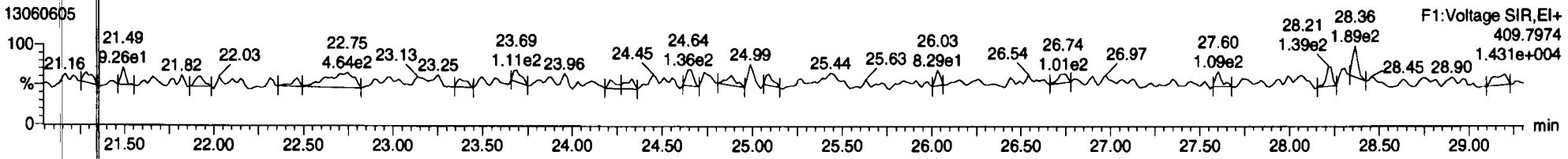
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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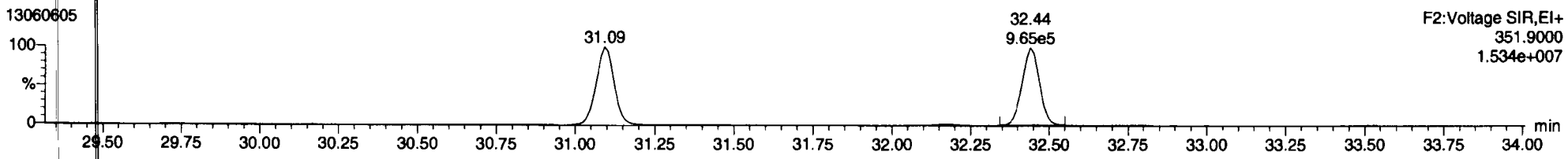
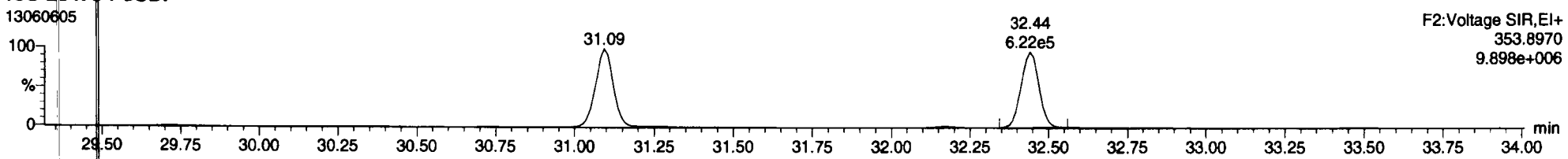
ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

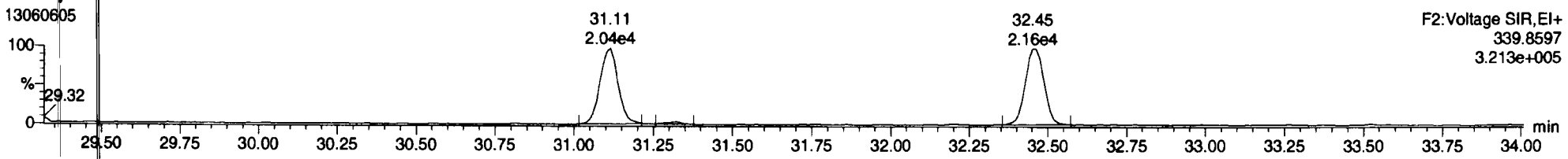
13C-23478-PeCDF



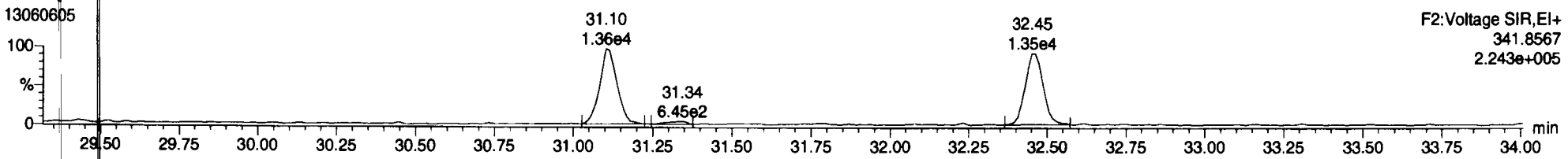
13C-23478-PeCDF



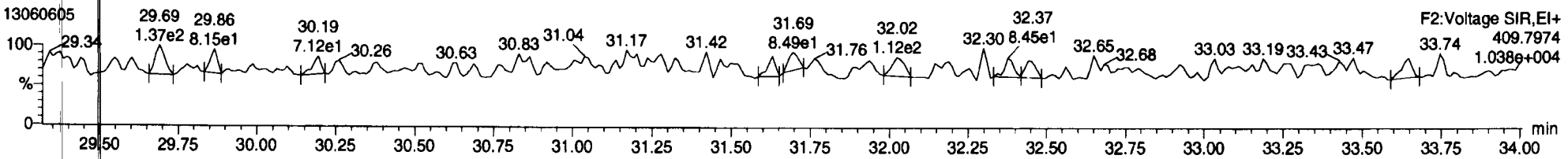
Total-pentafurans



Total-pentafurans



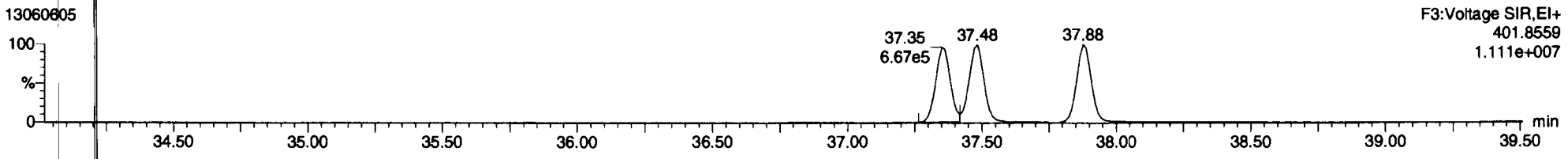
FUNCTION2 HPCDPE



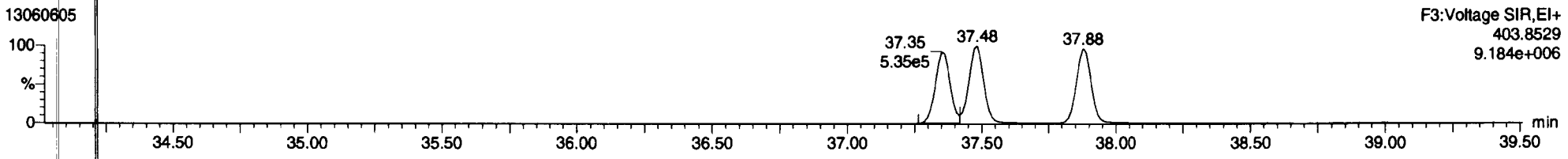
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

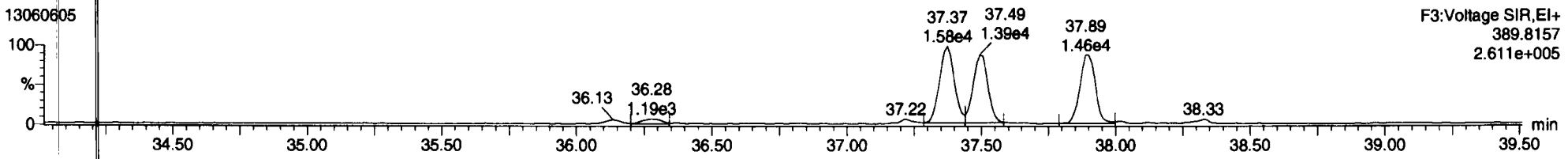
13C-123478-HxCDD



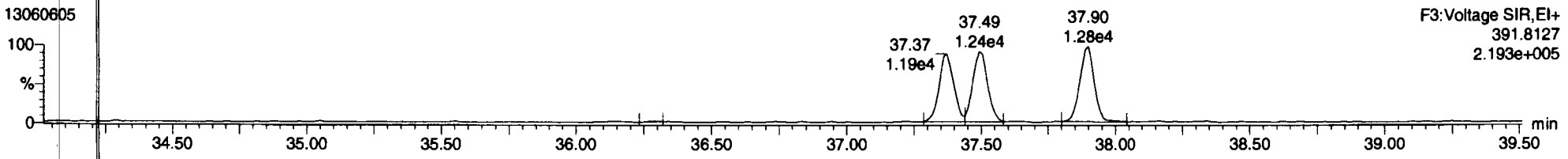
13C-123478-HxCDD



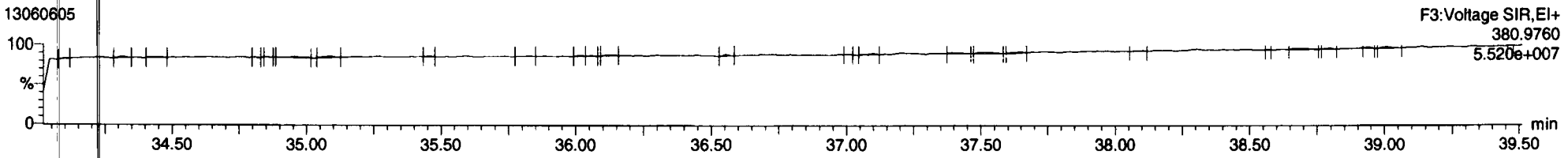
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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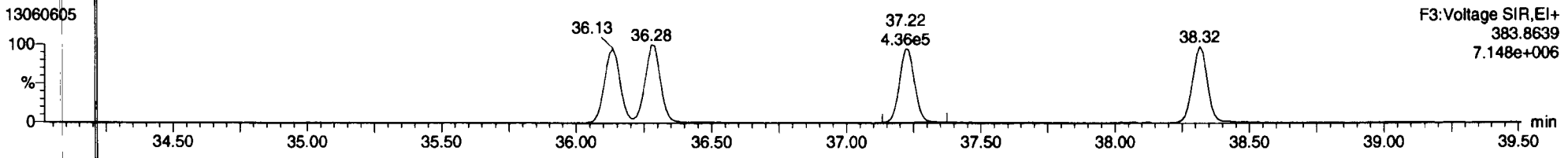
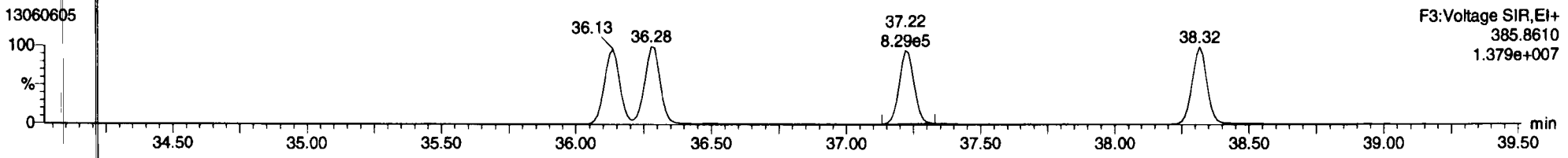
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

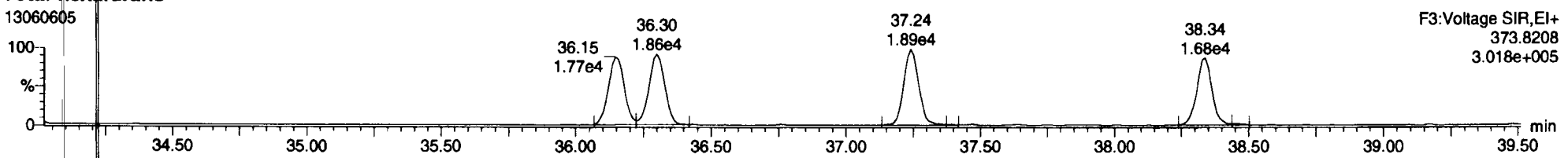
13C-234678-HxCDF



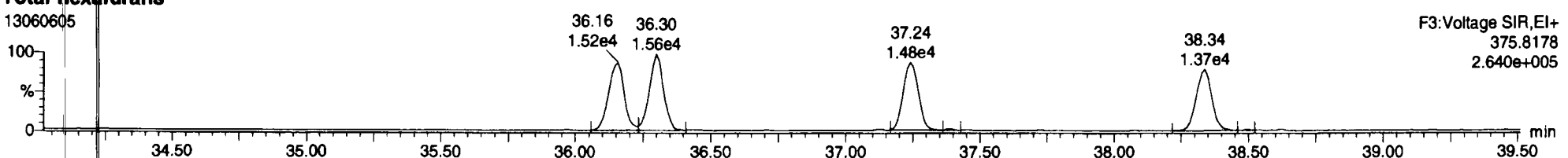
13C-234678-HxCDF



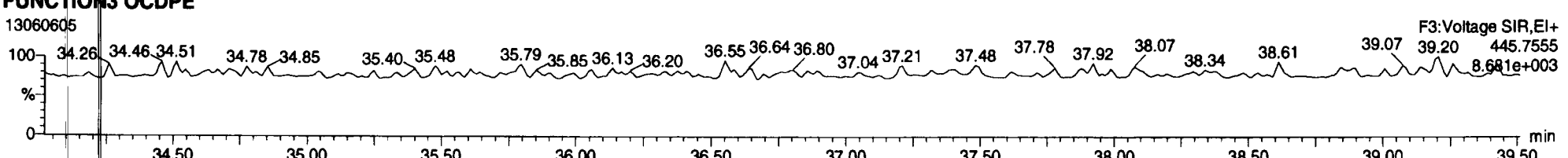
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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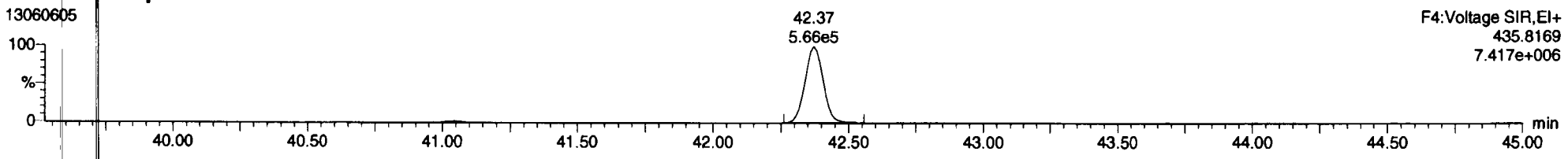
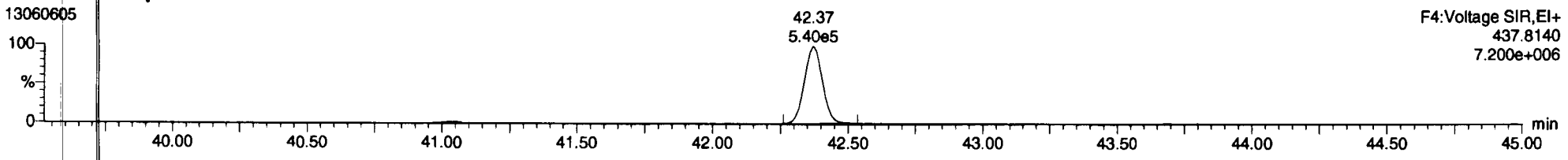
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

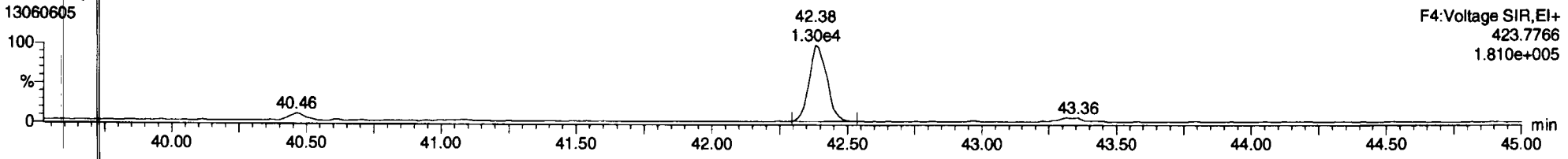
13C-1234678-HpCDD



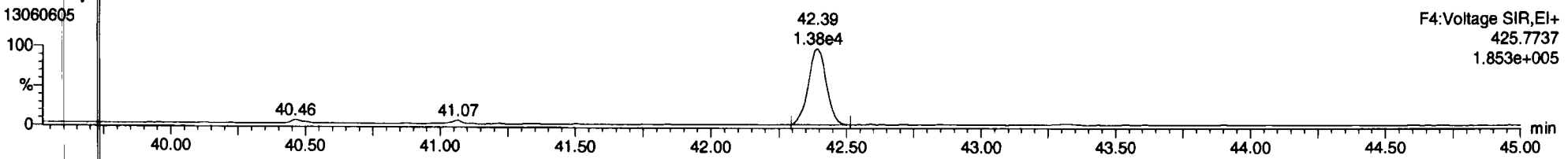
13C-1234678-HpCDD



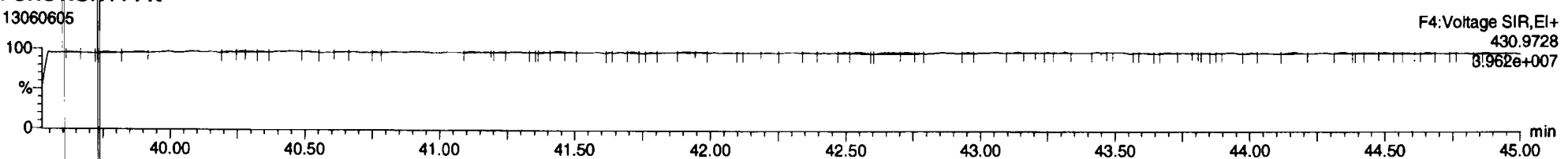
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
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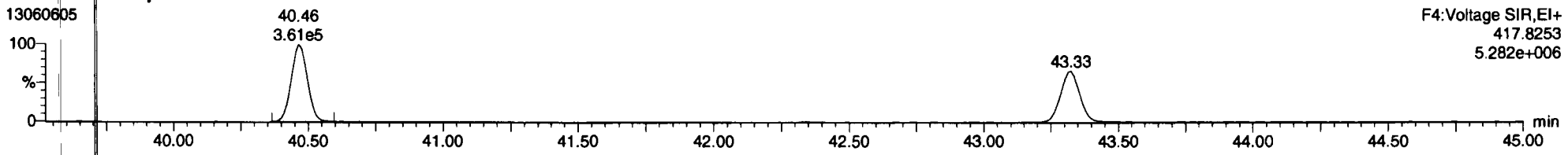
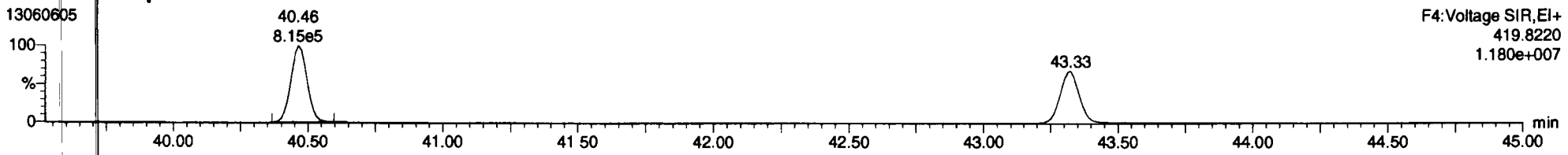
ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

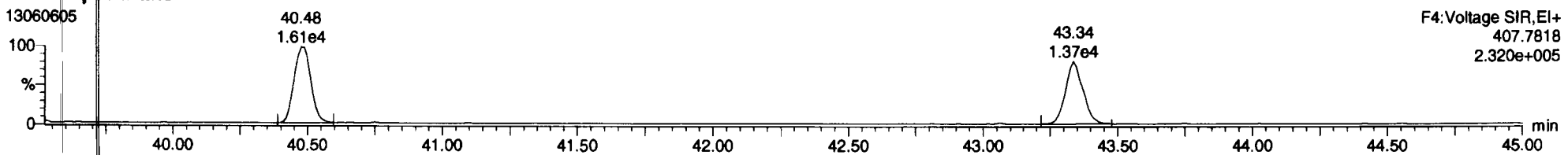
13C-1234678-HpCDF



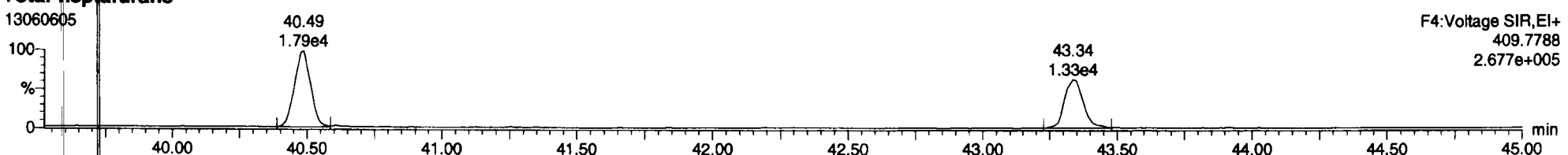
13C-1234678-HpCDF



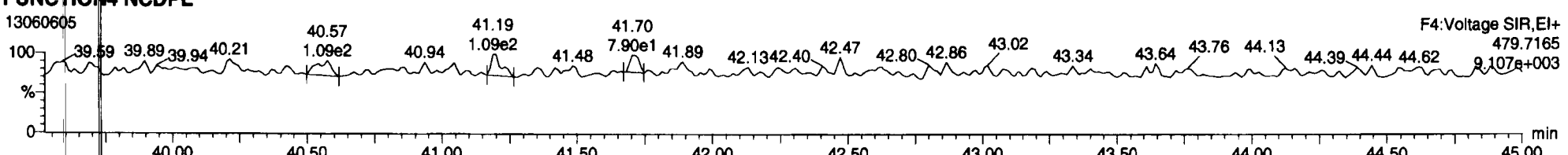
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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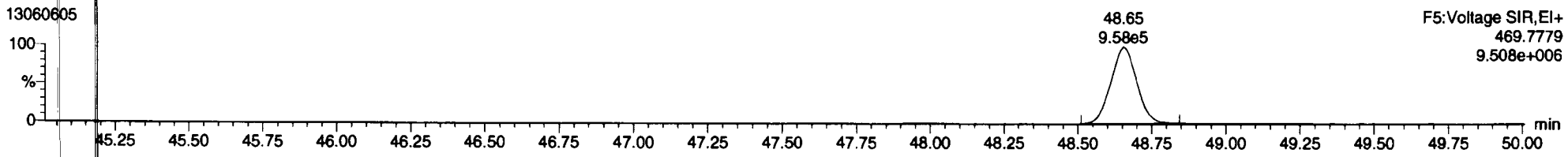
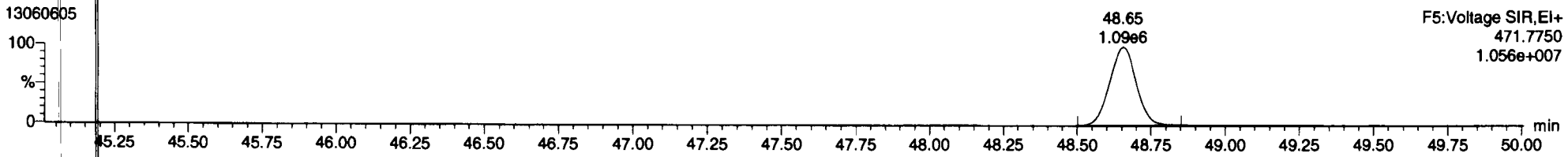
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

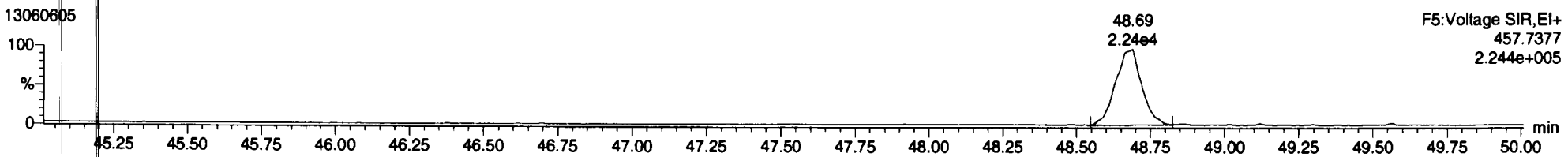
13C-OCDD



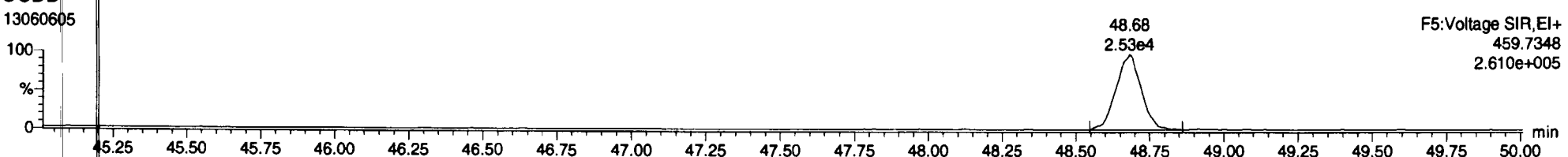
13C-OCDD



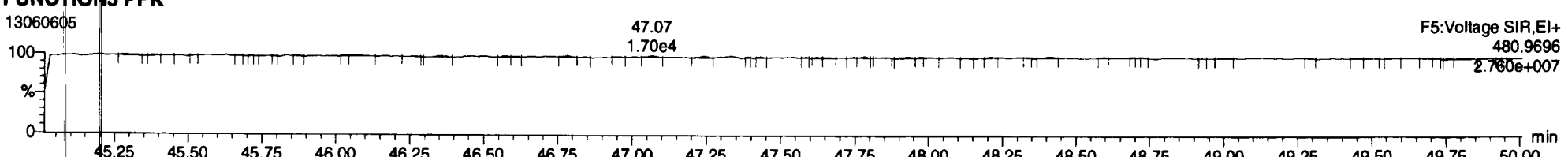
OCDD



OCDD



FUNCTION5 PFK



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
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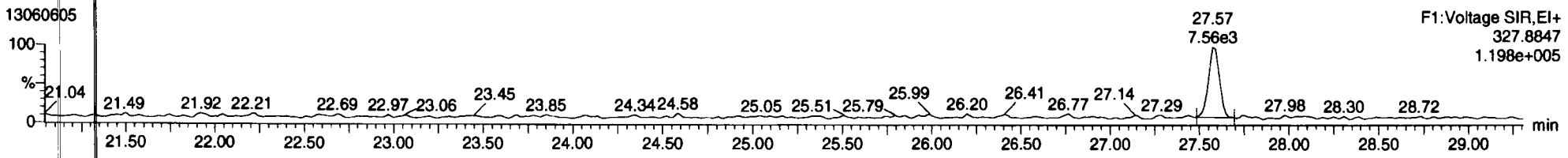
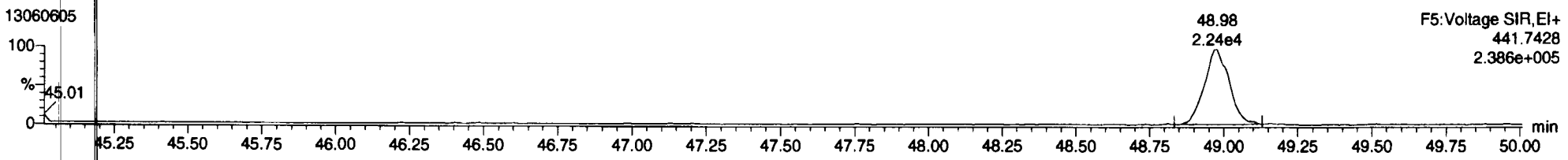
ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

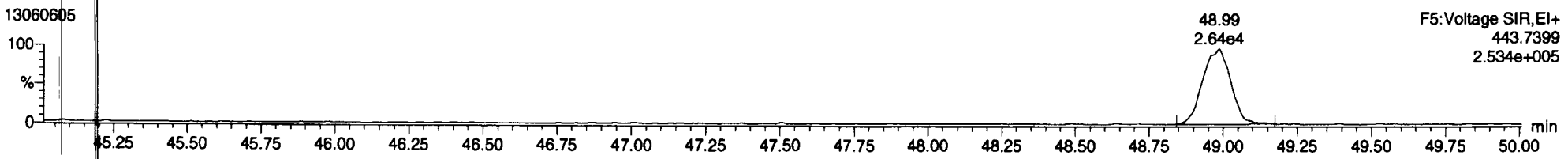
37CL-2378-TCDD



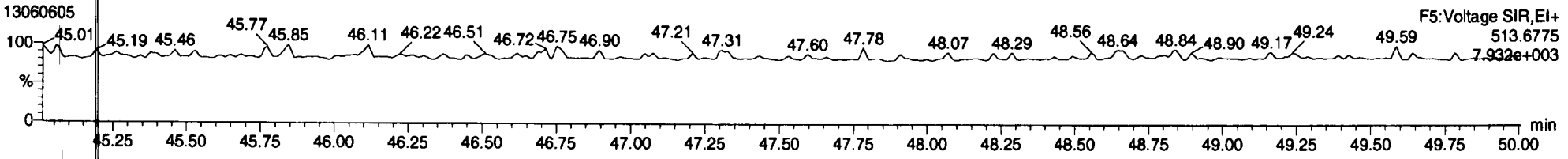
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.915	1.001	1.49e4	2.11e4	0.832	0.706	0.770	254.6	NO	2.004	2.004
12378-PeCDF	31.092	1.000	8.93e4	5.77e4	0.853	1.548	1.550	1048.0	NO	9.987	9.987
23478-PeCDF	32.440	1.000	8.82e4	5.74e4	0.884	1.536	1.550	1038.2	NO	9.795	9.795
123478-HxCDF	36.134	1.000	7.30e4	6.19e4	1.017	1.178	1.240	524.9	NO	9.914	9.914
234678-HxCDF	37.230	1.001	7.74e4	6.26e4	1.067	1.236	1.240	565.2	NO	10.202	10.202
123678-HxCDF	36.288	1.001	7.69e4	6.22e4	0.999	1.235	1.240	535.9	NO	9.896	9.896
123789-HxCDF	38.316	1.000	6.59e4	5.47e4	0.947	1.205	1.240	476.2	NO	9.743	9.743
1234678-HpCDF	40.464	1.000	7.09e4	6.91e4	1.151	1.026	1.050	728.8	NO	9.937	9.937
1234789-HpCDF	43.325	1.001	5.87e4	5.59e4	1.166	1.051	1.050	508.9	NO	10.063	10.063
OCDF	48.968	1.007	1.00e5	1.15e5	1.001	0.868	0.890	977.8	NO	19.468	19.468
2378-TCDD	27.557	1.001	1.23e4	1.64e4	0.939	0.747	0.770	120.1	NO	1.941	1.941
12378-PeCDD	32.692	1.000	6.65e4	4.43e4	0.930	1.502	1.550	768.6	NO	9.993	9.993
123478-HxCDD	37.362	1.001	6.17e4	5.01e4	0.930	1.232	1.240	1161.7	NO	9.776	9.776
123678-HxCDD	37.483	1.001	5.89e4	4.90e4	0.854	1.202	1.240	1159.9	NO	9.865	9.865
123789-HxCDD	37.877	1.011	6.01e4	4.95e4	0.885	1.215	1.240	1177.5	NO	9.864	9.864
1234678-HpCDD	42.371	1.000	5.38e4	5.11e4	0.966	1.052	1.050	638.2	NO	9.670	9.670
OCDD	48.663	1.000	9.15e4	1.09e5	0.921	0.838	0.890	1397.1	NO	19.684	19.684
13C-2378-TCDF	26.900	1.007	9.40e5	1.22e6	1.283	0.769	0.770	4648.4	NO		99.646
13C-12378-PeCDF	31.081	1.163	1.05e6	6.74e5	1.051	1.558	1.550	4504.4	NO		97.060
13C-23478-PeCDF	32.429	1.214	1.02e6	6.59e5	1.030	1.553	1.550	4364.4	NO		96.496
13C-123478-HxCDF	36.123	0.954	4.55e5	8.83e5	1.069	0.516	0.510	1825.1	NO		100.199
13C-123678-HxCDF	36.266	0.958	4.78e5	9.29e5	1.124	0.514	0.510	1924.2	NO		100.131
13C-234678-HxCDF	37.208	0.983	4.35e5	8.51e5	1.041	0.511	0.510	1787.4	NO		98.886
13C-123789-HxCDF	38.305	1.012	4.40e5	8.66e5	1.039	0.508	0.510	1820.0	NO		100.602
13C-1234678-HpCDF	40.453	1.068	3.80e5	8.44e5	0.965	0.451	0.440	3157.7	NO		101.554
13C-1234789-HpCDF	43.303	1.144	2.95e5	6.82e5	0.760	0.432	0.440	2091.0	NO		102.825
13C-1234-TCDD	26.721	0.000	7.47e5	9.45e5	1.000	0.790	0.770	1297.4	NO		100.000
13C-2378-TCDD	27.542	1.031	6.82e5	8.92e5	0.926	0.765	0.770	1163.3	NO		100.443
13C-12378-PeCDD	32.681	1.223	7.22e5	4.71e5	0.734	1.533	1.550	3116.2	NO		96.002
13C-123478-HxCDD	37.340	0.986	6.84e5	5.45e5	0.984	1.256	1.240	3027.7	NO		99.956
13C-123678-HxCDD	37.461	0.989	7.10e5	5.71e5	1.043	1.244	1.240	3160.2	NO		98.271
13C-1234678-HpCDD	42.360	1.119	5.71e5	5.51e5	0.891	1.035	1.050	2842.3	NO		100.773
13C-OCDD	48.645	1.285	1.04e6	1.17e6	0.849	0.886	0.890	4039.4	NO		208.717

CS2 16:22 06JUN13

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

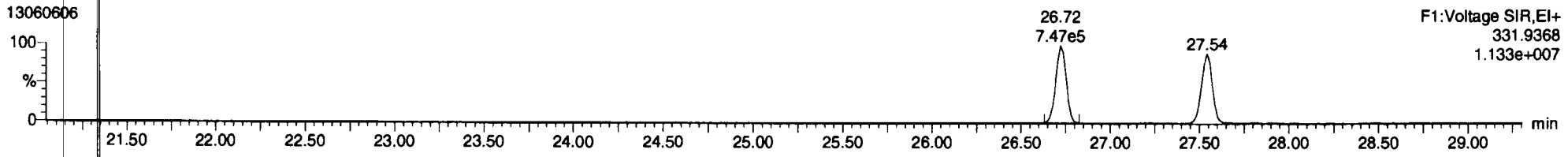
13C-123789-HxCDD	37.866	0.000	6.84e5	5.65e5	1.000	1.211	1.240	3145.1	NO	100.000
Total-tetrafurans			1.50e4		0.832					2.023
Total-penta1			0.00e0							
Total-pentafurans			1.80e5		0.868					20.053
Total-hexafurans			2.94e5		1.008					39.921
Total-heptafurans			1.30e5		1.159					20.119
Total-Furans			7.19e5		0.992					101.584
Total-tetradioxins			1.54e4		0.939					2.227
Total-pentadioxins			6.82e4		0.930					10.177
Total-hexadioxins			1.84e5		0.890					29.851
Total-heptadioxins			5.41e4		0.966					9.759
Total-Dioxins			4.13e5		0.918					71.698
Total-TEQ			1.13e6							173.282
37CL-2378-TCDD	27.557	1.031	3.39e4		0.989			169.8		2.024
FUNCTION1 PFK			4.51e7							
FUNCTION2 PFK			1.82e5							0.000
FUNCTION3 PFK			0.00e0							
FUNCTION4 PFK			0.00e0							
FUNCTION5 PFK			4.47e5							
FUNCTION1 HXCDPE			1.80e2							0.000
FUNCTION1 HPCDPE			1.91e3							0.000
FUNCTION2 HPCDPE			1.16e3							0.000
FUNCTION3 OCDPE			1.08e2							0.000
FUNCTION4 NCDPE			7.96e1							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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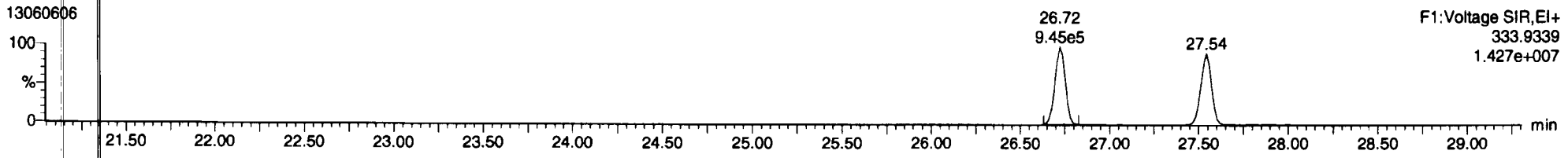
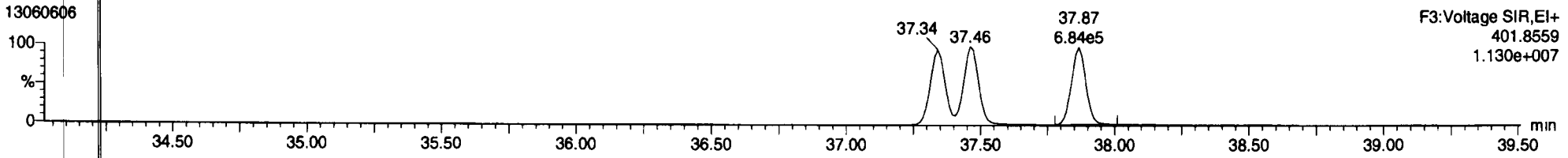


13C-123789-HxCDD



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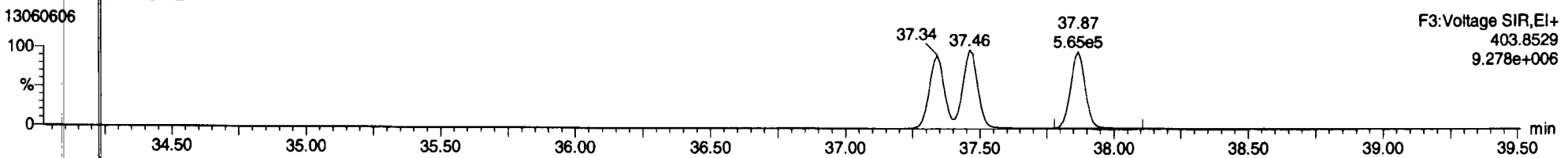
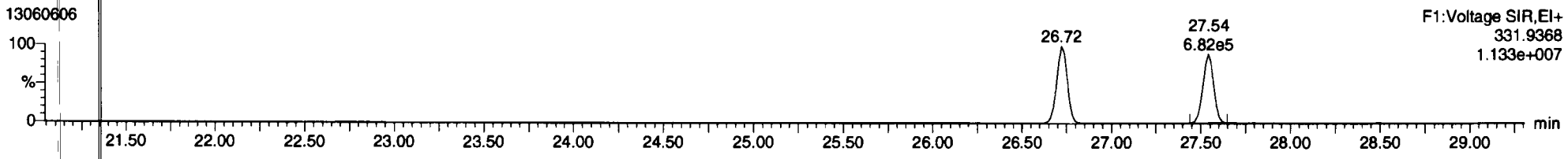


Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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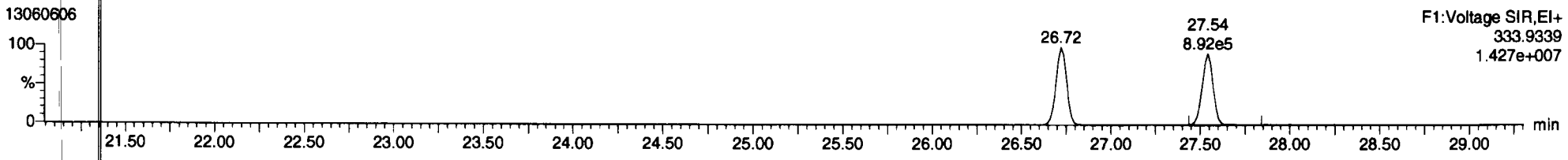
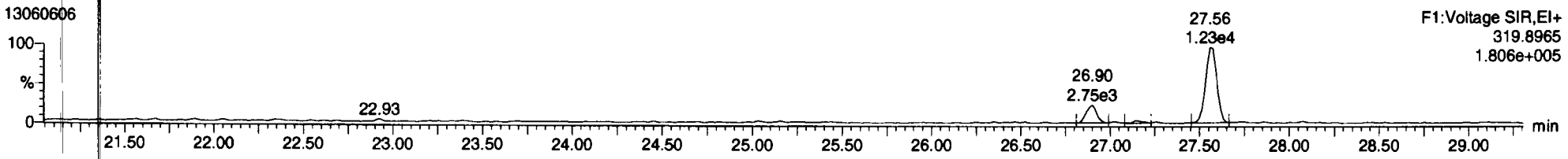
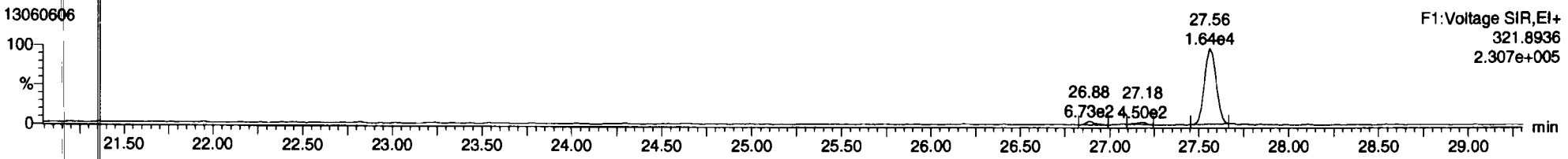


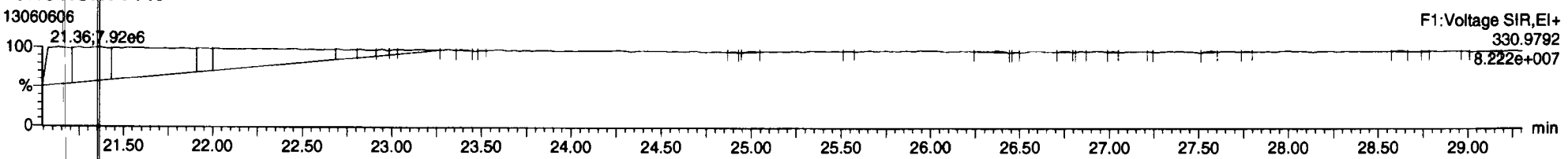
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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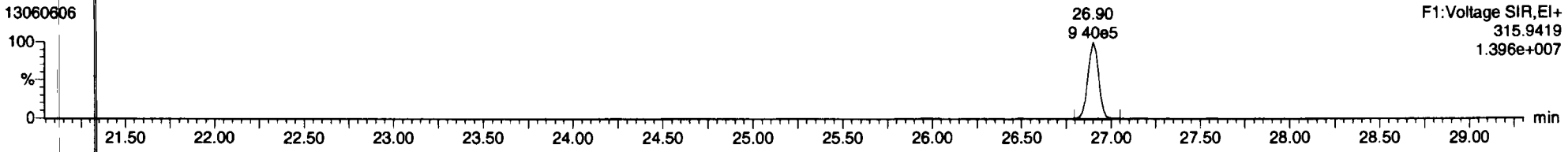
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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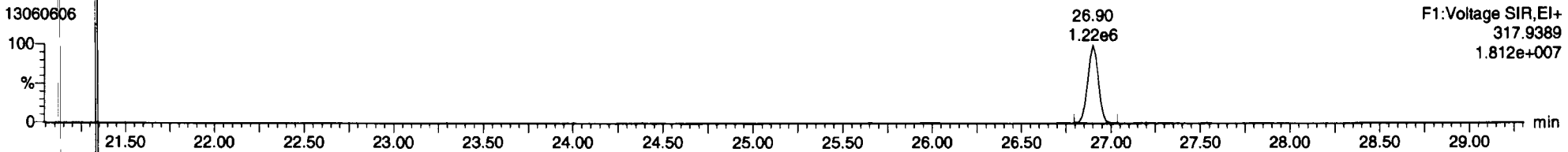
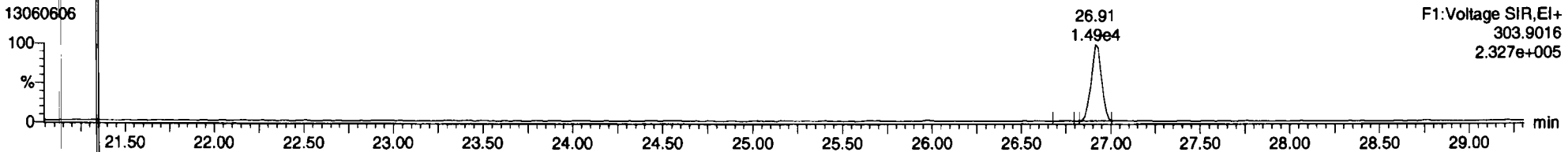
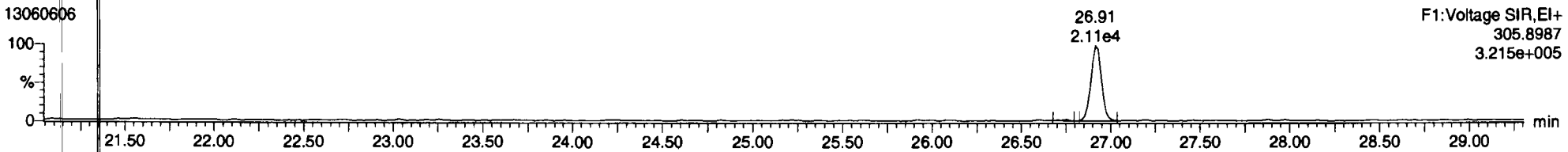


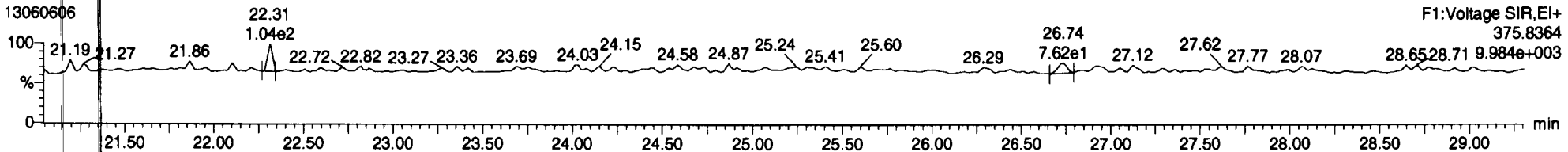
Total-tetrafurans



Total-tetrafurans



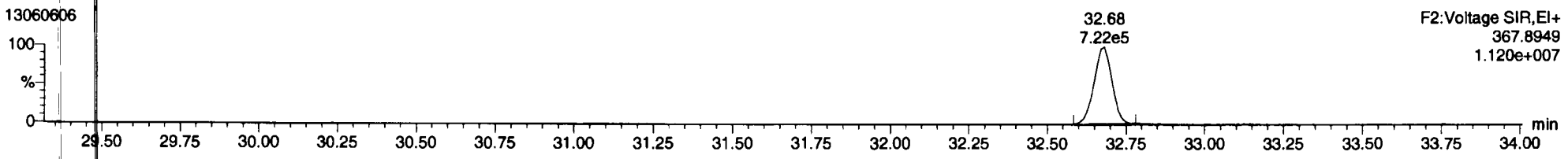
FUNCTION1 HXCDPE



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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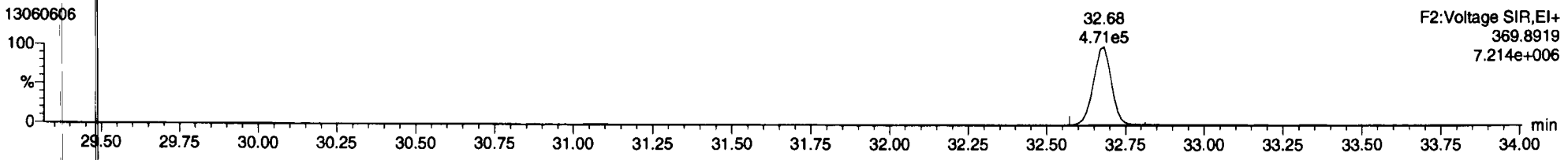
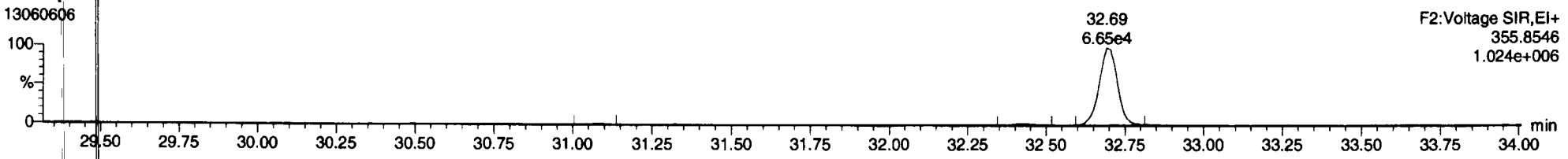
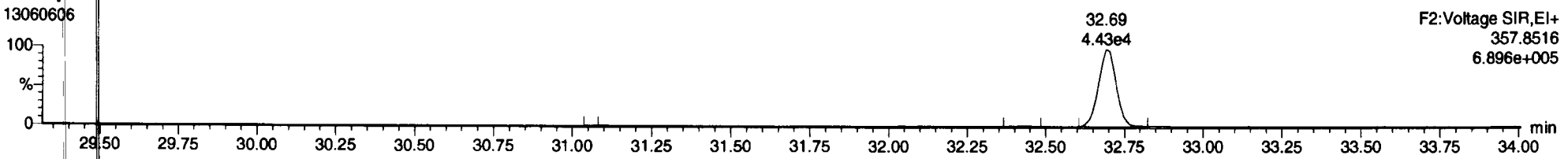


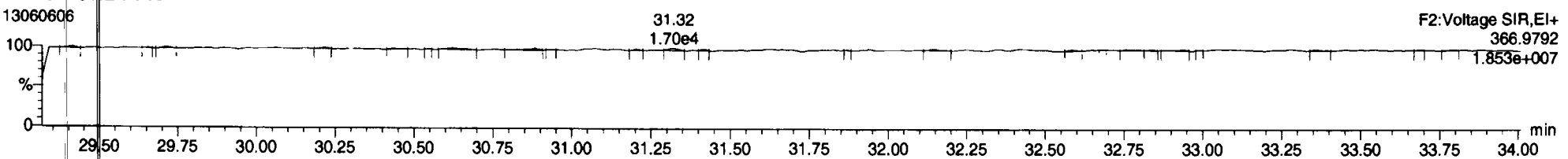
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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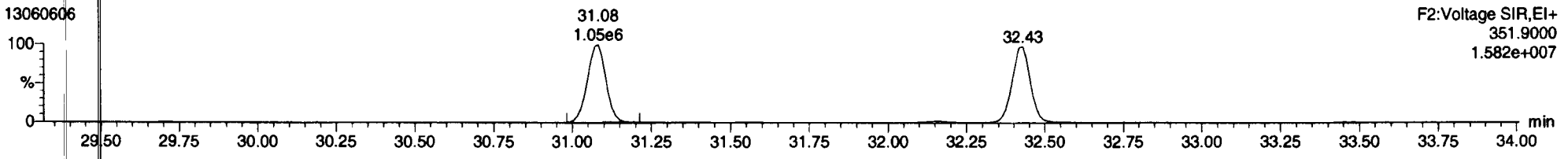
ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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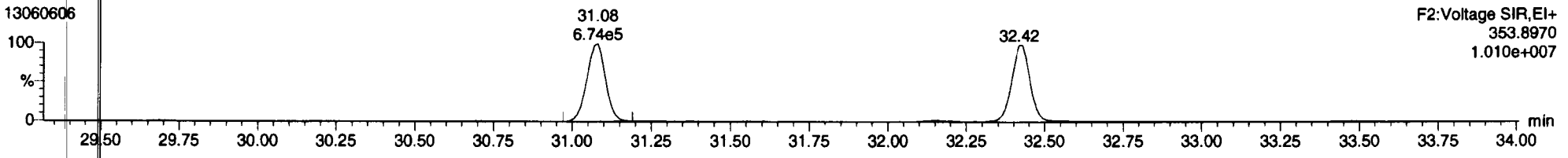

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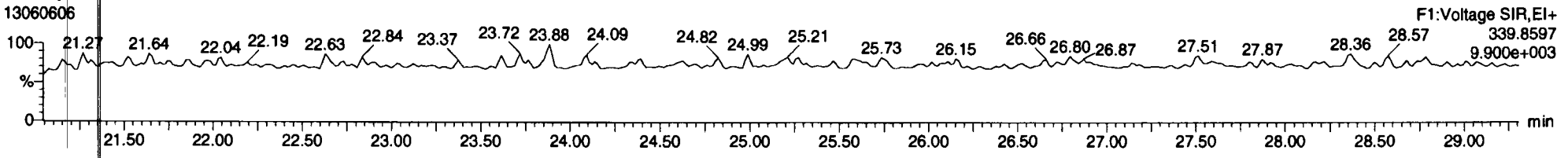
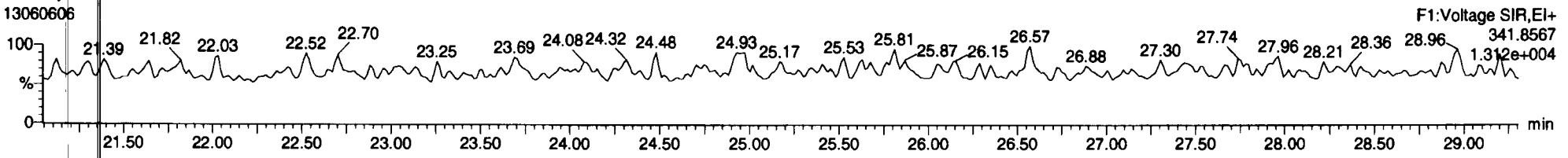
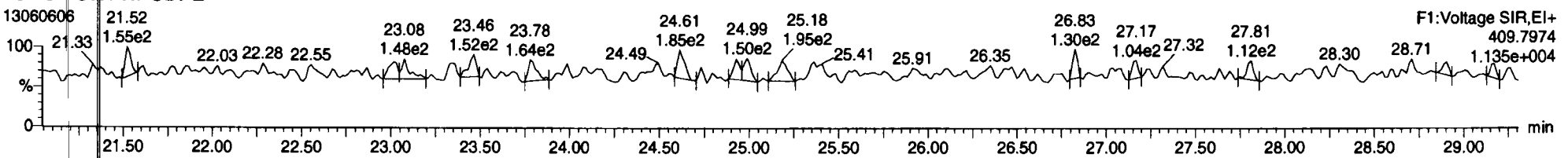


Total-penta1



FUNCTION1 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
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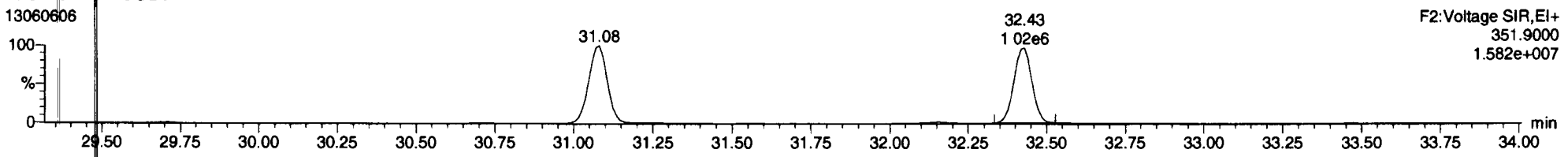
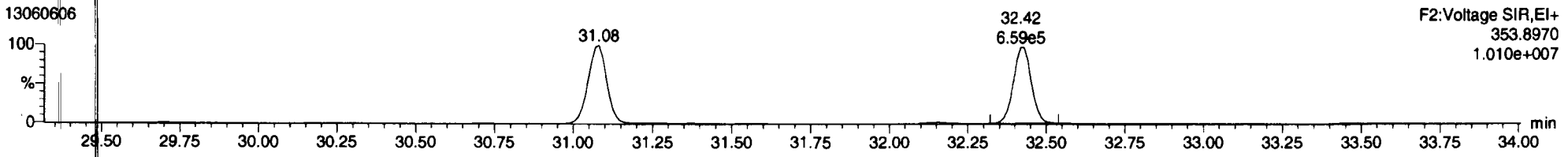
ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

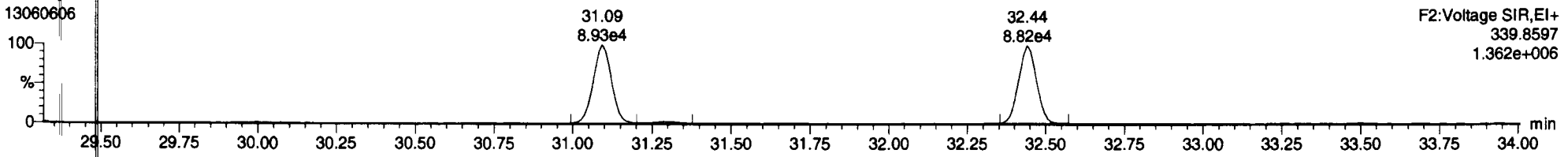
13C-23478-PeCDF



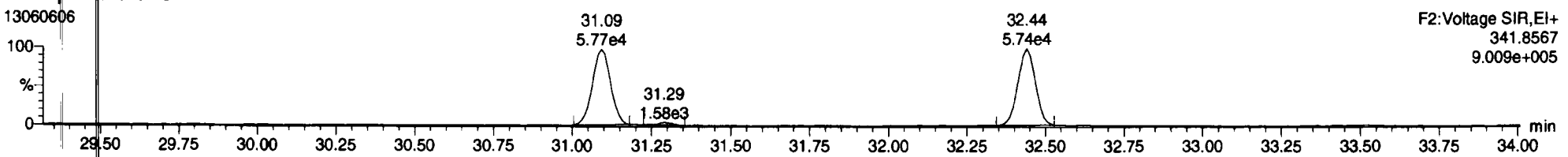
13C-23478-PeCDF



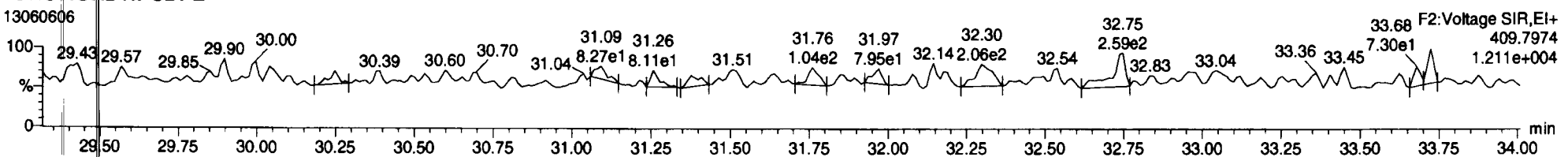
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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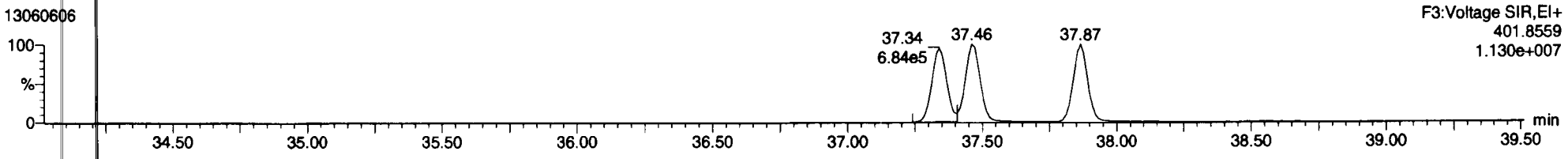
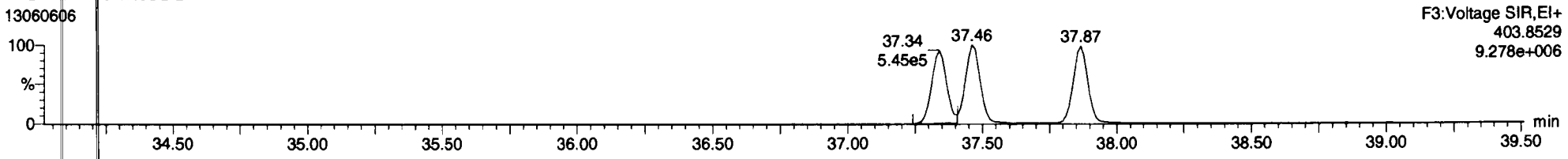
ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

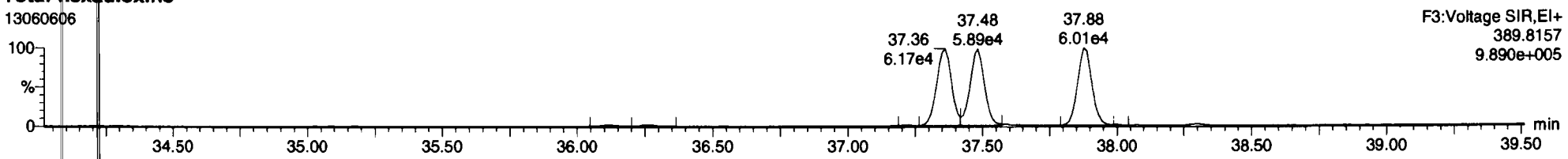
13C-123478-HxCDD



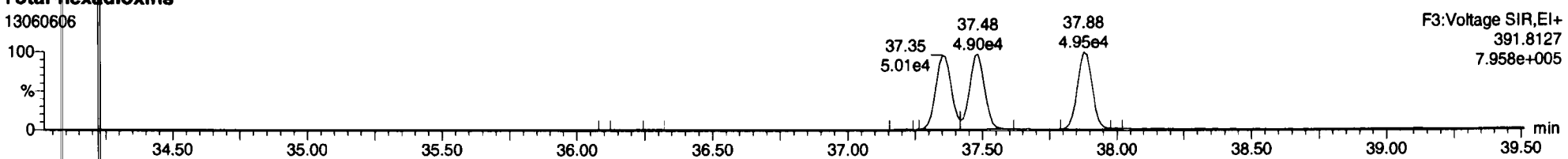
13C-123478-HxCDD



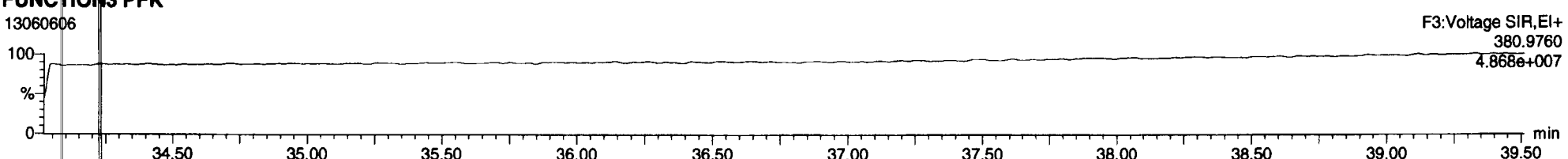
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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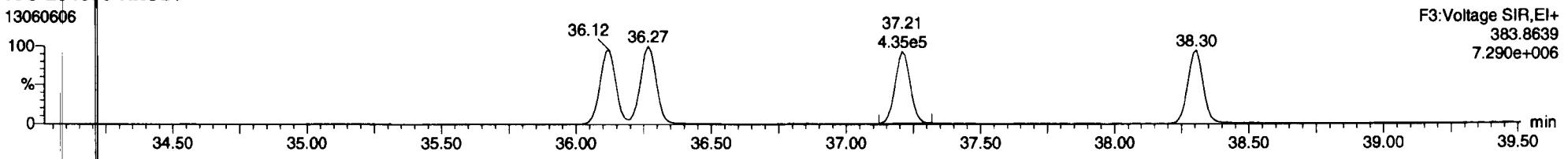
13C-234678-HxCDF



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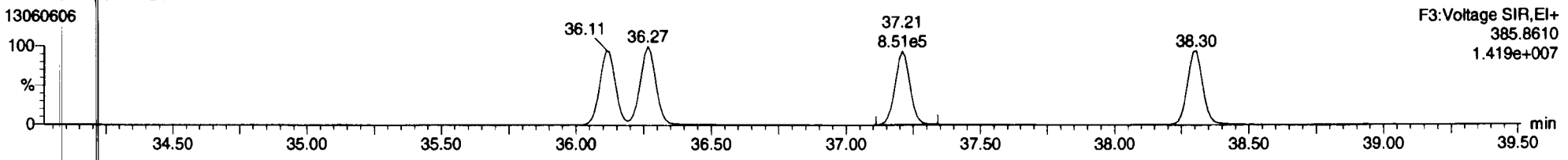
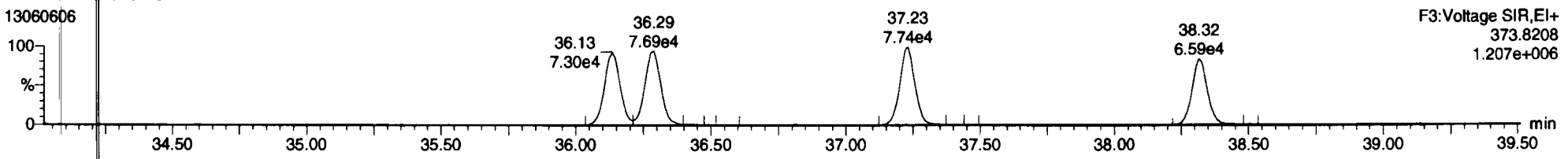
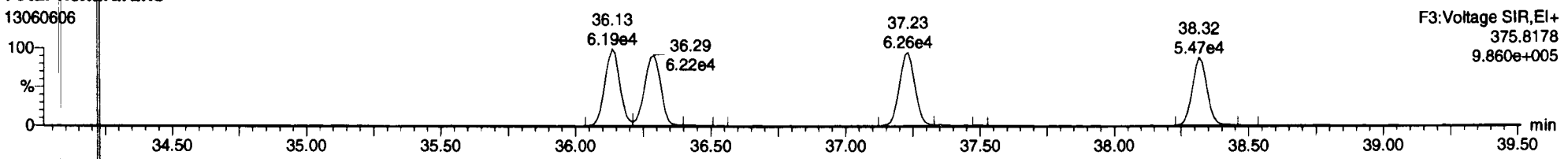


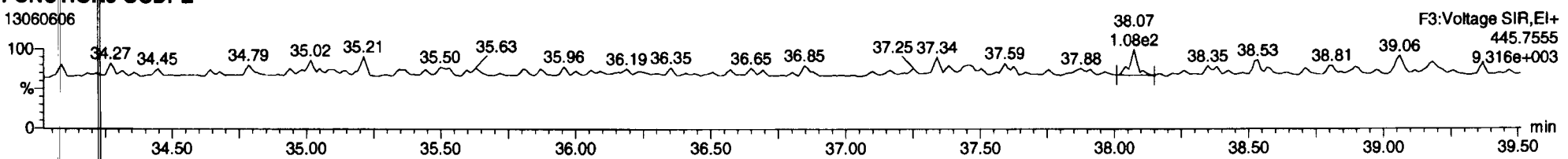
Total-hexafurans



Total-hexafurans



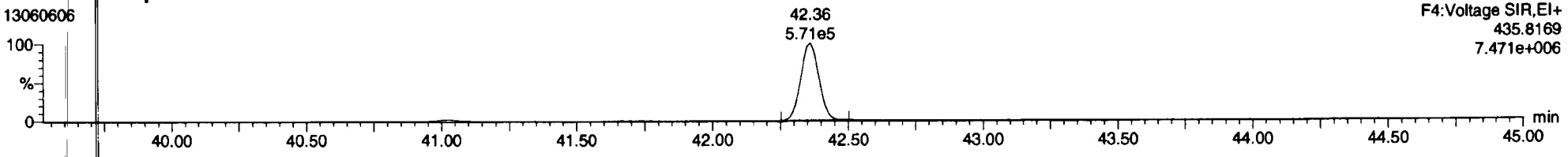
FUNCTION3 OCDPE



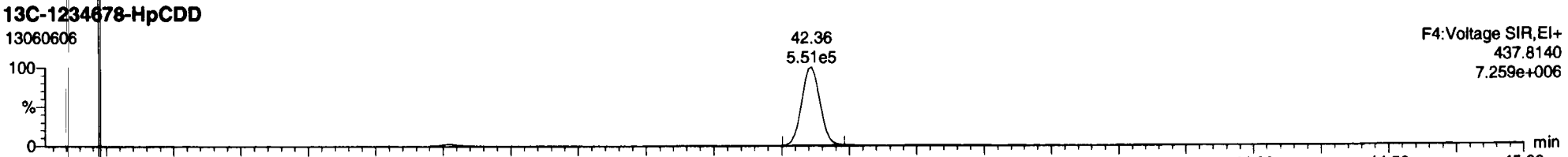
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

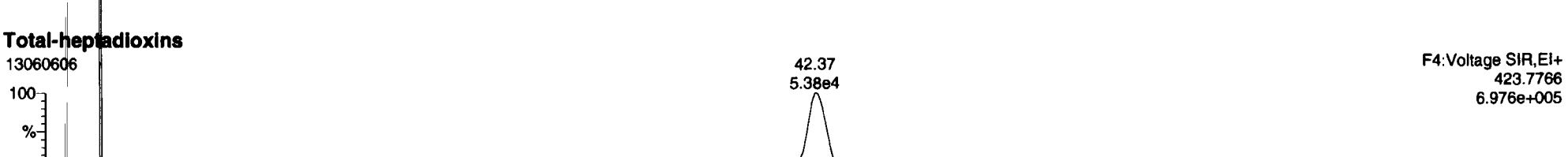
13C-1234678-HpCDD



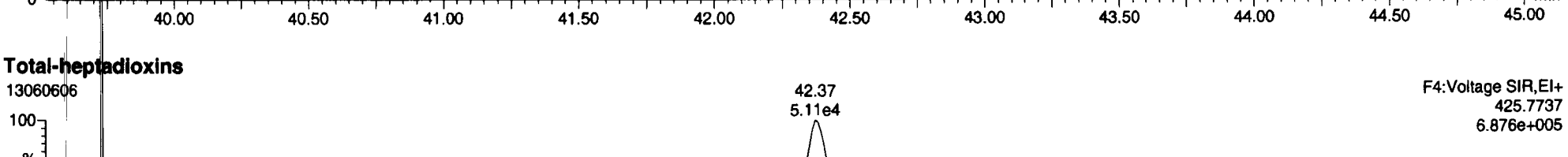
13C-1234678-HpCDD



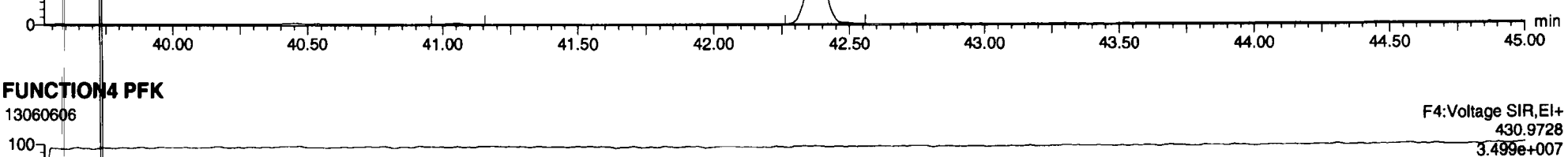
Total-heptadioxins



Total-heptadioxins



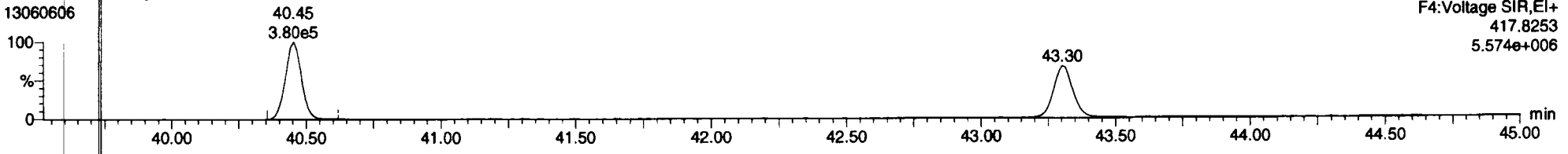
FUNCTION4 PFK



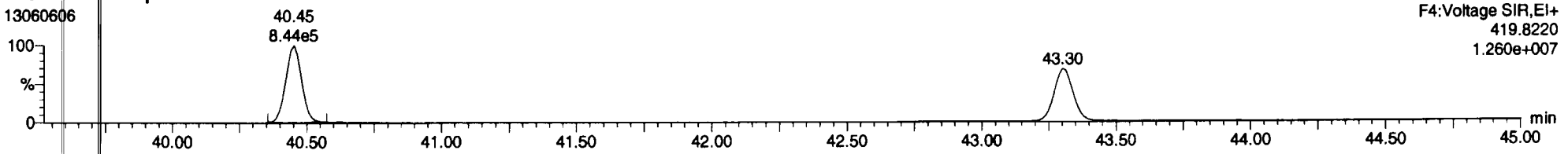
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

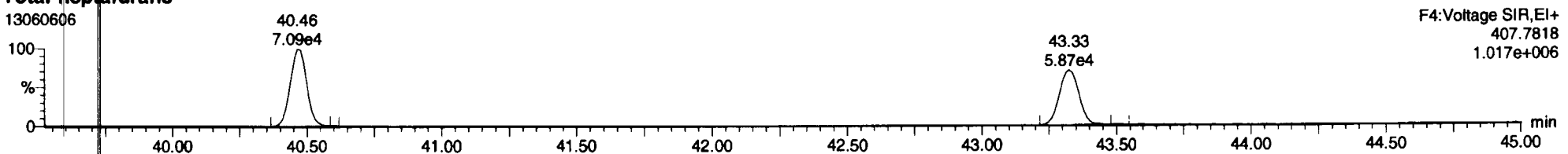
13C-1234678-HpCDF



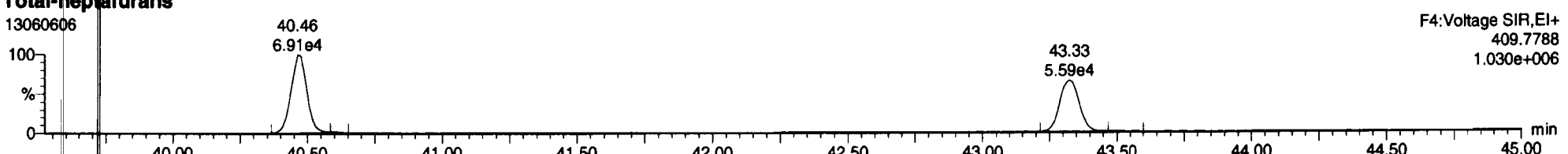
13C-1234678-HpCDF



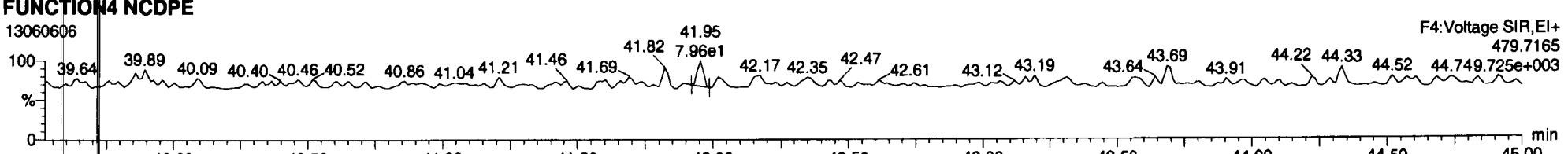
Total-heptafurans



Total-heptafurans



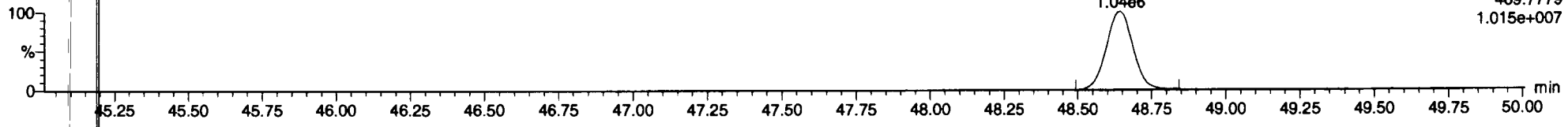
FUNCTION4 NCDPE



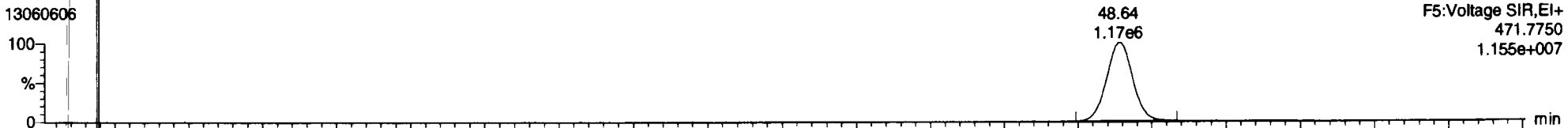
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

13C-OCDD
13060606
48.64
1.04e6
F5:Voltage SIR,EI+
469.7779
1.015e+007

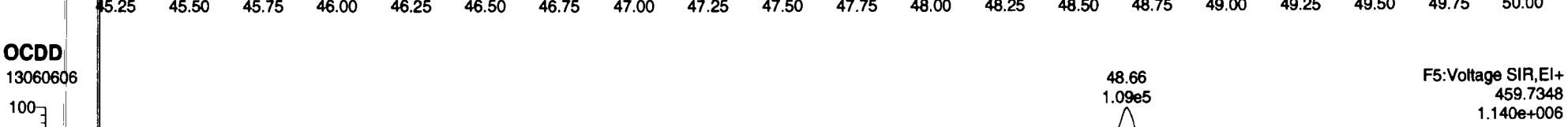


13C-OCDD
13060606
48.64
1.17e6
F5:Voltage SIR,EI+
471.7750
1.155e+007

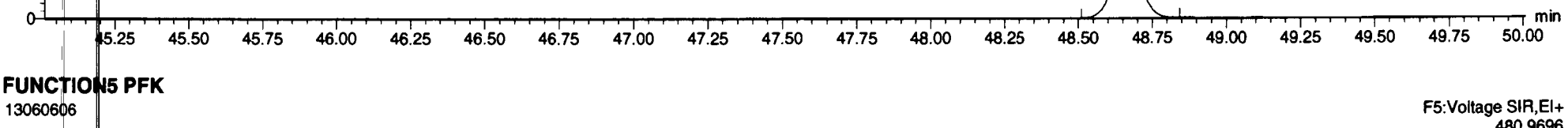


OCDD
13060606
48.66
9.15e4
F5:Voltage SIR,EI+
457.7377
9.281e+005

OCDD
13060606
48.66
1.09e5
F5:Voltage SIR,EI+
459.7348
1.140e+006



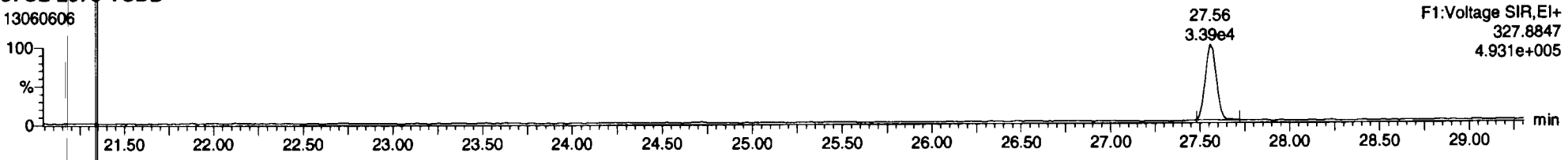
FUNCTION5 PFK
13060606
F5:Voltage SIR,EI+
480.9696
2.494e+007



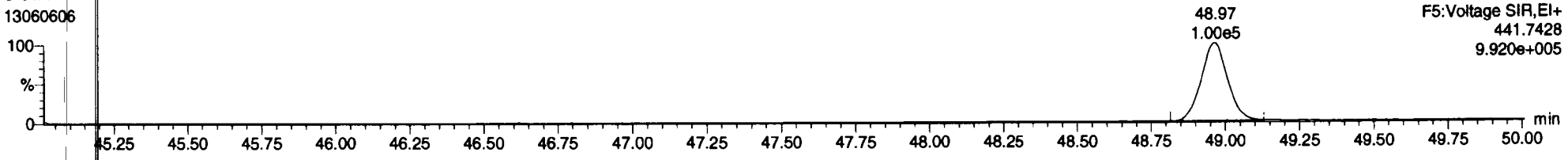
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

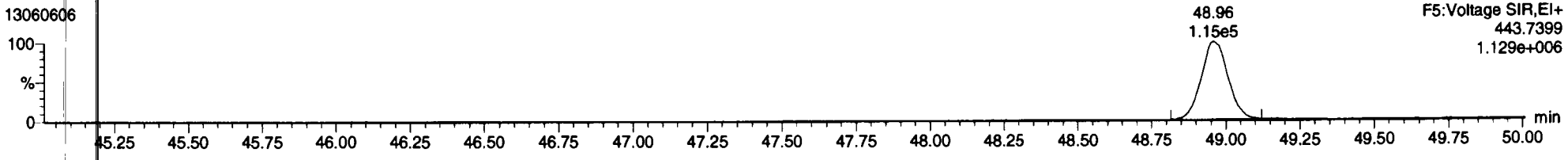
37CL-2378-TCDD



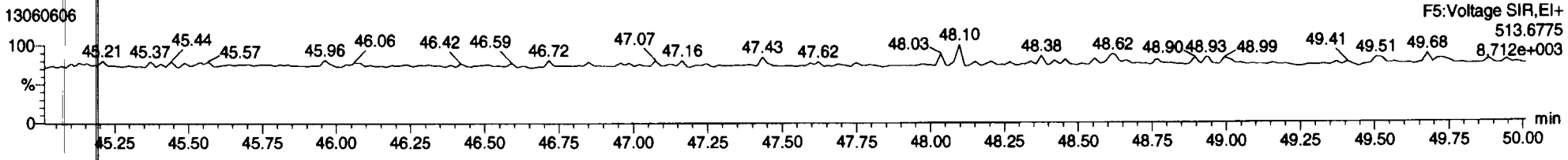
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.915	1.001	6.21e4	8.02e4	0.832	0.775	0.770	596.1	NO	9.935	9.935
12378-PeCDF	31.093	1.000	3.62e5	2.33e5	0.853	1.550	1.550	1510.3	NO	50.343	50.343
23478-PeCDF	32.441	1.000	3.63e5	2.41e5	0.884	1.508	1.550	1588.7	NO	49.321	49.321
123478-HxCDF	36.135	1.000	3.18e5	2.57e5	1.017	1.236	1.240	1343.9	NO	48.859	48.859
234678-HxCDF	37.231	1.001	3.20e5	2.67e5	1.067	1.201	1.240	1379.4	NO	49.583	49.583
123678-HxCDF	36.288	1.001	3.33e5	2.70e5	0.999	1.235	1.240	1418.6	NO	50.244	50.244
123789-HxCDF	38.327	1.001	2.86e5	2.39e5	0.947	1.194	1.240	1224.6	NO	49.455	49.455
1234678-HpCDF	40.475	1.001	3.05e5	3.03e5	1.151	1.009	1.050	1909.0	NO	49.285	49.285
1234789-HpCDF	43.325	1.000	2.41e5	2.37e5	1.166	1.016	1.050	1272.1	NO	50.060	50.060
OCDF	48.968	1.007	4.19e5	4.70e5	1.001	0.892	0.890	3142.2	NO	98.289	98.289
2378-TCDD	27.573	1.001	5.05e4	6.70e4	0.939	0.753	0.770	426.3	NO	10.024	10.024
12378-PeCDD	32.704	1.001	2.79e5	1.78e5	0.930	1.566	1.550	1707.2	NO	49.762	49.762
123478-HxCDD	37.362	1.001	2.69e5	2.16e5	0.930	1.249	1.240	1731.1	NO	49.065	49.065
123678-HxCDD	37.483	1.000	2.62e5	2.20e5	0.854	1.195	1.240	1733.8	NO	49.712	49.712
123789-HxCDD	37.889	1.011	2.67e5	2.18e5	0.885	1.221	1.240	1733.8	NO	49.793	49.793
1234678-HpCDD	42.383	1.001	2.29e5	2.25e5	0.966	1.021	1.050	1254.4	NO	47.940	47.940
OCDD	48.663	1.000	3.83e5	4.45e5	0.921	0.860	0.890	2117.1	NO	99.349	99.349
13C-2378-TCDF	26.900	1.007	7.51e5	9.71e5	1.283	0.774	0.770	3315.9	NO		98.327
13C-12378-PeCDF	31.082	1.163	8.43e5	5.43e5	1.051	1.553	1.550	5952.4	NO		96.621
13C-23478-PeCDF	32.430	1.214	8.43e5	5.43e5	1.030	1.552	1.550	6014.1	NO		98.576
13C-123478-HxCDF	36.124	0.954	3.95e5	7.63e5	1.069	0.517	0.510	1830.7	NO		100.837
13C-123678-HxCDF	36.266	0.958	4.10e5	7.92e5	1.124	0.518	0.510	1843.7	NO		99.525
13C-234678-HxCDF	37.209	0.983	3.80e5	7.29e5	1.041	0.521	0.510	1728.5	NO		99.192
13C-123789-HxCDF	38.305	1 012	3.80e5	7.40e5	1.039	0.514	0.510	1777.2	NO		100.365
13C-1234678-HpCDF	40.453	1.068	3.30e5	7.42e5	0.965	0.444	0.440	2612.4	NO		103.443
13C-1234789-HpCDF	43.314	1.144	2.52e5	5.67e5	0.760	0.444	0.440	1696.2	NO		100.342
13C-1234-TCDD	26.721	0.000	5.97e5	7.69e5	1.000	0.776	0.770	1347.0	NO		100.000
13C-2378-TCDD	27.543	1.031	5.42e5	7.06e5	0.926	0.768	0.770	1225.8	NO		98.722
13C-12378-PeCDD	32.682	1.223	6.03e5	3.85e5	0.734	1.567	1.550	3523.5	NO		98.539
13C-123478-HxCDD	37.340	0.986	5.93e5	4.71e5	0.984	1.259	1.240	2732.9	NO		100.583
13C-123678-HxCDD	37.472	0.990	6.27e5	5.09e5	1.043	1.231	1.240	2905.3	NO		101.381
13C-1234678-HpCDD	42.361	1.119	4.97e5	4.84e5	0.891	1.027	1.050	3391.1	NO		102.405
13C-OCDD	48.645	1.285	8.45e5	9.63e5	0.849	0.877	0.890	3826.5	NO		198.295

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

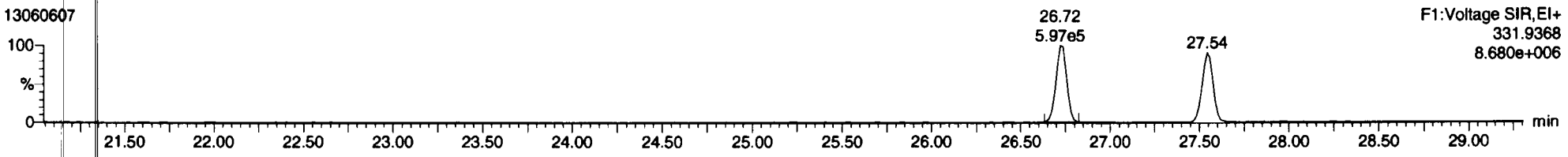
13C-123789-HxCDD	37.867	0.000	5.88e5	4.86e5	1.000	1.209	1.240	2753.4	NO	100.000
Total-tetrafurans			2.02e5		0.832					32.562
Total-penta1			6.00e5							78.064
Total-pentafurans			1.11e6		0.868					151.969
Total-hexafurans			1.62e6		1.008					255.744
Total-heptafurans			5.47e5		1.159					99.444
Total-Furans			4.50e6		0.992					716.072
Total-tetradioxins			2.98e5		0.939					58.778
Total-pentadioxins			9.66e5		0.930					173.298
Total-hexadioxins			1.14e6		0.890					211.633
Total-heptadioxins			4.98e5		0.966					104.324
Total-Dioxins			3.28e6		0.918					647.380
Total-TEQ			7.78e6							1363.452
37CL-2378-TCDD	27.573	1.032	1.31e5		0.989			738.2		9.720
FUNCTION1 PFK			4.82e7							
FUNCTION2 PFK			1.16e5							0.000
FUNCTION3 PFK			1.21e6							0.000
FUNCTION4 PFK			5.27e5							
FUNCTION5 PFK			1.07e5							
FUNCTION1 HXCDPE			0.00e0							
FUNCTION1 HPCDPE			1.70e3							0.000
FUNCTION2 HPCDPE			1.84e3							0.000
FUNCTION3 OCDPE			0.00e0							
FUNCTION4 NCDPE			1.60e2							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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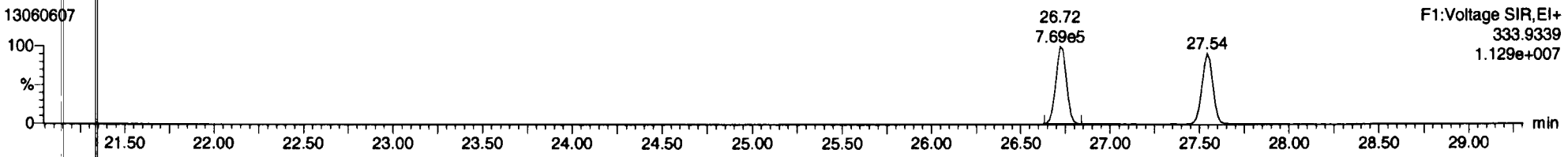

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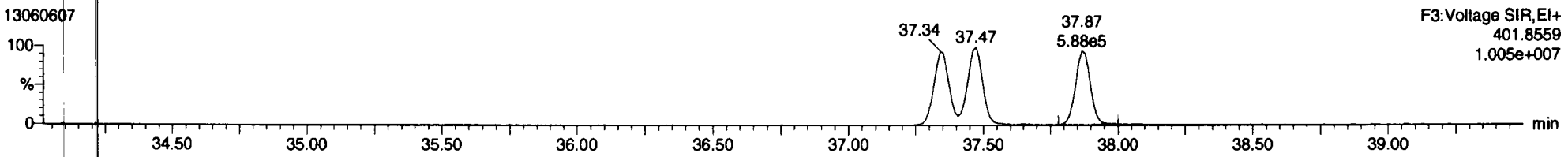

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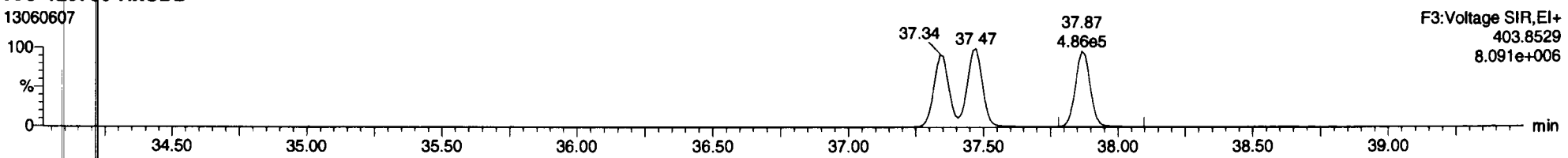

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Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
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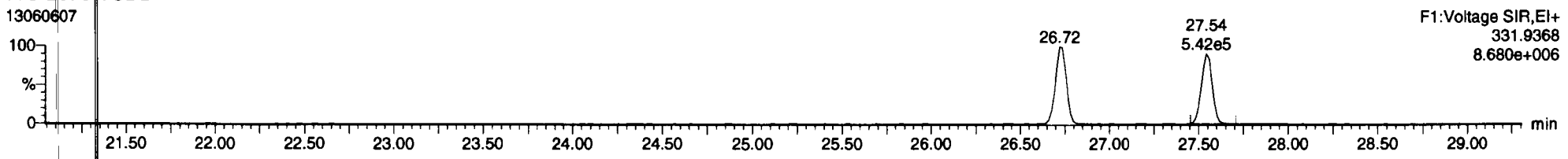
ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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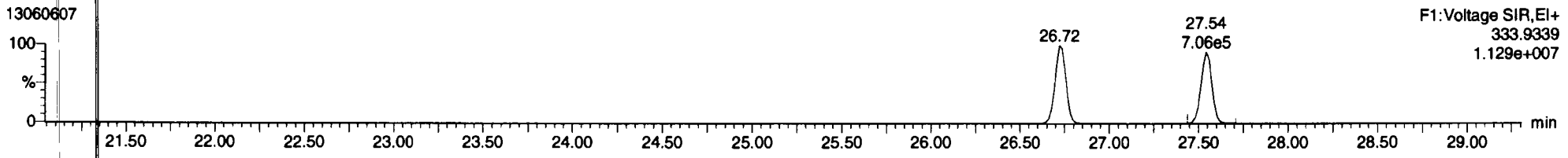
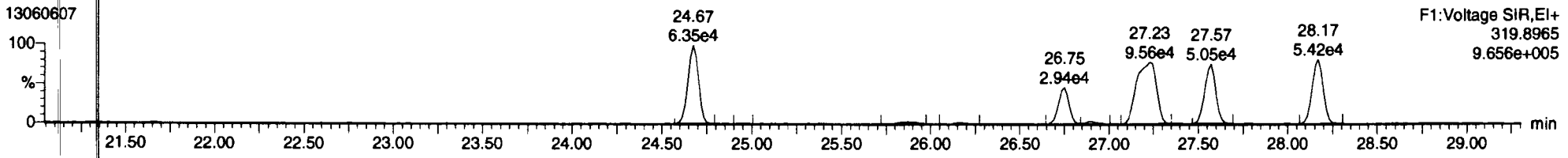
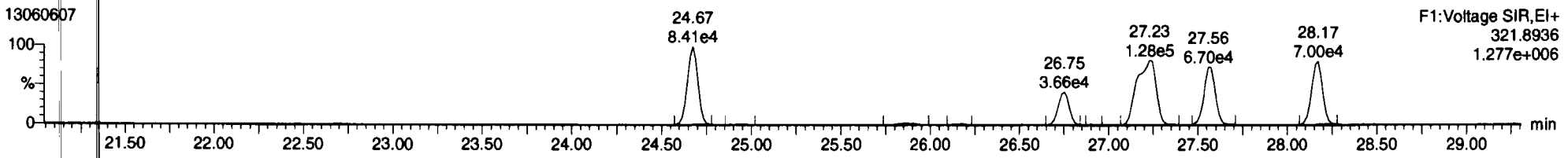


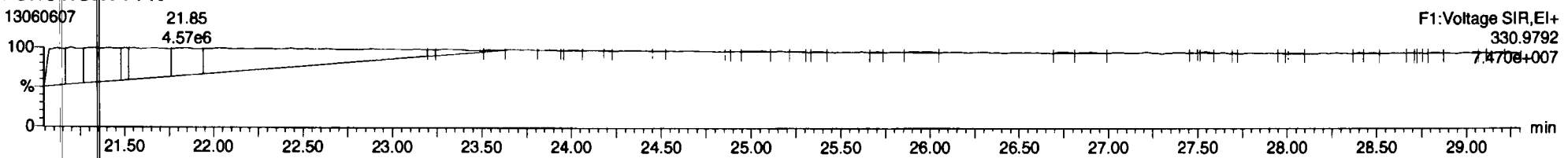
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
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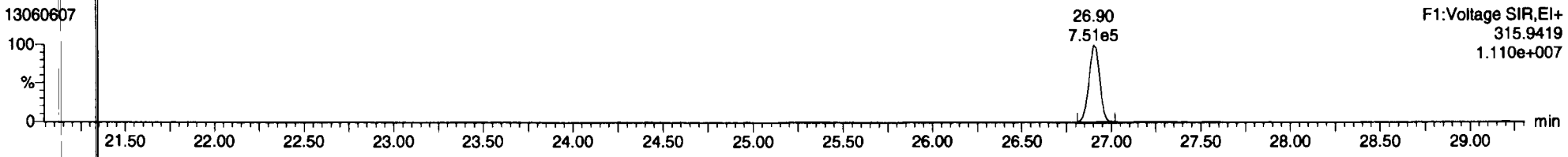
ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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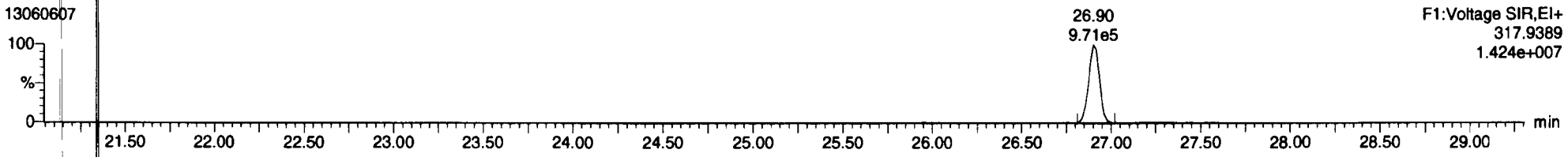
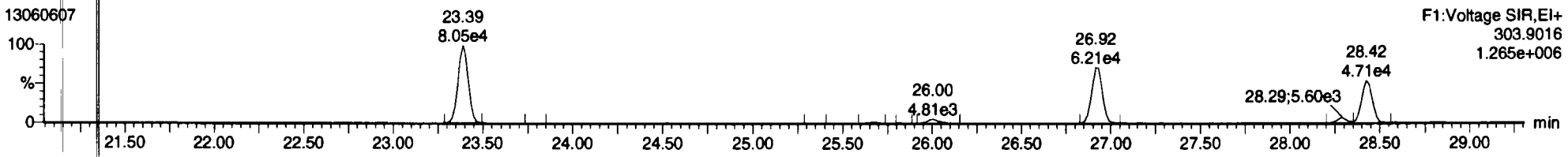
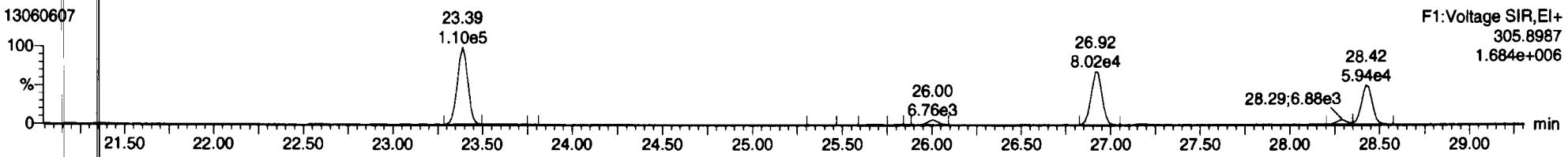


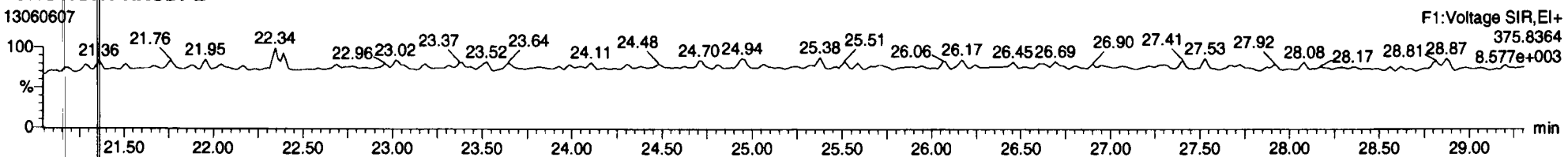
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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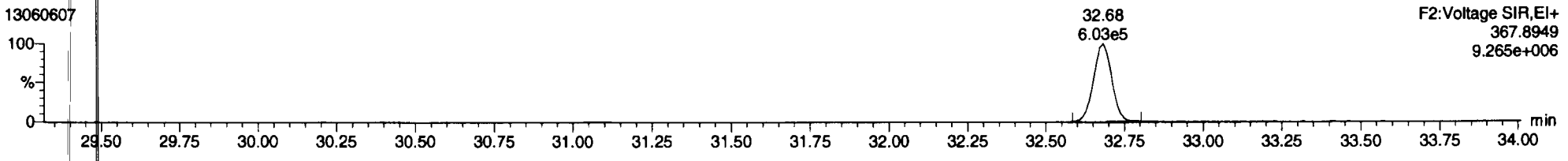
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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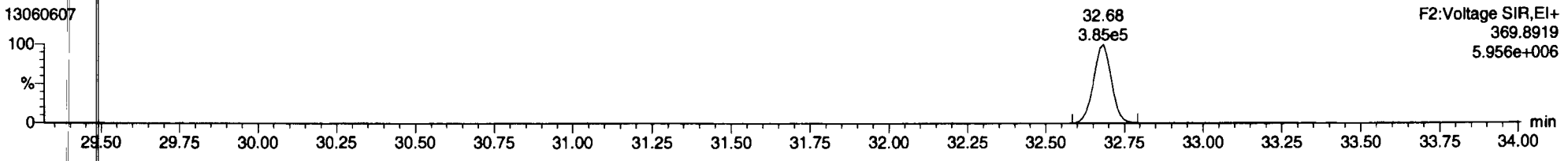
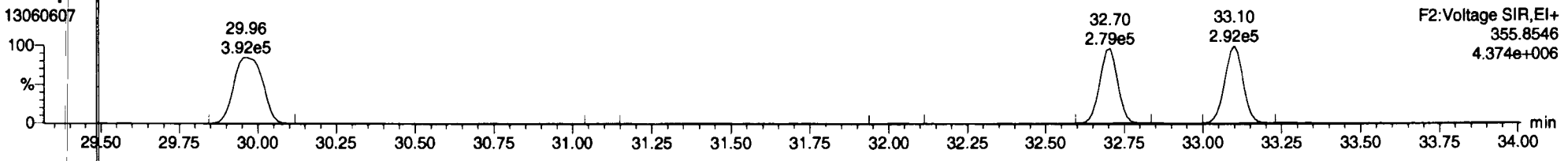
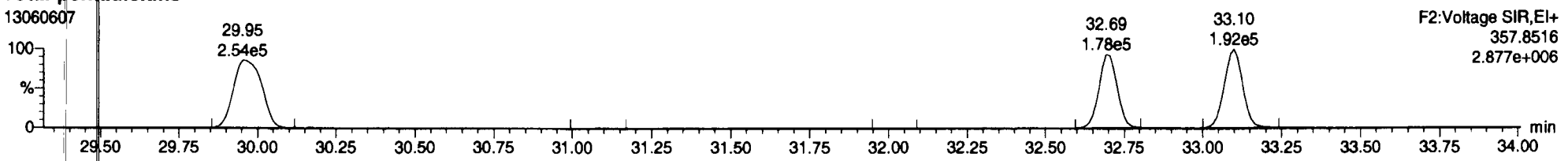


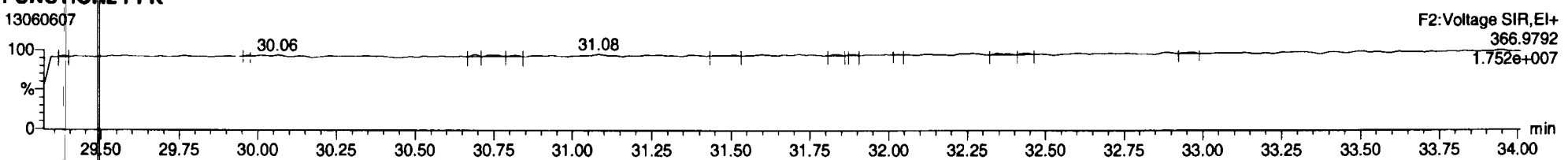
Total-pentadioxins



Total-pentadioxins



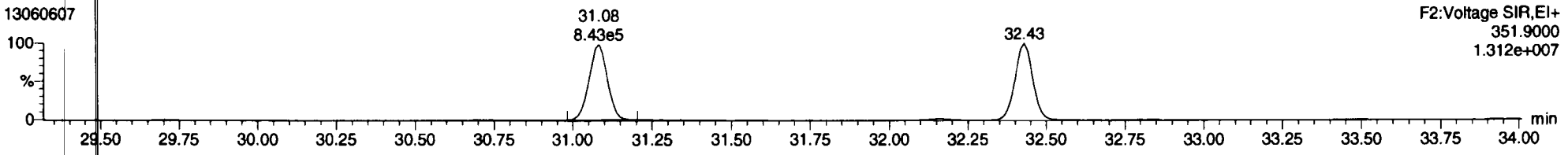
FUNCTION2 PFK



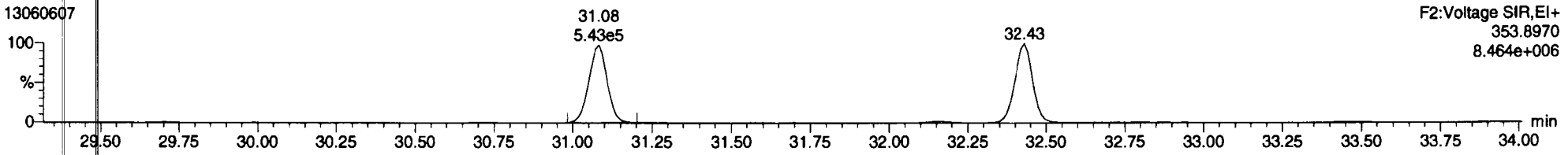
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

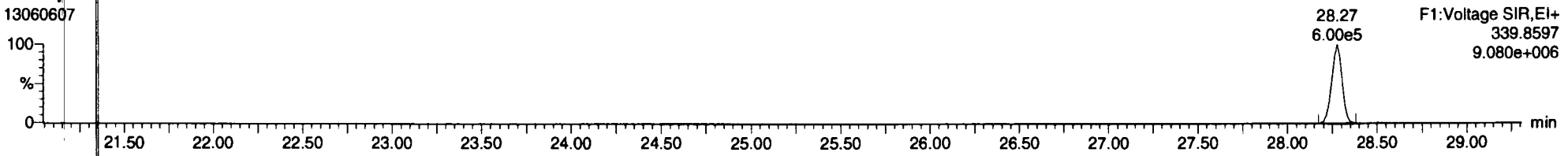
13C-12378-PeCDF



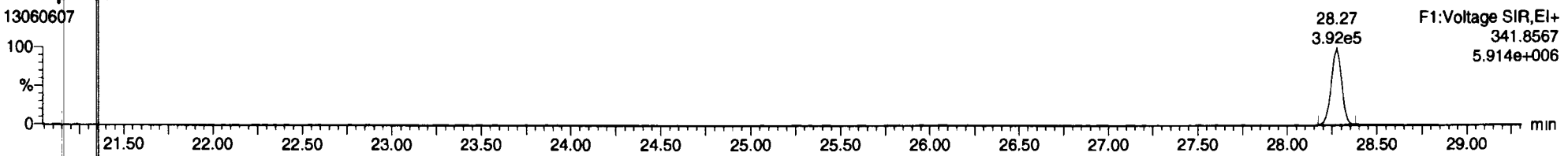
13C-12378-PeCDF



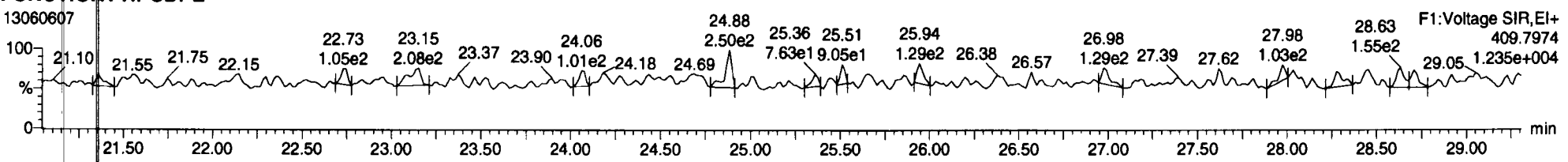
Total-penta1



Total-penta1



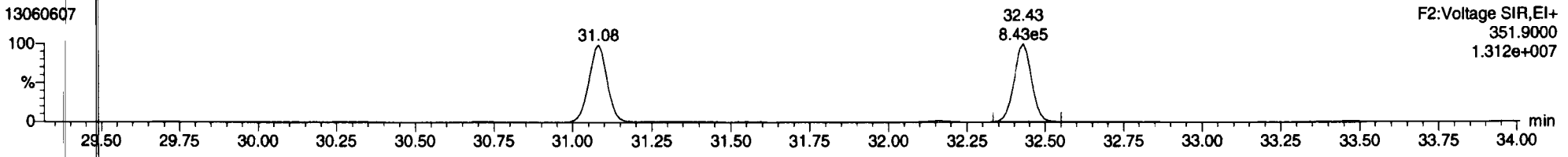
FUNCTION1 HPCDPE



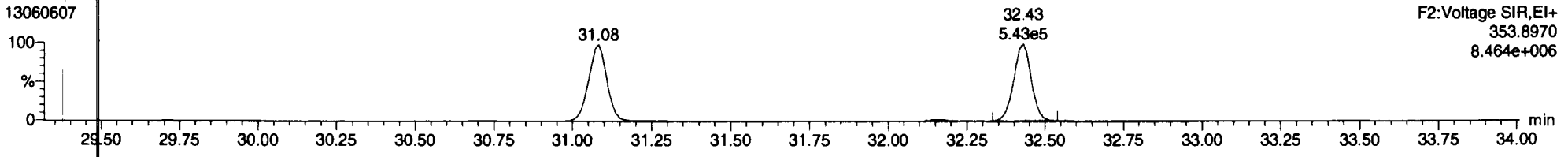
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

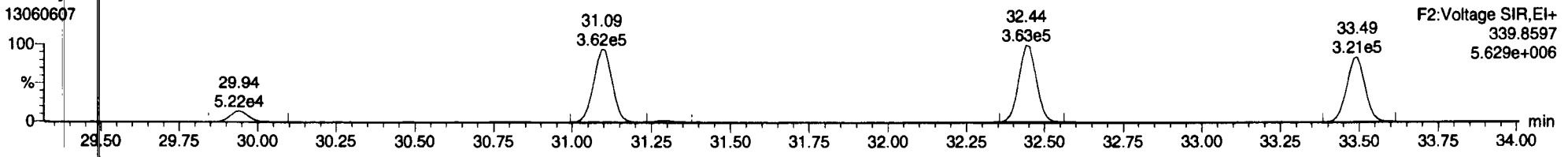
13C-23478-PeCDF



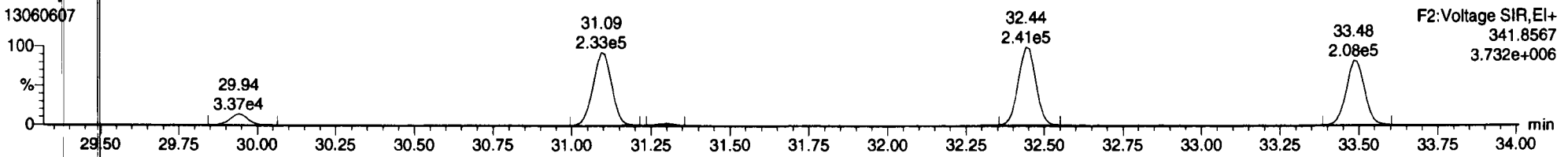
13C-23478-PeCDF



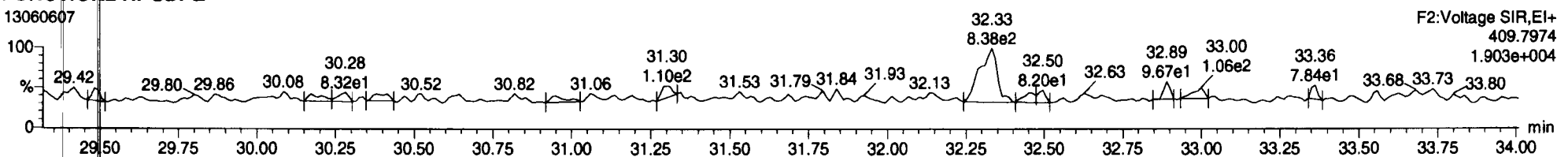
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
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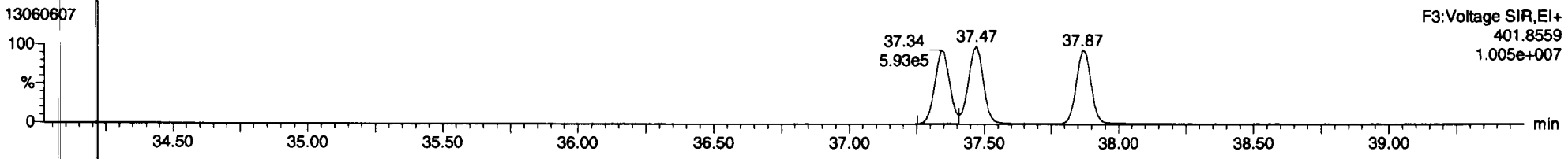
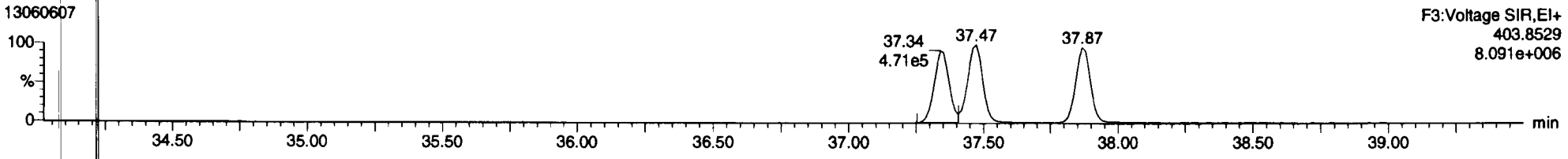
ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

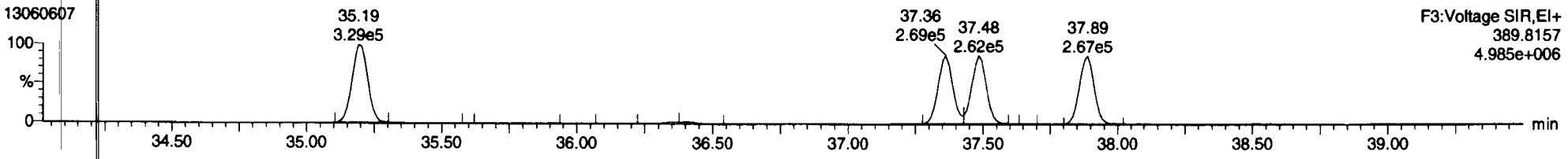
13C-123478-HxCDD



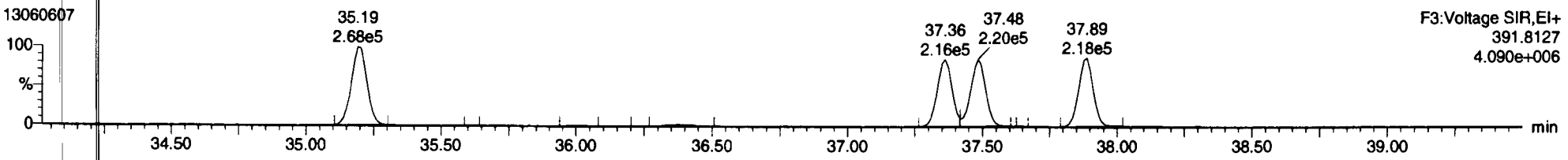
13C-123478-HxCDD



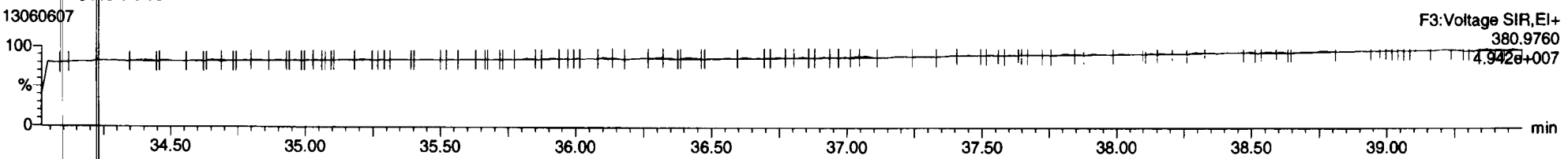
Total-hexadioxins



Total-hexadioxins



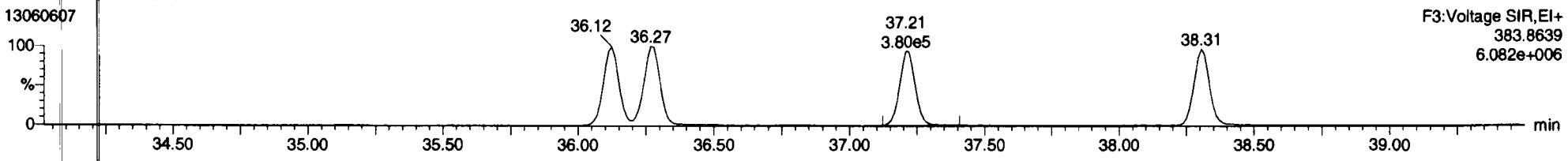
FUNCTION3 PFK



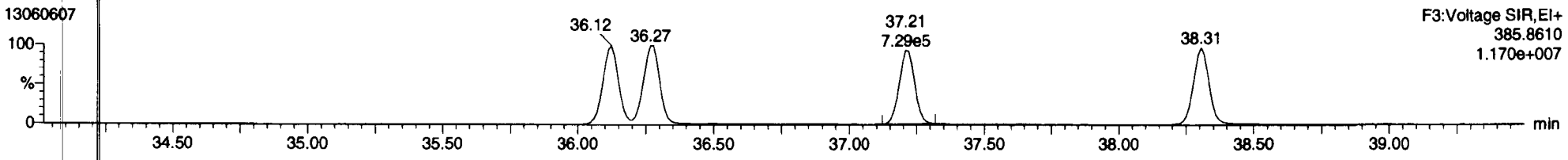
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

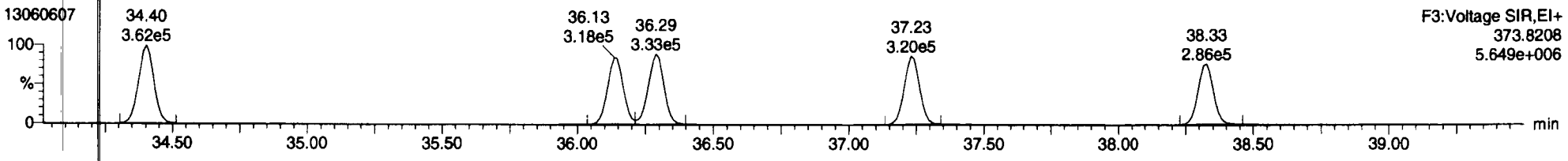
13C-234678-HxCDF



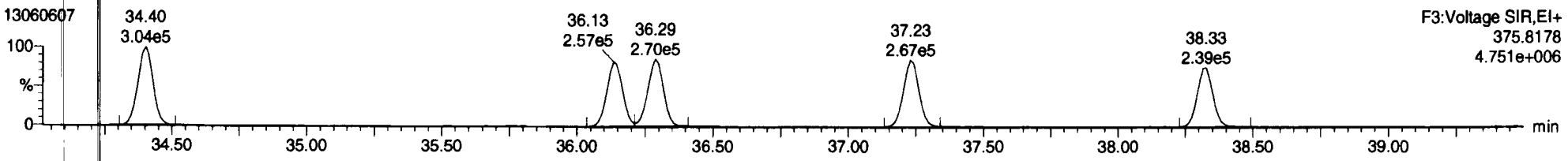
13C-234678-HxCDF



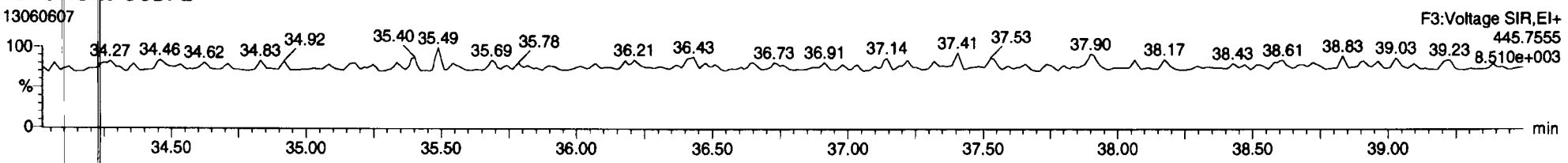
Total-hexafurans



Total-hexafurans



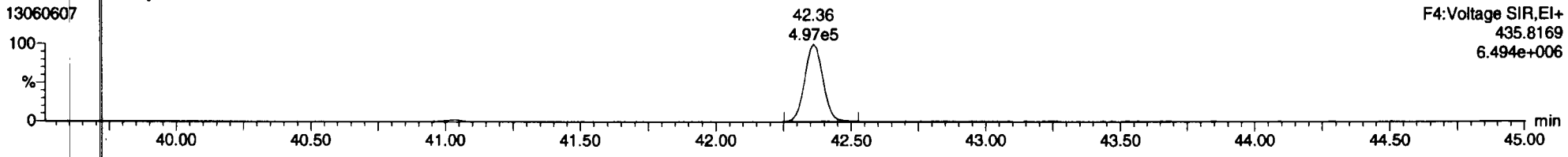
FUNCTION3 OCDPE



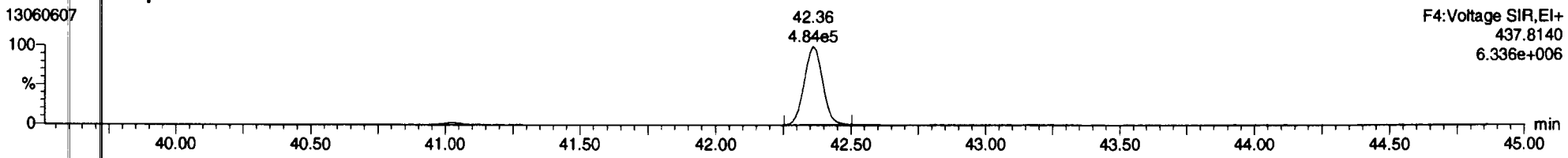
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

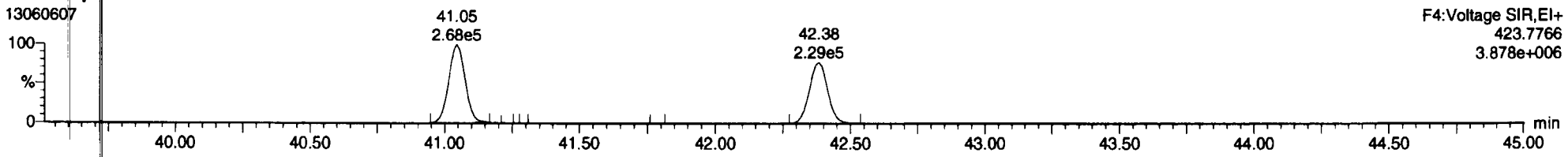
13C-1234678-HpCDD



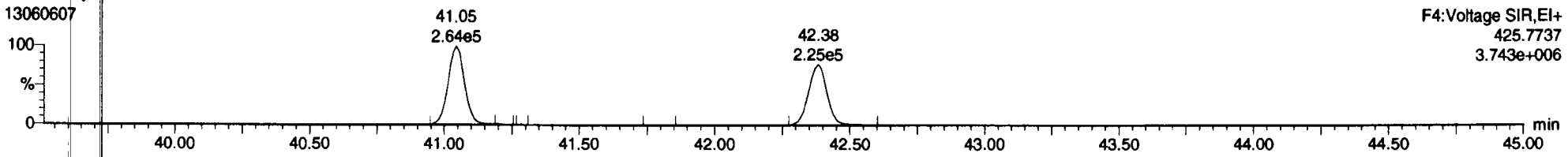
13C-1234678-HpCDD



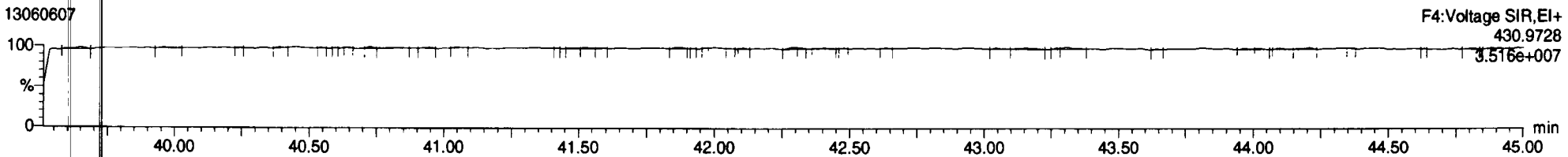
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
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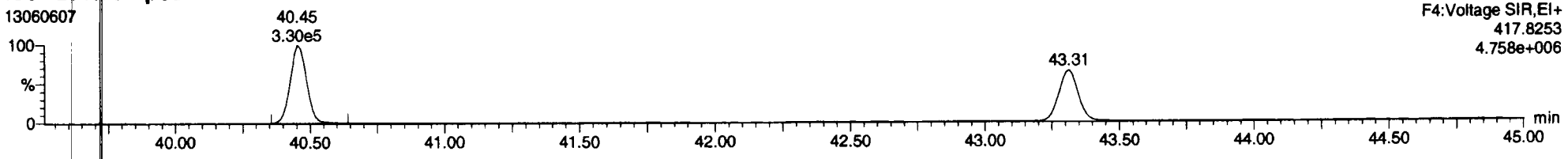
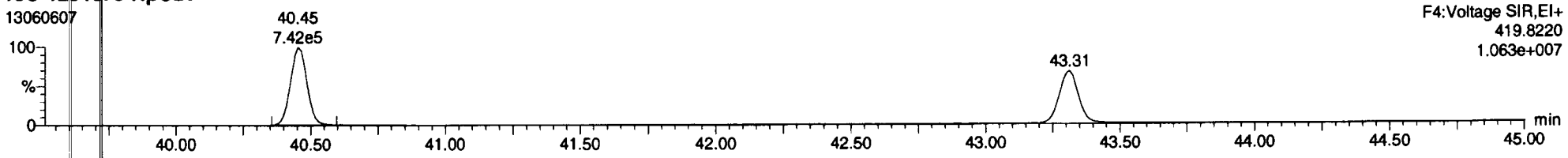
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

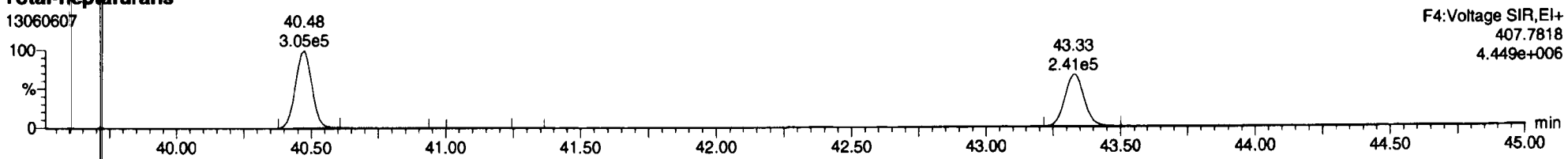
13C-1234678-HpCDF



13C-1234678-HpCDF



Total-heptafurans



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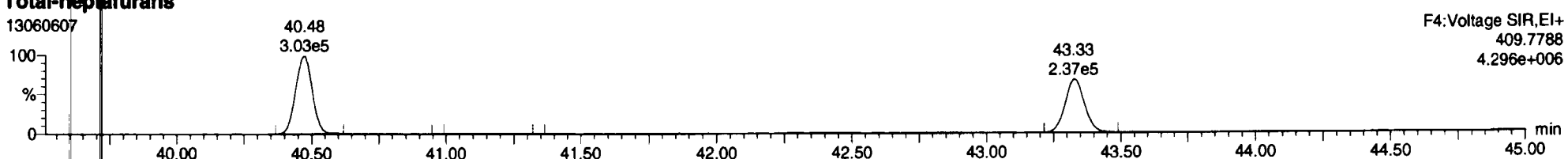
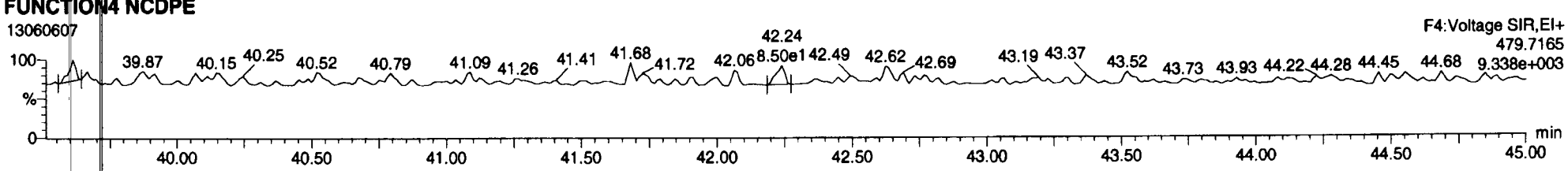


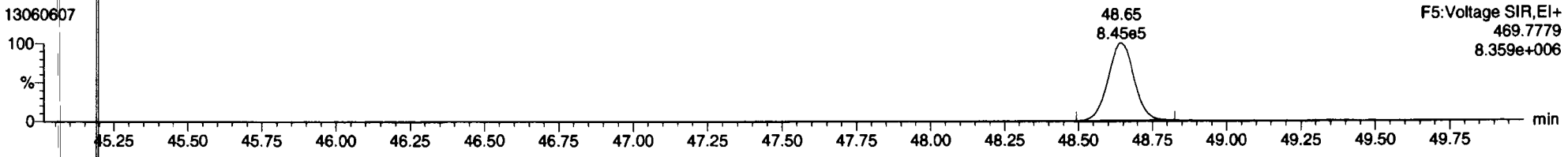
FUNCTION4 NCDPE



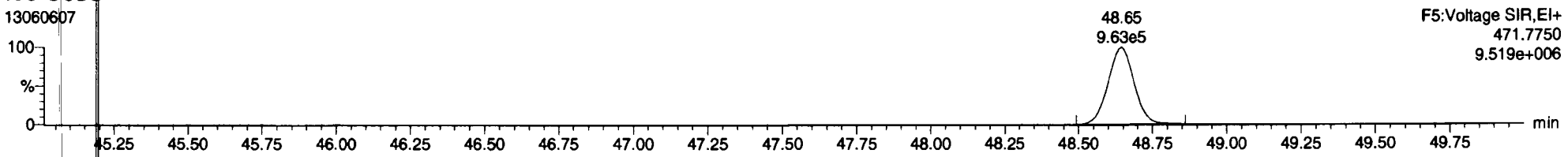
Dataset: P:\DIOXIN8290.PRO\130606IC.qid
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

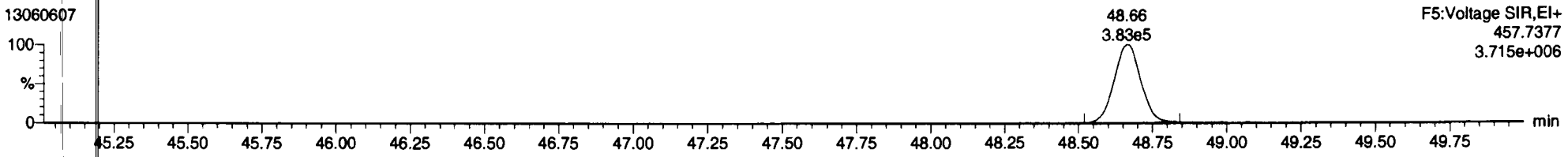
13C-OCDD



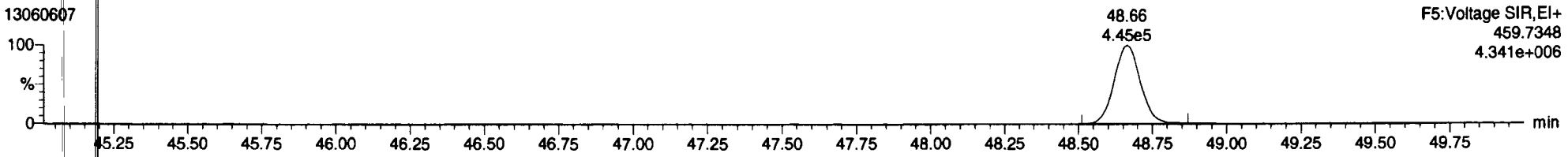
13C-OCDD



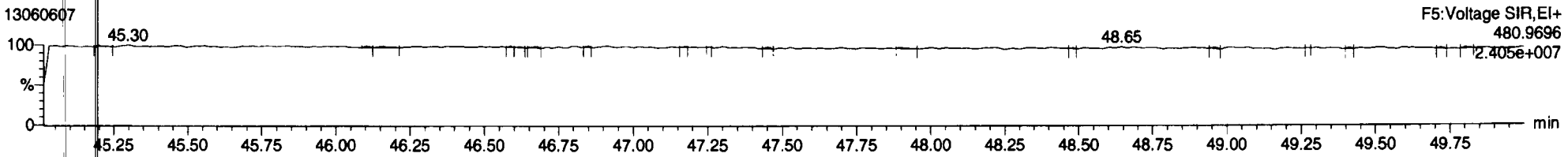
OCDD



OCDD



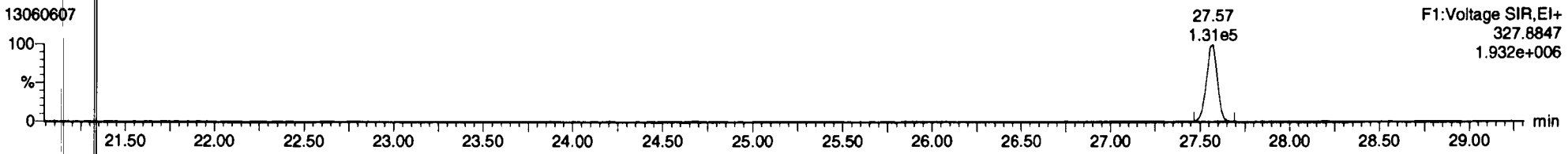
FUNCTION5 PFK



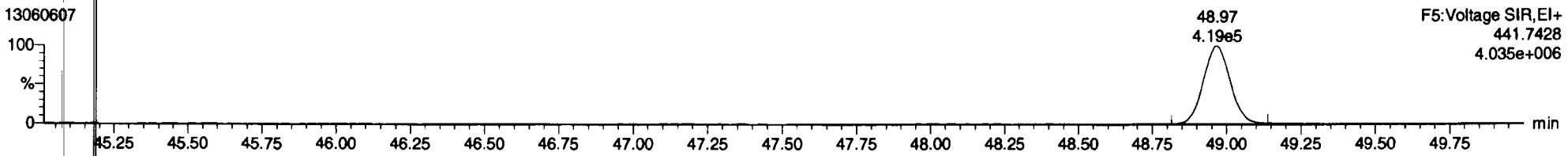
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

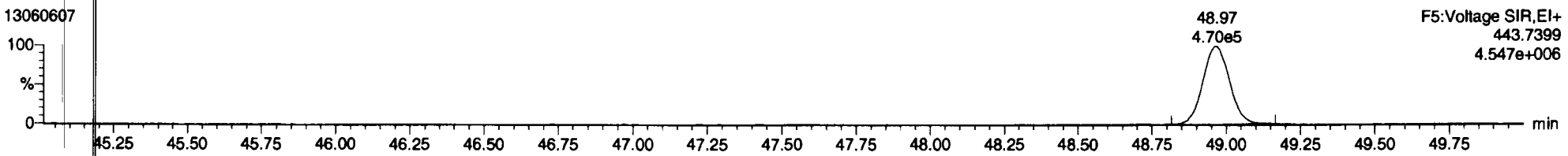
37CL-2378-TCDD



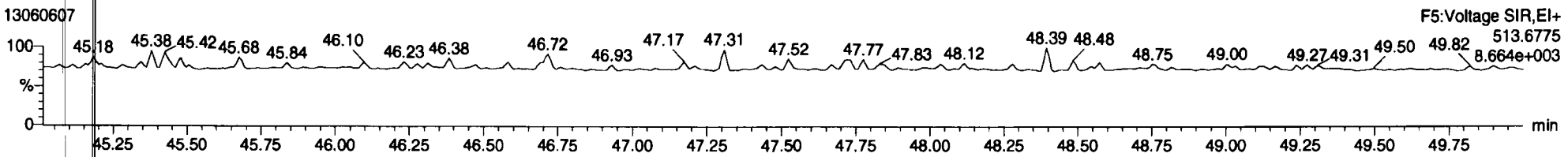
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:17 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.930	1.001	2.89e5	3.90e5	0.832	0.742	0.770	2543.4	NO	39.702	39.702
12378-PeCDF	31.103	1.001	1.79e6	1.17e6	0.853	1.532	1.550	7818.4	NO	202.915	202.915
23478-PeCDF	32.451	1.001	1.82e6	1.19e6	0.884	1.531	1.550	7924.9	NO	199.631	199.631
123478-HxCDF	36.145	1.001	1.58e6	1.30e6	1.017	1.214	1.240	5176.7	NO	201.188	201.188
234678-HxCDF	37.241	1.001	1.63e6	1.33e6	1.067	1.227	1.240	5232.1	NO	200.655	200.655
123678-HxCDF	36.287	1.000	1.64e6	1.34e6	0.999	1.220	1.240	5329.0	NO	199.283	199.283
123789-HxCDF	38.326	1.000	1.46e6	1.20e6	0.947	1.214	1.240	4919.9	NO	200.492	200.492
1234678-HpCDF	40.474	1.000	1.54e6	1.55e6	1.151	0.995	1.050	5573.4	NO	205.459	205.459
1234789-HpCDF	43.335	1.001	1.24e6	1.21e6	1.166	1.023	1.050	3802.4	NO	201.496	201.496
OCDF	48.976	1.007	2.20e6	2.49e6	1.001	0.885	0.890	14331.9	NO	399.626	399.626
2378-TCDD	27.572	1.001	2.49e5	3.28e5	0.939	0.760	0.770	2772.2	NO	41.400	41.400
12378-PeCDD	32.703	1.001	1.38e6	9.12e5	0.930	1.509	1.550	9213.2	NO	201.646	201.646
123478-HxCDD	37.361	1.000	1.35e6	1.09e6	0.930	1.238	1.240	8228.7	NO	200.528	200.528
123678-HxCDD	37.493	1.001	1.31e6	1.07e6	0.854	1.229	1.240	8006.8	NO	197.300	197.300
123789-HxCDD	37.888	1.011	1.33e6	1.08e6	0.885	1.229	1.240	8297.0	NO	199.486	199.486
1234678-HpCDD	42.382	1.000	1.17e6	1.14e6	0.966	1.030	1.050	9142.2	NO	195.451	195.451
OCDD	48.671	1.000	2.03e6	2.29e6	0.921	0.886	0.890	8710.7	NO	399.934	399.934
13C-2378-TCDF	26.915	1.007	8.95e5	1.16e6	1.283	0.769	0.770	3549.5	NO		100.890
13C-12378-PeCDF	31.081	1.163	1.04e6	6.68e5	1.051	1.553	1.550	3136.2	NO		102.183
13C-23478-PeCDF	32.429	1.213	1.04e6	6.64e5	1.030	1.565	1.550	3184.9	NO		103.964
13C-123478-HxCDF	36.123	0.954	4.76e5	9.33e5	1.069	0.510	0.510	2056.1	NO		98.978
13C-123678-HxCDF	36.277	0.958	5.06e5	9.91e5	1.124	0.511	0.510	2214.7	NO		100.012
13C-234678-HxCDF	37.219	0.983	4.63e5	9.16e5	1.041	0.505	0.510	2029.7	NO		99.539
13C-123789-HxCDF	38.315	1.012	4.80e5	9.24e5	1.039	0.520	0.510	2053.7	NO		101.474
13C-1234678-HpCDF	40.464	1.068	4.01e5	9.02e5	0.965	0.445	0.440	3363.9	NO		101.482
13C-1234789-HpCDF	43.313	1.144	3.26e5	7.18e5	0.760	0.453	0.440	2370.0	NO		103.167
13C-1234-TCDD	26.736	0.000	6.99e5	8.91e5	1.000	0.785	0.770	1438.0	NO		100.000
13C-2378-TCDD	27.542	1.030	6.52e5	8.32e5	0.926	0.784	0.770	1333.2	NO		100.778
13C-12378-PeCDD	32.681	1.222	7.44e5	4.76e5	0.734	1.566	1.550	3910.5	NO		104.523
13C-123478-HxCDD	37.350	0.986	7.28e5	5.81e5	0.984	1.253	1.240	5237.1	NO		99.886
13C-123678-HxCDD	37.471	0.989	7.75e5	6.42e5	1.043	1.207	1.240	5546.3	NO		102.032
13C-1234678-HpCDD	42.371	1.119	6.17e5	6.03e5	0.891	1.023	1.050	4411.9	NO		102.904
13C-OCDD	48.653	1.285	1.10e6	1.24e6	0.849	0.885	0.890	7086.4	NO		207.711

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:17 Pacific Daylight Time

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.877	0.000	7.30e5	6.01e5	1.000	1.215	1.240	5330.4	NO	100.000
Total-tetrafurans			2.95e5		0.832					40.446
Total-penta1			5.83e2							0.081
Total-pentafurans			3.67e6		0.868					409.431
Total-hexafurans			6.32e6		1.008					802.676
Total-heptafurans			2.78e6		1.159					407.252
Total-Furans			1.53e7		0.992					2059.513
Total-tetradioxins			2.59e5		0.939					42.802
Total-pentadioxins			1.38e6		0.930					202.462
Total-hexadioxins			3.99e6		0.890					597.659
Total-heptadioxins			1.18e6		0.966					196.318
Total-Dioxins			8.84e6		0.918					1439.176
Total-TEQ			2.41e7							3498.688
37CL-2378-TCDD	27.572	1.031	6.39e5		0.989			3576.6		40.670
FUNCTION1 PFK			1.51e6							
FUNCTION2 PFK			3.76e5							0.000
FUNCTION3 PFK			1.32e5							0.000
FUNCTION4 PFK			9.00e5							
FUNCTION5 PFK			7.35e6							
FUNCTION1 HXCDPE			7.29e1							0.000
FUNCTION1 HPCDPE			2.51e3							0.000
FUNCTION2 HPCDPE			3.80e3							0.000
FUNCTION3 OCDPE			7.72e1							0.000
FUNCTION4 NCDPE			0.00e0							
FUNCTION5 DCDPE			0.00e0							

JB1358 - CS4

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
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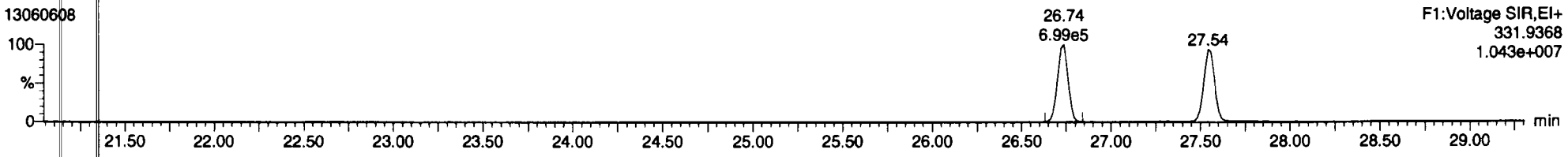
Printed: Monday, June 10, 2013 10:06:17 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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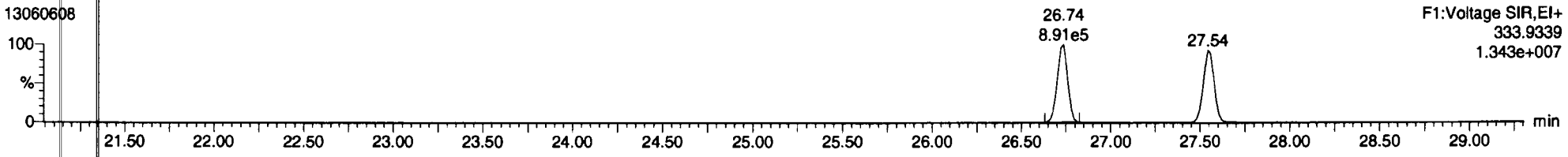
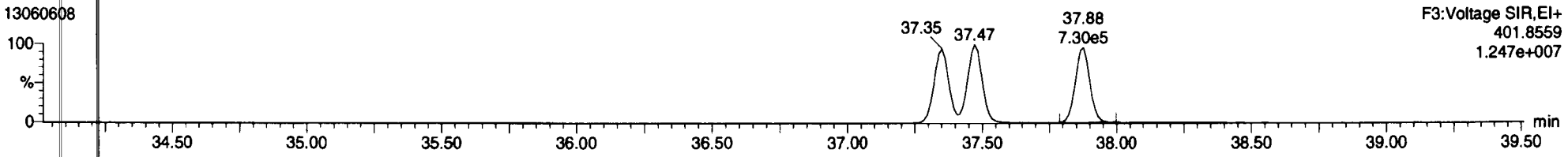


13C-123789-HxCDD



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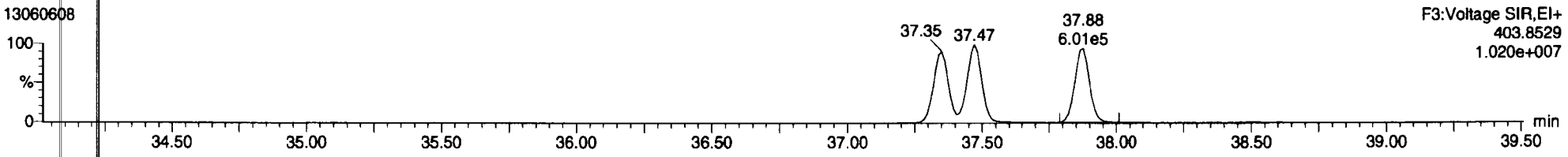

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Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
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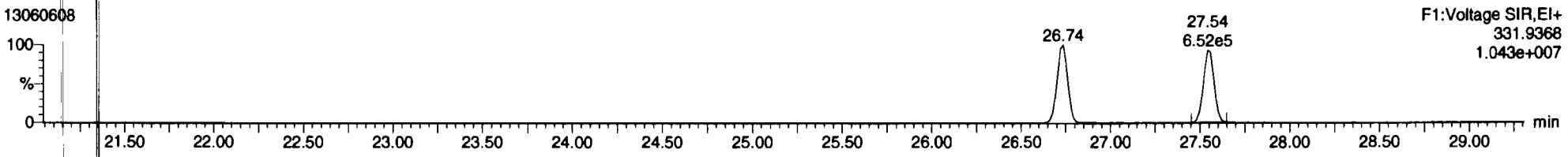
ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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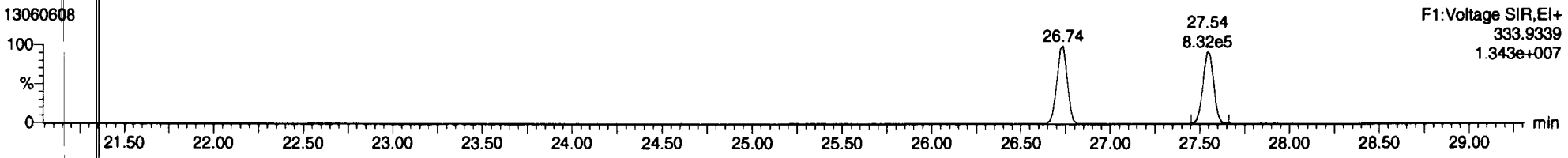
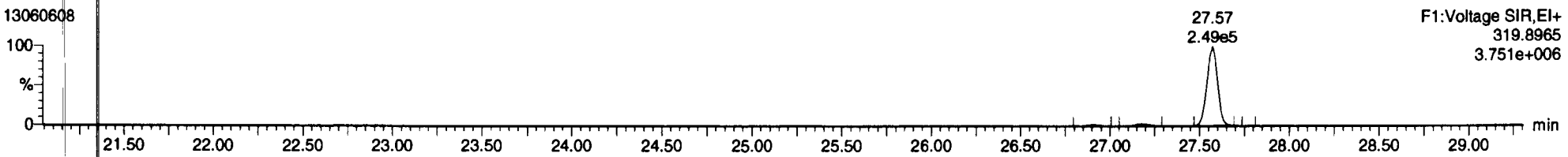
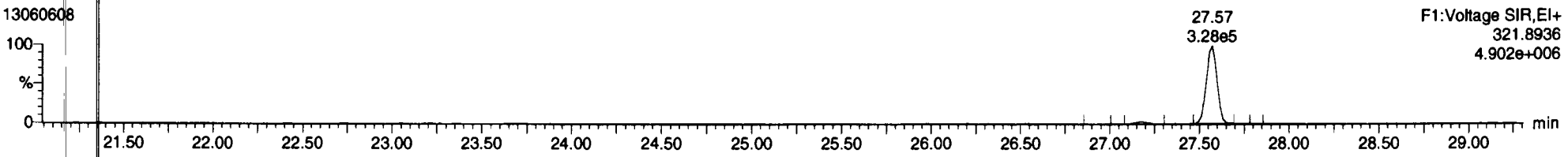


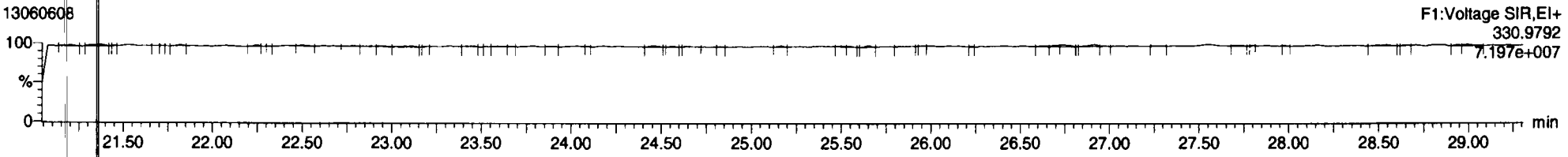
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



Dataset: P:\DIOXIN8290.PRO\130606IC.qid
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
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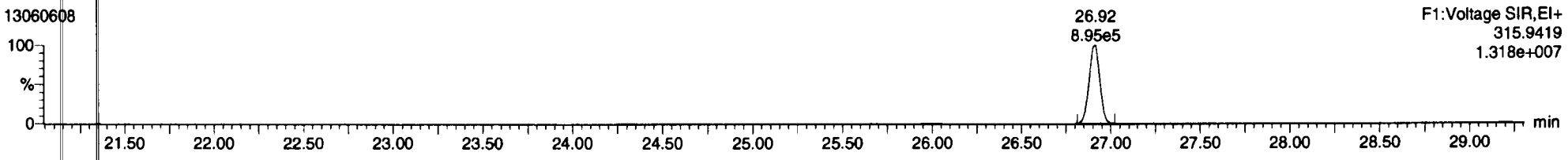
ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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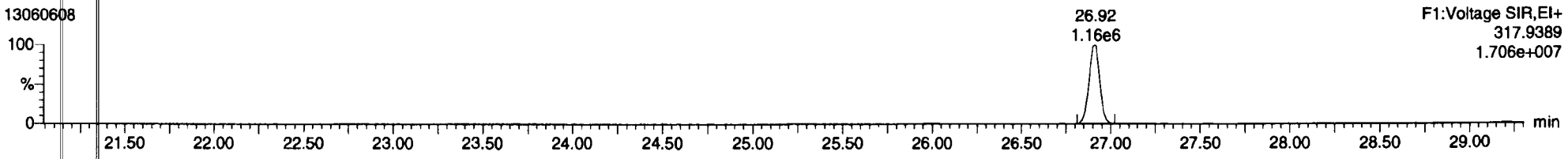
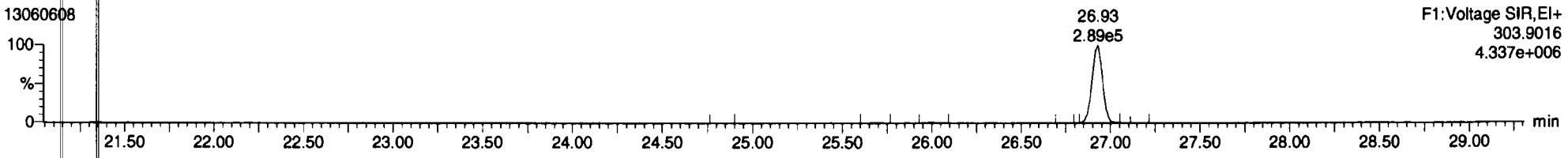
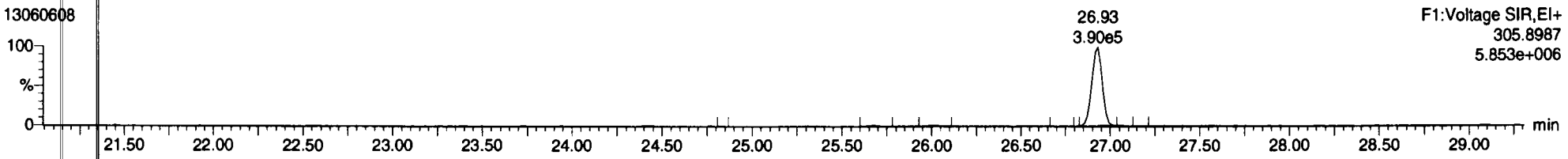


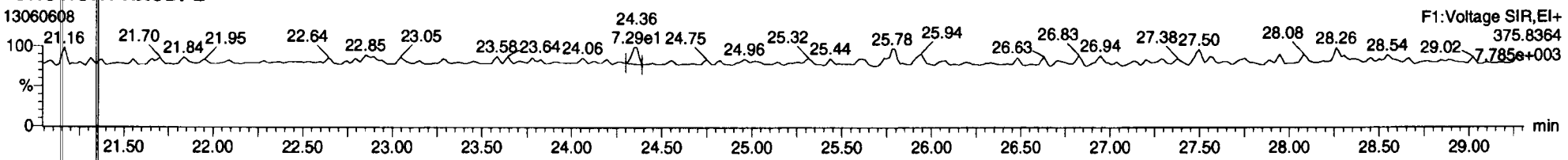
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
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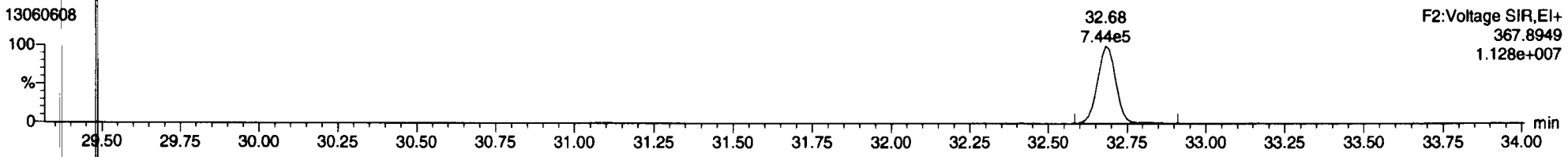
ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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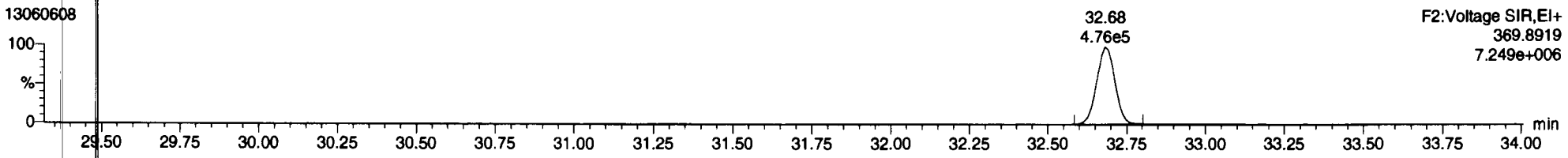
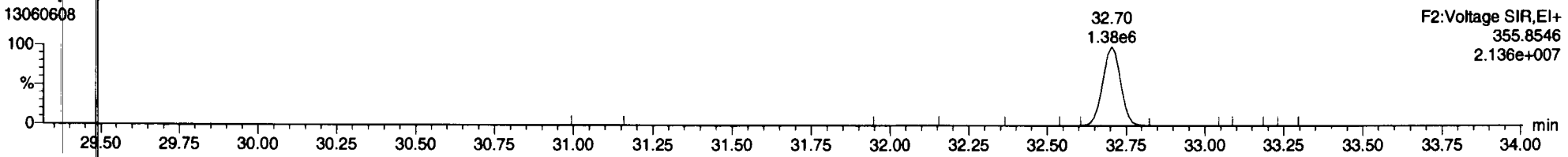
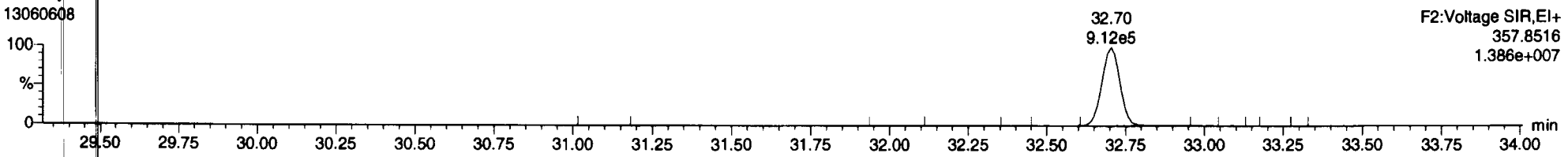


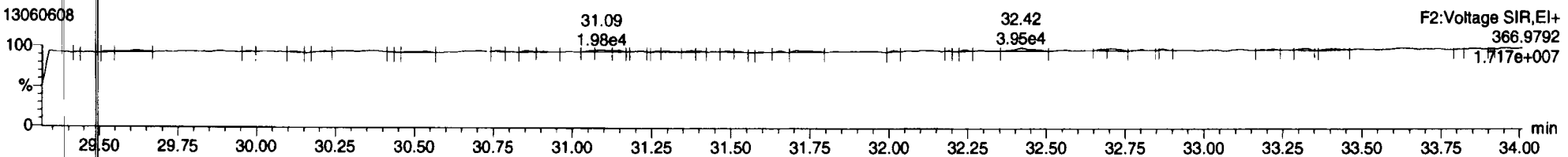
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
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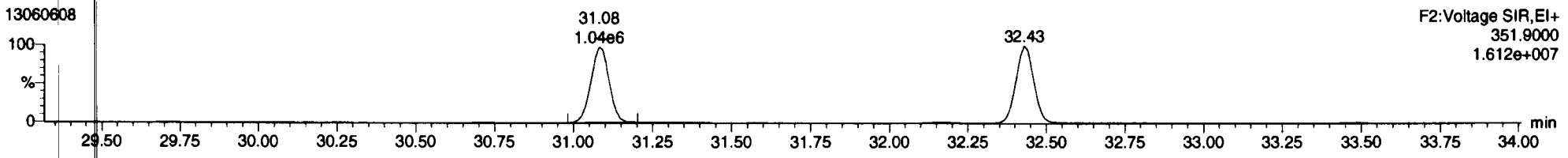
13C-12378-PeCDF



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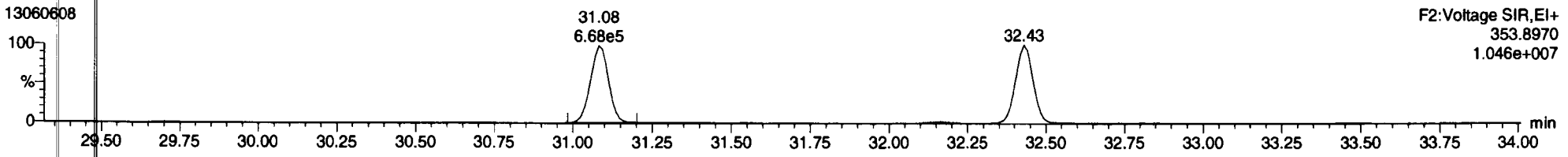
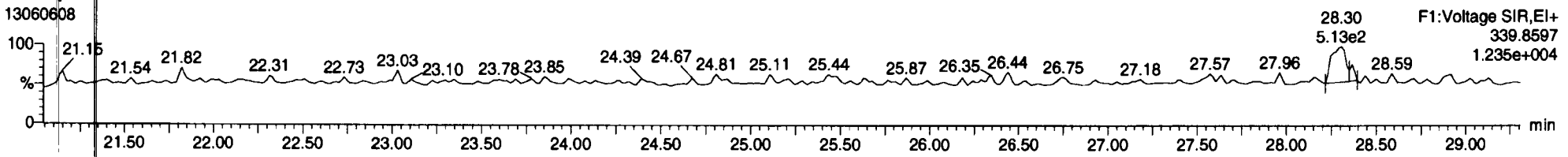
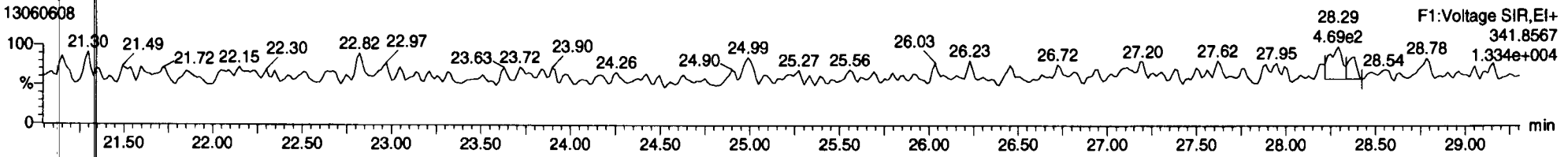


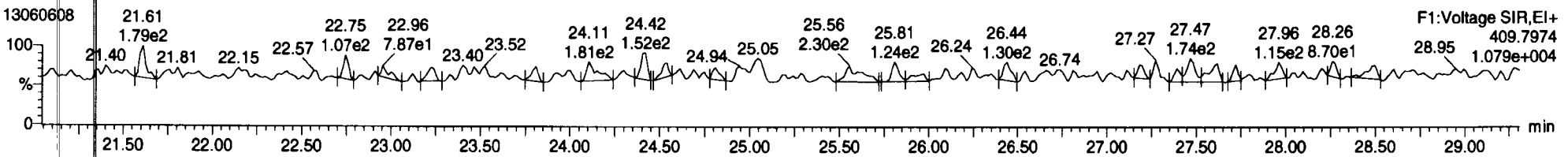
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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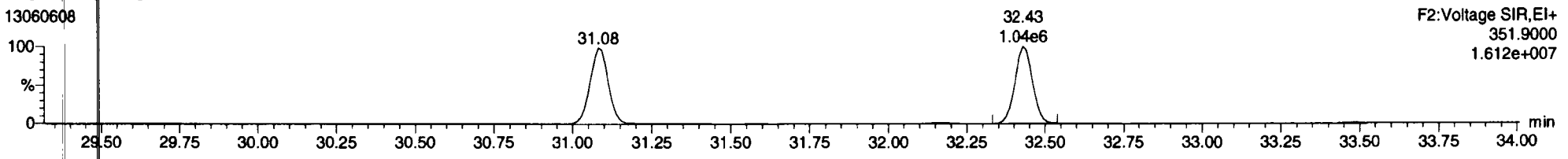
13C-23478-PeCDF



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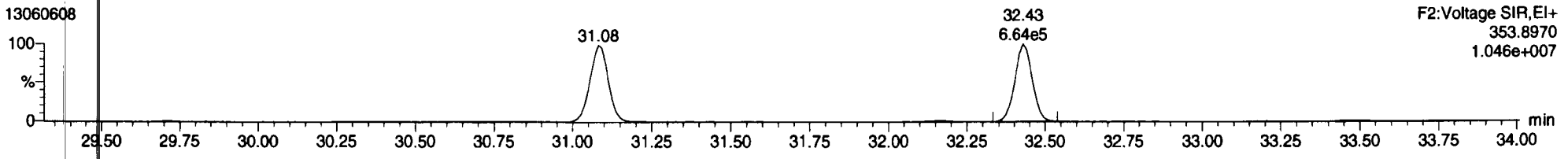
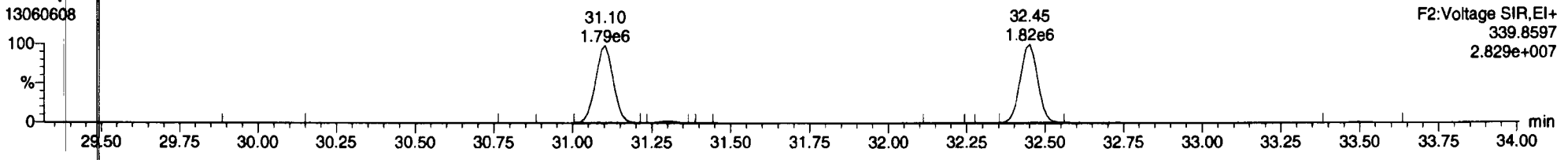


Total-pentafurans



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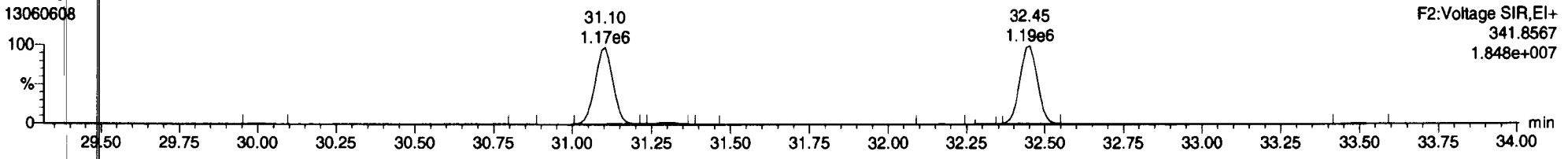
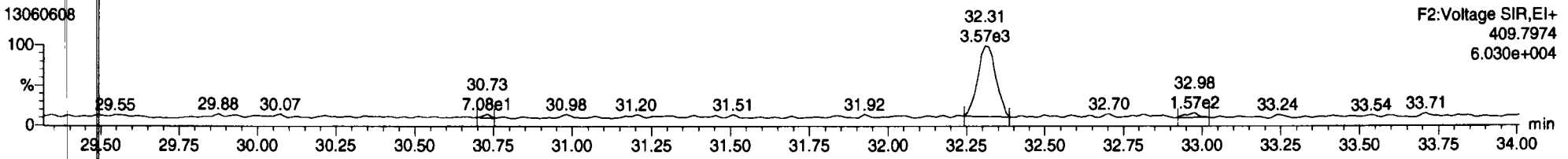


FUNCTION2 HPCDPE



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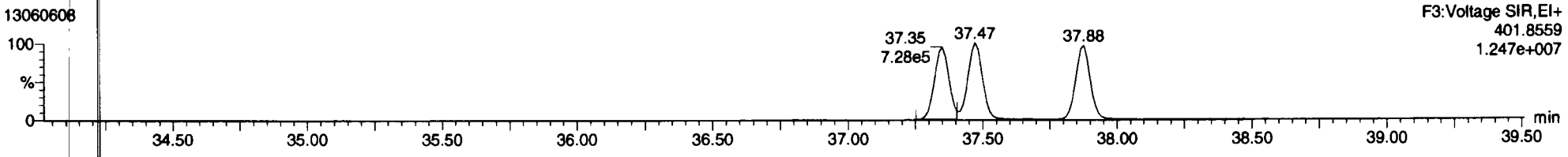
13C-123478-HxCDD



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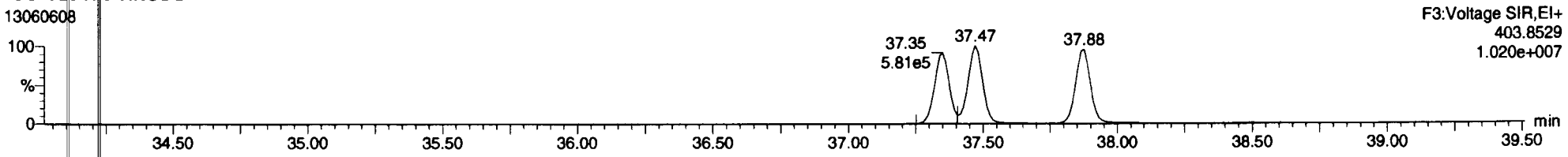
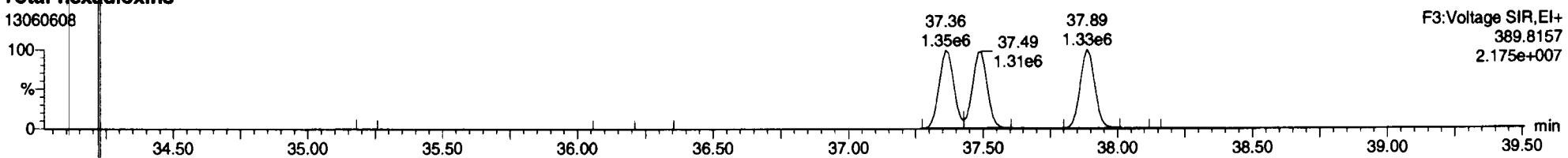
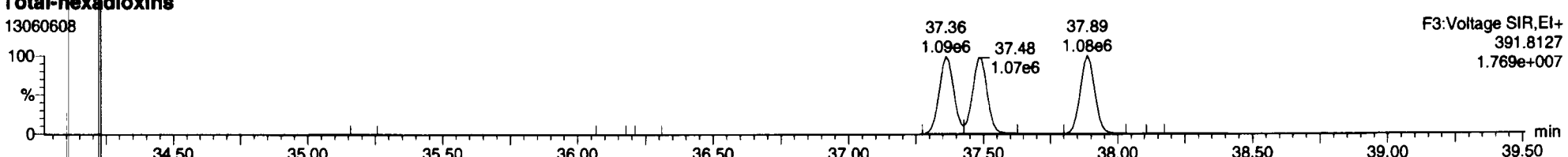


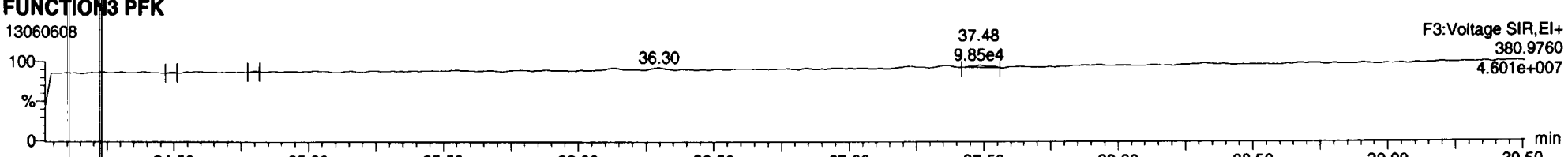
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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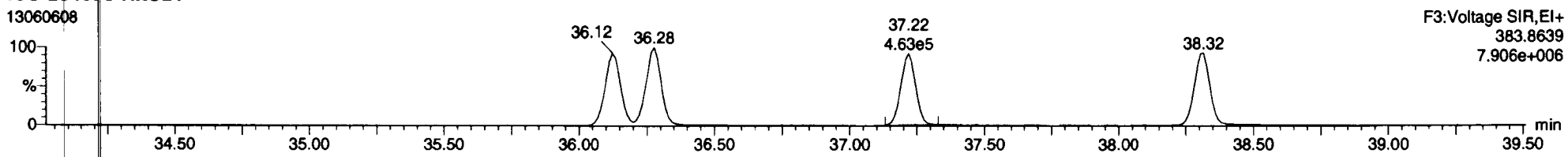
13C-234678-HxCDF



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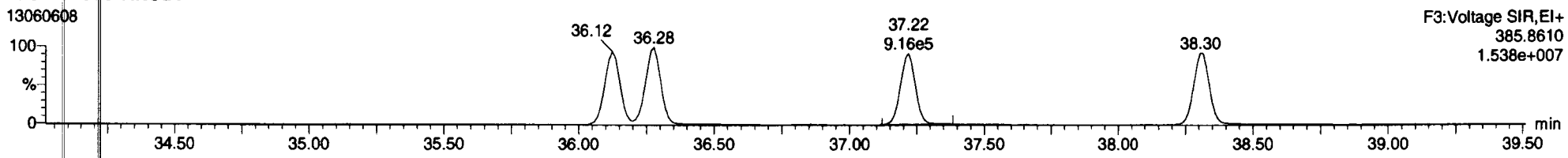
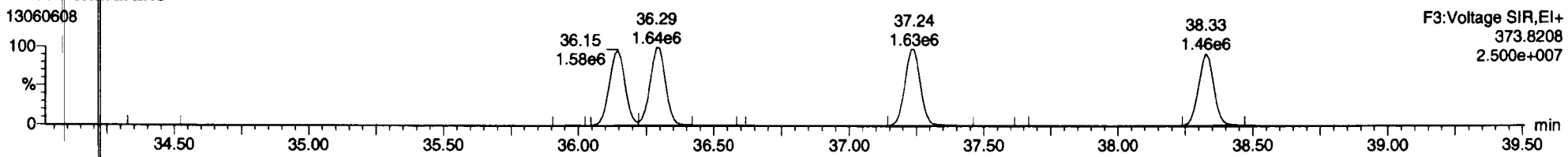
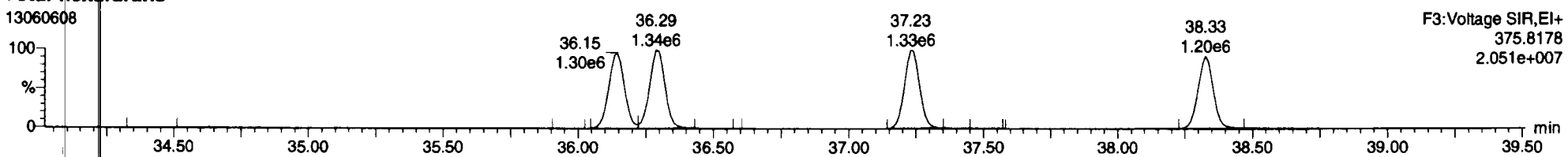


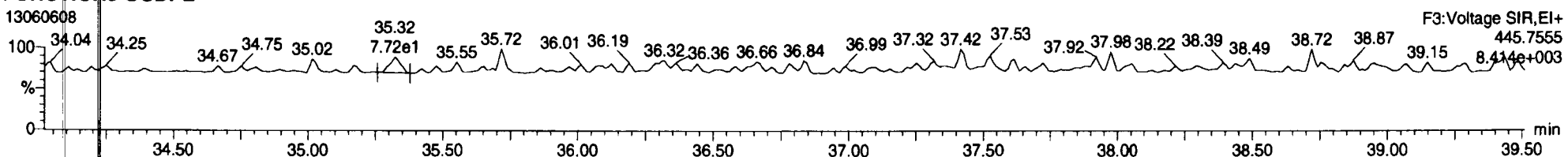
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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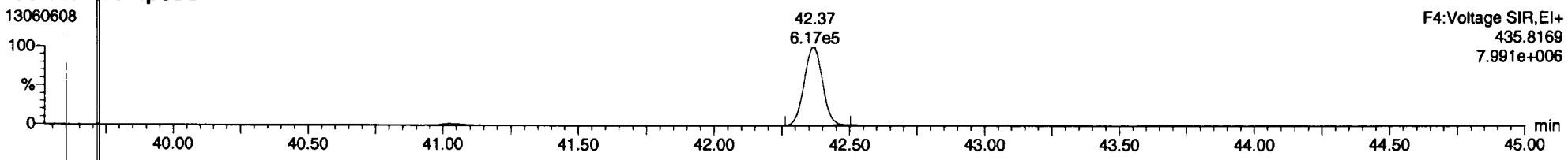
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:17 Pacific Daylight Time

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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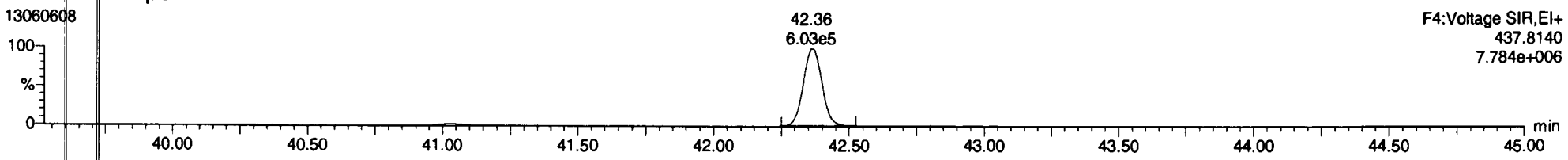

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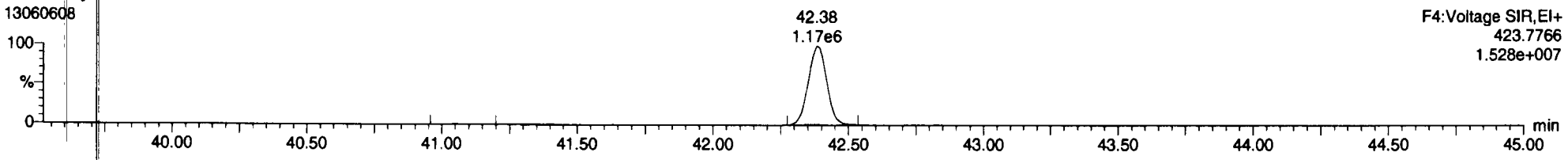
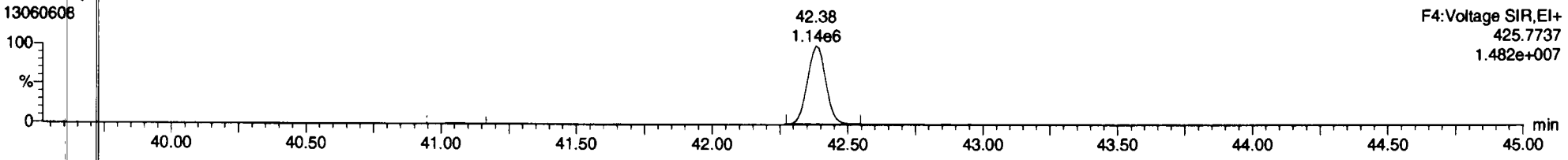
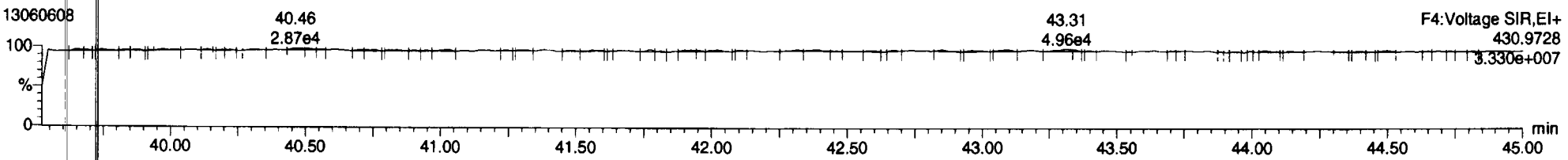


Total-heptadioxins



FUNCTION4 PFK



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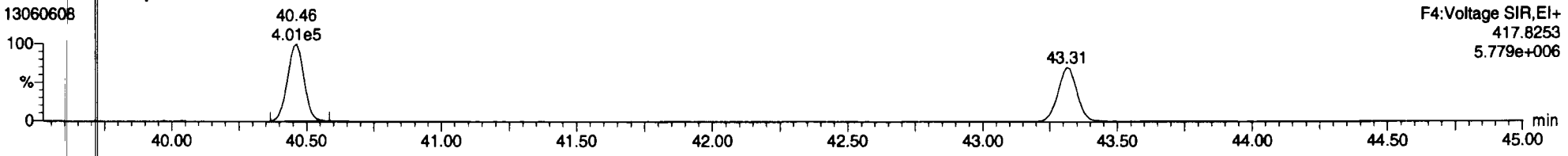
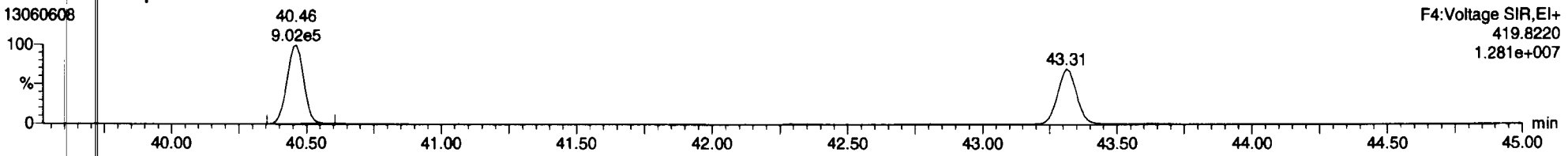
Printed: Monday, June 10, 2013 10:06:17 Pacific Daylight Time

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

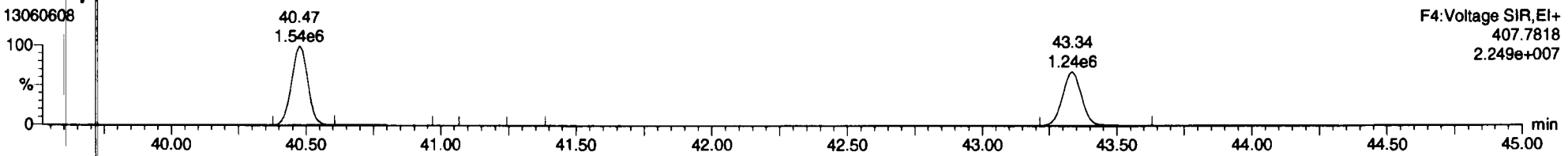
13C-1234678-HpCDF



13C-1234678-HpCDF



Total-heptafurans



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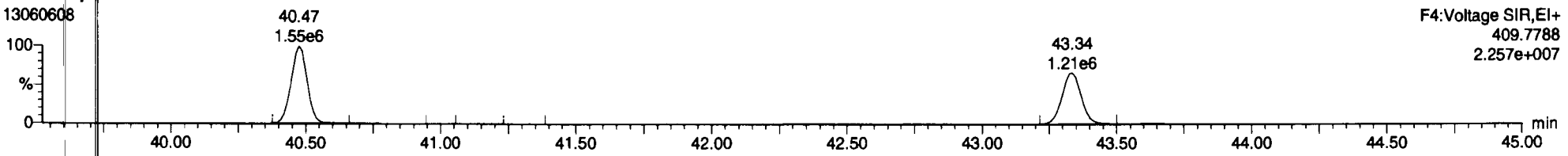
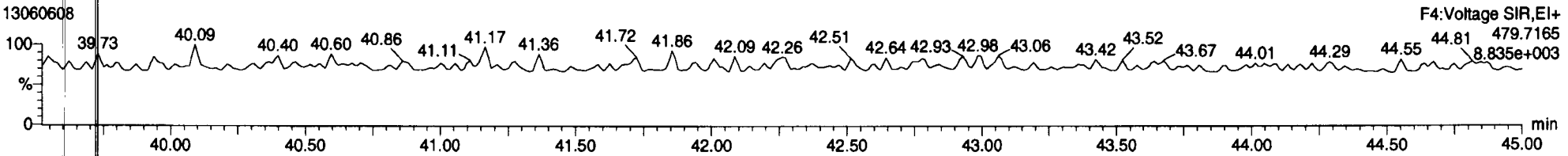


FUNCTION4 NCDPE



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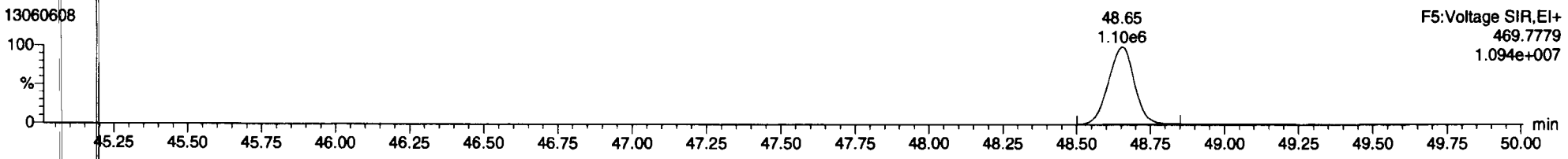
Printed: Monday, June 10, 2013 10:06:17 Pacific Daylight Time

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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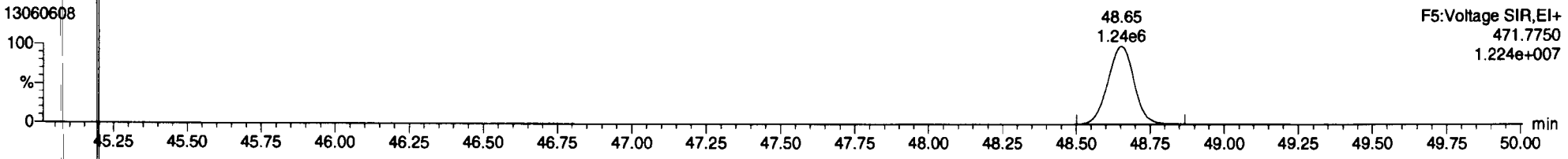
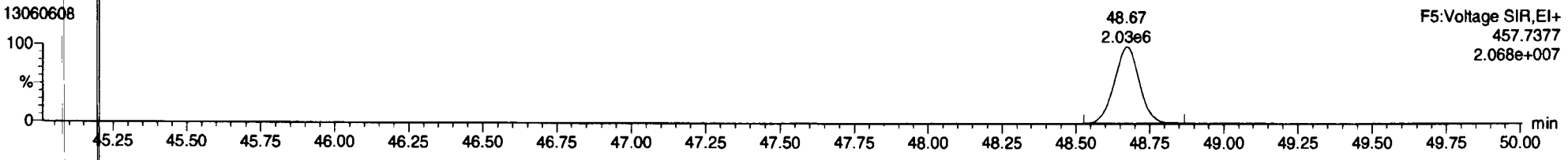


OCDD



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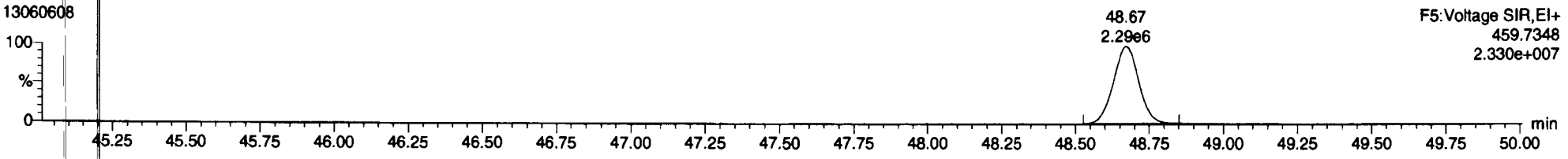
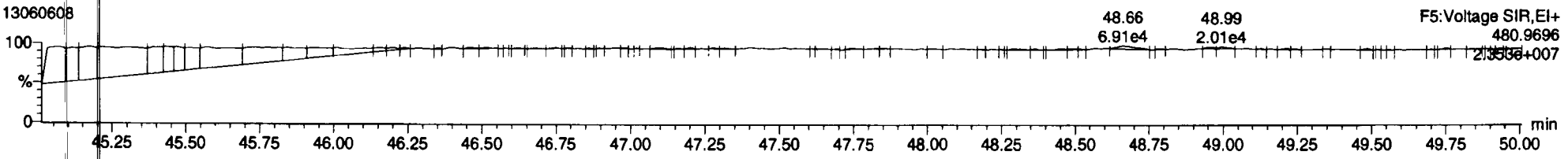


FUNCTION5 PFK



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
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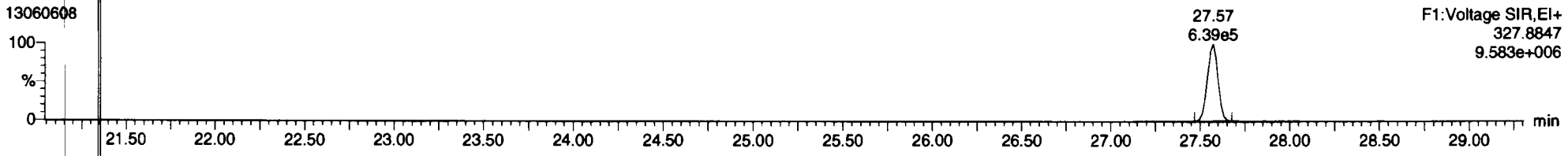
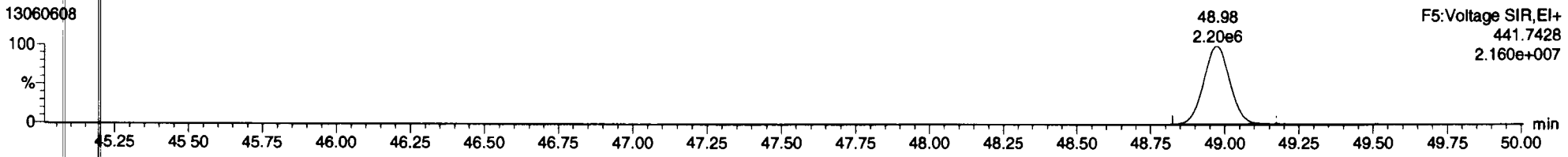
ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



OCDF



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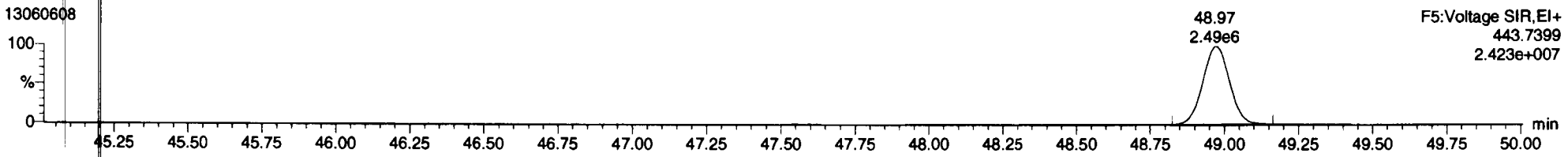
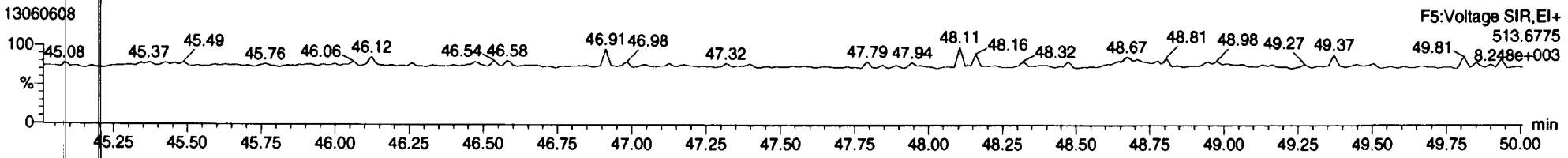


FUNCTION 5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.930	1.001	1.65e6	2.20e6	0.832	0.753	0.770	9018.8	NO	205.237	205.237
12378-PeCDF	31.103	1.001	1.07e7	7.03e6	0.853	1.522	1.550	31556.6	NO	1015.587	1015.587
23478-PeCDF	32.451	1.001	1.07e7	7.05e6	0.884	1.517	1.550	31445.6	NO	1014.116	1014.116
123478-HxCDF	36.145	1.001	8.84e6	7.22e6	1.017	1.225	1.240	18562.4	NO	1012.611	1012.611
234678-HxCDF	37.230	1.000	9.01e6	7.43e6	1.067	1.212	1.240	18740.2	NO	1039.620	1039.620
123678-HxCDF	36.287	1.000	9.13e6	7.55e6	0.999	1.209	1.240	18763.3	NO	1015.001	1015.001
123789-HxCDF	38.326	1.000	7.92e6	6.51e6	0.947	1.216	1.240	17289.9	NO	1014.625	1014.625
1234678-HpCDF	40.474	1.000	8.15e6	8.11e6	1.151	1.005	1.050	16882.0	NO	1029.369	1029.369
1234789-HpCDF	43.335	1.001	6.28e6	6.22e6	1.166	1.010	1.050	11191.6	NO	1007.672	1007.672
OCDF	48.976	1.007	1.18e7	1.33e7	1.001	0.885	0.890	33540.5	NO	2068.491	2068.491
2378-TCDD	27.572	1.001	1.43e6	1.88e6	0.939	0.761	0.770	12186.7	NO	210.230	210.230
12378-PeCDD	32.703	1.001	8.02e6	5.28e6	0.930	1.520	1.550	74813.2	NO	1016.977	1016.977
123478-HxCDD	37.361	1.000	7.49e6	6.10e6	0.930	1.228	1.240	25280.7	NO	1024.615	1024.615
123678-HxCDD	37.482	1.000	7.23e6	5.91e6	0.854	1.223	1.240	23817.6	NO	1004.587	1004.587
123789-HxCDD	37.888	1.011	7.25e6	5.93e6	0.885	1.223	1.240	24472.6	NO	1005.841	1005.841
1234678-HpCDD	42.382	1.000	6.04e6	5.89e6	0.966	1.026	1.050	14617.9	NO	988.505	988.505
OCDD	48.671	1.000	1.07e7	1.21e7	0.921	0.884	0.890	21977.7	NO	2033.253	2033.253
13C-2378-TCDF	26.900	1.006	9.76e5	1.28e6	1.283	0.762	0.770	4436.6	NO		103.391
13C-12378-PeCDF	31.081	1.163	1.25e6	8.00e5	1.051	1.559	1.550	8585.2	NO		114.551
13C-23478-PeCDF	32.429	1.213	1.21e6	7.73e5	1.030	1.561	1.550	8342.5	NO		112.959
13C-123478-HxCDF	36.123	0.954	5.25e5	1.04e6	1.069	0.507	0.510	3011.1	NO		102.326
13C-123678-HxCDF	36.276	0.958	5.59e5	1.09e6	1.124	0.514	0.510	3240.3	NO		102.591
13C-234678-HxCDF	37.219	0.983	5.05e5	9.77e5	1.041	0.516	0.510	2998.2	NO		99.847
13C-123789-HxCDF	38.315	1.012	5.11e5	9.91e5	1.039	0.516	0.510	3021.5	NO		101.351
13C-1234678-HpCDF	40.463	1.068	4.22e5	9.50e5	0.965	0.444	0.440	3871.1	NO		99.705
13C-1234789-HpCDF	43.313	1.144	3.32e5	7.32e5	0.760	0.454	0.440	2638.4	NO		98.109
13C-1234-TCDD	26.735	0.000	7.49e5	9.51e5	1.000	0.787	0.770	1197.3	NO		100.000
13C-2378-TCDD	27.542	1.030	7.31e5	9.47e5	0.926	0.772	0.770	1222.5	NO		106.602
13C-12378-PeCDD	32.681	1.222	8.55e5	5.51e5	0.734	1.551	1.550	4886.8	NO		112.619
13C-123478-HxCDD	37.350	0.986	7.91e5	6.35e5	0.984	1.247	1.240	5268.0	NO		101.611
13C-123678-HxCDD	37.471	0.989	8.46e5	6.87e5	1.043	1.232	1 240	5651.0	NO		103.081
13C-1234678-HpCDD	42.371	1.119	6.41e5	6.08e5	0.891	1.054	1.050	3903.1	NO		98.270
13C-OCDD	48.653	1.285	1.14e6	1.28e6	0.849	0.888	0.890	5138.8	NO		200.260

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.876	0.000	7.88e5	6.38e5	1.000	1.236	1.240	5225.4	NO	100.000
Total-tetrafurans			1.69e6		0.832					209.091
Total-penta1			1.81e2							0.018
Total-pentafurans			2.17e7		0.868					2063.494
Total-hexafurans			3.50e7		1.008					4088.145
Total-heptafurans			1.44e7		1.159					2038.566
Total-Furans			8.46e7		0.992					10467.813
Total-tetradioxins			1.47e6		0.939					216.137
Total-pentadioxins			8.04e6		0.930					1019.381
Total-hexadioxins			2.20e7		0.890					3035.279
Total-heptadioxins			6.06e6		0.966					992.409
Total-Dioxins			4.82e7		0.918					7296.459
Total-TEQ			1.33e8							17764.272
37CL-2378-TCDD	27.572	1.031	3.71e6		0.989			18387.8		220.877
FUNCTION1 PFK			7.04e5							
FUNCTION2 PFK			3.63e5							0.000
FUNCTION3 PFK			1.82e6							0.000
FUNCTION4 PFK			0.00e0							
FUNCTION5 PFK			0.00e0							
FUNCTION1 HXCDPE			1.06e2							0.000
FUNCTION1 HPCDPE			2.42e3							0.000
FUNCTION2 HPCDPE			1.87e4							0.000
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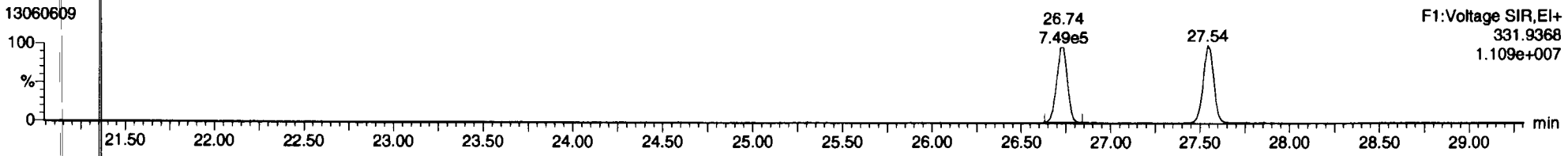
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

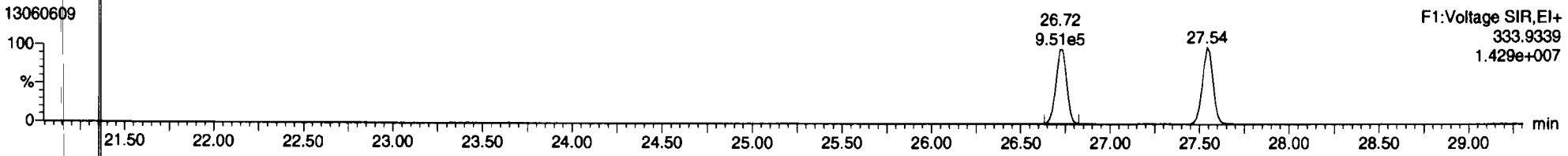
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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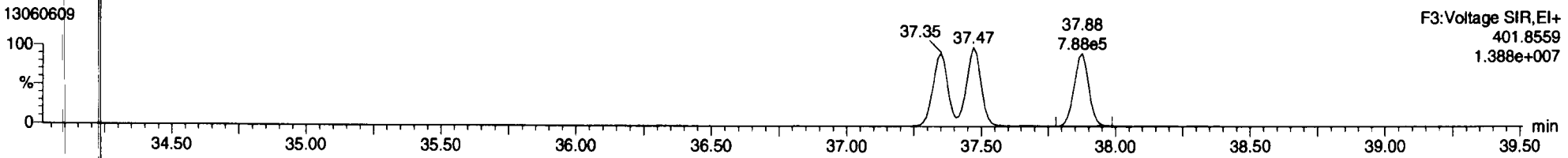

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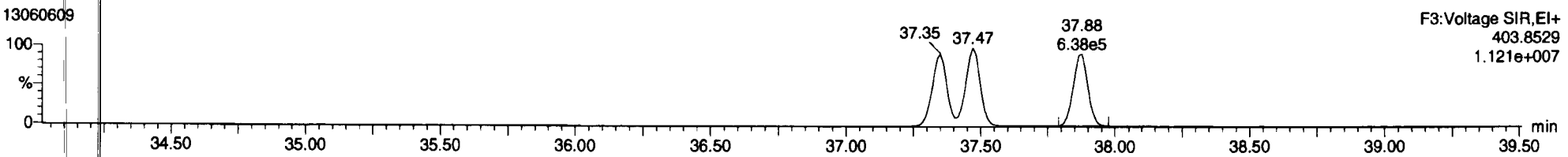

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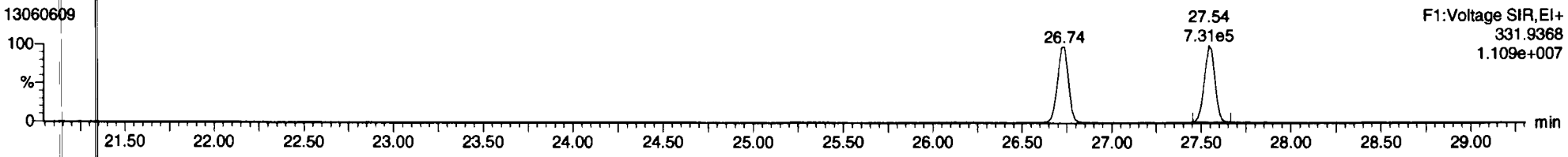
ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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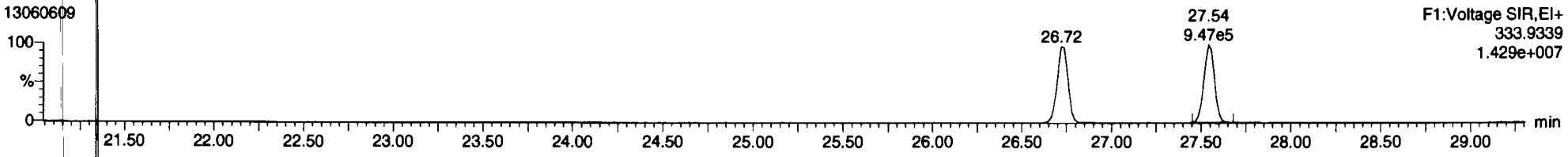
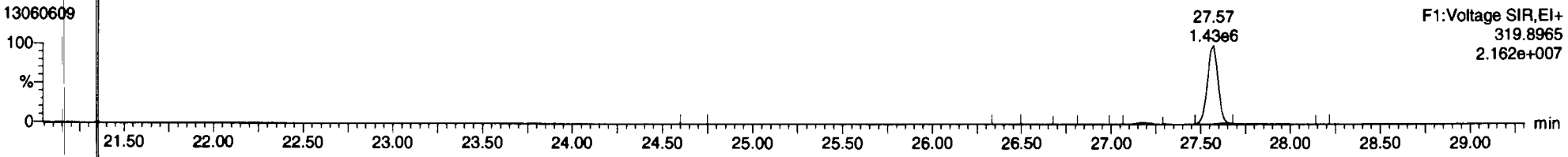
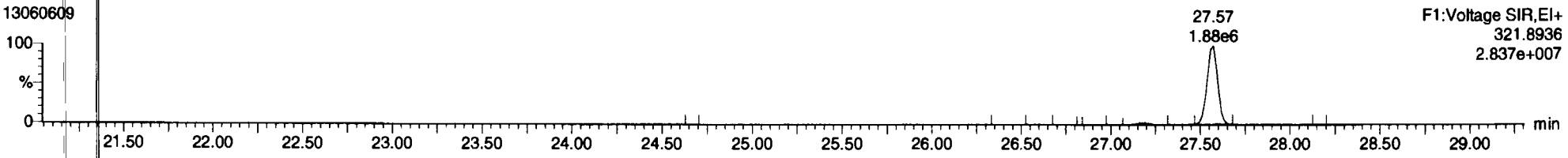


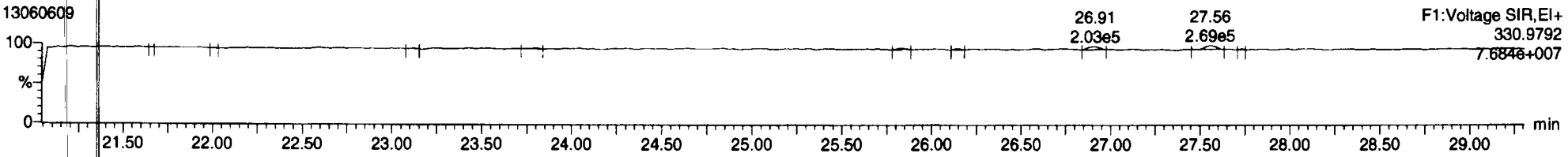
Total-tetradioxins



Total-tetradioxins



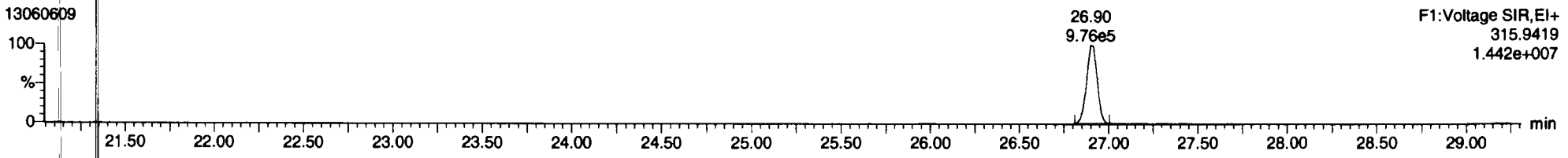
FUNCTION1 PFK



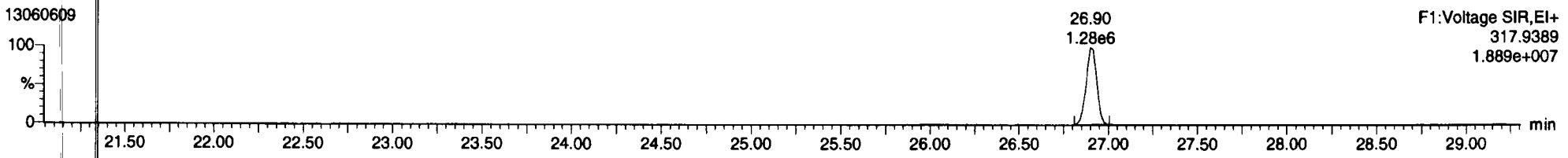
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

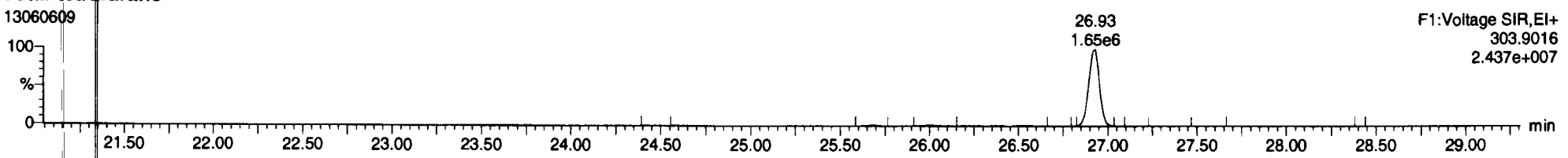
13C-2378-TCDF



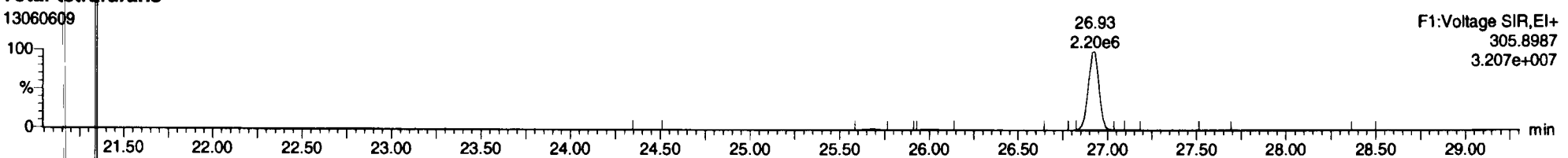
13C-2378-TCDF



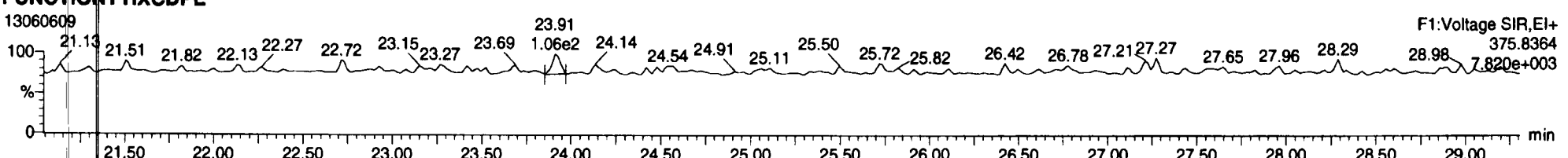
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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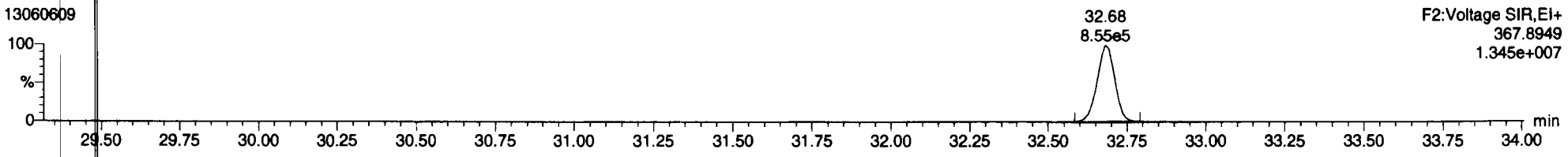
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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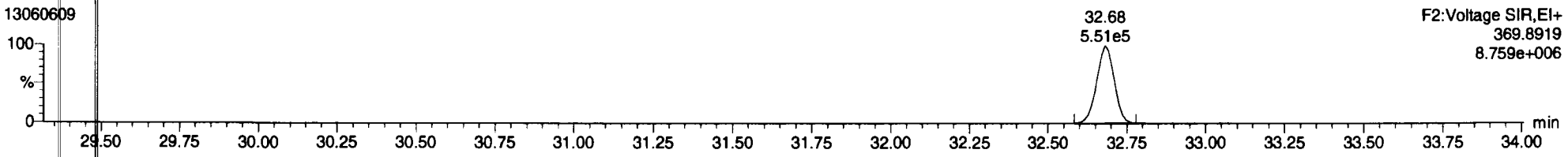
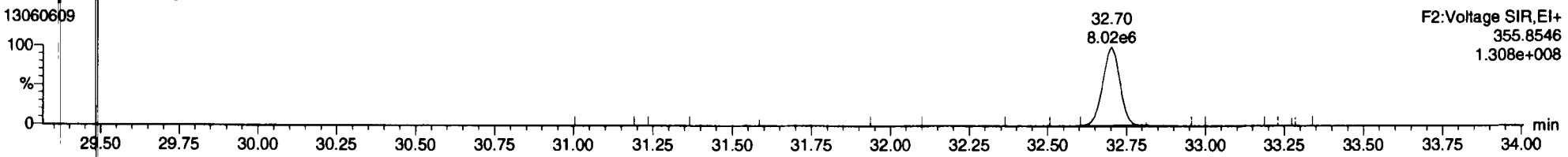
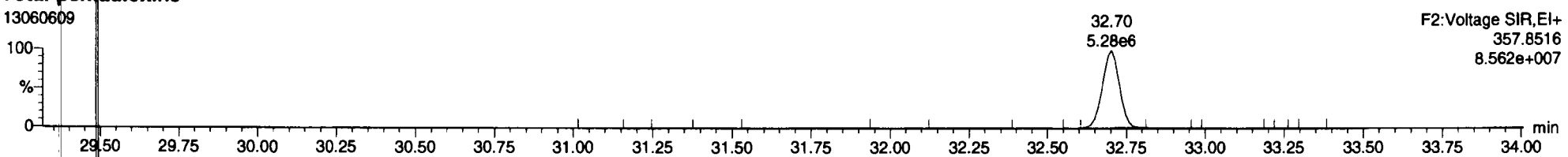


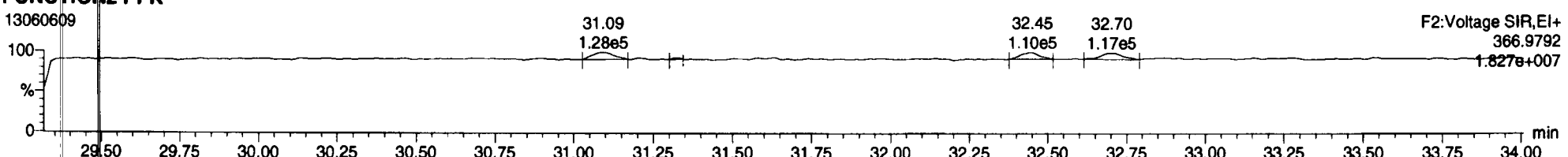
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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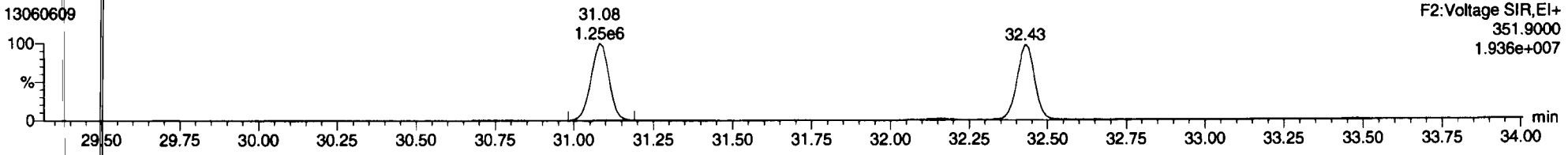
ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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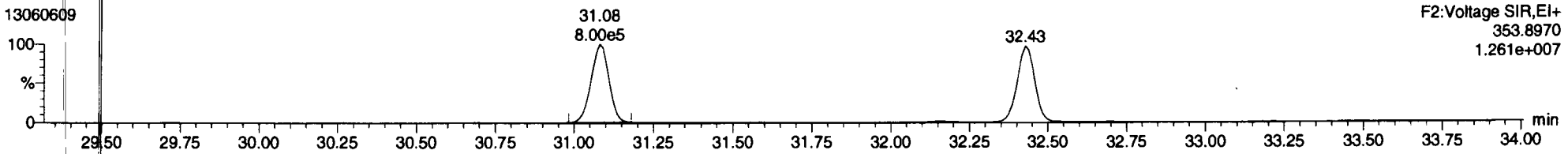

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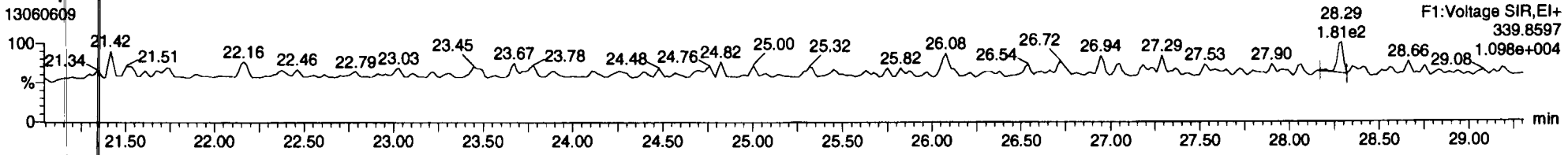

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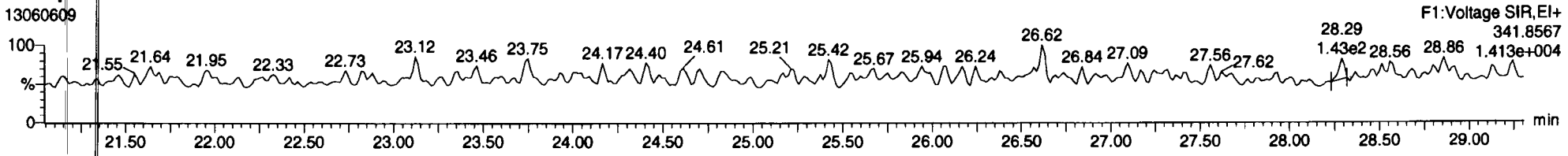
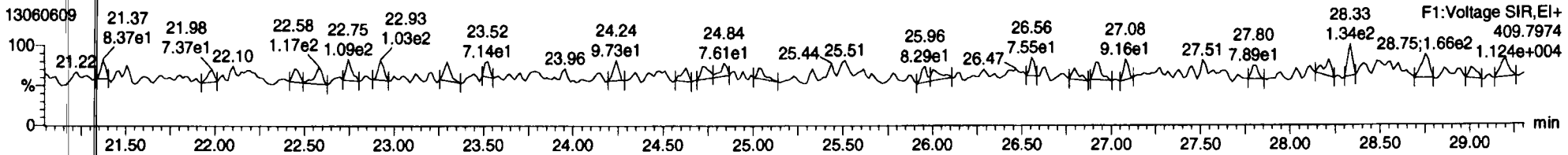


FUNCTION1 HPCDPE



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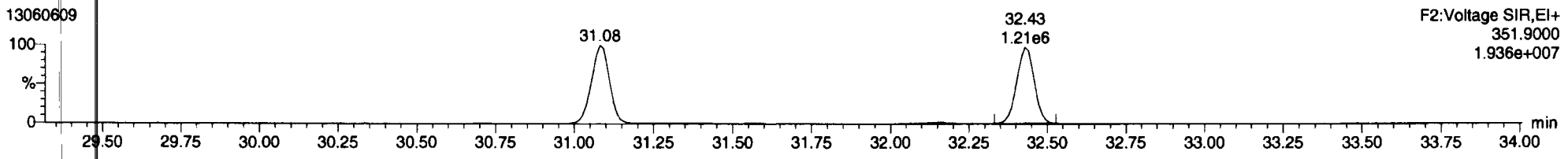
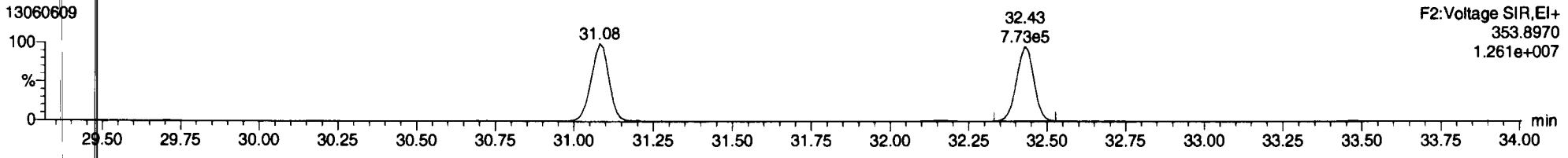
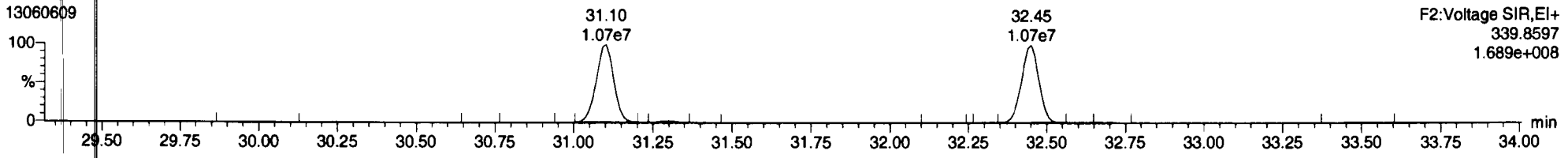
13C-23478-PeCDF



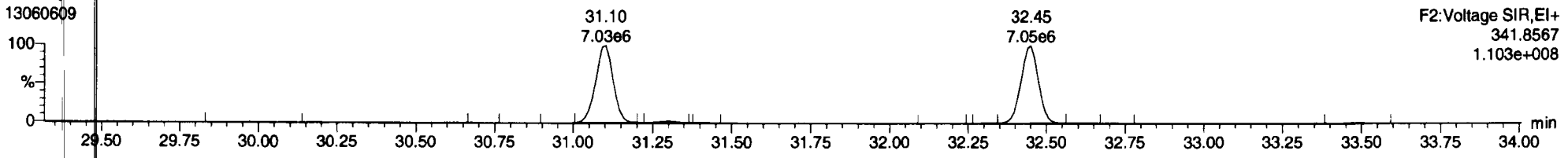
13C-23478-PeCDF



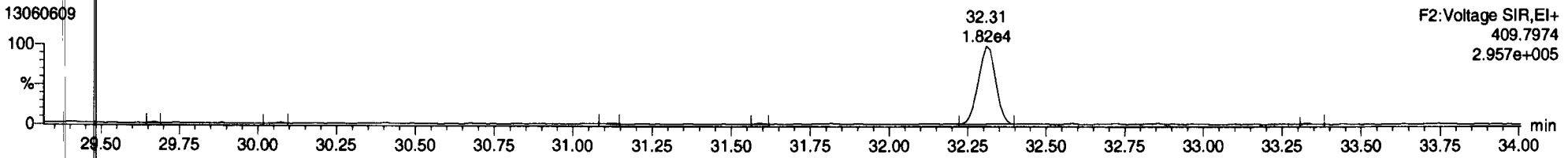
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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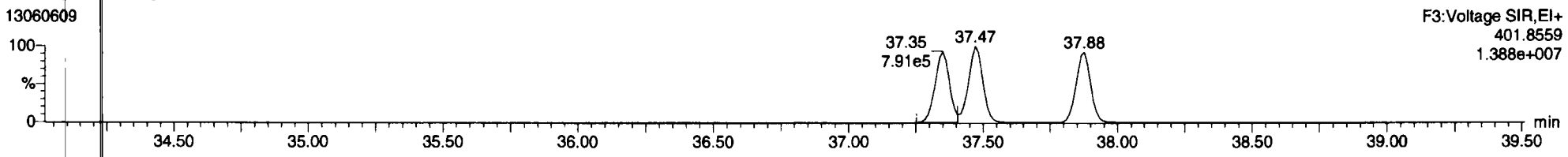
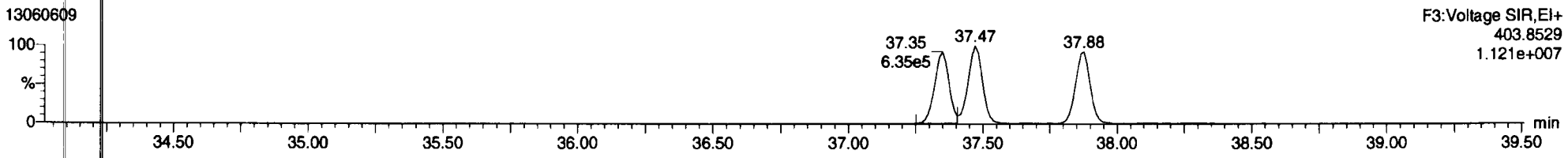
ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

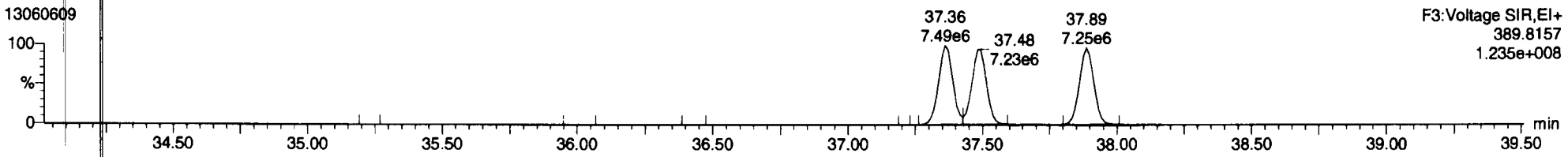
13C-123478-HxCDD



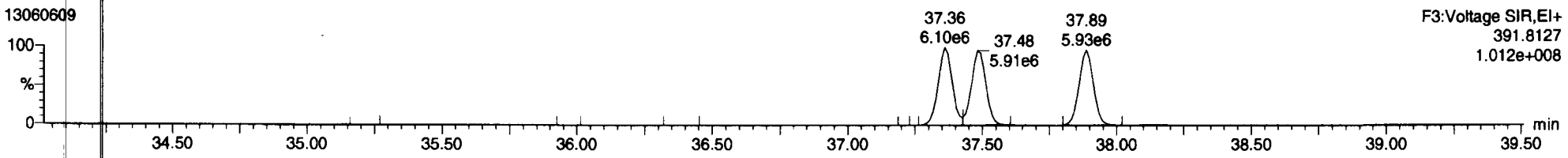
13C-123478-HxCDD



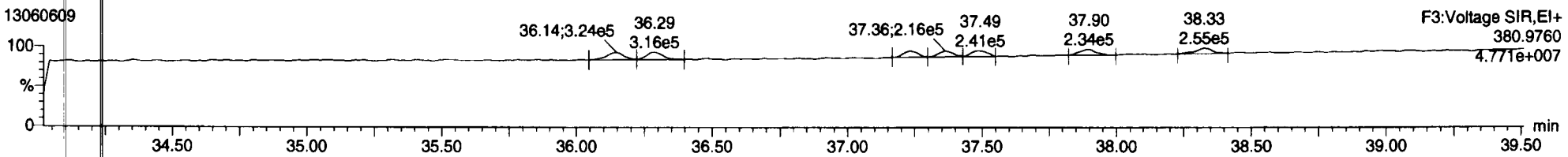
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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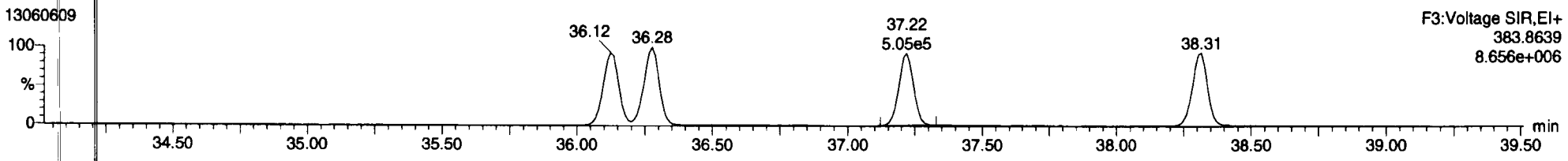
13C-234678-HxCDF



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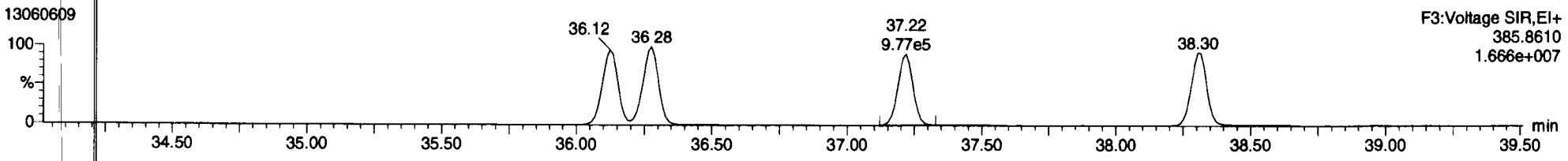
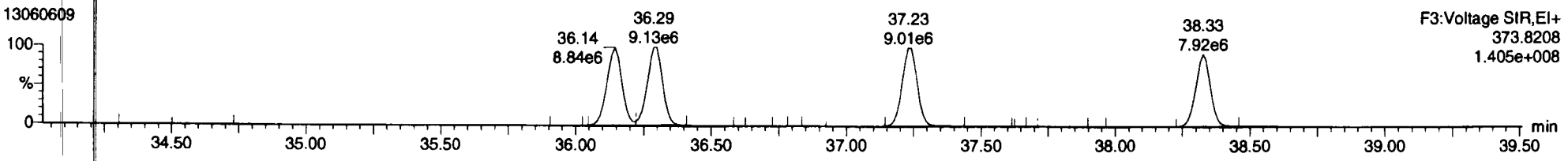
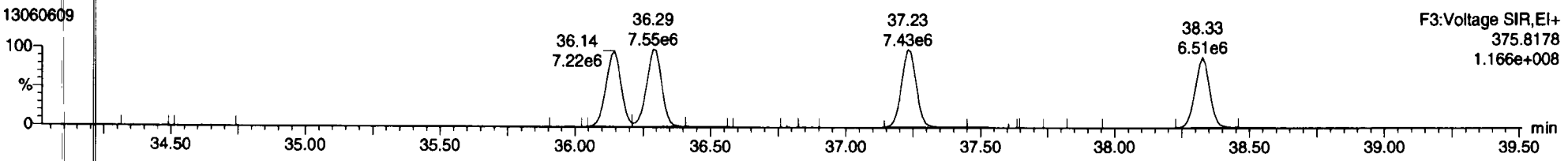


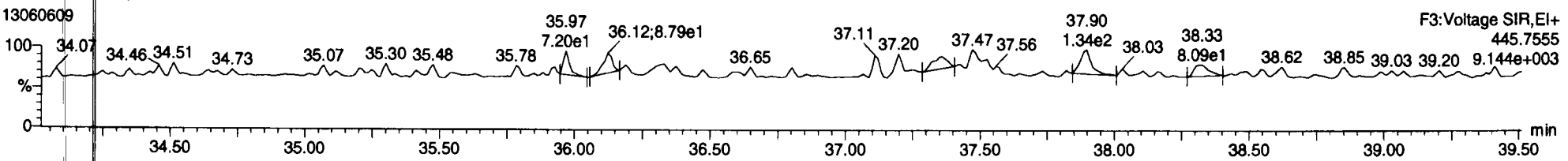
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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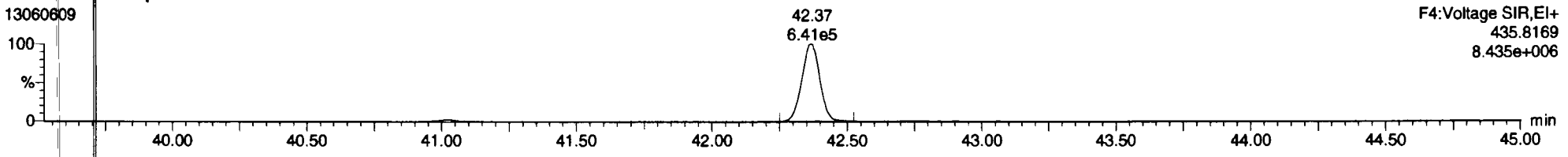
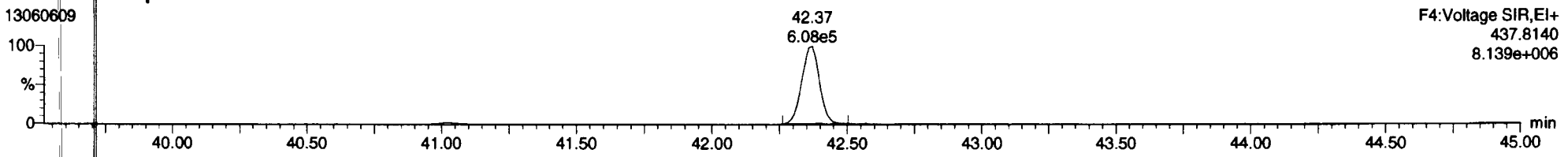
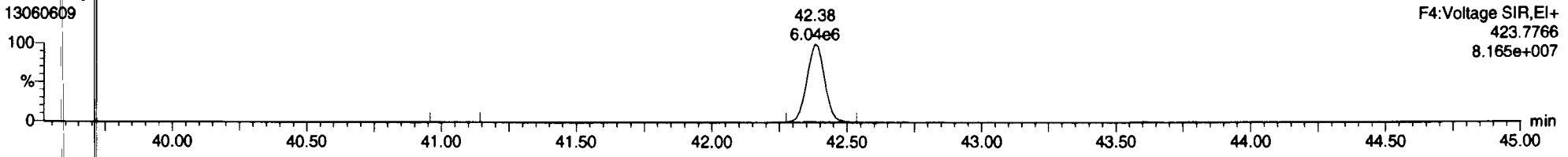
13C-1234678-HpCDD



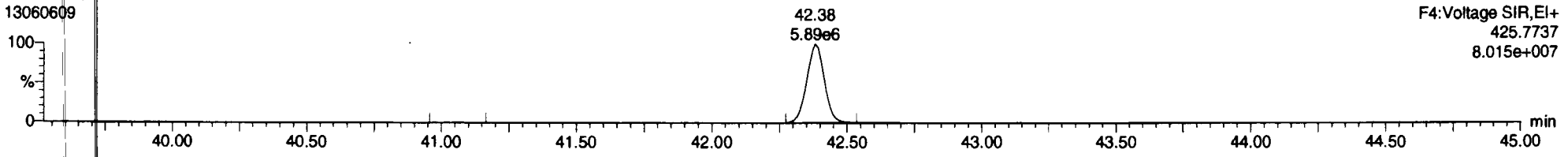
13C-1234678-HpCDD



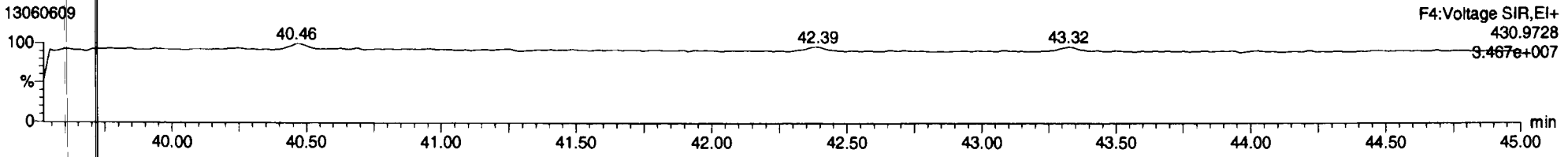
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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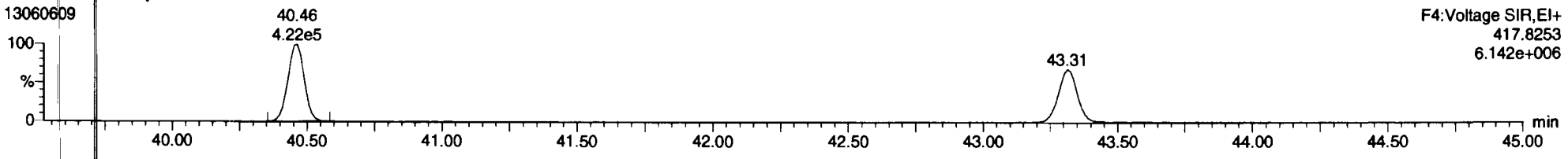
13C-1234678-HpCDF



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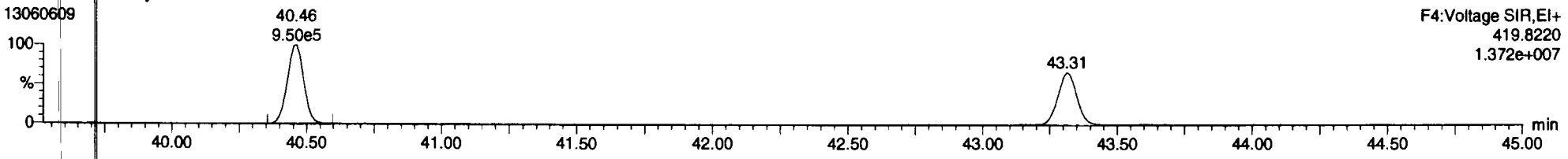
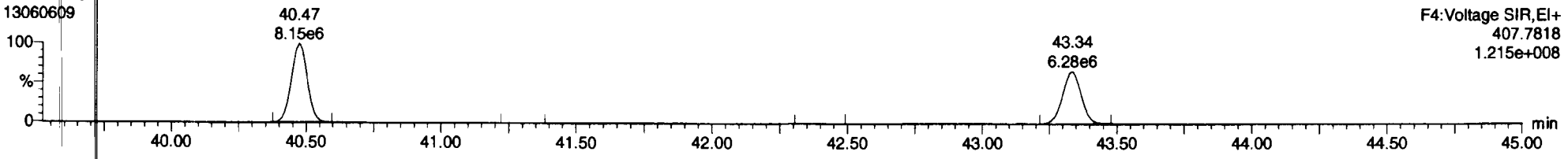


Total-heptafurans



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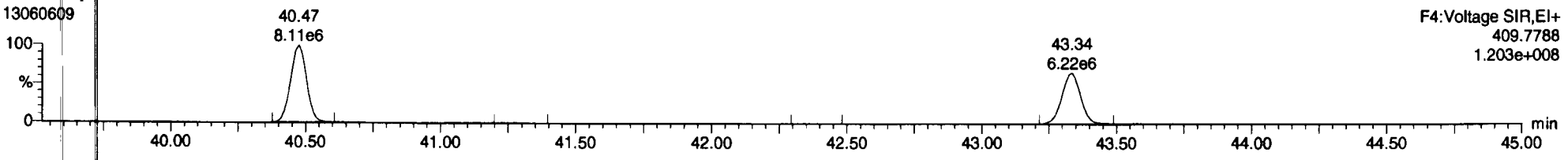
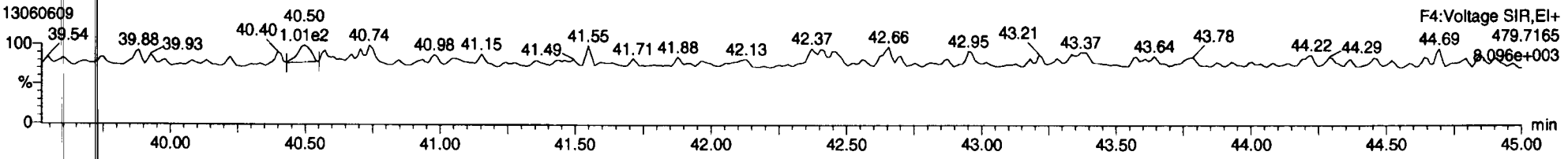


FUNCTION4 NCDPE



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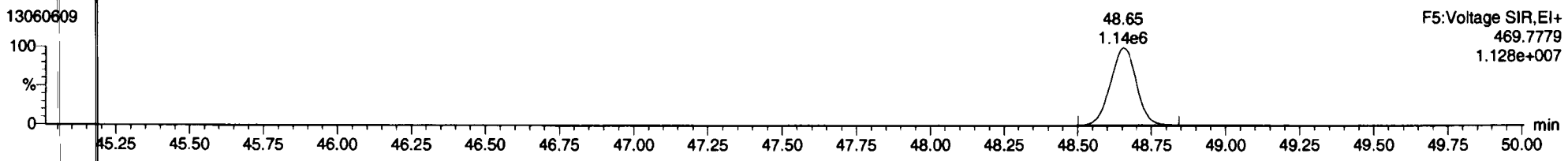
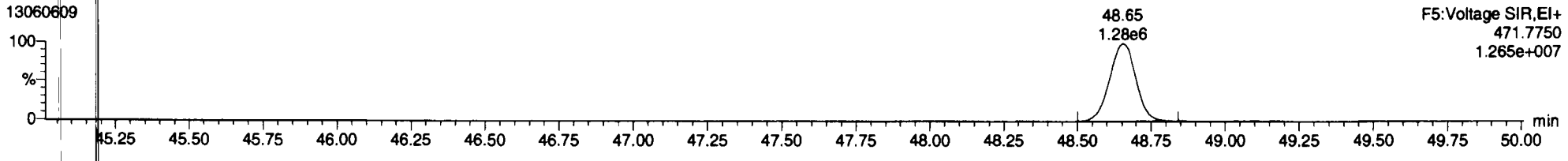
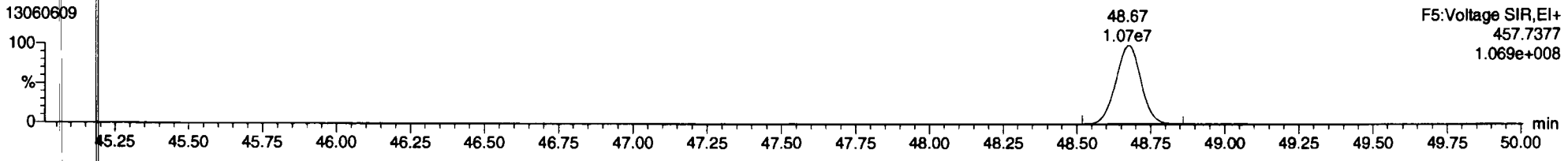
13C-OCDD



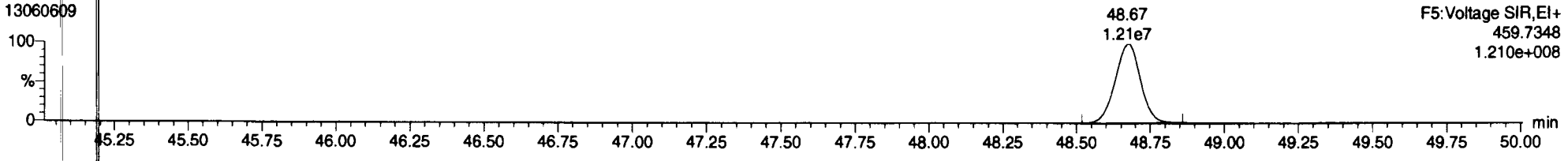
13C-OCDD



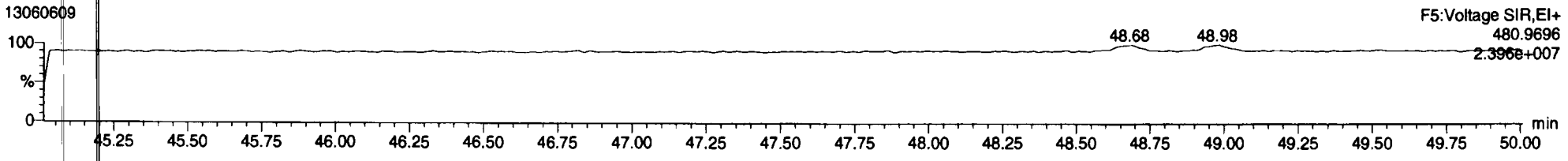
OCDD



OCDD



FUNCTION5 PFK



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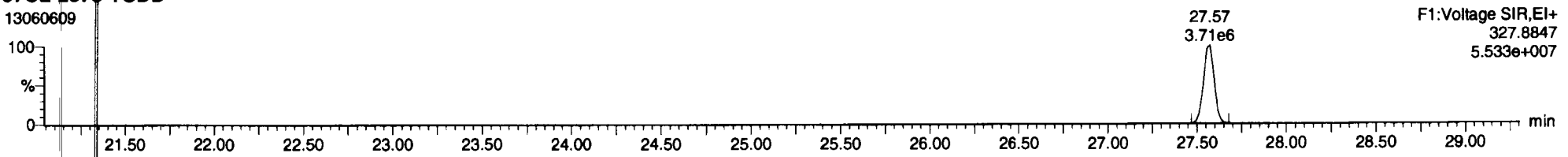
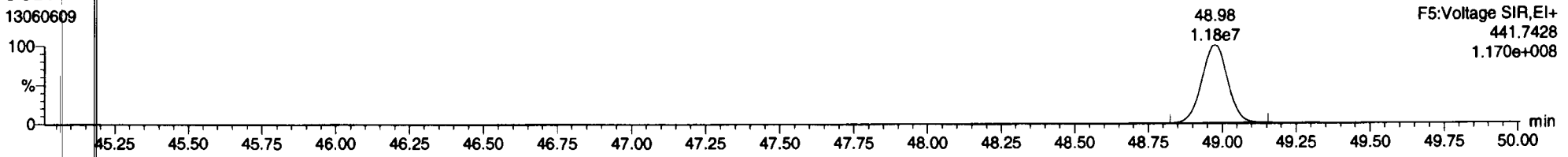
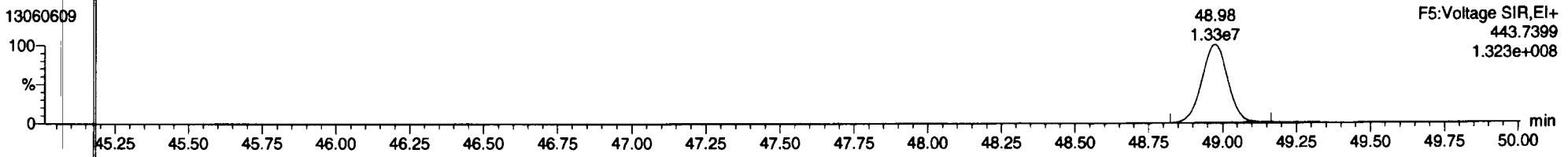
37CL-2378-TCDD



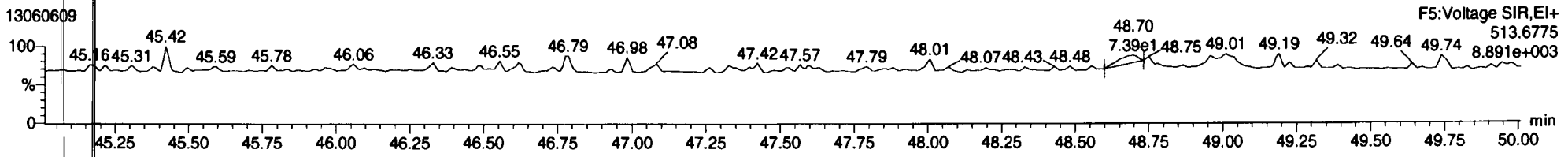
OCDF



OCDF



FUNCTION5 DCDPE



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Last Altered: Monday, June 10, 2013 10:06:43 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:07:15 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: ICV, Name: 13060610, Date: 06-Jun-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.915	1.001	6.19e4	8.46e4	0.832	0.732	0.770	971.3	NO	10.340	10.340
12378-PeCDF	31.092	1.001	3.92e5	2.53e5	0.853	1.552	1.550	1520.2	NO	55.531	55.531
23478-PeCDF	32.440	1.001	3.61e5	2.41e5	0.884	1.495	1.550	1411.6	NO	50.134	50.134
123478-HxCDF	36.134	1.001	3.46e5	2.83e5	1.017	1.224	1.240	1778.7	NO	56.314	56.314
234678-HxCDF	37.230	1.001	3.35e5	2.75e5	1.067	1.218	1.240	1721.8	NO	49.015	49.015
123678-HxCDF	36.276	1.000	3.57e5	2.90e5	0.999	1.230	1.240	1752.9	NO	53.421	53.421
123789-HxCDF	38.315	1.001	3.06e5	2.54e5	0.947	1.208	1.240	1608.0	NO	56.345	56.345
1234678-HpCDF	40.464	1.001	3.08e5	3.09e5	1.151	0.997	1.050	1546.9	NO	53.972	53.972
1234789-HpCDF	43.325	1.001	2.49e5	2.45e5	1.166	1.014	1.050	1065.2	NO	49.700	49.700
OCDF	48.959	1.007	4.41e5	5.01e5	1.001	0.879	0.890	2267.2	NO	113.194	113.194
2378-TCDD	27.557	1.001	5.69e4	7.68e4	0.939	0.741	0.770	648.8	NO	10.734	10.734
12378-PeCDD	32.692	1.001	2.84e5	1.85e5	0.930	1.537	1.550	2815.2	NO	47.368	47.368
123478-HxCDD	37.351	1.000	2.71e5	2.23e5	0.930	1.216	1.240	2632.3	NO	51.955	51.955
123678-HxCDD	37.471	1.000	2.62e5	2.13e5	0.854	1.230	1.240	2523.7	NO	55.740	55.740
123789-HxCDD	37.877	1.011	2.90e5	2.37e5	0.885	1.223	1.240	2808.1	NO	59.028	59.028
1234678-HpCDD	42.371	1.001	2.46e5	2.42e5	0.966	1.019	1.050	2119.1	NO	49.584	49.584
OCDD	48.653	1.000	4.05e5	4.66e5	0.921	0.868	0.890	2776.2	NO	113.615	113.615
13C-2378-TCDF	26.900	1.007	7.45e5	9.59e5	1.283	0.777	0.770	3099.2	NO		90.115
13C-12378-PeCDF	31.070	1.163	8.30e5	5.31e5	1.051	1.562	1.550	3483.1	NO		87.886
13C-23478-PeCDF	32.418	1.213	8.30e5	5.29e5	1.030	1.570	1.550	3469.5	NO		89.532
13C-123478-HxCDF	36.112	0.954	3.71e5	7.27e5	1.069	0.511	0.510	2038.3	NO		91.202
13C-123678-HxCDF	36.265	0.958	4.12e5	7.99e5	1.124	0.516	0.510	2183.7	NO		95.675
13C-234678-HxCDF	37.208	0.983	3.95e5	7.73e5	1.041	0.511	0.510	2183.6	NO		99.673
13C-123789-HxCDF	38.293	1.011	3.54e5	6.96e5	1.039	0.508	0 510	1955.6	NO		89.662
13C-1234678-HpCDF	40.442	1.068	3.06e5	6.86e5	0.965	0.446	0.440	1751.4	NO		91.330
13C-1234789-HpCDF	43.303	1.144	2.62e5	5.90e5	0.760	0.444	0.440	1339.5	NO		99.539
13C-1234-TCDD	26.721	0.000	6.53e5	8.20e5	1.000	0.797	0.770	1235.8	NO		100.000
13C-2378-TCDD	27.542	1.031	5.90e5	7.37e5	0.926	0.801	0.770	1074.8	NO		97.239
13C-12378-PeCDD	32.670	1.223	6.43e5	4.21e5	0.734	1.528	1.550	2826.6	NO		98.256
13C-123478-HxCDD	37.340	0.986	5.70e5	4.53e5	0.984	1.260	1.240	2472.0	NO		92.300
13C-123678-HxCDD	37.460	0.989	5.52e5	4.45e5	1.043	1.240	1.240	2351.4	NO		84.844
13C-1234678-HpCDD	42.349	1.118	5.22e5	4.95e5	0.891	1.054	1.050	3284.1	NO		101.385
13C-OCDD	48.636	1.284	7.86e5	8.77e5	0.849	0.896	0.890	5063.7	NO		174.022

Dataset: Untitled
Last Altered: Monday, June 10, 2013 10:06:43 Pacific Daylight Time
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ID: ICV, Name: 13060610, Date: 06-Jun-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.866	0.000	6.25e5	5.02e5	1.000	1.246	1.240	2682.2	NO	100.000
Total-tetrafurans			6.26e4		0.832					10.479
Total-penta1			7.81e1							0.016
Total-pentafurans			7.60e5		0.868					106.682
Total-hexafurans			1.34e6		1.008					215.095
Total-heptafurans			5.57e5		1.159					103.800
Total-Furans			3.17e6		0.992					549.278
Total-tetradioxins			5.88e4		0.939					10.914
Total-pentadioxins			2.85e5		0.930					47.517
Total-hexadioxins			8.26e5		0.890					167.204
Total-heptadioxins			2.46e5		0.966					49.735
Total-Dioxins			1.82e6		0.918					388.984
Total-TEQ			4.99e6							938.262
37CL-2378-TCDD	27.557	1.031	1.41e5		0.989			775.3		9.692
FUNCTION1 PFK			9.64e5							
FUNCTION2 PFK			2.85e5							0.000
FUNCTION3 PFK			9.31e6							0.000
FUNCTION4 PFK			0.00e0							
FUNCTION5 PFK			1.37e5							
FUNCTION1 HXCDPE			8.84e1							0.000
FUNCTION1 HPCDPE			2.21e3							0.000
FUNCTION2 HPCDPE			7.90e2							0.000
FUNCTION3 OCDPE			8.06e1							0.000
FUNCTION4 NCDPE			5.51e2							0.000
FUNCTION5 DCDPE			8.49e1							0.000

Dataset: Untitled
Last Altered: Monday, June 10, 2013 10:06:43 Pacific Daylight Time
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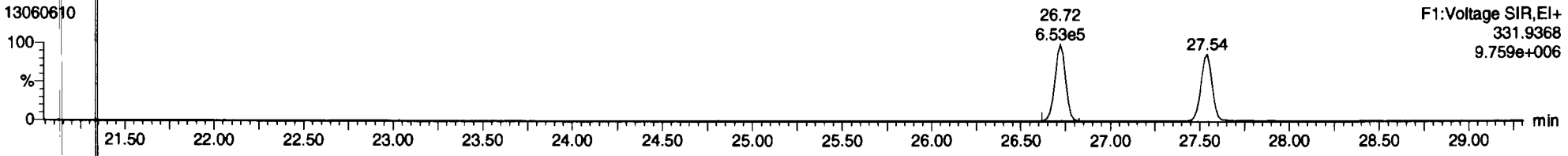
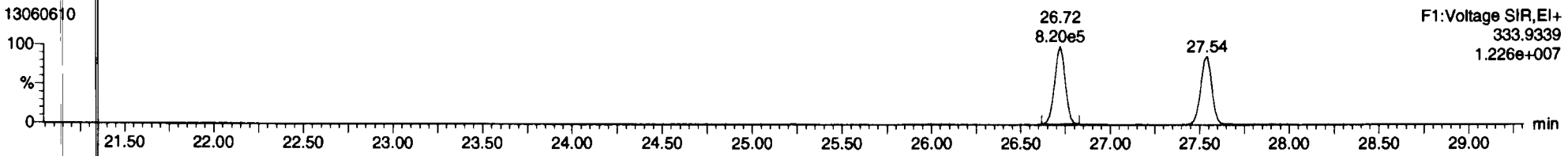
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: ICV, Name: 13060610, Date: 06-Jun-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

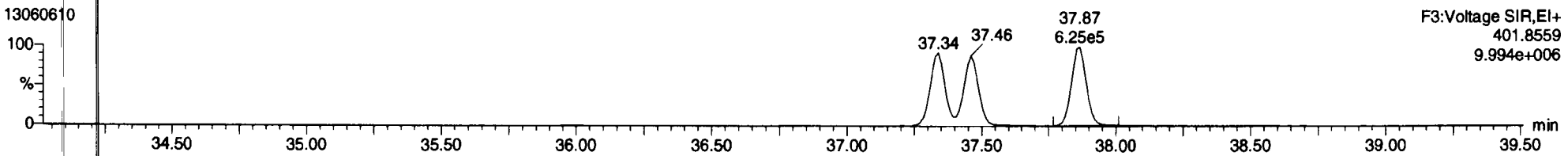
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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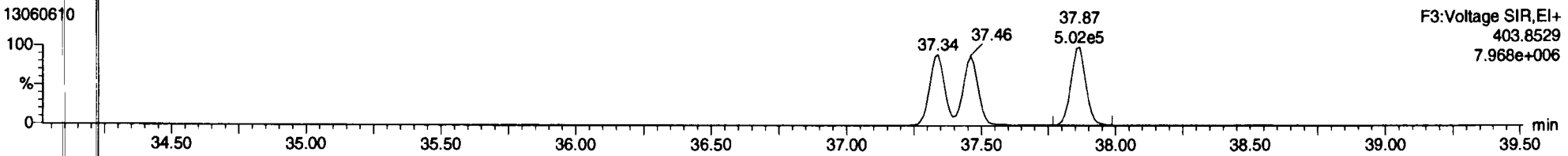

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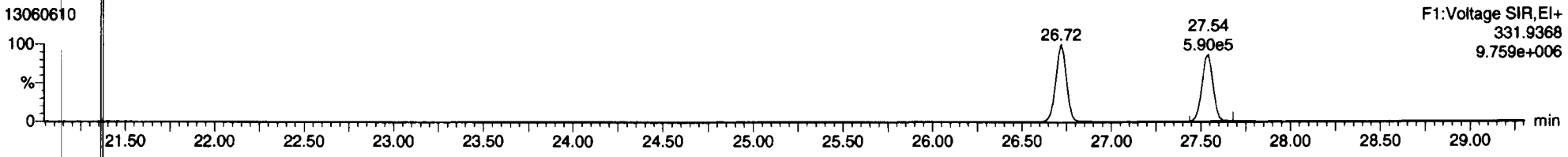
ID: ICV, Name: 13060610, Date: 06-Jun-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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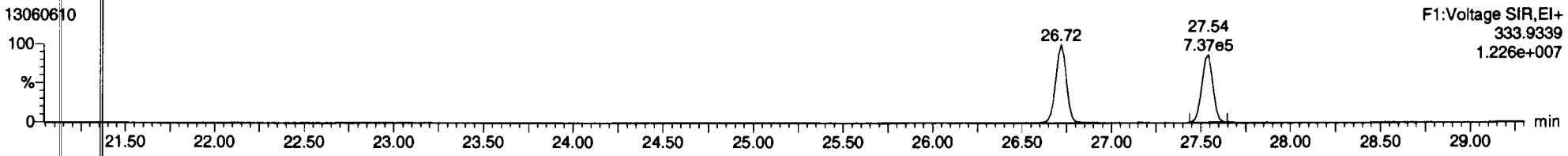
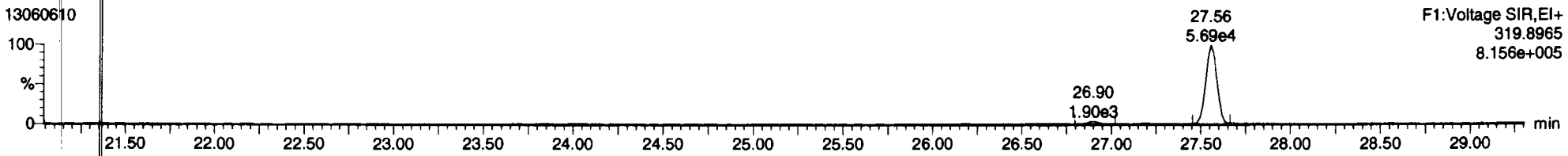
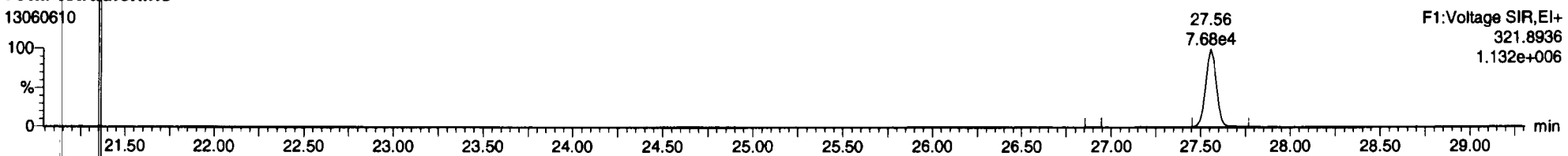


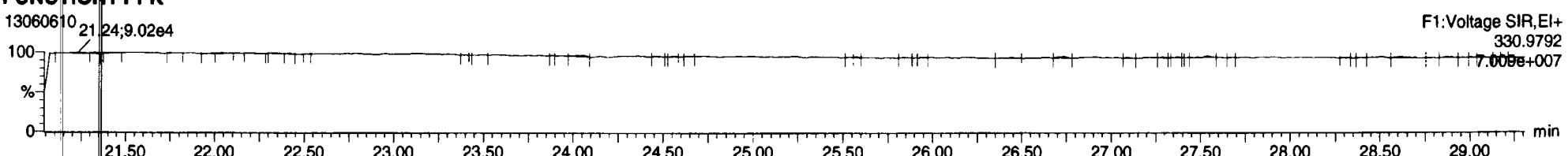
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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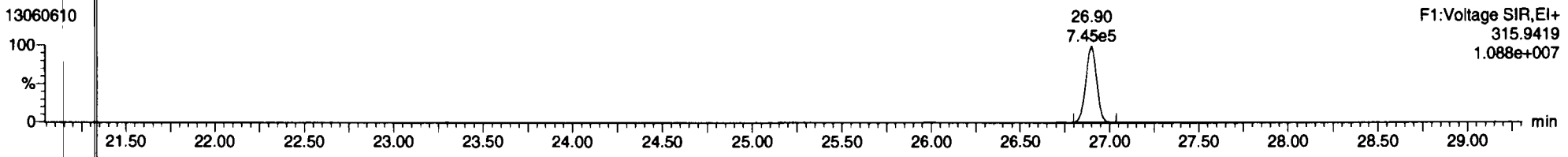
13C-2378-TCDF



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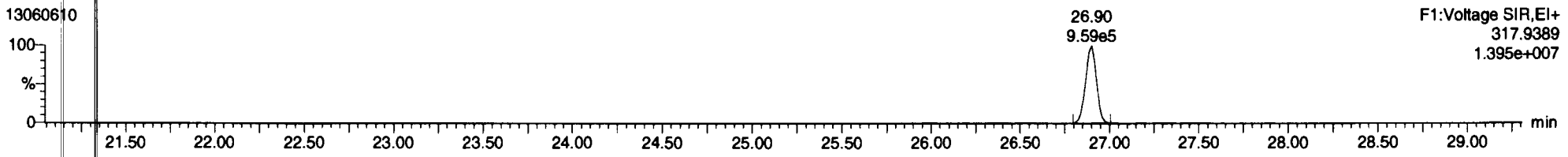
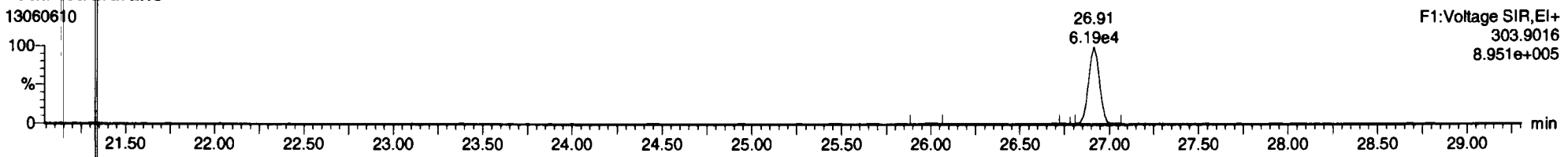
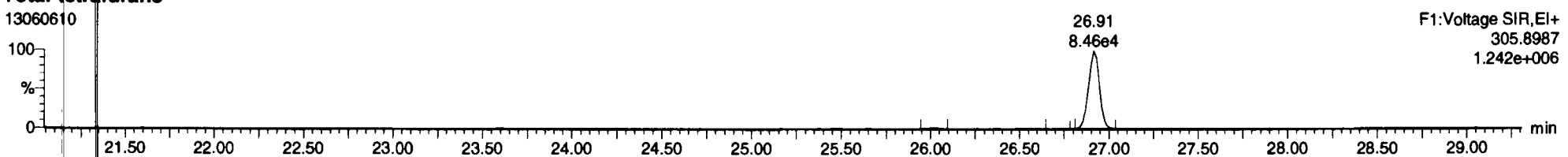


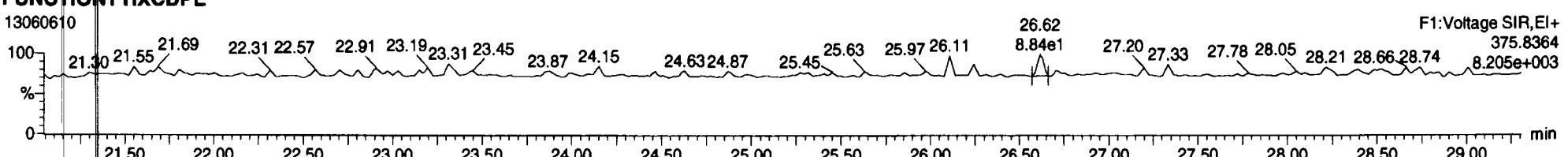
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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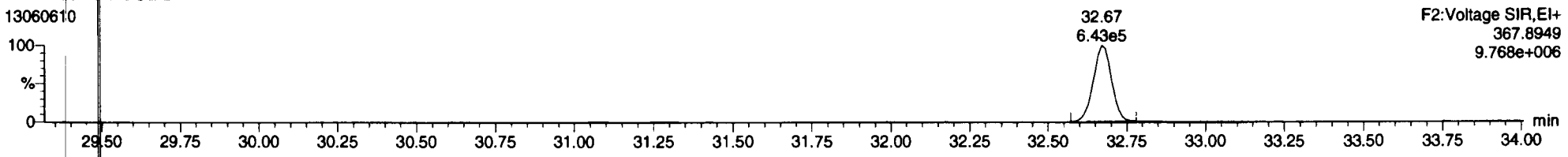
ID: ICV, Name: 13060610, Date: 06-Jun-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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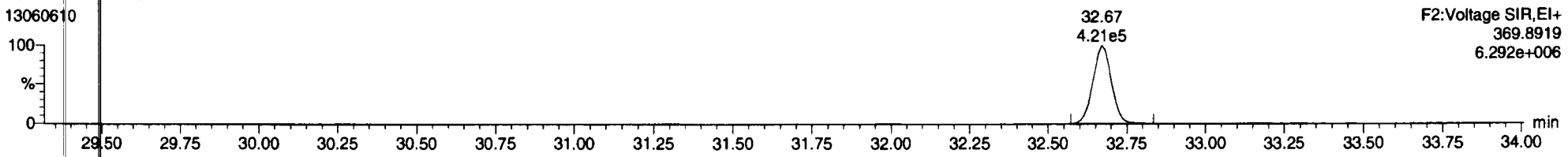
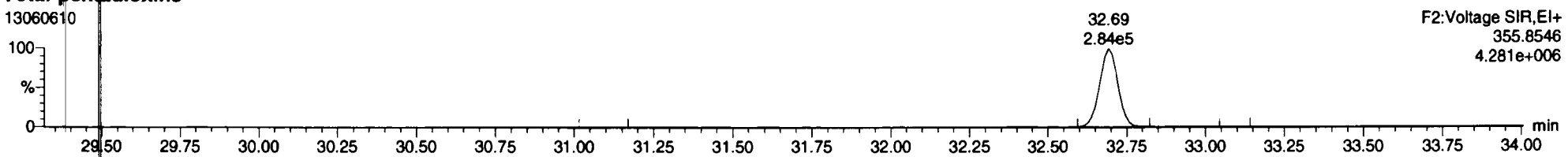
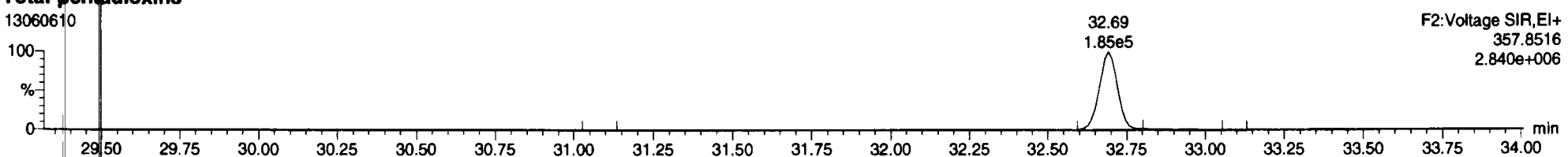


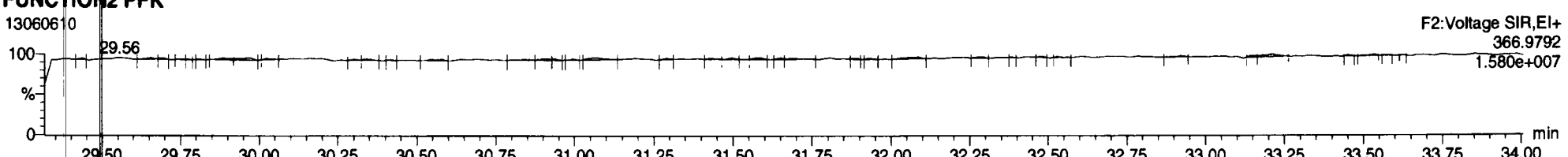
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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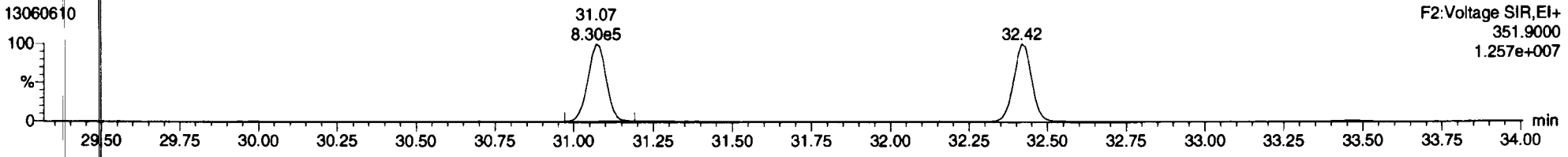
13C-12378-PeCDF



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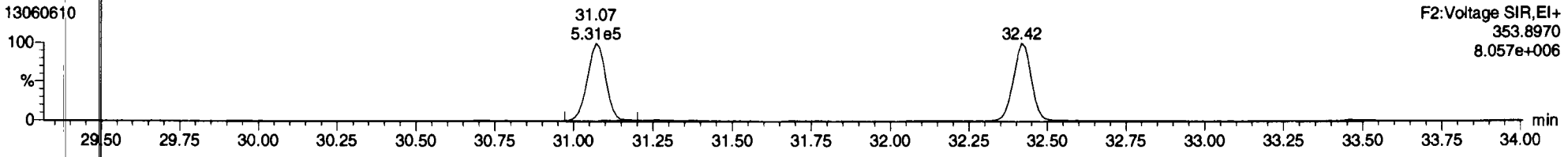
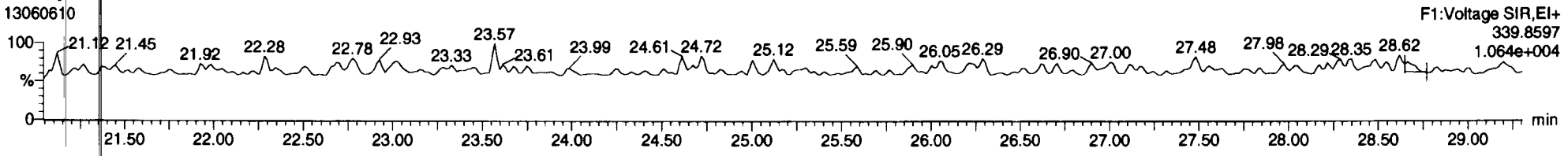
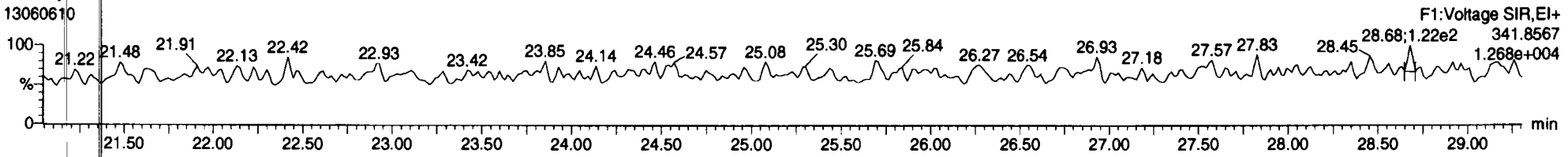


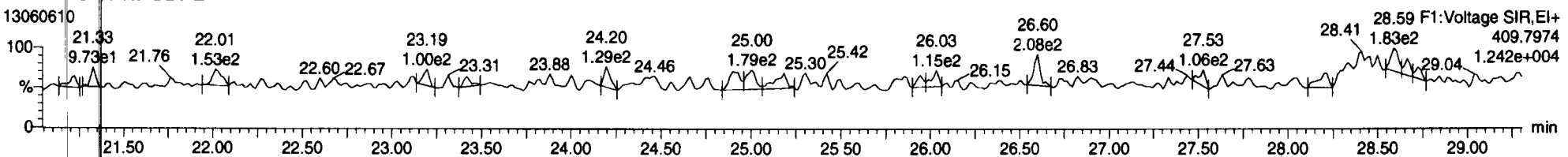
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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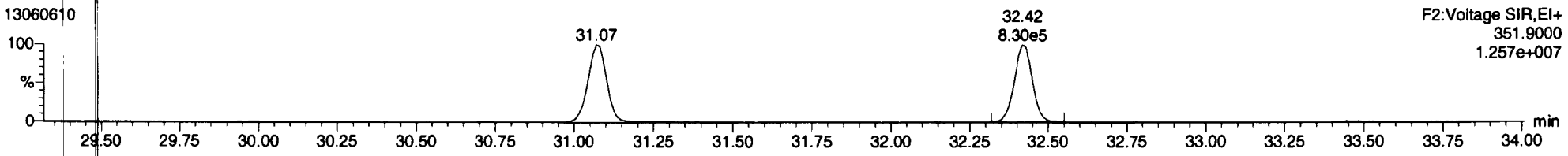
13C-23478-PeCDF



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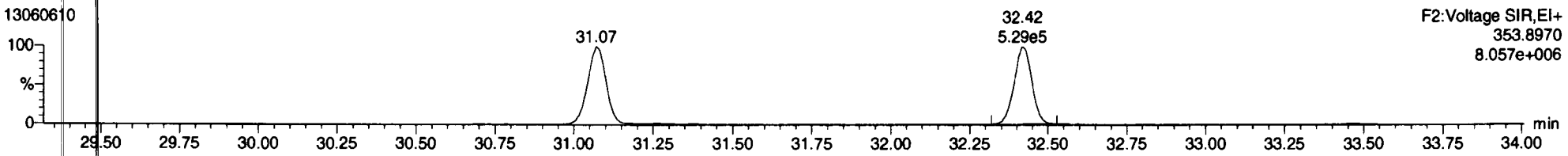
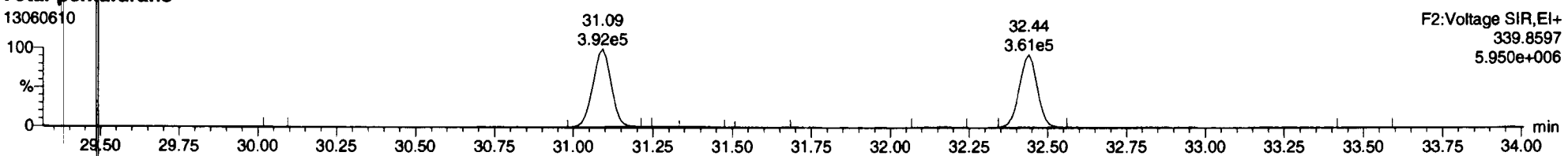
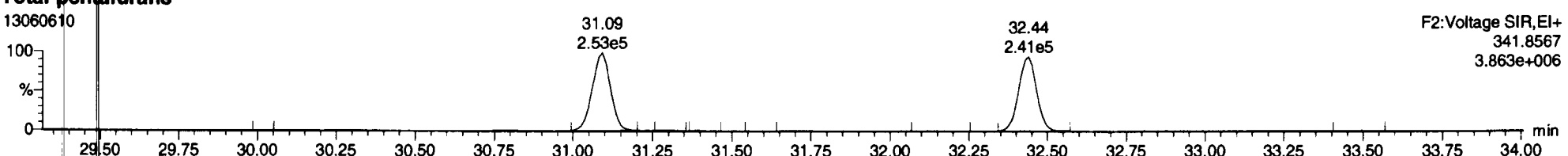


Total-pentafurans



Total-pentafurans



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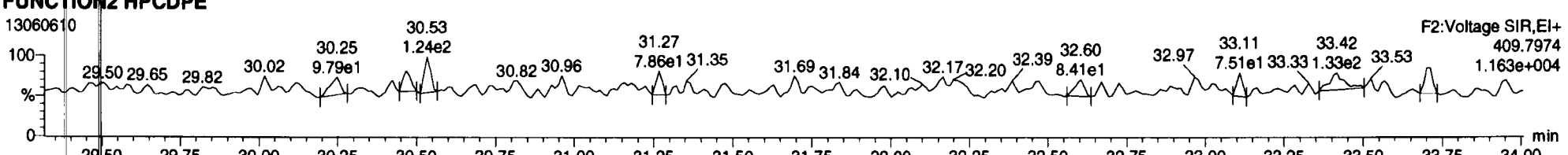

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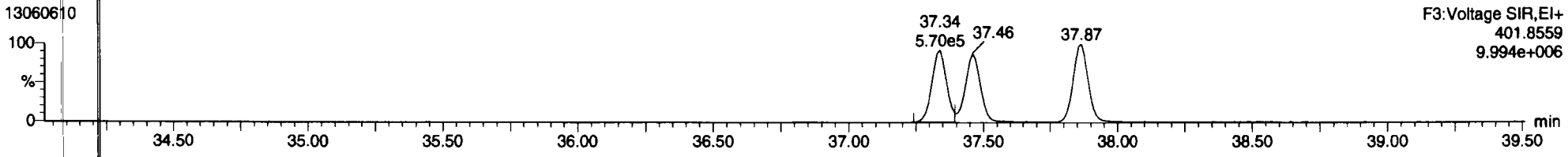
13C-123478-HxCDD



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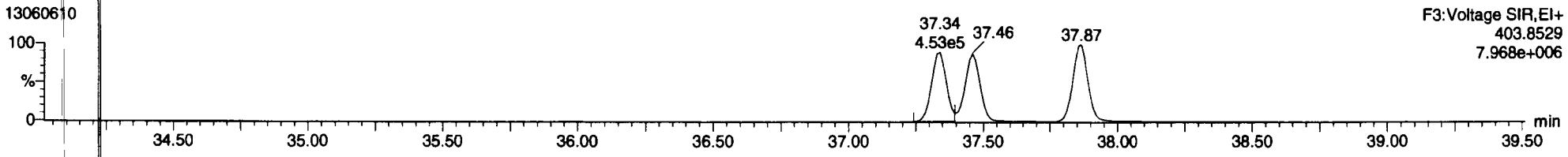
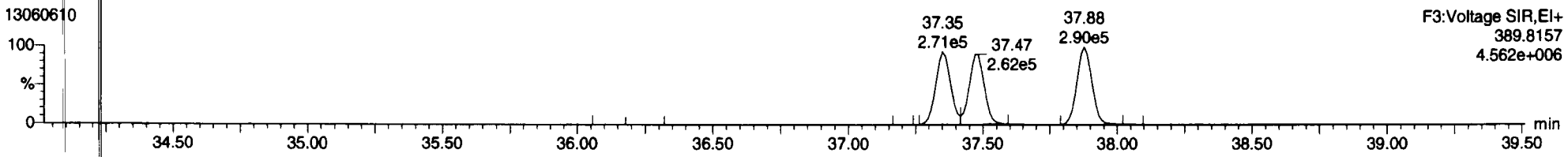
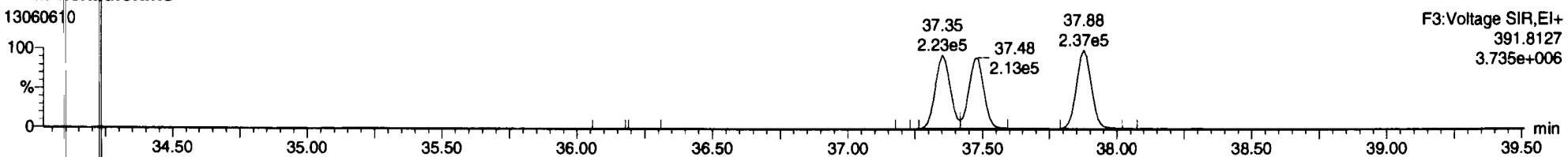


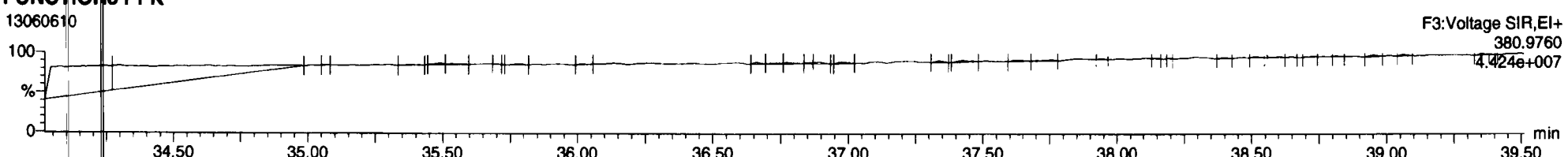
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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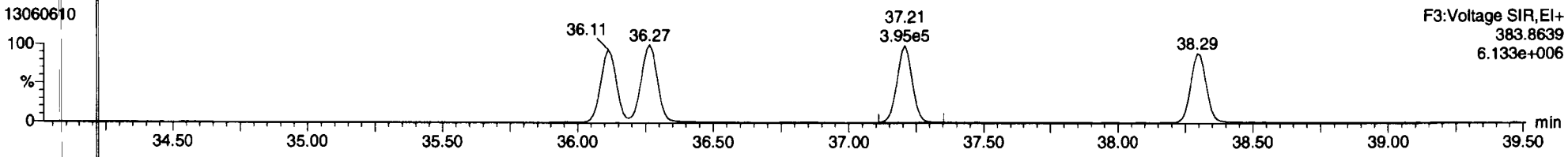
Printed: Monday, June 10, 2013 10:07:15 Pacific Daylight Time

ID: ICV, Name: 13060610, Date: 06-Jun-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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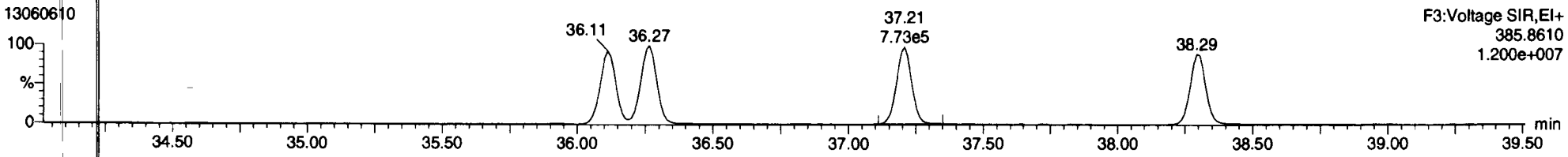
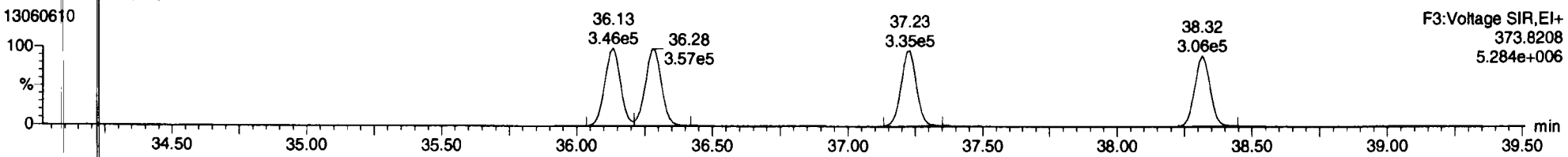


Total-hexafurans



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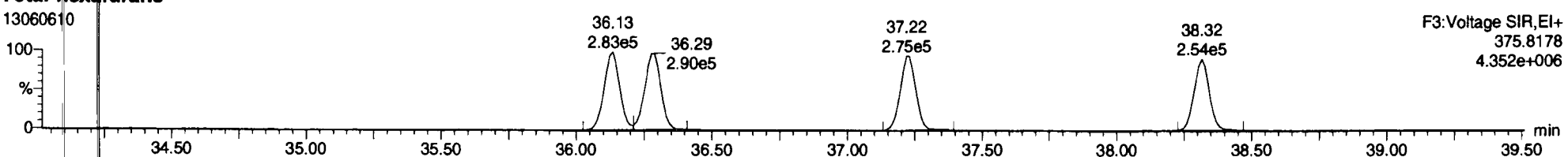
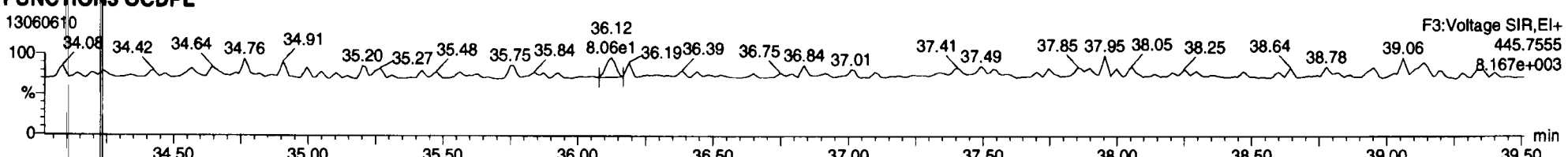


FUNCTION3 OCDPE



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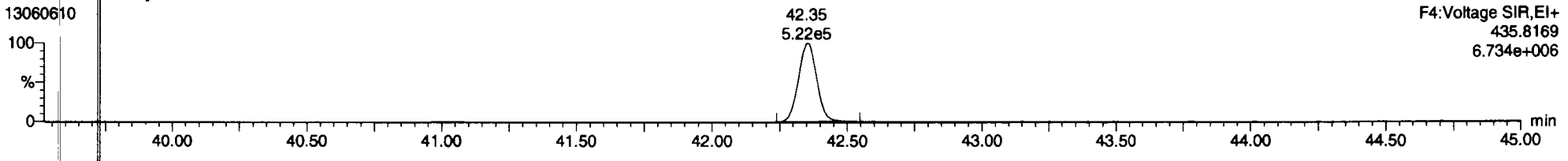
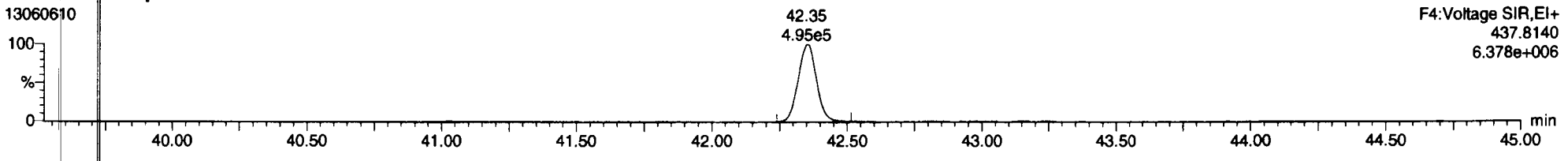
13C-1234678-HpCDD



13C-1234678-HpCDD



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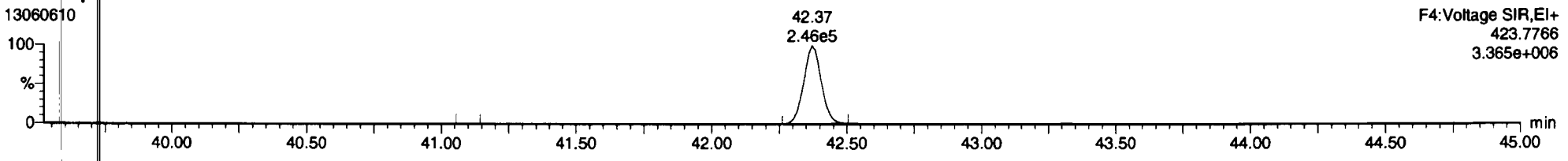

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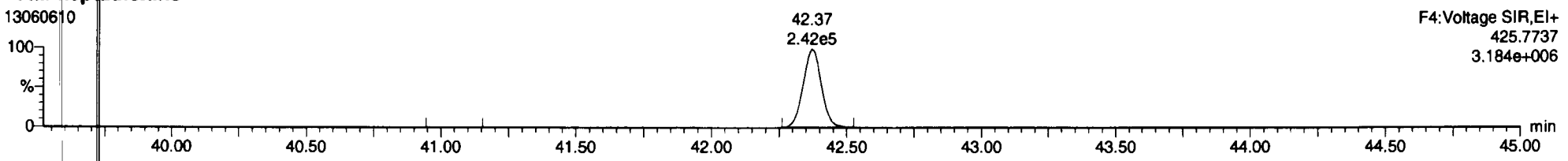

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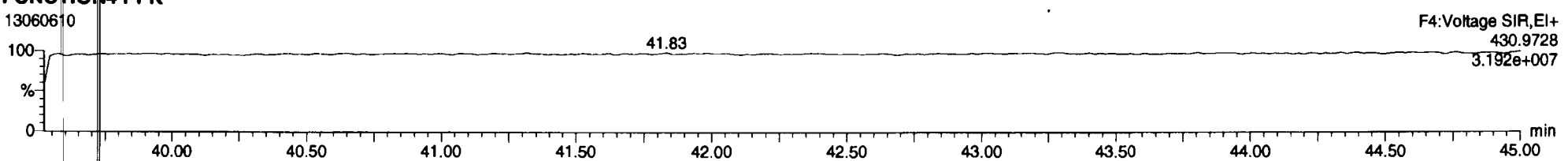

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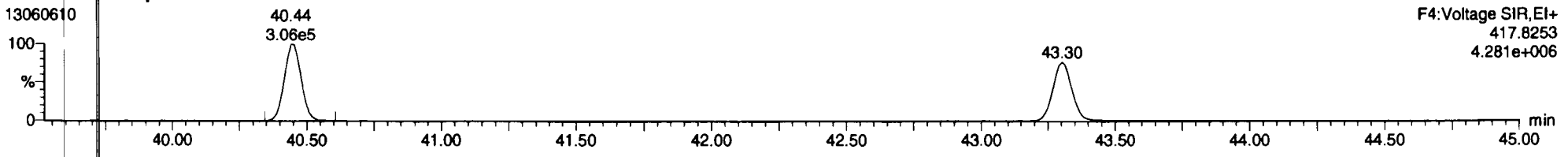
ID: ICV, Name: 13060610, Date: 06-Jun-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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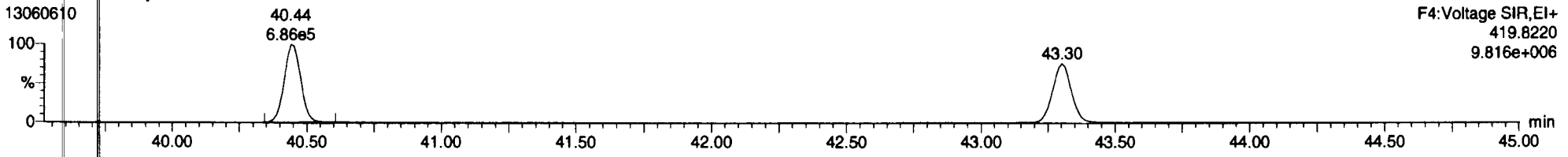

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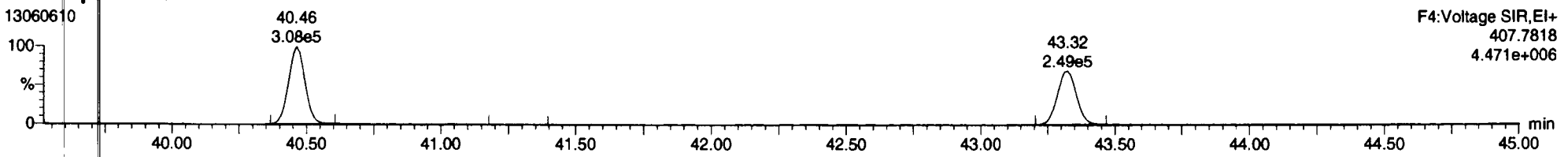

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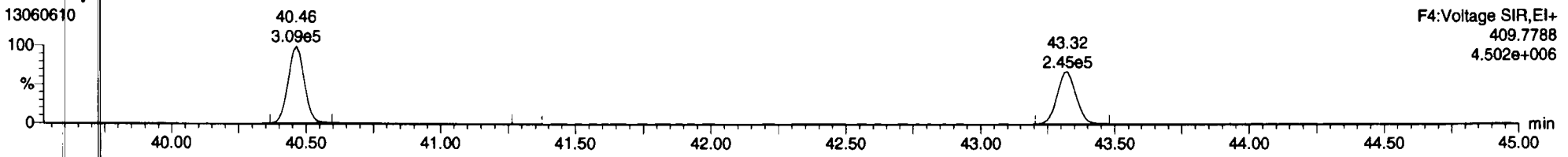
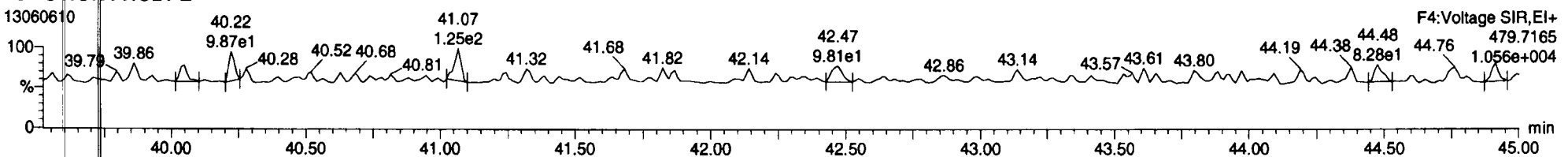


FUNCTION4 NCDPE



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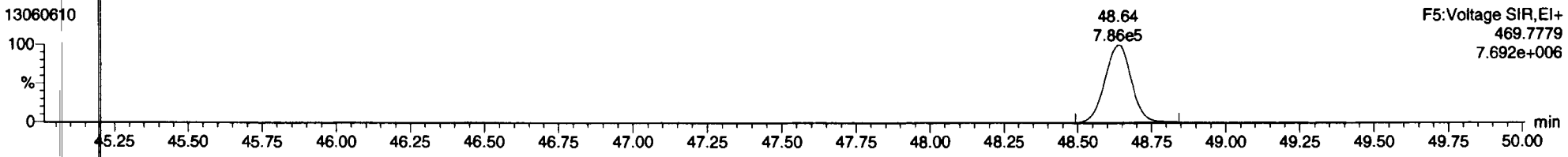
13C-OCDD



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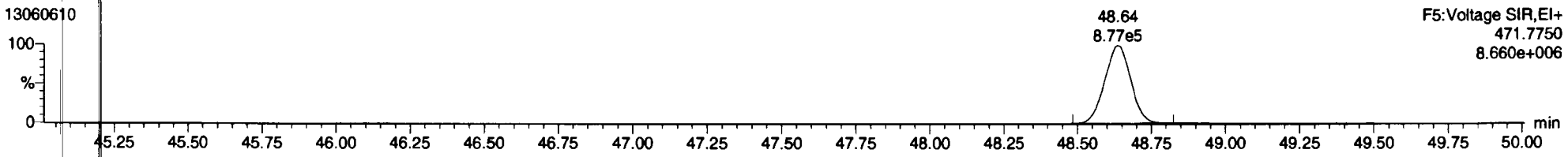

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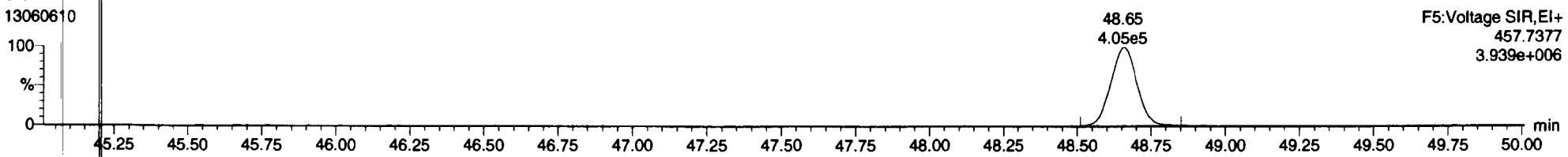

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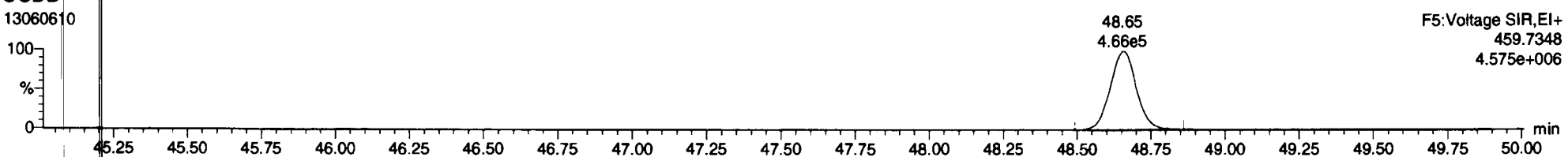

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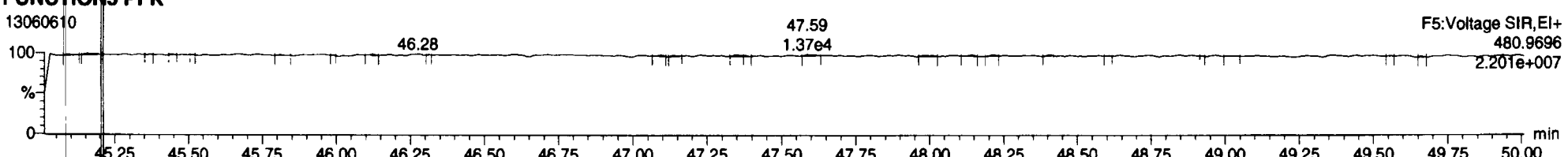

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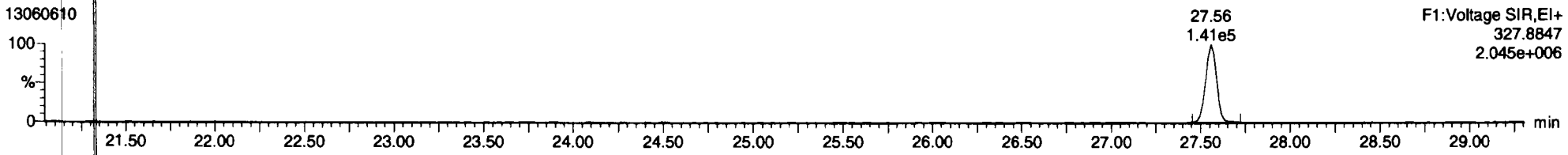
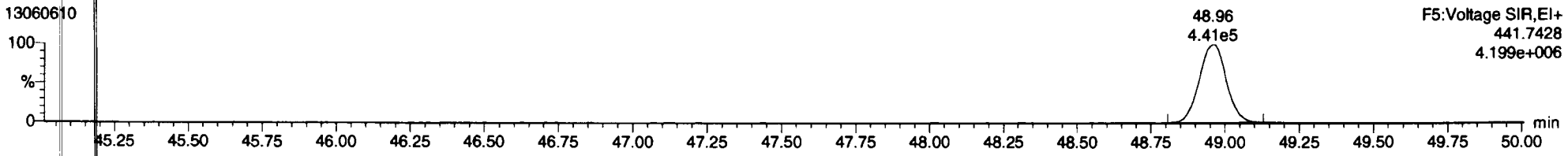
37CL-2378-TCDD



OCDF



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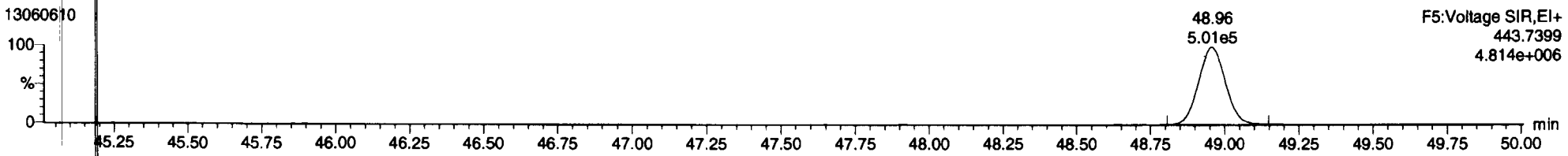
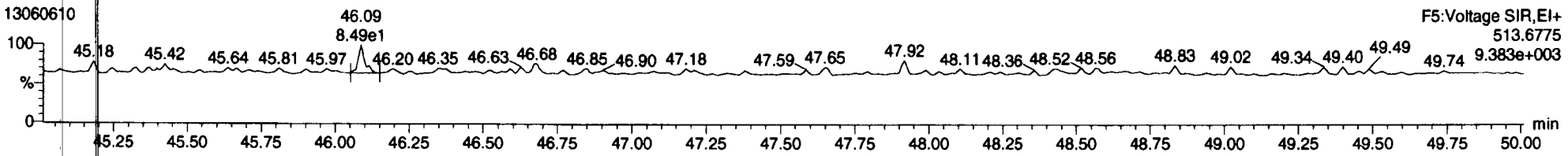


FUNCTION5 DCDPE



Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: WR59, WS21 Client ID: SAIC

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 6/6/13 Analysis Start Date: 6/17/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	Y / N / _____	Signal / Noise ≥ 2.5?	Y / N / _____
TCDD / TCDF Resolution ≤ 25%	Y / N / _____	Extraction STD Limits Met?	Y / N / _____
PCDF Windows Verified	Y / N / _____	Cleanup STD Limits Met?	Y / N / _____
CCV Meets %D Limits?	Y / N / _____	Method Blank in Control?	Y / N / _____
CCV Ion Ratios within Limits?	Y / N / _____	OPR Recovery Limits Met?	Y / N / _____
CCV RRT within Limits?	Y / N / _____	Values Exceeding Curve Range?	Y / N / _____
Manual Integrations for Samples?	Y / N / _____	Samples Diluted?	Y / N / _____
Special Analysis Request?	Y / N / _____	Duplicate Sample RPD ≤ 25%?	NA / _____

Detail problems, corrective actions and/or other pertinent information below:

Jobs batched.

(Review 1)Analyst: _____ **Date:** 6/18/13

(Review 2)Reviewer: _____ **Date:** _____

WR59 : WS21

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 6/17/13 Analysis: Dioxins Analyst: [illegible]

GC Program: 8290C Column No: I7822 Column Type: RTX-Dioxin2

Inj Vol: 1µl Instrument Tune (IPR) Jun13 1-5 Detector Voltage: 350

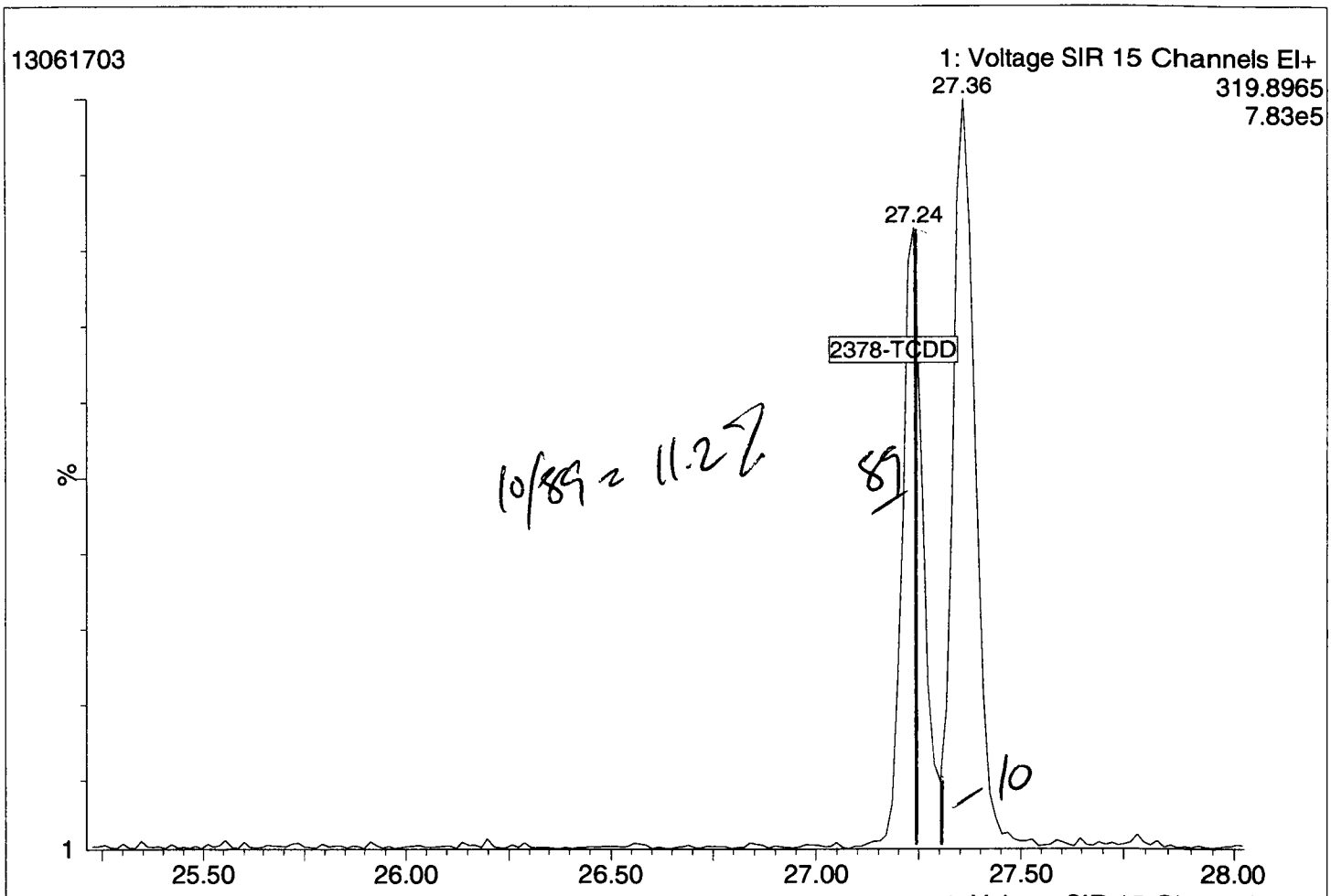
Resolution Check Files: 14:44, 01:37, 09:39 Curve Date: 6/6/13

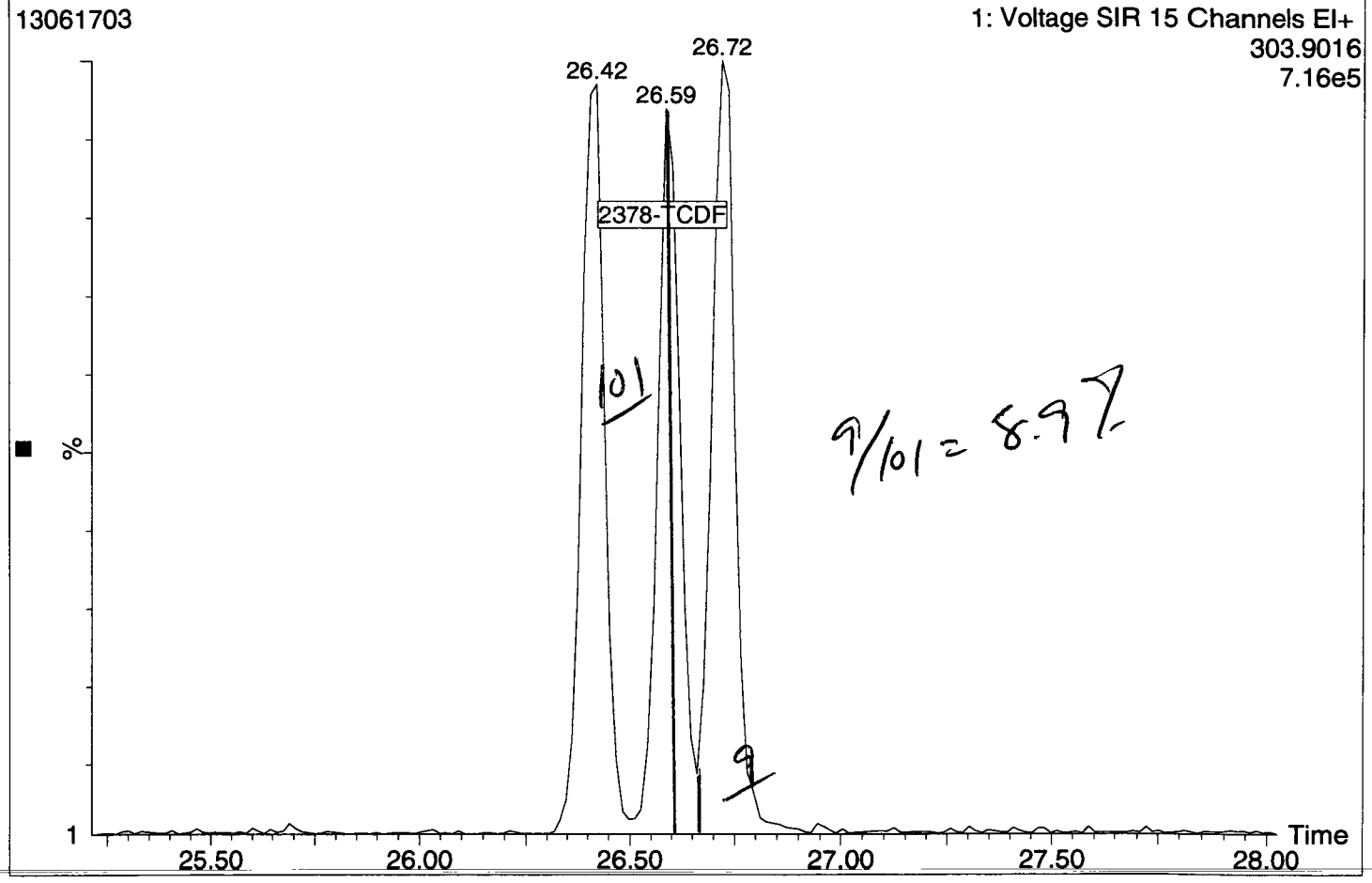
IS/SS	Ical/Ccal	LCS/ICV
I8144	I7708 PFT-2	

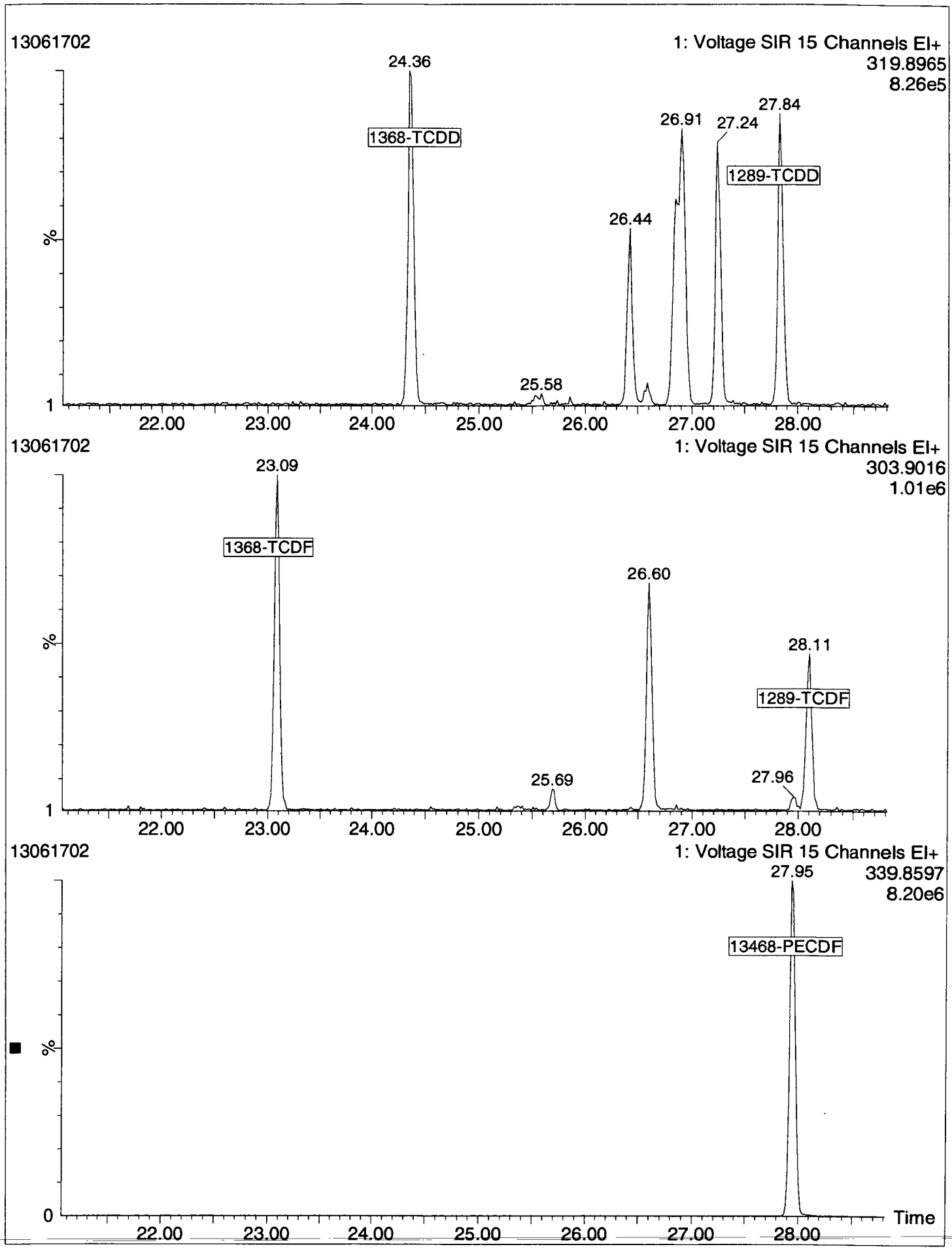
1	17-Jun-13	14:49:09	13061702	CS3	
2	17-Jun-13	15:54:35	13061703	ISC01	
3	17-Jun-13	16:45:51	13061704	WS30MBS	
4	17-Jun-13	17:38:04	13061705	WS30OPR	
5	17-Jun-13	18:30:25	13061706	WS30SRM	
6	17-Jun-13	19:22:47	13061707	WS21A	
7	17-Jun-13	20:15:16	13061708	WS09A	
8	17-Jun-13	21:07:21	13061709	WR99D	
9	17-Jun-13	21:59:42	13061710	WS30A	
10	17-Jun-13	22:51:57	13061711	WS30B	
11	17-Jun-13	23:44:17	13061712	WS30C	
12	18-Jun-13	00:36:31	13061713	CS3	
13	18-Jun-13	01:37:14	13061714	WS30D	
14	18-Jun-13	02:32:44	13061715	WS30E	
15	18-Jun-13	03:24:59	13061716	WS30F	
16	18-Jun-13	04:17:26	13061717	WS30G	
17	18-Jun-13	05:09:41	13061718	WS30H	
18	18-Jun-13	06:02:00	13061719	WS30I	
19	18-Jun-13	06:54:16	13061720	WS30IDUP	
20	18-Jun-13	07:46:36	13061721	WS30J	
21	18-Jun-13	08:38:43	13061722	CS3	

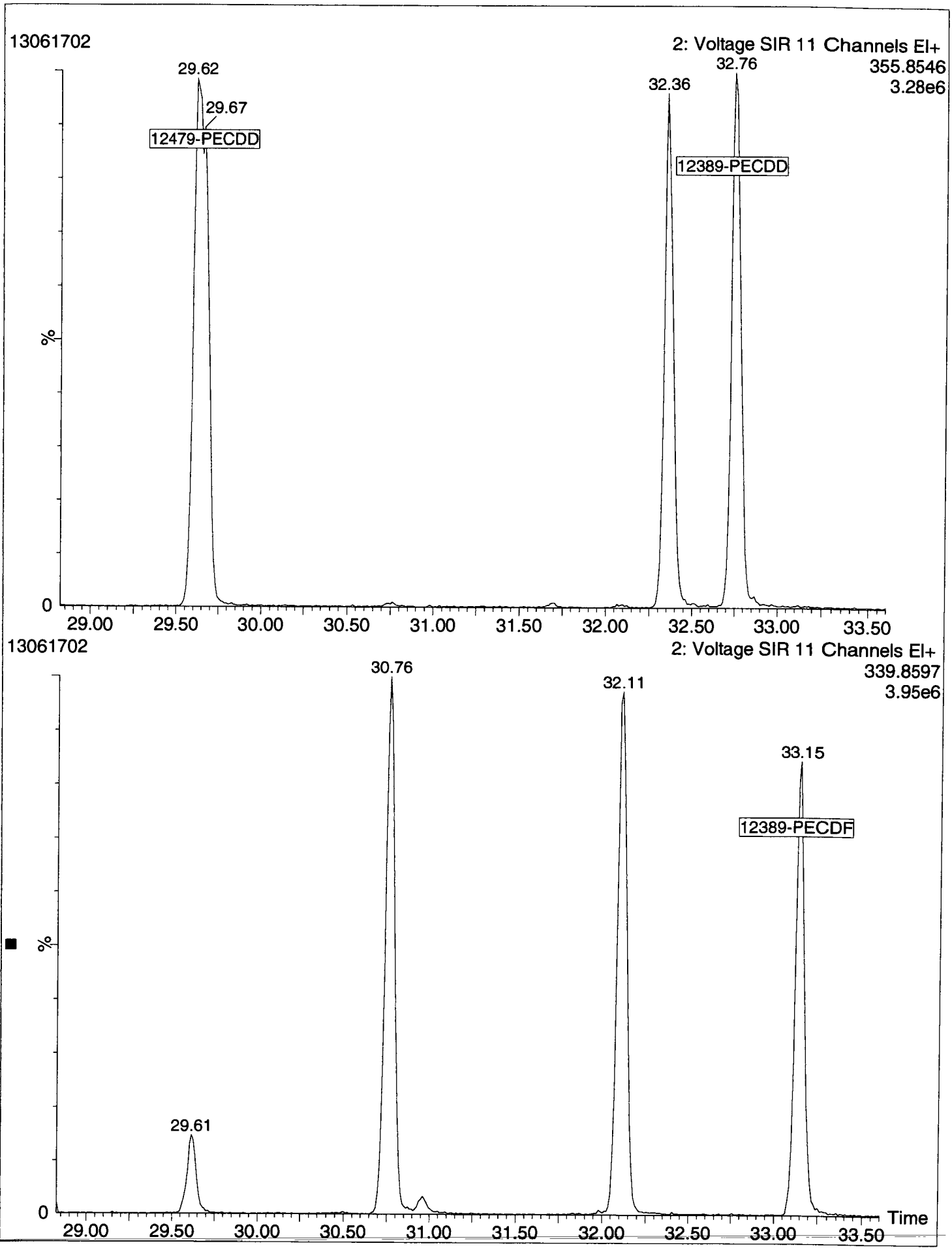
[illegible] 6/18/13

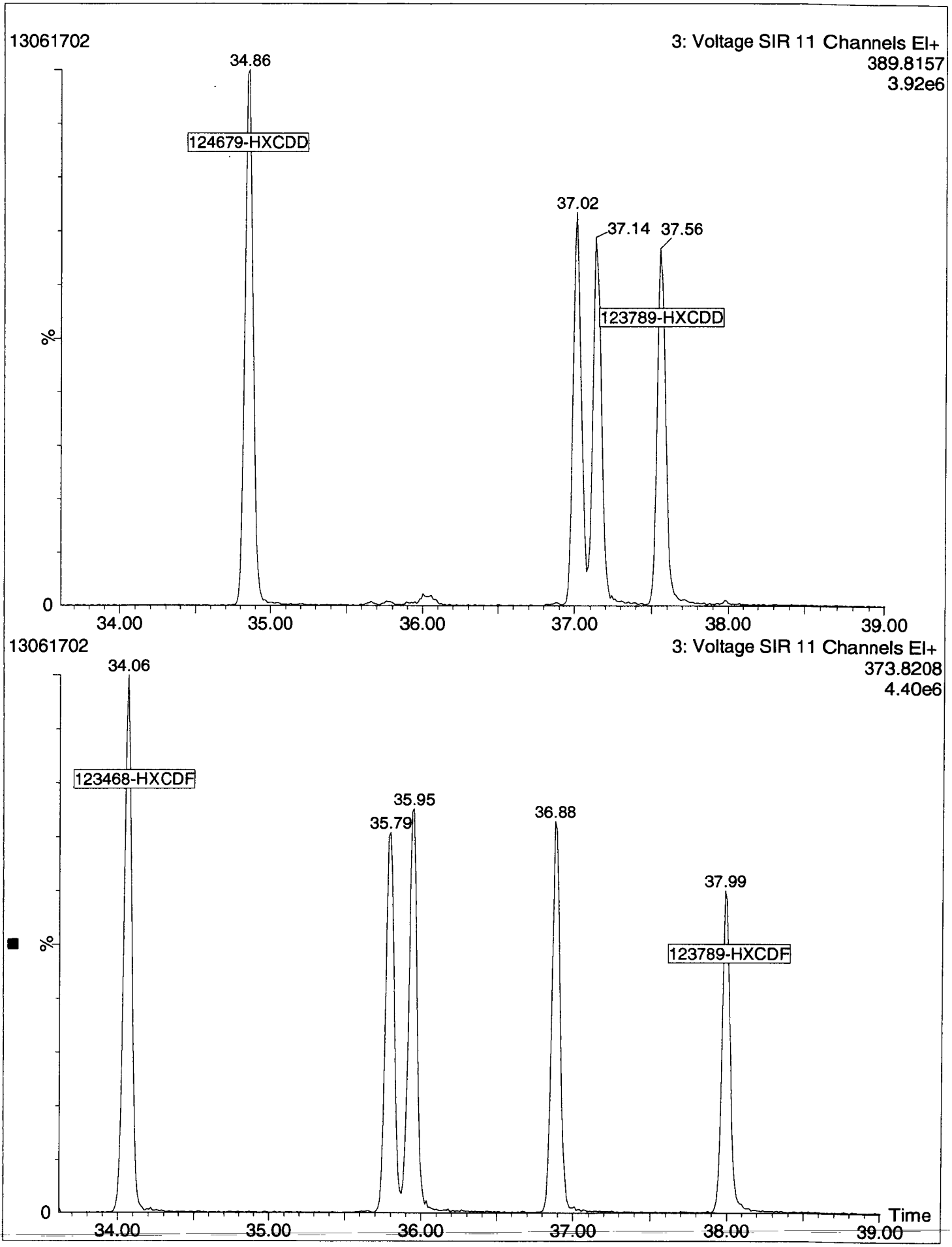
Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

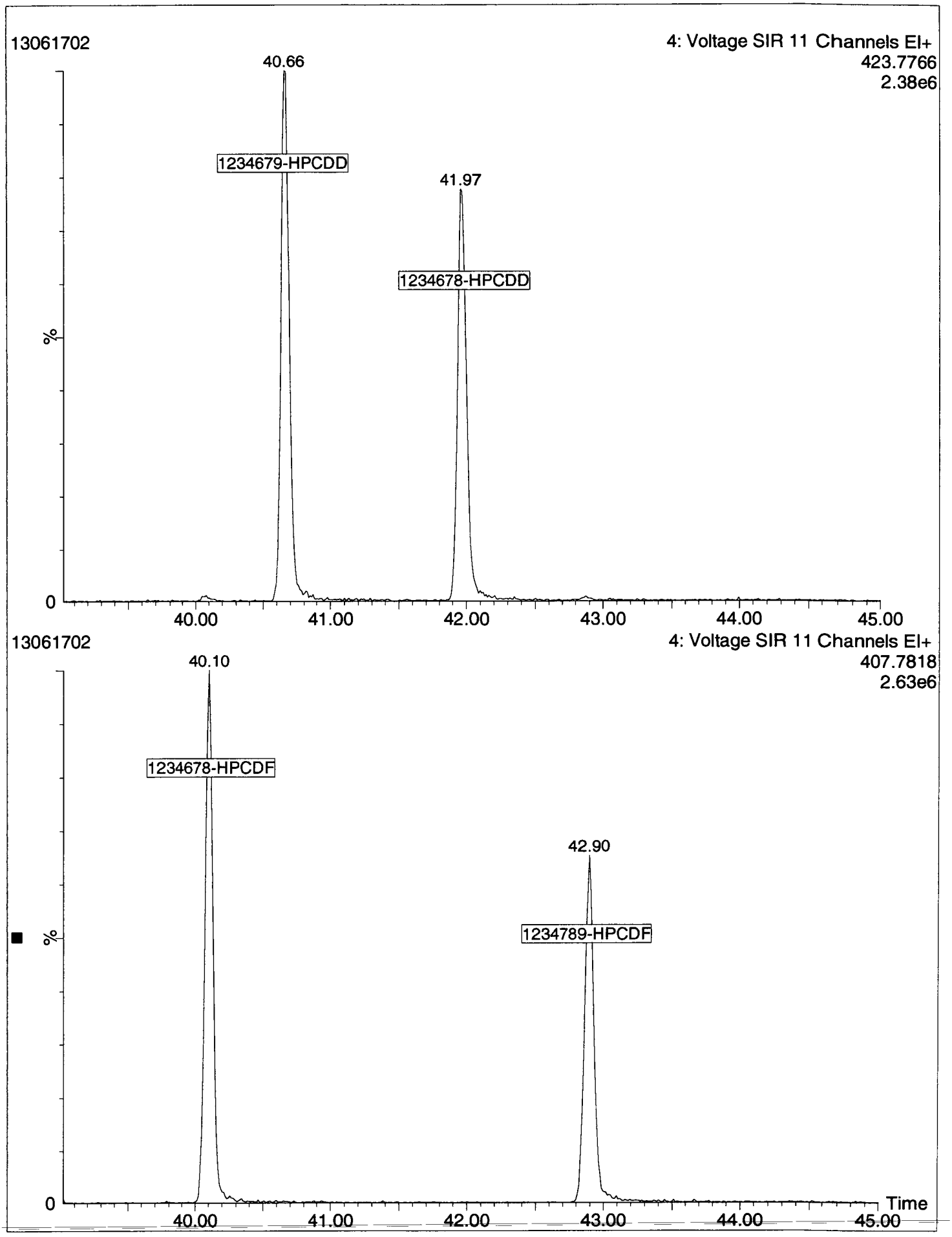

13061703
1: Voltage SIR 15 Channels EI+
27.36
319.8965
7.83e5
27.24
2378-TCDD
10/89 = 11.2%
89
10
%
1
25.50
26.00
26.50
27.00
27.50
28.00


13061703
1: Voltage SIR 15 Channels EI+
303.9016
7.16e5
26.72
26.42
26.59
2378-TCDF
101
9
9/101 = 8.9%
%
1
Time
25.50
26.00
26.50
27.00
27.50
28.00


13061702
1: Voltage SIR 15 Channels EI+
319.8965
8.26e5
24.36
1368-TCDD
26.91
27.24
27.84
1289-TCDD
26.44
25.58
%
1
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13061702
1: Voltage SIR 15 Channels EI+
303.9016
1.01e6
23.09
1368-TCDF
26.60
28.11
1289-TCDF
25.69
27.96
%
1
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13061702
1: Voltage SIR 15 Channels EI+
339.8597
8.20e6
27.95
13468-PECDF
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00

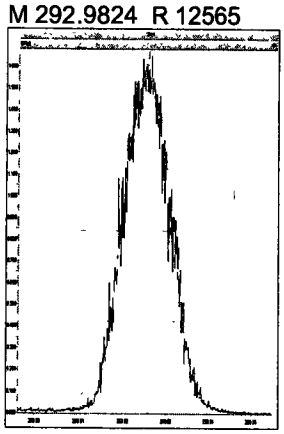

13061702
2: Voltage SIR 11 Channels EI+
355.8546
3.28e6
29.62
29.67
12479-PECDD
32.36
32.76
12389-PECDD
%
0
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50
13061702
2: Voltage SIR 11 Channels EI+
339.8597
3.95e6
30.76
32.11
33.15
12389-PECDF
29.61
%
0
Time
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50


13061702
3: Voltage SIR 11 Channels EI+
389.8157
3.92e6
34.86
124679-HXCDD
37.02
37.14
37.56
123789-HXCDD
%
0
34.00
35.00
36.00
37.00
38.00
39.00
13061702
3: Voltage SIR 11 Channels EI+
373.8208
4.40e6
34.06
123468-HXCDF
35.95
35.79
36.88
37.99
123789-HXCDF
%
0
Time
34.00
35.00
36.00
37.00
38.00
39.00

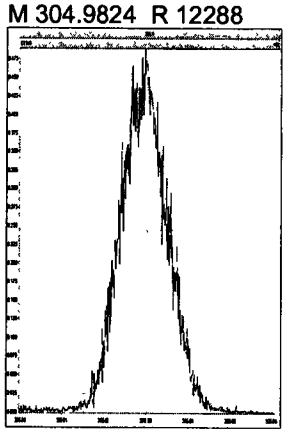

13061702
4: Voltage SIR 11 Channels EI+
423.7766
2.38e6
40.66
1234679-HPCDD
41.97
1234678-HPCDD
%
0
40.00
41.00
42.00
43.00
44.00
45.00
13061702
4: Voltage SIR 11 Channels EI+
407.7818
2.63e6
40.10
1234678-HPCDF
42.90
1234789-HPCDF
%
0
Time
40.00
41.00
42.00
43.00
44.00
45.00

Printed: Monday, June 17, 2013 14:44:42 Pacific Daylight Time

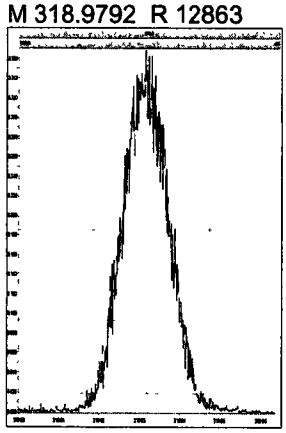
M 292.9824 R 12565



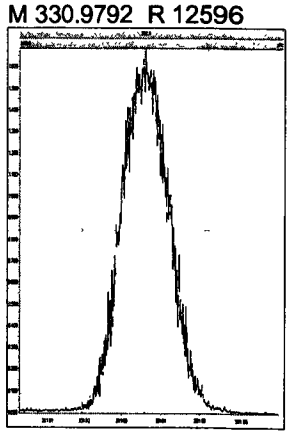
M 304.9824 R 12288



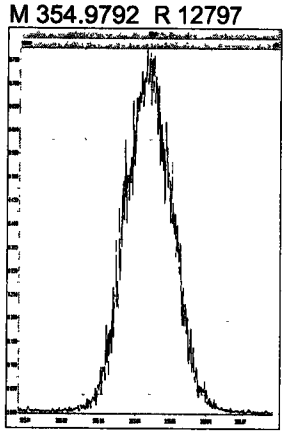
M 318.9792 R 12863



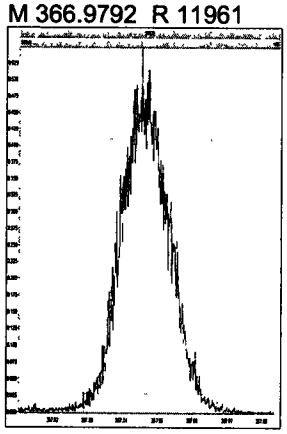
M 330.9792 R 12596



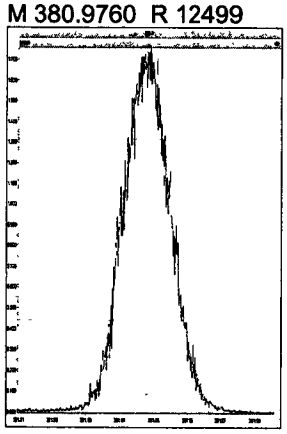
M 354.9792 R 12797



M 366.9792 R 11961



M 380.9760 R 12499



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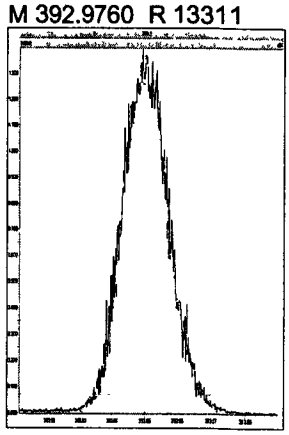

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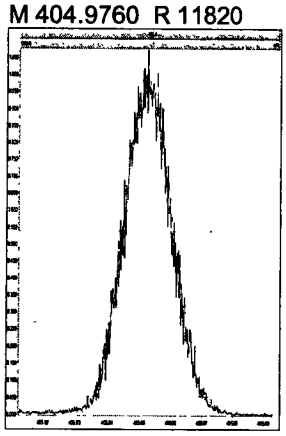
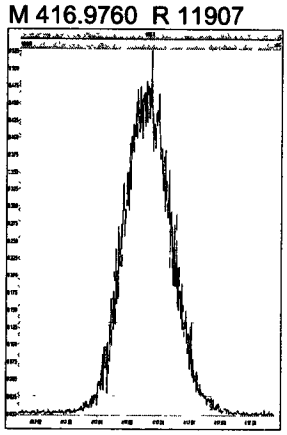


M 416.9760 R 11907



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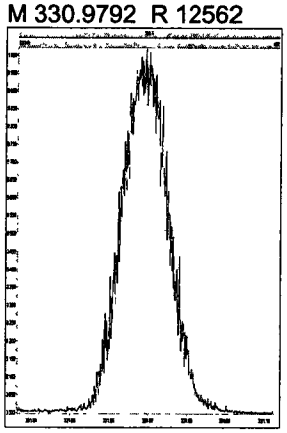
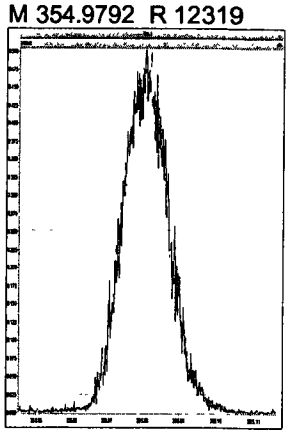
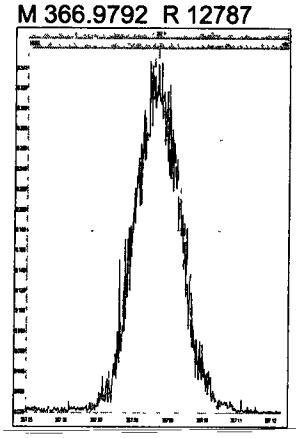


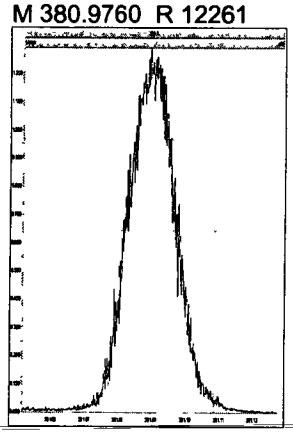
M 354.9792 R 12319



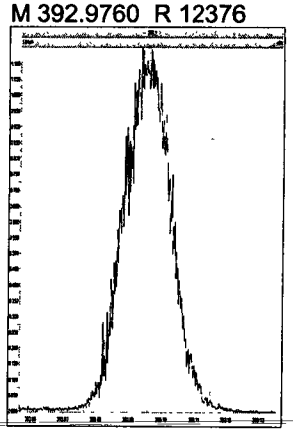
M 366.9792 R 12787



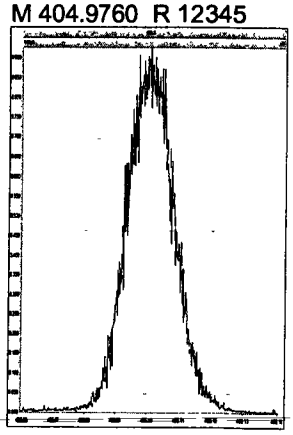
M 380.9760 R 12261



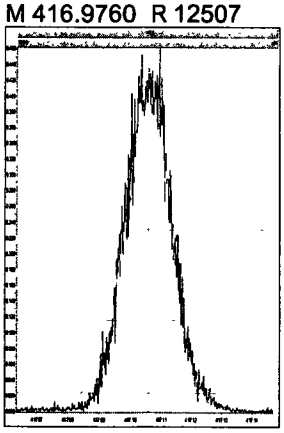
M 392.9760 R 12376



M 404.9760 R 12345



M 416.9760 R 12507



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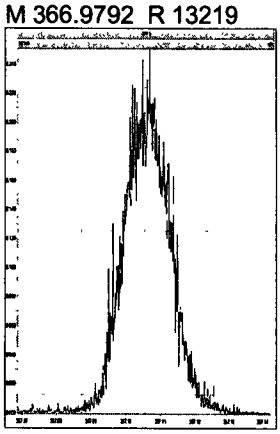
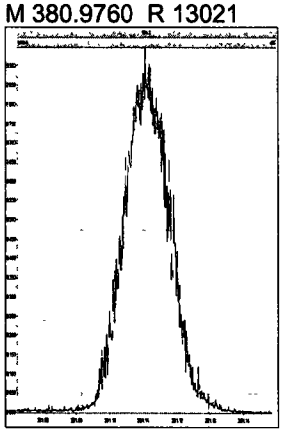
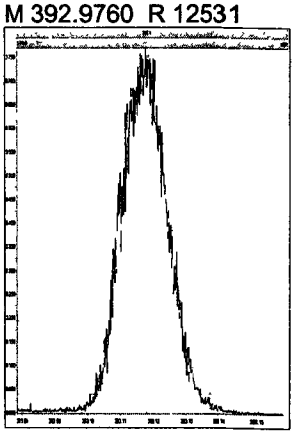


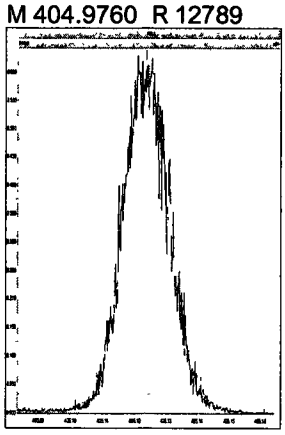
M 380.9760 R 13021



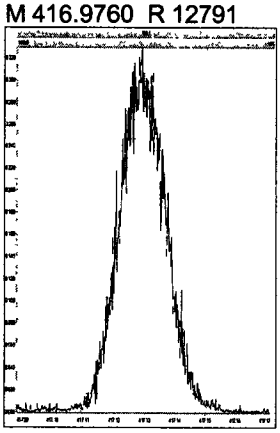
M 392.9760 R 12531



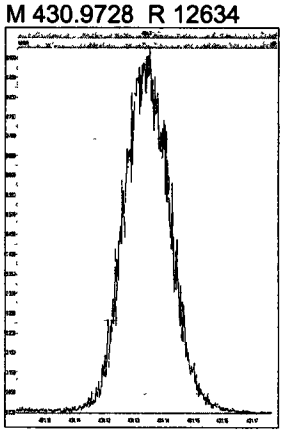
M 404.9760 R 12789



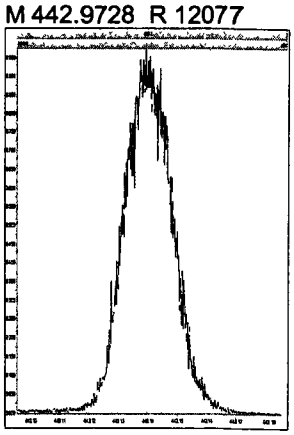
M 416.9760 R 12791



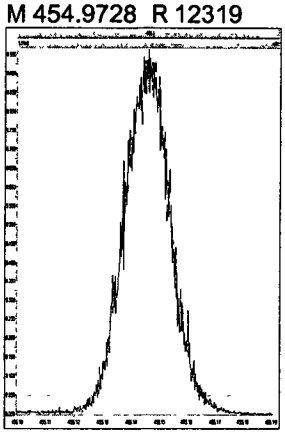
M 430.9728 R 12634



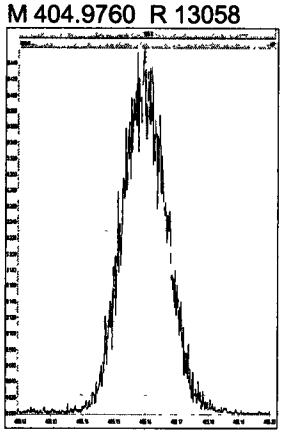
M 442.9728 R 12077



M 454.9728 R 12319



M 404.9760 R 13058



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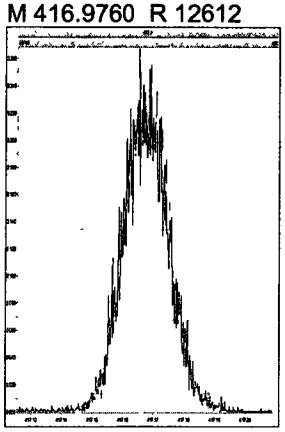
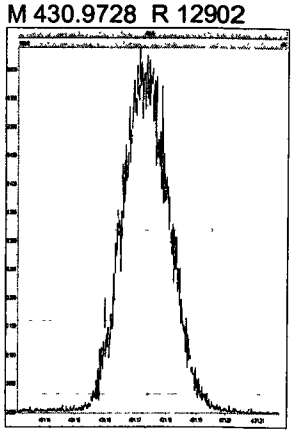
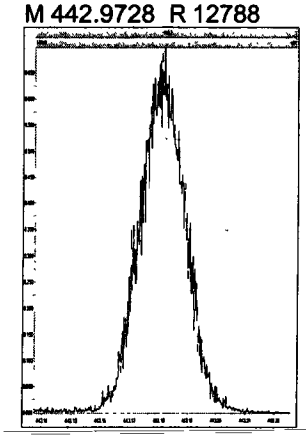


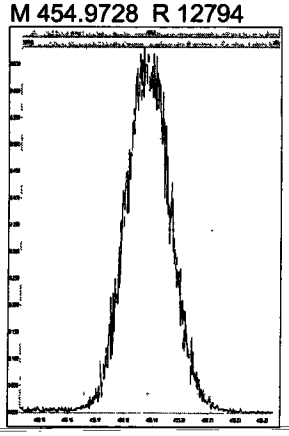
M 430.9728 R 12902



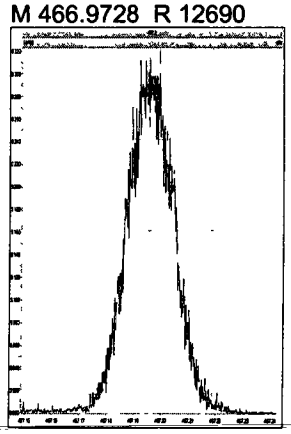
M 442.9728 R 12788



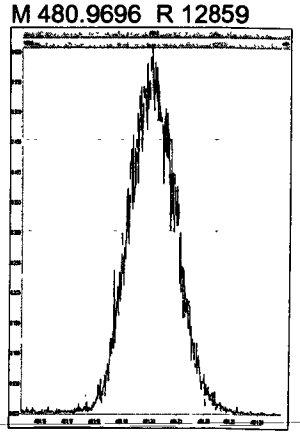
M 454.9728 R 12794



M 466.9728 R 12690



M 480.9696 R 12859



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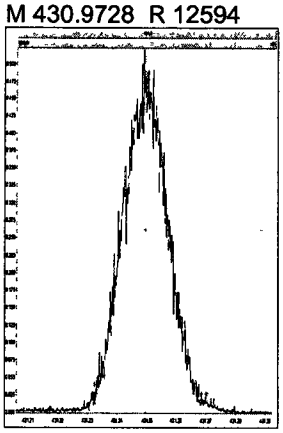
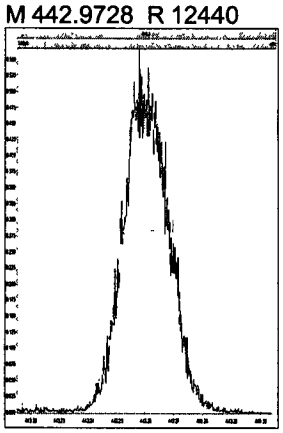
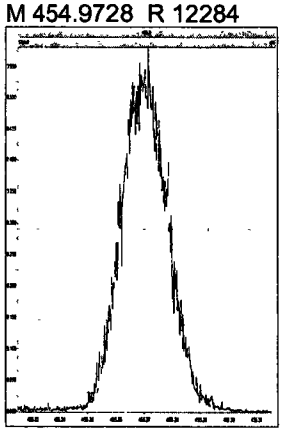
M 430.9728 R 12594



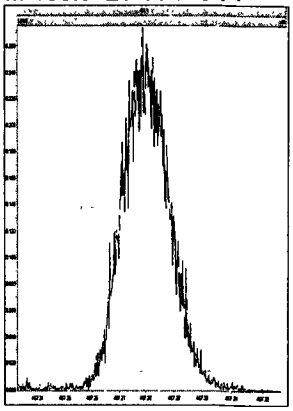
M 442.9728 R 12440



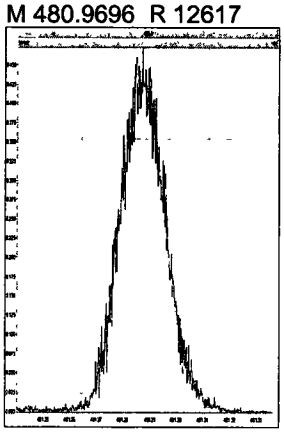
M 454.9728 R 12284



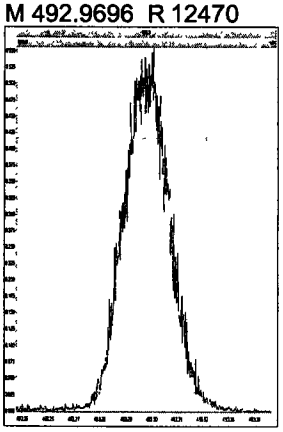
M 466.9728 R 12544



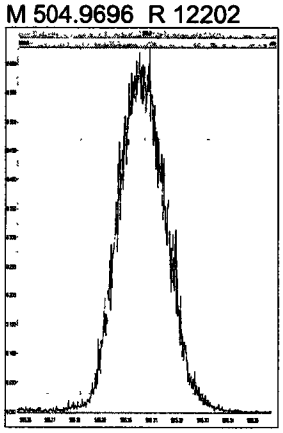
M 480.9696 R 12617



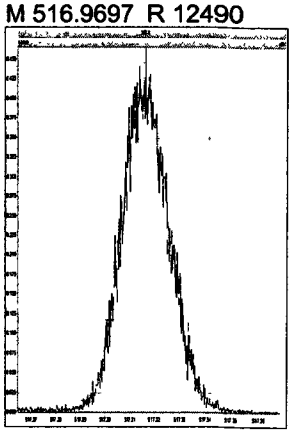
M 492.9696 R 12470



M 504.9696 R 12202



M 516.9697 R 12490



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.601	1.001	4.08e4	5.45e4	0.832	0.749	0.770	336.2	NO	9.944	9.944
12378-PeCDF	30.763	1.001	2.45e5	1.61e5	0.853	1.521	1.550	1915.6	NO	49.208	49.208
23478-PeCDF	32.111	1.001	2.38e5	1.60e5	0.884	1.493	1.550	1866.1	NO	47.602	47.602
123478-HxCDF	35.794	1.001	2.02e5	1.71e5	1.017	1.178	1.240	938.0	NO	48.511	48.511
234678-HxCDF	36.890	1.001	2.01e5	1.62e5	1.067	1.240	1.240	936.5	NO	48.466	48.466
123678-HxCDF	35.948	1.001	2.10e5	1.79e5	0.999	1.172	1.240	976.0	NO	49.300	49.300
123789-HxCDF	37.987	1.000	1.61e5	1.31e5	0.947	1.230	1.240	762.2	NO	48.619	48.619
1234678-HpCDF	40.102	1.001	1.76e5	1.72e5	1.151	1.021	1.050	1616.8	NO	48.195	48.195
1234789-HpCDF	42.897	1.001	1.31e5	1.27e5	1.166	1.031	1.050	1054.8	NO	47.974	47.974
OCDF	48.394	1.007	2.55e5	2.83e5	1.001	0.900	0.890	1187.6	NO	90.046	90.046
2378-TCDD	27.243	1.001	3.74e4	4.90e4	0.939	0.765	0.770	201.7	NO	10.229	10.229
12378-PeCDD	32.363	1.001	1.91e5	1.24e5	0.930	1.547	1.550	1243.9	NO	47.433	47.433
123478-HxCDD	37.022	1.001	1.74e5	1.41e5	0.930	1.233	1.240	1204.5	NO	47.888	47.888
123678-HxCDD	37.143	1.000	1.66e5	1.38e5	0.854	1.207	1.240	1131.6	NO	47.237	47.237
123789-HxCDD	37.559	1.012	1.64e5	1.30e5	0.885	1.261	1.240	1115.2	NO	45.409	45.409
1234678-HpCDD	41.977	1.001	1.36e5	1.33e5	0.966	1.022	1.050	882.8	NO	45.380	45.380
OCDD	48.097	1.000	2.44e5	2.77e5	0.921	0.882	0.890	1284.7	NO	94.757	94.757
13C-2378-TCDF	26.586	1.007	4.91e5	6.60e5	1.283	0.744	0.770	2194.7	NO		81.605
13C-12378-PeCDF	30.741	1.164	5.83e5	3.82e5	1.051	1.526	1.550	1894.9	NO		83.590
13C-23478-PeCDF	32.090	1.215	5.77e5	3.69e5	1.030	1.564	1.550	1885.1	NO		83.538
13C-123478-HxCDF	35.772	0.953	2.53e5	5.03e5	1.069	0.503	0.510	1707.1	NO		105.197
13C-123678-HxCDF	35.926	0.957	2.72e5	5.18e5	1.124	0.524	0.510	1741.0	NO		104.477
13C-234678-HxCDF	36.868	0.982	2.35e5	4.66e5	1.041	0.504	0.510	1583.2	NO		100.170
13C-123789-HxCDF	37.976	1.011	2.13e5	4.19e5	1.039	0.509	0.510	1461.2	NO		90.519
13C-1234678-HpCDF	40.080	1.067	1.89e5	4.38e5	0.965	0.432	0.440	1188.5	NO		96.778
13C-1234789-HpCDF	42.875	1.142	1.42e5	3.21e5	0.760	0.442	0.440	765.3	NO		90.510
13C-1234-TCDD	26.407	0.000	4.83e5	6.16e5	1.000	0.785	0.770	479.2	NO		100.000
13C-2378-TCDD	27.228	1.031	3.89e5	5.11e5	0.926	0.762	0.770	382.9	NO		88.391
13C-12378-PeCDD	32.341	1.225	4.31e5	2.84e5	0.734	1.520	1.550	1627.3	NO		88.537
13C-123478-HxCDD	37.000	0.985	3.91e5	3.15e5	0.984	1.243	1.240	2108.7	NO		106.675
13C-123678-HxCDD	37.132	0.989	4.19e5	3.36e5	1.043	1.245	1.240	2172.9	NO		107.681
13C-1234678-HpCDD	41.955	1.117	3.11e5	3.03e5	0.891	1.028	1.050	2142.0	NO		102.590
13C-OCDD	48.079	1.280	5.54e5	6.40e5	0.849	0.866	0.890	1933.3	NO		209.407

Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

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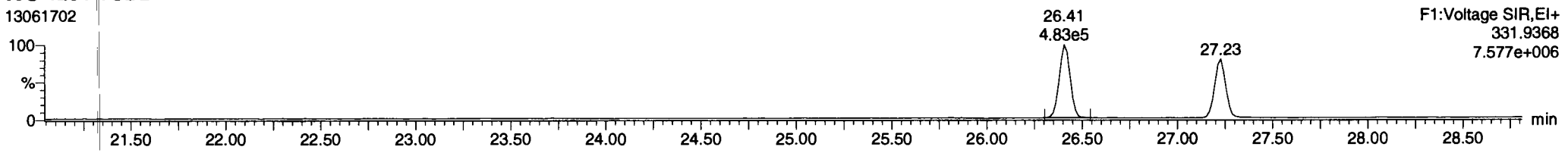
Total-tetrafurans			1.33e5		0.832					32.871
Total-penta1			5.00e5							94.928
Total-pentafurans			7.32e5		0.868					146.324
Total-hexafurans			1.03e6		1.008					260.830
Total-heptafurans			3.07e5		1.159					96.169
Total-Furans			2.96e6		0.992					721.168
Total-tetradioxins			2.30e5		0.939					58.044
Total-pentadioxins			7.16e5		0.930					178.436
Total-hexadioxins			7.52e5		0.890					210.261
Total-heptadioxins			3.04e5		0.966					101.067
Total-Dioxins			2.25e6		0.918					642.566
Total-TEQ			5.21e6							1363.734
37CL-2378-TCDD	27.243	1.032	9.57e4		0.989			348.2		8.807
FUNCTION1 PFK			2.48e6							
FUNCTION2 PFK			3.29e5							0.000
FUNCTION3 PFK			3.49e5							0.000
FUNCTION4 PFK			2.41e6							
FUNCTION5 PFK			7.53e6							
FUNCTION1 HXCDPE			1.02e3							0.000
FUNCTION1 HPCDPE			3.95e3							0.000
FUNCTION2 HPCDPE			2.81e3							0.000
FUNCTION3 OCDPE			7.75e1							0.000
FUNCTION4 NCDPE			9.74e2							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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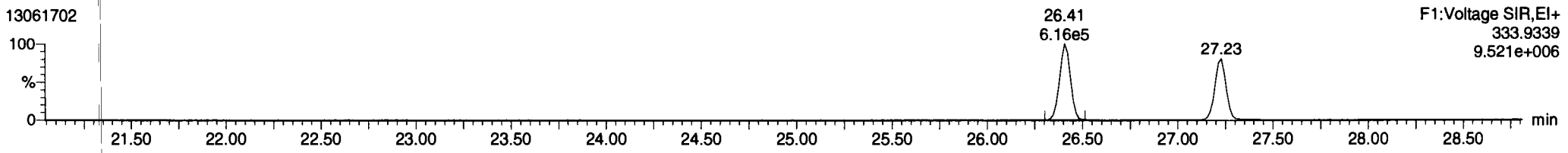

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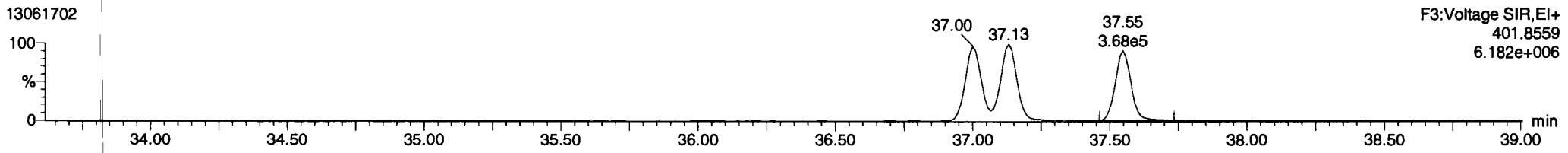

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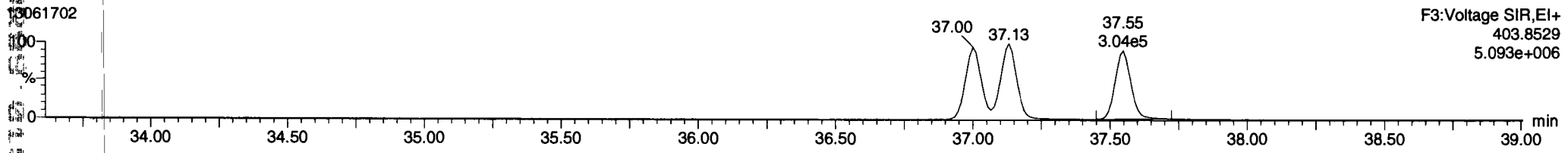

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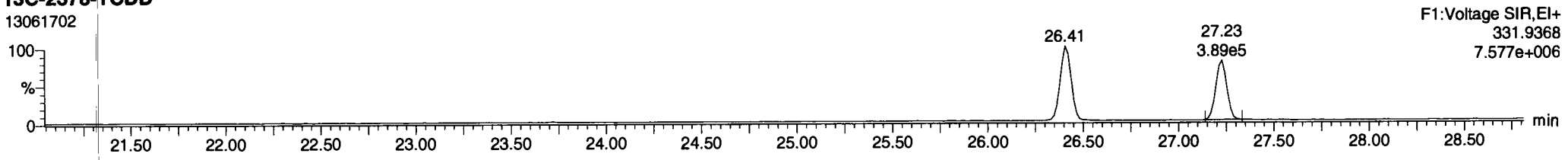
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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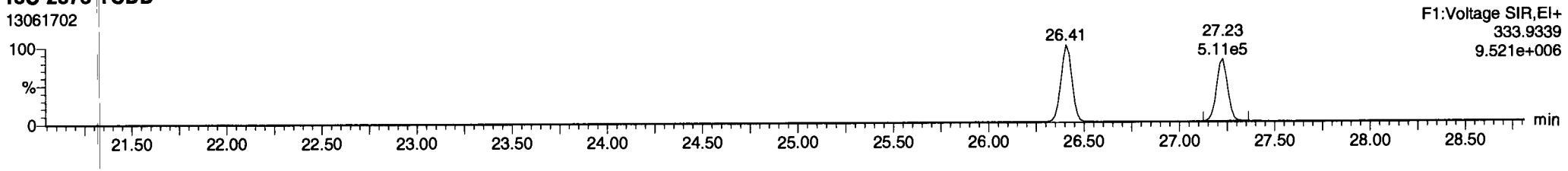

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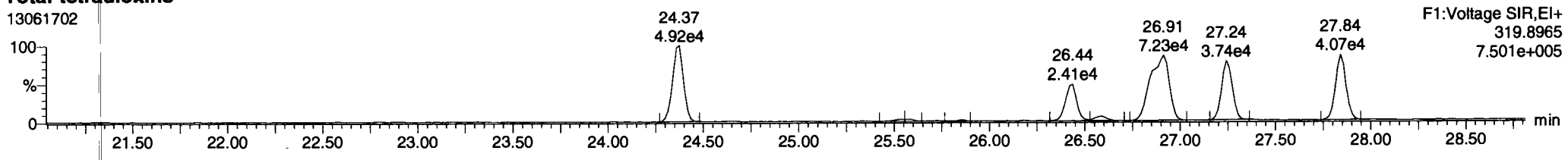
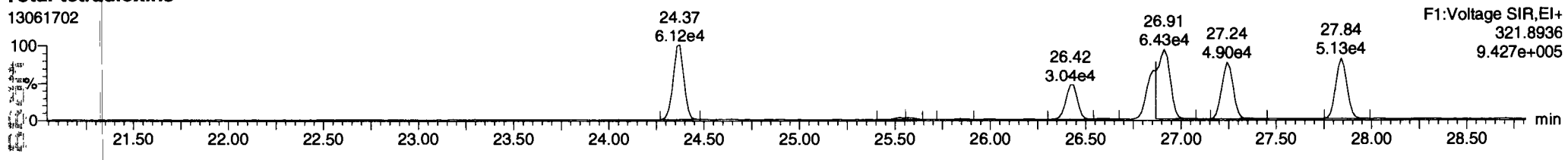
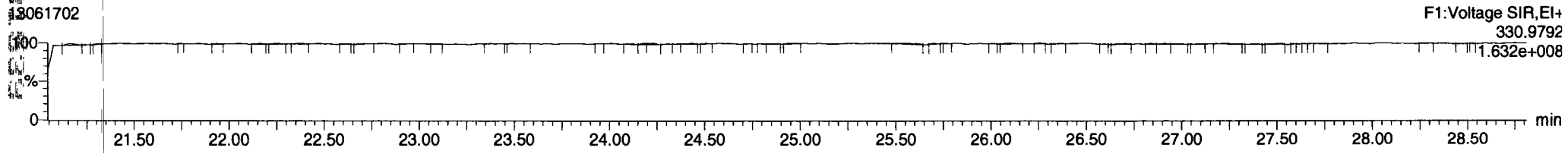


Total-tetradioxins



FUNCTION1 PFK



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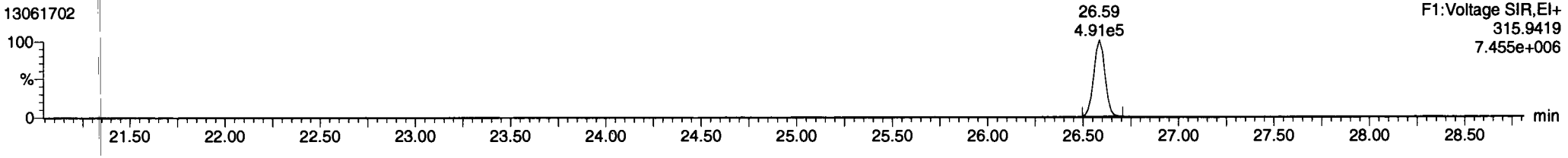
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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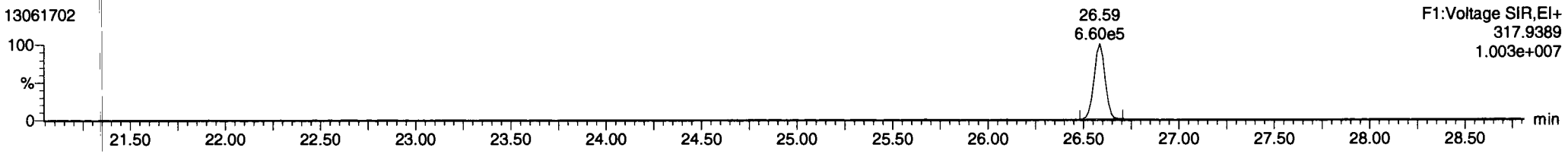
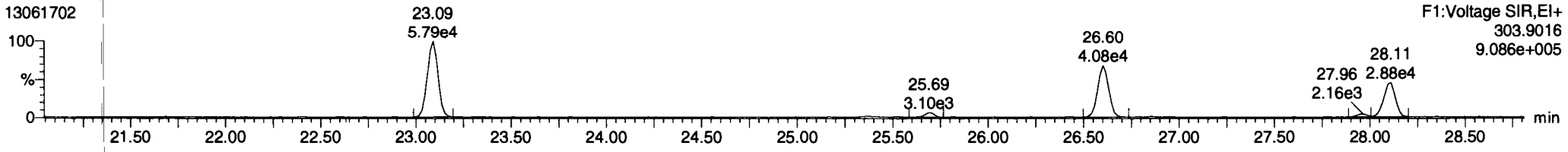
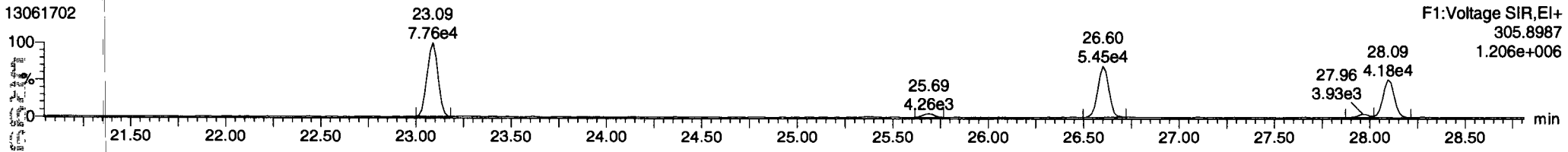


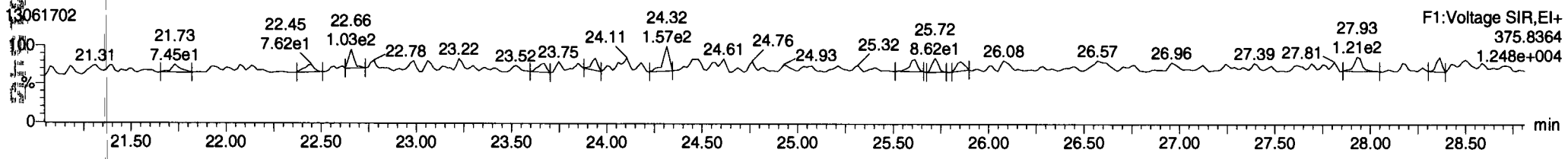
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
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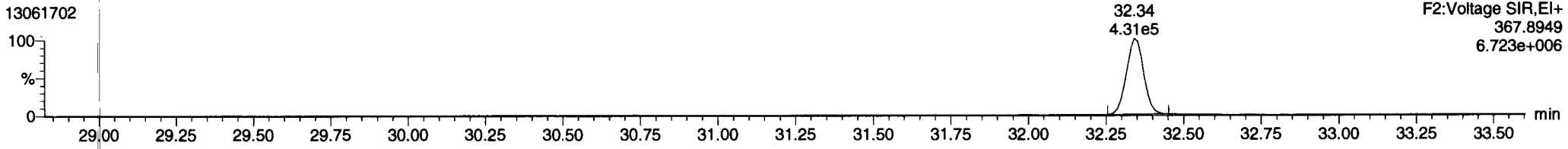
ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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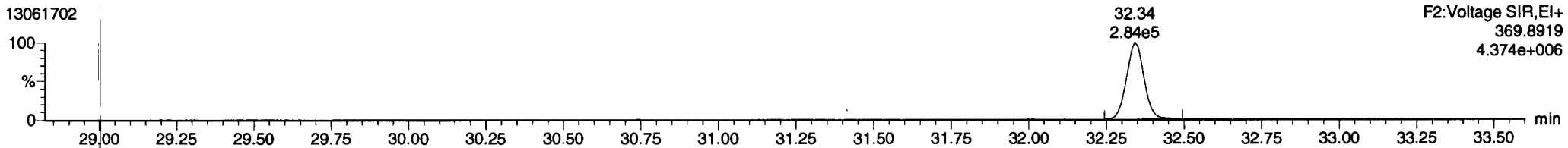
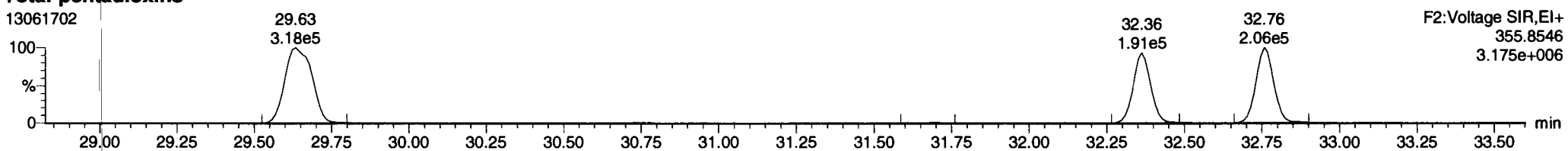
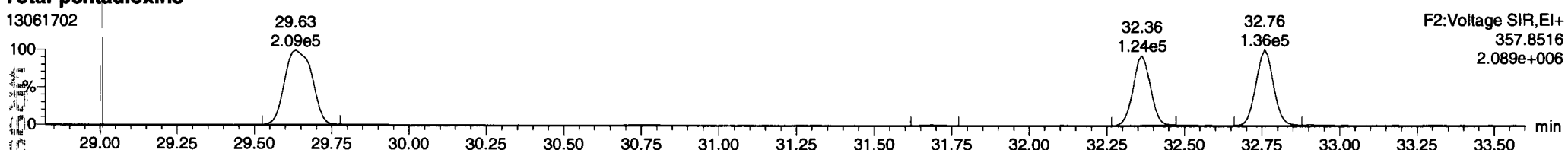


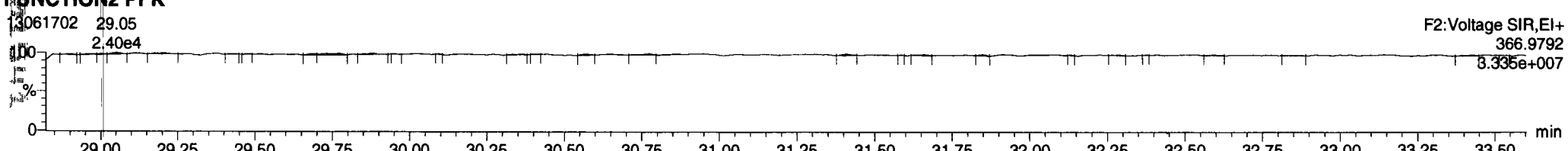
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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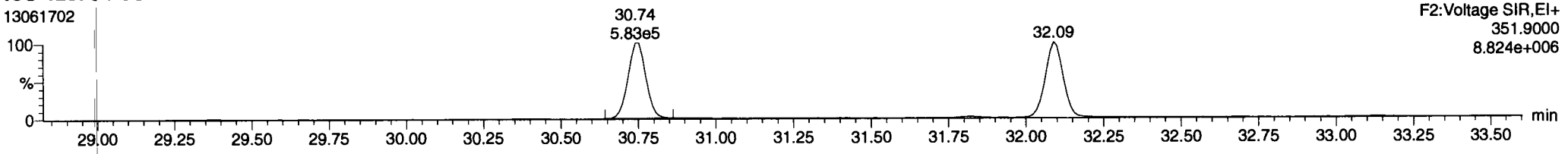
ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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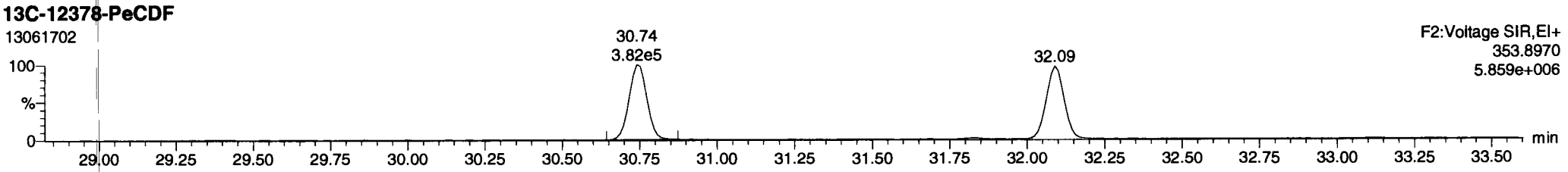
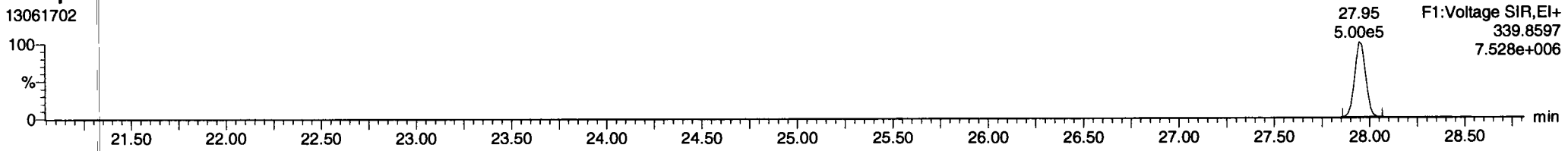


Total-penta1



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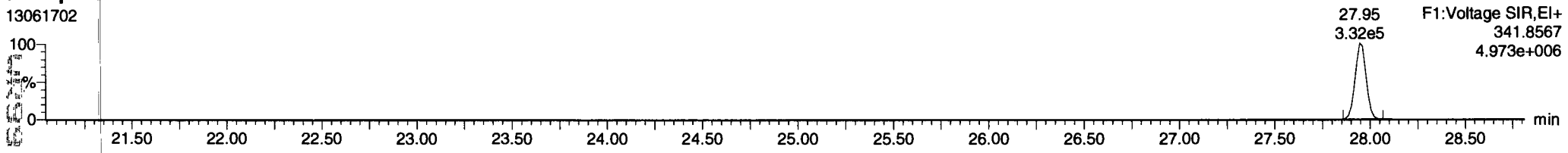
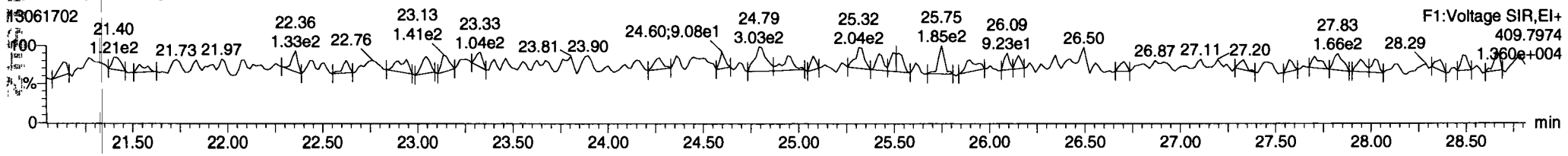


FUNCTION1 HPCDPE



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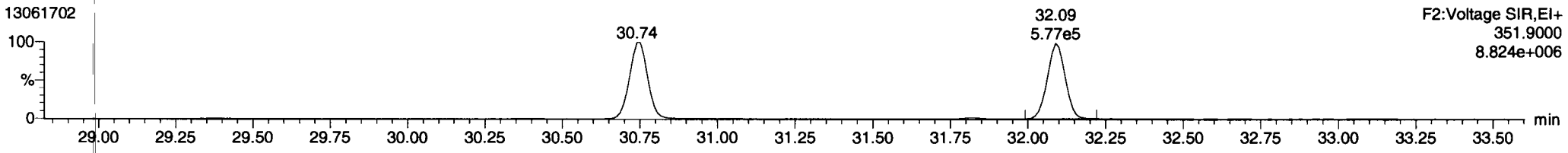

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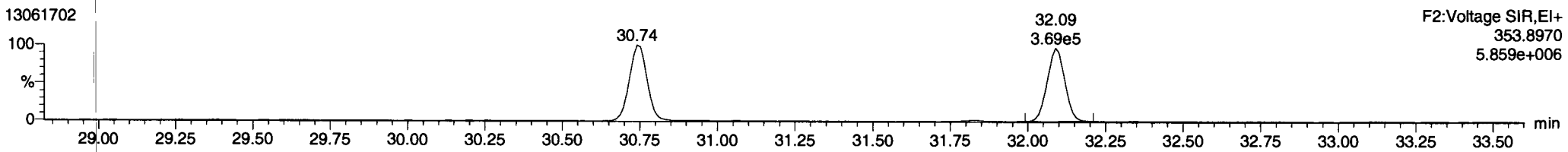
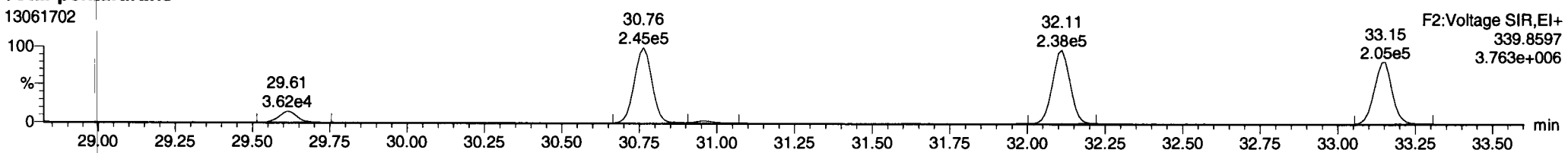
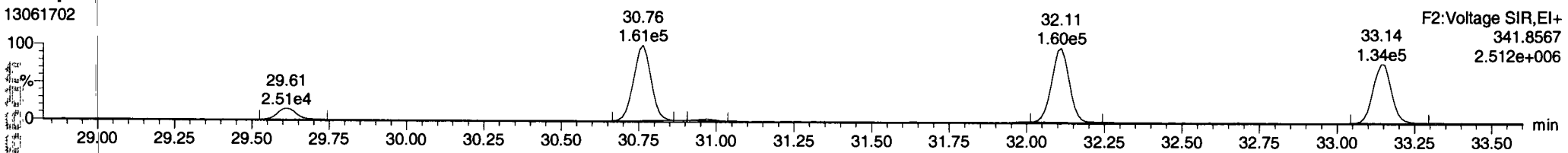


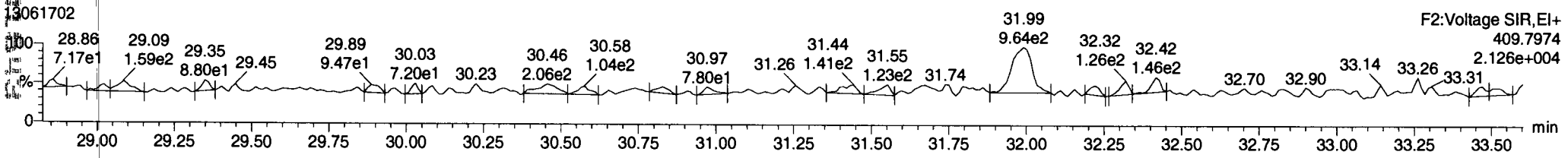
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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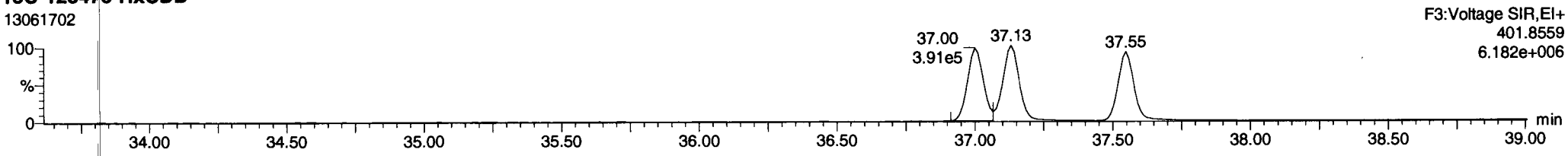
ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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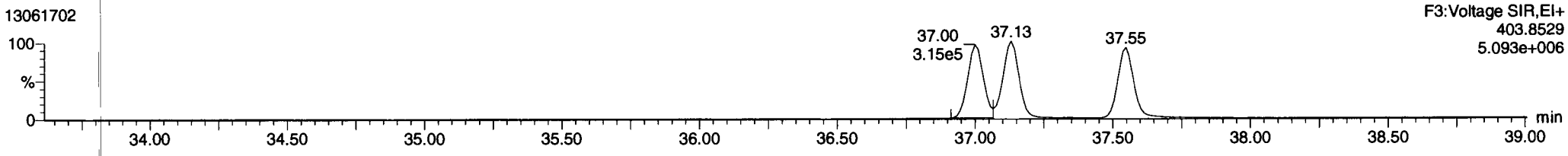
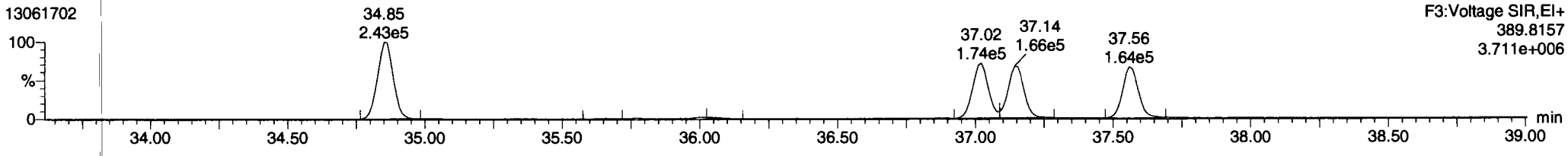
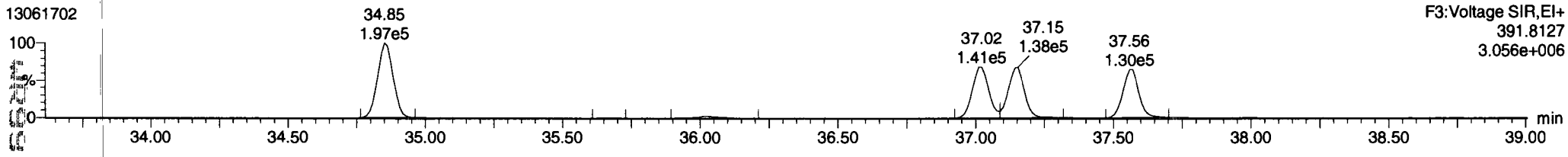


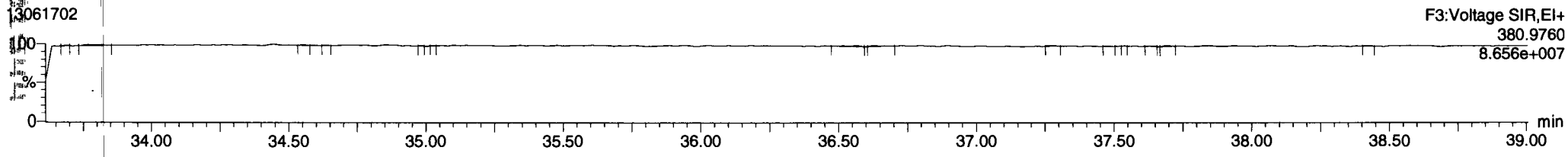
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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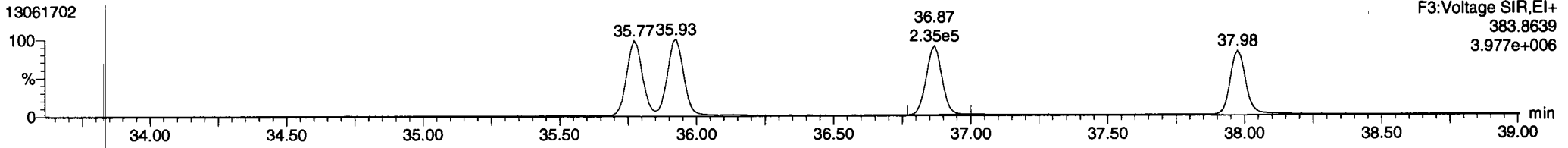
13C-234678-HxCDF



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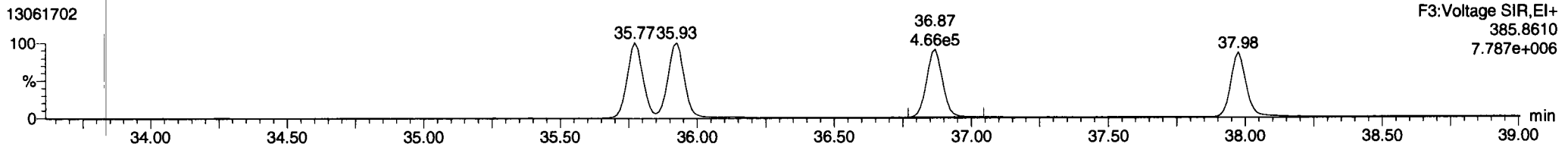
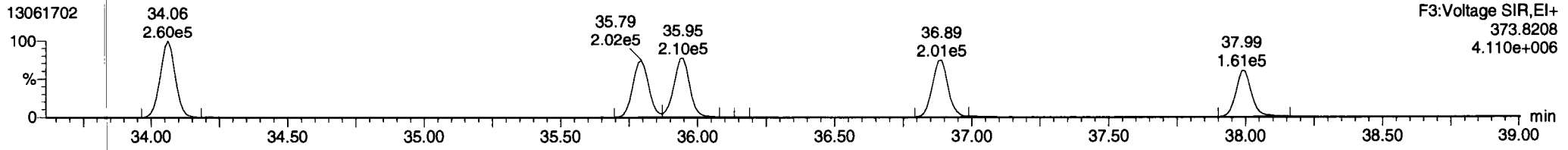
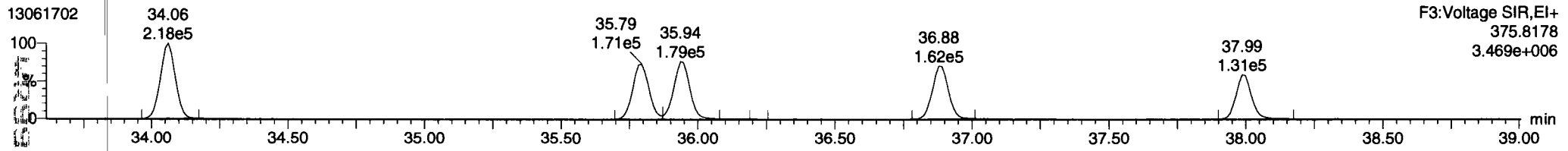


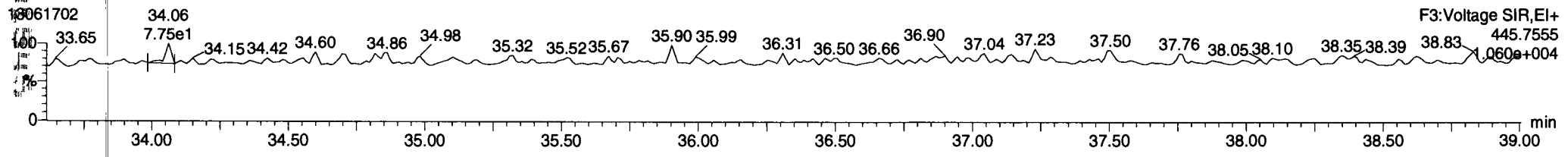
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
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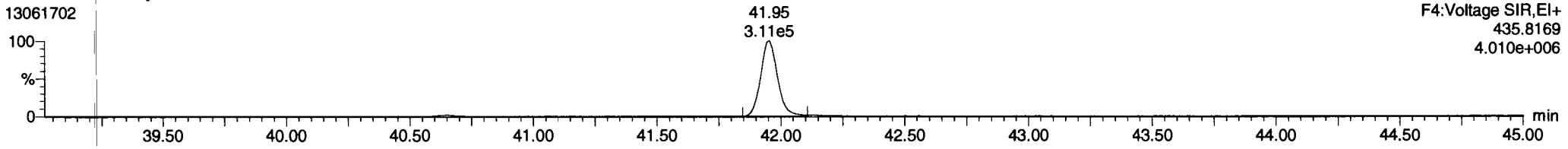
ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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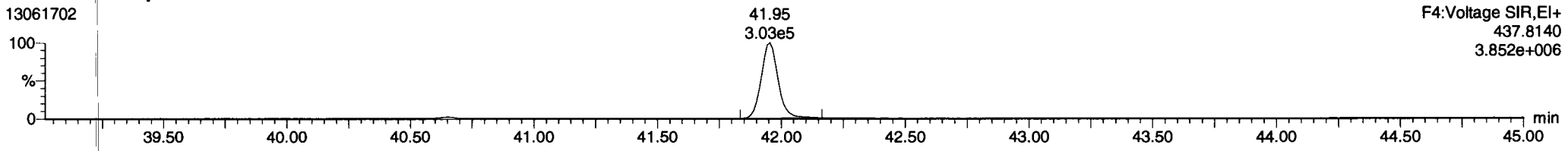
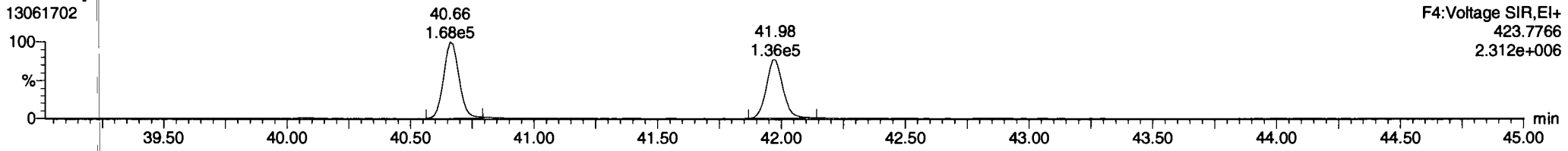
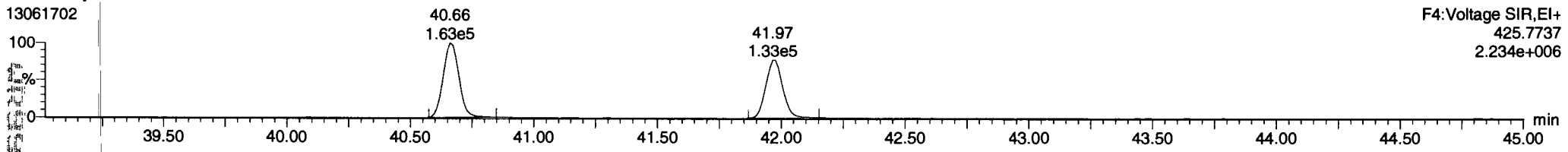


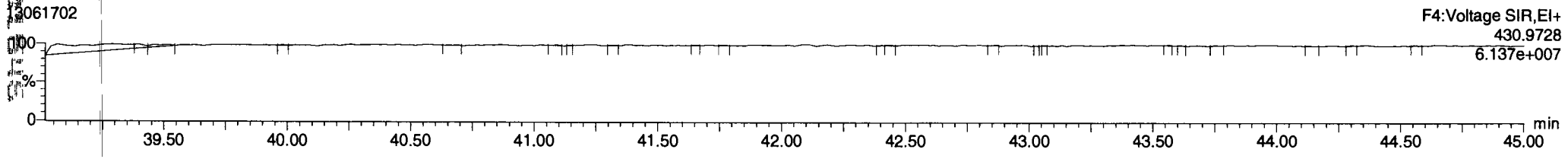
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
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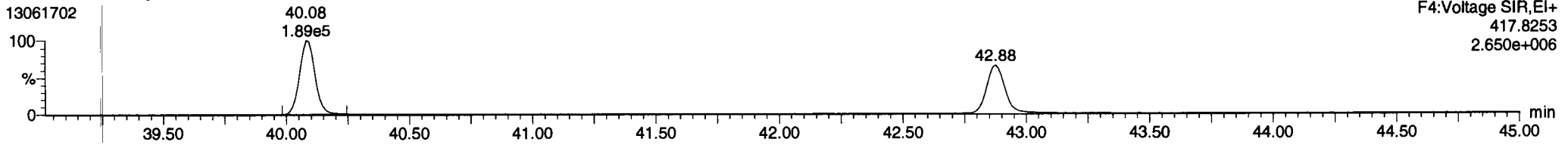
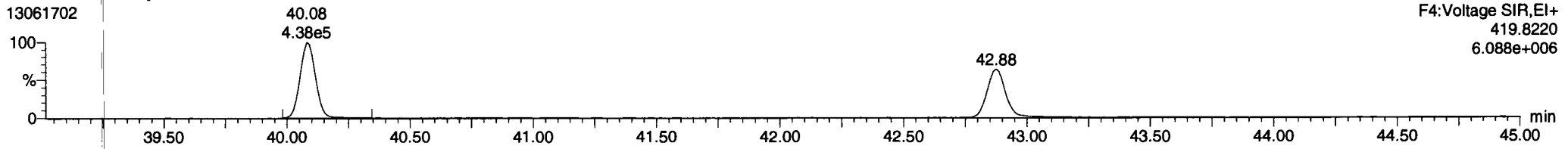
ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

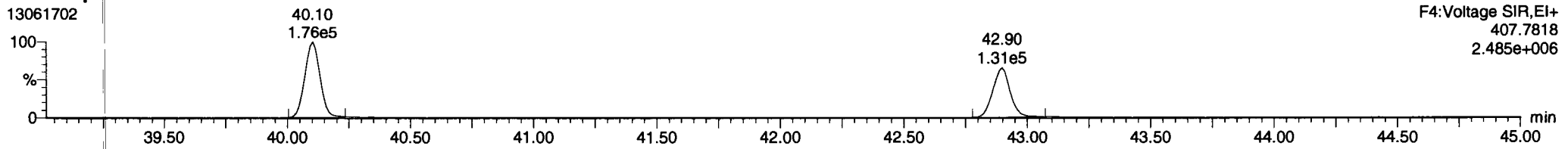
13C-1234678-HpCDF



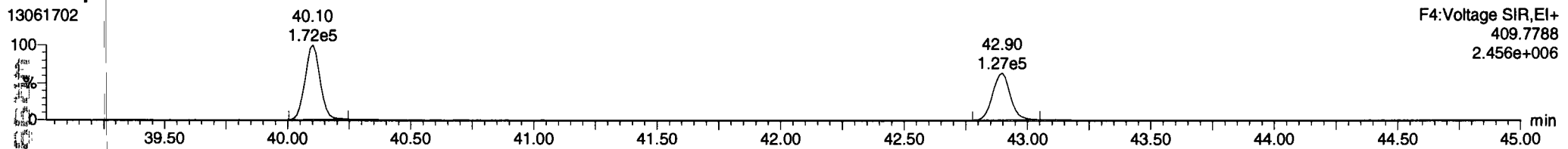
13C-1234678-HpCDF



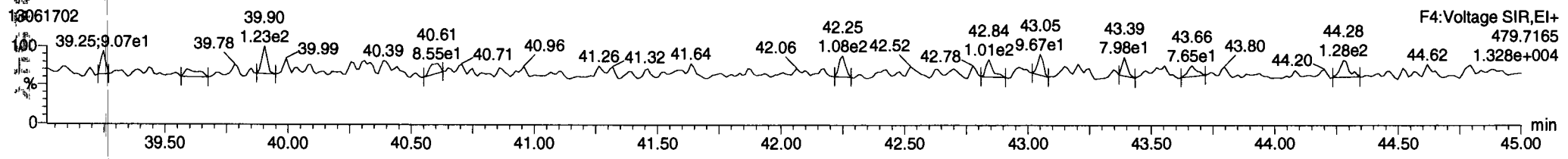
Total-heptafurans



Total-heptafurans



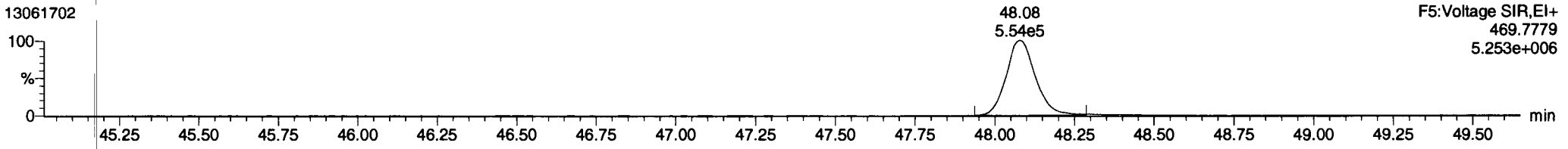
FUNCTION4 NCDPE



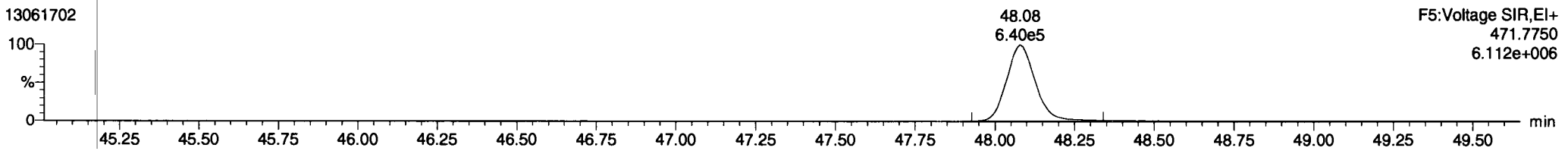
Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

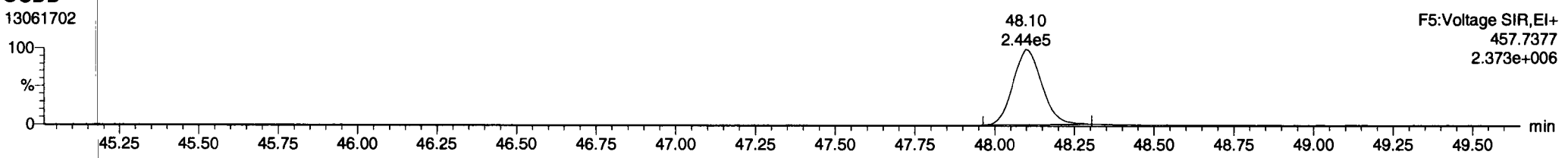
13C-OCDD



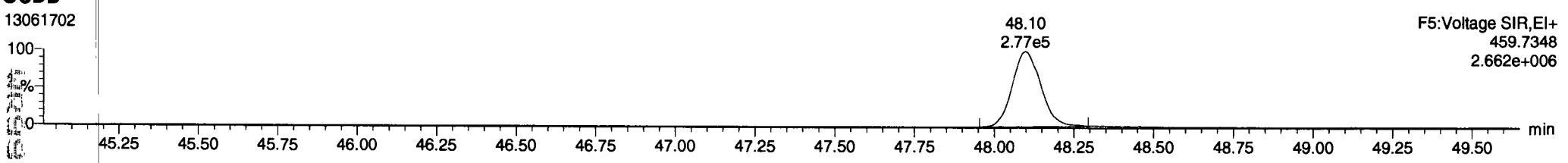
13C-OCDD



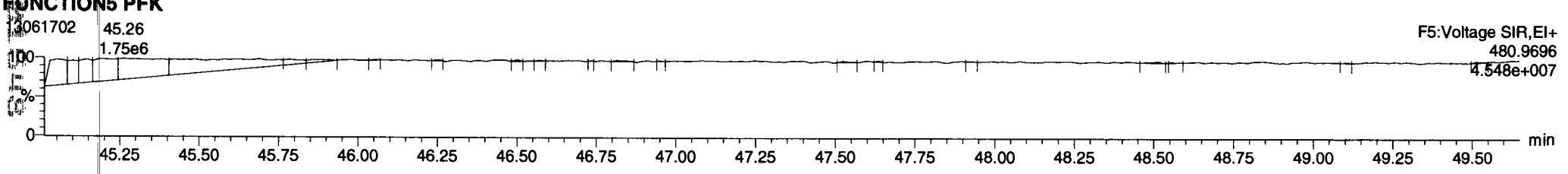
OCDD



OCDD



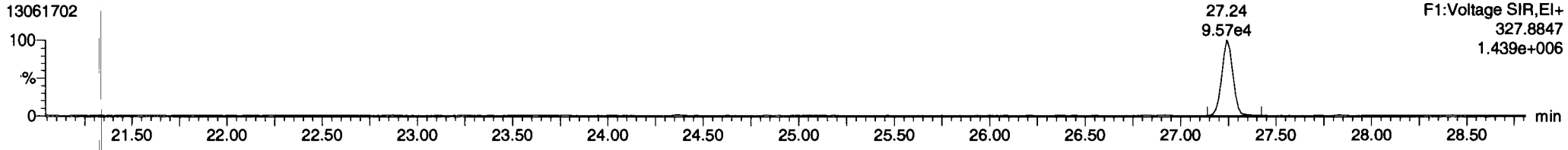
FUNCTION5 PFK



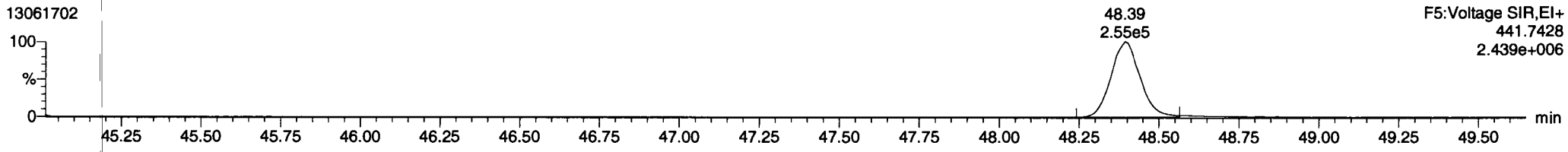
Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

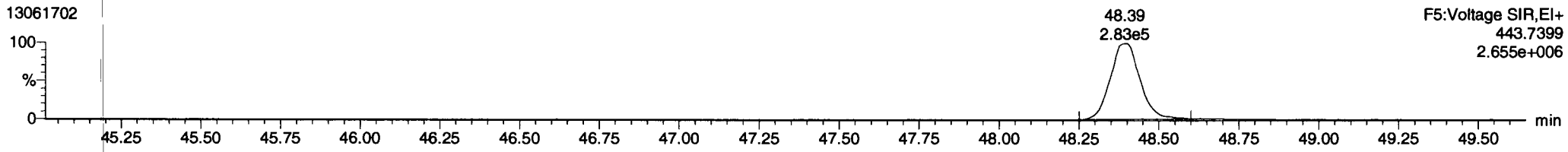
37CL-2378-TCDD



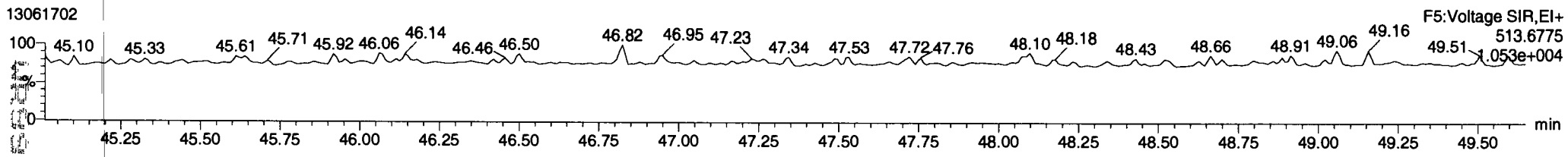
OCDF



OCDF



FUNCTION5 DCDPE



ARI
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: WS30MBS
Lab.File ID: 13061704
Date Analysed: 17-Jun-13

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	27.23	0.106		
12378-PeCDD	356/358	0.00			0.095
123478-HxCDD	390/392	0.00			0.078
123678-HxCDD	390/392	0.00			0.079
123789-HxCDD	390/392	0.00			0.079
1234678-HpCDD	424/426	41.96	0.251	0.206	
OCDD	458/460	48.07	1.59	1.39	
2378-TCDF	Traces	0.00			.08
12378-PeCDF	340/342	30.73	0.148	0.123	
23478-PeCDF	340/342	32.08	0.163	0.151	
123478-HxCDF	374/376	35.76	0.0913		
234678-HxCDF	374/376	36.88	0.103	0.0780	
123678-HxCDF	374/376	35.93	0.101	0.0720	
123789-HxCDF	374/376	0.00			0.062
1234678-HpCDF	408/410	40.09	0.0813	0.0580	
1234789-HpCDF	408/410	0.00			0.094
OCDF	442/444	0.00			0.17

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:23 Pacific Daylight Time

MC 6/18/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

2378-TCDF															
12378-PeCDF	30.731	1.000	4.80e2	4.73e2	0.853	1.016	1.550	6.3	1250	1908	7.87e3	8.72e3	YES	0.123	0.148
23478-PeCDF	32.079	1.000	5.64e2	4.36e2	0.884	1.293	1.550	7.3	1250	1908	9.11e3	6.09e3	YES	0.151	0.163
123478-HxCDF	35.762	1.000	2.75e2	2.12e2	1.017	1.297	1.240	4.9	824	567	4.00e3	3.93e3	NO	0.091	0.091
234678-HxCDF	36.880	1.001	3.61e2	1.85e2	1.067	1.956	1.240	7.1	824	567	5.87e3	4.88e3	YES	0.078	0.103
123678-HxCDF	35.926	1.001	2.35e2	3.57e2	0.999	0.659	1.240	4.9	824	567	4.03e3	6.93e3	YES	0.072	0.101
123789-HxCDF					0.947		1.240		824	567					
1234678-HpCDF	40.092	1.000	2.46e2	1.31e2	1.151	1.882	1.050	10.5	679	713	7.15e3	3.68e3	YES	0.058	0.081
1234789-HpCDF					1.166		1.050		679	713					
OCDF					1.001		0.890		855	1252					
2378-TCDD	27.229	1.001	2.69e2	4.01e2	0.939	0.670	0.770	3.7	1765	1572	6.53e3	6.55e3	NO	0.106	0.106
12378-PeCDD					0.930		1.550		1282	1596					
123478-HxCDD					0.930		1.240		940	1190					
123678-HxCDD					0.854		1.240		940	1190					
123789-HxCDD					0.885		1.240		940	1190					
1234678-HpCDD	41.955	1.000	4.11e2	5.68e2	0.966	0.724	1.050	6.1	1161	925	7.12e3	8.32e3	YES	0.206	0.251
OCDD	48.071	1.000	2.59e3	2.23e3	0.921	1.161	0.890	46.2	574	730	2.65e4	2.35e4	YES	1.390	1.589
13C-2378-TCDF	26.556	1.006	3.68e5	4.82e5	1.283	0.763	0.770	1797.7	3049	7947	5.48e6	7.22e6	NO		69.852
13C-12378-PeCDF	30.720	1.164	4.58e5	2.96e5	1.051	1.546	1.550	2057.9	3310	2100	6.81e6	4.50e6	NO		75.664
13C-23478-PeCDF	32.068	1.215	4.24e5	2.71e5	1.030	1.561	1.550	1961.5	3310	2100	6.49e6	4.13e6	NO		71.165
13C-123478-HxCDF	35.751	0.953	1.75e5	3.48e5	1.069	0.503	0.510	820.6	3124	3545	2.56e6	5.19e6	NO		97.125
13C-123678-HxCDF	35.905	0.957	2.04e5	3.85e5	1.124	0.529	0.510	931.8	3124	3545	2.91e6	5.61e6	NO		103.831
13C-234678-HxCDF	36.847	0.982	1.66e5	3.29e5	1.041	0.503	0.510	761.3	3124	3545	2.38e6	4.75e6	NO		94.258
13C-123789-HxCDF	37.954	1.011	1.42e5	2.76e5	1.039	0.516	0.510	642.9	3124	3545	2.01e6	3.92e6	NO		79.737
13C-1234678-HpCDF	40.070	1.068	1.22e5	2.80e5	0.965	0.434	0.440	772.0	2083	1786	1.61e6	3.74e6	NO		82.631
13C-1234789-HpCDF	42.854	1.142	8.61e4	1.98e5	0.760	0.436	0.440	462.4	2083	1786	9.63e5	2.26e6	NO		74.001
13C-1234-TCDD	26.392	0.000	4.10e5	5.37e5	1.000	0.764	0.770	385.8	16421	4883	6.34e6	8.06e6	NO		100.000
13C-2378-TCDD	27.199	1.031	2.92e5	3.79e5	0.926	0.771	0.770	268.3	16421	4883	4.41e6	5.69e6	NO		76.429
13C-12378-PeCDD	32.320	1.225	3.27e5	2.14e5	0.734	1.530	1.550	959.4	5127	2258	4.92e6	3.20e6	NO		77.626
13C-123478-HxCDD	36.979	0.985	2.70e5	2.25e5	0.984	1.202	1.240	1411.9	2825	1806	3.99e6	3.40e6	NO		99.764
13C-123678-HxCDD	37.110	0.989	3.16e5	2.62e5	1.043	1.206	1.240	1526.4	2825	1806	4.31e6	3.58e6	NO		109.858
13C-1234678-HpCDD	41.933	1.117	2.03e5	2.00e5	0.891	1.014	1.050	759.4	3232	2166	2.45e6	2.36e6	NO		89.774
13C-OCDD	48.071	1.281	3.03e5	3.55e5	0.849	0.853	0.890	988.1	2876	2322	2.84e6	3.15e6	NO		153.654

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:23 Pacific Daylight Time

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.527	0.000	2.82e5	2.22e5	1.000	1.272	1.240	1452.9	2825	1806	4.10e6	3.25e6	NO	100.000
Total-tetrafurans			0.00e0		0.832				1155		0.00e0			
Total-penta1			1.80e2						900		3.46e3			0.075
Total-pentafurans			1.04e3		0.868				1250		1.70e4			0.311
Total-hexafurans			8.71e2		1.008				824		1.39e4			0.295
Total-heptafurans			4.60e2		1.159				679		1.29e4			0.161
Total-Furans			2.84e3		0.992				1155		5.17e4			0.951
Total-tetradioxins			2.91e3		0.939				1765		4.22e4			0.614
Total-pentadioxins			9.88e2		0.930				1282		1.55e4			0.256
Total-hexadioxins			3.68e3		0.890				940		5.84e4			0.916
Total-heptadioxins			1.44e3		0.966				1161		2.20e4			0.795
Total-Dioxins			1.19e4		0.918				1765		1.72e5			4.244
Total-TEQ			1.47e4						1765		2.24e5			5.195
37CL-2378-TCDD	27.229	1.032	3.16e5		0.989			1476.3	3131		4.62e6			33.715
FUNCTION1 PFK			1.66e7						957947		1.45e7			
FUNCTION2 PFK			3.16e5						293442		8.13e6			0.000
FUNCTION3 PFK			7.58e6						575954		6.68e7			0.000
FUNCTION4 PFK			2.65e5						507076		9.46e6			
FUNCTION5 PFK			2.29e5						373627		1.03e7			
FUNCTION1 HXCDPE			7.10e2						767		1.53e4			0.000
FUNCTION1 HPCDPE			4.62e3						1655		9.15e4			0.000
FUNCTION2 HPCDPE			1.35e3						1742		3.39e4			0.000
FUNCTION3 OCDPE			7.65e1						753		2.85e3			0.000
FUNCTION4 NCDPE			8.47e2						1053		2.47e4			0.000
FUNCTION5 DCDPE			0.00e0						465		0.00e0			

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:23 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

TF

PP

36	Total-penta1	339.8597	27.95	498.347		0.075		0.57	1.55	YES	3.8

PF

3	23478-PeCDF	339.8597	32.08	1000.515	0.884	0.163	0.151	1.29	1.55	YES	7.3
2	12378-PeCDF	339.8597	30.73	953.571	0.853	0.148	0.123	1.02	1.55	YES	6.3

HF

5	234678-HxCDF	373.8208	36.88	546.192	1.067	0.103	0.078	1.96	1.24	YES	7.1
6	123678-HxCDF	373.8208	35.93	591.990	0.999	0.101	0.072	0.66	1.24	YES	4.9
4	123478-HxCDF	373.8208	35.76	486.265	1.017	0.091	0.091	1.30	1.24	NO	4.9

HPF

8	1234678-HpCDF	407.7818	40.09	376.221	1.151	0.081	0.058	1.88	1.05	YES	10.5
39	Total-heptafurans	407.7818	40.05	316.094	1.159	0.080		2.11	1.05	YES	8.4

Furans,TF,PP,PF,HF,HPF,OF

40	Total-Furans	303.9016	28.23	613.852	0.992	0.073		0.18	0.77	YES	1.0
40	Total-Furans	303.9016	21.39	299.568	0.992	0.036		1.83	0.77	YES	2.9
3	23478-PeCDF	339.8597	32.08	1000.515	0.884	0.163	0.151	1.29	1.55	YES	7.3
2	12378-PeCDF	339.8597	30.73	953.571	0.853	0.148	0.123	1.02	1.55	YES	6.3
5	234678-HxCDF	373.8208	36.88	546.192	1.067	0.103	0.078	1.96	1.24	YES	7.1
6	123678-HxCDF	373.8208	35.93	591.990	0.999	0.101	0.072	0.66	1.24	YES	4.9
4	123478-HxCDF	373.8208	35.76	486.265	1.017	0.091	0.091	1.30	1.24	NO	4.9
8	1234678-HpCDF	407.7818	40.09	376.221	1.151	0.081	0.058	1.88	1.05	YES	10.5
39	Total-heptafurans	407.7818	40.05	316.094	1.159	0.080		2.11	1.05	YES	8.4
36	Total-penta1	339.8597	27.95	498.347		0.075		0.57	1.55	YES	3.8

TD

11	2378-TCDD	319.8965	27.23	669.673	0.939	0.106	0.106	0.67	0.77	NO	3.7
41	Total-tetradioxins	319.8965	26.56	3200.317	0.939	0.508		4.70	0.77	YES	20.2

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

PD

	42 Total-pentadioxins	355.8546	30.72	1288.485	0.930	0.256		3.29	1.55	YES	12.1

HD

	43 Total-hexadioxins	389.8157	35.75	1484.208	0.890	0.311		6.29	1.24	YES	20.4
	43 Total-hexadioxins	389.8157	34.84	330.747	0.890	0.069		1.21	1.24	NO	3.7
	43 Total-hexadioxins	389.8157	36.84	1042.720	0.890	0.218		3.98	1.24	YES	18.0
	43 Total-hexadioxins	389.8157	35.88	1511.762	0.890	0.317		11.31	1.24	YES	20.2

HPD

	16 1234678-HpCDD	423.7766	41.96	978.628	0.966	0.251	0.206	0.72	1.05	YES	6.1
	44 Total-heptadioxins	423.7766	40.64	2121.792	0.966	0.544		0.95	1.05	NO	12.8

Dioxins,TD,PD,HD,HPD,OD

	11 2378-TCDD	319.8965	27.23	669.673	0.939	0.106	0.106	0.67	0.77	NO	3.7
	41 Total-tetradioxins	319.8965	26.56	3200.317	0.939	0.508		4.70	0.77	YES	20.2
	45 Total-Dioxins	319.8965	23.61	262.178	0.918	0.043		1.84	0.77	YES	2.0
	45 Total-Dioxins	319.8965	22.33	187.039	0.918	0.030		1.49	0.77	YES	2.1
	42 Total-pentadioxins	355.8546	30.72	1288.485	0.930	0.256		3.29	1.55	YES	12.1
	43 Total-hexadioxins	389.8157	35.75	1484.208	0.890	0.311		6.29	1.24	YES	20.4
	43 Total-hexadioxins	389.8157	34.84	330.747	0.890	0.069		1.21	1.24	NO	3.7
	43 Total-hexadioxins	389.8157	36.84	1042.720	0.890	0.218		3.98	1.24	YES	18.0
	43 Total-hexadioxins	389.8157	35.88	1511.762	0.890	0.317		11.31	1.24	YES	20.2
	16 1234678-HpCDD	423.7766	41.96	978.628	0.966	0.251	0.206	0.72	1.05	YES	6.1
	44 Total-heptadioxins	423.7766	40.64	2121.792	0.966	0.544		0.95	1.05	NO	12.8
	17 OCDD	457.7377	48.07	4814.456	0.921	1.589	1.390	1.16	0.89	YES	46.2

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	40 Total-Furans	303.9016	28.23	613.852	0.992	0.073		0.18	0.77	YES	1.0
	40 Total-Furans	303.9016	21.39	299.568	0.992	0.036		1.83	0.77	YES	2.9
	3 23478-PeCDF	339.8597	32.08	1000.515	0.884	0.163	0.151	1.29	1.55	YES	7.3
	2 12378-PeCDF	339.8597	30.73	953.571	0.853	0.148	0.123	1.02	1.55	YES	6.3
	5 234678-HxCDF	373.8208	36.88	546.192	1.067	0.103	0.078	1.96	1.24	YES	7.1
	6 123678-HxCDF	373.8208	35.93	591.990	0.999	0.101	0.072	0.66	1.24	YES	4.9
	4 123478-HxCDF	373.8208	35.76	486.265	1.017	0.091	0.091	1.30	1.24	NO	4.9
	8 1234678-HpCDF	407.7818	40.09	376.221	1.151	0.081	0.058	1.88	1.05	YES	10.5
	39 Total-heptafurans	407.7818	40.05	316.094	1.159	0.080		2.11	1.05	YES	8.4
	36 Total-penta1	339.8597	27.95	498.347		0.075		0.57	1.55	YES	3.8
	11 2378-TCDD	319.8965	27.23	669.673	0.939	0.106	0.106	0.67	0.77	NO	3.7
	41 Total-tetradioxins	319.8965	26.56	3200.317	0.939	0.508		4.70	0.77	YES	20.2
	45 Total-Dioxins	319.8965	23.61	262.178	0.918	0.043		1.84	0.77	YES	2.0
	45 Total-Dioxins	319.8965	22.33	187.039	0.918	0.030		1.49	0.77	YES	2.1
	42 Total-pentadioxins	355.8546	30.72	1288.485	0.930	0.256		3.29	1.55	YES	12.1
	43 Total-hexadioxins	389.8157	35.75	1484.208	0.890	0.311		6.29	1.24	YES	20.4
	43 Total-hexadioxins	389.8157	34.84	330.747	0.890	0.069		1.21	1.24	NO	3.7
	43 Total-hexadioxins	389.8157	36.84	1042.720	0.890	0.218		3.98	1.24	YES	18.0
	43 Total-hexadioxins	389.8157	35.88	1511.762	0.890	0.317		11.31	1.24	YES	20.2
	16 1234678-HpCDD	423.7766	41.96	978.628	0.966	0.251	0.206	0.72	1.05	YES	6.1
	44 Total-heptadioxins	423.7766	40.64	2121.792	0.966	0.544		0.95	1.05	NO	12.8
	17 OCDD	457.7377	48.07	4814.456	0.921	1.589	1.390	1.16	0.89	YES	46.2

PFK1

	48 FUNCTION1 PFK	330.9792	22.90	0.000							2.7
	48 FUNCTION1 PFK	330.9792	21.79	0.000							12.5

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

PFK2

	49	FUNCTION2 PFK	366.9792	29.09	0.000	0.000				1.7
	49	FUNCTION2 PFK	366.9792	28.94	0.000	0.000				3.1
	49	FUNCTION2 PFK	366.9792	32.01	0.000	0.000				0.8
	49	FUNCTION2 PFK	366.9792	31.93	0.000	0.000				0.7
	49	FUNCTION2 PFK	366.9792	31.81	0.000	0.000				1.8
	49	FUNCTION2 PFK	366.9792	31.66	0.000	0.000				1.1
	49	FUNCTION2 PFK	366.9792	31.53	0.000	0.000				0.7
	49	FUNCTION2 PFK	366.9792	31.49	0.000	0.000				0.6
	49	FUNCTION2 PFK	366.9792	31.41	0.000	0.000				0.5
	49	FUNCTION2 PFK	366.9792	31.05	0.000	0.000				1.3
	49	FUNCTION2 PFK	366.9792	30.91	0.000	0.000				1.2
	49	FUNCTION2 PFK	366.9792	30.62	0.000	0.000				1.5
	49	FUNCTION2 PFK	366.9792	30.48	0.000	0.000				1.2
	49	FUNCTION2 PFK	366.9792	30.20	0.000	0.000				1.3
	49	FUNCTION2 PFK	366.9792	29.83	0.000	0.000				0.6
	49	FUNCTION2 PFK	366.9792	29.60	0.000	0.000				1.0
	49	FUNCTION2 PFK	366.9792	29.20	0.000	0.000				1.5
	49	FUNCTION2 PFK	366.9792	29.16	0.000	0.000				1.8
	49	FUNCTION2 PFK	366.9792	33.00	0.000	0.000				1.5
	49	FUNCTION2 PFK	366.9792	32.94	0.000	0.000				1.5
	49	FUNCTION2 PFK	366.9792	32.64	0.000	0.000				0.9
	49	FUNCTION2 PFK	366.9792	32.50	0.000	0.000				1.3

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

PFK3

[redacted]	50 FUNCTION3 PFK	380.9760	34.99	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	34.95	0.000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	34.81	0.000	0.000					0.3
[redacted]	50 FUNCTION3 PFK	380.9760	34.69	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	34.64	0.000	0.000					0.4
[redacted]	50 FUNCTION3 PFK	380.9760	34.52	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	34.32	0.000	0.000					6.1
[redacted]	50 FUNCTION3 PFK	380.9760	34.18	0.000	0.000					10.9
[redacted]	50 FUNCTION3 PFK	380.9760	33.96	0.000	0.000					18.6
[redacted]	50 FUNCTION3 PFK	380.9760	33.77	0.000	0.000					23.7
[redacted]	50 FUNCTION3 PFK	380.9760	33.72	0.000	0.000					25.4
[redacted]	50 FUNCTION3 PFK	380.9760	37.35	0.000	0.000					0.4
[redacted]	50 FUNCTION3 PFK	380.9760	37.26	0.000	0.000					0.7
[redacted]	50 FUNCTION3 PFK	380.9760	37.06	0.000	0.000					0.6
[redacted]	50 FUNCTION3 PFK	380.9760	36.98	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	36.94	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	36.88	0.000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	36.65	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	36.60	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	36.41	0.000	0.000					0.8
[redacted]	50 FUNCTION3 PFK	380.9760	36.35	0.000	0.000					0.6
[redacted]	50 FUNCTION3 PFK	380.9760	36.20	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	36.06	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	36.01	0.000	0.000					1.5
[redacted]	50 FUNCTION3 PFK	380.9760	35.94	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	35.67	0.000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	35.42	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	38.96	0.000	0.000					0.6
[redacted]	50 FUNCTION3 PFK	380.9760	38.92	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	38.74	0.000	0.000					0.7
[redacted]	50 FUNCTION3 PFK	380.9760	38.62	0.000	0.000					0.4
[redacted]	50 FUNCTION3 PFK	380.9760	38.49	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	38.27	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	38.22	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	37.95	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	37.88	0.000	0.000					1.7
[redacted]	50 FUNCTION3 PFK	380.9760	37.81	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	37.76	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	37.46	0.000	0.000					1.1

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

PFK4

	51 FUNCTION4 PFK	430.9728	40.49	0.000						0.9
	51 FUNCTION4 PFK	430.9728	40.17	0.000						1.0
	51 FUNCTION4 PFK	430.9728	39.23	0.000						0.9
	51 FUNCTION4 PFK	430.9728	44.95	0.000						0.5
	51 FUNCTION4 PFK	430.9728	44.91	0.000						1.1
	51 FUNCTION4 PFK	430.9728	44.74	0.000						0.8
	51 FUNCTION4 PFK	430.9728	44.42	0.000						1.4
	51 FUNCTION4 PFK	430.9728	43.46	0.000						0.9
	51 FUNCTION4 PFK	430.9728	43.17	0.000						0.8
	51 FUNCTION4 PFK	430.9728	42.86	0.000						1.3
	51 FUNCTION4 PFK	430.9728	42.71	0.000						1.1
	51 FUNCTION4 PFK	430.9728	41.89	0.000						0.7
	51 FUNCTION4 PFK	430.9728	41.82	0.000						0.6
	51 FUNCTION4 PFK	430.9728	41.78	0.000						0.9
	51 FUNCTION4 PFK	430.9728	41.68	0.000						1.2
	51 FUNCTION4 PFK	430.9728	41.18	0.000						1.4
	51 FUNCTION4 PFK	430.9728	41.12	0.000						0.8
	51 FUNCTION4 PFK	430.9728	41.09	0.000						1.5
	51 FUNCTION4 PFK	430.9728	40.92	0.000						0.6

PFK5

	52 FUNCTION5 PFK	480.9696	48.55	0.000						1.8
	52 FUNCTION5 PFK	480.9696	48.03	0.000						0.5
	52 FUNCTION5 PFK	480.9696	47.85	0.000						0.9
	52 FUNCTION5 PFK	480.9696	47.63	0.000						1.3
	52 FUNCTION5 PFK	480.9696	47.60	0.000						0.6
	52 FUNCTION5 PFK	480.9696	47.27	0.000						1.0
	52 FUNCTION5 PFK	480.9696	47.17	0.000						0.7
	52 FUNCTION5 PFK	480.9696	46.92	0.000						1.3
	52 FUNCTION5 PFK	480.9696	46.77	0.000						1.5
	52 FUNCTION5 PFK	480.9696	46.67	0.000						0.6
	52 FUNCTION5 PFK	480.9696	46.43	0.000						1.8
	52 FUNCTION5 PFK	480.9696	46.13	0.000						1.0
	52 FUNCTION5 PFK	480.9696	45.16	0.000						0.6
	52 FUNCTION5 PFK	480.9696	45.14	0.000						0.8
	52 FUNCTION5 PFK	480.9696	45.10	0.000						1.0
	52 FUNCTION5 PFK	480.9696	49.69	0.000						2.1
	52 FUNCTION5 PFK	480.9696	49.62	0.000						0.7
	52 FUNCTION5 PFK	480.9696	49.10	0.000						1.4
	52 FUNCTION5 PFK	480.9696	48.94	0.000						1.7
	52 FUNCTION5 PFK	480.9696	48.91	0.000						1.6
	52 FUNCTION5 PFK	480.9696	48.78	0.000						1.3
	52 FUNCTION5 PFK	480.9696	48.73	0.000						1.1
	52 FUNCTION5 PFK	480.9696	48.70	0.000						1.2
	52 FUNCTION5 PFK	480.9696	48.66	0.000						1.1

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:23 Pacific Daylight Time

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

ETHERS1

[redacted]	53	FUNCTION1	HXCD...	375.8364	27.26	0.000	0.000				4.1
[redacted]	53	FUNCTION1	HXCD...	375.8364	27.23	0.000	0.000				3.9
[redacted]	53	FUNCTION1	HXCD...	375.8364	26.14	0.000	0.000				3.8
[redacted]	53	FUNCTION1	HXCD...	375.8364	23.34	0.000	0.000				1.5
[redacted]	53	FUNCTION1	HXCD...	375.8364	23.22	0.000	0.000				1.9
[redacted]	53	FUNCTION1	HXCD...	375.8364	22.09	0.000	0.000				2.2
[redacted]	53	FUNCTION1	HXCD...	375.8364	28.69	0.000	0.000				2.7

ETHERS2

[redacted]	54	FUNCTION1	HPCD...	409.7974	24.09	0.000	0.000				2.0
[redacted]	54	FUNCTION1	HPCD...	409.7974	23.99	0.000	0.000				1.3
[redacted]	54	FUNCTION1	HPCD...	409.7974	23.93	0.000	0.000				2.4
[redacted]	54	FUNCTION1	HPCD...	409.7974	23.81	0.000	0.000				1.6
[redacted]	54	FUNCTION1	HPCD...	409.7974	23.73	0.000	0.000				1.5
[redacted]	54	FUNCTION1	HPCD...	409.7974	23.66	0.000	0.000				1.5
[redacted]	54	FUNCTION1	HPCD...	409.7974	23.60	0.000	0.000				2.6
[redacted]	54	FUNCTION1	HPCD...	409.7974	23.54	0.000	0.000				1.1
[redacted]	54	FUNCTION1	HPCD...	409.7974	22.76	0.000	0.000				2.1
[redacted]	54	FUNCTION1	HPCD...	409.7974	22.40	0.000	0.000				1.9
[redacted]	54	FUNCTION1	HPCD...	409.7974	22.28	0.000	0.000				0.8
[redacted]	54	FUNCTION1	HPCD...	409.7974	21.84	0.000	0.000				2.3
[redacted]	54	FUNCTION1	HPCD...	409.7974	21.52	0.000	0.000				1.2
[redacted]	54	FUNCTION1	HPCD...	409.7974	21.31	0.000	0.000				1.4
[redacted]	54	FUNCTION1	HPCD...	409.7974	27.87	0.000	0.000				1.7
[redacted]	54	FUNCTION1	HPCD...	409.7974	27.51	0.000	0.000				1.3
[redacted]	54	FUNCTION1	HPCD...	409.7974	27.39	0.000	0.000				1.2
[redacted]	54	FUNCTION1	HPCD...	409.7974	27.33	0.000	0.000				1.7
[redacted]	54	FUNCTION1	HPCD...	409.7974	26.86	0.000	0.000				1.5
[redacted]	54	FUNCTION1	HPCD...	409.7974	26.72	0.000	0.000				1.3
[redacted]	54	FUNCTION1	HPCD...	409.7974	25.78	0.000	0.000				1.5
[redacted]	54	FUNCTION1	HPCD...	409.7974	25.65	0.000	0.000				2.5
[redacted]	54	FUNCTION1	HPCD...	409.7974	25.33	0.000	0.000				1.1
[redacted]	54	FUNCTION1	HPCD...	409.7974	25.27	0.000	0.000				2.2
[redacted]	54	FUNCTION1	HPCD...	409.7974	25.08	0.000	0.000				1.5
[redacted]	54	FUNCTION1	HPCD...	409.7974	25.02	0.000	0.000				1.7
[redacted]	54	FUNCTION1	HPCD...	409.7974	24.75	0.000	0.000				1.6
[redacted]	54	FUNCTION1	HPCD...	409.7974	24.60	0.000	0.000				1.2
[redacted]	54	FUNCTION1	HPCD...	409.7974	24.45	0.000	0.000				3.3
[redacted]	54	FUNCTION1	HPCD...	409.7974	24.17	0.000	0.000				1.3
[redacted]	54	FUNCTION1	HPCD...	409.7974	28.65	0.000	0.000				2.2
[redacted]	54	FUNCTION1	HPCD...	409.7974	28.45	0.000	0.000				1.3
[redacted]	54	FUNCTION1	HPCD...	409.7974	28.02	0.000	0.000				1.6

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

ETHERS3

	55 FUNCTION2 HPCD...	409.7974	32.76	0.000	0.000					1.7
	55 FUNCTION2 HPCD...	409.7974	32.57	0.000	0.000					2.0
	55 FUNCTION2 HPCD...	409.7974	32.46	0.000	0.000					1.6
	55 FUNCTION2 HPCD...	409.7974	32.08	0.000	0.000					1.4
	55 FUNCTION2 HPCD...	409.7974	31.28	0.000	0.000					2.1
	55 FUNCTION2 HPCD...	409.7974	30.09	0.000	0.000					1.4
	55 FUNCTION2 HPCD...	409.7974	30.03	0.000	0.000					1.6
	55 FUNCTION2 HPCD...	409.7974	29.81	0.000	0.000					1.2
	55 FUNCTION2 HPCD...	409.7974	29.34	0.000	0.000					2.9
	55 FUNCTION2 HPCD...	409.7974	28.95	0.000	0.000					3.4

ETHERS4

	56 FUNCTION3 OCDPE	445.7555	37.91	0.000	0.000					3.8

ETHERS5

	57 FUNCTION4 NCDPE	479.7165	44.96	0.000	0.000					4.3
	57 FUNCTION4 NCDPE	479.7165	42.96	0.000	0.000					2.6
	57 FUNCTION4 NCDPE	479.7165	42.36	0.000	0.000					2.1
	57 FUNCTION4 NCDPE	479.7165	42.26	0.000	0.000					2.6
	57 FUNCTION4 NCDPE	479.7165	41.83	0.000	0.000					1.8
	57 FUNCTION4 NCDPE	479.7165	41.77	0.000	0.000					1.6
	57 FUNCTION4 NCDPE	479.7165	39.88	0.000	0.000					3.4
	57 FUNCTION4 NCDPE	479.7165	39.65	0.000	0.000					2.4
	57 FUNCTION4 NCDPE	479.7165	39.47	0.000	0.000					2.7

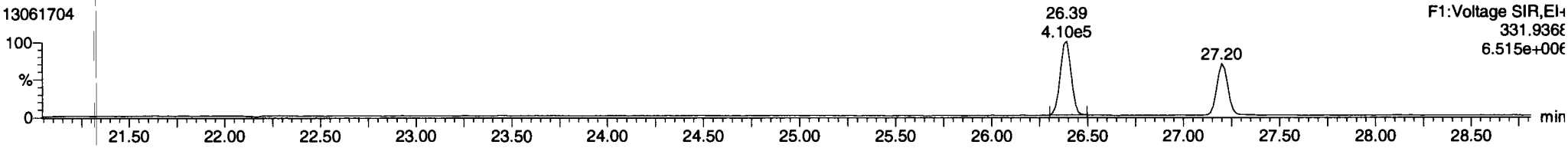
ETHERS6

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:23 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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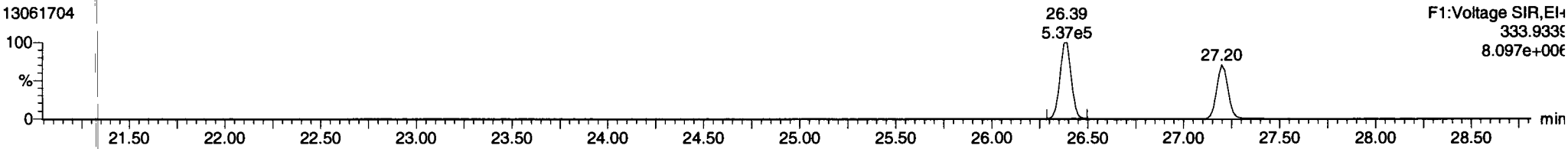

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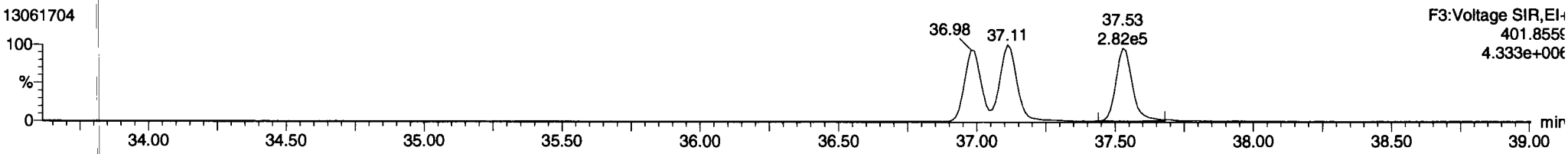

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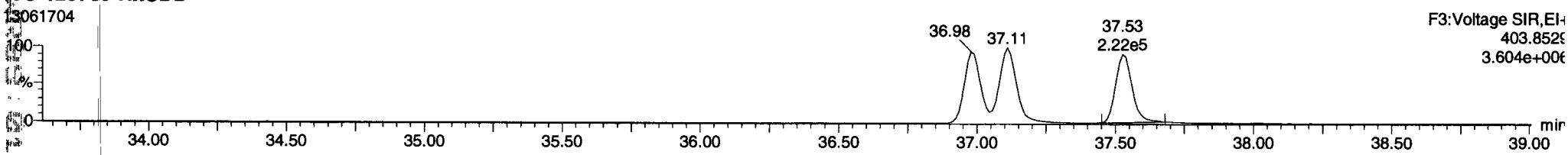
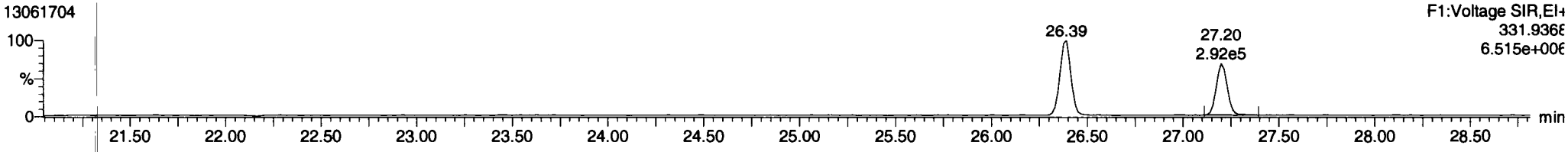


ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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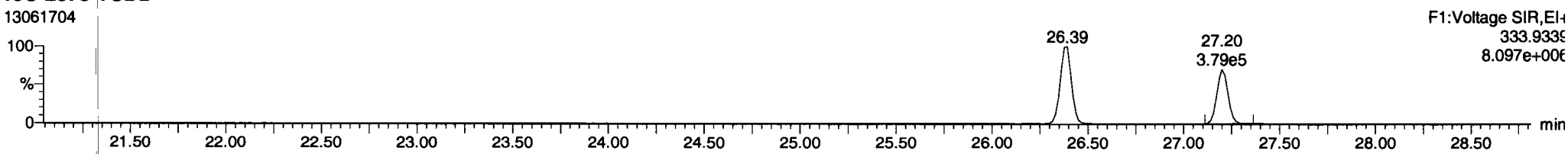
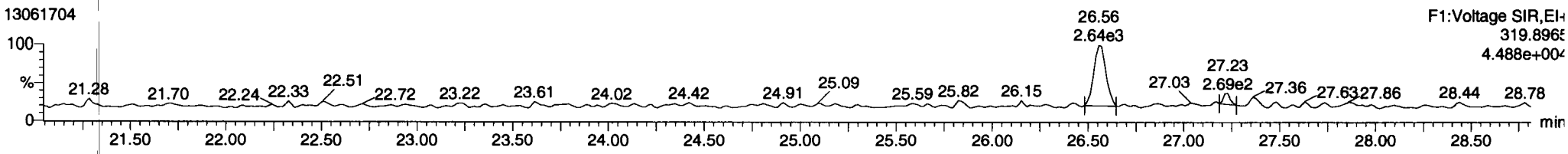
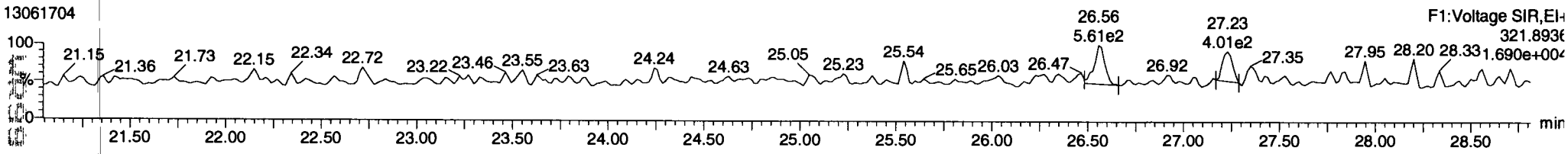


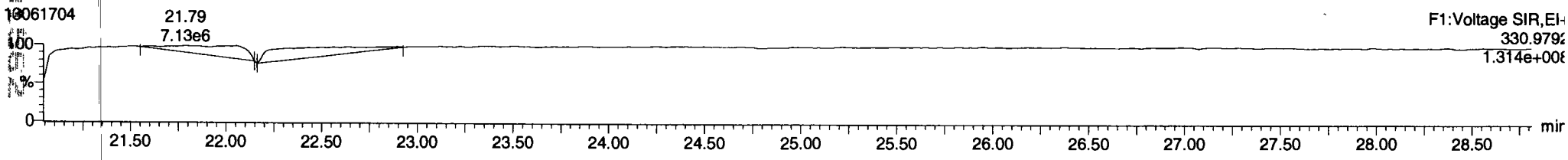
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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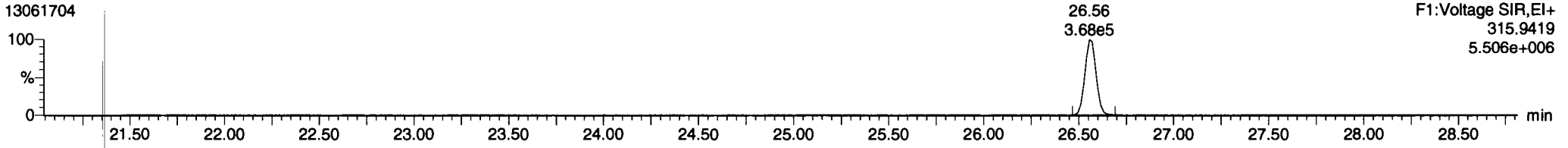
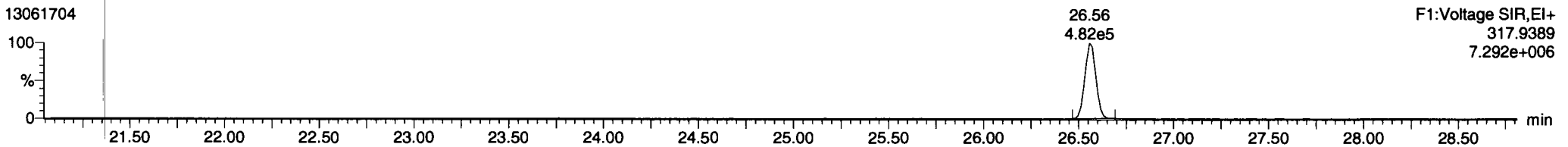
Printed: Tuesday, June 18, 2013 12:41:23 Pacific Daylight Time

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

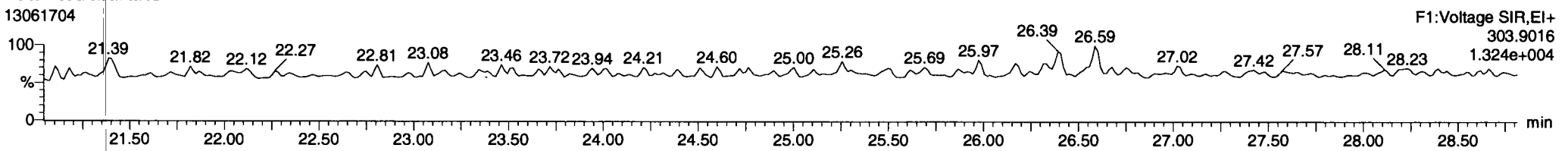
13C-2378-TCDF



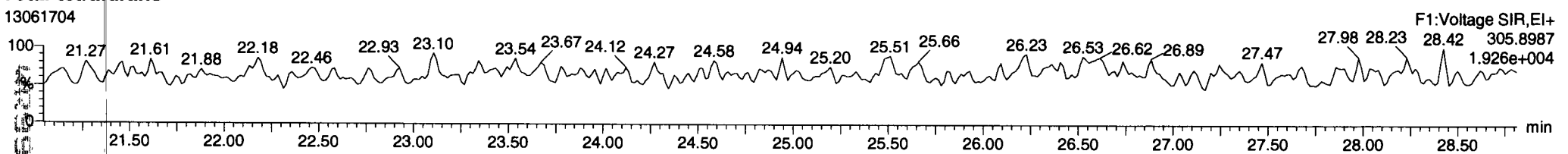
13C-2378-TCDF



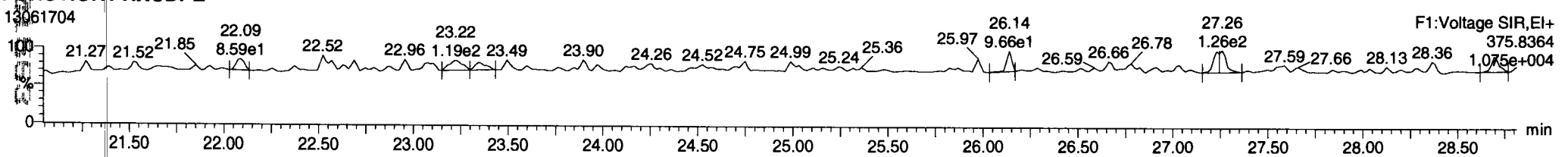
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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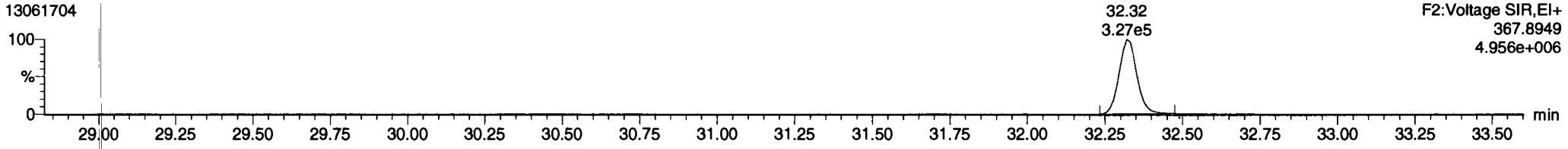
13C-12378-PeCDD



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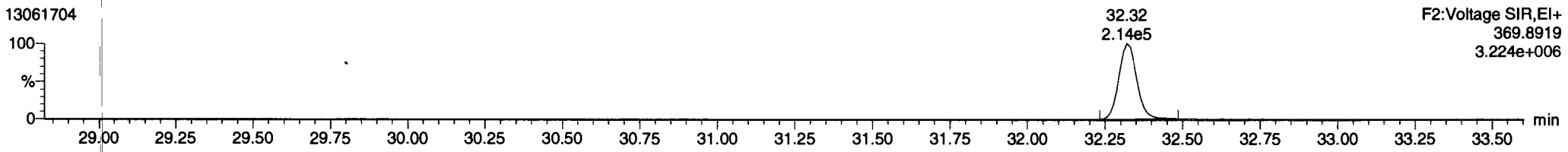
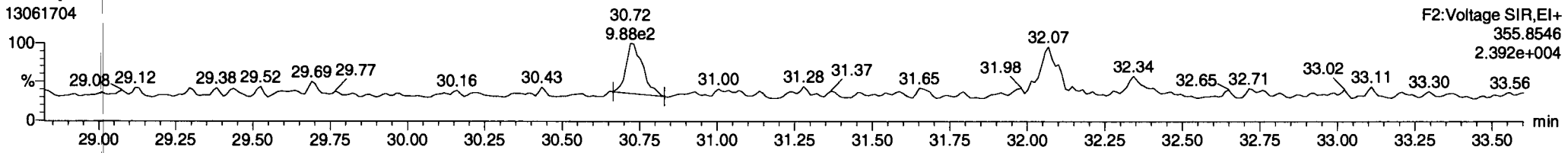
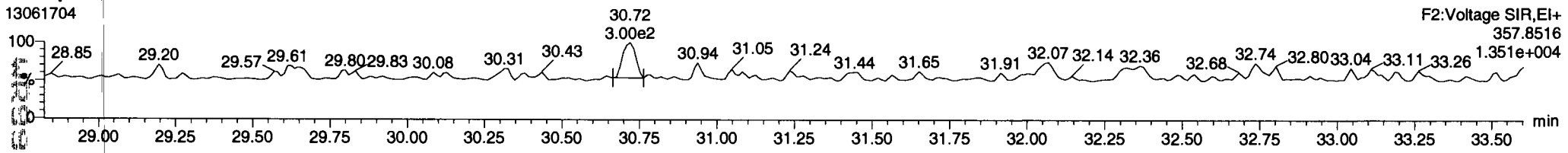


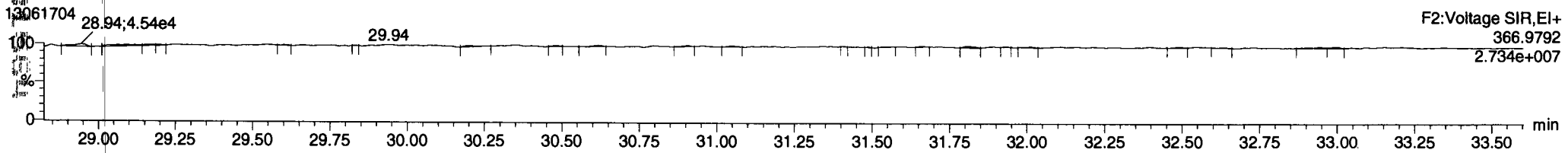
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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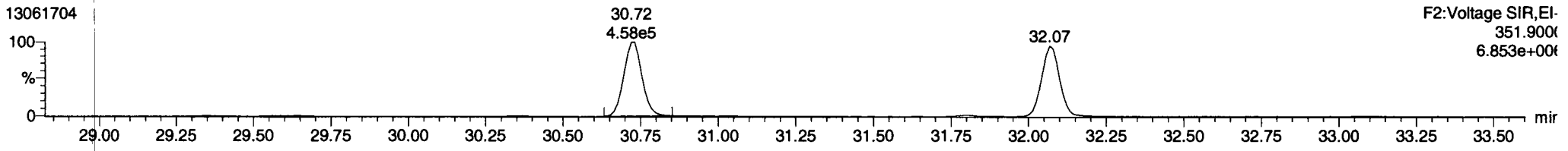
ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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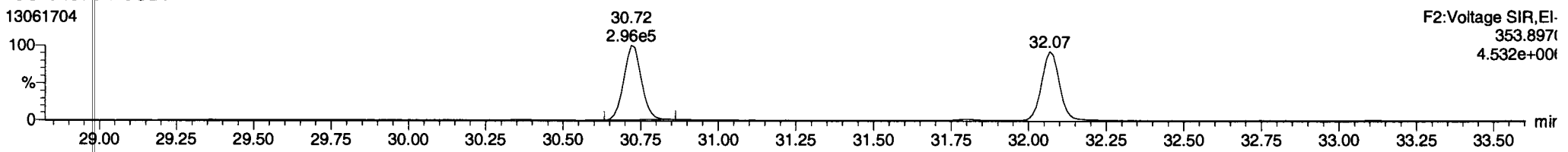

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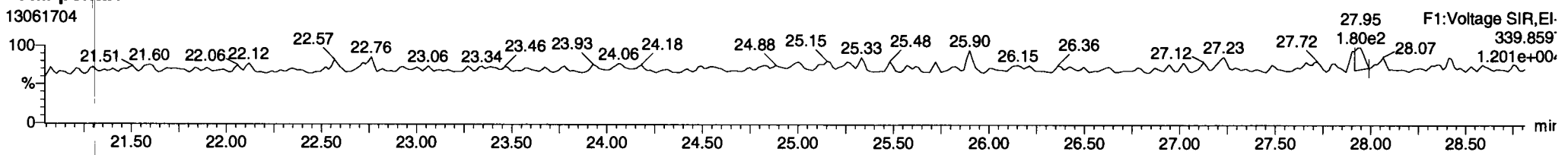
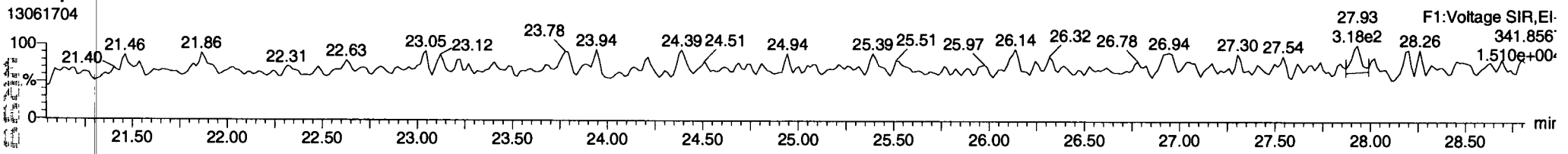
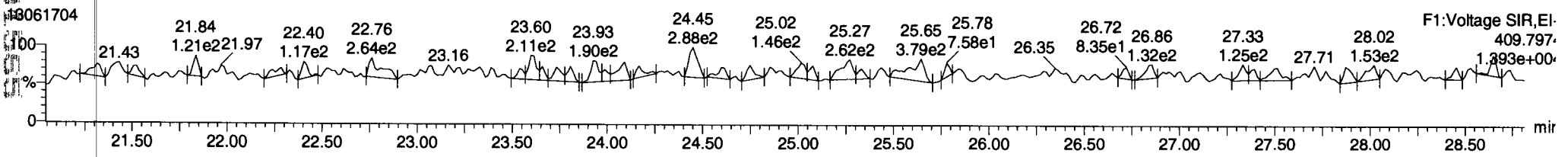


Total-penta1



FUNCTION1 HPCDPE



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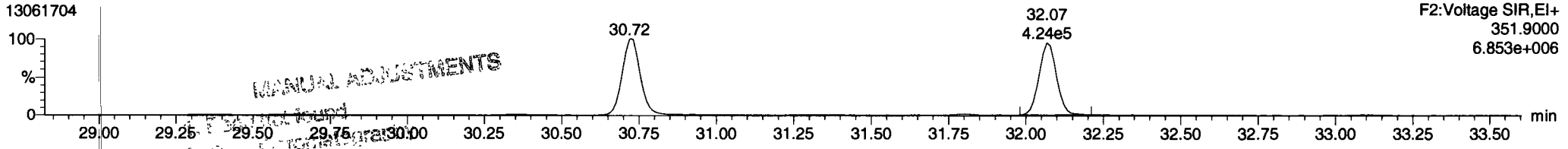
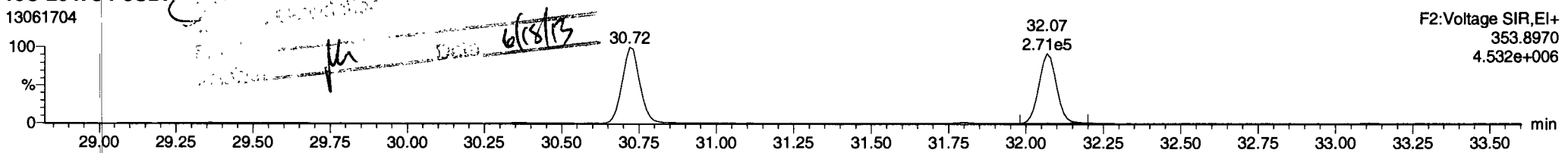
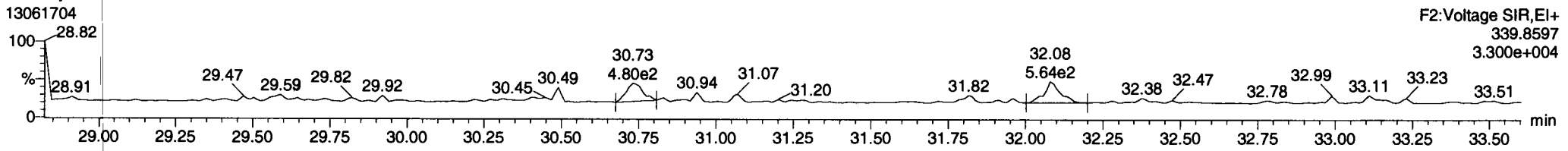
13C-23478-PeCDF



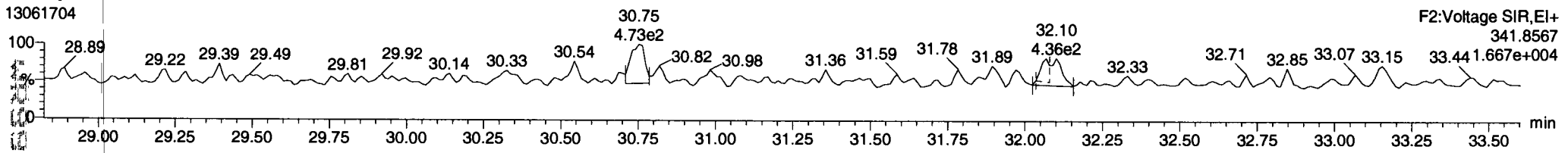
13C-23478-PeCDF



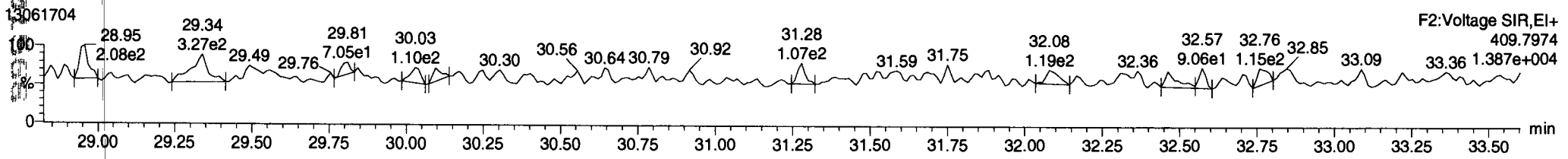
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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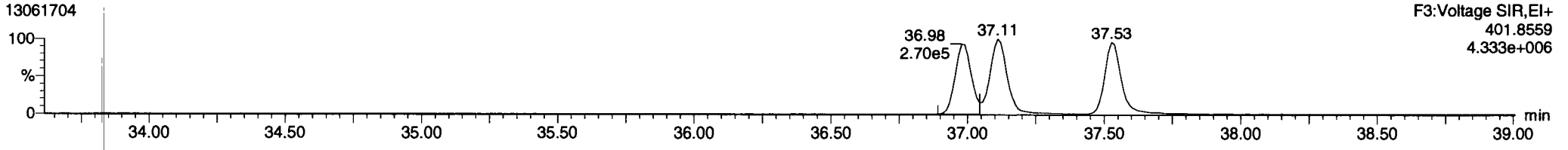
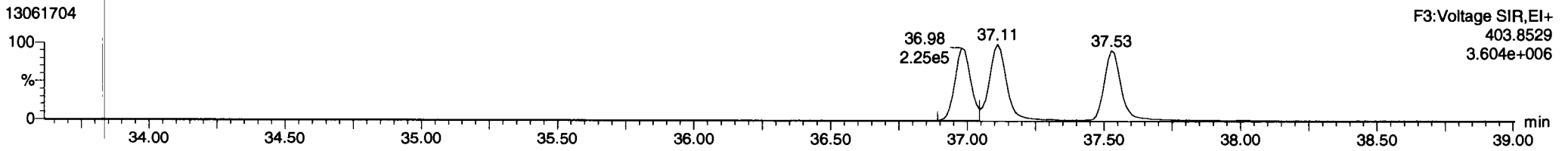
13C-123478-HxCDD



13C-123478-HxCDD



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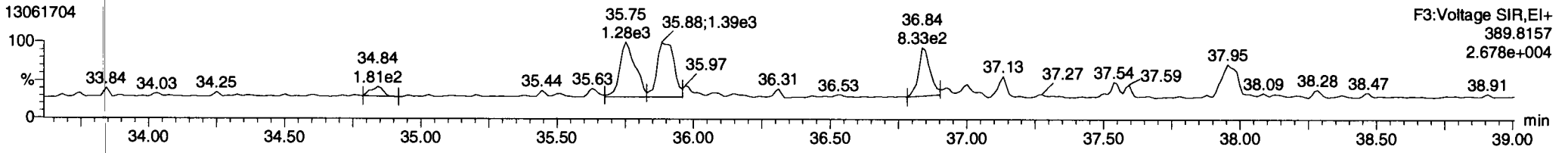
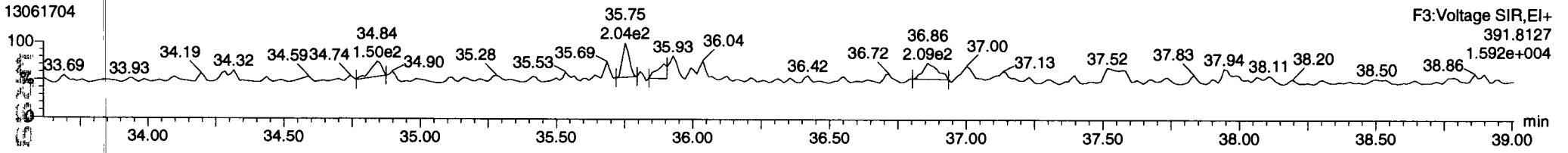
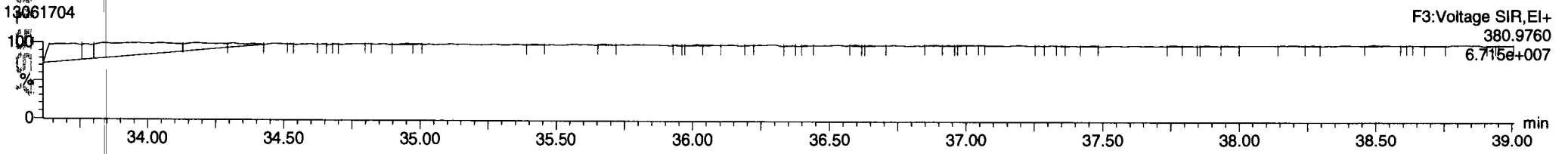


Total-hexadioxins



FUNCTION3 PFK



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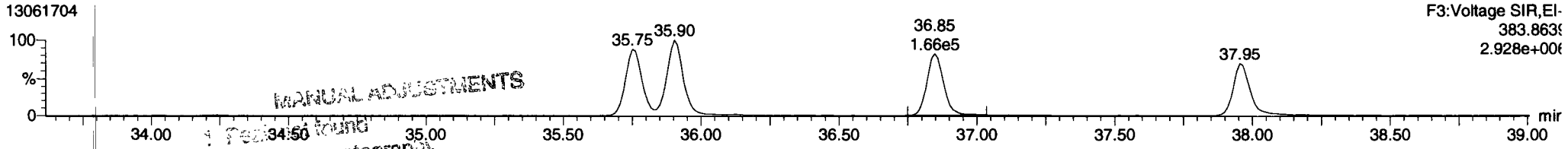
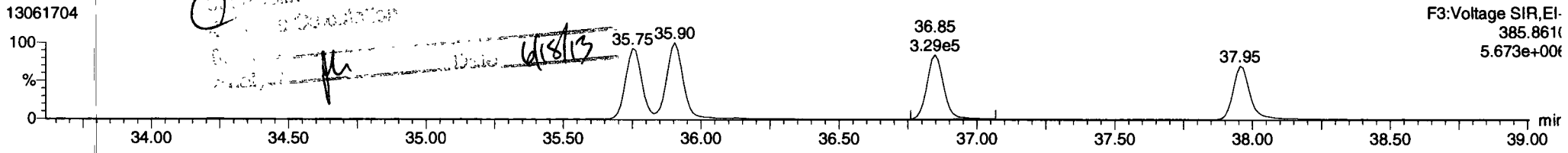
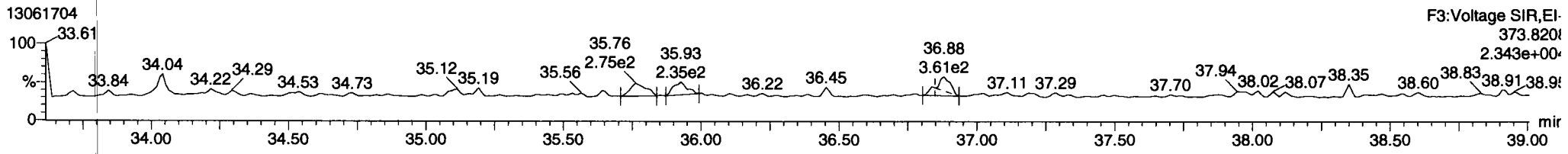
13C-234678-HxCDF



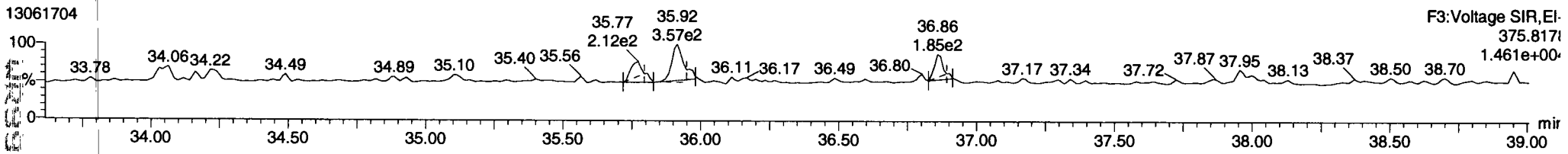
13C-234678-HxCDF



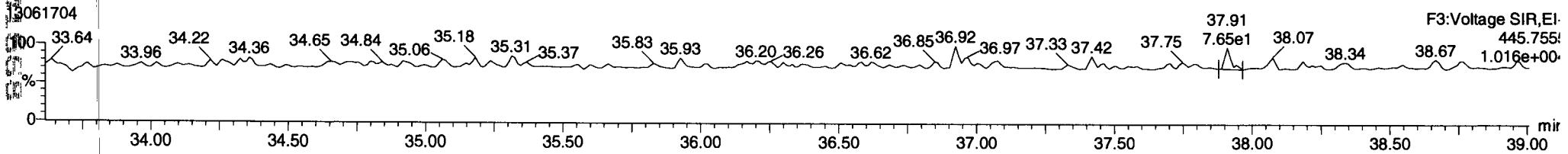
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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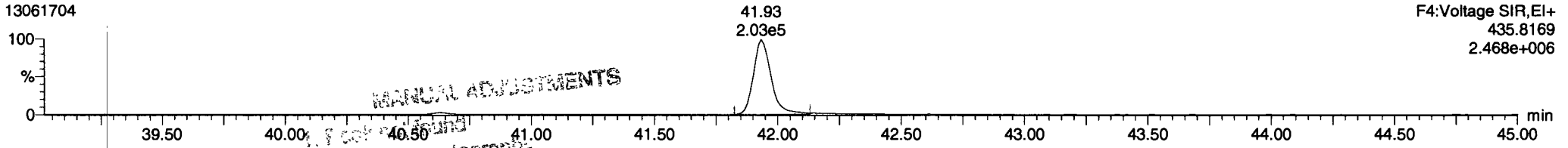
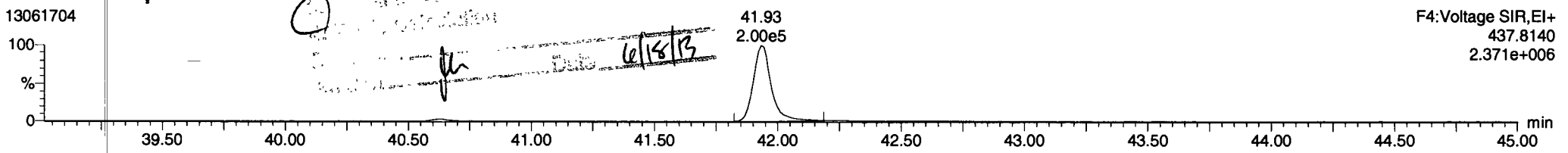
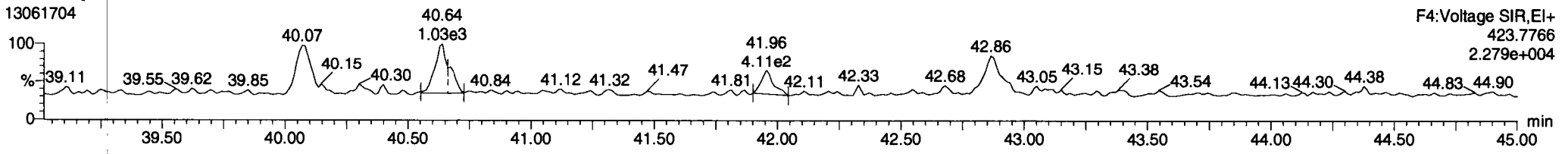
13C-1234678-HpCDD



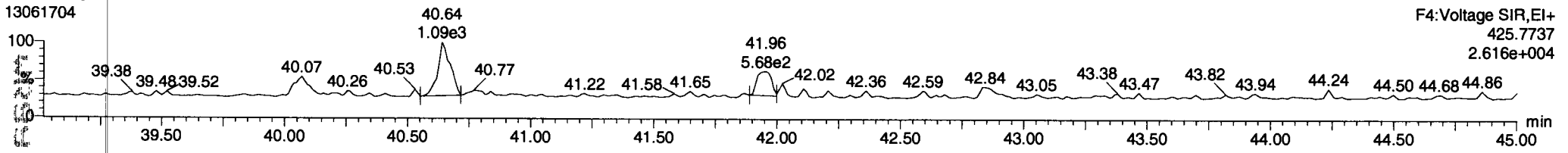
13C-1234678-HpCDD



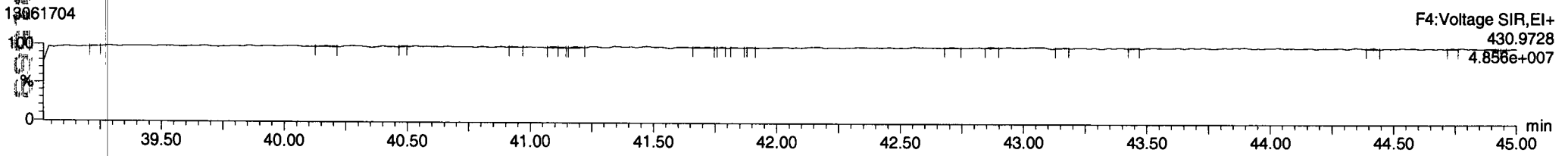
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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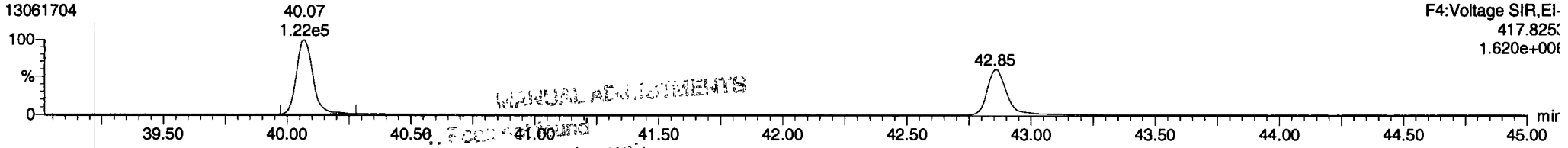
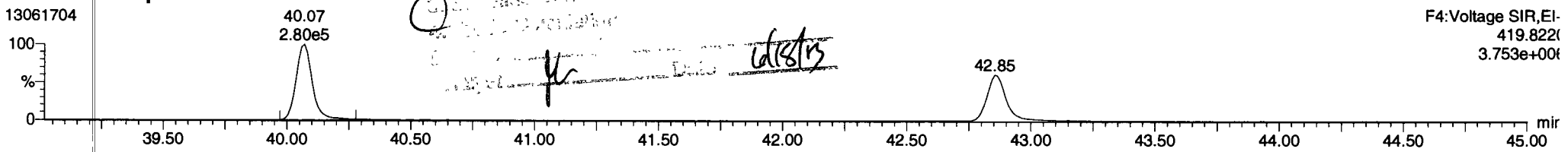
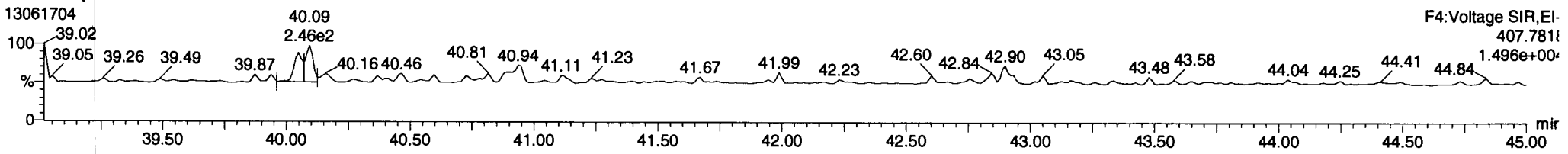
13C-1234678-HpCDF



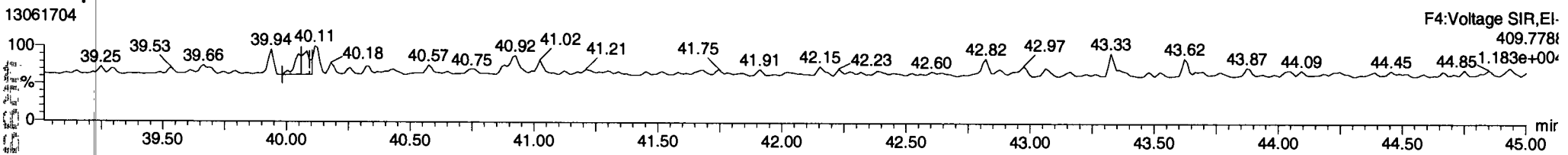
13C-1234678-HpCDF



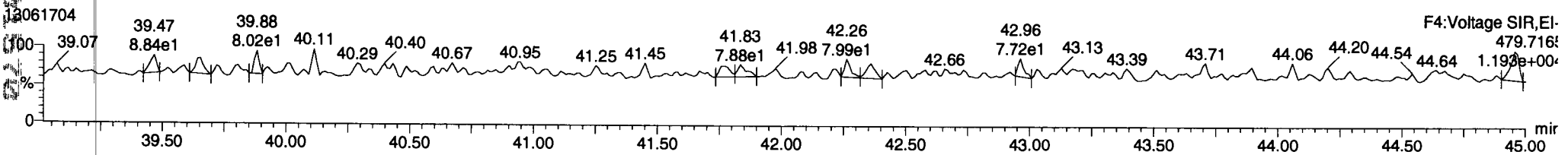
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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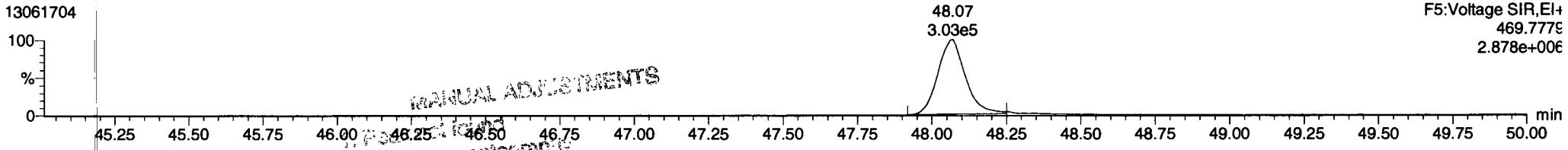
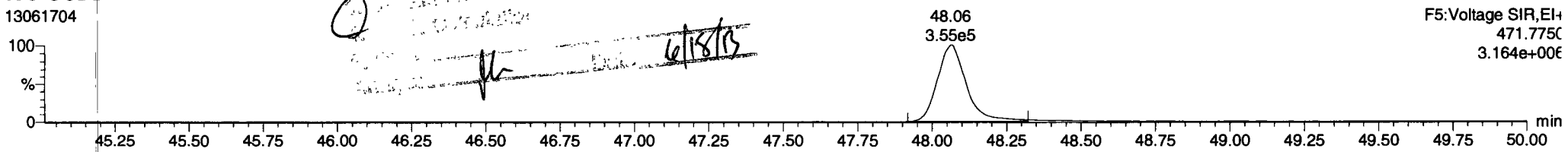
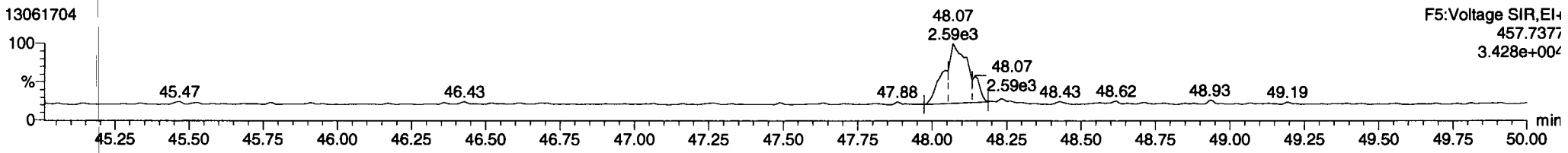
13C-OCDD



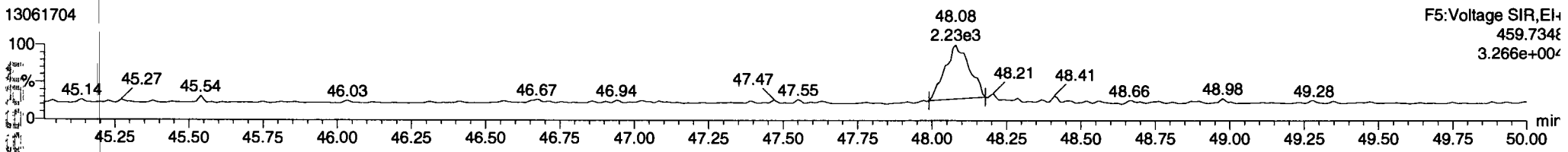
13C-OCDD



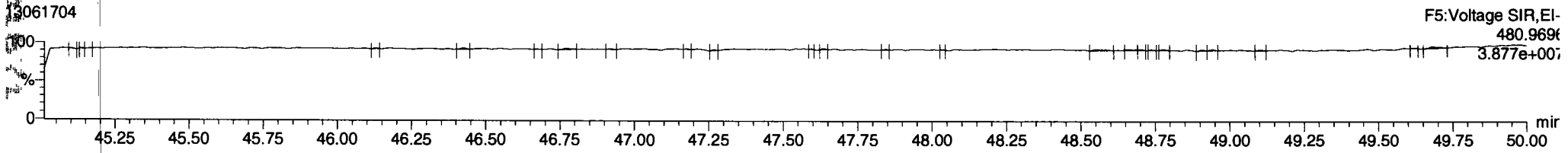
OCDD



OCDD



FUNCTION5 PFK



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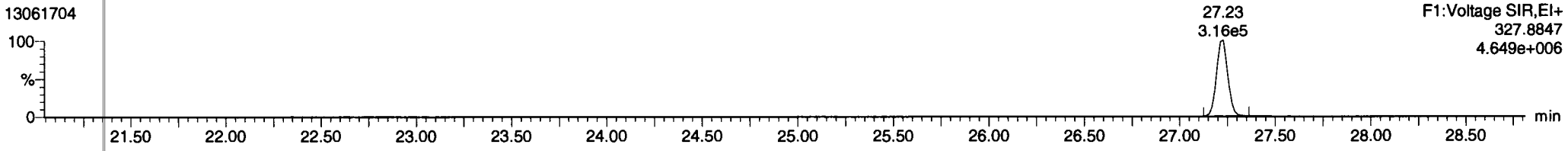
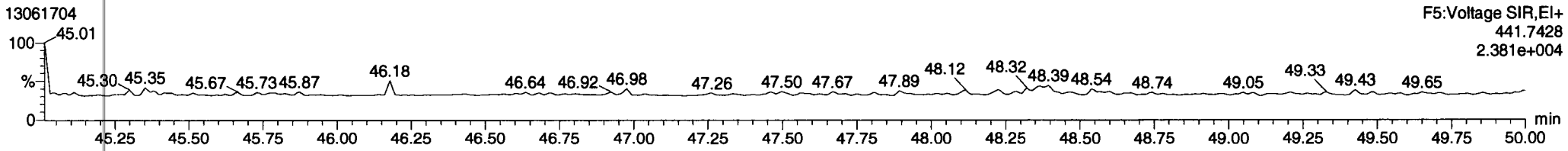
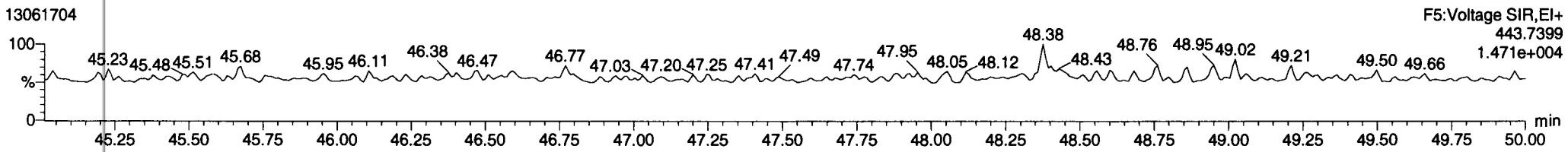
37CL-2378-TCDD



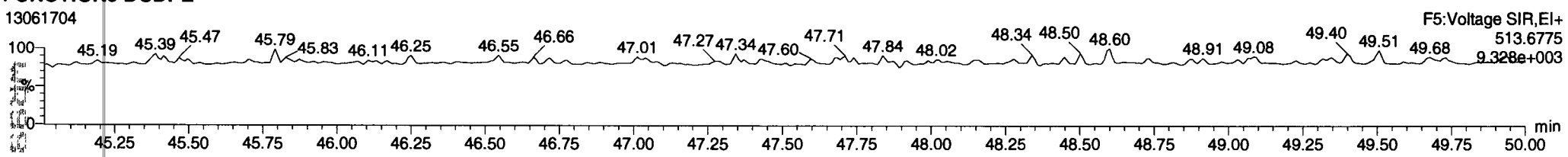
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

jlh 6/18/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.586	1.001	3.12e4	3.99e4	0.832	0.782	0.770	314.6	1363	2806	4.29e5	5.81e5	NO	9.847	9.847
12378-PeCDF	30.742	1.000	2.01e5	1.30e5	0.853	1.547	1.550	1645.1	1759	3284	2.89e6	1.91e6	NO	49.511	49.511
23478-PeCDF	32.090	1.000	1.84e5	1.22e5	0.884	1.509	1.550	1545.9	1759	3284	2.72e6	1.84e6	NO	47.303	47.303
123478-HxCDF	35.784	1.001	1.45e5	1.21e5	1.017	1.197	1.240	508.6	4177	3089	2.12e6	1.77e6	NO	49.317	49.317
234678-HxCDF	36.869	1.001	1.44e5	1.16e5	1.067	1.237	1.240	491.4	4177	3089	2.05e6	1.67e6	NO	47.981	47.981
123678-HxCDF	35.926	1.001	1.66e5	1.40e5	0.999	1.189	1.240	560.9	4177	3089	2.34e6	1.91e6	NO	50.622	50.622
123789-HxCDF	37.976	1.000	1.13e5	9.32e4	0.947	1.214	1.240	382.3	4177	3089	1.60e6	1.30e6	NO	49.426	49.426
1234678-HpCDF	40.092	1.000	1.25e5	1.23e5	1.151	1.013	1.050	747.2	2163	2375	1.62e6	1.59e6	NO	55.075	55.075
1234789-HpCDF	42.887	1.000	8.22e4	8.30e4	1.166	0.990	1.050	434.7	2163	2375	9.40e5	9.41e5	NO	47.425	47.425
OCDF	48.385	1.007	1.34e5	1.57e5	1.001	0.854	0.890	772.7	1492	2024	1.15e6	1.31e6	NO	90.866	90.866
2378-TCDD	27.229	1.001	2.98e4	4.02e4	0.939	0.741	0.770	184.8	2257	1617	4.17e5	5.70e5	NO	10.315	10.315
12378-PeCDD	32.342	1.000	1.53e5	1.02e5	0.930	1.498	1.550	1044.5	2136	1685	2.23e6	1.46e6	NO	47.618	47.618
123478-HxCDD	37.000	1.000	1.24e5	1.01e5	0.930	1.238	1.240	749.2	2471	2050	1.85e6	1.50e6	NO	46.553	46.553
123678-HxCDD	37.132	1.000	1.34e5	1.10e5	0.854	1.220	1.240	727.4	2471	2050	1.80e6	1.51e6	NO	48.714	48.714
123789-HxCDD	37.549	1.012	1.24e5	9.38e4	0.885	1.323	1.240	672.0	2471	2050	1.66e6	1.33e6	NO	44.442	44.442
1234678-HpCDD	41.955	1.000	9.53e4	9.19e4	0.966	1.037	1.050	742.9	1497	1544	1.11e6	1.08e6	NO	47.687	47.687
OCDD	48.089	1.000	1.34e5	1.56e5	0.921	0.860	0.890	777.4	1601	1777	1.24e6	1.47e6	NO	98.488	98.488
13C-2378-TCDF	26.571	1.007	3.73e5	4.95e5	1.283	0.753	0.770	2558.0	2090	10426	5.35e6	7.20e6	NO		71.653
13C-12378-PeCDF	30.730	1.164	4.73e5	3.10e5	1.051	1.527	1.550	1720.2	3981	3891	6.85e6	4.48e6	NO		78.902
13C-23478-PeCDF	32.079	1.215	4.41e5	2.89e5	1.030	1.526	1.550	1650.9	3981	3891	6.57e6	4.22e6	NO		75.160
13C-123478-HxCDF	35.762	0.953	1.77e5	3.54e5	1.069	0.501	0.510	867.9	2933	4218	2.55e6	5.12e6	NO		87.982
13C-123678-HxCDF	35.904	0.956	2.00e5	4.04e5	1.124	0.494	0.510	968.1	2933	4218	2.84e6	5.59e6	NO		95.250
13C-234678-HxCDF	36.847	0.982	1.70e5	3.38e5	1.041	0.503	0.510	795.6	2933	4218	2.33e6	4.74e6	NO		86.360
13C-123789-HxCDF	37.965	1.011	1.48e5	2.93e5	1.039	0.505	0.510	724.7	2933	4218	2.13e6	4.07e6	NO		75.198
13C-1234678-HpCDF	40.070	1.067	1.18e5	2.73e5	0.965	0.432	0.440	673.0	2376	2276	1.60e6	3.65e6	NO		71.800
13C-1234789-HpCDF	42.865	1.142	9.13e4	2.07e5	0.760	0.440	0.440	444.3	2376	2276	1.06e6	2.24e6	NO		69.611
13C-1234-TCDD	26.392	0.000	4.12e5	5.32e5	1.000	0.775	0.770	409.9	15074	4025	6.18e6	7.92e6	NO		100.000
13C-2378-TCDD	27.199	1.031	3.12e5	4.11e5	0.926	0.758	0.770	293.7	15074	4025	4.43e6	5.88e6	NO		82.728
13C-12378-PeCDD	32.331	1.225	3.51e5	2.26e5	0.734	1.553	1.550	1405.0	3672	1925	5.16e6	3.28e6	NO		83.275
13C-123478-HxCDD	36.990	0.985	2.88e5	2.32e5	0.984	1.240	1.240	2234.0	1912	1973	4.27e6	3.39e6	NO		93.572
13C-123678-HxCDD	37.121	0.989	3.24e5	2.64e5	1.043	1.227	1.240	2235.6	1912	1973	4.28e6	3.55e6	NO		99.917
13C-1234678-HpCDD	41.944	1.117	2.07e5	1.99e5	0.891	1.042	1.050	945.2	2558	3078	2.42e6	2.29e6	NO		80.754
13C-OCDD	48.071	1.281	3.04e5	3.35e5	0.849	0.907	0.890	996.6	2695	2257	2.69e6	3.03e6	NO		133.531

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.538	0.000	3.08e5	2.56e5	1.000	1.202	1.240	2259.5	1912	1973	4.32e6	3.57e6	NO	100.000
Total-tetrafurans			3.24e4		0.832				1363		4.48e5			10.273
Total-penta1			0.00e0						801		0.00e0			
Total-pentafurans			3.98e5		0.868				1759		5.78e6			99.958
Total-hexafurans			5.73e5		1.008				4177		8.22e6			199.089
Total-heptafurans			2.10e5		1.159				2163		2.61e6			103.873
Total-Furans			1.35e6		0.992				1363		1.82e7			504.058
Total-tetradioxins			3.09e4		0.939				2257		4.30e5			10.643
Total-pentadioxins			1.54e5		0.930				2136		2.25e6			47.910
Total-hexadioxins			3.87e5		0.890				2471		5.38e6			140.885
Total-heptadioxins			1.00e5		0.966				1497		1.18e6			49.734
Total-Dioxins			8.07e5		0.918				2257		1.05e7			347.661
Total-TEQ			2.15e6						2257		2.87e7			851.719
37CL-2378-TCDD	27.229	1.032	3.30e5		0.989			1586.9	2996		4.75e6			35.413
FUNCTION1 PFK			2.87e7						803053		1.74e8			
FUNCTION2 PFK			2.38e5						270533		7.50e6			0.000
FUNCTION3 PFK			7.35e5						527961		2.16e7			0.000
FUNCTION4 PFK			5.95e5						369317		2.04e7			
FUNCTION5 PFK			4.99e6						433841		5.80e7			
FUNCTION1 HXCDPE			4.98e2						574		1.25e4			0.000
FUNCTION1 HPCDPE			3.64e3						1821		8.29e4			0.000
FUNCTION2 HPCDPE			1.04e3						1875		2.57e4			0.000
FUNCTION3 OCDPE			0.00e0						598		0.00e0			
FUNCTION4 NCDPE			3.62e2						860		8.95e3			0.000
FUNCTION5 DCDPE			0.00e0						560		0.00e0			

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

TF

	1 2378-TCDF	303.9016	26.59	71073.904	0.832	9.847	9.847	0.78	0.77	NO	314.6
	35 Total-tetrafurans	303.9016	25.48	3078.518	0.832	0.427		0.67	0.77	NO	13.7

PP

PF

	37 Total-pentafurans	339.8597	33.14	2262.301	0.868	0.344		1.17	1.55	YES	11.1
	3 23478-PeCDF	339.8597	32.09	305509.875	0.884	47.303	47.303	1.51	1.55	NO	1545.9
	37 Total-pentafurans	339.8597	30.95	10276.785	0.868	1.564		1.60	1.55	NO	49.0
	2 12378-PeCDF	339.8597	30.74	330485.445	0.853	49.511	49.511	1.55	1.55	NO	1645.1
	37 Total-pentafurans	339.8597	30.37	2617.184	0.868	0.398		1.39	1.55	NO	15.7
	37 Total-pentafurans	339.8597	29.66	5502.874	0.868	0.837		3.03	1.55	YES	21.5

HF

	4 123478-HxCDF	373.8208	35.78	266140.196	1.017	49.317	49.317	1.20	1.24	NO	508.6
	38 Total-hexafurans	373.8208	34.26	2934.558	1.008	0.559		0.88	1.24	YES	5.6
	38 Total-hexafurans	373.8208	38.18	2255.651	1.008	0.430					6.5
	7 123789-HxCDF	373.8208	37.98	206447.922	0.947	49.426	49.426	1.21	1.24	NO	382.3
	5 234678-HxCDF	373.8208	36.87	259626.719	1.067	47.981	47.981	1.24	1.24	NO	491.4
	38 Total-hexafurans	373.8208	36.16	1706.117	1.008	0.325		1.04	1.24	YES	5.1
	38 Total-hexafurans	373.8208	36.09	2245.781	1.008	0.428		1.27	1.24	NO	6.9
	6 123678-HxCDF	373.8208	35.93	305722.328	0.999	50.622	50.622	1.19	1.24	NO	560.9

HPF

	39 Total-heptafurans	407.7818	40.91	1708.519	1.159	0.428		1.23	1.05	YES	7.0
	39 Total-heptafurans	407.7818	40.60	867.362	1.159	0.217		0.91	1.05	NO	4.2
	8 1234678-HpCDF	407.7818	40.09	247880.961	1.151	55.075	55.075	1.01	1.05	NO	747.2
	39 Total-heptafurans	407.7818	43.03	2910.332	1.159	0.728					15.5
	9 1234789-HpCDF	407.7818	42.89	165162.907	1.166	47.425	47.425	0.99	1.05	NO	434.7

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

1	2378-TCDF	303.9016	26.59	71073.904	0.832	9.847	9.847	0.78	0.77	NO	314.6
35	Total-tetrafurans	303.9016	25.48	3078.518	0.832	0.427		0.67	0.77	NO	13.7
37	Total-pentafurans	339.8597	33.14	2262.301	0.868	0.344		1.17	1.55	YES	11.1
3	23478-PeCDF	339.8597	32.09	305509.875	0.884	47.303	47.303	1.51	1.55	NO	1545.9
37	Total-pentafurans	339.8597	30.95	10276.785	0.868	1.564		1.60	1.55	NO	49.0
2	12378-PeCDF	339.8597	30.74	330485.445	0.853	49.511	49.511	1.55	1.55	NO	1645.1
37	Total-pentafurans	339.8597	30.37	2617.184	0.868	0.398		1.39	1.55	NO	15.7
37	Total-pentafurans	339.8597	29.66	5502.874	0.868	0.837		3.03	1.55	YES	21.5
4	123478-HxCDF	373.8208	35.78	266140.196	1.017	49.317	49.317	1.20	1.24	NO	508.6
38	Total-hexafurans	373.8208	34.26	2934.558	1.008	0.559		0.88	1.24	YES	5.6
38	Total-hexafurans	373.8208	38.18	2255.651	1.008	0.430					6.5
7	123789-HxCDF	373.8208	37.98	206447.922	0.947	49.426	49.426	1.21	1.24	NO	382.3
5	234678-HxCDF	373.8208	36.87	259626.719	1.067	47.981	47.981	1.24	1.24	NO	491.4
38	Total-hexafurans	373.8208	36.16	1706.117	1.008	0.325		1.04	1.24	YES	5.1
38	Total-hexafurans	373.8208	36.09	2245.781	1.008	0.428		1.27	1.24	NO	6.9
6	123678-HxCDF	373.8208	35.93	305722.328	0.999	50.622	50.622	1.19	1.24	NO	560.9
39	Total-heptafurans	407.7818	40.91	1708.519	1.159	0.428		1.23	1.05	YES	7.0
39	Total-heptafurans	407.7818	40.60	867.362	1.159	0.217		0.91	1.05	NO	4.2
8	1234678-HpCDF	407.7818	40.09	247880.961	1.151	55.075	55.075	1.01	1.05	NO	747.2
39	Total-heptafurans	407.7818	43.03	2910.332	1.159	0.728					15.5
9	1234789-HpCDF	407.7818	42.89	165162.907	1.166	47.425	47.425	0.99	1.05	NO	434.7
10	OCDF	441.7428	48.39	290811.907	1.001	90.866	90.866	0.85	0.89	NO	772.7

TD

11	2378-TCDD	319.8965	27.23	70017.729	0.939	10.315	10.315	0.74	0.77	NO	184.8
41	Total-tetradioxins	319.8965	26.86	2230.206	0.939	0.329		0.96	0.77	YES	5.6

PD

12	12378-PeCDD	355.8546	32.34	255504.157	0.930	47.618	47.618	1.50	1.55	NO	1044.5
42	Total-pentadioxins	355.8546	30.74	1570.895	0.930	0.293		3.98	1.55	YES	8.6

HD

15	123789-HxCDD	389.8157	37.55	217968.937	0.885	44.442	44.442	1.32	1.24	NO	672.0
43	Total-hexadioxins	389.8157	37.32	2991.829	0.890	0.607		2.05	1.24	YES	14.3
14	123678-HxCDD	389.8157	37.13	244515.008	0.854	48.714	48.714	1.22	1.24	NO	727.4
13	123478-HxCDD	389.8157	37.00	224987.500	0.930	46.553	46.553	1.24	1.24	NO	749.2
43	Total-hexadioxins	389.8157	36.04	770.027	0.890	0.156		1.94	1.24	YES	3.0
43	Total-hexadioxins	389.8157	35.92	1407.635	0.890	0.286		7.07	1.24	YES	7.2
43	Total-hexadioxins	389.8157	34.83	623.139	0.890	0.126		1.59	1.24	YES	2.7

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HPD

	44 Total-heptadioxins	423.7766	42.15	3348.421	0.966	0.853					23.2
	16 1234678-HpCDD	423.7766	41.96	187169.180	0.966	47.687	47.687	1.04	1.05	NO	742.9
	44 Total-heptadioxins	423.7766	40.65	4687.256	0.966	1.194		1.07	1.05	NO	23.4

Dioxins,TD,PD,HD,HPD,OD

	11 2378-TCDD	319.8965	27.23	70017.729	0.939	10.315	10.315	0.74	0.77	NO	184.8
	41 Total-tetradioxins	319.8965	26.86	2230.206	0.939	0.329		0.96	0.77	YES	5.6
	12 12378-PeCDD	355.8546	32.34	255504.157	0.930	47.618	47.618	1.50	1.55	NO	1044.5
	42 Total-pentadioxins	355.8546	30.74	1570.895	0.930	0.293		3.98	1.55	YES	8.6
	15 123789-HxCDD	389.8157	37.55	217968.937	0.885	44.442	44.442	1.32	1.24	NO	672.0
	43 Total-hexadioxins	389.8157	37.32	2991.829	0.890	0.607		2.05	1.24	YES	14.3
	14 123678-HxCDD	389.8157	37.13	244515.008	0.854	48.714	48.714	1.22	1.24	NO	727.4
	13 123478-HxCDD	389.8157	37.00	224987.500	0.930	46.553	46.553	1.24	1.24	NO	749.2
	43 Total-hexadioxins	389.8157	36.04	770.027	0.890	0.156		1.94	1.24	YES	3.0
	43 Total-hexadioxins	389.8157	35.92	1407.635	0.890	0.286		7.07	1.24	YES	7.2
	43 Total-hexadioxins	389.8157	34.83	623.139	0.890	0.126		1.59	1.24	YES	2.7
	44 Total-heptadioxins	423.7766	42.15	3348.421	0.966	0.853					23.2
	16 1234678-HpCDD	423.7766	41.96	187169.180	0.966	47.687	47.687	1.04	1.05	NO	742.9
	44 Total-heptadioxins	423.7766	40.65	4687.256	0.966	1.194		1.07	1.05	NO	23.4
	17 OCDD	457.7377	48.09	290167.594	0.921	98.488	98.488	0.86	0.89	NO	777.4

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	1 2378-TCDF	303.9016	26.59	71073.904	0.832	9.847	9.847	0.78	0.77	NO	314.6
	35 Total-tetrafurans	303.9016	25.48	3078.518	0.832	0.427		0.67	0.77	NO	13.7
	37 Total-pentafurans	339.8597	33.14	2262.301	0.868	0.344		1.17	1.55	YES	11.1
	3 23478-PeCDF	339.8597	32.09	305509.875	0.884	47.303	47.303	1.51	1.55	NO	1545.9
	37 Total-pentafurans	339.8597	30.95	10276.785	0.868	1.564		1.60	1.55	NO	49.0
	2 12378-PeCDF	339.8597	30.74	330485.445	0.853	49.511	49.511	1.55	1.55	NO	1645.1
	37 Total-pentafurans	339.8597	30.37	2617.184	0.868	0.398		1.39	1.55	NO	15.7
	37 Total-pentafurans	339.8597	29.66	5502.874	0.868	0.837		3.03	1.55	YES	21.5
	4 123478-HxCDF	373.8208	35.78	266140.196	1.017	49.317	49.317	1.20	1.24	NO	508.6
	38 Total-hexafurans	373.8208	34.26	2934.558	1.008	0.559		0.88	1.24	YES	5.6
	38 Total-hexafurans	373.8208	38.18	2255.651	1.008	0.430					6.5
	7 123789-HxCDF	373.8208	37.98	206447.922	0.947	49.426	49.426	1.21	1.24	NO	382.3
	5 234678-HxCDF	373.8208	36.87	259626.719	1.067	47.981	47.981	1.24	1.24	NO	491.4
	38 Total-hexafurans	373.8208	36.16	1706.117	1.008	0.325		1.04	1.24	YES	5.1
	38 Total-hexafurans	373.8208	36.09	2245.781	1.008	0.428		1.27	1.24	NO	6.9
	6 123678-HxCDF	373.8208	35.93	305722.328	0.999	50.622	50.622	1.19	1.24	NO	560.9
	39 Total-heptafurans	407.7818	40.91	1708.519	1.159	0.428		1.23	1.05	YES	7.0
	39 Total-heptafurans	407.7818	40.60	867.362	1.159	0.217		0.91	1.05	NO	4.2
	8 1234678-HpCDF	407.7818	40.09	247880.961	1.151	55.075	55.075	1.01	1.05	NO	747.2
	39 Total-heptafurans	407.7818	43.03	2910.332	1.159	0.728					15.5
	9 1234789-HpCDF	407.7818	42.89	165162.907	1.166	47.425	47.425	0.99	1.05	NO	434.7
	10 OCDF	441.7428	48.39	290811.907	1.001	90.866	90.866	0.85	0.89	NO	772.7
	11 2378-TCDD	319.8965	27.23	70017.729	0.939	10.315	10.315	0.74	0.77	NO	184.8
	41 Total-tetradioxins	319.8965	26.86	2230.206	0.939	0.329		0.96	0.77	YES	5.6
	12 12378-PeCDD	355.8546	32.34	255504.157	0.930	47.618	47.618	1.50	1.55	NO	1044.5
	42 Total-pentadioxins	355.8546	30.74	1570.895	0.930	0.293		3.98	1.55	YES	8.6
	15 123789-HxCDD	389.8157	37.55	217968.937	0.885	44.442	44.442	1.32	1.24	NO	672.0
	43 Total-hexadioxins	389.8157	37.32	2991.829	0.890	0.607		2.05	1.24	YES	14.3
	14 123678-HxCDD	389.8157	37.13	244515.008	0.854	48.714	48.714	1.22	1.24	NO	727.4
	13 123478-HxCDD	389.8157	37.00	224987.500	0.930	46.553	46.553	1.24	1.24	NO	749.2
	43 Total-hexadioxins	389.8157	36.04	770.027	0.890	0.156		1.94	1.24	YES	3.0
	43 Total-hexadioxins	389.8157	35.92	1407.635	0.890	0.286		7.07	1.24	YES	7.2
	43 Total-hexadioxins	389.8157	34.83	623.139	0.890	0.126		1.59	1.24	YES	2.7
	44 Total-heptadioxins	423.7766	42.15	3348.421	0.966	0.853					23.2
	16 1234678-HpCDD	423.7766	41.96	187169.180	0.966	47.687	47.687	1.04	1.05	NO	742.9
	44 Total-heptadioxins	423.7766	40.65	4687.256	0.966	1.194		1.07	1.05	NO	23.4
	17 OCDD	457.7377	48.09	290167.594	0.921	98.488	98.488	0.86	0.89	NO	777.4

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

PFK1

[redacted]	48	FUNCTION1 PFK	330.9792	24.09	0.000						2.4
[redacted]	48	FUNCTION1 PFK	330.9792	23.91	0.000						2.8
[redacted]	48	FUNCTION1 PFK	330.9792	23.76	0.000						0.5
[redacted]	48	FUNCTION1 PFK	330.9792	23.36	0.000						1.1
[redacted]	48	FUNCTION1 PFK	330.9792	23.27	0.000						0.5
[redacted]	48	FUNCTION1 PFK	330.9792	23.21	0.000						0.6
[redacted]	48	FUNCTION1 PFK	330.9792	22.69	0.000						1.0
[redacted]	48	FUNCTION1 PFK	330.9792	22.48	0.000						0.5
[redacted]	48	FUNCTION1 PFK	330.9792	22.42	0.000						0.3
[redacted]	48	FUNCTION1 PFK	330.9792	22.36	0.000						1.2
[redacted]	48	FUNCTION1 PFK	330.9792	21.76	0.000						24.9
[redacted]	48	FUNCTION1 PFK	330.9792	21.30	0.000						44.3
[redacted]	48	FUNCTION1 PFK	330.9792	21.21	0.000						47.9
[redacted]	48	FUNCTION1 PFK	330.9792	21.13	0.000						51.3
[redacted]	48	FUNCTION1 PFK	330.9792	27.36	0.000						1.3
[redacted]	48	FUNCTION1 PFK	330.9792	26.87	0.000						0.8
[redacted]	48	FUNCTION1 PFK	330.9792	26.72	0.000						0.7
[redacted]	48	FUNCTION1 PFK	330.9792	26.53	0.000						0.9
[redacted]	48	FUNCTION1 PFK	330.9792	26.39	0.000						1.7
[redacted]	48	FUNCTION1 PFK	330.9792	26.06	0.000						1.3
[redacted]	48	FUNCTION1 PFK	330.9792	25.87	0.000						1.3
[redacted]	48	FUNCTION1 PFK	330.9792	25.12	0.000						0.6
[redacted]	48	FUNCTION1 PFK	330.9792	24.85	0.000						1.4
[redacted]	48	FUNCTION1 PFK	330.9792	24.78	0.000						1.5
[redacted]	48	FUNCTION1 PFK	330.9792	24.67	0.000						1.5
[redacted]	48	FUNCTION1 PFK	330.9792	24.63	0.000						2.0
[redacted]	48	FUNCTION1 PFK	330.9792	24.52	0.000						1.5
[redacted]	48	FUNCTION1 PFK	330.9792	24.30	0.000						1.3
[redacted]	48	FUNCTION1 PFK	330.9792	24.21	0.000						3.3
[redacted]	48	FUNCTION1 PFK	330.9792	24.14	0.000						2.6
[redacted]	48	FUNCTION1 PFK	330.9792	28.77	0.000						2.0
[redacted]	48	FUNCTION1 PFK	330.9792	28.72	0.000						2.1
[redacted]	48	FUNCTION1 PFK	330.9792	28.53	0.000						3.0
[redacted]	48	FUNCTION1 PFK	330.9792	28.18	0.000						1.1
[redacted]	48	FUNCTION1 PFK	330.9792	28.05	0.000						1.2
[redacted]	48	FUNCTION1 PFK	330.9792	27.95	0.000						0.6
[redacted]	48	FUNCTION1 PFK	330.9792	27.80	0.000						1.5
[redacted]	48	FUNCTION1 PFK	330.9792	27.65	0.000						1.3
[redacted]	48	FUNCTION1 PFK	330.9792	27.45	0.000						0.8

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
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ID: WS30PR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

PFK2

[redacted]	49	FUNCTION2 PFK	366.9792	29.73	0.000	0.000				0.6
[redacted]	49	FUNCTION2 PFK	366.9792	29.57	0.000	0.000				0.9
[redacted]	49	FUNCTION2 PFK	366.9792	29.47	0.000	0.000				1.0
[redacted]	49	FUNCTION2 PFK	366.9792	29.21	0.000	0.000				1.0
[redacted]	49	FUNCTION2 PFK	366.9792	28.91	0.000	0.000				0.4
[redacted]	49	FUNCTION2 PFK	366.9792	28.87	0.000	0.000				0.5
[redacted]	49	FUNCTION2 PFK	366.9792	32.68	0.000	0.000				1.5
[redacted]	49	FUNCTION2 PFK	366.9792	32.57	0.000	0.000				1.3
[redacted]	49	FUNCTION2 PFK	366.9792	32.43	0.000	0.000				2.0
[redacted]	49	FUNCTION2 PFK	366.9792	32.13	0.000	0.000				0.7
[redacted]	49	FUNCTION2 PFK	366.9792	31.95	0.000	0.000				0.7
[redacted]	49	FUNCTION2 PFK	366.9792	31.66	0.000	0.000				0.7
[redacted]	49	FUNCTION2 PFK	366.9792	31.40	0.000	0.000				1.2
[redacted]	49	FUNCTION2 PFK	366.9792	31.32	0.000	0.000				1.0
[redacted]	49	FUNCTION2 PFK	366.9792	30.97	0.000	0.000				0.8
[redacted]	49	FUNCTION2 PFK	366.9792	30.93	0.000	0.000				0.6
[redacted]	49	FUNCTION2 PFK	366.9792	30.82	0.000	0.000				0.4
[redacted]	49	FUNCTION2 PFK	366.9792	30.69	0.000	0.000				0.8
[redacted]	49	FUNCTION2 PFK	366.9792	30.64	0.000	0.000				0.6
[redacted]	49	FUNCTION2 PFK	366.9792	30.36	0.000	0.000				1.1
[redacted]	49	FUNCTION2 PFK	366.9792	30.25	0.000	0.000				0.4
[redacted]	49	FUNCTION2 PFK	366.9792	29.77	0.000	0.000				0.8
[redacted]	49	FUNCTION2 PFK	366.9792	33.57	0.000	0.000				1.5
[redacted]	49	FUNCTION2 PFK	366.9792	33.51	0.000	0.000				1.2
[redacted]	49	FUNCTION2 PFK	366.9792	33.31	0.000	0.000				0.9
[redacted]	49	FUNCTION2 PFK	366.9792	33.19	0.000	0.000				1.9
[redacted]	49	FUNCTION2 PFK	366.9792	33.13	0.000	0.000				0.8
[redacted]	49	FUNCTION2 PFK	366.9792	33.09	0.000	0.000				0.6
[redacted]	49	FUNCTION2 PFK	366.9792	32.97	0.000	0.000				1.3
[redacted]	49	FUNCTION2 PFK	366.9792	32.88	0.000	0.000				0.7

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PFK3

[redacted]	50 FUNCTION3 PFK	380.9760	34.23	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	34.17	0.000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	34.10	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	33.87	0.000	0.000					2.2
[redacted]	50 FUNCTION3 PFK	380.9760	33.78	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	33.71	0.000	0.000					2.7
[redacted]	50 FUNCTION3 PFK	380.9760	33.68	0.000	0.000					2.8
[redacted]	50 FUNCTION3 PFK	380.9760	36.88	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	36.85	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	36.60	0.000	0.000					0.3
[redacted]	50 FUNCTION3 PFK	380.9760	36.46	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	36.29	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	36.12	0.000	0.000					2.0
[redacted]	50 FUNCTION3 PFK	380.9760	35.93	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	35.75	0.000	0.000					2.3
[redacted]	50 FUNCTION3 PFK	380.9760	35.71	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	35.49	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	35.41	0.000	0.000					0.6
[redacted]	50 FUNCTION3 PFK	380.9760	35.18	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	35.10	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	34.93	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	34.40	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	34.34	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	38.95	0.000	0.000					0.4
[redacted]	50 FUNCTION3 PFK	380.9760	38.90	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	38.82	0.000	0.000					0.6
[redacted]	50 FUNCTION3 PFK	380.9760	38.72	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	38.67	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	38.61	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	38.45	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	37.90	0.000	0.000					1.5
[redacted]	50 FUNCTION3 PFK	380.9760	37.81	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	37.64	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	37.29	0.000	0.000					0.8
[redacted]	50 FUNCTION3 PFK	380.9760	37.13	0.000	0.000					0.3
[redacted]	50 FUNCTION3 PFK	380.9760	36.99	0.000	0.000					0.6
[redacted]	50 FUNCTION3 PFK	380.9760	36.92	0.000	0.000					0.6

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PFK4

	51 FUNCTION4 PFK	430.9728	39.08	0.000						2.5
	51 FUNCTION4 PFK	430.9728	40.88	0.000						0.4
	51 FUNCTION4 PFK	430.9728	40.74	0.000						1.1
	51 FUNCTION4 PFK	430.9728	40.65	0.000						1.3
	51 FUNCTION4 PFK	430.9728	40.49	0.000						1.1
	51 FUNCTION4 PFK	430.9728	40.35	0.000						0.8
	51 FUNCTION4 PFK	430.9728	40.31	0.000						1.0
	51 FUNCTION4 PFK	430.9728	40.23	0.000						0.8
	51 FUNCTION4 PFK	430.9728	40.19	0.000						0.8
	51 FUNCTION4 PFK	430.9728	39.98	0.000						1.0
	51 FUNCTION4 PFK	430.9728	39.95	0.000						1.1
	51 FUNCTION4 PFK	430.9728	39.88	0.000						1.7
	51 FUNCTION4 PFK	430.9728	39.82	0.000						1.4
	51 FUNCTION4 PFK	430.9728	39.68	0.000						1.4
	51 FUNCTION4 PFK	430.9728	39.51	0.000						1.2
	51 FUNCTION4 PFK	430.9728	39.39	0.000						0.6
	51 FUNCTION4 PFK	430.9728	39.34	0.000						0.7
	51 FUNCTION4 PFK	430.9728	42.62	0.000						1.2
	51 FUNCTION4 PFK	430.9728	42.43	0.000						0.7
	51 FUNCTION4 PFK	430.9728	42.35	0.000						0.8
	51 FUNCTION4 PFK	430.9728	42.30	0.000						0.6
	51 FUNCTION4 PFK	430.9728	42.04	0.000						0.7
	51 FUNCTION4 PFK	430.9728	42.01	0.000						0.7
	51 FUNCTION4 PFK	430.9728	41.98	0.000						0.9
	51 FUNCTION4 PFK	430.9728	41.92	0.000						0.5
	51 FUNCTION4 PFK	430.9728	41.88	0.000						1.7
	51 FUNCTION4 PFK	430.9728	41.81	0.000						1.9
	51 FUNCTION4 PFK	430.9728	41.75	0.000						1.4
	51 FUNCTION4 PFK	430.9728	41.66	0.000						1.8
	51 FUNCTION4 PFK	430.9728	41.59	0.000						1.5
	51 FUNCTION4 PFK	430.9728	41.07	0.000						0.8
	51 FUNCTION4 PFK	430.9728	40.98	0.000						1.0
	51 FUNCTION4 PFK	430.9728	40.94	0.000						0.7
	51 FUNCTION4 PFK	430.9728	44.64	0.000						1.3
	51 FUNCTION4 PFK	430.9728	44.50	0.000						1.3
	51 FUNCTION4 PFK	430.9728	44.47	0.000						1.5
	51 FUNCTION4 PFK	430.9728	44.24	0.000						1.6
	51 FUNCTION4 PFK	430.9728	44.17	0.000						1.0
	51 FUNCTION4 PFK	430.9728	44.01	0.000						1.0
	51 FUNCTION4 PFK	430.9728	43.88	0.000						1.1
	51 FUNCTION4 PFK	430.9728	43.81	0.000						0.9
	51 FUNCTION4 PFK	430.9728	43.58	0.000						0.8
	51 FUNCTION4 PFK	430.9728	43.52	0.000						0.8
	51 FUNCTION4 PFK	430.9728	43.41	0.000						0.5
	51 FUNCTION4 PFK	430.9728	43.38	0.000						0.3
	51 FUNCTION4 PFK	430.9728	43.27	0.000						1.1
	51 FUNCTION4 PFK	430.9728	43.23	0.000						1.0
	51 FUNCTION4 PFK	430.9728	43.02	0.000						1.4
	51 FUNCTION4 PFK	430.9728	42.89	0.000						1.1

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PFK4

	51	FUNCTION4 PFK	430.9728	44.97	0.000						1.1
	51	FUNCTION4 PFK	430.9728	44.84	0.000						0.4
	51	FUNCTION4 PFK	430.9728	44.76	0.000						0.6
	51	FUNCTION4 PFK	430.9728	44.72	0.000						0.7

PFK5

	52	FUNCTION5 PFK	480.9696	46.03	0.000						0.8
	52	FUNCTION5 PFK	480.9696	45.95	0.000						0.6
	52	FUNCTION5 PFK	480.9696	45.92	0.000						0.7
	52	FUNCTION5 PFK	480.9696	45.83	0.000						1.5
	52	FUNCTION5 PFK	480.9696	45.71	0.000						2.5
	52	FUNCTION5 PFK	480.9696	45.70	0.000						2.5
	52	FUNCTION5 PFK	480.9696	45.54	0.000						9.3
	52	FUNCTION5 PFK	480.9696	45.36	0.000						16.7
	52	FUNCTION5 PFK	480.9696	45.21	0.000						23.1
	52	FUNCTION5 PFK	480.9696	45.16	0.000						24.3
	52	FUNCTION5 PFK	480.9696	45.07	0.000						28.0
	52	FUNCTION5 PFK	480.9696	47.95	0.000						1.0
	52	FUNCTION5 PFK	480.9696	47.81	0.000						1.6
	52	FUNCTION5 PFK	480.9696	47.77	0.000						0.4
	52	FUNCTION5 PFK	480.9696	47.61	0.000						0.6
	52	FUNCTION5 PFK	480.9696	47.43	0.000						1.0
	52	FUNCTION5 PFK	480.9696	47.36	0.000						0.3
	52	FUNCTION5 PFK	480.9696	46.94	0.000						1.3
	52	FUNCTION5 PFK	480.9696	46.81	0.000						0.7
	52	FUNCTION5 PFK	480.9696	46.79	0.000						0.5
	52	FUNCTION5 PFK	480.9696	46.74	0.000						1.4
	52	FUNCTION5 PFK	480.9696	46.68	0.000						0.9
	52	FUNCTION5 PFK	480.9696	46.58	0.000						0.4
	52	FUNCTION5 PFK	480.9696	46.47	0.000						0.3
	52	FUNCTION5 PFK	480.9696	46.38	0.000						0.4
	52	FUNCTION5 PFK	480.9696	46.29	0.000						1.3
	52	FUNCTION5 PFK	480.9696	46.08	0.000						0.9
	52	FUNCTION5 PFK	480.9696	49.75	0.000						1.3
	52	FUNCTION5 PFK	480.9696	49.70	0.000						0.7
	52	FUNCTION5 PFK	480.9696	49.63	0.000						0.4
	52	FUNCTION5 PFK	480.9696	49.40	0.000						1.2
	52	FUNCTION5 PFK	480.9696	49.31	0.000						1.4
	52	FUNCTION5 PFK	480.9696	49.23	0.000						0.7
	52	FUNCTION5 PFK	480.9696	49.08	0.000						0.5
	52	FUNCTION5 PFK	480.9696	49.05	0.000						1.3
	52	FUNCTION5 PFK	480.9696	48.90	0.000						0.4
	52	FUNCTION5 PFK	480.9696	48.55	0.000						0.7
	52	FUNCTION5 PFK	480.9696	48.03	0.000						1.1
	52	FUNCTION5 PFK	480.9696	48.00	0.000						1.0

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ETHERS1

	53	FUNCTION1	HXCD...	375.8364	24.12	0.000	0.000			3.1
	53	FUNCTION1	HXCD...	375.8364	23.28	0.000	0.000			4.4
	53	FUNCTION1	HXCD...	375.8364	21.39	0.000	0.000			4.4
	53	FUNCTION1	HXCD...	375.8364	25.75	0.000	0.000			3.4
	53	FUNCTION1	HXCD...	375.8364	25.63	0.000	0.000			4.0
	53	FUNCTION1	HXCD...	375.8364	24.91	0.000	0.000			2.5

ETHERS2

	54	FUNCTION1	HPCD...	409.7974	23.69	0.000	0.000			1.5
	54	FUNCTION1	HPCD...	409.7974	23.14	0.000	0.000			1.5
	54	FUNCTION1	HPCD...	409.7974	23.00	0.000	0.000			1.5
	54	FUNCTION1	HPCD...	409.7974	22.76	0.000	0.000			2.2
	54	FUNCTION1	HPCD...	409.7974	22.55	0.000	0.000			1.5
	54	FUNCTION1	HPCD...	409.7974	22.43	0.000	0.000			1.1
	54	FUNCTION1	HPCD...	409.7974	22.36	0.000	0.000			3.2
	54	FUNCTION1	HPCD...	409.7974	22.27	0.000	0.000			1.3
	54	FUNCTION1	HPCD...	409.7974	21.69	0.000	0.000			1.5
	54	FUNCTION1	HPCD...	409.7974	21.43	0.000	0.000			1.3
	54	FUNCTION1	HPCD...	409.7974	21.34	0.000	0.000			1.4
	54	FUNCTION1	HPCD...	409.7974	21.22	0.000	0.000			2.1
	54	FUNCTION1	HPCD...	409.7974	28.51	0.000	0.000			1.3
	54	FUNCTION1	HPCD...	409.7974	28.36	0.000	0.000			1.3
	54	FUNCTION1	HPCD...	409.7974	28.24	0.000	0.000			1.4
	54	FUNCTION1	HPCD...	409.7974	27.96	0.000	0.000			2.2
	54	FUNCTION1	HPCD...	409.7974	27.71	0.000	0.000			1.1
	54	FUNCTION1	HPCD...	409.7974	27.35	0.000	0.000			1.5
	54	FUNCTION1	HPCD...	409.7974	26.44	0.000	0.000			1.2
	54	FUNCTION1	HPCD...	409.7974	25.96	0.000	0.000			1.3
	54	FUNCTION1	HPCD...	409.7974	25.66	0.000	0.000			1.1
	54	FUNCTION1	HPCD...	409.7974	25.54	0.000	0.000			0.8
	54	FUNCTION1	HPCD...	409.7974	25.15	0.000	0.000			1.5
	54	FUNCTION1	HPCD...	409.7974	24.67	0.000	0.000			1.0
	54	FUNCTION1	HPCD...	409.7974	24.55	0.000	0.000			1.4
	54	FUNCTION1	HPCD...	409.7974	24.38	0.000	0.000			3.0
	54	FUNCTION1	HPCD...	409.7974	23.94	0.000	0.000			1.7
	54	FUNCTION1	HPCD...	409.7974	23.85	0.000	0.000			1.8
	54	FUNCTION1	HPCD...	409.7974	28.75	0.000	0.000			1.6

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

ETHERS3

	55	FUNCTION2 HPCD...	409.7974	33.47	0.000	0.000					1.7
	55	FUNCTION2 HPCD...	409.7974	33.09	0.000	0.000					1.2
	55	FUNCTION2 HPCD...	409.7974	32.58	0.000	0.000					2.0
	55	FUNCTION2 HPCD...	409.7974	30.41	0.000	0.000					1.7
	55	FUNCTION2 HPCD...	409.7974	29.58	0.000	0.000					1.3
	55	FUNCTION2 HPCD...	409.7974	29.51	0.000	0.000					1.7
	55	FUNCTION2 HPCD...	409.7974	29.25	0.000	0.000					2.5
	55	FUNCTION2 HPCD...	409.7974	28.94	0.000	0.000					1.5

ETHERS4

ETHERS5

	57	FUNCTION4 NCDPE	479.7165	44.88	0.000	0.000					2.2
	57	FUNCTION4 NCDPE	479.7165	44.13	0.000	0.000					2.9
	57	FUNCTION4 NCDPE	479.7165	43.77	0.000	0.000					3.3
	57	FUNCTION4 NCDPE	479.7165	43.07	0.000	0.000					2.0

ETHERS6

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
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Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

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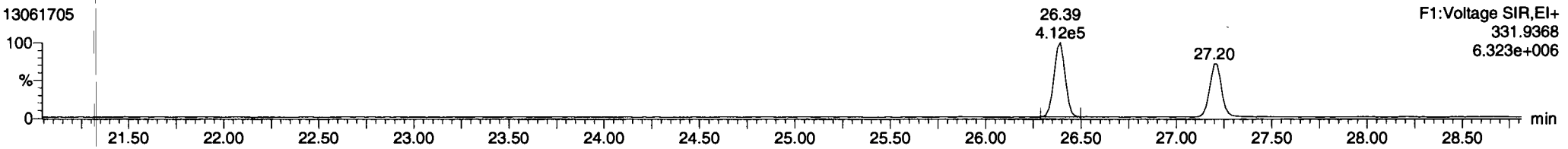
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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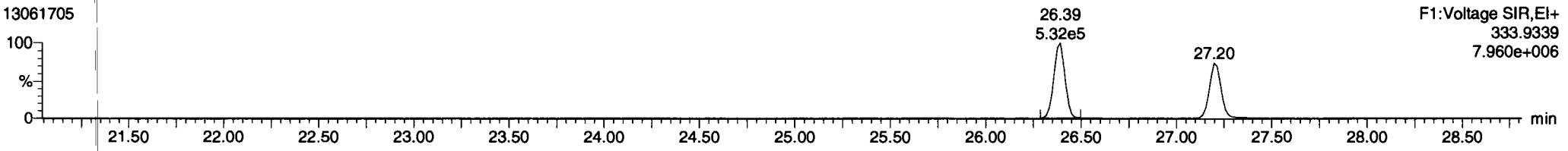

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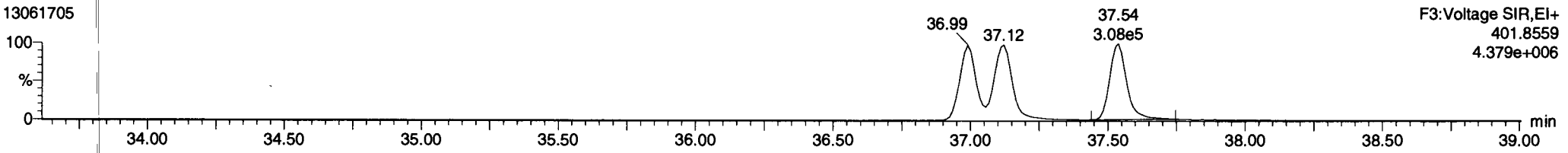

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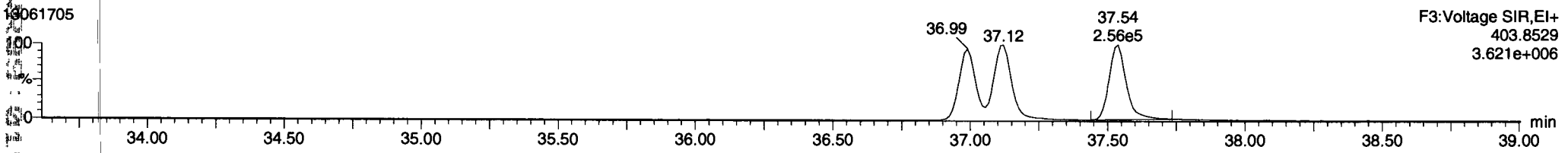

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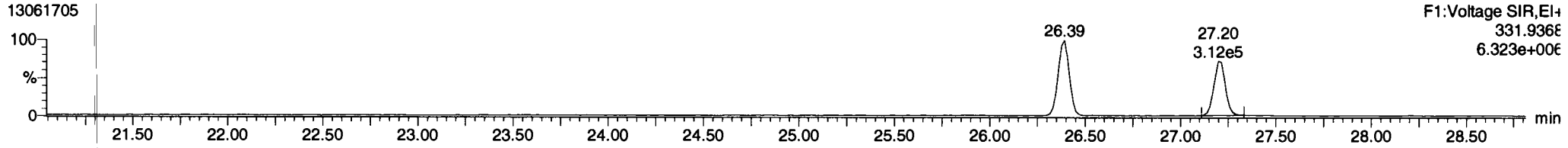

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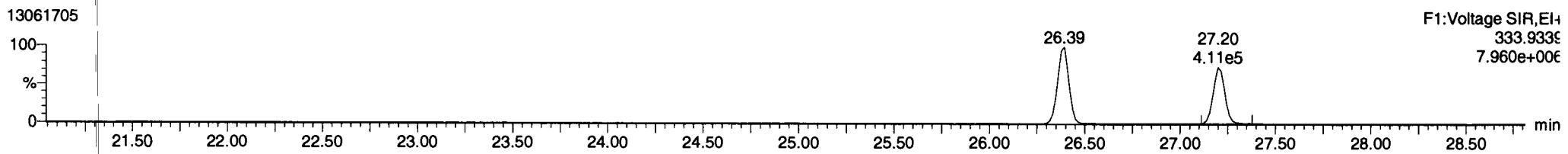

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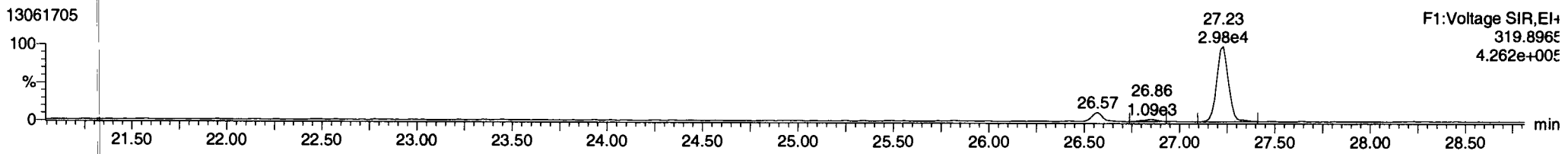

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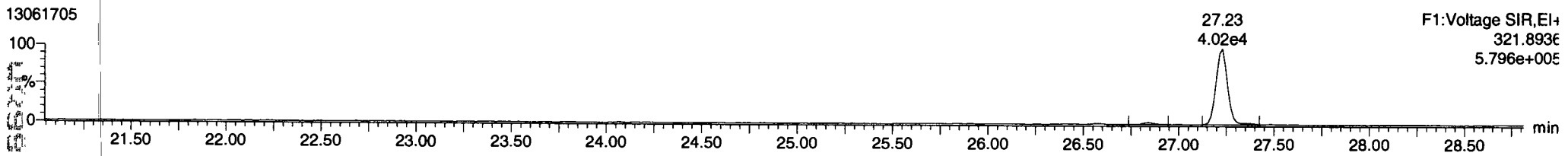
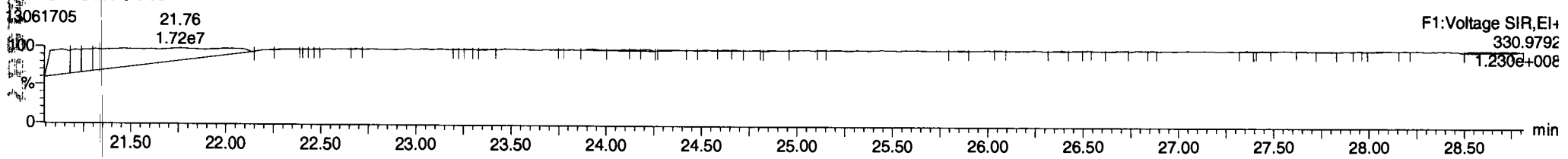


FUNCTION1 PFK



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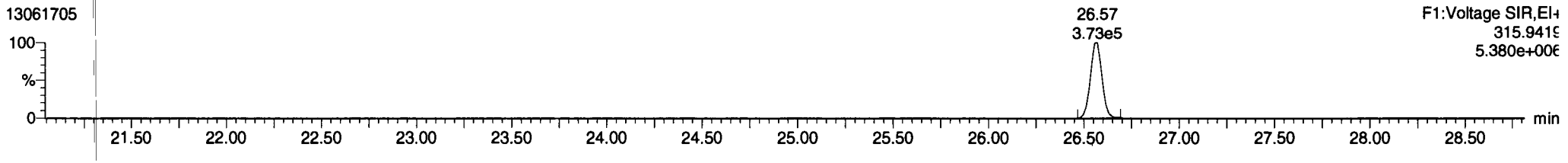
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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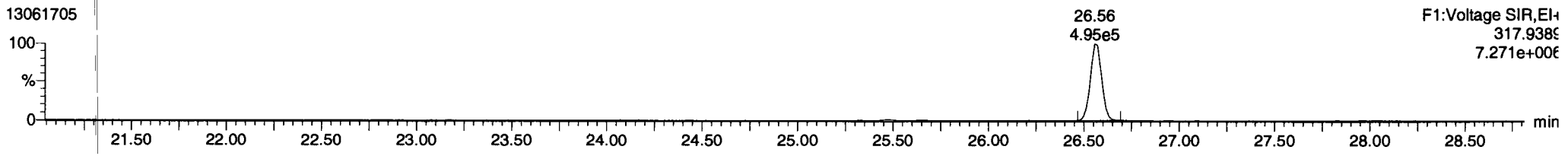

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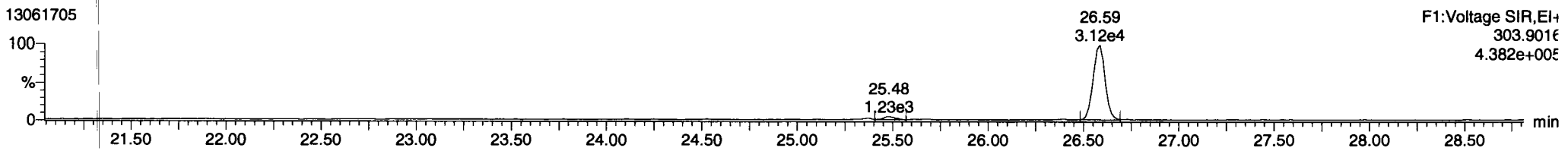
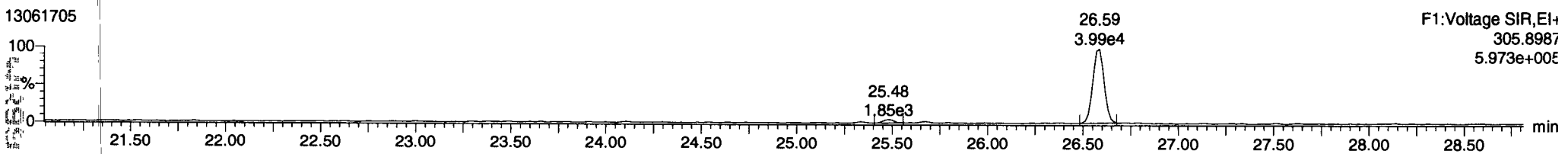
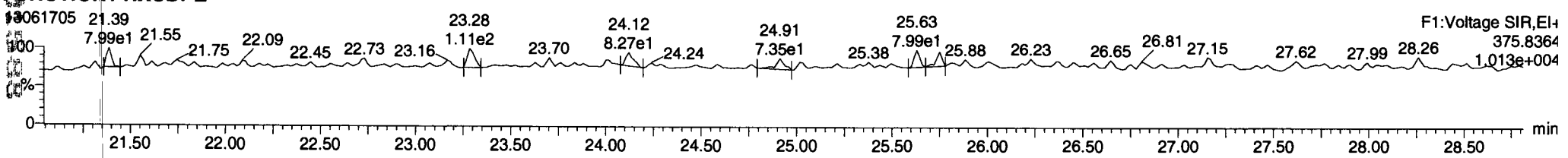


Total-tetrafurans



FUNCTION1 HXCDPE



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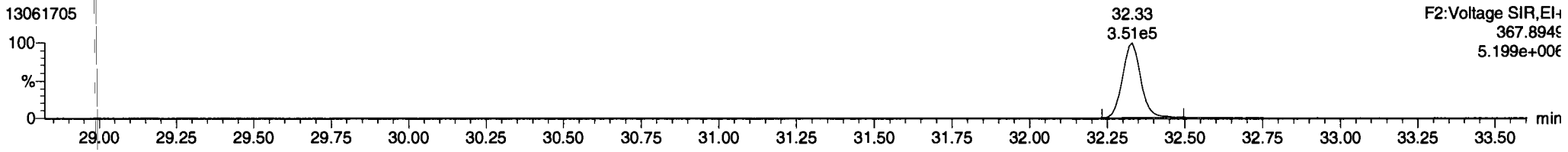
13C-12378-PeCDD



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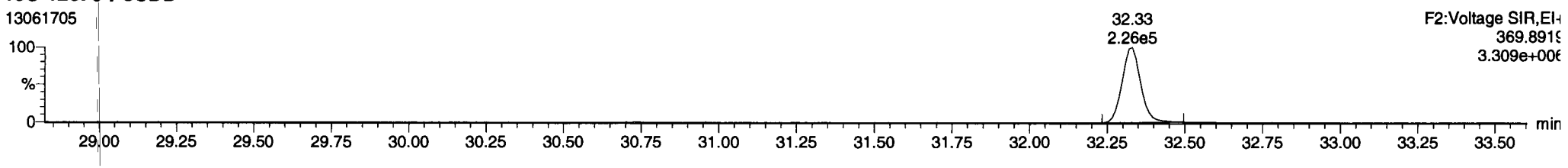

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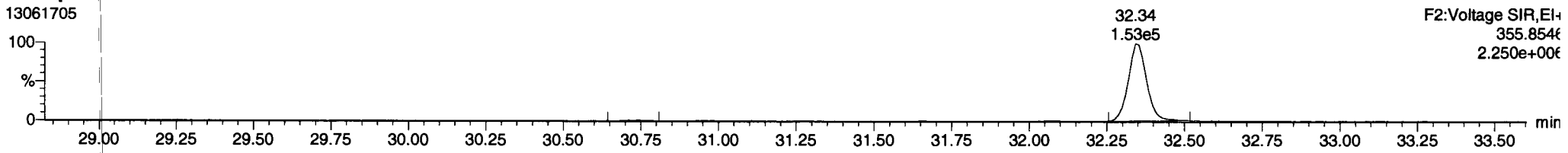
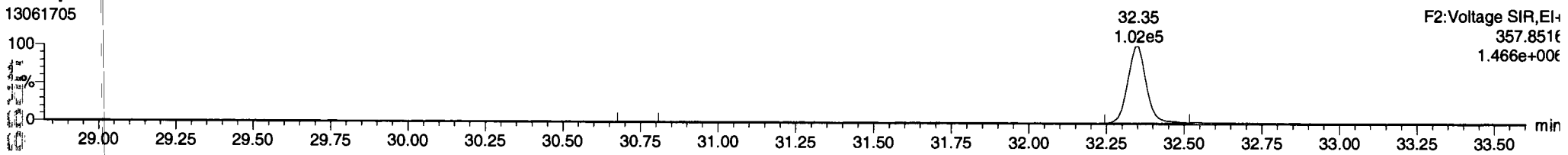
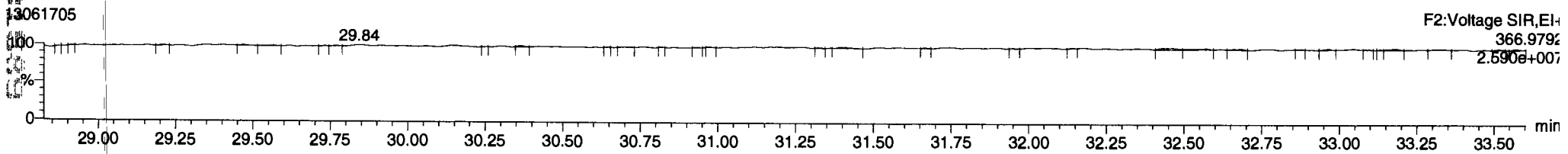


Total-pentadioxins



FUNCTION2 PFK



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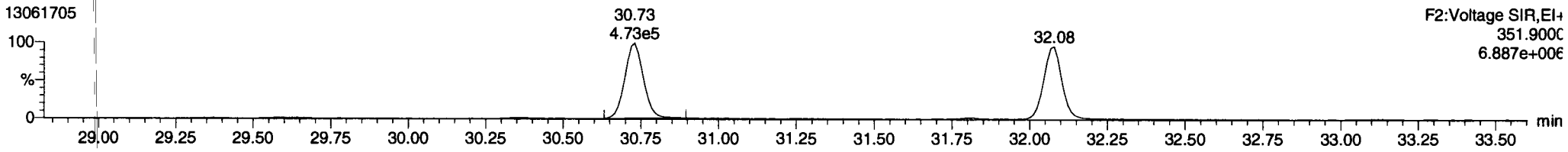
13C-12378-PeCDF



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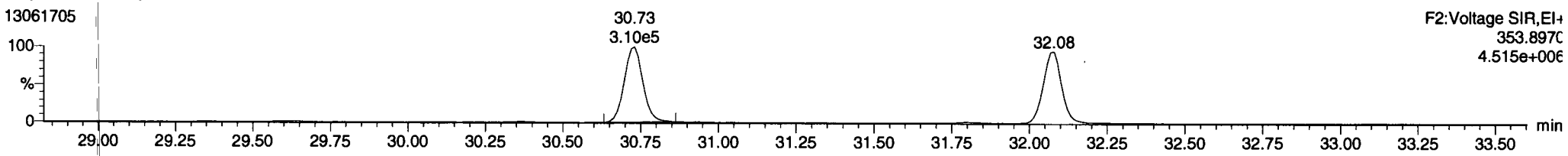

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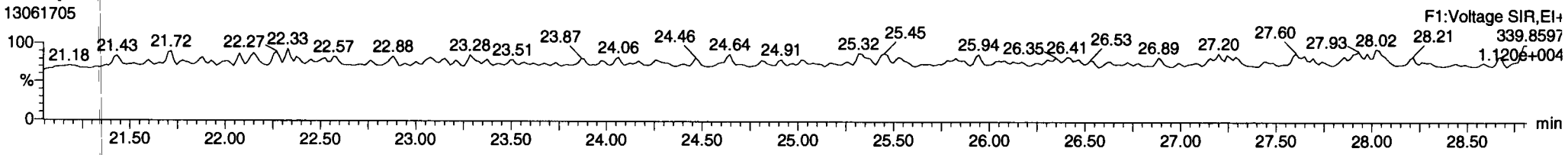

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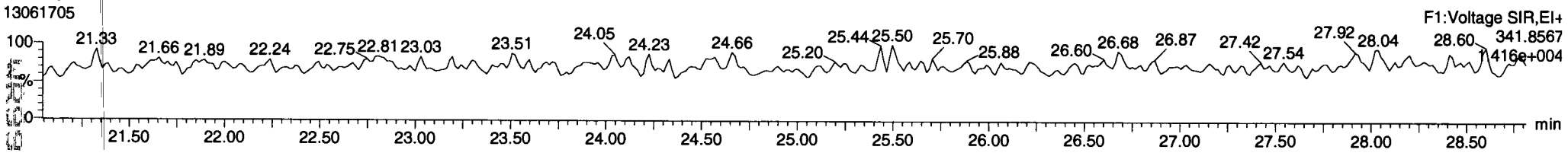
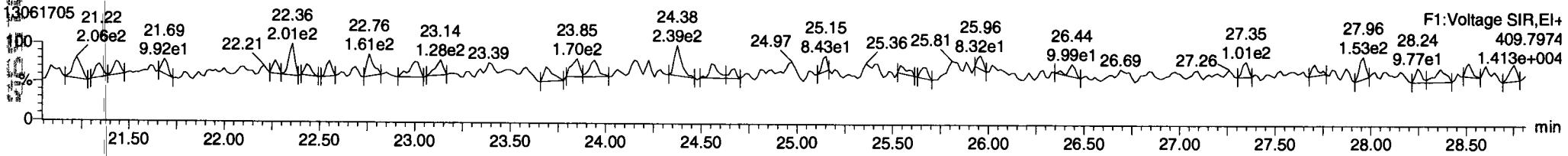


FUNCTION1 HPCDPE



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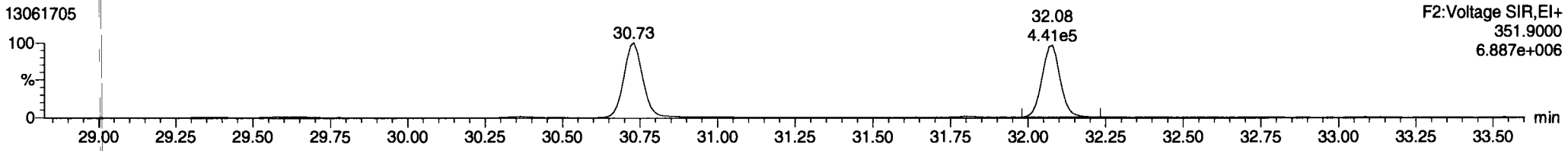
13C-23478-PeCDF



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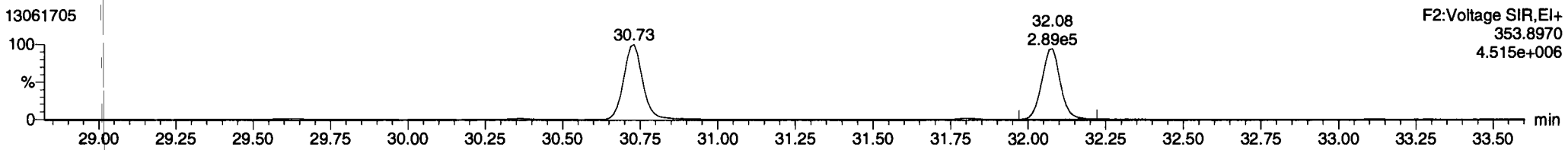
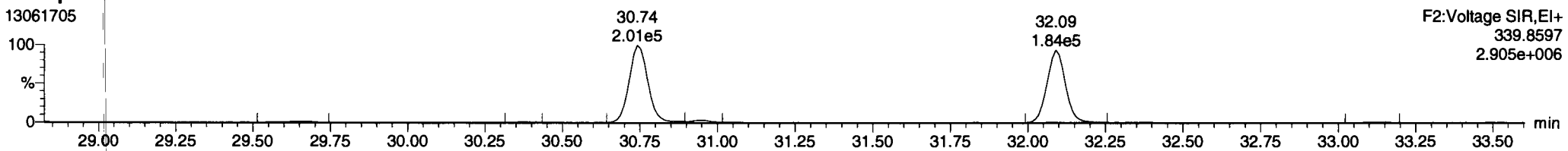


Total-pentafurans



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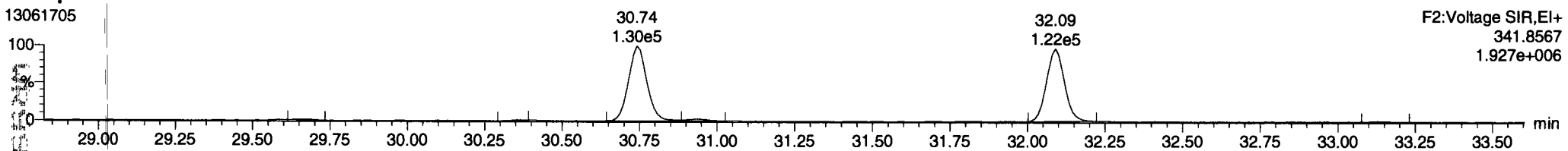

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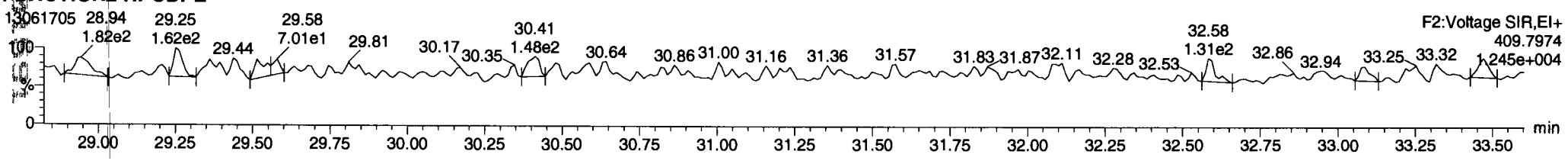

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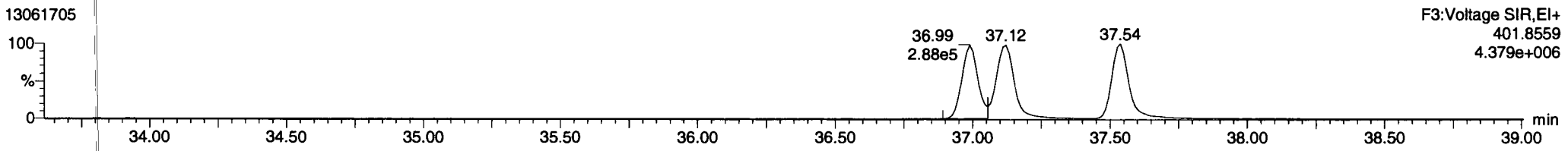
13C-123478-HxCDD



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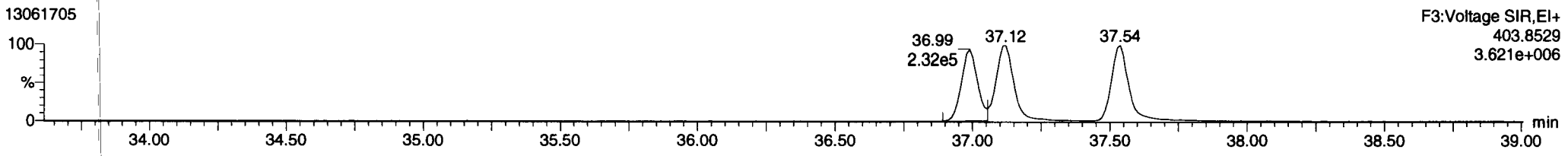

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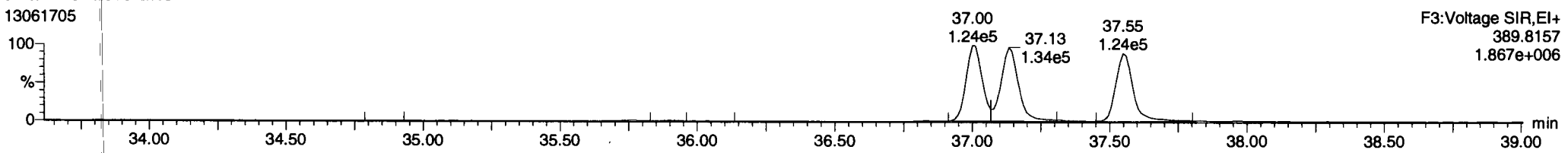

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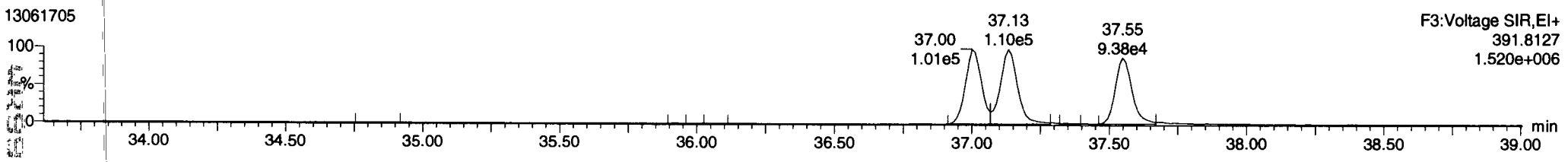
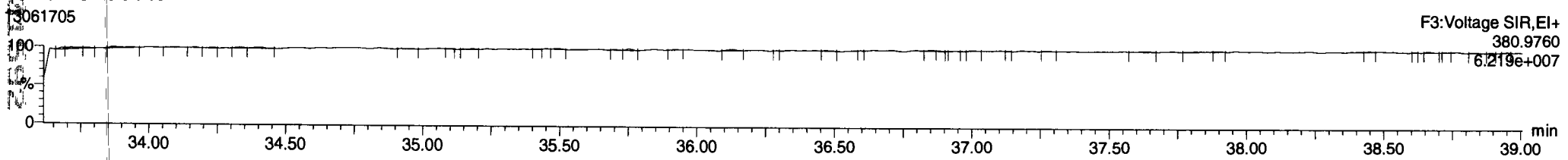


FUNCTION3 PFK



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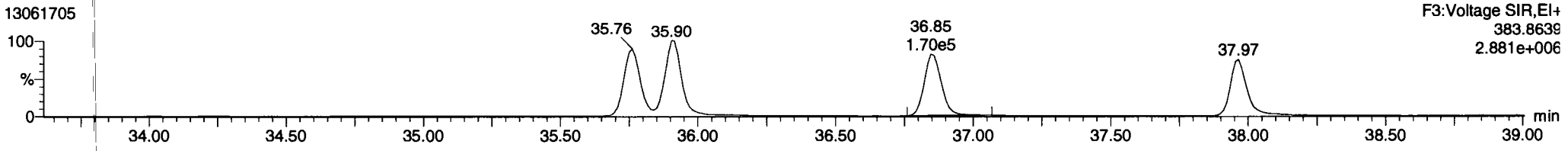
13C-234678-HxCDF



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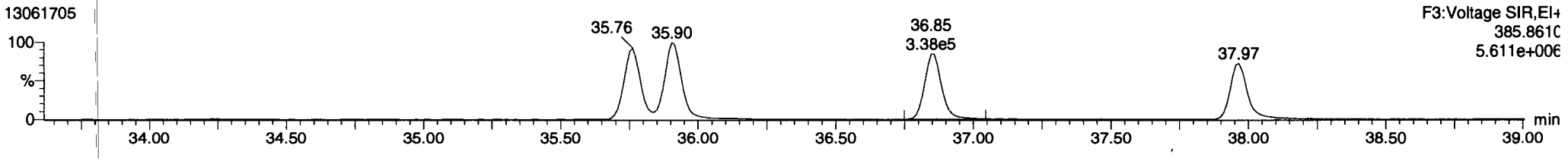
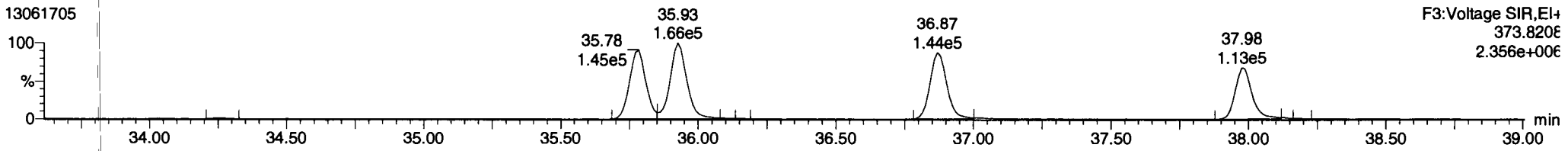
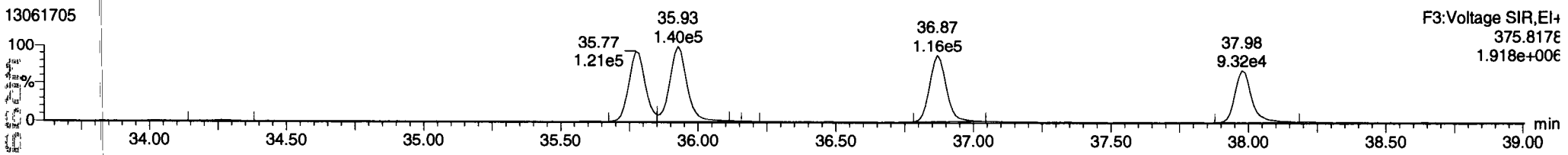


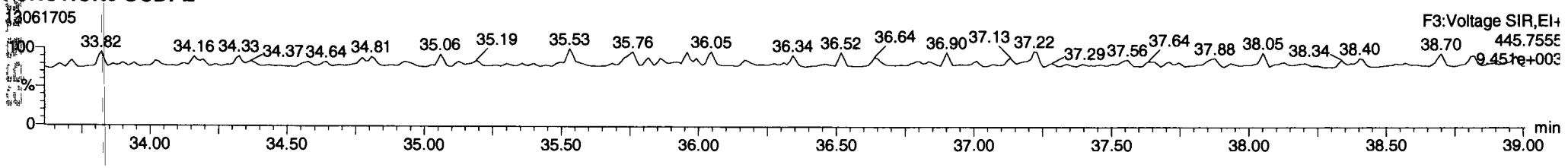
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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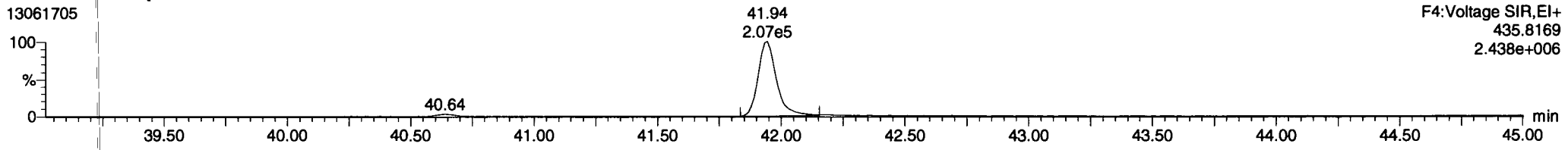
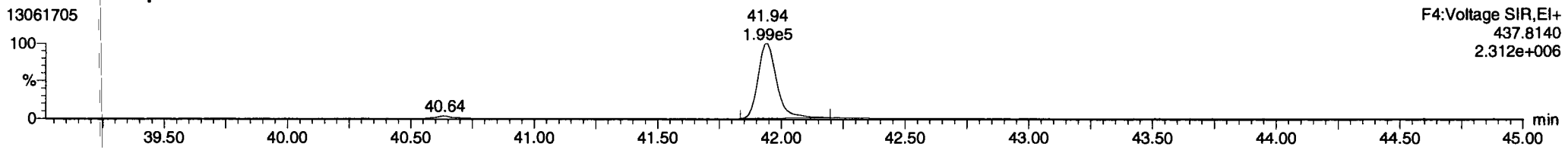
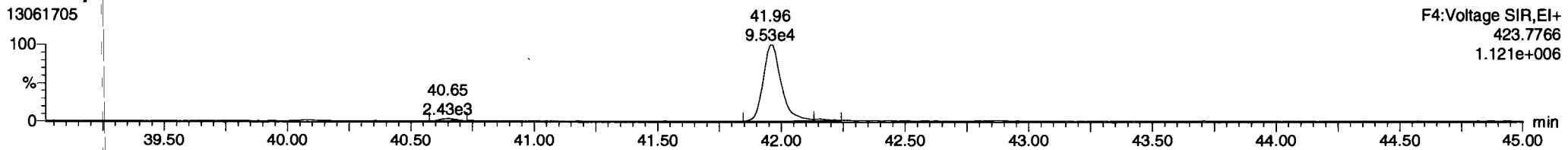


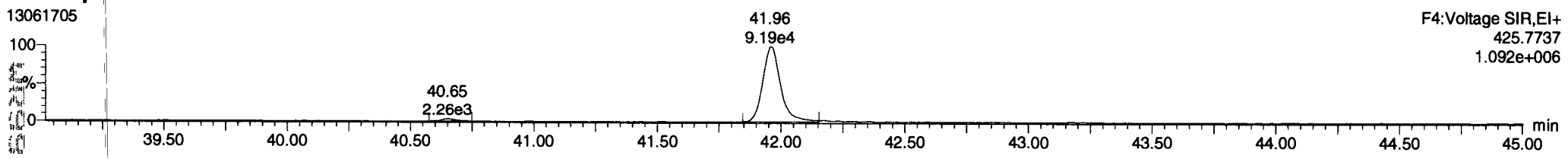
13C-1234678-HpCDD



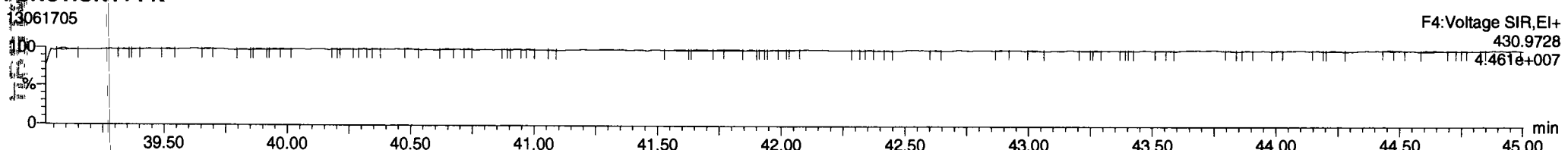
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
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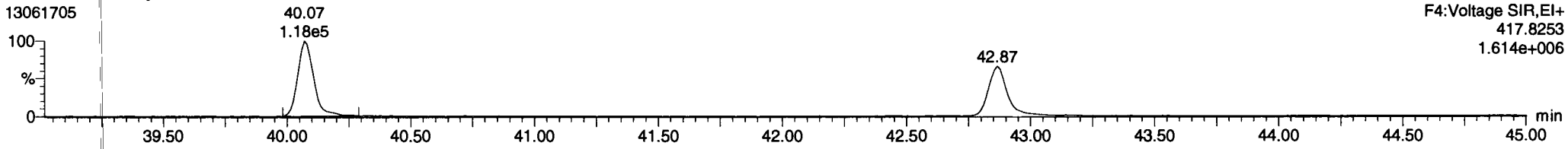
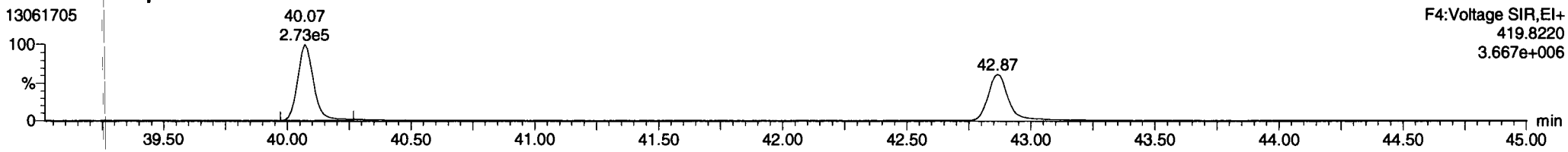
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

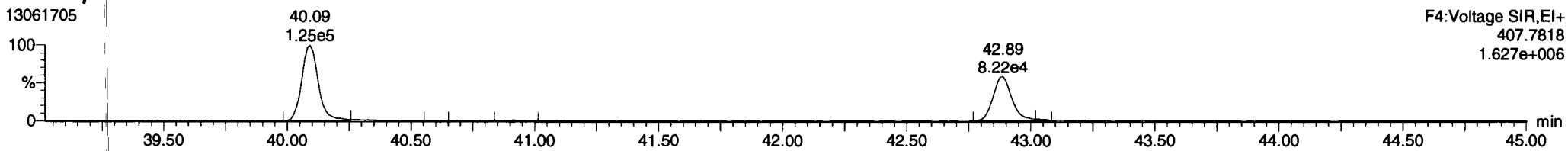
13C-1234678-HpCDF



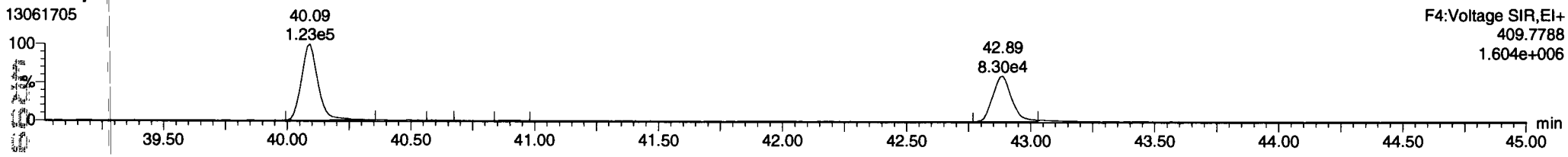
13C-1234678-HpCDF



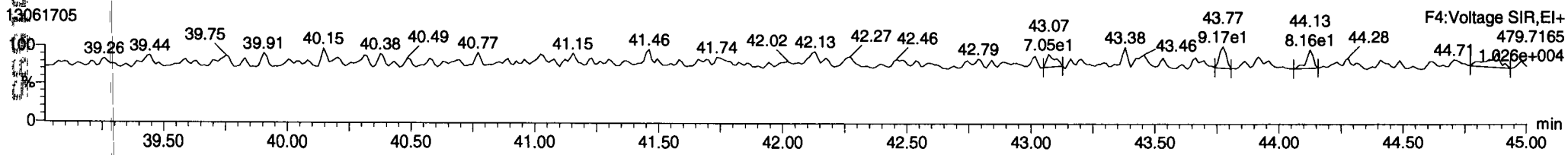
Total-heptafurans



Total-heptafurans



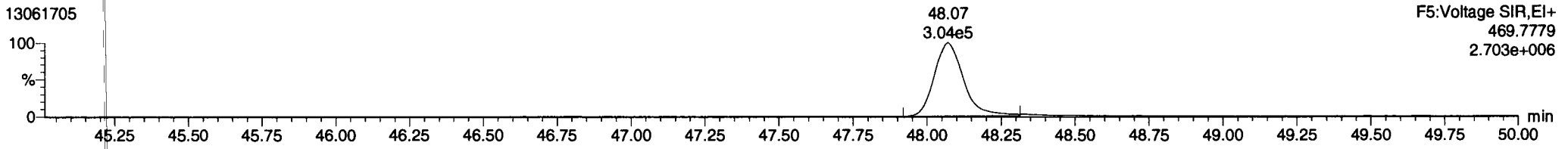
FUNCTION4 NCDPE



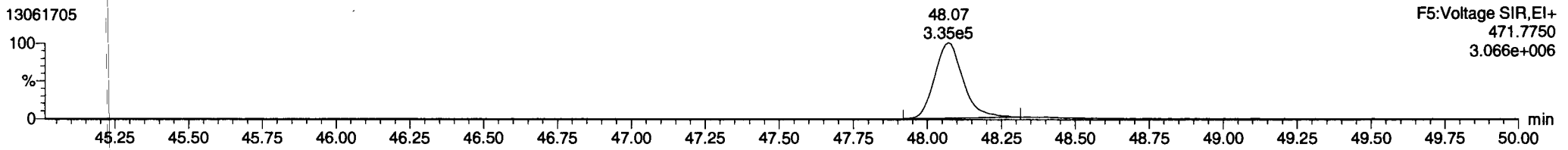
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

ID: WS30PR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

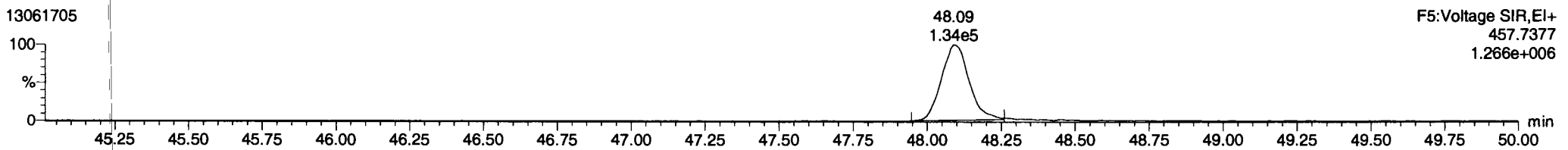
13C-OCDD



13C-OCDD



OCDD



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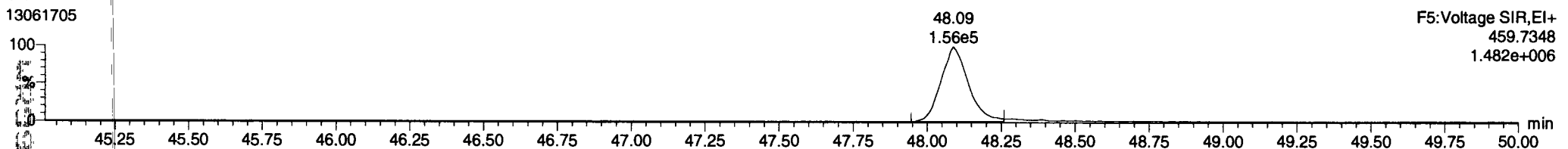
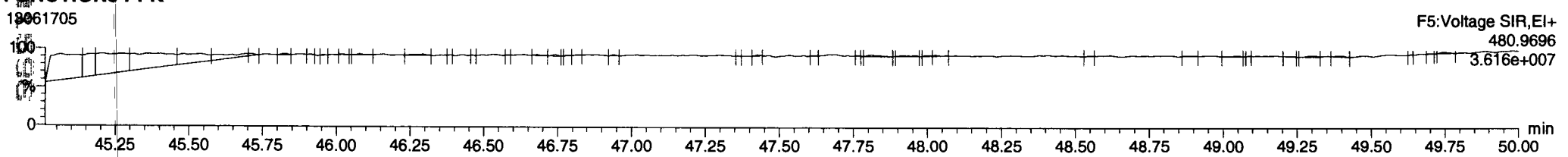
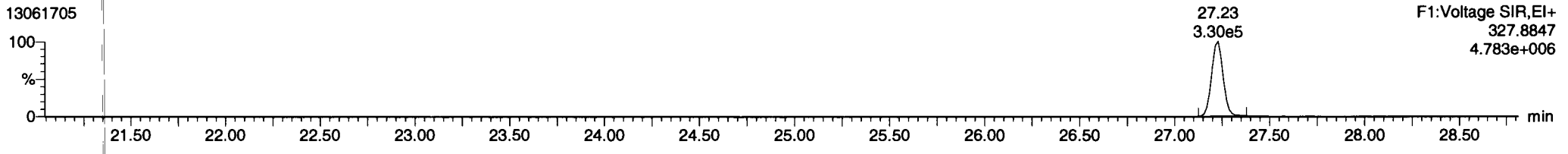


FUNCTION5 PFK

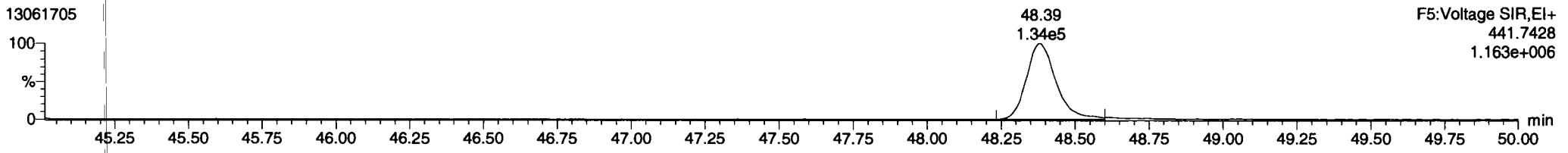


ID: WS30PR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

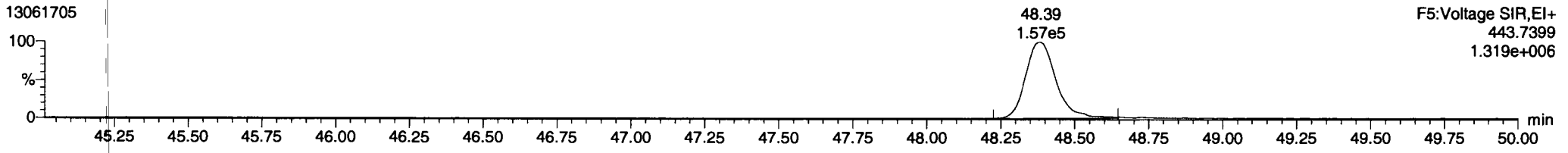
37CL-2378-TCDD



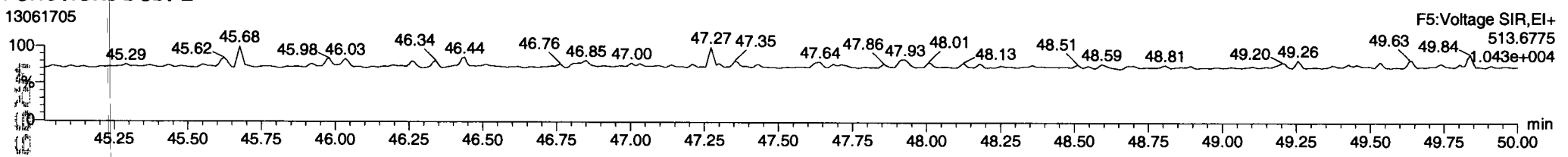
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:44:29 Pacific Daylight Time

MA 6/18/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WR99D, Name: 13061709, Date: 17-Jun-2013, Time: 21:07:21, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.571	1.001	1.45e3	1.29e3	0.832	1.120	0.770	13.7	1212	2792	1.66e4	2.31e4	YES	0.183	0.219	
12378-PeCDF	30.741	1.001	1.19e3	1.06e3	0.853	1.126	1.550	11.6	1851	3159	2.15e4	1.15e4	YES	0.173	0.199	B
23478-PeCDF	32.100	1.001	2.65e3	1.83e3	0.884	1.447	1.550	24.2	1851	3159	4.48e4	2.43e4	NO	0.384	0.384	B
123478-HxCDF	35.827	1.001	3.23e3	2.76e3	1.017	1.171	1.240	43.3	1135	789	4.91e4	3.69e4	NO	0.577	0.577	B
234678-HxCDF	36.956	1.000	2.74e3	2.30e3	1.067	1.189	1.240	24.2	1135	789	2.75e4	2.63e4	NO	0.534	0.534	B
123678-HxCDF	35.981	1.001	2.13e3	1.51e3	0.999	1.413	1.240	29.6	1135	789	3.36e4	2.07e4	NO	0.372	0.372	B
123789-HxCDF	38.008	1.000	1.05e3	8.49e2	0.947	1.231	1.240	23.9	1135	789	2.72e4	1.63e4	NO	0.262	0.262	
1234678-HpCDF	40.091	1.000	1.37e4	1.37e4	1.151	1.002	1.050	262.1	733	728	1.92e5	1.87e5	NO	3.268	3.268	
1234789-HpCDF	42.875	1.000	6.17e2	9.83e2	1.166	0.627	1.050	13.2	733	728	9.66e3	1.32e4	YES	0.171	0.227	
OCDF	48.393	1.007	1.67e4	1.85e4	1.001	0.901	0.890	198.9	801	951	1.59e5	1.80e5	NO	5.477	5.477	
2378-TCDD	27.214	1.001	9.66e2	1.78e3	0.939	0.542	0.770	10.5	1407	1772	1.48e4	2.76e4	YES	0.189	0.234	B
12378-PeCDD	32.353	1.001	3.37e3	2.07e3	0.930	1.623	1.550	35.6	1261	1675	4.49e4	2.67e4	NO	0.569	0.569	
123478-HxCDD	37.110	1.000	2.48e3	2.27e3	0.930	1.090	1.240	31.5	1195	1423	3.76e4	2.77e4	NO	0.523	0.523	
123678-HxCDD	37.241	1.000	5.80e3	5.30e3	0.854	1.096	1.240	70.2	1195	1423	8.39e4	7.26e4	NO	1.288	1.288	
123789-HxCDD	37.658	1.012	5.43e3	4.48e3	0.885	1.214	1.240	65.8	1195	1423	7.86e4	7.57e4	NO	1.127	1.127	
1234678-HpCDD	41.954	1.000	7.64e4	7.63e4	0.966	1.001	1.050	553.2	1792	1991	9.91e5	1.01e6	NO	20.559	20.559	
OCDD	48.097	1.001	4.48e5	5.16e5	0.921	0.869	0.890	2148.2	1907	1747	4.10e6	4.89e6	NO	163.085	163.085	
13C-2378-TCDF	26.556	1.007	6.52e5	8.55e5	1.283	0.762	0.770	4448.4	2133	8336	9.49e6	1.23e7	NO		75.999	
13C-12378-PeCDF	30.719	1.165	8.01e5	5.19e5	1.051	1.544	1.550	3873.2	3031	2712	1.17e7	7.51e6	NO		81.331	
13C-23478-PeCDF	32.068	1.216	8.00e5	5.18e5	1.030	1.546	1.550	3770.8	3031	2712	1.14e7	7.47e6	NO		82.771	
13C-123478-HxCDF	35.805	0.951	3.43e5	6.77e5	1.069	0.507	0.510	1562.9	2895	4439	4.53e6	8.80e6	NO		87.303	
13C-123678-HxCDF	35.959	0.955	3.33e5	6.48e5	1.124	0.513	0.510	1590.8	2895	4439	4.61e6	8.91e6	NO		79.784	
13C-234678-HxCDF	36.956	0.982	2.96e5	5.88e5	1.041	0.503	0.510	1374.0	2895	4439	3.98e6	7.83e6	NO		77.680	
13C-123789-HxCDF	38.020	1.010	2.60e5	5.04e5	1.039	0.516	0.510	2589.9	2895	4439	7.50e6	1.43e7	NO		67.179	
13C-1234678-HpCDF	40.069	1.064	2.24e5	5.04e5	0.965	0.444	0.440	2230.2	1404	2009	3.13e6	7.13e6	NO		68.950	
13C-1234789-HpCDF	42.864	1.139	1.86e5	4.18e5	0.760	0.444	0.440	1640.7	1404	2009	2.30e6	5.09e6	NO		72.672	
13C-1234-TCDD	26.377	0.000	6.77e5	8.68e5	1.000	0.780	0.770	757.0	13240	3457	1.00e7	1.26e7	NO		100.000	
13C-2378-TCDD	27.199	1.031	5.41e5	7.09e5	0.926	0.762	0.770	577.9	13240	3457	7.65e6	1.01e7	NO		87.356	
13C-12378-PeCDD	32.331	1.226	6.23e5	4.06e5	0.734	1.537	1.550	1927.8	4610	1936	8.89e6	5.65e6	NO		90.695	
13C-123478-HxCDD	37.099	0.985	5.38e5	4.38e5	0.984	1.230	1.240	3793.4	1959	3189	7.43e6	5.95e6	NO		90.691	
13C-123678-HxCDD	37.230	0.989	5.55e5	4.55e5	1.043	1.220	1.240	3961.5	1959	3189	7.76e6	6.38e6	NO		88.583	
13C-1234678-HpCDD	41.943	1.114	3.93e5	3.76e5	0.891	1.044	1.050	1974.3	2517	1643	4.97e6	4.82e6	NO		78.895	
13C-OCDD	48.070	1.277	6.02e5	6.82e5	0.849	0.882	0.890	3317.2	1737	2097	5.76e6	6.43e6	NO		138.299	

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:44:29 Pacific Daylight Time

ID: WR99D, Name: 13061709, Date: 17-Jun-2013, Time: 21:07:21, Conditions: AUTOSPEC01, User: pk

Name	RT	Area	Height											
13C-123789-HxCDD	37.647	0.000	5.99e5	4.94e5	1.000	1.212	1.240	4514.7	1959	3189	8.84e6	7.33e6	NO	100.000
Total-tetrafurans			4.91e4		0.832				1212		6.65e5			8.711
Total-penta1			1.08e5						1035		1.53e6			14.946
Total-pentafurans			4.98e4		0.868				1851		5.97e5			7.416
Total-hexafurans			6.08e4		1.008				1135		8.51e5			11.826
Total-heptafurans			3.40e4		1.159				733		4.93e5			8.671
Total-Furans			3.19e5		0.992				1212		4.29e6			57.047
Total-tetradioxins			2.14e4		0.939				1407		3.03e5			3.514
Total-pentadioxins			3.24e4		0.930				1261		4.40e5			5.579
Total-hexadioxins			7.63e4		0.890				1195		9.55e5			15.107
Total-heptadioxins			1.86e5		0.966				1792		2.55e6			49.660
Total-Dioxins			7.64e5		0.918				1407		8.35e6			236.945
Total-TEQ			1.08e6						1407		1.26e7			293.992
37CL-2378-TCDD	27.214	1.032	5.52e5		0.989			3354.2	2350		7.88e6			36.164
FUNCTION1 PFK			1.08e6						602682		2.06e7			
FUNCTION2 PFK			0.00e0						228899		0.00e0			
FUNCTION3 PFK			9.60e6						432693		9.68e6			0.000
FUNCTION4 PFK			3.51e5						339140		9.77e6			
FUNCTION5 PFK			2.18e5						227040		6.88e6			
FUNCTION1 HXCDPE			1.08e3						713		2.53e4			0.000
FUNCTION1 HPCDPE			2.66e3						1329		5.91e4			0.000
FUNCTION2 HPCDPE			1.15e3						1319		2.81e4			0.000
FUNCTION3 OCDPE			2.42e2						794		9.22e3			0.000
FUNCTION4 NCDPE			1.59e3						852		3.02e4			0.000
FUNCTION5 DCDPE			0.00e0						380		0.00e0			

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:44:29 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WR99D, Name: 13061709, Date: 17-Jun-2013, Time: 21:07:21, Conditions: AUTOSPEC01, User: pk

TF

	35 Total-tetrafurans	303.9016	25.32	1097.546	0.832	0.088		0.58	0.77	YES	6.4
	35 Total-tetrafurans	303.9016	25.23	3800.552	0.832	0.303		0.71	0.77	NO	17.9
	35 Total-tetrafurans	303.9016	24.82	2482.085	0.832	0.198		0.43	0.77	YES	8.2
	35 Total-tetrafurans	303.9016	24.67	1140.665	0.832	0.091		0.42	0.77	YES	7.4
	35 Total-tetrafurans	303.9016	24.55	12819.840	0.832	1.023		0.82	0.77	NO	63.6
	35 Total-tetrafurans	303.9016	24.32	5660.123	0.832	0.452		1.11	0.77	YES	28.9
	35 Total-tetrafurans	303.9016	24.20	2274.446	0.832	0.181		1.76	0.77	YES	14.8
	35 Total-tetrafurans	303.9016	24.03	4436.349	0.832	0.354		0.99	0.77	YES	18.9
	35 Total-tetrafurans	303.9016	23.90	31059.752	0.832	2.478		0.80	0.77	NO	159.3
	35 Total-tetrafurans	303.9016	23.31	8106.768	0.832	0.647		0.72	0.77	NO	41.5
	35 Total-tetrafurans	303.9016	23.05	1896.388	0.832	0.151		0.48	0.77	YES	7.1
	35 Total-tetrafurans	303.9016	28.01	1944.108	0.832	0.155		0.65	0.77	YES	6.6
	35 Total-tetrafurans	303.9016	26.81	3583.459	0.832	0.286		1.68	0.77	YES	19.1
	1 2378-TCDF	303.9016	26.57	2740.951	0.832	0.219	0.183	1.12	0.77	YES	13.7
	35 Total-tetrafurans	303.9016	26.36	3470.693	0.832	0.277		0.66	0.77	NO	13.4
	35 Total-tetrafurans	303.9016	26.08	1206.855	0.832	0.096		0.84	0.77	NO	8.9
	35 Total-tetrafurans	303.9016	25.90	1229.007	0.832	0.098		0.74	0.77	NO	5.9
	35 Total-tetrafurans	303.9016	25.64	2383.378	0.832	0.190		0.85	0.77	NO	15.8
	35 Total-tetrafurans	303.9016	25.48	17851.709	0.832	1.424		0.77	0.77	NO	91.1

PP

	36 Total-penta1	339.8597	27.99	180771.274		14.946		1.49	1.55	NO	1475.5

PF

	2 12378-PeCDF	339.8597	30.74	2242.965	0.853	0.199	0.173	1.13	1.55	YES	11.6
	37 Total-pentafurans	339.8597	30.37	14897.060	0.868	1.301		1.36	1.55	NO	51.6
	37 Total-pentafurans	339.8597	30.28	2657.361	0.868	0.232		1.74	1.55	NO	15.5
	37 Total-pentafurans	339.8597	29.67	37860.694	0.868	3.305		1.54	1.55	NO	125.8
	37 Total-pentafurans	339.8597	29.47	3586.127	0.868	0.313		0.83	1.55	YES	13.2
	3 23478-PeCDF	339.8597	32.10	4473.761	0.884	0.384	0.384	1.45	1.55	NO	24.2
	37 Total-pentafurans	339.8597	31.94	12029.831	0.868	1.050		1.33	1.55	NO	51.7
	37 Total-pentafurans	339.8597	31.83	2166.628	0.868	0.189		2.05	1.55	YES	11.2
	37 Total-pentafurans	339.8597	30.93	5069.102	0.868	0.443		1.25	1.55	YES	17.4

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HF

		Name										
	38	Total-hexafurans	373.8208	35.16	36550.312	1.008	3.978		1.23	1.24	NO	245.2
	38	Total-hexafurans	373.8208	34.82	1356.113	1.008	0.148		1.05	1.24	YES	8.8
	38	Total-hexafurans	373.8208	34.58	271.667	1.008	0.030		2.44	1.24	YES	3.3
	38	Total-hexafurans	373.8208	34.28	42101.570	1.008	4.582		1.28	1.24	NO	274.2
	38	Total-hexafurans	373.8208	34.06	9625.123	1.008	1.047		1.38	1.24	NO	69.9
	7	123789-HxCDF	373.8208	38.01	1894.247	0.947	0.262	0.262	1.23	1.24	NO	23.9
	5	234678-HxCDF	373.8208	36.96	5039.046	1.067	0.534	0.534	1.19	1.24	NO	24.2
	38	Total-hexafurans	373.8208	36.89	1608.739	1.008	0.175		1.62	1.24	YES	19.0
	6	123678-HxCDF	373.8208	35.98	3645.260	0.999	0.372	0.372	1.41	1.24	NO	29.6
	4	123478-HxCDF	373.8208	35.83	5990.748	1.017	0.577	0.577	1.17	1.24	NO	43.3
	38	Total-hexafurans	373.8208	35.65	1109.713	1.008	0.121		0.44	1.24	YES	8.8

HPF

		Name										
	39	Total-heptafurans	407.7818	42.92	252.745	1.159	0.033		1.83	1.05	YES	8.7
	9	1234789-HpCDF	407.7818	42.88	1599.448	1.166	0.227	0.171	0.63	1.05	YES	13.2
	39	Total-heptafurans	407.7818	40.90	38624.535	1.159	5.007		0.96	1.05	NO	370.9
	39	Total-heptafurans	407.7818	40.60	837.758	1.159	0.109		1.60	1.05	YES	13.4
	39	Total-heptafurans	407.7818	40.26	209.661	1.159	0.027		0.85	1.05	YES	3.4
	8	1234678-HpCDF	407.7818	40.09	27365.109	1.151	3.268	3.268	1.00	1.05	NO	262.1

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
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Furans,TF,PP,PF,HF,HPF,OF

[redacted]	#	Name	[redacted]	RT	[redacted]	RRF M	[redacted]	EMPA	[redacted]	[redacted]	[redacted]	S/N
[redacted]	35	Total-tetrafurans	303.9016	25.32	1097.546	0.832	0.088		0.58	0.77	YES	6.4
[redacted]	35	Total-tetrafurans	303.9016	25.23	3800.552	0.832	0.303		0.71	0.77	NO	17.9
[redacted]	35	Total-tetrafurans	303.9016	24.82	2482.085	0.832	0.198		0.43	0.77	YES	8.2
[redacted]	35	Total-tetrafurans	303.9016	24.67	1140.665	0.832	0.091		0.42	0.77	YES	7.4
[redacted]	35	Total-tetrafurans	303.9016	24.55	12819.840	0.832	1.023		0.82	0.77	NO	63.6
[redacted]	35	Total-tetrafurans	303.9016	24.32	5660.123	0.832	0.452		1.11	0.77	YES	28.9
[redacted]	35	Total-tetrafurans	303.9016	24.20	2274.446	0.832	0.181		1.76	0.77	YES	14.8
[redacted]	35	Total-tetrafurans	303.9016	24.03	4436.349	0.832	0.354		0.99	0.77	YES	18.9
[redacted]	35	Total-tetrafurans	303.9016	23.90	31059.752	0.832	2.478		0.80	0.77	NO	159.3
[redacted]	35	Total-tetrafurans	303.9016	23.31	8106.768	0.832	0.647		0.72	0.77	NO	41.5
[redacted]	35	Total-tetrafurans	303.9016	23.05	1896.388	0.832	0.151		0.48	0.77	YES	7.1
[redacted]	35	Total-tetrafurans	303.9016	28.01	1944.108	0.832	0.155		0.65	0.77	YES	6.6
[redacted]	35	Total-tetrafurans	303.9016	26.81	3583.459	0.832	0.286		1.68	0.77	YES	19.1
[redacted]	1	2378-TCDF	303.9016	26.57	2740.951	0.832	0.219	0.183	1.12	0.77	YES	13.7
[redacted]	35	Total-tetrafurans	303.9016	26.36	3470.693	0.832	0.277		0.66	0.77	NO	13.4
[redacted]	35	Total-tetrafurans	303.9016	26.08	1206.855	0.832	0.096		0.84	0.77	NO	8.9
[redacted]	35	Total-tetrafurans	303.9016	25.90	1229.007	0.832	0.098		0.74	0.77	NO	5.9
[redacted]	35	Total-tetrafurans	303.9016	25.64	2383.378	0.832	0.190		0.85	0.77	NO	15.8
[redacted]	35	Total-tetrafurans	303.9016	25.48	17851.709	0.832	1.424		0.77	0.77	NO	91.1
[redacted]	2	12378-PeCDF	339.8597	30.74	2242.965	0.853	0.199	0.173	1.13	1.55	YES	11.6
[redacted]	37	Total-pentafurans	339.8597	30.37	14897.060	0.868	1.301		1.36	1.55	NO	51.6
[redacted]	37	Total-pentafurans	339.8597	30.28	2657.361	0.868	0.232		1.74	1.55	NO	15.5
[redacted]	37	Total-pentafurans	339.8597	29.67	37860.694	0.868	3.305		1.54	1.55	NO	125.8
[redacted]	37	Total-pentafurans	339.8597	29.47	3586.127	0.868	0.313		0.83	1.55	YES	13.2
[redacted]	3	23478-PeCDF	339.8597	32.10	4473.761	0.884	0.384	0.384	1.45	1.55	NO	24.2
[redacted]	37	Total-pentafurans	339.8597	31.94	12029.831	0.868	1.050		1.33	1.55	NO	51.7
[redacted]	37	Total-pentafurans	339.8597	31.83	2166.628	0.868	0.189		2.05	1.55	YES	11.2
[redacted]	37	Total-pentafurans	339.8597	30.93	5069.102	0.868	0.443		1.25	1.55	YES	17.4
[redacted]	38	Total-hexafurans	373.8208	35.16	36550.312	1.008	3.978		1.23	1.24	NO	245.2
[redacted]	38	Total-hexafurans	373.8208	34.82	1356.113	1.008	0.148		1.05	1.24	YES	8.8
[redacted]	38	Total-hexafurans	373.8208	34.58	271.667	1.008	0.030		2.44	1.24	YES	3.3
[redacted]	38	Total-hexafurans	373.8208	34.28	42101.570	1.008	4.582		1.28	1.24	NO	274.2
[redacted]	38	Total-hexafurans	373.8208	34.06	9625.123	1.008	1.047		1.38	1.24	NO	69.9
[redacted]	7	123789-HxCDF	373.8208	38.01	1894.247	0.947	0.262	0.262	1.23	1.24	NO	23.9
[redacted]	5	234678-HxCDF	373.8208	36.96	5039.046	1.067	0.534	0.534	1.19	1.24	NO	24.2
[redacted]	38	Total-hexafurans	373.8208	36.89	1608.739	1.008	0.175		1.62	1.24	YES	19.0
[redacted]	6	123678-HxCDF	373.8208	35.98	3645.260	0.999	0.372	0.372	1.41	1.24	NO	29.6
[redacted]	4	123478-HxCDF	373.8208	35.83	5990.748	1.017	0.577	0.577	1.17	1.24	NO	43.3
[redacted]	38	Total-hexafurans	373.8208	35.65	1109.713	1.008	0.121		0.44	1.24	YES	8.8
[redacted]	39	Total-heptafurans	407.7818	42.92	252.745	1.159	0.033		1.83	1.05	YES	8.7
[redacted]	9	1234789-HpCDF	407.7818	42.88	1599.448	1.166	0.227	0.171	0.63	1.05	YES	13.2
[redacted]	39	Total-heptafurans	407.7818	40.90	38624.535	1.159	5.007		0.96	1.05	NO	370.9
[redacted]	39	Total-heptafurans	407.7818	40.60	837.758	1.159	0.109		1.60	1.05	YES	13.4
[redacted]	39	Total-heptafurans	407.7818	40.26	209.661	1.159	0.027		0.85	1.05	YES	3.4
[redacted]	8	1234678-HpCDF	407.7818	40.09	27365.109	1.151	3.268	3.268	1.00	1.05	NO	262.1
[redacted]	10	OCDF	441.7428	48.39	35171.248	1.001	5.477	5.477	0.90	0.89	NO	198.9
[redacted]	36	Total-penta1	339.8597	27.99	180771.274		14.946		1.49	1.55	NO	1475.5

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TD

		Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	41	Total-tetradioxins	319.8965	25.32	1219.236	0.939	0.104		0.65	0.77	YES	5.3
	41	Total-tetradioxins	319.8965	24.81	813.103	0.939	0.069		0.76	0.77	NO	3.3
	41	Total-tetradioxins	319.8965	24.60	2867.540	0.939	0.244		1.06	0.77	YES	16.6
	41	Total-tetradioxins	319.8965	24.33	6809.074	0.939	0.580		0.94	0.77	YES	31.2
	41	Total-tetradioxins	319.8965	28.08	1830.818	0.939	0.156		0.97	0.77	YES	8.8
	41	Total-tetradioxins	319.8965	27.77	2760.684	0.939	0.235		0.70	0.77	NO	11.6
	41	Total-tetradioxins	319.8965	27.33	1762.918	0.939	0.150		0.94	0.77	YES	8.1
	11	2378-TCDD	319.8965	27.21	2746.291	0.939	0.234	0.189	0.54	0.77	YES	10.5
	41	Total-tetradioxins	319.8965	26.84	2636.279	0.939	0.225		1.27	0.77	YES	8.6
	41	Total-tetradioxins	319.8965	26.56	7352.181	0.939	0.627		3.97	0.77	YES	63.5
	41	Total-tetradioxins	319.8965	26.41	2201.551	0.939	0.188		0.77	0.77	NO	11.3
	41	Total-tetradioxins	319.8965	26.18	1030.485	0.939	0.088		1.05	0.77	YES	5.1
	41	Total-tetradioxins	319.8965	26.09	630.641	0.939	0.054		1.21	0.77	YES	3.7
	41	Total-tetradioxins	319.8965	25.84	3067.462	0.939	0.261		0.64	0.77	YES	12.5
	41	Total-tetradioxins	319.8965	25.54	3509.237	0.939	0.299		0.78	0.77	NO	15.3

PD

		Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	42	Total-pentadioxins	355.8546	30.95	12982.757	0.930	1.357		1.36	1.55	NO	92.7
	42	Total-pentadioxins	355.8546	30.74	6914.651	0.930	0.723		1.95	1.55	YES	48.8
	42	Total-pentadioxins	355.8546	30.13	3114.276	0.930	0.326		1.89	1.55	YES	25.7
	42	Total-pentadioxins	355.8546	29.65	13483.316	0.930	1.409		1.40	1.55	NO	64.6
	42	Total-pentadioxins	355.8546	32.75	1740.591	0.930	0.182		1.69	1.55	NO	13.8
	12	12378-PeCDD	355.8546	32.35	5439.896	0.930	0.569	0.569	1.62	1.55	NO	35.6
	42	Total-pentadioxins	355.8546	31.66	1831.388	0.930	0.191		1.58	1.55	NO	13.4
	42	Total-pentadioxins	355.8546	31.27	4330.036	0.930	0.453		1.63	1.55	NO	27.1
	42	Total-pentadioxins	355.8546	31.09	3533.834	0.930	0.369		1.58	1.55	NO	27.4

HD

		Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	43	Total-hexadioxins	389.8157	35.79	2576.800	0.890	0.292		3.68	1.24	YES	20.4
	43	Total-hexadioxins	389.8157	35.70	10686.775	0.890	1.210		1.33	1.24	NO	65.5
	43	Total-hexadioxins	389.8157	34.86	48348.717	0.890	5.473		1.29	1.24	NO	295.4
	15	123789-HxCDD	389.8157	37.66	9909.863	0.885	1.127	1.127	1.21	1.24	NO	65.8
	43	Total-hexadioxins	389.8157	37.43	1915.357	0.890	0.217		1.03	1.24	YES	16.3
	14	123678-HxCDD	389.8157	37.24	11102.865	0.854	1.288	1.288	1.10	1.24	NO	70.2
	13	123478-HxCDD	389.8157	37.11	4748.584	0.930	0.523	0.523	1.09	1.24	NO	31.5
	43	Total-hexadioxins	389.8157	36.97	2243.481	0.890	0.254		6.28	1.24	YES	23.6
	43	Total-hexadioxins	389.8157	36.22	2017.408	0.890	0.228		0.99	1.24	YES	19.8
	43	Total-hexadioxins	389.8157	36.11	36394.665	0.890	4.120		1.28	1.24	NO	155.8
	43	Total-hexadioxins	389.8157	35.99	3311.669	0.890	0.375		7.81	1.24	YES	34.7

HPD

		Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	16	1234678-HpCDD	423.7766	41.95	152733.164	0.966	20.559	20.559	1.00	1.05	NO	553.2
	44	Total-heptadioxins	423.7766	40.65	216189.211	0.966	29.101		1.02	1.05	NO	870.0

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Dioxins,TD,PD,HD,HPD,OD

	Name	Trace			RRF M	pg	EMPC				
41	Total-tetradioxins	319.8965	25.32	1219.236	0.939	0.104		0.65	0.77	YES	5.3
41	Total-tetradioxins	319.8965	24.81	813.103	0.939	0.069		0.76	0.77	NO	3.3
41	Total-tetradioxins	319.8965	24.60	2867.540	0.939	0.244		1.06	0.77	YES	16.6
41	Total-tetradioxins	319.8965	24.33	6809.074	0.939	0.580		0.94	0.77	YES	31.2
41	Total-tetradioxins	319.8965	28.08	1830.818	0.939	0.156		0.97	0.77	YES	8.8
41	Total-tetradioxins	319.8965	27.77	2760.684	0.939	0.235		0.70	0.77	NO	11.6
41	Total-tetradioxins	319.8965	27.33	1762.918	0.939	0.150		0.94	0.77	YES	8.1
11	2378-TCDD	319.8965	27.21	2746.291	0.939	0.234	0.189	0.54	0.77	YES	10.5
41	Total-tetradioxins	319.8965	26.84	2636.279	0.939	0.225		1.27	0.77	YES	8.6
41	Total-tetradioxins	319.8965	26.56	7352.181	0.939	0.627		3.97	0.77	YES	63.5
41	Total-tetradioxins	319.8965	26.41	2201.551	0.939	0.188		0.77	0.77	NO	11.3
41	Total-tetradioxins	319.8965	26.18	1030.485	0.939	0.088		1.05	0.77	YES	5.1
41	Total-tetradioxins	319.8965	26.09	630.641	0.939	0.054		1.21	0.77	YES	3.7
41	Total-tetradioxins	319.8965	25.84	3067.462	0.939	0.261		0.64	0.77	YES	12.5
41	Total-tetradioxins	319.8965	25.54	3509.237	0.939	0.299		0.78	0.77	NO	15.3
42	Total-pentadioxins	355.8546	30.95	12982.757	0.930	1.357		1.36	1.55	NO	92.7
42	Total-pentadioxins	355.8546	30.74	6914.651	0.930	0.723		1.95	1.55	YES	48.8
42	Total-pentadioxins	355.8546	30.13	3114.276	0.930	0.326		1.89	1.55	YES	25.7
42	Total-pentadioxins	355.8546	29.65	13483.316	0.930	1.409		1.40	1.55	NO	64.6
42	Total-pentadioxins	355.8546	32.75	1740.591	0.930	0.182		1.69	1.55	NO	13.8
12	12378-PeCDD	355.8546	32.35	5439.896	0.930	0.569	0.569	1.62	1.55	NO	35.6
42	Total-pentadioxins	355.8546	31.66	1831.388	0.930	0.191		1.58	1.55	NO	13.4
42	Total-pentadioxins	355.8546	31.27	4330.036	0.930	0.453		1.63	1.55	NO	27.1
42	Total-pentadioxins	355.8546	31.09	3533.834	0.930	0.369		1.58	1.55	NO	27.4
43	Total-hexadioxins	389.8157	35.79	2576.800	0.890	0.292		3.68	1.24	YES	20.4
43	Total-hexadioxins	389.8157	35.70	10686.775	0.890	1.210		1.33	1.24	NO	65.5
43	Total-hexadioxins	389.8157	34.86	48348.717	0.890	5.473		1.29	1.24	NO	295.4
15	123789-HxCDD	389.8157	37.66	9909.863	0.885	1.127	1.127	1.21	1.24	NO	65.8
43	Total-hexadioxins	389.8157	37.43	1915.357	0.890	0.217		1.03	1.24	YES	16.3
14	123678-HxCDD	389.8157	37.24	11102.865	0.854	1.288	1.288	1.10	1.24	NO	70.2
13	123478-HxCDD	389.8157	37.11	4748.584	0.930	0.523	0.523	1.09	1.24	NO	31.5
43	Total-hexadioxins	389.8157	36.97	2243.481	0.890	0.254		6.28	1.24	YES	23.6
43	Total-hexadioxins	389.8157	36.22	2017.408	0.890	0.228		0.99	1.24	YES	19.8
43	Total-hexadioxins	389.8157	36.11	36394.665	0.890	4.120		1.28	1.24	NO	155.8
43	Total-hexadioxins	389.8157	35.99	3311.669	0.890	0.375		7.81	1.24	YES	34.7
16	1234678-HpCDD	423.7766	41.95	152733.164	0.966	20.559	20.559	1.00	1.05	NO	553.2
44	Total-heptadioxins	423.7766	40.65	216189.211	0.966	29.101		1.02	1.05	NO	870.0
17	OCDD	457.7377	48.10	964118.375	0.921	163.085	163....	0.87	0.89	NO	2148.2

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TotalTEQ,Furans,Dioxins

	35	Total-tetrafurans	303.9016	25.32	1097.546	0.832	0.088		0.58	0.77	YES	6.4
	35	Total-tetrafurans	303.9016	25.23	3800.552	0.832	0.303		0.71	0.77	NO	17.9
	35	Total-tetrafurans	303.9016	24.82	2482.085	0.832	0.198		0.43	0.77	YES	8.2
	35	Total-tetrafurans	303.9016	24.67	1140.665	0.832	0.091		0.42	0.77	YES	7.4
	35	Total-tetrafurans	303.9016	24.55	12819.840	0.832	1.023		0.82	0.77	NO	63.6
	35	Total-tetrafurans	303.9016	24.32	5660.123	0.832	0.452		1.11	0.77	YES	28.9
	35	Total-tetrafurans	303.9016	24.20	2274.446	0.832	0.181		1.76	0.77	YES	14.8
	35	Total-tetrafurans	303.9016	24.03	4436.349	0.832	0.354		0.99	0.77	YES	18.9
	35	Total-tetrafurans	303.9016	23.90	31059.752	0.832	2.478		0.80	0.77	NO	159.3
	35	Total-tetrafurans	303.9016	23.31	8106.768	0.832	0.647		0.72	0.77	NO	41.5
	35	Total-tetrafurans	303.9016	23.05	1896.388	0.832	0.151		0.48	0.77	YES	7.1
	35	Total-tetrafurans	303.9016	28.01	1944.108	0.832	0.155		0.65	0.77	YES	6.6
	35	Total-tetrafurans	303.9016	26.81	3583.459	0.832	0.286		1.68	0.77	YES	19.1
	1	2378-TCDF	303.9016	26.57	2740.951	0.832	0.219	0.183	1.12	0.77	YES	13.7
	35	Total-tetrafurans	303.9016	26.36	3470.693	0.832	0.277		0.66	0.77	NO	13.4
	35	Total-tetrafurans	303.9016	26.08	1206.855	0.832	0.096		0.84	0.77	NO	8.9
	35	Total-tetrafurans	303.9016	25.90	1229.007	0.832	0.098		0.74	0.77	NO	5.9
	35	Total-tetrafurans	303.9016	25.64	2383.378	0.832	0.190		0.85	0.77	NO	15.8
	35	Total-tetrafurans	303.9016	25.48	17851.709	0.832	1.424		0.77	0.77	NO	91.1
	2	12378-PeCDF	339.8597	30.74	2242.965	0.853	0.199	0.173	1.13	1.55	YES	11.6
	37	Total-pentafurans	339.8597	30.37	14897.060	0.868	1.301		1.36	1.55	NO	51.6
	37	Total-pentafurans	339.8597	30.28	2657.361	0.868	0.232		1.74	1.55	NO	15.5
	37	Total-pentafurans	339.8597	29.67	37860.694	0.868	3.305		1.54	1.55	NO	125.8
	37	Total-pentafurans	339.8597	29.47	3586.127	0.868	0.313		0.83	1.55	YES	13.2
	3	23478-PeCDF	339.8597	32.10	4473.761	0.884	0.384	0.384	1.45	1.55	NO	24.2
	37	Total-pentafurans	339.8597	31.94	12029.831	0.868	1.050		1.33	1.55	NO	51.7
	37	Total-pentafurans	339.8597	31.83	2166.628	0.868	0.189		2.05	1.55	YES	11.2
	37	Total-pentafurans	339.8597	30.93	5069.102	0.868	0.443		1.25	1.55	YES	17.4
	38	Total-hexafurans	373.8208	35.16	36550.312	1.008	3.978		1.23	1.24	NO	245.2
	38	Total-hexafurans	373.8208	34.82	1356.113	1.008	0.148		1.05	1.24	YES	8.8
	38	Total-hexafurans	373.8208	34.58	271.667	1.008	0.030		2.44	1.24	YES	3.3
	38	Total-hexafurans	373.8208	34.28	42101.570	1.008	4.582		1.28	1.24	NO	274.2
	38	Total-hexafurans	373.8208	34.06	9625.123	1.008	1.047		1.38	1.24	NO	69.9
	7	123789-HxCDF	373.8208	38.01	1894.247	0.947	0.262	0.262	1.23	1.24	NO	23.9
	5	234678-HxCDF	373.8208	36.96	5039.046	1.067	0.534	0.534	1.19	1.24	NO	24.2
	38	Total-hexafurans	373.8208	36.89	1608.739	1.008	0.175		1.62	1.24	YES	19.0
	6	123678-HxCDF	373.8208	35.98	3645.260	0.999	0.372	0.372	1.41	1.24	NO	29.6
	4	123478-HxCDF	373.8208	35.83	5990.748	1.017	0.577	0.577	1.17	1.24	NO	43.3
	38	Total-hexafurans	373.8208	35.65	1109.713	1.008	0.121		0.44	1.24	YES	8.8
	39	Total-heptafurans	407.7818	42.92	252.745	1.159	0.033		1.83	1.05	YES	8.7
	9	1234789-HpCDF	407.7818	42.88	1599.448	1.166	0.227	0.171	0.63	1.05	YES	13.2
	39	Total-heptafurans	407.7818	40.90	38624.535	1.159	5.007		0.96	1.05	NO	370.9
	39	Total-heptafurans	407.7818	40.60	837.758	1.159	0.109		1.60	1.05	YES	13.4
	39	Total-heptafurans	407.7818	40.26	209.661	1.159	0.027		0.85	1.05	YES	3.4
	8	1234678-HpCDF	407.7818	40.09	27365.109	1.151	3.268	3.268	1.00	1.05	NO	262.1
	10	OCDF	441.7428	48.39	35171.248	1.001	5.477	5.477	0.90	0.89	NO	198.9
	36	Total-penta1	339.8597	27.99	180771.274		14.946		1.49	1.55	NO	1475.5
	41	Total-tetradioxins	319.8965	25.32	1219.236	0.939	0.104		0.65	0.77	YES	5.3
	41	Total-tetradioxins	319.8965	24.81	813.103	0.939	0.069		0.76	0.77	NO	3.3

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TotalTEQ,Furans,Dioxins

	41	Total-tetradioxins	319.8965	24.60	2867.540	0.939	0.244		1.06	0.77	YES	16.6
	41	Total-tetradioxins	319.8965	24.33	6809.074	0.939	0.580		0.94	0.77	YES	31.2
	41	Total-tetradioxins	319.8965	28.08	1830.818	0.939	0.156		0.97	0.77	YES	8.8
	41	Total-tetradioxins	319.8965	27.77	2760.684	0.939	0.235		0.70	0.77	NO	11.6
	41	Total-tetradioxins	319.8965	27.33	1762.918	0.939	0.150		0.94	0.77	YES	8.1
	11	2378-TCDD	319.8965	27.21	2746.291	0.939	0.234	0.189	0.54	0.77	YES	10.5
	41	Total-tetradioxins	319.8965	26.84	2636.279	0.939	0.225		1.27	0.77	YES	8.6
	41	Total-tetradioxins	319.8965	26.56	7352.181	0.939	0.627		3.97	0.77	YES	63.5
	41	Total-tetradioxins	319.8965	26.41	2201.551	0.939	0.188		0.77	0.77	NO	11.3
	41	Total-tetradioxins	319.8965	26.18	1030.485	0.939	0.088		1.05	0.77	YES	5.1
	41	Total-tetradioxins	319.8965	26.09	630.641	0.939	0.054		1.21	0.77	YES	3.7
	41	Total-tetradioxins	319.8965	25.84	3067.462	0.939	0.261		0.64	0.77	YES	12.5
	41	Total-tetradioxins	319.8965	25.54	3509.237	0.939	0.299		0.78	0.77	NO	15.3
	42	Total-pentadioxins	355.8546	30.95	12982.757	0.930	1.357		1.36	1.55	NO	92.7
	42	Total-pentadioxins	355.8546	30.74	6914.651	0.930	0.723		1.95	1.55	YES	48.8
	42	Total-pentadioxins	355.8546	30.13	3114.276	0.930	0.326		1.89	1.55	YES	25.7
	42	Total-pentadioxins	355.8546	29.65	13483.316	0.930	1.409		1.40	1.55	NO	64.6
	42	Total-pentadioxins	355.8546	32.75	1740.591	0.930	0.182		1.69	1.55	NO	13.8
	12	12378-PeCDD	355.8546	32.35	5439.896	0.930	0.569	0.569	1.62	1.55	NO	35.6
	42	Total-pentadioxins	355.8546	31.66	1831.388	0.930	0.191		1.58	1.55	NO	13.4
	42	Total-pentadioxins	355.8546	31.27	4330.036	0.930	0.453		1.63	1.55	NO	27.1
	42	Total-pentadioxins	355.8546	31.09	3533.834	0.930	0.369		1.58	1.55	NO	27.4
	43	Total-hexadioxins	389.8157	35.79	2576.800	0.890	0.292		3.68	1.24	YES	20.4
	43	Total-hexadioxins	389.8157	35.70	10686.775	0.890	1.210		1.33	1.24	NO	65.5
	43	Total-hexadioxins	389.8157	34.86	48348.717	0.890	5.473		1.29	1.24	NO	295.4
	15	123789-HxCDD	389.8157	37.66	9909.863	0.885	1.127	1.127	1.21	1.24	NO	65.8
	43	Total-hexadioxins	389.8157	37.43	1915.357	0.890	0.217		1.03	1.24	YES	16.3
	14	123678-HxCDD	389.8157	37.24	11102.865	0.854	1.288	1.288	1.10	1.24	NO	70.2
	13	123478-HxCDD	389.8157	37.11	4748.584	0.930	0.523	0.523	1.09	1.24	NO	31.5
	43	Total-hexadioxins	389.8157	36.97	2243.481	0.890	0.254		6.28	1.24	YES	23.6
	43	Total-hexadioxins	389.8157	36.22	2017.408	0.890	0.228		0.99	1.24	YES	19.8
	43	Total-hexadioxins	389.8157	36.11	36394.665	0.890	4.120		1.28	1.24	NO	155.8
	43	Total-hexadioxins	389.8157	35.99	3311.669	0.890	0.375		7.81	1.24	YES	34.7
	16	1234678-HpCDD	423.7766	41.95	152733.164	0.966	20.559	20.559	1.00	1.05	NO	553.2
	44	Total-heptadioxins	423.7766	40.65	216189.211	0.966	29.101		1.02	1.05	NO	870.0
	17	OCDD	457.7377	48.10	964118.375	0.921	163.085	163....	0.87	0.89	NO	2148.2

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PFK1

		Name	Trace	RT	Abs Rat	RRT M	Pg	EMPC	1° Rati	1° Rati	1° R	S/N
	48	FUNCTION1 PFK	330.9792	22.13	0.000							1.3
	48	FUNCTION1 PFK	330.9792	22.03	0.000							1.5
	48	FUNCTION1 PFK	330.9792	21.67	0.000							0.9
	48	FUNCTION1 PFK	330.9792	21.57	0.000							0.5
	48	FUNCTION1 PFK	330.9792	21.49	0.000							1.1
	48	FUNCTION1 PFK	330.9792	21.39	0.000							1.1
	48	FUNCTION1 PFK	330.9792	21.24	0.000							1.1
	48	FUNCTION1 PFK	330.9792	21.13	0.000							2.3
	48	FUNCTION1 PFK	330.9792	26.91	0.000							1.2
	48	FUNCTION1 PFK	330.9792	26.75	0.000							1.0
	48	FUNCTION1 PFK	330.9792	26.18	0.000							2.4
	48	FUNCTION1 PFK	330.9792	25.70	0.000							1.1
	48	FUNCTION1 PFK	330.9792	25.61	0.000							1.4
	48	FUNCTION1 PFK	330.9792	25.53	0.000							0.8
	48	FUNCTION1 PFK	330.9792	25.36	0.000							0.4
	48	FUNCTION1 PFK	330.9792	25.23	0.000							0.9
	48	FUNCTION1 PFK	330.9792	24.85	0.000							1.6
	48	FUNCTION1 PFK	330.9792	24.49	0.000							1.0
	48	FUNCTION1 PFK	330.9792	24.37	0.000							0.7
	48	FUNCTION1 PFK	330.9792	24.20	0.000							1.0
	48	FUNCTION1 PFK	330.9792	24.08	0.000							1.1
	48	FUNCTION1 PFK	330.9792	23.64	0.000							1.0
	48	FUNCTION1 PFK	330.9792	23.27	0.000							1.3
	48	FUNCTION1 PFK	330.9792	22.64	0.000							1.5
	48	FUNCTION1 PFK	330.9792	28.65	0.000							0.4
	48	FUNCTION1 PFK	330.9792	28.32	0.000							0.4
	48	FUNCTION1 PFK	330.9792	28.17	0.000							1.5
	48	FUNCTION1 PFK	330.9792	28.04	0.000							1.5
	48	FUNCTION1 PFK	330.9792	27.14	0.000							0.7
	48	FUNCTION1 PFK	330.9792	26.99	0.000							1.1

PFK2

		Name	Trace	RT	Abs Rat	RRT M	Pg	EMPC	1° Rati	1° Rati	1° R	S/N

PFK3

		Name	Trace	RT	Abs Rat	RRT M	Pg	EMPC	1° Rati	1° Rati	1° R	S/N
	50	FUNCTION3 PFK	380.9760	38.78	0.000	0.000						0.6
	50	FUNCTION3 PFK	380.9760	37.70	0.000	0.000						21.8

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PFK4

		Name	Mass	RT	Abs Resp	RRF M...	Qu	EMPC	13 Ratl...	37 Ratl...	1° R...	S/N
[redacted]	51	FUNCTION4 PFK	430.9728	40.33	0.000							1.6
[redacted]	51	FUNCTION4 PFK	430.9728	40.12	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	39.52	0.000							0.6
[redacted]	51	FUNCTION4 PFK	430.9728	39.25	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	39.12	0.000							1.5
[redacted]	51	FUNCTION4 PFK	430.9728	44.80	0.000							2.0
[redacted]	51	FUNCTION4 PFK	430.9728	44.74	0.000							2.1
[redacted]	51	FUNCTION4 PFK	430.9728	44.69	0.000							1.7
[redacted]	51	FUNCTION4 PFK	430.9728	43.89	0.000							0.4
[redacted]	51	FUNCTION4 PFK	430.9728	43.69	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	43.29	0.000							2.2
[redacted]	51	FUNCTION4 PFK	430.9728	42.46	0.000							1.1
[redacted]	51	FUNCTION4 PFK	430.9728	42.10	0.000							0.9
[redacted]	51	FUNCTION4 PFK	430.9728	41.91	0.000							1.6
[redacted]	51	FUNCTION4 PFK	430.9728	41.84	0.000							2.4
[redacted]	51	FUNCTION4 PFK	430.9728	41.80	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430.9728	41.41	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	41.33	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	40.69	0.000							0.7
[redacted]	51	FUNCTION4 PFK	430.9728	40.53	0.000							0.7
[redacted]	51	FUNCTION4 PFK	430.9728	40.45	0.000							2.2

PFK5

		Name	Mass	RT	Abs Resp	RRF M...	Qu	EMPC	13 Ratl...	37 Ratl...	1° R...	S/N
[redacted]	52	FUNCTION5 PFK	480.9696	49.33	0.000							1.8
[redacted]	52	FUNCTION5 PFK	480.9696	49.06	0.000							1.0
[redacted]	52	FUNCTION5 PFK	480.9696	48.94	0.000							1.4
[redacted]	52	FUNCTION5 PFK	480.9696	48.81	0.000							1.3
[redacted]	52	FUNCTION5 PFK	480.9696	48.78	0.000							2.0
[redacted]	52	FUNCTION5 PFK	480.9696	48.12	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	47.12	0.000							1.6
[redacted]	52	FUNCTION5 PFK	480.9696	47.01	0.000							1.2
[redacted]	52	FUNCTION5 PFK	480.9696	46.58	0.000							1.2
[redacted]	52	FUNCTION5 PFK	480.9696	46.30	0.000							2.8
[redacted]	52	FUNCTION5 PFK	480.9696	46.15	0.000							1.7
[redacted]	52	FUNCTION5 PFK	480.9696	45.93	0.000							1.3
[redacted]	52	FUNCTION5 PFK	480.9696	45.79	0.000							0.7
[redacted]	52	FUNCTION5 PFK	480.9696	45.16	0.000							1.9
[redacted]	52	FUNCTION5 PFK	480.9696	45.08	0.000							1.9
[redacted]	52	FUNCTION5 PFK	480.9696	49.99	0.000							0.8
[redacted]	52	FUNCTION5 PFK	480.9696	49.95	0.000							2.3
[redacted]	52	FUNCTION5 PFK	480.9696	49.90	0.000							1.1
[redacted]	52	FUNCTION5 PFK	480.9696	49.84	0.000							1.0
[redacted]	52	FUNCTION5 PFK	480.9696	49.69	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	49.48	0.000							1.4

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ETHERS1

	53	FUNCTION1 HXCD...	375.8364	28.27	0.000	0.000					2.8
	53	FUNCTION1 HXCD...	375.8364	26.96	0.000	0.000					5.0
	53	FUNCTION1 HXCD...	375.8364	26.59	0.000	0.000					2.2
	53	FUNCTION1 HXCD...	375.8364	26.42	0.000	0.000					6.8
	53	FUNCTION1 HXCD...	375.8364	26.33	0.000	0.000					4.1
	53	FUNCTION1 HXCD...	375.8364	25.82	0.000	0.000					3.7
	53	FUNCTION1 HXCD...	375.8364	24.60	0.000	0.000					4.5
	53	FUNCTION1 HXCD...	375.8364	24.45	0.000	0.000					2.4
	53	FUNCTION1 HXCD...	375.8364	24.40	0.000	0.000					4.1

ETHERS2

	54	FUNCTION1 HPCD...	409.7974	25.36	0.000	0.000					1.3
	54	FUNCTION1 HPCD...	409.7974	25.14	0.000	0.000					2.2
	54	FUNCTION1 HPCD...	409.7974	24.78	0.000	0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	24.55	0.000	0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	24.43	0.000	0.000					2.5
	54	FUNCTION1 HPCD...	409.7974	24.09	0.000	0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	23.96	0.000	0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	23.02	0.000	0.000					2.1
	54	FUNCTION1 HPCD...	409.7974	22.93	0.000	0.000					2.7
	54	FUNCTION1 HPCD...	409.7974	22.87	0.000	0.000					1.5
	54	FUNCTION1 HPCD...	409.7974	21.94	0.000	0.000					3.0
	54	FUNCTION1 HPCD...	409.7974	21.88	0.000	0.000					1.2
	54	FUNCTION1 HPCD...	409.7974	21.63	0.000	0.000					1.5
	54	FUNCTION1 HPCD...	409.7974	21.51	0.000	0.000					1.5
	54	FUNCTION1 HPCD...	409.7974	21.09	0.000	0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	28.75	0.000	0.000					3.6
	54	FUNCTION1 HPCD...	409.7974	28.44	0.000	0.000					1.3
	54	FUNCTION1 HPCD...	409.7974	28.05	0.000	0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	27.57	0.000	0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	26.44	0.000	0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	25.72	0.000	0.000					2.3
	54	FUNCTION1 HPCD...	409.7974	25.54	0.000	0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	25.44	0.000	0.000					2.2

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ETHERS3

	55	FUNCTION2 HPCD...	409.7974	31.97	0.000	0.000					1.3
	55	FUNCTION2 HPCD...	409.7974	31.40	0.000	0.000					2.6
	55	FUNCTION2 HPCD...	409.7974	31.22	0.000	0.000					1.1
	55	FUNCTION2 HPCD...	409.7974	30.74	0.000	0.000					1.7
	55	FUNCTION2 HPCD...	409.7974	30.71	0.000	0.000					1.9
	55	FUNCTION2 HPCD...	409.7974	30.47	0.000	0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	29.78	0.000	0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	33.50	0.000	0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	32.64	0.000	0.000					1.9
	55	FUNCTION2 HPCD...	409.7974	32.59	0.000	0.000					1.7
	55	FUNCTION2 HPCD...	409.7974	32.50	0.000	0.000					2.0

ETHERS4

	56	FUNCTION3 OCDPE	445.7555	35.93	0.000	0.000					3.2
	56	FUNCTION3 OCDPE	445.7555	35.60	0.000	0.000					3.8
	56	FUNCTION3 OCDPE	445.7555	34.58	0.000	0.000					4.6

ETHERS5

	57	FUNCTION4 NCDPE	479.7165	41.78	0.000	0.000					4.4
	57	FUNCTION4 NCDPE	479.7165	41.44	0.000	0.000					4.0
	57	FUNCTION4 NCDPE	479.7165	39.67	0.000	0.000					27.2

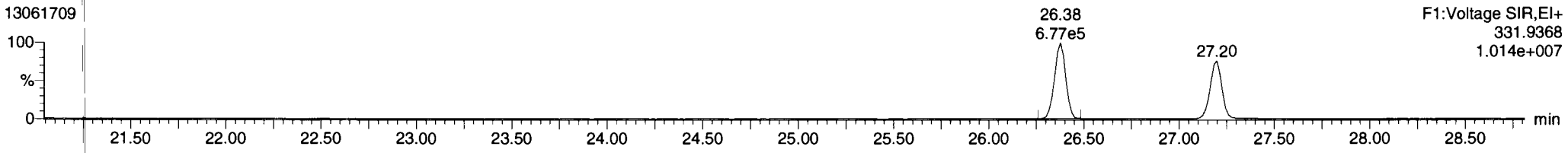
ETHERS6

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:44:29 Pacific Daylight Time

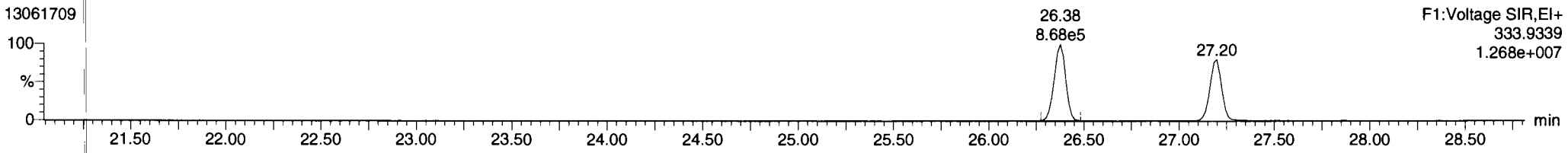
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WR99D, Name: 13061709, Date: 17-Jun-2013, Time: 21:07:21, Conditions: AUTOSPEC01, User: pk

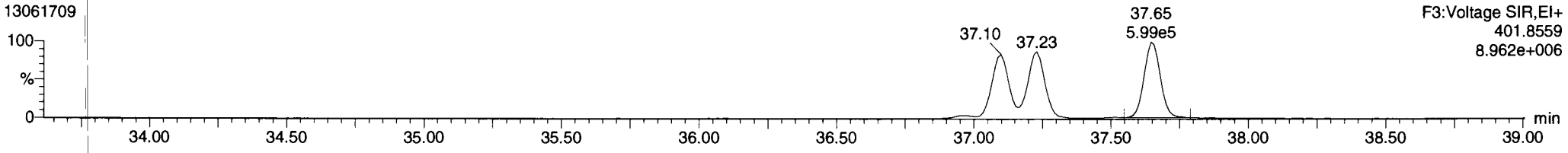
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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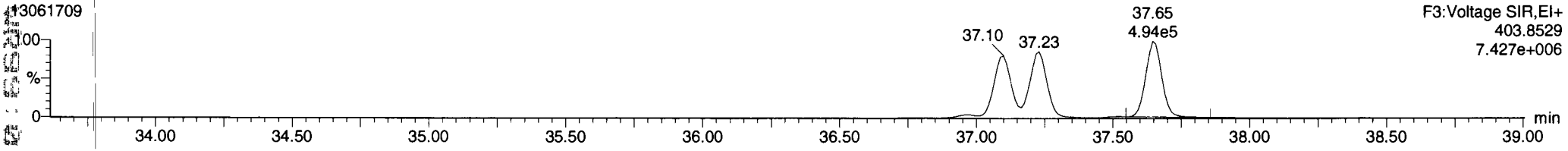

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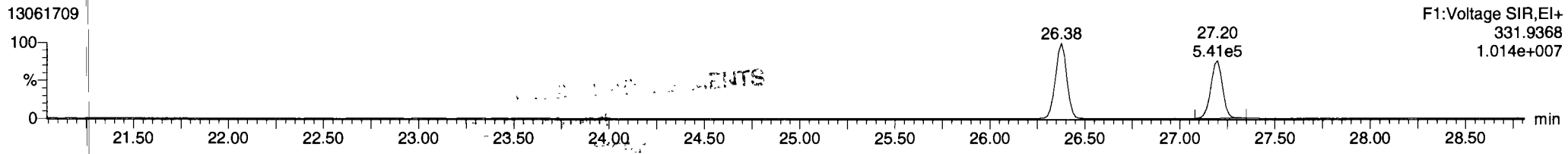
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:44:29 Pacific Daylight Time

ID: WR99D, Name: 13061709, Date: 17-Jun-2013, Time: 21:07:21, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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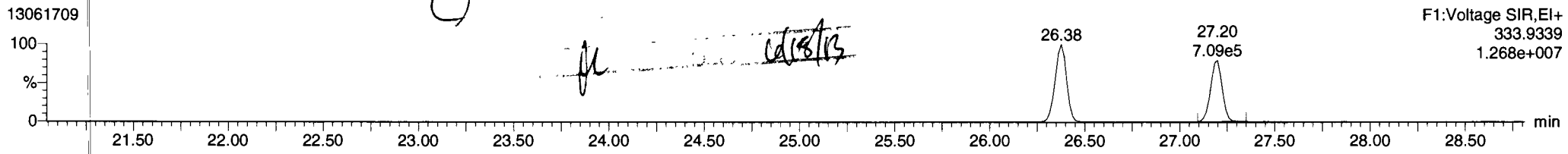

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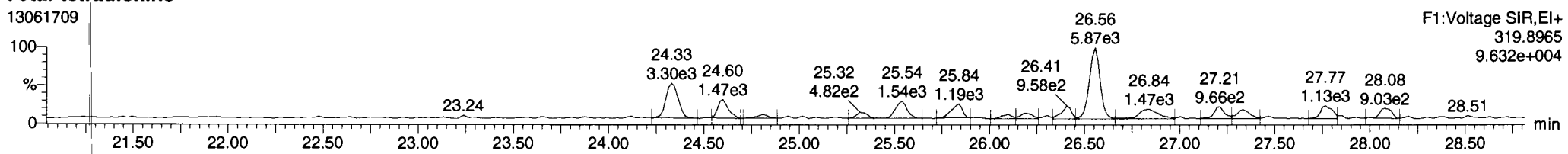
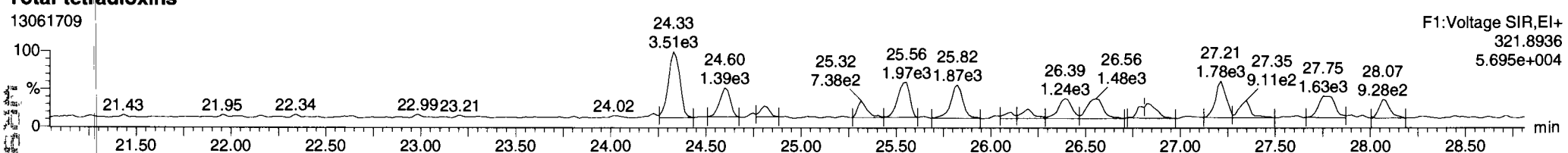
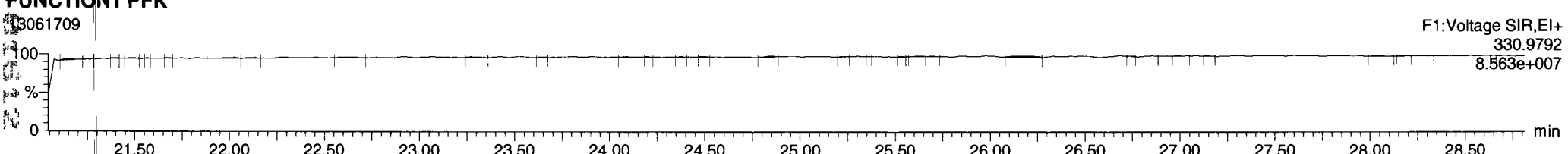


Total-tetradioxins



FUNCTION1 PFK



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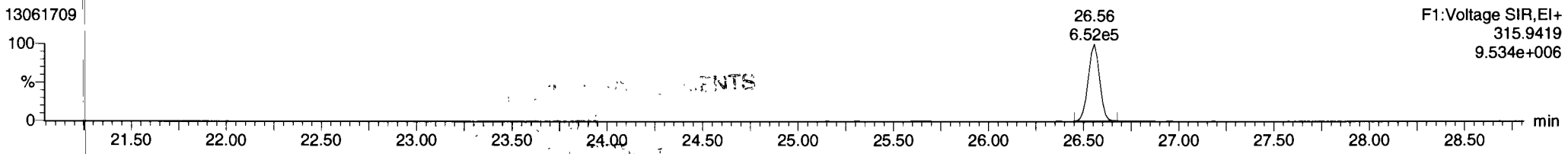
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:44:29 Pacific Daylight Time

ID: WR99D, Name: 13061709, Date: 17-Jun-2013, Time: 21:07:21, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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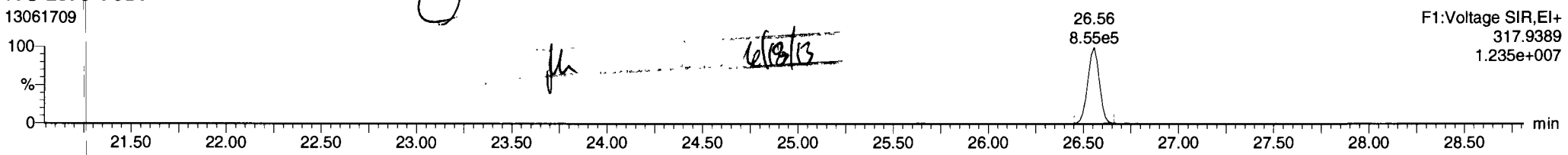
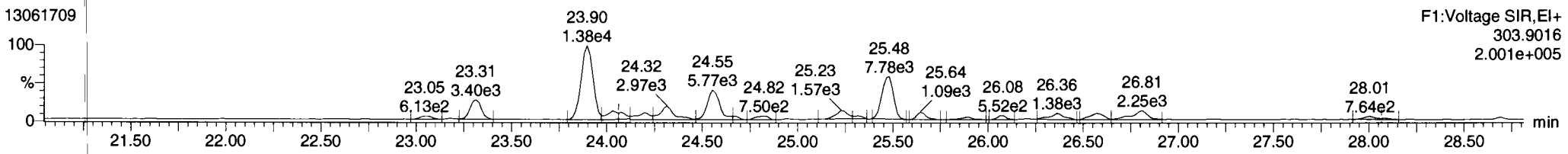
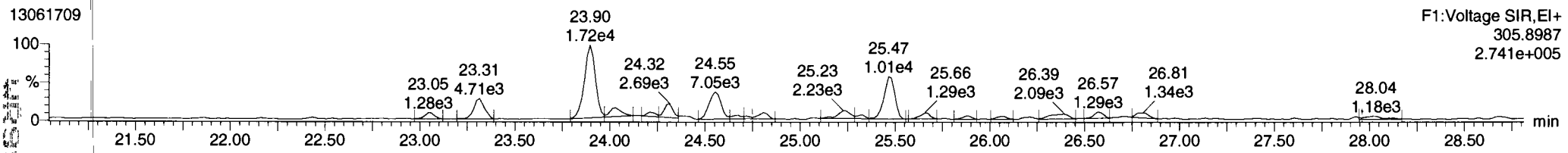


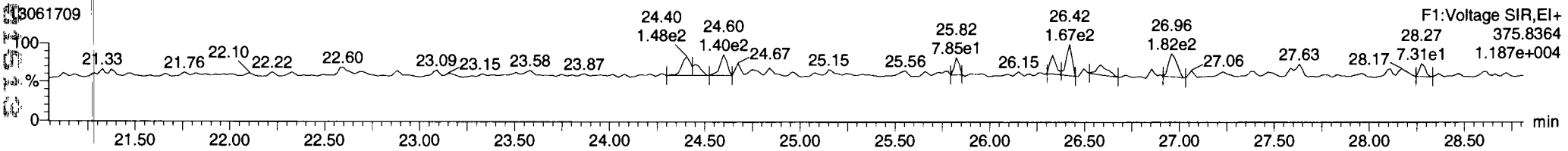
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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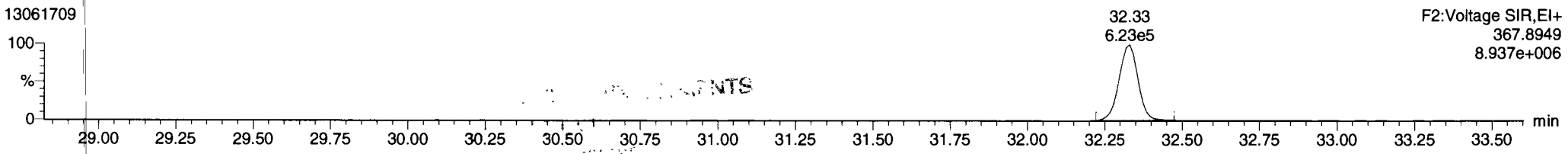
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:44:29 Pacific Daylight Time

ID: WR99D, Name: 13061709, Date: 17-Jun-2013, Time: 21:07:21, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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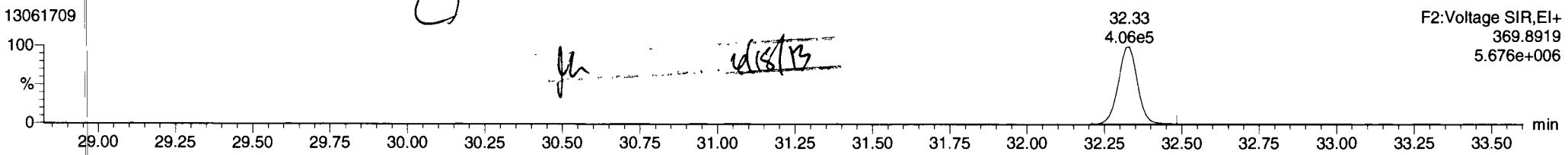
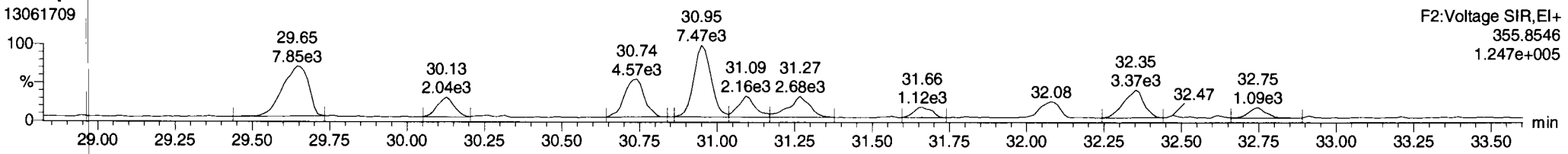
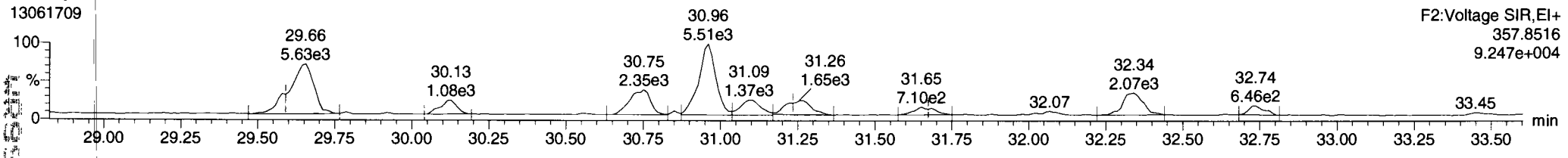


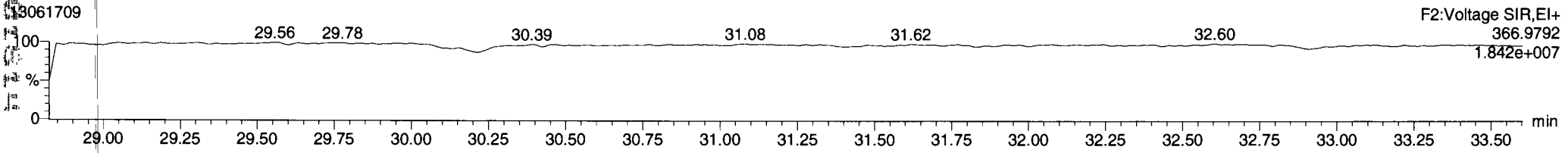
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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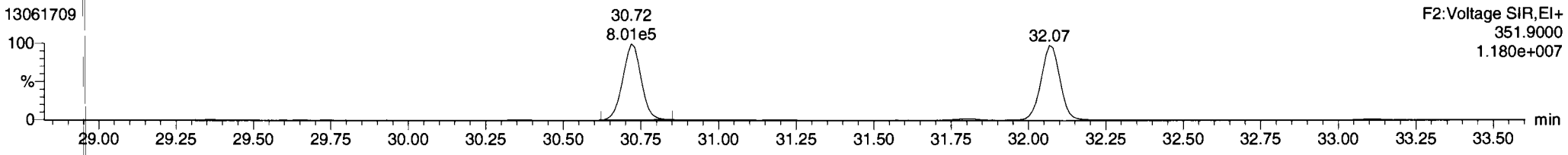
ID: WR99D, Name: 13061709, Date: 17-Jun-2013, Time: 21:07:21, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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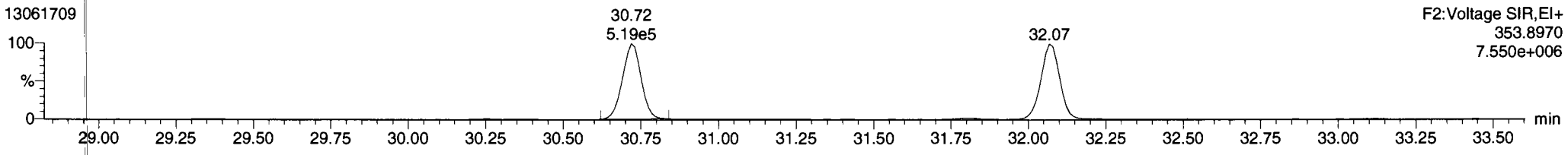

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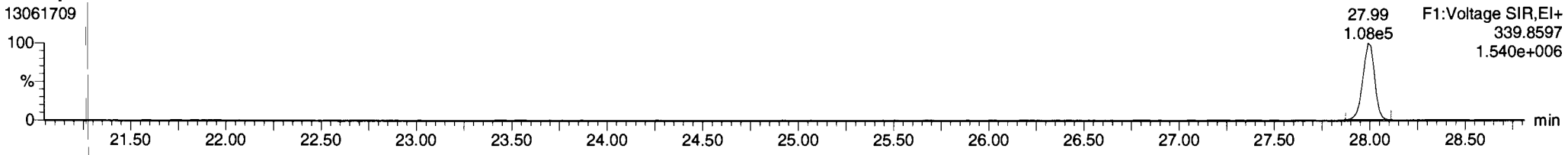
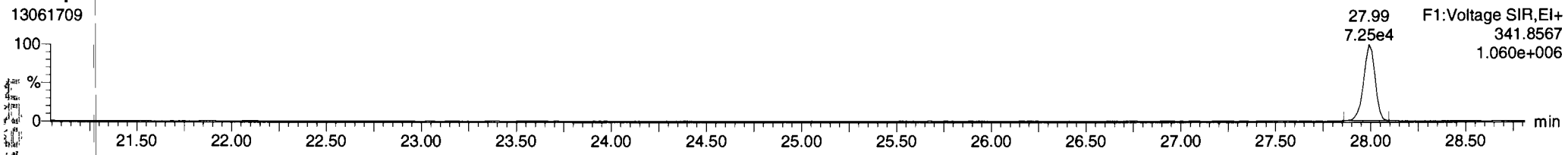
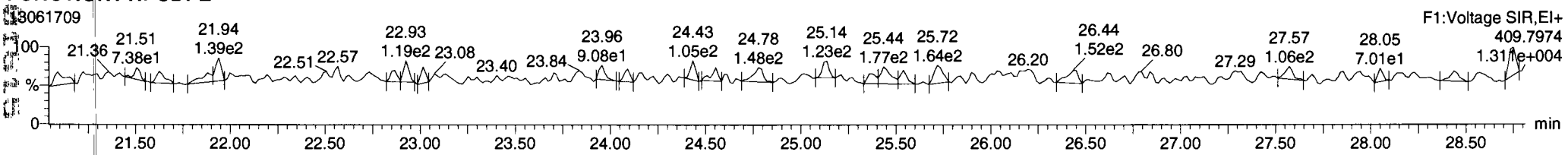


Total-penta1



FUNCTION1 HPCDPE



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ID: WR99D, Name: 13061709, Date: 17-Jun-2013, Time: 21:07:21, Conditions: AUTOSPEC01, User: pk

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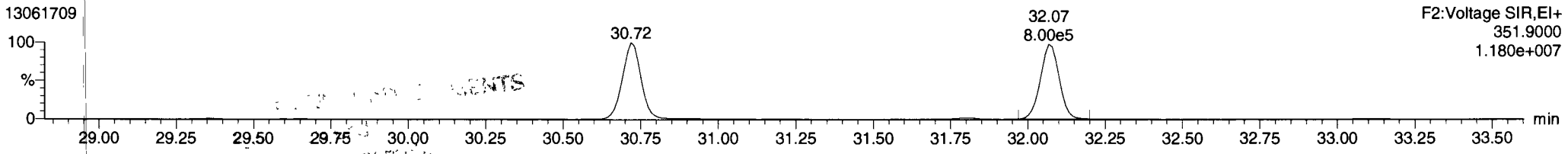
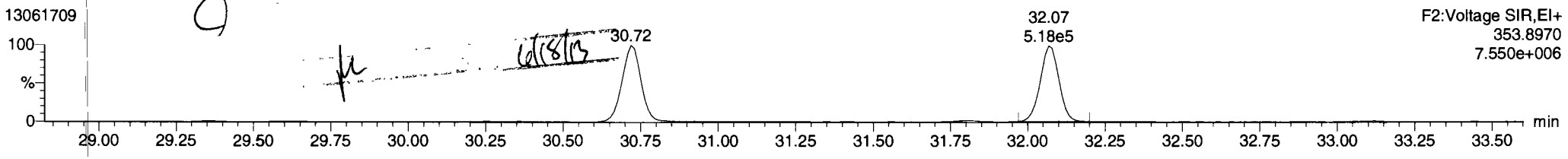
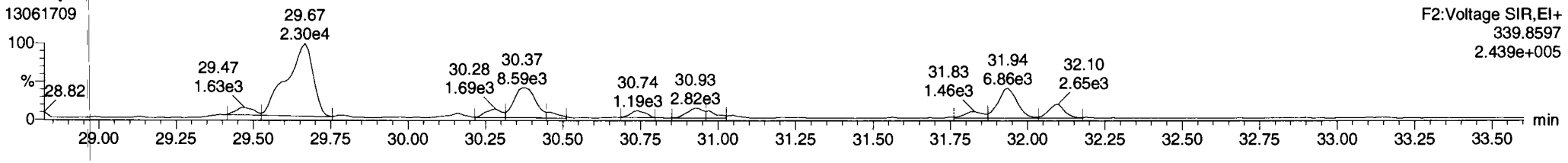


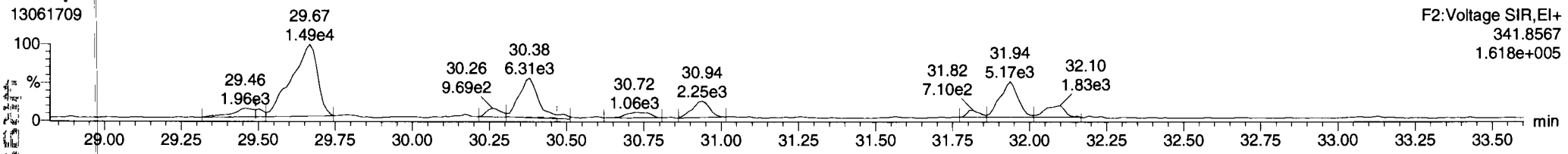
13C-23478-PeCDF



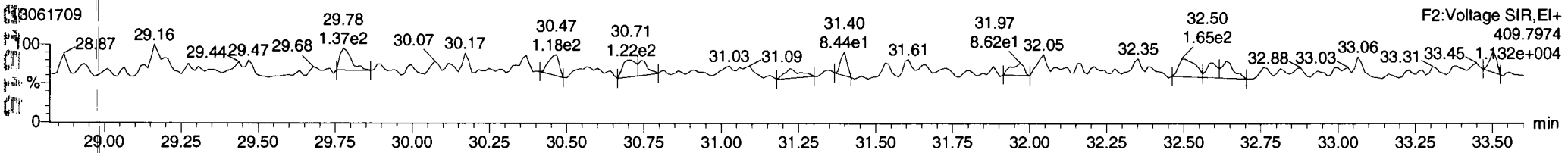
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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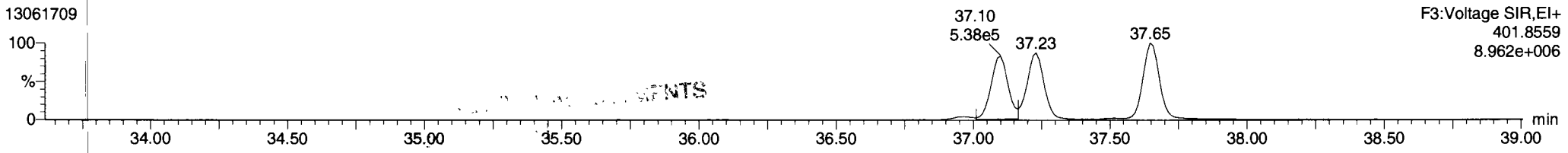
13C-123478-HxCDD



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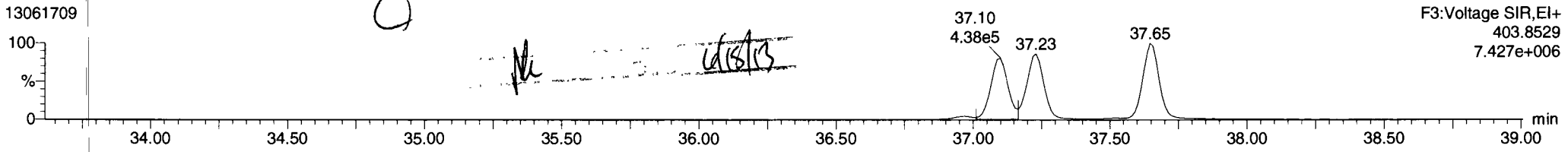
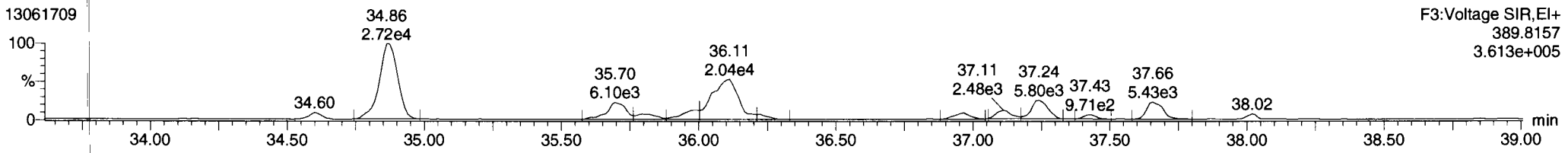
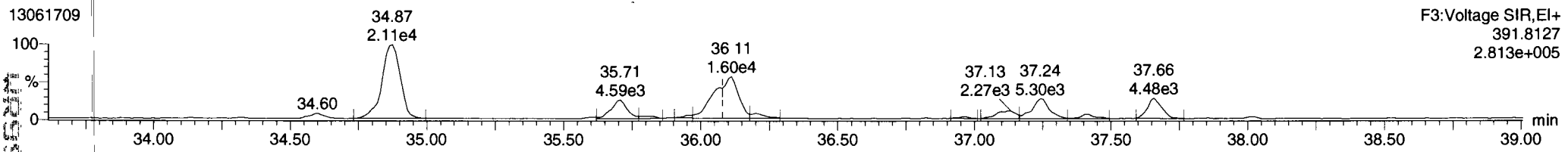


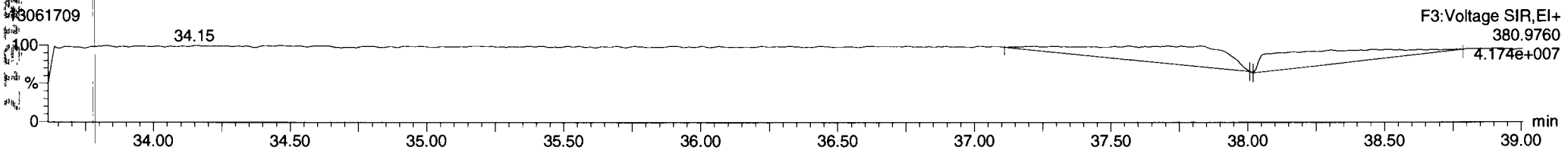
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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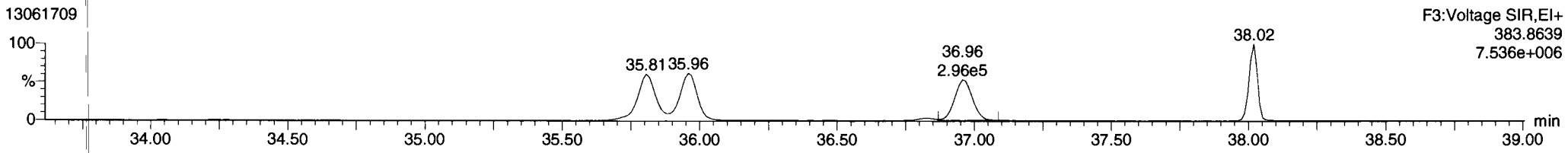
13C-234678-HxCDF



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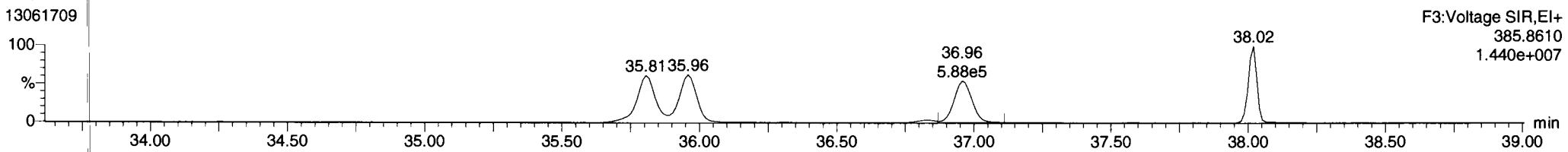
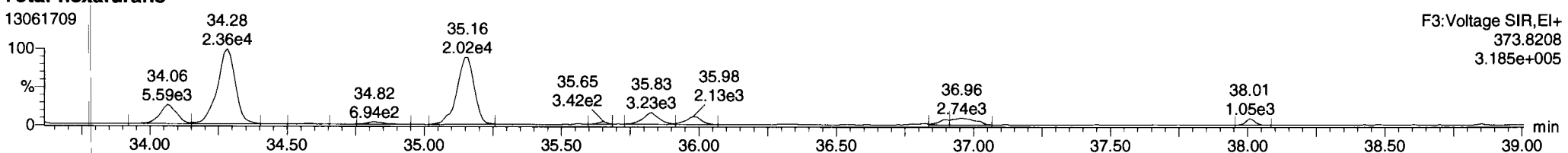
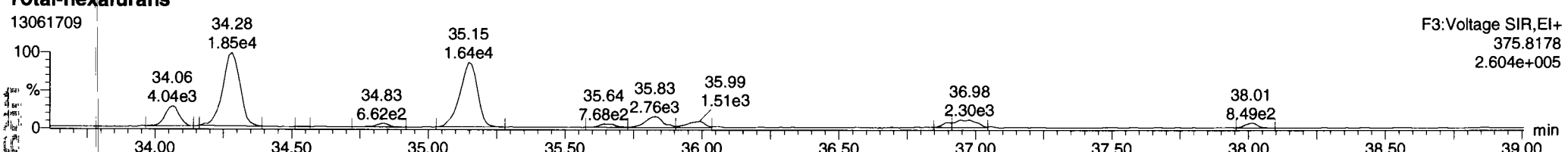


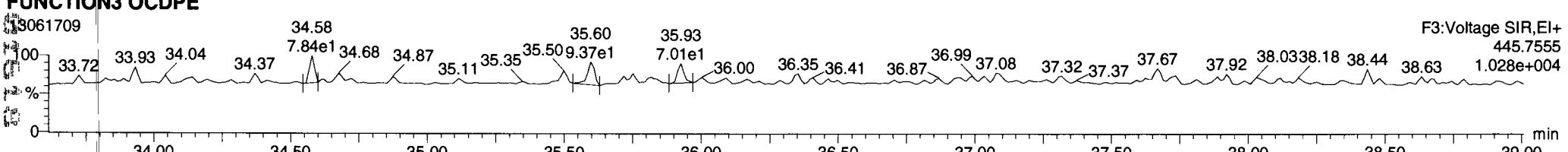
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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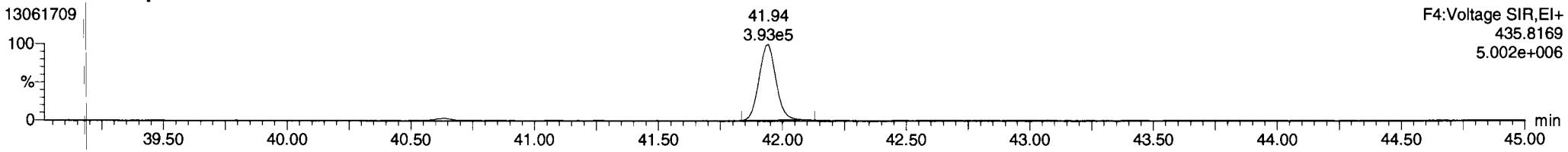
13C-1234678-HpCDD



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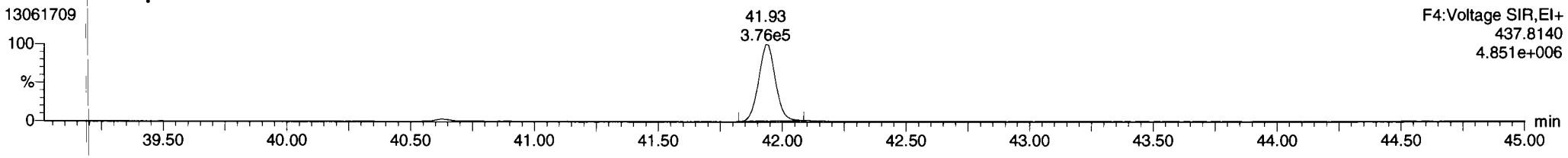
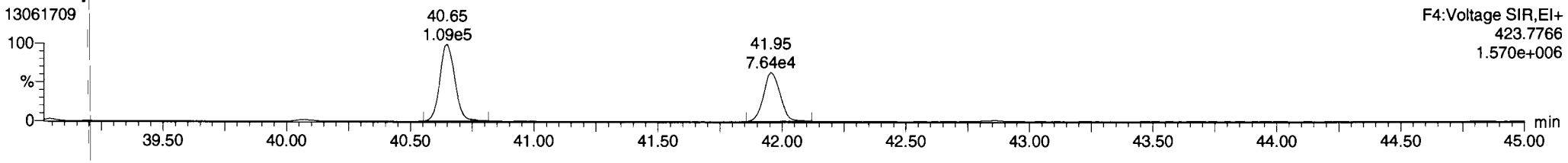
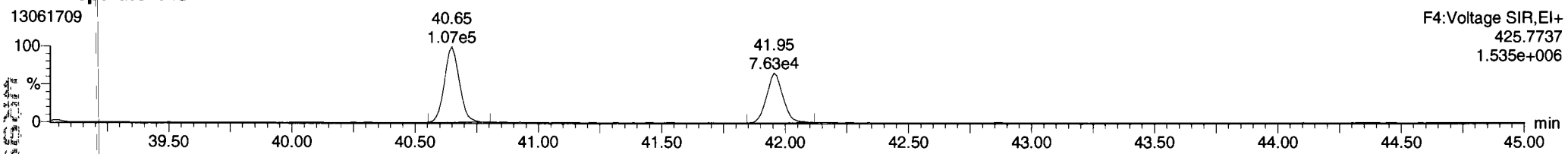


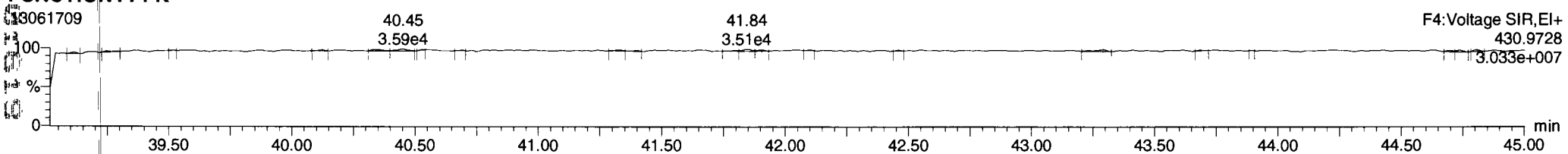
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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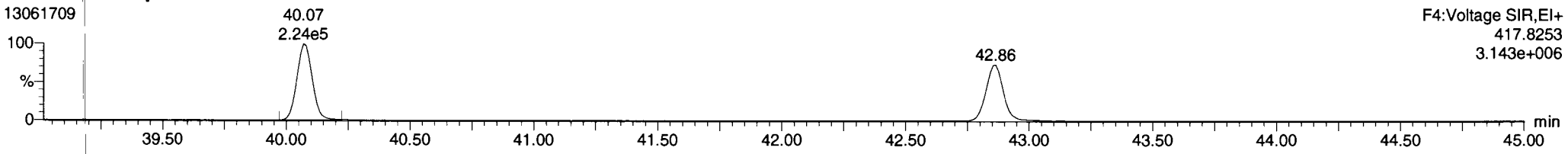
13C-1234678-HpCDF



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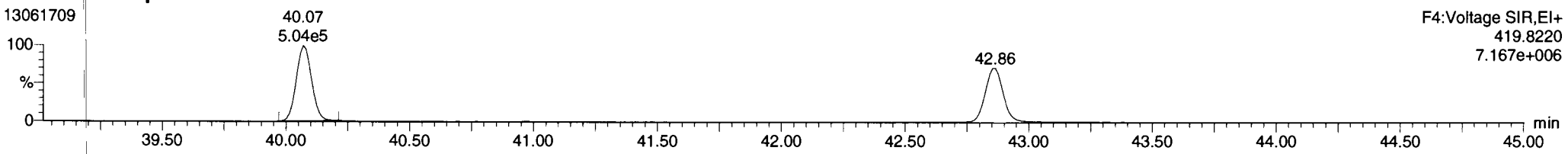
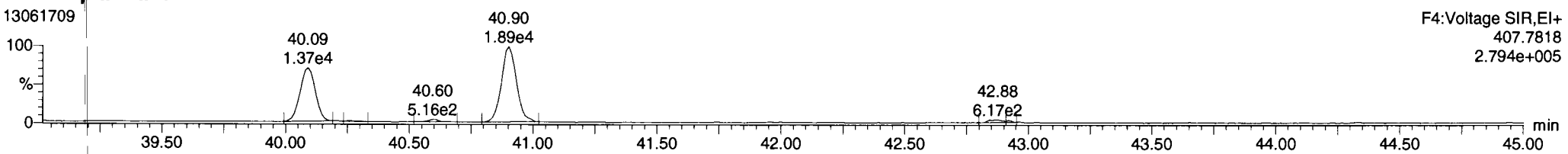


Total-heptafurans



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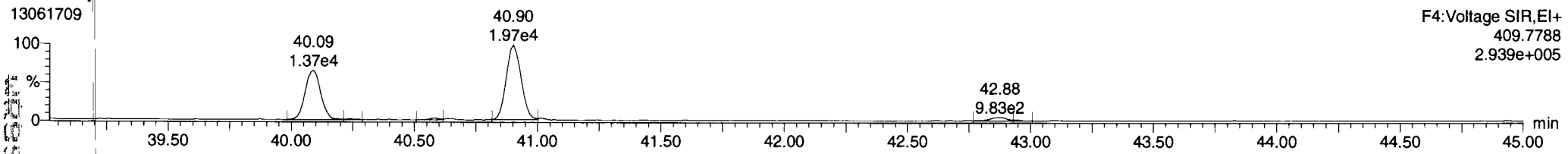
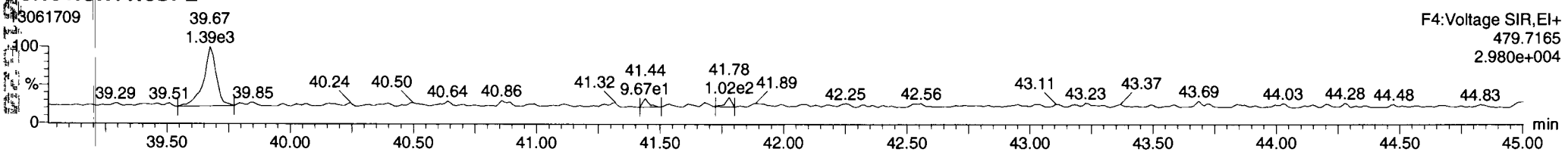


FUNCTION4 NCDPE



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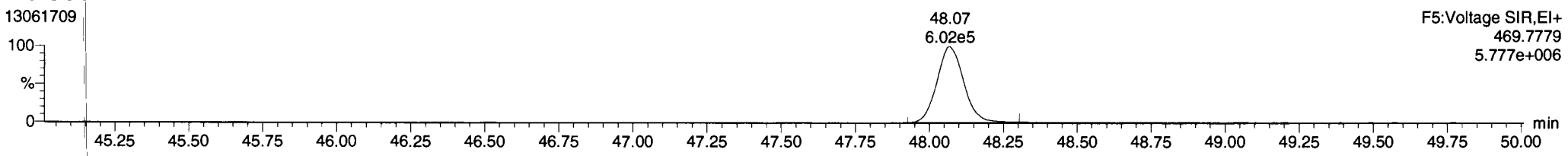
Printed: Tuesday, June 18, 2013 12:44:29 Pacific Daylight Time

ID: WR99D, Name: 13061709, Date: 17-Jun-2013, Time: 21:07:21, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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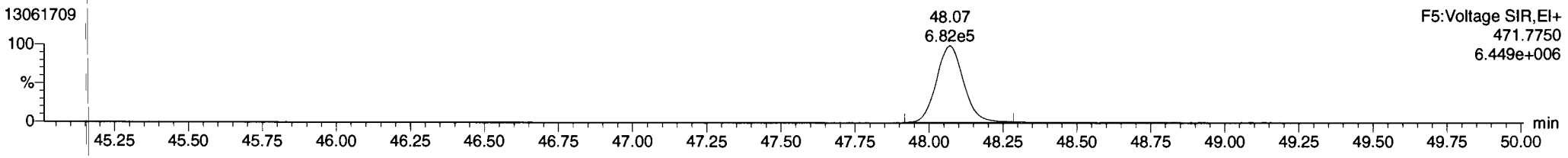

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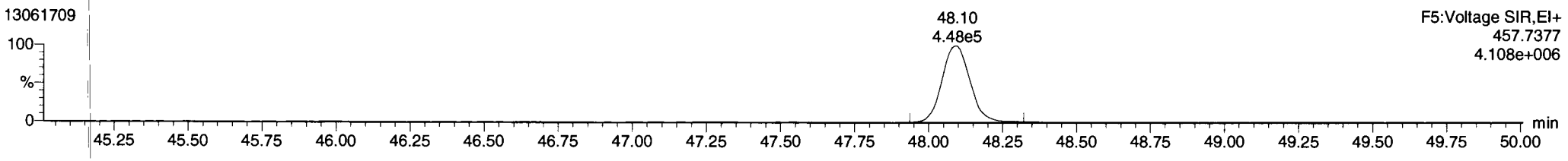

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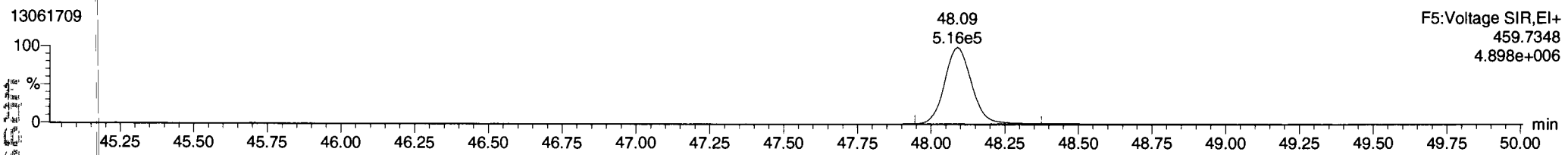
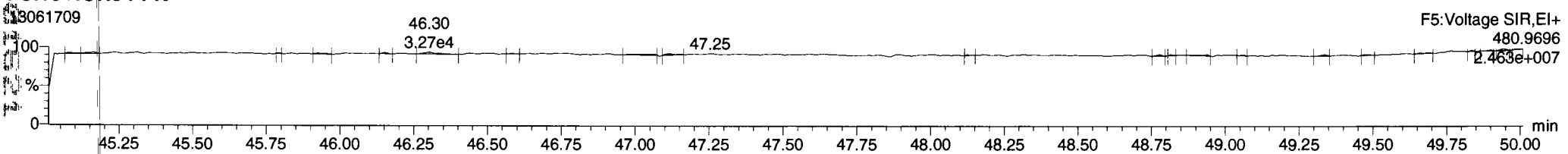


FUNCTION5 PFK



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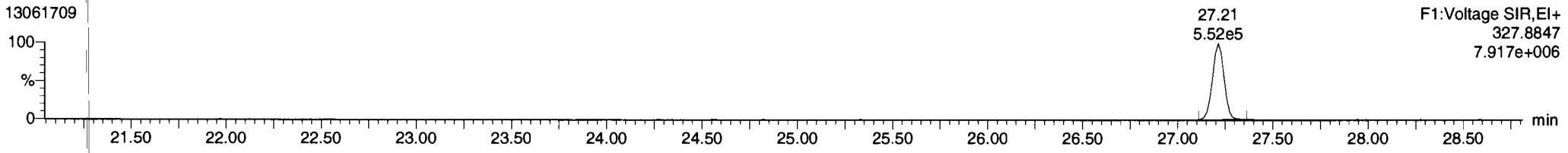
37CL-2378-TCDD



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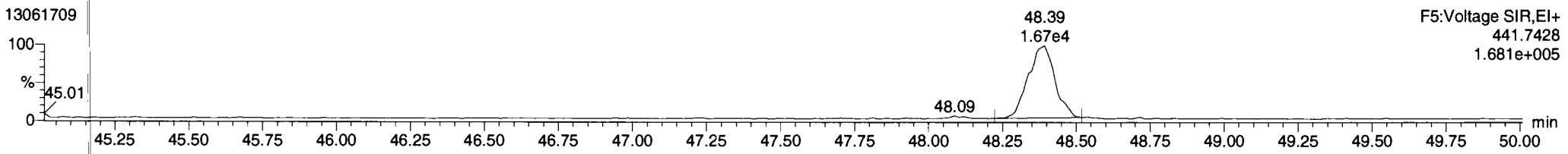

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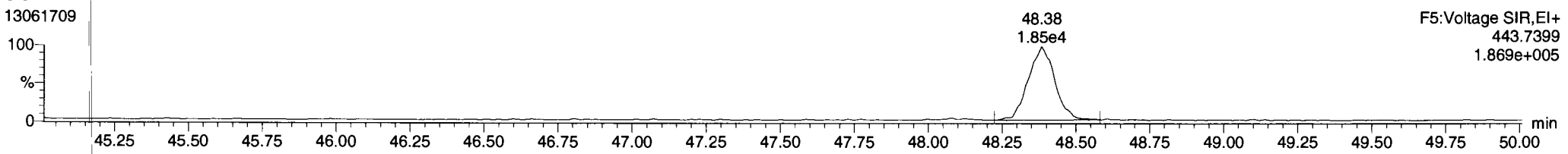
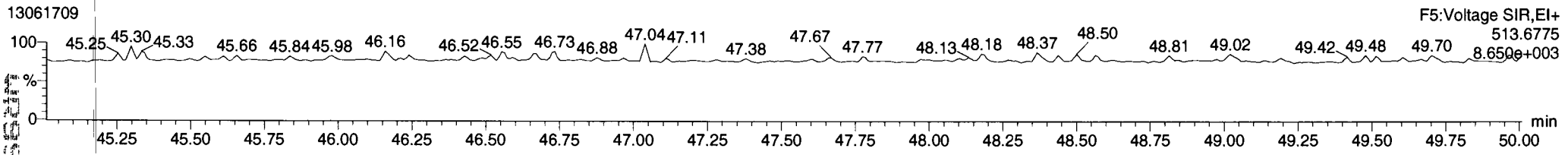
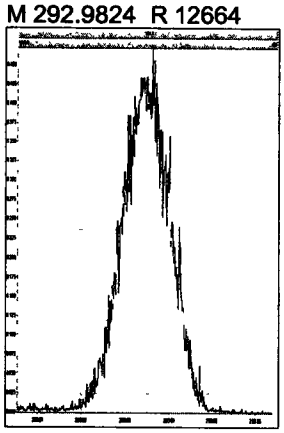


FUNCTION5 DCDPE



M 292.9824 R 12664



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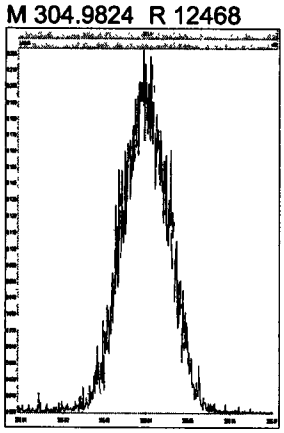
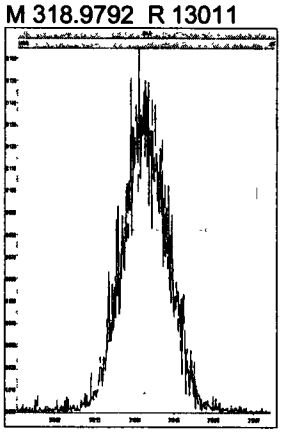


M 318.9792 R 13011



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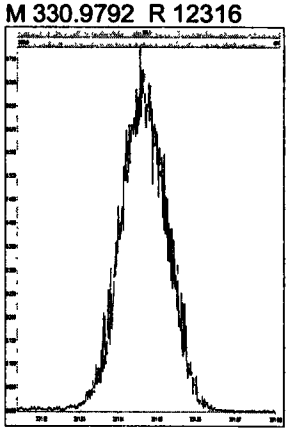

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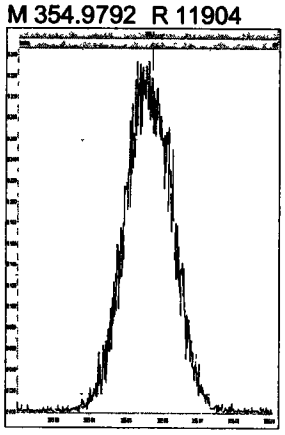
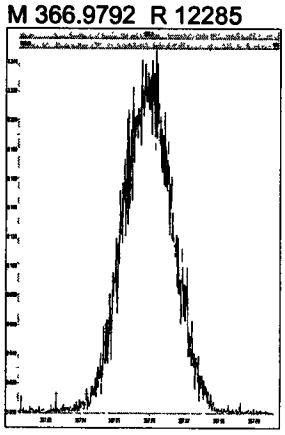


M 366.9792 R 12285



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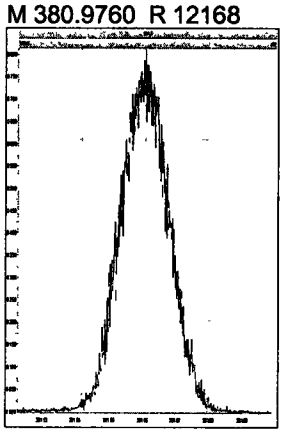

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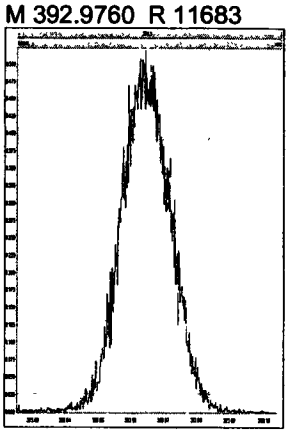

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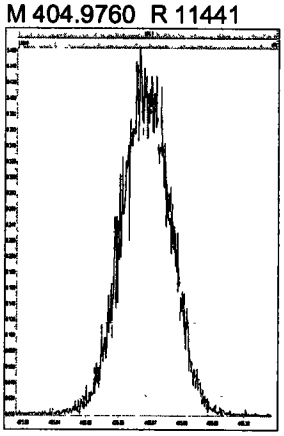

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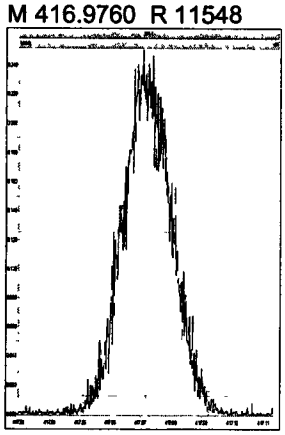

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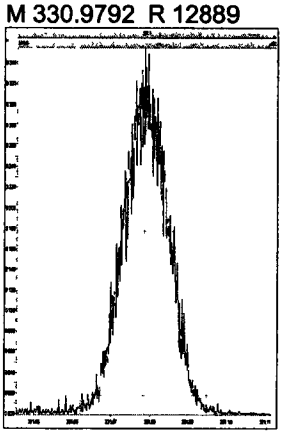
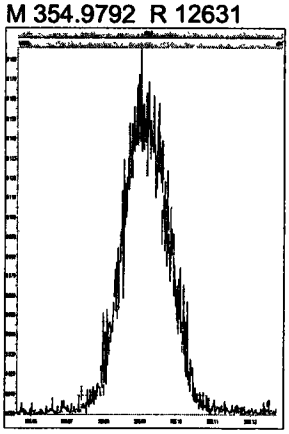


M 354.9792 R 12631



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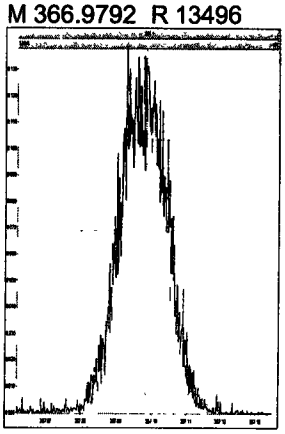

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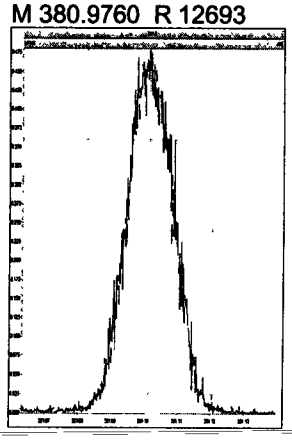

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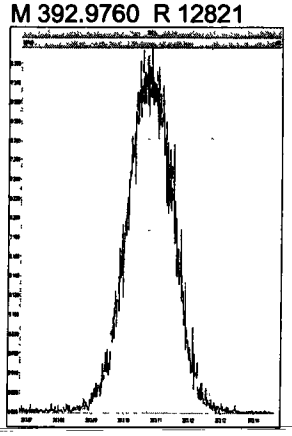

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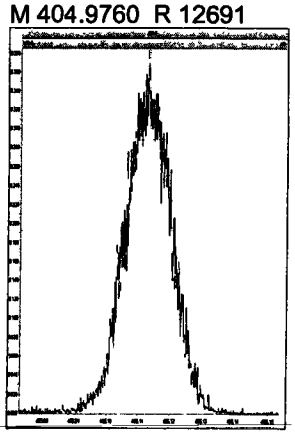

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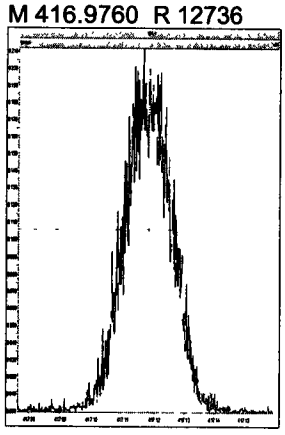

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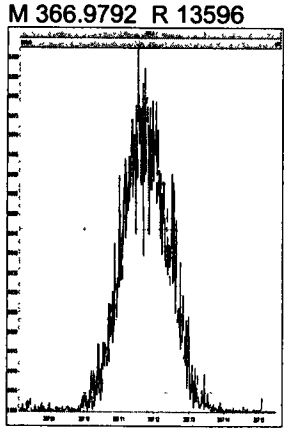

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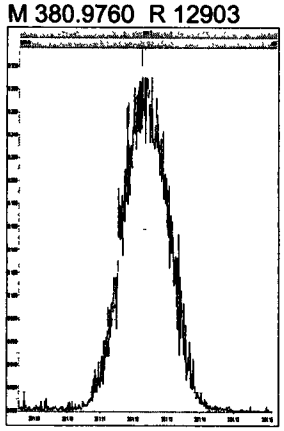

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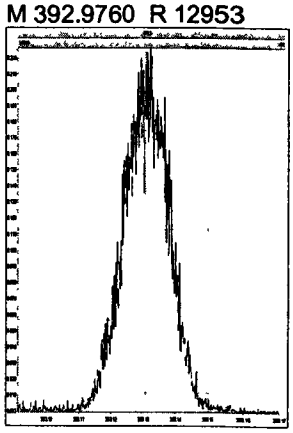

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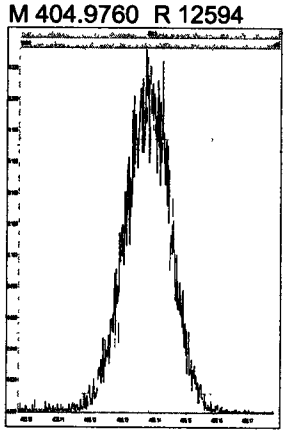

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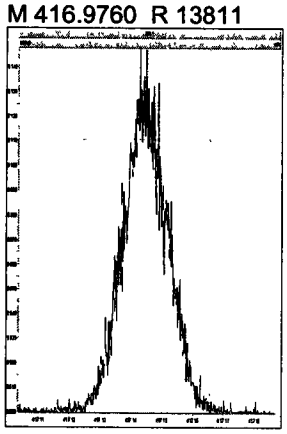
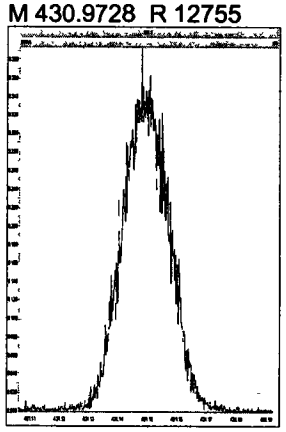


M 430.9728 R 12755



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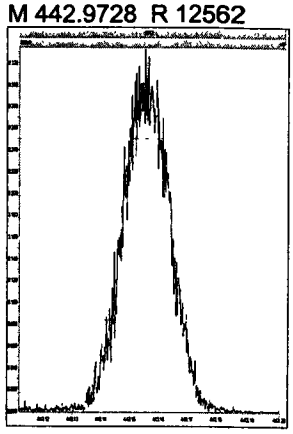

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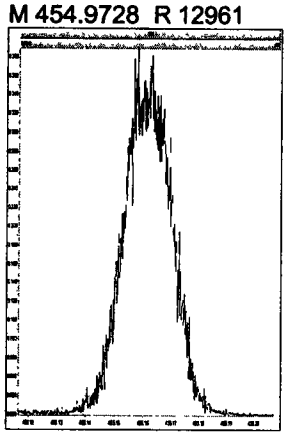

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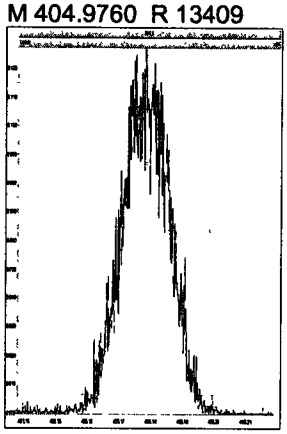

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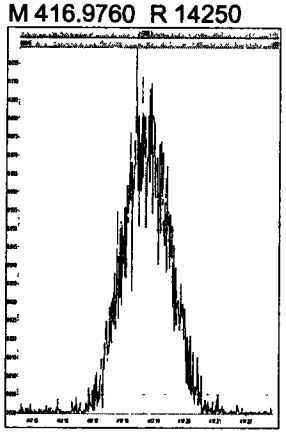

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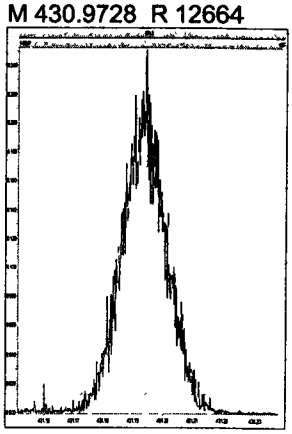

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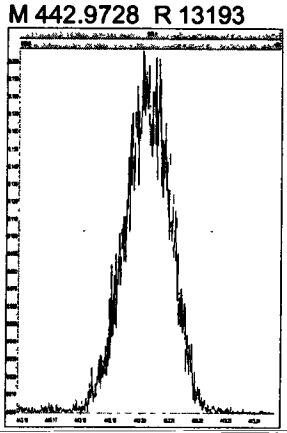

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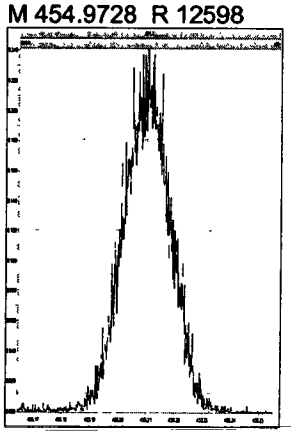

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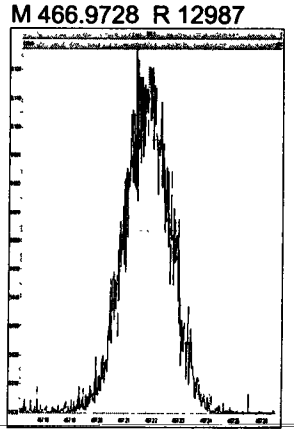
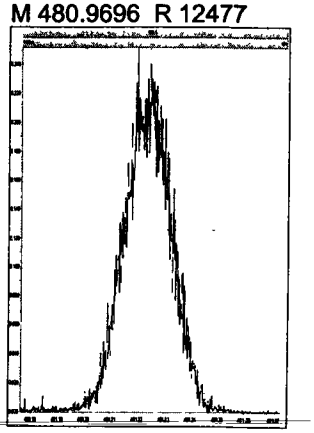


M 480.9696 R 12477



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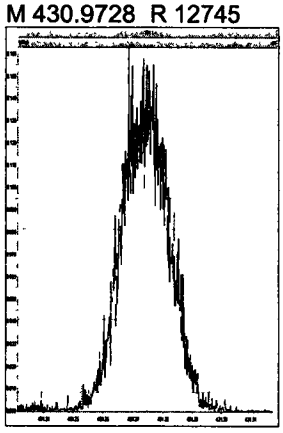

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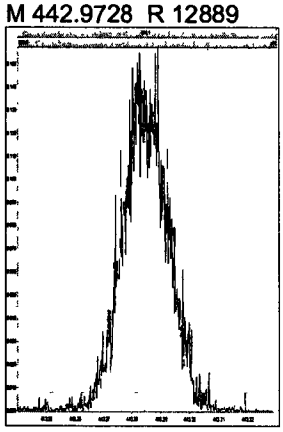

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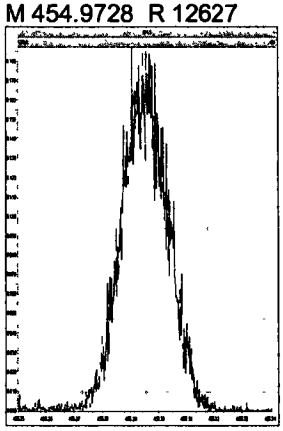

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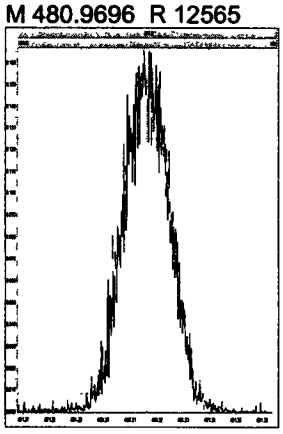

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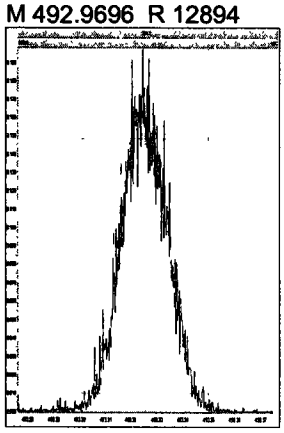

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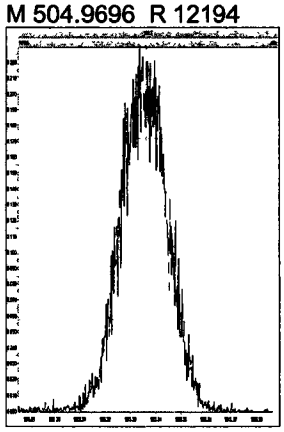
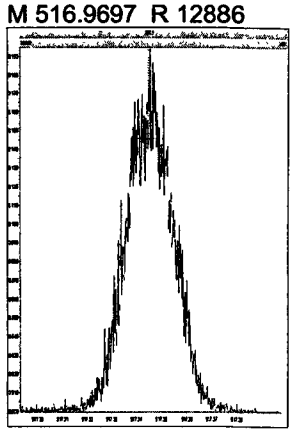


M 516.9697 R 12886



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ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.556	1.001	3.84e4	5.17e4	0.832	0.742	0.770	604.6	NO	9.167	9.167
12378-PeCDF	30.719	1.000	2.25e5	1.55e5	0.853	1.451	1.550	1492.8	NO	47.220	47.220
23478-PeCDF	32.068	1.000	2.25e5	1.50e5	0.884	1.498	1.550	1517.2	NO	45.857	45.857
123478-HxCDF	35.751	1.000	1.83e5	1.50e5	1.017	1.223	1.240	1045.7	NO	46.905	46.905
234678-HxCDF	36.847	1.000	1.82e5	1.50e5	1.067	1.211	1.240	1054.7	NO	48.178	48.178
123678-HxCDF	35.904	1.001	1.88e5	1.61e5	0.999	1.169	1.240	1063.2	NO	47.774	47.774
123789-HxCDF	37.965	1.001	1.46e5	1.26e5	0.947	1.163	1.240	847.5	NO	46.520	46.520
1234678-HpCDF	40.070	1.000	1.50e5	1.54e5	1.151	0.975	1.050	1388.3	NO	48.066	48.066
1234789-HpCDF	42.854	1.000	1.17e5	1.19e5	1.166	0.988	1.050	929.3	NO	47.904	47.904
OCDF	48.349	1.007	2.14e5	2.48e5	1.001	0.865	0.890	1478.6	NO	86.924	86.924
2378-TCDD	27.199	1.000	3.73e4	4.91e4	0.939	0.759	0.770	399.1	NO	9.813	9.813
12378-PeCDD	32.331	1.001	1.85e5	1.24e5	0.930	1.496	1.550	1489.8	NO	46.325	46.325
123478-HxCDD	36.978	1.000	1.59e5	1.29e5	0.930	1.237	1.240	980.5	NO	45.389	45.389
123678-HxCDD	37.110	1.000	1.62e5	1.32e5	0.854	1.222	1.240	953.3	NO	48.413	48.413
123789-HxCDD	37.527	1.012	1.50e5	1.26e5	0.885	1.188	1.240	920.4	NO	44.606	44.606
1234678-HpCDD	41.933	1.000	1.22e5	1.21e5	0.966	1.014	1.050	868.0	NO	45.363	45.363
OCDD	48.062	1.001	2.18e5	2.48e5	0.921	0.878	0.890	2363.3	NO	95.176	95.176
13C-2378-TCDF	26.541	1.007	5.10e5	6.71e5	1.283	0.760	0.770	4101.8	NO		90.720
13C-12378-PeCDF	30.708	1.165	5.68e5	3.75e5	1.051	1.516	1.550	2663.8	NO		88.449
13C-23478-PeCDF	32.057	1.216	5.57e5	3.69e5	1.030	1.510	1.550	2590.6	NO		88.622
13C-123478-HxCDF	35.740	0.953	2.36e5	4.62e5	1.069	0.511	0.510	1562.1	NO		99.335
13C-123678-HxCDF	35.882	0.956	2.49e5	4.81e5	1.124	0.516	0.510	1618.5	NO		98.834
13C-234678-HxCDF	36.836	0.982	2.14e5	4.33e5	1.041	0.495	0.510	1418.2	NO		94.633
13C-123789-HxCDF	37.943	1.011	2.09e5	4.09e5	1.039	0.511	0.510	1388.2	NO		90.569
13C-1234678-HpCDF	40.048	1.067	1.64e5	3.86e5	0.965	0.426	0.440	1335.8	NO		86.839
13C-1234789-HpCDF	42.843	1.142	1.27e5	2.96e5	0.760	0.430	0.440	856.3	NO		84.697
13C-1234-TCDD	26.362	0.000	4.43e5	5.71e5	1.000	0.776	0.770	638.9	NO		100.000
13C-2378-TCDD	27.184	1.031	4.09e5	5.28e5	0.926	0.776	0.770	593.1	NO		99.721
13C-12378-PeCDD	32.309	1.226	4.37e5	2.80e5	0.734	1.563	1.550	2463.3	NO		96.157
13C-123478-HxCDD	36.967	0.985	3.76e5	3.06e5	0.984	1.228	1.240	2867.5	NO		105.638
13C-123678-HxCDD	37.099	0.989	3.90e5	3.22e5	1.043	1.211	1.240	2895.3	NO		103.887
13C-1234678-HpCDD	41.911	1.117	2.81e5	2.73e5	0.891	1.029	1.050	1385.5	NO		94.705
13C-OCDD	48.035	1.280	4.94e5	5.68e5	0.849	0.870	0.890	3154.2	NO		190.613

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13C-123789-HxCDD	37.515	0.000	3.61e5	2.96e5	1.000	1.222	1.240	2798.9	NO	100.000
Total-tetrafurans			1.20e5		0.832					29.034
Total-penta1			4.86e5							94.213
Total-pentafurans			6.80e5		0.868					140.003
Total-hexafurans			9.19e5		1.008					248.202
Total-heptafurans			2.69e5		1.159					96.257
Total-Furans			2.69e6		0.992					694.634
Total-tetradioxins			2.13e5		0.939					56.215
Total-pentadioxins			6.67e5		0.930					166.403
Total-hexadioxins			6.83e5		0.890					201.219
Total-heptadioxins			2.66e5		0.966					98.200
Total-Dioxins			2.05e6		0.918					617.213
Total-TEQ			4.73e6							1311.847
37CL-2378-TCDD	27.199	1.032	9.92e4		0.989			583.7		9.887
FUNCTION1 PFK			6.59e5							
FUNCTION2 PFK			0.00e0							
FUNCTION3 PFK			8.49e6							0.000
FUNCTION4 PFK			1.71e5							
FUNCTION5 PFK			3.40e5							
FUNCTION1 HXCDPE			3.95e2							0.000
FUNCTION1 HPCDPE			2.65e3							0.000
FUNCTION2 HPCDPE			1.86e3							0.000
FUNCTION3 OCDPE			1.07e2							0.000
FUNCTION4 NCDPE			1.84e2							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
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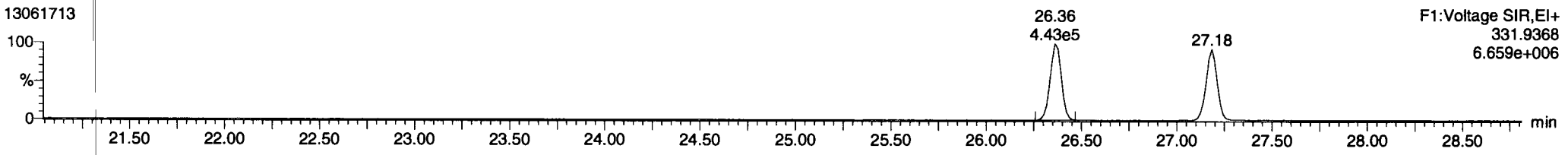
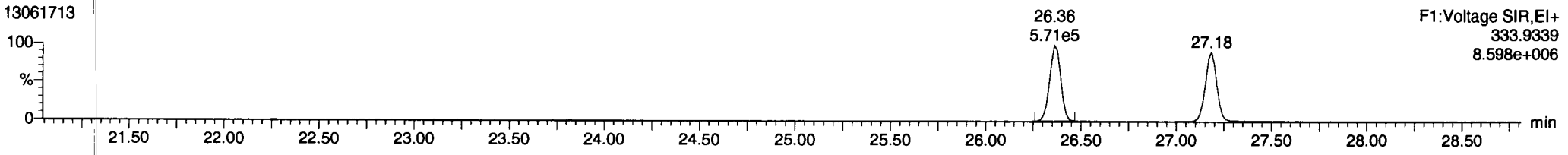
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

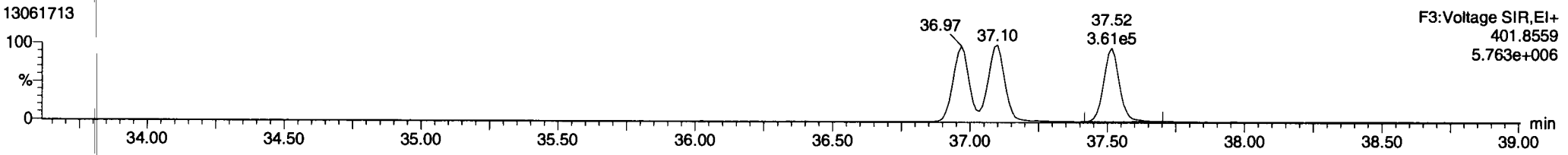
13C-1234-TCDD



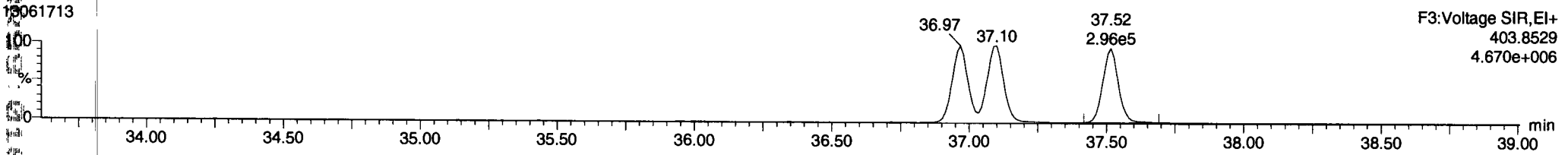
13C-1234-TCDD



13C-123789-HxCDD

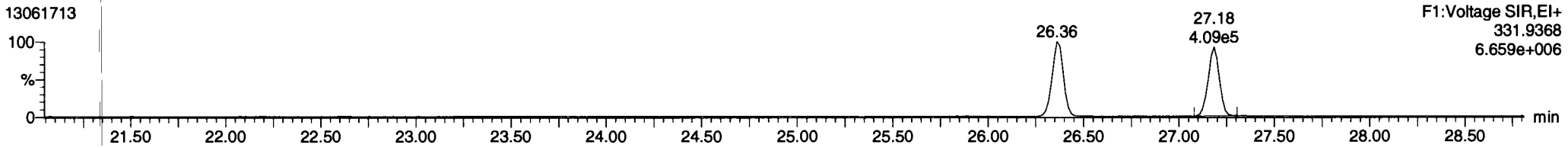


13C-123789-HxCDD



ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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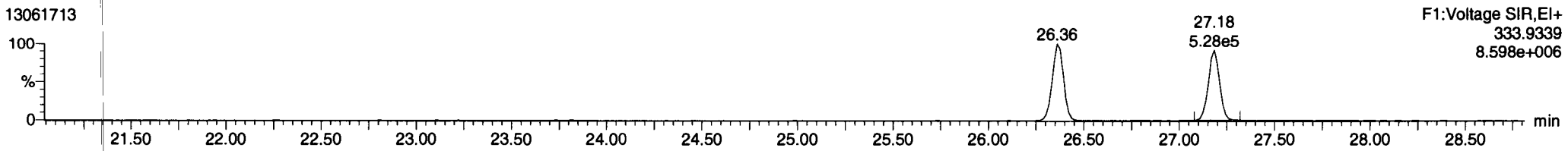
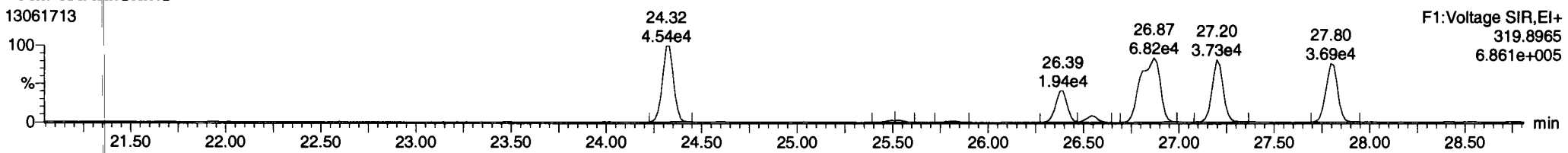
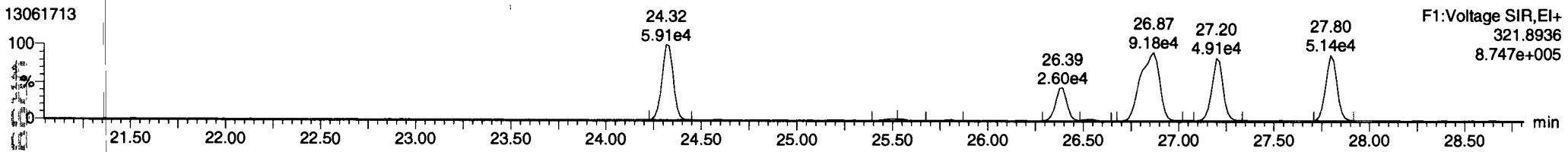


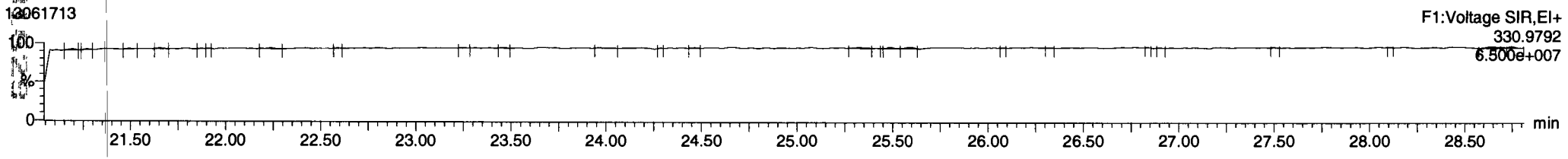
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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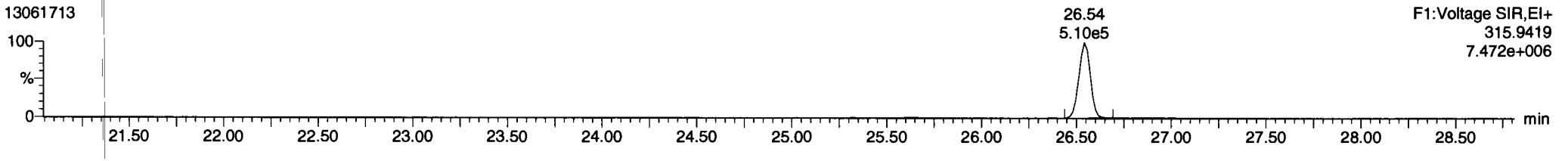
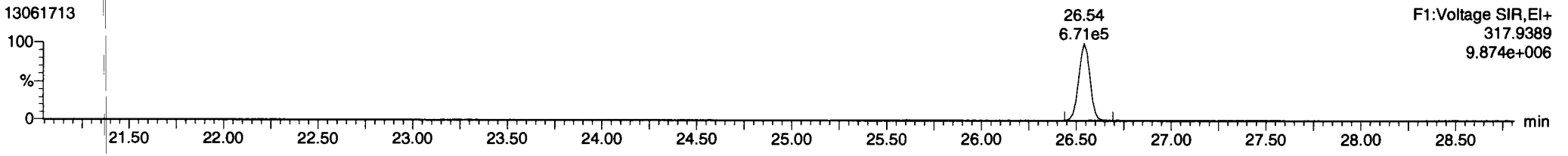
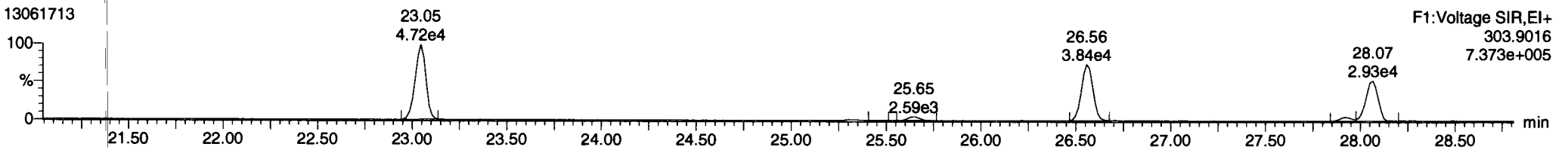
13C-2378-TCDF



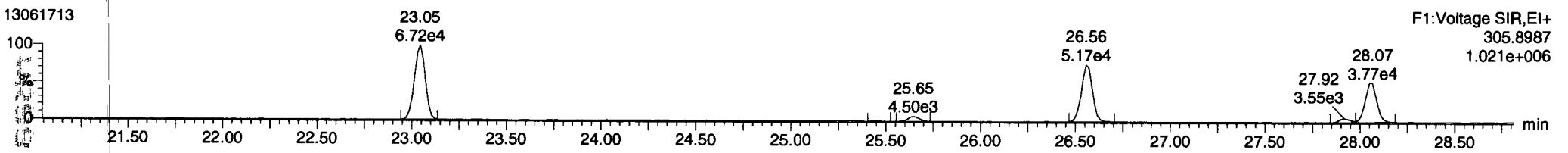
13C-2378-TCDF



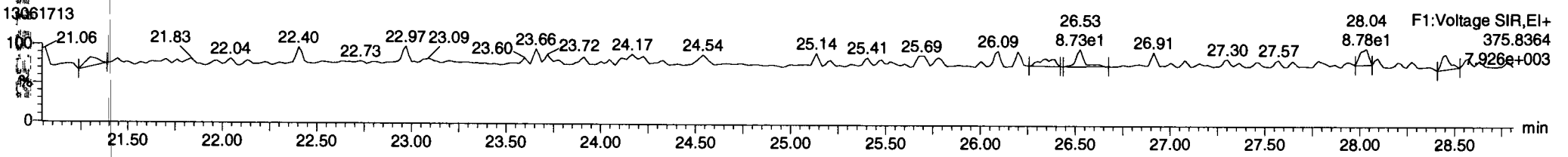
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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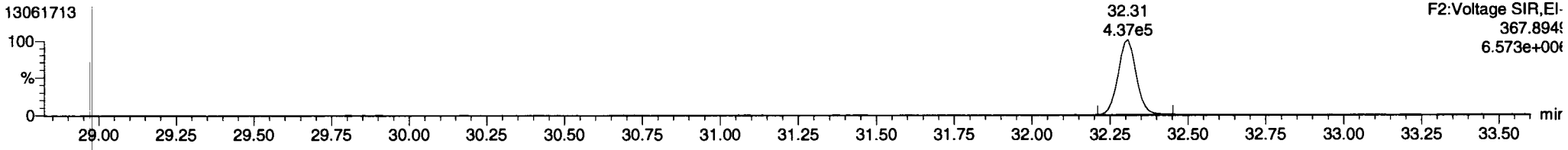
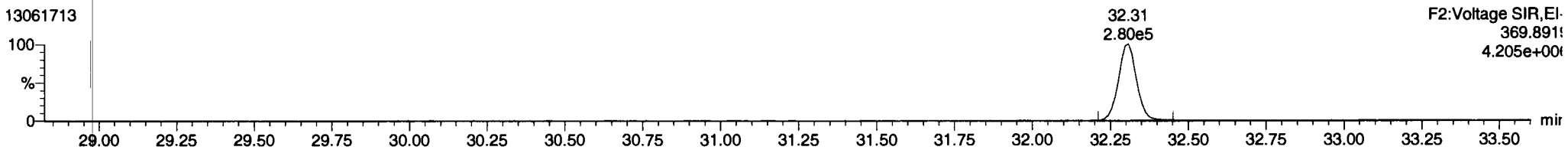
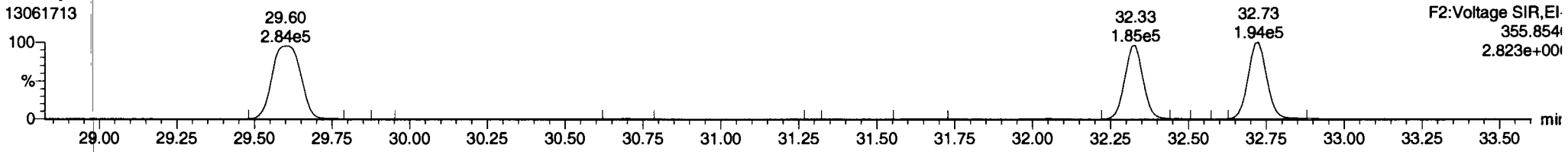
13C-12378-PeCDD



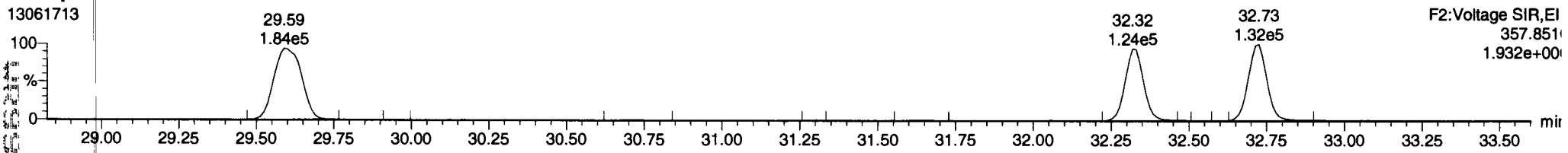
13C-12378-PeCDD



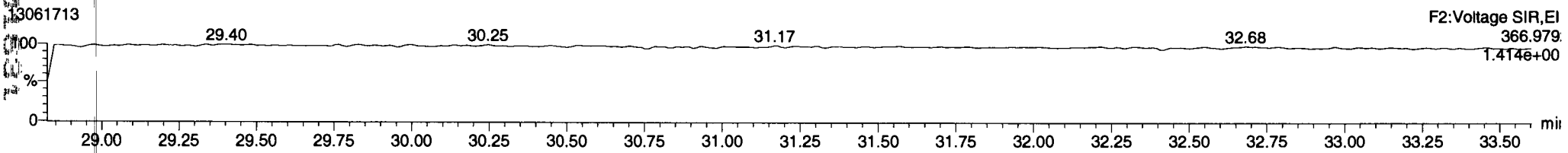
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
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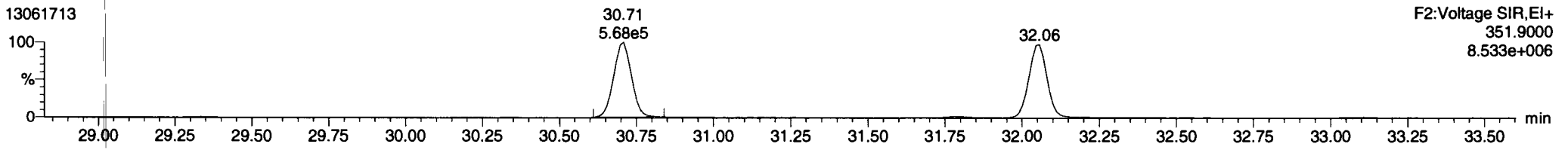
ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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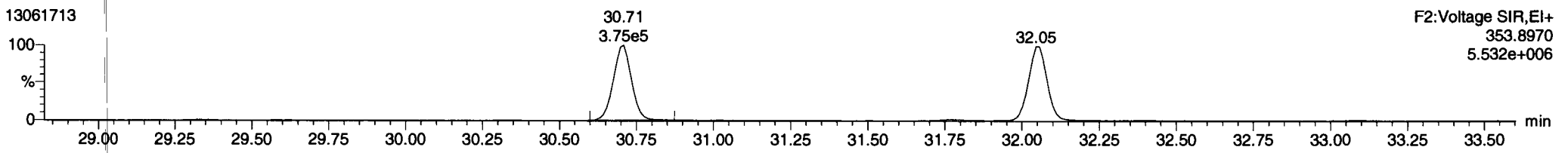
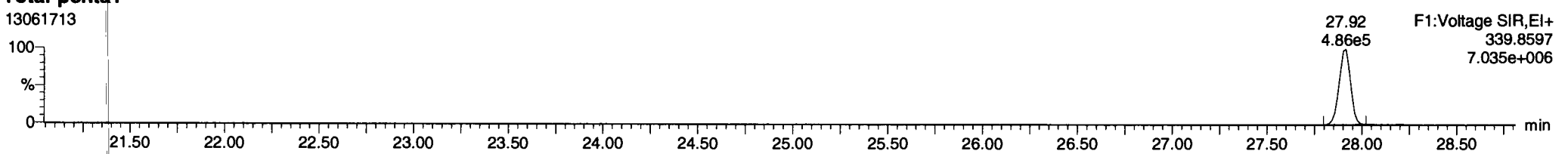
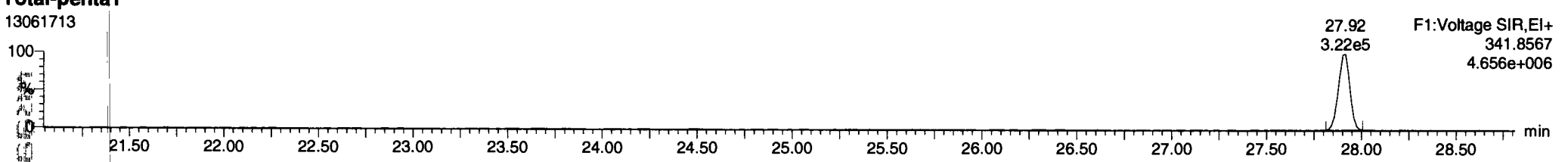


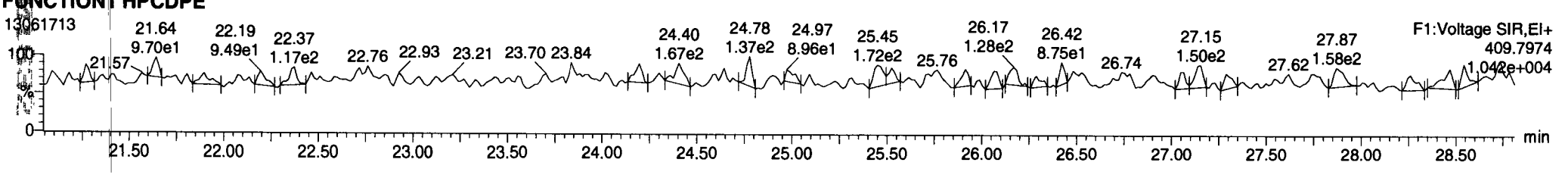
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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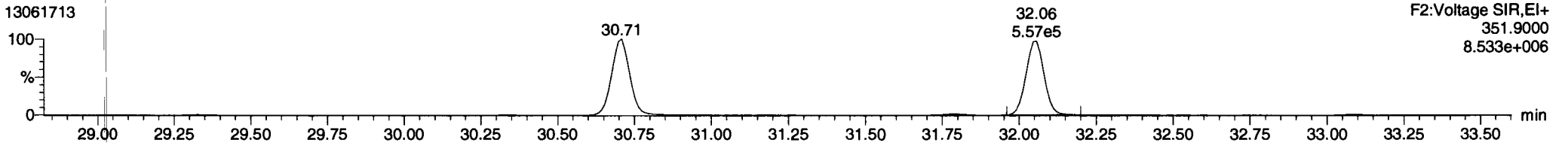
ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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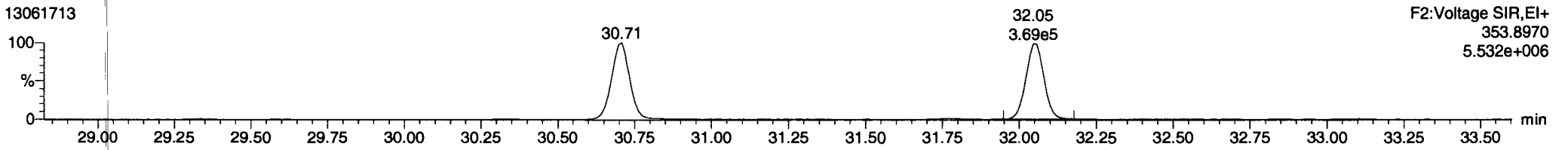
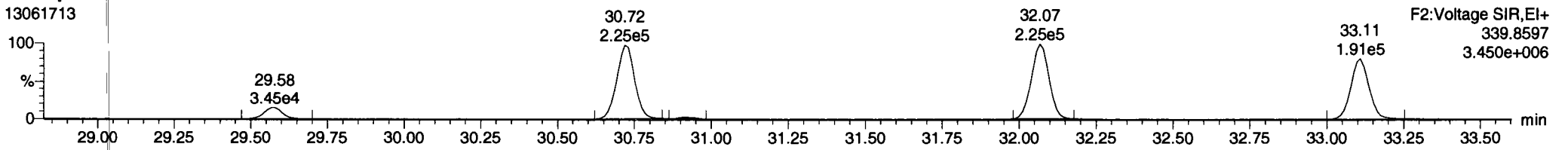
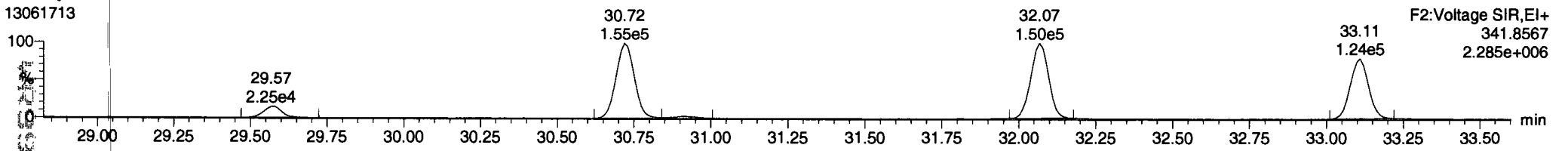


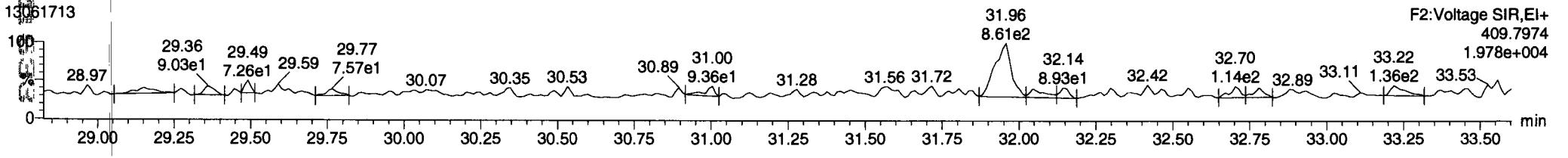
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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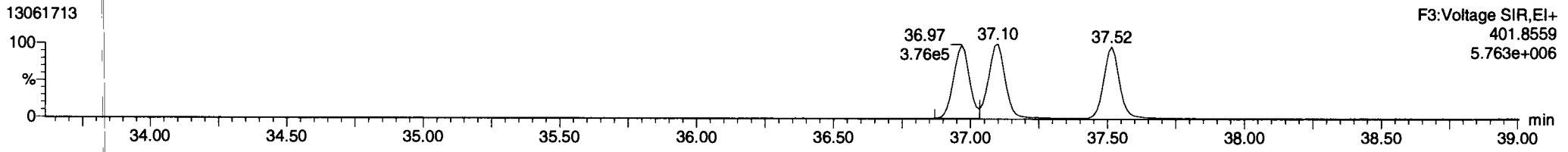
13C-123478-HxCDD



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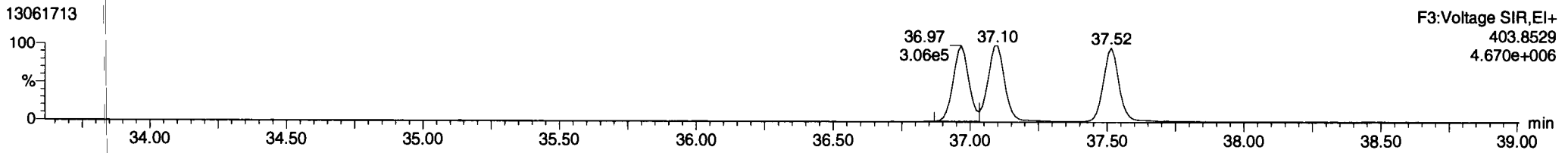
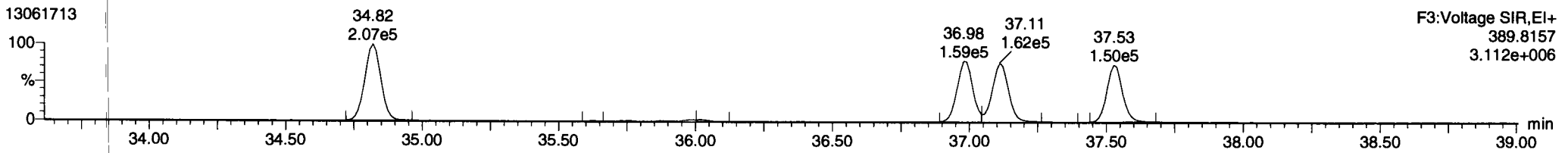
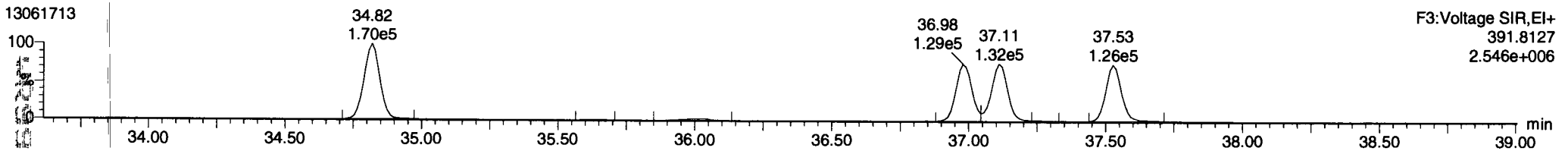


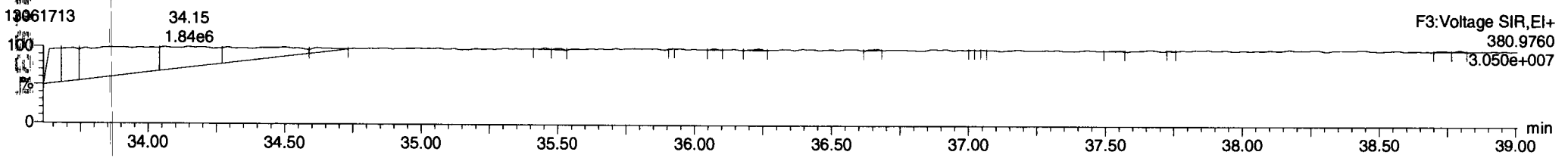
Total-hexadioxins



Total-hexadioxins



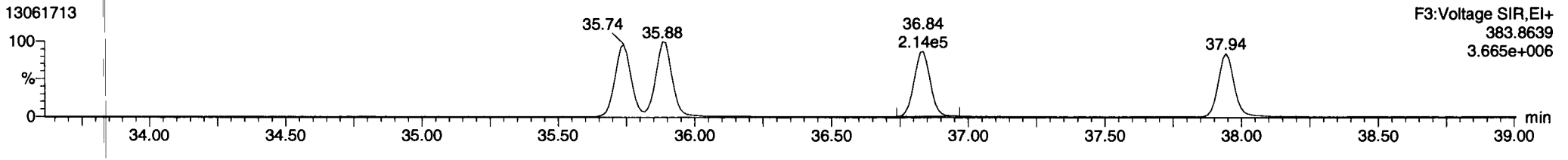
FUNCTION3 PFK



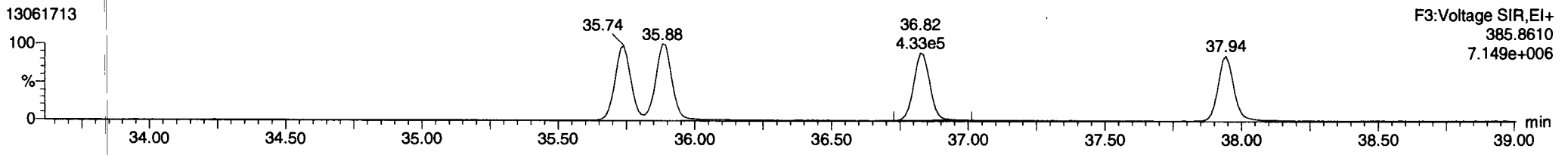
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:40:44 Pacific Daylight Time

ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

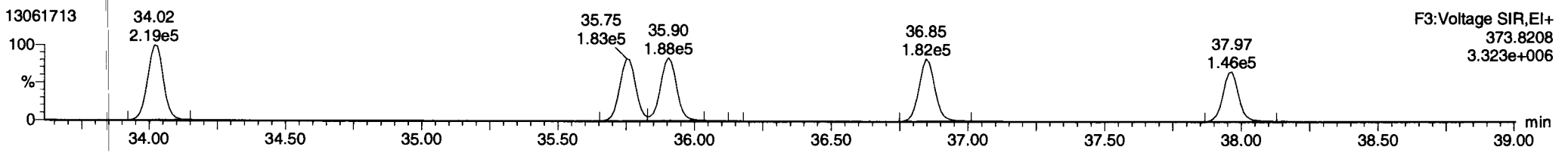
13C-234678-HxCDF



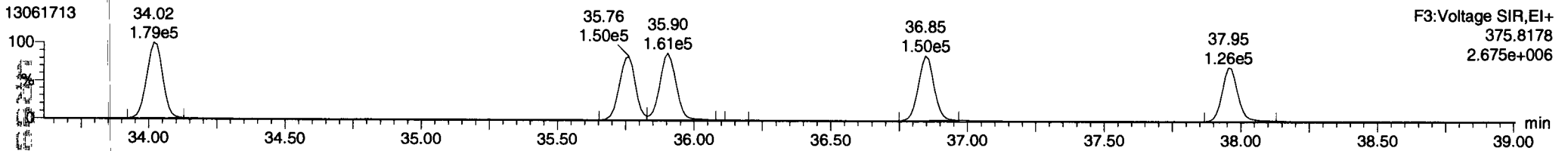
13C-234678-HxCDF



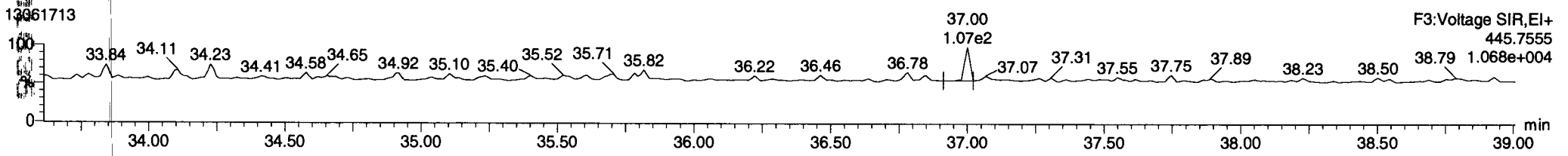
Total-hexafurans



Total-hexafurans



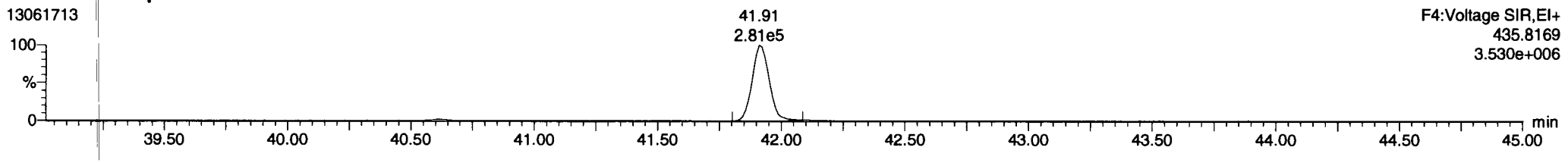
FUNCTION3 OCDPE



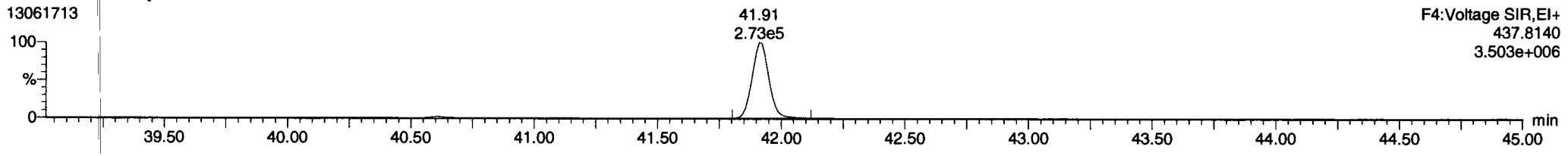
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:40:44 Pacific Daylight Time

ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

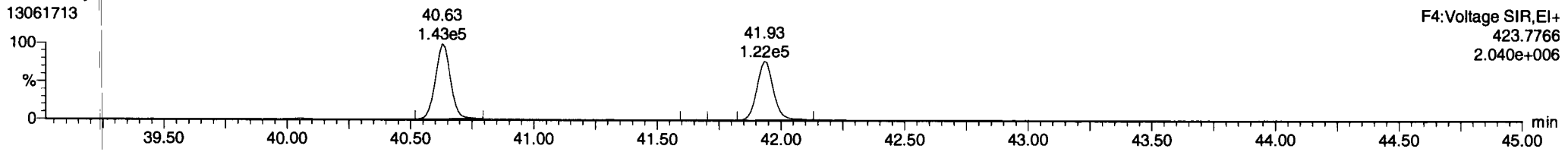
13C-1234678-HpCDD



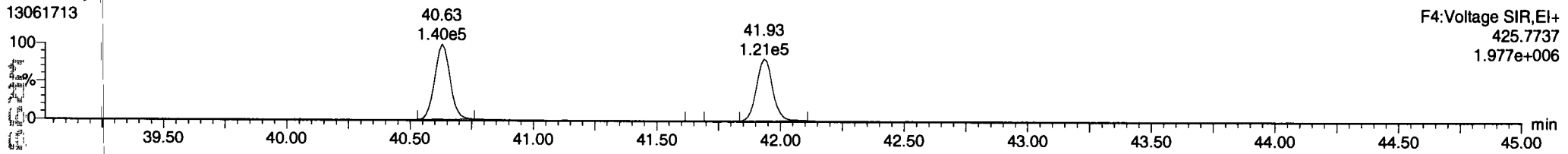
13C-1234678-HpCDD



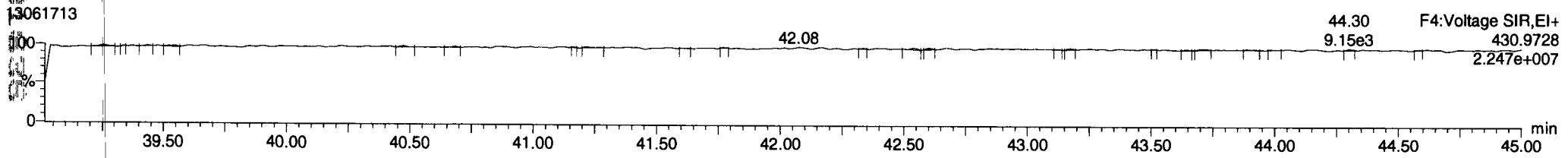
Total-heptadioxins



Total-heptadioxins



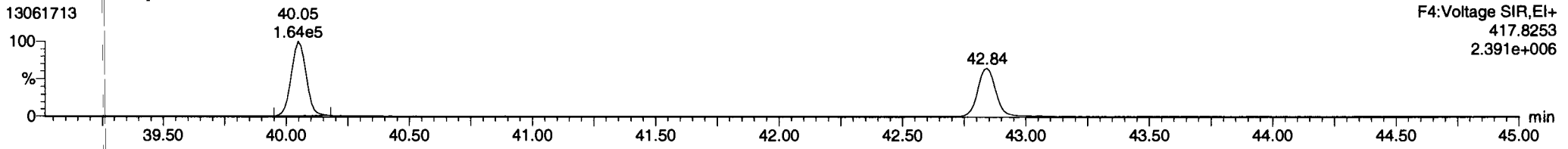
FUNCTION4 PFK



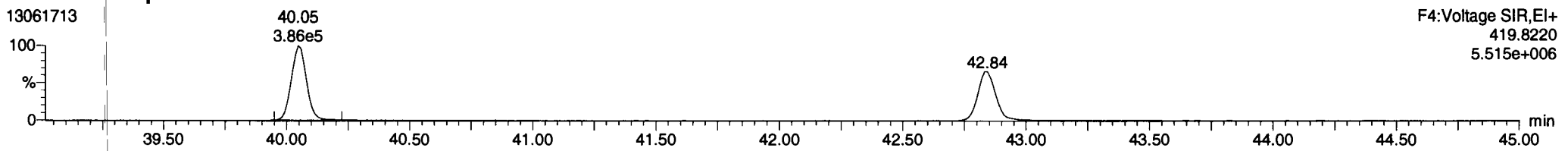
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:40:44 Pacific Daylight Time

ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

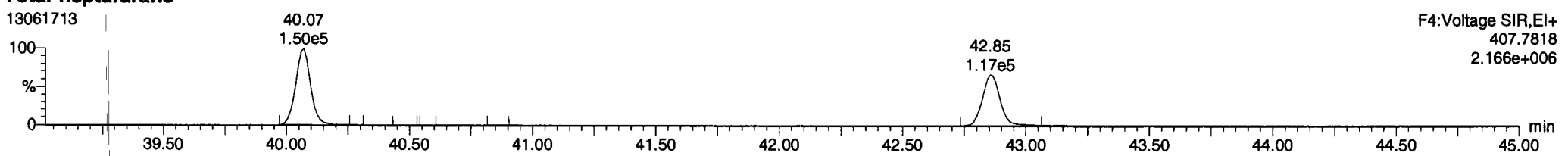
13C-1234678-HpCDF



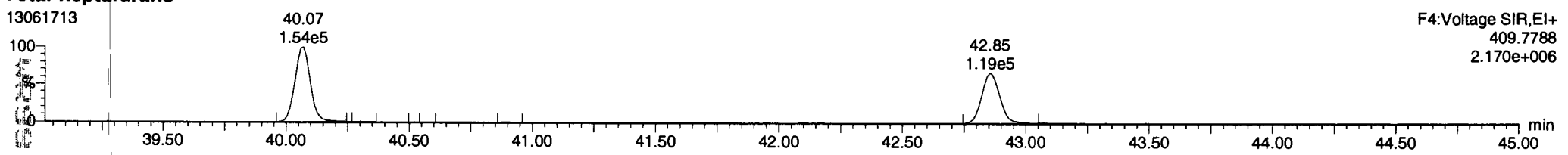
13C-1234678-HpCDF



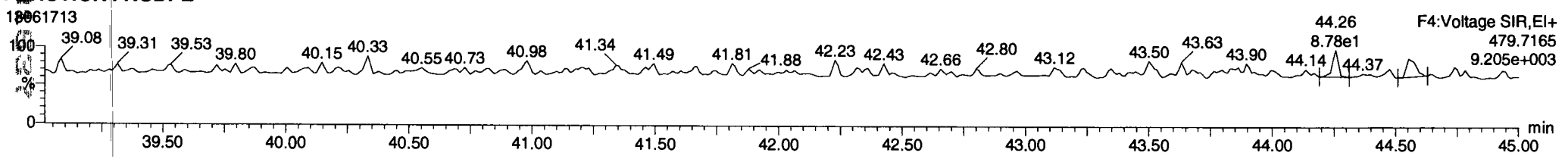
Total-heptafurans



Total-heptafurans



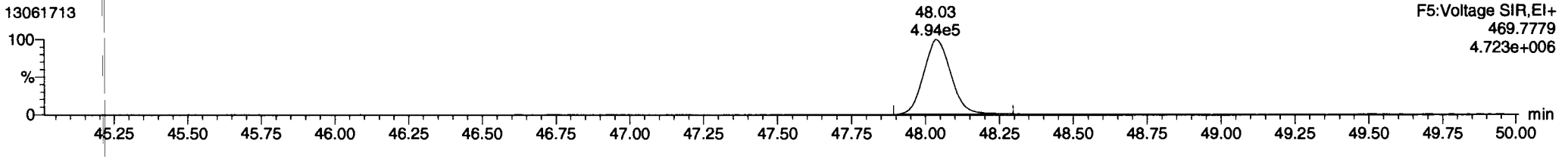
FUNCTION4 NCDPE



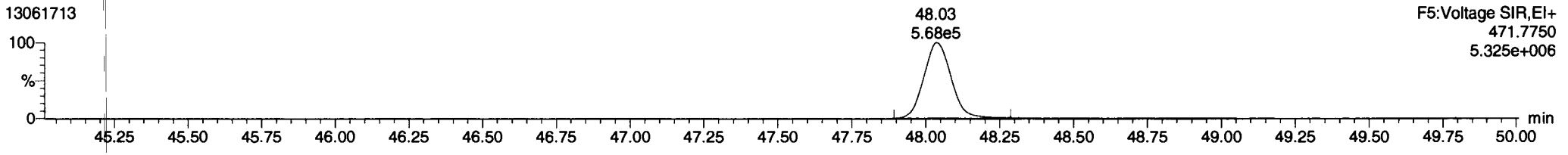
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:40:44 Pacific Daylight Time

ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

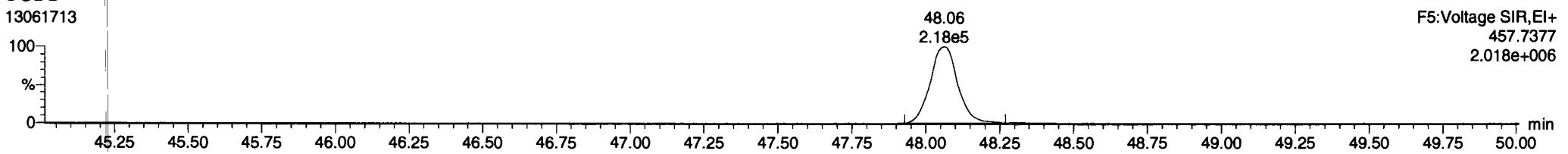
13C-OCDD



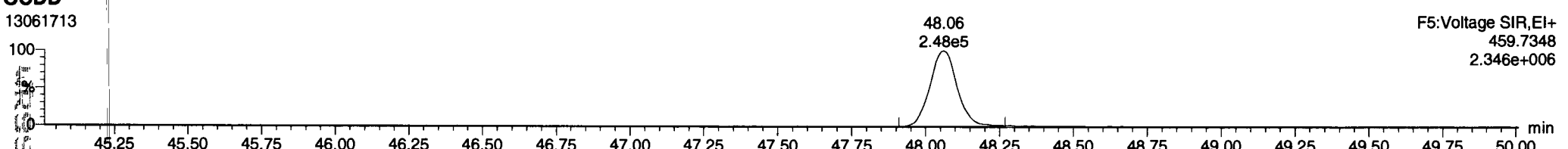
13C-OCDD



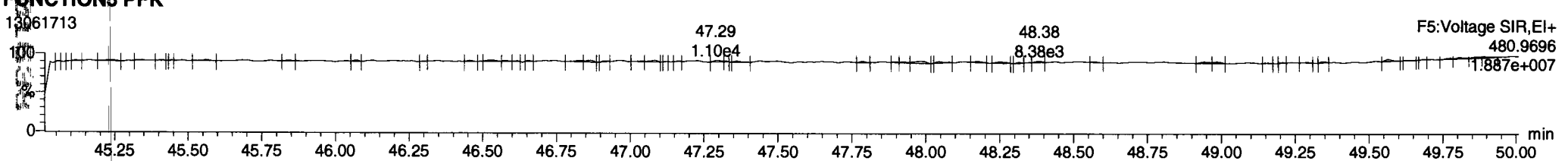
OCDD



OCDD



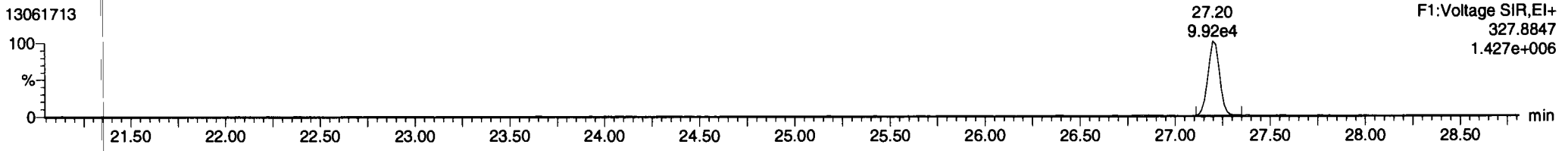
FUNCTION5 PFK



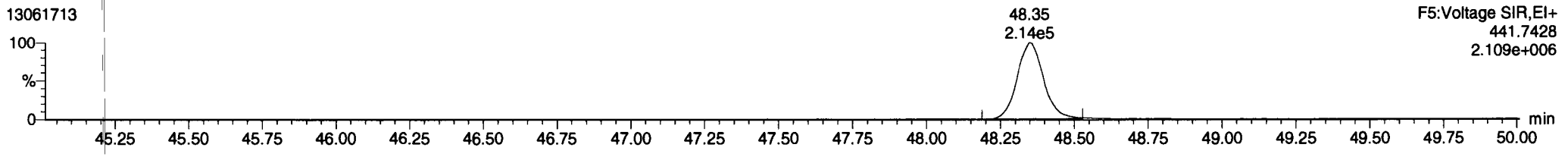
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:40:44 Pacific Daylight Time

ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

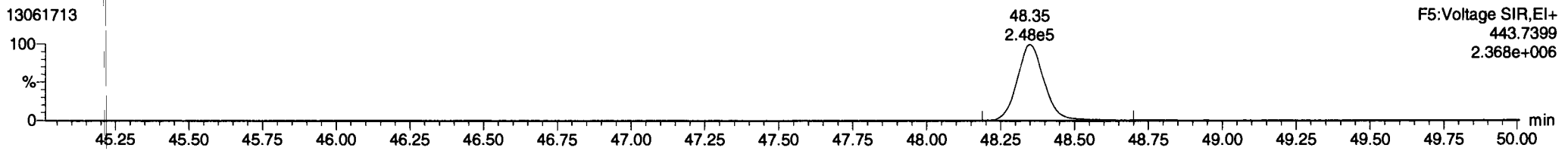
37CL-2378-TCDD



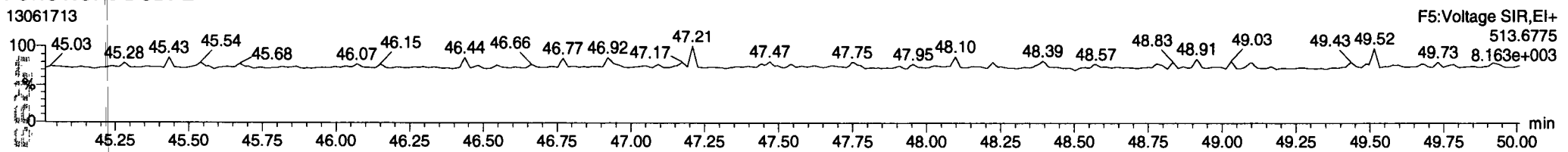
OCDF



OCDF



FUNCTION5 DCDPE



CS3 130618

ataset: P:\DIOXIN8290.PRO\130617DATA1.qld
ıst Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
inted: Tuesday, June 18, 2013 14:04:27 Pacific Daylight Time

Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	
Pre modification peak	Sample:13061704, Compound:PF, RT:32.101	1
Peak modified	Sample:13061704, Compound:PF, RT:32.101	1
Pre modification peak	Sample:13061704, Compound:HF, RT:35.773	1
Peak modified	Sample:13061704, Compound:HF, RT:35.773	1
Pre modification peak	Sample:13061704, Compound:HF, RT:36.858	1
Peak modified	Sample:13061704, Compound:HF, RT:36.858	1
Pre modification peak	Sample:13061704, Compound:HF, RT:36.880	1
Peak modified	Sample:13061704, Compound:HF, RT:36.880	1
Pre modification peak	Sample:13061704, Compound:HF, RT:35.916	1
Peak modified	Sample:13061704, Compound:HF, RT:35.916	1
Pre modification peak	Sample:13061704, Compound:HPF, RT:40.081	1
Peak modified	Sample:13061704, Compound:HPF, RT:40.081	1
Peak deleted	Sample:13061704, Compound:PD, RT:32.364	1
Peak deleted	Sample:13061704, Compound:PD, RT:32.342	1
Peak deleted	Sample:13061704, Compound:PD, RT:32.320	1
Peak added	Sample:13061704, Compound:PD, RT:32.364	1
Peak deleted	Sample:13061704, Compound:HD, RT:37.001	1
Peak deleted	Sample:13061704, Compound:HD, RT:37.001	1
Peak deleted	Sample:13061704, Compound:HD, RT:37.516	1
Peak deleted	Sample:13061704, Compound:HD, RT:37.538	1
Peak deleted	Sample:13061704, Compound:HD, RT:37.571	1
Pre modification peak	Sample:13061704, Compound:OD, RT:48.071	1
Peak modified	Sample:13061704, Compound:OD, RT:48.071	1
Peak deleted	Sample:13061704, Compound:TF, RT:23.105	1
Peak deleted	Sample:13061704, Compound:TF, RT:23.075	1
Peak deleted	Sample:13061704, Compound:TF, RT:26.392	1
Peak deleted	Sample:13061704, Compound:TF, RT:25.496	1
Peak deleted	Sample:13061704, Compound:PF, RT:31.816	1
Peak deleted	Sample:13061704, Compound:HF, RT:34.216	1
Peak deleted	Sample:13061704, Compound:TD, RT:27.363	1
Peak deleted	Sample:13061704, Compound:PD, RT:32.068	1
Pre modification peak	Sample:13061704, Compound:HPD, RT:40.640	1
Peak modified	Sample:13061704, Compound:HPD, RT:40.640	1
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	
Peak deleted	Sample:13061705, Compound:PP, RT:28.021	2
Peak deleted	Sample:13061705, Compound:HF, RT:34.041	2
Peak deleted	Sample:13061705, Compound:HF, RT:35.597	2
Peak deleted	Sample:13061705, Compound:HF, RT:36.387	2
Peak deleted	Sample:13061705, Compound:HF, RT:36.222	2
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	
Peak deleted	Sample:13061705, Compound:PD, RT:32.068	2
Peak deleted	Sample:13061705, Compound:PD, RT:31.651	2
Peak deleted	Sample:13061705, Compound:PD, RT:30.961	2
Peak deleted	Sample:13061705, Compound:PD, RT:32.616	2
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	
Pre modification peak	Sample:13061706, Compound:HF, RT:37.965	3
Peak modified	Sample:13061706, Compound:HF, RT:37.965	3
Pre modification peak	Sample:13061706, Compound:HPF, RT:42.886	3

Peak modified	Sample:13061706, Compound:HPF, RT:42.886	3
Pre modification peak	Sample:13061706, Compound:TF, RT:24.330	3
Peak modified	Sample:13061706, Compound:TF, RT:24.330	3
Pre modification peak	Sample:13061706, Compound:TF, RT:24.226	3
Peak modified	Sample:13061706, Compound:TF, RT:24.226	3
Pre modification peak	Sample:13061706, Compound:TF, RT:25.331	3
Peak modified	Sample:13061706, Compound:TF, RT:25.331	3
Pre modification peak	Sample:13061706, Compound:TF, RT:26.347	3
Peak modified	Sample:13061706, Compound:TF, RT:26.347	3
Pre modification peak	Sample:13061706, Compound:PF, RT:29.503	3
Peak modified	Sample:13061706, Compound:PF, RT:29.503	3
Peak deleted	Sample:13061706, Compound:PF, RT:31.049	3
Pre modification peak	Sample:13061706, Compound:TD, RT:26.840	3
Peak modified	Sample:13061706, Compound:TD, RT:26.840	3
Peak deleted	Sample:13061706, Compound:TD, RT:28.095	3
Pre modification peak	Sample:13061706, Compound:PD, RT:30.972	3
Peak modified	Sample:13061706, Compound:PD, RT:30.972	3
Pre modification peak	Sample:13061706, Compound:PD, RT:31.290	3
Peak modified	Sample:13061706, Compound:PD, RT:31.290	3
Peak deleted	Sample:13061706, Compound:PD, RT:32.770	3
Pre modification peak	Sample:13061706, Compound:HD, RT:36.047	3
Peak modified	Sample:13061706, Compound:HD, RT:36.047	3
Peak deleted	Sample:13061706, Compound:HPD, RT:40.869	3
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	
Pre modification peak	Sample:13061707, Compound:HF, RT:36.836	4
Peak modified	Sample:13061707, Compound:HF, RT:36.836	4
Pre modification peak	Sample:13061707, Compound:HF, RT:37.943	4
Peak modified	Sample:13061707, Compound:HF, RT:37.943	4
Pre modification peak	Sample:13061707, Compound:HPF, RT:42.886	4
Peak modified	Sample:13061707, Compound:HPF, RT:42.886	4
Pre modification peak	Sample:13061707, Compound:HPF, RT:42.875	4
Peak modified	Sample:13061707, Compound:HPF, RT:42.875	4
Pre modification peak	Sample:13061707, Compound:PD, RT:32.342	4
Peak modified	Sample:13061707, Compound:PD, RT:32.342	4
Pre modification peak	Sample:13061707, Compound:HD, RT:36.989	4
Peak modified	Sample:13061707, Compound:HD, RT:36.989	4
Peak deleted	Sample:13061707, Compound:TF, RT:23.314	4
Peak deleted	Sample:13061707, Compound:TF, RT:24.420	4
Peak deleted	Sample:13061707, Compound:TF, RT:25.316	4
Peak deleted	Sample:13061707, Compound:PF, RT:30.106	4
Pre modification peak	Sample:13061707, Compound:PF, RT:30.358	4
Peak modified	Sample:13061707, Compound:PF, RT:30.358	4
Pre modification peak	Sample:13061707, Compound:PF, RT:32.090	4
Peak modified	Sample:13061707, Compound:PF, RT:32.090	4
Peak modified	Sample:13061707, Compound:PF, RT:32.090	4
Peak deleted	Sample:13061707, Compound:PF, RT:33.109	4
Pre modification peak	Sample:13061707, Compound:HF, RT:34.008	4
Peak modified	Sample:13061707, Compound:HF, RT:34.008	4
Peak added	Sample:13061707, Compound:HF, RT:34.052	4
Peak added	Sample:13061707, Compound:HF, RT:34.041	4
Pre modification peak	Sample:13061707, Compound:HF, RT:36.825	4
Peak modified	Sample:13061707, Compound:HF, RT:36.825	4
Peak deleted	Sample:13061707, Compound:TD, RT:24.764	4

Dantity Audit Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 14:04:27 Pacific Daylight Time

Peak deleted	Sample:13061707, Compound:TD, RT:24.898	4
Peak deleted	Sample:13061707, Compound:PD, RT:31.662	4
Pre modification peak	Sample:13061707, Compound:PD, RT:32.090	4
Peak modified	Sample:13061707, Compound:PD, RT:32.090	4
Pre modification peak	Sample:13061707, Compound:HD, RT:36.036	4
Peak modified	Sample:13061707, Compound:HD, RT:36.036	4
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	
Pre modification peak	Sample:13061708, Compound:PF, RT:30.708	5
Peak modified	Sample:13061708, Compound:PF, RT:30.708	5
Pre modification peak	Sample:13061708, Compound:HF, RT:35.751	5
Peak modified	Sample:13061708, Compound:HF, RT:35.751	5
Pre modification peak	Sample:13061708, Compound:HF, RT:35.773	5
Peak modified	Sample:13061708, Compound:HF, RT:35.773	5
Peak added	Sample:13061708, Compound:OF, RT:48.358	5
Peak added	Sample:13061708, Compound:OF, RT:48.403	5
Pre modification peak	Sample:13061708, Compound:OF, RT:48.403	5
Peak modified	Sample:13061708, Compound:OF, RT:48.403	5
Pre modification peak	Sample:13061708, Compound:OF, RT:48.403	5
Peak modified	Sample:13061708, Compound:OF, RT:48.403	5
Pre modification peak	Sample:13061708, Compound:PD, RT:32.353	5
Peak modified	Sample:13061708, Compound:PD, RT:32.353	5
Pre modification peak	Sample:13061708, Compound:PD, RT:32.353	5
Peak modified	Sample:13061708, Compound:PD, RT:32.353	5
Peak added	Sample:13061708, Compound:HD, RT:37.001	5
Peak added	Sample:13061708, Compound:HD, RT:36.990	5
Peak deleted	Sample:13061708, Compound:HD, RT:37.001	5
Peak deleted	Sample:13061708, Compound:HD, RT:36.990	5
Peak deleted	Sample:13061708, Compound:TF, RT:23.045	5
Peak deleted	Sample:13061708, Compound:TF, RT:24.838	5
Peak deleted	Sample:13061708, Compound:TF, RT:24.584	5
Peak deleted	Sample:13061708, Compound:TF, RT:24.300	5
Peak deleted	Sample:13061708, Compound:TF, RT:25.376	5
Peak deleted	Sample:13061708, Compound:TF, RT:25.451	5
Peak deleted	Sample:13061708, Compound:TF, RT:25.495	5
Peak deleted	Sample:13061708, Compound:TF, RT:25.675	5
Peak deleted	Sample:13061708, Compound:TF, RT:25.899	5
Peak deleted	Sample:13061708, Compound:TF, RT:26.825	5
Peak deleted	Sample:13061708, Compound:PF, RT:30.961	5
Peak deleted	Sample:13061708, Compound:PF, RT:32.123	5
Pre modification peak	Sample:13061708, Compound:HF, RT:35.093	5
Peak modified	Sample:13061708, Compound:HF, RT:35.093	5
Peak added	Sample:13061708, Compound:HF, RT:35.115	5
Peak added	Sample:13061708, Compound:HF, RT:35.137	5
Peak deleted	Sample:13061708, Compound:TD, RT:26.123	5
Peak deleted	Sample:13061708, Compound:TD, RT:25.824	5
Peak deleted	Sample:13061708, Compound:TD, RT:25.181	5
Peak deleted	Sample:13061708, Compound:TD, RT:26.885	5
Peak deleted	Sample:13061708, Compound:TD, RT:26.840	5
Peak deleted	Sample:13061708, Compound:PD, RT:31.103	5
Peak deleted	Sample:13061708, Compound:PD, RT:31.059	5
Peak deleted	Sample:13061708, Compound:HD, RT:36.146	5
Pre modification peak	Sample:13061708, Compound:HD, RT:36.025	5
Peak modified	Sample:13061708, Compound:HD, RT:36.025	5

ataset: P:\DIOXIN8290.PRO\130617DATA1.qld
ast Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
rinted: Tuesday, June 18, 2013 14:04:27 Pacific Daylight Time

Pre modification peak	Sample:13061708, Compound:HD, RT:35.992	5
Peak modified	Sample:13061708, Compound:HD, RT:35.992	5
Pre modification peak	Sample:13061708, Compound:HD, RT:35.904	5
Peak modified	Sample:13061708, Compound:HD, RT:35.904	5
Pre modification peak	Sample:13061708, Compound:HD, RT:36.036	5
Peak modified	Sample:13061708, Compound:HD, RT:36.036	5
Pre modification peak	Sample:13061708, Compound:HD, RT:35.981	5
Peak modified	Sample:13061708, Compound:HD, RT:35.981	5
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	
Peak deleted	Sample:13061709, Compound:PF, RT:30.939	6
Peak deleted	Sample:13061709, Compound:PF, RT:30.928	6
Peak added	Sample:13061709, Compound:PF, RT:30.719	6
Peak added	Sample:13061709, Compound:PF, RT:30.741	6
Peak added	Sample:13061709, Compound:13C-123789-HxCDD, RT:37.647	6
Peak added	Sample:13061709, Compound:13C-123789-HxCDD, RT:37.647	6
Peak added	Sample:13061709, Compound:13C-123789-HxCDD, RT:37.647	6
Peak added	Sample:13061709, Compound:13C-123789-HxCDD, RT:37.647	6
Pre modification peak	Sample:13061709, Compound:TF, RT:24.031	6
Peak modified	Sample:13061709, Compound:TF, RT:24.031	6
Pre modification peak	Sample:13061709, Compound:TF, RT:28.035	6
Peak modified	Sample:13061709, Compound:TF, RT:28.035	6
Pre modification peak	Sample:13061709, Compound:TF, RT:28.005	6
Peak modified	Sample:13061709, Compound:TF, RT:28.005	6
Pre modification peak	Sample:13061709, Compound:TF, RT:24.808	6
Peak modified	Sample:13061709, Compound:TF, RT:24.808	6
Pre modification peak	Sample:13061709, Compound:PF, RT:29.459	6
Peak modified	Sample:13061709, Compound:PF, RT:29.459	6
Peak added	Sample:13061709, Compound:PF, RT:30.939	6
Peak added	Sample:13061709, Compound:PF, RT:30.928	6
Pre modification peak	Sample:13061709, Compound:PF, RT:30.928	6
Peak modified	Sample:13061709, Compound:PF, RT:30.928	6
Peak deleted	Sample:13061709, Compound:PF, RT:30.456	6
Peak deleted	Sample:13061709, Compound:PF, RT:30.160	6
Pre modification peak	Sample:13061709, Compound:PF, RT:30.379	6
Peak modified	Sample:13061709, Compound:PF, RT:30.379	6
Pre modification peak	Sample:13061709, Compound:PF, RT:30.368	6
Peak modified	Sample:13061709, Compound:PF, RT:30.368	6
Pre modification peak	Sample:13061709, Compound:TD, RT:26.825	6
Peak modified	Sample:13061709, Compound:TD, RT:26.825	6
Pre modification peak	Sample:13061709, Compound:PD, RT:29.656	6
Peak modified	Sample:13061709, Compound:PD, RT:29.656	6
Pre modification peak	Sample:13061709, Compound:PD, RT:31.256	6
Peak modified	Sample:13061709, Compound:PD, RT:31.256	6
Pre modification peak	Sample:13061709, Compound:PD, RT:31.651	6
Peak modified	Sample:13061709, Compound:PD, RT:31.651	6
Peak deleted	Sample:13061709, Compound:PD, RT:32.079	6
Pre modification peak	Sample:13061709, Compound:HD, RT:36.112	6
Peak modified	Sample:13061709, Compound:HD, RT:36.112	6
Peak deleted	Sample:13061709, Compound:HD, RT:36.847	6
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	
Peak deleted	Sample:13061710, Compound:TF, RT:25.077	7
Pre modification peak	Sample:13061710, Compound:TF, RT:26.332	7
Peak modified	Sample:13061710, Compound:TF, RT:26.332	7

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 14:04:27 Pacific Daylight Time

Peak deleted	Sample:13061710, Compound:TF, RT:26.213	7
Peak deleted	Sample:13061710, Compound:PF, RT:29.788	7
Peak deleted	Sample:13061710, Compound:PF, RT:29.952	7
Pre modification peak	Sample:13061710, Compound:PF, RT:30.160	7
Peak modified	Sample:13061710, Compound:PF, RT:30.160	7
Peak deleted	Sample:13061710, Compound:PF, RT:31.563	7
Peak deleted	Sample:13061710, Compound:HF, RT:34.523	7
Peak deleted	Sample:13061710, Compound:HPF, RT:41.089	7
Peak deleted	Sample:13061710, Compound:TD, RT:26.078	7
Pre modification peak	Sample:13061710, Compound:PD, RT:29.645	7
Peak modified	Sample:13061710, Compound:PD, RT:29.645	7
Peak deleted	Sample:13061710, Compound:HD, RT:35.027	7
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	
Pre modification peak	Sample:13061711, Compound:PF, RT:30.698	8
Peak modified	Sample:13061711, Compound:PF, RT:30.698	8
Pre modification peak	Sample:13061711, Compound:PF, RT:32.057	8
Peak modified	Sample:13061711, Compound:PF, RT:32.057	8
Pre modification peak	Sample:13061711, Compound:HF, RT:36.826	8
Peak modified	Sample:13061711, Compound:HF, RT:36.826	8
Peak deleted	Sample:13061711, Compound:PD, RT:32.331	8
Peak deleted	Sample:13061711, Compound:PD, RT:32.342	8
Pre modification peak	Sample:13061711, Compound:HD, RT:36.990	8
Peak modified	Sample:13061711, Compound:HD, RT:36.990	8
Pre modification peak	Sample:13061711, Compound:TF, RT:23.314	8
Peak modified	Sample:13061711, Compound:TF, RT:23.314	8
Peak deleted	Sample:13061711, Compound:TF, RT:23.075	8
Peak deleted	Sample:13061711, Compound:TF, RT:23.030	8
Pre modification peak	Sample:13061711, Compound:TF, RT:24.031	8
Peak modified	Sample:13061711, Compound:TF, RT:24.031	8
Peak deleted	Sample:13061711, Compound:TF, RT:25.301	8
Pre modification peak	Sample:13061711, Compound:TF, RT:25.645	8
Peak modified	Sample:13061711, Compound:TF, RT:25.645	8
Pre modification peak	Sample:13061711, Compound:TF, RT:26.317	8
Peak modified	Sample:13061711, Compound:TF, RT:26.317	8
Pre modification peak	Sample:13061711, Compound:PF, RT:29.646	8
Peak modified	Sample:13061711, Compound:PF, RT:29.646	8
Peak deleted	Sample:13061711, Compound:PF, RT:29.942	8
Peak deleted	Sample:13061711, Compound:PF, RT:30.161	8
Pre modification peak	Sample:13061711, Compound:PF, RT:30.413	8
Peak modified	Sample:13061711, Compound:PF, RT:30.413	8
Pre modification peak	Sample:13061711, Compound:PF, RT:30.906	8
Peak modified	Sample:13061711, Compound:PF, RT:30.906	8
Peak deleted	Sample:13061711, Compound:TD, RT:27.348	8
Peak deleted	Sample:13061711, Compound:PD, RT:30.117	8
Pre modification peak	Sample:13061711, Compound:PD, RT:31.257	8
Peak modified	Sample:13061711, Compound:PD, RT:31.257	8
Pre modification peak	Sample:13061711, Compound:HD, RT:36.025	8
Peak modified	Sample:13061711, Compound:HD, RT:36.025	8
Peak deleted	Sample:13061711, Compound:HD, RT:36.146	8
Peak modified	Sample:13061711, Compound:HD, RT:36.025	8
Pre modification peak	Sample:13061711, Compound:HD, RT:36.003	8
Peak modified	Sample:13061711, Compound:HD, RT:36.003	8
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	

ıantity Audit Report MassLynx 4.1 SCN 714
ıtaset: P:\DIOXIN8290.PRO\130617DATA1.qld
ıst Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
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Pre modification peak	Sample:13061712, Compound:HF, RT:35.772	9
Peak modified	Sample:13061712, Compound:HF, RT:35.772	9
Peak deleted	Sample:13061712, Compound:PF, RT:29.404	9
Pre modification peak	Sample:13061712, Compound:PF, RT:29.634	9
Peak modified	Sample:13061712, Compound:PF, RT:29.634	9
Pre modification peak	Sample:13061712, Compound:HF, RT:34.030	9
Peak modified	Sample:13061712, Compound:HF, RT:34.030	9
Peak deleted	Sample:13061712, Compound:TD, RT:24.808	9
Peak deleted	Sample:13061712, Compound:PD, RT:29.590	9
Pre modification peak	Sample:13061712, Compound:PD, RT:32.035	9
Peak modified	Sample:13061712, Compound:PD, RT:32.035	9
Pre modification peak	Sample:13061712, Compound:PD, RT:32.046	9
Peak modified	Sample:13061712, Compound:PD, RT:32.046	9
Peak deleted	Sample:13061712, Compound:PD, RT:32.046	9
Peak deleted	Sample:13061712, Compound:HD, RT:37.285	9
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130617DATA1.qld'	

Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WR99, WS01

Incorporated
Analytical Chemists and Consultants

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)
In-House (0.05-0.1ppb)

Preparation Test Pest # 1(PESWSI)
ARI Job No(s) WR99 Page 1 of 1 Batch set up by: ~~JH~~

Bottle #	ARI Sample I.D.	Volume Extracted	(Opt) Sulfur Clean 4.5mL+0.5mL (5mL) Ethyl Acetate 1 2 3	(Opt) Silica Gel Clean (1:5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID
	WR99 MBW	500mL	(5mL) Y / (N)	(1:5) Y / (N)	5mL	1mL		WW 6/5/13 Analyst/Date
	SBW	500mL	(5mL) Y / (N)	(1:5) Y / (N)	5mL	1mL		Verify pH is (5-9)
	SBW Dup.	500mL	(5mL) Y / (N)	(1:5) Y / (N)	5mL	1mL		M 6/5/13 Analyst/Date
	~~QLS~~	~~500mL~~	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
6	WR99 A	500mL	(5mL) Y / (N)	(1:5) Y / (N)	5mL	1mL		KD 80-85°C / Hexane Exchange (2 X 20mL) 100°C (1) 2 3 4 5 6
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		RR 6/10/13 Analyst/Date
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1 2 3 Pre-Cleanups (4mL=10mL Hexane Exchange)
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		SP 6/11/13 Analyst/Date
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1 2 3 Post Cleanups
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		N/A
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL	SP Reviewed 6/11/13	
Analyst/Date		M 6/5/13			SP 6/11/13	SP 6/11/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (B***15)	2µg/mL	100µL	4/30/14	M	WW
Spike	3 (2***-2)	0.5/1/5µg/mL	200µL	12/16/13	M	WW
~~QLS Spike~~	~~10 ( )~~	~~0.25-2.5µg/mL~~	~~50µL~~			
Extraction Time:	13 2h					

SPECIAL INSTRUCTIONS: 1. Verify pH is 5-9 2. Adjust pH (if necessary=Analyst Notes). 3. Add Surr/Spike. 4. Extract 3X with 30mL DCM. 5. KD (NO Drying Column) at 80°. 6. Exchange (2 X with 20mL) Hexane at 100°. 7. TurboVap to 4mL=10mL Hexane Exchange. 8. TurboVap. 9. Clean-ups? 10. TurboVap (if Silica Clean). 11. Vial with Hexane.

A. Archive Y (N)

WR99 : 61547

Reagent and Solutions Identification

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WR99

(8081B) Pest Aqueous:	Analyst/Date
Separatory Funnel Station: Methylene Chloride: (I# 8270) Anhydrous Sodium Sulfate: (I#8150 + jar date 6/3/13)	Sep. Funnel AL 6/5/13
KD Station: Methylene Chloride: (I#8270) Hexane: (I#8269)	KD RR 6/6/13
Vialing Station: Hexane: (I# 8269) Ethyl Acetate: (I# N/A) Tetrabutylammonium hydrogensulfate (TBAS): (H# N/A) Sodium Sulfite: (I# N/A) Silica Gel (SPE) Darts: (I# N/A)	Vialing SP 6/11/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WR99 Client ID: SAIC

Parameter: Pest Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☒ Turbid/Color= A-Yellow	mm 6/5/13
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☒ Other (Details)= Sample recieved in 1L bottles for SGinL extraction, Pre Rinse	mm 6/5/13
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

WR99 : 6/5/13

Incorporated
Analytical Chemists and Consultants

(8081B) Pest PSDDA – Soil (Sed)
Microwave (3546) (SOP # 3304S)

Preparation Test Pest # 5 (PESSDMP)
PSDDA (1-2ppb)

ARI Job No(s) WR99, W521 Page 1 of 1 Batch set up by: JH

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5 dry wt)	(REQ) Sulfur Clean 2mL+0.5mL Ethyl Acetate 1 2 (3) very high sulfur	(REQ) Silica Gel Clean (1:2.5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID
	WR99 MBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	YL 06/10/13 Analyst/Date
	↓ SBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 (2) 3 CT 06-10-13
	~~SBS Dup.~~	~~12.5g~~	~~2.5mL~~	~~(1:2.5) 1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	Analyst/Date
	WR99 QLS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	KD 100°C Hexane Exchange (2 X 20mL) 1 (2) 3 4 5 6 YL/TH 06/11/13 Analyst/Date
8	D	17.02	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
8	DMS	17.04	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
8	DMSd	17.03	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
3	E	5.03	2.5mL	(1:2.5) 1mL	2.5mL	1mL	See Analyst Notes	TurboVap 1 (2) 3 Pre-Cleanups WW 6/11/13
3	↓ F	2.53	2.5mL	(1:2.5) 1mL	2.5mL	1mL	↓	
8	W521 A	16.02	2.5mL	(1:2.5) 1mL	2.5mL	1mL		Analyst/Date
			~~2.5mL~~	~~(1:2.5) 1mL~~	~~2.5mL~~	~~1mL~~		
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 (2) 3 Post Cleanups WW 6/12/13
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			~~2.5mL~~	~~(1:2.5) 1mL~~	2.5mL	1mL		
Analyst/Date YL 06/10/13			WW 6/11/13	WW 6/12/13	WW 6/11/13	WW 6/12/13	Reviewed By WW 6/12/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (B060151)	2µg/mL	50µL	4/30/14	CT	AC
Spike	3 (2060792)	0.5/1/5µg/mL	100µL	12/10/13	CT	AC
QLS Spike	10 (B060567)	0.25-2.5µg/mL	25µL	12/10/13	CT	AC
Extraction Time: 1:25			Balance ID: B146426 14			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing neutral glasswool. 8. Rinse with Hexane 9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (Small ~~orange~~ drying column) to 5mL at 100°C. 12. Exchange to Hexane (2 X with 20mL). 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial in Hexane.

A. Need Total Solids Y (N) B. Archive/Freeze Y (N)

WR99 : 01556

Reagent and Solutions Identification

(8081B) Pest PSDDA – Soil/Sed)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WR99, W521

(8081B) Pest PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Anhydrous Sodium Sulfate: (I# 8134 + jar date 5-24-13)	CT 06-10-13
Neutral Glasswool: (I# 7998 + jar date 4-15-13)	
1:1 Hexane/Acetone: (H# 194)	
80:20 Hexane/Acetone: (H# 177)	
Hexane: (I# 8269)	KD
KD Station:	YC / TH
Hexane: (I# 8269)	06/11/13
Anhydrous Sodium Sulfate: (I# 8136 + jar date 5/24/13)	
Neutral Glasswool: (I# 7998 + jar date 4/15/13)	Vialing
Vialing Station:	VW
Hexane: (I# 8269)	6/12/13
Ethyl Acetate: (I# 6879)	
Tetrabutylammonium hydrogensulfate (TBAS): (H# 165)	
Sodium Sulfite: (I# 7784)	
Silica Gel (SPE) Darts: (I# 8127)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WR99 Client ID: SAIC

Parameter: Pest PSDDA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A, B, C	YL 05/31/13
☒ Standing Water Decanted (Not shared)= A, B,	YL 05/31/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). Folders received on 6/03/13. (Centrifuge#1 used for all Centrifugations)	
GC analyst, reduced extraction weights for samples E and F, based on sample pre-screens.	JH 6/07/13
D, Dms accidentally concentrated to <0.5mL, improperly rinsed funnel, tube and discarded as normal	MW 6/12/13

3056F

Revision 009
08/14/12

Pesticide Raw Data
Initial Calibration

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 05/14/13 Internal Standard ID 2006-1 Expiration 7/26/13

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO
ICV Exceeding ±30%? YES / NO
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	B00037 O	8/29/13	UCT-Q	2023-1	10/4/13
	B000337	12/10/13			
	2048-2	05/16/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YZ **Date:** 5/16/13

Reviewer: VD **Date:** 5.16.13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 5/14/13 (5/10) Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1085684 Column Type: 5TXCL

Column 2 Serial No.: 1094709 Column Type: 5TXCL2

GC Method: Pest ICal Date: 05/14/13

IS	Ical/Ccal	ICV
2000-1	B000370 (5/10)	2023-1
	B000337 (10/10)	
	2048-2.	

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/ical-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-MAY-2013 14:17	0514a004.d	1	DS	
2	14-MAY-2013 14:37	0514a005.d	1	INDAE	
3	14-MAY-2013 14:57	0514a006.d	1	INDAA	
4	14-MAY-2013 15:17	0514a007.d	1	INDAB	
5	14-MAY-2013 15:37	0514a008.d	1	INDAC	
6	14-MAY-2013 15:56	0514a009.d	1	INDAD	
7	14-MAY-2013 16:16	0514a010.d	1	INDAF	
8	14-MAY-2013 16:34	0514a011.d	1	INDAG	
9	14-MAY-2013 16:54	0514a012.d	1	INDAICV	
10	14-MAY-2013 17:12	0514a013.d	1	TOXAPH	
11	14-MAY-2013 17:31	0514a014.d	1	DS	
12	14-MAY-2013 17:48	0514a015.d	1	INDAE	
13	14-MAY-2013 18:06	0514a016.d	1	WO26MBS1	
14	14-MAY-2013 18:24	0514a017.d	1	WO26LCSS1	
15	14-MAY-2013 18:42	0514a018.d	1	WO26LCSDS1	
16	14-MAY-2013 19:00	0514a019.d	1	WO26QLS	
17	14-MAY-2013 19:17	0514a020.d	5	WO26A	5
18	14-MAY-2013 19:35	0514a021.d	5	WO26B	5
19	14-MAY-2013 19:53	0514a022.d	5	WO26C	5
20	14-MAY-2013 20:11	0514a023.d	5	WO26D	5
21	14-MAY-2013 20:29	0514a024.d	5	WO26E	5
22	14-MAY-2013 20:46	0514a025.d	5	WO26F	5
23	14-MAY-2013 21:04	0514a026.d	5	WO26G	5
24	14-MAY-2013 21:22	0514a027.d	5	WO26H	5
25	14-MAY-2013 21:40	0514a028.d	1	WO26MBS1	
26	14-MAY-2013 21:58	0514a029.d	1	WO26LCSS1	
27	14-MAY-2013 22:15	0514a030.d	1	WO26LCSDS1	
28	14-MAY-2013 22:33	0514a031.d	1	DS	
29	14-MAY-2013 22:51	0514a032.d	1	INDAE	
30	14-MAY-2013 23:09	0514a033.d	5	WO26I	5
31	14-MAY-2013 23:27	0514a034.d	1	WO26J	
32	14-MAY-2013 23:44	0514a035.d	1	WO26K	
33	15-MAY-2013 00:02	0514a036.d	5	WO26KMS	
34	15-MAY-2013 00:20	0514a037.d	1	WO26KMSD	
35	15-MAY-2013 00:38	0514a038.d	1	WO27MBS1	
36	15-MAY-2013 00:56	0514a039.d	1	WO27LCSS1	
37	15-MAY-2013 01:13	0514a040.d	1	WO27LCSDS1	
38	15-MAY-2013 01:31	0514a041.d	1	DS	
39	15-MAY-2013 01:49	0514a042.d	1	INDAE	
40	15-MAY-2013 02:07	0514a043.d	5	WO27A	5
41	15-MAY-2013 02:25	0514a044.d	5	WO27B	5
42	15-MAY-2013 02:42	0514a045.d	5	WO27C	5
43	15-MAY-2013 03:00	0514a046.d	5	WO27CMS	5
44	15-MAY-2013 03:18	0514a047.d	5	WO27CMSD	5
45	15-MAY-2013 03:36	0514a048.d	5	WO27D	5
46	15-MAY-2013 03:54	0514a049.d	5	WO27E	5
47	15-MAY-2013 04:11	0514a050.d	5	WO27F	5
48	15-MAY-2013 04:29	0514a051.d	5	WO27G	5
49	15-MAY-2013 04:47	0514a052.d	1	WO27MBS1	
50	15-MAY-2013 05:05	0514a053.d	1	WO27LCSS1	
51	15-MAY-2013 05:23	0514a054.d	1	WO27LCSDS1	
52	15-MAY-2013 05:40	0514a055.d	1	DS	
53	15-MAY-2013 05:58	0514a056.d	1	INDAE	
54	15-MAY-2013 06:16	0514a057.d	5	WO27H	5
55	15-MAY-2013 06:34	0514a058.d	5	WO27I	5
56	15-MAY-2013 06:52	0514a059.d	5	WO27J	5
57	15-MAY-2013 07:09	0514a060.d	5	WO27K	5
58	15-MAY-2013 07:27	0514a061.d	1	WO27MBS1	
59	15-MAY-2013 07:45	0514a062.d	1	WO27LCSS1	
60	15-MAY-2013 08:03	0514a063.d	1	WO27LCSDS1	
61	15-MAY-2013 08:21	0514a064.d	1	DS	
62	15-MAY-2013 08:38	0514a065.d	1	INDAE	

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YZ 5/14/13

URS9 : 01655

Report Date : 15-May-2013 15:10

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0514a005	0514a006	0514a007	0514a008	0514a009	0514a010	0514a011
INJ.DATE:	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013
INJ.TIME:	14:37	14:57	15:17	15:37	15:56	16:16	16:34

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.336	2.336	2.336	2.336	2.336	2.336	2.336	2.336	2.286-2.386	2.336	0.000
* 54 1Bromo-2nitrobenzene	3.162	3.162	3.162	3.161	3.160	3.161	3.160	3.162	3.112-3.212	3.161	0.001
* 58 Hexabromobiphenyl	8.997	8.998	8.998	8.999	8.998	8.999	8.999	8.997	8.947-9.047	8.998	0.001
$ 2 Tetrachloro-m-xylene	3.840	3.842	3.842	3.840	3.837	3.837	3.835	3.840	3.790-3.890	3.839	0.003
3 Hexachlorobenzene	4.186	4.197	4.195	4.190	4.186	4.183	4.179	4.186	4.136-4.236	4.188	0.006
4 alpha-BHC	4.332	4.331	4.332	4.331	4.328	4.329	4.326	4.332	4.282-4.382	4.330	0.002
5 gamma-BHC (Lindane)	4.617	4.618	4.619	4.618	4.614	4.614	4.611	4.617	4.567-4.667	4.616	0.003
6 beta-BHC	4.697	4.724	4.720	4.712	4.702	4.692	4.687	4.697	4.647-4.747	4.705	0.014
7 delta-BHC	4.868	4.894	4.890	4.882	4.872	4.863	4.858	4.868	4.818-4.918	4.875	0.014
8 Heptachlor	5.065	5.065	5.066	5.065	5.062	5.063	5.059	5.065	5.015-5.115	5.063	0.002
9 Aldrin	5.359	5.359	5.360	5.359	5.356	5.357	5.353	5.359	5.309-5.409	5.358	0.002
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
11 Heptachlor epoxide b	5.933	5.935	5.936	5.934	5.931	5.931	5.928	5.933	5.883-5.983	5.933	0.003
12 gamma-Chlordane	6.054	6.060	6.059	6.057	6.052	6.051	6.048	6.054	6.004-6.104	6.054	0.005
13 alpha-Chlordane	6.177	6.183	6.182	6.180	6.176	6.175	6.172	6.177	6.127-6.227	6.178	0.004
14 Endosulfan I	6.310	6.315	6.314	6.313	6.309	6.309	6.306	6.310	6.260-6.360	6.311	0.003

Reviewer 1 YZ Date: 5/15/13
Reviewer 2 Date: 5-16-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	6.235	6.247	6.245	6.241	6.235	6.232	6.229	6.235	6.185-6.285	6.238	0.007
	16 Dieldrin	6.532	6.536	6.536	6.534	6.531	6.531	6.528	6.532	6.482-6.582	6.533	0.003
	17 Endrin	6.751	6.755	6.755	6.753	6.750	6.749	6.747	6.751	6.701-6.801	6.751	0.003
	18 4,4'-DDD	6.800	6.812	6.812	6.809	6.806	6.795	6.787	6.800	6.750-6.850	6.803	0.009
	19 Endosulfan II	6.959	6.966	6.964	6.962	6.958	6.956	6.953	6.959	6.909-7.009	6.960	0.004
	20 4,4'-DDT	7.053	7.063	7.062	7.059	7.056	7.049	7.043	7.053	7.003-7.103	7.055	0.007
	21 Endrin aldehyde	7.336	7.341	7.341	7.339	7.336	7.334	7.330	7.336	7.286-7.386	7.337	0.004
	22 Methoxychlor	7.479	7.487	7.486	7.484	7.482	7.478	7.474	7.479	7.429-7.529	7.482	0.005
	23 Endosulfan sulfate	7.727	7.731	7.730	7.729	7.726	7.725	7.721	7.727	7.677-7.777	7.727	0.003
	24 Endrin ketone	7.983	7.987	7.986	7.985	7.982	7.981	7.977	7.983	7.933-8.033	7.983	0.003
$	25 Decachlorobiphenyl	8.832	8.834	8.834	8.833	8.832	8.832	8.830	8.832	8.782-8.882	8.833	0.002
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.006	6.956-7.056	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.911	5.861-5.961	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.347-6.447	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.636	6.586-6.686	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.754	1.704-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.840	5.790-5.890	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.162	6.112-6.212	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.778	6.728-6.828	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.653	7.603-7.703	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.837	4.787-4.887	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Report Date : 15-May-2013 15:10

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0514a005	0514a006	0514a007	0514a008	0514a009	0514a010	0514a011
INJ.DATE:	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013
INJ.TIME:	14:37	14:57	15:17	15:37	15:56	16:16	16:34

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.493	2.492	2.493	2.492	2.492	2.493	2.493	2.493	2.443-2.543	2.493	0.000
* 52 1Bromo-2nitrobenzene	3.331	3.331	3.331	3.330	3.329	3.330	3.329	3.331	3.281-3.381	3.330	0.001
* 55 Hexabromobiphenyl	10.370	10.370	10.371	10.372	10.370	10.372	10.371	10.370	10.320-10.421	10.371	0.001
$ 2 Tetrachloro-m-xylene	4.168	4.169	4.170	4.168	4.165	4.166	4.166	4.168	4.118-4.218	4.168	0.002
3 Hexachlorobenzene	4.633	4.638	4.638	4.635	4.631	4.630	4.627	4.633	4.583-4.683	4.633	0.004
4 alpha-BHC	4.756	4.755	4.756	4.756	4.752	4.754	4.752	4.756	4.706-4.806	4.754	0.002
5 gamma-BHC (Lindane)	5.115	5.115	5.116	5.115	5.112	5.113	5.111	5.115	5.065-5.165	5.114	0.002
6 beta-BHC	5.189	5.204	5.203	5.198	5.190	5.186	5.183	5.189	5.139-5.239	5.193	0.008
7 delta-BHC	5.501	5.513	5.512	5.508	5.502	5.498	5.495	5.501	5.451-5.551	5.504	0.007
8 Heptachlor	5.579	5.579	5.580	5.579	5.577	5.577	5.575	5.579	5.529-5.629	5.578	0.002
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	5.917	5.917	5.917	5.917	5.915	5.916	5.913	5.917	5.867-5.967	5.916	0.001
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	6.470	6.472	6.472	6.471	6.469	6.470	6.467	6.470	6.420-6.520	6.470	0.002
12 gamma-Chlordane	6.653	6.657	6.657	6.656	6.653	6.652	6.650	6.653	6.603-6.703	6.654	0.003
13 alpha-Chlordane	6.791	6.793	6.794	6.793	6.790	6.790	6.788	6.791	6.741-6.841	6.791	0.002
14 Endosulfan I	6.858	6.861	6.861	6.860	6.857	6.857	6.855	6.858	6.808-6.908	6.859	0.002

Reviewer 1 YZ Date: 5/15/13
Reviewer 2 Date: 5.16.13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
15 4,4'-DDE	6.918	6.925	6.923	6.921	6.918	6.916	6.915	6.918	6.868-6.968	6.919	0.004
16 Dieldrin	7.116	7.117	7.118	7.116	7.114	7.115	7.113	7.116	7.066-7.166	7.116	0.002
17 Endrin	7.405	7.407	7.407	7.406	7.404	7.404	7.403	7.405	7.355-7.455	7.405	0.002
18 4,4'-DDD	7.460	7.466	7.465	7.464	7.462	7.457	7.454	7.460	7.410-7.510	7.461	0.004
19 Endosulfan II	7.594	7.598	7.598	7.596	7.594	7.593	7.592	7.594	7.544-7.644	7.595	0.002
20 4,4'-DDT	7.745	7.749	7.749	7.748	7.746	7.743	7.740	7.745	7.695-7.795	7.746	0.003
21 Endrin aldehyde	7.892	7.895	7.896	7.893	7.892	7.891	7.889	7.892	7.842-7.942	7.892	0.002
22 Endosulfan sulfate	8.138	8.139	8.140	8.138	8.137	8.136	8.134	8.138	8.088-8.188	8.138	0.002
23 Methoxychlor	8.327	8.329	8.330	8.329	8.327	8.326	8.325	8.327	8.277-8.377	8.328	0.002
24 Endrin ketone	8.629	8.631	8.631	8.630	8.629	8.628	8.627	8.629	8.579-8.679	8.629	0.002
$ 25 Decachlorobiphenyl	9.791	9.791	9.792	9.792	9.790	9.791	9.791	9.791	9.741-9.841	9.791	0.001
26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.338	7.288-7.388	+++++	+++++
38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.631	6.581-6.681	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.115	7.065-7.165	+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.404	7.354-7.454	+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.732	1.682-1.782	+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.385	6.335-6.435	+++++	+++++
43 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.691-6.791	+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.465	7.415-7.515	+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.619	8.569-8.669	+++++	+++++
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.369	5.319-5.419	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a006.d
Level 2: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a007.d
Level 3: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a008.d
Level 4: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a009.d
Level 5: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d
Level 6: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a010.d
Level 7: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a011.d
Level 8: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d/0514a013.cdf

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.79325	1.69392	1.74961	1.78148	1.75119	1.71302		
	1.98781	+++++					1.78147	5.471
3 Hexachlorobenzene	1.49749	1.39055	1.33447	1.32478	1.26906	1.22701		
	1.39069	+++++					1.34772	6.607
4 alpha-BHC	1.59686	1.53923	1.58723	1.69009	1.72967	1.74432		
	2.04256	+++++					1.70428	9.858
5 gamma-BHC (Lindane)	1.37757	1.32209	1.37386	1.47369	1.50450	1.51729		
	1.76991	+++++					1.47699	10.069
6 beta-BHC	0.73008	0.68228	0.67383	0.64825	0.64133	0.63188		
	0.72204	+++++					0.67567	5.734
7 delta-BHC	1.27862	1.26192	1.31879	1.44766	1.43894	1.47751		
	1.73280	+++++					1.42232	11.390

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.44016	1.35450	1.36987	1.44472	1.43635	1.40950		
	1.59374	+++++					1.43555	5.447
9 Aldrin	1.33913	1.32192	1.35890	1.43056	1.44425	1.42846		
	1.62361	+++++					1.42098	7.160
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.31883	1.22935	1.23549	1.29042	1.26295	1.24015		
	1.39299	+++++					1.28146	4.594
12 gamma-Chlordane	1.34328	1.29043	1.30193	1.38657	1.37855	1.37018		
	1.54904	+++++					1.37428	6.228
13 alpha-Chlordane	1.26506	1.18635	1.20487	1.27829	1.28473	1.27759		
	1.45008	+++++					1.27814	6.667
14 Endosulfan I	1.33723	1.22412	1.19481	1.20636	1.16700	1.12310		
	1.25888	+++++					1.21593	5.636
15 4,4'-DDE	1.07900	0.99206	0.98337	1.00262	1.00227	1.00380		
	1.18006	+++++					1.03474	6.900

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.28138	1.23307	1.26288	1.31804	1.29159	1.25290		
	1.40559	+++++					1.29221	4.417
17 Endrin	1.00045	0.95140	0.98797	1.05878	1.05845	1.07061		
	1.20035	+++++					1.04686	7.715
18 4,4'-DDD	1.22524	1.14701	1.15954	1.20318	1.16084	1.17739		
	1.32680	+++++					1.20000	5.184
19 Endosulfan II	1.12524	1.08894	1.05454	1.15097	1.11621	1.13029		
	1.27640	+++++					1.13466	6.160
20 4,4'-DDT	1.00324	0.95977	0.99273	1.06721	1.05511	1.10036		
	1.26486	+++++					1.06332	9.513
21 Endrin aldehyde	1.01452	0.92945	0.92202	0.94895	0.90871	0.92167		
	1.03644	+++++					0.95454	5.274
22 Methoxychlor	0.54273	0.50238	0.49266	0.49601	0.47525	0.48309		
	0.56389	+++++					0.50800	6.446
23 Endosulfan sulfate	1.04430	0.96556	0.97447	1.00876	0.98463	1.00608		
	1.14237	+++++					1.01803	5.968
24 Endrin ketone	1.44182	1.27425	1.25105	1.26006	1.20536	1.22442		
	1.39160	+++++					1.29265	6.880

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.04979	+++++		
	+++++	0.04979					0.04979	0.000
(2)	+++++	+++++	+++++	+++++	0.03856	+++++		
	+++++	+++++					0.03856	0.000
(3)	+++++	+++++	+++++	+++++	0.05763	+++++		
	+++++	+++++					0.05763	0.000
(4)	+++++	+++++	+++++	+++++	0.05405	+++++		
	+++++	+++++					0.05405	0.000
(5)	+++++	+++++	+++++	+++++	0.03832	+++++		
	+++++	+++++					0.03832	0.000
(6)	+++++	+++++	+++++	+++++	0.03390	+++++		
	+++++	+++++					0.03390	0.000
39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
$ 2 Tetrachloro-m-xylene	1.05731	1.02496	1.04909	1.09575	1.10430	1.07844		
	1.22555	+++++					1.09077	6.002
$ 25 Decachlorobiphenyl	1.36908	1.17032	1.18645	1.09539	1.01496	0.99573		
	1.12973	+++++					1.13738	11.007

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a006.d
Level 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a007.d
Level 3: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a008.d
Level 4: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a009.d
Level 5: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d
Level 6: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a010.d
Level 7: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a011.d
Level 8: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d/0514a013.cdf

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.60053	1.49408	1.47331	1.53778	1.43422	1.40997		
	1.56693	+++++					1.50240	4.639
3 Hexachlorobenzene	1.91130	1.81415	1.84722	1.93843	1.89171	1.80326		
	1.99642	+++++					1.88607	3.694
4 alpha-BHC	1.59644	1.60778	1.71794	1.85564	1.87161	1.84057		
	2.08612	+++++					1.79658	9.554
5 gamma-BHC (Lindane)	1.41279	1.39821	1.47572	1.59627	1.61089	1.59098		
	1.82714	+++++					1.55886	9.485
6 beta-BHC	0.67540	0.64906	0.66168	0.69664	0.70034	0.68947		
	0.76488	+++++					0.69107	5.428
7 delta-BHC	1.25042	1.25618	1.36398	1.51769	1.57828	1.57346		
	1.78854	+++++					1.47551	13.302

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.52144	1.46615	1.50731	1.56510	1.51707	1.41707		
	1.49206	+++++					1.49803	3.120
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.36731	1.34038	1.38390	1.47646	1.46628	1.38183		
	1.48140	+++++					1.41394	4.156
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.31110	1.18086	1.22473	1.27311	1.25167	1.18019		
	1.24678	+++++					1.23835	3.848
12 gamma-Chlordane	1.27948	1.21377	1.25856	1.33964	1.33160	1.27964		
	1.38294	+++++					1.29795	4.382
13 alpha-Chlordane	1.14954	1.11506	1.16114	1.24321	1.22852	1.18631		
	1.28714	+++++					1.19585	5.019
14 Endosulfan I	1.12895	1.09165	1.12764	1.19879	1.17527	1.11474		
	1.17124	+++++					1.14404	3.350
15 4,4'-DDE	1.24203	1.21383	1.24821	1.28890	1.20552	1.12039		
	1.15989	+++++					1.21125	4.679

Analytical Resources, Inc.

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Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.21939	1.20049	1.19568	1.22906	1.15598	1.05909		
	1.10103	+++++					1.16582	5.498
17 Endrin	1.54901	1.48644	1.53945	1.58915	1.52214	1.42686		
	1.49666	+++++					1.51567	3.431
18 4,4'-DDD	1.88151	1.77566	1.81334	1.83674	1.73699	1.64836		
	1.79856	+++++					1.78445	4.221
19 Endosulfan II	1.82350	1.73853	1.79597	1.88652	1.77228	1.65784		
	1.77324	+++++					1.77827	3.991
20 4,4'-DDT	1.40789	1.35837	1.42769	1.51306	1.44947	1.46591		
	1.66557	+++++					1.46971	6.727
21 Endrin aldehyde	1.51334	1.40321	1.41383	1.43030	1.36548	1.30518		
	1.40698	+++++					1.40547	4.499
22 Endosulfan sulfate	1.47464	1.39724	1.44210	1.49521	1.44784	1.40238		
	1.52333	+++++					1.45468	3.199
23 Methoxychlor	0.67502	0.62296	0.60582	0.57954	0.51795	0.47598		
	0.48760	+++++					0.56641	13.184
24 Endrin ketone	1.70322	1.58267	1.59409	1.60970	1.52594	1.46607		
	1.60759	+++++					1.58418	4.668

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	0.08641	+++++		
	+++++	+++++					0.08641	0.000
(3)	+++++	+++++	+++++	+++++	0.09252	+++++		
	+++++	+++++					0.09252	0.000
(4)	+++++	+++++	+++++	+++++	0.06545	+++++		
	+++++	+++++					0.06545	0.000
(5)	+++++	+++++	+++++	+++++	0.08604	+++++		
	+++++	+++++					0.08604	0.000
38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
39 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
43 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	--- RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.36753	1.31204	1.33239	1.36072	1.28841	1.21312		
	1.22974	+++++					1.30057	4.662
$ 25 Decachlorobiphenyl	1.80274	1.62026	1.59384	1.59909	1.52505	1.48844		
	1.68340	+++++					1.61612	6.428

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a005.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a005.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar
Injection Date: 14-MAY-2013 14:37
Report Date: 05/15/2013 14:42
Matrix: NONE
Dilution Factor: 1.000

YE 5/15/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.162	0.000	5500669	3.331	0.002	29060499	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.332	0.000	2378587	4.756	0.004	13597458	20.2980	20.8352	2.6	alpha-BHC
4.697	0.000	881930	5.189	0.006	5088022	18.9835	20.2683	6.5	beta-BHC
4.868	0.000	1978785	5.501	0.006	11466386	20.2337	21.3930	5.6	delta-BHC
4.617	0.000	2068937	5.115	0.004	11703292	20.3725	20.6675	1.4	gamma-BHC (Lindane)
5.065	0.000	1975223	5.579	0.004	11021714	20.0112	20.2542	1.2	Heptachlor
5.359	0.000	1986091	5.917	0.004	10652708	20.3276	20.7404	2.0	Aldrin
5.933	0.000	1736770	6.470	0.003	9093575	19.7112	20.2152	2.5	Heptachlor epoxide b
6.310	0.000	1604825	6.858	0.003	8538511	19.1953	20.5460	6.8	Endosulfan I
6.532	0.000	3552297	7.116	0.003	16796653	39.9808	39.6624	0.8	Dieldrin
6.235	0.000	2756569	6.918	0.003	17516467	38.7447	39.8107	2.7	4,4'-DDE
6.751	0.000	2814950	7.405	0.002	12569567	40.4428	40.1706	0.7	Endrin
6.959	0.000	2968558	7.594	0.003	14635204	39.3496	39.8653	1.3	Endosulfan II
6.800	0.000	3087253	7.460	0.006	14343775	38.6946	38.9360	0.6	4,4'-DDD
7.727	0.000	2618632	8.138	0.003	11956025	38.6879	39.8119	2.9	Endosulfan sulfate
7.053	0.000	2806075	7.745	0.004	11969550	39.6911	39.4493	0.6	4,4'-DDT
7.479	0.000	6319705	8.327	0.002	21385691	187.1070	182.8875	2.3	Methoxychlor
7.983	0.000	3205646	8.629	0.002	12600957	37.2987	38.5293	3.2	Endrin ketone
7.336	0.000	2416722	7.892	0.003	11275916	38.0797	38.8617	2.0	Endrin aldehyde
6.054	0.000	1895741	6.653	0.003	9674267	20.0621	20.5186	2.2	gamma-Chlordane
6.177	0.000	1766712	6.791	0.003	8925381	20.1031	20.5465	2.2	alpha-Chlordane
2.336	0.000	2408182	2.493	0.000	10419791	19.6601	19.0923	2.9	Hexachlorobutadiene
4.186	0.000	1745176	4.633	0.006	13743481	18.8327	20.0598	6.3	Hexachlorobenzene
8.997	0.000	5319006	10.370	-0.001	16515704	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	0.000	3037199	4.168	0.002	18720888	40.4962	39.6261	2.2	Tetrachloro-m-xylen
8.832	0.000	2699302	9.791	0.001	12593626	35.6948	37.7460	5.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	101.2	99.1	99.1~	115- 0
Decachlorobiphenyl	89.2	94.4	89.2~	115- 0

LR99:01674

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

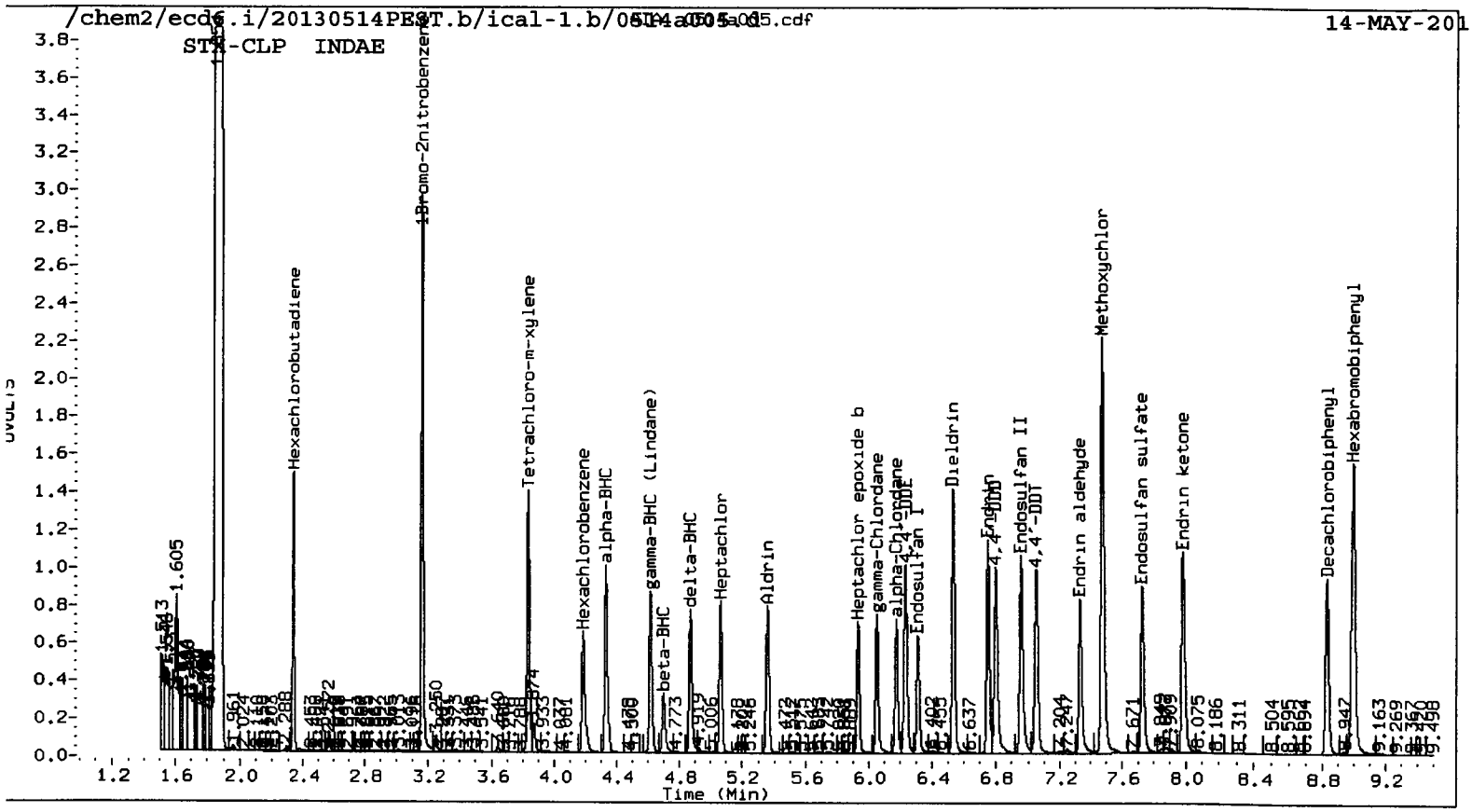
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5500669	0.0
Hexabromobiphenyl	5319006	5319006	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29060499	0.0
Hexabromobiphenyl	16515704	16515704	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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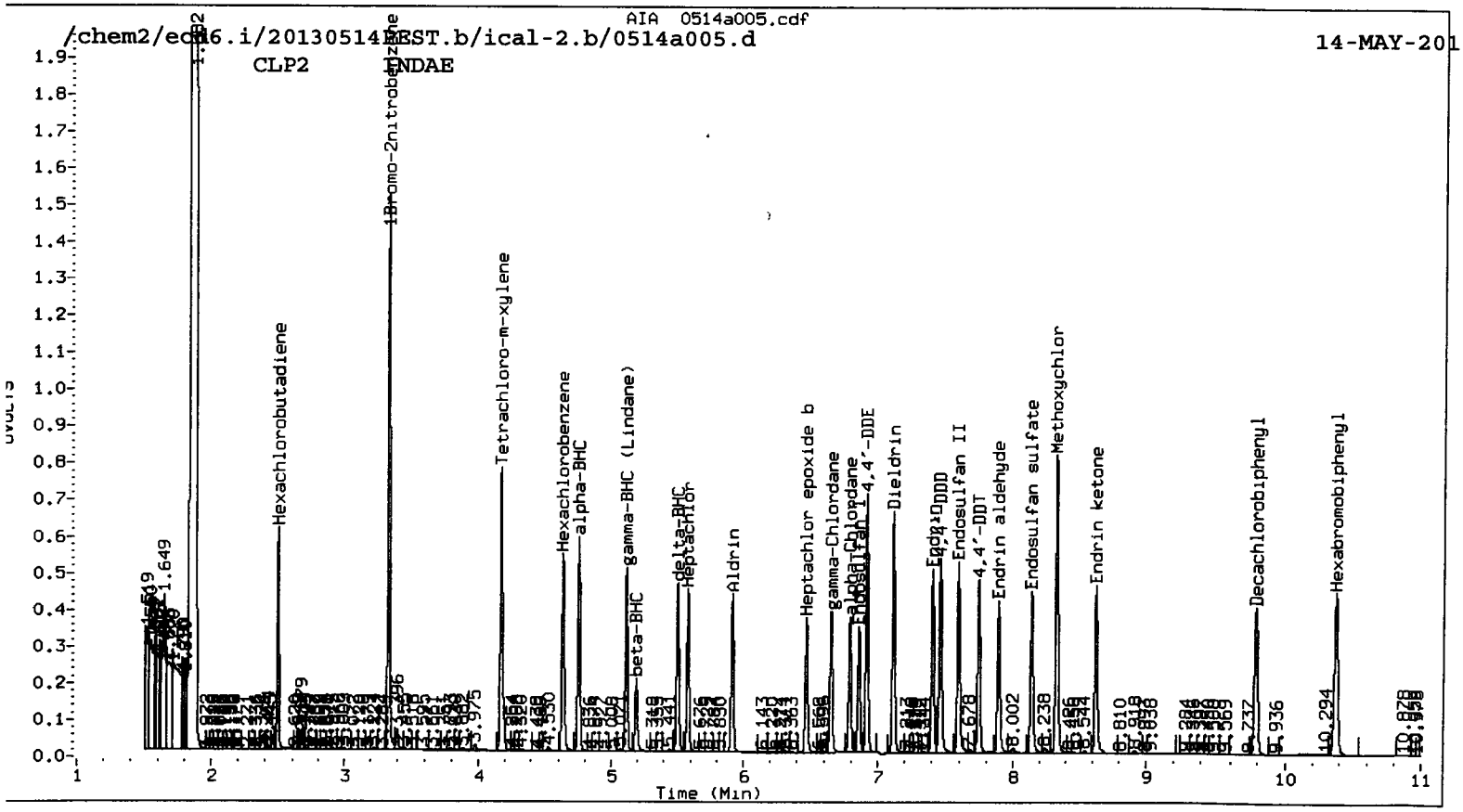
14-MAY-201
STX-CLP INDAE
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Methoxychlor
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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14-MAY-201
CLP2 INDAE
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a006.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a006.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 14:57
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	0.000	5276720	3.331	0.001	28661245	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	131659	4.755	0.004	714937	1.1712	1.1107	5.3	alpha-BHC
4.724	0.000	60194	5.204	0.021	302466	1.3507	1.2217	10.0	beta-BHC
4.894	0.000	105421	5.513	0.018	559976	1.1237	1.0593	5.9	delta-BHC
4.618	0.000	113579	5.115	0.004	632692	1.1659	1.1329	2.9	gamma-BHC (Lindane)
5.065	0.000	118739	5.579	0.004	681351	1.2540	1.2695	1.2	Heptachlor
5.359	0.000	110410	5.917	0.003	612325	1.1780	1.2088	2.6	Aldrin
5.935	0.000	108736	6.472	0.004	587152	1.2865	1.3234	2.8	Heptachlor epoxide b
6.315	0.000	110253	6.861	0.006	505578	1.3747	1.2335	10.8	Endosulfan I
6.536	0.000	211297	7.117	0.004	1092166	2.4791	2.6149	5.3	Dieldrin
6.247	0.000	177925	6.925	0.010	1112439	2.6069	2.5635	1.7	4,4'-DDE
6.755	0.000	157918	7.407	0.004	778157	2.3892	2.5550	6.7	Endrin
6.966	0.000	177617	7.598	0.006	916046	2.4793	2.5636	3.3	Endosulfan II
6.812	0.000	193401	7.466	0.012	945192	2.5526	2.6360	3.2	4,4'-DDD
7.731	0.000	164840	8.139	0.005	740798	2.5645	2.5343	1.2	Endosulfan sulfate
7.063	0.000	158359	7.749	0.009	707264	2.3587	2.3948	1.5	4,4'-DDT
7.487	0.000	428340	8.329	0.004	1695513	13.3544	14.8969	10.9	Methoxychlor
7.987	0.000	227587	8.631	0.004	855623	2.7885	2.6878	3.7	Endrin ketone
7.341	0.000	160140	7.895	0.007	760235	2.6571	2.6919	1.3	Endrin aldehyde
6.060	0.000	110752	6.657	0.007	572990	1.2218	1.2322	0.8	gamma-Chlordane
6.183	0.000	104303	6.793	0.006	514801	1.2372	1.2016	2.9	alpha-Chlordane
2.336	0.000	147851	2.492	-0.001	716768	1.2583	1.3316	5.7	Hexachlorobutadiene
4.197	0.000	123466	4.638	0.010	855939	1.3889	1.2667	9.2	Hexachlorobenzene
8.998	0.000	5051117	10.370	-0.001	16075431	80.0000	80.0000	0.0	Hexabromobiphenyl
3.842	0.000	174347	4.169	0.003	1224847	2.4233	2.6287	8.1	Tetrachloro-m-xylene
8.834	0.000	216105	9.791	0.001	905617	3.0093	2.7887	7.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	6.1	6.6	6.1~	115- 0
Decachlorobiphenyl	7.5	7.0	7.0~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

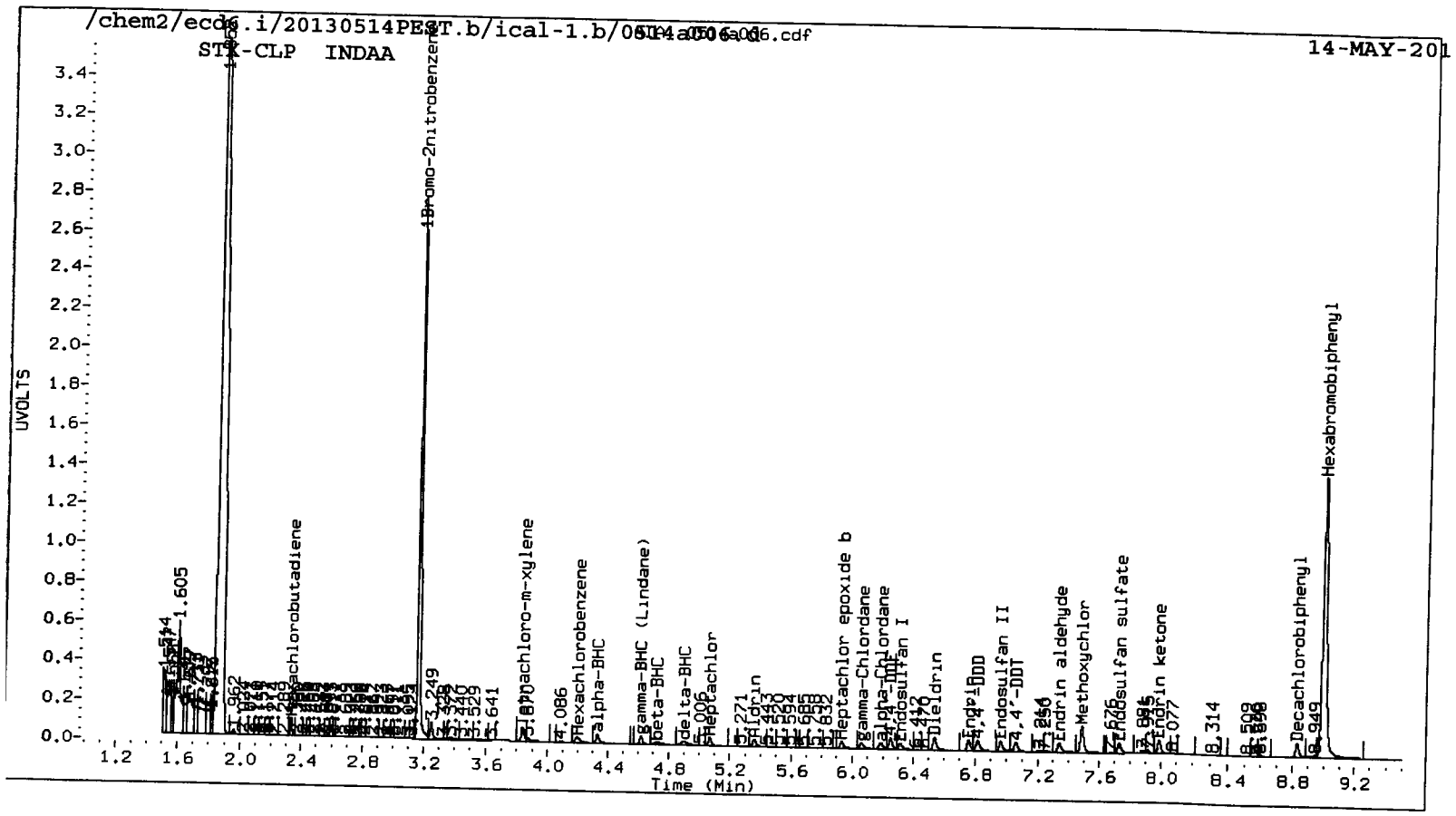
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5276720	-4.1
Hexabromobiphenyl	5319006	5051117	-5.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	28661245	-1.4
Hexabromobiphenyl	16515704	16075431	-2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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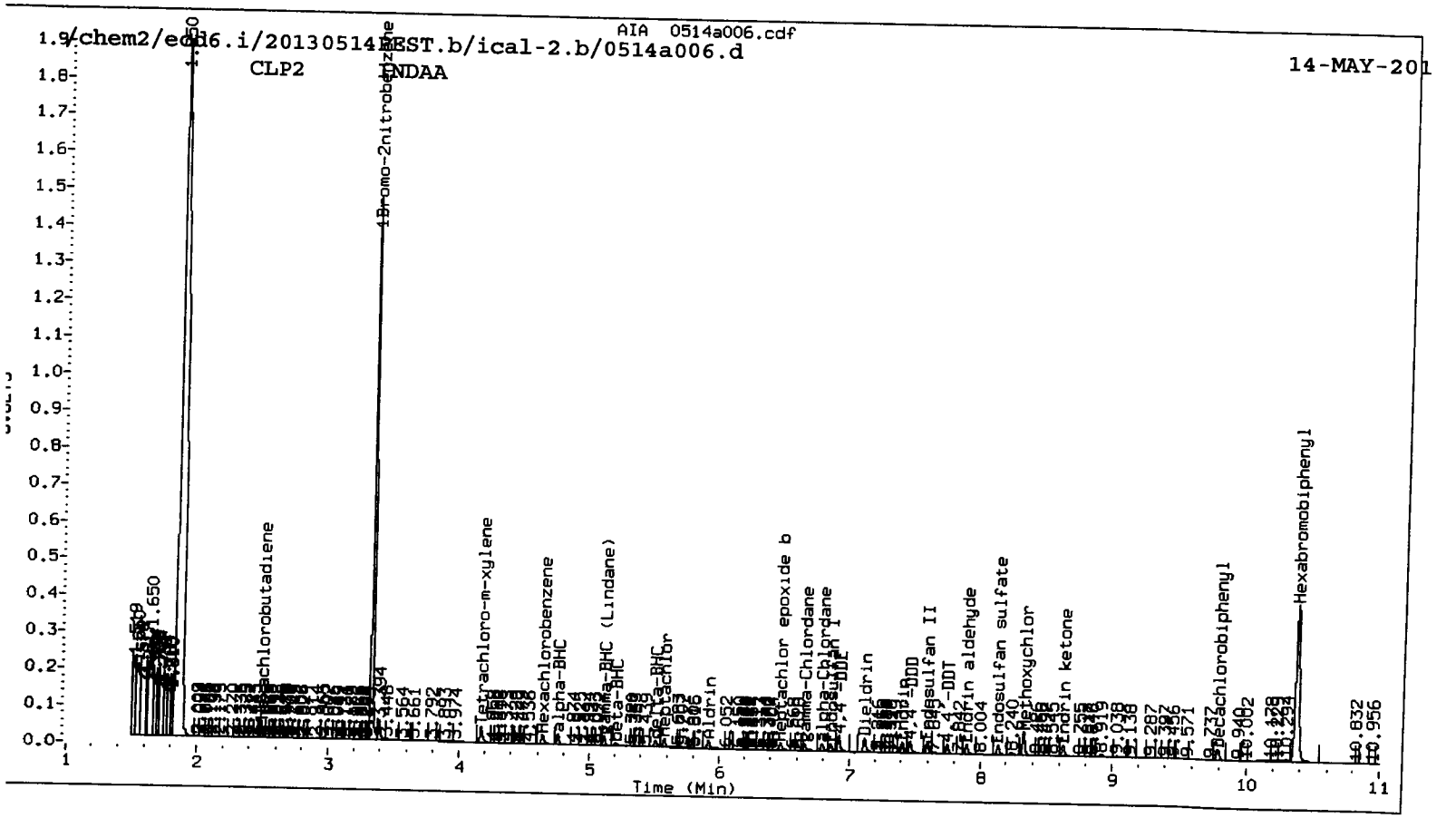
STX-CLP INDAA
14-MAY-201
UVOLTS
Time (Min)
1.605
Hexachlorobutadiene
1Bromo-2nitrobenzene
m-xylene
Hexachlorobenzene
Alpha-BHC
Gamma-BHC (Lindane)
Beta-BHC
Delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Gamma-Chlordane
Alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 INDAA
14-MAY-201
Time (Min)
1.650
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Alpha-BHC
Gamma-BHC (Lindane)
Beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Gamma-Chlordane
Alpha-Chlordane
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a007.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a007.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 15:17
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	0.000	5534770	3.331	0.002	30201103	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.332	0.000	266227	4.756	0.005	1517399	2.2579	2.2373	0.9	alpha-BHC
4.720	0.000	118008	5.203	0.020	612573	2.5245	2.3480	7.2	beta-BHC
4.890	0.000	218264	5.512	0.017	1185561	2.2181	2.1284	4.1	delta-BHC
4.619	0.000	228671	5.116	0.006	1319610	2.2378	2.2424	0.2	gamma-BHC (Lindane)
5.066	0.000	234277	5.580	0.005	1383730	2.3589	2.4468	3.7	Heptachlor
5.360	0.000	228641	5.917	0.004	1265030	2.3257	2.3699	1.9	Aldrin
5.936	0.000	212631	6.472	0.005	1114482	2.3984	2.3839	0.6	Heptachlor epoxide b
6.314	0.000	211726	6.861	0.006	1030282	2.5168	2.3855	5.4	Endosulfan I
6.536	0.000	426547	7.118	0.005	2266016	4.7712	5.1487	7.6	Dieldrin
6.245	0.000	343175	6.923	0.008	2291185	4.7937	5.0106	4.4	4,4'-DDE
6.755	0.000	319855	7.407	0.004	1592938	4.5441	4.9036	7.6	Endrin
6.964	0.000	366093	7.598	0.006	1863085	4.7985	4.8883	1.9	Endosulfan II
6.812	0.000	385618	7.465	0.011	1902877	4.7792	4.9754	4.0	4,4'-DDD
7.730	0.000	324616	8.140	0.005	1497340	4.7423	4.8026	1.3	Endosulfan sulfate
7.062	0.000	322667	7.749	0.009	1455693	4.5130	4.6212	2.4	4,4'-DDT
7.486	0.000	844492	8.330	0.005	3337982	24.7235	27.4961	10.6	Methoxychlor
7.986	0.000	428395	8.631	0.005	1696063	4.9288	4.9952	1.3	Endrin ketone
7.341	0.000	312474	7.896	0.007	1503742	4.8686	4.9919	2.5	Endrin aldehyde
6.059	0.000	223194	6.657	0.007	1145536	2.3475	2.3379	0.4	gamma-Chlordane
6.182	0.000	205193	6.794	0.006	1052375	2.3205	2.3311	0.5	alpha-Chlordane
2.336	0.000	292983	2.493	0.000	1410088	2.3771	2.4861	4.5	Hexachlorobutadiene
4.195	0.000	240511	4.638	0.010	1712164	2.5794	2.4047	7.0	Hexachlorobenzene
8.998	0.000	5379091	10.371	0.000	17146317	80.0000	80.0000	0.0	Hexabromobiphenyl
3.842	0.000	354557	4.170	0.003	2476566	4.6983	5.0441	7.1	Tetrachloro-m-xylene
8.834	0.000	393452	9.792	0.002	1736343	5.1448	5.0128	2.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	11.7	12.6	11.7~	115- 0
Decachlorobiphenyl	12.9	12.5	12.5~	115- 0

WR99:01588

~ Indicates recovery outside QC Limits

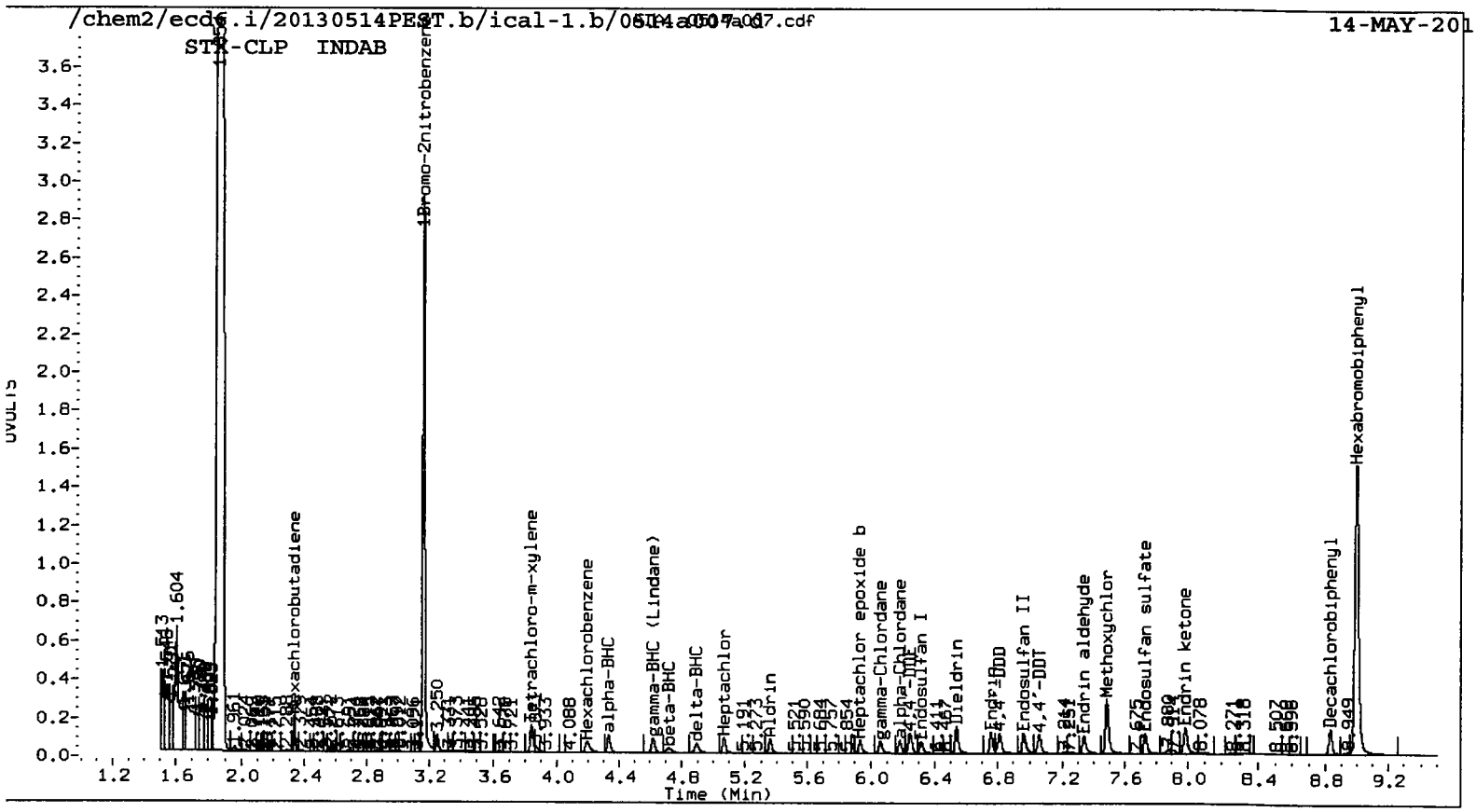
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	%D
Bromo-Nitrobenzene	5500669	5534770	0.6
Hexabromobiphenyl	5319006	5379091	1.1

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	%D
Bromo-Nitrobenzene	29060499	30201103	3.9
Hexabromobiphenyl	16515704	17146317	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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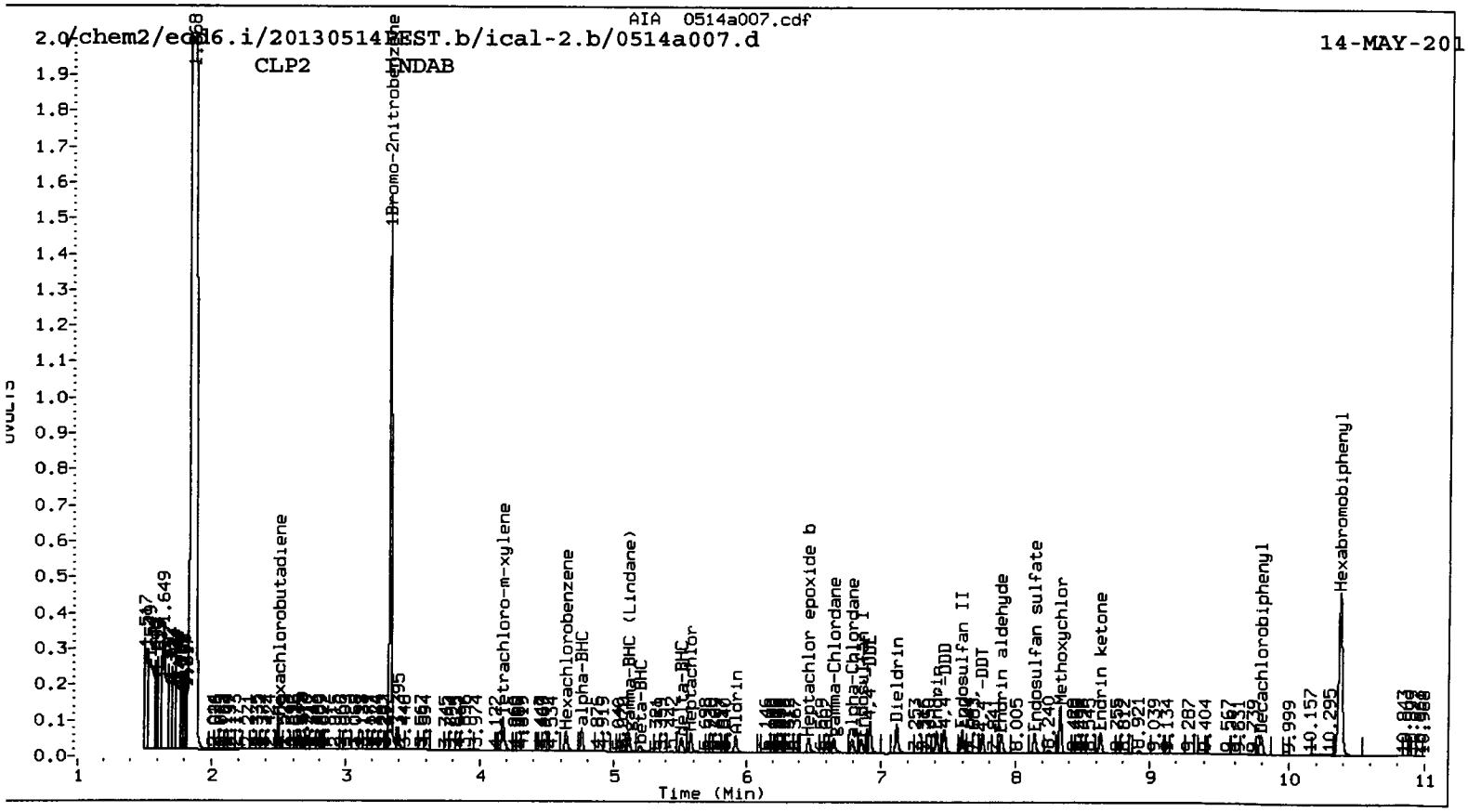
ST-CLP INDAB
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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14-MAY-201
CLP2 INDAB
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a008.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a008.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 15:37
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 5/15/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.161	0.000	5478422	3.330	0.001	29972511	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	543471	4.756	0.004	3218177	4.6566	4.7811	2.6	alpha-BHC
4.712	0.000	230721	5.198	0.015	1239504	4.9864	4.7874	4.1	beta-BHC
4.882	0.000	451555	5.508	0.012	2555115	4.6360	4.6221	0.3	delta-BHC
4.618	0.000	470412	5.115	0.004	2764445	4.6509	4.7334	1.8	gamma-BHC (Lindane)
5.065	0.000	469047	5.579	0.004	2823616	4.7713	5.0310	5.3	Heptachlor
5.359	0.000	465290	5.917	0.004	2592438	4.7816	4.8938	2.3	Aldrin
5.934	0.000	423034	6.471	0.004	2294257	4.8207	4.9450	2.5	Heptachlor epoxide b
6.313	0.000	409103	6.860	0.004	2112396	4.9131	4.9283	0.3	Endosulfan I
6.534	0.000	864822	7.116	0.003	4479682	9.7730	10.2561	4.8	Dieldrin
6.241	0.000	673413	6.921	0.006	4676501	9.5035	10.3051	8.1	4,4'-DDE
6.753	0.000	657274	7.406	0.003	3232003	9.4374	10.1569	7.3	Endrin
6.962	0.000	701565	7.596	0.004	3770541	9.2939	10.0995	8.3	Endosulfan II
6.809	0.000	771416	7.464	0.010	3807006	9.6628	10.1619	5.0	4,4'-DDD
7.729	0.000	648297	8.138	0.004	3027616	9.5722	9.9135	3.5	Endosulfan sulfate
7.059	0.000	660441	7.748	0.007	2997363	9.3361	9.7141	4.0	4,4'-DDT
7.484	0.000	1638780	8.329	0.004	6359453	48.4899	53.4789	9.8	Methoxychlor
7.985	0.000	832294	8.630	0.003	3346715	9.6782	10.0626	3.9	Endrin ketone
7.339	0.000	613397	7.893	0.005	2968269	9.6593	10.0595	4.1	Endrin aldehyde
6.057	0.000	445784	6.656	0.006	2357637	4.7368	4.8483	2.3	gamma-Chlordane
6.180	0.000	412550	6.793	0.005	2175134	4.7134	4.8549	3.0	alpha-Chlordane
2.336	0.000	599069	2.492	-0.001	2759930	4.9106	4.9032	0.2	Hexachlorobutadiene
4.190	0.000	456923	4.635	0.008	3460369	4.9508	4.8970	1.1	Hexachlorobenzene
8.999	0.000	5322227	10.372	0.001	16795593	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	0.000	718422	4.168	0.002	4991895	9.6179	10.2447	6.3	Tetrachloro-m-xylene
8.833	0.000	789319	9.792	0.001	3346191	10.4314	9.8622	5.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	24.0	25.6	24.0~	115- 0
Decachlorobiphenyl	26.1	24.7	24.7~	115- 0

~ Indicates recovery outside QC Limits

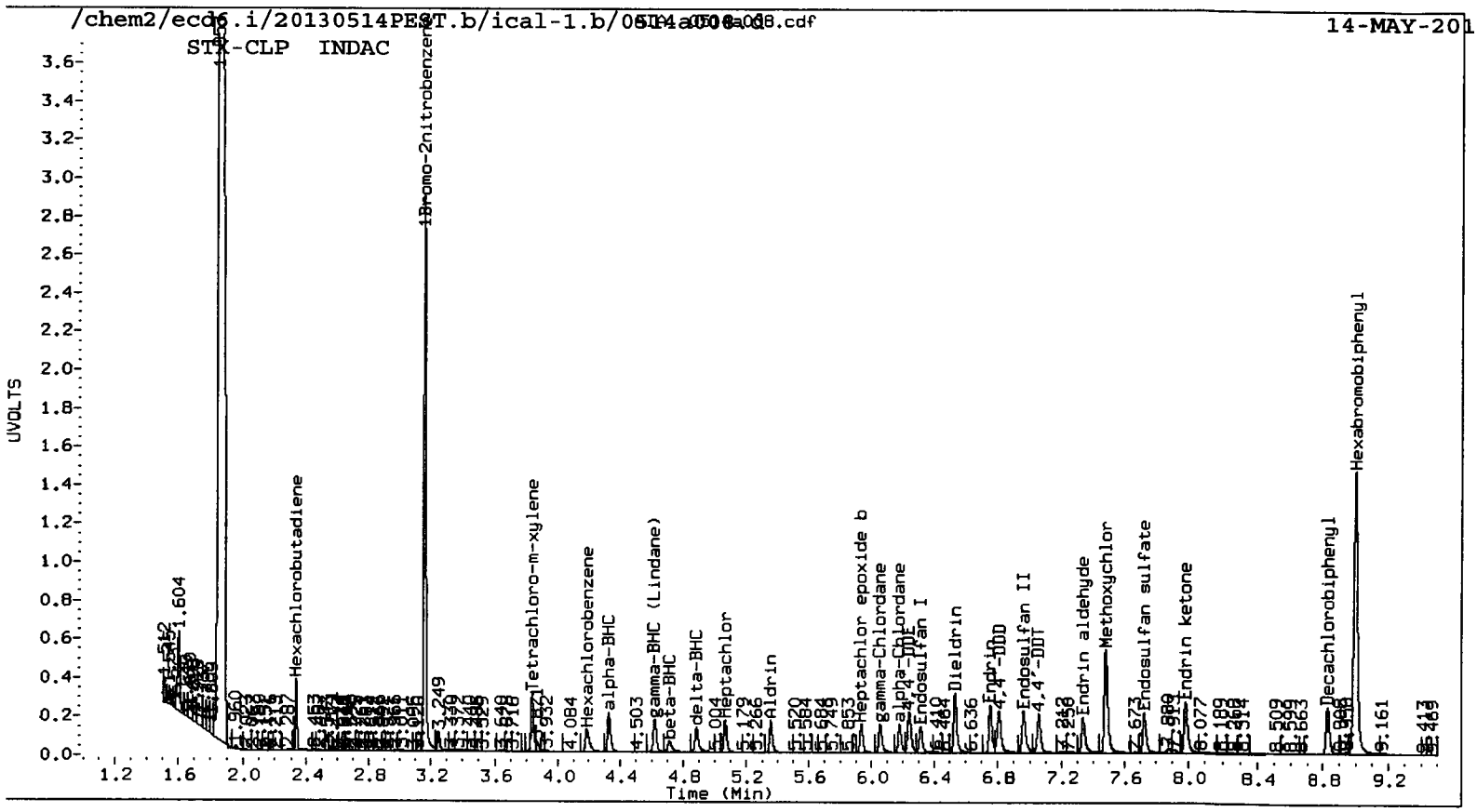
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5478422	-0.4
Hexabromobiphenyl	5319006	5322227	0.1

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29972511	3.1
Hexabromobiphenyl	16515704	16795593	1.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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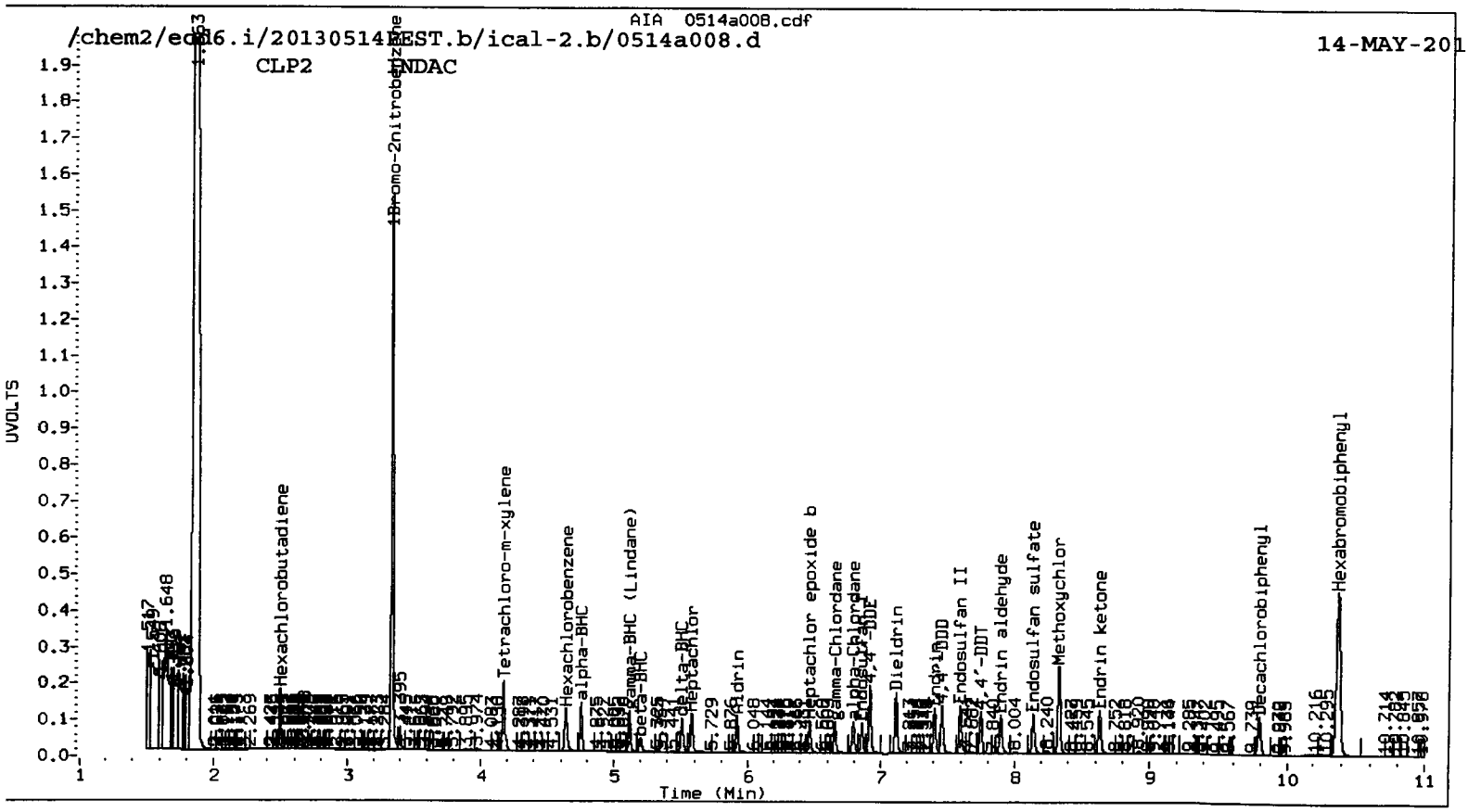
AIA 0514a008.cdf
14-MAY-201
STX-CLP INDAC
UVOLTS
Time (Min)
1,604
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 INDAC
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a009.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a009.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 14-MAY-2013 15:56
Report Date: 05/15/2013 14:42
Matrix: NONE
Dilution Factor: 1.000

YZ 5/16/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.160	0.000	5395940	3.329	0.000	29160968	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.328	0.000	1139950	4.752	0.001	6764016	9.9167	10.3287	4.1	alpha-BHC
4.702	0.000	437239	5.190	0.008	2539348	9.5942	10.0807	4.9	beta-BHC
4.872	0.000	976436	5.502	0.006	5532164	10.1781	10.2859	1.1	delta-BHC
4.614	0.000	993991	5.112	0.002	5818591	9.9777	10.2400	2.6	gamma-BHC (Lindane)
5.062	0.000	974450	5.577	0.002	5704997	10.0639	10.4478	3.7	Heptachlor
5.356	0.000	964900	5.915	0.002	5381877	10.0674	10.4422	3.7	Aldrin
5.931	0.000	870381	6.469	0.001	4640629	10.0700	10.2807	2.1	Heptachlor epoxide b
6.309	0.000	813681	6.857	0.002	4369749	9.9213	10.4786	5.5	Endosulfan I
6.531	0.000	1778022	7.114	0.001	8960153	20.3999	21.0850	3.3	Dieldrin
6.235	0.000	1352520	6.918	0.003	9396365	19.3792	21.2821	9.4	4,4'-DDE
6.750	0.000	1372588	7.404	0.001	6565999	20.2278	20.9695	3.6	Endrin
6.958	0.000	1492098	7.594	0.002	7794686	20.2876	21.2175	4.5	Endosulfan II
6.806	0.000	1559782	7.462	0.008	7589012	20.0530	20.5861	2.6	4,4'-DDD
7.726	0.000	1307738	8.137	0.003	6177871	19.8180	20.5573	3.7	Endosulfan sulfate
7.056	0.000	1383512	7.746	0.006	6251609	20.0731	20.5899	2.5	4,4'-DDT
7.482	0.000	3215078	8.327	0.002	11972694	97.6388	102.3181	4.7	Methoxychlor
7.982	0.000	1633514	8.629	0.002	6650933	19.4957	20.3222	4.2	Endrin ketone
7.336	0.000	1230206	7.892	0.003	5909701	19.8830	20.3533	2.3	Endrin aldehyde
6.052	0.000	935231	6.653	0.003	4883146	10.0894	10.3212	2.3	gamma-Chlordane
6.176	0.000	862198	6.790	0.002	4531641	10.0012	10.3961	3.9	alpha-Chlordane
2.336	0.000	1201598	2.492	-0.001	5605387	10.0001	10.2355	2.3	Hexachlorobutadiene
4.186	0.000	893552	4.631	0.004	7065810	9.8298	10.2776	4.5	Hexachlorobenzene
8.998	0.000	5185525	10.370	-0.001	16527116	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.000	1478146	4.165	-0.001	9919999	20.0912	20.9251	4.1	Tetrachloro-m-xylene
8.832	0.000	1420049	9.790	0.000	6607102	19.2617	19.7893	2.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	50.2	52.3	50.2~	115- 0
Decachlorobiphenyl	48.2	49.5	48.2~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

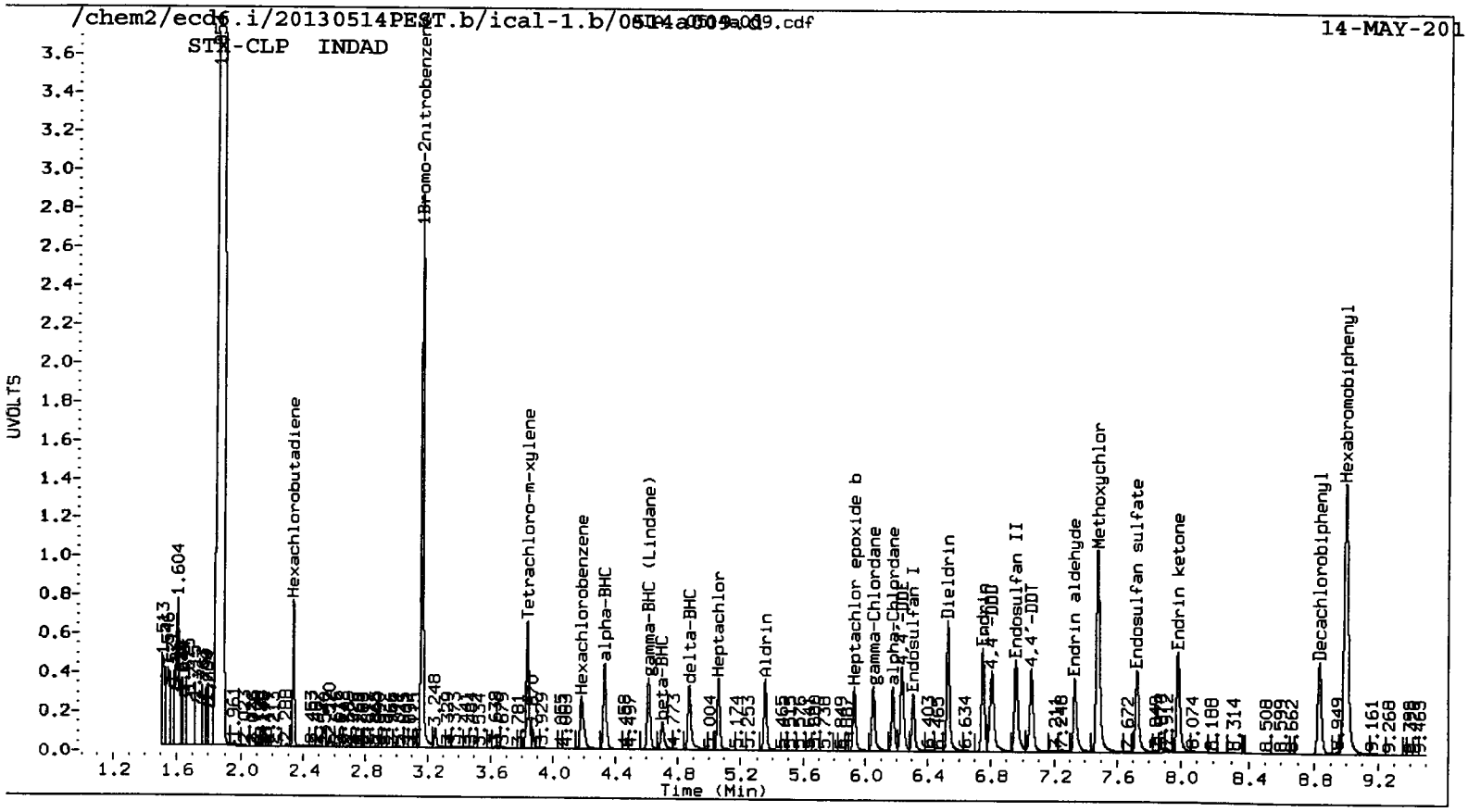
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5395940	-1.9
Hexabromobiphenyl	5319006	5185525	-2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29160968	0.3
Hexabromobiphenyl	16515704	16527116	0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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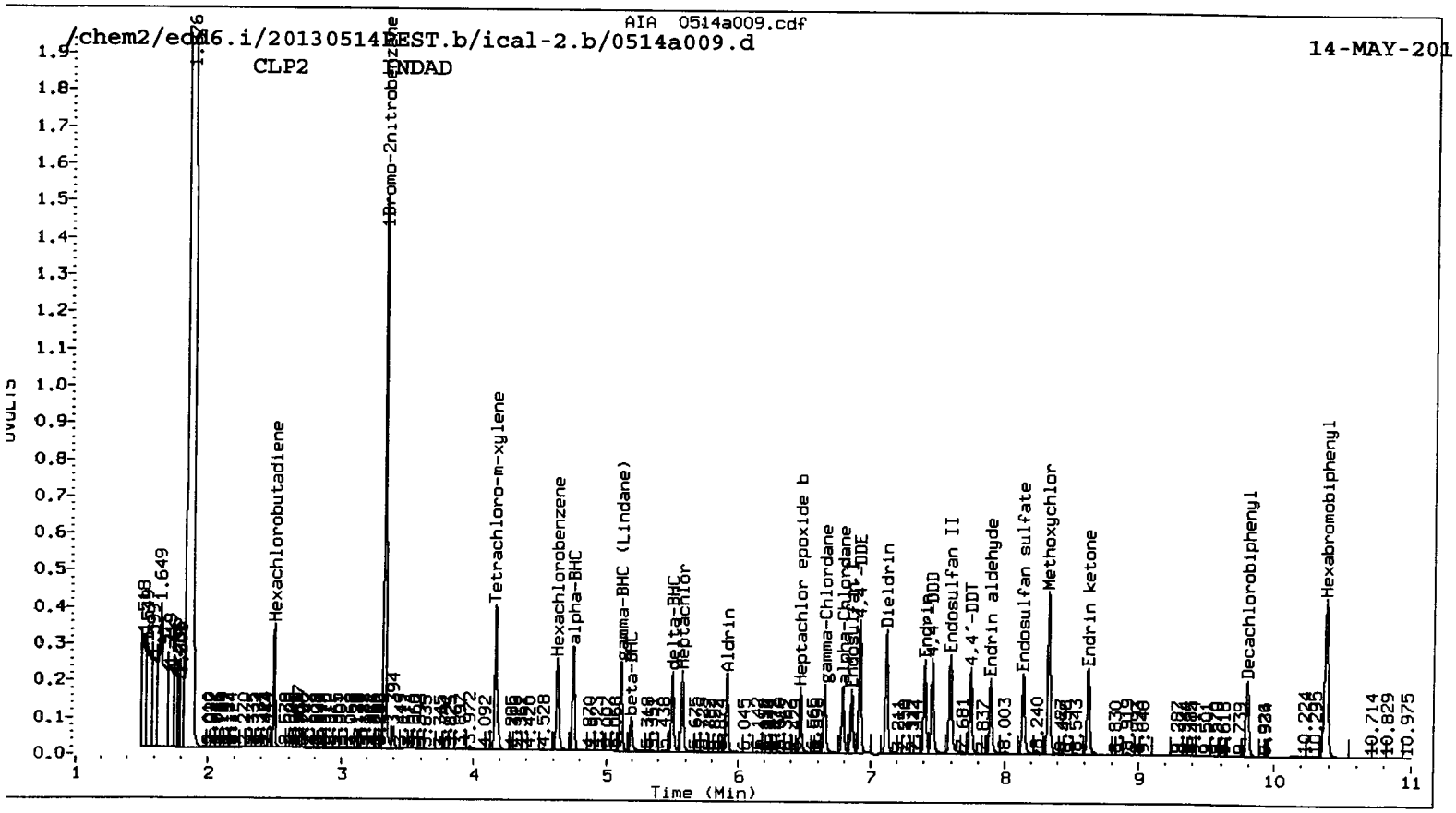
AIA 0514a009.cdf
14-MAY-201
STR-CLP INDAD
UVOLTS
Time (Min)
1.604
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-MAY-201
CLP2 INDAD
UVOLTS
Time (Min)
1.649
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a010.d ARI ID: INDAF
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a010.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 16:16
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.161	0.000	5385380	3.330	0.001	29405183	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.329	0.000	4696911	4.754	0.002	27061082	40.9398	40.9793	0.1	alpha-BHC
4.692	0.000	1701444	5.186	0.003	10136932	37.4075	39.9074	6.5	beta-BHC
4.863	0.000	3978478	5.498	0.003	23133964	41.5521	42.6555	2.6	delta-BHC
4.614	0.000	4085589	5.113	0.002	23391530	41.0915	40.8243	0.7	gamma-BHC (Lindane)
5.063	0.000	3795342	5.577	0.002	20834563	39.2741	37.8382	3.7	Heptachlor
5.357	0.000	3846389	5.916	0.002	20316416	40.2106	39.0916	2.8	Aldrin
5.931	0.000	3339340	6.470	0.002	17351838	38.7107	38.1214	1.5	Heptachlor epoxide
6.309	0.000	3024165	6.857	0.002	16389635	36.9463	38.9756	5.3	Endosulfan I
6.531	0.000	6747354	7.115	0.002	31142629	77.5666	72.6760	6.5	Dieldrin
6.232	0.000	5405842	6.916	0.002	32945159	77.6079	73.9986	4.8	4,4'-DDE
6.749	0.000	5376621	7.404	0.001	23448845	81.8151	75.3121	8.3	Endrin
6.956	0.000	5676334	7.593	0.001	27244763	79.6922	74.5822	6.6	Endosulfan II
6.795	0.000	5912865	7.457	0.003	27089075	78.4926	73.8989	6.0	4,4'-DDD
7.725	0.000	5052560	8.136	0.002	23046636	79.0614	77.1240	2.5	Endosulfan sulfate
7.049	0.000	5526006	7.743	0.003	24090708	82.7862	79.7934	3.7	4,4'-DDT
7.478	0.000	12130490	8.326	0.001	39111410	380.3859	336.1400	12.4	Methoxychlor
7.981	0.000	6149035	8.628	0.002	24093264	75.7772	74.0354	2.3	Endrin ketone
7.334	0.000	4628640	7.891	0.002	21449280	77.2455	74.2914	3.9	Endrin aldehyde
6.051	0.000	3689472	6.652	0.002	18814044	39.8806	39.4359	1.1	gamma-Chlordane
6.175	0.000	3440149	6.790	0.002	17441880	39.9828	39.6812	0.8	alpha-Chlordane
2.336	0.000	4612620	2.493	-0.001	20730266	38.4630	37.5391	2.4	Hexachlorobutadiene
4.183	0.000	3303966	4.630	0.003	26512574	36.4174	38.2438	4.9	Hexachlorobenzene
8.999	0.000	5022010	10.372	0.001	16433920	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.000	5807812	4.166	0.000	35671955	79.0956	74.6210	5.8	Tetrachloro-m-xylen
8.832	0.000	5000587	9.791	0.001	24460912	70.0370	73.6798	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	197.7	186.6	186.6~	115- 0
Decachlorobiphenyl	175.1	184.2	175.1~	115- 0

~ Indicates recovery outside QC Limits

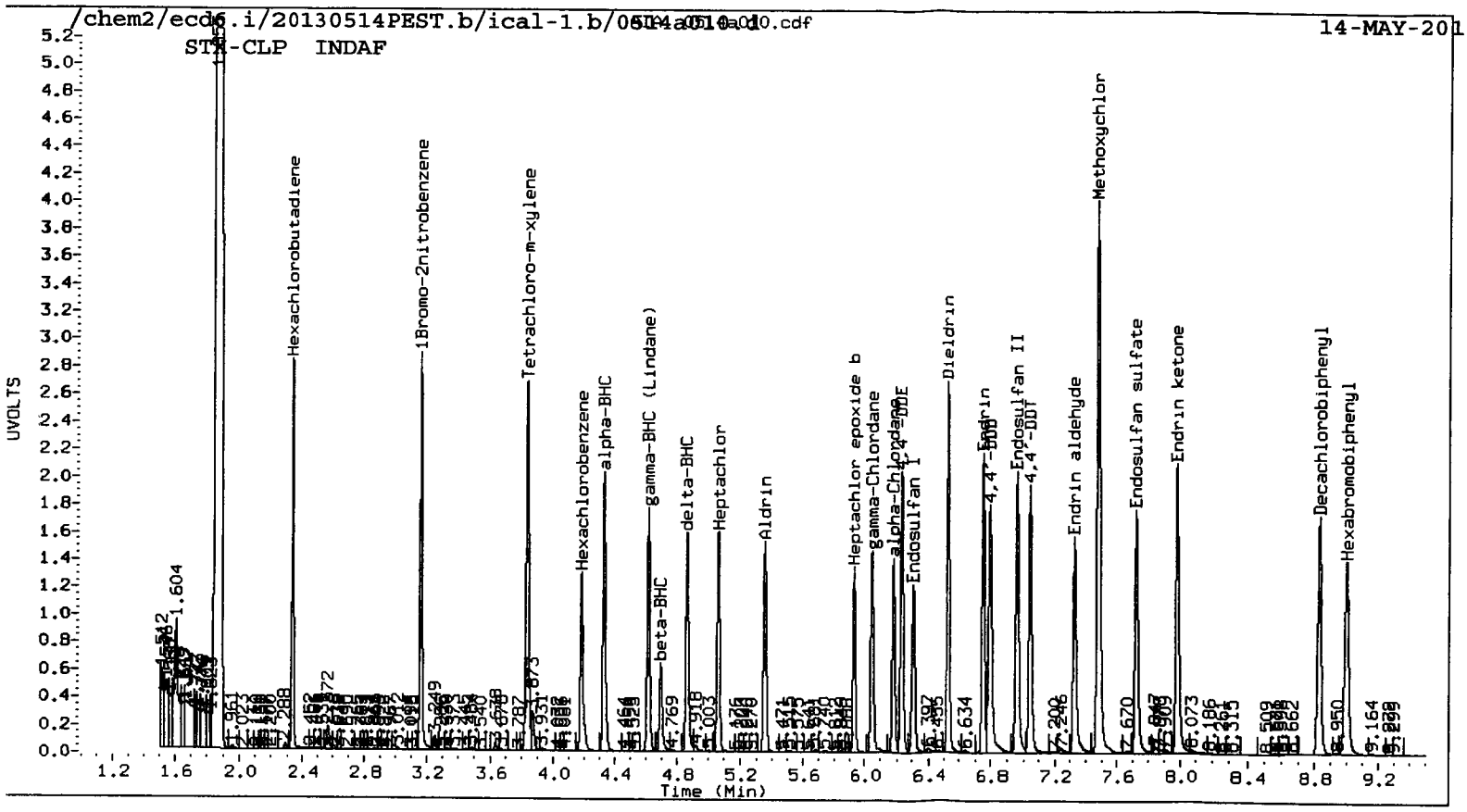
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	%D
Bromo-Nitrobenzene	5500669	5385380	-2.1
Hexabromobiphenyl	5319006	5022010	-5.6

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	%D
Bromo-Nitrobenzene	29060499	29405183	1.2
Hexabromobiphenyl	16515704	16433920	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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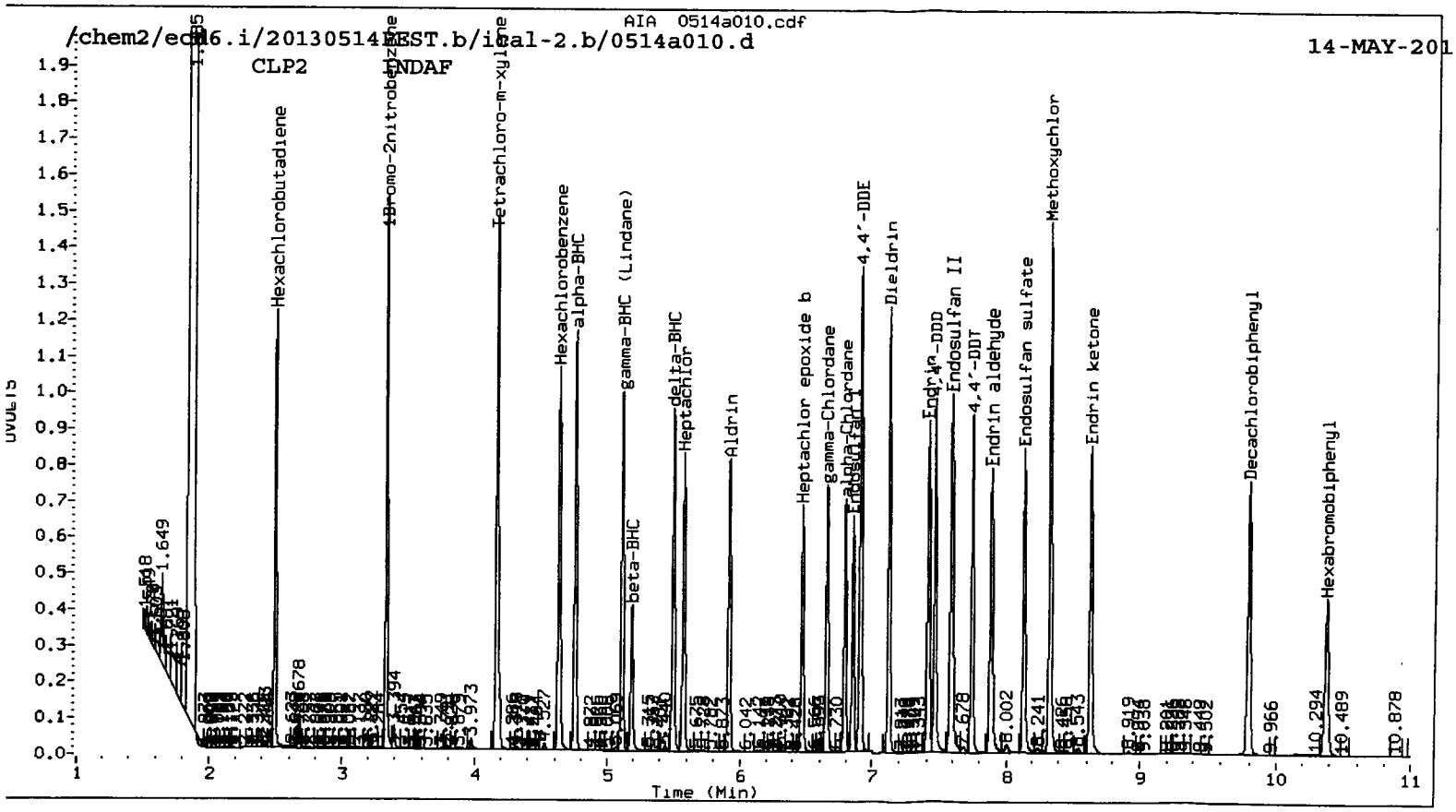
14-MAY-201
STX-CLP INDAF
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0514a010.cdf
14-MAY-201
CLP2 INDAF
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a011.d ARI ID: INDAG
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a011.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 14-MAY-2013 16:34
Report Date: 05/15/2013 14:42
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.160	0.000	4447256	3.329	0.000	24971444	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.326	0.000	9083784	4.752	0.000	52093305	95.8791	92.8926	3.2	alpha-BHC
4.687	0.000	3211079	5.183	0.000	19100075	85.4901	88.5447	3.5	beta-BHC
4.858	0.000	7706224	5.495	0.000	44662411	97.4634	96.9723	0.5	delta-BHC
4.611	0.000	7871237	5.111	0.000	45626240	95.8659	93.7681	2.2	gamma-BHC (Lindane)
5.059	0.000	7087765	5.575	0.000	37258776	88.8156	79.6810	10.8	Heptachlor
5.353	0.000	7220609	5.913	0.000	36992672	91.4082	83.8170	8.7	Aldrin
5.928	0.000	6194985	6.467	0.000	31134002	86.9630	80.5449	7.7	Heptachlor epoxide
6.306	0.000	5598549	6.855	0.000	29247673	82.8257	81.9022	1.1	Endosulfan I
6.528	0.000	12502052	7.113	0.000	54988789	174.0391	151.1088	14.1	Dieldrin
6.229	0.000	10496099	6.915	0.000	57928305	182.4713	153.2156	17.4	4,4'-DDE
6.747	0.000	10042433	7.403	0.000	41365984	183.4598	157.9933	14.9	Endrin
6.953	0.000	10678636	7.592	0.000	49010258	179.9873	159.5478	12.0	Endosulfan II
6.787	0.000	11100345	7.454	0.000	49710150	176.9071	161.2653	9.3	4,4'-DDD
7.721	0.000	9557351	8.134	0.000	42103099	179.5431	167.5514	6.9	Endosulfan sulfate
7.043	0.000	10582072	7.740	0.000	46034366	190.3247	181.3223	4.8	4,4'-DDT
7.474	0.000	23588324	8.325	0.000	67383324	888.0169	688.6854	25.3	Methoxychlor
7.977	0.000	11642474	8.627	0.000	44431774	172.2483	162.3638	5.9	Endrin ketone
7.330	0.000	8671066	7.889	0.000	38887201	173.7281	160.1712	8.1	Endrin aldehyde
6.048	0.000	6888968	6.650	0.000	34534060	90.1728	85.2387	5.6	gamma-Chlordane
6.172	0.000	6448867	6.788	0.000	32141725	90.7618	86.1074	5.3	alpha-Chlordane
2.336	0.000	8840303	2.493	0.000	39128589	89.2662	83.4361	6.8	Hexachlorobutadiene
4.179	0.000	6184773	4.627	0.000	49853539	82.5509	84.6808	2.5	Hexachlorobenzene
8.999	0.000	4183112	10.371	0.000	13819406	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	0.000	10900686	4.166	0.000	61416989	179.7703	151.2874	17.2	Tetrachloro-m-xyl
8.830	0.000	9451613	9.791	0.000	46527110	158.9243	166.6610	4.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	449.4	378.2	378.2~	115- 0
Decachlorobiphenyl	397.3	416.7	397.3~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

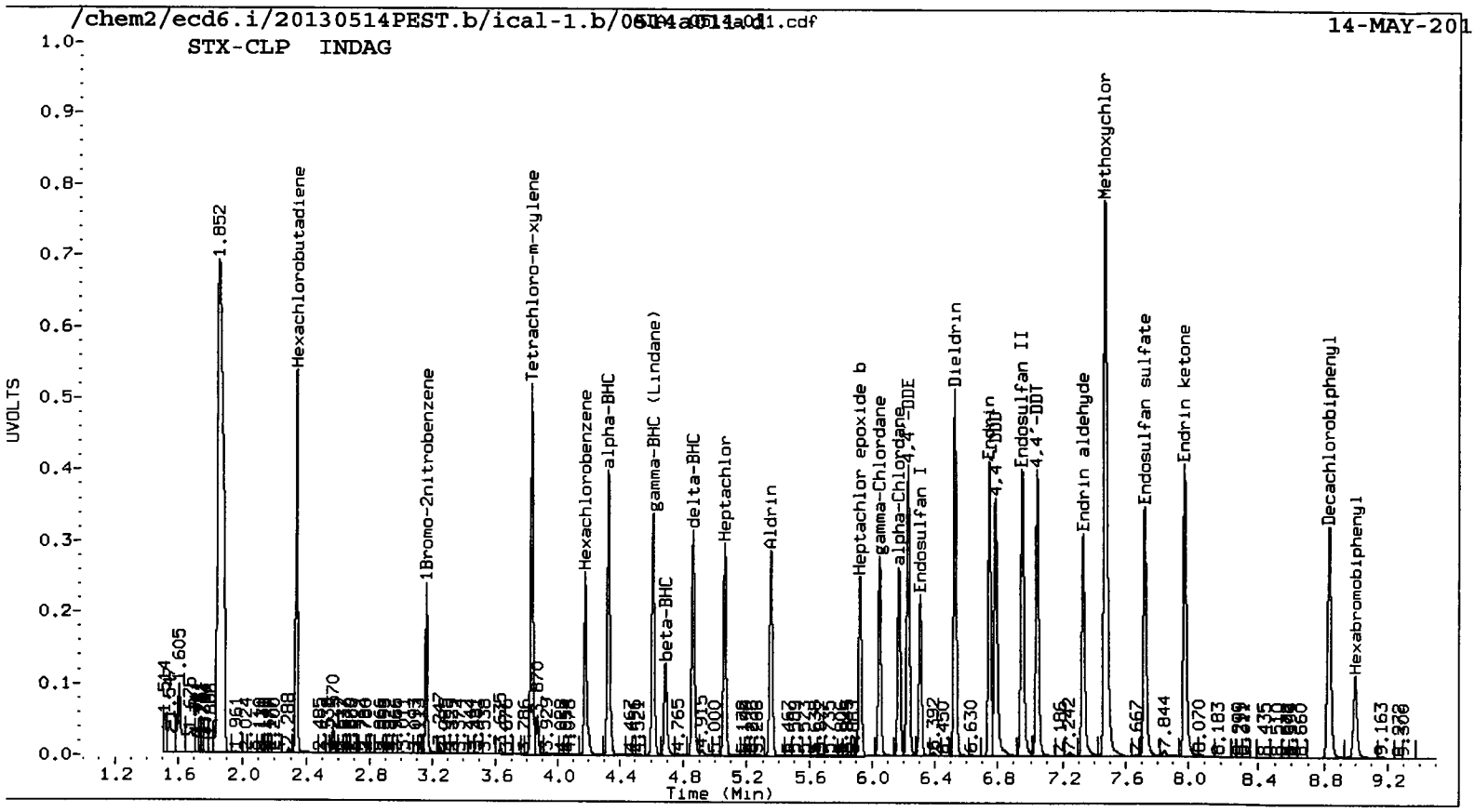
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	4447256	-19.2
Hexabromobiphenyl	5319006	4183112	-21.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	24971444	-14.1
Hexabromobiphenyl	16515704	13819406	-16.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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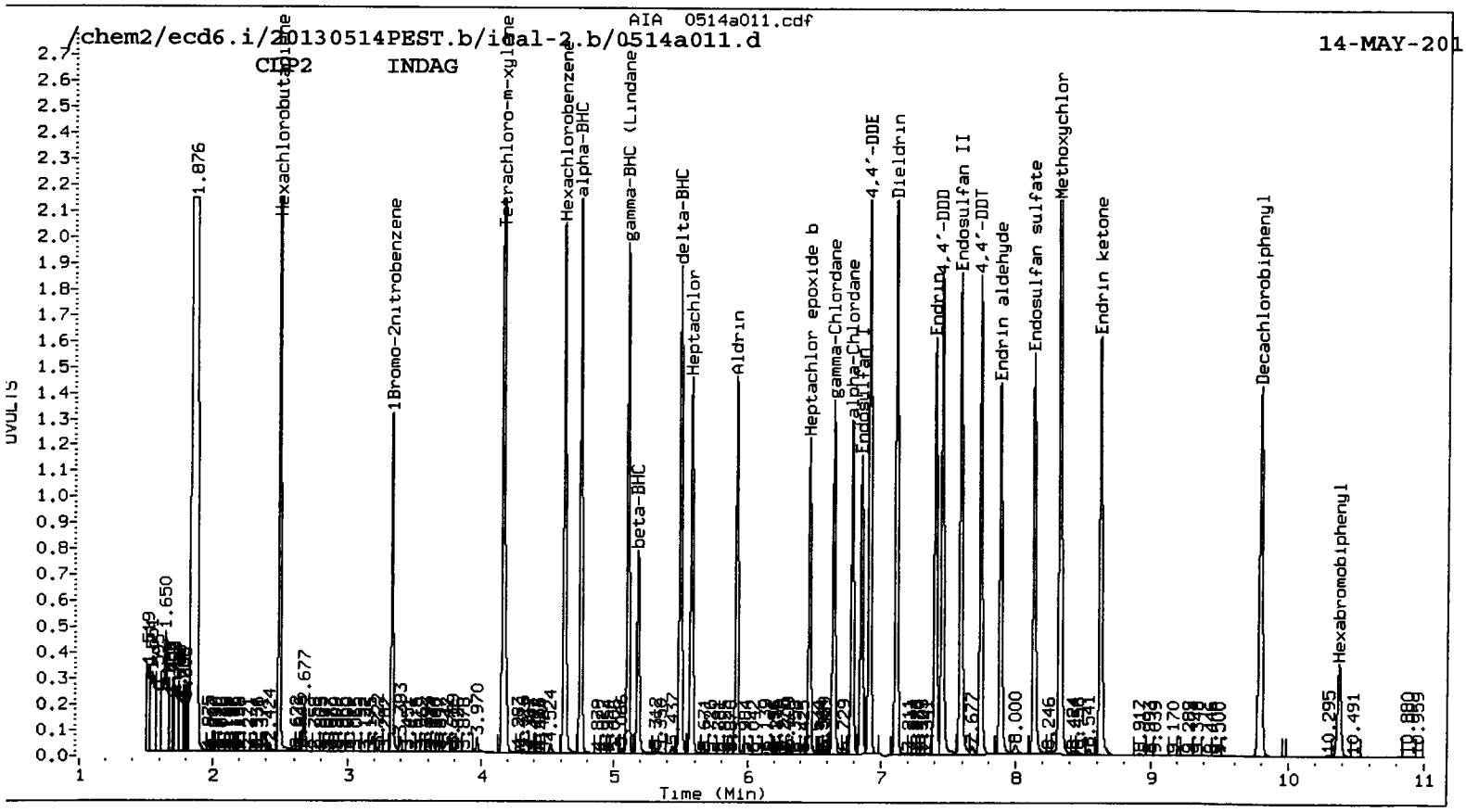
14-MAY-201
STX-CLP INDAG
UVOLTS
Time (Min)
1.852
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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DIA 0514a011.cdf
14-MAY-201
CLP2 INDAG
UVOLTS
Time (Min)
1.876
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: TOXAPH
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar
Injection Date: 14-MAY-2013 17:12
Report Date: 05/15/2013 14:43
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.160	0.000	5170972	3.329	0.000	29085221	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.999	0.000	5171544	10.371	0.000	16639283	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.003	2463544	4.165	-0.001	18029402	34.9417	38.1300	8.7	Tetrachloro-m-xylen
8.832	0.002	2745039	9.792	0.001	12769214	37.3347	37.9880	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	87.4	95.3	87.4~	150- 0
Decachlorobiphenyl	93.3	95.0	93.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

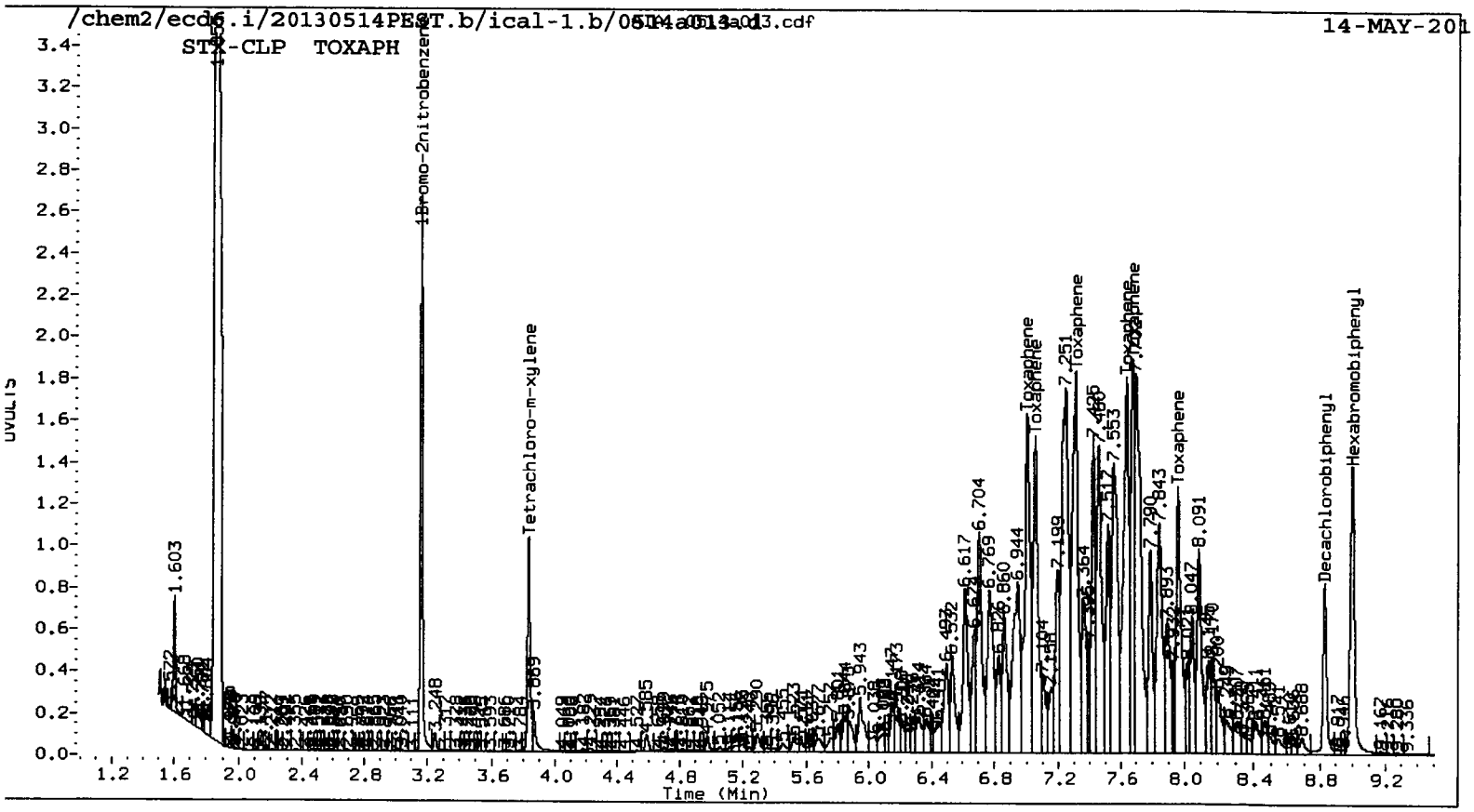
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5170972	-6.0
Hexabromobiphenyl	5319006	5171544	-2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29085221	0.1
Hexabromobiphenyl	16515704	16639283	0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.006	0.000	8045822	2500.0	1	7.338	0.000	30225007	2500.0
Toxaphene	2	7.057	0.000	6231410	2500.0	2	7.664	0.000	44930131	2500.0
Toxaphene	3	7.314	0.000	9313581	2500.0	3	7.894	0.000	48107139	2500.0
Toxaphene	4	7.640	0.000	8735760	2500.0	4	8.363	0.000	34031049	2500.0
Toxaphene	5	7.681	0.000	6192990	2500.0	5	8.401	0.000	44737734	2500.0
Toxaphene	6	7.961	0.000	5478732	2500.0	NS	---			----
Total STX-CLPAve (6 peaks): 2500.000						Total CLP2Ave (5 peaks): 2500.000				RPD = 0
Corrected Ave (6 peaks): 2500.000						Corrected Ave (5 peaks): 2500.000				RPD = 0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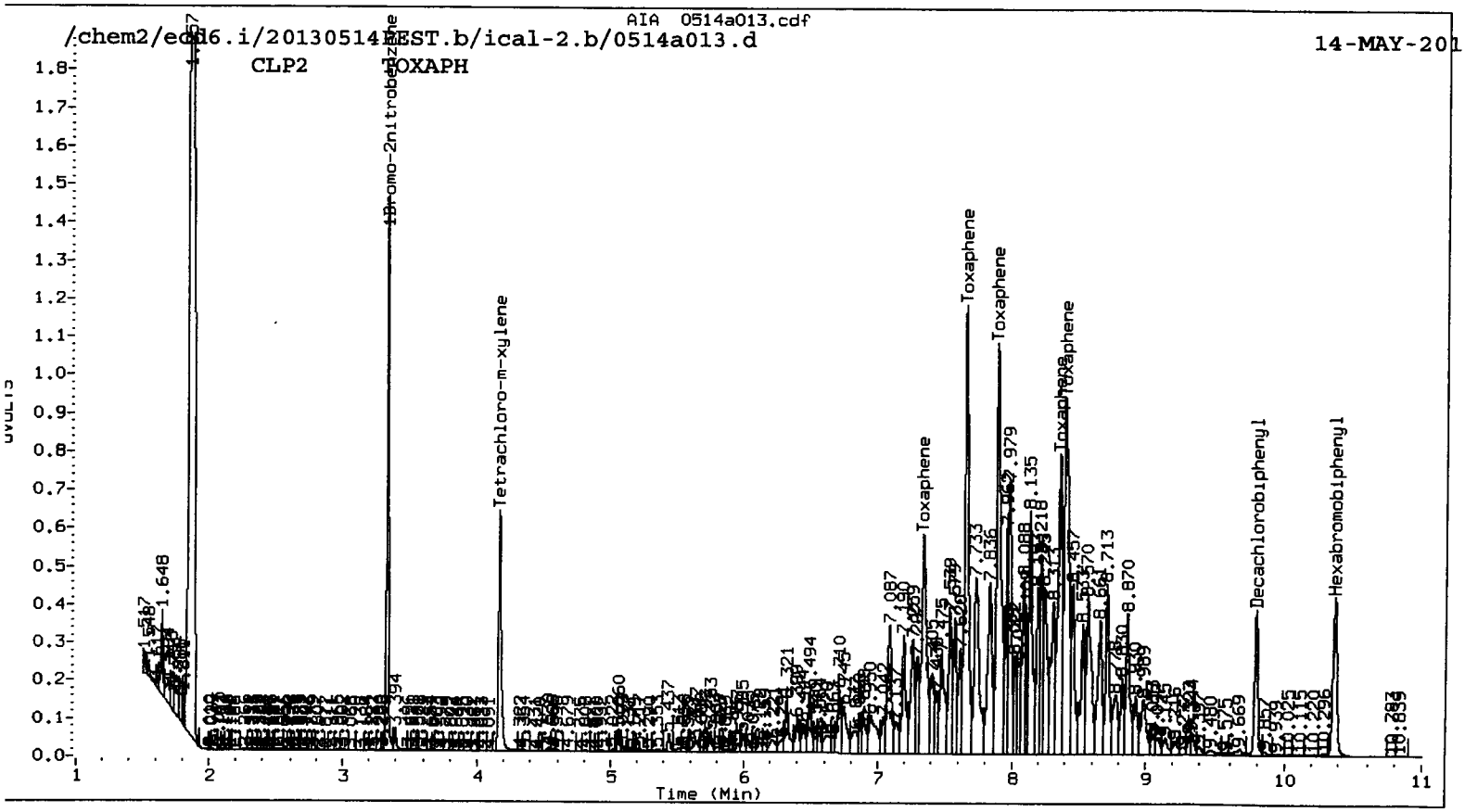
0514a013.cdf
14-MAY-201
STX-CLP TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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14-MAY-201
CLP2 TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/16/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a012.d ARI ID: INDAICV
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a012.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Injection Date: 14-MAY-2013 16:54
Compound Sublist: INDA
Report Date: 05/16/2013 12:55
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	0.000	5229139	3.331	0.001	29203550	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	4591630	4.755	0.003	26999593	41.2179	41.1684	0.1	alpha-BHC
4.708	-0.015	1792584	5.197	0.014	10448458	40.5888	41.4178	2.0	beta-BHC
4.882	0.022	3879613	5.509	0.014	21726867	41.7302	40.3376	3.4	delta-BHC
4.617	-0.001	3908034	5.114	0.004	23234633	40.4801	40.8304	0.9	gamma-BHC (Lindane)
5.064	0.000	3722436	5.579	0.004	21669499	39.6706	39.6263	0.1	Heptachlor
5.359	0.000	3844529	5.916	0.003	20810347	41.3920	40.3184	2.6	Aldrin
5.933	-0.002	3258516	6.471	0.004	17450909	38.9024	38.6037	0.8	Heptachlor epoxide
6.313	-0.002	3463827	6.859	0.004	16375535	43.5821	39.2110	10.6	Endosulfan I
6.534	-0.002	3468526	7.116	0.003	17381588	41.0650	40.8426	0.5	Dieldrin
6.252	0.004	3415443	6.926	0.011	17667309	50.4982	39.9568	23.3	4,4'-DDE
6.753	-0.002	2584296	7.406	0.003	12436481	38.9320	39.8967	2.4	Endrin
6.963	-0.002	2790296	7.597	0.005	14886672	38.7828	40.7048	4.8	Endosulfan II
6.812	0.000	3064870	7.465	0.011	14854516	40.2794	40.4761	0.5	4,4'-DDD
7.729	-0.001	2508266	8.139	0.005	11996679	38.8568	40.0995	3.1	Endosulfan sulfate
7.062	0.000	2701822	7.749	0.009	12175344	40.0722	40.2805	0.5	4,4'-DDT
7.490	0.003	1272077	8.331	0.006	5107174	39.4912	43.8423	10.4	Methoxychlor
7.985	-0.002	2977417	8.631	0.004	12316529	36.3255	37.8032	4.0	Endrin ketone
7.340	-0.002	2247383	7.894	0.006	11004894	37.1310	38.0722	2.5	Endrin aldehyde
6.057	-0.003	3572622	6.656	0.006	18499116	39.7714	39.0435	1.8	gamma-Chlordane
6.179	-0.003	3331051	6.792	0.004	17217290	39.8715	39.4406	1.1	alpha-Chlordane
2.356	0.020	10785	2.481	-0.012	5157	0.0926	0.0094	163.1*	Hexachlorobutadiene
4.186	-0.011	36977	4.635	0.007	5355	0.4198	0.0078	192.7*	Hexachlorobenzene
9.001	0.003	5072678	10.372	0.001	16453002	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	-0.002	2680346	4.168	0.001	18925047	37.5939	39.8620	5.9	Tetrachloro-m-xylen
8.835	0.001	2583146	9.794	0.003	12580025	35.8175	37.8489	5.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.0	99.7	94.0~	115- 0
Decachlorobiphenyl	89.5	94.6	89.5~	115- 0

WR99-01698

~ Indicates recovery outside QC Limits

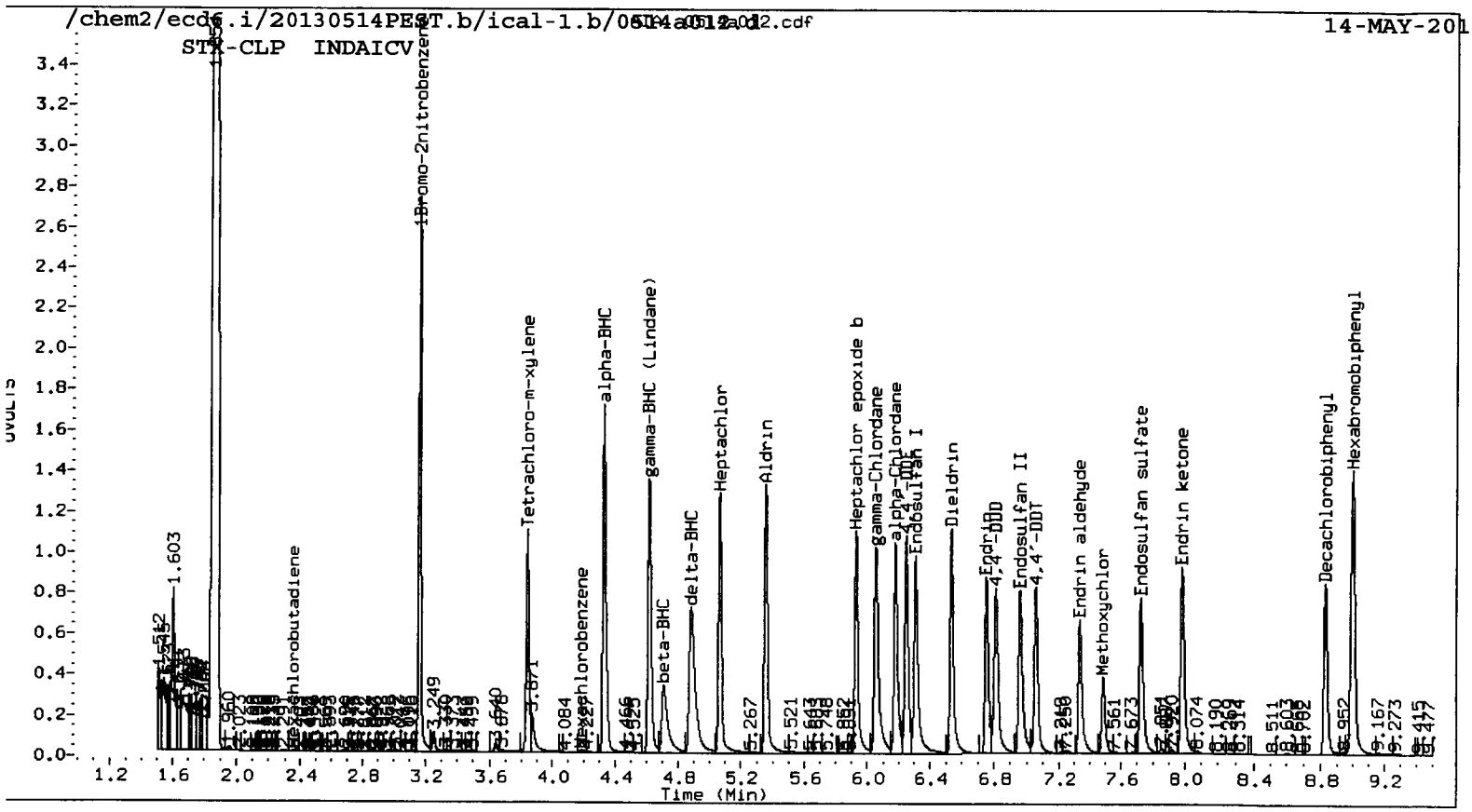
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5500669	5229139	-4.9
Hexabromobiphenyl	5319006	5072678	-4.6

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	29060499	29203550	0.5
Hexabromobiphenyl	16515704	16453002	-0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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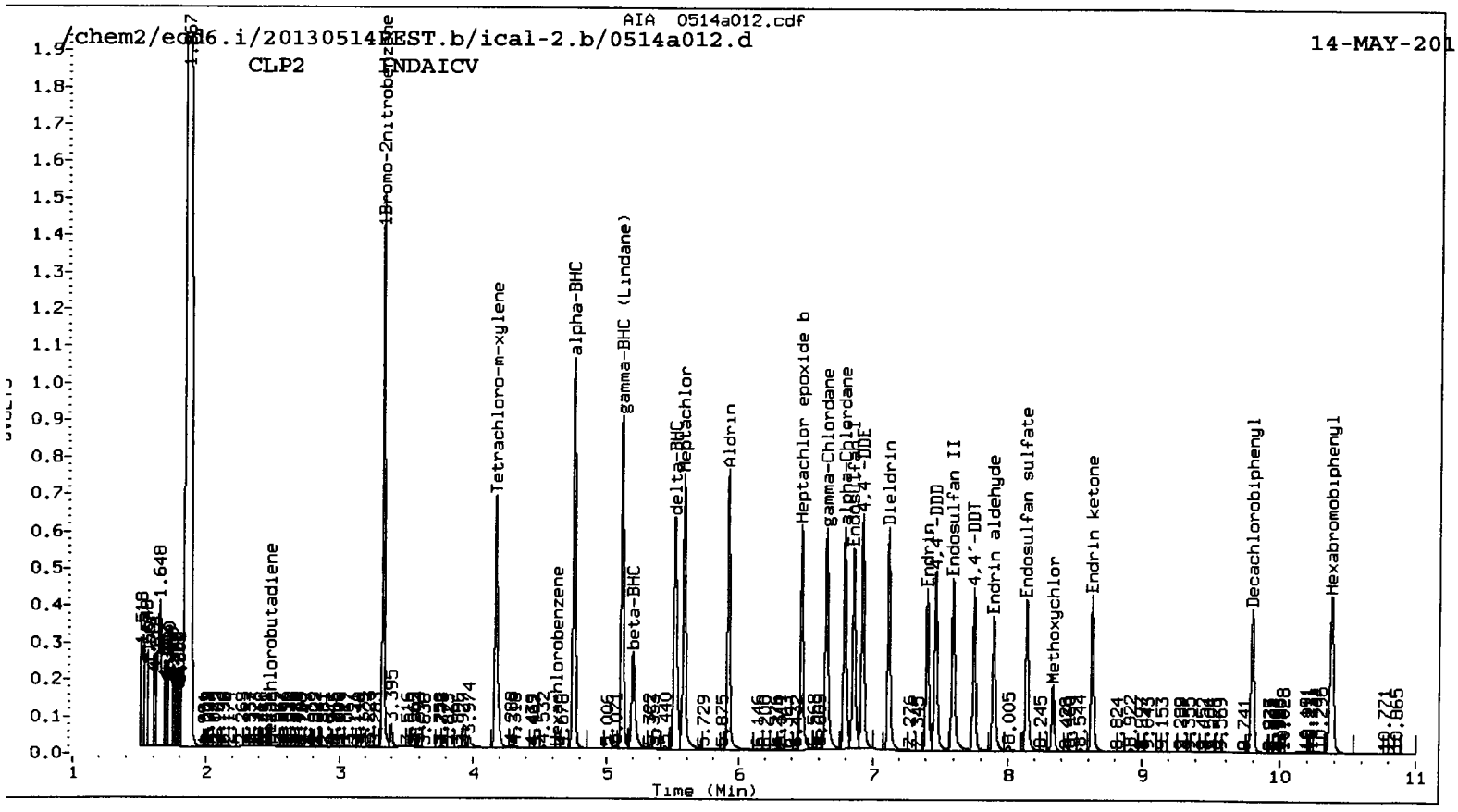
14-MAY-201
STX-CLP INDAICV
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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14-MAY-201
CLP2 INDAICV
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: HR99 Client ID: NPDES sampling

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 05/14/13 Analysis Start Date: 06/12/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / ____
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	NA / N / ____
Internal STD. within 50-200%?	NA / Y / N / ✓	MS / MSD RPD ≤30%?	NA / ____
Manual Integrations?	Y / N / ____	Samples Diluted?	Y / N / ____
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ____

Detail problems, corrective actions and/or other pertinent information below

DCB low ~4% on CLP1 for ccals, trans-nonachlor high ~4%
2,4-DDD high ~2% on CLP2. sample is non-detect

(Review 1) Analyst: _____ **Date:** 06/14/13

(Review 2) Reviewer: _____ **Date:** 06/14

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 06/12/13 Analysis: Pest Analyst: JZ

Column 1 Serial No.: 1005624 Column Type: STX CLP1

Column 2 Serial No.: 1014709 Column Type: STCLP2

GC Method: Pest Cal Date: 7µL

IS	Ical/Ccal	Vol. inj	ICV
	B370		
	B337		
7506-1	2048-2		

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	12-JUN-2013 13:44	0612a005.d	1	WND
2	12-JUN-2013 14:01	0612a006.d	1	DS
3	12-JUN-2013 14:19	0612a007.d	1	INDAE
4	12-JUN-2013 14:37	0612a008.d	1	TOXAPH
5	12-JUN-2013 14:57	0612a009.d	1	WND
6	12-JUN-2013 15:15	0612a010.d	1	GPC1
7	12-JUN-2013 15:33	0612a011.d	1	GPC2
8	12-JUN-2013 15:50	0612a012.d	1	WR99MBW1
9	12-JUN-2013 16:08	0612a013.d	1	WR99LCSW1
10	12-JUN-2013 16:26	0612a014.d	1	WR99LCSDW
11	12-JUN-2013 16:44	0612a015.d	1	WR99A
12	12-JUN-2013 17:02	0612a016.d	1	WS09MBS1
13	12-JUN-2013 17:19	0612a017.d	1	WS09LCSS1
14	12-JUN-2013 17:37	0612a018.d	3	WS09A
15	12-JUN-2013 17:55	0612a019.d	3	WS09ADUP
16	12-JUN-2013 18:13	0612a020.d	3	WS09B
17	12-JUN-2013 18:31	0612a021.d	3	WS09BMS
18	12-JUN-2013 18:48	0612a022.d	3	WS09BMSD
19	12-JUN-2013 19:06	0612a023.d	1	DS
20	12-JUN-2013 19:24	0612a024.d	1	INDAE
21	12-JUN-2013 19:42	0612a025.d	1	TOXAPH
22	12-JUN-2013 20:00	0612a026.d	1	WND

6/14/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

WR99 : 01763

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0612-1.b

ARI Job No.: WND Method: PEST0514.m Instrument: ecd6.i Date: 12-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1344	0612a005.d	WND		1	NO MANUAL INTEGRATION
1401	0612a006.d	DS		1	NO MANUAL INTEGRATION
1419	0612a007.d	INDAE		1	NO MANUAL INTEGRATION
1437	0612a008.d	TOXAPH		1	NO MANUAL INTEGRATION
1457	0612a009.d	WND		1	NO MANUAL INTEGRATION
1515	0612a010.d	GPC1		1	NO MANUAL INTEGRATION
1533	0612a011.d	GPC2		1	NO MANUAL INTEGRATION
1550	0612a012.d	WR99MBW1	WR99MBW1	1	NO MANUAL INTEGRATION
1608	0612a013.d	WR99LCSW1	WR99LCSW1	1	NO MANUAL INTEGRATION
1626	0612a014.d	WR99LCSDW1	WR99LCSDW1	1	NO MANUAL INTEGRATION
1644	0612a015.d	WR99A	KC-VT-1593	1	NO MANUAL INTEGRATION
1702	0612a016.d	WS09MBS1	WS09MBS1	1	NO MANUAL INTEGRATION
1719	0612a017.d	WS09LCSS1	WS09LCSS1	1	NO MANUAL INTEGRATION
1737	0612a018.d	WS09A	A	3	NO MANUAL INTEGRATION
1755	0612a019.d	WS09ADUP	A DUP	3	Heptachlor,
1813	0612a020.d	WS09B	B	3	Aroclor-1016, Aroclor-1242, Tetrachloro-m-xylene,
1831	0612a021.d	WS09BMS	B MS	3	NO MANUAL INTEGRATION
1848	0612a022.d	WS09BMSD	B MSD	3	NO MANUAL INTEGRATION
1906	0612a023.d	DS		1	NO MANUAL INTEGRATION
1924	0612a024.d	INDAE		1	NO MANUAL INTEGRATION

Sat Jun 13 08:51:14 2015

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0612-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2000	0612a026.d	WND		1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0612-1.b/0612a007.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/0612-2.b/0612a007.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 12-JUN-2013 14:19
Report Date: 06/13/2013 15:54
Matrix: NONE
Dilution Factor: 1.000

YZ 6/13/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.128	0.000	6164849	3.299	-0.001	31376876	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.283	-0.001	2440201	4.708	-0.001	13533304	18.5803	19.2060	3.3	alpha-BHC
4.642	0.000	874153	5.137	0.000	4776056	16.7889	17.6210	4.8	beta-BHC
4.811	0.000	1980178	5.448	0.000	11377502	18.0665	19.6601	8.4	delta-BHC
4.565	-0.001	2194852	5.063	-0.001	10706776	19.2840	17.5119	9.6	gamma-BHC (Lindane)
5.011	-0.001	2057605	5.528	0.000	11127065	18.6000	18.9383	1.8	Heptachlor
5.304	-0.001	2023859	5.866	0.000	10840063	18.4825	19.5471	5.6	Aldrin
5.879	-0.001	1873031	6.421	-0.001	10314348	18.9674	21.2363	11.3	Heptachlor epoxide
6.256	-0.001	1732894	6.808	0.000	9402009	18.4940	20.9536	12.5	Endosulfan I
6.478	-0.001	3727749	7.065	-0.001	18570864	37.4353	40.6146	8.1	Dieldrin
6.179	0.000	2791242	6.868	0.000	18746629	35.0053	39.4611	12.0	4,4'-DDE
6.697	0.000	3096803	7.355	0.000	14262877	37.8157	37.1082	1.9	Endrin
6.902	0.000	3030151	7.544	0.000	15920709	34.1387	35.3048	3.4	Endosulfan II
6.737	0.000	3116255	7.406	0.000	15561162	33.1969	34.3879	3.5	4,4'-DDD
7.670	0.000	2756195	8.087	0.000	13270330	34.6097	35.9736	3.9	Endosulfan sulfate
6.994	0.000	2864066	7.694	0.000	12874583	34.4321	34.5438	0.3	4,4'-DDT
7.420	0.001	6451607	8.277	0.000	23157085	162.3484	161.2205	0.7	Methoxychlor
7.925	0.000	3450178	8.578	0.000	14095757	34.1199	35.0874	2.8	Endrin ketone
7.279	-0.001	2440167	7.842	0.000	12119612	32.6793	34.0043	4.0	Endrin aldehyde
5.998	-0.001	1957672	6.603	0.000	10428619	18.4855	20.4857	10.3	gamma-Chlordane
6.123	0.000	1866750	6.741	0.000	9780631	18.9529	20.8532	9.5	alpha-Chlordane
2.310	0.001	2455773	2.467	0.001	9834318	17.8887	16.6893	6.9	Hexachlorobutadiene
4.137	-0.001	1744519	4.584	0.000	13873685	16.7974	18.7549	11.0	Hexachlorobenzene
8.920	-0.001	6258113	10.288	-0.002	20287175	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	0.000	3078369	4.125	0.000	18478000	36.6231	36.2246	1.1	Tetrachloro-m-xylen
8.771	0.000	2714525	9.725	0.000	14062954	30.5095	34.3141	11.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	91.6	90.6	90.6~	115- 0
Decachlorobiphenyl	76.3	85.8	76.3~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

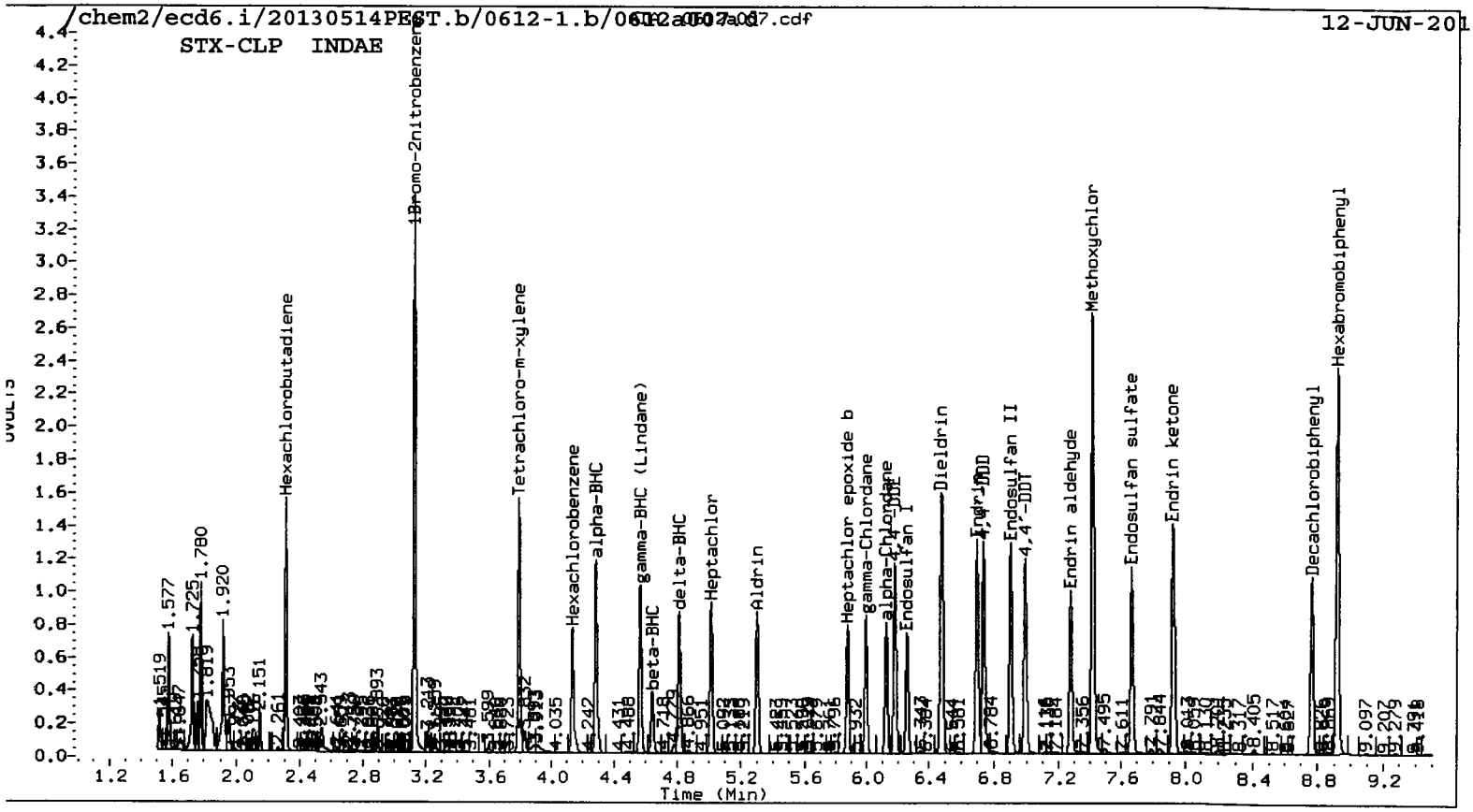
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6164849	12.1
Hexabromobiphenyl	5319006	6258113	17.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	31376876	8.0
Hexabromobiphenyl	16515704	20287175	22.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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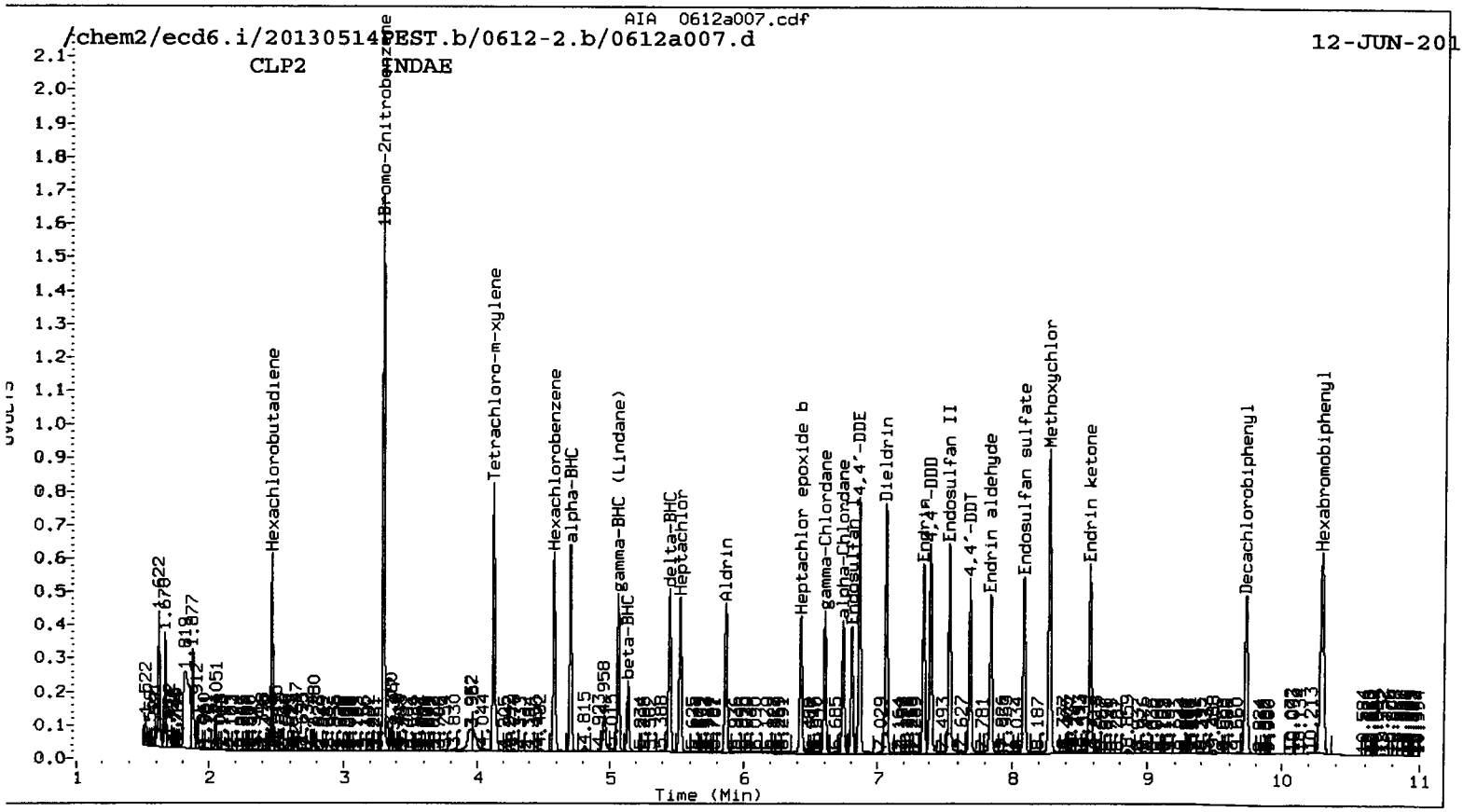
12-JUN-201
STX-CLP INDAE
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Methoxychlor
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0612a007.cdf
/chem2/ecd6.i/20130514PEST.b/0612-2.b/0612a007.d
12-JUN-201
CLP2 INDAE
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0612-1.b/0612a008.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/0612-2.b/0612a008.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 12-JUN-2013 14:37
Compound Sublist: TOXAPH Report Date: 06/13/2013 15:54
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YE 6/13/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.129	0.000	5829997	3.299	0.000	29871429	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.920	0.000	5894745	10.287	-0.003	18056260	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	0.000	2457130	4.126	0.000	15080579	30.9112	31.0542	0.5	Tetrachloro-m-xylen
8.771	0.000	2531819	9.724	-0.001	12630547	30.2101	34.6267	13.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	77.3	77.6	77.3~	150- 0
Decachlorobiphenyl	75.5	86.6	75.5~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

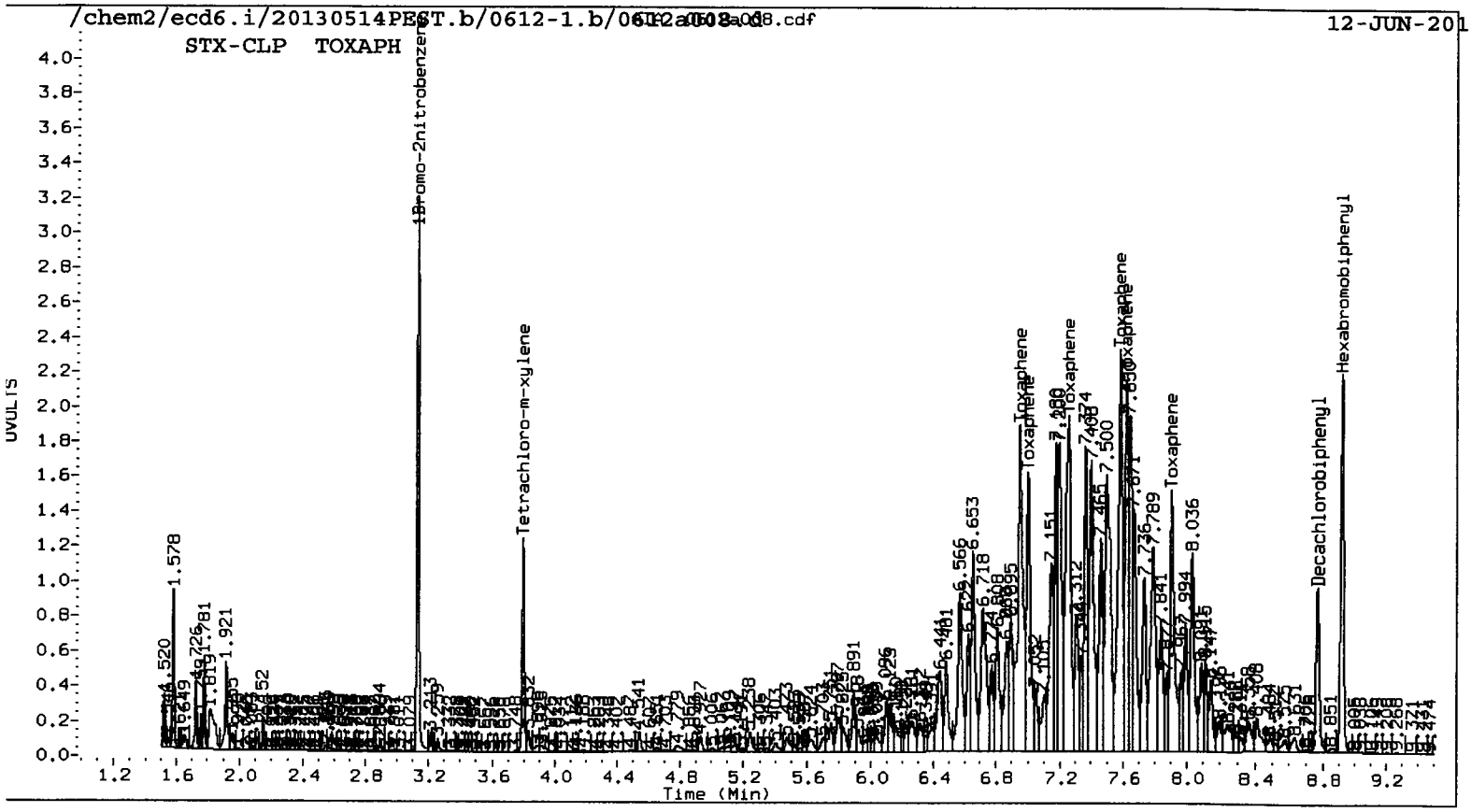
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5829997	6.0
Hexabromobiphenyl	5319006	5894745	10.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29871429	2.8
Hexabromobiphenyl	16515704	18056260	9.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.954	-0.001	8303249	2263.5	1	7.291	0.000	29213161	2226.7
Toxaphene	2	7.005	-0.001	5590514	1967.7	2	7.615	-0.001	43637621	2237.5
Toxaphene	3	7.263	-0.001	9402114	2214.1	3	7.845	-0.001	47917632	2294.7
Toxaphene	4	7.588	-0.001	9383446	2355.9	4	8.313	-0.001	34982547	2368.2
Toxaphene	5	7.627	0.000	6206699	2198.1	5	8.353	0.000	44054565	2268.6
Toxaphene	6	7.908	-0.001	5363446	2147.1	NS	---			----
Total STX-CLPAve (6 peaks): 2191.080						Total CLP2Ave (5 peaks): 2279.163				RPD = 4
Corrected Ave (6 peaks): 2191.080						Corrected Ave (5 peaks): 2279.163				RPD = 4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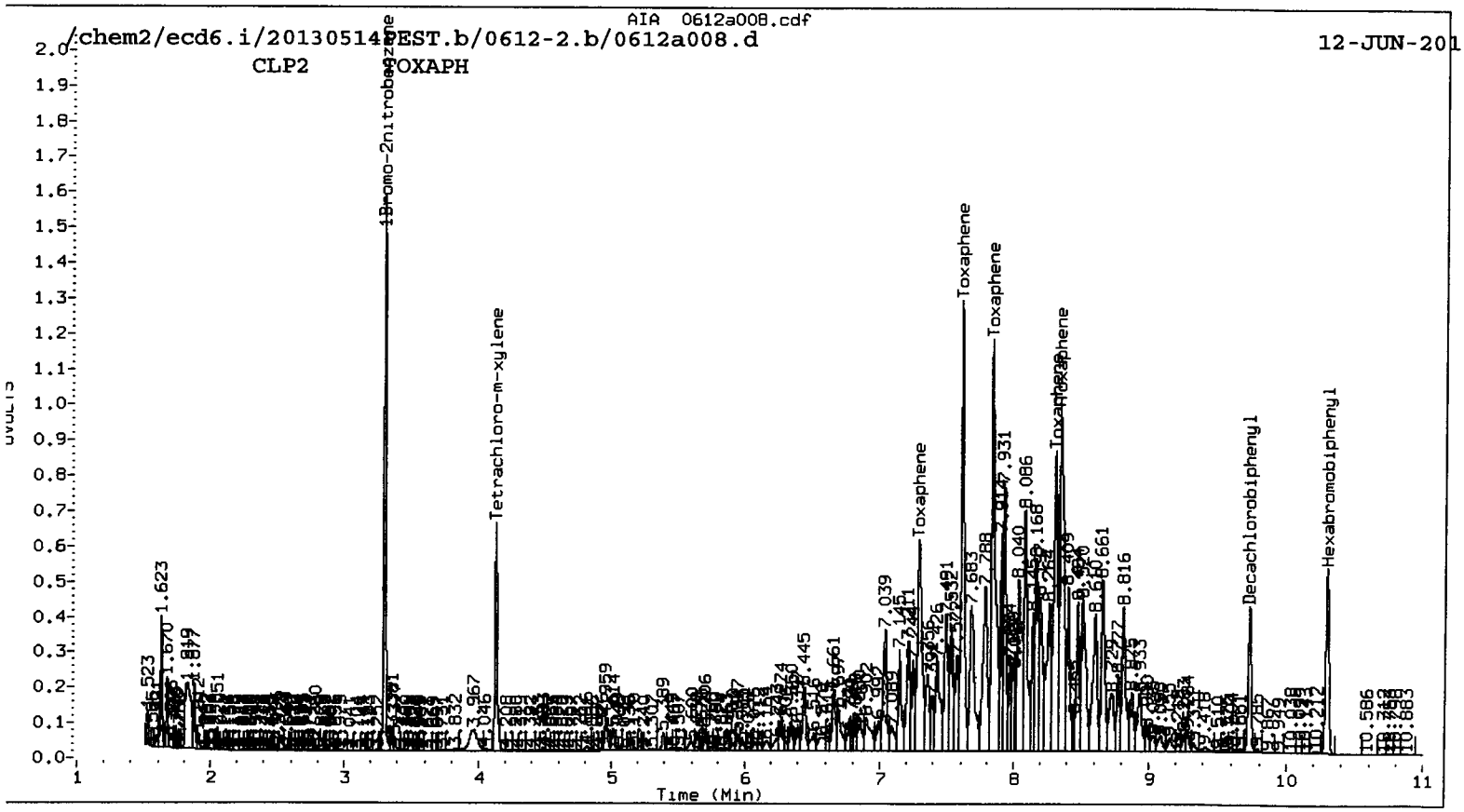
12-JUN-201
STX-CLP TOXAPH
UVVOLTS
Time (Min)
1.578
1.921
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0612a008.cdf
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12-JUN-201
CLP2 TOXAPH
UVVOLTS
Time (Min)
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/13/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/0612-1.b/0612a009.d ARI ID: WND
Data file 2: /chem2/ecd6.i/20130514PEST.b/0612-2.b/0612a009.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 12-JUN-2013 14:57
Compound Sublist: WND Report Date: 06/13/2013 15:54
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.759	0.004	19961	1.726	0.002	258341	0.0000	0.0000	---	Hexachloroethane
3.130	0.001	5603121	3.299	0.000	29062075	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.003	2909497	6.332	0.000	16168487	38.8789	40.8058	4.8	Oxychlordane
5.862	0.004	2287799	6.581	0.001	11830433	40.4995	39.9808	1.3	2,4-DDE
6.110	0.003	3721692	6.689	-0.003	18813553	40.5401	45.3743	11.3	trans-Nonachlor
6.348	0.004	2084260	7.066	0.001	10638030	41.6803	46.1418	10.2	2,4-DDD
6.586	0.004	2333313	7.353	0.001	11076841	41.7209	45.8447	9.4	2,4-DDT
6.725	0.003	4058566	7.413	-0.004	19586788	40.9261	45.1658	9.8	cis-Nonachlor
7.599	0.003	2433693	8.565	0.001	9427970	39.6372	40.8547	3.0	Mirex
8.923	0.003	5597162	10.290	0.000	18479613	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.002	2956504	4.127	0.002	18555789	38.6995	39.2745	1.5	Tetrachloro-m-xylen
8.773	0.003	2727480	9.726	0.002	14265972	34.2750	38.2143	10.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	96.7	98.2	96.7~	150- 0
Decachlorobiphenyl	85.7	95.5	85.7~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

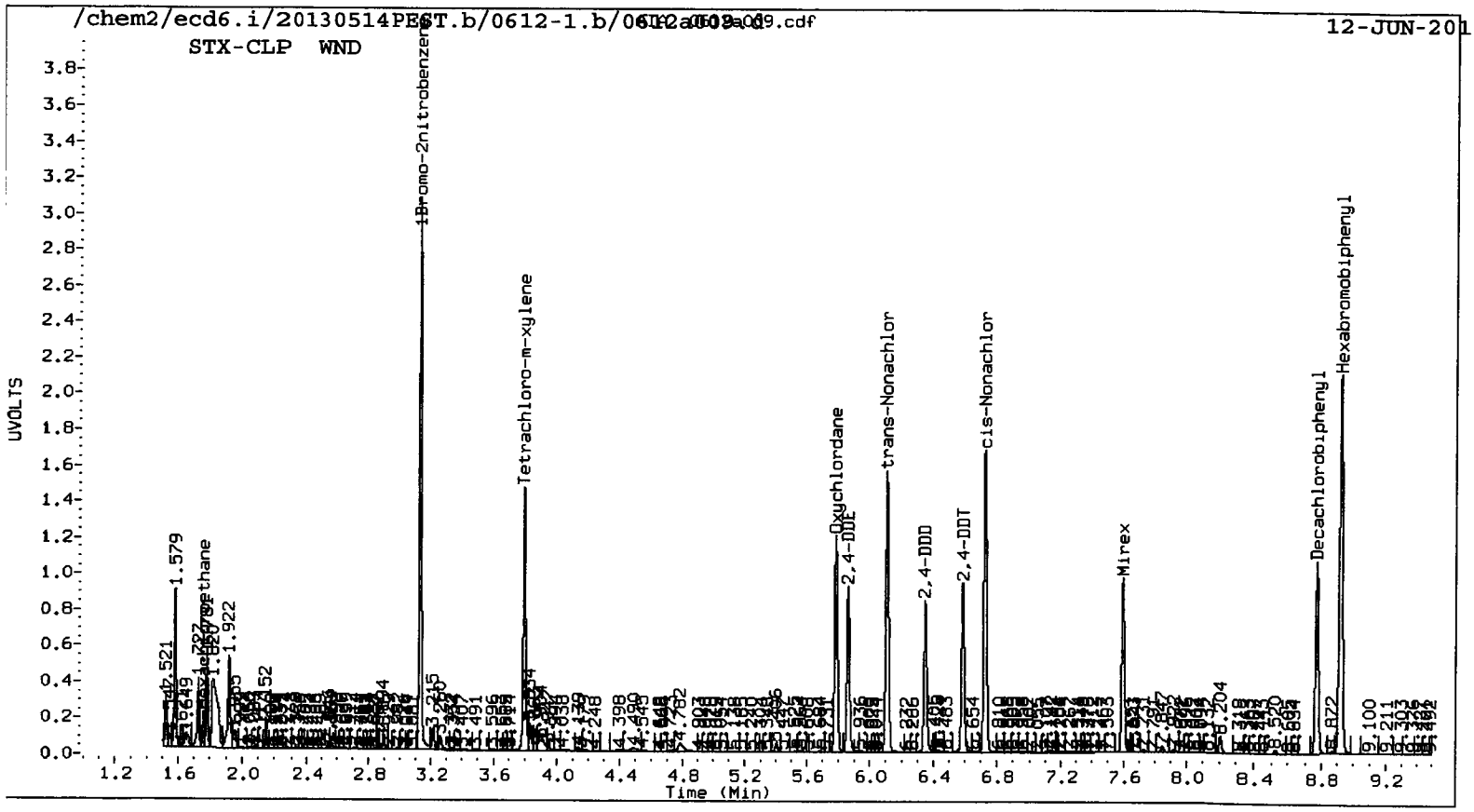
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5603121	1.9
Hexabromobiphenyl	5319006	5597162	5.2

WR99:91713

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29062075	0.0
Hexabromobiphenyl	16515704	18479613	11.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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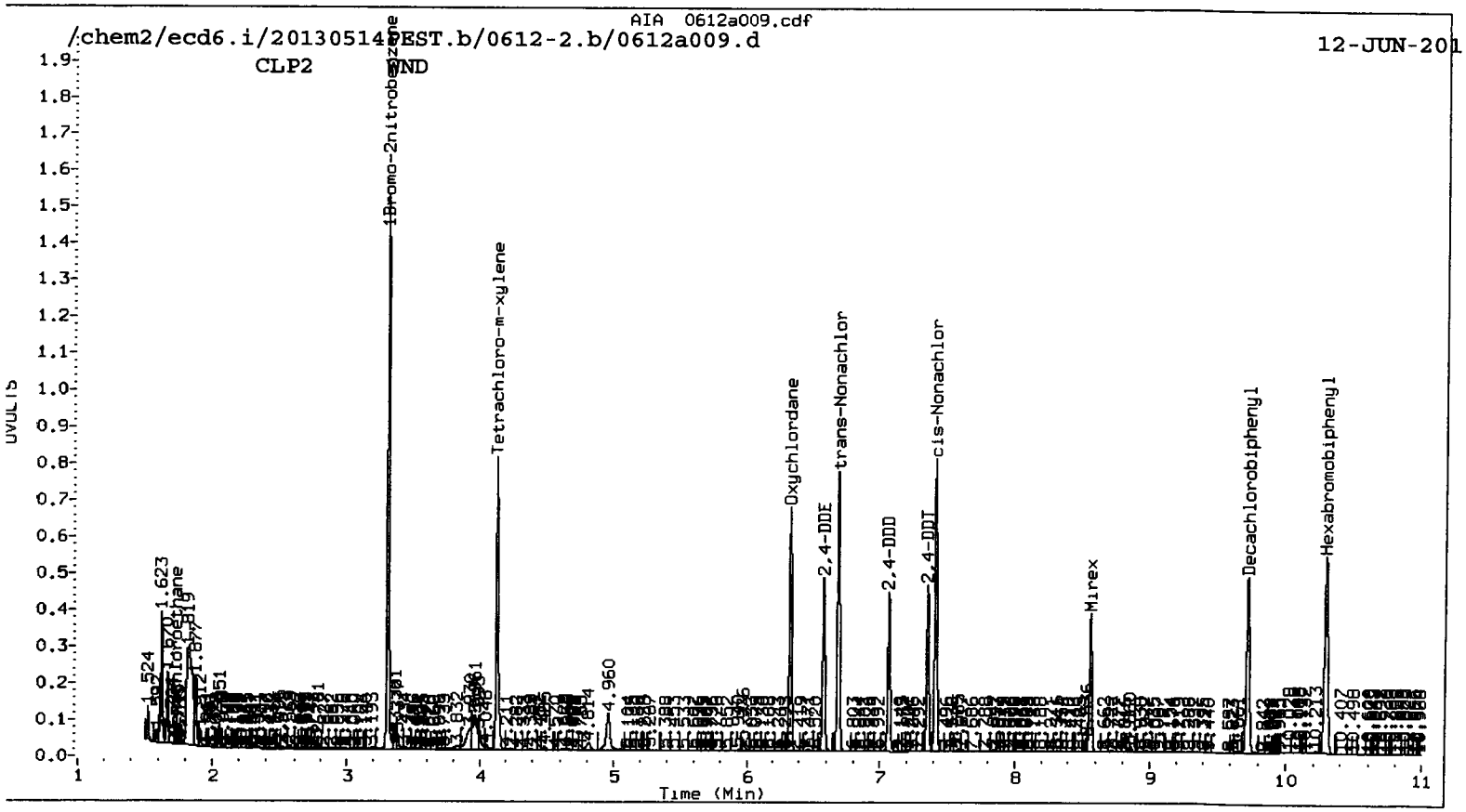
STX-CLP WND
12-JUN-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WND
12-JUN-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0612-1.b/0612a012.d ARI ID: WR99MBW1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0612-2.b/0612a012.d Client ID: WR99MBW1
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 12-JUN-2013 15:50
Compound Sublist: wpest Report Date: 06/14/2013 10:33
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

JK 06/14/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.129	0.000	6035583	3.299	0.000	31448786	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.276	-0.008	6315	4.707	-0.002	10194	0.0491	0.0144	109.1*	alpha-BHC
4.643	0.002	1801	5.138	0.001	8727	0.0353	0.0321	9.6	beta-BHC
4.795	-0.016	56030	5.455	0.008	29229	0.5221	0.0504	164.8*	delta-BHC
4.562	-0.004	4329	5.098	0.033	9796	0.0389	0.0160	83.4*	gamma-BHC (Lindane)
5.011	-0.001	3097	5.529	0.000	11545	0.0286	0.0196	37.3	Heptachlor
5.327	0.022	36821	5.851	-0.015	130869	0.3435	0.2354	37.3	Aldrin
5.876	-0.004	7277	6.415	-0.006	19275	0.0753	0.0396	62.1*	Heptachlor epoxide b
6.289	0.033	1257	6.788	-0.021	3735	0.0137	0.0083	49.1*	Endosulfan I
6.477	-0.002	1039	7.114	0.048	7320	0.0107	0.0160	39.9	Dieldrin
6.184	0.005	2276	6.867	-0.001	16973	0.0292	0.0356	20.0	4,4'-DDE
6.699	0.002	1050	7.355	0.000	8616	0.0130	0.0217	50.1*	Endrin
6.905	0.002	1677	7.539	-0.005	11275	0.0192	0.0242	23.2	Endosulfan II
6.740	0.004	5005	7.406	0.000	9306	0.0542	0.0199	92.4*	4,4'-DDD
7.671	0.001	2005	8.089	0.002	28239	0.0256	0.0742	97.4*	Endosulfan sulfate
7.000	0.005	3032	7.705	0.011	13552	0.0370	0.0353	4.9	4,4'-DDT
7.421	0.001	2309	8.276	-0.001	27410	0.0590	0.1850	103.2*	Methoxychlor
7.921	-0.005	30920	8.572	-0.005	21878	0.3107	0.0528	141.9*	Endrin ketone
7.278	-0.002	3012	7.843	0.002	12301	0.0410	0.0335	20.2	Endrin aldehyde
5.997	-0.002	1811	6.617	0.014	16138	0.0175	0.0316	57.7*	gamma-Chlordane
6.123	0.000	2601	6.744	0.003	7321	0.0270	0.0156	53.6*	alpha-Chlordane
2.328	0.019	18666	2.439	-0.027	2335305	0.1389	3.9541	186.4*	Hexachlorobutadiene
4.137	0.000	40960	4.583	-0.001	30046	0.4028	0.0405	163.4*	Hexachlorobenzene
5.804	0.020	1221	6.333	0.001	13148	0.0148	0.0307	69.6*	Oxychlordane
----			6.567	-0.013	14212	0.0000	0.0444	---	2,4-DDE
----			6.683	-0.009	19005	0.0000	0.0405	---	trans-Nonachlor
----			7.061	-0.003	24612	0.0000	0.0943	---	2,4-DDD
----			7.374	0.021	6005	0.0000	0.0220	---	2,4-DDT
----			7.461	0.044	11351	0.0000	0.0231	---	cis-Nonachlor
7.596	0.000	1375	8.534	-0.030	263429	0.0204	1.0083	192.1*	Mirex
8.920	0.000	6159253	10.288	-0.002	20922041	80.0000	80.0000	0.0	Hexabromobiphenyl
1.757	0.002	2354	1.725	0.001	537139	0.0000	0.0000	---	Hexachloroethane
----			7.307	-0.029	15120	0.0000	0.0000	---	Kepone
3.797	0.001	1953685	4.126	0.000	12425210	23.7406	24.3029	2.3	Tetrachloro-m-xylen
8.771	0.000	1973372	9.725	0.000	10553879	22.5354	24.9704	10.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	59.4	60.8	59.4	52-100
Decachlorobiphenyl	56.3	62.4	56.3	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

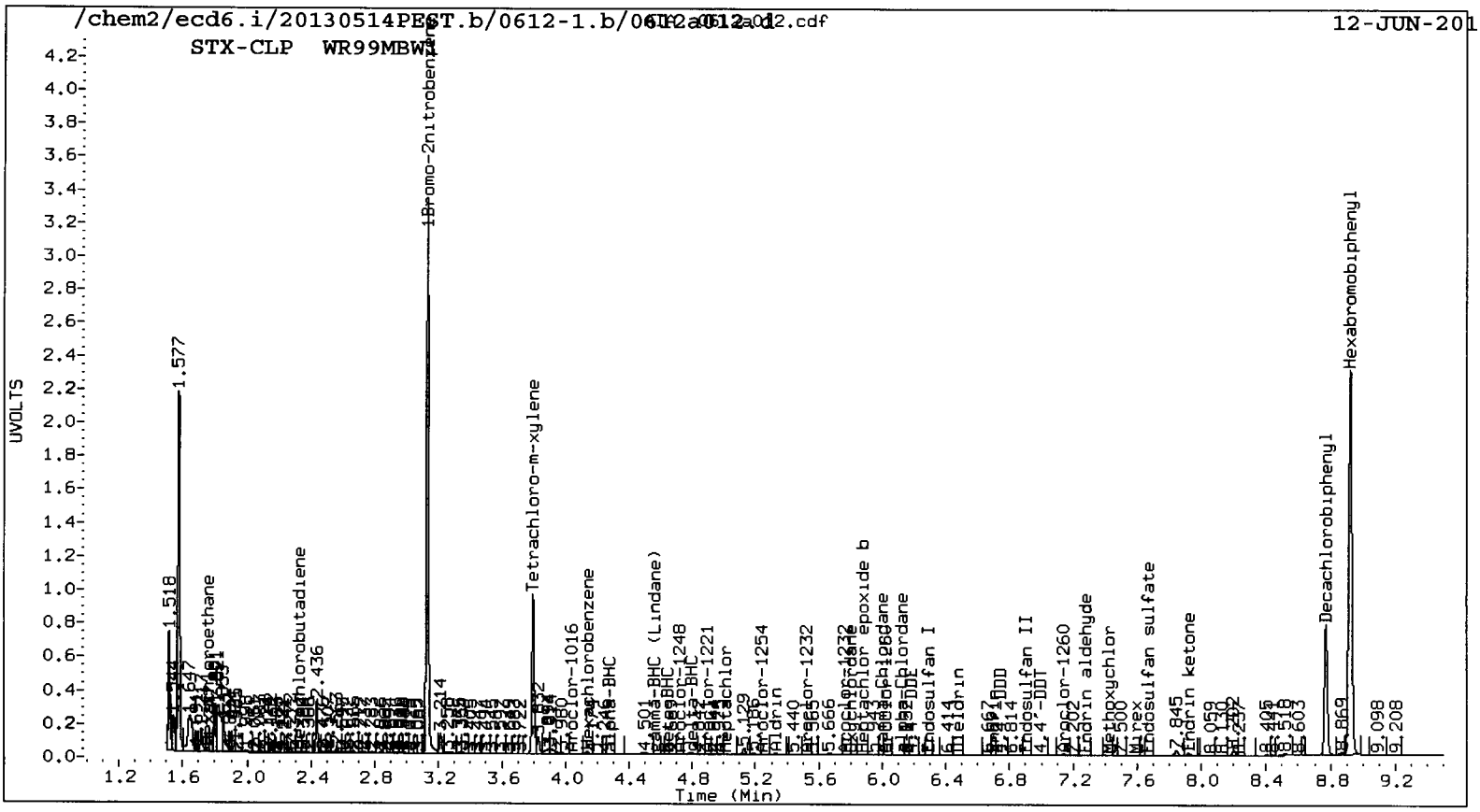
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6035583	9.7
Hexabromobiphenyl	5319006	6159253	15.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	31448786	8.2
Hexabromobiphenyl	16515704	20922041	26.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.000	0.044	3032	0.8	1	7.307	0.016	15120	1.0
Toxaphene	2	---			0.000	2	7.618	0.002	4652	0.2
Toxaphene	3	7.278	0.014	3012	0.7	3	7.843	-0.003	12301	0.5
Toxaphene	4	7.596	0.007	1375	0.3	4	8.319	0.005	16203	0.9
Toxaphene	5	---			0.000	5	8.346	-0.007	3036	0.1
Toxaphene	6	7.921	0.012	30920	11.8	NS	---			----
Total STX-CLPAve (4 peaks): 3.412						Total CLP2Ave (5 peaks): 0.558			RPD = 144*	
Corrected Ave (3 peaks): 0.600						Corrected Ave (4 peaks): 0.449			RPD = 29	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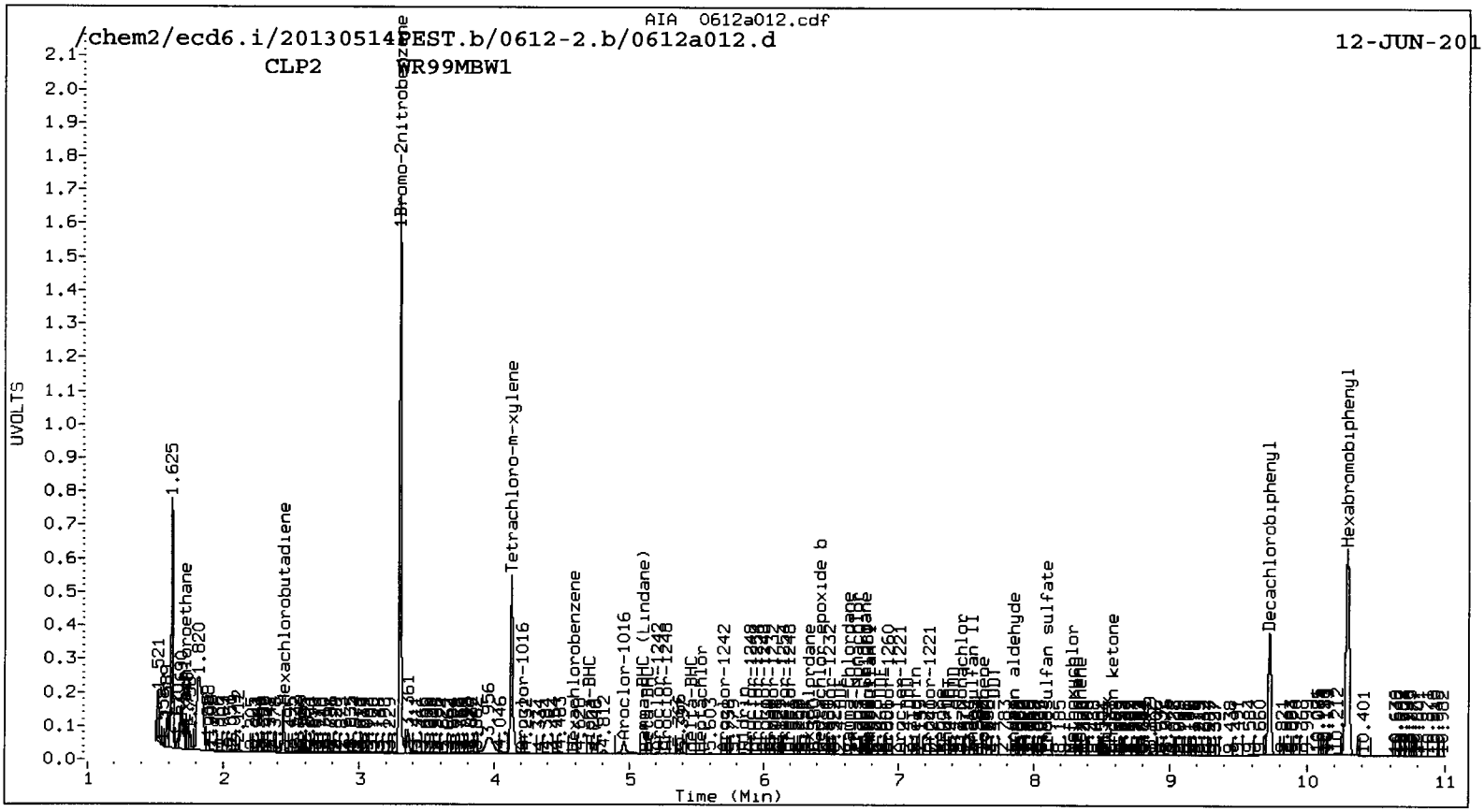
12-JUN-201
STX-CLP WR99MBW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
1.577
1.518
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachloroethane
Hexachlorobenzene
Aroclor-1016
Aroclor-1248
Aroclor-1221
Aroclor-1254
Aroclor-1232
Aroclor-1260
Decachlorobiphenyl
Hexabromobiphenyl
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Methoxychlor
Mirex
Endosulfan I
Endosulfan II
4,4'-DDT
4,4'-DDE
4,4'-DDD
Dieldrin
Endrin
Heptachlor epoxide b
Heptachlor
Chlordane
Gamma-BHC (Lindane)
Beta-BHC
Delta-BHC
Alpha-BHC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12-JUN-201
CLP2 WR99MBW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
1.625
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachloroethane
Hexachlorobenzene
Aroclor-1016
Aroclor-1248
Aroclor-1221
Aroclor-1242
Aroclor-1254
Aroclor-1232
Aroclor-1260
Decachlorobiphenyl
Hexabromobiphenyl
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Methoxychlor
Endosulfan II
4,4'-DDT
Dieldrin
Endrin
Heptachlor epoxide b
Chlordane
Gamma-BHC (Lindane)
Beta-BHC
Alpha-BHC

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0612-1.b/0612a013.d ARI ID: WR99LCSW1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0612-2.b/0612a013.d Client ID: WR99LCSW1
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Compound Sublist: wpest Report Date: 06/14/2013 10:33
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

06/14/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.129	0.000	6354177	3.299	0.000	33075009	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.284	0.000	2252744	4.709	0.000	12730829	16.6419	17.1396	2.9	alpha-BHC
4.642	0.001	858982	5.138	0.001	4732083	16.0060	16.5624	3.4	beta-BHC
4.812	0.001	1917579	5.449	0.001	11322190	16.9741	18.5601	8.9	delta-BHC
4.566	0.000	2081642	5.065	0.000	10784560	17.7444	16.7335	5.9	gamma-BHC (Lindane)
5.012	0.000	1700739	5.529	0.001	9490871	14.9159	15.3241	2.7	Heptachlor
5.305	0.000	1572245	5.867	0.001	8452108	13.9304	14.4586	3.7	Aldrin
5.880	0.000	1844371	6.421	0.000	9788042	18.1207	19.1180	5.4	Heptachlor epoxide b
6.257	0.000	1746884	6.808	0.000	9166384	18.0878	19.3796	6.9	Endosulfan I
6.479	0.000	3696567	7.066	0.000	18550058	36.0161	38.4862	6.6	Dieldrin
6.182	0.002	3392159	6.869	0.001	17536875	41.2739	35.0193	16.4	4,4'-DDE
6.698	0.000	3072655	7.356	0.000	14238455	36.0662	33.9559	6.0	Endrin
6.903	0.000	3063388	7.544	0.000	15477422	33.1751	31.4601	5.3	Endosulfan II
6.738	0.001	3050468	7.407	0.001	15320493	31.2363	31.0332	0.7	4,4'-DDD
7.671	0.000	2701708	8.087	0.000	13212654	32.6103	32.8308	0.7	Endosulfan sulfate
6.995	0.001	2895481	7.694	0.001	13418702	33.4603	33.0018	1.4	4,4'-DDT
7.420	0.001	6448461	8.277	0.000	23564495	155.9784	150.3779	3.7	Methoxychlor
7.925	0.000	3393620	8.577	0.000	14302855	32.2595	32.6344	1.2	Endrin ketone
7.280	0.000	2180867	7.841	0.000	10773769	28.0744	27.7079	1.3	Endrin aldehyde
5.999	0.000	1860939	6.604	0.001	9784638	17.0485	18.2338	6.7	gamma-Chlordane
6.123	0.000	1787959	6.742	0.001	9171313	17.6121	18.5501	5.2	alpha-Chlordane
2.310	0.001	1419722	2.467	0.001	6164574	10.0336	9.9245	1.1	Hexachlorobutadiene
4.138	0.000	1372977	4.585	0.001	10925544	12.8261	14.0112	8.8	Hexachlorobenzene
5.797	0.013	12753	6.346	0.014	2975	0.1465	0.0066	182.8*	Oxychlordane
5.835	-0.022	1722	6.543	-0.037	106480	0.0262	0.3162	169.4*	2,4-DDE
----			6.686	-0.006	22363	0.0000	0.0450	---	trans-Nonachlor
6.346	0.002	40015	7.029	-0.036	41712	0.6880	0.1511	128.0*	2,4-DDD
6.582	0.000	17022	----			0.2617	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.612	0.016	16600	8.534	-0.031	391890	0.2324	1.4179	143.7*	Mirex
8.920	0.000	6510512	10.288	-0.002	22132570	80.0000	80.0000	0.0	Hexabromobiphenyl
1.777	0.021	6180	1.726	0.002	497746	0.0000	0.0000	---	Hexachloroethane
6.545	-0.036	2540	7.291	-0.046	28100	0.0000	0.0000	---	Kepone
3.797	0.001	2047635	4.126	0.000	12892983	23.6347	23.9779	1.4	Tetrachloro-m-xylen
8.771	0.000	1938678	9.725	0.000	10353113	20.9447	23.1556	10.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	59.1	59.9	59.1	52-100
Decachlorobiphenyl	52.4	57.9	52.4	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

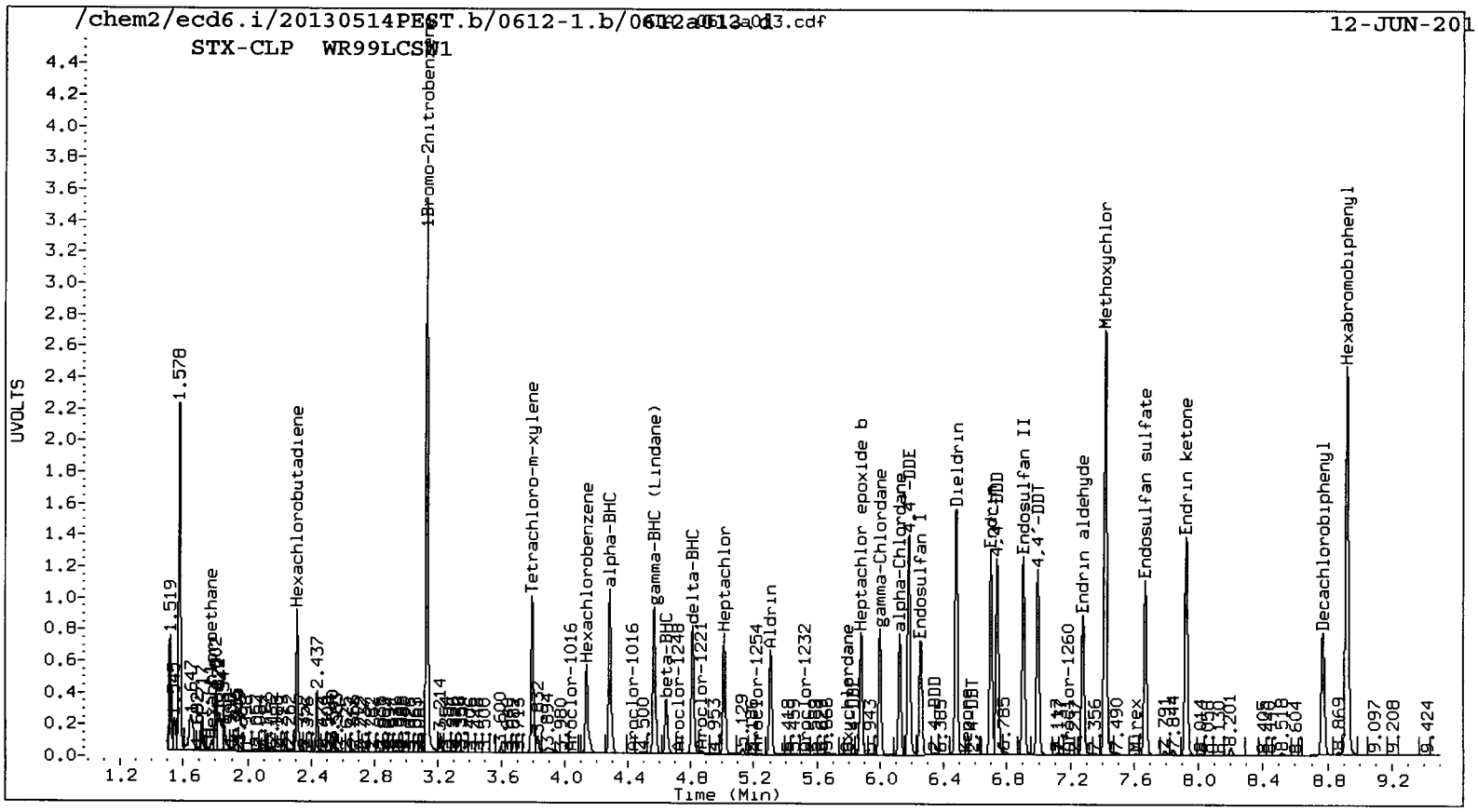
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6354177	15.5
Hexabromobiphenyl	5319006	6510512	22.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	33075009	13.8
Hexabromobiphenyl	16515704	22132570	34.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.995	0.040	2895481	714.7	1	7.291	-0.001	28100	1.7	
Toxaphene	2	---			0.000	2	7.627	0.011	218398	9.1	
Toxaphene	3	7.280	0.016	2180867	465.0	3	7.841	-0.005	10773769	420.9	
Toxaphene	4	7.612	0.023	16600	3.8	4	8.277	-0.037	23564495	1301.4	
Toxaphene	5	---			0.000	5	8.377	0.024	125393	5.3	
Toxaphene	6	7.925	0.016	3393620	1230.1	NS	---			----	
Total STX-CLPAve (4 peaks): 603.374						Total CLP2Ave (5 peaks): 347.703				RPD = 54*	
Corrected Ave (3 peaks): 394.477						Corrected Ave (4 peaks): 109.268				RPD = 113*	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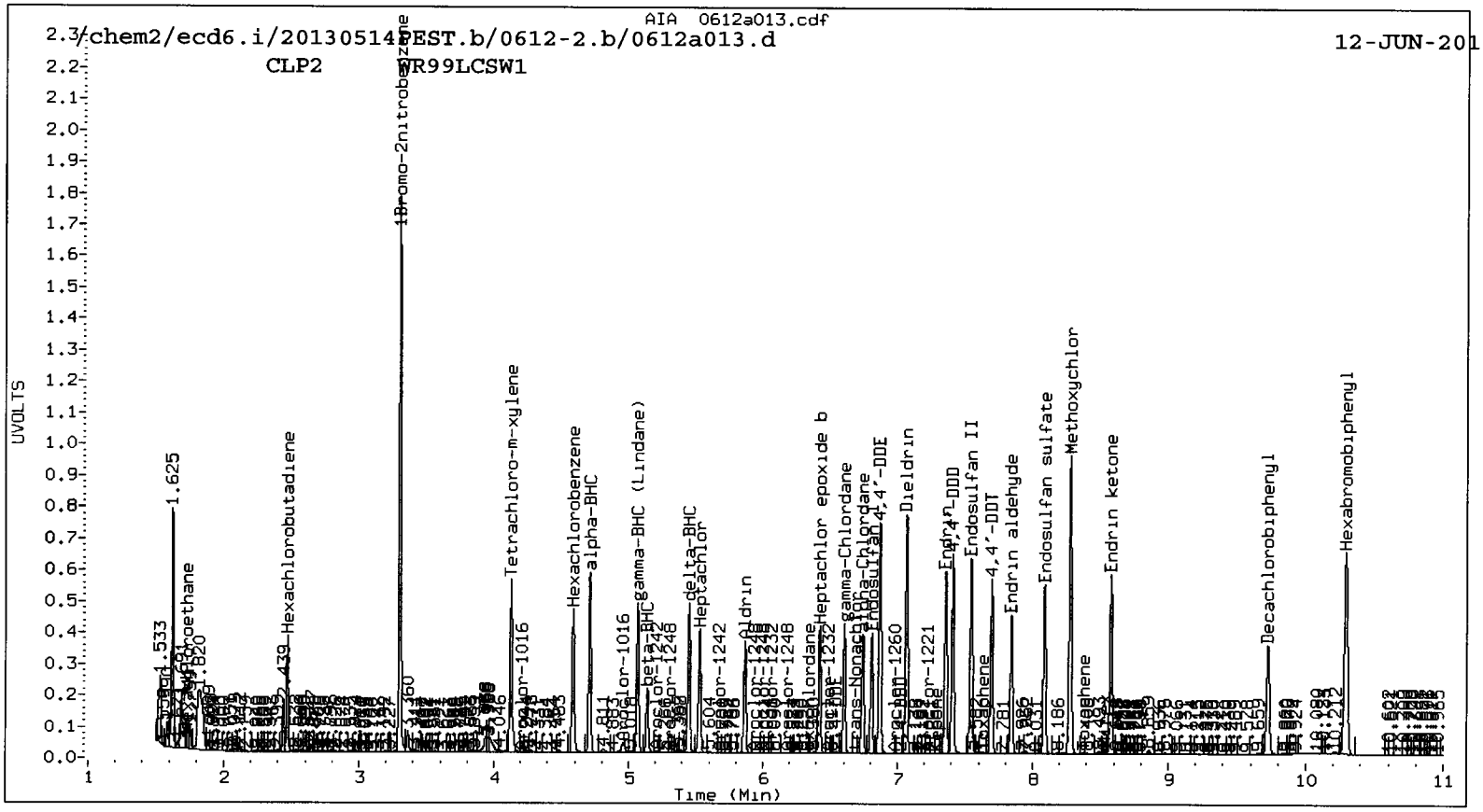
12-JUN-201
UVOLTS
Time (Min)
1.519
1.578
Hexachlorobutadiene
2.437
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WR99LCSW1
12-JUN-201
UVOLTS
Time (Min)
1.625
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

WR99 : 61724

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

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Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 12-JUN-2013 16:26
Compound Sublist: wpest Report Date: 06/14/2013 10:33
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

06/14/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.129	0.000	6318779	3.299	0.000	33119544	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.284	0.000	2216521	4.708	-0.001	12574925	16.4660	16.9069	2.6	alpha-BHC
4.642	0.000	851043	5.137	0.000	4708976	15.9469	16.4594	3.2	beta-BHC
4.811	0.000	1891432	5.449	0.001	11191870	16.8364	18.3218	8.4	delta-BHC
4.566	0.000	2048673	5.065	0.000	10695531	17.5611	16.5730	5.8	gamma-BHC (Lindane)
5.012	-0.001	1669278	5.528	0.000	9371165	14.7220	15.1105	2.6	Heptachlor
5.304	-0.001	1555172	5.866	0.000	8380594	13.8563	14.3169	3.3	Aldrin
5.879	-0.001	1812766	6.421	0.000	9648524	17.9100	18.8202	5.0	Heptachlor epoxide b
6.256	-0.001	1719374	6.808	-0.001	9044964	17.9027	19.0972	6.5	Endosulfan I
6.479	-0.001	3636509	7.066	-0.001	18368376	35.6294	38.0580	6.6	Dieldrin
6.181	0.002	3366101	6.869	0.001	17470463	41.1863	34.8398	16.7	4,4'-DDE
6.697	0.000	3037184	7.355	0.000	14118608	35.5636	33.5669	5.8	Endrin
6.902	0.000	3021206	7.544	-0.001	15470761	32.6391	31.3502	4.0	Endosulfan II
6.737	0.001	2992799	7.407	0.000	15069386	30.5716	30.4310	0.5	4,4'-DDD
7.670	0.000	2662136	8.087	0.000	13037771	32.0548	32.2970	0.8	Endosulfan sulfate
6.995	0.001	2867618	7.694	0.000	13256389	33.0581	32.5027	1.7	4,4'-DDT
7.420	0.000	6430113	8.276	0.000	23569035	155.1582	149.9460	3.4	Methoxychlor
7.925	0.000	3350675	8.577	0.000	14174110	31.7741	32.2415	1.5	Endrin ketone
7.279	-0.001	2105678	7.842	0.000	10462591	27.0409	26.8251	0.8	Endrin aldehyde
5.999	-0.001	1836369	6.604	0.000	9690199	16.9177	18.0336	6.4	gamma-Chlordane
6.123	0.000	1765924	6.741	0.000	9080121	17.4925	18.3410	4.7	alpha-Chlordane
2.310	0.001	1315220	2.467	0.001	5641750	9.3471	9.0705	3.0	Hexachlorobutadiene
4.138	0.000	1358541	4.585	0.001	10856422	12.7623	13.9038	8.6	Hexachlorobenzene
5.797	0.012	12370	6.290	-0.042	43792	0.1418	0.0970	37.5	Oxychlordane
5.834	-0.023	1533	6.542	-0.038	105640	0.0233	0.3133	172.3*	2,4-DDE
----			6.685	-0.007	24255	0.0000	0.0487	---	trans-Nonachlor
6.345	0.001	39173	----			0.6718	0.0000	---	2,4-DDD
6.582	-0.001	16799	----			0.2576	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.611	0.016	16209	8.534	-0.030	343884	0.2264	1.2404	138.3*	Mirex
8.920	0.000	6526308	10.289	-0.001	22200604	80.0000	80.0000	0.0	Hexabromobiphenyl
1.758	0.002	2619	1.741	0.016	2337043	0.0000	0.0000	---	Hexachloroethane
6.539	-0.042	2598	7.290	-0.046	26027	0.0000	0.0000	---	Kepone
3.797	0.000	1924134	4.125	0.000	12256392	22.3336	22.7634	1.9	Tetrachloro-m-xylen
8.771	0.000	1952340	9.725	0.000	10457598	21.0413	23.3176	10.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	55.8	56.9	55.8	52-100
Decachlorobiphenyl	52.6	58.3	52.6	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6318779	14.9
Hexabromobiphenyl	5319006	6526308	22.7

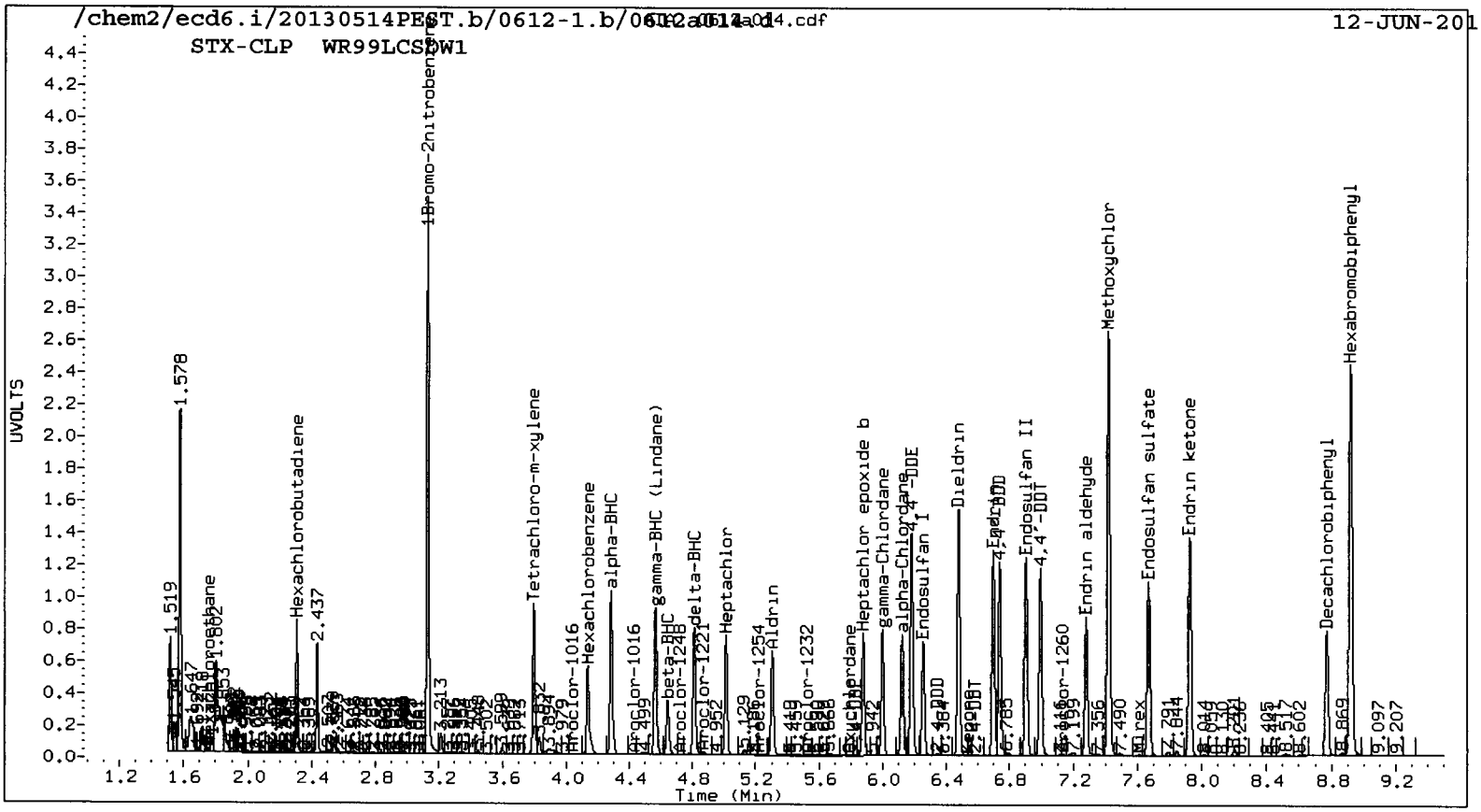
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	33119544	14.0
Hexabromobiphenyl	16515704	22200604	34.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.995	0.040	2867618	706.1	1	7.290	-0.001	26027	1.6
Toxaphene	2	---			0.000	2	7.627	0.011	200555	8.4
Toxaphene	3	7.279	0.016	2105678	447.9	3	7.842	-0.004	10462591	407.5
Toxaphene	4	7.611	0.022	16209	3.7	4	8.276	-0.038	23569035	1297.7
Toxaphene	5	---			0.000	5	8.377	0.024	122325	5.1
Toxaphene	6	7.925	0.016	3350675	1211.6	NS	---			----

Total STX-CLPAve (4 peaks): 592.296 Total CLP2Ave (5 peaks): 344.064 RPD = 53*
Corrected Ave (3 peaks): 385.875 Corrected Ave (4 peaks): 105.653 RPD = 114*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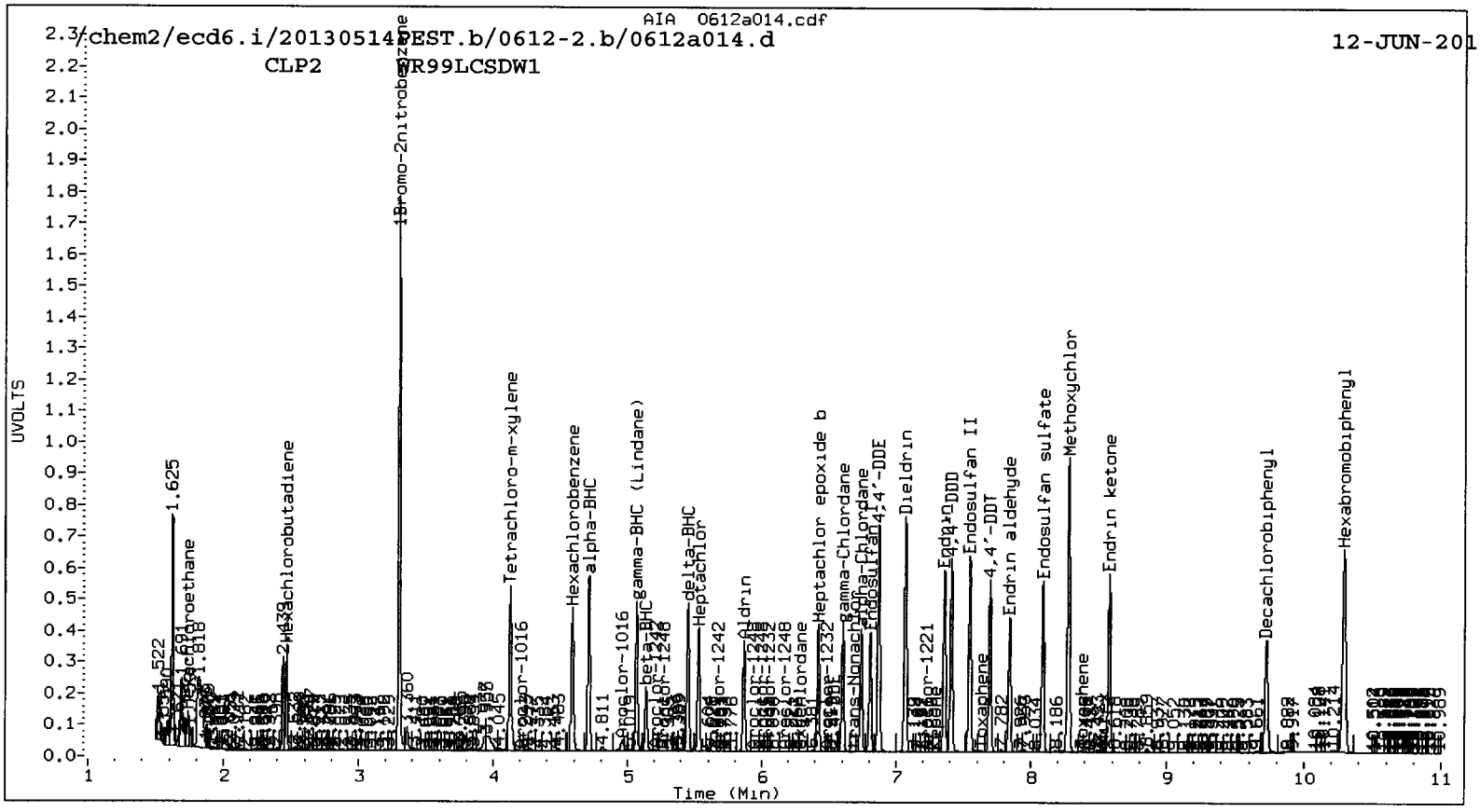
12-JUN-201
STX-CLP WR99LCSDW1
UVOLTS
Time (Min)
1.578
1.519
1.802
2.437
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0612a014.cdf
12-JUN-201
CLP2 WR99LCSDW1
UVOLTS
Time (Min)
1.625
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0612-1.b/0612a015.d ARI ID: WR99A
Data file 2: /chem2/ecd6.i/20130514PEST.b/0612-2.b/0612a015.d Client ID: KC-VT-1593-20130530
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 12-JUN-2013 16:44
Compound Sublist: wpest Report Date: 06/14/2013 10:33
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

6/14/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.128	-0.001	6253861	3.298	-0.001	29883711	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.276	-0.008	20004	4.705	-0.004	451635	0.1502	0.6730	127.0*	alpha-BHC
4.661	0.019	101631	5.145	0.008	29874	1.9241	0.1157	177.3*	beta-BHC
4.792	-0.019	98631	5.447	-0.001	110579	0.8871	0.2006	126.2*	delta-BHC
4.569	0.003	43385	5.052	-0.013	172331	0.3758	0.2959	23.8	gamma-BHC (Lindane)
5.011	-0.001	14047	5.530	0.002	82585	0.1252	0.1476	16.4	Heptachlor
5.327	0.022	35461	5.881	0.015	102061	0.3192	0.1932	49.2*	Aldrin
5.876	-0.004	15966	6.424	0.003	163425	0.1594	0.3533	75.6*	Heptachlor epoxide b
6.252	-0.004	31411	6.811	0.002	181862	0.3305	0.4256	25.2	Endosulfan I
6.483	0.004	24564	7.088	0.022	124121	0.2432	0.2850	15.8	Dieldrin
6.188	0.009	29363	6.867	-0.001	51772	0.3630	0.1144	104.1*	4,4'-DDE
6.697	0.000	8710	7.353	-0.002	193778	0.1015	0.4851	130.8*	Endrin
6.903	0.000	9970	7.537	-0.007	148864	0.1072	0.3176	99.1*	Endosulfan II
6.731	-0.005	54708	7.406	-0.001	147300	0.5563	0.3132	55.9*	4,4'-DDD
7.669	-0.001	24589	8.084	-0.003	242306	0.2948	0.6320	72.8*	Endosulfan sulfate
7.000	0.006	21528	7.692	-0.002	284804	0.2471	0.7353	99.4*	4,4'-DDT
7.407	-0.012	45446	8.276	-0.001	252003	1.0917	1.6882	42.9*	Methoxychlor
7.920	-0.006	28533	8.576	-0.001	195517	0.2694	0.4683	53.9*	Endrin ketone
7.276	-0.004	12817	7.843	0.001	190551	0.1639	0.5144	103.4*	Endrin aldehyde
5.994	-0.005	5375	6.598	-0.005	167182	0.0500	0.3448	149.3*	gamma-Chlordane
6.125	0.002	9444	6.742	0.001	57514	0.0945	0.1288	30.7	alpha-Chlordane
2.292	-0.016	4144	2.464	-0.002	27065	0.0298	0.0482	47.4*	Hexachlorobutadiene
4.135	-0.003	41309	4.566	-0.018	104094	0.3921	0.1477	90.5*	Hexachlorobenzene
5.781	-0.003	28530	6.316	-0.016	228946	0.3255	0.5619	53.3*	Oxychlordane
5.828	-0.029	15994	6.532	-0.048	68238	0.2417	0.2243	7.5	2,4-DDE
6.068	-0.038	55456	6.682	-0.010	303084	0.5158	0.6407	21.6	trans-Nonachlor
6.319	-0.025	2545	7.048	-0.017	385420	0.0435	1.4653	188.5*	2,4-DDD
----			----			0.0000	0.0000	---	2,4-DDT
----			7.452	0.035	252112	0.0000	0.5096	---	cis-Nonachlor
7.597	0.001	4821	8.533	-0.032	591669	0.0670	2.2473	188.4*	Mirex
8.919	-0.002	6555799	10.287	-0.003	21083494	80.0000	80.0000	0.0	Hexabromobiphenyl
1.758	0.002	1408	1.725	0.001	509122	0.0000	0.0000	---	Hexachloroethane
6.552	-0.029	10865	7.305	-0.032	69449	0.0000	0.0000	---	Kepone
3.795	-0.001	1963531	4.124	-0.001	9565625	23.0274	19.6896	15.6	Tetrachloro-m-xylene
8.770	-0.001	2390013	9.724	-0.001	12213948	25.6424	28.6768	11.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	57.6	49.2	49.27	52-100
Decachlorobiphenyl	64.1	71.7	64.1	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

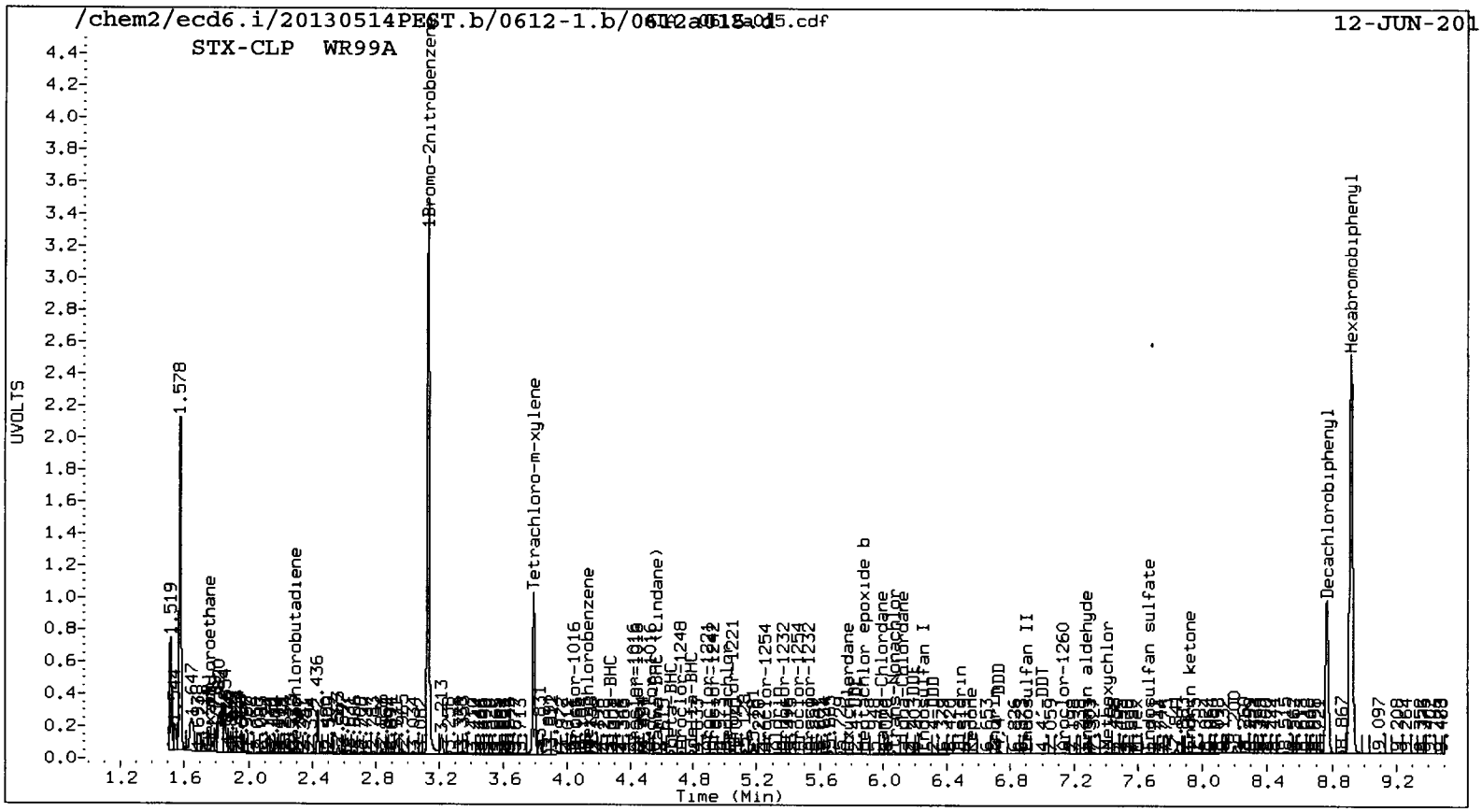
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6253861	13.7
Hexabromobiphenyl	5319006	6555799	23.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29883711	2.8
Hexabromobiphenyl	16515704	21083494	27.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.000	0.045	21528	5.3	1	7.305	0.014	69449	4.5
Toxaphene	2	---			0.000	2	7.633	0.017	54682	2.4
Toxaphene	3	7.276	0.012	12817	2.7	3	7.843	-0.003	190551	7.8
Toxaphene	4	7.597	0.008	4821	1.1	4	8.309	-0.005	75603	4.4
Toxaphene	5	---			0.000	5	8.326	-0.026	148145	6.5
Toxaphene	6	7.920	0.011	28533	10.3	NS	---			----
Total STX-CLPAve (4 peaks): 4.838						Total CLP2Ave (5 peaks): 5.133			RPD = 6	
Corrected Ave (3 peaks): 3.026						Corrected Ave (5 peaks): 5.133			RPD = 52*	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0612a015.cdf
12-JUN-201
STX-CLP WR99A
UVOLTS
Time (Min)
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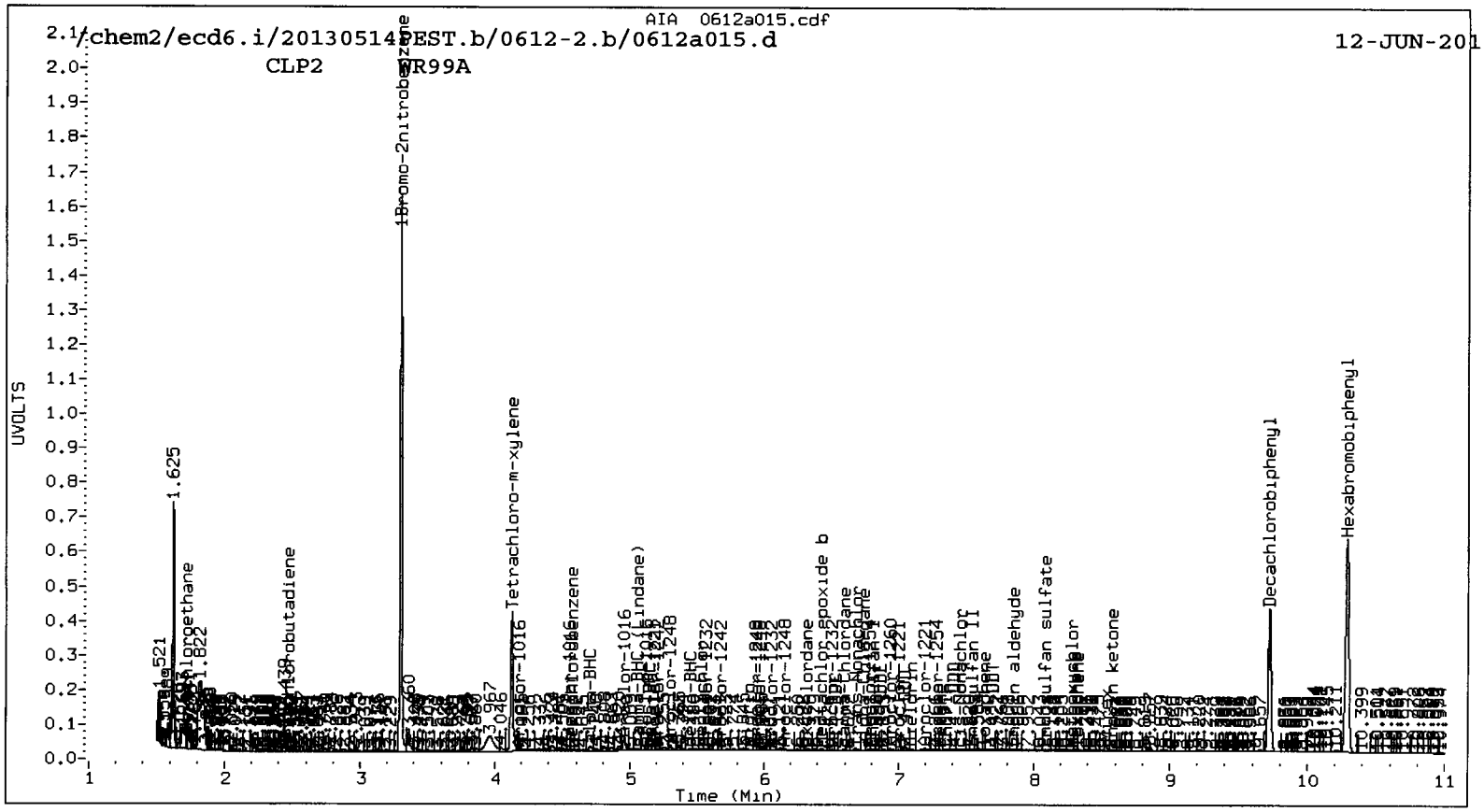
1.519
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl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AIA 0612a015.cdf
12-JUN-201
CLP2 WR99A
UVOLTS
Time (Min)
1.625
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0612-1.b/0612a024.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/0612-2.b/0612a024.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 12-JUN-2013 19:24
Compound Sublist: INDA Report Date: 06/13/2013 15:54
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 6/13/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.129	0.000	5887010	3.299	0.000	30861935	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.284	0.000	2341775	4.709	0.000	12900287	18.6724	18.6131	0.3	alpha-BHC
4.642	0.001	834095	5.138	0.001	4611715	16.7756	17.2986	3.1	beta-BHC
4.812	0.001	1843717	5.449	0.002	10416780	17.6154	18.3004	3.8	delta-BHC
4.566	0.000	2098728	5.065	0.000	10579252	19.3097	17.5920	9.3	gamma-BHC (Lindane)
5.012	0.000	1952168	5.529	0.000	10391023	18.4797	17.9806	2.7	Heptachlor
5.305	0.000	1925826	5.867	0.001	9930967	18.4173	18.2066	1.2	Aldrin
5.880	0.000	1760516	6.421	0.000	9015518	18.6695	18.8718	1.1	Heptachlor epoxide b
6.257	0.000	1623016	6.809	0.000	7828607	18.1389	17.7382	2.2	Endosulfan I
6.479	0.000	3460635	7.067	0.000	14993660	36.3931	33.3383	8.8	Dieldrin
6.180	0.000	2641902	6.869	0.001	15451182	34.6961	33.0670	4.8	4,4'-DDE
6.697	0.000	2882275	7.356	0.001	11569249	39.1054	38.2787	2.1	Endrin
6.903	0.001	2757365	7.545	0.000	12783144	34.5159	36.0494	4.3	Endosulfan II
6.737	0.001	2863979	7.406	0.000	12461349	33.8983	35.0201	3.3	4,4'-DDD
7.670	0.000	2423151	8.087	0.000	10075275	33.8073	34.7334	2.7	Endosulfan sulfate
6.995	0.001	2534839	7.694	0.001	10404405	33.8590	35.5012	4.7	4,4'-DDT
7.420	0.001	5989270	8.277	0.000	19988014	167.4545	176.9678	5.5	Methoxychlor
7.925	0.000	3079366	8.578	0.000	10290368	33.8353	32.5749	3.8	Endrin ketone
7.280	0.000	2210230	7.842	0.000	9663640	32.8877	34.4806	4.7	Endrin aldehyde
6.000	0.000	1822761	6.604	0.001	8751704	18.0239	17.4784	3.1	gamma-Chlordane
6.124	0.000	1732356	6.742	0.001	8169960	18.4185	17.7097	3.9	alpha-Chlordane
2.310	0.001	2352505	2.467	0.001	9586950	17.9452	16.5410	8.1	Hexachlorobutadiene
4.137	0.000	1679142	4.585	0.001	13218601	16.9310	18.1675	7.0	Hexachlorobenzene
8.921	0.001	5632493	10.289	-0.001	15952663	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	0.000	2975676	4.126	0.000	17947463	37.0721	35.7716	3.6	Tetrachloro-m-xylen
8.771	0.001	2436647	9.725	0.000	10894628	30.4282	33.8062	10.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	92.7	89.4	89.4~	115- 0
Decachlorobiphenyl	76.1	84.5	76.1~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

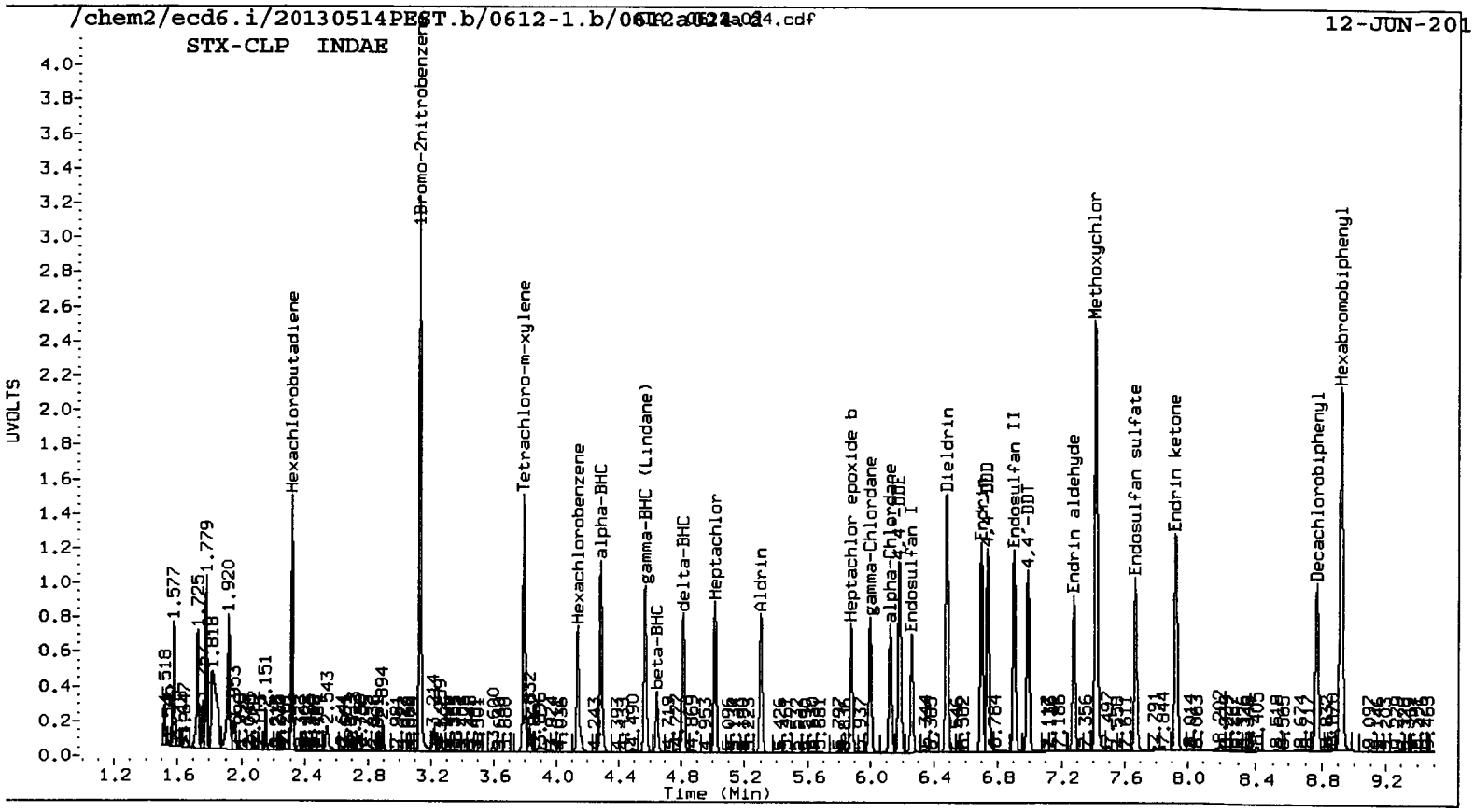
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5887010	7.0
Hexabromobiphenyl	5319006	5632493	5.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	30861935	6.2
Hexabromobiphenyl	16515704	15952663	-3.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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12-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
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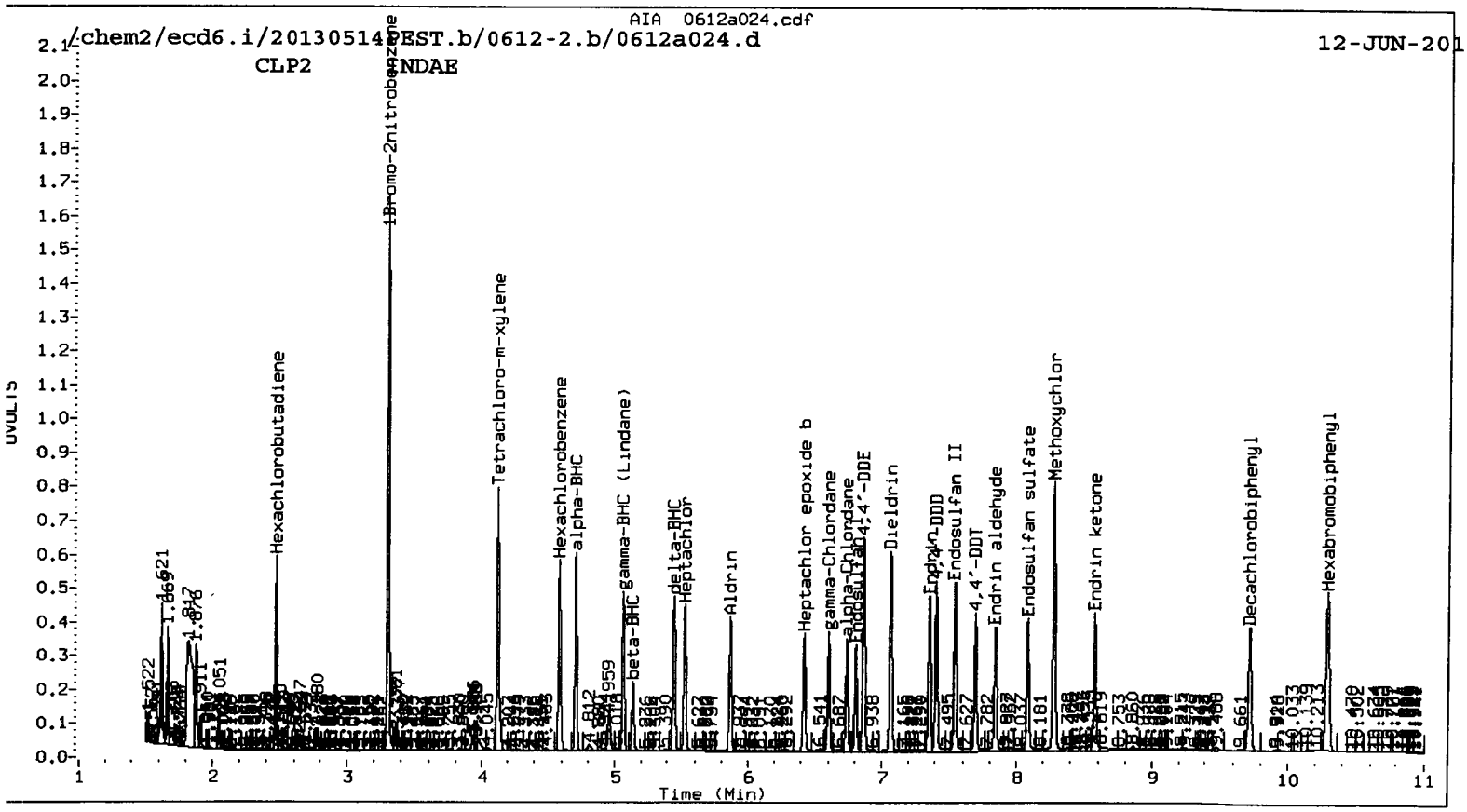
1.725
1.779
1.818
1.920
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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12-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

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Data file 2: /chem2/ecd6.i/20130514PEST.b/0612-2.b/0612a025.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 12-JUN-2013 19:42
Compound Sublist: TOXAPH Report Date: 06/13/2013 15:54
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

6/13/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.129	0.000	5695567	3.299	0.000	29805904	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.920	0.000	5435755	10.288	-0.002	15313396	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	0.001	2433006	4.126	0.000	15124874	31.3302	31.2139	0.4	Tetrachloro-m-xylen
8.771	0.000	2348969	9.725	0.000	10678435	30.3949	34.5186	12.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	78.3	78.0	78.0~	150- 0
Decachlorobiphenyl	76.0	86.3	76.0~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

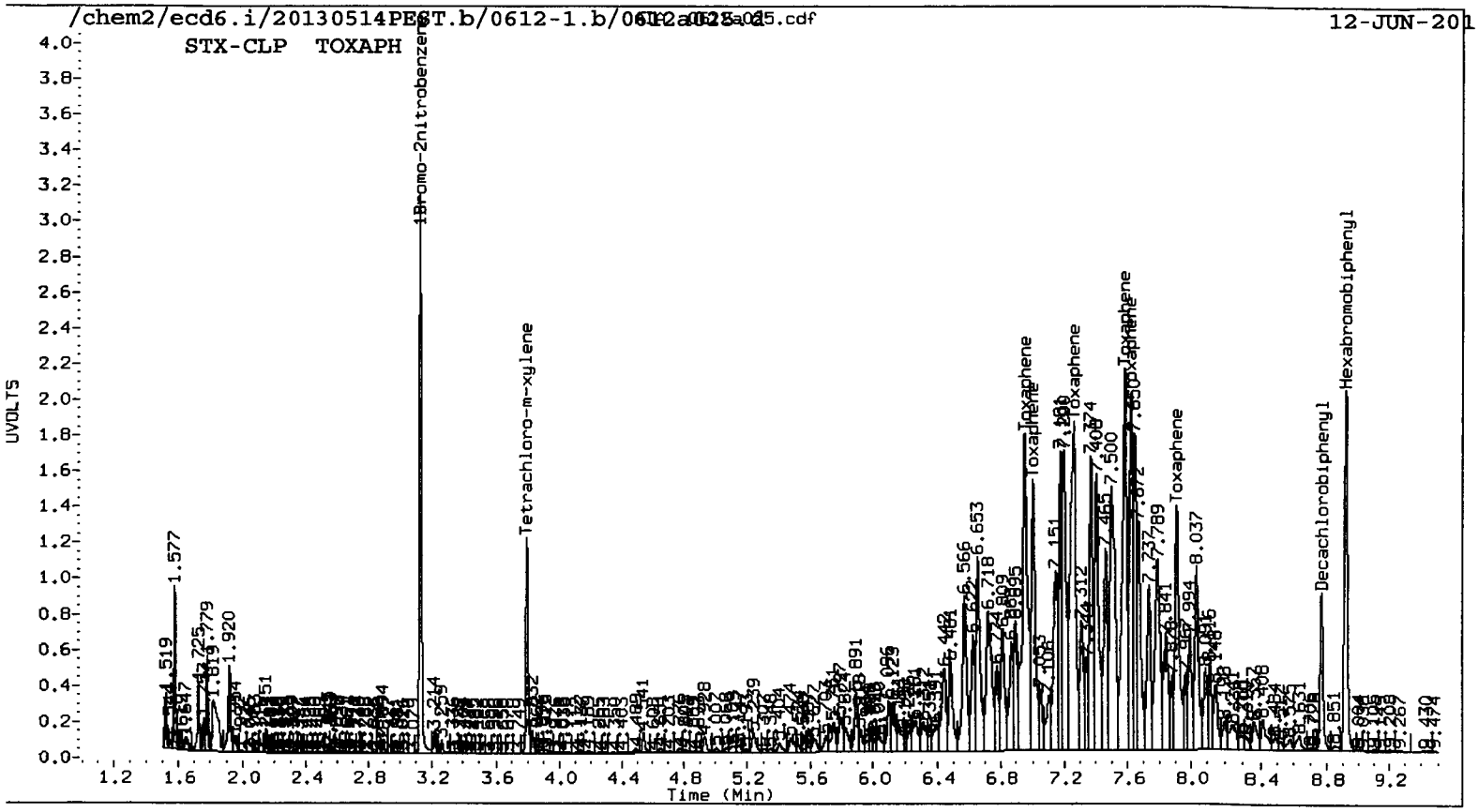
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5695567	3.5
Hexabromobiphenyl	5319006	5435755	2.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29805904	2.6
Hexabromobiphenyl	16515704	15313396	-7.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.954	-0.001	7884994	2330.9	1	7.291	0.000	25578331	2298.8
Toxaphene	2	7.006	-0.001	5284847	2017.2	2	7.615	-0.001	38054253	2300.7
Toxaphene	3	7.263	-0.001	8785775	2243.7	3	7.846	0.000	41058748	2318.5
Toxaphene	4	7.588	0.000	8696534	2367.8	4	8.313	-0.001	29094079	2322.4
Toxaphene	5	7.627	0.000	5773779	2217.5	5	8.353	0.000	36386594	2209.4
Toxaphene	6	7.909	0.000	4922820	2137.1	NS	---			----
Total STX-CLPAve (6 peaks): 2219.043						Total CLP2Ave (5 peaks): 2289.960				RPD = 3
Corrected Ave (6 peaks): 2219.043						Corrected Ave (5 peaks): 2289.960				RPD = 3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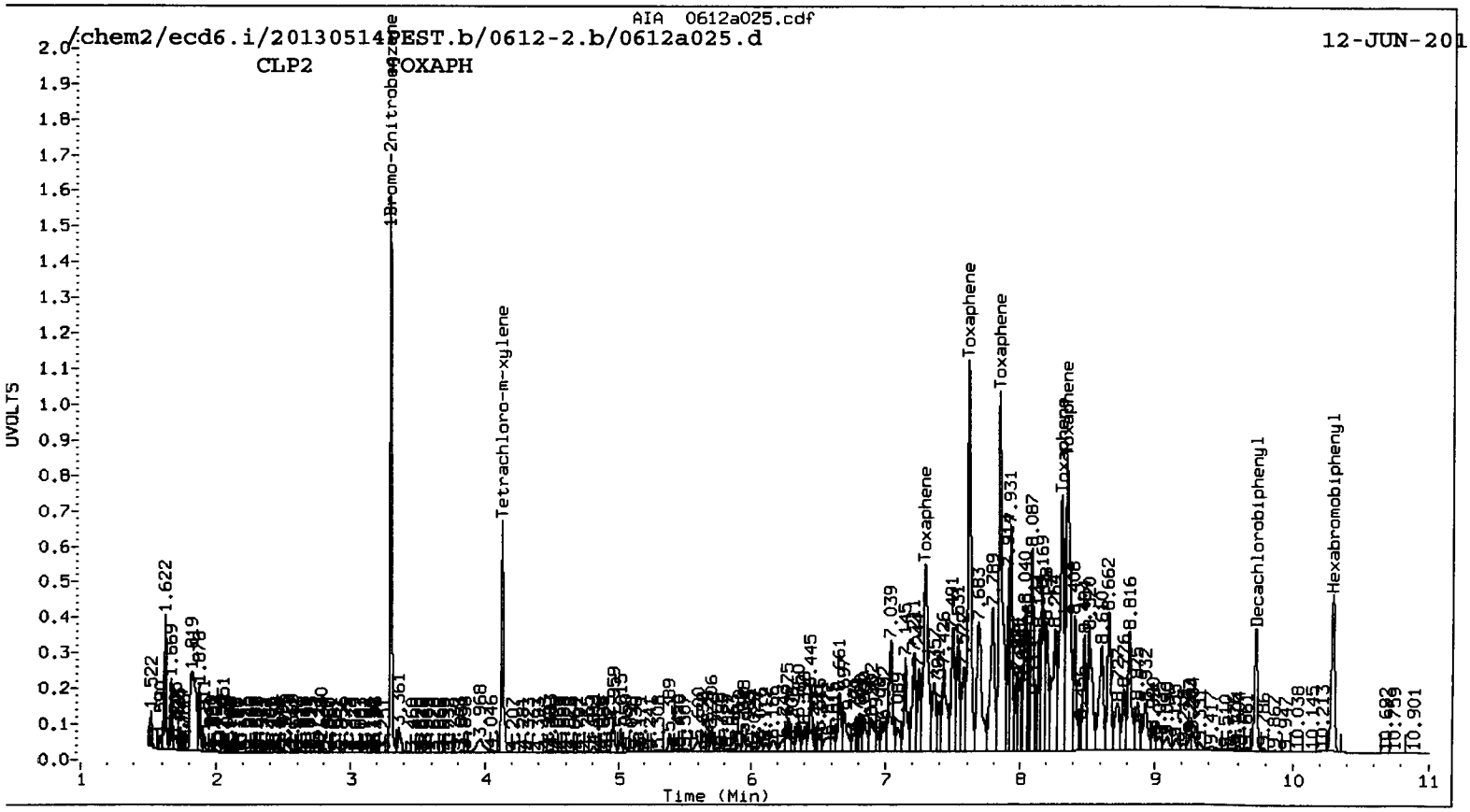
12-JUN-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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12-JUN-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/13/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/0612-1.b/0612a026.d ARI ID: WND
Data file 2: /chem2/ecd6.i/20130514PEST.b/0612-2.b/0612a026.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 12-JUN-2013 20:00
Compound Sublist: WND Report Date: 06/13/2013 15:54
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.757	0.002	18547	1.725	0.001	281543	0.0000	0.0000	---	Hexachloroethane
3.129	0.000	5410272	3.299	-0.001	28506124	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.785	0.001	2872600	6.331	0.000	15501637	40.9915	39.8858	2.7	Oxychlordane
5.859	0.002	2215804	6.579	0.000	11293457	41.8876	38.9104	7.4	2,4-DDE
6.107	0.001	3588410	6.688	-0.004	17785050	41.7415	48.5088	15.0	trans-Nonachlor
6.346	0.002	2014667	7.065	0.000	9928384	43.0233	48.7011	12.4	2,4-DDD
6.584	0.001	2206673	7.352	0.000	10036128	42.1347	46.9749	10.9	2,4-DDT
6.723	0.001	3872976	7.412	-0.005	17841546	41.7057	46.5271	10.9	cis-Nonachlor
7.596	0.001	2283297	8.564	0.000	8280158	39.7119	40.5779	2.2	Mirex
8.921	0.001	5241384	10.289	-0.001	16340523	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	0.001	2989091	4.126	0.001	18561754	40.5206	40.0533	1.2	Tetrachloro-m-xylen
8.771	0.001	2559249	9.725	0.000	12597261	34.3440	38.1617	10.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	101.3	100.1	100.1~	150- 0
Decachlorobiphenyl	85.9	95.4	85.9~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

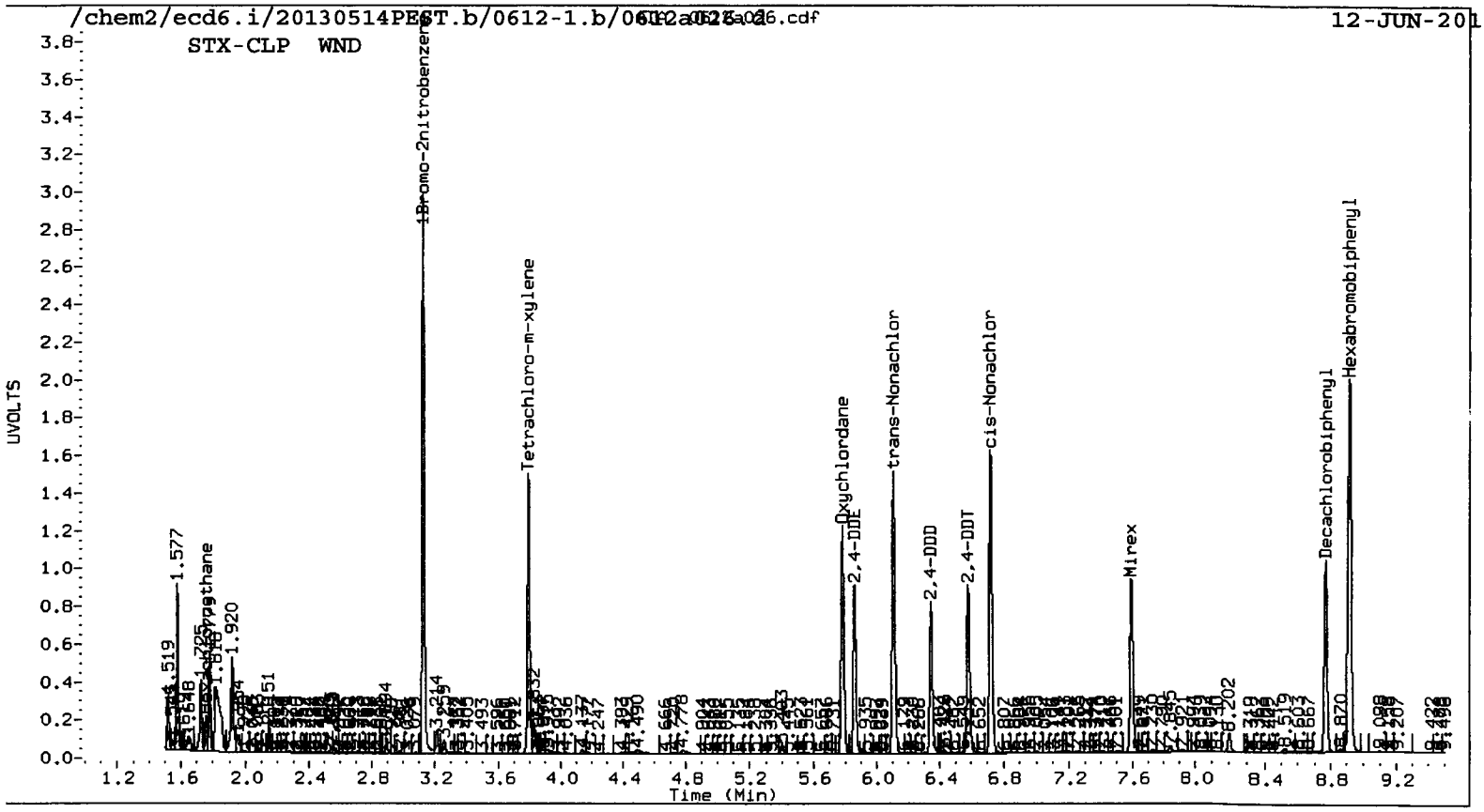
	Column 1		
	Standard	Sample	
Standard Cpnd	Area*	Area	%D
Bromo-Nitrobenzene	5500669	5410272	-1.6
Hexabromobiphenyl	5319006	5241384	-1.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	28506124	-1.9
Hexabromobiphenyl	16515704	16340523	-1.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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12-JUN-201
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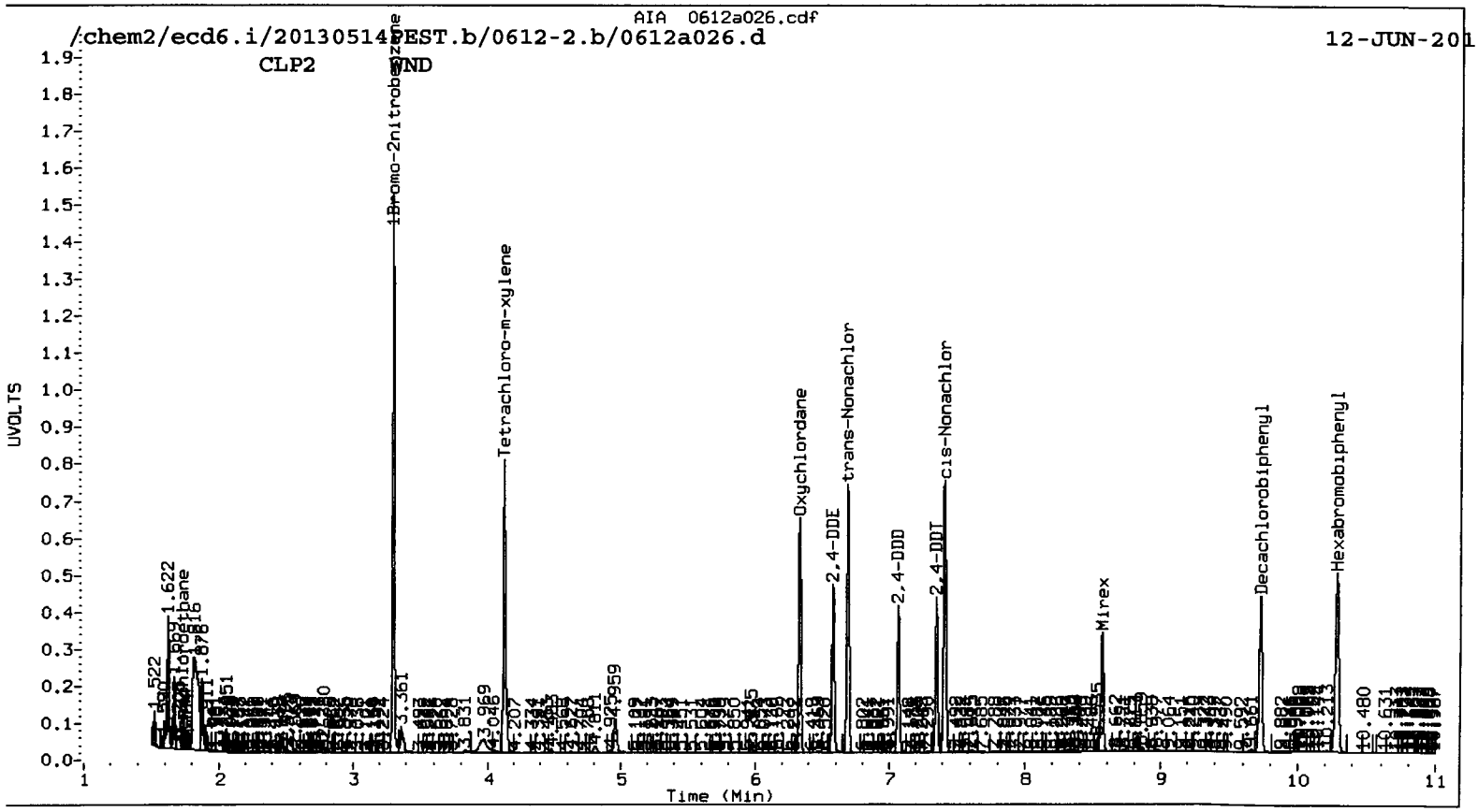
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.577
1.920
UVOLTS
Time (Min)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12-JUN-201
CLP2 WND
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.622
UVOLTS
Time (Min)

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WR99/WS21 Client ID: NPDES

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 05/14/13 Analysis Start Date: 06/14/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / LCS only
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / See Form III
Internal STD. within 50-200%?	NA / Y / N / ✓	MS / MSD RPD ≤30%?	NA /
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below

samples diluted due to matrix, pcb's in samples inflate pest results, y-flags mostly due to PCB's in samples. ms/msd j-flagged due to dil. misc peaks in sample/MD inflate ms/msd rec. RT shift due to maintenance 06/13/13, surr rec. inflated by misc peak, reported as NR due to misc peak.

(Review 1) Analyst: _____ **Date:** 06/13/13

(Review 2) Reviewer: _____ **Date:** 6/18/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 06/14/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 108524 Column Type: 5,STXCLP1

Column 2 Serial No.: 104709 Column Type: STXCLP2

GC Method: Pest ICal Date: 2μL

IS	Ical/Ccal	ICV
	1270	
2006-1	.0737	
	2018-2	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	14-JUN-2013 11:38	0614a017.d	1	DS
2	14-JUN-2013 11:55	0614a018.d	1	INDAE
3	14-JUN-2013 12:13	0614a019.d	1	TOXAPH
4	14-JUN-2013 12:31	0614a020.d	1	WR99MBS1
5	14-JUN-2013 12:49	0614a021.d	1	WR99LCSS1
6	14-JUN-2013 13:07	0614a022.d	1	WR99QLS
7	14-JUN-2013 13:24	0614a023.d	1	WR99D
8	14-JUN-2013 13:42	0614a024.d	1	WR99DMS
9	14-JUN-2013 14:00	0614a025.d	1	WR99DMSD
10	14-JUN-2013 14:20	0614a026.d	1	WR99E
11	14-JUN-2013 14:38	0614a027.d	1	WR99F
12	14-JUN-2013 14:55	0614a028.d	1	WS21A
13	14-JUN-2013 15:13	0614a029.d	1	DS
14	14-JUN-2013 15:31	0614a030.d	1	INDAE
15	14-JUN-2013 15:51	0614a031.d	1	TOXAPH
16	14-JUN-2013 16:09	0614a032.d	1	WND
17	14-JUN-2013 16:26	0614a033.d	1	WS30MBS1
18	14-JUN-2013 16:44	0614a034.d	1	WS30LCSS1
19	14-JUN-2013 17:02	0614a035.d	1	WS30SRM1
20	14-JUN-2013 17:20	0614a036.d	1	WS30A
21	14-JUN-2013 17:38	0614a037.d	1	WS30B
22	14-JUN-2013 17:56	0614a038.d	1	WS30C
23	14-JUN-2013 18:13	0614a039.d	1	WS30D
24	14-JUN-2013 18:31	0614a040.d	1	WS30E
25	14-JUN-2013 18:49	0614a041.d	1	WS30F
26	14-JUN-2013 19:07	0614a042.d	1	WS30G
27	14-JUN-2013 19:24	0614a043.d	1	WS30H
28	14-JUN-2013 19:42	0614a044.d	1	DS
29	14-JUN-2013 20:00	0614a045.d	1	INDAE
30	14-JUN-2013 20:18	0614a046.d	1	WND
31	14-JUN-2013 20:36	0614a047.d	1	WS30I
32	14-JUN-2013 20:53	0614a048.d	1	WS30IMS
33	14-JUN-2013 21:11	0614a049.d	1	WS30IMSD
34	14-JUN-2013 21:29	0614a050.d	1	WS30J
35	14-JUN-2013 21:47	0614a051.d	1	DS
36	14-JUN-2013 22:05	0614a052.d	1	INDAE
37	14-JUN-2013 22:22	0614a053.d	1	WND

E
S

06/19/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0614-1.b

ARI Job No.: DS Method: PEST0514.m Instrument: ecd6.i Date: 14-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1138	0614a017.d	DS		1	NO MANUAL INTEGRATION
1155	0614a018.d	INDAE		1	NO MANUAL INTEGRATION
1213	0614a019.d	TOXAPH		1	NO MANUAL INTEGRATION
1231	0614a020.d	WR99MBS1	WR99MBS1	1	NO MANUAL INTEGRATION
1249	0614a021.d	WR99LCSS1	WR99LCSS1	1	NO MANUAL INTEGRATION
1307	0614a022.d	WR99QLS		1	NO MANUAL INTEGRATION
1324	0614a023.d	WR99D	KC-VT-1593	5	NO MANUAL INTEGRATION
1342	0614a024.d	WR99DMS	KC-VT-1593	5	NO MANUAL INTEGRATION
1400	0614a025.d	WR99DMSD	KC-VT-1593	5	NO MANUAL INTEGRATION
1420	0614a026.d	WR99E	KC-CB-01-2	10	NO MANUAL INTEGRATION
1438	0614a027.d	WR99F	KC-DD-2009	10	NO MANUAL INTEGRATION
1455	0614a028.d	WS21A	KC-IV-SPS-	5	NO MANUAL INTEGRATION
1513	0614a029.d	DS		1	NO MANUAL INTEGRATION
1531	0614a030.d	INDAE		1	NO MANUAL INTEGRATION
1551	0614a031.d	TOXAPH		1	NO MANUAL INTEGRATION
1609	0614a032.d	WND		1	NO MANUAL INTEGRATION
1626	0614a033.d	WS30MBS1		1	NO MANUAL INTEGRATION
1644	0614a034.d	WS30LCSS1		1	NO MANUAL INTEGRATION
1702	0614a035.d	WS30SRM1		1	NO MANUAL INTEGRATION
1720	0614a036.d	WS30A		1	NO MANUAL INTEGRATION

1738 0614a037.d WS30B 1 NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0614-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1756	0614a038.d	WS30C		1	NO MANUAL INTEGRATION
1813	0614a039.d	WS30D		1	NO MANUAL INTEGRATION
1831	0614a040.d	WS30E		1	NO MANUAL INTEGRATION
1849	0614a041.d	WS30F		1	NO MANUAL INTEGRATION
1907	0614a042.d	WS30G		1	NO MANUAL INTEGRATION
1924	0614a043.d	WS30H		1	NO MANUAL INTEGRATION
1942	0614a044.d	DS		1	NO MANUAL INTEGRATION
2000	0614a045.d	INDAE		1	NO MANUAL INTEGRATION
2018	0614a046.d	WND		1	NO MANUAL INTEGRATION
2036	0614a047.d	WS30I		1	NO MANUAL INTEGRATION
2053	0614a048.d	WS30IMS		1	NO MANUAL INTEGRATION
2111	0614a049.d	WS30IMSD		1	NO MANUAL INTEGRATION
2129	0614a050.d	WS30J		1	NO MANUAL INTEGRATION
2147	0614a051.d	DS		1	NO MANUAL INTEGRATION
2205	0614a052.d	INDAE		1	NO MANUAL INTEGRATION
2222	0614a053.d	WND		1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0614-2.b

Instrument: ecd6.i Date: 14-JUN-2013 Method: PEST0514B.m

INITIAL CAL: 14-MAY-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 14-JUN-2013

Compound	%D
NO Q-FLAGS	

INITIAL CAL: 14-MAY-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 14-JUN-2013

Compound	%D
NO Q-FLAGS	

INITIAL CAL: 14-MAY-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 14-JUN-2013

Compound	%D
NO Q-FLAGS	

INITIAL CAL: 14-MAY-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 14-JUN-2013

Compound	%D
NO Q-FLAGS	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a018.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a018.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 11:55
Compound Sublist: INDA Report Date: 06/18/2013 09:43
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 6/18/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.129	0.000	5062298	3.299	-0.001	27642194	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.285	0.000	2474191	4.709	0.000	14316349	22.9422	23.0623	0.5	alpha-BHC
4.642	0.001	906140	5.138	0.001	5272796	21.1936	22.0821	4.1	beta-BHC
4.812	0.001	2028001	5.449	0.001	12143577	22.5327	23.8190	5.6	delta-BHC
4.567	0.000	2213085	5.065	0.000	12274216	23.6790	22.7879	3.8	gamma-BHC (Lindane)
5.013	0.001	2072538	5.529	0.000	11841649	22.8153	22.8775	0.3	Heptachlor
5.306	0.001	2094570	5.867	0.000	11488815	23.2943	23.5160	0.9	Aldrin
5.880	0.001	1888172	6.421	0.000	9849727	23.2852	23.0196	1.1	Heptachlor epoxide b
6.258	0.001	1732569	6.809	0.000	8813081	22.5177	22.2948	1.0	Endosulfan I
6.480	0.001	3733157	7.066	0.000	17366340	45.6548	43.1117	5.7	Dieldrin
6.181	0.001	2782146	6.868	0.000	17634104	42.4904	42.1344	0.8	4,4'-DDE
6.698	0.001	3068761	7.355	0.000	13096725	46.7420	44.0117	6.0	Endrin
6.903	0.001	3024267	7.544	0.000	13950688	42.5000	39.9586	6.2	Endosulfan II
6.737	0.001	3041066	7.406	0.000	13844973	40.4089	39.5183	2.2	4,4'-DDD
7.671	0.001	2623977	8.087	0.000	11094555	41.0992	38.8467	5.6	Endosulfan sulfate
6.995	0.001	2835446	7.694	0.000	11582228	42.5195	40.1395	5.8	4,4'-DDT
7.421	0.001	6371638	8.277	0.000	21303360	199.9943	191.5699	4.3	Methoxychlor
7.926	0.001	3234043	8.578	0.000	11576431	39.8931	37.2204	6.9	Endrin ketone
7.281	0.001	2406639	7.842	0.000	10248563	40.2023	37.1408	7.9	Endrin aldehyde
6.000	0.001	1968724	6.604	0.000	9983620	22.6387	22.2612	1.7	gamma-Chlordane
6.124	0.001	1880900	6.741	0.000	9217701	23.2557	22.3082	4.2	alpha-Chlordane
2.310	0.001	2547863	2.467	0.001	10973115	22.6017	21.1378	6.7	Hexachlorobutadiene
4.139	0.001	1807346	4.585	0.001	14954022	21.1926	22.9466	7.9	Hexachlorobenzene
8.921	0.001	5017151	10.289	-0.001	15706475	80.0000	80.0000	0.0	Hexabromobiphenyl
3.798	0.001	3195401	4.126	0.000	20129068	46.2950	44.7929	3.3	Tetrachloro-m-xylen
8.772	0.001	2624948	9.725	0.000	12443388	36.8000	39.2173	6.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	115.7	112.0	112.0~	115- 0
Decachlorobiphenyl	92.0	98.0	92.0~	115- 0

~ Indicates recovery outside QC Limits

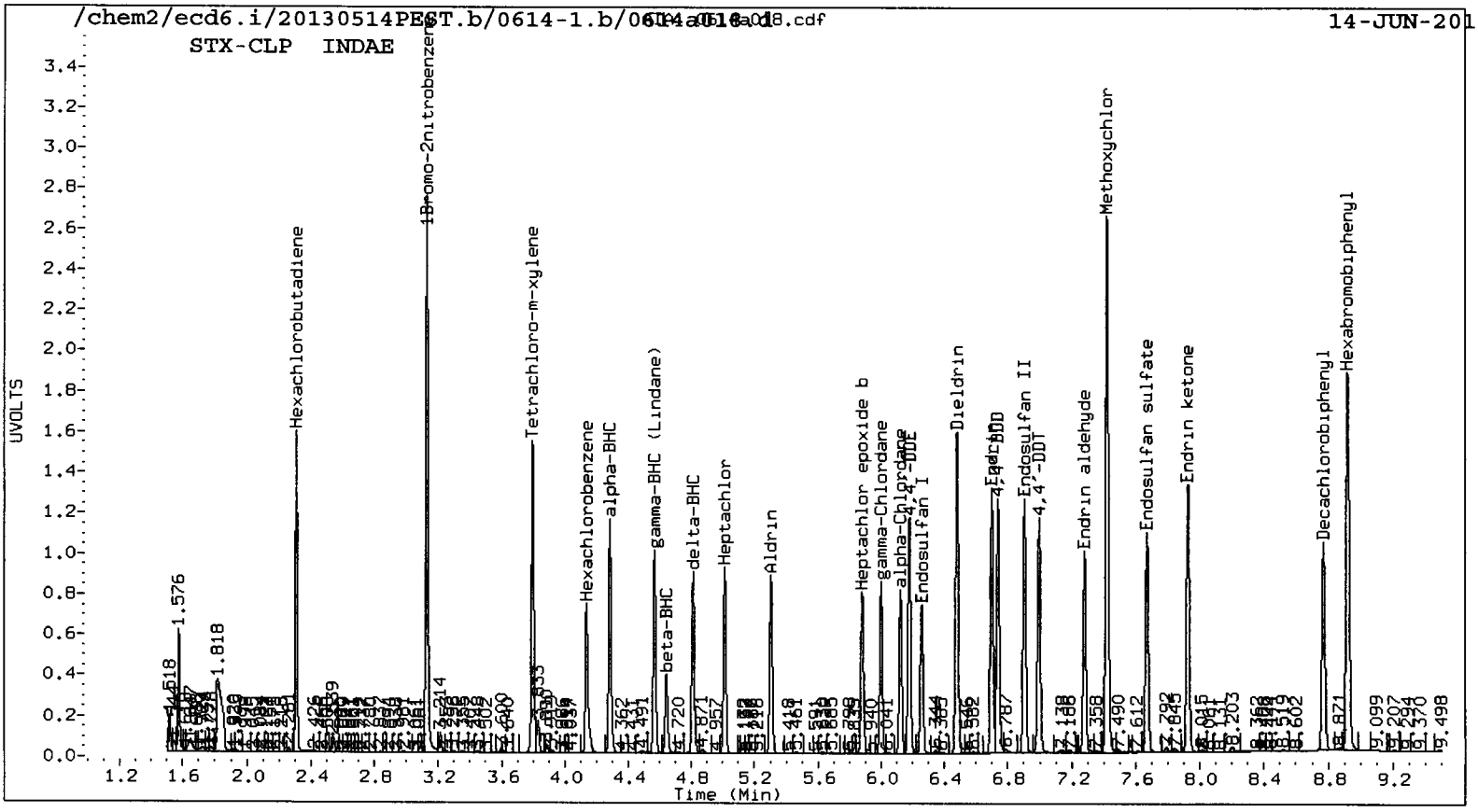
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5500669	5062298	-8.0
Hexabromobiphenyl	5319006	5017151	-5.7

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	29060499	27642194	-4.9
Hexabromobiphenyl	16515704	15706475	-4.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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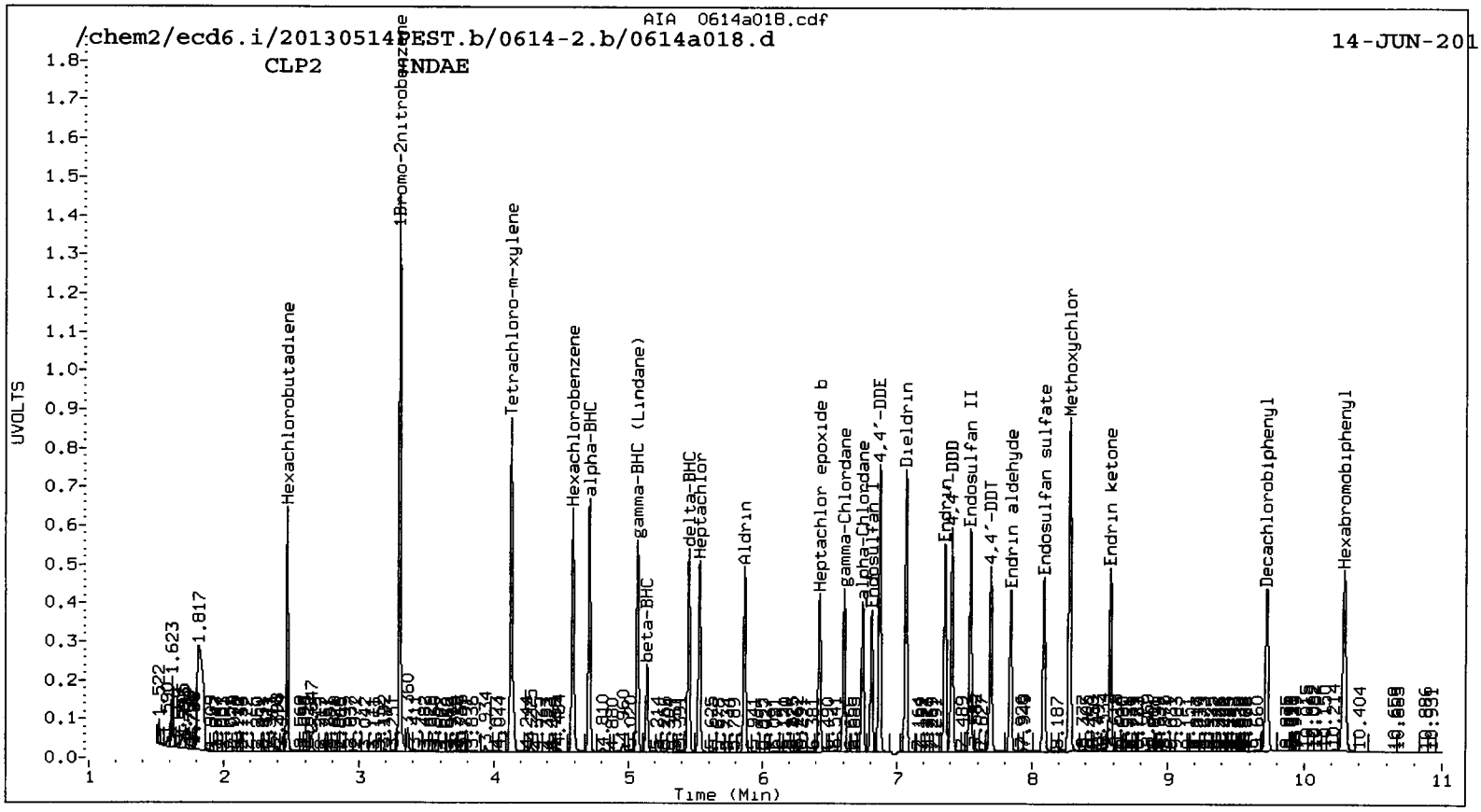
14-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.576
1.818
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0614a018.cdf
/chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a018.d
14-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
1.623
1.817
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a019.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a019.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 12:13
Compound Sublist: TOXAPH Report Date: 06/18/2013 09:43
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 6/18/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.128	0.000	6490816	3.299	-0.001	34809892	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.919	-0.001	6578881	10.287	-0.003	18801167	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	0.000	2839992	4.125	0.000	17901706	32.0903	31.6337	1.4	Tetrachloro-m-xylen
8.770	0.000	2784434	9.723	-0.002	12485837	29.7693	32.8738	9.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	80.2	79.1	79.1~	150- 0
Decachlorobiphenyl	74.4	82.2	74.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

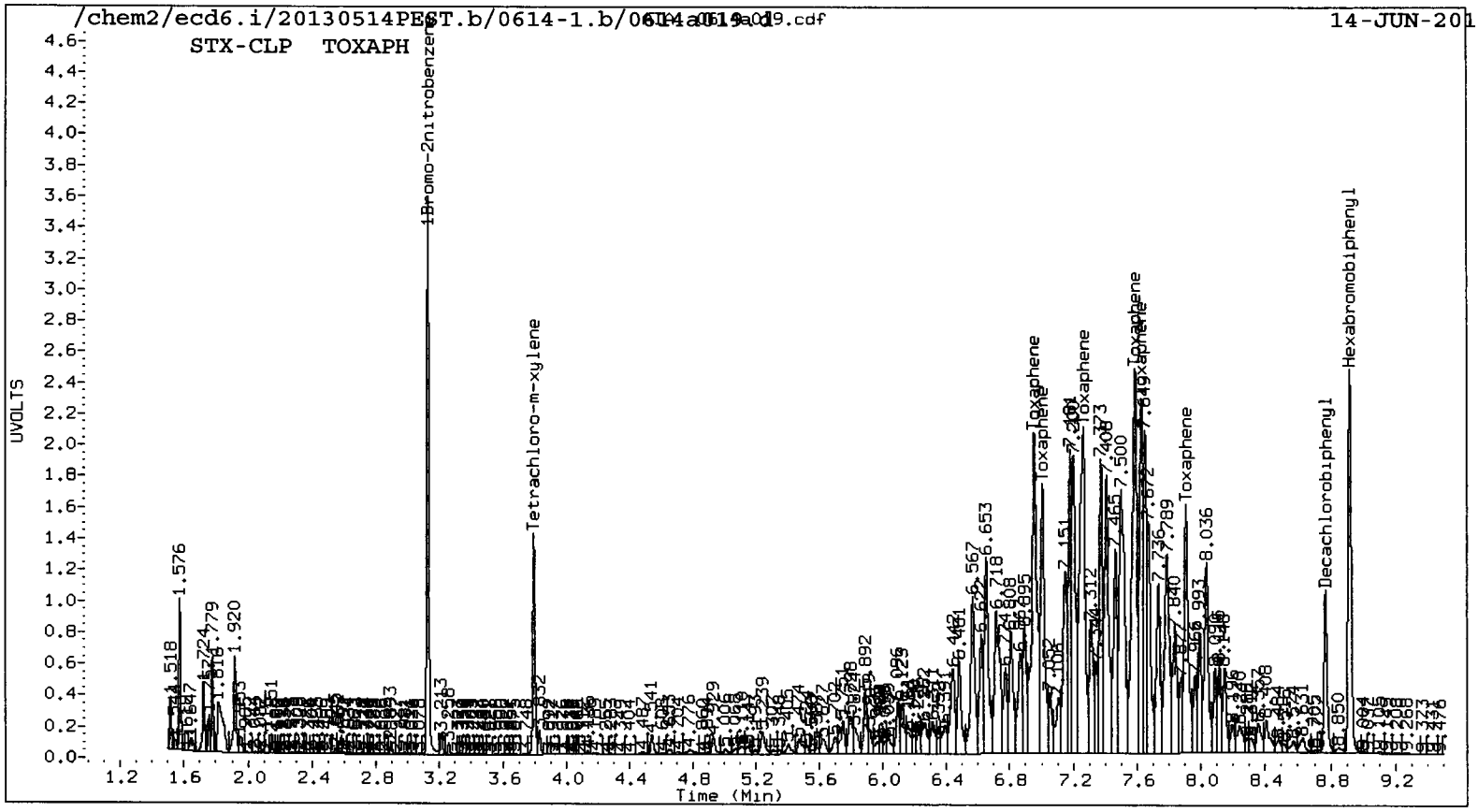
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6490816	18.0
Hexabromobiphenyl	5319006	6578881	23.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	34809892	19.8
Hexabromobiphenyl	16515704	18801167	13.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.954	-0.001	9045000	2209.3	1	7.290	-0.001	30315713	2219.2
Toxaphene	2	7.006	-0.001	6065196	1912.8	2	7.615	-0.001	44427257	2187.8
Toxaphene	3	7.263	-0.001	10092128	2129.5	3	7.845	-0.001	46678088	2146.8
Toxaphene	4	7.588	-0.001	10061586	2263.5	4	8.313	-0.001	33144498	2154.9
Toxaphene	5	7.627	0.000	6612985	2098.5	5	8.353	0.000	41795319	2067.0
Toxaphene	6	7.907	-0.001	5707031	2047.1	NS	---			----
Total STX-CLPAve (6 peaks): 2110.096						Total CLP2Ave (5 peaks): 2155.132				RPD = 2
Corrected Ave (6 peaks): 2110.096						Corrected Ave (5 peaks): 2155.132				RPD = 2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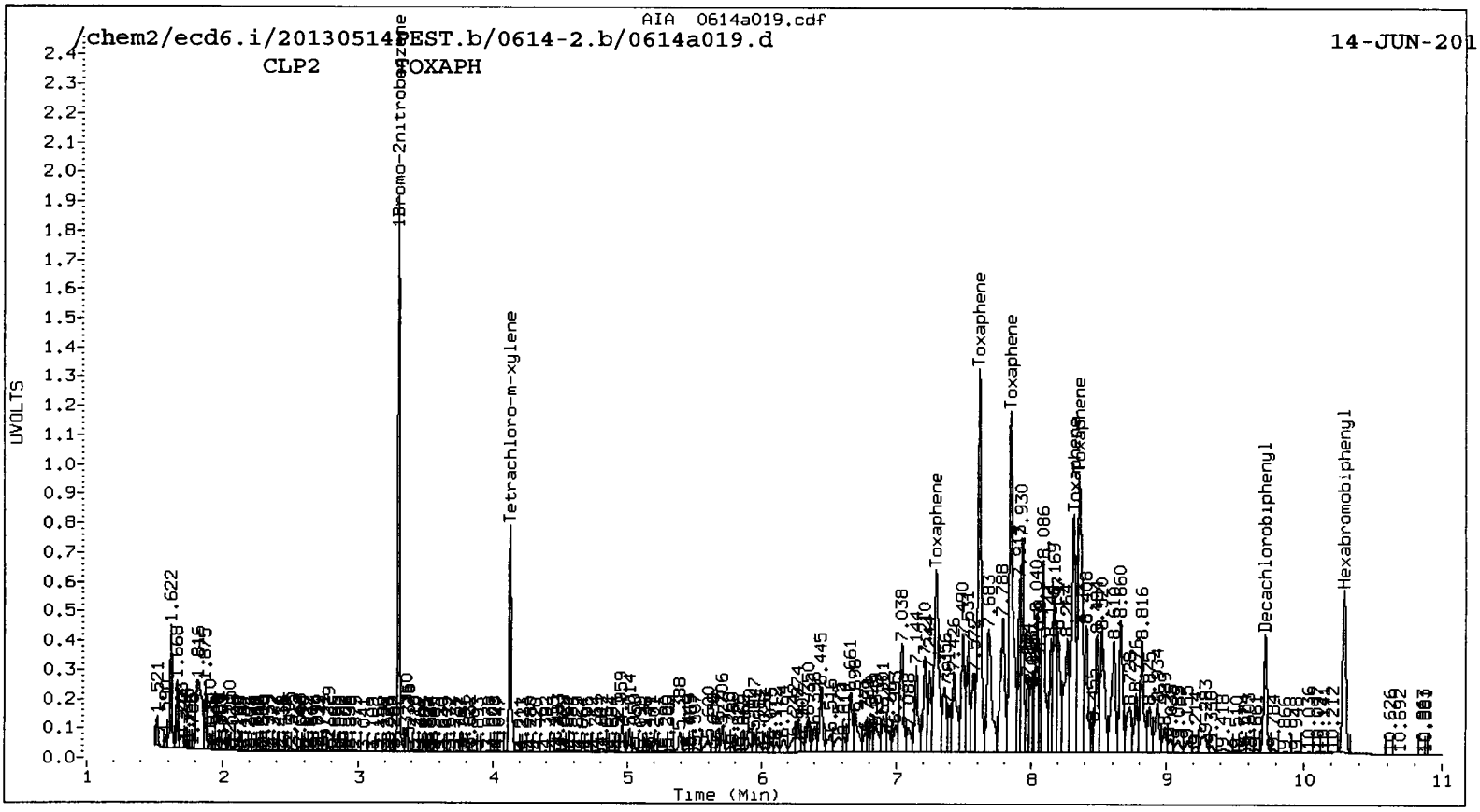
14-JUN-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1.576
1.920
4.518
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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14-JUN-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1.622
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/18/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a020.d ARI ID: WR99MBS1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a020.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Injection Date: 14-JUN-2013 12:31
Compound Sublist: wpest
Report Date: 06/18/2013 09:43
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: SOIL
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.128	-0.001	5992911	3.298	-0.001	28970198	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.281	-0.003	7014	4.707	-0.001	24551	0.0549	0.0377	37.1	alpha-BHC
4.663	0.021	20713	5.152	0.015	77656	0.4092	0.3103	27.5	beta-BHC
4.796	-0.015	40249	5.452	0.004	38191	0.3778	0.0715	136.4*	delta-BHC
4.565	-0.002	7368	5.043	-0.022	141944	0.0666	0.2514	116.2*	gamma-BHC (Lindane)
5.010	-0.002	5545	5.501	-0.028	80318	0.0516	0.1481	96.7*	Heptachlor
5.324	0.019	74095	5.850	-0.016	242455	0.6961	0.4735	38.1	Aldrin
5.876	-0.003	23207	6.397	-0.024	75976	0.2418	0.1694	35.2	Heptachlor epoxide b
6.220	-0.036	3650	6.786	-0.022	20888	0.0401	0.0504	22.9	Endosulfan I
6.459	-0.021	9013	7.102	0.036	12794	0.0931	0.0303	101.8*	Dieldrin
6.178	-0.002	10105	6.851	-0.017	24355	0.1304	0.0555	80.5*	4,4'-DDE
6.658	-0.039	3639	7.371	0.015	89903	0.0463	0.2672	140.9*	Endrin
6.920	0.017	2600	7.547	0.002	69989	0.0305	0.1773	141.3*	Endosulfan II
6.754	0.018	3407	----			0.0378	0.0000	---	4,4'-DDD
7.669	-0.002	1823	8.087	0.000	40910	0.0238	0.1267	136.6*	Endosulfan sulfate
6.972	-0.022	29972	7.706	0.012	166981	0.3753	0.5118	30.8	4,4'-DDT
7.420	0.001	1528	8.291	0.014	99373	0.0400	0.7903	180.7*	Methoxychlor
7.919	-0.007	16903	8.584	0.006	117115	0.1741	0.3330	62.7*	Endrin ketone
7.276	-0.004	2679	7.840	-0.001	34512	0.0374	0.1106	99.0*	Endrin aldehyde
5.996	-0.003	8370	6.627	0.023	51524	0.0813	0.1096	29.7	gamma-Chlordane
6.139	0.015	7625	6.747	0.006	12122	0.0796	0.0280	96.0*	alpha-Chlordane
2.314	0.005	40176	2.490	0.024	56739	0.3011	0.1043	97.1*	Hexachlorobutadiene
4.136	-0.002	50978	4.567	-0.017	91250	0.5049	0.1336	116.3*	Hexachlorobenzene
5.780	-0.004	7719	6.354	0.022	28404	0.0961	0.0719	28.8	Oxychlordane
----			6.569	-0.011	53689	0.0000	0.1820	---	2,4-DDE
6.088	-0.019	3233	6.675	-0.017	28256	0.0328	0.0709	73.5*	trans-Nonachlor
6.329	-0.014	2279	----			0.0425	0.0000	---	2,4-DDD
----			----			0.0000	0.0000	---	2,4-DDT
6.710	-0.013	19600	7.450	0.033	18540	0.1841	0.0445	122.2*	cis-Nonachlor
7.594	-0.002	1461	8.533	-0.031	383258	0.0222	1.7281	194.9*	Mirex
8.919	-0.001	6008642	10.288	-0.002	17759464	80.0000	80.0000	0.0	Hexabromobiphenyl
1.754	-0.001	35857	1.742	0.018	20755244	0.0000	0.0000	---	Hexachloroethane
6.548	-0.033	13497	7.313	-0.023	37923	0.0000	0.0000	---	Kepone
3.796	-0.001	2602826	4.125	-0.001	13972191	31.8540	29.6668	7.1	Tetrachloro-m-xylen
8.771	0.000	2854920	9.724	-0.001	12746784	33.4196	35.5294	6.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	79.6	74.2	74.2	42-112
Decachlorobiphenyl	83.5	88.8	83.5	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

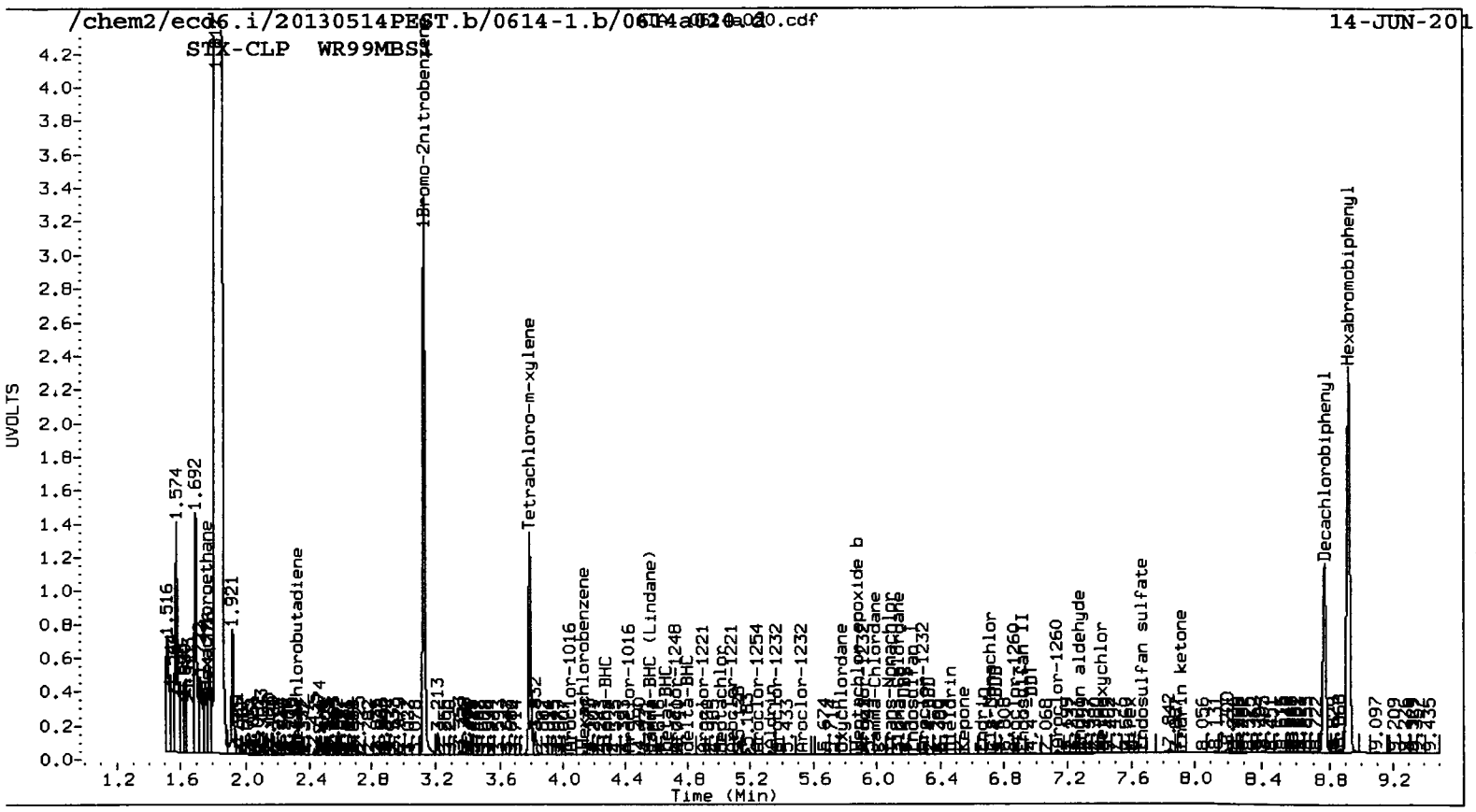
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5992911	8.9
Hexabromobiphenyl	5319006	6008642	13.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	28970198	-0.3
Hexabromobiphenyl	16515704	17759464	7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.972	0.017	29972	8.0	1	7.313	0.022	37923	2.9
Toxaphene	2	---			0.000	2	7.626	0.010	23392	1.2
Toxaphene	3	7.276	0.012	2679	0.6	3	7.840	-0.006	34512	1.7
Toxaphene	4	7.594	0.005	1461	0.4	4	8.330	0.016	51153	3.5
Toxaphene	5	---			0.000	5	---			0.000
Toxaphene	6	7.919	0.010	16903	6.6	NS	---			----
Total STX-CLPAve (4 peaks): 3.908						Total CLP2Ave (4 peaks): 2.340			RPD = 50*	
Corrected Ave (3 peaks): 2.539						Corrected Ave (4 peaks): 2.340			RPD = 8	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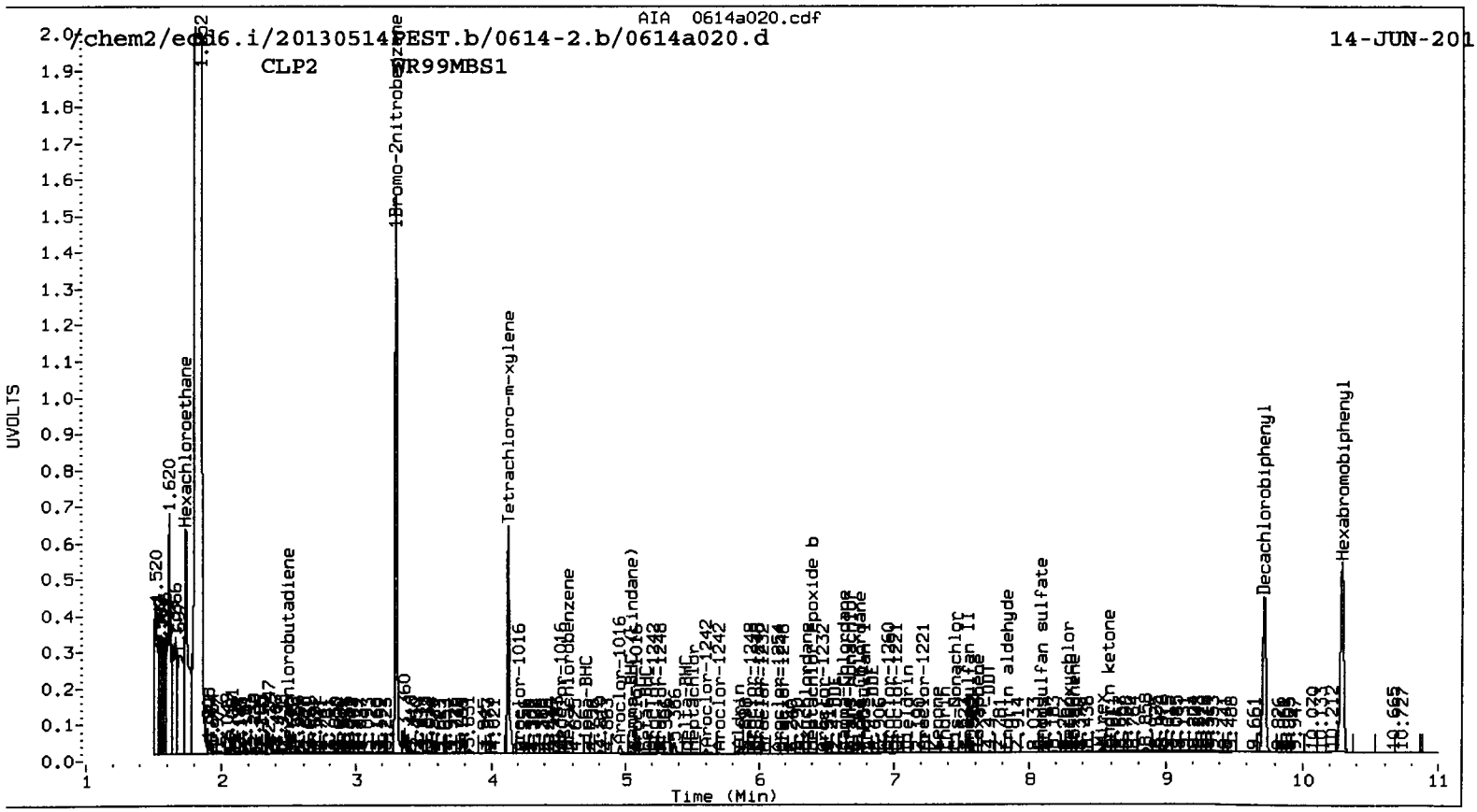
14-JUN-201
STX-CLP WR99MBS1
UVOLTS
Time (Min)
1.574
1.692
1.516
1.921
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl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14-JUN-201
CLP2 WR99MBS1
UVOLTS
Time (Min)
1.620
Hexachloroethane
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/18/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a021.d ARI ID: WR99LCSS1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a021.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 12:49
Compound Sublist: wpest Report Date: 06/18/2013 09:43
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.128	-0.001	6382179	3.298	-0.002	29378191	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.283	-0.001	2475044	4.707	-0.001	12173561	18.2038	18.4517	1.4	alpha-BHC
4.640	-0.001	969671	5.137	0.000	4803067	17.9892	18.9262	5.1	beta-BHC
4.810	-0.001	2231590	5.447	-0.001	11093373	19.6670	20.4733	4.0	delta-BHC
4.566	-0.001	2315055	5.063	-0.001	10566983	19.6474	18.4591	6.2	gamma-BHC (Lindane)
5.012	-0.001	2161076	5.528	-0.001	10685554	18.8701	19.4241	2.9	Heptachlor
5.304	-0.001	2138770	5.866	-0.001	9935058	18.8668	19.1340	1.4	Aldrin
5.879	-0.001	2114864	6.420	-0.001	9640175	20.6871	21.1986	2.4	Heptachlor epoxide b
6.256	-0.001	1951106	6.808	-0.001	8649837	20.1138	20.5888	2.3	Endosulfan I
6.478	-0.001	4158884	7.065	-0.001	17612951	40.3427	41.1402	2.0	Dieldrin
6.180	0.000	3961239	6.867	-0.001	17476055	47.9867	39.2893	19.9	4,4'-DDE
6.697	0.000	3519954	7.354	-0.001	13507839	39.9302	38.4425	3.8	Endrin
6.902	0.000	3505006	7.543	-0.001	14257994	36.6841	34.5854	5.9	Endosulfan II
6.736	0.000	3433395	7.406	-0.001	14186556	33.9778	34.2928	0.9	4,4'-DDD
7.669	-0.001	3055400	8.085	-0.001	12103477	35.6420	35.8901	0.7	Endosulfan sulfate
6.994	0.000	3218462	7.693	-0.001	11322747	35.9448	33.2316	7.8	4,4'-DDT
7.419	0.000	7302651	8.275	-0.002	22978238	170.7134	174.9909	2.5	Methoxychlor
7.924	-0.001	3759044	8.576	-0.001	12556270	34.5342	34.1890	1.0	Endrin ketone
7.279	-0.001	1247336	7.840	-0.001	5269656	15.5183	16.1730	4.1	Endrin aldehyde
5.999	-0.001	2164010	6.603	-0.001	9812881	19.7380	20.5875	4.2	gamma-Chlordane
6.123	0.000	2065832	6.741	0.000	9032005	20.2599	20.5671	1.5	alpha-Chlordane
2.308	-0.001	2223701	2.465	-0.001	8496264	15.6466	15.3995	1.6	Hexachlorobutadiene
4.137	-0.001	1769833	4.583	-0.001	12582644	16.4609	18.1668	9.9	Hexachlorobenzene
5.796	0.012	20232	6.338	0.006	2818	~~0.2246~~	~~0.0070~~	187.9*	Oxychlordane
5.833	-0.024	1421	6.540	-0.039	135707	0.0209	~~0.4537~~	182.4*	2,4-DDE
----			6.685	-0.007	16430	~~0.0000~~	0.0395	---	trans-Nonachlor
6.343	-0.001	37982	----			0.6311	0.0000	---	2,4-DDD
6.581	-0.001	18804	----			0.2794	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.611	0.015	44122	8.533	-0.032	451687	~~0.5971~~	~~1.~~9503	106.2*	Mirex
8.918	-0.002	6736535	10.286	-0.004	18546379	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.754	-0.002	11403	1.708	-0.017	7578338	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.545	-0.036	3587	7.290	-0.046	68564	~~0.0000~~	~~0.0000~~	---	Kepone
3.796	-0.001	2575832	4.124	-0.001	13556760	29.6009	28.3850	4.2	Tetrachloro-m-xylen
8.770	-0.001	2809709	9.722	-0.002	12222072	29.3365	32.6214	10.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

WR99LCSS

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	74.0	71.0	71.0	42-112
Decachlorobiphenyl	73.3	81.6	73.3	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

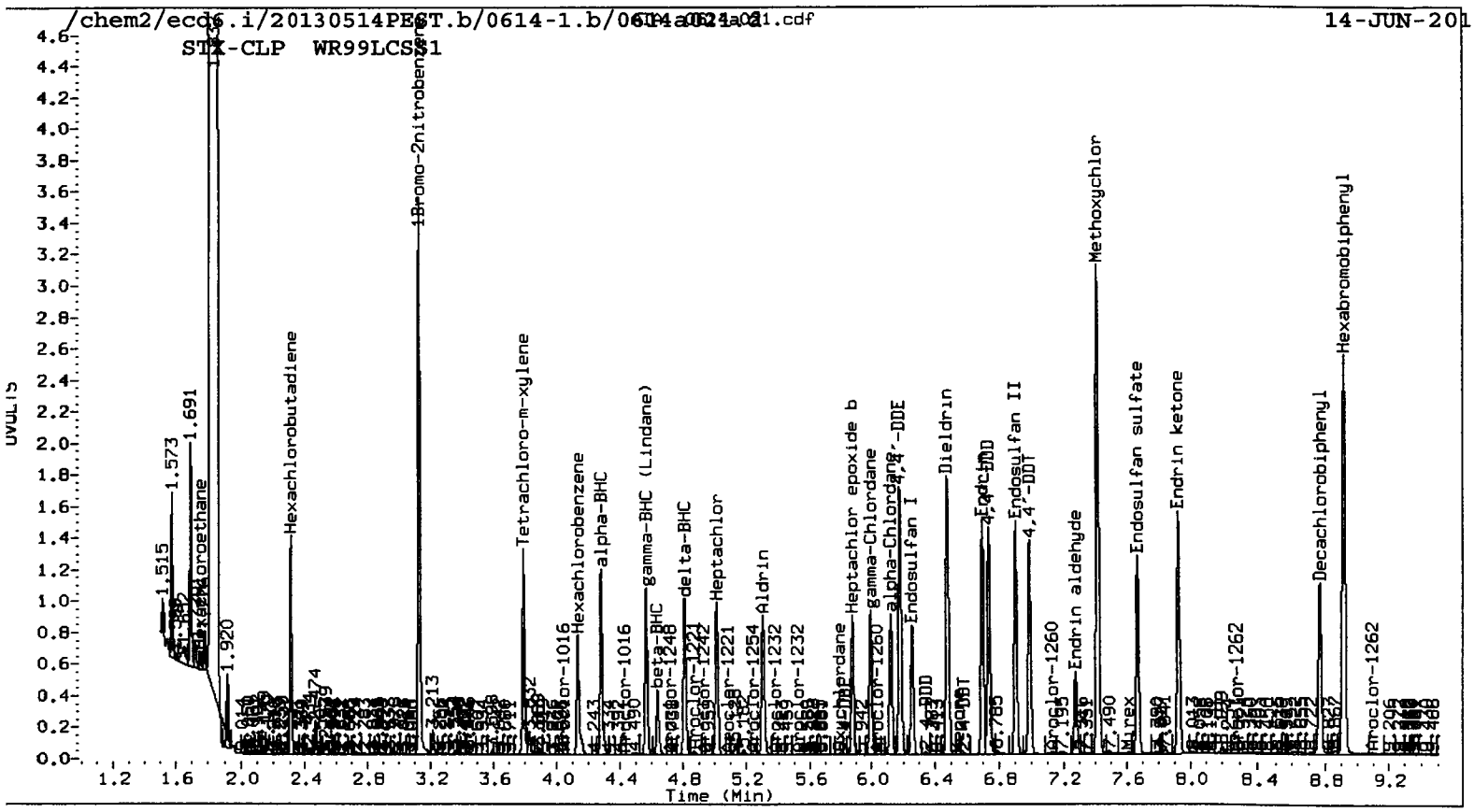
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6382179	16.0
Hexabromobiphenyl	5319006	6736535	26.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29378191	1.1
Hexabromobiphenyl	16515704	18546379	12.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.994	0.039	3218462	767.7	1	7.290	-0.001	68564	5.1
Toxaphene	2	---			0.000	2	7.626	0.010	423422	21.1
Toxaphene	3	7.279	0.015	1247336	257.0	3	7.840	-0.006	5269656	245.7
Toxaphene	4	7.611	0.022	44122	9.7	4	8.275	-0.039	22978238	1514.5
Toxaphene	5	---			0.000	5	8.375	0.022	372723	18.7
Toxaphene	6	7.924	0.015	3759044	1316.8	NS	---			----
Total STX-CLPAve (4 peaks): 587.812						Total CLP2Ave (5 peaks): 361.012				RPD = 48*
Corrected Ave (3 peaks): 344.815						Corrected Ave (4 peaks): 72.651				RPD = 130*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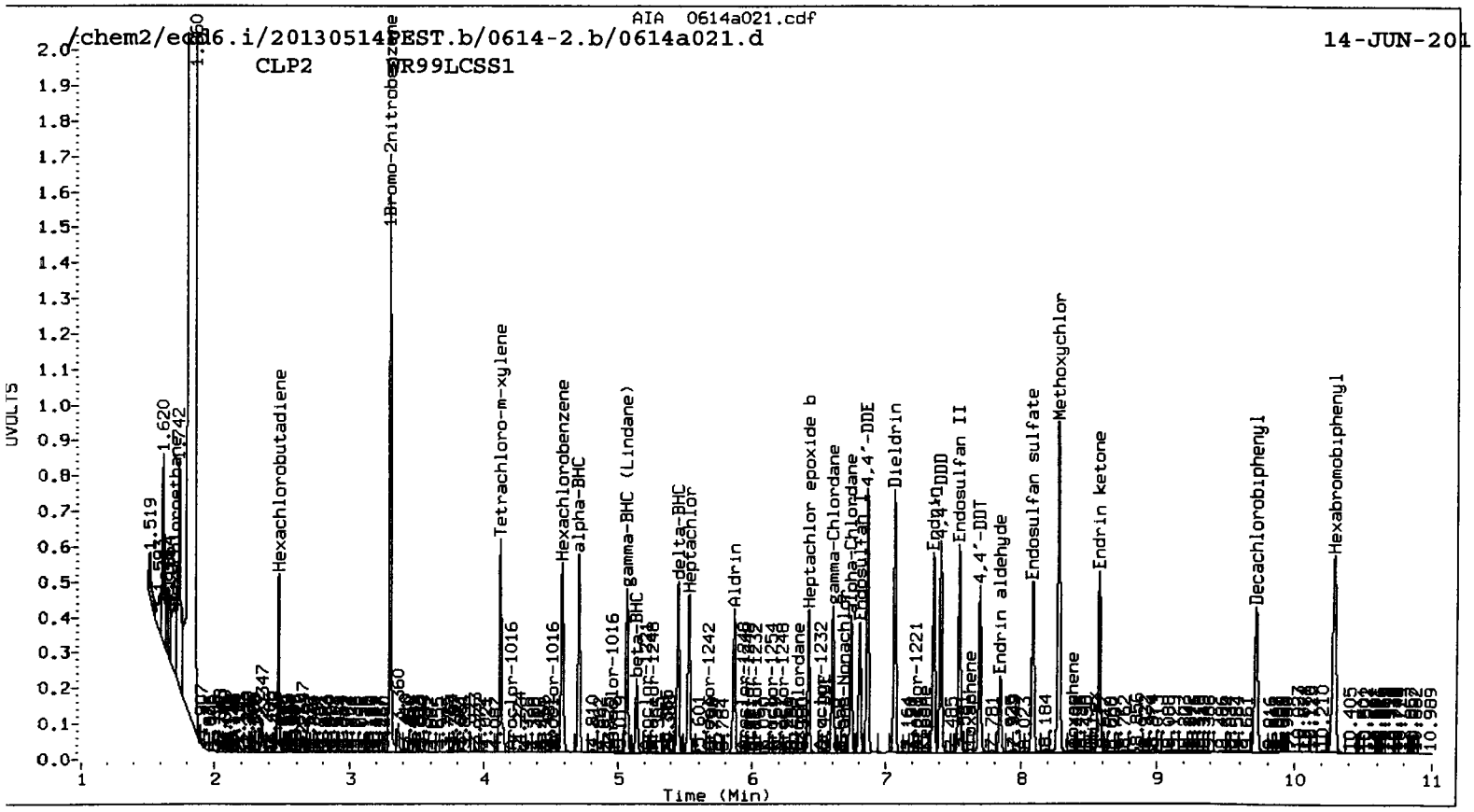
14-JUN-201
STX-CLP WR99LCSS1
UVOLTS
Time (Min)
1.515
1.573
1.691
1.920
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-JUN-201
CLP2 WR99LCSS1
UVOLTS
Time (Min)
1.519
1.620
1.742
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a023.d ARI ID: WR99D
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a023.d Client ID: 5
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 13:24
Compound Sublist: wpest Report Date: 06/18/2013 09:43
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

YZ 6/18/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.128	-0.001	5500369	3.298	-0.001	24088740	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.269	-0.015	104115	4.702	-0.006	664729	0.8885	1.2288	32.1	alpha-BHC
4.639	-0.003	24065	5.125	-0.011	97056	0.5180	0.4664	10.5	beta-BHC
4.799	-0.011	74332	5.451	0.003	108457	0.7601	0.2441	102.8*	delta-BHC
4.566	-0.001	13998	5.054	-0.010	963736	0.1378	2.0532	174.8*	gamma-BHC (Lindane)
4.994	-0.019	11221	5.530	0.002	1165317	0.1137	2.5834	183.1*	Heptachlor
5.323	0.018	27593	5.882	0.016	142164	0.2824	0.3339	16.7	Aldrin
5.913	0.034	27348	6.426	0.005	47307	0.3104	0.1269	83.9*	Heptachlor epoxide b
6.260	0.003	32742	6.808	0.000	183518	0.3916	0.5327	30.5	Endosulfan I
6.479	0.000	61203	7.100	0.034	33515	0.6889	0.0955	151.3*	Dieldrin
6.183	0.003	74832	6.868	0.000	15692	1.0519	0.0430	184.3*	4,4'-DDE
6.685	-0.012	85741	----			1.0955	0.0000	---	Endrin
6.890	-0.013	25332	7.530	-0.015	673585	0.2986	2.8604	162.2*	Endosulfan II
----			7.380	-0.027	529436	0.0000	2.2405	---	4,4'-DDD
7.673	0.003	63585	8.106	0.019	718916	0.8354	3.7320	126.8*	Endosulfan sulfate
7.004	0.010	228398	7.703	0.010	476402	2.8730	2.4478	16.0	4,4'-DDT
7.431	0.011	40456	8.276	-0.001	373502	1.0652	4.9796	129.5*	Methoxychlor
7.906	-0.020	100305	8.580	0.002	687718	1.0379	3.2782	103.8*	Endrin ketone
7.295	0.015	59855	7.851	0.009	183543	0.8387	0.9862	16.2	Endrin aldehyde
5.981	-0.019	61825	6.610	0.007	261500	0.6543	0.6691	2.2	gamma-Chlordane
6.136	0.012	9705	6.739	-0.002	34206	0.1104	0.0950	15.0	alpha-Chlordane
2.306	-0.003	20931	2.453	-0.013	39466	0.1709	0.0872	64.8*	Hexachlorobutadiene
4.136	-0.002	32463	4.566	-0.018	61186	0.3503	0.1077	105.9*	Hexachlorobenzene
5.778	-0.006	12583	6.314	-0.018	11066566	0.1574	33.6960	198.1*	Oxychlordane
5.852	-0.005	60370	6.569	-0.011	37999	~~1.0001~~	~~0.1549~~	146.3*	2,4-DDE
6.067	-0.039	1526043	6.685	-0.007	4073300	15.5560	17.1364	9.7	trans-Nonachlor
6.331	-0.013	19054	7.048	-0.017	427391	0.3566	3.2337	160.3*	2,4-DDD
6.601	0.019	3924	7.348	-0.004	574684	0.0657	4.1489	193.8*	2,4-DDT
6.728	0.005	189284	7.452	0.035	182294	1.7862	0.7333	83.6*	cis-Nonachlor
7.608	0.013	151506	8.537	-0.028	292192	2.3092	2.2087	4.4	Mirex
8.920	0.000	5981100	10.288	-0.002	10593945	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.756	0.001	2297	1.723	-0.001	188786	0.0000	0.0000	---	Hexachloroethane
6.552	-0.029	42279	----			0.0000	0.0000	---	Kepone
3.796	-0.001	494170	4.124	-0.001	2066757	6.5893	5.2776	22.1	Tetrachloro-m-xylene
8.755	-0.016	2393456	9.731	0.006	1927115	28.1468	9.0047	103.0*	Decachlorobiphenyl

NR

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	16.5	13.2	13.2~	42-112
Decachlorobiphenyl	70.4	22.5	22.5~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

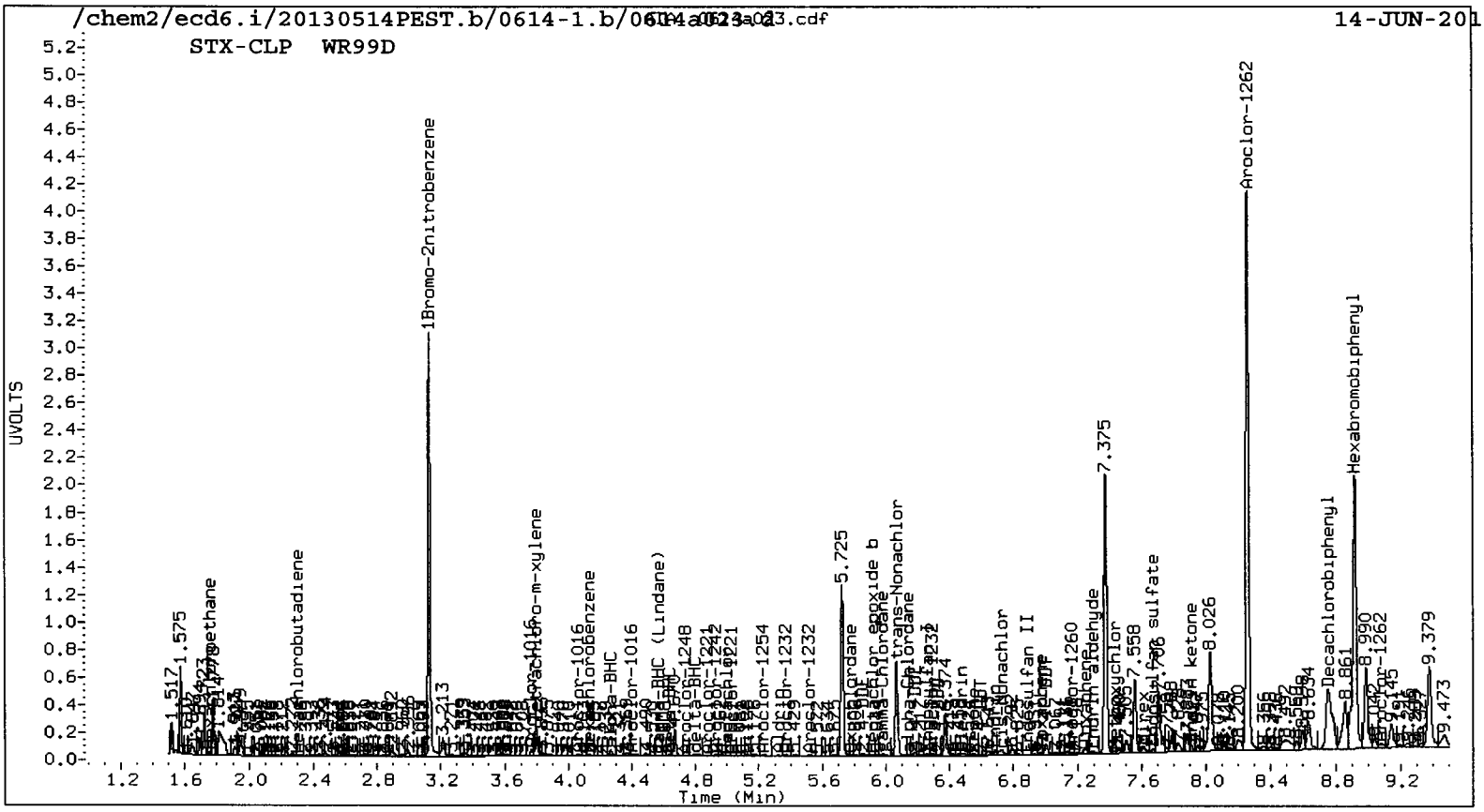
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5500369	0.0
Hexabromobiphenyl	5319006	5981100	12.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	24088740	-17.1
Hexabromobiphenyl	16515704	10593945	-35.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.971	0.016	50156	13.5	1	7.283	-0.008	992005	128.9
Toxaphene	2	7.004	-0.003	228398	79.2	2	7.619	0.003	71937	6.3
Toxaphene	3	7.249	-0.015	151283	35.1	3	7.851	0.005	183543	15.0
Toxaphene	4	7.608	0.020	151506	37.5	4	8.335	0.021	3679738	424.6
Toxaphene	5	---			0.000	5	8.367	0.014	379613	33.3
Toxaphene	6	7.906	-0.003	100305	39.6	NS	---			----
Total STX-CLPAve (5 peaks): 40.976						Total CLP2Ave (5 peaks): 121.608				RPD = 99*
Corrected Ave (4 peaks): 31.413						Corrected Ave (4 peaks): 45.865				RPD = 37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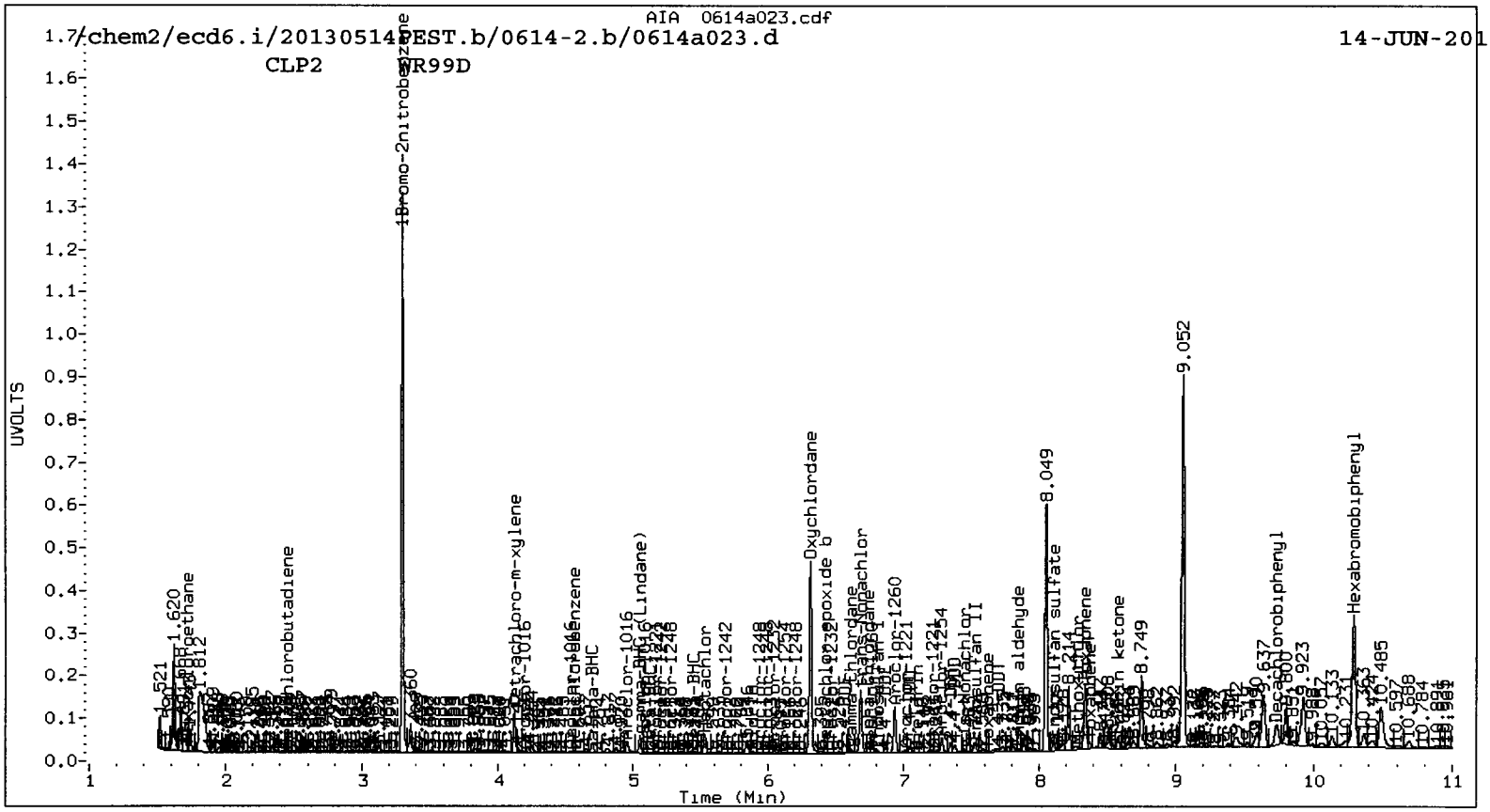
14-JUN-201
STX-CLP WR99D
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Aroclor-1262
Hexabromobiphenyl
Decachlorobiphenyl
7.375
5.725
8.026
9.379
8.861
8.990
9.473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14-JUN-201
CLP2 WR99D
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
9.052
8.049
Oxychlordane
Hexabromobiphenyl
8.749

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a024.d ARI ID: WR99DMS
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a024.d Client ID: 5
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 13:42
Compound Sublist: wpest Report Date: 06/18/2013 09:43
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

1/2 06/18/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.128	-0.001	6300117	3.298	-0.001	24443149	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.279	-0.005	370502	4.705	-0.004	1547869	2.7605	2.8198	2.1	alpha-BHC
4.641	-0.001	128184	5.137	0.000	436630	2.4090	2.0679	15.2	beta-BHC
4.808	-0.003	118330	5.448	0.000	457233	1.0564	1.0142	4.1	delta-BHC
4.565	-0.002	113214	5.055	-0.010	1495191	0.9733	3.1392	105.3*	gamma-BHC (Lindane)
5.012	-0.001	81841	5.530	0.001	1307983	0.7239	2.8577	119.2*	Heptachlor
5.304	-0.001	390419	5.864	-0.002	779563	3.4889	1.8045	63.6*	Aldrin
5.879	-0.001	316448	6.421	0.000	853010	3.1357	2.2545	32.7	Heptachlor epoxide b
6.257	0.000	191529	6.809	0.001	835601	2.0002	2.3905	17.8	Endosulfan I
6.479	0.000	1027102	7.066	0.000	3263296	10.0931	9.1613	9.7	Dieldrin
6.180	0.001	751146	6.868	0.000	1516905	9.2180	4.0988	76.9*	4,4'-DDE
6.689	-0.008	1376855	7.350	-0.005	1317963	16.3126	5.5932	97.9*	Endrin N
6.902	-0.001	294010	7.533	-0.012	4086043	3.2138	14.7797	128.6*	Endosulfan II
6.735	-0.002	664485	7.407	0.000	1538625	6.8680	5.5461	21.3	4,4'-DDD
7.673	0.003	286940	8.106	0.019	1654777	3.4959	7.3170	70.7*	Endosulfan sulfate
7.005	0.011	1134305	7.693	-0.001	749897	13.2309	3.2819	120.5*	4,4'-DDT
7.420	0.001	397829	8.280	0.003	2142827	9.7130	24.3341	85.9*	Methoxychlor
7.908	-0.018	963440	8.581	0.004	3861466	9.2442	15.6786	51.6*	Endrin ketone
7.284	0.004	284832	7.843	0.002	734231	3.7010	3.3602	9.7	Endrin aldehyde
5.998	-0.001	416740	6.606	0.003	1526670	3.8506	3.8496	0.0	gamma-Chlordane
6.124	0.000	282528	6.741	0.000	1030474	2.8069	2.8203	0.5	alpha-Chlordane
2.309	0.000	414370	2.466	0.000	1500349	2.9536	3.2684	10.1	Hexachlorobutadiene
4.136	-0.002	338933	4.583	-0.001	1842423	3.1934	3.1972	0.1	Hexachlorobenzene
5.779	-0.006	254132	6.315	-0.017	12350244	2.9468	37.0593	170.5*	Oxychlordane
5.851	-0.007	167156	----			2.5678	0.0000	---	2,4-DDE
6.068	-0.038	7751591	6.685	-0.007	19187850	73.2718	68.7587	6.4	trans-Nonachlor
6.343	0.000	42122	7.022	-0.042	1064777	0.7310	6.8621	161.5*	2,4-DDD
6.588	0.005	33432	7.350	-0.002	1317963	0.5187	8.1047	175.9*	2,4-DDT
----			7.449	0.032	440107	0.0000	1.5079	---	cis-Nonachlor
7.611	0.015	602329	8.539	-0.026	2142198	8.5128	13.7926	47.3*	Mirex
8.922	0.001	6450091	10.288	-0.002	12437423	80.0000	80.0000	0.0	Hexabromobiphenyl
1.757	0.002	3469	1.743	0.019	1544155	0.0000	0.0000	---	Hexachloroethane
6.552	-0.029	92171	7.307	-0.029	531623	0.0000	0.0000	---	Kepone
3.796	0.000	714412	4.124	-0.002	2019858	8.3168	5.0830	48.3*	Tetrachloro-m-xylene
8.788	0.018	1193185	9.738	0.013	2135197	13.0115	8.4982	42.0*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	20.8	12.7	12.7~	42-112
Decachlorobiphenyl	32.5	21.2	21.2~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

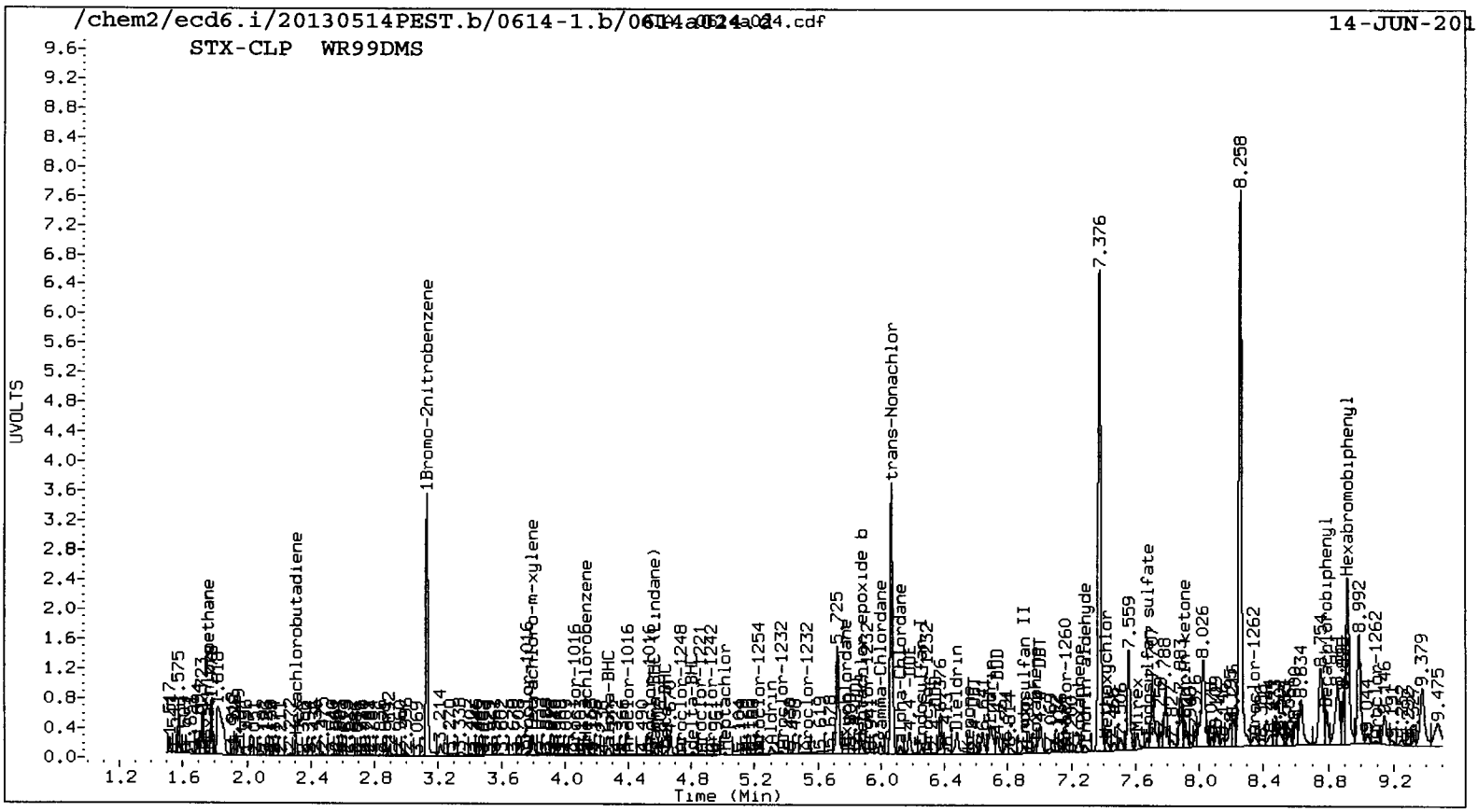
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6300117	14.5
Hexabromobiphenyl	5319006	6450091	21.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	24443149	-15.9
Hexabromobiphenyl	16515704	12437423	-24.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.977	0.022	254585	63.4	1	7.284	-0.007	2044069	226.2	
Toxaphene	2	7.005	-0.002	1134305	364.9	2	7.590	-0.026	555349	41.3	
Toxaphene	3	7.246	-0.017	436742	94.0	3	7.843	-0.002	734231	51.0	
Toxaphene	4	7.611	0.022	602329	138.2	4	8.336	0.022	11000685	1081.2	
Toxaphene	5	---			0.000	5	8.364	0.011	3249875	243.0	
Toxaphene	6	7.908	-0.001	963440	352.5	NS	---			----	
Total STX-CLPAve (5 peaks): 202.596						Total CLP2Ave (5 peaks): 328.539				RPD = 47*	
Corrected Ave (3 peaks): 98.542						Corrected Ave (4 peaks): 140.385				RPD = 35	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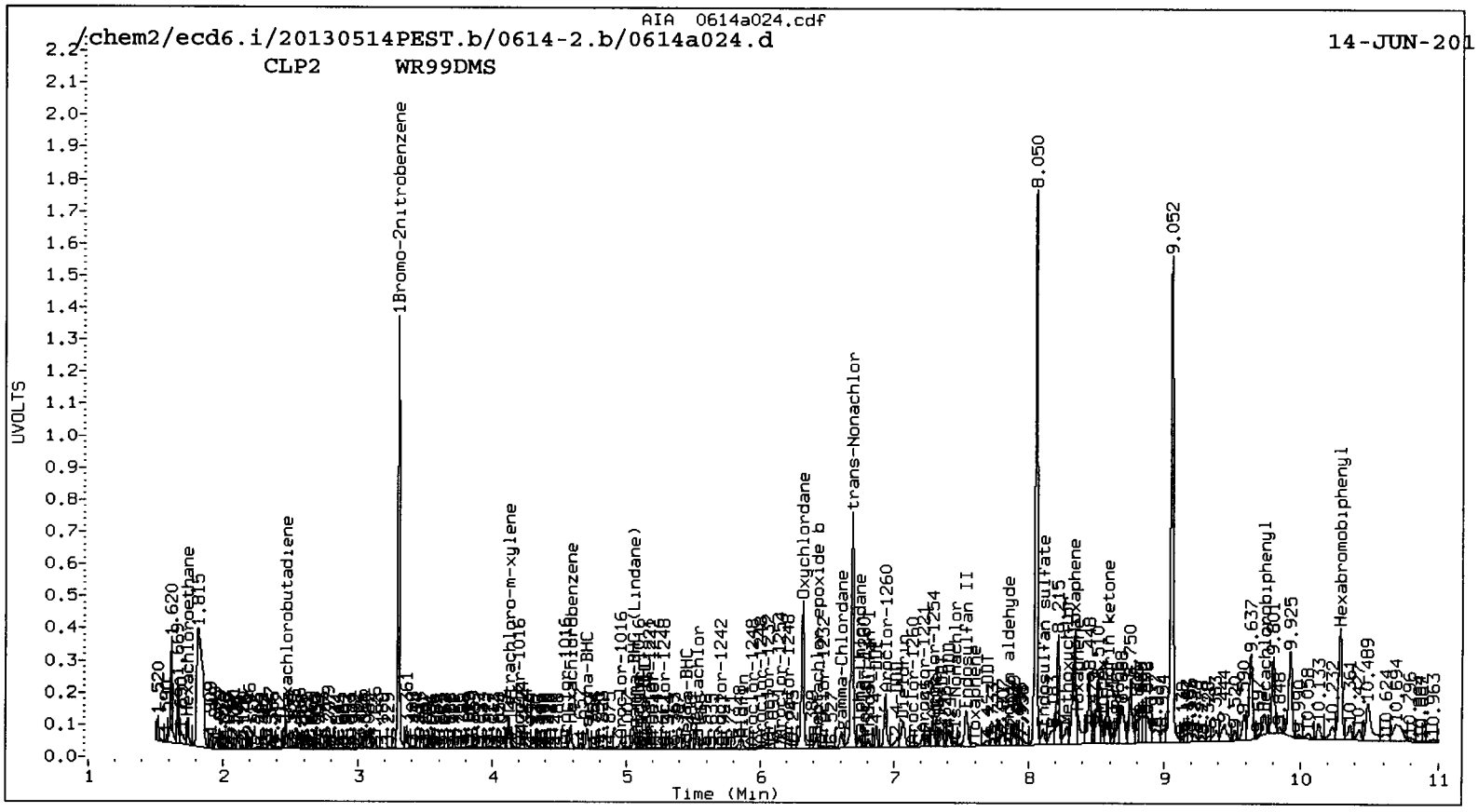
14-JUN-201
STX-CLP WR99DMS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachloroethane
Chlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
Benzyl chloride
1,2,4-Trichlorobenzene
Naphthalene
Hexachlorocyclopentadiene
2-Chloronaphthalene
2,6-Dinitrotoluene
Acenaphthylene
Acenaphthene
2,4-Dinitrotoluene
Fluorene
4-Chlorophenyl phenyl ether
Diethylphthalate
4-Nitroaniline
4,6-Dinitro-2-methylphenol
N-Nitrosodiphenylamine
4-Bromophenyl phenyl ether
Hexachlorobenzene
Atrazine
Pentachlorophenol
Phenanthrene
Anthracene
Carbazole
Di-n-butylphthalate
Fluoranthene
Pyrene
Butylbenzylphthalate
3,3'-Dichlorobenzidine
Benzo(a)anthracene
Chrysene
Bis(2-ethylhexyl)phthalate
Di-n-octylphthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene
Alpha-BHC
Beta-BHC
Delta-BHC
Gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Oxychlordane
trans-Nonachlor
Mirex
Hexabromobiphenyl
Decachlorobiphenyl
Surr: 1-Chloro-m-xylene
Surr: Decachlorobiphenyl
Surr: Tetrachloro-m-xylene
Surr: Dibutylchlorendate
Surr: 2,4,6-Tribromophenol
Surr: 2-Fluorobiphenyl
Surr: Nitrobenzene-d5
Surr: p-Terphenyl-d14
Surr: Phenol-d6
Surr: 2-Fluorophenol
Surr: Pentachlorophenol
Surr: 2,4,6-Tribromophenol
Surr: Dibutylchlorendate
Surr: Tetrachloro-m-xylene
Surr: Decachlorobiphenyl
Surr: 1-Chloro-m-xylene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14-JUN-201
CLP2 WR99DMS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachloroethane
Chlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
Benzyl chloride
1,2,4-Trichlorobenzene
Naphthalene
Hexachlorocyclopentadiene
2-Chloronaphthalene
2,6-Dinitrotoluene
Acenaphthylene
Acenaphthene
2,4-Dinitrotoluene
Fluorene
4-Chlorophenyl phenyl ether
Diethylphthalate
4-Nitroaniline
4,6-Dinitro-2-methylphenol
N-Nitrosodiphenylamine
4-Bromophenyl phenyl ether
Hexachlorobenzene
Atrazine
Pentachlorophenol
Phenanthrene
Anthracene
Carbazole
Di-n-butylphthalate
Fluoranthene
Pyrene
Butylbenzylphthalate
3,3'-Dichlorobenzidine
Benzo(a)anthracene
Chrysene
Bis(2-ethylhexyl)phthalate
Di-n-octylphthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene
Alpha-BHC
Beta-BHC
Delta-BHC
Gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Oxychlordane
trans-Nonachlor
Mirex
Hexabromobiphenyl
Decachlorobiphenyl
Surr: 1-Chloro-m-xylene
Surr: Decachlorobiphenyl
Surr: Tetrachloro-m-xylene
Surr: Dibutylchlorendate
Surr: 2,4,6-Tribromophenol
Surr: 2-Fluorobiphenyl
Surr: Nitrobenzene-d5
Surr: p-Terphenyl-d14
Surr: Phenol-d6
Surr: 2-Fluorophenol
Surr: Pentachlorophenol
Surr: 2,4,6-Tribromophenol
Surr: Dibutylchlorendate
Surr: Tetrachloro-m-xylene
Surr: Decachlorobiphenyl
Surr: 1-Chloro-m-xylene

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a025.d ARI ID: WR99DMSD
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a025.d Client ID: 5
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 14:00
Compound Sublist: wpest Report Date: 06/18/2013 09:44
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

6/18/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.127	-0.002	6064480	3.297	-0.002	23634673	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.280	-0.004	221033	4.704	-0.004	1088580	1.7109	2.0509	18.1	alpha-BHC
4.639	-0.003	77843	5.135	-0.002	373360	1.5198	1.8287	18.5	beta-BHC
4.807	-0.004	103595	5.447	-0.001	378006	0.9608	0.8672	10.2	delta-BHC
4.564	-0.003	105527	5.054	-0.010	1349691	0.9425	2.9307	102.7*	gamma-BHC (Lindane)
5.011	-0.002	83519	5.529	0.000	1183595	0.7675	2.6744	110.8*	Heptachlor
5.304	-0.001	254087	5.864	-0.002	675974	2.3588	1.6182	37.2	Aldrin
5.878	-0.002	313692	6.420	-0.001	591833	3.2292	1.6177	66.5*	Heptachlor epoxide b
6.256	-0.001	128558	6.808	-0.001	554984	1.3947	1.6420	16.3	Endosulfan I
6.478	-0.001	939473	7.064	-0.002	2107526	9.5907	6.1190	44.2*	Dieldrin N
6.179	0.000	644614	6.867	-0.001	1247780	8.2180	3.4869	80.8*	4,4'-DDE
6.696	-0.001	260135	7.350	-0.005	698159	3.0341	2.9101	4.2	Endrin N
6.901	-0.001	125070	7.543	-0.002	1441025	1.3459	5.1196	116.7*	Endosulfan II
6.734	-0.002	482435	7.405	-0.002	996266	4.9088	3.5272	32.8	4,4'-DDD
7.672	0.002	204402	8.106	0.019	758223	2.4516	3.2930	29.3	Endosulfan sulfate
7.001	0.007	340476	7.693	-0.001	283228	3.9097	1.2175	105.0*	4,4'-DDT
7.420	0.000	308712	8.276	0.000	679216	7.4200	7.5759	2.1	Methoxychlor
7.921	-0.004	293575	8.579	0.001	801486	2.7730	3.1963	14.2	Endrin ketone
7.279	-0.001	195939	7.843	0.001	321753	2.5064	1.4463	53.6*	Endrin aldehyde
5.998	-0.001	243484	6.604	0.001	1002230	2.3372	2.6137	11.2	gamma-Chlordane
6.123	0.000	219114	6.741	0.000	934031	2.2615	2.6438	15.6	alpha-Chlordane
2.307	-0.001	412917	2.465	-0.001	1663930	3.0576	3.7488	20.3	Hexachlorobutadiene
4.135	-0.003	282784	4.582	-0.002	1691813	2.7679	3.0362	9.2	Hexachlorobenzene
5.784	0.000	1005868	6.314	-0.018	10046455	11.4824	31.1776	92.3*	Oxychlordane
----			6.531	-0.049	232578	0.0000	0.9665	---	2,4-DDE
6.067	-0.039	1581270	6.683	-0.009	5165811	14.7146	18.1820	21.1	trans-Nonachlor
6.336	-0.007	13944	7.064	0.000	2107526	0.2382	13.3404	193.0*	2,4-DDD
6.591	0.009	50798	7.350	-0.002	698159	0.7759	4.2169	137.8*	2,4-DDT
----			7.451	0.034	180116	0.0000	0.6061	---	cis-Nonachlor
7.609	0.013	160563	8.533	-0.032	427008	2.2340	2.7004	18.9	Mirex
8.920	0.000	6551955	10.287	-0.003	12662774	80.0000	80.0000	0.0	Hexabromobiphenyl
1.756	0.000	12512	1.742	0.017	5869613	0.0000	0.0000	---	Hexachloroethane
6.552	-0.029	103655	----			0.0000	0.0000	---	Kepone
3.795	-0.002	547818	4.123	-0.002	1925429	6.6252	5.0111	27.7	Tetrachloro-m-xylene
8.756	-0.015	2379361	9.730	0.005	1939284	25.5431	7.5811	108.5*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	16.6	12.5	12.5~	42-112
Decachlorobiphenyl	63.9	19.0	19.0~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6064480	10.2
Hexabromobiphenyl	5319006	6551955	23.2

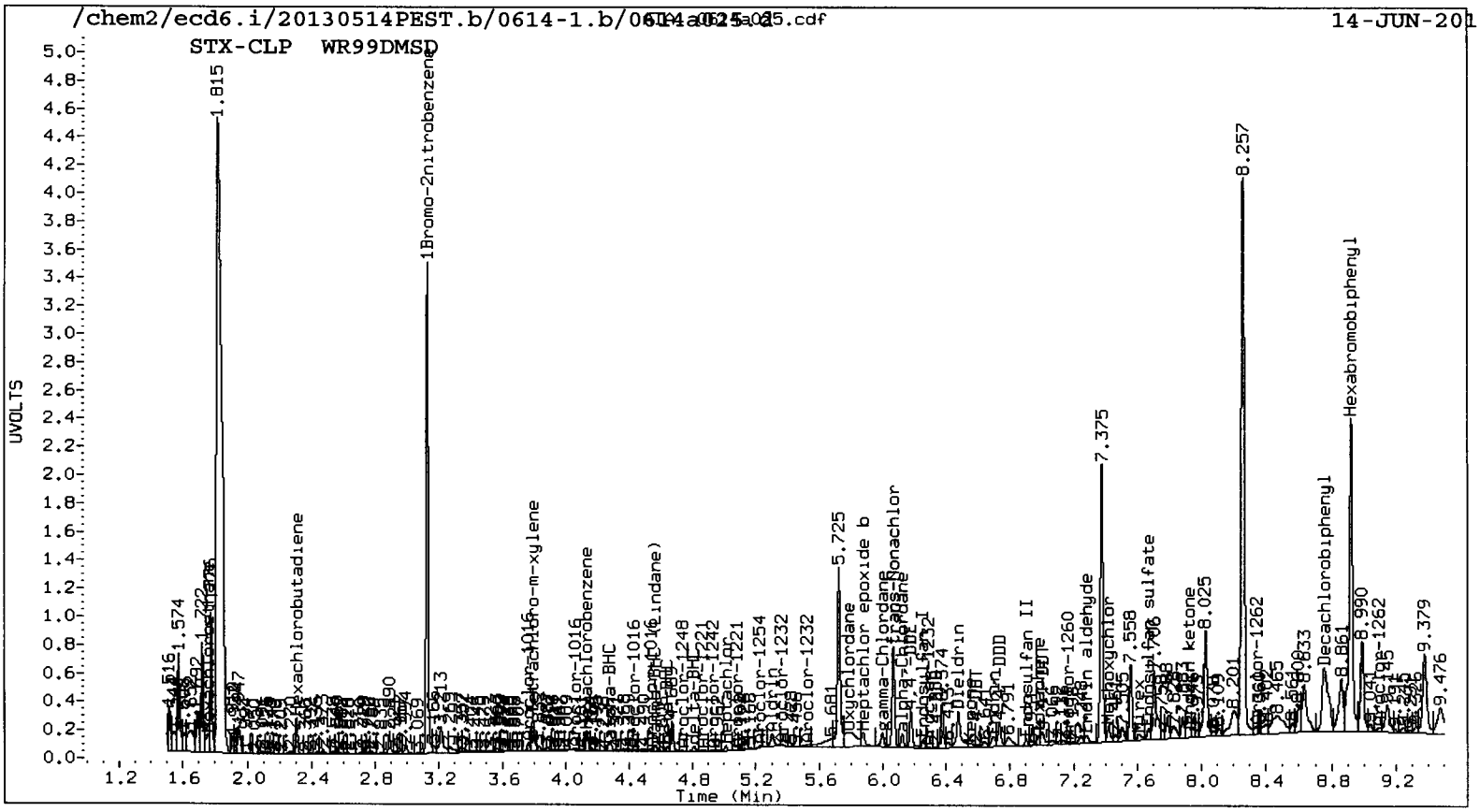
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	23634673	-18.7
Hexabromobiphenyl	16515704	12662774	-23.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.978	0.023	150295	36.9	1	7.282	-0.009	672889	73.1
Toxaphene	2	7.001	-0.006	340476	107.8	2	7.612	-0.004	480795	35.2
Toxaphene	3	7.279	0.015	195939	41.5	3	7.843	-0.003	321753	22.0
Toxaphene	4	7.609	0.020	160563	36.3	4	8.336	0.022	6690591	645.9
Toxaphene	5	---			0.000	5	8.364	0.011	3129560	229.8
Toxaphene	6	7.921	0.012	293575	105.7	NS	---			----
Total STX-CLPAve (5 peaks): 65.640						Total CLP2Ave (5 peaks): 201.183				RPD = 102*
Corrected Ave (5 peaks): 65.640						Corrected Ave (4 peaks): 90.016				RPD = 31

WR30-01763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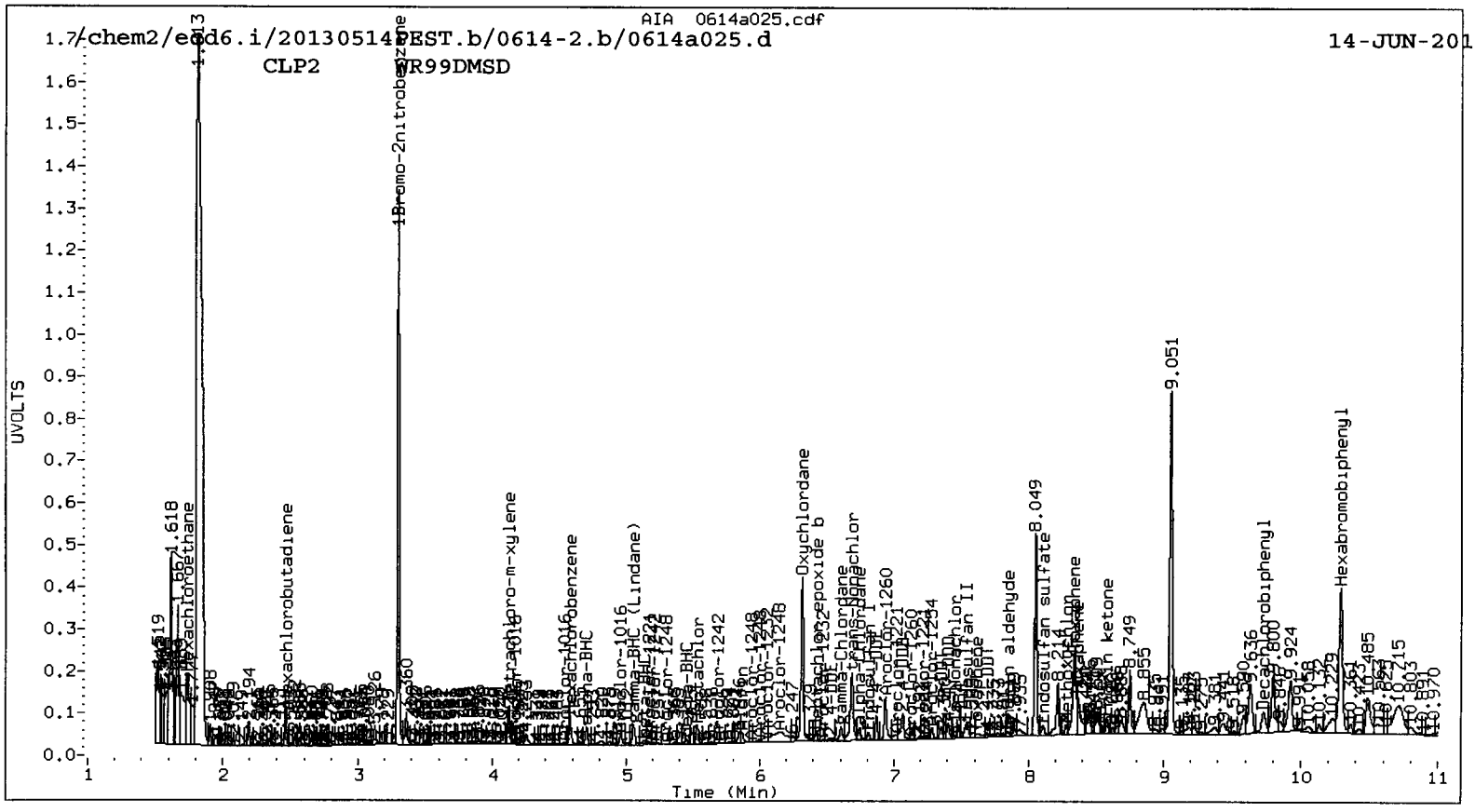
14-JUN-201
STX-CLP WR99DMSD
UVOLTS
Time (Min)
1.815
1Bromo-2nitrobenzene
8.257
Hexabromobiphenyl
7.375
Decachlorobiphenyl
5.725
Oxychlordane
Heptachlor epoxide b
gamma-Chlordane
Endosulfan II
Endrin aldehyde
Endosulfan sulfate
4,4'-DDT
Endrin ketone
Hexachlorobutadiene
1,2,4,5-Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Dieldrin
4,4'-DDD
4,4'-DDE
Methoxychlor
Endosulfan I
Chlorpyrifos
Pentachloronitrobenzene
Tetrachloro-m-xylene
1.574
1.722
7.558
8.025
8.861
8.990
9.379
9.476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14-JUN-201
CLP2 WR99DMSD
UVOLTS
Time (Min)
1.613
1Bromo-2nitrobenzene
9.051
Hexabromobiphenyl
8.049
Oxychlordane
Heptachlor epoxide b
gamma-Chlordane
Endosulfan II
Endrin aldehyde
Endosulfan sulfate
4,4'-DDT
Endrin ketone
Hexachlorobutadiene
1,2,4,5-Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Dieldrin
4,4'-DDD
4,4'-DDE
Methoxychlor
Endosulfan I
Chlorpyrifos
Pentachloronitrobenzene
Tetrachloro-m-xylene
1.618
1.749
8.214
8.855
9.361
9.636
9.800
9.924
10.229
10.485
10.715
10.803
10.970

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a026.d ARI ID: WR99E
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a026.d Client ID: 10
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 14:20
Compound Sublist: wpest Report Date: 06/18/2013 09:44
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 10.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.128	0.000	5874255	3.298	-0.002	25325930	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.271	-0.013	6990	4.706	-0.003	36976	~~0.0559~~	~~0.0650~~	15.2	alpha-BHC
4.621	-0.021	1859	5.134	-0.003	254146	~~0.0375~~	~~1.1617~~	187.5*	beta-BHC
4.798	-0.013	45630	5.456	0.008	89872	~~0.4369~~	~~0.1924~~	77.7*	delta-BHC
4.566	0.000	15682	5.056	-0.009	194267	~~0.1446~~	~~0.3937~~	92.5*	gamma-BHC (Lindane)
4.970	-0.043	5503	5.532	0.004	34167	~~0.0522~~	~~0.0720~~	31.9	Heptachlor
5.321	0.016	398620	5.850	-0.016	174247	~~3.0204~~	~~0.3893~~	163.0*	Aldrin
5.869	-0.011	542697	6.399	-0.022	4537832	5.7675	11.5752	67.0*	Heptachlor epoxide b
6.222	-0.034	875472	6.792	-0.016	417284	~~9.8055~~	~~1.1522~~	157.9*	Endosulfan I
6.460	-0.019	2349974	7.043	-0.023	1928487	24.7667	5.2253 Y	130.3*	Dieldrin
6.180	0.000	2333827	6.849	-0.020	2586760	30.7167	6.7460 Y	128.0*	4,4'-DDE
6.658	-0.039	520865	7.371	0.016	10263141	7.3326	47.2169 Y	146.2*	Endrin
6.921	0.019	447153	7.547	0.002	7292972	5.8079	28.5976 Y	132.5*	Endosulfan II
6.760	0.024	204311	----			~~2.5092~~	~~0.0000~~	---	4,4'-DDD
7.673	0.003	17788	8.080	-0.007	93935	~~0.2575~~	~~0.4503~~	54.5*	Endosulfan sulfate
6.973	-0.021	7749456	7.706	-0.012	21301931	107.4062	101.0671 Y	6.1	4,4'-DDT
7.424	~~-0.004~~	48049	8.257	-0.019	6026040	1.3939	74.1861 Y	192.6*	Methoxychlor
7.954	0.028	53587	8.585	0.008	4356589	~~0.6109~~	~~19.1763~~	187.6*	Endrin ketone
7.267	-0.013	280669	7.831	-0.010	1351957	4.3334	6.7075 Y	43.0*	Endrin aldehyde
6.037	0.038	58029	6.631	0.027	3861402	~~0.5751~~	~~9.3975~~	176.9*	gamma-Chlordane
6.140	0.016	1067070	----			~~11.3698~~	~~0.0000~~	---	alpha-Chlordane
2.313	0.004	3488	2.472	0.006	17376	0	~~0.0267~~ ~~0.0365~~	31.2	Hexachlorobutadiene
4.135	-0.002	29132	4.567	-0.017	21687	~~0.2944~~	~~0.0363~~	156.1*	Hexachlorobenzene
5.781	-0.003	523987	6.315	-0.017	345631	7.2197	1.0010	151.3*	Oxychlordane
----			6.570	-0.010	7367875	0.0000	28.5729	---	2,4-DDE
6.092	-0.015	195424	6.675	-0.017	2675180	2.1949	10.3924	130.2*	trans-Nonachlor
6.330	-0.013	526069	7.106	0.042	2293084	10.8473	16.0206	38.5	2,4-DDD
6.603	0.021	278617	----			5.1368	0.0000	---	2,4-DDT
6.711	-0.011	4733238	7.442	0.025	32145	49.2140	0.1194	199.0*	cis-Nonachlor
7.608	0.013	63054	8.614	0.050	1516938	1.0589	10.5881	163.6*	Mirex
8.921	0.000	5428326	10.289	-0.001	11472749	80.0000	80.0000	0.0	Hexabromobiphenyl
1.755	-0.001	3983	1.743	0.019	1513080	0.0000	0.0000	---	Hexachloroethane
6.549	-0.032	4165481	7.314	-0.022	2233775	0.0000	0.0000	---	Kepone
3.797	0.001	233244	4.125	0.000	1140974	2.9122	2.7712	5.0	Tetrachloro-m-xylene
8.772	0.001	325866	9.725	0.000	516881	4.2224	2.2302	61.7*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	7.3	6.9	6.9~	42-112
Decachlorobiphenyl	10.6	5.6	5.6~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

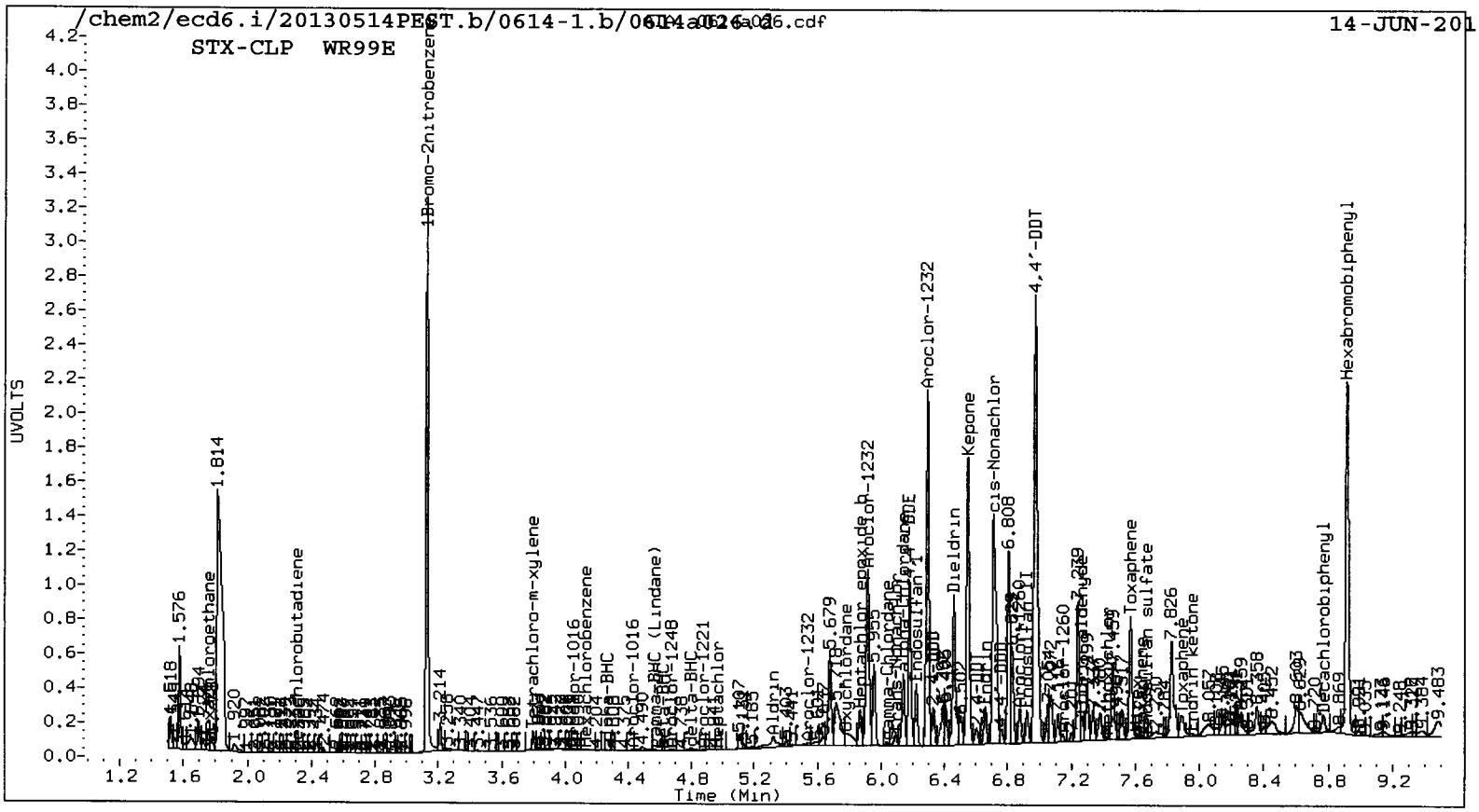
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5874255	6.8
Hexabromobiphenyl	5319006	5428326	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	25325930	-12.9
Hexabromobiphenyl	16515704	11472749	-30.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.973	0.018	7749456	2294.0	1	7.314	0.023	2233775	268.0	
Toxaphene	2	---			0.000	2	7.607	-0.009	1918805	154.8	
Toxaphene	3	7.267	0.003	280669	71.8	3	7.831	-0.015	1351957	101.9	
Toxaphene	4	7.570	-0.018	1714734	467.5	4	8.358	0.044	6178481	658.3	
Toxaphene	5	7.636	0.009	46389	17.8	5	---			0.0	
Toxaphene	6	7.890	-0.019	457168	198.7	NS	---			----	
Total STX-CLPAve (5 peaks): 609.975						Total CLP2Ave (4 peaks): 295.748				RPD = 69*	
Corrected Ave (4 peaks): 188.967						Corrected Ave (3 peaks): 174.903				RPD = 8	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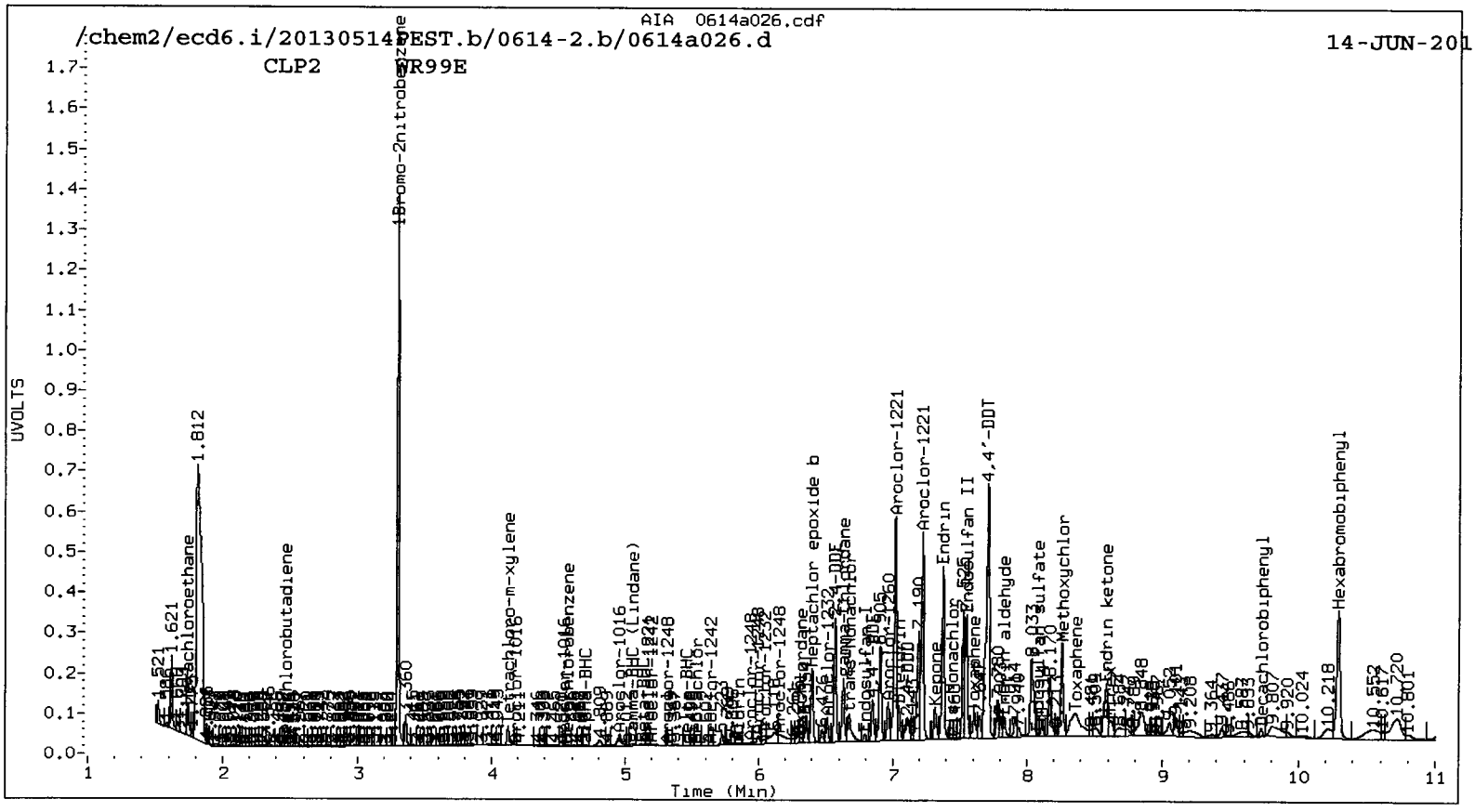
14-JUN-201
STX-CLP WR99E
UVOLTS
Time (Min)
1.814
1.576
1Bromo-2nitrobenzene
Hexachloroethane
Hexachlorobutadiene
Tetrachloro-m-xylene
Dichlorobenzene
Aroclor-1016
Alpha-BHC
Gamma-BHC (Lindane)
Beta-BHC
Heptachlor
Delta-BHC
Aroclor-1221
Aroclor-1232
Aldrin
Heptachlor epoxide b
Oxychlordane
Dieldrin
Endosulfan I
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Kepone
cis-Nonachlor
Toxaphene
Hexabromobiphenyl
Decachlorobiphenyl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14-JUN-201
CLP2 WR99E
UVOLTS
Time (Min)
1.812
1Bromo-2nitrobenzene
Hexachloroethane
Hexachlorobutadiene
Tetrachloro-m-xylene
Dichlorobenzene
Aroclor-1016
Alpha-BHC
Gamma-BHC (Lindane)
Beta-BHC
Heptachlor
Delta-BHC
Aroclor-1221
Aroclor-1232
Aldrin
Heptachlor epoxide b
Oxychlordane
Dieldrin
Endosulfan I
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Kepone
cis-Nonachlor
Toxaphene
Hexabromobiphenyl
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a027.d ARI ID: WR99F
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a027.d Client ID: 10
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 14:38
Compound Sublist: wpest Report Date: 06/18/2013 09:44
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 10.000

6/18/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.127	-0.001	6089419	3.298	-0.001	28352002	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.270	-0.014	19591	4.704	-0.004	103608	~~0.1510~~	~~0.1627~~	7.5	alpha-BHC
4.672	0.030	38625	5.128	-0.009	37271	~~0.7510~~	0.1522	132.6*	beta-BHC
4.800	-0.011	88738	5.457	0.009	153655	~~0.8196~~	~~0.2938~~	94.4*	delta-BHC
4.568	0.002	18237	5.056	-0.008	119396	~~0.1622~~	~~0.2161~~	28.5	gamma-BHC (Lindane)
4.999	-0.014	25039	5.530	0.002	407373	~~0.2291~~	~~0.7673~~	108.0*	Heptachlor
5.317	0.013	2579932	5.848	-0.018	118868	~~23.8526~~	~~0.2372~~	196.1*	Aldrin
5.867	-0.013	3265587	6.400	-0.022	44173666	33.4789	100.6530 Y	100.2*	Heptachlor epoxide
6.220	-0.037	5645653	6.791	-0.017	3558609	60.9986	8.7770 Y	149.7*	Endosulfan I
6.458	-0.021	14546922	7.106	0.040	15080288	147.8948	36.4994 Y E	120.8*	Dieldrin
6.178	-0.002	17086298	6.848	-0.020	22499619	216.9357	52.4140 Y E	122.2*	4,4'-DDE
6.656	-0.041	3119087	7.373	0.018	61448655	41.4683	269.0076 Y E	146.6*	Endrin
6.920	0.017	2878210	7.546	0.002	51346705	35.3050	191.5901 Y E	137.8*	Endosulfan II
6.758	0.022	1137013	----			~~13.1875~~	~~0.0000~~	---	4,4'-DDD
7.675	0.004	224941	8.114	0.027	7244610	3.0753	33.0450 Y	165.9*	Endosulfan sulfate
6.973	-0.021	49061544	7.713	0.019	107128220	642.1741	483.6485 Y E	28.2	4,4'-DDT
7.424	0.004	289454	8.257	-0.020	40530672	7.9303	474.7982 Y	193.4*	Methoxychlor
7.889	-0.037	2640368	8.584	0.007	27771558	28.4290	116.3195 Y	121.4*	Endrin ketone
7.265	-0.015	1565985	7.831	-0.011	8838046	22.8335	41.7245 Y	58.5*	Endrin aldehyde
6.034	0.035	415918	6.630	0.027	28631895	3.9760	62.2443 Y	176.0*	gamma-Chlordane
6.137	0.014	7994020	6.746	0.005	39578	~~82.1678~~	~~0.0934~~	199.5*	alpha-Chlordane
2.292	-0.017	7308	2.472	0.006	16906	~~0.0539~~	~~0.0318~~	51.7*	Hexachlorobutadiene
4.132	-0.006	178674	4.567	-0.017	93985	~~1.7417~~	~~0.1406~~	170.1*	Hexachlorobenzene
5.816	0.032	23795	6.354	0.022	22937501	0.3096	59.3392	197.9*	Oxychlordane
----			6.571	-0.009	57516180	0.0000	199.2432	---	2,4-DDE
6.090	-0.017	1268295	6.674	-0.018	15915900	13.4530	58.8342	125.6*	trans-Nonachlor
6.328	-0.015	3436870	7.042	-0.022	12220292	66.9263	81.2410	19.3	2,4-DDD
6.601	0.019	1783846	----			31.0594	0.0000	---	2,4-DDT
6.710	-0.012	29458511	7.442	0.025	202418	289.2640	0.7154	199.0*	cis-Nonachlor
7.606	0.011	568821	8.518	-0.047	1961191	9.0213	13.0258	36.3	Mirex
8.919	-0.001	5747943	10.288	-0.002	12056814	80.0000	80.0000	0.0	Hexabromobiphenyl
1.754	-0.001	2415	1.722	-0.002	365446	0.0000	0.0000	---	Hexachloroethane
6.547	-0.034	28469020	7.313	-0.024	15445411	0.0000	0.0000	---	Kepone
3.796	-0.001	251677	4.125	-0.001	1371301	3.0313	2.9751	1.9	Tetrachloro-m-xylene
8.771	0.000	478130	9.726	0.001	1111079	5.8508	4.5617	24.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	7.6	7.4	7.4~	42-112
Decachlorobiphenyl	14.6	11.4	11.4~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

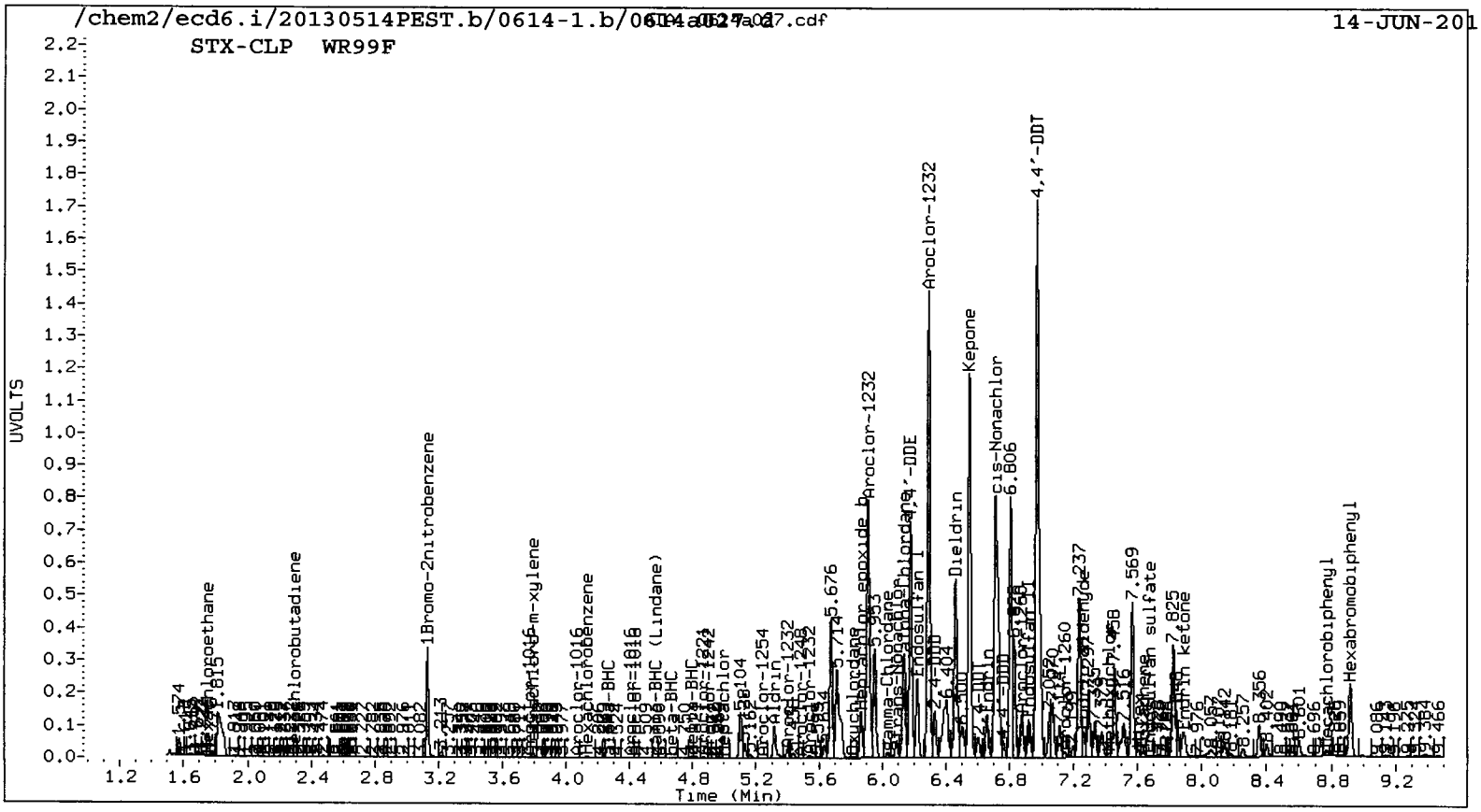
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6089419	10.7
Hexabromobiphenyl	5319006	5747943	8.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	28352002	-2.4
Hexabromobiphenyl	16515704	12056814	-27.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.973	0.018	49061544	13715.7	1	7.313	0.021	15445411	1763.1
Toxaphene	2	---			0.000	2	7.606	-0.010	9609587	737.9
Toxaphene	3	7.265	0.001	1565985	378.2	3	7.831	-0.015	8838046	633.9
Toxaphene	4	7.606	0.018	568821	146.5	4	8.320	0.006	1876456	190.2
Toxaphene	5	7.636	0.008	432394	157.0	5	---			0.0
Toxaphene	6	7.889	-0.020	2640368	1084.0	NS	---			----
Total STX-CLPAve (5 peaks): 3096.286						Total CLP2Ave (4 peaks): 811.277				RPD = 115*
Corrected Ave (4 peaks): 441.428						Corrected Ave (3 peaks): 520.671				RPD = 16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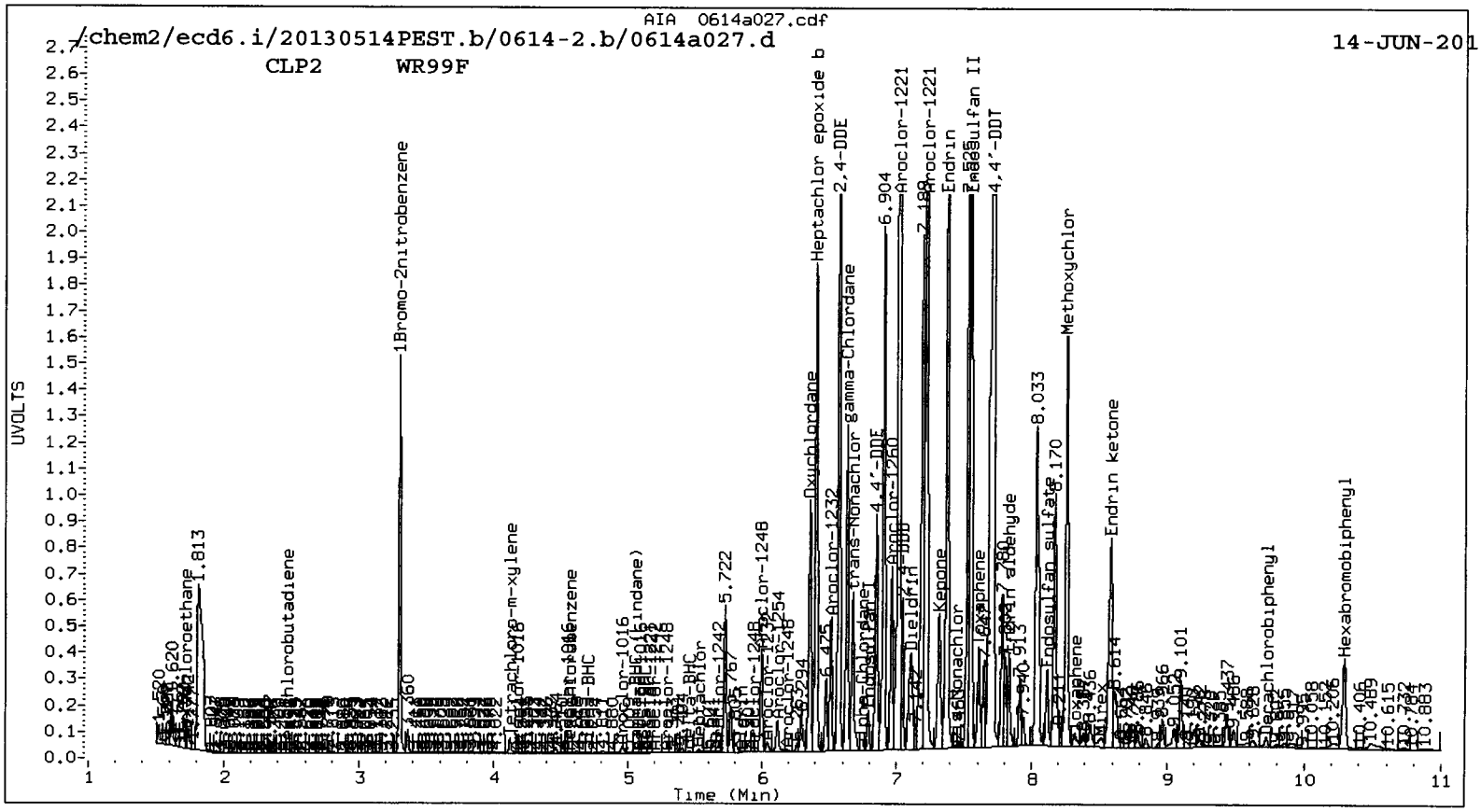
0614a027.cdf
14-JUN-201
STX-CLP WR99F
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Aroclor-1232
4,4'-DDT
Kepone
Dieldrin
cis-Nonachlor
Endosulfan sulfate
Endrin ketone
Hexabromobiphenyl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14-JUN-201
CLP2 WR99F
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Heptachlor epoxide b
2,4-DDE
Aroclor-1232
Aroclor-1221
Aroclor-1260
Endrin
4,4'-DDT
Methoxychlor
Endosulfan sulfate
Endrin ketone
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a030.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a030.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 15:31
Compound Sublist: INDA Report Date: 06/18/2013 09:44
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.128	-0.001	5519699	3.298	-0.001	27028833	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.283	-0.001	2692672	4.708	-0.001	13384125	22.8990	22.0498	3.8	alpha-BHC
4.641	-0.001	974047	5.137	0.000	4882285	20.8940	20.9106	0.1	beta-BHC
4.811	0.000	2165919	5.448	0.000	10833943	22.0708	21.7324	1.5	delta-BHC
4.565	-0.001	2378482	5.064	-0.001	11364495	23.3398	21.5778	7.8	gamma-BHC (Lindane)
5.011	-0.001	2237013	5.527	-0.001	10562531	22.5853	20.8694	7.9	Heptachlor
5.304	-0.001	2276400	5.865	-0.001	9969857	23.2186	20.8700	10.7	Aldrin
5.878	-0.001	2018108	6.420	-0.001	8341169	22.8252	19.9364	13.5	Heptachlor epoxide b
6.255	-0.001	1831939	6.807	-0.001	6880737	21.8362	17.8015	20.4	Endosulfan I
6.478	-0.001	3902464	7.065	-0.002	12752829	43.7705	32.3771	29.9	Dieldrin
6.178	-0.001	3029810	6.867	-0.001	13990701	42.4384	34.1876	21.5	4,4'-DDE
6.696	-0.001	3232687	7.354	-0.001	10133103	47.5211	43.4956	8.8	Endrin
6.901	-0.001	3179785	7.543	-0.001	10874531	43.1266	39.7852	8.1	Endosulfan II
6.736	-0.001	3227120	7.405	-0.001	10833499	41.3852	39.4977	4.7	4,4'-DDD
7.669	-0.001	2620268	8.085	-0.002	8214838	39.6094	36.7401	7.5	Endosulfan sulfate
6.993	-0.001	2833421	7.692	-0.002	8651547	41.0069	38.2975	6.8	4,4'-DDT
7.419	-0.001	6674052	8.275	-0.001	18006499	202.1785	206.8259	2.3	Methoxychlor
7.924	-0.001	3325800	8.576	-0.002	8934931	39.5938	36.6939	7.6	Endrin ketone
7.278	-0.002	2547271	7.840	-0.001	8410025	41.0671	38.9298	5.3	Endrin aldehyde
5.998	-0.001	2068666	6.602	-0.001	8249101	21.8167	18.8110	14.8	gamma-Chlordane
6.122	-0.001	1974004	6.740	-0.001	7285857	22.3844	18.0330	21.5	alpha-Chlordane
2.308	0.000	2771321	2.466	0.000	10739884	22.5467	21.1581	6.4	Hexachlorobutadiene
4.137	-0.001	1972488	4.584	0.000	14021505	21.2124	22.0039	3.7	Hexachlorobenzene
8.919	-0.001	5198503	10.287	-0.003	12296519	80.0000	80.0000	0.0	Hexabromobiphenyl
3.796	0.000	3466088	4.125	0.000	18995664	46.0554	43.2300	6.3	Tetrachloro-m-xylen
8.770	-0.001	2716344	9.723	-0.002	10136232	36.7528	40.8048	10.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	115.1	108.1	108.1~	115- 0
Decachlorobiphenyl	91.9	102.0	91.9~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

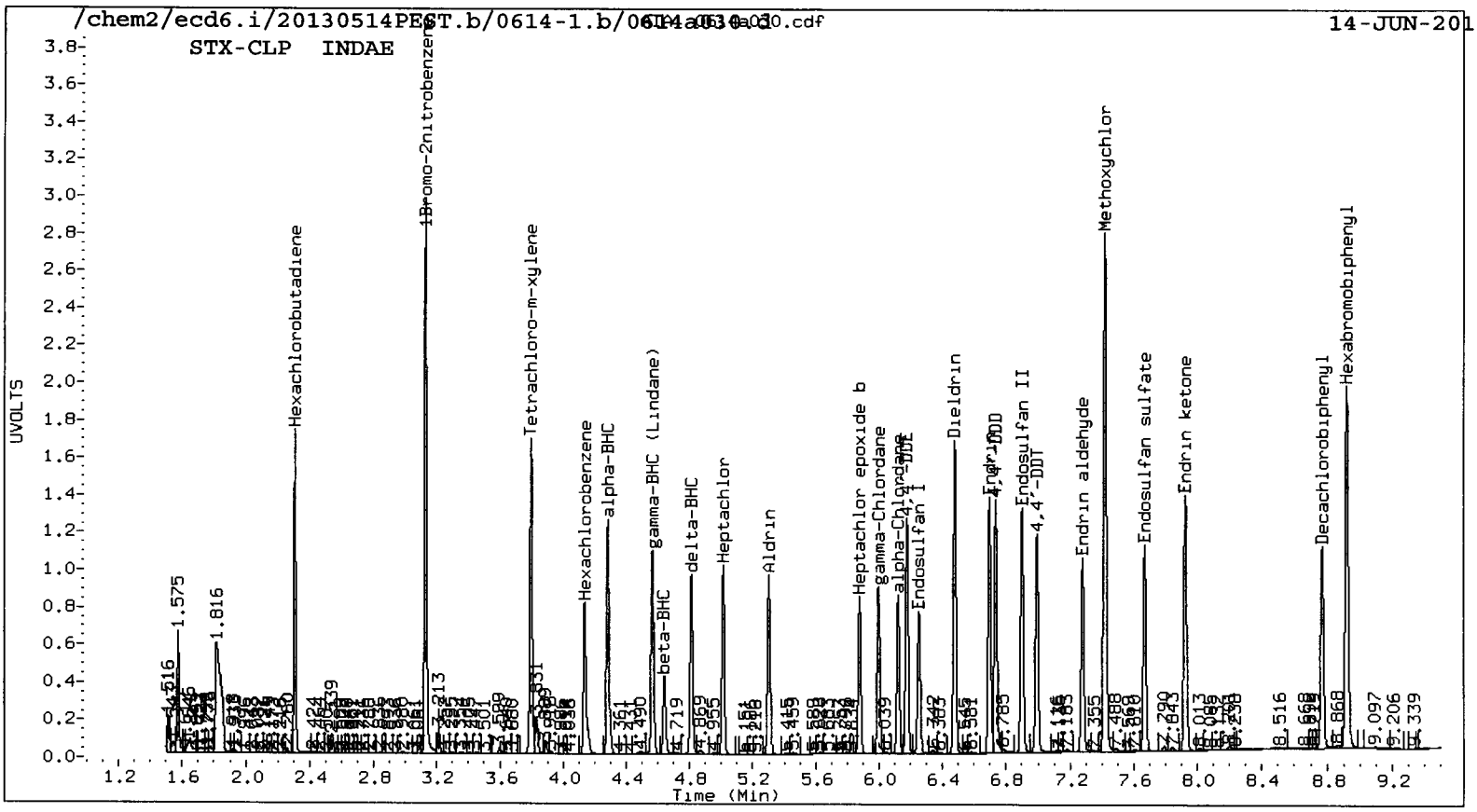
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5519699	0.3
Hexabromobiphenyl	5319006	5198503	-2.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	27028833	-7.0
Hexabromobiphenyl	16515704	12296519	-25.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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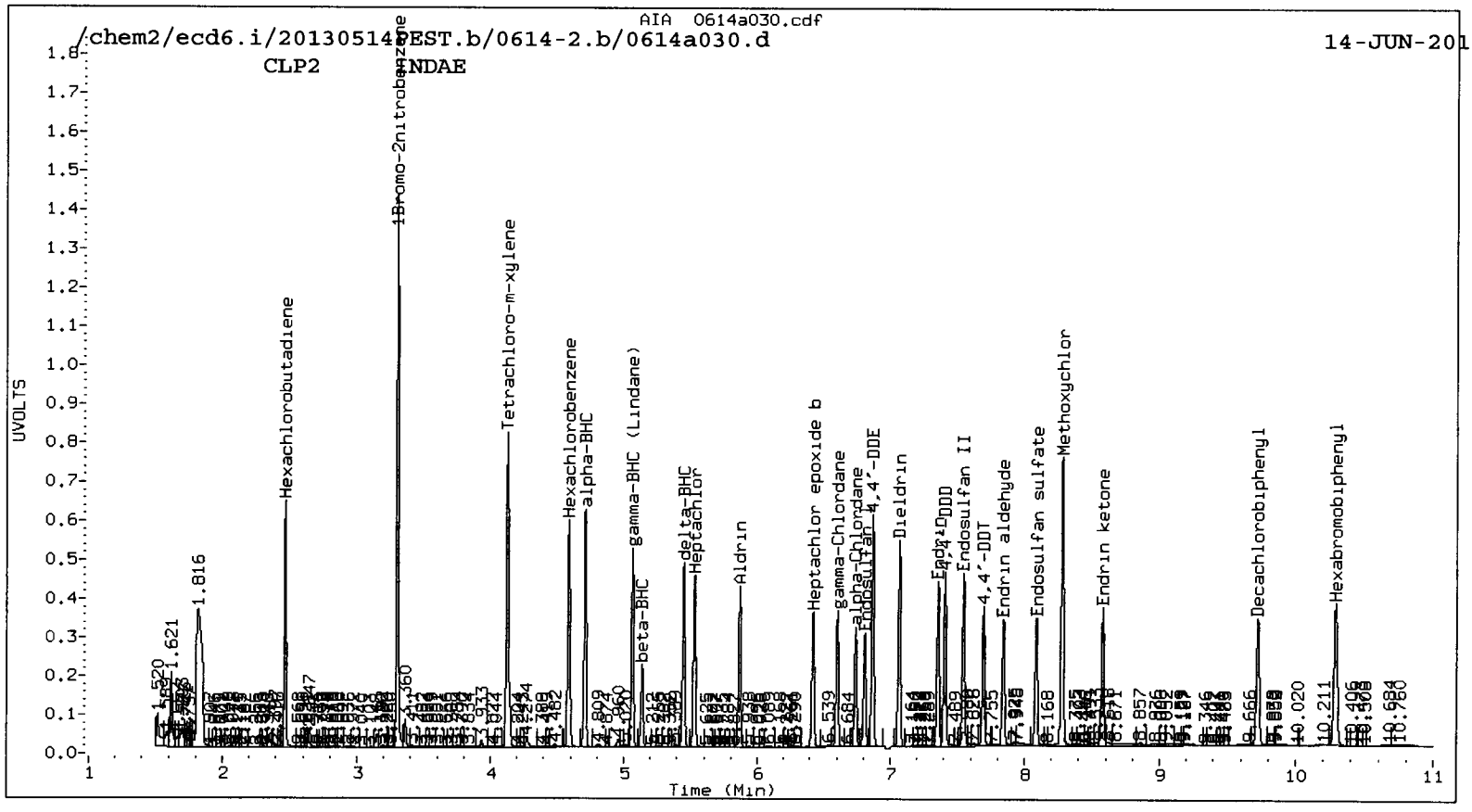
0614a030.cdf
14-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a031.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a031.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 15:51
Compound Sublist: TOXAPH Report Date: 06/18/2013 09:44
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.129	0.000	7094744	3.299	-0.001	34759697	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.922	0.002	6789314	10.289	-0.001	16322638	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.002	3082298	4.127	0.001	17962347	31.8636	31.7867	0.2	Tetrachloro-m-xylen
8.773	0.002	2777492	9.725	0.000	10647231	28.7747	32.2897	11.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	79.7	79.5	79.5~	150- 0
Decachlorobiphenyl	71.9	80.7	71.9~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

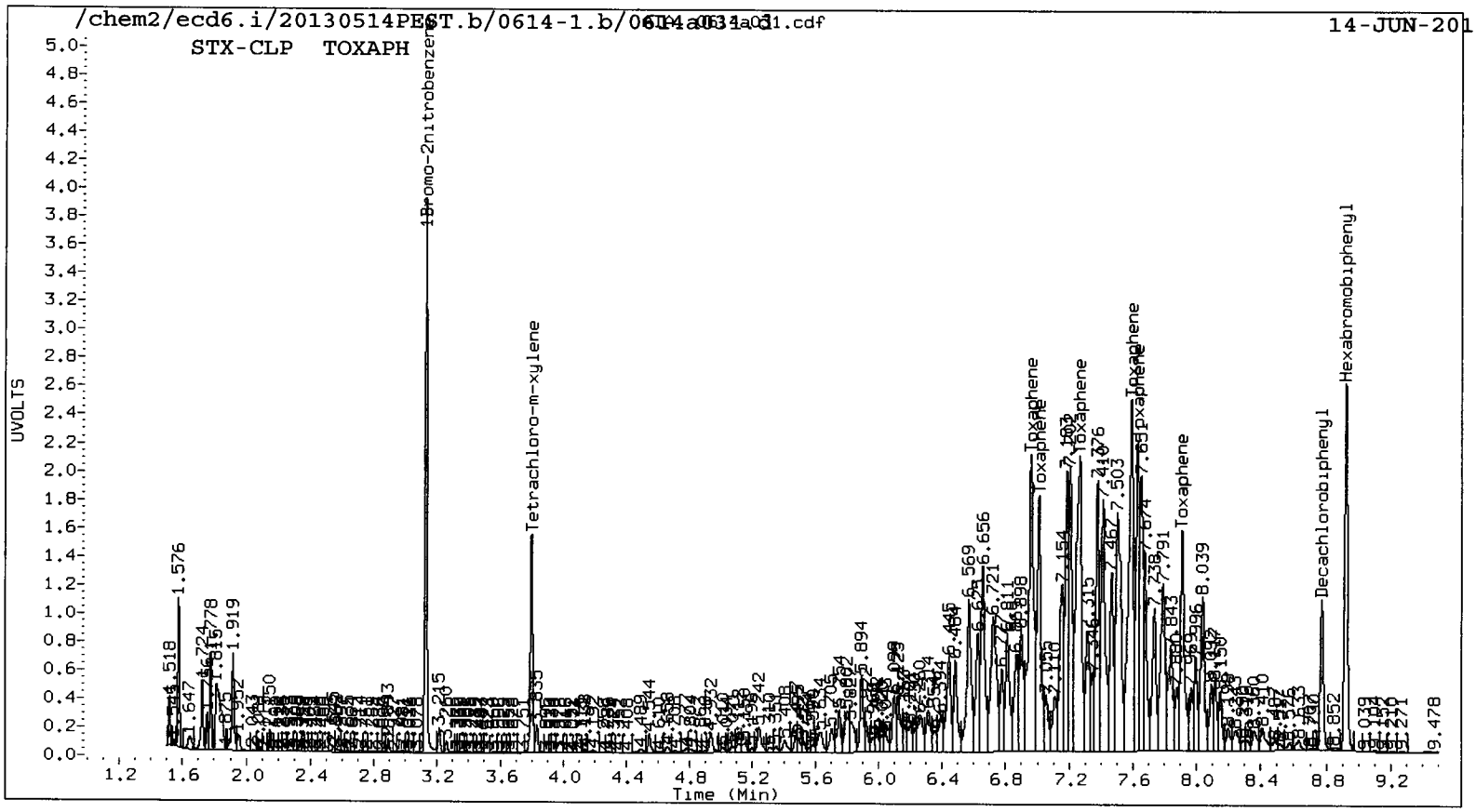
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	7094744	29.0
Hexabromobiphenyl	5319006	6789314	27.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	34759697	19.6
Hexabromobiphenyl	16515704	16322638	-1.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.957	0.002	9359494	2215.2	1	7.292	0.001	26539501	2237.7
Toxaphene	2	7.008	0.001	6268280	1915.6	2	7.616	0.000	37266114	2113.8
Toxaphene	3	7.266	0.002	10144480	2074.2	3	7.846	0.000	37638778	1993.9
Toxaphene	4	7.590	0.002	9914118	2161.2	4	8.314	0.000	25988717	1946.2
Toxaphene	5	7.629	0.002	6382424	1962.5	5	8.353	0.000	32022241	1824.2
Toxaphene	6	7.911	0.002	5410358	1880.5	NS	---			----
Total STX-CLPAve (6 peaks): 2034.867						Total CLP2Ave (5 peaks): 2023.169				RPD = 1
Corrected Ave (6 peaks): 2034.867						Corrected Ave (5 peaks): 2023.169				RPD = 1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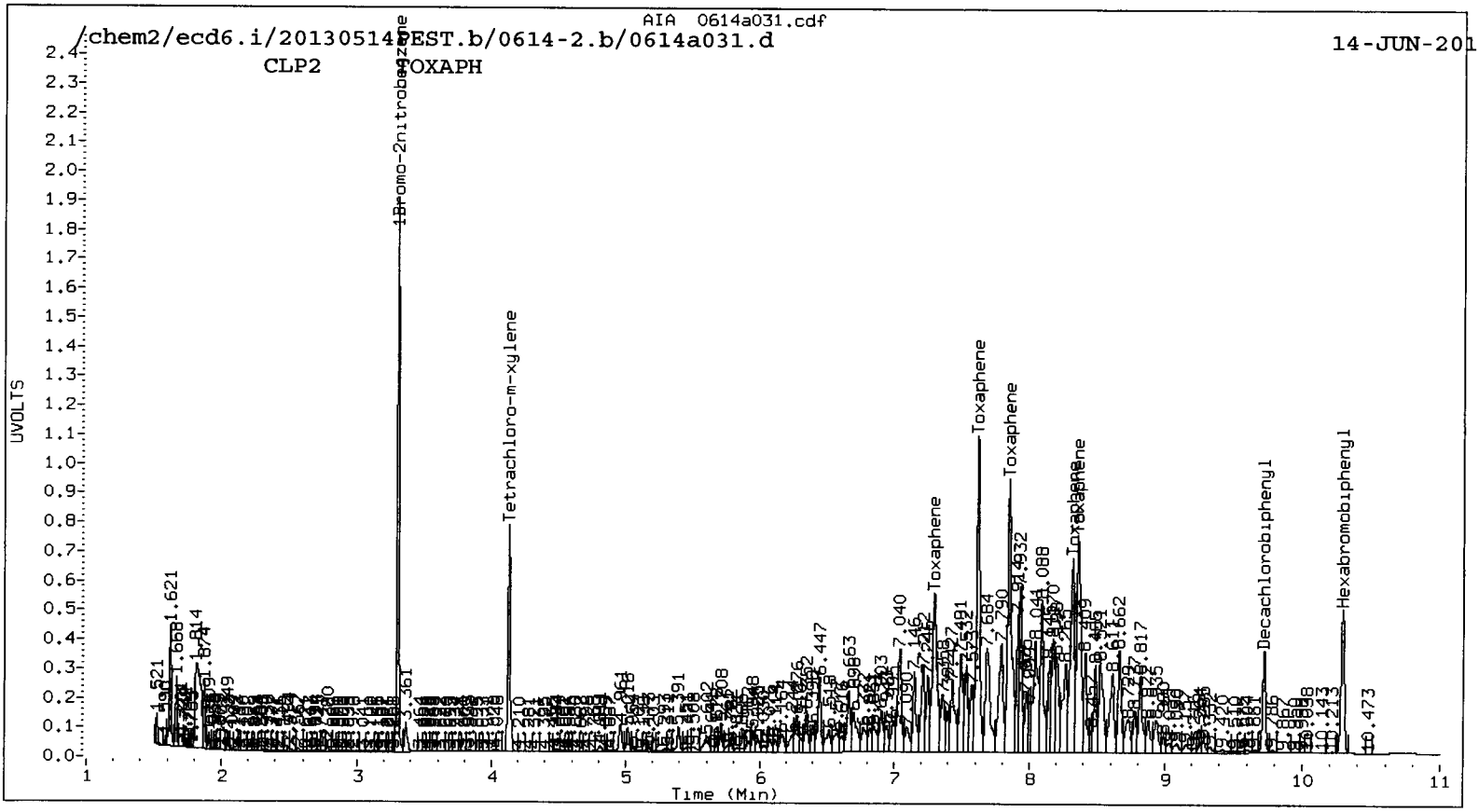
STX-CLP TOXAPH
14-JUN-201
UVOLTS
Time (Min)
1.576
1.778
1.919
3.215
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
9.478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CLP2 TOXAPH
14-JUN-201
UVOLTS
Time (Min)
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
10.473

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WR99, WS01

Analytical Chemists and Consultants

(8082A) PCB – (Soil / Sediment)
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 19 (PCBSDMP4)

ARI Job No(s) WS49, WR99, WS21, WS69 Page 1 of 1

PSDDA (4ppb)
Batch set up by: JH

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5g dry wt)	(REQ) Acid Clean (2.5mL)	(REQ) Sulfur Clean (2.5mL) very High 1 2 (3) Sulfur	(REQ) Silica Gel Clean (1:2.5)	Extraction Final Volume	Volume to Lab	Comments	Verify Client ID
	MBS WS49	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual W)	YL 06/14/13 Analyst/Date
	SBS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 (2) 3 CT 06-14-13
	SBSDup	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Analyst/Date
	~~QLS~~	~~12.50g~~	~~2.5mL~~	~~2.5mL~~	~~1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
2	WS49 A	14.03	2.5mL	2.5mL	1mL	2.5mL	1mL		KD 100°C Hexane Exchange (2 X 20mL) 1 2 (3) 4 5 6
2	B	14.01	2.5mL	2.5mL	1mL	2.5mL	1mL		
2	C	14.00	2.5mL	2.5mL	1mL	2.5mL	1mL	SEE NOTES	YL 06/11/13 Analyst/Date
2	D	15.03	2.5mL	2.5mL	1mL	2.5mL	1mL		
8	WR99 D	17.00	2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 (2) 3 Pre-Cleanups
8	Dms	17.03	2.5mL	2.5mL	1mL	2.5mL	1mL		
8	Dmsd	17.04	2.5mL	2.5mL	1mL	2.5mL	1mL		CJZ 6/12/13 Analyst/Date
3	E	5.00	2.5mL	2.5mL	1mL	2.5mL	1mL	see Analyst Notes	
3	F	2.51	2.5mL	2.5mL	1mL	2.5mL	1mL	↓	TurboVap 1 (2) 3 Post Cleanups
3	WS21 A	16.01	2.5mL	2.5mL	1mL	2.5mL	1mL		
1	WS69 A	2.51	2.5mL	2.5mL	1mL	2.5mL	1mL	See Analyst Notes	
Analyst/Date	YL 06/14/13		CJZ 6/12/13	CJZ 6/12/13	CJZ 6/12/13	CJZ 6/12/13	CJZ 6/12/13		CJZ 6/12/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(B003151)	2µg/mL	50µL	4/3/14	CT	AC
Spike	1 (2874-4)	20µg/mL	63µL	10/31/13	CT	AC
~~QLS Spike~~	~~5 ( )~~	~~2µg/mL~~	~~25µL~~			
Extraction Time: 12:45		Balance ID:	B14642614			

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in cold water 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in bottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches above the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (Small or ~~large~~ Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate). 12. Exchange (2 X with 20mL) Hexane. 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial with Hexane.

A. Need Total Solids Y / (N) B. ~~Archive~~/Freeze (Y) N

W549, WR99 and WS21 only

WR99:01778

Reagent and Solutions Identification

(8082A) PCB – (Soil / Sediment)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) W549, WR99, W521, W569

(8082A) PCB PSDDA (4ppb) Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Anhydrous Sodium Sulfate: (I# 8134 jar date 5-24-13)	CT 6-14-13
Neutral Glasswool: (I# 7998 + jar date 4-15-13)	
1:1 Hexane/Acetone: (H# 194)	
80:20 Hexane/Acetone: (H# 177)	
Hexane: (I# 8269)	KD
KD Station:	YL 1
Hexane: (I# 8269)	6/11/13
Anhydrous Sodium Sulfate: (I# 8134 jar date 5/24/13)	
Neutral Glasswool: (I# 7998 jar date 4/15/13)	Vialing
Vialing Station:	CJE
Hexane: (I# 8269)	6/12/13
Concentrated Sulfuric Acid: (I# 8156)	
Tetrabutylammonium hydrogensulfate (TBAS): (H# 165)	
Sodium Sulfite: (I# 7704)	
Silica Gel (SPE) Darts: (I# 8127)	

WR99:01779

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WR99 Client ID: SAIC

Parameter: PCB PSDDA (4ppb) Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A, B, C	YL 05/31/13
☒ Standing Water Decanted (Not shared)= A, B,	YL 05/31/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☑ Other Notes/Comments= (Note problems, concerns, corrective actions). Folder received	
(Centrifuge#1 used for all Centrifugations) on 6/3/13.	
GC analyst, reduced extraction weights for Samples E and F, based on sample pre-screens.	SH 6/07/13

WR99 : 01758

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: WR99 / WS69 Client ID: _____
Analyst: JL Date: 06/12/13

ARI Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Dilution Factor	Primary Dilution (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Final Dilution Factor
WR99E	100	Hexane	900	100				
↓ F	↓	↓	↓	↓	100	Hexane	900	100
WS69A	↓	↓	↓	↓				

PCB Raw Data
Initial Calibration

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: ~~403S~~(PCB) 405S(Herb) 407S(TPH-D) 409S(HCID) 412S(PCP) 423S(Pest)
427S(Dir Inj) 428S(EPH) Other

Instrument: FID-3A FID-3B ~~FID-4A~~ FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 05/07/13 Internal Standard ID 2006-1 Expiration 07/26/13

Endrin/DDT Breakdown <15%? YES / NO / NA		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
IB	1982-2	05/16/13	AR1660	~~B207~~ 2005/04/13 B182	04/30/14
AR1660	B161	04/30/14	AR1242	B190	
AR1242	B163		AR1248	B191	
AR1248	B172		AR1254	B192	
AR1254	B173		AR2162	B193	
AR2162	B174		AR3268	B194	
AR3268	B175				
BD	2067-1	05/16/13			
DDT-	1991-2	01/21/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JR **Date:** 05/07/13

Reviewer: MD **Date:** 5-8-13

WR99:01783

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/ical-1.b

ARI Job No.: IB Method: PCB1.m Instrument: ecd5.i Date: 07-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1619	0507a003.d	IB		1	NO MANUAL INTEGRATION
1639	0507a004.d	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1659	0507a005.d	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1719	0507a006.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1739	0507a007.d	1PPMAR1660		1	NO MANUAL INTEGRATION
1759	0507a008.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1819	0507a009.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1839	0507a010.d	AR1242		1	NO MANUAL INTEGRATION
1859	0507a011.d	AR1248		1	NO MANUAL INTEGRATION
1920	0507a012.d	AR1254		1	NO MANUAL INTEGRATION
1940	0507a013.d	AR2162		1	NO MANUAL INTEGRATION
2000	0507a014.d	AR3268		1	NO MANUAL INTEGRATION
2021	0507a015.d	AR1242	ICV	1	NO MANUAL INTEGRATION
2041	0507a016.d	AR1248	ICV	1	NO MANUAL INTEGRATION
2101	0507a017.d	AR1254	ICV	1	NO MANUAL INTEGRATION
2121	0507a018.d	AR1660	ICV	1	NO MANUAL INTEGRATION
2142	0507a019.d	AR2162	ICV	1	NO MANUAL INTEGRATION
2202	0507a020.d	AR3268	ICV	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB	2.727	2.727	2.726	2.727	2.725	2.725	2.724	2.624-2.824	2.726	0.001
$ 2 Tetrachloro-m-xylene	4.414	4.413	4.413	4.414	4.413	4.412	4.412	4.312-4.512	4.413	0.001
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	3.694	3.594-3.794	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.165	6.066-6.266	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.167	6.067-6.267	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.800	6.700-6.900	+++++	+++++
7 Aroclor-1016	6.167	6.167	6.167	6.167	6.167	6.166	6.166	6.066-6.266	6.167	0.000
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.298	8.198-8.398	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.260	10.160-10.360	+++++	+++++
9 Aroclor-1260	10.261	10.262	10.262	10.260	10.262	10.260	10.260	10.160-10.360	10.261	0.001
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.507	11.407-11.607	+++++	+++++
$ 13 Decachlorobiphenyl	13.206	13.206	13.205	13.203	13.204	13.204	13.205	13.105-13.305	13.205	0.001
* 12 IS-HBBP	14.074	14.073	14.073	14.072	14.073	14.073	14.072	13.972-14.172	14.073	0.001
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.560	8.510-8.610	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.246	9.196-9.296	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.949	8.849-9.049	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.713	9.613-9.813	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

SGS-2435-10SCH

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.148	10.048-10.248	+++++	+++++

SGS-CSC-2144

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.250	2.250	2.250	2.249	2.249	2.249	2.249	2.149-2.349	2.249	0.001
$ 1 Tetrachloro-m-xylene	4.412	4.411	4.411	4.410	4.411	4.411	4.411	4.311-4.511	4.411	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	5.064	4.964-5.164	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.059	5.959-6.159	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.060	5.960-6.160	+++++	+++++
7 Aroclor-1016	6.062	6.062	6.062	6.059	6.061	6.060	6.060	5.960-6.160	6.061	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.467	6.367-6.567	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.192	8.092-8.292	+++++	+++++
9 Aroclor-1260	9.968	9.968	9.968	9.967	9.967	9.967	9.967	9.867-10.067	9.967	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.283	10.183-10.383	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.175	11.075-11.275	+++++	+++++
$ 13 Decachlorobiphenyl	12.829	12.828	12.828	12.827	12.828	12.827	12.828	12.728-12.928	12.828	0.001
* 12 IS-HBBP	13.191	13.191	13.191	13.189	13.191	13.190	13.191	13.091-13.291	13.190	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.156	8.106-8.206	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	8.707	8.657-8.757	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.210	9.160-9.260	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.589	8.489-8.689	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

13Z 29:65Z1d

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.163	9.063-9.263	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.675	9.575-9.775	+++++	+++++

052750 : 6521

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-1.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-1.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-1.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-1.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-1.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-1.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-1.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-1.b/0507a021.d/0507a021.cdf

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03259	+++++	0.03259	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00997	+++++	0.00997	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01408	+++++	0.01408	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02881	+++++	0.02881	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.08837	+++++	0.08837	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03943	+++++	0.03943	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04869	+++++					0.04869	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01482	+++++					0.01482	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04536	+++++					0.04536	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02357	+++++					0.02357	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02708	+++++					0.02708	0.000
7 Aroclor-1016(1)	0.04186	0.03922	0.03800	0.03458	0.03232	0.03038		
	+++++	+++++					0.03606	12.136
(2)	0.12934	0.12017	0.11740	0.10631	0.09981	0.09343		
	+++++	+++++					0.11108	12.195
(3)	0.05884	0.05458	0.05260	0.04727	0.04418	0.04111		
	+++++	+++++					0.04976	13.510
(4)	0.04321	0.04072	0.03932	0.03524	0.03340	0.03123		
	+++++	+++++					0.03718	12.437

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05630	+++++	0.05630	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.06332	+++++	0.06332	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.08051	+++++	0.08051	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05614	+++++	0.05614	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07461	+++++	0.07461	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04925	+++++	0.04925	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.10267	+++++	0.10267	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10574	+++++	0.10574	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.03999	+++++	0.03999	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
9 Aroclor-1260(1)	0.08092	0.07140	0.06872	0.06239	0.05721	0.05245		
	+++++	+++++					0.06551	15.742
(2)	0.07490	0.06756	0.06590	0.06047	0.05602	+++++		
	+++++	+++++					0.06497	11.060
(3)	0.17376	0.16180	0.15830	0.14675	0.13829	+++++		
	+++++	+++++					0.15578	8.810
(4)	0.08420	0.07867	0.07662	0.07158	0.06832	+++++		
	+++++	+++++					0.07588	8.154
(5)	0.04297	0.04212	0.04155	0.03881	0.03753	+++++		
	+++++	+++++					0.04060	5.708
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07490	+++++					0.07490	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.17600	+++++					0.17600	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05574	+++++					0.05574	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07824	+++++					0.07824	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRP	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06005	+++++					0.06005	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.16835	+++++					0.16835	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18617	+++++					0.18617	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13825	+++++					0.13825	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.38949	+++++					0.38949	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1111					1111	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1189					1189	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1453					1453	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1128					1128	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1294					1294	0.000
$ 1 Tetrachloro-m-xylene	1.27779	1.27691	1.30214	1.24444	1.19768	1.14335		
	+++++	+++++					1.24039	4.811
$ 13 Decachlorobiphenyl	1.45250	1.28741	1.22687	1.12094	1.06410	1.01848		
	+++++	+++++					1.19505	13.474

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-2.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-2.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-2.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-2.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-2.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-2.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-2.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-2.b/0507a021.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00820	+++++	0.00820	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01373	+++++	0.01373	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.00748	+++++	0.00748	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02352	+++++	0.02352	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02053	+++++	0.02053	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04099	+++++	0.04099	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01709	+++++					0.01709	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01434	+++++					0.01434	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03645	+++++					0.03645	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08006	+++++					0.08006	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03345	+++++					0.03345	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02802	+++++					0.02802	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05013	+++++					0.05013	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04157	+++++					0.04157	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04304	+++++					0.04304	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05593	+++++					0.05593	0.000
7 Aroclor-1016(1)	0.05136	0.05104	0.04862	0.04453	0.04104	0.03730		
	+++++	+++++					0.04565	12.493
(2)	0.11167	0.10627	0.10431	0.09724	0.09163	0.08432		
	+++++	+++++					0.09924	10.221
(3)	0.02778	0.02695	0.02737	0.02574	0.02469	0.02316		
	+++++	+++++					0.02595	6.857
(4)	0.02758	0.02578	0.02560	0.02332	0.02231	0.02042		
	+++++	+++++					0.02417	10.869
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03879	+++++					0.03879	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04792	+++++					0.04792	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03671	+++++					0.03671	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07862	+++++					0.07862	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04427	+++++					0.04427	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11065	+++++					0.11065	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10118	+++++					0.10118	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18978	+++++					0.18978	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.12335	+++++					0.12335	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05956	+++++					0.05956	0.000
9 Aroclor-1260(1)	0.08456	0.07842	0.07600	0.07099	0.06556	0.05983		
	+++++	+++++					0.07256	12.383
(2)	0.09657	0.09048	0.08853	0.08437	0.07825	0.07177		
	+++++	+++++					0.08500	10.489
(3)	0.16866	0.16707	0.16406	0.15713	0.14786	0.13685		
	+++++	+++++					0.15694	7.943

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	0.04850	0.04574	0.04367	0.04155	0.03920	0.03660		
	+++++	+++++					0.04254	10.221
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19311	+++++					0.19311	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18203	+++++					0.18203	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.14408	+++++					0.14408	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.37318	+++++					0.37318	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	757					757	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	727					727	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1214					1214	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	916					916	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
$ 2 Tetrachloro-m-xylene	1.13790	1.10316	1.09698	1.08696	1.05825	1.00770		
	+++++	+++++					1.08183	4.115
$ 13 Decachlorobiphenyl	1.43878	1.24550	1.16217	1.06757	1.02392	0.96937		
	+++++	+++++					1.15122	14.943

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a003.d
Data file 2: 20130507.b/ical-2.b/0507a003.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 07-MAY-2013 16:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	32061788	4.413	0.002	8759043	42.4	42.7	0.7	Tetrachloro-m-xylen
12.829	0.000	27295255	13.206	0.001	4923666	35.8	35.7	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.9	106.6
Decachlorobiphenyl	89.6	89.2

JE 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48807947	-0.3
Hexabromobiphenyl	50004151	51001521	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15184482	2.3
Hexabromobiphenyl	9345340	9588268	2.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

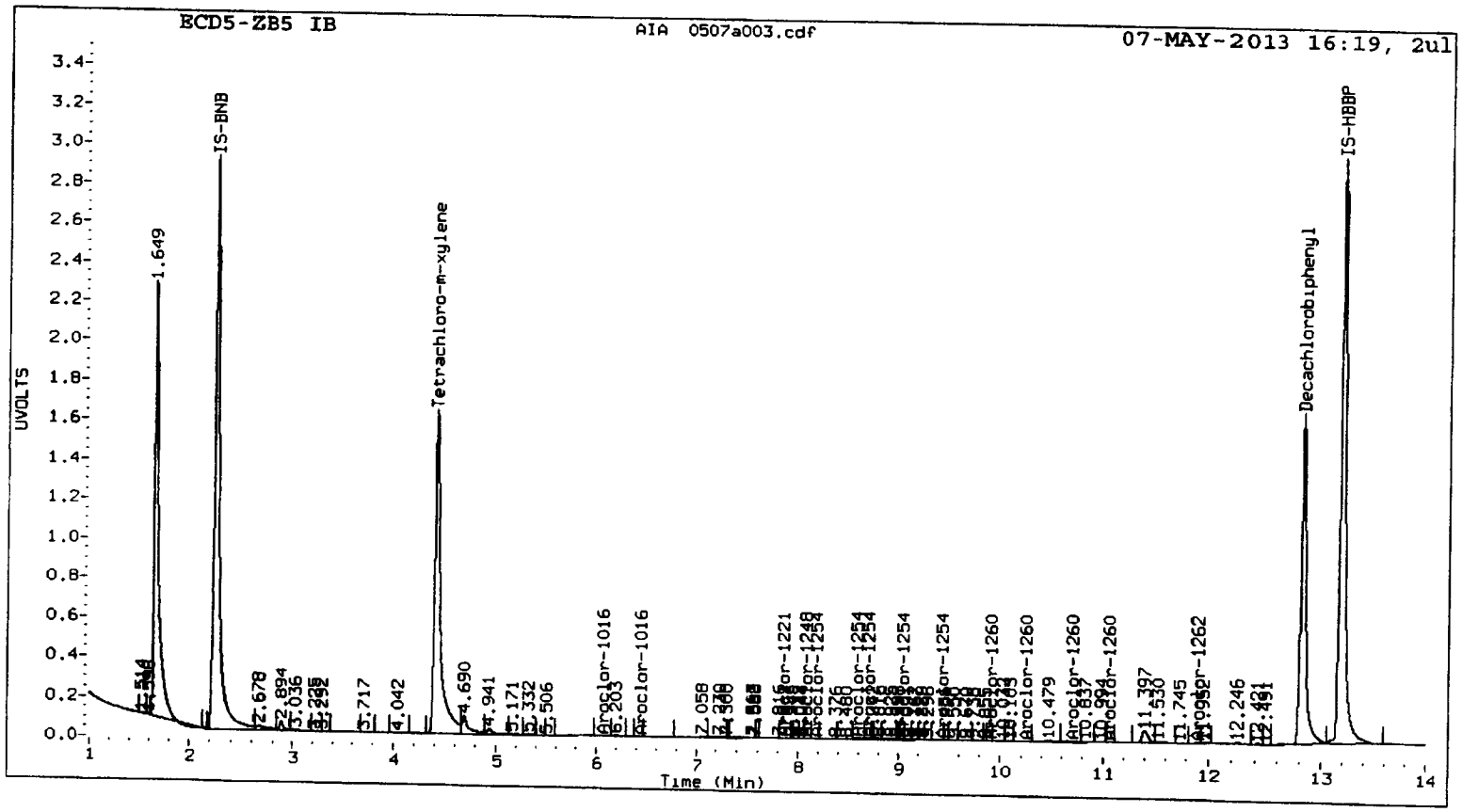
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.073	0.012	22097	1.0	1	---			0.0
Aroclor-1016	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.444	-0.024	12954	2.1	2	5.113	0.019	112267	43.1
Aroclor-1221	3	7.865	-0.013	88509	10.3	3	---			0.0
Aroclor-1221	NS	---			----	4	5.468	0.008	21627	4.8
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.073	0.012	22097	2.4	1	---			0.0
Aroclor-1232	2	6.444	-0.025	12954	0.5	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	7.865	-0.009	88509	5.4	4	---			0.0
Total Col1Ave (3 peaks):				2.8		Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.073	0.013	22097	1.3	1	---			0.0
Aroclor-1242	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	7.865	-0.007	88509	3.0	4	---			0.0
Total Col1Ave (3 peaks):				1.5		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.444	-0.022	12954	0.4	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	7.865	-0.009	88509	1.8	3	---			0.0
Aroclor-1248	4	8.084	-0.027	42411	1.2	4	---			0.0
Total Col1Ave (3 peaks):				1.1		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.193	0.001	54179	1.2	1	---			0.0
Aroclor-1254	2	8.591	0.027	84538	2.8	2	---			0.0
Aroclor-1254	3	8.702	0.002	41716	0.7	3	---			0.0
Aroclor-1254	4	9.044	-0.009	43297	0.7	4	---			0.0
Aroclor-1254	5	9.430	0.068	73478	3.0	5	---			0.0
Total Col1Ave (5 peaks):				1.7		Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	9.912	-0.055	26920	0.6	1	---			0.0
Aroclor-1260	2	10.257	-0.027	72723	1.8	2	---			0.0
Aroclor-1260	3	10.709	0.050	104804	1.1	3	---			0.0
Aroclor-1260	4	11.055	-0.003	13255	0.3	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks):				0.9		Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.257	-0.026	72723	1.5	1	---			0.0
Aroclor-1262	2	10.709	0.051	104804	0.9	2	---			0.0
Aroclor-1262	3	11.055	-0.005	13255	0.4	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	11.906	-0.012	20784	0.5	5	---			0.0
Total Col1Ave (4 peaks):				0.8		Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (4.511 - 12.728) = 7126262 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 766675 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.649
4.042
4.690
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5.171
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5.506
6.203
10.479
11.397
11.530
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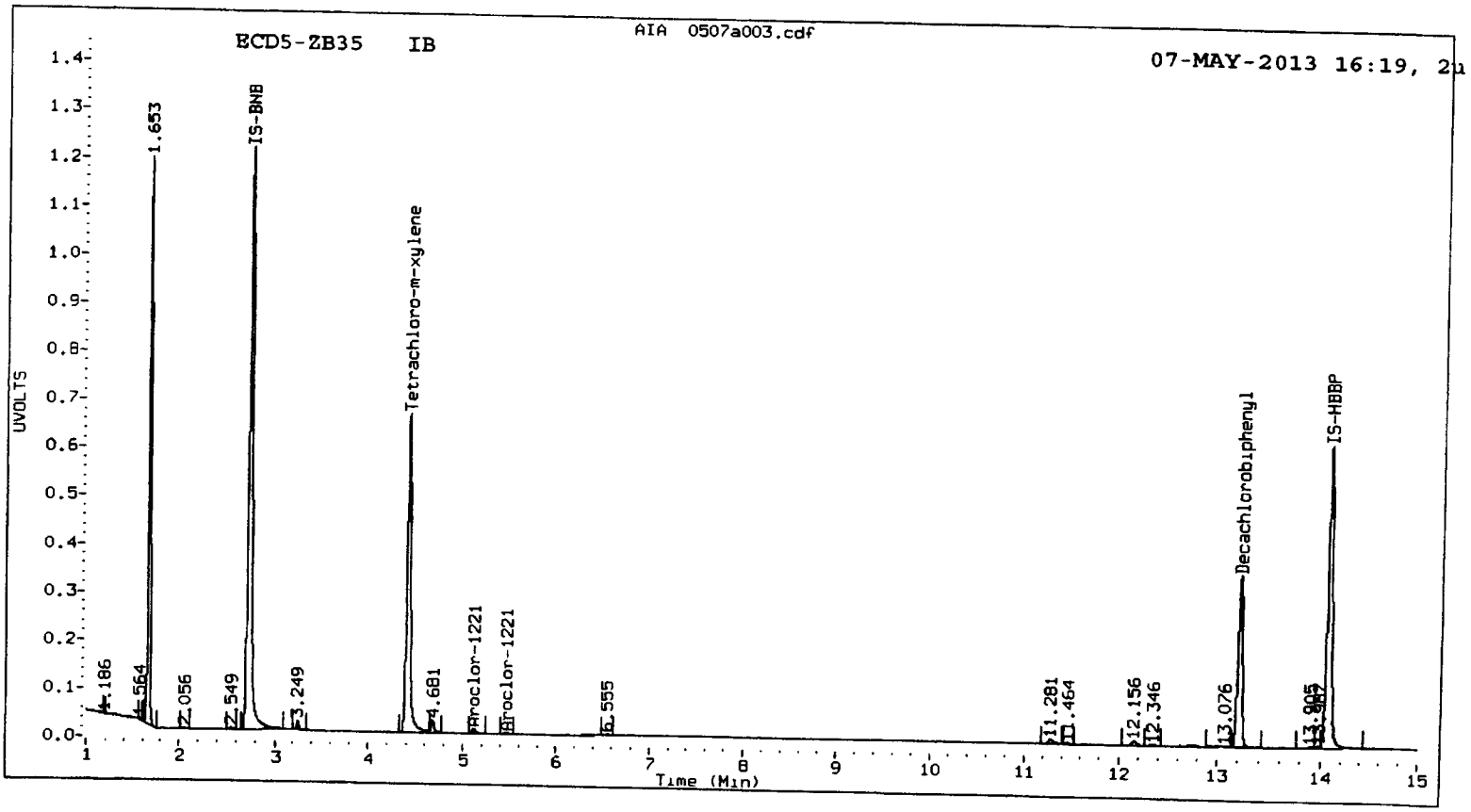
12.491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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.653
4.186
4.564
5.056
5.549
6.249
4.681
5.555
11.281
11.464
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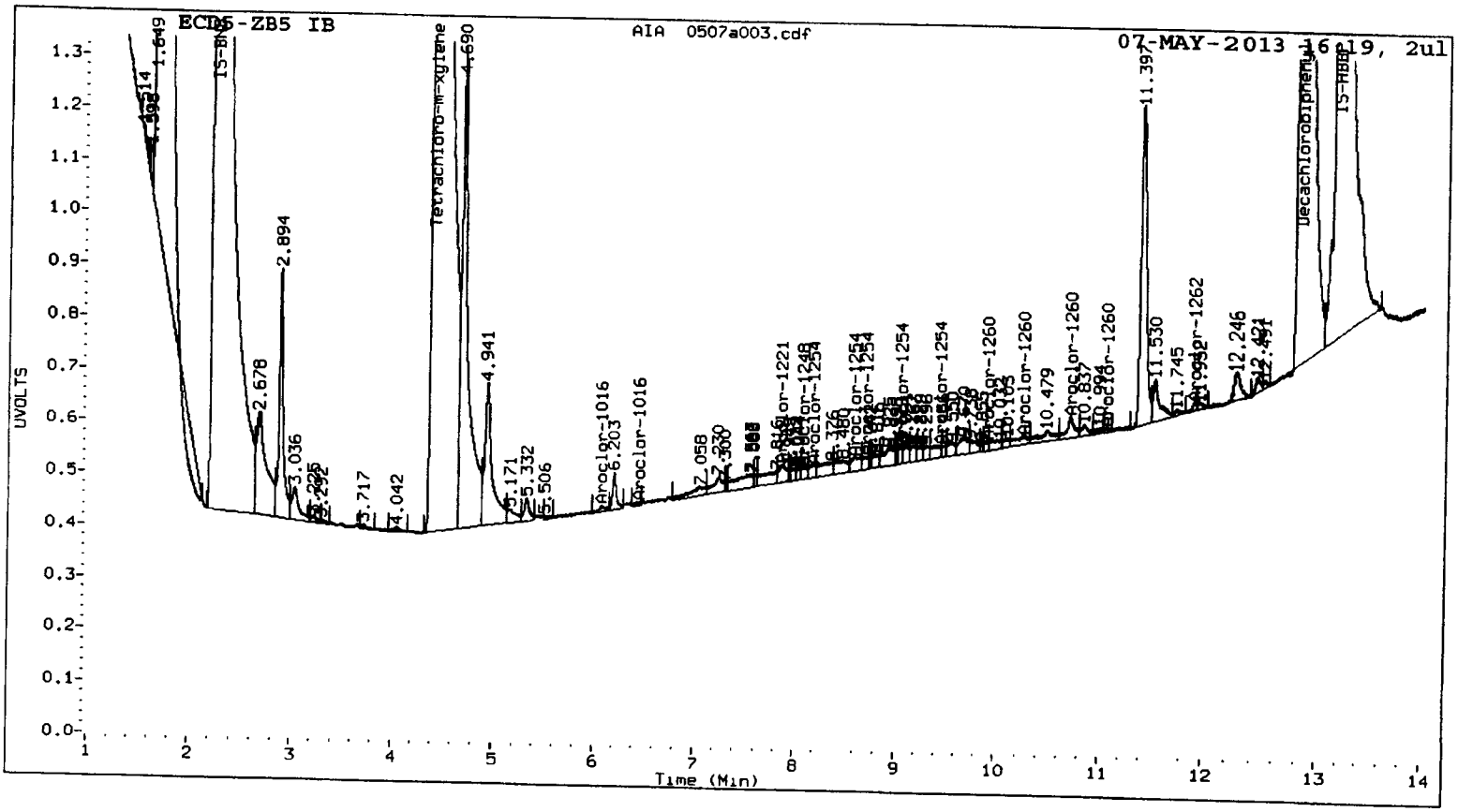
12.346
13.076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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
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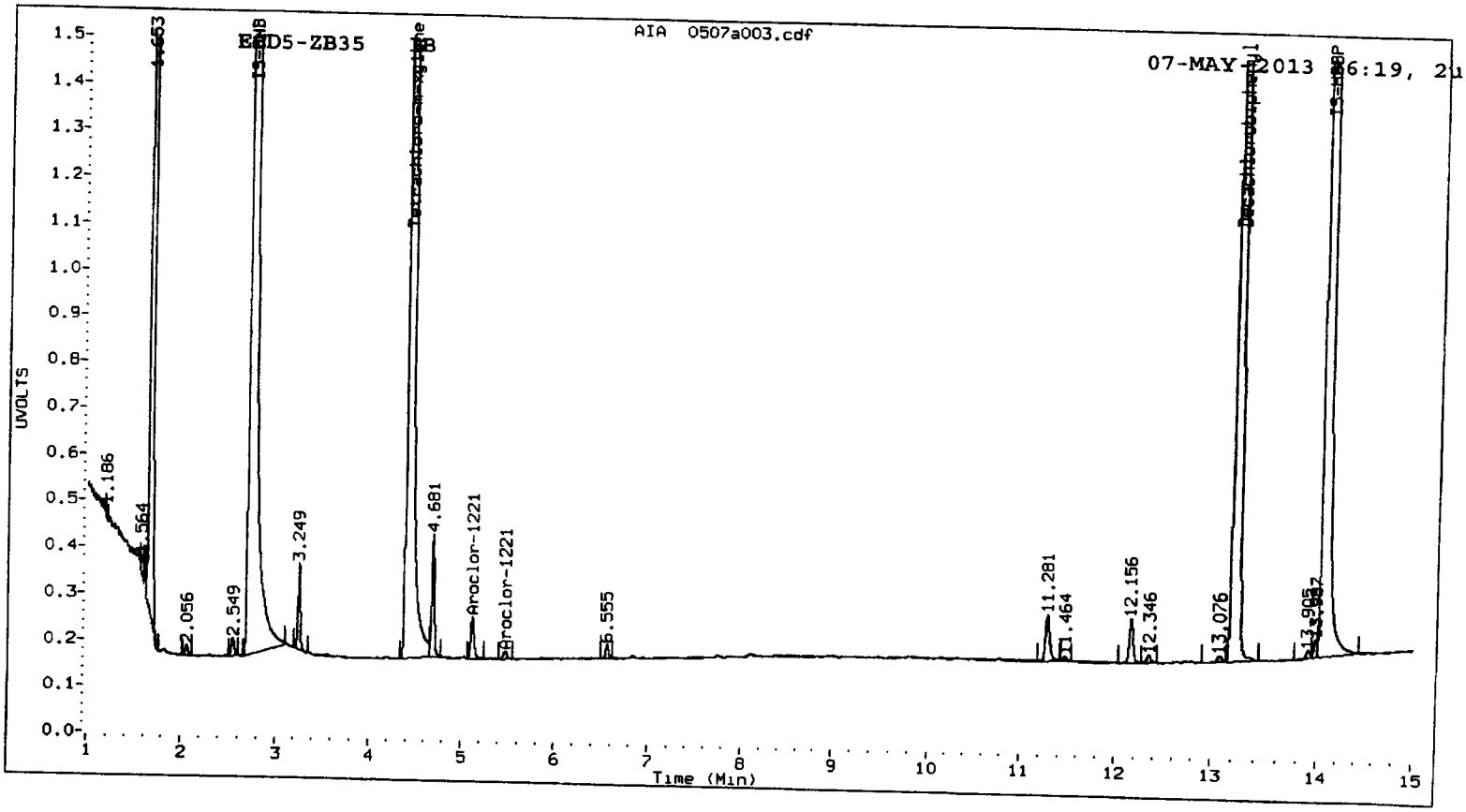
Aroclor-1221
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262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07-MAY-2013 16:19, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1221
Aroclor-1221

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a004.d
Data file 2: 20130507.b/ical-2.b/0507a004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.412	0.002	15237305	4.414	0.002	4032555	20.1	20.1	0.1	Tetrachloro-m-xylen
12.829	0.000	14012855	13.206	0.000	2494212	18.8	18.5	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.2	50.2
Decachlorobiphenyl	46.9	46.4

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48977254	0.0
Hexabromobiphenyl	50004151	50004151	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14839715	0.0
Hexabromobiphenyl	9345340	9345340	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

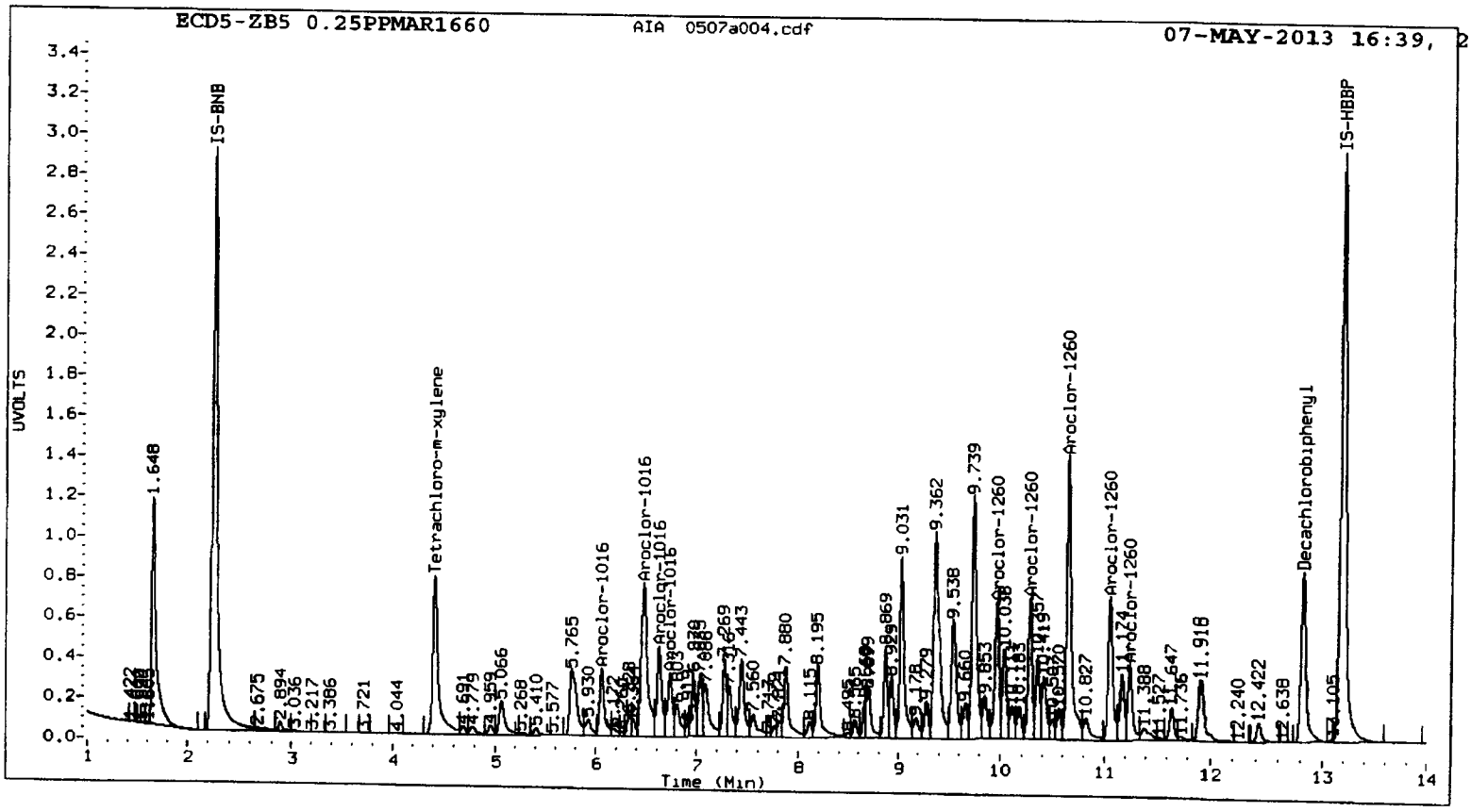
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	5292322	239.7	1	6.167	0.001	2064971	243.9
Aroclor-1016	2	6.470	0.002	16270732	239.3	2	6.803	0.002	4509319	245.0
Aroclor-1016	3	6.619	0.002	7234719	237.5	3	7.187	0.002	1193712	248.0
Aroclor-1016	4	6.731	0.003	5392918	236.9	4	7.360	0.002	1081244	241.2
Total Col1Ave (4 peaks):		238.3				Total Col2Ave (4 peaks):			244.5	RPD = 3
Corrected Ave (3 peaks):		237.9				Corrected Ave (3 peaks):			243.3	RPD = 2
Aroclor-1260	1	9.968	0.001	9749945	238.1	1	10.261	0.001	2073273	244.6
Aroclor-1260	2	10.284	0.001	9449895	232.7	2	10.711	0.001	2464050	248.2
Aroclor-1260	3	10.660	0.000	22932169	235.5	3	10.986	0.001	4588966	250.3
Aroclor-1260	4	11.059	0.001	11185744	235.8	4	11.507	0.002	1213324	244.1
Aroclor-1260	5	11.247	0.000	6064816	239.0	NS	---			----
Total Col1Ave (5 peaks):		236.2				Total Col2Ave (4 peaks):			246.8	RPD = 4
Corrected Ave (4 peaks):		235.5				Corrected Ave (3 peaks):			245.6	RPD = 4

Total PCB Area Col1 (4.511 - 12.728) = 301049488 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 65038970 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 16:39,
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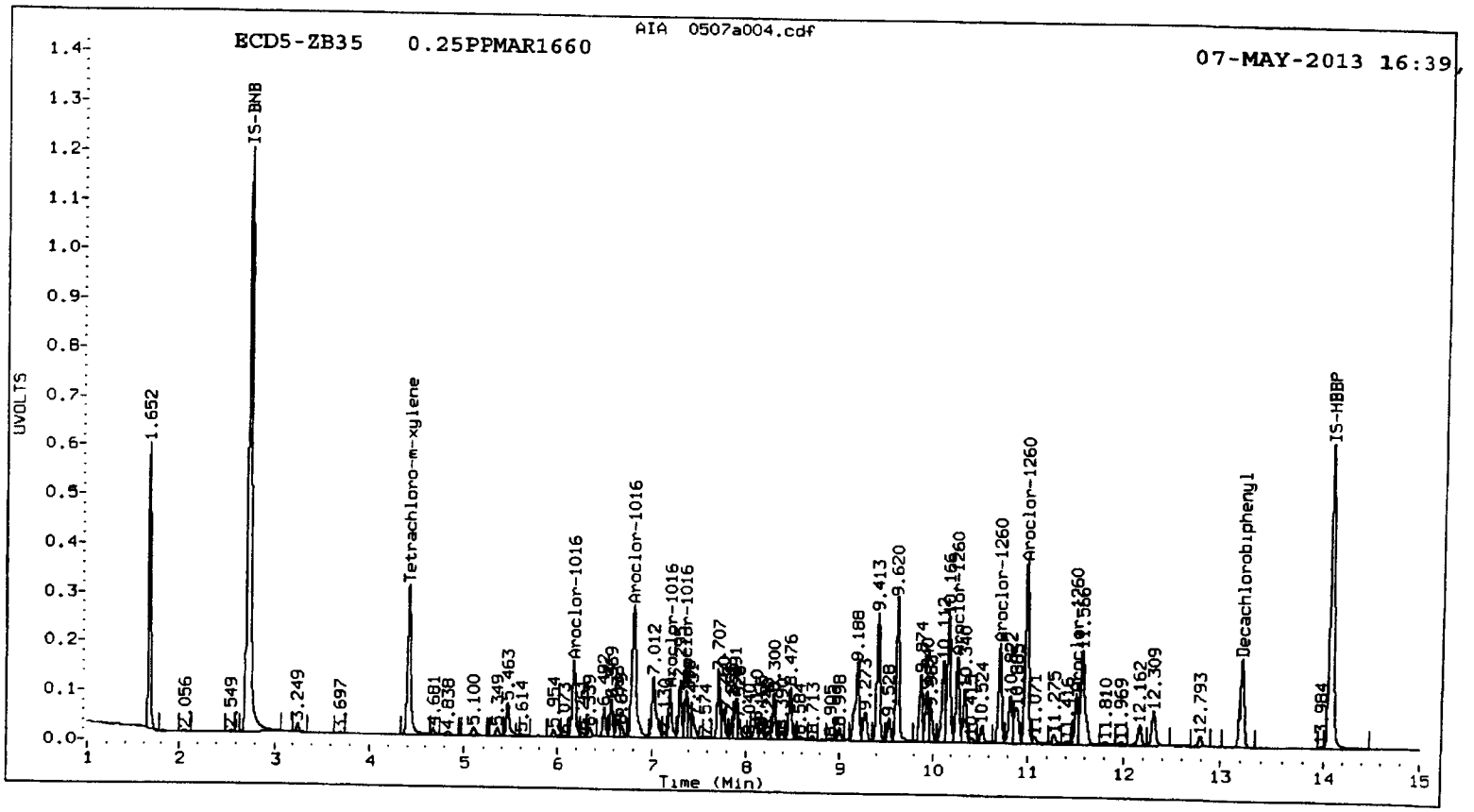
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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Time (Min)
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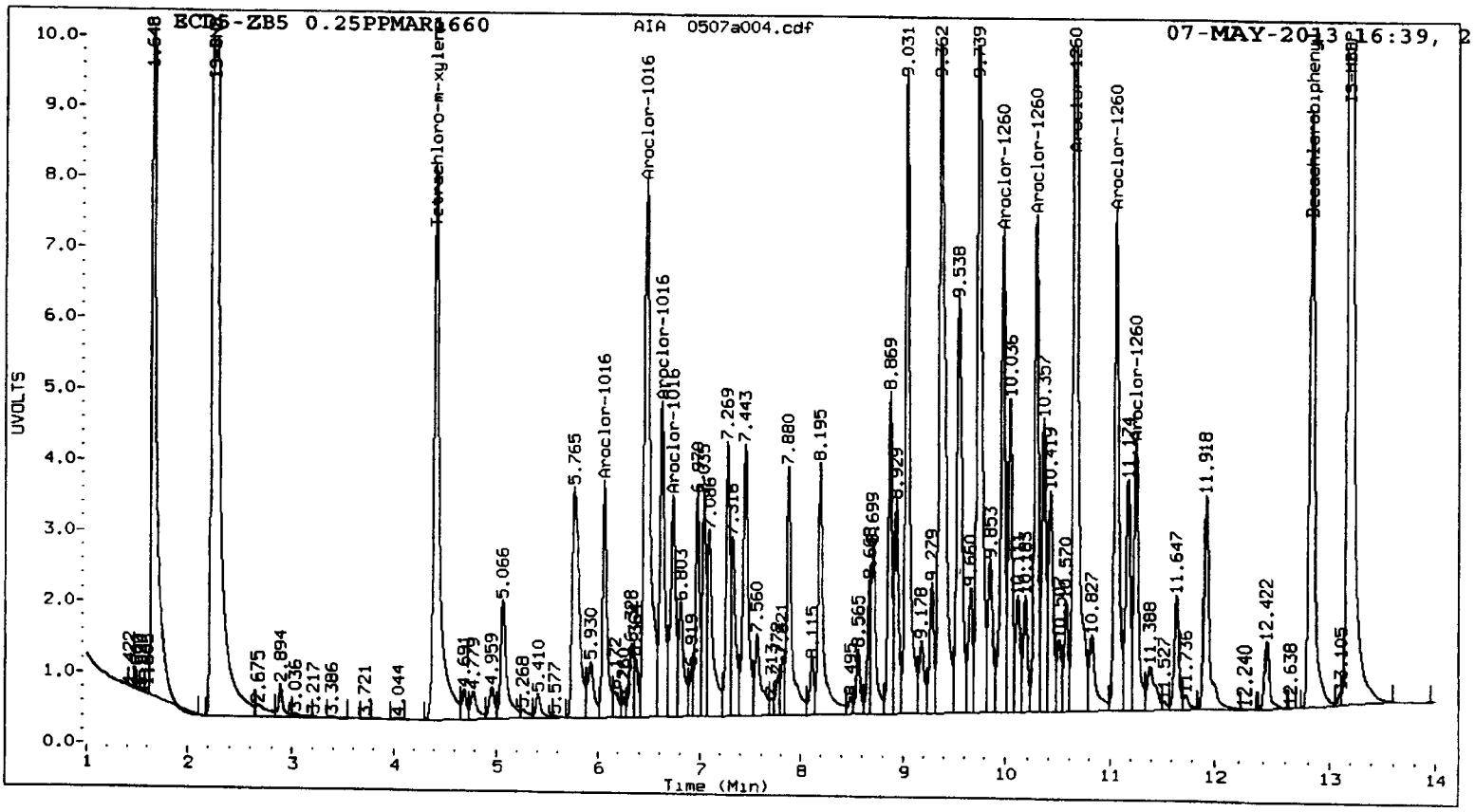
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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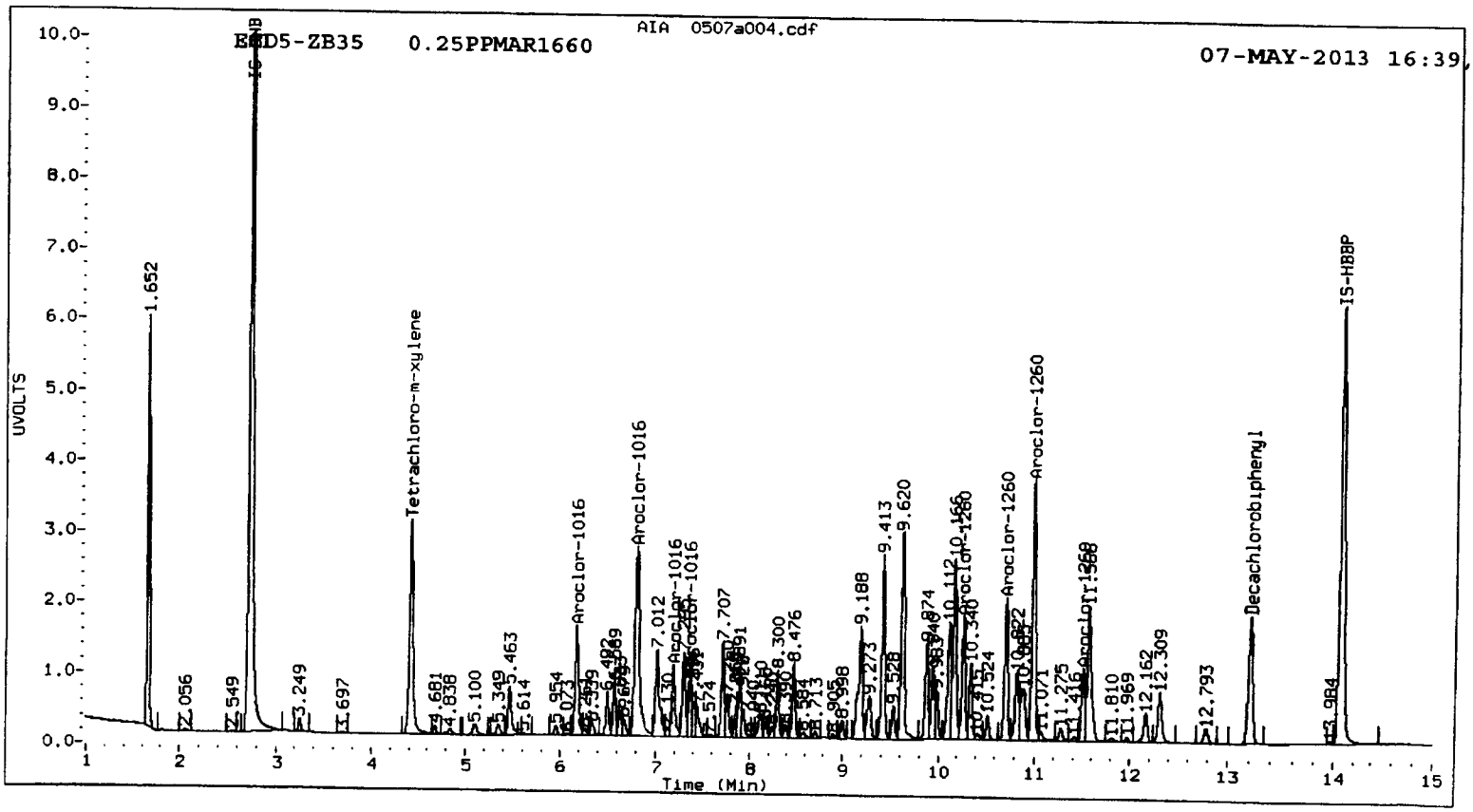
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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AIA 0507a004.cdf
07-MAY-2013 16:39,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a005.d
Data file 2: 20130507.b/ical-2.b/0507a005.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.001	1277251	4.413	0.002	336292	1.6	1.7	2.1	Tetrachloro-m-xylen
12.828	0.000	1463829	13.206	0.001	269190	1.9	2.0	2.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	4.1	4.2
Decachlorobiphenyl	4.9	5.0

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49978735	2.0
Hexabromobiphenyl	50004151	50389911	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14776833	-0.4
Hexabromobiphenyl	9345340	9354827	0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

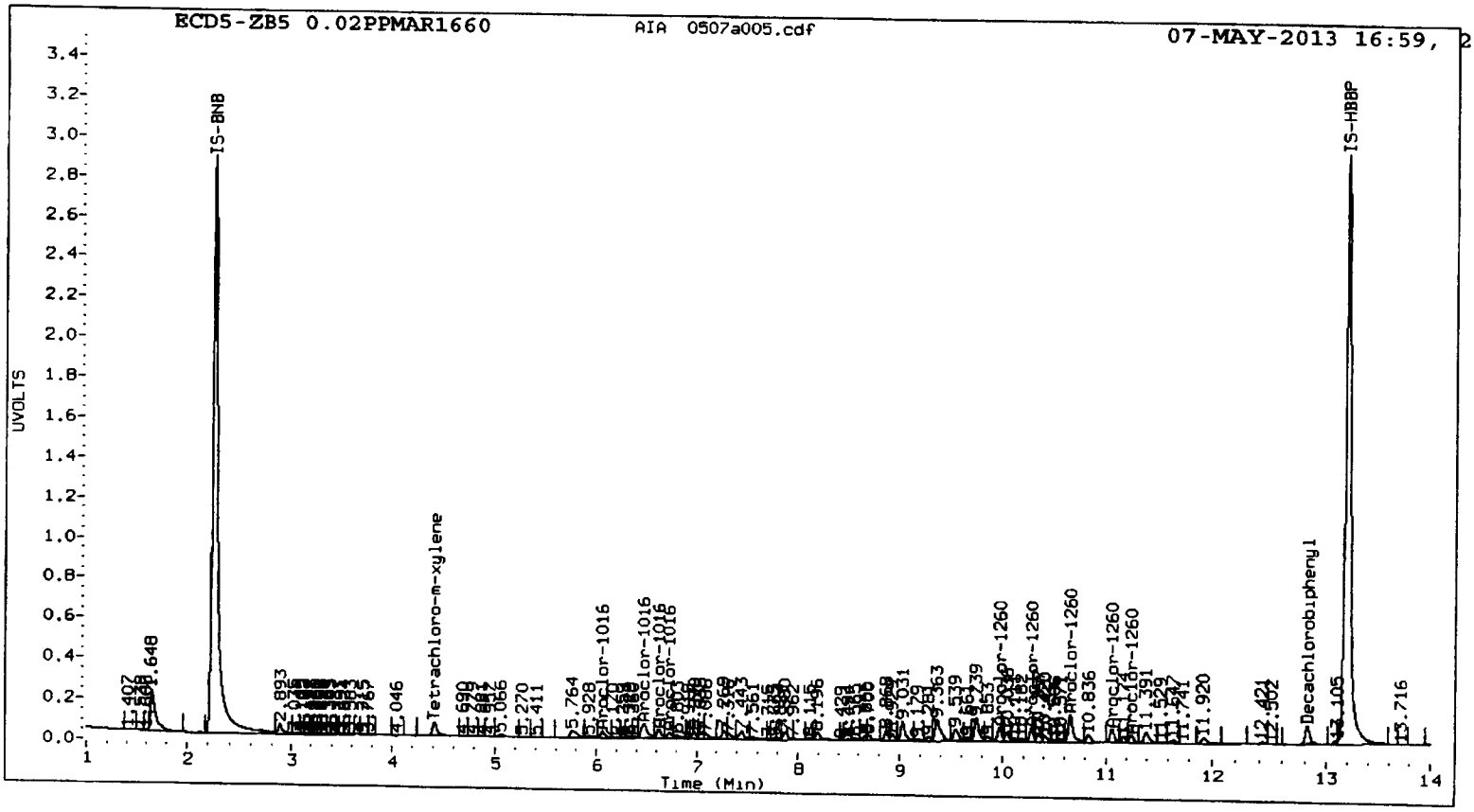
Aroclor	Peak#	RT (ZB5 Col)	Shift	Area	Amount	Peak#	RT (ZB35 Col)	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	522973	23.2	1	6.167	0.001	189742	22.5
Aroclor-1016	2	6.471	0.003	1616098	23.3	2	6.805	0.004	412537	22.5
Aroclor-1016	3	6.620	0.004	735232	23.6	3	7.188	0.003	102632	21.4
Aroclor-1016	4	6.731	0.003	539914	23.2	4	7.360	0.002	101879	22.8
Total Col1Ave (4 peaks):					23.3	Total Col2Ave (4 peaks):			22.3	RPD = 5
Corrected Ave (3 peaks):					23.2	Corrected Ave (3 peaks):			22.1	RPD = 5
Aroclor-1260	1	9.968	0.001	1019399	24.7	1	10.262	0.002	197758	23.3
Aroclor-1260	2	10.284	0.001	943544	23.1	2	10.711	0.002	225842	22.7
Aroclor-1260	3	10.661	0.001	2188991	22.3	3	10.987	0.002	394454	21.5
Aroclor-1260	4	11.060	0.003	1060689	22.2	4	11.507	0.002	113428	22.8
Aroclor-1260	5	11.249	0.002	541330	21.2	NS	---			----
Total Col1Ave (5 peaks):					22.7	Total Col2Ave (4 peaks):			22.6	RPD = 0
Corrected Ave (4 peaks):					22.2	Corrected Ave (3 peaks):			22.3	RPD = 1

Total PCB Area Col1 (4.511 - 12.728) = 32498603 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 6010068 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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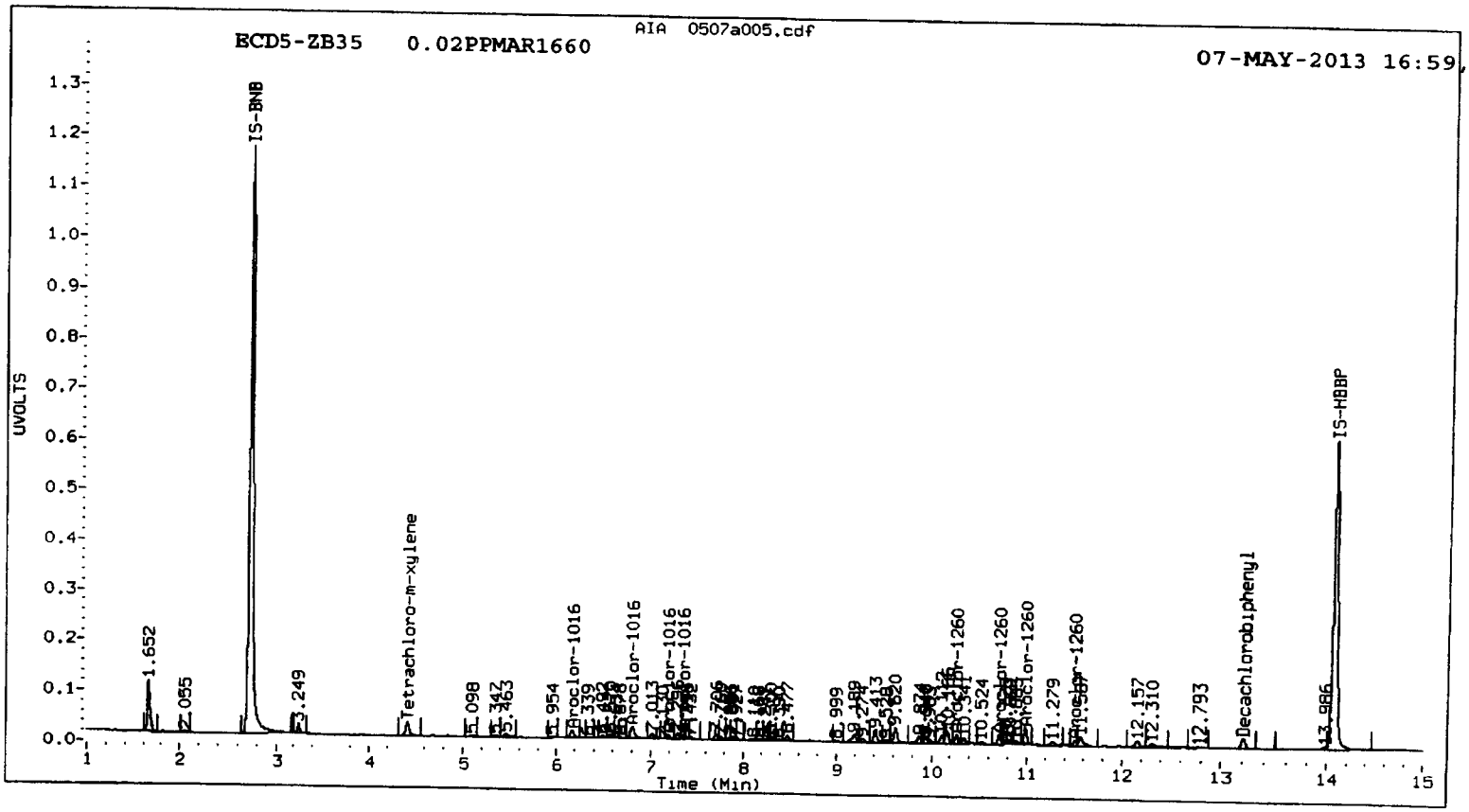
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)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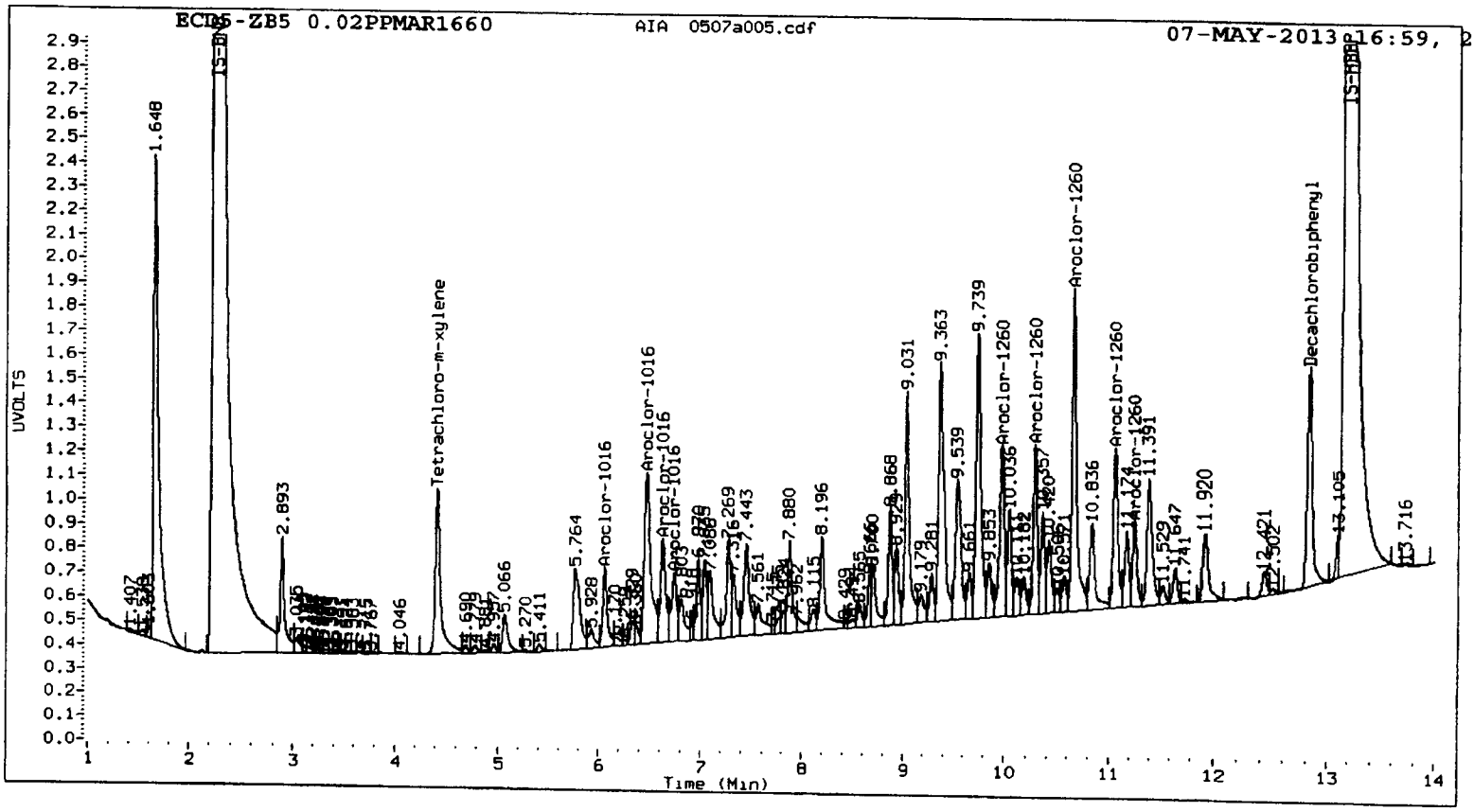
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)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5.764
Aroclor-1016
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Aroclor-1260
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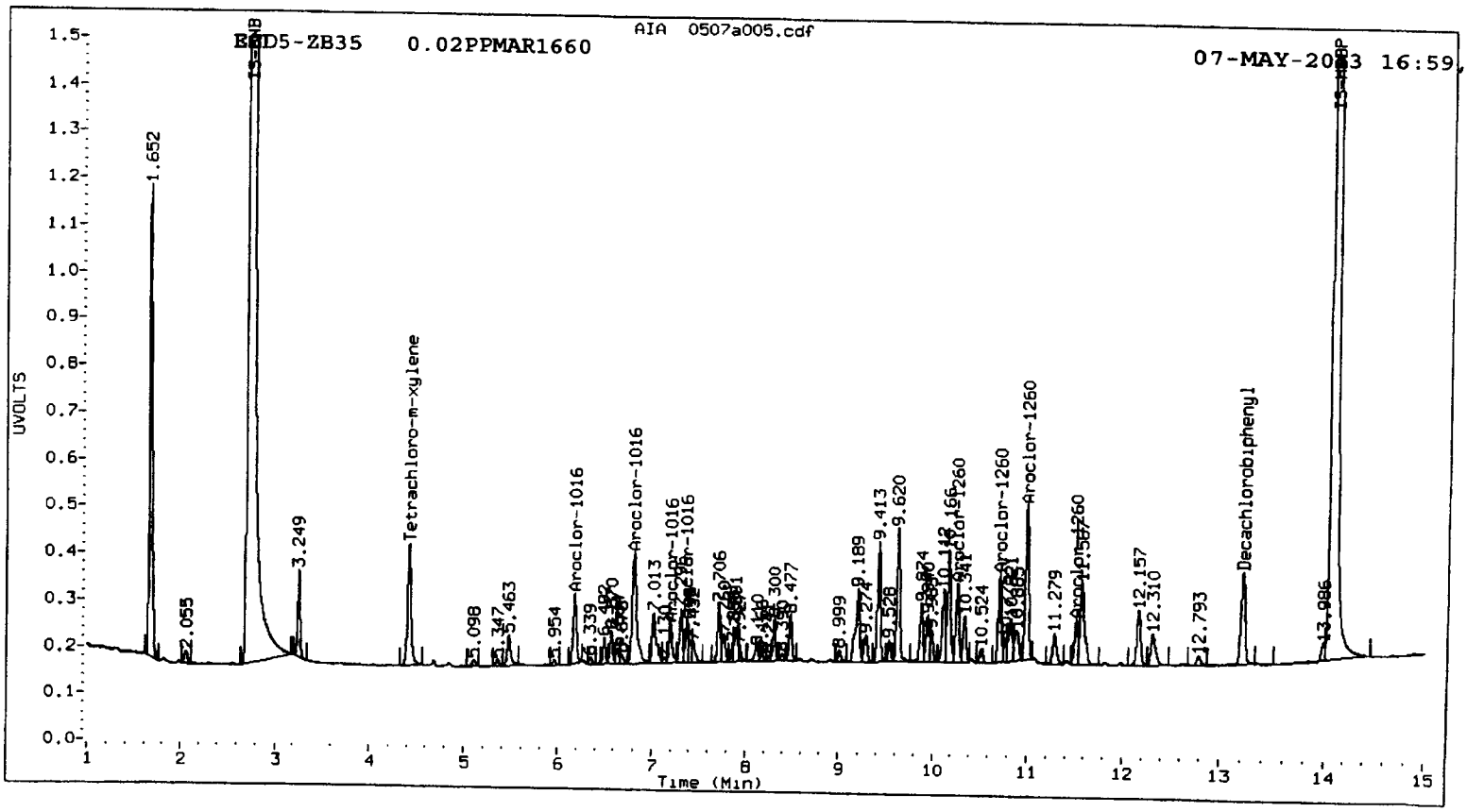
11.391
11.920
Decachlorobiphenyl
13.105
13.716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Time (Min)
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Tetrachloro-m-xylene
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Aroclor-1016
9.413
9.620
Aroclor-1260
11.279
12.157
12.310
12.793
Decachlorobiphenyl
13.986

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a006.d
Data file 2: 20130507.b/ical-2.b/0507a006.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.001	3240306	4.413	0.001	828310	4.1	4.1	0.9	Tetrachloro-m-xylen
12.828	0.000	3422581	13.205	0.000	610804	4.3	4.3	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	10.3	10.2
Decachlorobiphenyl	10.8	10.8

JR 05/07/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50752482	3.6
Hexabromobiphenyl	50004151	53170067	6.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15017003	1.2
Hexabromobiphenyl	9345340	9808139	5.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

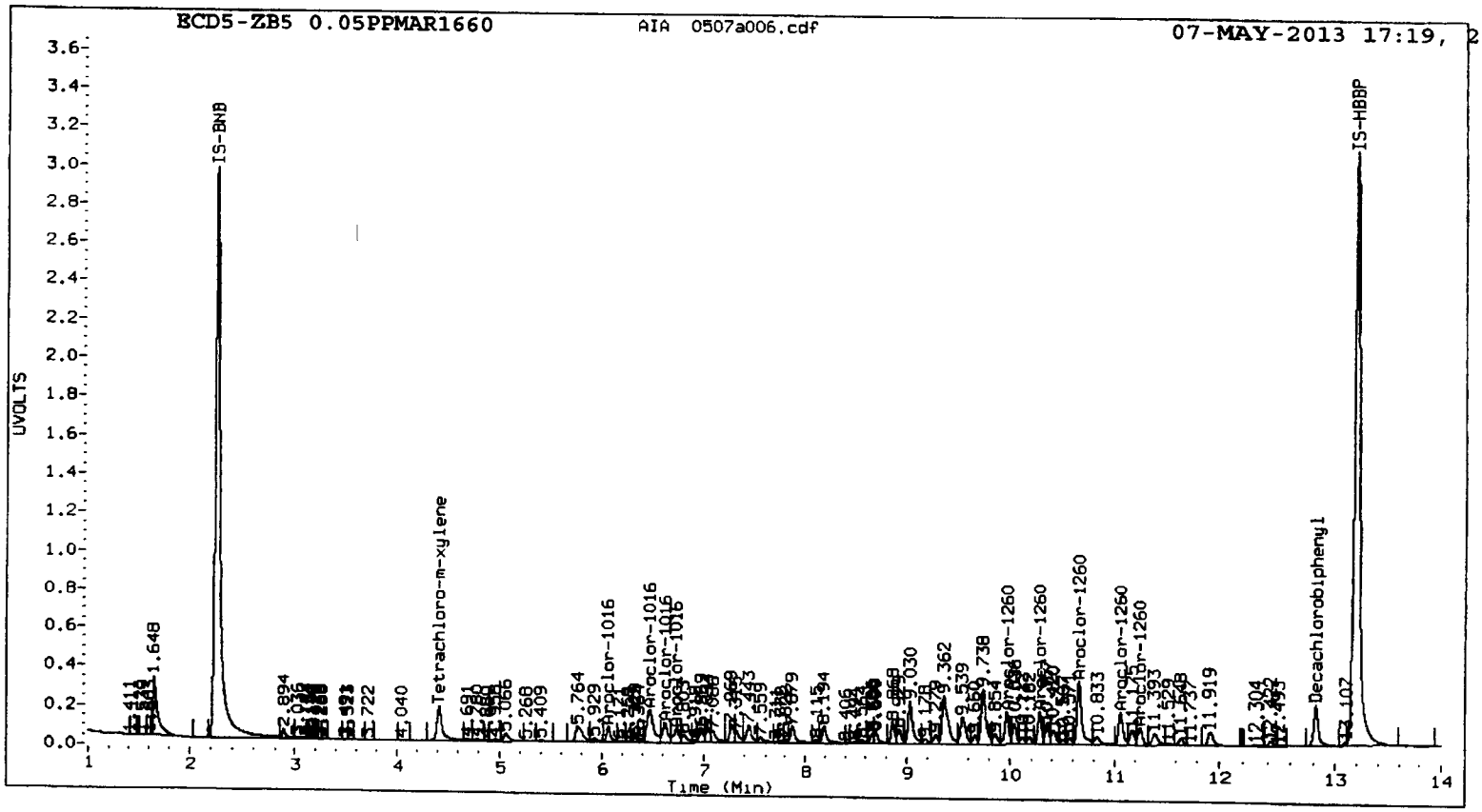
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	1244105	54.4	1	6.167	0.001	479006	55.9
Aroclor-1016	2	6.471	0.002	3811814	54.1	2	6.804	0.003	997455	53.5
Aroclor-1016	3	6.620	0.003	1731330	54.8	3	7.187	0.002	252974	51.9
Aroclor-1016	4	6.731	0.003	1291534	54.7	4	7.359	0.001	242005	53.3
Total Col1Ave (4 peaks):					54.5	Total Col2Ave (4 peaks):			53.7	RPD = 2
Corrected Ave (3 peaks):					54.4	Corrected Ave (3 peaks):			52.9	RPD = 3
Aroclor-1260	1	9.968	0.001	2372653	54.5	1	10.262	0.002	480726	54.0
Aroclor-1260	2	10.284	0.001	2245127	52.0	2	10.711	0.002	554671	53.2
Aroclor-1260	3	10.661	0.001	5376976	51.9	3	10.987	0.003	1024158	53.2
Aroclor-1260	4	11.059	0.002	2614350	51.8	4	11.507	0.002	280398	53.8
Aroclor-1260	5	11.248	0.001	1399830	51.9	NS	---			----
Total Col1Ave (5 peaks):					52.4	Total Col2Ave (4 peaks):			53.6	RPD = 2
Corrected Ave (4 peaks):					51.9	Corrected Ave (3 peaks):			53.4	RPD = 3

Total PCB Area Col1 (4.511 - 12.728) = 73710860 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 14729318 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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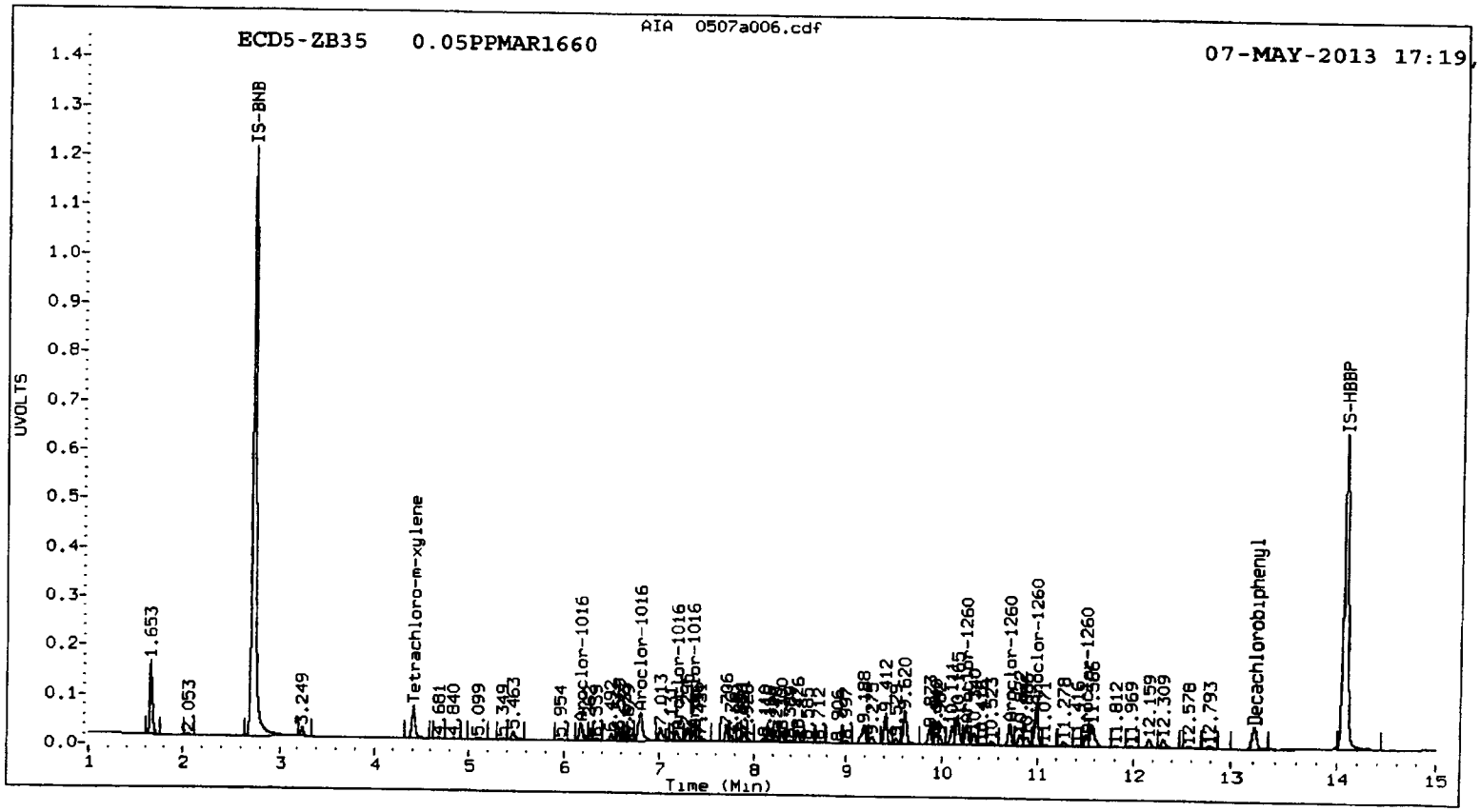
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
UVOLTS
Time (Min)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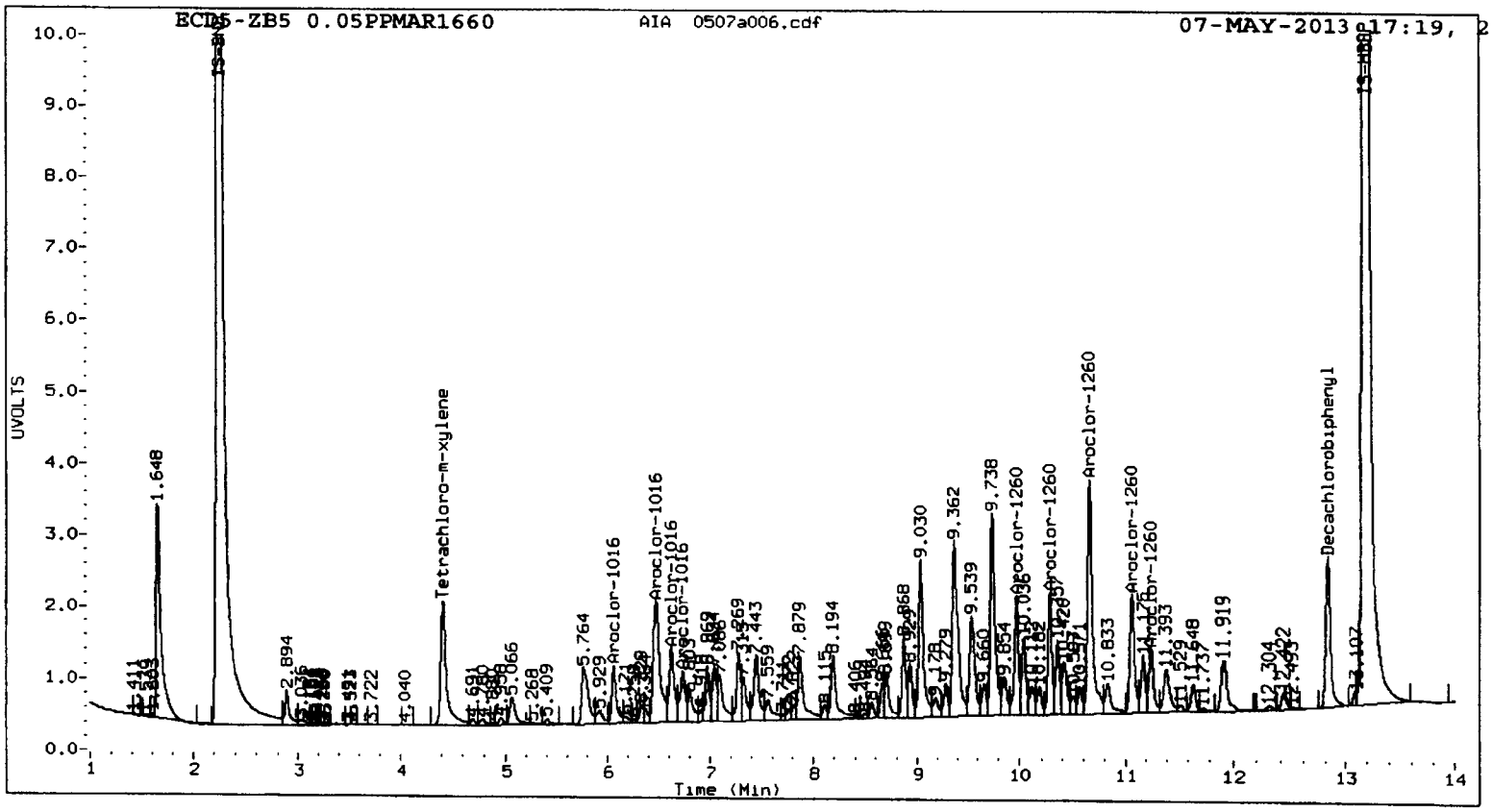
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
UVOLTS
Time (Min)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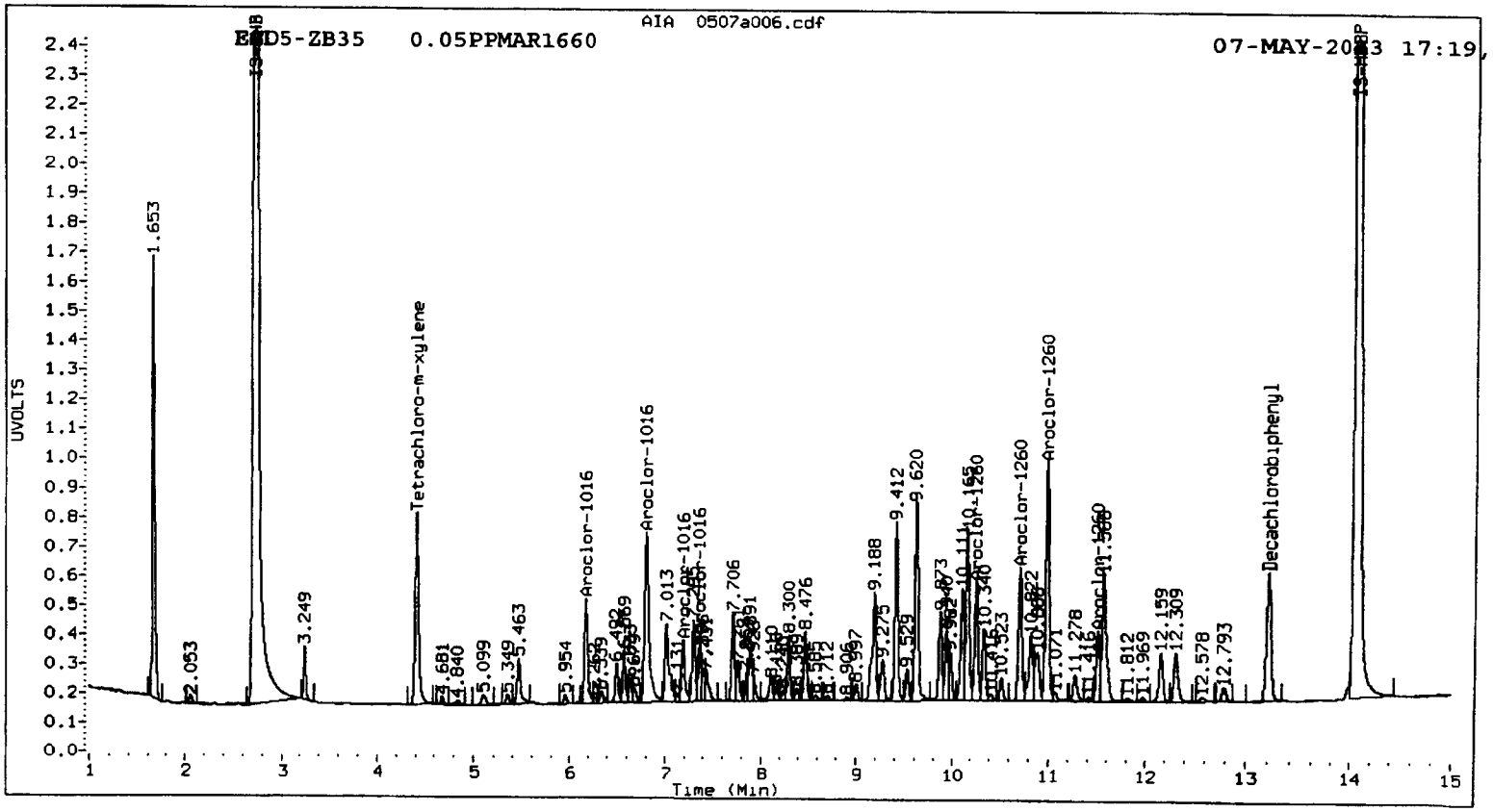
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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07-MAY-2013 17:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a007.d
Data file 2: 20130507.b/ical-2.b/0507a007.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	56438104	4.414	0.003	14978631	73.7	74.5	1.0	Tetrachloro-m-xylen
12.827	-0.001	54253911	13.203	-0.002	9605990	68.2	67.4	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/08/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	184.4	186.3
Decachlorobiphenyl	170.5	168.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49361946	0.8
Hexabromobiphenyl	50004151	53269354	6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14864205	0.2
Hexabromobiphenyl	9345340	9909484	6.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

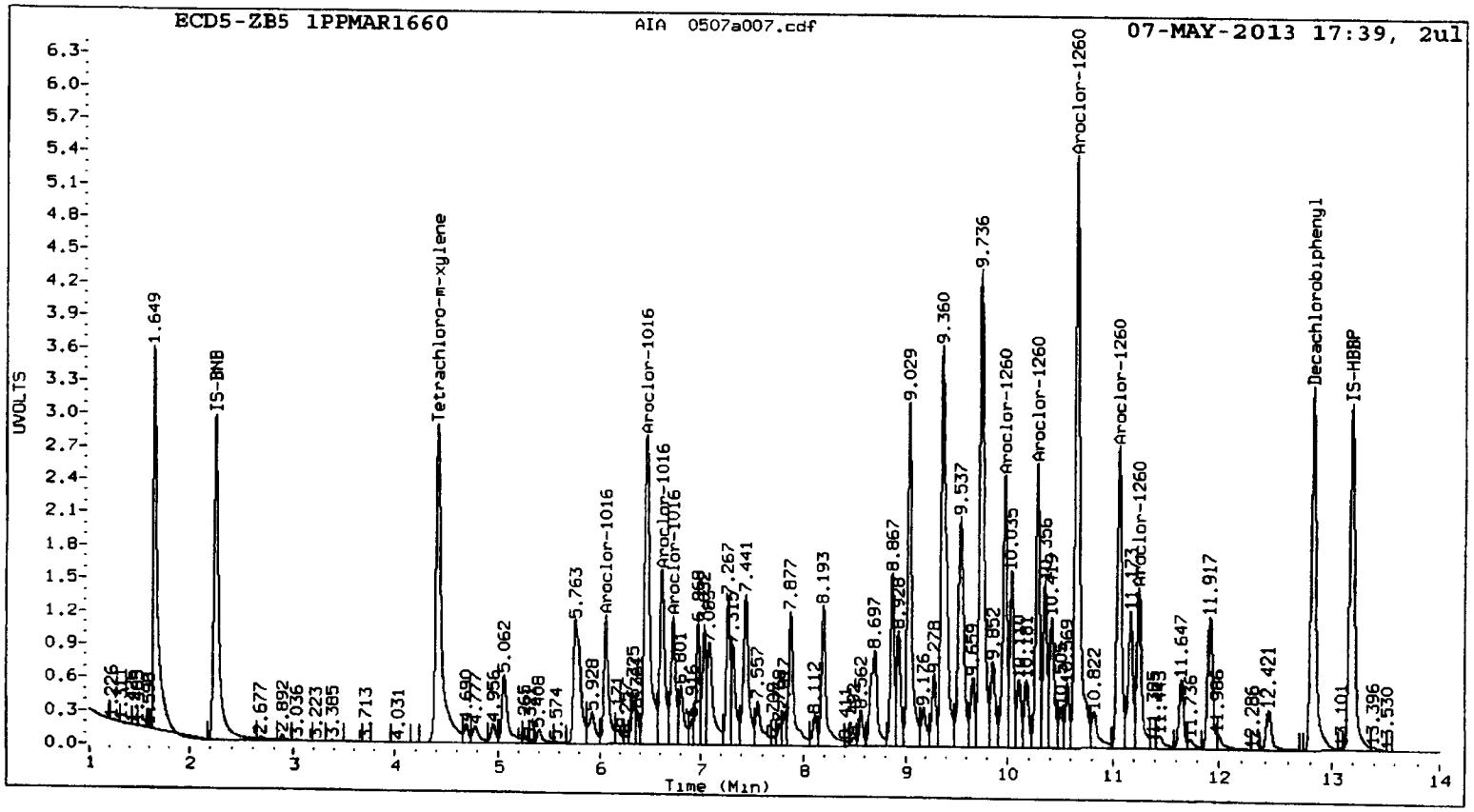
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.059	-0.001	18746470	842.5	1	6.167	0.001	6930745	817.2
Aroclor-1016	2	6.467	-0.002	57649136	841.1	2	6.801	0.000	15666487	849.6
Aroclor-1016	3	6.616	-0.001	25366020	826.1	3	7.186	0.000	4302384	892.4
Aroclor-1016	4	6.727	-0.001	19267159	839.8	4	7.359	0.001	3794728	845.1
Total Col1Ave (4 peaks):		837.4				Total Col2Ave (4 peaks):			851.1	RPD = 2
Corrected Ave (3 peaks):		835.7				Corrected Ave (3 peaks):			837.3	RPD = 0
Aroclor-1260	1	9.967	0.000	34921569	800.5	1	10.260	0.000	7411124	824.6
Aroclor-1260	2	10.283	-0.001	34401497	795.2	2	10.709	0.000	8889960	844.4
Aroclor-1260	3	10.659	0.000	86265488	831.6	3	10.986	0.001	16951381	872.0
Aroclor-1260	4	11.057	0.000	42604682	843.2	4	11.506	0.000	4533121	860.2
Aroclor-1260	5	11.247	0.000	23577619	872.2	NS	---			----
Total Col1Ave (5 peaks):		828.6				Total Col2Ave (4 peaks):			850.3	RPD = 3
Corrected Ave (4 peaks):		817.6				Corrected Ave (3 peaks):			843.1	RPD = 3

Total PCB Area Col1 (4.511 - 12.728) = 1078983721 Col1 Total PCB = 1.8 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 230522338 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
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Tetrachloro-m-xylene
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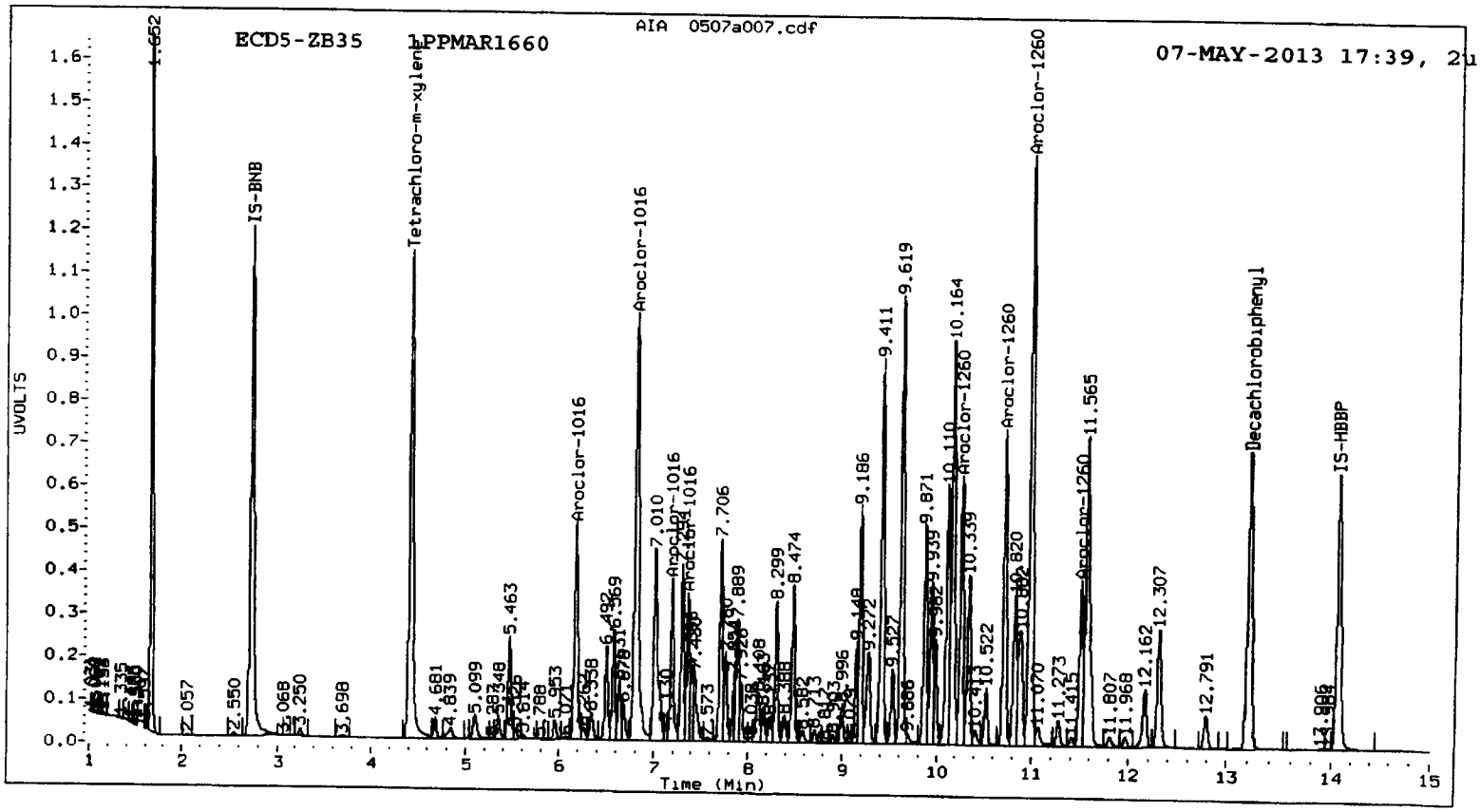
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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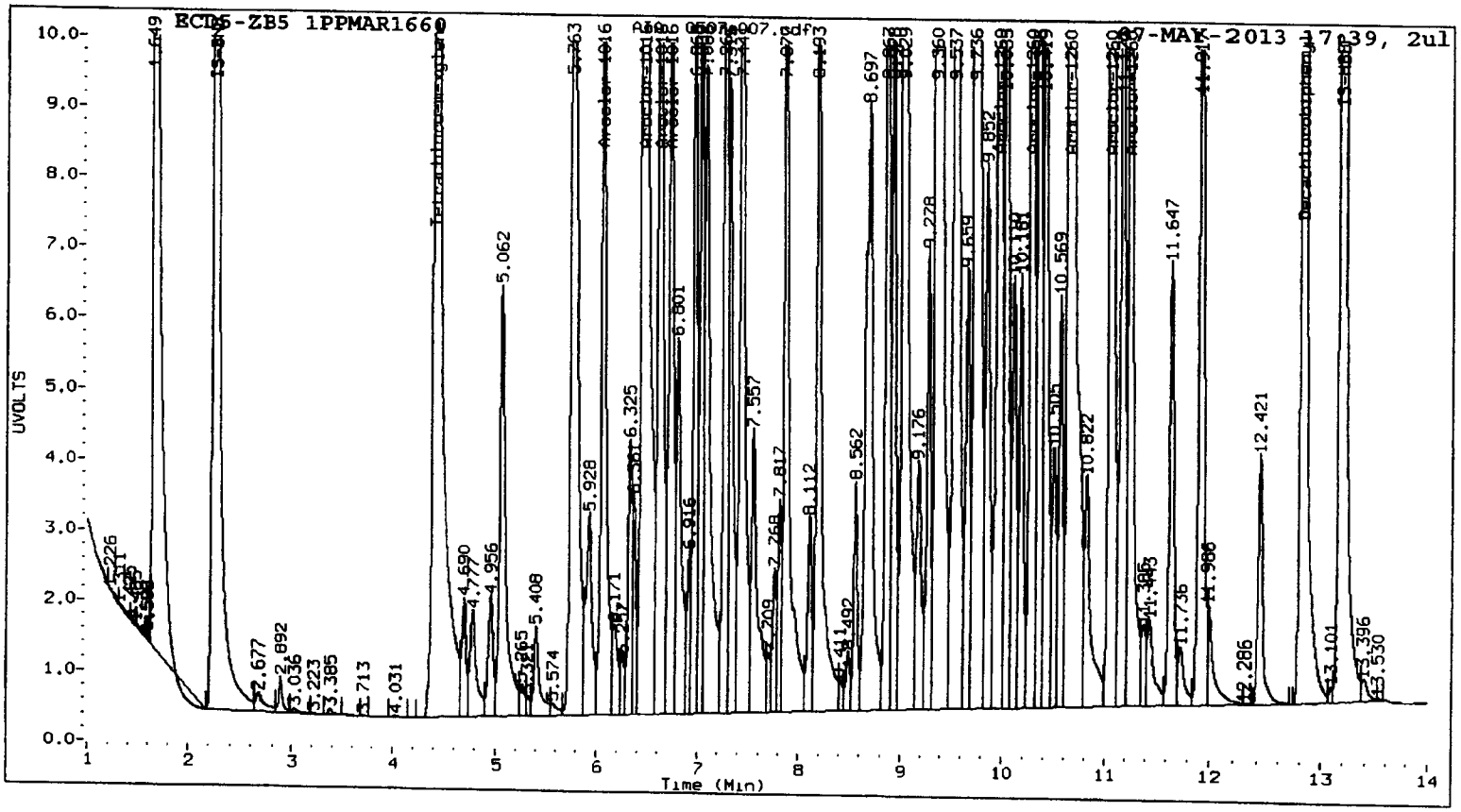
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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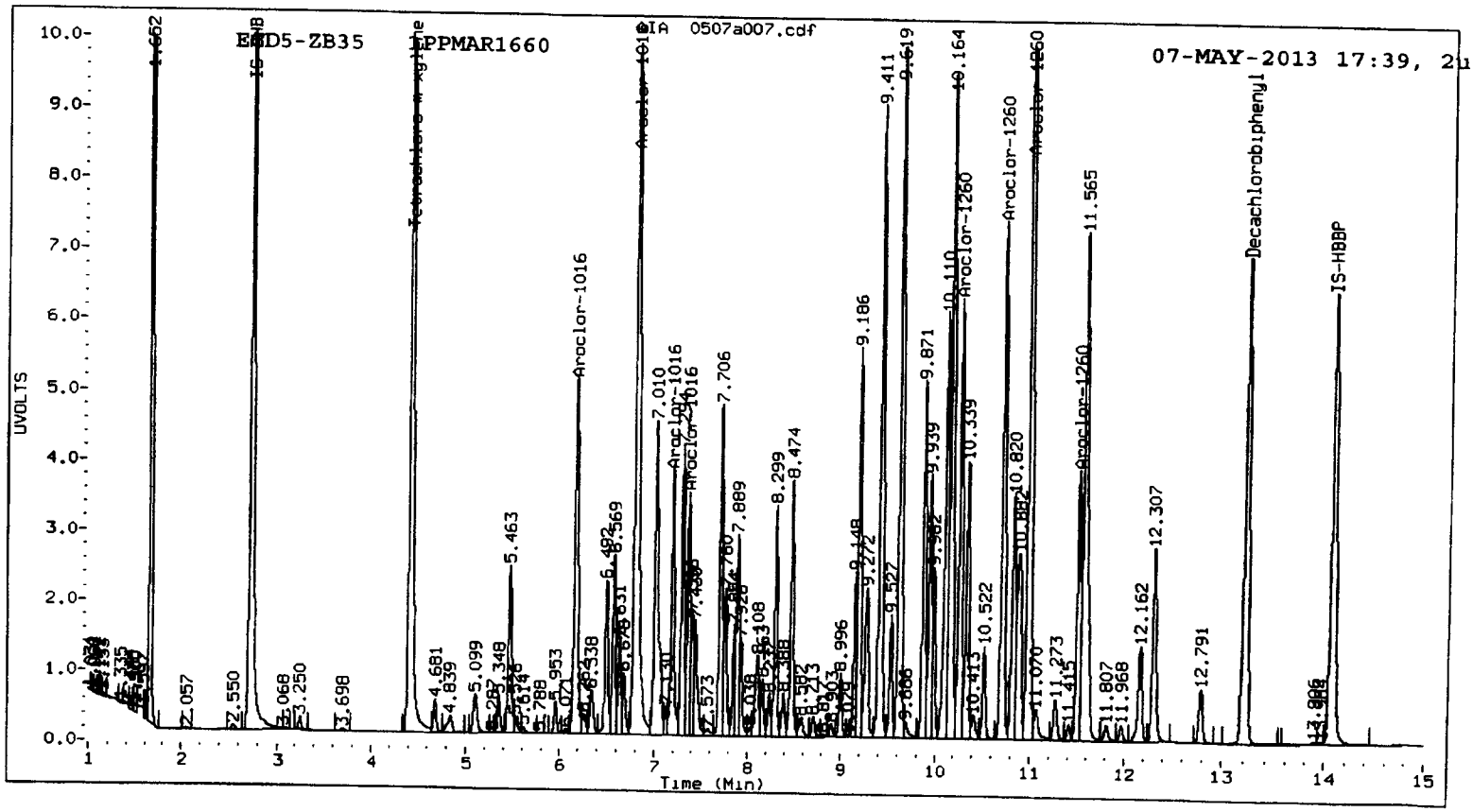
UVOLTS
Time (Min)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07-MAY-2013 17:39, 2u
UVOLTS
Time (Min)
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a008.d
Data file 2: 20130507.b/ical-2.b/0507a008.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	6731015	4.413	0.001	1684319	8.4	8.1	3.5	Tetrachloro-m-xylen
12.828	0.000	6587362	13.204	-0.001	1145480	8.2	8.1	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	21.0	20.3
Decachlorobiphenyl	20.5	20.2

JM 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51692067	5.5
Hexabromobiphenyl	50004151	53692342	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15354151	3.5
Hexabromobiphenyl	9345340	9856374	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

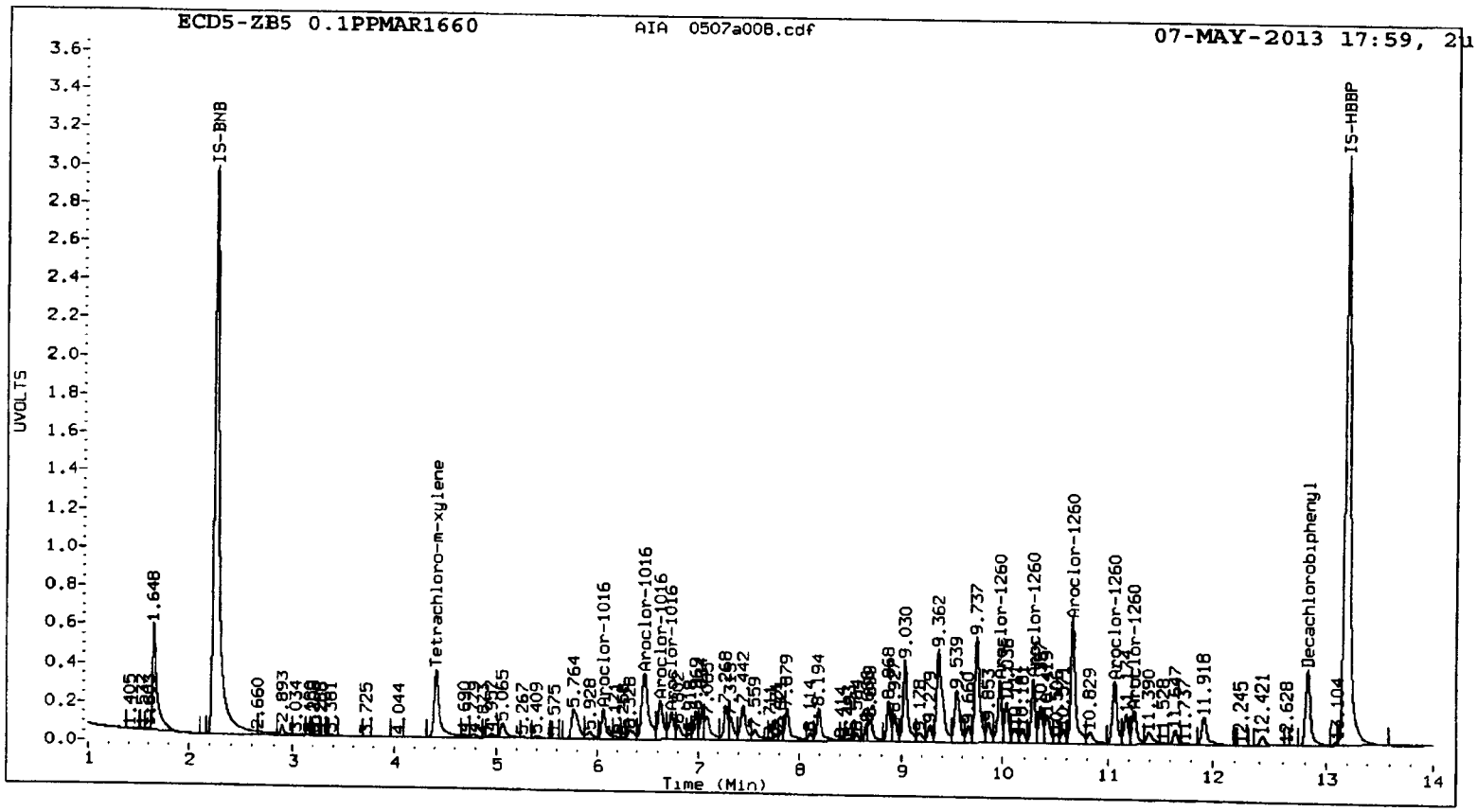
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.061	0.000	2455484	105.4	1	6.167	0.001	933103	106.5
Aroclor-1016	2	6.469	0.001	7585703	105.7	2	6.803	0.003	2002074	105.1
Aroclor-1016	3	6.619	0.002	3398868	105.7	3	7.187	0.002	525355	105.5
Aroclor-1016	4	6.730	0.002	2540359	105.7	4	7.359	0.001	491272	105.9
Total Col1Ave (4 peaks):					105.6	Total Col2Ave (4 peaks):			105.8	RPD = 0
Corrected Ave (3 peaks):					105.6	Corrected Ave (3 peaks):			105.5	RPD = 0
Aroclor-1260	1	9.967	0.001	4612344	104.9	1	10.262	0.002	936375	104.7
Aroclor-1260	2	10.284	0.001	4422973	101.4	2	10.710	0.001	1090787	104.2
Aroclor-1260	3	10.660	0.000	10624516	101.6	3	10.986	0.001	2021333	104.5
Aroclor-1260	4	11.059	0.001	5142675	101.0	4	11.507	0.002	538050	102.7
Aroclor-1260	5	11.248	0.001	2788613	102.3	NS	---			----
Total Col1Ave (5 peaks):					102.3	Total Col2Ave (4 peaks):			104.0	RPD = 2
Corrected Ave (4 peaks):					101.6	Corrected Ave (3 peaks):			103.8	RPD = 2

Total PCB Area Col1 (4.511 - 12.728) = 143086545 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 29038947 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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UVOLTS
Time (Min)
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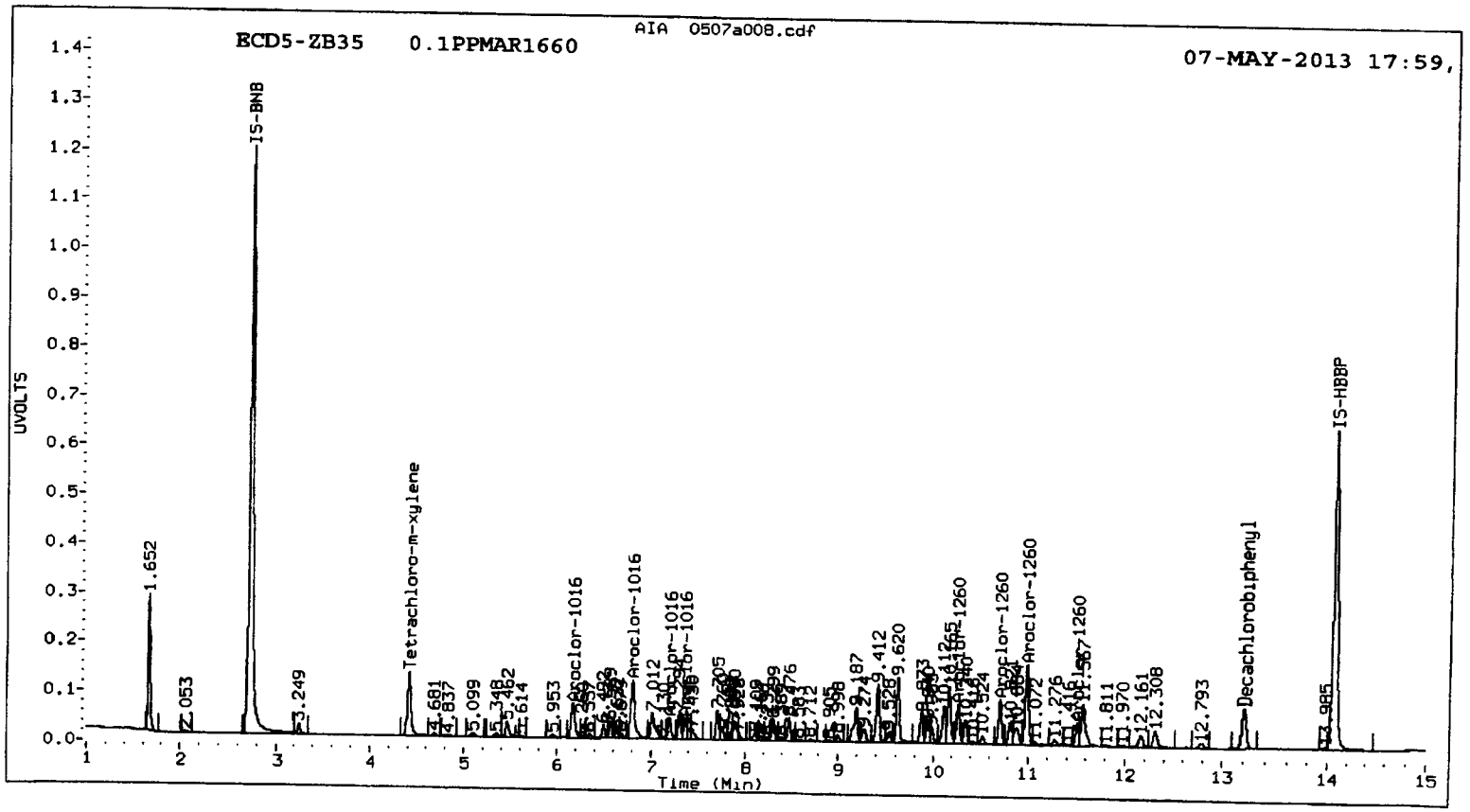
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
1.648
Aroclor-1016
Aroclor-1260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IS-HBBP
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Decachlorobiphenyl
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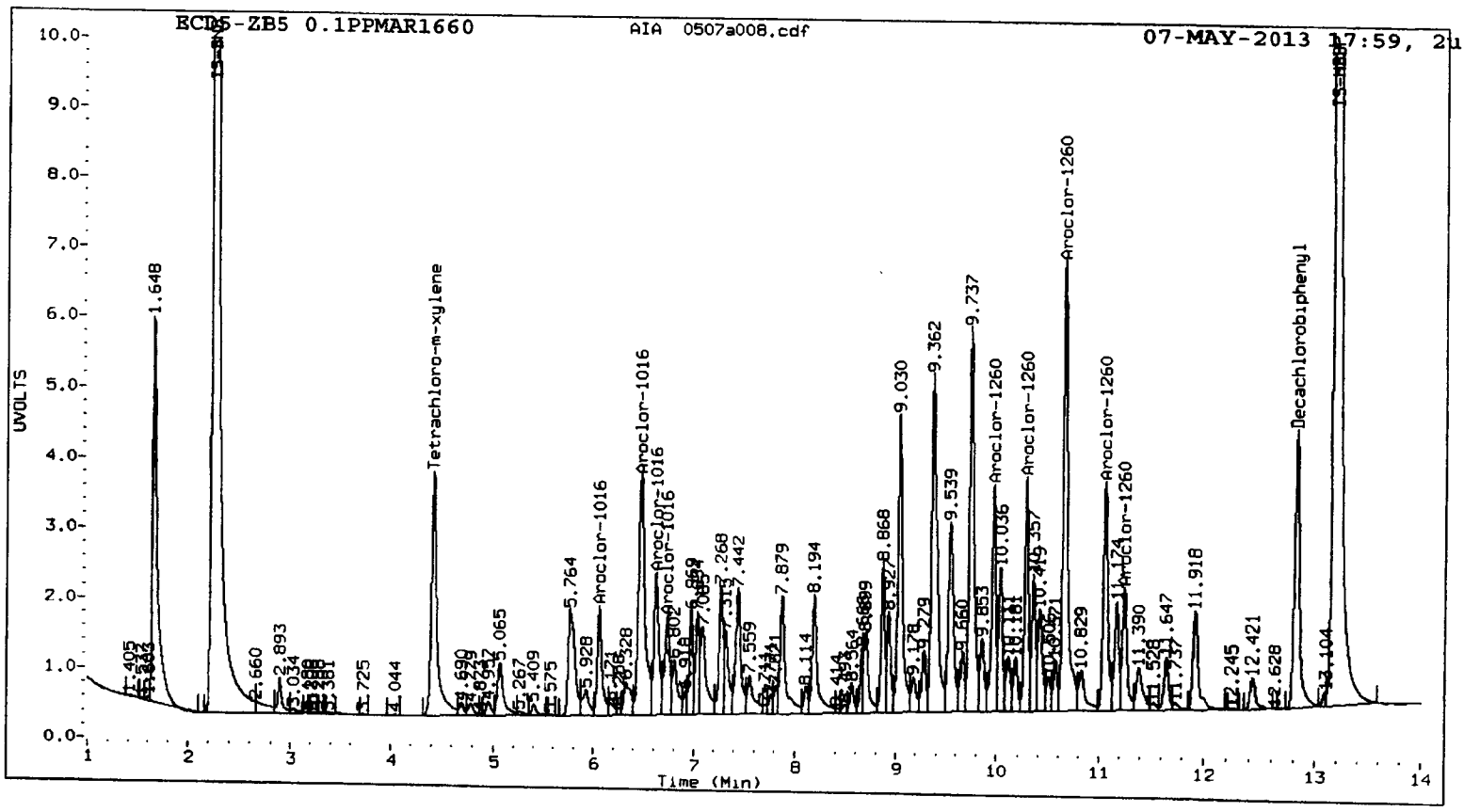
Aroclor-1260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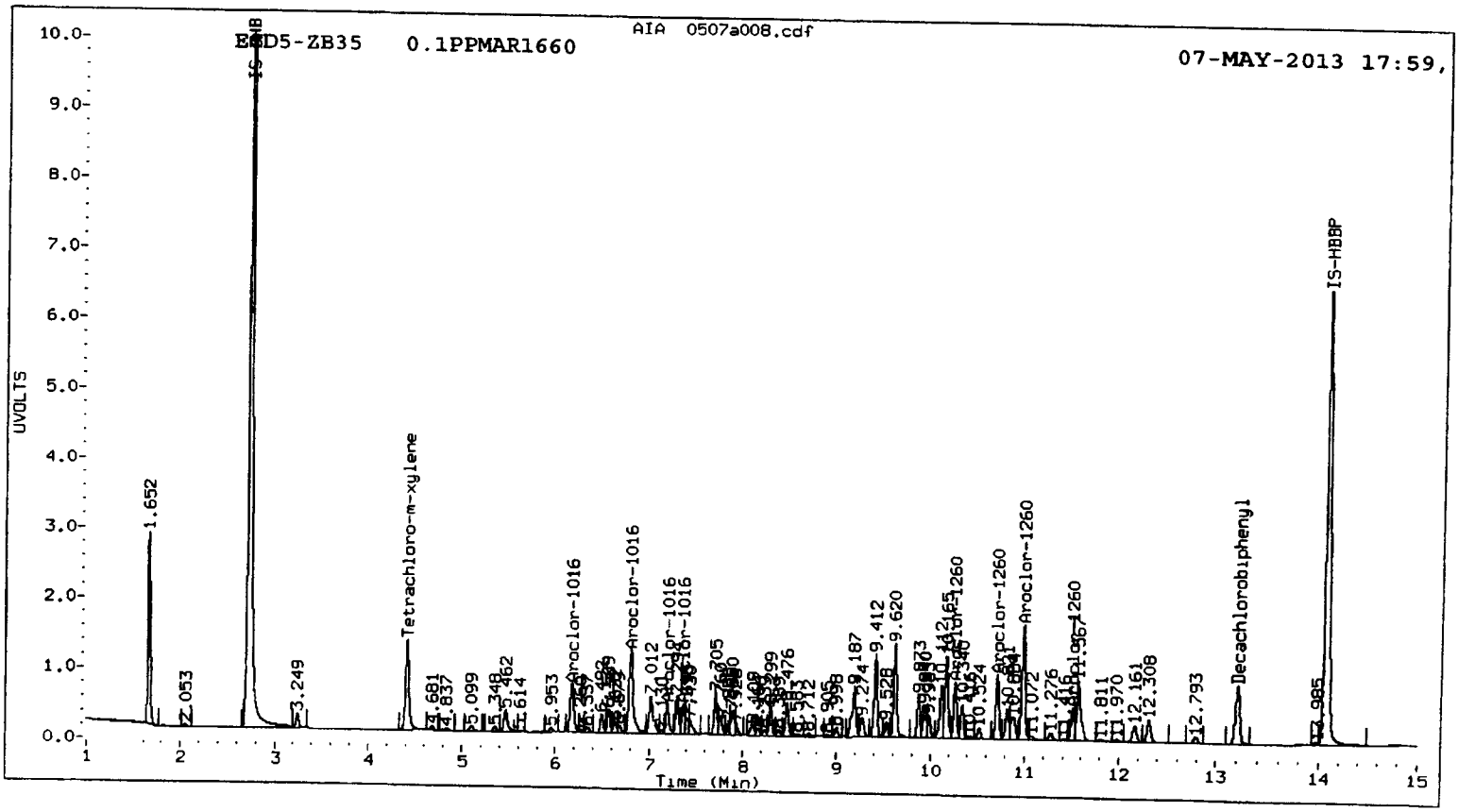
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 0.1PPMAR1660
AIA 0507a008.cdf
07-MAY-2013 17:59,
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a009.d
Data file 2: 20130507.b/ical-2.b/0507a009.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 18:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	30263952	4.412	0.001	7879158	38.6	39.1	1.3	Tetrachloro-m-xylen
12.827	-0.001	28353890	13.204	-0.001	4992554	35.6	35.6	0.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.6	97.8
Decachlorobiphenyl	89.0	88.9

5/06/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50537542	3.2
Hexabromobiphenyl	50004151	53291913	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14890872	0.3
Hexabromobiphenyl	9345340	9751846	4.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

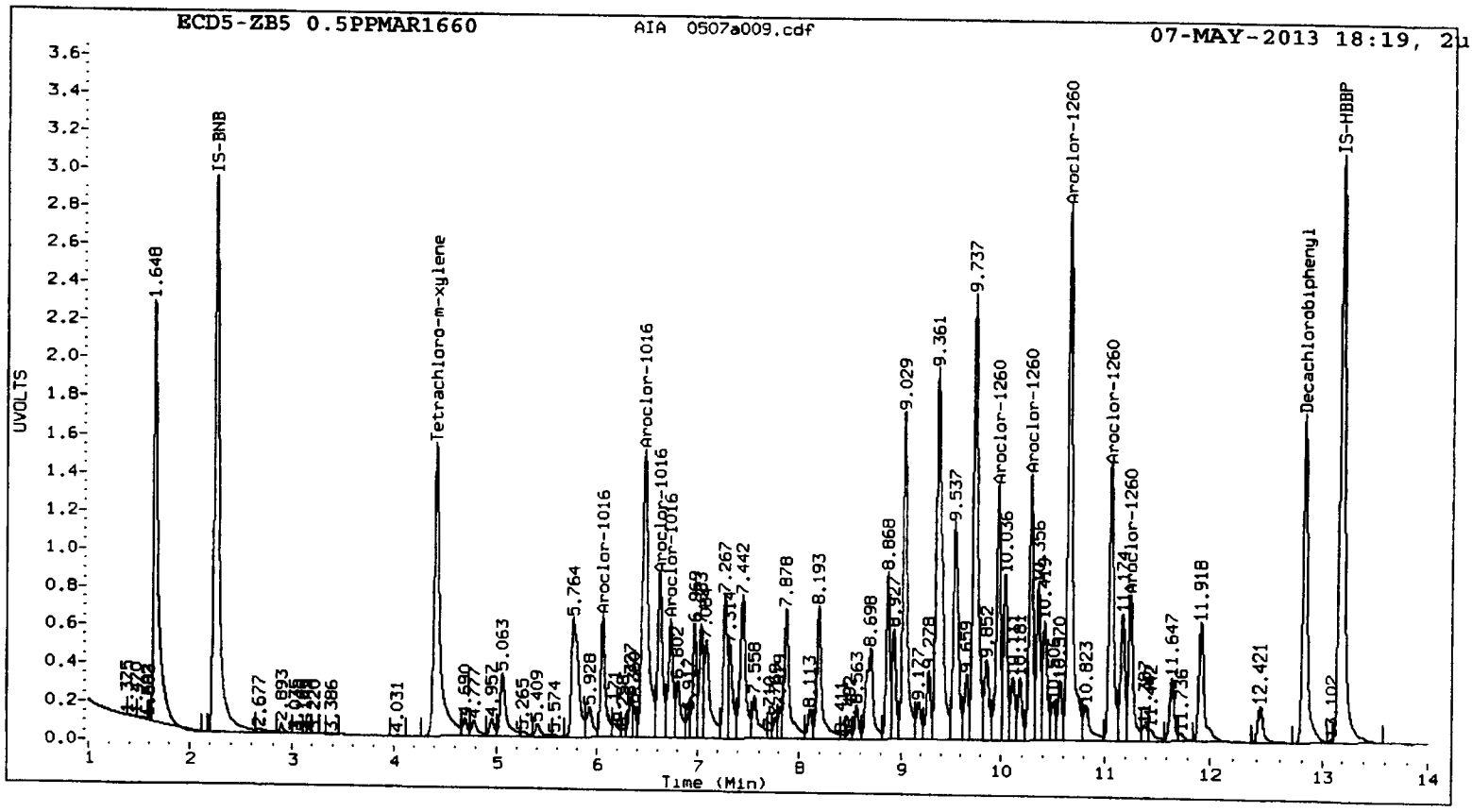
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.060	0.000	10209142	448.2	1	6.166	0.000	3819812	449.6
Aroclor-1016	2	6.469	0.000	31525506	449.3	2	6.801	0.000	8527560	461.6
Aroclor-1016	3	6.617	0.000	13954591	443.9	3	7.185	0.000	2297705	475.7
Aroclor-1016	4	6.728	0.000	10550969	449.2	4	7.358	0.000	2075939	461.5
Total Col1Ave (4 peaks):		447.6				Total Col2Ave (4 peaks):			462.1	RPD = 3
Corrected Ave (3 peaks):		447.1				Corrected Ave (3 peaks):			457.6	RPD = 2
Aroclor-1260	1	9.967	0.000	19054399	436.6	1	10.260	0.000	3995682	451.7
Aroclor-1260	2	10.284	0.000	18658025	431.1	2	10.709	0.000	4769094	460.3
Aroclor-1260	3	10.659	0.000	46060556	443.9	3	10.985	0.000	9011917	471.1
Aroclor-1260	4	11.058	0.000	22756673	450.2	4	11.505	0.000	2389092	460.7
Aroclor-1260	5	11.247	0.000	12499862	462.2	NS	---			----
Total Col1Ave (5 peaks):		444.8				Total Col2Ave (4 peaks):			461.0	RPD = 4
Corrected Ave (4 peaks):		440.4				Corrected Ave (3 peaks):			457.6	RPD = 4

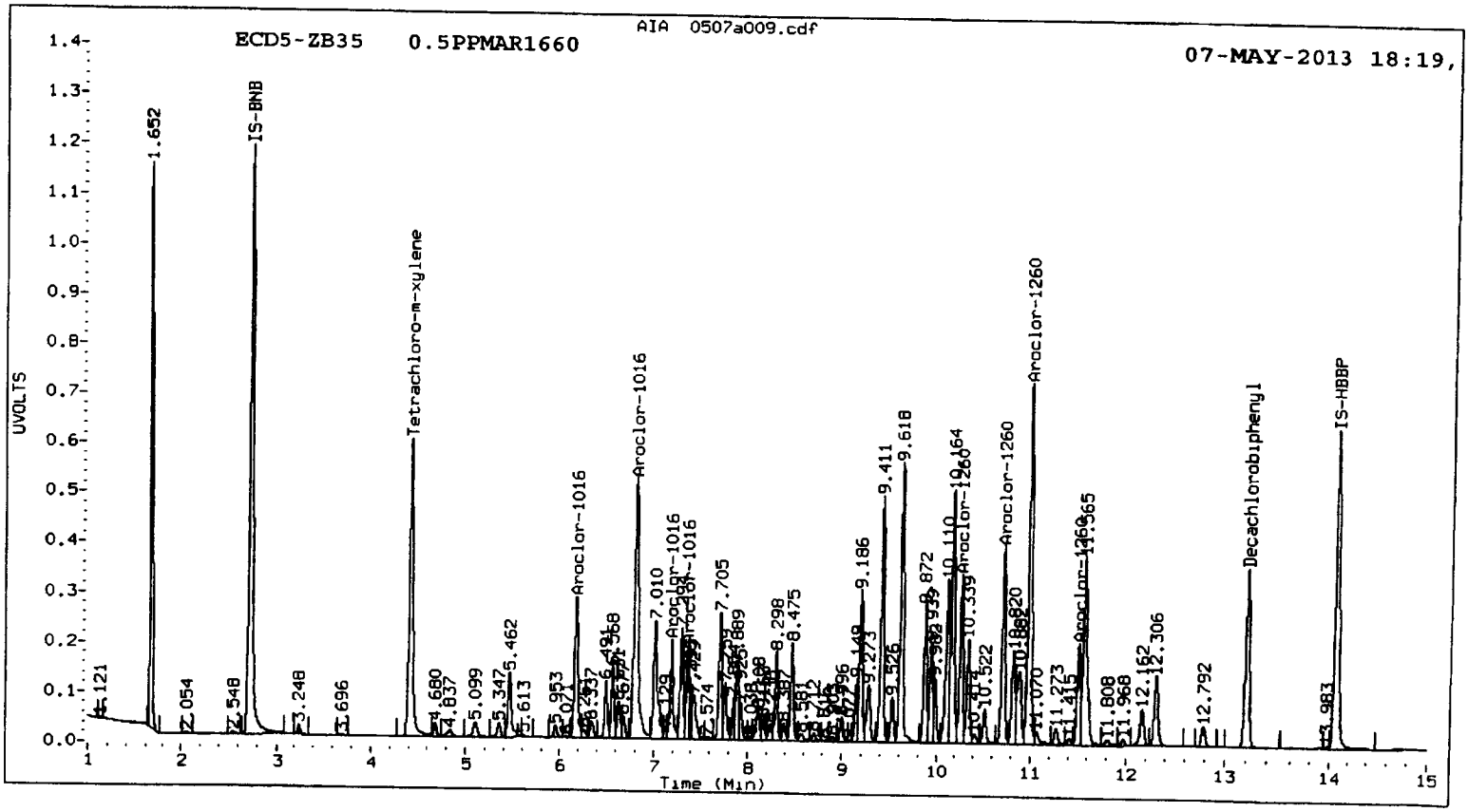
Total PCB Area Col1 (4.511 - 12.728) = 589049282 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 124374053 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.5PPMAR1660
AIA 0507a009.cdf
07-MAY-2013 18:19, 21
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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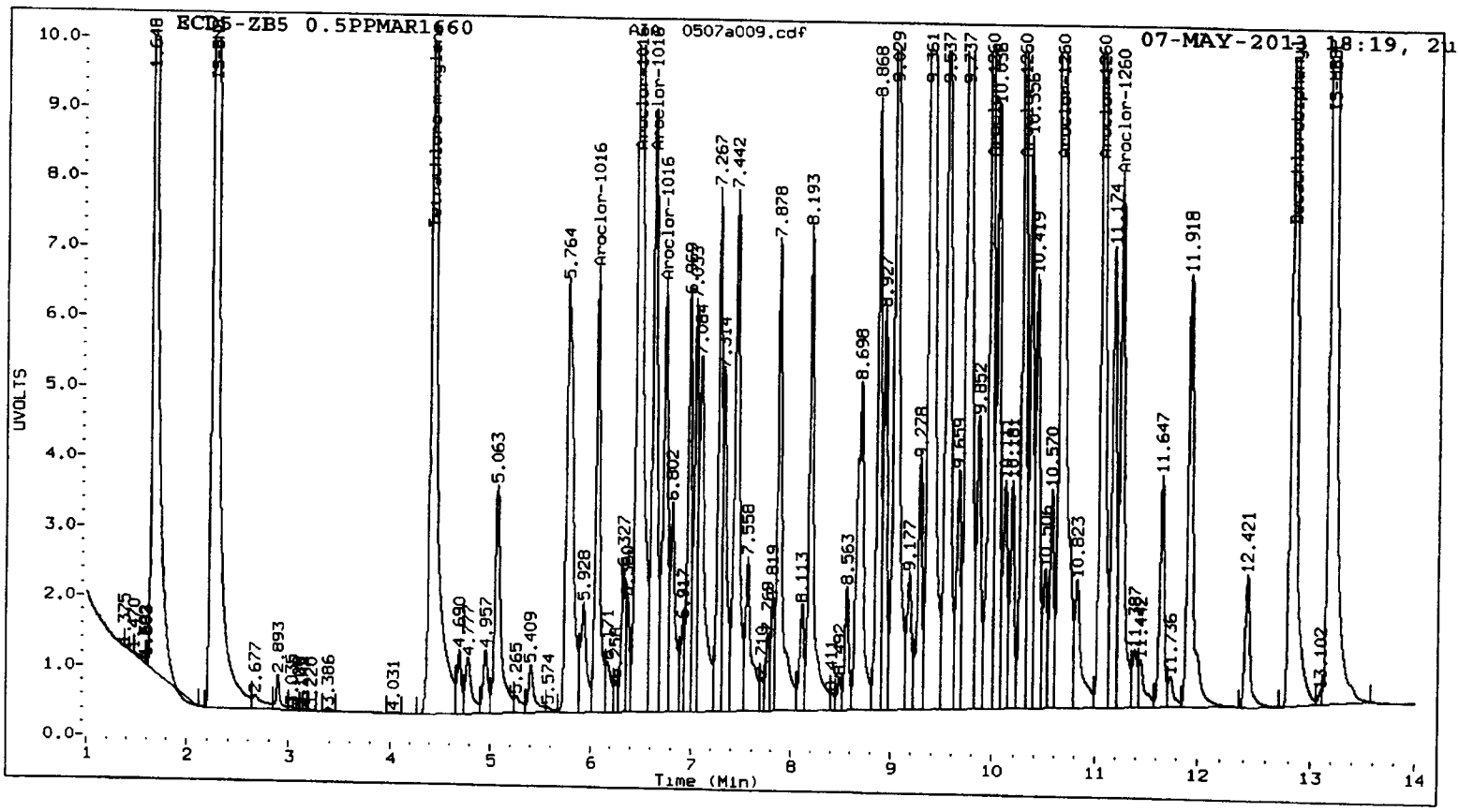
AIA 0507a009.cdf
07-MAY-2013 18:19,
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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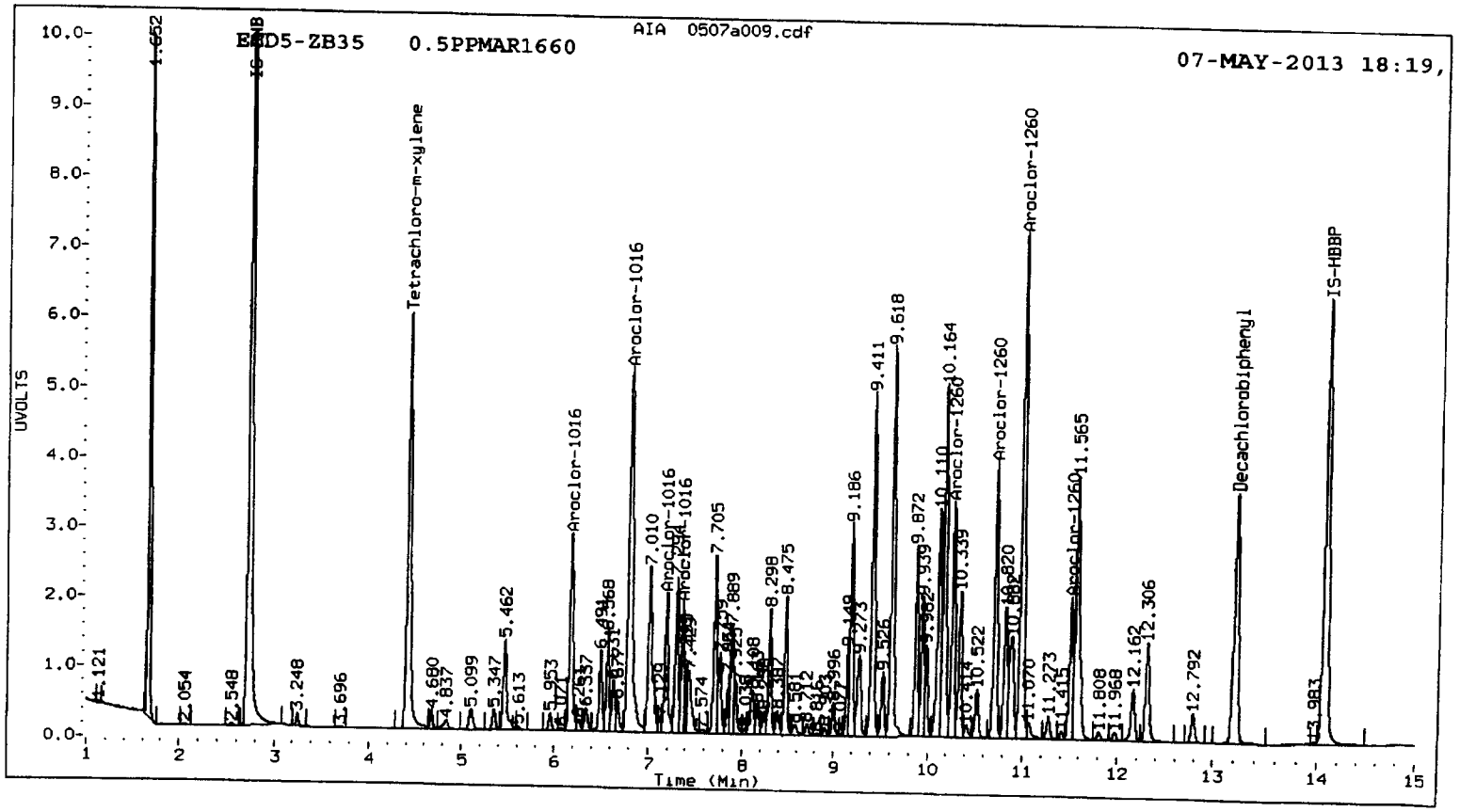
AIA 0507a009.cdf
07-MAY-2013 18:19, 21
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 0.5PPMAR1660
AIA 0507a009.cdf
07-MAY-2013 18:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a010.d
Data file 2: 20130507.b/ical-2.b/0507a010.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 07-MAY-2013 18:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	31274266	4.414	0.003	8134040	39.1	39.8	1.9	Tetrachloro-m-xylen
12.828	-0.001	31253738	13.204	-0.001	5452308	37.9	37.4	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.7	99.6
Decachlorobiphenyl	94.8	93.6

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51594521	5.3
Hexabromobiphenyl	50004151	55145987	10.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15094795	1.7
Hexabromobiphenyl	9345340	10120992	8.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	6.059	0.000	4645645	250.0	1	6.167	0.000	1719309	250.0
Aroclor-1242	2	6.468	0.000	14248309	250.0	2	6.803	0.000	3776677	250.0
Aroclor-1242	3	6.617	0.000	6357384	250.0	3	7.011	0.000	1577853	250.0
Aroclor-1242	4	7.873	0.000	7850170	250.0	4	8.239	0.000	1321956	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

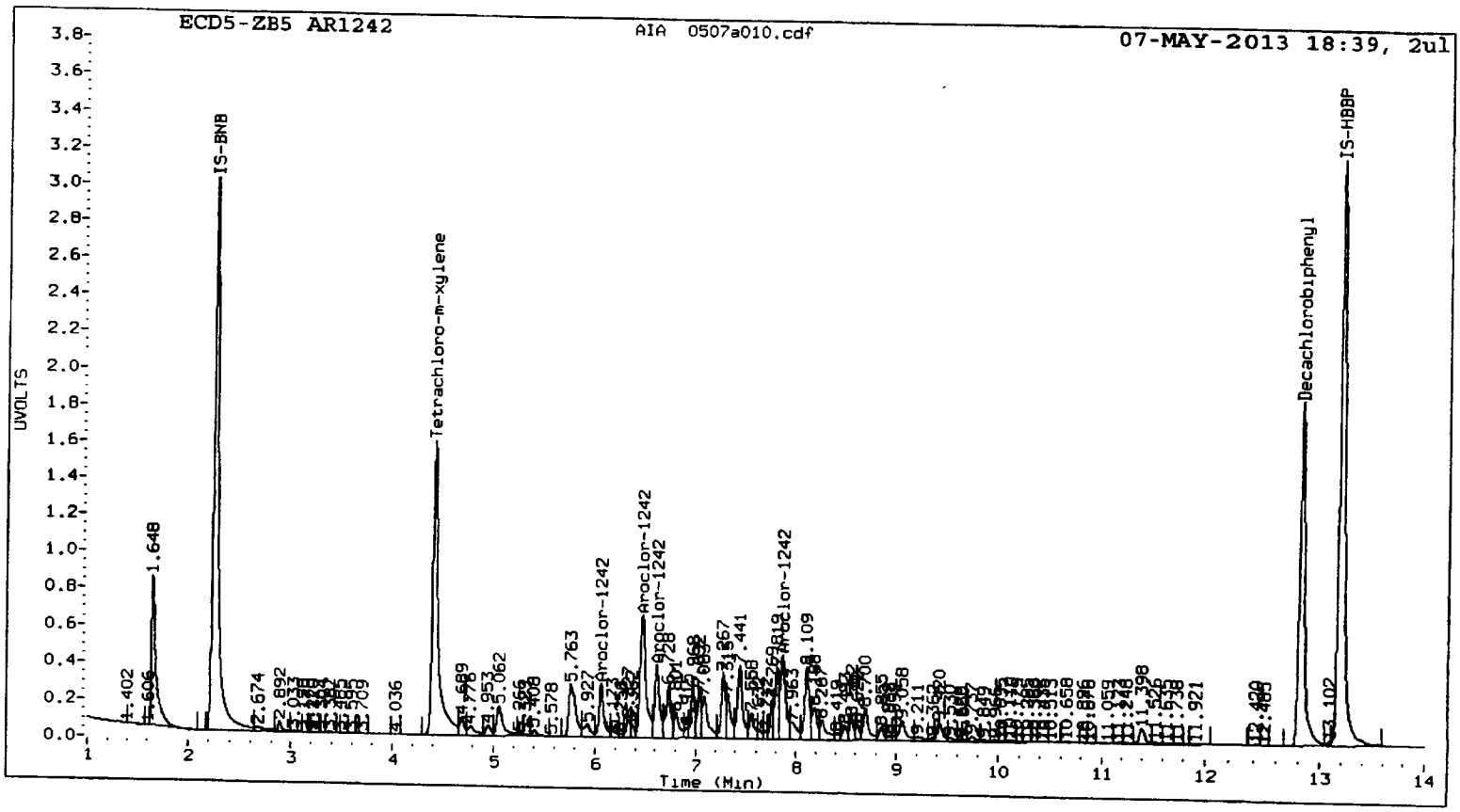
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

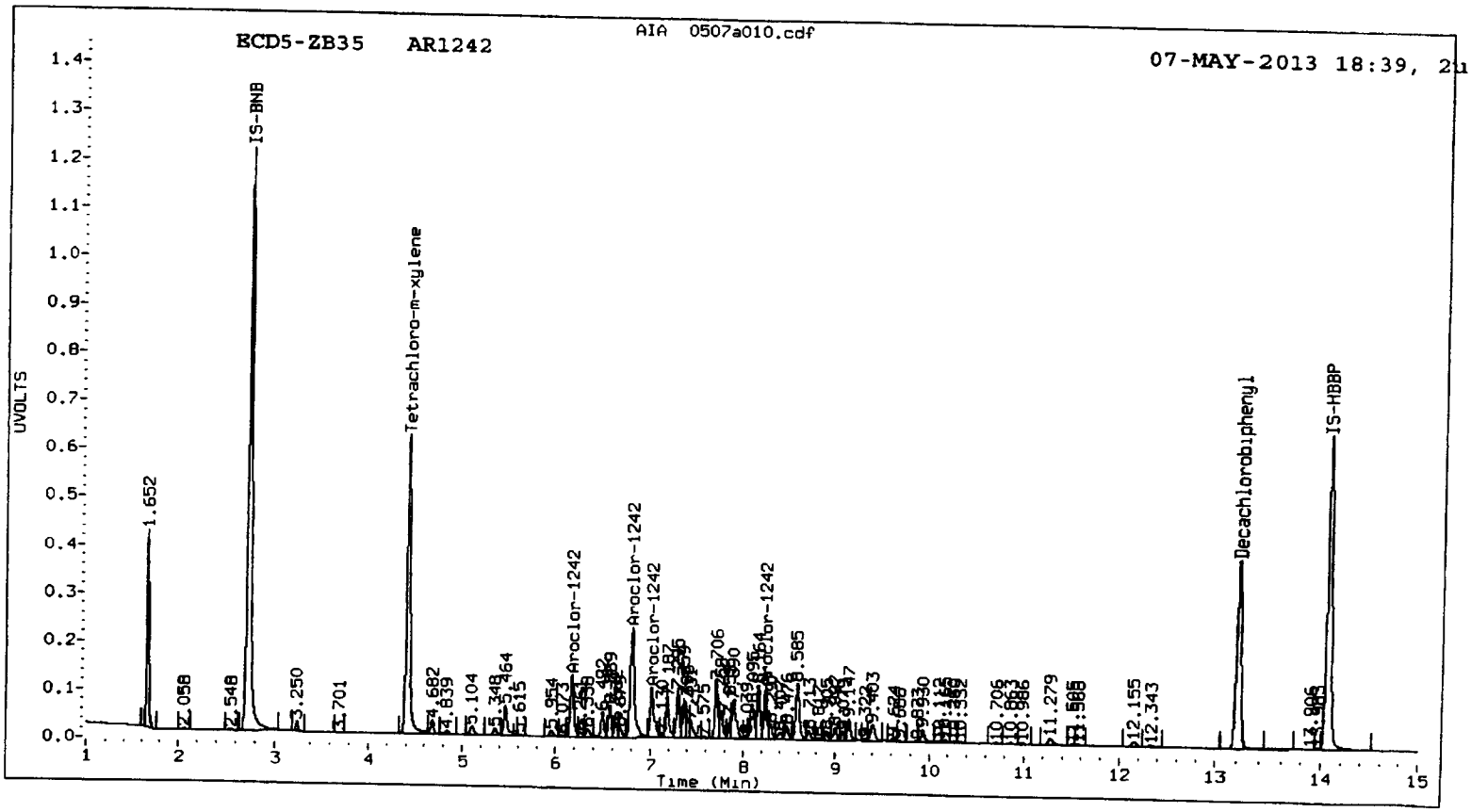
Total PCB Area Col1 (4.511 - 12.728) = 132730122 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 28500992 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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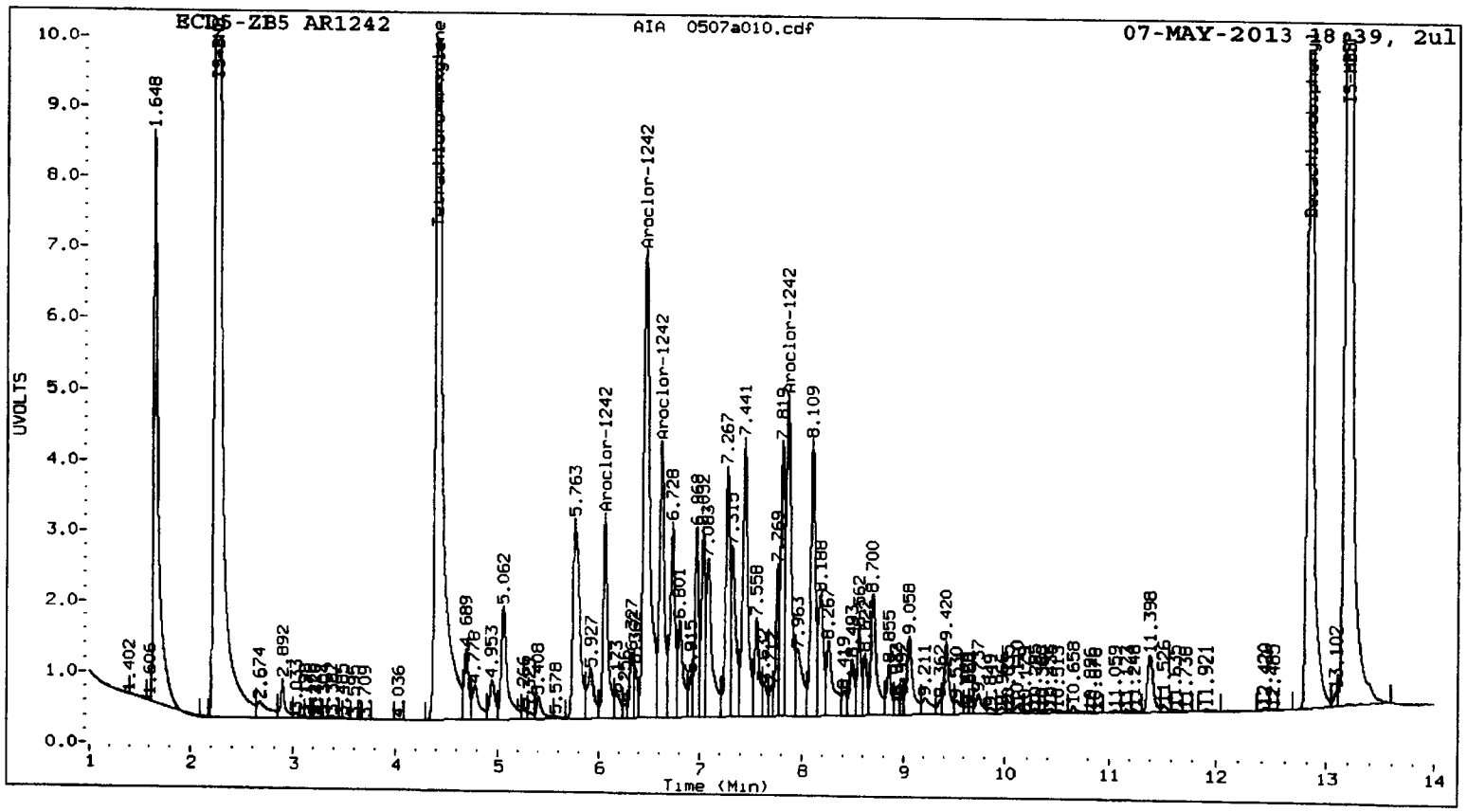
AIA 0507a010.cdf
07-MAY-2013 18:39, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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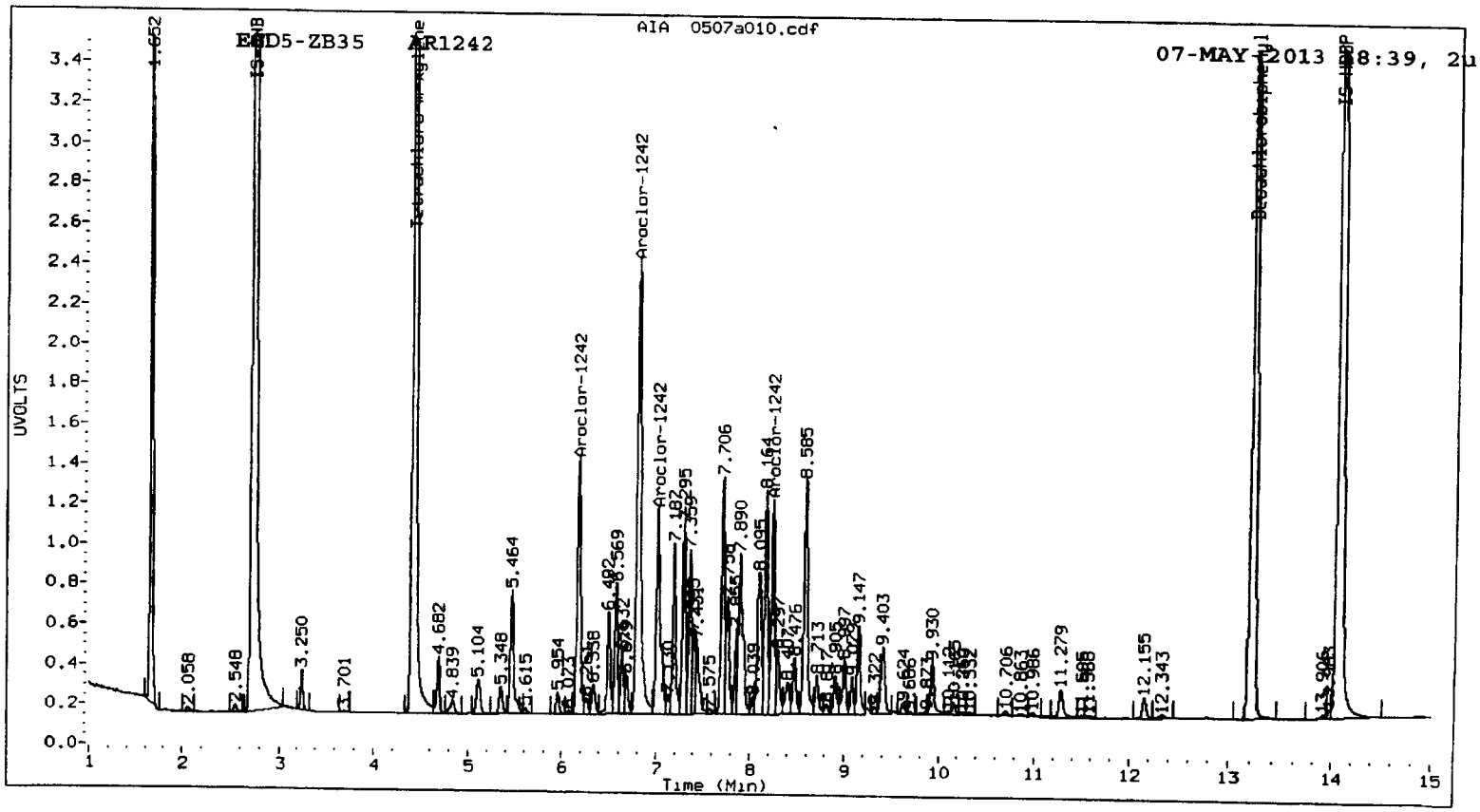
AIA 0507a010.cdf
07-MAY-2013 18:39, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl


ECD5-ZB35 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a011.d
Data file 2: 20130507.b/ical-2.b/0507a011.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 07-MAY-2013 18:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31267686	4.412	0.000	8079724	38.2	39.1	2.2	Tetrachloro-m-xylen
12.828	0.000	29535239	13.204	-0.001	5138640	34.6	34.4	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	95.5	97.6
Decachlorobiphenyl	86.5	85.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52790343	7.8
Hexabromobiphenyl	50004151	57162764	14.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15297537	3.1
Hexabromobiphenyl	9345340	10392760	11.2

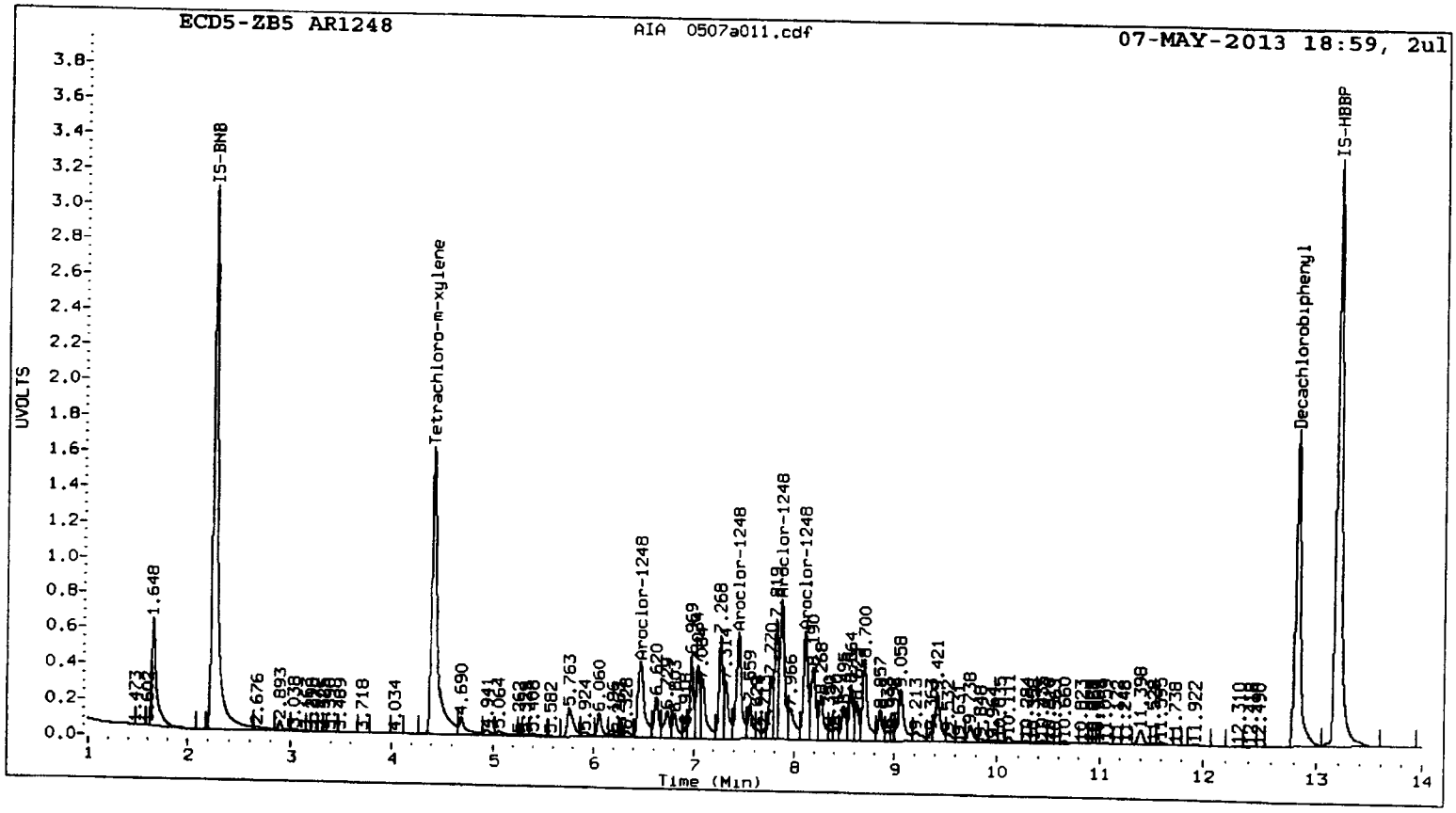
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1248	1	6.467	0.000	9288203	250.0	1	6.800	0.000	2396407	250.0
Aroclor-1248	2	7.442	0.000	10446110	250.0	2	7.706	0.000	1987417	250.0
Aroclor-1248	3	7.874	0.000	13282472	250.0	3	8.239	0.000	2057504	250.0
Aroclor-1248	4	8.110	0.000	9261094	250.0	4	8.584	0.000	2673699	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 170915176 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 35045707 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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AIA 0507a011.cdf
07-MAY-2013 18:59, 2ul
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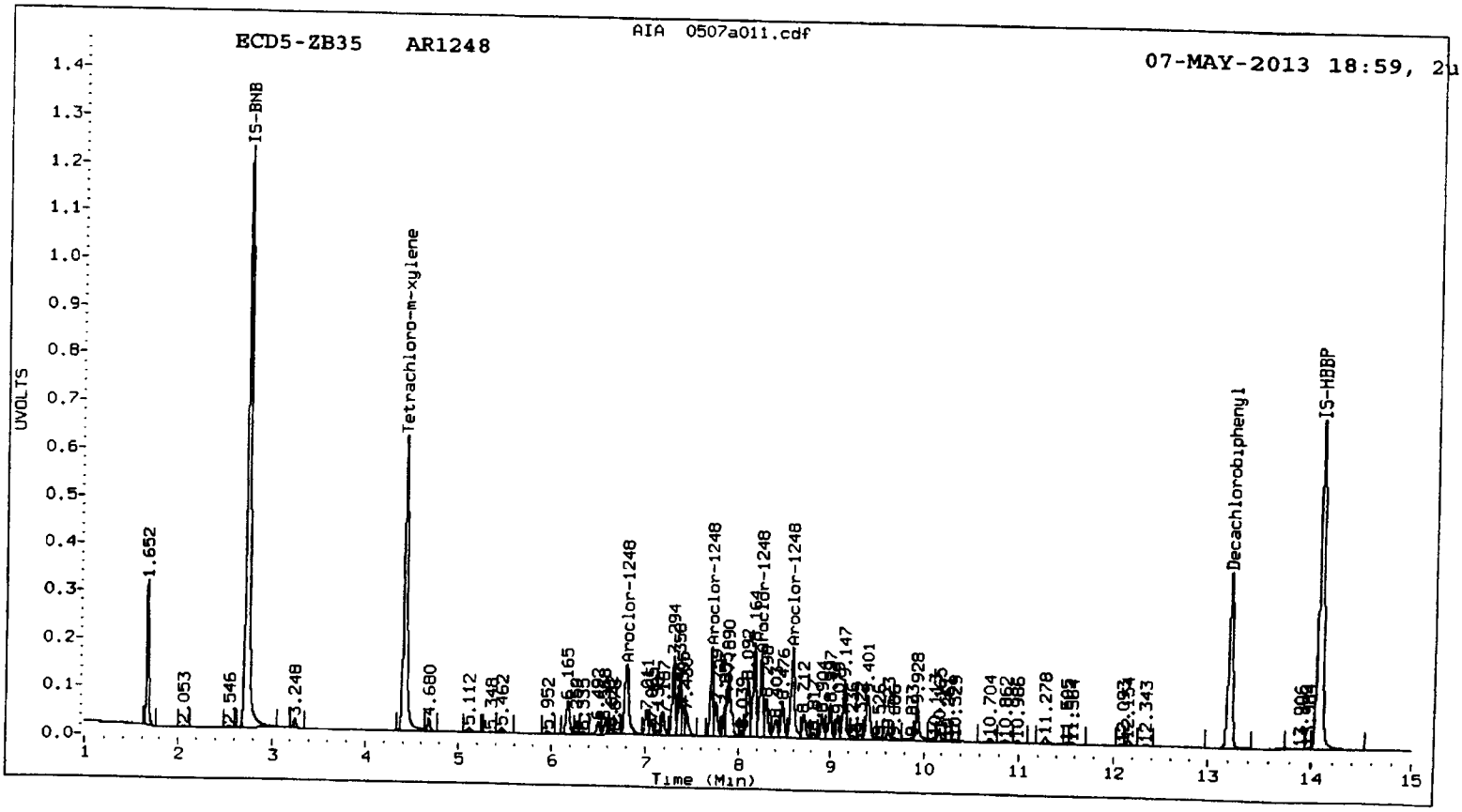
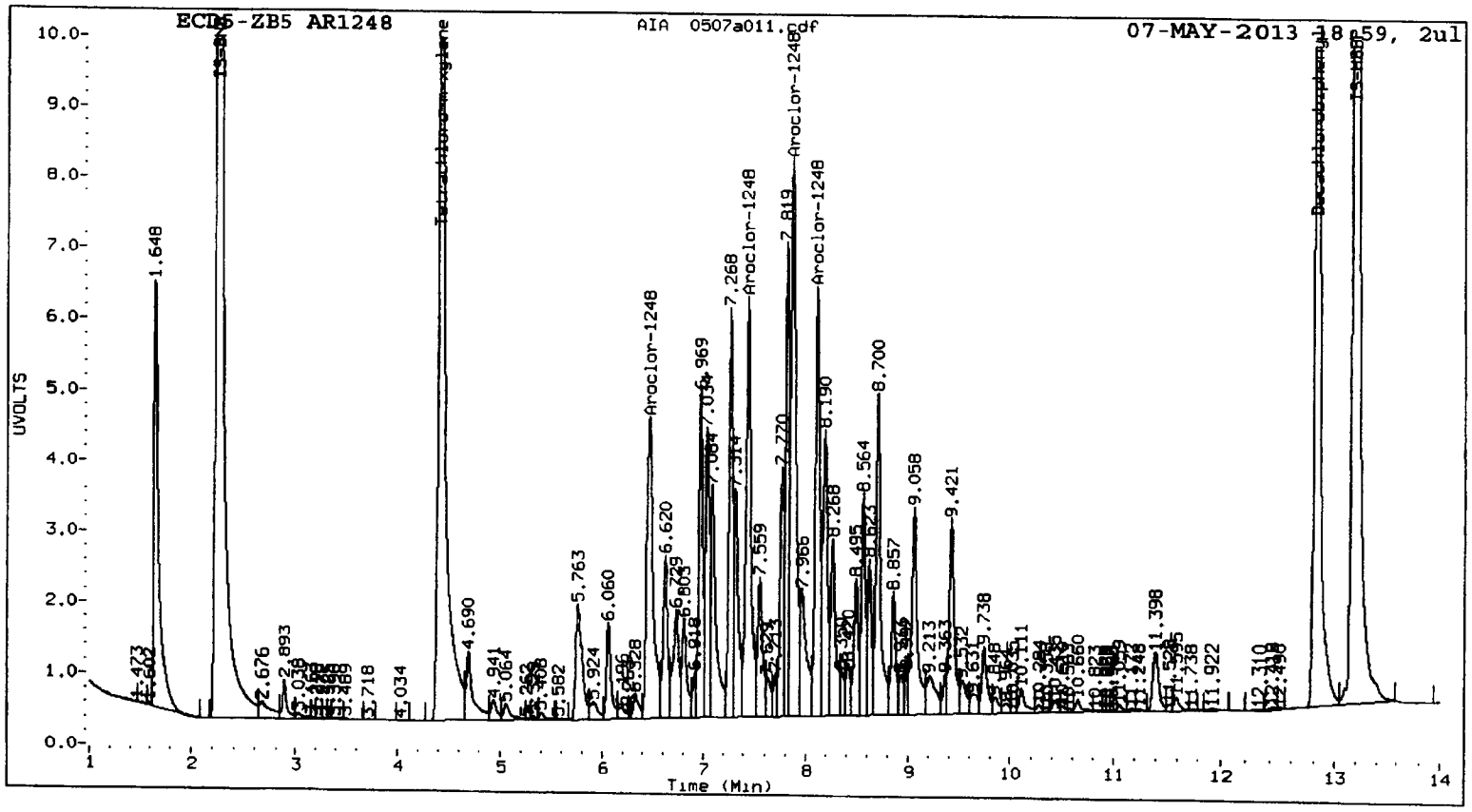
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1248
AIA 0507a011.cdf
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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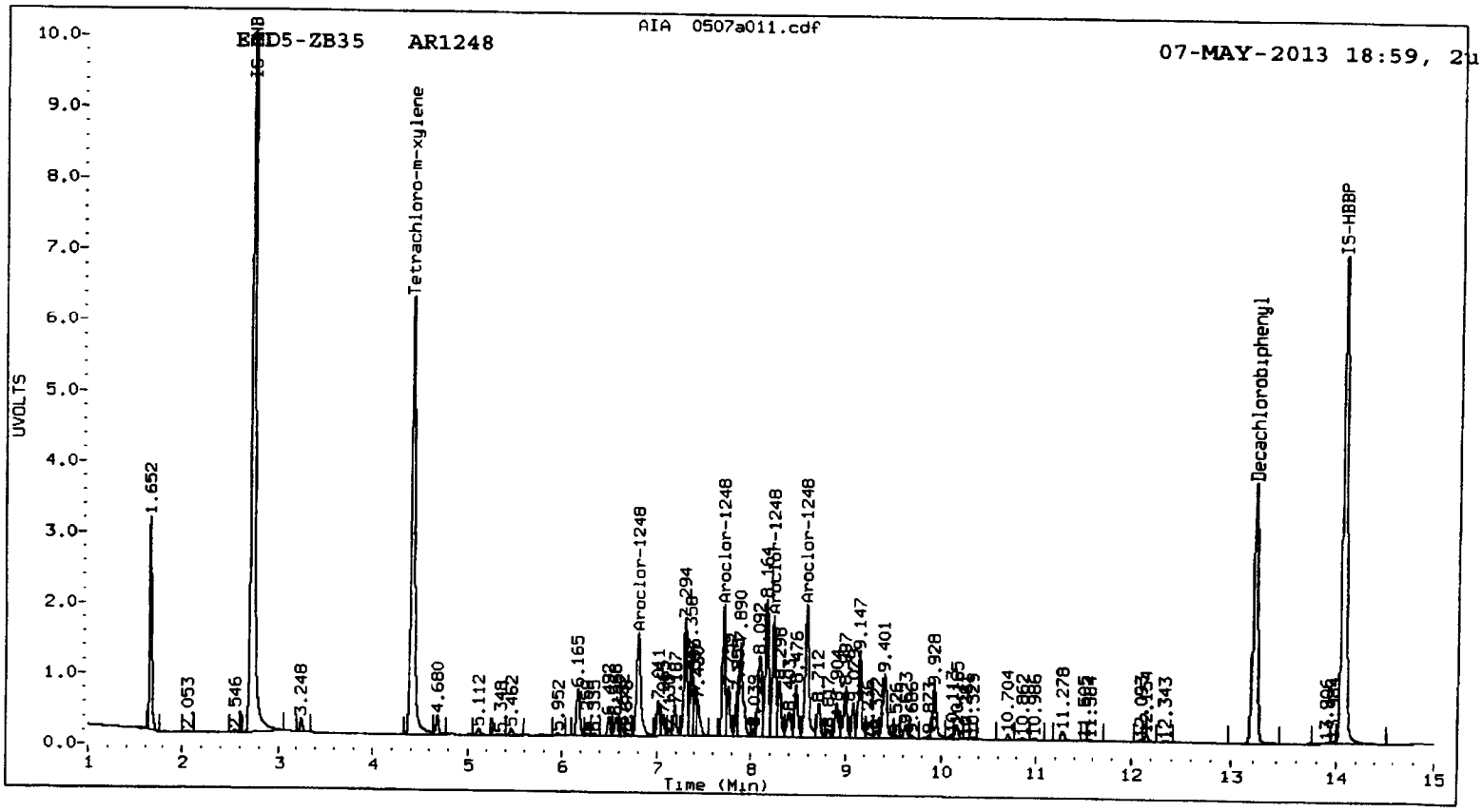
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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AIA 0507a011.cdf
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a012.d
Data file 2: 20130507.b/ical-2.b/0507a012.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 07-MAY-2013 19:20
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31597187	4.412	0.000	8169778	38.5	39.8	3.2	Tetrachloro-m-xylen
12.828	0.000	30575045	13.204	-0.001	5300158	35.4	35.2	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.3	99.4
Decachlorobiphenyl	88.4	87.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52930034	8.1
Hexabromobiphenyl	50004151	57859101	15.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15196733	2.4
Hexabromobiphenyl	9345340	10477901	12.1

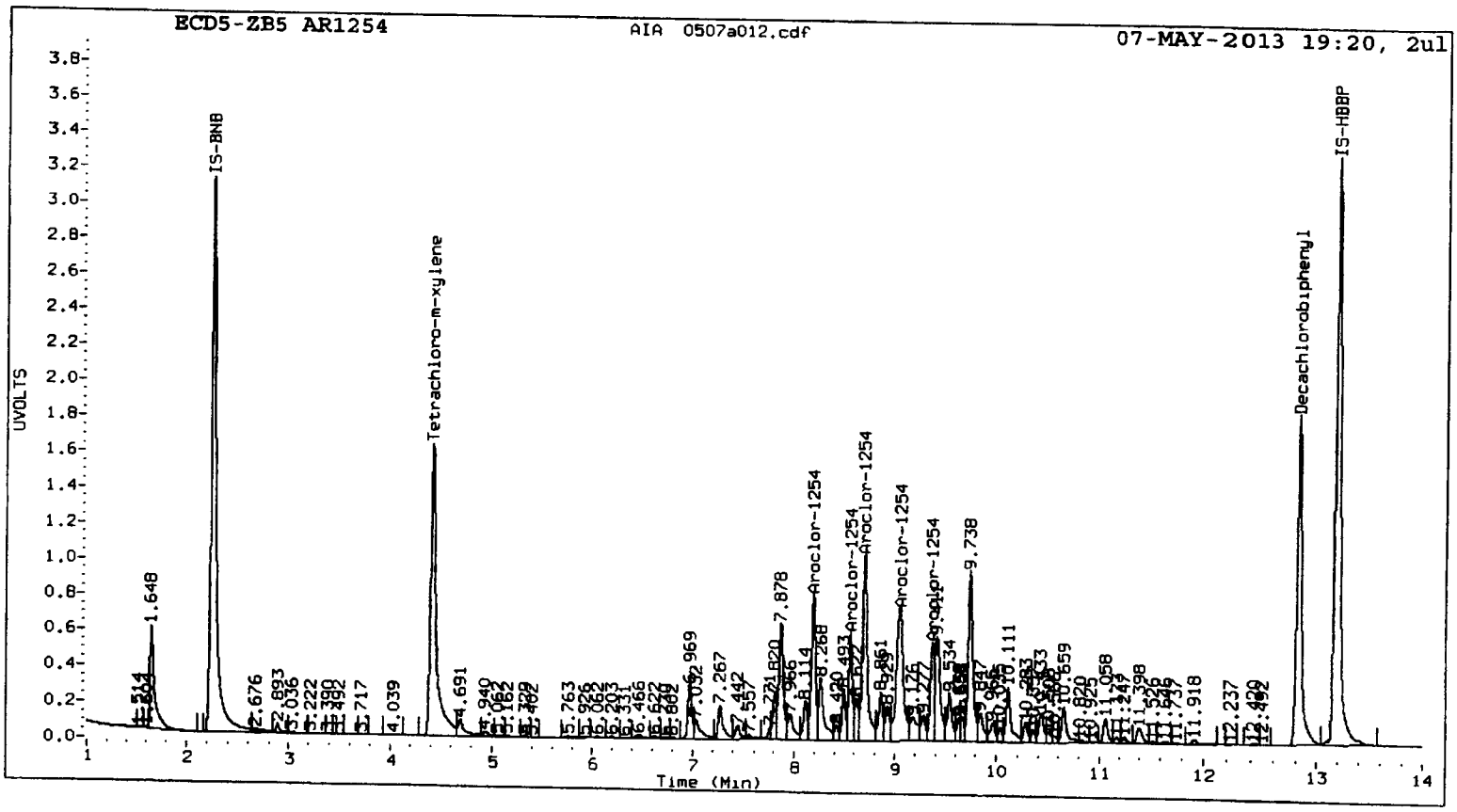
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

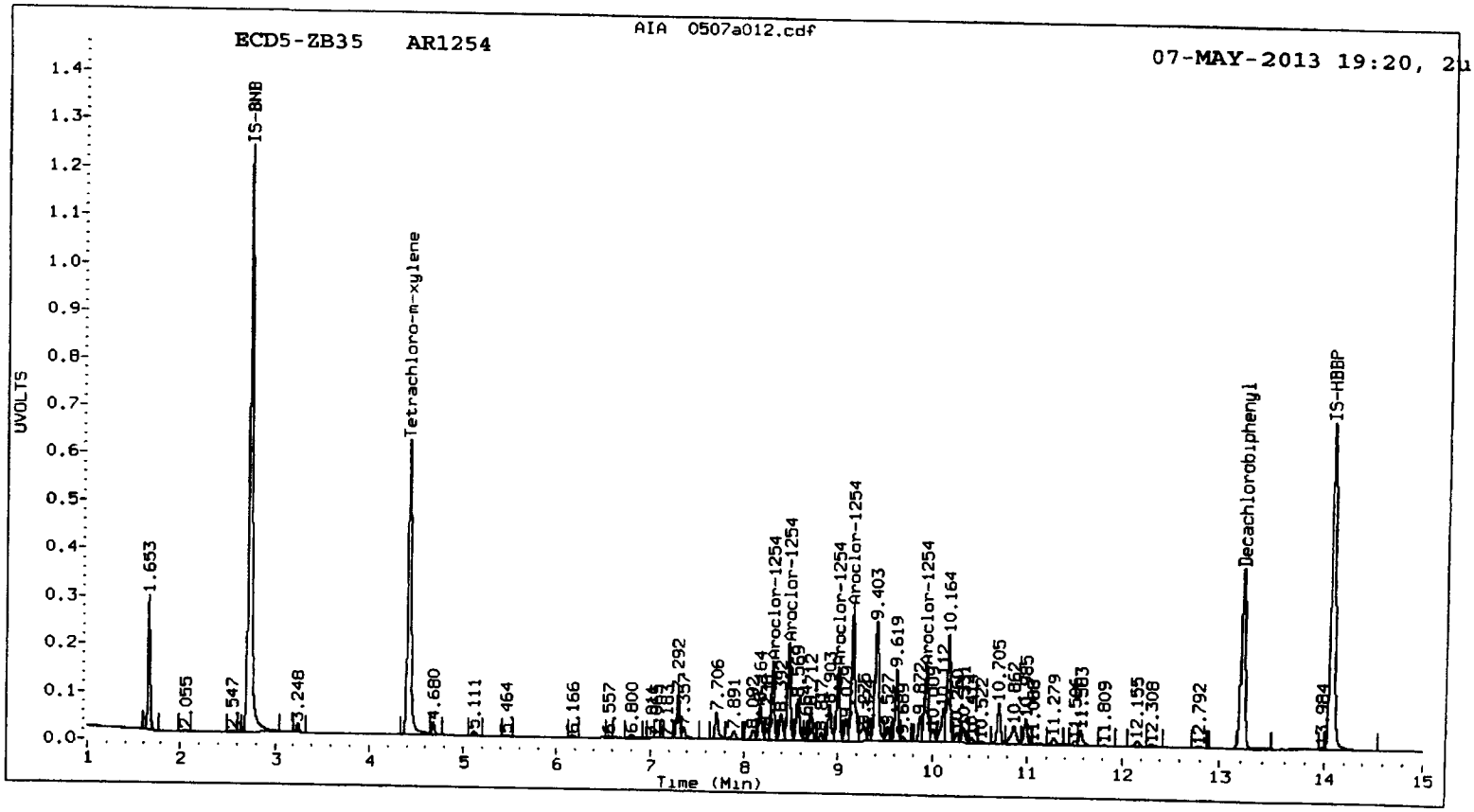
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	8.192	0.000	12340679	250.0	1	8.298	0.000	1842172	250.0
Aroclor-1254	2	8.564	0.000	8145566	250.0	2	8.475	0.000	2275796	250.0
Aroclor-1254	3	8.700	0.000	16981832	250.0	3	8.996	0.000	1743263	250.0
Aroclor-1254	4	9.053	0.000	17490326	250.0	4	9.147	0.000	3733641	250.0
Aroclor-1254	5	9.362	0.000	6614633	250.0	5	9.935	0.000	2102395	250.0
Total Col1Ave (5 peaks):					250.0	Total Col2Ave (5 peaks):				250.0 RPD = 0
Corrected Ave (4 peaks):					250.0	Corrected Ave (4 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 185172722 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 35929102 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP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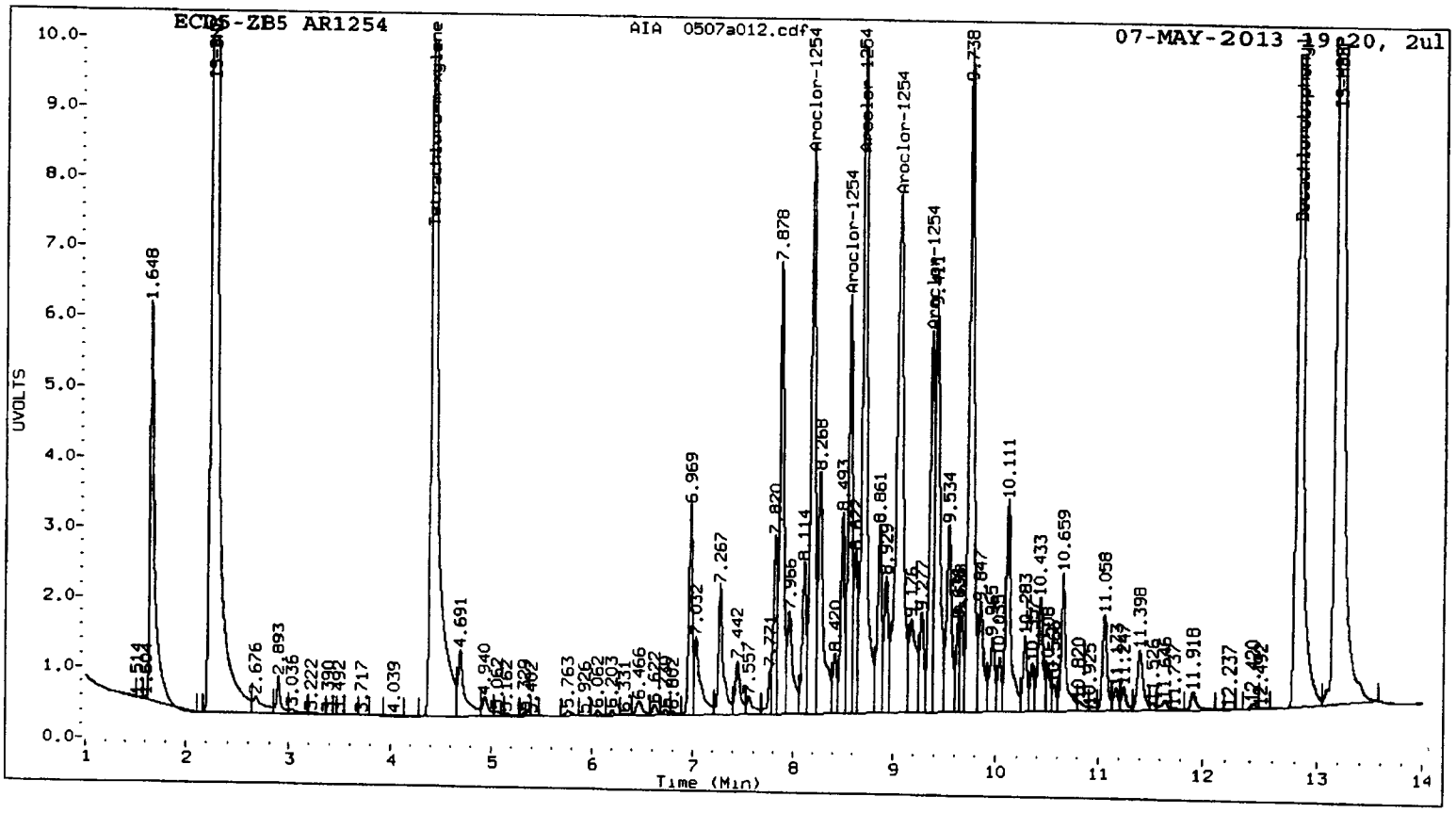
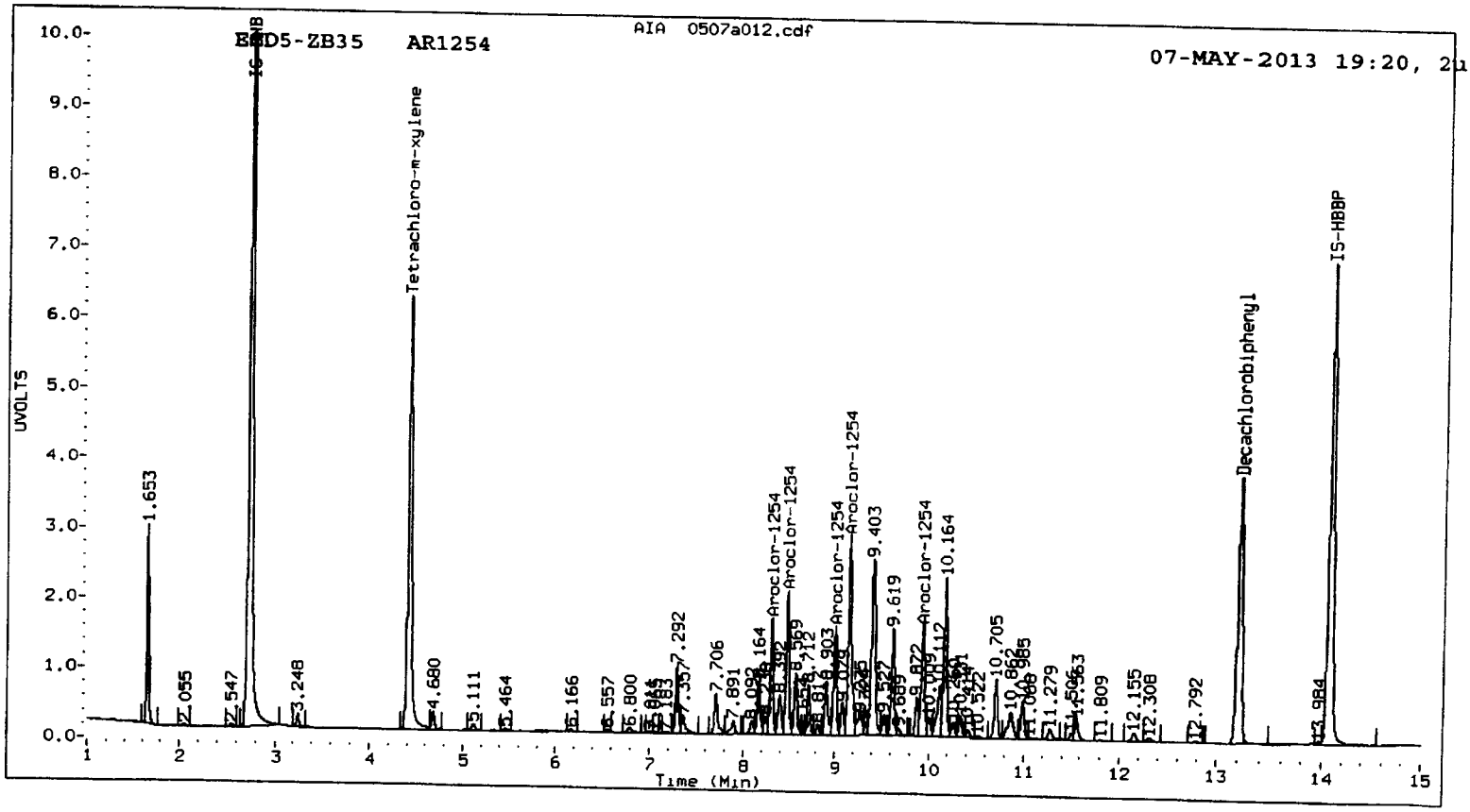
AIA 0507a012.cdf
07-MAY-2013 19:20, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP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AIA 0507a012.cdf
07-MAY-2013 19:20, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a013.d
Data file 2: 20130507.b/ical-2.b/0507a013.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 07-MAY-2013 19:40
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	32354650	4.411	-0.001	8289820	38.8	40.0	2.9	Tetrachloro-m-xylen
12.828	-0.001	30623420	13.203	-0.002	5314887	35.1	34.9	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.1	99.9
Decachlorobiphenyl	87.9	87.2

5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53739671	9.7
Hexabromobiphenyl	50004151	58323154	16.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15340978	3.4
Hexabromobiphenyl	9345340	10583916	13.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

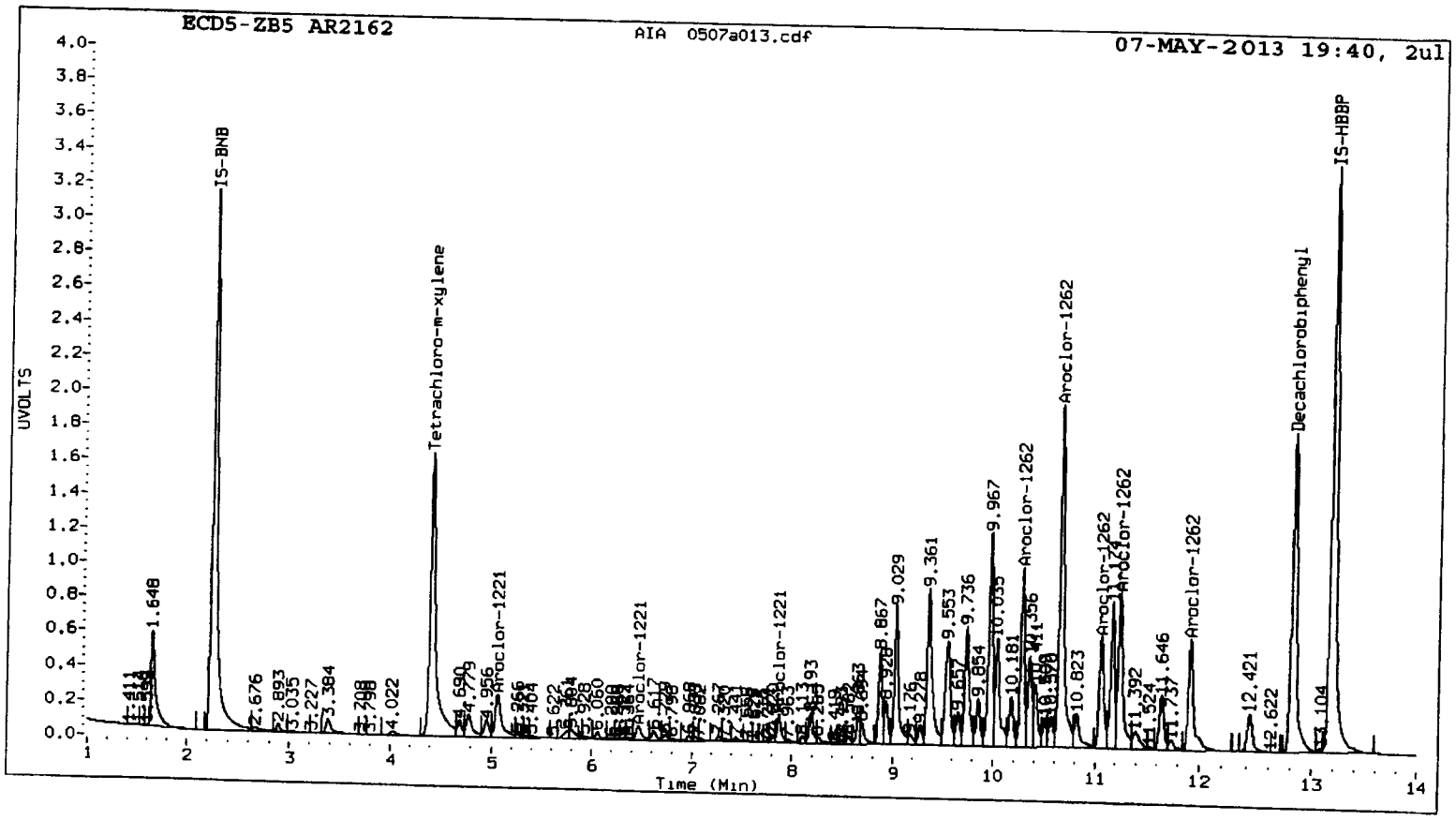
Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1221	1	5.064	0.000	5473596	250.0	1	3.694	0.000	393179	250.0
Aroclor-1221	2	6.468	0.000	1674697	250.0	2	5.095	0.000	658077	250.0
Aroclor-1221	3	7.878	0.000	2364906	250.0	3	5.345	0.000	358396	250.0
Aroclor-1221	NS	---			----	4	5.460	0.000	1127517	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			250.0	
Aroclor-1262	1	10.283	0.000	13652093	250.0	1	10.260	0.000	3659800	250.0
Aroclor-1262	2	10.659	0.000	32077138	250.0	2	10.710	0.000	3346602	250.0
Aroclor-1262	3	11.059	0.000	10159557	250.0	3	10.985	0.000	6277067	250.0
Aroclor-1262	4	11.247	0.000	14260811	250.0	4	11.567	0.000	4079795	250.0
Aroclor-1262	5	11.918	0.000	10944344	250.0	5	12.306	0.000	1969832	250.0
Total Col1Ave (5 peaks):					250.0	Total Col2Ave (5 peaks):			250.0	RPD = 0
Corrected Ave (4 peaks):					250.0	Corrected Ave (4 peaks):			250.0	RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 262283464 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 51791020 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
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Tetrachloro-m-xylene
Aroclor-1221
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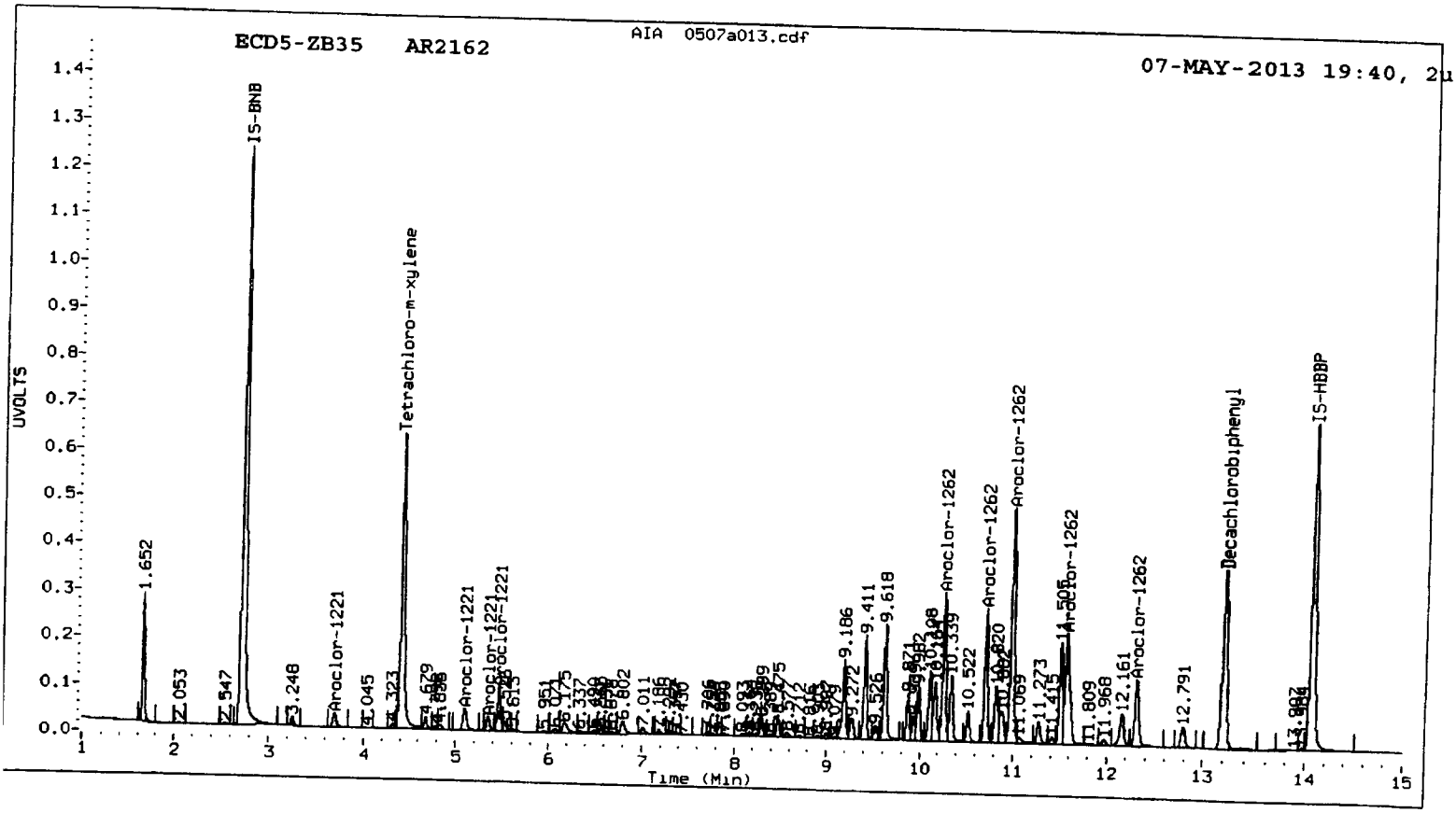
Decachlorobiphenyl
IS-HBBP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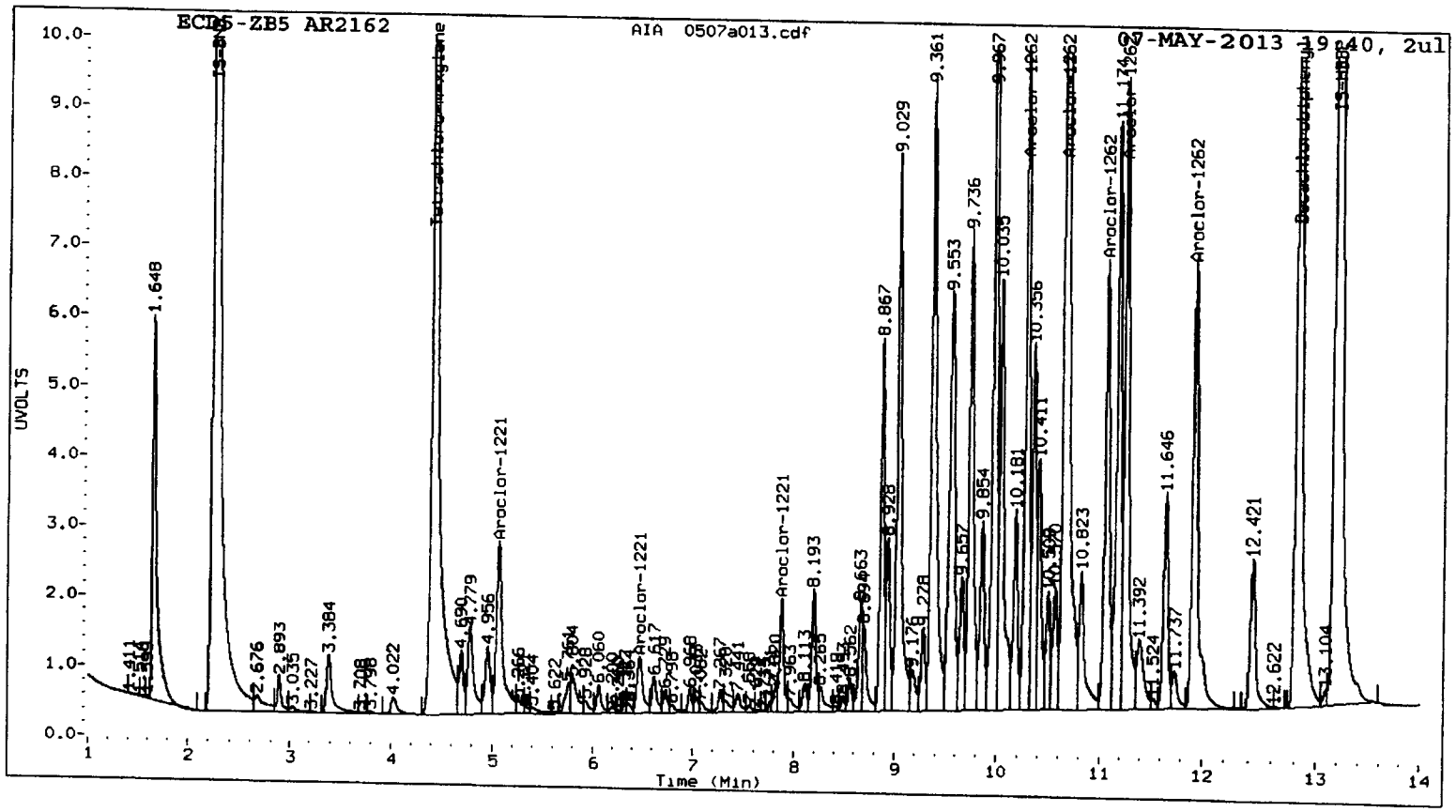
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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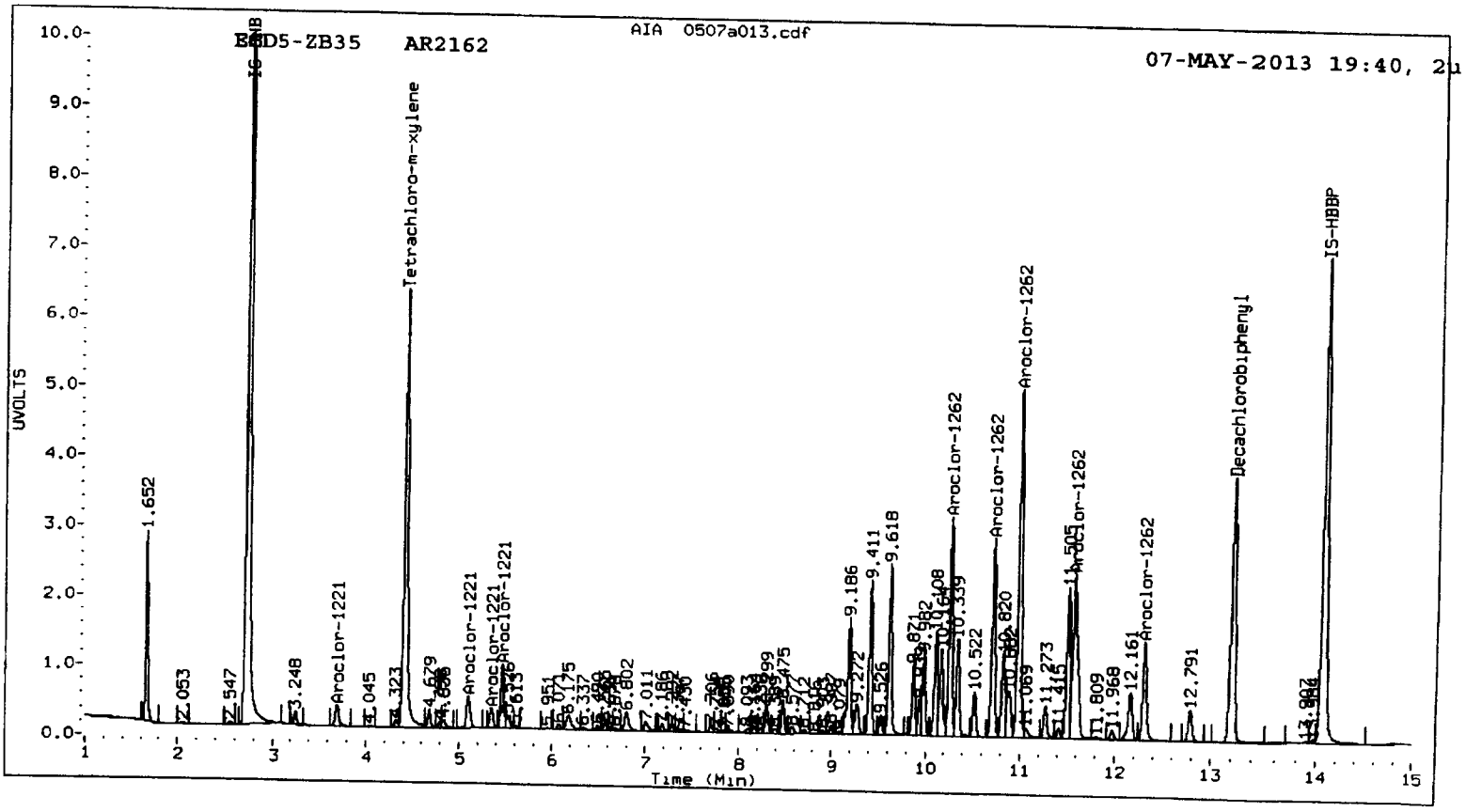
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl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Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a014.d
Data file 2: 20130507.b/ical-2.b/0507a014.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 07-MAY-2013 20:00
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31984640	4.412	0.000	8241550	38.7	40.0	3.2	Tetrachloro-m-xylen
12.828	0.000	43449498	13.205	0.000	7536002	50.6	49.8	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.8	100.0
Decachlorobiphenyl	126.5	124.5

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53262724	8.7
Hexabromobiphenyl	50004151	57460185	14.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15239954	2.7
Hexabromobiphenyl	9345340	10518547	12.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1232	1	6.060	0.000	2466405	250.0	1	6.165	0.000	977839	250.0
Aroclor-1232	2	6.469	0.000	7549613	250.0	2	6.801	0.000	1952023	250.0
Aroclor-1232	3	7.442	0.000	3923778	250.0	3	7.011	0.000	813950	250.0
Aroclor-1232	4	7.874	0.000	4507818	250.0	4	8.239	0.000	683109	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	11.175	0.000	30229266	250.0	1	11.507	0.000	6347619	250.0
Aroclor-1268	2	11.246	0.000	33428922	250.0	2	11.573	0.000	5983248	250.0
Aroclor-1268	3	11.632	0.000	24825470	250.0	3	11.969	0.000	4735989	250.0
Aroclor-1268	4	12.422	0.000	69938717	250.0	4	12.792	0.000	12266670	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

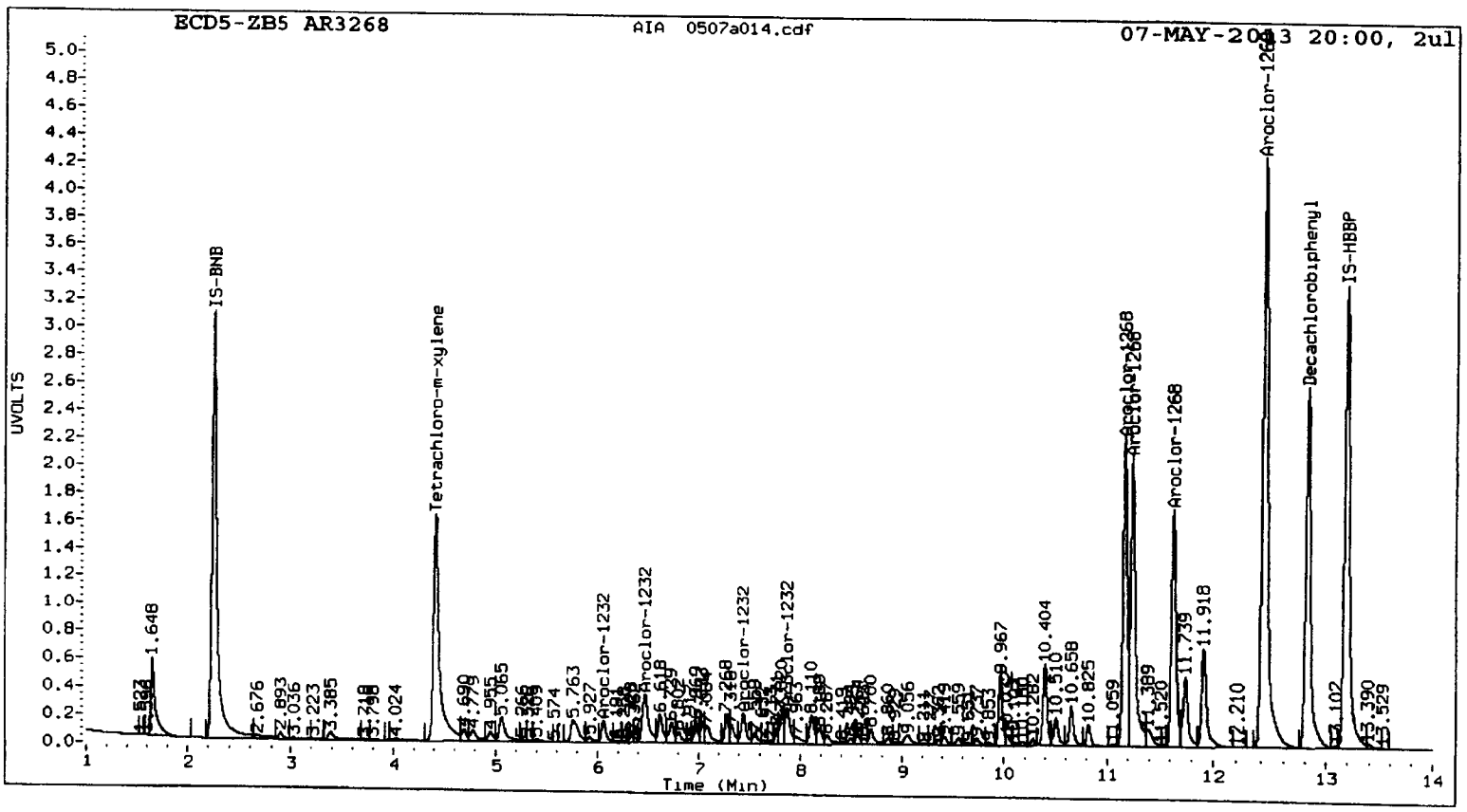
Total PCB Area Col1 (4.511 - 12.728) = 288711386 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 55525050 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR99:01955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07-MAY-2013 20:00, 2ul
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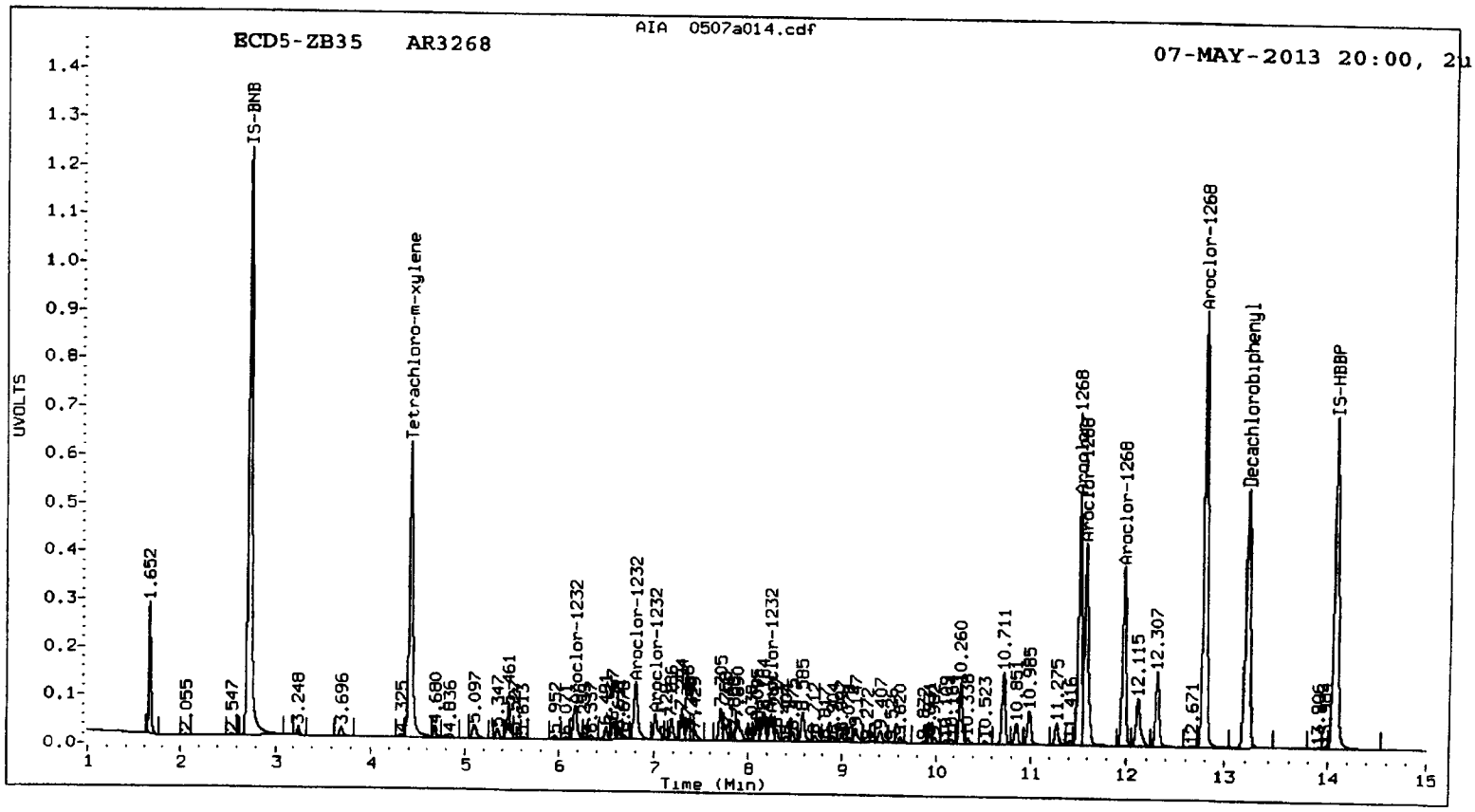
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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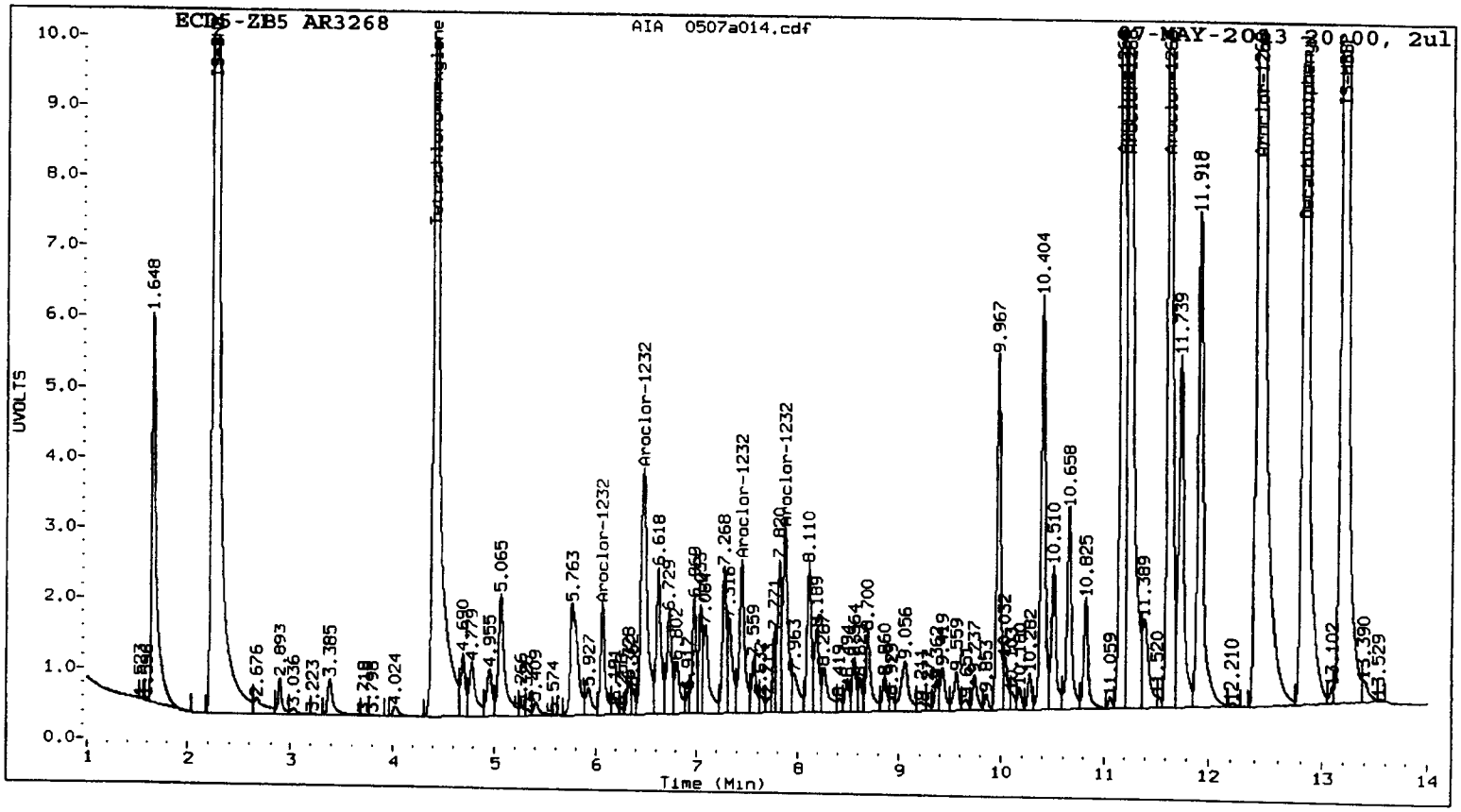
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Decachlorobiphenyl
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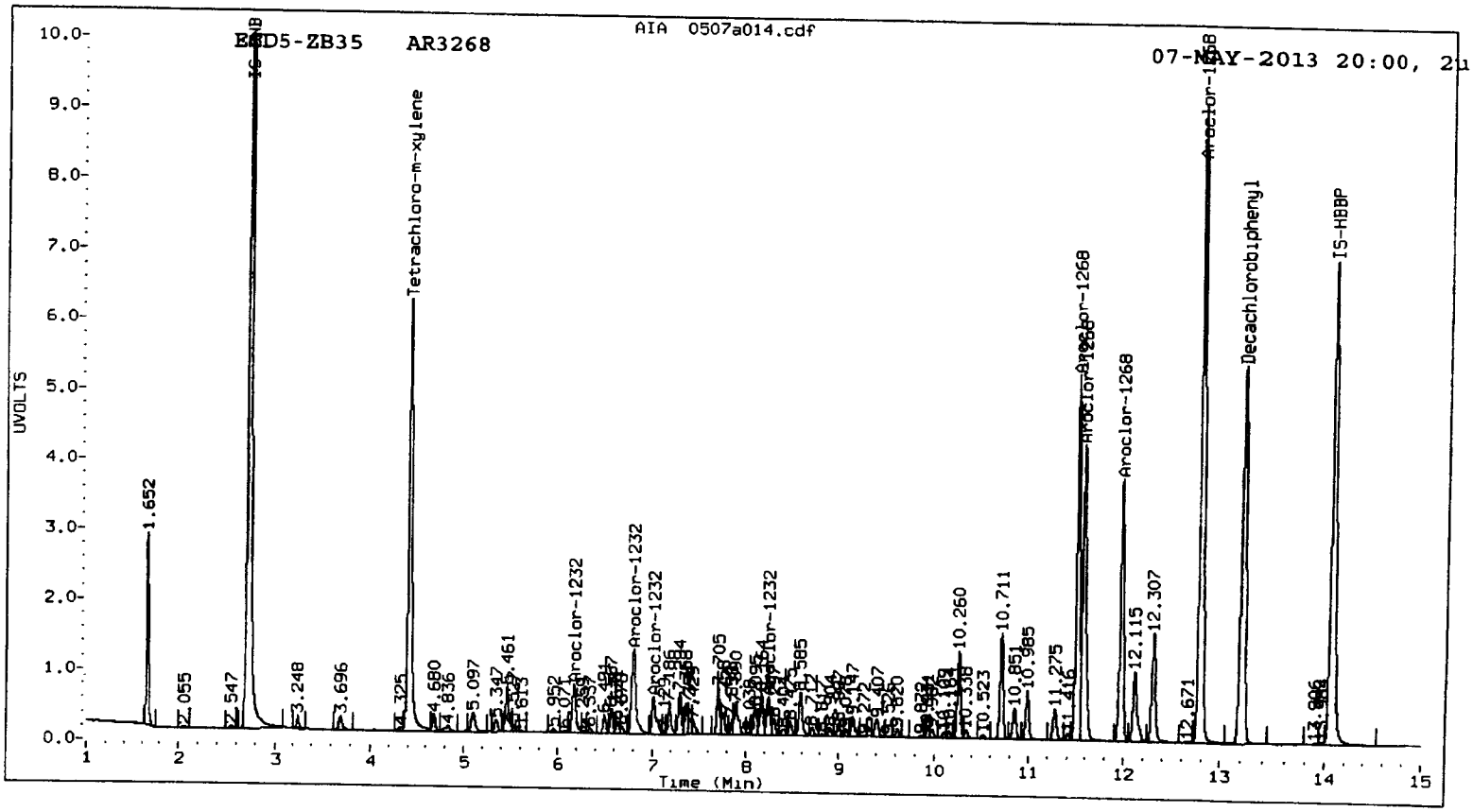
11.739
11.918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Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
10.711
12.115
12.307

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a015.d
Data file 2: 20130507.b/ical-2.b/0507a015.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 07-MAY-2013 20:21
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	31924156	4.411	0.000	8216234	38.0	38.8	2.2	Tetrachloro-m-xylen
12.828	0.000	30828729	13.205	0.000	5320370	34.3	34.0	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.9	97.0
Decachlorobiphenyl	85.8	84.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54248541	10.8
Hexabromobiphenyl	50004151	60099807	20.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15658755	5.5
Hexabromobiphenyl	9345340	10888882	16.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount	
Aroclor-1016	1	6.060	-0.001	4470855	182.8	1	6.166	0.000	1663757	186.2	
Aroclor-1016	2	6.468	0.000	13617695	180.8	2	6.802	0.001	3565246	183.5	
Aroclor-1016	3	6.617	0.001	6113829	181.2	3	7.185	0.000	947812	186.6	
Aroclor-1016	4	6.729	0.001	4549783	180.4	4	7.358	0.000	881454	186.3	
Total Col1Ave (4 peaks):					181.3	Total Col2Ave (4 peaks):				185.7	RPD = 2
Corrected Ave (3 peaks):					180.8	Corrected Ave (3 peaks):				185.4	RPD = 2
Aroclor-1221	1	5.063	-0.001	3230223	146.2	1	---				0.0
Aroclor-1221	2	6.468	0.000	13617695	2013.8	2	5.101	0.006	254025		94.5
Aroclor-1221	3	7.874	-0.004	7607955	796.7	3	5.346	0.001	163596		111.8
Aroclor-1221	NS	---			---	4	5.461	0.001	799065		173.6
Total Col1Ave (3 peaks):					985.6	Total Col2Ave (3 peaks):				126.6	RPD = 154*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks					
Aroclor-1232	1	6.060	-0.001	4470855	444.9	1	6.166	0.000	1663757	414.0	
Aroclor-1232	2	6.468	-0.001	13617695	442.7	2	6.802	0.000	3565246	444.4	
Aroclor-1232	3	7.442	0.000	6893473	431.2	3	7.009	-0.002	1501264	448.8	
Aroclor-1232	4	7.874	0.000	7607955	414.3	4	8.238	-0.001	1167882	416.0	
Total Col1Ave (4 peaks):					433.3	Total Col2Ave (4 peaks):				430.8	RPD = 1
Corrected Ave (3 peaks):					429.4	Corrected Ave (3 peaks):				424.8	RPD = 1
Aroclor-1242	1	6.060	0.000	4470855	228.8	1	6.166	-0.002	1663757	233.2	
Aroclor-1242	2	6.468	0.000	13617695	227.2	2	6.802	-0.001	3565246	227.5	
Aroclor-1242	3	6.617	0.001	6113829	228.7	3	7.009	-0.002	1501264	229.3	
Aroclor-1242	4	7.874	0.001	7607955	230.4	4	8.238	-0.001	1167882	212.9	
Total Col1Ave (4 peaks):					228.8	Total Col2Ave (4 peaks):				225.7	RPD = 1
Corrected Ave (3 peaks):					228.2	Corrected Ave (3 peaks):				223.2	RPD = 2
Aroclor-1248	1	6.468	0.002	13617695	356.7	1	6.802	0.002	3565246	363.4	
Aroclor-1248	2	7.442	-0.001	6893473	160.5	2	7.705	-0.001	1266936	155.7	
Aroclor-1248	3	7.874	-0.001	7607955	139.3	3	8.238	-0.001	1167882	138.6	
Aroclor-1248	4	8.110	0.000	5502492	144.5	4	8.584	0.001	1486653	135.8	
Total Col1Ave (4 peaks):					200.3	Total Col2Ave (4 peaks):				198.4	RPD = 1
Corrected Ave (3 peaks):					148.1	Corrected Ave (3 peaks):				143.4	RPD = 3
Aroclor-1254	1	8.190	-0.002	3647666	72.1	1	8.298	0.000	493209	65.0	
Aroclor-1254	2	8.564	0.000	2121258	63.5	2	8.475	0.000	469897	50.1	
Aroclor-1254	3	8.700	0.000	3853127	55.3	3	8.996	0.000	426802	59.4	
Aroclor-1254	4	9.057	0.005	3495648	48.8	4	9.147	0.000	714252	46.4	
Aroclor-1254	5	9.362	0.000	680928	25.1	5	9.930	-0.004	413402	47.7	
Total Col1Ave (5 peaks):					53.0	Total Col2Ave (5 peaks):				53.7	RPD = 1
Corrected Ave (4 peaks):					48.2	Corrected Ave (4 peaks):				50.9	RPD = 5
Aroclor-1260	1	9.966	-0.001	248097	5.0	1	10.260	0.001	14609	1.5	
Aroclor-1260	2	10.282	-0.001	177183	3.6	2	10.704	-0.005	88810	7.7	
Aroclor-1260	3	10.658	-0.001	314580	2.7	3	10.985	0.001	50951	2.4	
Aroclor-1260	4	11.058	0.000	188167	3.3	4	11.506	0.001	16977	2.9	
Aroclor-1260	5	11.248	0.001	45330	1.5	NS	---				
Total Col1Ave (5 peaks):					3.2	Total Col2Ave (4 peaks):				3.6	RPD = 11
Corrected Ave (4 peaks):					2.8	Corrected Ave (3 peaks):				2.3	RPD = 20
Aroclor-1262	1	10.282	0.000	177183	3.1	1	10.260	0.001	14609	1.0	
Aroclor-1262	2	10.658	-0.001	314580	2.4	2	10.704	-0.006	88810	6.4	
Aroclor-1262	3	11.058	-0.001	188167	4.5	3	10.985	0.000	50951	2.0	
Aroclor-1262	4	11.248	0.001	45330	0.8	4	11.564	-0.003	37242	2.2	
Aroclor-1262	5	11.923	0.005	55055	1.2	5	12.344	0.038	32722	4.0	
Total Col1Ave (5 peaks):					2.4	Total Col2Ave (5 peaks):				3.1	RPD = 26
Corrected Ave (4 peaks):					1.9	Corrected Ave (4 peaks):				2.3	RPD = 20
Aroclor-1268	1	11.173	-0.002	51213	0.4	1	11.506	0.000	16977	0.6	

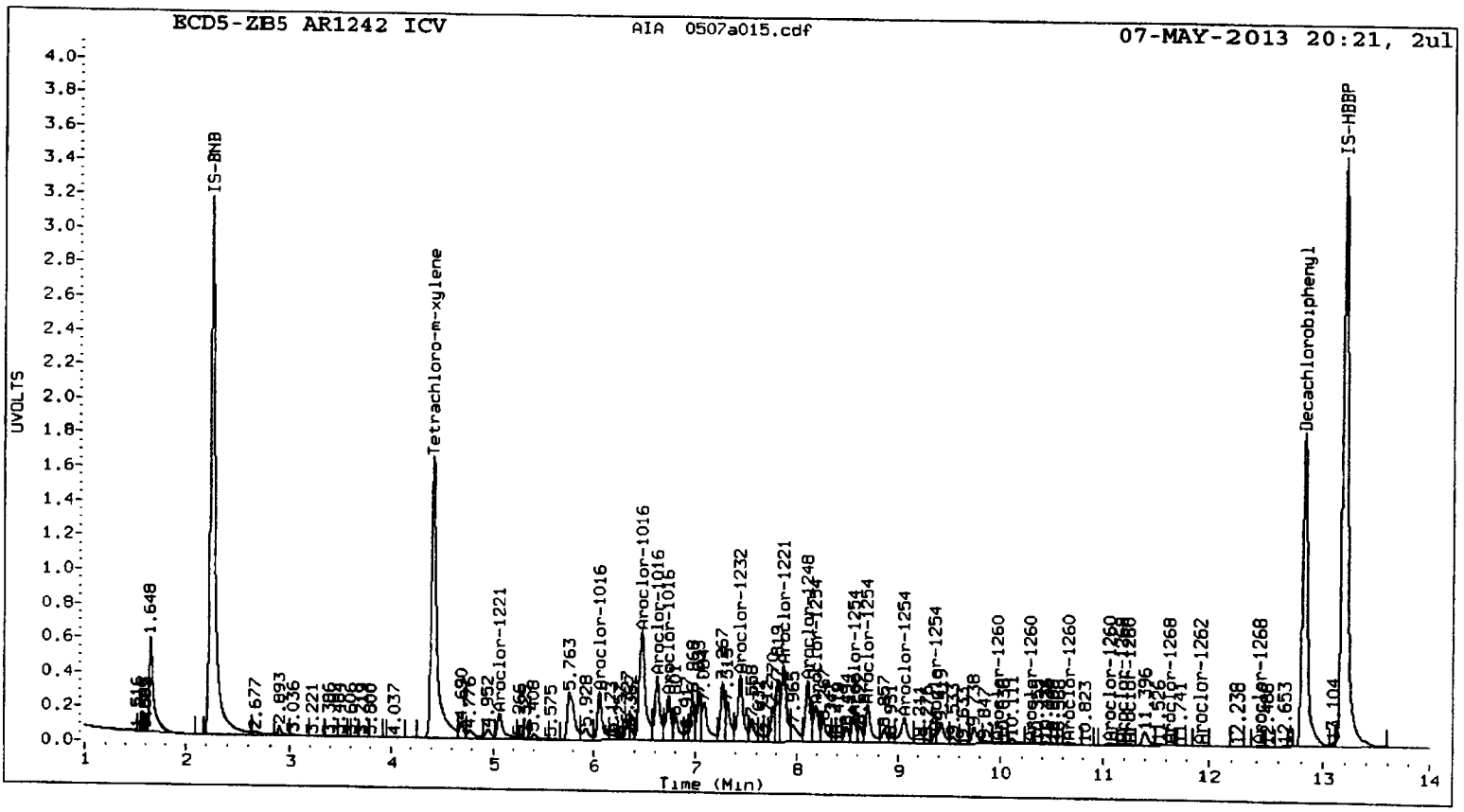
Aroclor-1268 2	11.248	0.002	45330	0.3	2	11.564	-0.009	37242	1.5
Aroclor-1268 3	11.629	-0.004	63465	0.6	3	---			0.0
Aroclor-1268 4	12.419	-0.003	91475	0.3	4	12.791	-0.001	10921	0.2
Total Col1Ave (4 peaks):			0.4		Total Col2Ave (3 peaks):			0.8	RPD = 62*
Corrected Ave (3 peaks):			0.3					Corrected Ave: < 3 Peaks	

Total PCB Area Col1 (4.511 - 12.728) = 136701149 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 28787302 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 20:21, 2ul
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Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
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2.677
2.883
3.036
4.037
4.680
4.952
5.575
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11.526
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12.653
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Aroclor-1016
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Aroclor-1262
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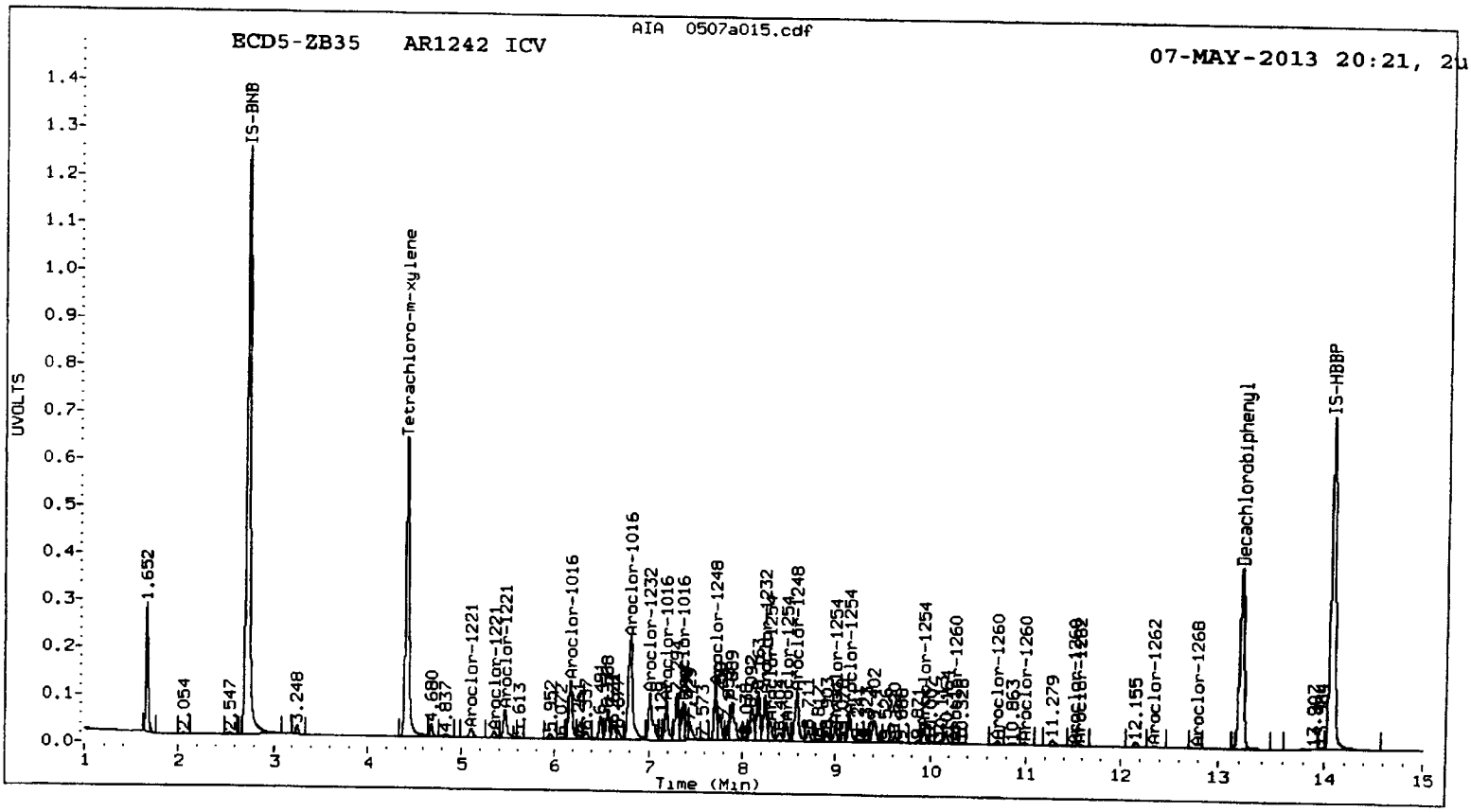
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Time (Min)
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Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
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2.248
2.547
4.680
4.837
5.613
5.952
10.863
11.279
12.155
13.902
Aroclor-1016
Aroclor-1221
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Aroclor-1254
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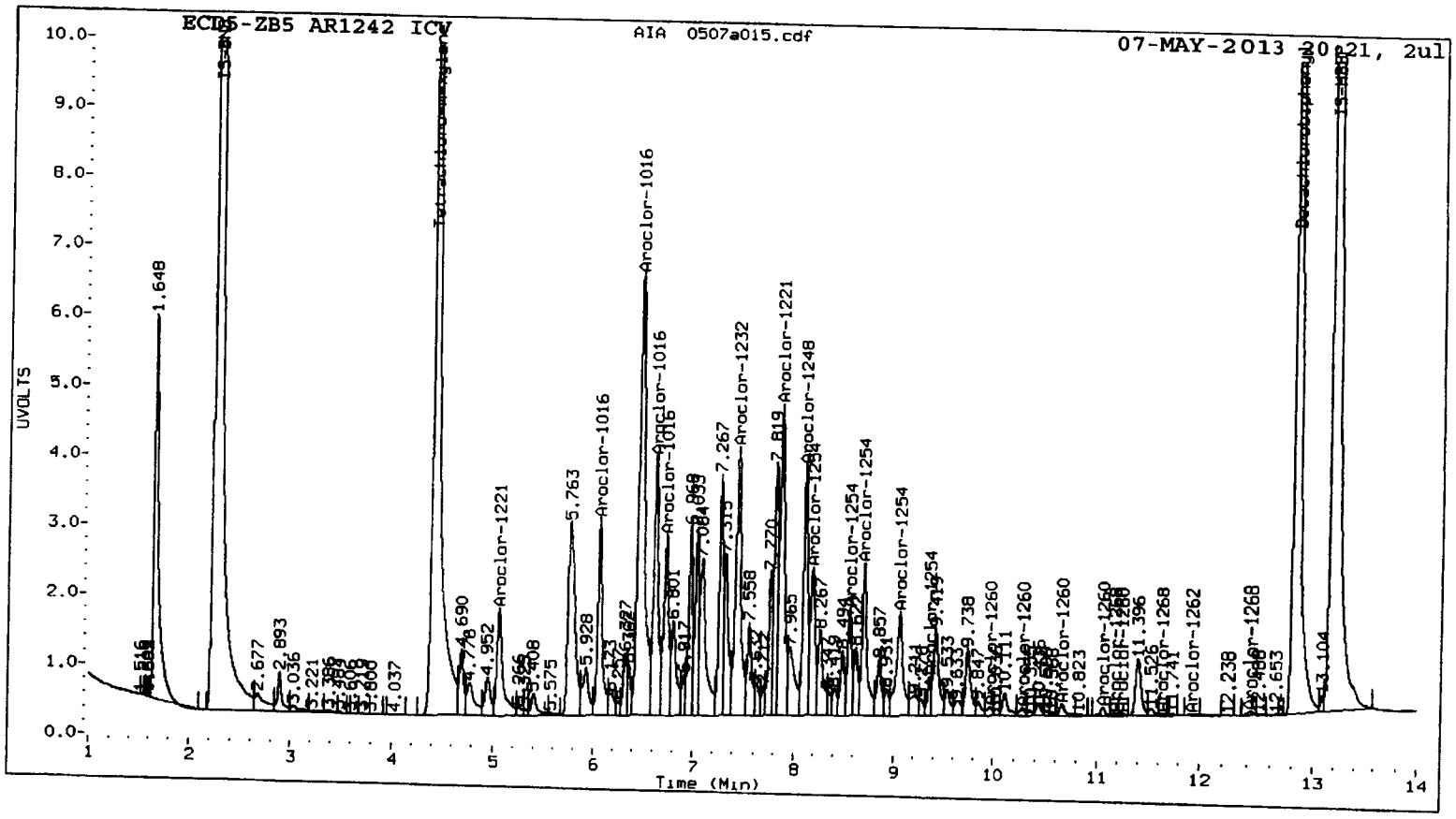
Aroclor-1268


ECD5-ZB5 AR1242 ICV
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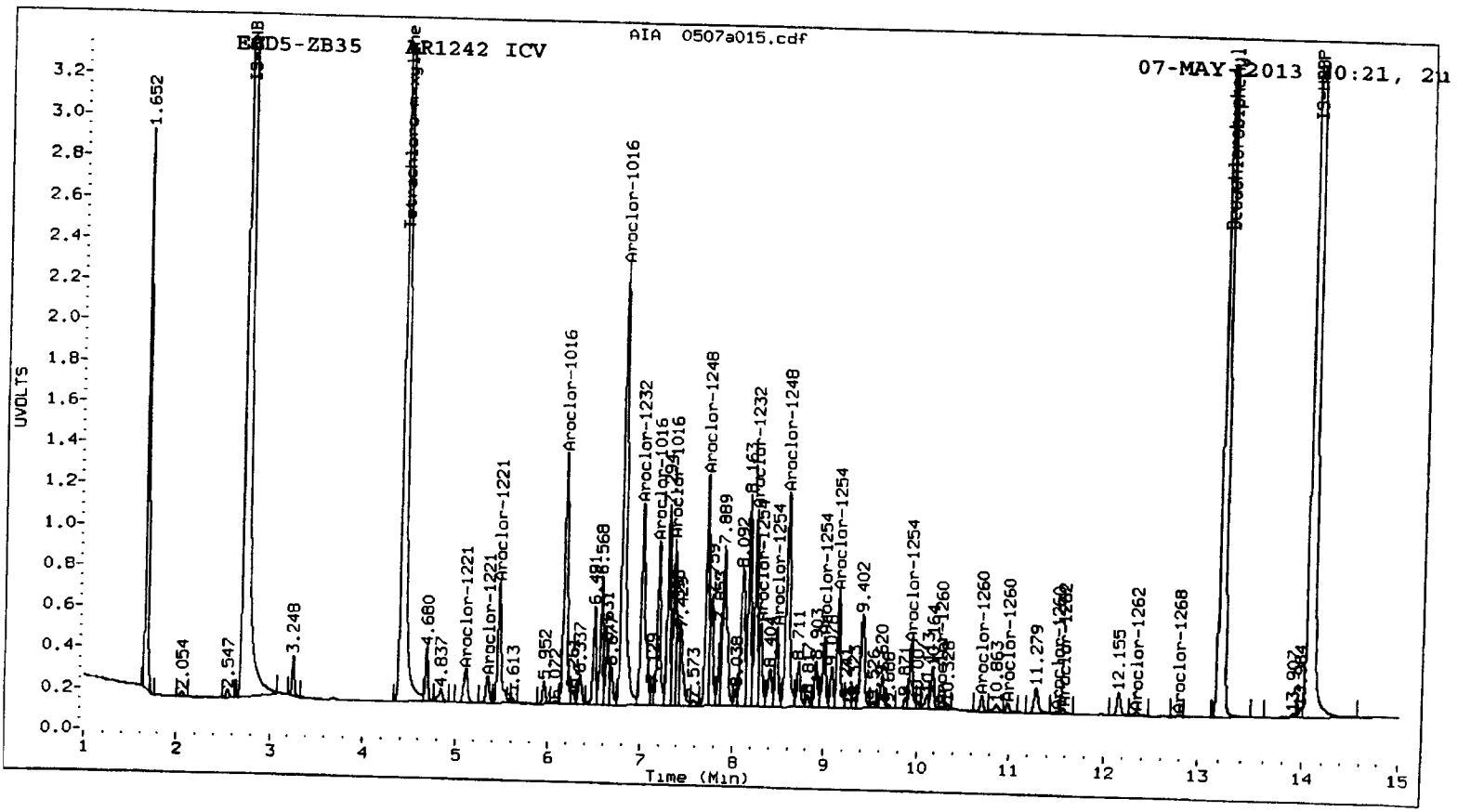
07-MAY-2013 20:21, 2ul
UVOLTS
Time (Min)
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 AR1242 ICV
AIA 0507a015.cdf
07-MAY-2013 20:21, 2u
UVOLTS
Time (Min)
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a016.d
Data file 2: 20130507.b/ical-2.b/0507a016.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 07-MAY-2013 20:41
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	30900777	4.412	0.000	7953899	37.1	38.1	2.5	Tetrachloro-m-xylen
12.828	0.000	31048472	13.203	-0.002	5334093	34.3	33.8	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	92.9	95.2
Decachlorobiphenyl	85.7	84.6

JL 05/03/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53651835	9.5
Hexabromobiphenyl	50004151	60660565	21.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15441440	4.1
Hexabromobiphenyl	9345340	10952020	17.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.060	-0.001	2318537	95.9	1	6.163	-0.002	909531	103.2
Aroclor-1016	2	6.467	-0.002	9438131	126.7	2	6.800	-0.001	2390530	124.8
Aroclor-1016	3	6.619	0.002	3851669	115.4	3	7.186	0.000	515984	103.0
Aroclor-1016	4	6.729	0.001	2894284	116.1	4	7.358	0.000	1263898	270.9
Total Col1Ave (4 peaks):					113.5	Total Col2Ave (4 peaks):				150.5 RPD = 28
Corrected Ave (3 peaks):					109.1	Corrected Ave (3 peaks):				110.3 RPD = 1
Aroclor-1221	1	5.063	0.000	864224	39.5	1	---			0.0
Aroclor-1221	2	6.467	-0.001	9438131	1411.2	2	5.110	0.015	123396	46.6
Aroclor-1221	3	7.874	-0.004	12549915	1328.9	3	5.348	0.003	31614	21.9
Aroclor-1221	NS	---			----	4	5.462	0.001	185951	41.0
Total Col1Ave (3 peaks):					926.5	Total Col2Ave (3 peaks):				36.5 RPD = 185*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.060	-0.001	2318537	233.3	1	6.163	-0.002	909531	229.5
Aroclor-1232	2	6.467	-0.002	9438131	310.3	2	6.800	-0.001	2390530	302.2
Aroclor-1232	3	7.441	0.000	9852880	623.2	3	7.010	-0.001	586053	177.7
Aroclor-1232	4	7.874	0.000	12549915	691.0	4	8.238	-0.001	1898417	685.7
Total Col1Ave (4 peaks):					464.4	Total Col2Ave (4 peaks):				348.8 RPD = 28
Corrected Ave (3 peaks):					388.9	Corrected Ave (3 peaks):				236.4 RPD = 49*
Aroclor-1242	1	6.060	0.000	2318537	120.0	1	6.163	-0.004	909531	129.3
Aroclor-1242	2	6.467	-0.001	9438131	159.3	2	6.800	-0.003	2390530	154.7
Aroclor-1242	3	6.619	0.003	3851669	145.7	3	7.010	-0.001	586053	90.8
Aroclor-1242	4	7.874	0.001	12549915	384.3	4	8.238	-0.001	1898417	351.0
Total Col1Ave (4 peaks):					202.3	Total Col2Ave (4 peaks):				181.4 RPD = 11
Corrected Ave (3 peaks):					141.6	Corrected Ave (3 peaks):				124.9 RPD = 13
Aroclor-1248	1	6.467	0.000	9438131	250.0	1	6.800	0.000	2390530	247.1
Aroclor-1248	2	7.441	-0.001	9852880	232.0	2	7.705	-0.001	1901637	237.0
Aroclor-1248	3	7.874	-0.001	12549915	232.4	3	8.238	-0.001	1898417	228.5
Aroclor-1248	4	8.110	0.000	8659425	230.0	4	8.584	0.000	2478354	229.6
Total Col1Ave (4 peaks):					236.1	Total Col2Ave (4 peaks):				235.5 RPD = 0
Corrected Ave (3 peaks):					231.8	Corrected Ave (3 peaks):				231.7 RPD = 0
Aroclor-1254	1	8.190	-0.003	6700207	133.9	1	8.298	0.000	911407	121.7
Aroclor-1254	2	8.563	0.000	4108008	124.4	2	8.476	0.001	848875	91.8
Aroclor-1254	3	8.700	0.000	7416000	107.7	3	8.996	0.000	845277	119.3
Aroclor-1254	4	9.057	0.005	6343972	89.5	4	9.147	0.000	1366372	90.0
Aroclor-1254	5	9.362	0.000	724814	27.0	5	9.929	-0.006	923605	108.1
Total Col1Ave (5 peaks):					96.5	Total Col2Ave (5 peaks):				106.2 RPD = 10
Corrected Ave (4 peaks):					87.1	Corrected Ave (4 peaks):				102.3 RPD = 16
Aroclor-1260	1	9.965	-0.002	449508	9.0	1	10.261	0.001	42393	4.3
Aroclor-1260	2	10.283	0.000	290261	5.9	2	10.705	-0.004	108079	9.3
Aroclor-1260	3	10.658	-0.001	538597	4.6	3	10.986	0.001	81136	3.8
Aroclor-1260	4	11.058	0.000	190563	3.3	4	11.505	0.000	34540	5.9
Aroclor-1260	5	11.248	0.001	168155	5.5	NS	---			----
Total Col1Ave (5 peaks):					5.7	Total Col2Ave (4 peaks):				5.8 RPD = 3
Corrected Ave (4 peaks):					4.8	Corrected Ave (3 peaks):				4.7 RPD = 3
Aroclor-1262	1	10.283	0.000	290261	5.1	1	10.261	0.001	42393	2.8
Aroclor-1262	2	10.658	0.000	538597	4.0	2	10.705	-0.005	108079	7.8
Aroclor-1262	3	11.058	-0.002	190563	4.5	3	10.986	0.000	81136	3.1
Aroclor-1262	4	11.248	0.000	168155	2.8	4	11.567	0.000	56086	3.3
Aroclor-1262	5	11.919	0.001	152715	3.4	5	12.341	0.035	50555	6.2
Total Col1Ave (5 peaks):					4.0	Total Col2Ave (5 peaks):				4.6 RPD = 16
Corrected Ave (4 peaks):					3.7	Corrected Ave (4 peaks):				3.9 RPD = 5
Aroclor-1268	1	11.173	-0.002	164171	1.3	1	11.505	-0.001	34540	1.3

Aroclor-1268	2	11.248	0.002	168155	1.2	2	11.567	-0.006	56086	2.3
Aroclor-1268	3	11.641	0.008	89736	0.9	3	---			0.0
Aroclor-1268	4	12.419	-0.002	102180	0.3	4	12.793	0.001	11794	0.2

Total Col1Ave (4 peaks): 0.9 Total Col2Ave (3 peaks): 1.3 RPD = 31

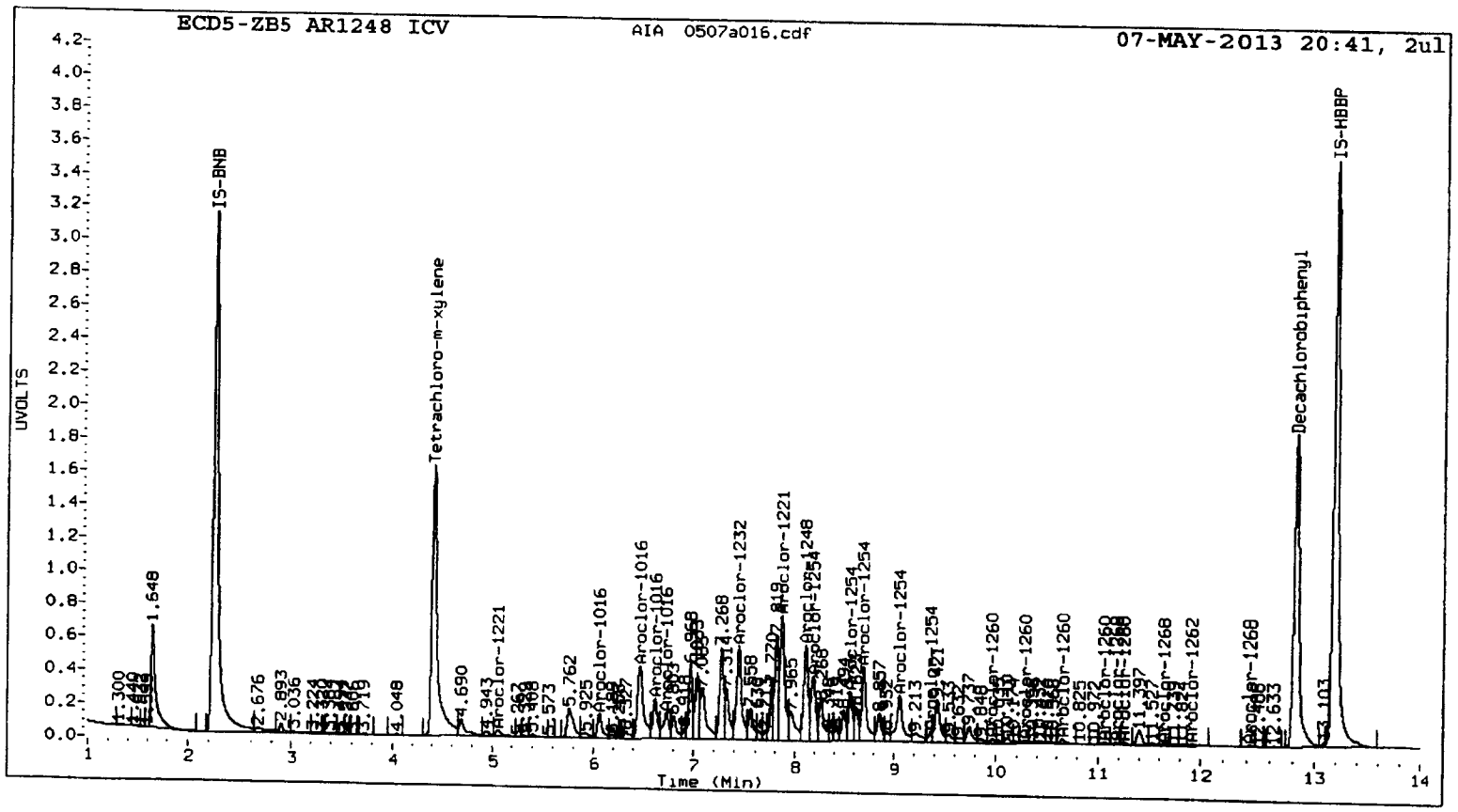
Corrected Ave (3 peaks): 0.8 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (4.511 - 12.728) = 167287666 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 33824743 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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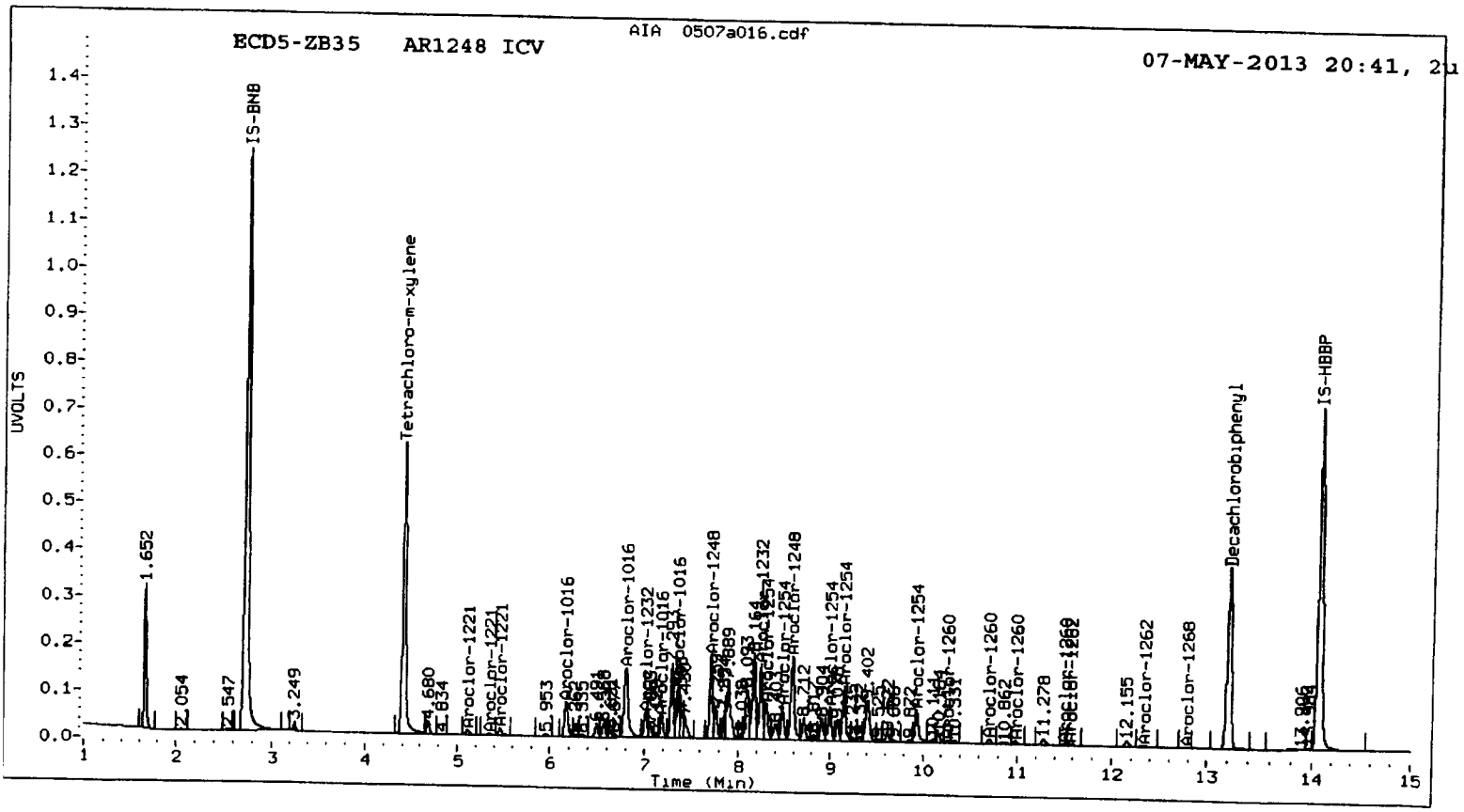
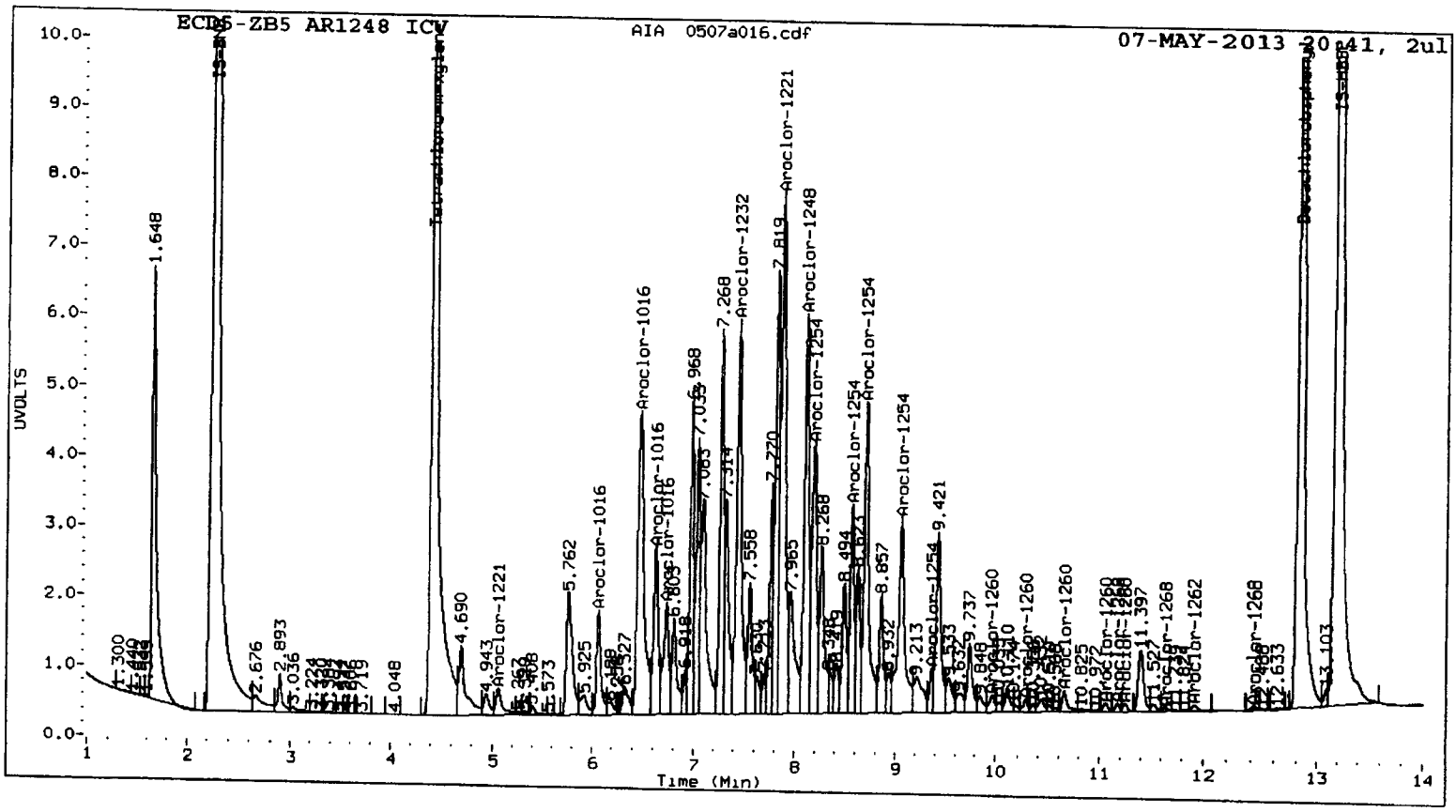
07-MAY-2013 20:41, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.648
4.048
4.690
5.762
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 AR1248 ICV
AIA 0507a016.cdf
07-MAY-2013 20:41, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.652
4.680
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB5 AR1248 ICV
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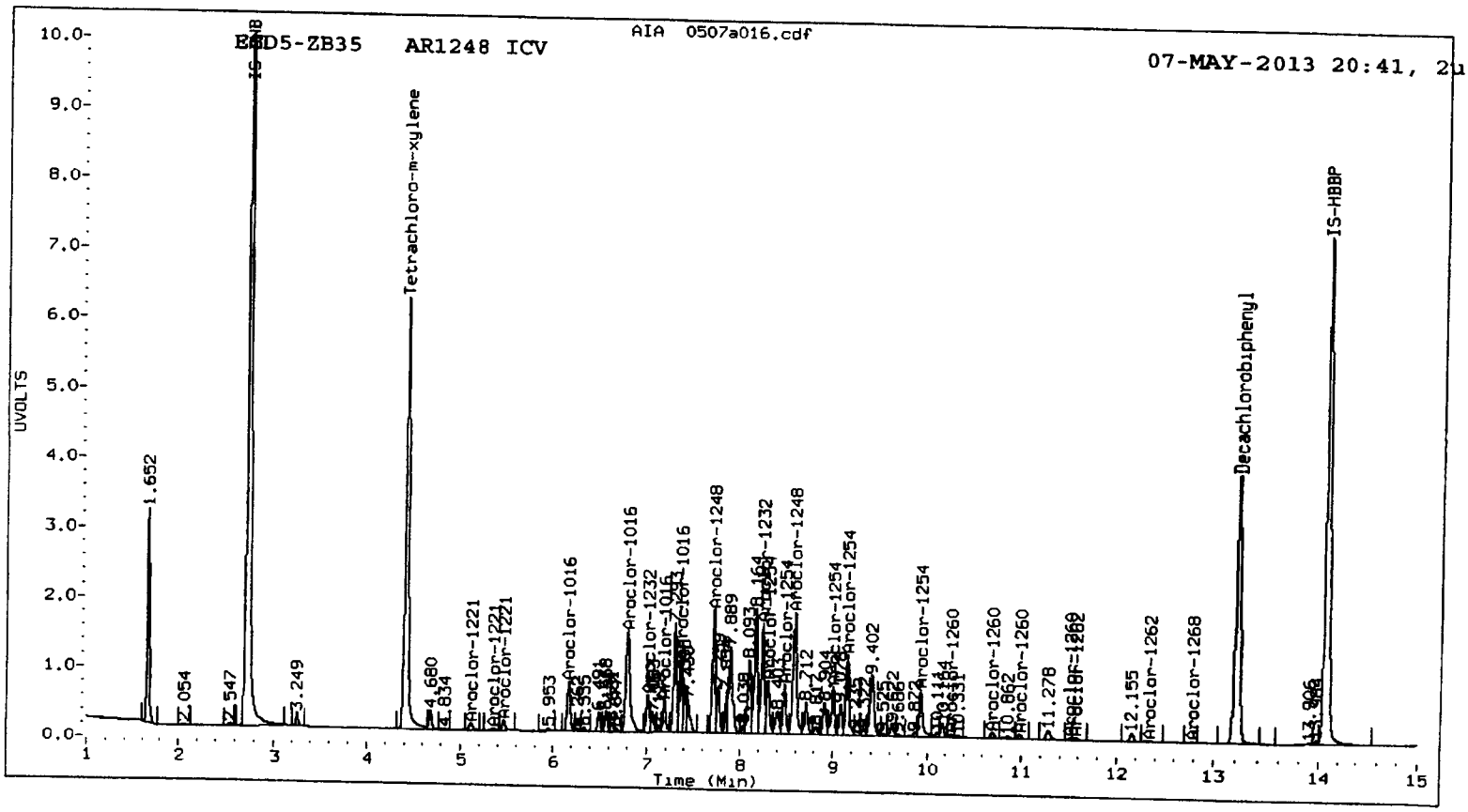
07-MAY-2013 20:41, 2ul
UVOLTS
Time (Min)
1.648
Tetrachloro-m-xylene
4.690
Aroclor-1221
Aroclor-1016
5.762
Aroclor-1232
7.268
Aroclor-1248
7.819
Aroclor-1254
8.857
9.421
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
13.103


ECD5-ZB35 AR1248 ICV
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07-MAY-2013 20:41, 2u
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
4.680
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a017.d
Data file 2: 20130507.b/ical-2.b/0507a017.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 07-MAY-2013 21:01
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	31249884	4.411	0.000	8016298	37.6	38.6	2.7	Tetrachloro-m-xylen
12.828	0.000	30201361	13.205	-0.001	5162177	34.7	34.1	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	93.9	96.5
Decachlorobiphenyl	86.9	85.3

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53642771	9.5
Hexabromobiphenyl	50004151	58188446	16.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15360402	3.5
Hexabromobiphenyl	9345340	10510294	12.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.061	0.001	74537	3.1	1	6.163	-0.003	28483	3.2
Aroclor-1016	2	6.462	-0.007	337320	4.5	2	6.793	-0.007	84978	4.5
Aroclor-1016	3	6.623	0.006	206176	6.2	3	7.187	0.001	11814	2.4
Aroclor-1016	4	6.730	0.002	85227	3.4	4	7.357	-0.001	459146	98.9
Total Col1Ave (4 peaks):					4.3	Total Col2Ave (4 peaks):				27.3 RPD = 145*
Corrected Ave (3 peaks):					3.7	Corrected Ave (3 peaks):				3.4 RPD = 9
Aroclor-1221	1	5.059	-0.005	147002	6.7	1	---			0.0
Aroclor-1221	2	6.462	-0.007	337320	50.4	2	5.111	0.016	103036	39.1
Aroclor-1221	3	7.878	0.000	10714695	1134.7	3	---			0.0
Aroclor-1221	NS	---			----	4	5.465	0.004	27897	6.2
Total Col1Ave (3 peaks):					397.3	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.061	0.001	74537	7.5	1	6.163	-0.002	28483	7.2
Aroclor-1232	2	6.462	-0.008	337320	11.1	2	6.793	-0.008	84978	10.8
Aroclor-1232	3	7.442	0.001	1732024	109.6	3	7.010	-0.001	15916	4.9
Aroclor-1232	4	7.878	0.004	10714695	590.0	4	8.237	-0.001	361750	131.4
Total Col1Ave (4 peaks):					179.5	Total Col2Ave (4 peaks):				38.6 RPD = 129*
Corrected Ave (3 peaks):					42.7	Corrected Ave (3 peaks):				7.6 RPD = 139*
Aroclor-1242	1	6.061	0.002	74537	3.9	1	6.163	-0.004	28483	4.1
Aroclor-1242	2	6.462	-0.006	337320	5.7	2	6.793	-0.010	84978	5.5
Aroclor-1242	3	6.623	0.006	206176	7.8	3	7.010	-0.001	15916	2.5
Aroclor-1242	4	7.878	0.006	10714695	328.2	4	8.237	-0.002	361750	67.2
Total Col1Ave (4 peaks):					86.4	Total Col2Ave (4 peaks):				19.8 RPD = 125*
Corrected Ave (3 peaks):					5.8	Corrected Ave (3 peaks):				4.0 RPD = 36
Aroclor-1248	1	6.462	-0.005	337320	8.9	1	6.793	-0.007	84978	8.8
Aroclor-1248	2	7.442	0.000	1732024	40.8	2	7.705	-0.001	756815	94.8
Aroclor-1248	3	7.878	0.004	10714695	198.5	3	8.237	-0.001	361750	43.8
Aroclor-1248	4	8.113	0.003	3375422	89.7	4	8.569	-0.015	1382582	128.7
Total Col1Ave (4 peaks):					84.5	Total Col2Ave (4 peaks):				69.0 RPD = 20
Corrected Ave (3 peaks):					46.5	Corrected Ave (3 peaks):				49.1 RPD = 6
Aroclor-1254	1	8.192	0.000	14171059	283.3	1	8.299	0.001	2103454	282.4
Aroclor-1254	2	8.563	0.000	9711755	294.1	2	8.475	0.000	2629736	285.8
Aroclor-1254	3	8.700	0.000	19370984	281.4	3	8.996	0.000	2093024	297.0
Aroclor-1254	4	9.054	0.002	20541352	289.7	4	9.148	0.001	4267118	282.7
Aroclor-1254	5	9.362	0.000	7016935	261.7	5	9.933	-0.001	2526495	297.2
Total Col1Ave (5 peaks):					282.0	Total Col2Ave (5 peaks):				289.0 RPD = 2
Corrected Ave (4 peaks):					279.0	Corrected Ave (4 peaks):				287.0 RPD = 3
Aroclor-1260	1	9.964	-0.003	1762734	37.0	1	10.260	0.000	214372	22.5
Aroclor-1260	2	10.284	0.000	1461583	30.9	2	10.704	-0.005	1157323	103.6
Aroclor-1260	3	10.658	-0.001	2962044	26.1	3	10.985	0.000	606704	29.4
Aroclor-1260	4	11.057	0.000	2253674	40.8	4	11.506	0.001	77148	13.8
Aroclor-1260	5	11.247	0.000	227786	7.7	NS	---			----
Total Col1Ave (5 peaks):					28.5	Total Col2Ave (4 peaks):				42.3 RPD = 39
Corrected Ave (4 peaks):					25.4	Corrected Ave (3 peaks):				21.9 RPD = 15
Aroclor-1262	1	10.284	0.001	1461583	26.8	1	10.260	0.000	214372	14.7
Aroclor-1262	2	10.658	0.000	2962044	23.1	2	10.704	-0.006	1157323	87.1
Aroclor-1262	3	11.057	-0.002	2253674	55.6	3	10.985	0.000	606704	24.3
Aroclor-1262	4	11.247	0.000	227786	4.0	4	11.563	-0.004	395081	24.4
Aroclor-1262	5	11.918	0.000	149251	3.4	5	12.340	0.034	39786	5.1
Total Col1Ave (5 peaks):					22.6	Total Col2Ave (5 peaks):				31.1 RPD = 32
Corrected Ave (4 peaks):					14.3	Corrected Ave (4 peaks):				17.1 RPD = 18
Aroclor-1268	1	11.171	-0.004	198308	1.6	1	11.506	0.000	77148	3.0
Aroclor-1268	2	11.247	0.001	227786	1.7	2	11.563	-0.010	395081	16.5

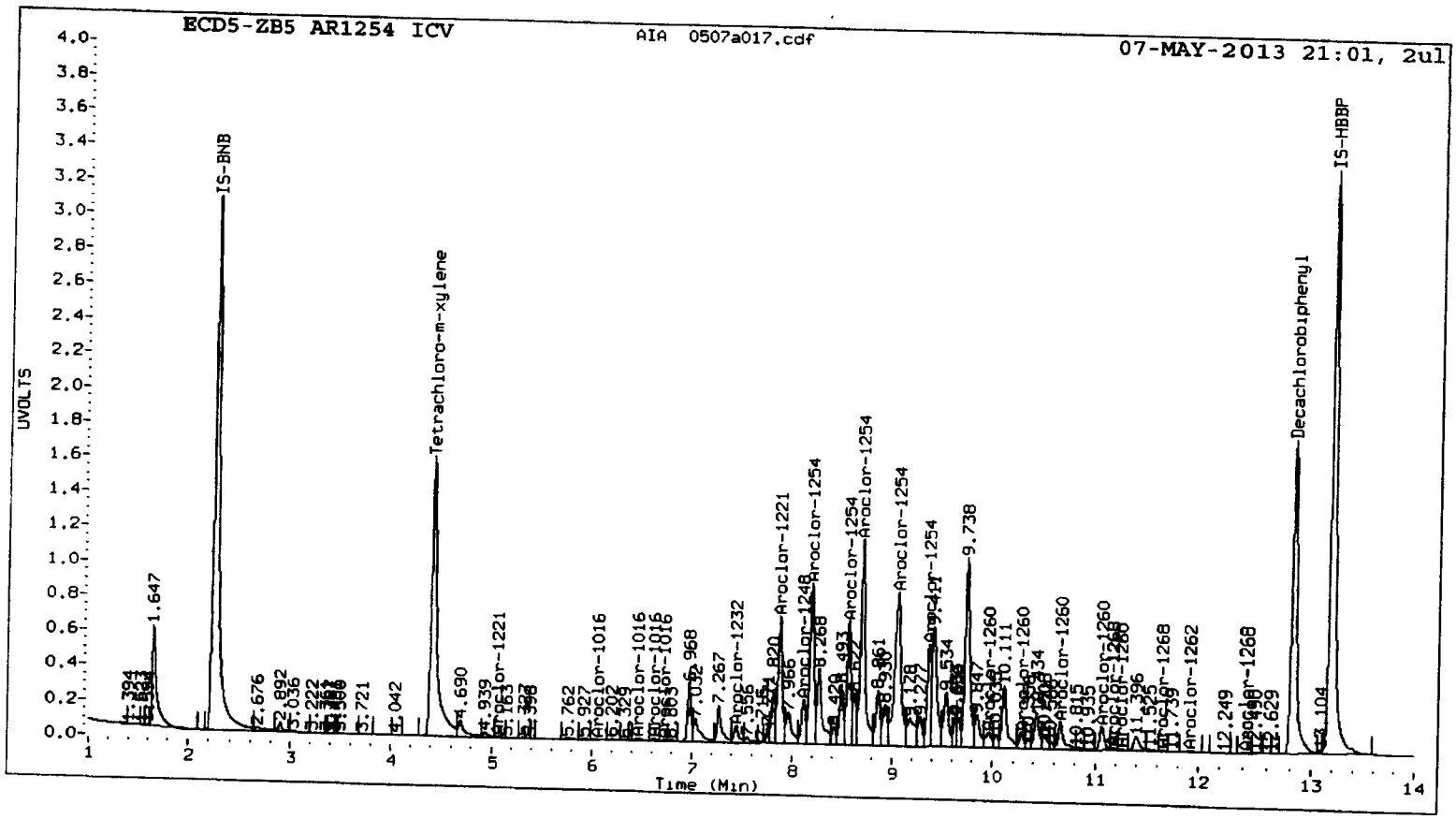
Aroclor-1268	3	11.643	0.011	109759	1.1	3 ---	0.0
Aroclor-1268	4	12.420	-0.002	62105	0.2	4 ---	0.0
Total Col1Ave (4 peaks):					1.2	Col2Ave: <3 Quant Peaks	

Total PCB Area Col1 (4.511 - 12.728) = 211898856 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 42309153 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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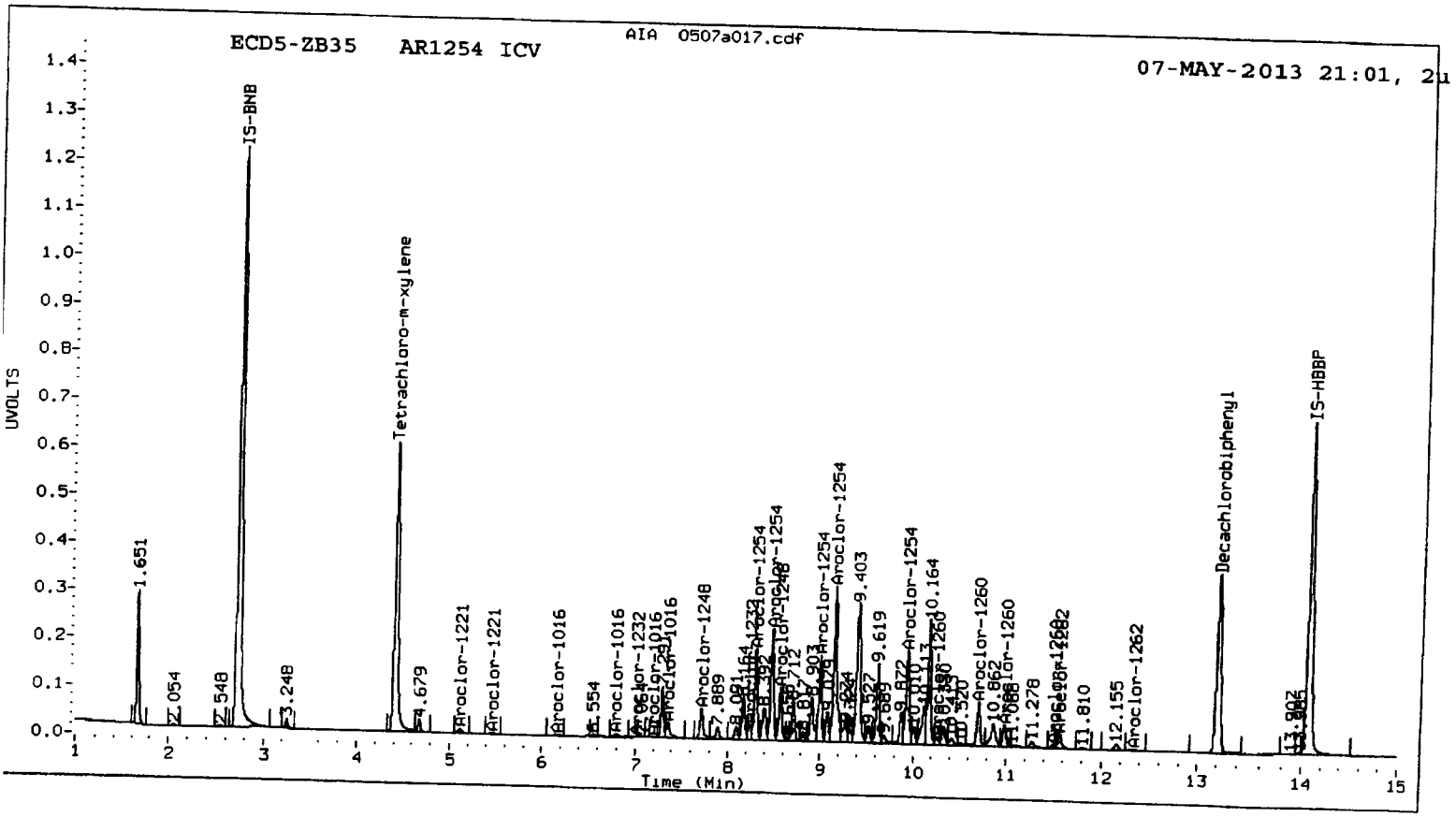
AIA 0507a017.cdf
07-MAY-2013 21:01, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.647
4.690
7.267
9.738
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 AR1254 ICV
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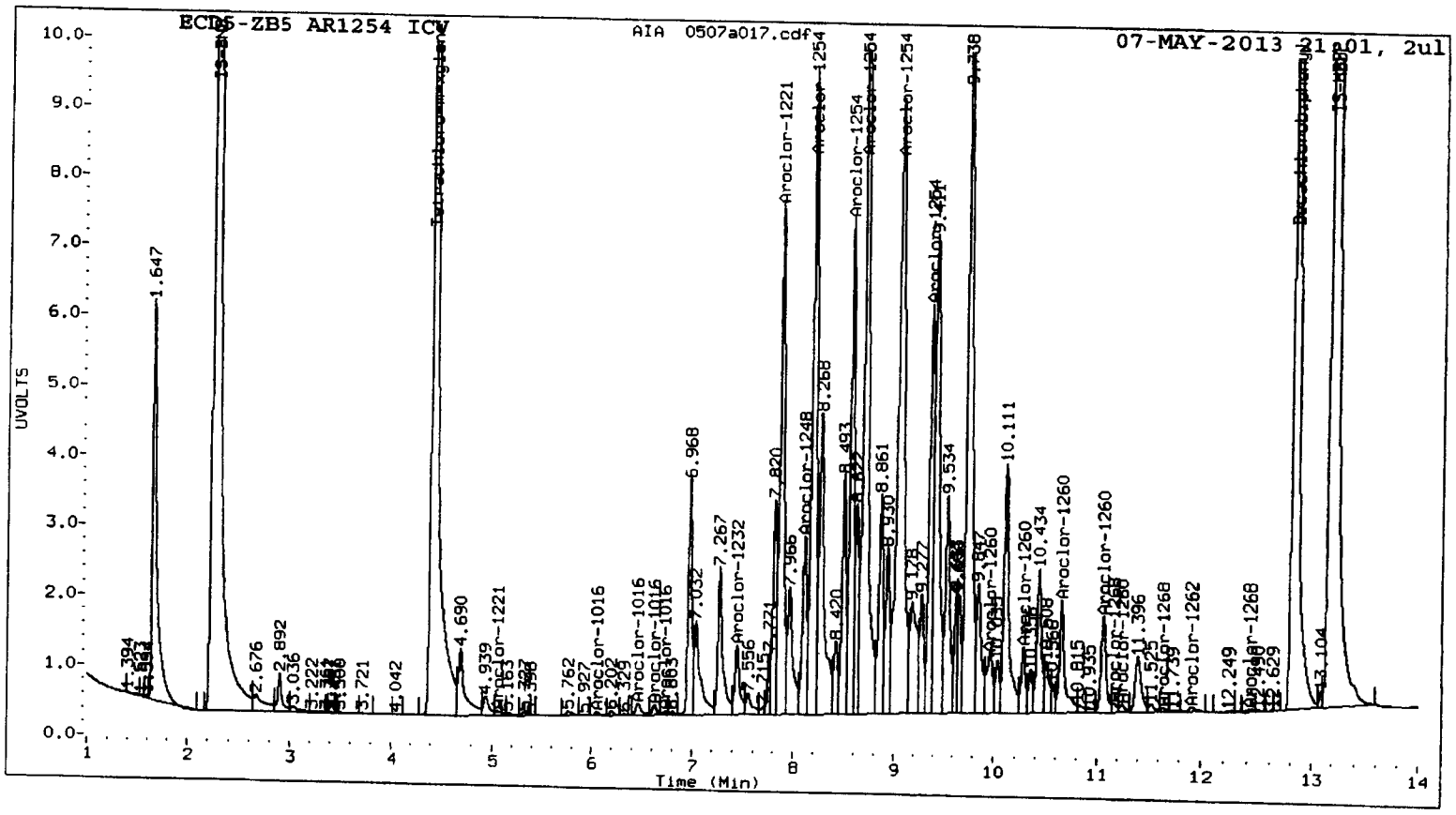
07-MAY-2013 21:01, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.651
4.679
9.403
9.619
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262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07-MAY-2013 21:01, 2ul
UVOLTS
Time (Min)
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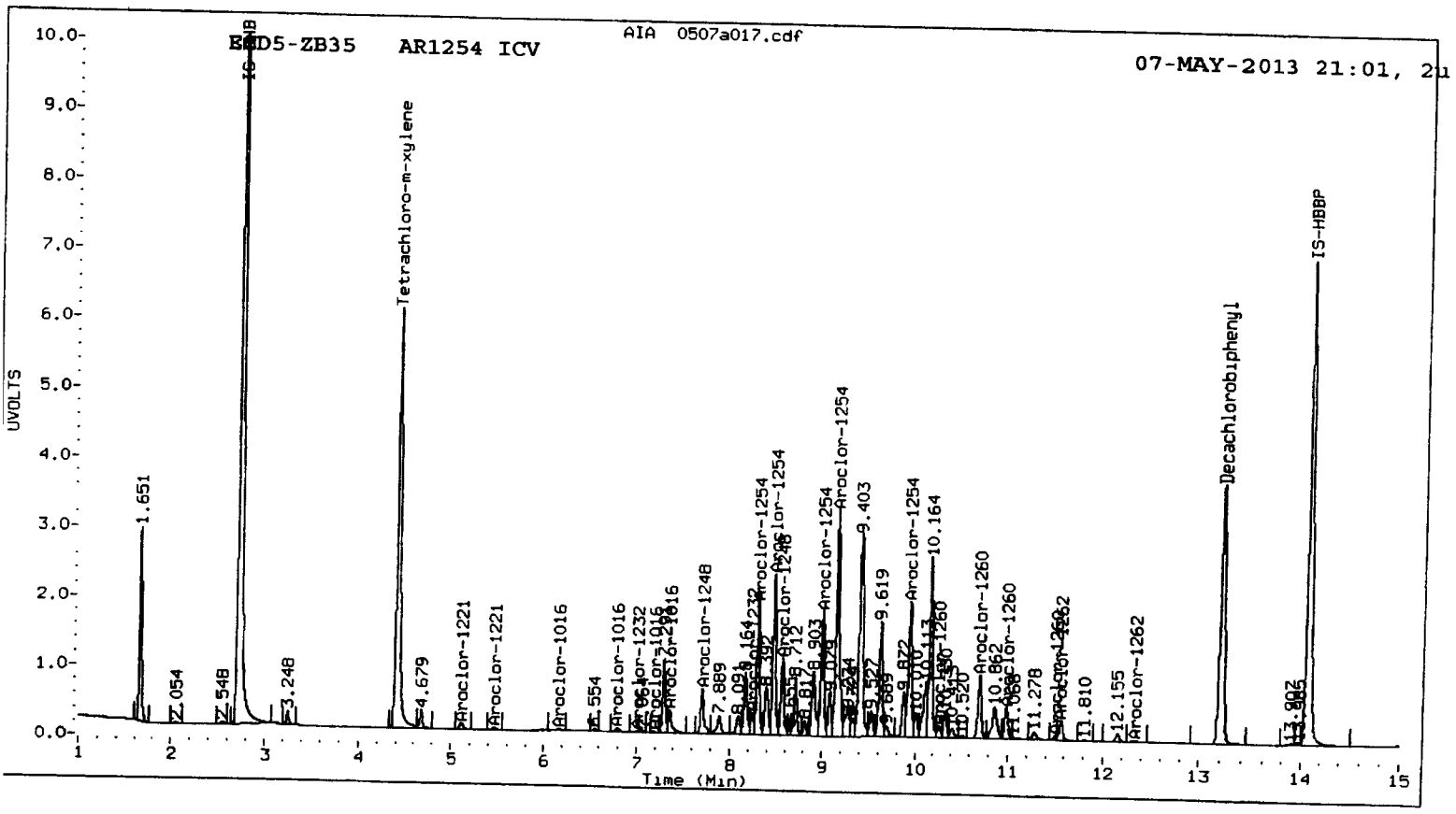
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1254 ICV
AIA 0507a017.cdf
07-MAY-2013 21:01, 2u
UVOLTS
Time (Min)
1.651
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a018.d
Data file 2: 20130507.b/ical-2.b/0507a018.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 07-MAY-2013 21:21
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	31767638	4.411	0.000	8077710	37.7	38.5	2.1	Tetrachloro-m-xylen
12.827	-0.001	30552007	13.205	0.000	5210574	34.7	34.1	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.2	96.2
Decachlorobiphenyl	86.8	85.3

M 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54355833	11.0
Hexabromobiphenyl	50004151	58930522	17.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15522820	4.6
Hexabromobiphenyl	9345340	10608758	13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.060	0.000	5710646	233.1	1	6.166	0.000	2083969	235.3
Aroclor-1016	2	6.468	0.000	17399600	230.5	2	6.800	0.000	4481969	232.8
Aroclor-1016	3	6.618	0.001	7785800	230.3	3	7.185	0.000	1171797	232.7
Aroclor-1016	4	6.729	0.001	5827980	230.7	4	7.357	-0.001	1070181	228.2
Total Col1Ave (4 peaks):					231.1	Total Col2Ave (4 peaks):				232.2 RPD = 0
Corrected Ave (3 peaks):					230.5	Corrected Ave (3 peaks):				231.2 RPD = 0
Aroclor-1221	1	5.063	0.000	4136002	186.8	1	3.696	0.001	11910	7.5
Aroclor-1221	2	6.468	0.000	17399600	2568.0	2	5.100	0.006	292561	109.8
Aroclor-1221	3	7.878	0.000	5153861	538.7	3	5.347	0.002	209236	144.2
Aroclor-1221	NS	---			----	4	5.461	0.001	1022087	224.0
Total Col1Ave (3 peaks):					1097.8	Total Col2Ave (4 peaks):				121.4 RPD = 160*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				87.2
Aroclor-1232	1	6.060	0.000	5710646	567.2	1	6.166	0.000	2083969	523.1
Aroclor-1232	2	6.468	-0.001	17399600	564.6	2	6.800	-0.001	4481969	563.6
Aroclor-1232	3	7.442	0.000	8239430	514.4	3	7.010	-0.001	1862855	561.7
Aroclor-1232	4	7.878	0.004	5153861	280.1	4	8.237	-0.002	198387	71.3
Total Col1Ave (4 peaks):					481.6	Total Col2Ave (4 peaks):				429.9 RPD = 11
Corrected Ave (3 peaks):					453.0	Corrected Ave (3 peaks):				385.4 RPD = 16
Aroclor-1242	1	6.060	0.001	5710646	291.7	1	6.166	-0.002	2083969	294.7
Aroclor-1242	2	6.468	0.000	17399600	289.8	2	6.800	-0.002	4481969	288.5
Aroclor-1242	3	6.618	0.001	7785800	290.6	3	7.010	-0.001	1862855	287.0
Aroclor-1242	4	7.878	0.006	5153861	155.8	4	8.237	-0.002	198387	36.5
Total Col1Ave (4 peaks):					257.0	Total Col2Ave (4 peaks):				226.7 RPD = 13
Corrected Ave (3 peaks):					245.4	Corrected Ave (3 peaks):				204.0 RPD = 18
Aroclor-1248	1	6.468	0.001	17399600	454.8	1	6.800	0.001	4481969	460.8
Aroclor-1248	2	7.442	0.000	8239430	191.5	2	7.705	-0.001	1494414	185.3
Aroclor-1248	3	7.878	0.004	5153861	94.2	3	8.237	-0.002	198387	23.8
Aroclor-1248	4	8.113	0.003	956546	25.1	4	8.584	0.000	77790	7.2
Total Col1Ave (4 peaks):					191.4	Total Col2Ave (4 peaks):				169.2 RPD = 12
Corrected Ave (3 peaks):					103.6	Corrected Ave (3 peaks):				72.1 RPD = 36
Aroclor-1254	1	8.194	0.002	5604593	110.6	1	8.299	0.000	888811	118.1
Aroclor-1254	2	8.563	0.000	760107	22.7	2	8.475	0.000	906791	97.5
Aroclor-1254	3	8.696	-0.004	2725232	39.1	3	8.997	0.001	149462	21.0
Aroclor-1254	4	9.029	-0.024	14910986	207.5	4	9.187	0.040	2306321	151.2
Aroclor-1254	5	9.361	-0.001	20865390	767.9	5	9.939	0.004	1000144	116.4
Total Col1Ave (5 peaks):					229.6	Total Col2Ave (5 peaks):				100.8 RPD = 78*
Corrected Ave (4 peaks):					95.0	Corrected Ave (4 peaks):				88.3 RPD = 7
Aroclor-1260	1	9.967	0.000	12336540	255.6	1	10.261	0.001	2515434	261.4
Aroclor-1260	2	10.283	-0.001	11792031	246.4	2	10.710	0.001	2780218	246.7
Aroclor-1260	3	10.659	-0.001	28793615	250.9	3	10.986	0.001	5491310	263.9
Aroclor-1260	4	11.059	0.001	13292663	237.8	4	11.506	0.001	1529990	271.2
Aroclor-1260	5	11.247	0.000	8346657	279.1	NS	---			----
Total Col1Ave (5 peaks):					254.0	Total Col2Ave (4 peaks):				260.8 RPD = 3
Corrected Ave (4 peaks):					247.7	Corrected Ave (3 peaks):				257.3 RPD = 4
Aroclor-1262	1	10.283	0.000	11792031	213.7	1	10.261	0.001	2515434	171.4
Aroclor-1262	2	10.659	0.000	28793615	222.1	2	10.710	0.000	2780218	207.2
Aroclor-1262	3	11.059	-0.001	13292663	323.7	3	10.986	0.001	5491310	218.2
Aroclor-1262	4	11.247	0.000	8346657	144.8	4	11.565	-0.002	3586824	219.3
Aroclor-1262	5	11.918	0.000	7146896	161.6	5	12.307	0.001	1281460	162.3
Total Col1Ave (5 peaks):					213.2	Total Col2Ave (5 peaks):				195.7 RPD = 9
Corrected Ave (4 peaks):					185.5	Corrected Ave (4 peaks):				189.8 RPD = 2
Aroclor-1268	1	11.174	-0.001	6512368	52.5	1	11.506	-0.001	1529990	59.7

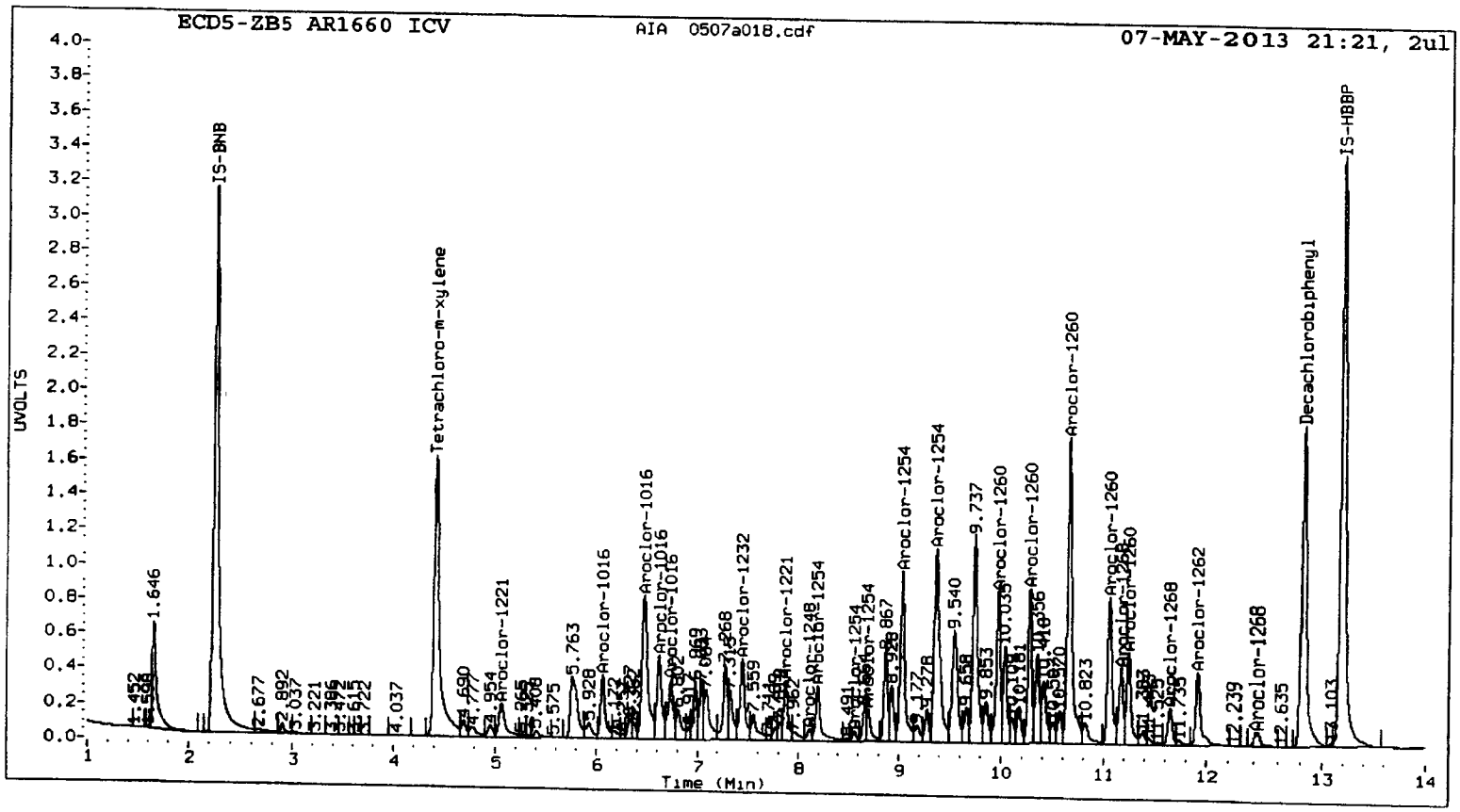
Aroclor-1268	2	11.247	0.001	8346657	60.9	2	11.565	-0.008	3586824	148.6
Aroclor-1268	3	11.648	0.015	3204605	31.5	3	11.967	-0.002	50714	2.7
Aroclor-1268	4	12.420	-0.001	1403153	4.9	4	12.792	0.000	228513	4.6
Total Col1Ave (4 peaks):					37.4	Total Col2Ave (4 peaks):			53.9	RPD = 36
Corrected Ave (3 peaks):					29.6	Corrected Ave (3 peaks):			22.3	RPD = 28

Total PCB Area Col1 (4.511 - 12.728) = 339033302 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 67437339 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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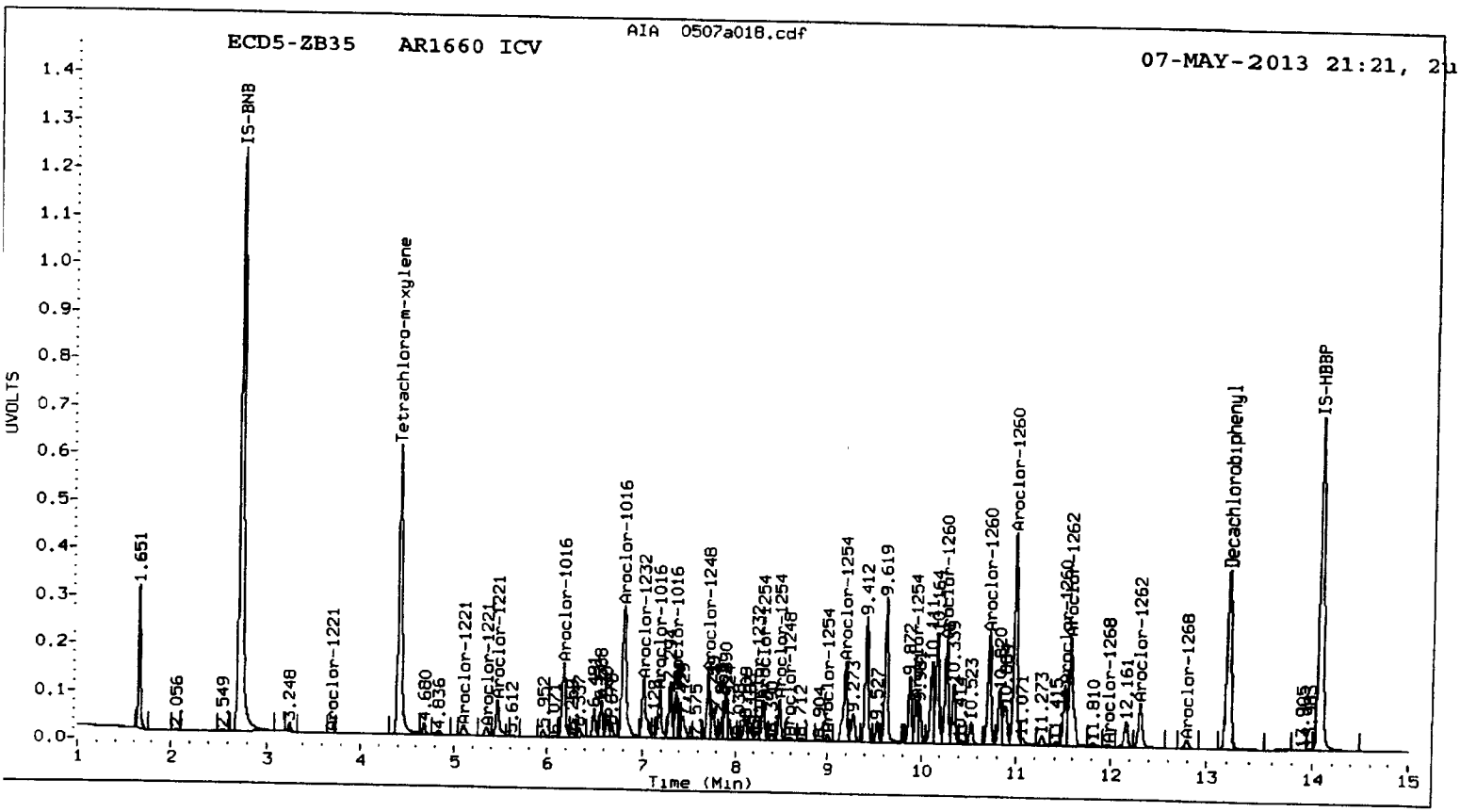
07-MAY-2013 21:21, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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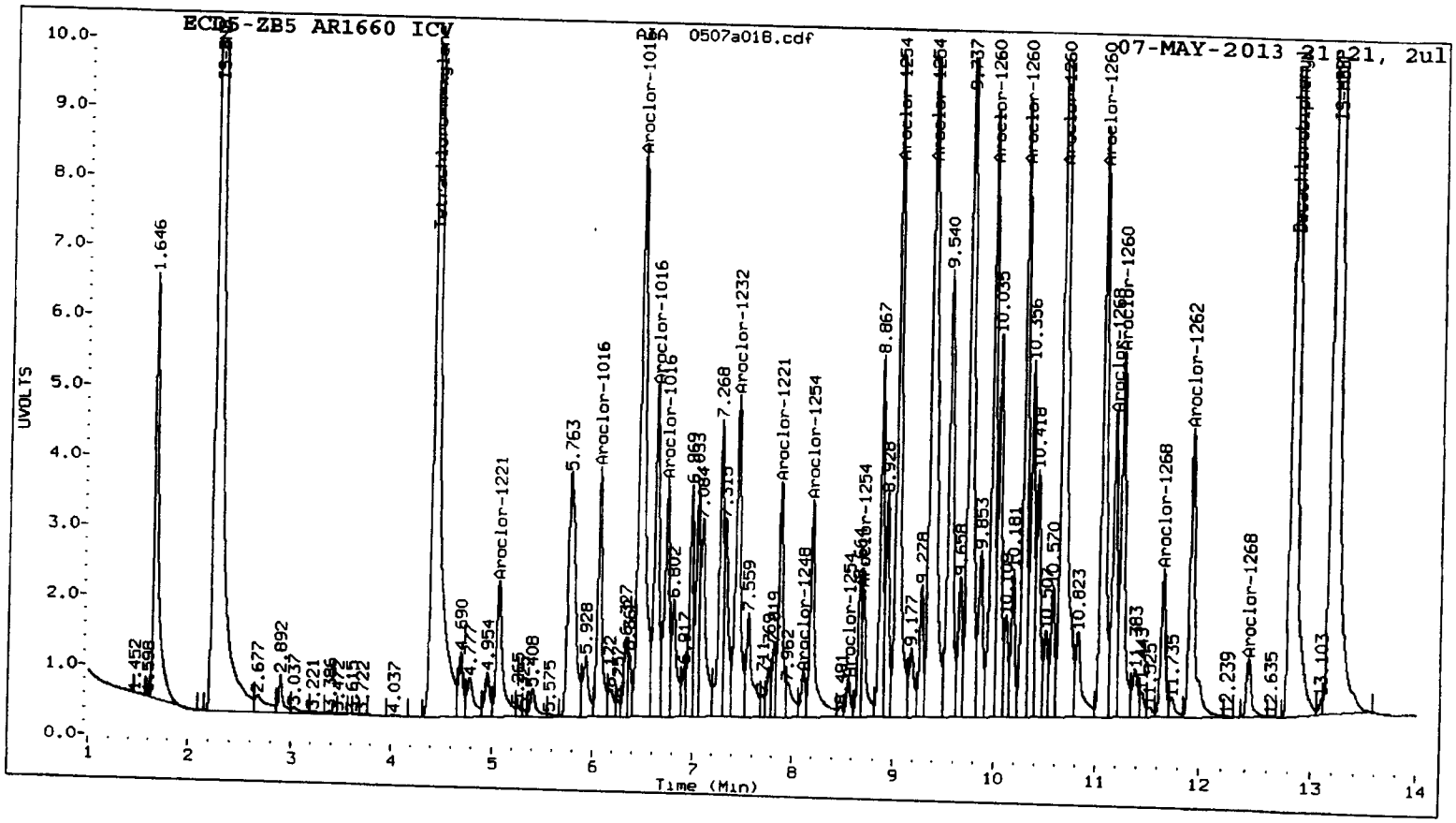
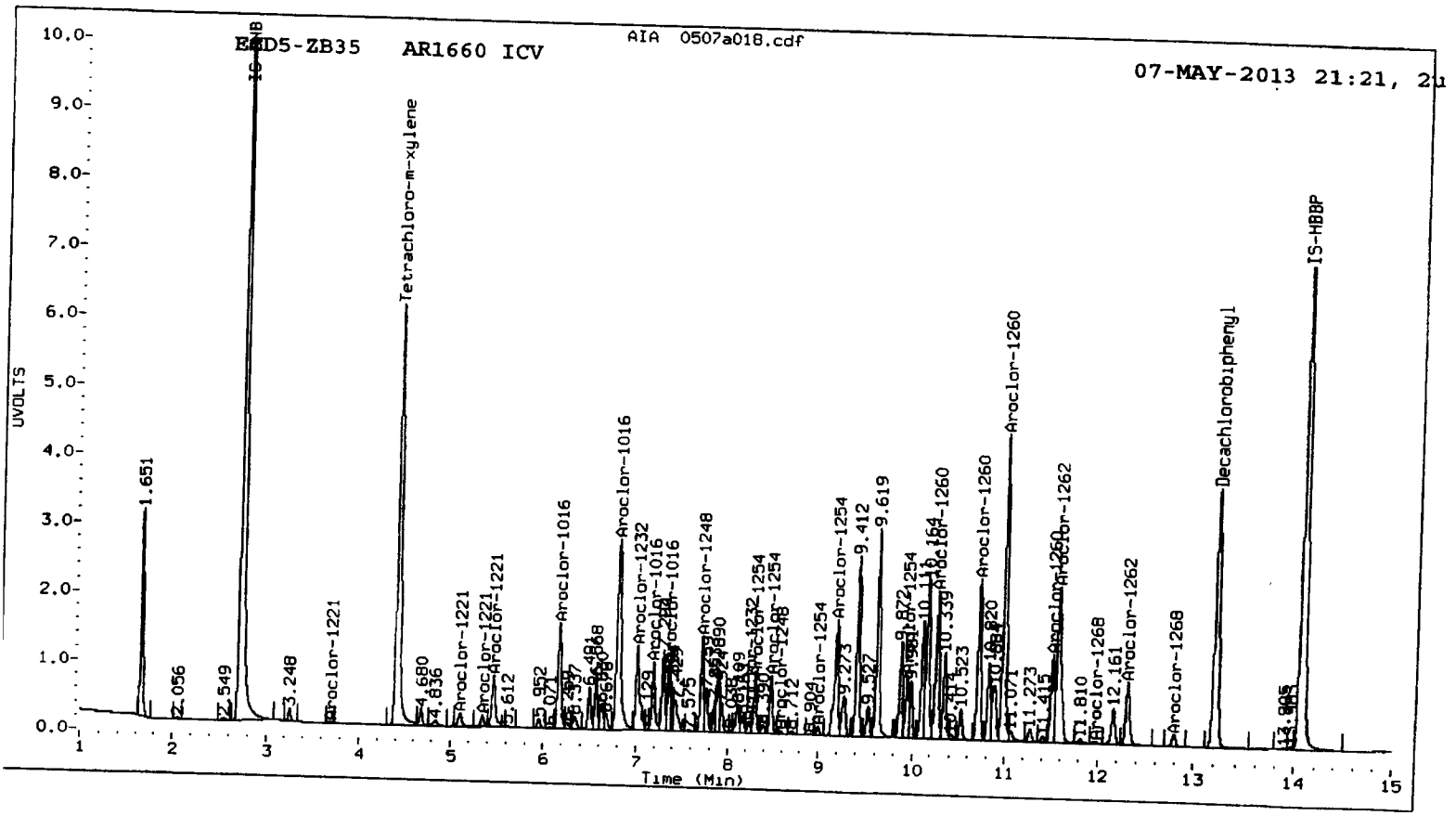
07-MAY-2013 21:21, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB5 AR1660 ICV
AIA 0507a018.cdf
07-MAY-2013 21:21, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1660 ICV
AIA 0507a018.cdf
07-MAY-2013 21:21, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a019.d
Data file 2: 20130507.b/ical-2.b/0507a019.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 07-MAY-2013 21:42
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	32723514	4.412	0.000	8175501	38.5	39.3	2.2	Tetrachloro-m-xylen
12.828	0.000	30887403	13.205	0.000	5217278	35.3	34.6	1.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.1	98.3
Decachlorobiphenyl	88.3	86.6

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54884040	12.1
Hexabromobiphenyl	50004151	58566252	17.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15378234	3.6
Hexabromobiphenyl	9345340	10470042	12.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.060	-0.001	613149	24.8	1	6.177	0.011	386723	44.1
Aroclor-1016	2	6.470	0.001	1448260	19.0	2	6.803	0.002	348544	18.3
Aroclor-1016	3	6.617	0.000	702982	20.6	3	7.186	0.001	92186	18.5
Aroclor-1016	4	6.729	0.001	468102	18.3	4	7.357	-0.001	67755	14.6
Total Col1Ave (4 peaks):					20.7	Total Col2Ave (4 peaks):			23.9	RPD = 14
Corrected Ave (3 peaks):					19.3	Corrected Ave (3 peaks):			17.1	RPD = 12
Aroclor-1221	1	5.064	0.000	5852175	261.7	1	3.696	0.002	409204	259.6
Aroclor-1221	2	6.470	0.002	1448260	211.7	2	5.095	0.001	683679	259.1
Aroclor-1221	3	7.878	0.000	2211598	228.9	3	5.346	0.001	375497	261.3
Aroclor-1221	NS	---			----	4	5.461	0.001	1172244	259.3
Total Col1Ave (3 peaks):					234.1	Total Col2Ave (4 peaks):			259.8	RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			259.3	
Aroclor-1232	1	6.060	-0.001	613149	60.3	1	6.177	0.011	386723	98.0
Aroclor-1232	2	6.470	0.001	1448260	46.5	2	6.803	0.002	348544	44.2
Aroclor-1232	3	7.441	0.000	391114	24.2	3	7.011	0.000	157577	48.0
Aroclor-1232	4	7.878	0.004	2211598	119.0	4	8.239	0.001	57476	20.8
Total Col1Ave (4 peaks):					62.5	Total Col2Ave (4 peaks):			52.8	RPD = 17
Corrected Ave (3 peaks):					43.7	Corrected Ave (3 peaks):			37.7	RPD = 15
Aroclor-1242	1	6.060	0.000	613149	31.0	1	6.177	0.009	386723	55.2
Aroclor-1242	2	6.470	0.002	1448260	23.9	2	6.803	0.000	348544	22.6
Aroclor-1242	3	6.617	0.000	702982	26.0	3	7.011	0.000	157577	24.5
Aroclor-1242	4	7.878	0.005	2211598	66.2	4	8.239	0.000	57476	10.7
Total Col1Ave (4 peaks):					36.8	Total Col2Ave (4 peaks):			28.3	RPD = 26
Corrected Ave (3 peaks):					27.0	Corrected Ave (3 peaks):			19.3	RPD = 33
Aroclor-1248	1	6.470	0.003	1448260	37.5	1	6.803	0.003	348544	36.2
Aroclor-1248	2	7.441	-0.001	391114	9.0	2	7.705	-0.001	87992	11.0
Aroclor-1248	3	7.878	0.004	2211598	40.0	3	8.239	0.000	57476	6.9
Aroclor-1248	4	8.113	0.003	478072	12.4	4	8.578	-0.005	115261	10.7
Total Col1Ave (4 peaks):					24.7	Total Col2Ave (4 peaks):			16.2	RPD = 42*
Corrected Ave (3 peaks):					19.6	Corrected Ave (3 peaks):			9.6	RPD = 69*
Aroclor-1254	1	8.194	0.002	2387711	46.6	1	8.299	0.000	421166	56.5
Aroclor-1254	2	8.563	0.000	484981	14.4	2	8.475	0.000	484426	52.6
Aroclor-1254	3	8.663	-0.037	3505604	49.8	3	8.997	0.000	101058	14.3
Aroclor-1254	4	9.029	-0.024	12603810	173.7	4	9.186	0.040	2047860	135.5
Aroclor-1254	5	9.361	-0.001	15873155	578.6	5	9.939	0.004	484038	56.9
Total Col1Ave (5 peaks):					172.6	Total Col2Ave (5 peaks):			63.2	RPD = 93*
Corrected Ave (4 peaks):					71.1	Corrected Ave (4 peaks):			45.1	RPD = 45*
Aroclor-1260	1	9.967	0.000	17243313	359.5	1	10.261	0.001	3588073	377.8
Aroclor-1260	2	10.282	-0.001	14266396	299.9	2	10.711	0.002	3379274	303.8
Aroclor-1260	3	10.659	0.000	31833903	279.1	3	10.986	0.001	6071825	295.6
Aroclor-1260	4	11.059	0.002	10098810	181.8	4	11.507	0.002	2715788	487.8
Aroclor-1260	5	11.248	0.001	14639139	492.6	NS	---			----
Total Col1Ave (5 peaks):					322.6	Total Col2Ave (4 peaks):			366.3	RPD = 13
Corrected Ave (4 peaks):					280.1	Corrected Ave (3 peaks):			325.7	RPD = 15
Aroclor-1262	1	10.282	0.000	14266396	260.2	1	10.261	0.001	3588073	247.8
Aroclor-1262	2	10.659	0.000	31833903	247.1	2	10.711	0.001	3379274	255.2
Aroclor-1262	3	11.059	0.000	10098810	247.5	3	10.986	0.001	6071825	244.5
Aroclor-1262	4	11.248	0.000	14639139	255.6	4	11.569	0.002	4096791	253.8
Aroclor-1262	5	11.917	-0.001	11001330	250.3	5	12.308	0.002	1957515	251.1
Total Col1Ave (5 peaks):					252.1	Total Col2Ave (5 peaks):			250.5	RPD = 1
Corrected Ave (4 peaks):					250.1	Corrected Ave (4 peaks):			249.3	RPD = 0
Aroclor-1268	1	11.173	-0.002	12852069	104.3	1	11.507	0.000	2715788	107.5

Aroclor-1268	2	11.248	0.002	14639139	107.4	2	11.569	-0.004	4096791	172.0
Aroclor-1268	3	11.648	0.016	5026777	49.7	3	11.970	0.001	170870	9.1
Aroclor-1268	4	12.421	0.000	3714076	13.0	4	12.792	0.000	626393	12.8

Total Col1Ave (4 peaks): 68.6 Total Col2Ave (4 peaks): 75.3 RPD = 9

Corrected Ave (3 peaks): 55.7 Corrected Ave (3 peaks): 43.1 RPD = 25

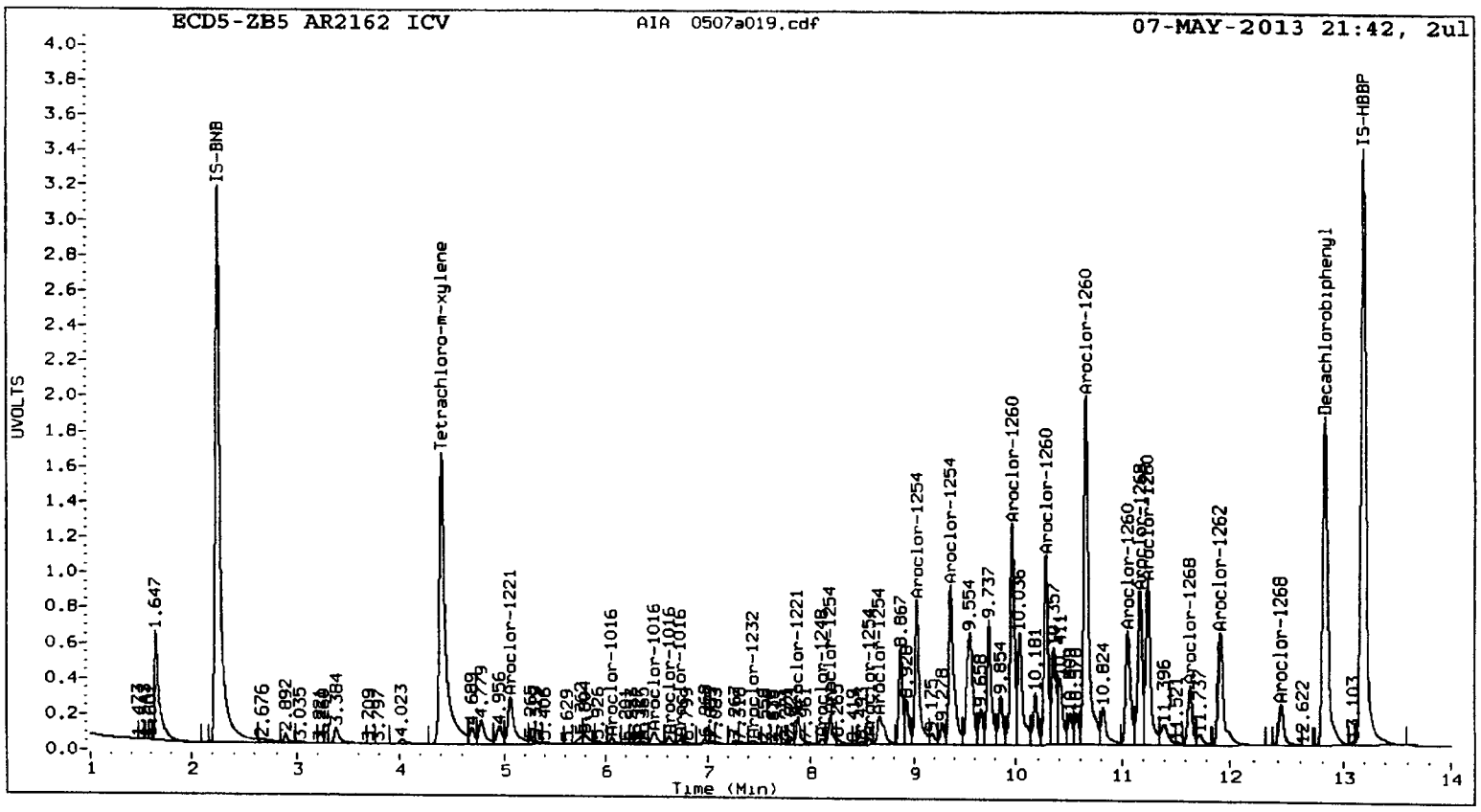
Total PCB Area Col1 (4.511 - 12.728) = 265426514 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 50390342 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR99:01898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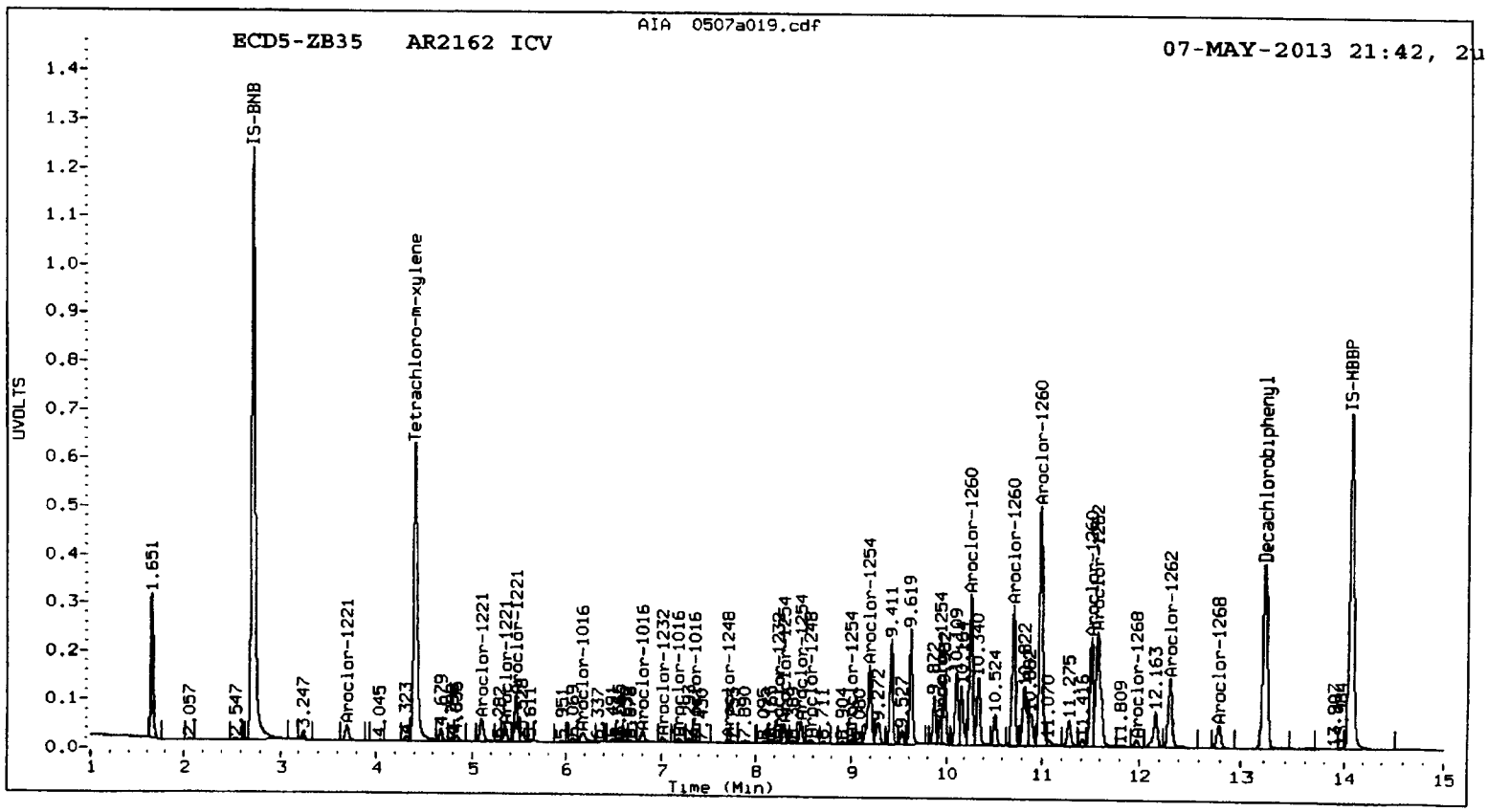
AIA 0507a019.cdf
07-MAY-2013 21:42, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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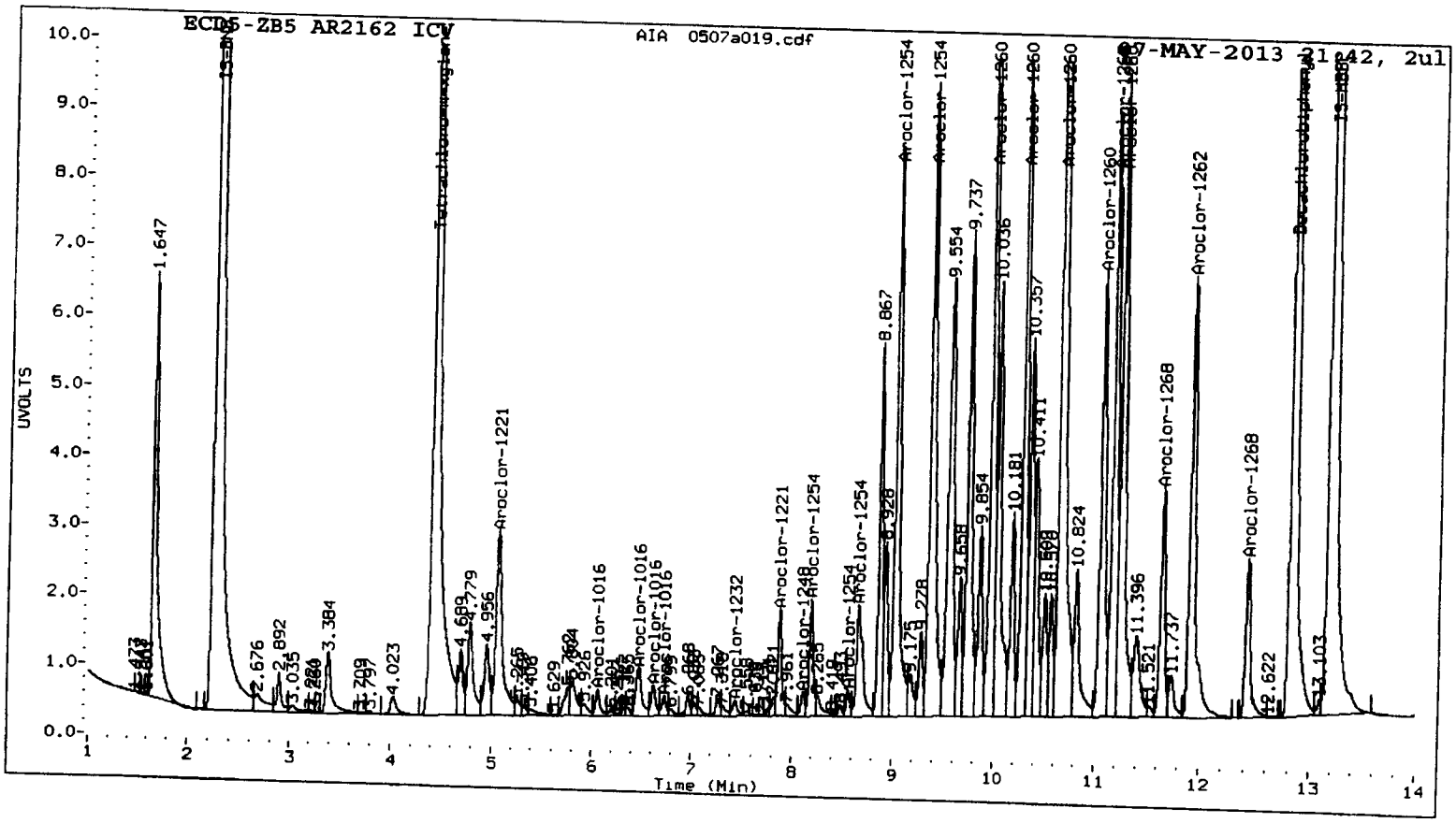
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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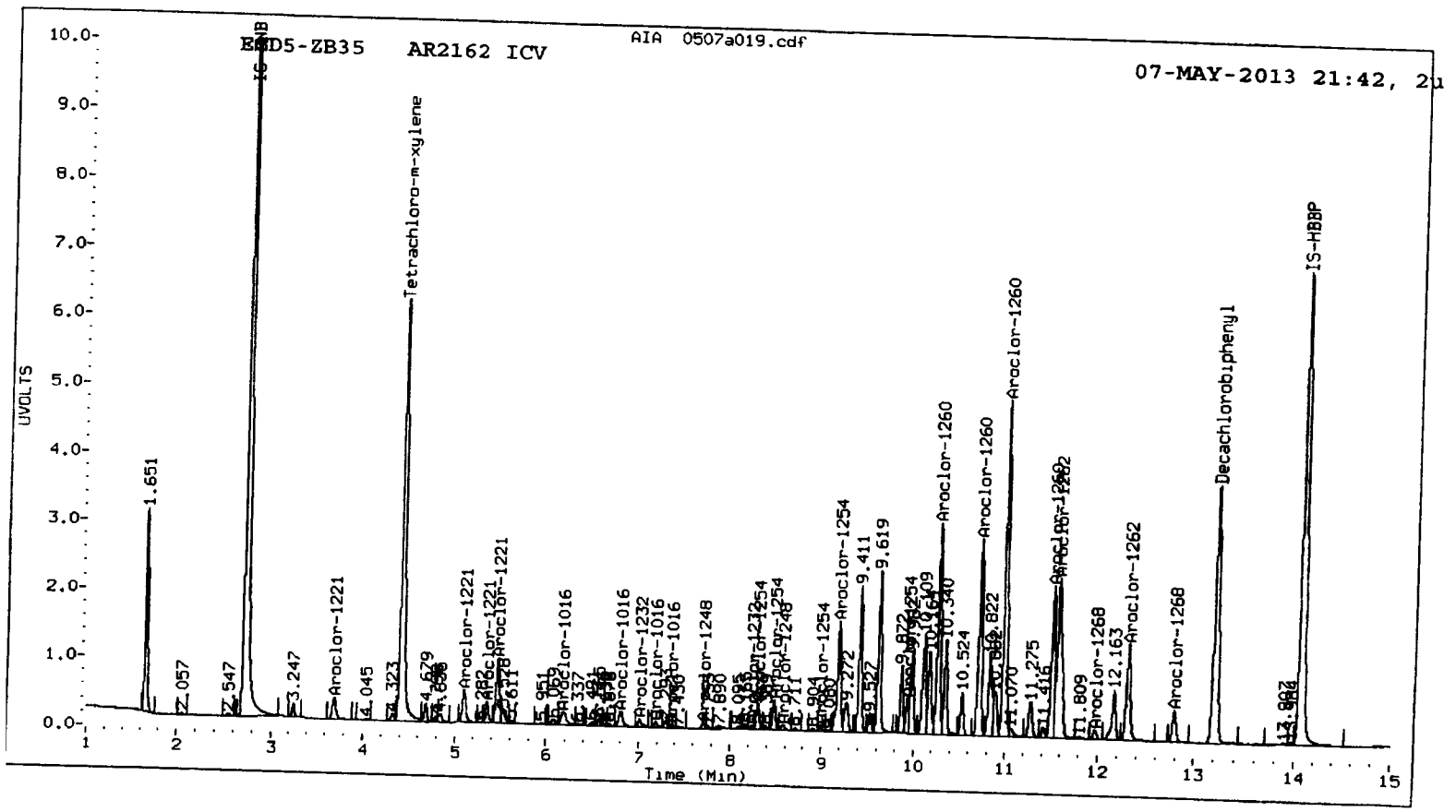
AIA 0507a019.cdf
07-MAY-2013 21:42, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 21:42, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

APG: 01492

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a020.d
Data file 2: 20130507.b/ical-2.b/0507a020.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 07-MAY-2013 22:02
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	32178954	4.411	-0.001	8089911	37.9	39.1	3.0	Tetrachloro-m-xylen
12.827	-0.001	41292857	13.204	-0.001	6993423	45.8	45.1	1.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.8	97.7
Decachlorobiphenyl	114.6	112.8

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54747539	11.8
Hexabromobiphenyl	50004151	60316622	20.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15307215	3.2
Hexabromobiphenyl	9345340	10773388	15.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.060	-0.001	2754975	111.6	1	6.165	-0.001	1064635	121.9
Aroclor-1016	2	6.468	0.000	8293080	109.1	2	6.801	0.001	2096355	110.4
Aroclor-1016	3	6.617	0.000	3727765	109.5	3	7.186	0.000	553151	111.4
Aroclor-1016	4	6.729	0.001	2773984	109.0	4	7.357	-0.001	453332	98.0
Total Col1Ave (4 peaks):					109.8	Total Col2Ave (4 peaks):				110.4 RPD = 1
Corrected Ave (3 peaks):					109.2	Corrected Ave (3 peaks):				106.6 RPD = 2
Aroclor-1221	1	5.063	0.000	4449445	199.5	1	3.695	0.001	235147	149.8
Aroclor-1221	2	6.468	0.000	8293080	1215.2	2	5.097	0.002	434232	165.3
Aroclor-1221	3	7.874	-0.004	4148169	430.4	3	5.346	0.001	253609	177.3
Aroclor-1221	NS	---			----	4	5.461	0.000	945969	210.2
Total Col1Ave (3 peaks):					615.0	Total Col2Ave (4 peaks):				175.7 RPD = 111*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				164.2
Aroclor-1232	1	6.060	-0.001	2754975	271.7	1	6.165	0.000	1064635	271.0
Aroclor-1232	2	6.468	-0.001	8293080	267.2	2	6.801	0.000	2096355	267.3
Aroclor-1232	3	7.441	0.000	3759089	233.0	3	7.010	-0.001	874326	267.4
Aroclor-1232	4	7.874	0.000	4148169	223.8	4	8.239	0.000	645903	235.3
Total Col1Ave (4 peaks):					248.9	Total Col2Ave (4 peaks):				260.3 RPD = 4
Corrected Ave (3 peaks):					241.3	Corrected Ave (3 peaks):				256.7 RPD = 6
Aroclor-1242	1	6.060	0.000	2754975	139.7	1	6.165	-0.002	1064635	152.7
Aroclor-1242	2	6.468	0.000	8293080	137.1	2	6.801	-0.001	2096355	136.8
Aroclor-1242	3	6.617	0.001	3727765	138.1	3	7.010	-0.001	874326	136.6
Aroclor-1242	4	7.874	0.001	4148169	124.5	4	8.239	0.000	645903	120.5
Total Col1Ave (4 peaks):					134.9	Total Col2Ave (4 peaks):				136.6 RPD = 1
Corrected Ave (3 peaks):					133.3	Corrected Ave (3 peaks):				131.3 RPD = 1
Aroclor-1248	1	6.468	0.002	8293080	215.2	1	6.801	0.002	2096355	218.6
Aroclor-1248	2	7.441	-0.001	3759089	86.7	2	7.705	-0.002	686789	86.3
Aroclor-1248	3	7.874	0.000	4148169	75.3	3	8.239	0.000	645903	78.4
Aroclor-1248	4	8.111	0.001	3087951	80.4	4	8.585	0.002	769968	71.9
Total Col1Ave (4 peaks):					114.4	Total Col2Ave (4 peaks):				113.8 RPD = 1
Corrected Ave (3 peaks):					80.8	Corrected Ave (3 peaks):				78.9 RPD = 2
Aroclor-1254	1	8.189	-0.003	1593730	31.2	1	8.297	-0.002	213975	28.8
Aroclor-1254	2	8.564	0.000	750392	22.3	2	8.476	0.001	185955	20.3
Aroclor-1254	3	8.700	0.001	1491908	21.2	3	8.996	0.000	159149	22.7
Aroclor-1254	4	9.035	-0.018	1725047	23.8	4	9.148	0.001	236498	15.7
Aroclor-1254	5	9.362	0.000	1079040	39.4	5	9.932	-0.003	135485	16.0
Total Col1Ave (5 peaks):					27.6	Total Col2Ave (5 peaks):				20.7 RPD = 29
Corrected Ave (4 peaks):					24.6	Corrected Ave (4 peaks):				18.7 RPD = 28
Aroclor-1260	1	9.967	0.000	9566796	193.7	1	10.260	0.000	2036369	208.4
Aroclor-1260	2	10.283	-0.001	1540353	31.4	2	10.711	0.002	2209727	193.1
Aroclor-1260	3	10.658	-0.001	7448068	63.4	3	10.985	0.000	1398883	66.2
Aroclor-1260	4	11.059	0.002	580097	10.1	4	11.505	0.000	6860604	1197.5
Aroclor-1260	5	11.246	-0.001	39714854	1297.5	NS	---			----
Total Col1Ave (5 peaks):					319.2	Total Col2Ave (4 peaks):				416.3 RPD = 26
Corrected Ave (4 peaks):					74.7	Corrected Ave (3 peaks):				155.9 RPD = 70*
Aroclor-1262	1	10.283	0.000	1540353	27.3	1	10.260	0.000	2036369	136.7
Aroclor-1262	2	10.658	0.000	7448068	56.1	2	10.711	0.001	2209727	162.2
Aroclor-1262	3	11.059	0.000	580097	13.8	3	10.985	-0.001	1398883	54.7
Aroclor-1262	4	11.246	-0.001	39714854	673.2	4	11.572	0.005	7134271	429.5
Aroclor-1262	5	11.918	0.000	12822548	283.2	5	12.307	0.001	2273742	283.5
Total Col1Ave (5 peaks):					210.7	Total Col2Ave (5 peaks):				213.3 RPD = 1
Corrected Ave (4 peaks):					95.1	Corrected Ave (4 peaks):				159.3 RPD = 50*
Aroclor-1268	1	11.174	-0.001	33104578	260.8	1	11.505	-0.001	6860604	263.8

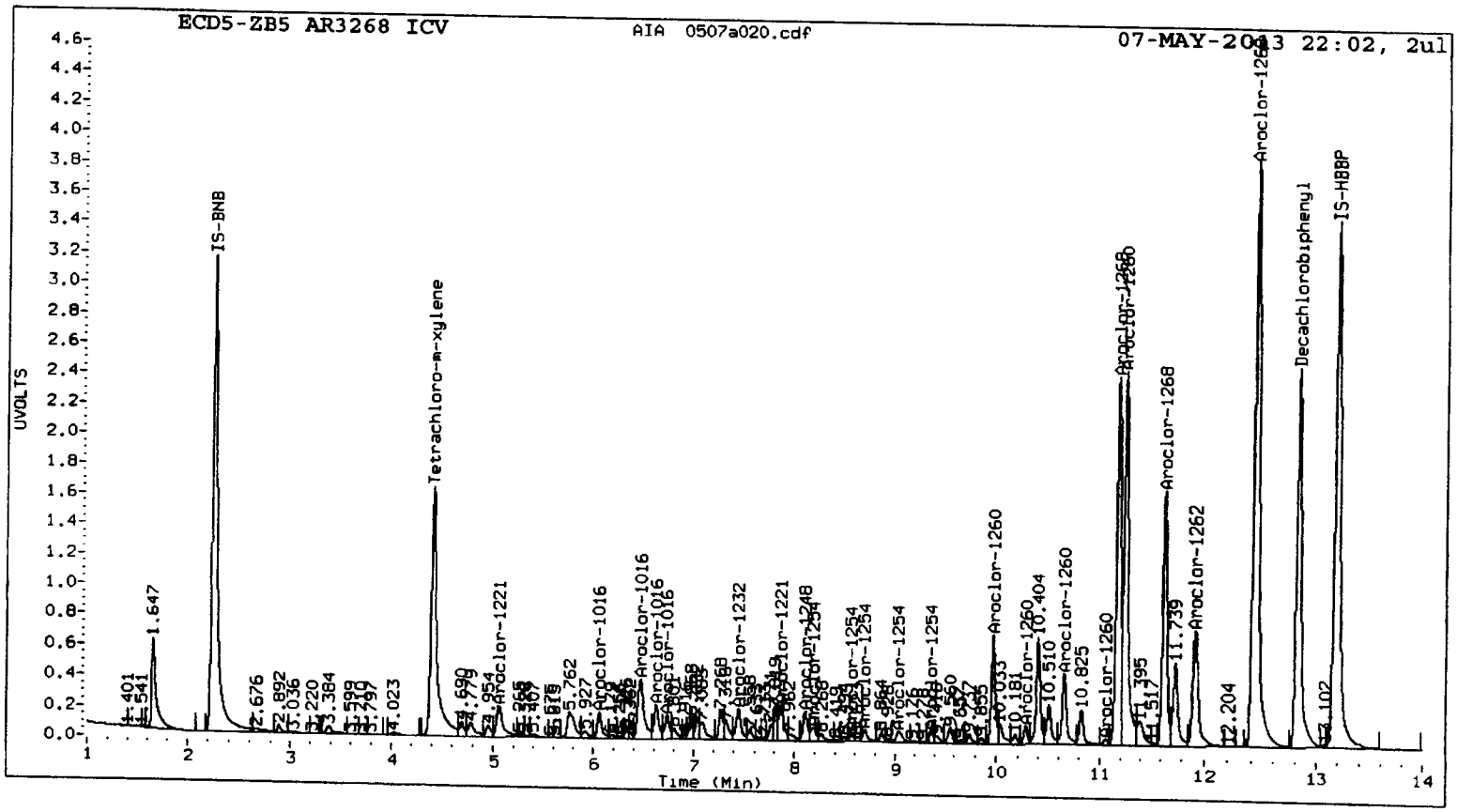
Aroclor-1268 2	11.246	0.000	39714854	282.9	2	11.572	-0.001	7134271	291.0	
Aroclor-1268 3	11.632	-0.001	24428545	234.4	3	11.969	0.000	4550691	234.5	
Aroclor-1268 4	12.422	0.000	64120345	218.3	4	12.791	-0.002	11103711	220.9	
Total Col1Ave (4 peaks):			249.1		Total Col2Ave (4 peaks):			252.6	RPD = 1	
Corrected Ave (3 peaks):			237.8		Corrected Ave (3 peaks):			239.8	RPD = 1	

Total PCB Area Col1 (4.511 - 12.728) = 308240732 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 58535775 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

WR99:01885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AIA 0507a020.cdf
07-MAY-2013 22:02, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
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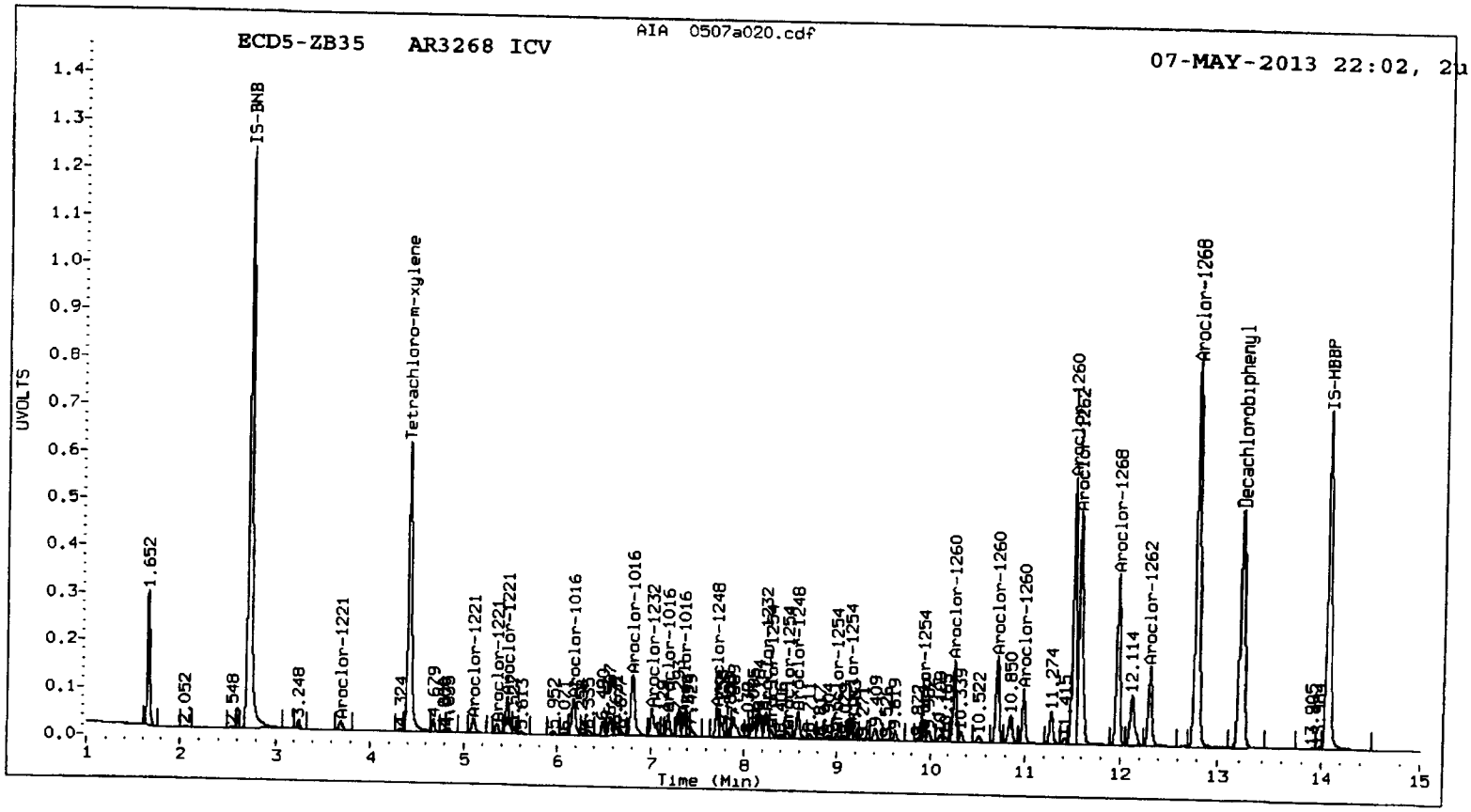
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 22:02, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
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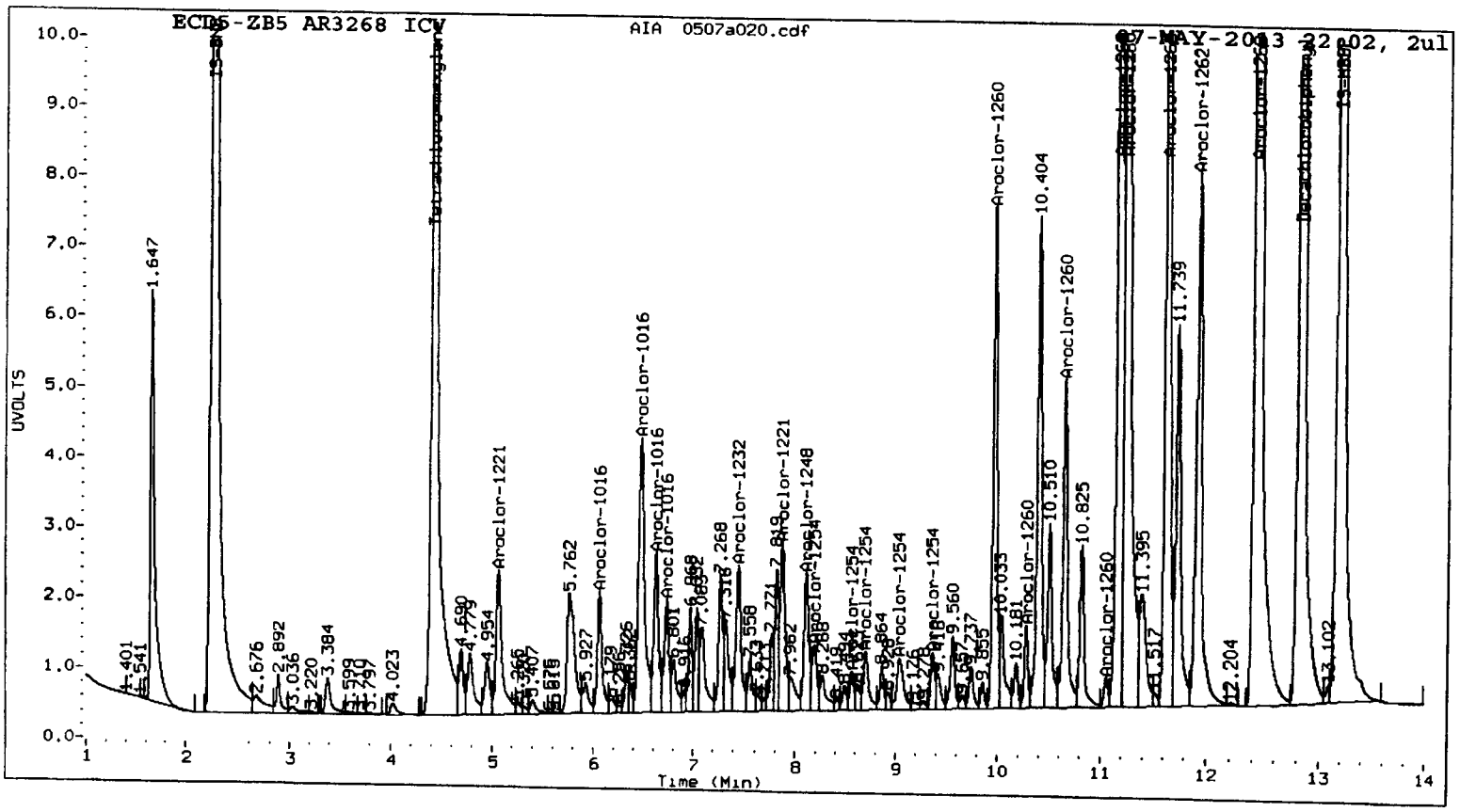
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 22:02, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
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Aroclor-1260
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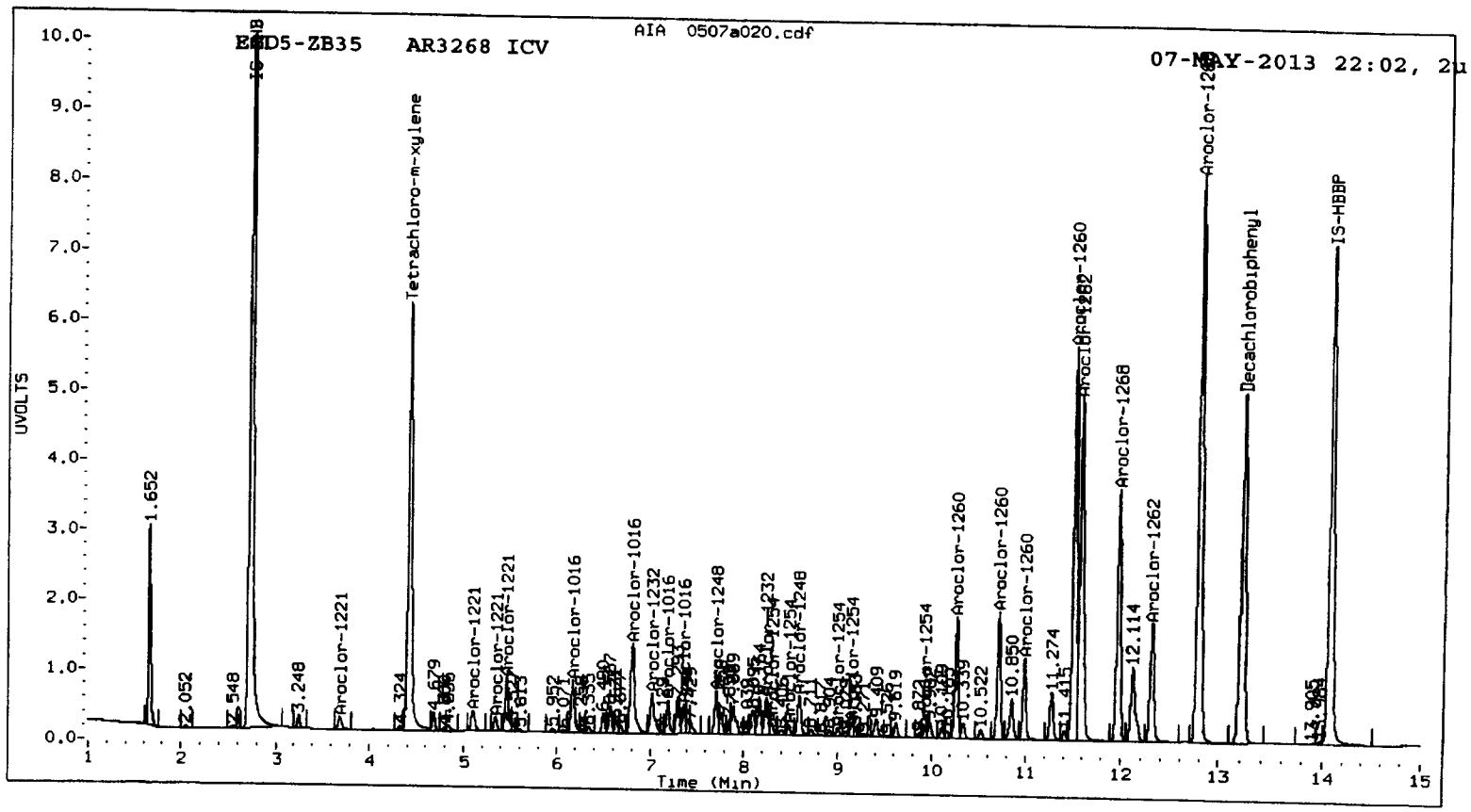
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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AIA 0507a020.cdf
07-MAY-2013 22:02, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
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Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130507.b/ddt-1.b/0507a021.d ARI ID: 0.1 PPM DDTS

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
8.156	0.000	70648560	8.560	0.000	14556975	0.100	0.100	0.0	2,4-DDE
8.707	0.000	75652806	9.246	0.000	13980580	0.100	0.100	0.0	2,4-DDD
9.210	0.000	80992371	9.713	0.000	35257917	0.100	0.200#	66.7*	2,4-DDT
8.589	0.000	98960725	8.949	0.000	23356763	0.100	0.100	0.0	4,4-DDE
9.163	0.000	76831347	9.713	0.000	35257917	0.100	0.200#	66.7*	4,4-DDD
9.675	0.000	88164078	10.148	0.000	19956133	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/08/13

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 07-MAY-2013 22:43 Init. Calib. Date: 07-MAY-2013

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.590	867273
4,4-DDD	9.168	6982253
4,4-DDT	9.676	87775915

Col 1: 4,4-DDT Percent Breakdown = 8.2 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.950	168832
4,4-DDD/2,4-DDT	9.719	1384968
4,4-DDT	10.149	20474911

Col 2: 4,4-DDT Percent Breakdown = 7.1 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/08/13

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WR99 | WS21 Client ID: NPDES

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 05/07/13 Analysis Start Date: 06/12/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ___	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / <10 %
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / ✓
Internal STD. within 50-200%?	NA / Y / N / ___	MS / MSD RPD ≤30%?	NA / ✓
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ___

Detail problems, corrective actions and/or other pertinent information below

went w/ best fit, y-flags are for ranges

(Review 1) Analyst: _____ **Date:** 06/13/13

(Review 2) Reviewer: _____ **Date:** 6/13/13

Analytical Resources Inc.: Organics Instrument Log

ECD-5 Serial No.: US00034118

Date: 06/12/13 Analysis: PCB Analyst: JL

Column 1 Serial No.: 196390 Column Type: ZB5

Column 2 Serial No.: 197259 Column Type: ZB35

GC Method: PCB 2 ICal Date: 05/07/13 Injection Volume: 2µL

IS	Ical/Ccal	ICV
2006-1	B161	B182
	B162	B191
	B173	B192
	B174	B195
	B175	B194
	B207	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	12-JUN-2013 14:53	0612b001.d	1	RINSE
2	12-JUN-2013 15:13	0612b002.d	1	DDT
3	12-JUN-2013 15:33	0612b003.d	1	DDT BD
4	12-JUN-2013 15:54	0612b004.d	1	AR1254
5	12-JUN-2013 16:14	0612b005.d	1	AR1660
6	12-JUN-2013 16:34	0612b006.d	1	WS49MBS1
7	12-JUN-2013 16:54	0612b007.d	1	WS49LCSS1
8	12-JUN-2013 17:15	0612b008.d	1	WS49LCSDS1
9	12-JUN-2013 17:35	0612b009.d	1	WS49A
10	12-JUN-2013 17:55	0612b010.d	1	WS49B
11	12-JUN-2013 18:16	0612b011.d	1	WS49C
12	12-JUN-2013 18:36	0612b012.d	1	WS49D
13	12-JUN-2013 18:56	0612b013.d	1	AR1248
14	12-JUN-2013 19:16	0612b014.d	1	AR1660
15	12-JUN-2013 19:37	0612b015.d	1	WR99D
16	12-JUN-2013 19:57	0612b016.d	1	WR99DMS
17	12-JUN-2013 20:17	0612b017.d	1	WR99DMSD
18	12-JUN-2013 20:38	0612b018.d	10	WR99E
19	12-JUN-2013 20:58	0612b019.d	10	WR99F
20	12-JUN-2013 21:18	0612b020.d	1	WS21A
21	12-JUN-2013 21:39	0612b021.d	10	WS69A
22	12-JUN-2013 21:59	0612b022.d	1	AR1242
23	12-JUN-2013 22:19	0612b023.d	1	AR1660

JL 06/13/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/0612-1.b

ARI Job No.: RINS Method: PCB1.m Instrument: ecd5.i Date: 12-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1453	0612b001.d	RINSE		1	NO MANUAL INTEGRATION
1513	0612b002.d	DDT		1	NO MANUAL INTEGRATION
1533	0612b003.d	DDT BD		1	NO MANUAL INTEGRATION
1554	0612b004.d	AR1254		1	NO MANUAL INTEGRATION
1614	0612b005.d	AR1660		1	NO MANUAL INTEGRATION
1634	0612b006.d	WS69MBS1	WS69MBS1	1	NO MANUAL INTEGRATION
1654	0612b007.d	WS69LCSS1	WS69LCSS1	1	NO MANUAL INTEGRATION
1715	0612b008.d	WS69LCSDS1	WS69LCSDS1	1	NO MANUAL INTEGRATION
1735	0612b009.d	WS49A	FA-1-S	1	NO MANUAL INTEGRATION
1755	0612b010.d	WS49B	FA-2-4	1	NO MANUAL INTEGRATION
1816	0612b011.d	WS49C	FA-3-2	1	NO MANUAL INTEGRATION
1836	0612b012.d	WS49D	FA-4-3	1	NO MANUAL INTEGRATION
1856	0612b013.d	AR1248		1	NO MANUAL INTEGRATION
1916	0612b014.d	AR1660		1	NO MANUAL INTEGRATION
1937	0612b015.d	WR99D	KC-VT-1593	1	NO MANUAL INTEGRATION
1957	0612b016.d	WR99DMS	KC-VT-1593	1	NO MANUAL INTEGRATION
2017	0612b017.d	WR99DMSD	KC-VT-1593	1	NO MANUAL INTEGRATION
2038	0612b018.d	WR99E	KC-CB-01-2	10	NO MANUAL INTEGRATION
2058	0612b019.d	WR99F	KC-DD-2009	10	NO MANUAL INTEGRATION
2118	0612b020.d	WS21A	KC-IV-SPS-	1	NO MANUAL INTEGRATION

2139 06l2b021.d WS69A SD-PEB015 10 NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/0612-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2159	0612b022.d	AR1242		1	NO MANUAL INTEGRATION
2219	0612b023.d	AR1660		1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0613-1.b/0613b002.d
Data file 2: 20130507.b/0613-2.b/0613b002.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 13-JUN-2013 07:06
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.409	0.000	35046030	4.405	-0.001	8459599	39.5	38.6	2.4	Tetrachloro-m-xylen
12.828	0.000	35861980	13.201	0.001	6171591	36.8	36.8	0.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	98.8	96.5
Decachlorobiphenyl	92.0	91.9

R 06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57171174	16.7
Hexabromobiphenyl	50004151	65204121	30.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16213048	9.3
Hexabromobiphenyl	9345340	11665185	24.8

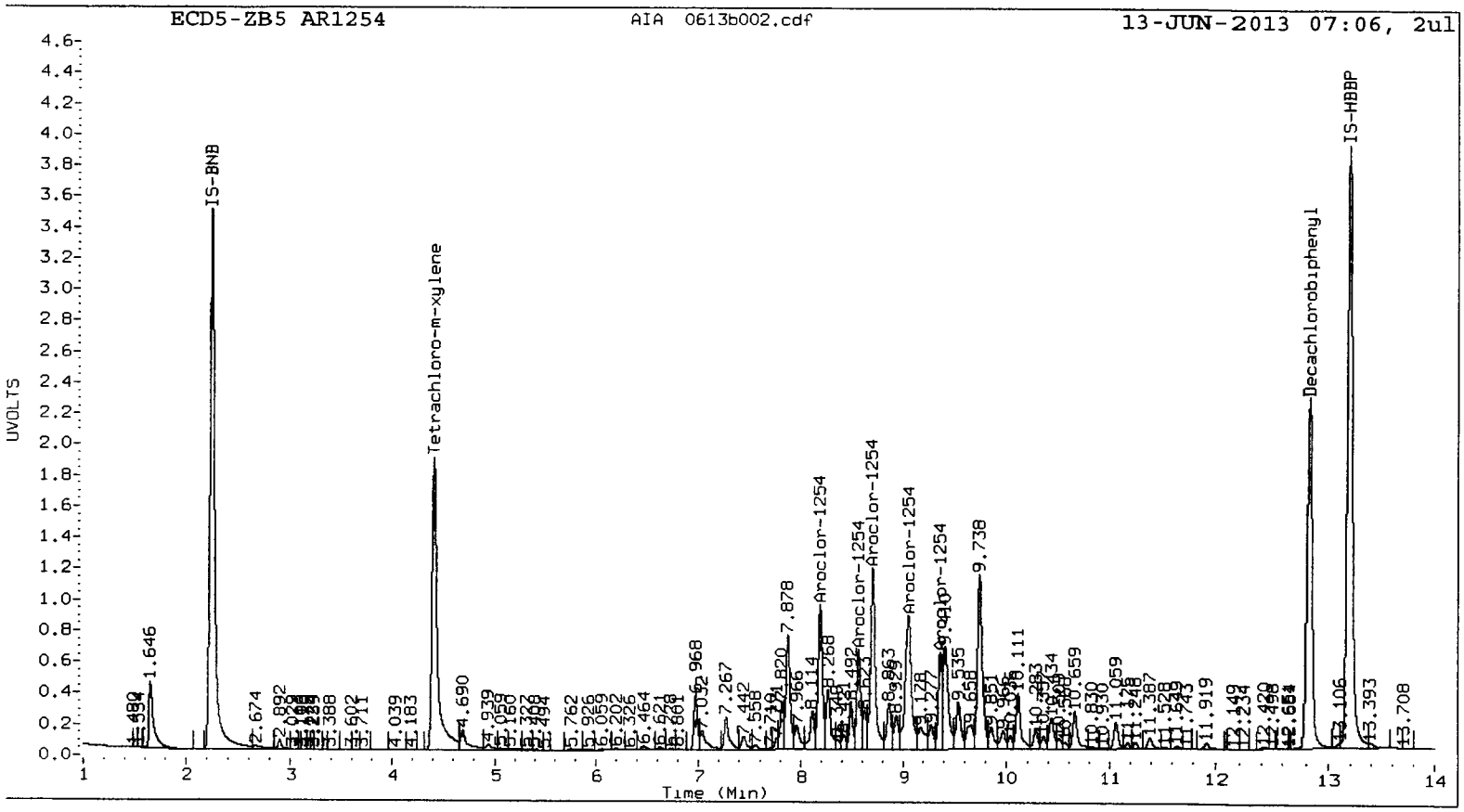
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	8.192	0.000	13939105	261.4	1	8.294	0.000	1927427	245.2
Aroclor-1254	2	8.564	0.000	8343631	237.1	2	8.471	0.000	2377277	244.8
Aroclor-1254	3	8.700	0.000	18489729	252.0	3	8.992	0.000	1835668	246.7
Aroclor-1254	4	9.054	0.000	19637939	259.9	4	9.143	0.000	3857060	242.1
Aroclor-1254	5	9.361	0.000	7590285	265.6	5	9.929	0.000	2256406	251.5
Total Col1Ave (5 peaks):				255.2		Total Col2Ave (5 peaks):			246.1	RPD = 4
Corrected Ave (4 peaks):				252.6		Corrected Ave (4 peaks):			244.7	RPD = 3

Total PCB Area Col1 (4.509 - 12.728) = 205248703 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.505 - 13.100) = 37978214 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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13-JUN-2013 07:06, 2ul
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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
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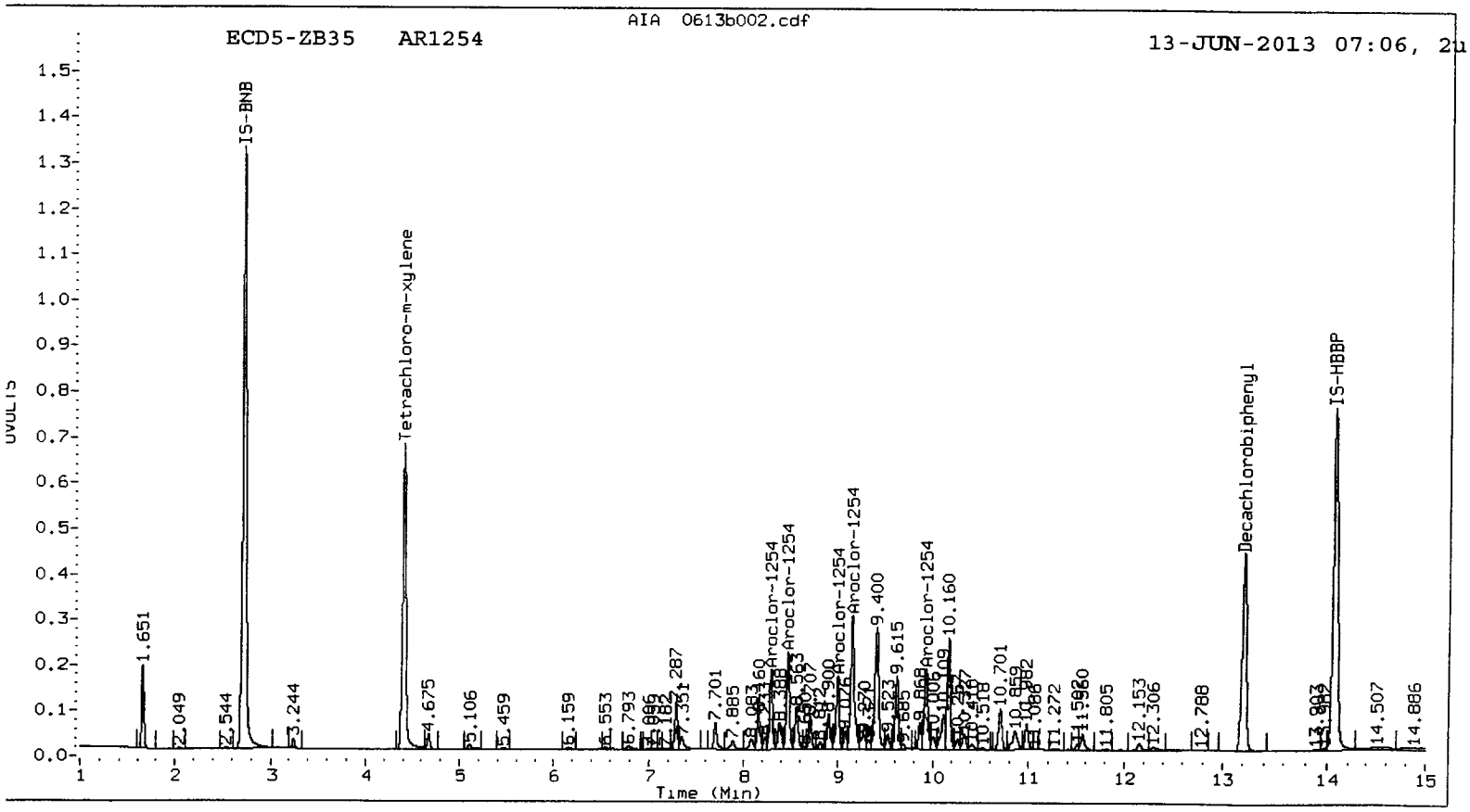
7.878
9.738
13.106
13.393
13.708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ECD5-ZB35 AR1254
13-JUN-2013 07:06, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
1.651
4.675
9.400
9.615
10.160
13.244
14.507
14.886

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0613-1.b/0613b003.d
Data file 2: 20130507.b/0613-2.b/0613b003.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 13-JUN-2013 07:26
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	35717356	4.407	0.001	8575177	39.4	38.4	2.6	Tetrachloro-m-xylen
12.826	0.000	36578864	13.200	0.000	6285708	36.7	36.7	0.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	98.6	96.0
Decachlorobiphenyl	91.6	91.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	58417745	19.3
Hexabromobiphenyl	50004151	66796809	33.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16508980	11.2
Hexabromobiphenyl	9345340	11907083	27.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

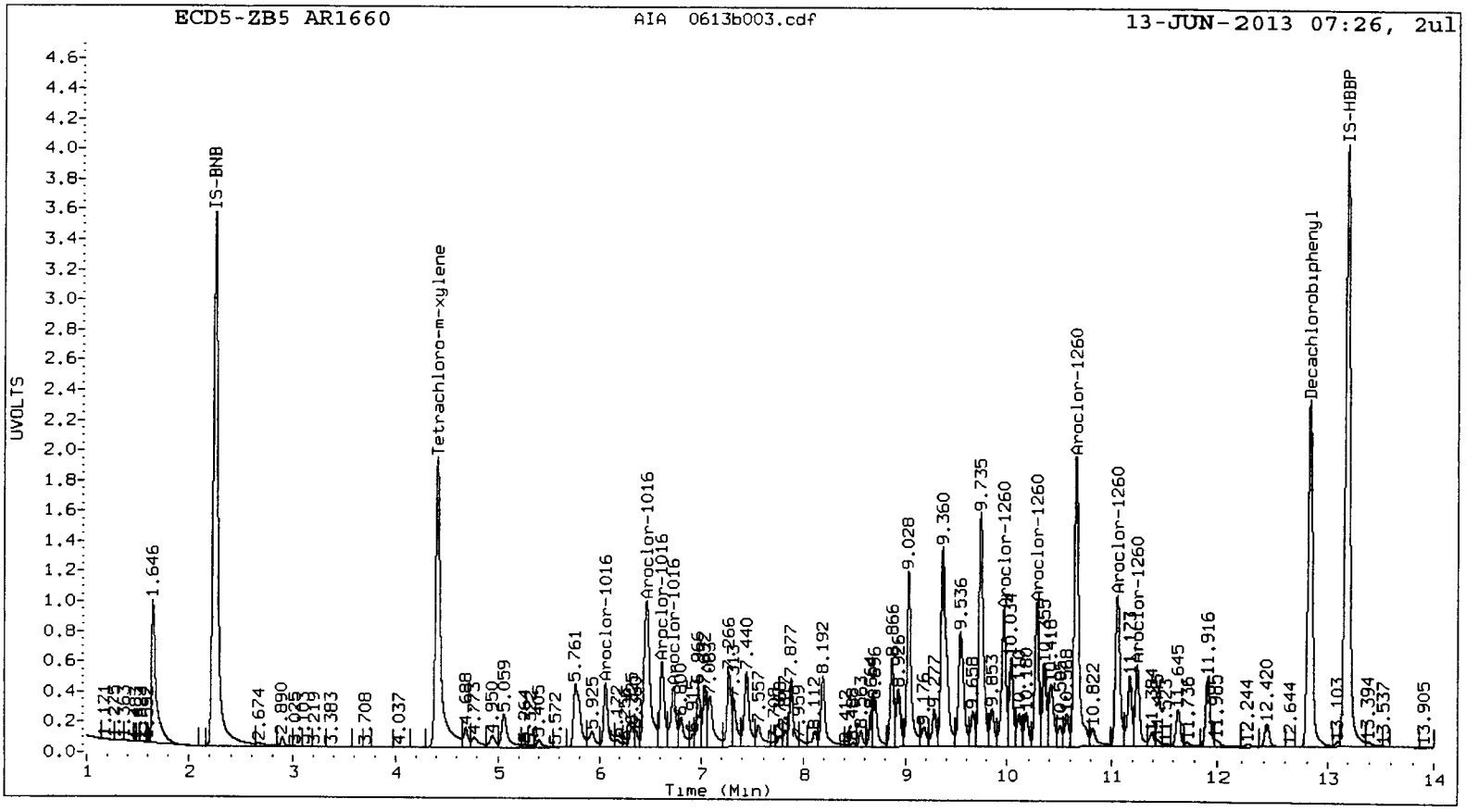
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.058	0.000	6599952	250.6	1	6.161	0.000	2227716	236.5
Aroclor-1016	2	6.466	0.000	20388520	251.4	2	6.797	0.001	4966004	242.5
Aroclor-1016	3	6.615	0.000	8860575	243.8	3	7.181	0.001	1321494	246.8
Aroclor-1016	4	6.727	0.000	6762774	249.1	4	7.354	0.001	1179668	236.5
Total Col1Ave (4 peaks):					248.7	Total Col2Ave (4 peaks):				240.6 RPD = 3
Corrected Ave (3 peaks):					247.8	Corrected Ave (3 peaks):				238.5 RPD = 4
Aroclor-1260	1	9.965	0.000	12886944	235.6	1	10.257	0.000	2423544	224.4
Aroclor-1260	2	10.282	0.000	12773955	235.5	2	10.706	0.000	2905364	229.7
Aroclor-1260	3	10.657	0.000	30967333	238.1	3	10.982	0.000	5575987	238.7
Aroclor-1260	4	11.058	0.000	15773017	249.0	4	11.502	0.001	1555580	245.7
Aroclor-1260	5	11.247	0.000	8402933	247.9	NS	---			----
Total Col1Ave (5 peaks):					241.2	Total Col2Ave (4 peaks):				234.6 RPD = 3
Corrected Ave (4 peaks):					239.3	Corrected Ave (3 peaks):				230.9 RPD = 4

Total PCB Area Col1 (4.507 - 12.726) = 392617853 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.505 - 13.100) = 75061481 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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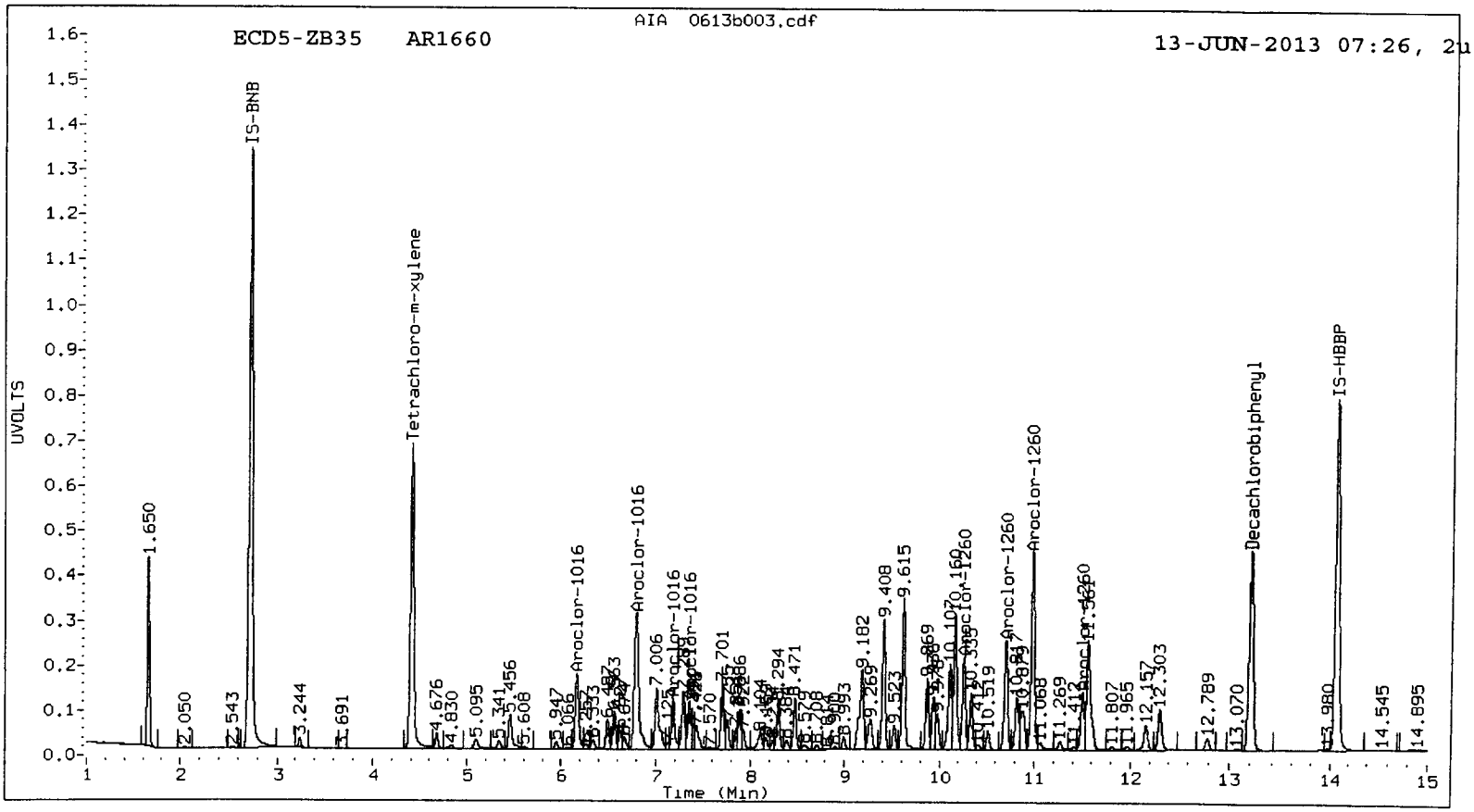
13-JUN-2013 07:26, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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13-JUN-2013 07:26, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b004.d
Data file 2: 20130507.b/0612-2.b/0612b004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 12-JUN-2013 15:54
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	34259147	4.411	0.004	8267921	39.7	38.5	3.0	Tetrachloro-m-xylen
12.825	0.000	33437227	13.202	0.001	5647526	35.5	37.8	6.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	99.1	96.2
Decachlorobiphenyl	88.6	94.6

06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	55717451	13.8
Hexabromobiphenyl	50004151	63128266	26.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15886848	7.1
Hexabromobiphenyl	9345340	10370835	11.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	8.190	0.000	12800180	246.3	1	8.298	0.000	1821265	236.4
Aroclor-1254	2	8.561	0.000	7678448	223.9	2	8.474	0.000	2247284	236.1
Aroclor-1254	3	8.698	0.000	16704554	233.6	3	8.996	0.000	1747052	239.7
Aroclor-1254	4	9.051	0.000	17762333	241.2	4	9.147	0.000	3635840	232.9
Aroclor-1254	5	9.359	0.000	6890957	247.4	5	9.932	0.000	2114032	240.5

Total Col1Ave (5 peaks): 238.5 Total Col2Ave (5 peaks): 237.1 RPD = 1

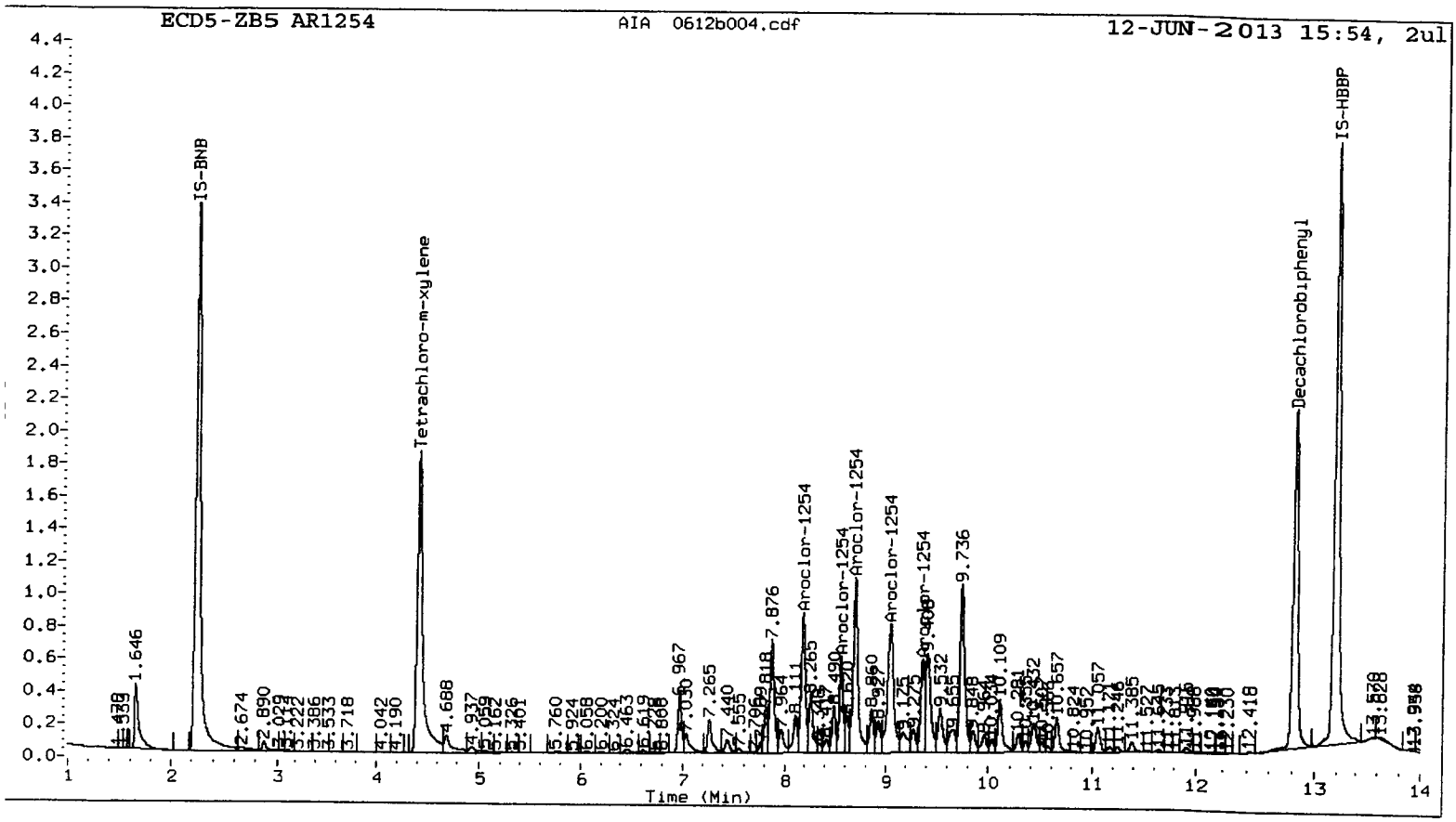
Corrected Ave (4 peaks): 236.3 Corrected Ave (4 peaks): 236.3 RPD = 0

Total PCB Area Col1 (4.507 - 12.726) = 185524234 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 36761122 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR99:61904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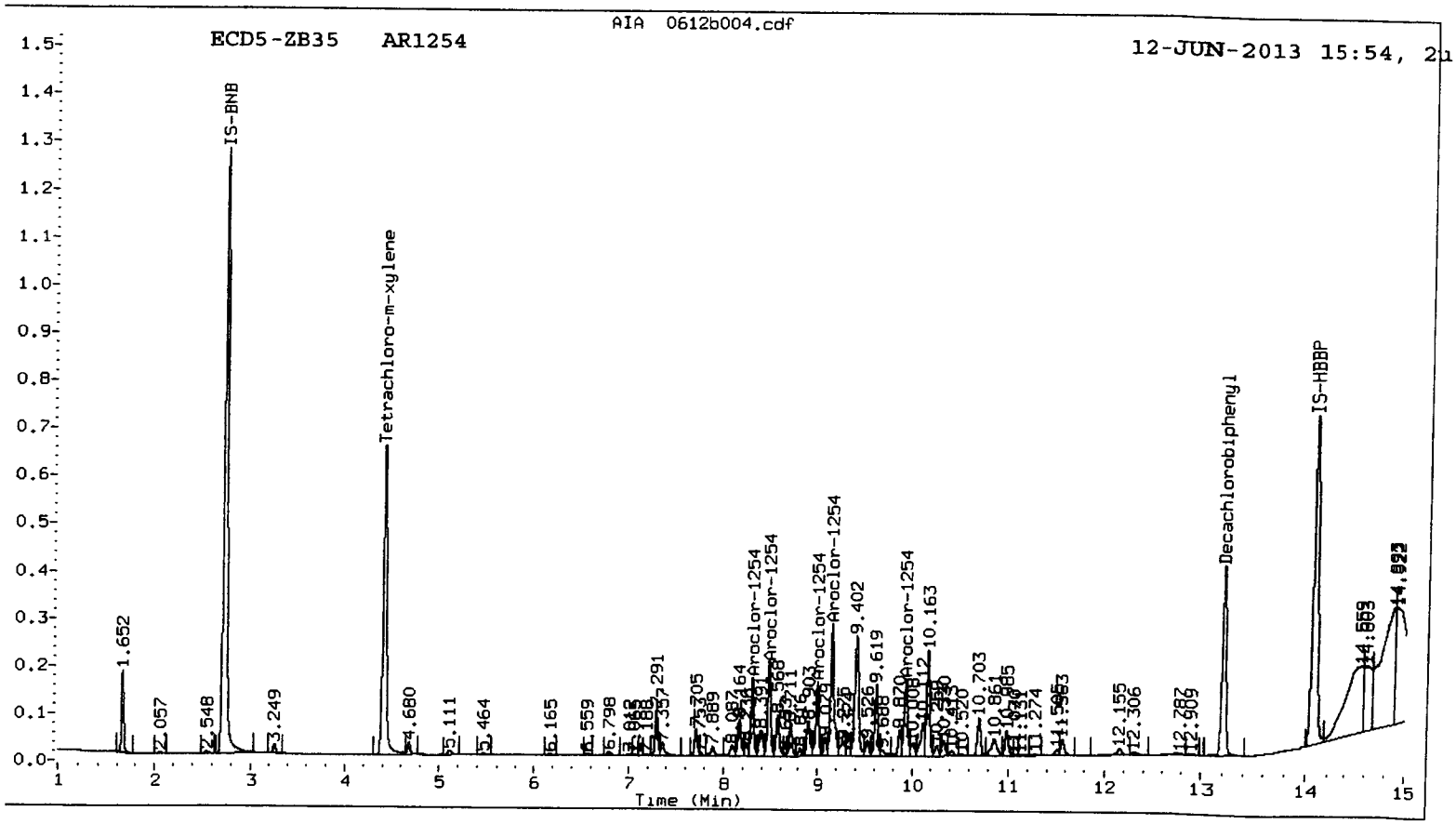
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
Time (Min)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Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0613-1.b/0613b004.d
Data file 2: 20130507.b/0613-2.b/0613b004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WR99F
Client ID: KC-DD-2009-20130530
Injection Date: 13-JUN-2013 07:46
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 100.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.404	-0.003	396341	4.409	0.003	71852	0.5	0.4	31.0	Tetrachloro-m-xylen
12.825	-0.001	762980	13.201	0.001	102002	0.8	0.6	24.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	122.0	89.2
Decachlorobiphenyl	194.8	152.1

06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52387910	7.0
Hexabromobiphenyl	50004151	65560650	31.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14884001	0.3
Hexabromobiphenyl	9345340	11649720	24.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.061	0.003	48303	2.0	1	6.215	0.054	13133	1.5
Aroclor-1016	2	6.464	-0.002	197887	2.7	2	6.800	0.005	51768	2.8
Aroclor-1016	3	6.620	0.005	99643	3.1	3	---			0.0
Aroclor-1016	4	6.707	-0.019	68569	2.8	4	7.353	0.000	422683	94.0
	Total Col1Ave (4 peaks):				2.7	Total Col2Ave (3 peaks):			32.8	RPD = 170*
	Corrected Ave (3 peaks):				2.5	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	5.062	-0.002	79951	3.7	1	---			0.0
Aroclor-1221	2	6.464	-0.004	197887	30.3	2	---			0.0
Aroclor-1221	3	7.875	-0.003	16835617	1825.7	3	5.325	-0.020	11835	8.5
Aroclor-1221	NS	---			----	4	5.454	-0.007	65190	14.9
	Total Col1Ave (3 peaks):				619.9	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.061	0.000	48303	5.0	1	6.215	0.049	13133	3.4
Aroclor-1232	2	6.464	-0.005	197887	6.7	2	6.800	-0.001	51768	6.8
Aroclor-1232	3	7.438	-0.004	1461269	94.7	3	7.062	0.051	12641	4.0
Aroclor-1232	4	7.875	0.001	16835617	949.3	4	8.233	-0.005	732984	274.7
	Total Col1Ave (4 peaks):				263.9	Total Col2Ave (4 peaks):			72.2	RPD = 114*
	Corrected Ave (3 peaks):				35.4	Corrected Ave (3 peaks):			4.7	RPD = 153*
Aroclor-1242	1	6.061	0.003	48303	2.6	1	6.215	0.055	13133	1.9
Aroclor-1242	2	6.464	-0.002	197887	3.4	2	6.800	0.003	51768	3.5
Aroclor-1242	3	6.620	0.005	99643	3.9	3	7.062	0.056	12641	2.0
Aroclor-1242	4	7.875	0.005	16835617	528.0	4	8.233	0.001	732984	140.6
	Total Col1Ave (4 peaks):				134.5	Total Col2Ave (4 peaks):			37.0	RPD = 114*
	Corrected Ave (3 peaks):				3.3	Corrected Ave (3 peaks):			2.5	RPD = 28
Aroclor-1248	1	6.464	0.001	197887	5.4	1	6.800	0.005	51768	5.6
Aroclor-1248	2	7.438	-0.002	1461269	35.2	2	7.703	0.000	670961	86.7
Aroclor-1248	3	7.875	0.003	16835617	319.3	3	8.233	-0.001	732984	91.5
Aroclor-1248	4	8.110	0.002	6379702	173.5	4	8.565	-0.015	2696760	259.2
	Total Col1Ave (4 peaks):				133.4	Total Col2Ave (4 peaks):			110.7	RPD = 19
	Corrected Ave (3 peaks):				71.4	Corrected Ave (3 peaks):			61.3	RPD = 15
Aroclor-1254	1	8.189	-0.003	26523743	542.9	1	8.295	0.001	2958590	409.9
Aroclor-1254	2	8.560	-0.004	20990516	650.9	2	8.472	0.001	4800974	538.5
Aroclor-1254	3	8.697	-0.003	45840688	681.8	3	8.994	0.001	4409934	645.7
Aroclor-1254	4	9.049	-0.005	57096910	824.6	4	9.144	0.001	10123629	692.1
Aroclor-1254	5	9.359	-0.003	23669599	903.8	5	9.929	0.000	7671919	931.5
	Total Col1Ave (5 peaks):				720.8	Total Col2Ave (5 peaks):			643.5	RPD = 11
	Corrected Ave (4 peaks):				675.0	Corrected Ave (4 peaks):			571.6	RPD = 17
Aroclor-1260	1	9.963	-0.002	8887879	165.5	1	10.258	0.001	1381904	130.8
Aroclor-1260	2	10.281	-0.002	8605886	161.6	2	10.702	-0.003	4482152	362.1
Aroclor-1260	3	10.656	-0.001	19410391	152.0	3	10.982	0.000	3610862	158.0
Aroclor-1260	4	11.056	-0.002	11838020	190.4	4	11.503	0.002	1116420	180.2
Aroclor-1260	5	11.245	-0.001	4823762	145.0	NS	---			----
	Total Col1Ave (5 peaks):				162.9	Total Col2Ave (4 peaks):			207.8	RPD = 24
	Corrected Ave (4 peaks):				156.1	Corrected Ave (3 peaks):			156.3	RPD = 0
Aroclor-1262	1	10.281	-0.002	8605886	140.2	1	10.258	-0.002	1381904	85.8
Aroclor-1262	2	10.656	-0.002	19410391	134.6	2	10.702	-0.008	4482152	304.2
Aroclor-1262	3	11.056	-0.004	11838020	259.1	3	10.982	-0.003	3610862	130.7
Aroclor-1262	4	11.245	-0.002	4823762	75.2	4	11.561	-0.006	2552016	142.1
Aroclor-1262	5	11.915	-0.003	3863150	78.5	5	12.304	-0.002	687348	79.3
	Total Col1Ave (5 peaks):				137.5	Total Col2Ave (5 peaks):			148.4	RPD = 8
	Corrected Ave (4 peaks):				107.1	Corrected Ave (4 peaks):			109.4	RPD = 2
Aroclor-1268	1	11.171	-0.004	4182236	30.3	1	11.503	-0.004	1116420	39.7
Aroclor-1268	2	11.245	-0.001	4823762	31.6	2	11.561	-0.012	2552016	96.3

Aroclor-1268	3	11.644	0.012	2289486	20.2	3	11.966	-0.003	84933	4.0
Aroclor-1268	4	12.419	-0.003	1877361	5.9	4	12.789	-0.004	294604	5.4

Total Col1Ave (4 peaks): 22.0 Total Col2Ave (4 peaks): 36.4 RPD = 49*

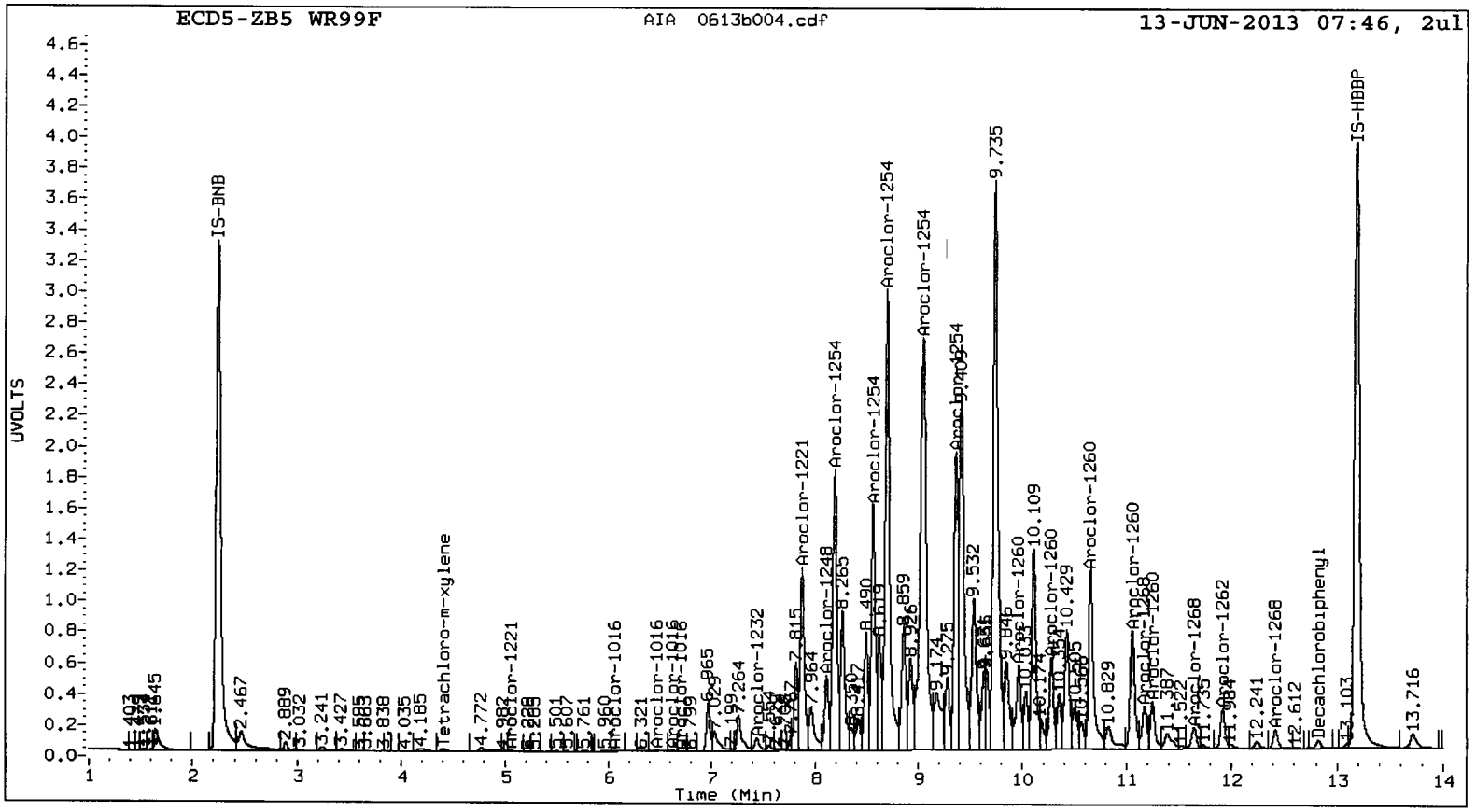
Corrected Ave (3 peaks): 18.8 Corrected Ave (3 peaks): 16.4 RPD = 14

Total PCB Area Col1 (4.507 - 12.726) = 557972897 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.505 - 13.100) = 105964449 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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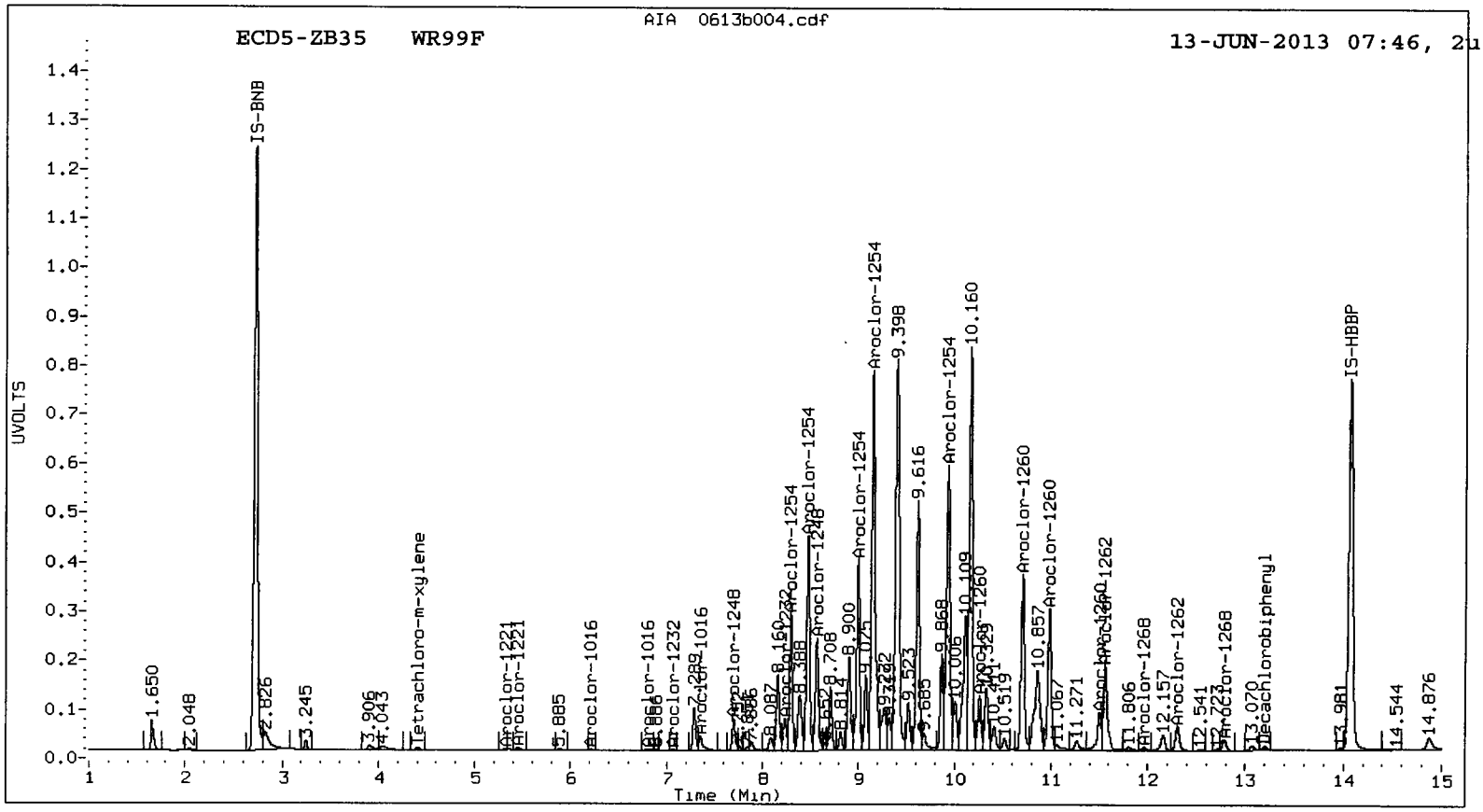
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Time (Min)
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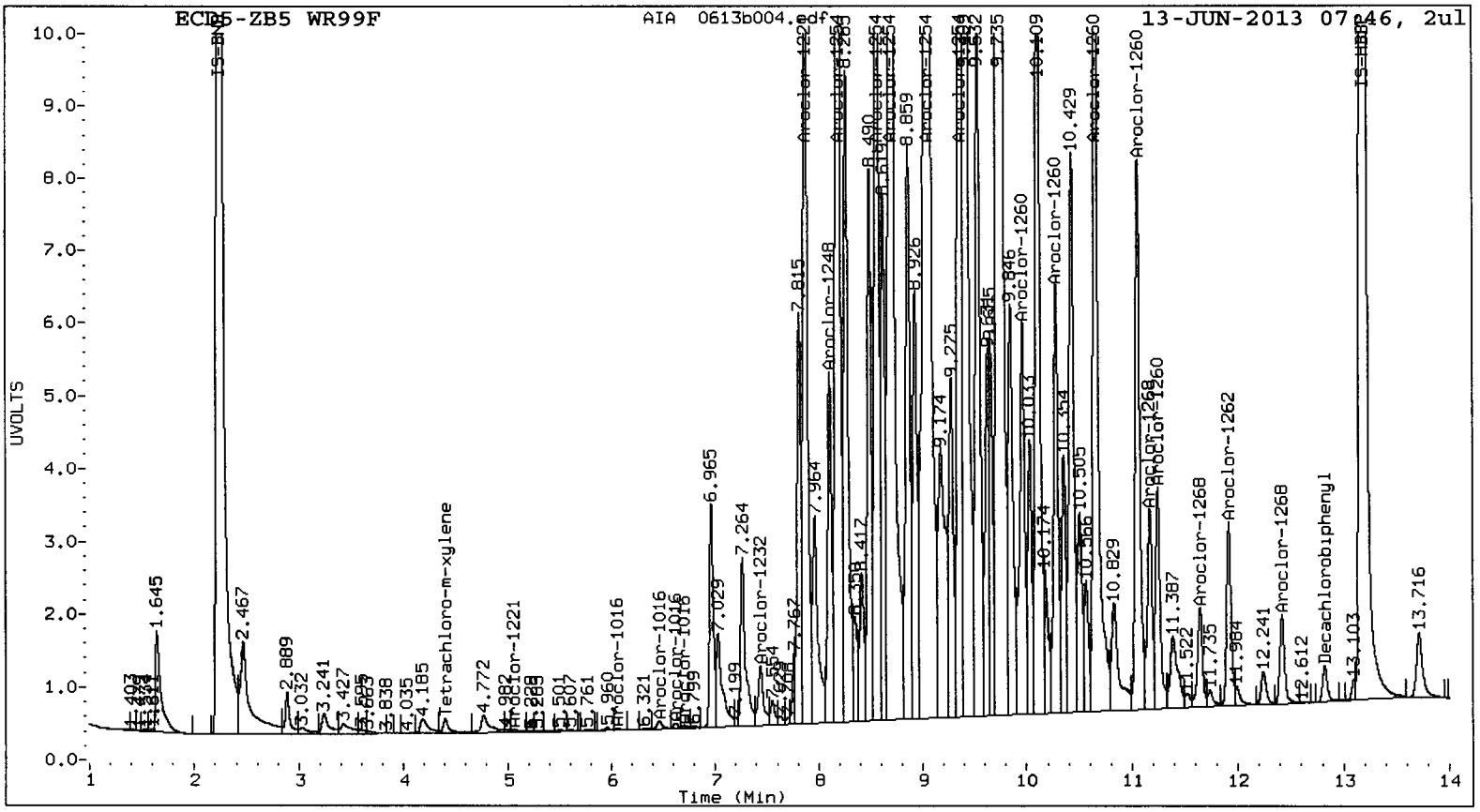
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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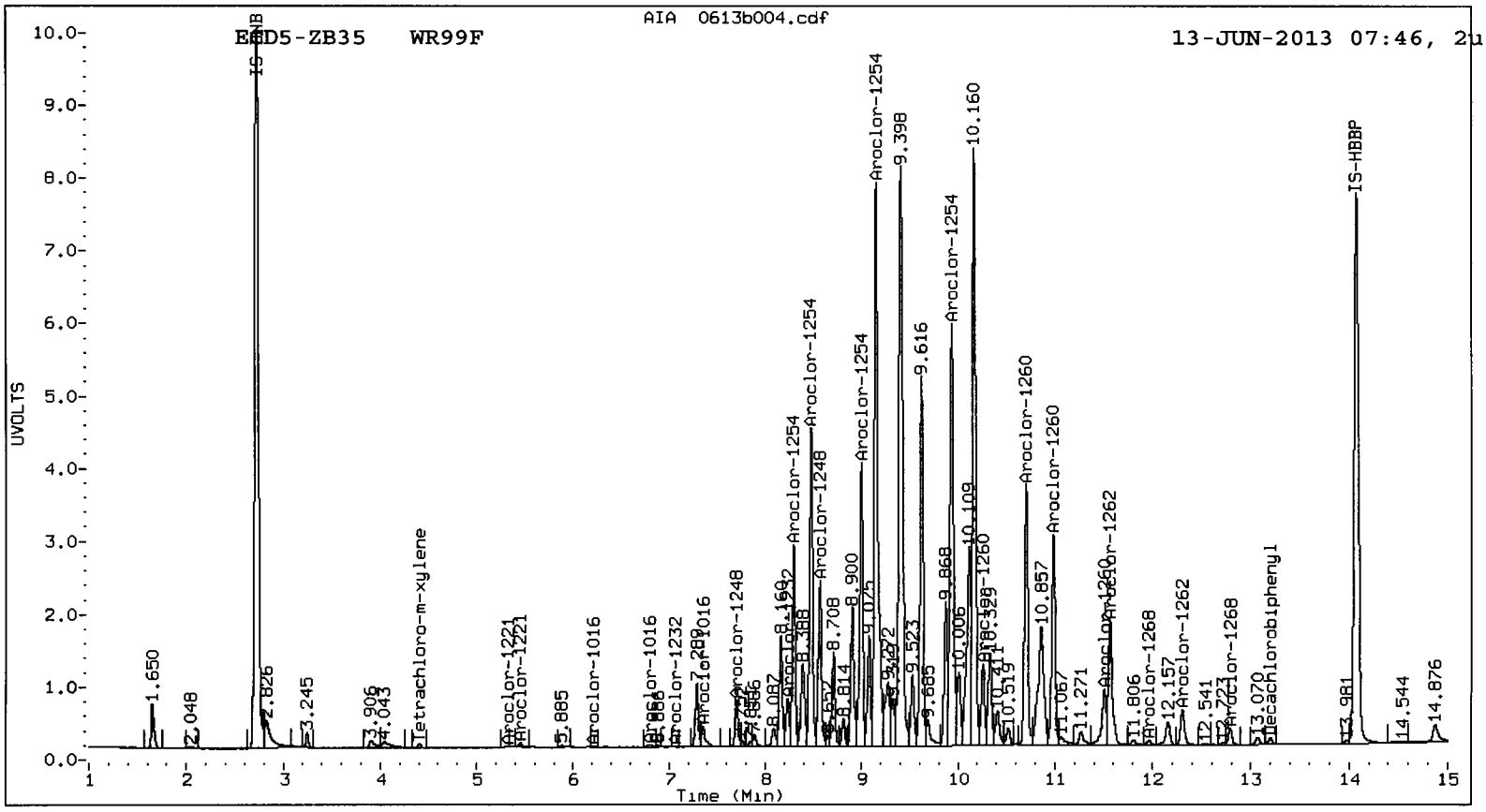
13-JUN-2013 07:46, 2ul
UVOLTS
Time (Min)
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl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ECD5-ZB35 WR99F
13-JUN-2013 07:46, 2u
UVOLTS
Time (Min)
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b005.d
Data file 2: 20130507.b/0612-2.b/0612b005.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 12-JUN-2013 16:14
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	35092424	4.413	0.005	8441604	39.5	38.2	3.3	Tetrachloro-m-xylen
12.826	0.001	35911358	13.203	0.002	6025755	36.3	37.1	2.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

6/06/13/13

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	98.8	95.6
Decachlorobiphenyl	90.6	92.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57257025	16.9
Hexabromobiphenyl	50004151	66302804	32.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16325735	10.0
Hexabromobiphenyl	9345340	11278282	20.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

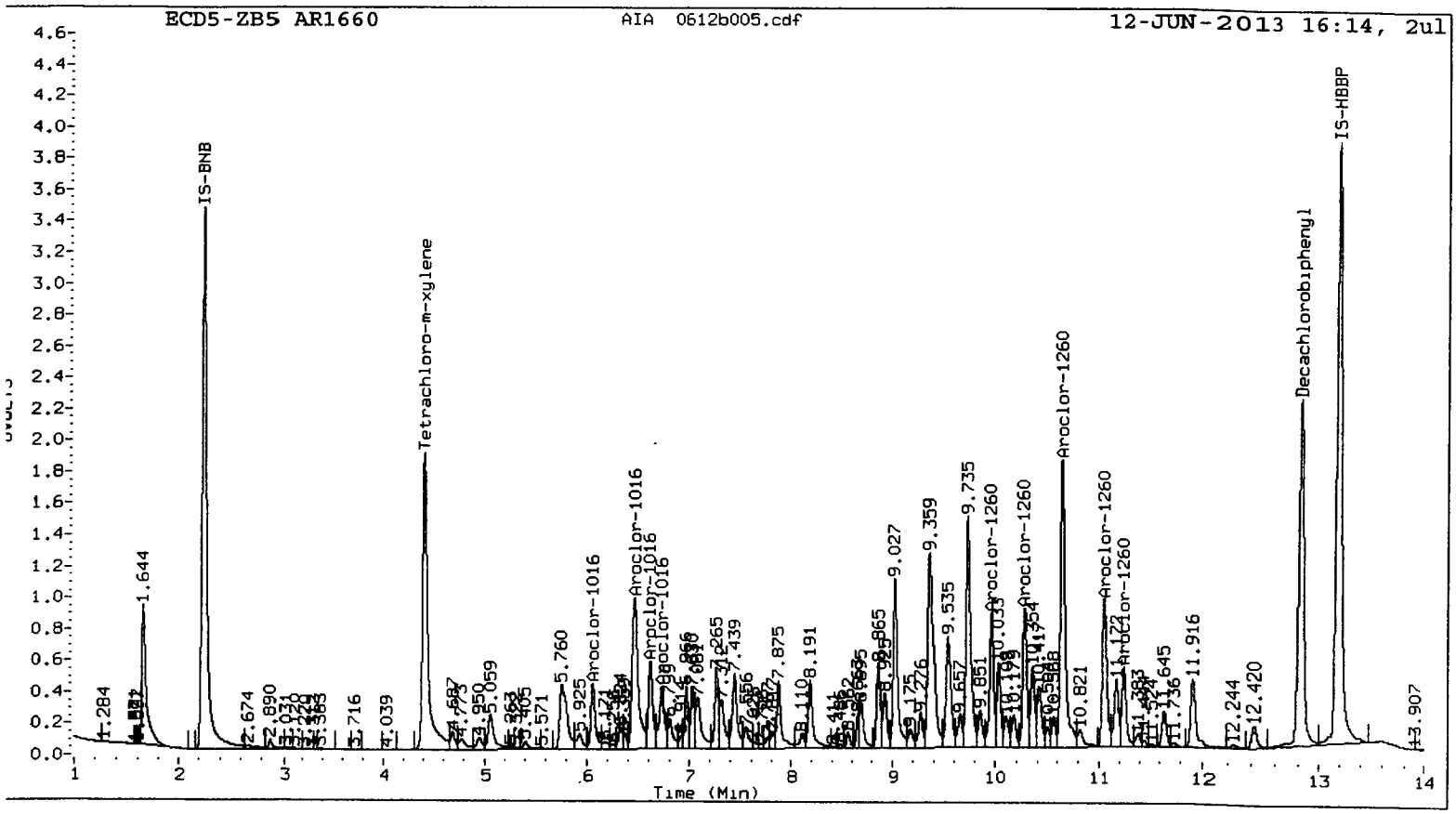
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.057	0.000	6413667	248.5	1	6.165	0.003	2195921	235.7
Aroclor-1016	2	6.466	0.000	19975970	251.3	2	6.801	0.003	4840467	239.0
Aroclor-1016	3	6.615	0.000	8759756	245.9	3	7.185	0.003	1279883	241.7
Aroclor-1016	4	6.725	-0.001	6596228	247.9	4	7.358	0.003	1141020	231.4
Total Col1Ave (4 peaks):					248.4	Total Col2Ave (4 peaks):				236.9 RPD = 5
Corrected Ave (3 peaks):					247.4	Corrected Ave (3 peaks):				235.4 RPD = 5
Aroclor-1260	1	9.965	0.000	11883327	218.9	1	10.260	0.004	2225096	217.5
Aroclor-1260	2	10.281	0.000	11801815	219.2	2	10.709	0.002	2607410	217.6
Aroclor-1260	3	10.657	0.001	29168321	225.9	3	10.985	0.002	5101448	230.6
Aroclor-1260	4	11.056	0.000	14781376	235.0	4	11.505	0.003	1466628	244.5
Aroclor-1260	5	11.246	0.001	7780690	231.3	NS	---			----
Total Col1Ave (5 peaks):					226.0	Total Col2Ave (4 peaks):				227.6 RPD = 1
Corrected Ave (4 peaks):					223.8	Corrected Ave (3 peaks):				221.9 RPD = 1

Total PCB Area Col1 (4.507 - 12.726) = 367357490 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 71149382 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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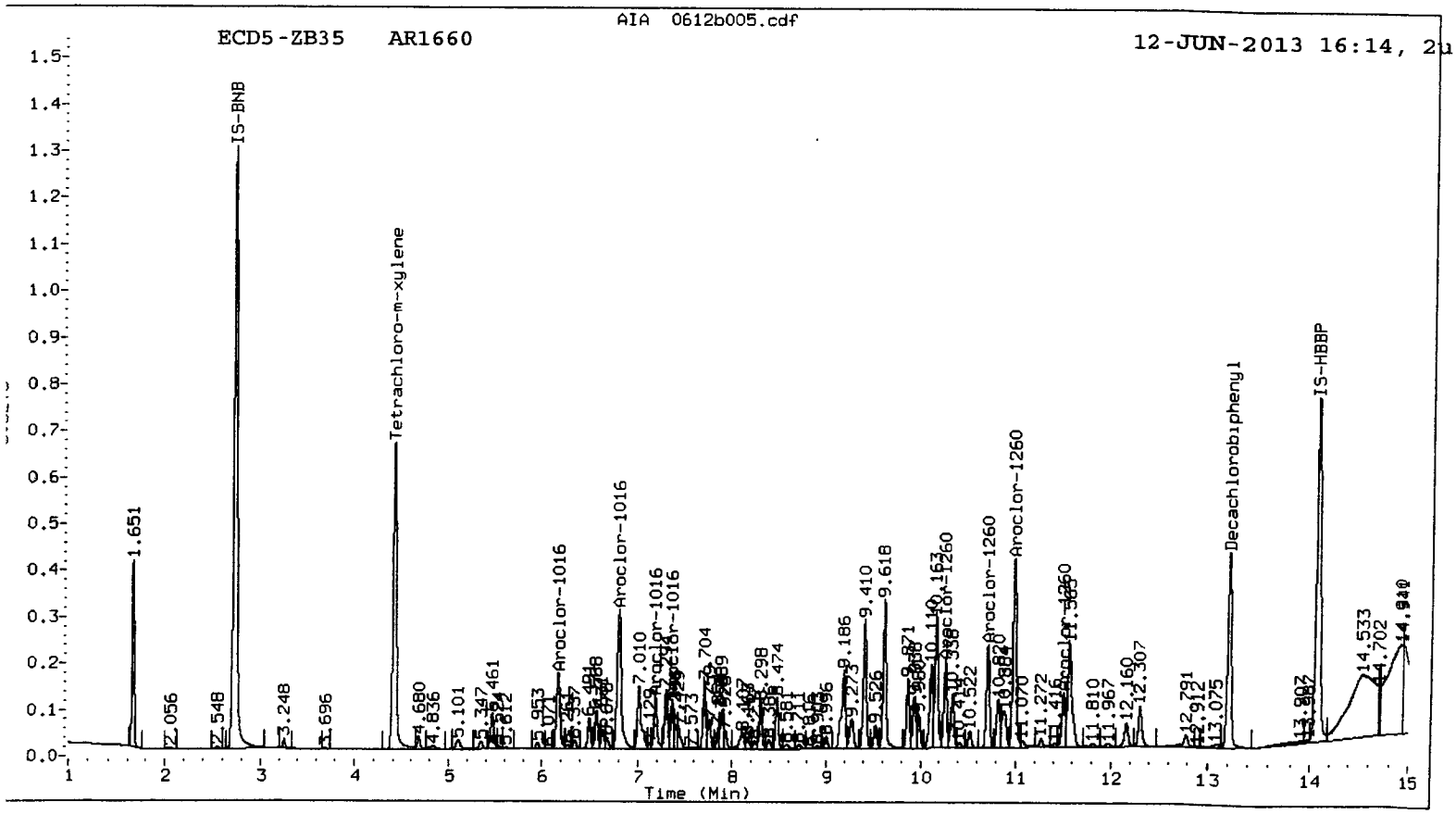
12-JUN-2013 16:14, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)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12-JUN-2013 16:14, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b006.d
Data file 2: 20130507.b/0612-2.b/0612b006.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS49MBS1
Client ID: WS49MBS1
Injection Date: 12-JUN-2013 16:34
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.407	0.000	26911064	4.412	0.004	6330101	31.8	29.8	6.5	Tetrachloro-m-xylen
12.827	0.001	30887676	13.204	0.004	5253371	32.1	32.0	0.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	79.5	74.5
Decachlorobiphenyl	80.2	80.1

JK 06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54564860	11.4
Hexabromobiphenyl	50004151	64458811	28.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15704773	5.8
Hexabromobiphenyl	9345340	11398988	22.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

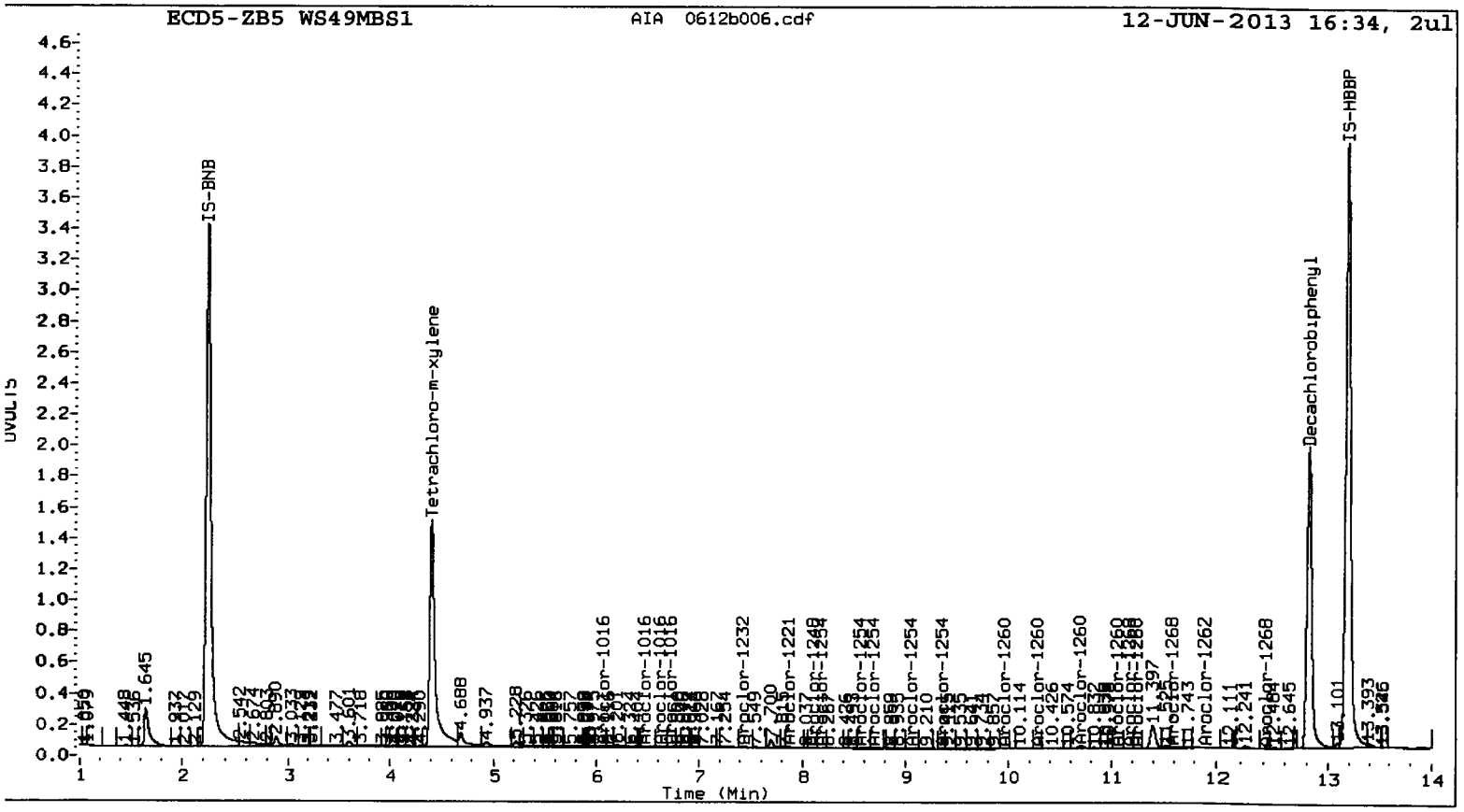
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.065	0.008	264233	10.7	1	---			0.0
Aroclor-1016	2	6.469	0.004	391585	5.2	2	---			0.0
Aroclor-1016	3	6.620	0.005	296542	8.7	3	---			0.0
Aroclor-1016	4	6.728	0.002	218758	8.6	4	---			0.0
Total Col1Ave (4 peaks):		8.3				Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	3.682	-0.012	107237	66.6
Aroclor-1221	2	6.469	0.001	391585	57.6	2	5.113	0.019	77793	28.9
Aroclor-1221	3	7.871	-0.007	295122	30.7	3	5.371	0.026	120211	81.9
Aroclor-1221	NS	---			----	4	5.471	0.010	19741	4.3
Col1Ave: <3 Quant Peaks						Col2Ave: 45.4				
Aroclor-1232	1	6.065	0.005	264233	26.1	1	---			0.0
Aroclor-1232	2	6.469	0.000	391585	12.7	2	---			0.0
Aroclor-1232	3	7.435	-0.006	277324	17.2	3	---			0.0
Aroclor-1232	4	7.871	-0.003	295122	16.0	4	---			0.0
Total Col1Ave (4 peaks):		18.0				Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.065	0.008	264233	13.4	1	---			0.0
Aroclor-1242	2	6.469	0.003	391585	6.5	2	---			0.0
Aroclor-1242	3	6.620	0.005	296542	11.0	3	---			0.0
Aroclor-1242	4	7.871	0.001	295122	8.9	4	---			0.0
Total Col1Ave (4 peaks):		10.0				Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.469	0.006	391585	10.2	1	---			0.0
Aroclor-1248	2	7.435	-0.005	277324	6.4	2	---			0.0
Aroclor-1248	3	7.871	-0.001	295122	5.4	3	---			0.0
Aroclor-1248	4	8.107	0.000	134615	3.5	4	---			0.0
Total Col1Ave (4 peaks):		6.4				Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.188	-0.001	140942	2.8	1	---			0.0
Aroclor-1254	2	8.570	0.009	102527	3.1	2	---			0.0
Aroclor-1254	3	8.699	0.001	93266	1.3	3	8.999	0.003	268557	37.3
Aroclor-1254	4	9.052	0.002	104225	1.4	4	9.149	0.002	19251	1.2
Aroclor-1254	5	9.361	0.001	36294	1.3	5	---			0.0
Total Col1Ave (5 peaks):		2.0				Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	9.962	-0.002	17850	0.3	1	10.309	0.052	23970	2.3
Aroclor-1260	2	10.283	0.002	13461	0.3	2	---			0.0
Aroclor-1260	3	10.701	0.044	352217	2.8	3	---			0.0
Aroclor-1260	4	11.059	0.003	36644	0.6	4	11.460	-0.042	52655	8.7
Aroclor-1260	5	11.243	-0.002	12627	0.4	NS	---			----
Total Col1Ave (5 peaks):		0.9				Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.283	0.000	13461	0.2	1	10.309	0.049	23970	1.5
Aroclor-1262	2	10.701	0.042	352217	2.5	2	---			0.0
Aroclor-1262	3	11.059	0.000	36644	0.8	3	---			0.0
Aroclor-1262	4	11.243	-0.004	12627	0.2	4	---			0.0
Aroclor-1262	5	11.900	-0.018	178913	3.7	5	12.342	0.036	21833	2.6
Total Col1Ave (5 peaks):		1.5				Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	11.175	0.000	32372	0.2	1	11.460	-0.047	52655	1.9
Aroclor-1268	2	11.243	-0.003	12627	0.1	2	---			0.0
Aroclor-1268	3	11.589	-0.044	143519	1.3	3	11.971	0.002	33350	1.6
Aroclor-1268	4	12.419	-0.003	47631	0.2	4	12.787	-0.006	17639	0.3
Total Col1Ave (4 peaks):		0.4				Total Col2Ave (3 peaks):			1.3	RPD = 98*
Corrected Ave (3 peaks):		0.2				Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (4.507 - 12.726) = 16722343 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 1617319 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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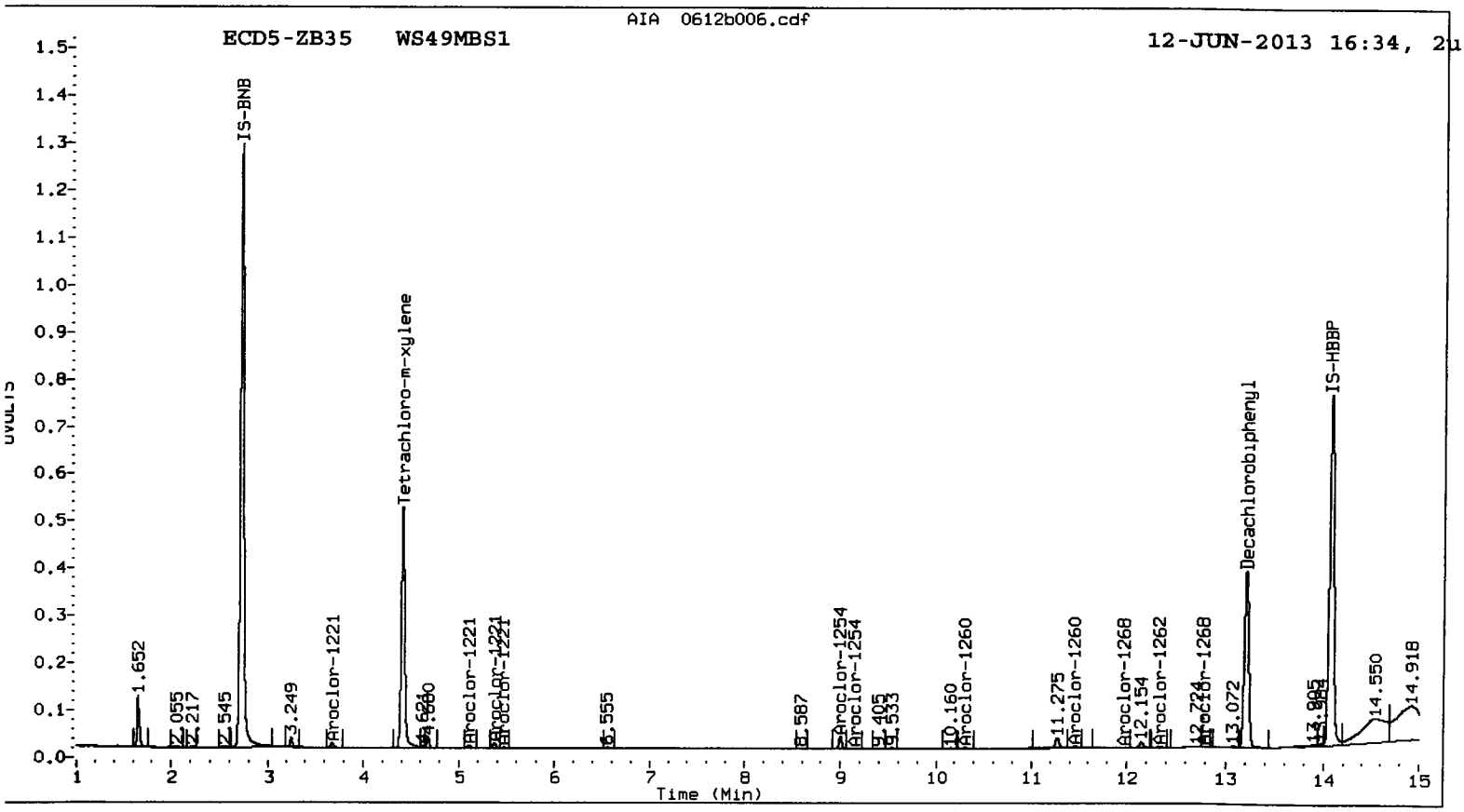
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Time (Min)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ECD5-ZB35 WS49MBS1
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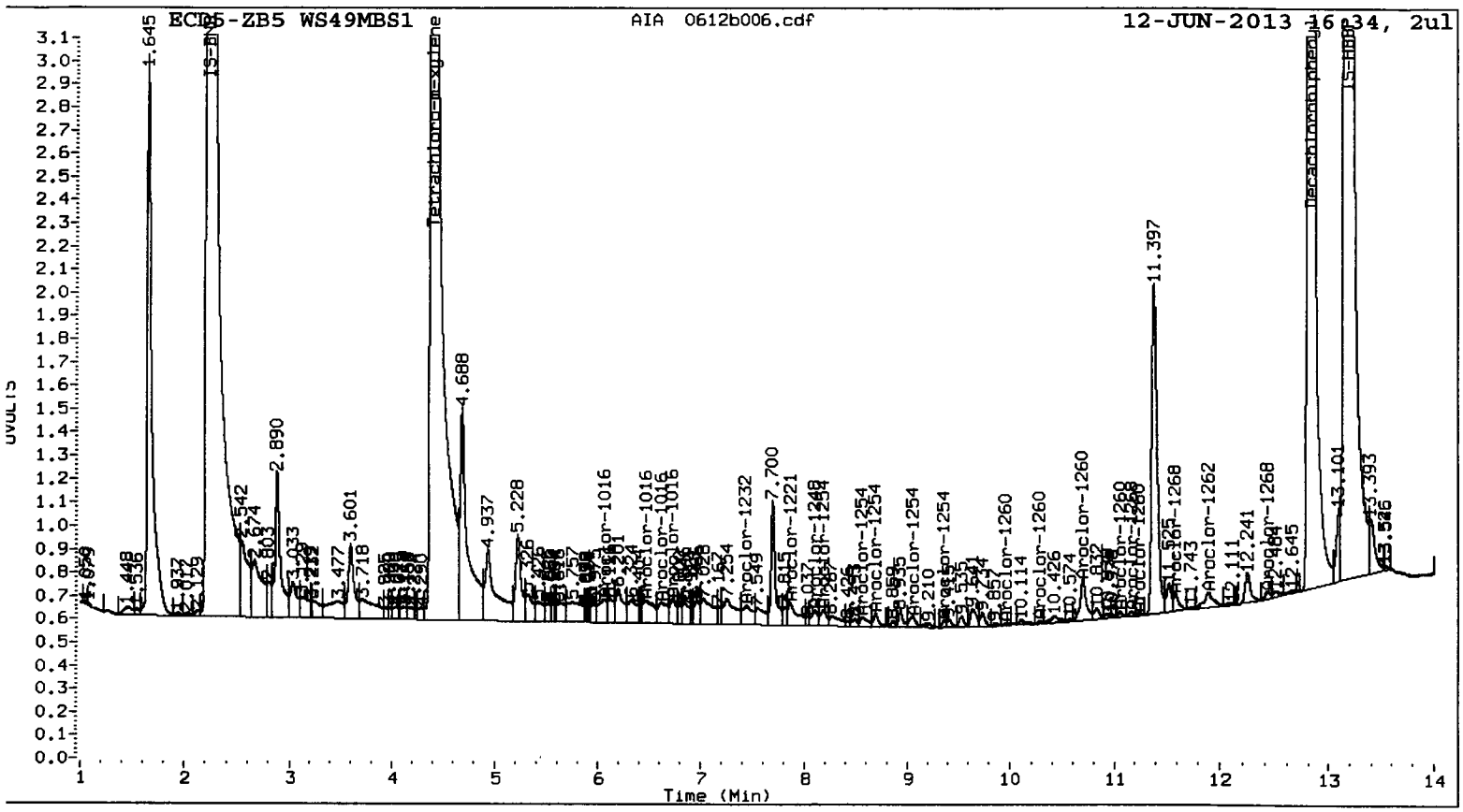
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Time (Min)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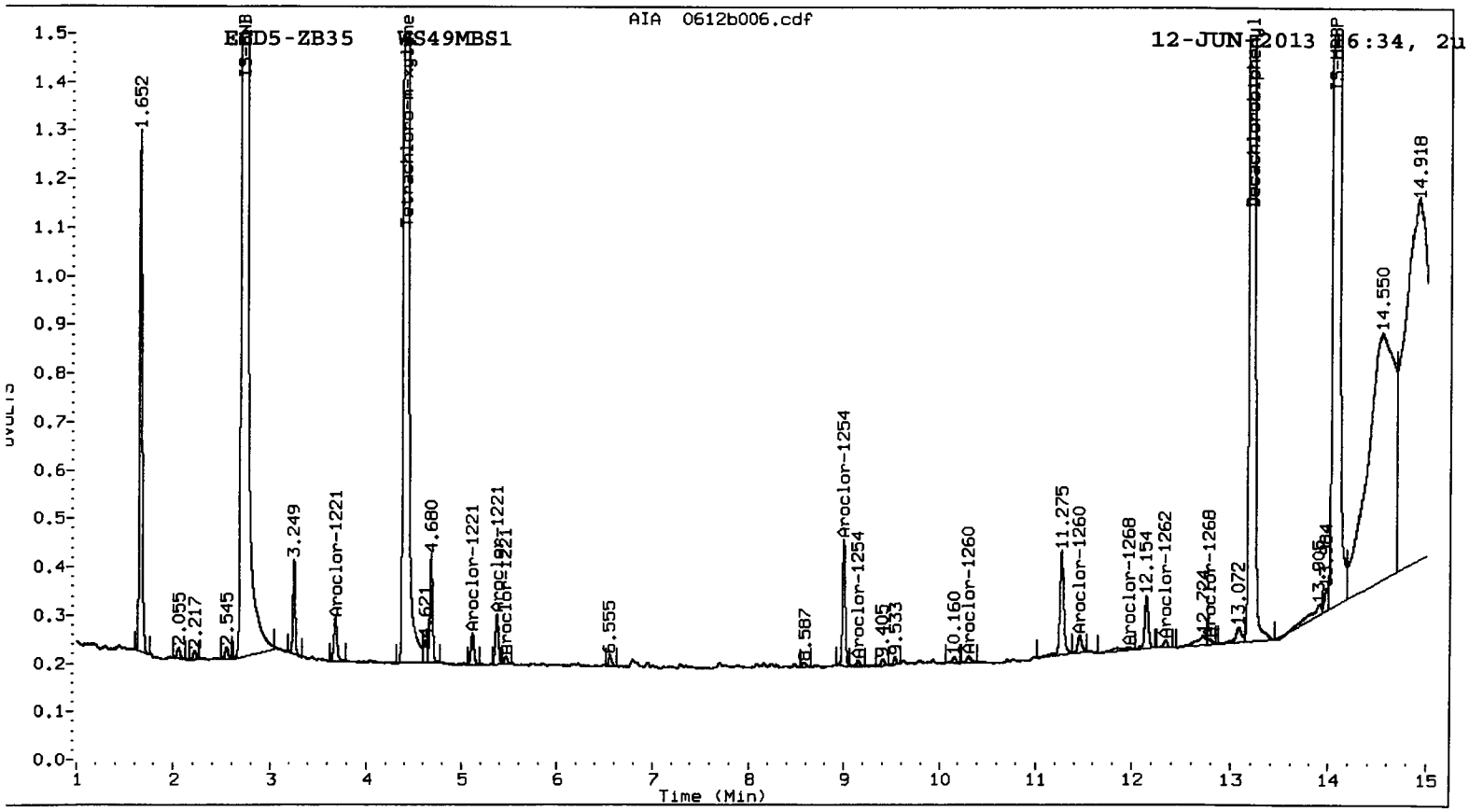
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)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Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b007.d
Data file 2: 20130507.b/0612-2.b/0612b007.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS49LCSS1
Client ID: WS49LCSS1
Injection Date: 12-JUN-2013 16:54
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	24803374	4.412	0.005	5856619	28.7	27.4	4.7	Tetrachloro-m-xylen
12.826	0.000	31182488	13.203	0.002	5316349	31.8	31.6	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	71.7	68.4
Decachlorobiphenyl	79.6	79.1

A 06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	55808676	13.9
Hexabromobiphenyl	50004151	65552837	31.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15833995	6.7
Hexabromobiphenyl	9345340	11676897	24.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.058	0.000	9758755	387.9	1	6.166	0.004	3336014	369.2
Aroclor-1016	2	6.465	-0.001	31089523	401.2	2	6.801	0.003	7659297	389.9
Aroclor-1016	3	6.614	-0.001	13256399	381.9	3	7.185	0.003	2040472	397.3
Aroclor-1016	4	6.725	-0.001	10198629	393.2	4	7.358	0.004	1858417	388.5
	Total Col1Ave (4 peaks):				391.0	Total Col2Ave (4 peaks):				386.2 RPD = 1
	Corrected Ave (3 peaks):				387.6	Corrected Ave (3 peaks):				382.6 RPD = 1
Aroclor-1221	1	5.059	-0.005	6013148	264.5	1	3.686	-0.008	34774	21.4
Aroclor-1221	2	6.465	-0.003	31089523	4469.0	2	5.096	0.002	323923	119.2
Aroclor-1221	3	7.876	-0.002	10164852	1034.7	3	5.347	0.002	311693	210.7
Aroclor-1221	NS	---			----	4	5.462	0.002	1358997	291.9
	Total Col1Ave (3 peaks):				1922.7	Total Col2Ave (4 peaks):				160.8 RPD = 169*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				117.1
Aroclor-1232	1	6.058	-0.003	9758755	944.0	1	6.166	0.001	3336014	820.9
Aroclor-1232	2	6.465	-0.004	31089523	982.5	2	6.801	0.000	7659297	944.1
Aroclor-1232	3	7.440	-0.002	13574659	825.4	3	7.011	0.000	3144189	929.5
Aroclor-1232	4	7.876	0.002	10164852	538.0	4	8.236	-0.002	355453	125.2
	Total Col1Ave (4 peaks):				822.5	Total Col2Ave (4 peaks):				704.9 RPD = 15
	Corrected Ave (3 peaks):				769.2	Corrected Ave (3 peaks):				625.2 RPD = 21
Aroclor-1242	1	6.058	0.000	9758755	485.5	1	6.166	0.004	3336014	462.4
Aroclor-1242	2	6.465	-0.002	31089523	504.3	2	6.801	0.001	7659297	483.3
Aroclor-1242	3	6.614	-0.001	13256399	481.9	3	7.011	0.003	3144189	474.9
Aroclor-1242	4	7.876	0.005	10164852	299.3	4	8.236	0.001	355453	64.1
	Total Col1Ave (4 peaks):				442.8	Total Col2Ave (4 peaks):				371.2 RPD = 18
	Corrected Ave (3 peaks):				422.2	Corrected Ave (3 peaks):				333.8 RPD = 23
Aroclor-1248	1	6.465	0.001	31089523	791.5	1	6.801	0.006	7659297	772.0
Aroclor-1248	2	7.440	0.000	13574659	307.3	2	7.705	0.002	2572262	312.6
Aroclor-1248	3	7.876	0.004	10164852	181.0	3	8.236	0.002	355453	41.7
Aroclor-1248	4	8.110	0.002	2149703	54.9	4	8.581	0.001	191928	17.3
	Total Col1Ave (4 peaks):				333.7	Total Col2Ave (4 peaks):				285.9 RPD = 15
	Corrected Ave (3 peaks):				181.1	Corrected Ave (3 peaks):				123.9 RPD = 37
Aroclor-1254	1	8.191	0.001	11661842	224.1	1	8.299	0.000	1799297	234.4
Aroclor-1254	2	8.560	-0.001	2315288	67.4	2	8.474	0.001	2021545	213.1
Aroclor-1254	3	8.695	-0.003	10699811	149.4	3	8.996	0.000	551082	75.8
Aroclor-1254	4	9.027	-0.023	27179814	368.5	4	9.149	0.002	922040	59.3
Aroclor-1254	5	9.359	0.000	39094684	1401.4	5	9.938	0.006	2137387	243.9
	Total Col1Ave (5 peaks):				442.1	Total Col2Ave (5 peaks):				165.3 RPD = 91*
	Corrected Ave (4 peaks):				202.3	Corrected Ave (4 peaks):				145.6 RPD = 33
Aroclor-1260	1	9.965	0.000	20341519	378.9	1	10.260	0.003	3910620	369.2
Aroclor-1260	2	10.281	0.001	20294140	381.2	2	10.709	0.003	4736138	381.8
Aroclor-1260	3	10.657	0.000	50599012	396.4	3	10.985	0.002	9158166	399.8
Aroclor-1260	4	11.055	-0.001	25923799	416.9	4	11.506	0.004	2556911	411.8
Aroclor-1260	5	11.245	0.000	13811741	415.2	NS	---			----
	Total Col1Ave (5 peaks):				397.7	Total Col2Ave (4 peaks):				390.6 RPD = 2
	Corrected Ave (4 peaks):				392.9	Corrected Ave (3 peaks):				383.6 RPD = 2
Aroclor-1262	1	10.281	-0.001	20294140	330.6	1	10.260	0.000	3910620	242.1
Aroclor-1262	2	10.657	-0.002	50599012	350.9	2	10.709	-0.001	4736138	320.7
Aroclor-1262	3	11.055	-0.004	25923799	567.6	3	10.985	0.000	9158166	330.6
Aroclor-1262	4	11.245	-0.002	13811741	215.4	4	11.564	-0.003	6182378	343.4
Aroclor-1262	5	11.916	-0.002	11470641	233.1	5	12.305	-0.001	2173388	250.0
	Total Col1Ave (5 peaks):				339.5	Total Col2Ave (5 peaks):				297.4 RPD = 13
	Corrected Ave (4 peaks):				282.5	Corrected Ave (4 peaks):				285.9 RPD = 1
Aroclor-1268	1	11.172	-0.003	11164707	80.9	1	11.506	-0.001	2556911	90.7

Aroclor-1268 2	11.245	-0.001	13811741	90.5	2	11.564	-0.009	6182378	232.7
Aroclor-1268 3	11.645	0.012	6218376	54.9	3	11.968	-0.001	167130	7.9
Aroclor-1268 4	12.418	-0.003	3735474	11.7	4	12.791	-0.002	627354	11.5

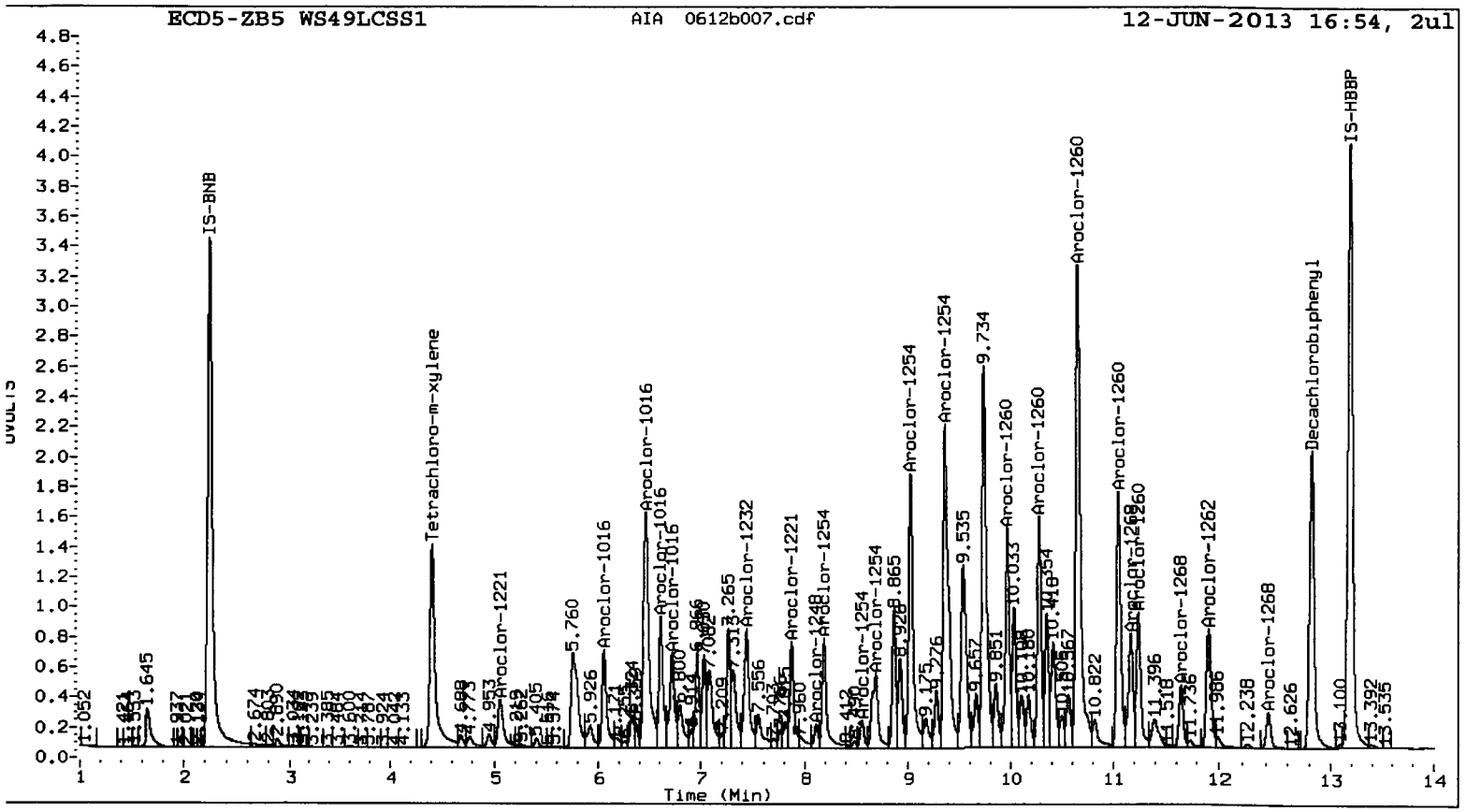
Total Col1Ave (4 peaks): 59.5 Total Col2Ave (4 peaks): 85.7 RPD = 36

Corrected Ave (3 peaks): 49.2 Corrected Ave (3 peaks): 36.7 RPD = 29

Total PCB Area Col1 (4.507 - 12.726) = 608732156 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 118020422 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical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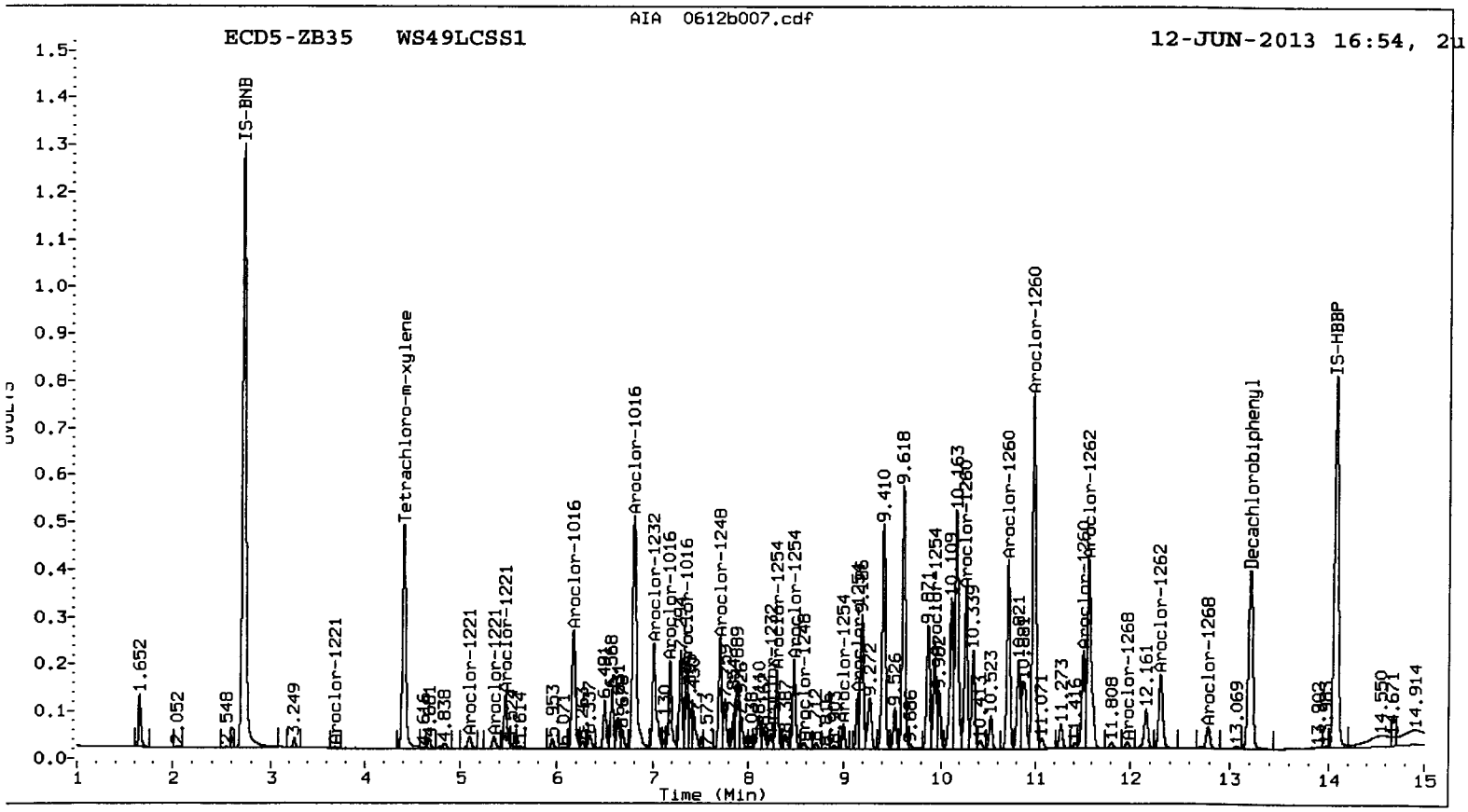
IS-HBBP
Time (Min)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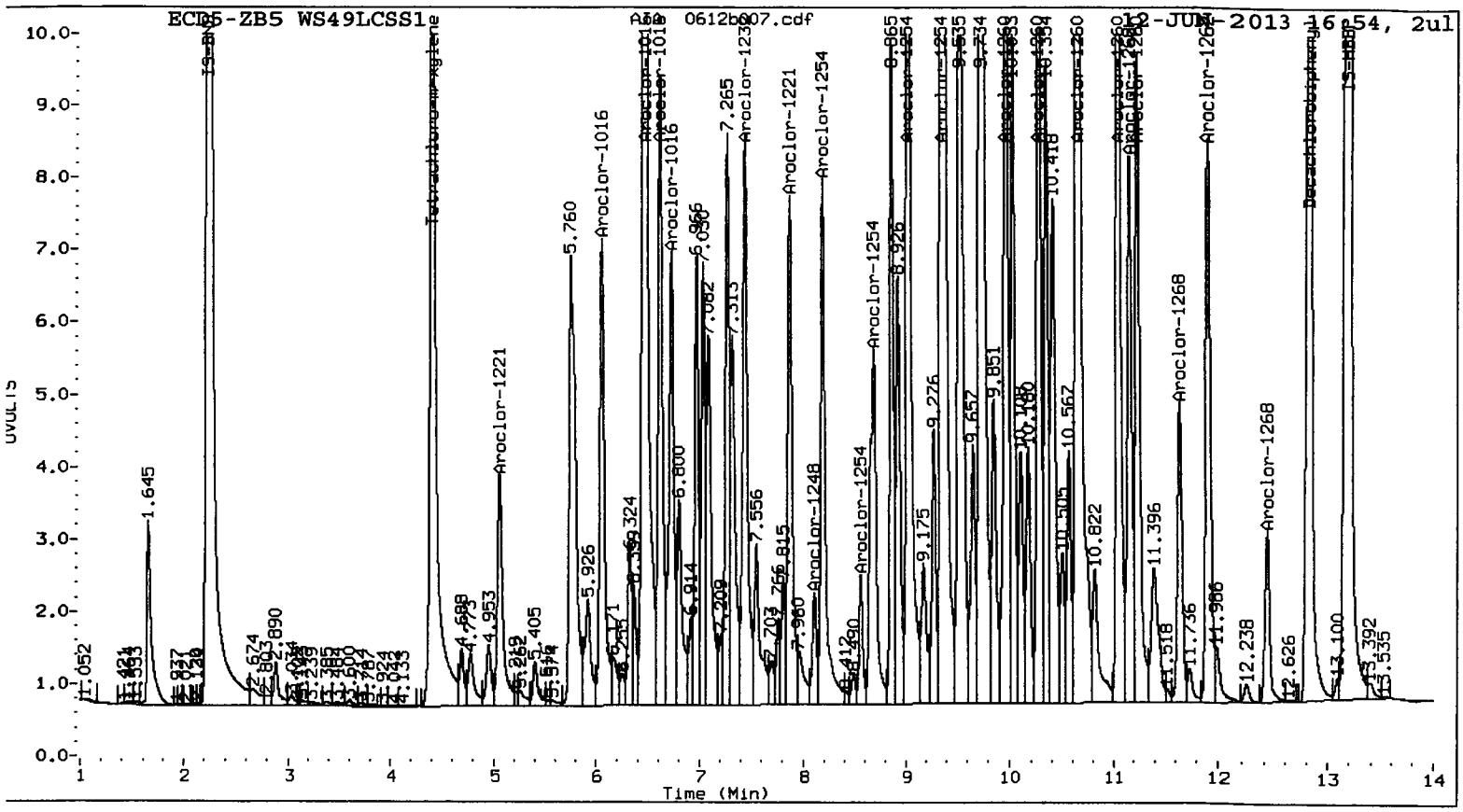
IS-HBBP
Time (Min)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UVOLTS
Time (Min)
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Aroclor-1221
Aroclor-1232
Aroclor-1242
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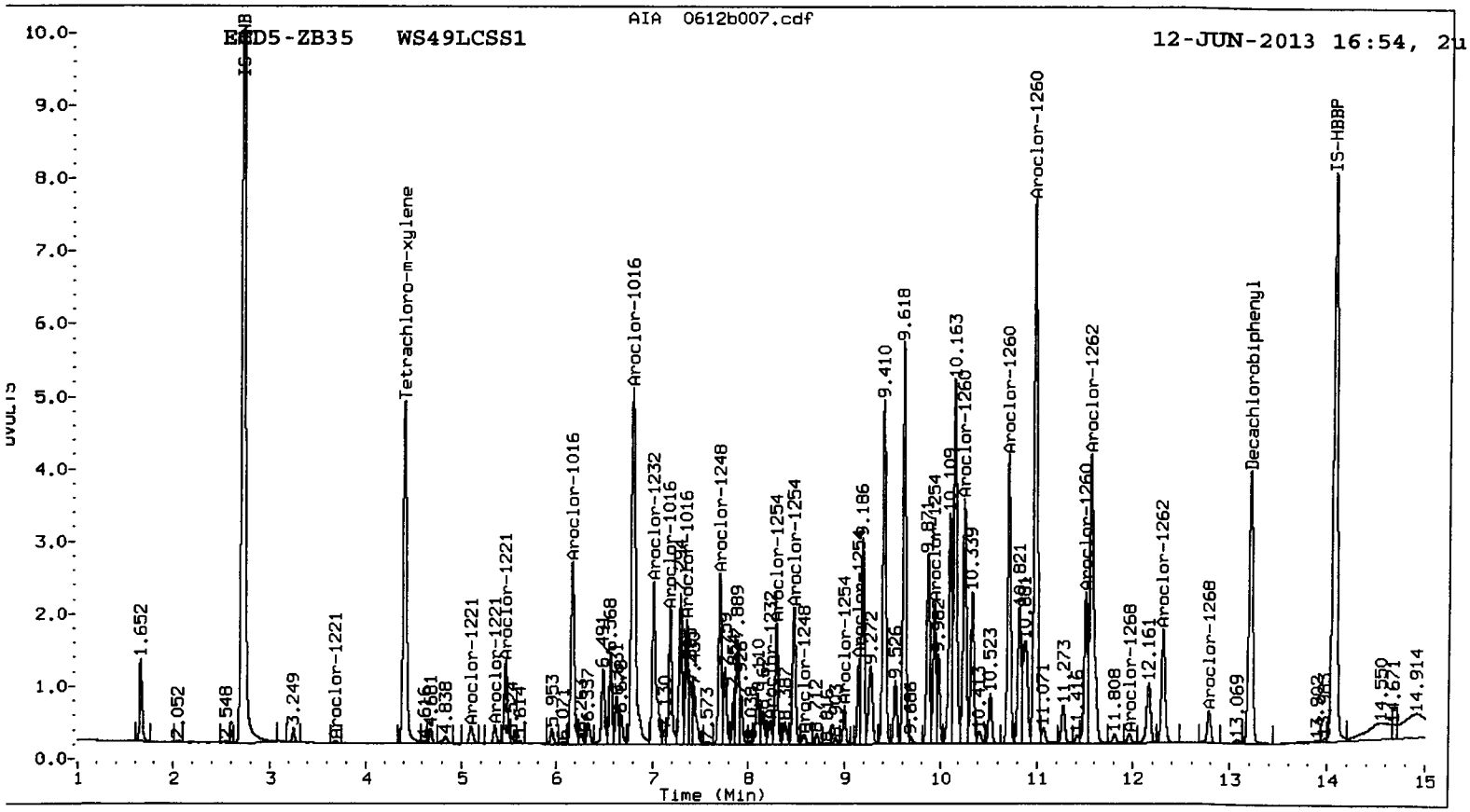
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b008.d
Data file 2: 20130507.b/0612-2.b/0612b008.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS49LCSDS1
Client ID: WS49LCSDS1
Injection Date: 12-JUN-2013 17:15
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.406	-0.001	26193091	4.412	0.004	6193909	30.6	29.8	2.7	Tetrachloro-m-xylen
12.826	0.000	33937004	13.204	0.003	5726850	34.9	34.2	1.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	76.5	74.4
Decachlorobiphenyl	87.2	85.5

JK 06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	55233395	12.8
Hexabromobiphenyl	50004151	65166408	30.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15392655	3.7
Hexabromobiphenyl	9345340	11634249	24.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount	
Aroclor-1016	1	6.057	0.000	10224933	410.7	1	6.166	0.004	3523308	401.1	
Aroclor-1016	2	6.465	-0.001	32146969	419.2	2	6.801	0.002	8057167	422.0	
Aroclor-1016	3	6.615	0.000	12577503	366.1	3	7.186	0.003	2153989	431.4	
Aroclor-1016	4	6.725	-0.001	10441628	406.7	4	7.358	0.004	1950624	419.5	
Total Col1Ave (4 peaks):					400.7	Total Col2Ave (4 peaks):				418.5	RPD = 4
Corrected Ave (3 peaks):					394.5	Corrected Ave (3 peaks):				414.2	RPD = 5
Aroclor-1221	1	5.059	-0.005	6285472	279.3	1	3.689	-0.005	31544	20.0	
Aroclor-1221	2	6.465	-0.003	32146969	4669.1	2	5.096	0.002	354078	134.1	
Aroclor-1221	3	7.876	-0.002	10613935	1091.7	3	5.346	0.001	338030	235.0	
Aroclor-1221	NS	---			----	4	5.461	0.000	1445150	319.4	
Total Col1Ave (3 peaks):					2013.4	Total Col2Ave (4 peaks):				177.1	RPD = 168*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				129.7	
Aroclor-1232	1	6.057	-0.003	10224933	999.4	1	6.166	0.000	3523308	891.9	
Aroclor-1232	2	6.465	-0.005	32146969	1026.5	2	6.801	-0.001	8057167	1021.7	
Aroclor-1232	3	7.439	-0.002	14029677	862.0	3	7.010	-0.001	3249274	988.1	
Aroclor-1232	4	7.876	0.002	10613935	567.6	4	8.237	-0.001	348896	126.4	
Total Col1Ave (4 peaks):					863.9	Total Col2Ave (4 peaks):				757.0	RPD = 13
Corrected Ave (3 peaks):					809.7	Corrected Ave (3 peaks):				668.8	RPD = 19
Aroclor-1242	1	6.057	-0.001	10224933	514.0	1	6.166	0.004	3523308	502.4	
Aroclor-1242	2	6.465	-0.002	32146969	526.9	2	6.801	0.001	8057167	523.0	
Aroclor-1242	3	6.615	-0.001	12577503	462.0	3	7.010	0.003	3249274	504.9	
Aroclor-1242	4	7.876	0.005	10613935	315.7	4	8.237	0.002	348896	64.7	
Total Col1Ave (4 peaks):					454.7	Total Col2Ave (4 peaks):				398.7	RPD = 13
Corrected Ave (3 peaks):					430.6	Corrected Ave (3 peaks):				357.3	RPD = 19
Aroclor-1248	1	6.465	0.001	32146969	827.0	1	6.801	0.005	8057167	835.4	
Aroclor-1248	2	7.439	-0.001	14029677	320.9	2	7.705	0.002	2717482	339.7	
Aroclor-1248	3	7.876	0.004	10613935	190.9	3	8.237	0.003	348896	42.1	
Aroclor-1248	4	8.111	0.003	2208656	57.0	4	8.582	0.001	201084	18.7	
Total Col1Ave (4 peaks):					349.0	Total Col2Ave (4 peaks):				309.0	RPD = 12
Corrected Ave (3 peaks):					189.6	Corrected Ave (3 peaks):				133.5	RPD = 35
Aroclor-1254	1	8.191	0.001	12226234	237.4	1	8.299	0.000	1882588	252.2	
Aroclor-1254	2	8.560	-0.001	2447356	72.0	2	8.475	0.001	2133552	231.4	
Aroclor-1254	3	8.696	-0.002	7790246	109.9	3	8.996	0.001	574383	81.3	
Aroclor-1254	4	9.028	-0.023	28965216	396.8	4	9.187	0.040	4597334	303.9	
Aroclor-1254	5	9.359	0.000	41685625	1509.8	5	9.939	0.007	2291569	269.0	
Total Col1Ave (5 peaks):					465.2	Total Col2Ave (5 peaks):				227.6	RPD = 69*
Corrected Ave (4 peaks):					204.0	Corrected Ave (4 peaks):				208.5	RPD = 2
Aroclor-1260	1	9.965	0.001	21705494	406.7	1	10.261	0.004	4209679	398.9	
Aroclor-1260	2	10.281	0.000	21638656	408.9	2	10.710	0.004	5141808	416.0	
Aroclor-1260	3	10.656	0.000	53934860	425.0	3	10.986	0.003	10044013	440.1	
Aroclor-1260	4	11.056	0.000	27720375	448.5	4	11.506	0.004	2695514	435.7	
Aroclor-1260	5	11.246	0.001	14829287	448.4	NS	---			----	
Total Col1Ave (5 peaks):					427.5	Total Col2Ave (4 peaks):				422.7	RPD = 1
Corrected Ave (4 peaks):					422.3	Corrected Ave (3 peaks):				416.9	RPD = 1
Aroclor-1262	1	10.281	-0.002	21638656	354.6	1	10.261	0.001	4209679	261.6	
Aroclor-1262	2	10.656	-0.002	53934860	376.2	2	10.710	0.000	5141808	349.4	
Aroclor-1262	3	11.056	-0.003	27720375	610.5	3	10.986	0.001	10044013	363.9	
Aroclor-1262	4	11.246	-0.001	14829287	232.7	4	11.564	-0.003	6625425	369.3	
Aroclor-1262	5	11.916	-0.002	12306788	251.6	5	12.306	0.000	2349447	271.3	
Total Col1Ave (5 peaks):					365.1	Total Col2Ave (5 peaks):				323.1	RPD = 12
Corrected Ave (4 peaks):					303.8	Corrected Ave (4 peaks):				311.6	RPD = 3
Aroclor-1268	1	11.172	-0.003	11981154	87.4	1	11.506	-0.001	2695514	96.0	

Aroclor-1268	2	11.246	0.000	14829287	97.8	2	11.564	-0.008	6625425	250.3
Aroclor-1268	3	11.645	0.012	6635594	58.9	3	11.969	0.000	179797	8.6
Aroclor-1268	4	12.419	-0.002	4036412	12.7	4	12.791	-0.001	655692	12.1

Total Col1Ave (4 peaks): 64.2 Total Col2Ave (4 peaks): 91.7 RPD = 35

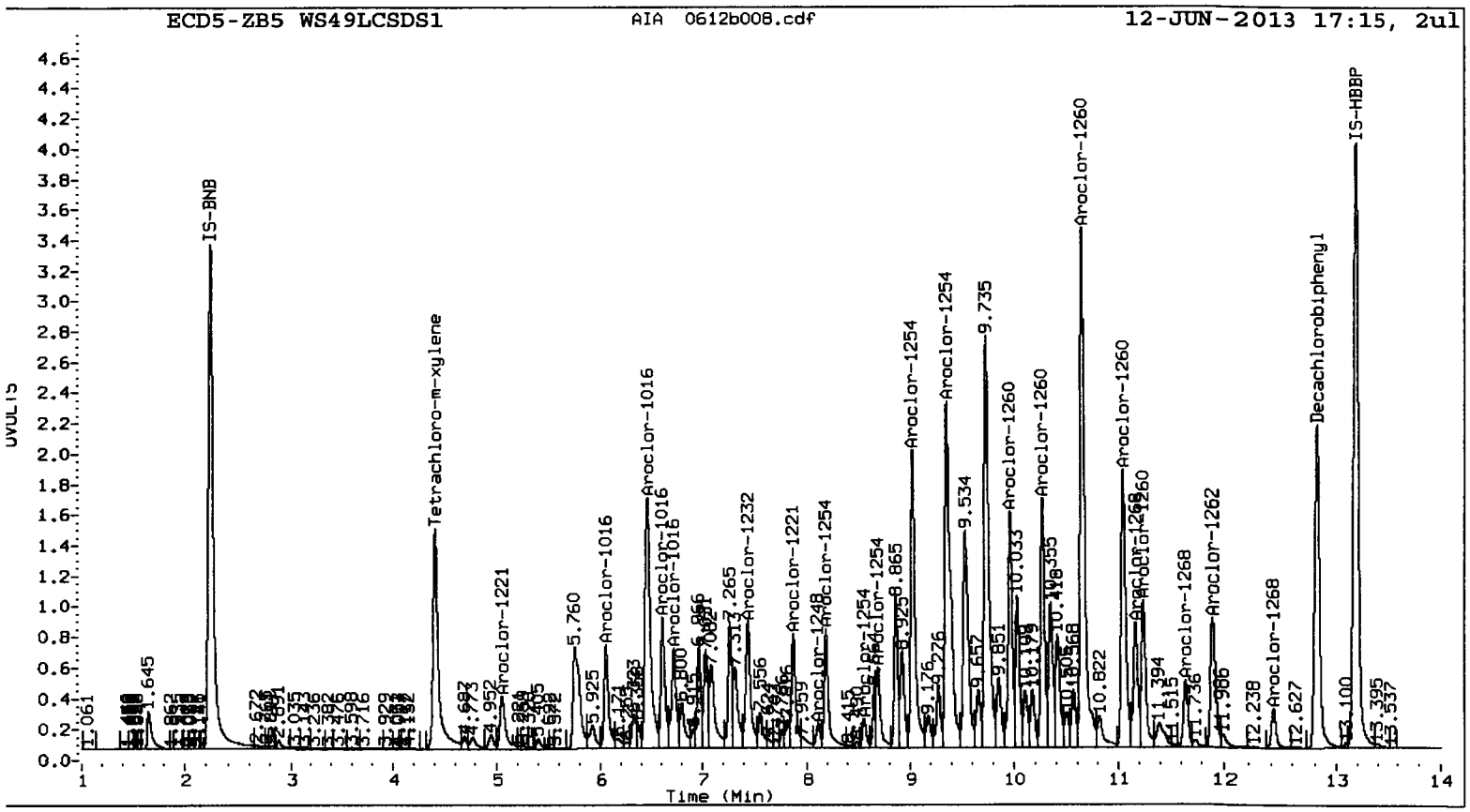
Corrected Ave (3 peaks): 53.0 Corrected Ave (3 peaks): 38.9 RPD = 31

Total PCB Area Col1 (4.507 - 12.726) = 643166274 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 126196236 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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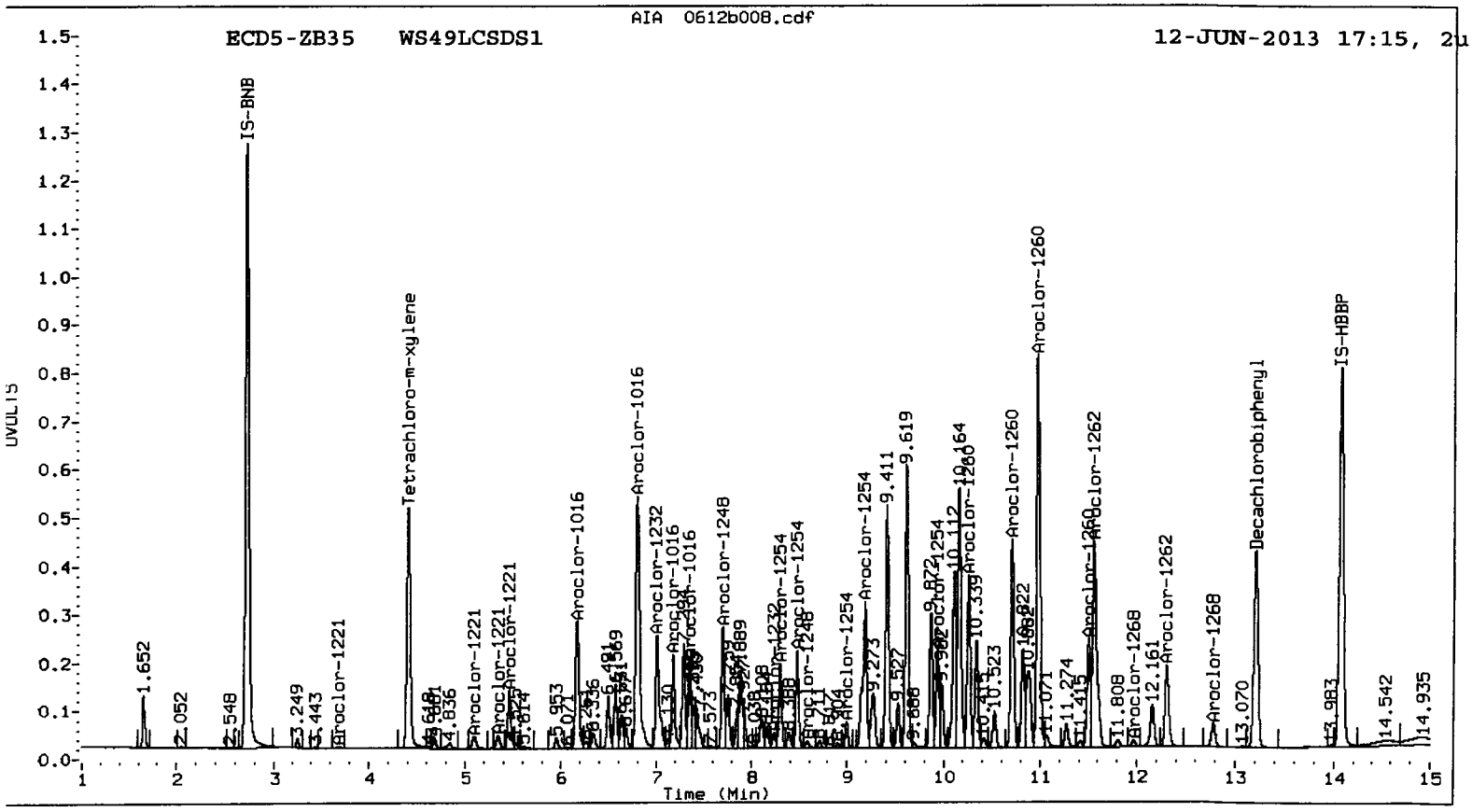
Decachlorobiphenyl
IS-HBBP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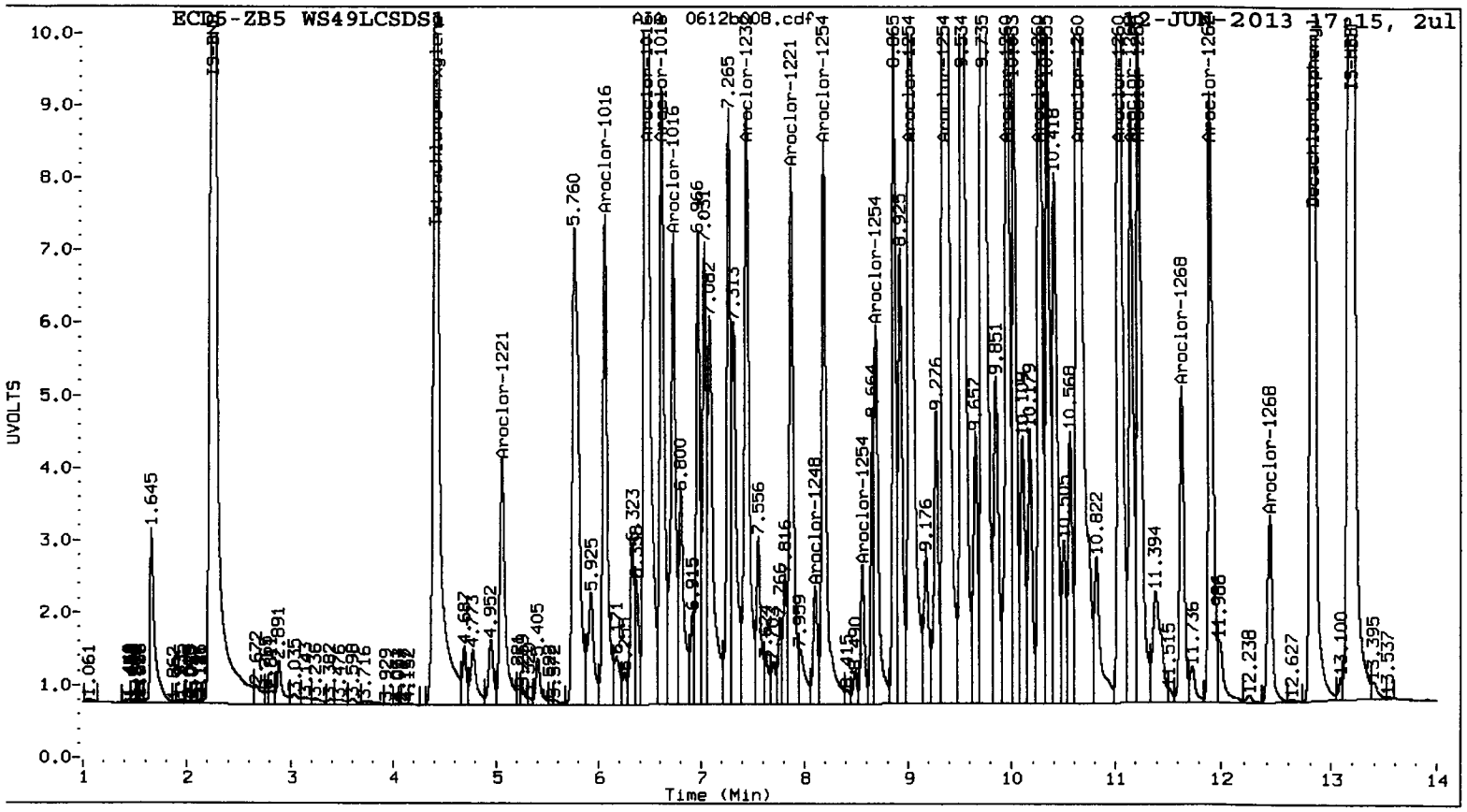
IS-HBBP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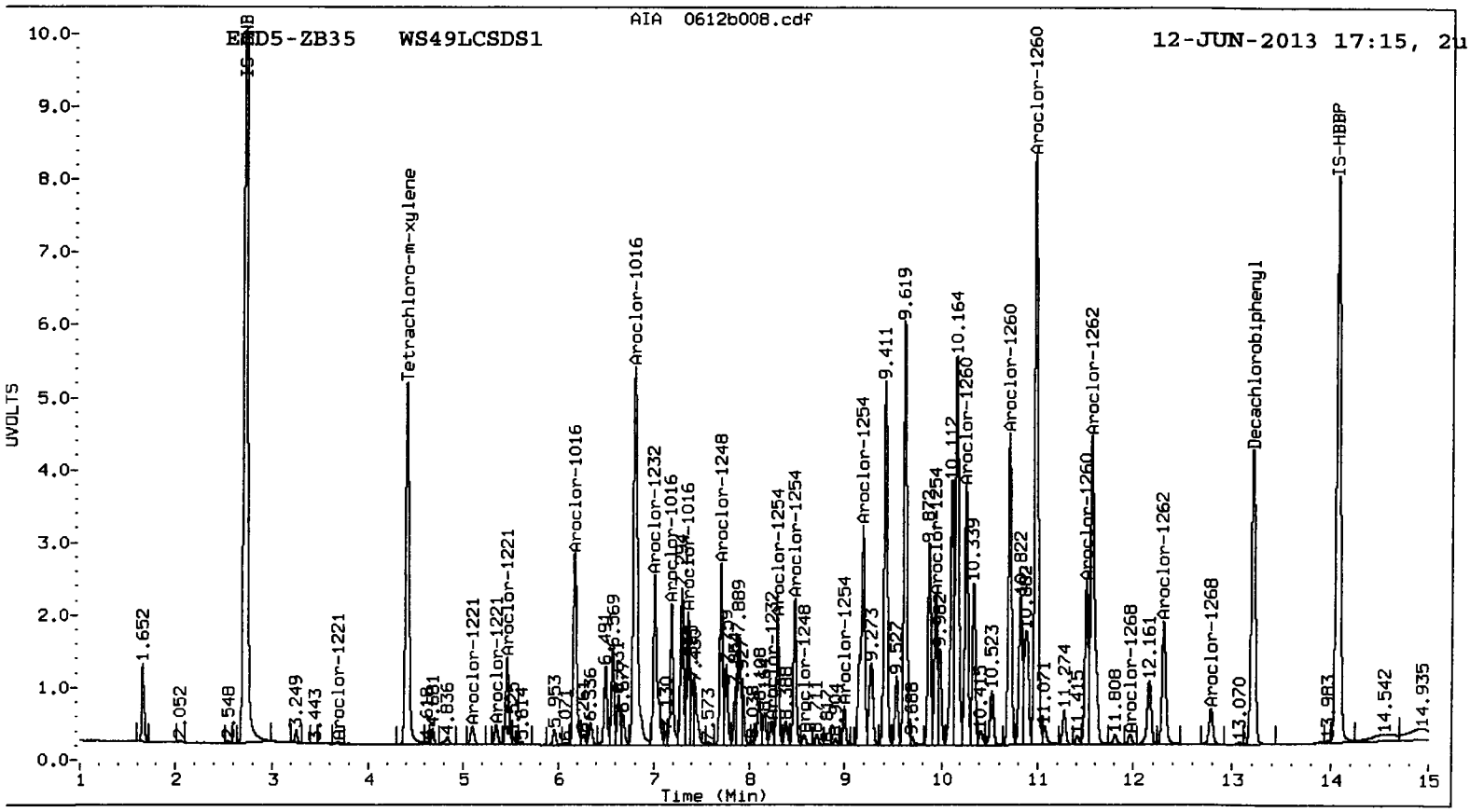
Decachlorobiphenyl
IS-HBBP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Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0613-1.b/0613b010.d
Data file 2: 20130507.b/0613-2.b/0613b010.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 13-JUN-2013 09:47
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.403	0.000	38001052	4.407	0.001	9023669	39.2	38.4	1.9	Tetrachloro-m-xylen
12.824	0.000	39866367	13.200	-0.001	6727384	39.6	39.1	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.9	96.1
Decachlorobiphenyl	99.0	97.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	62577819	27.8
Hexabromobiphenyl	50004151	67365615	34.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	17367099	17.0
Hexabromobiphenyl	9345340	11953866	27.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	6.054	0.000	5458788	242.2	1	6.160	0.000	1863232	235.5
Aroclor-1242	2	6.463	0.000	16964364	245.4	2	6.797	0.000	3894717	224.1
Aroclor-1242	3	6.611	0.000	7388565	239.6	3	7.005	0.000	1682752	231.7
Aroclor-1242	4	7.867	0.000	8870147	232.9	4	8.232	0.000	1427641	234.7

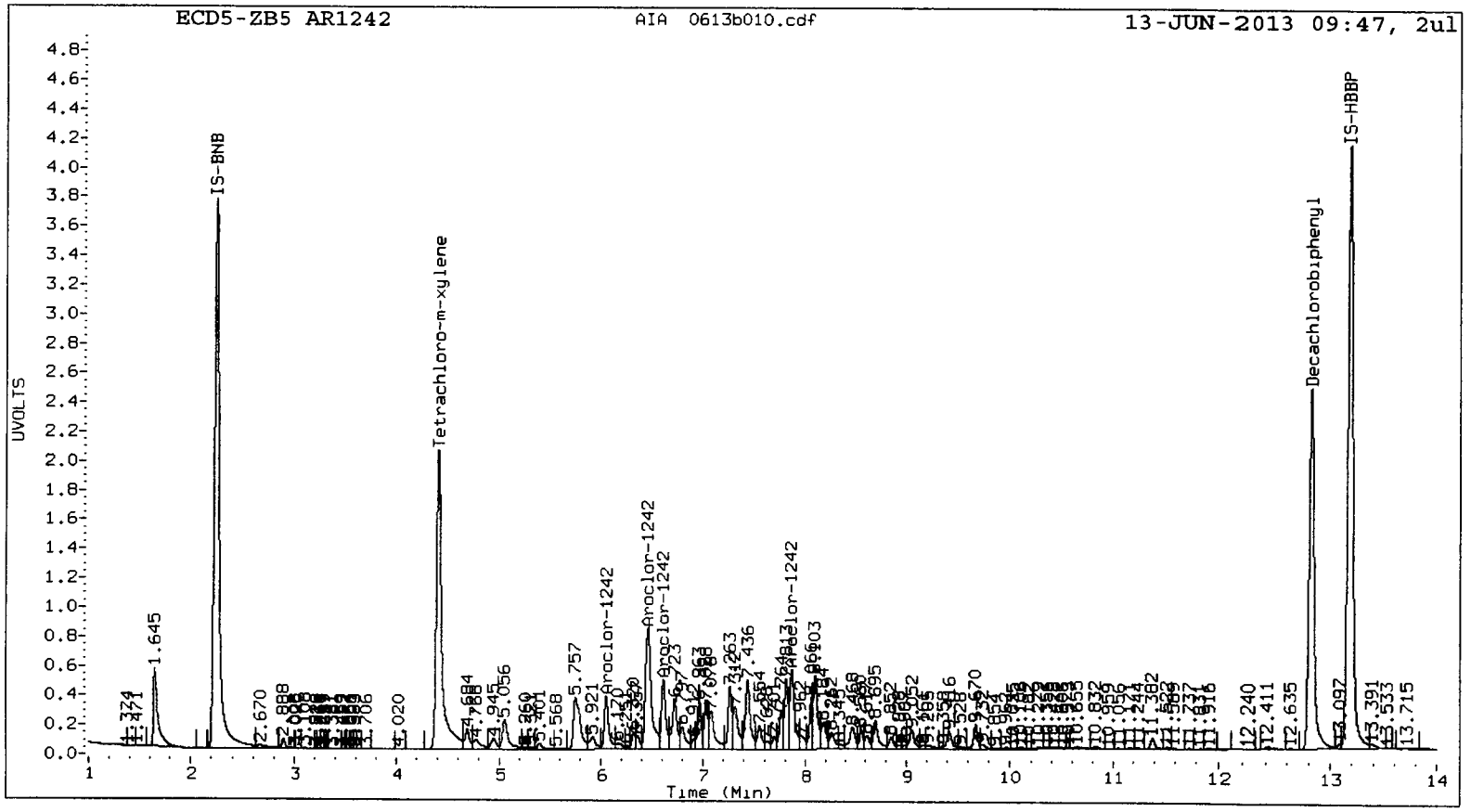
Total Col1Ave (4 peaks): 240.0 Total Col2Ave (4 peaks): 231.5 RPD = 4

Corrected Ave (3 peaks): 238.2 Corrected Ave (3 peaks): 230.2 RPD = 3

Total PCB Area Col1 (4.503 - 12.724) = 161252993 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.505 - 13.100) = 32062681 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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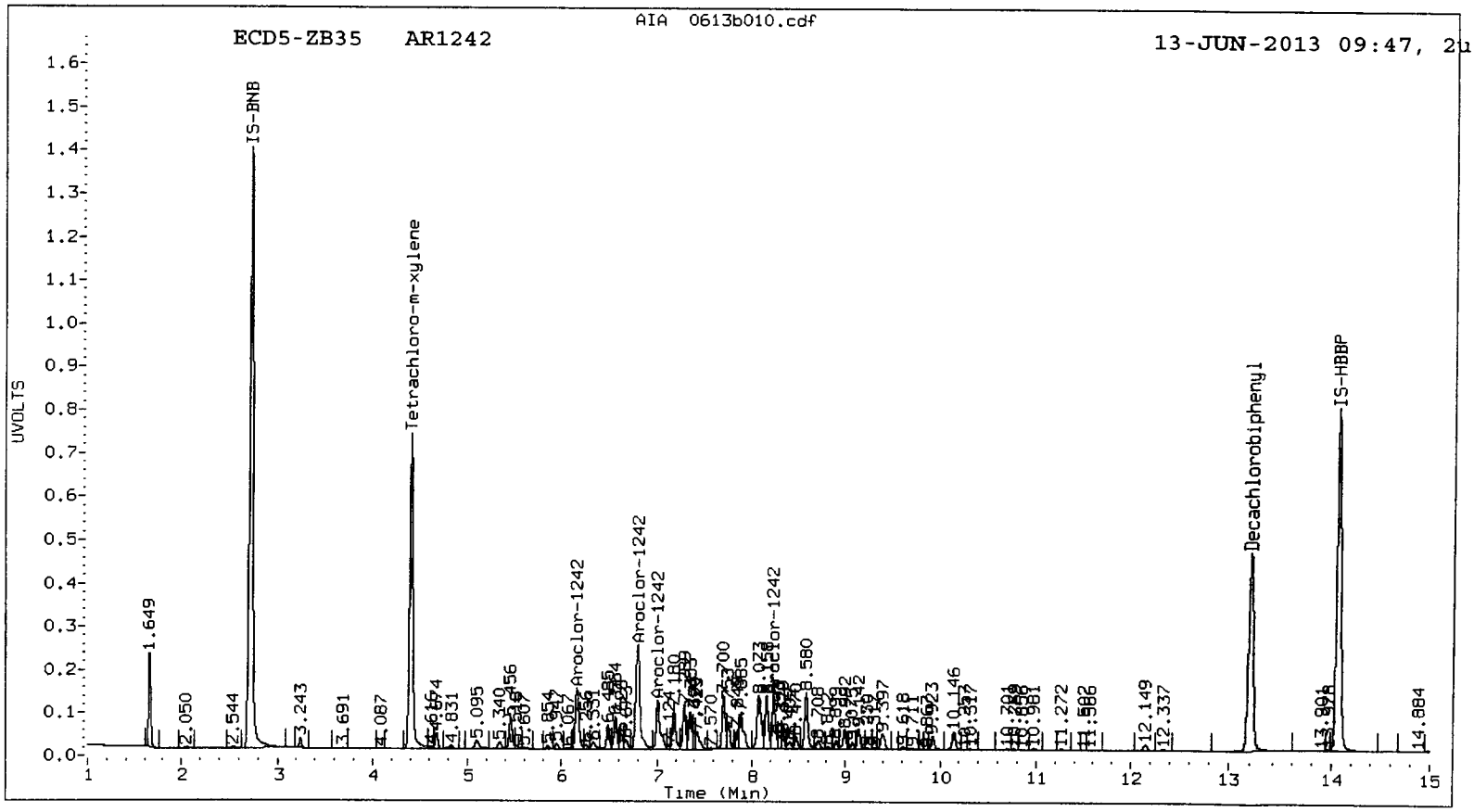
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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Aroclor-1242
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0613-1.b/0613b011.d
Data file 2: 20130507.b/0613-2.b/0613b011.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 13-JUN-2013 10:07
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.405	0.000	37537050	4.405	0.000	8909983	38.8	38.2	1.5	Tetrachloro-m-xylen
12.824	0.000	38677704	13.200	0.000	6331011	37.2	35.8	4.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.0	95.6
Decachlorobiphenyl	93.1	89.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	62378319	27.4
Hexabromobiphenyl	50004151	69516655	39.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	17233203	16.1
Hexabromobiphenyl	9345340	12292772	31.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

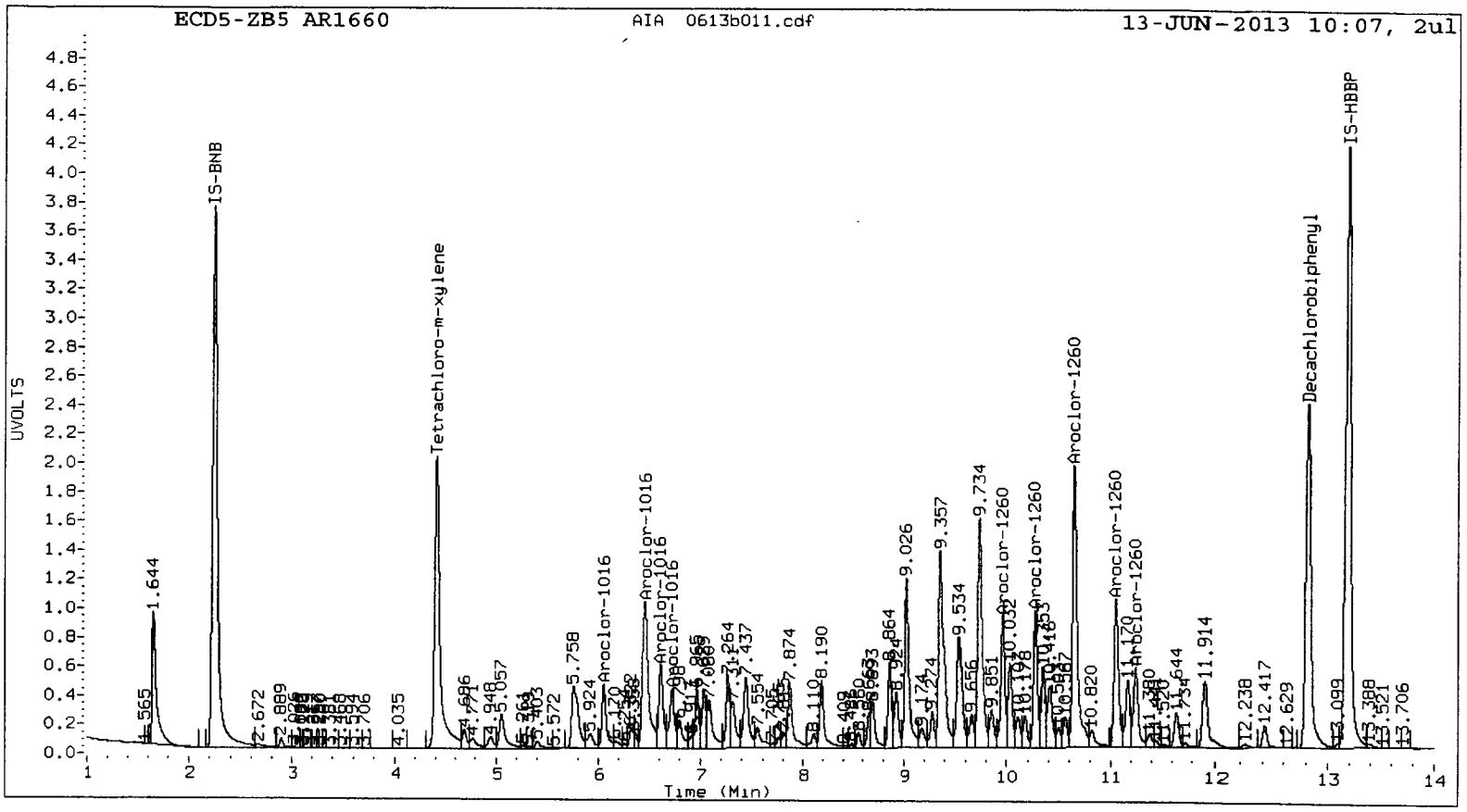
Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.055	0.000	6766582	240.7	1	6.160	0.000	2294299	233.3
Aroclor-1016	2	6.464	0.000	20830322	240.5	2	6.796	0.000	5064686	236.9
Aroclor-1016	3	6.613	0.000	9045617	233.1	3	7.180	0.000	1341038	239.9
Aroclor-1016	4	6.724	0.000	6817395	235.1	4	7.353	0.000	1190686	228.7
Total Col1Ave (4 peaks):					237.4	Total Col2Ave (4 peaks):				234.7 RPD = 1
Corrected Ave (3 peaks):					236.3	Corrected Ave (3 peaks):				233.0 RPD = 1
Aroclor-1260	1	9.963	0.000	12718205	223.4	1	10.257	0.000	2403304	215.6
Aroclor-1260	2	10.280	0.000	12603440	223.2	2	10.705	0.000	2899958	222.0
Aroclor-1260	3	10.655	0.000	30875678	228.1	3	10.982	0.000	5641466	233.9
Aroclor-1260	4	11.054	0.000	15702901	238.2	4	11.501	0.000	1571066	240.3
Aroclor-1260	5	11.244	0.000	8563027	242.7	NS	---			----
Total Col1Ave (5 peaks):					231.1	Total Col2Ave (4 peaks):				228.0 RPD = 1
Corrected Ave (4 peaks):					228.2	Corrected Ave (3 peaks):				223.8 RPD = 2

Total PCB Area Col1 (4.505 - 12.724) = 393747546 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.505 - 13.100) = 75466220 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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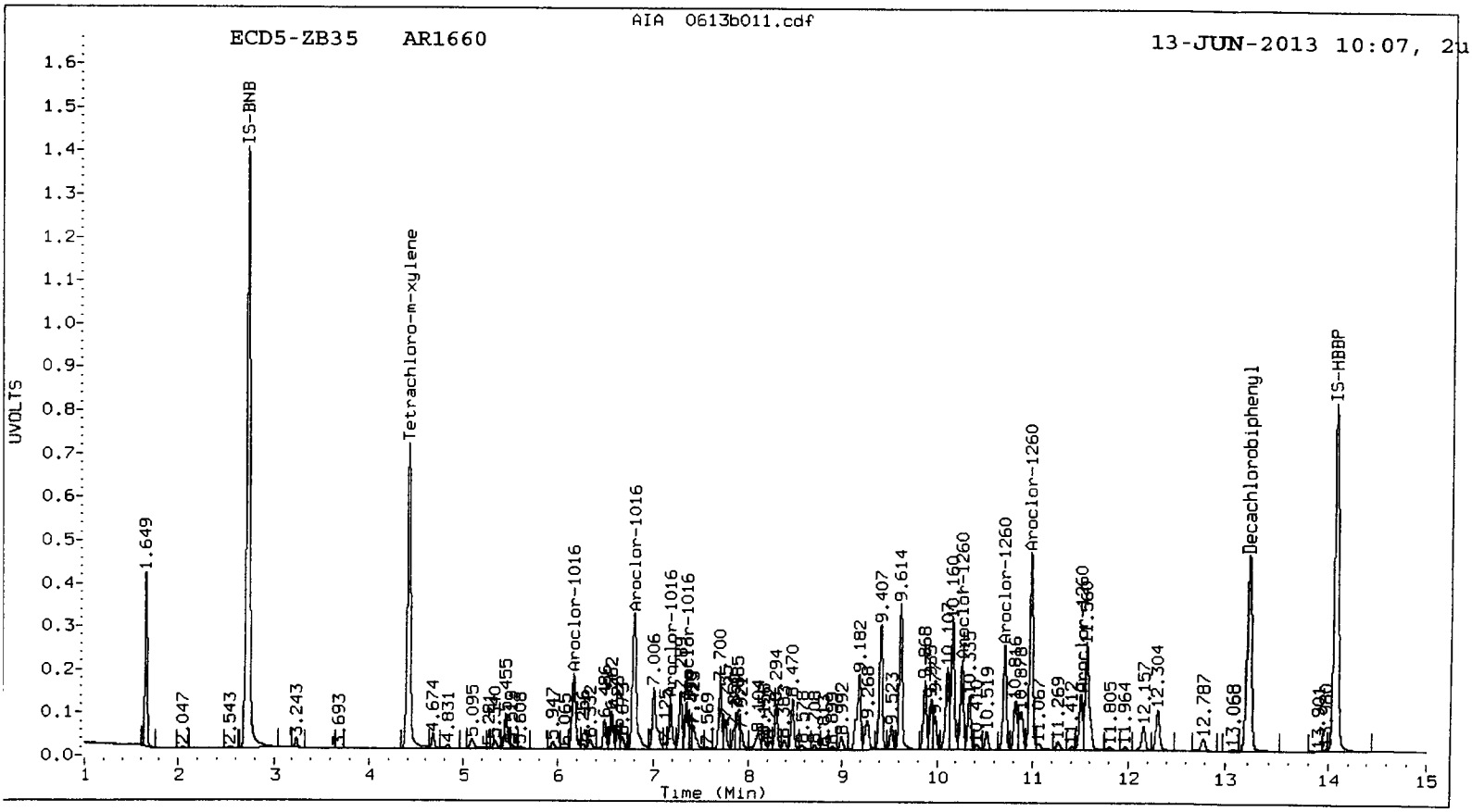
13-JUN-2013 10:07, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1260
1.644
5.758
9.026
9.357
9.534
9.734
11.914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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1260
1.649
9.407
9.614

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b013.d
Data file 2: 20130507.b/0612-2.b/0612b013.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 12-JUN-2013 18:56
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.408	0.001	35226377	4.409	0.001	8419907	39.0	38.3	1.7	Tetrachloro-m-xylen
12.827	0.001	33264167	13.203	0.002	5657563	36.4	35.4	2.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.4	95.7
Decachlorobiphenyl	91.0	88.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	58322257	19.1
Hexabromobiphenyl	50004151	61167163	22.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16259753	9.6
Hexabromobiphenyl	9345340	11097948	18.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	6.463	0.000	10048409	244.8	1	6.795	0.000	2400000	235.6
Aroclor-1248	2	7.440	0.000	10772425	233.4	2	7.703	0.000	1936955	229.2
Aroclor-1248	3	7.872	0.000	13695240	233.3	3	8.235	0.000	1988556	227.3
Aroclor-1248	4	8.107	0.000	10074908	246.2	4	8.580	0.000	2522166	221.9

Total Col1Ave (4 peaks): 239.4 Total Col2Ave (4 peaks): 228.5 RPD = 5

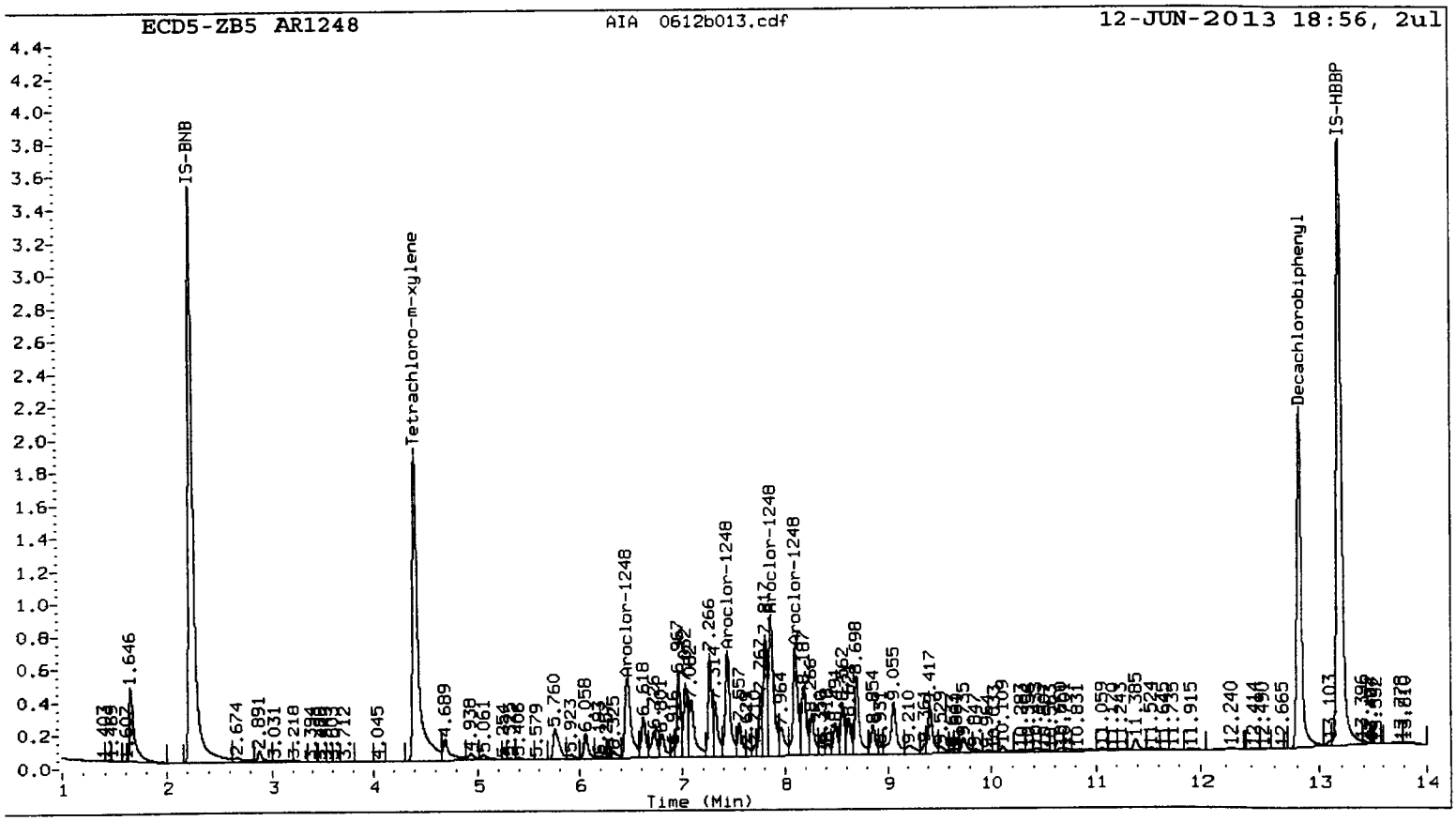
Corrected Ave (3 peaks): 237.2 Corrected Ave (3 peaks): 226.1 RPD = 5

Total PCB Area Col1 (4.507 - 12.726) = 177478186 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 33909490 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

UR99:01938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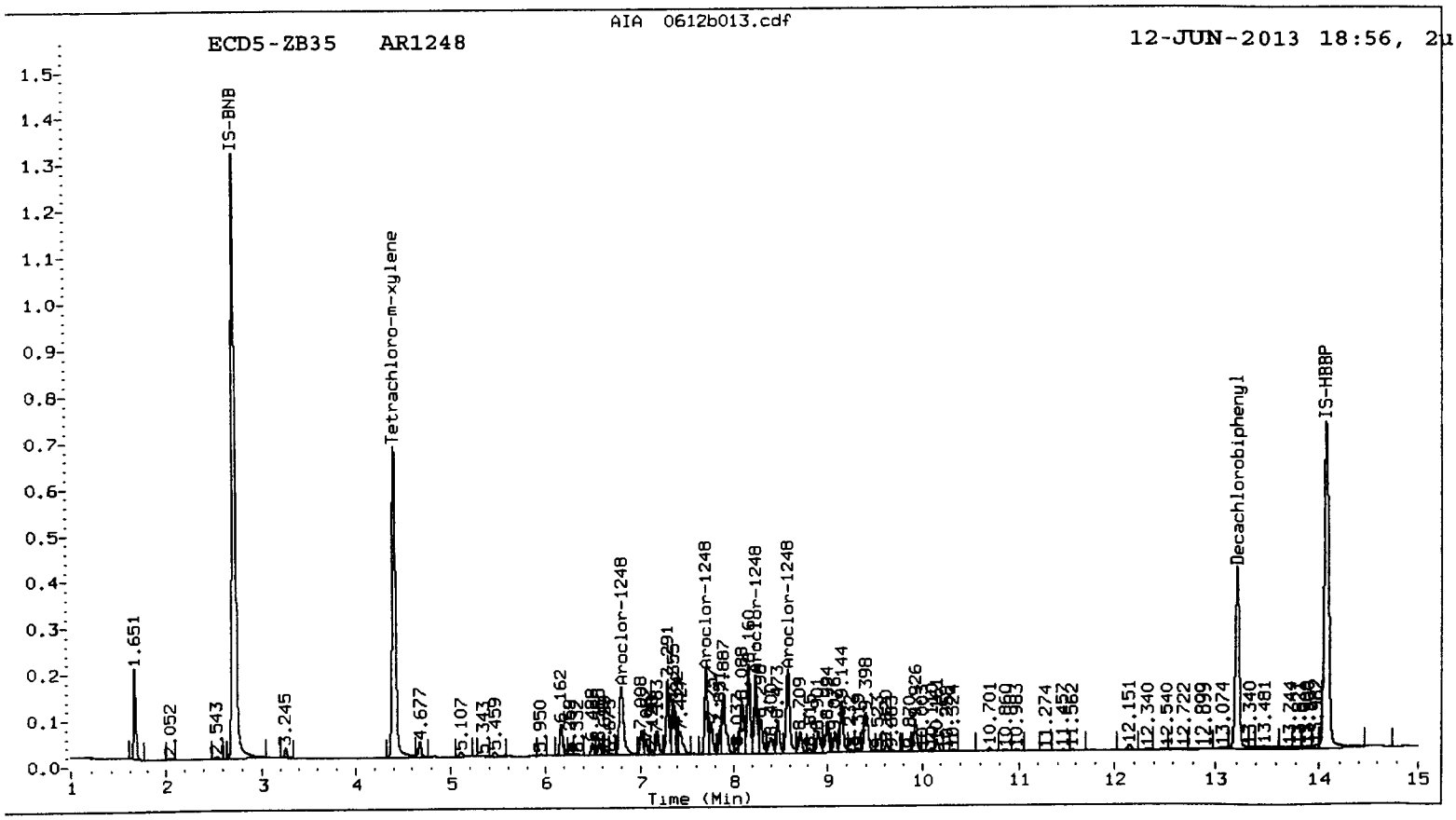
12-JUN-2013 18:56, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Aroclor-1248
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)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12-JUN-2013 18:56, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Aroclor-1248
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b014.d
Data file 2: 20130507.b/0612-2.b/0612b014.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 12-JUN-2013 19:16
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.409	0.002	35425286	4.408	0.001	8455885	38.7	37.9	2.0	Tetrachloro-m-xylen
12.827	0.002	34319765	13.202	0.001	5709209	36.6	35.8	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.8	94.9
Decachlorobiphenyl	91.5	89.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	59009209	20.5
Hexabromobiphenyl	50004151	62782280	25.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16480424	11.1
Hexabromobiphenyl	9345340	11097077	18.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

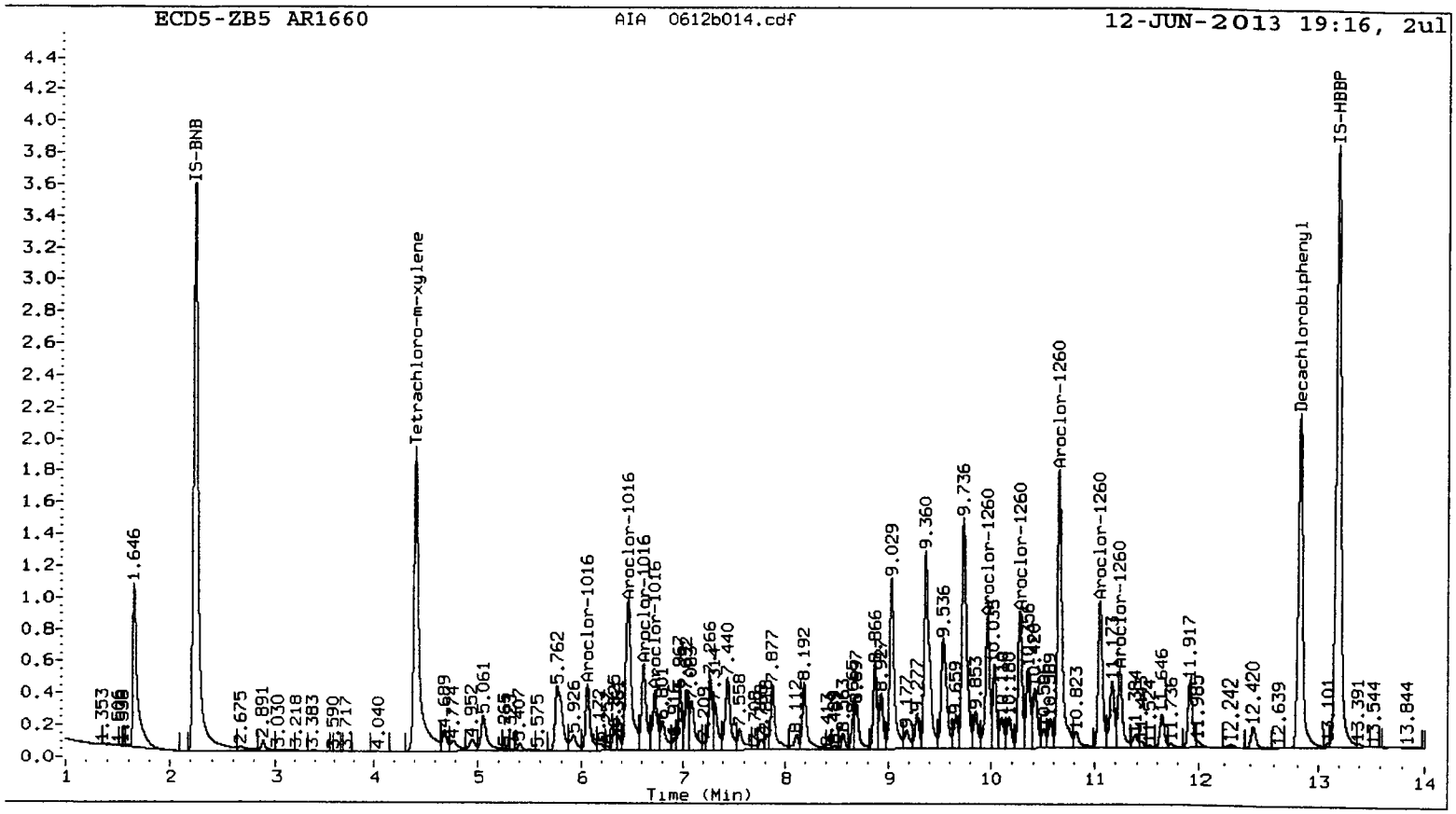
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.059	0.001	6318215	237.5	1	6.163	0.001	2170007	230.8
Aroclor-1016	2	6.467	0.002	19520639	238.3	2	6.800	0.002	4697570	229.8
Aroclor-1016	3	6.616	0.001	8433275	229.7	3	7.184	0.001	1214227	227.1
Aroclor-1016	4	6.727	0.001	6330092	230.8	4	7.356	0.001	1102631	221.5
Total Col1Ave (4 peaks):					234.1	Total Col2Ave (4 peaks):			227.3	RPD = 3
Corrected Ave (3 peaks):					232.7	Corrected Ave (3 peaks):			226.1	RPD = 3
Aroclor-1260	1	9.966	0.002	11540651	224.5	1	10.258	0.002	2163161	214.9
Aroclor-1260	2	10.282	0.002	11349252	222.6	2	10.708	0.002	2603736	220.8
Aroclor-1260	3	10.658	0.001	27563632	225.5	3	10.984	0.002	5046338	231.8
Aroclor-1260	4	11.058	0.002	14064916	236.2	4	11.504	0.002	1398524	237.0
Aroclor-1260	5	11.247	0.002	7570694	237.6	NS	---			----
Total Col1Ave (5 peaks):					229.3	Total Col2Ave (4 peaks):			226.1	RPD = 1
Corrected Ave (4 peaks):					227.2	Corrected Ave (3 peaks):			222.5	RPD = 2

Total PCB Area Col1 (4.507 - 12.726) = 355910596 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 68105696 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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12-JUN-2013 19:16, 2ul
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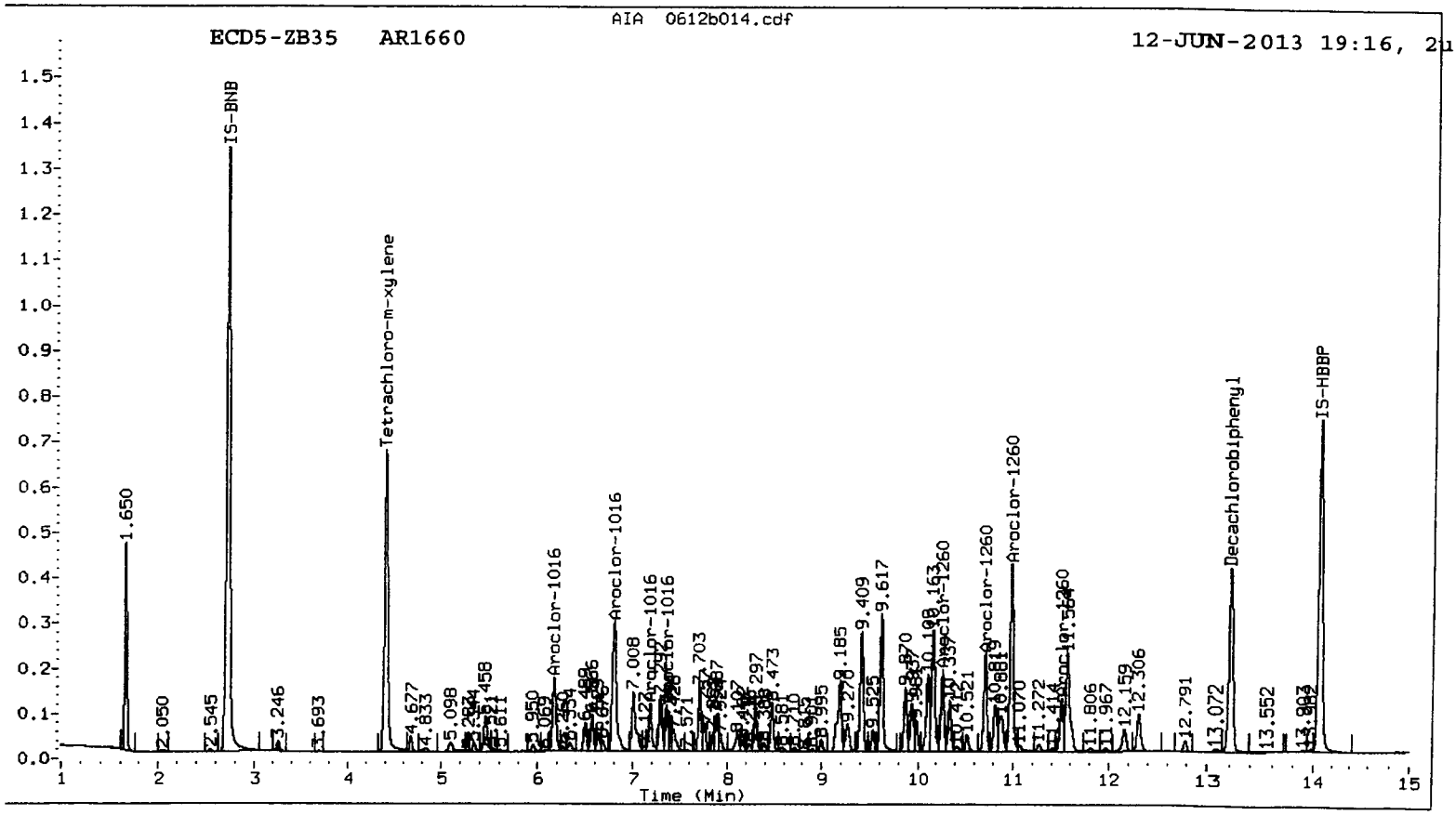
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)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12-JUN-2013 19:16, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b015.d
Data file 2: 20130507.b/0612-2.b/0612b015.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WR99D
Client ID: KC-VT-1593-20130530
Injection Date: 12-JUN-2013 19:37
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	24176622	4.408	0.000	5835347	29.0	28.1	3.2	Tetrachloro-m-xylen
12.826	0.000	26506515	13.202	0.001	4622580	30.1	29.6	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	72.5	70.2
Decachlorobiphenyl	75.4	74.0

JA 06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53753844	9.8
Hexabromobiphenyl	50004151	58860876	17.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15363874	3.5
Hexabromobiphenyl	9345340	10848507	16.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.022	-0.035	243867	10.1	1	6.165	0.003	14714	1.7
Aroclor-1016	2	6.443	-0.022	151971	2.0	2	6.803	0.005	35610	1.9
Aroclor-1016	3	6.620	0.005	48089	1.4	3	7.099	-0.083	39742	8.0
Aroclor-1016	4	6.717	-0.009	175072	7.0	4	7.353	-0.002	27048	5.8
	Total Col1Ave (4 peaks):				5.1	Total Col2Ave (4 peaks):				4.3 RPD = 17
	Corrected Ave (3 peaks):				3.5	Corrected Ave (3 peaks):				3.1 RPD = 11
Aroclor-1221	1	5.064	0.001	93039	4.2	1	3.679	-0.015	198146	125.8
Aroclor-1221	2	6.443	-0.025	151971	22.7	2	5.105	0.010	110183	41.8
Aroclor-1221	3	7.876	-0.002	942802	99.6	3	5.367	0.022	133089	92.7
Aroclor-1221	NS	---			----	4	5.480	0.019	695150	153.9
	Total Col1Ave (3 peaks):				42.2	Total Col2Ave (4 peaks):				105.6 RPD = 84*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				86.8
Aroclor-1232	1	6.022	-0.038	243867	24.5	1	6.165	-0.001	14714	3.7
Aroclor-1232	2	6.443	-0.026	151971	5.0	2	6.803	0.002	35610	4.5
Aroclor-1232	3	7.416	-0.026	257139	16.2	3	7.013	0.002	12056	3.7
Aroclor-1232	4	7.876	0.002	942802	51.8	4	8.219	-0.020	72450	26.3
	Total Col1Ave (4 peaks):				24.4	Total Col2Ave (4 peaks):				9.6 RPD = 87*
	Corrected Ave (3 peaks):				15.2	Corrected Ave (3 peaks):				4.0 RPD = 117*
Aroclor-1242	1	6.022	-0.035	243867	12.6	1	6.165	0.002	14714	2.1
Aroclor-1242	2	6.443	-0.023	151971	2.6	2	6.803	0.003	35610	2.3
Aroclor-1242	3	6.620	0.005	48089	1.8	3	7.013	0.006	12056	1.9
Aroclor-1242	4	7.876	0.006	942802	28.8	4	8.219	-0.016	72450	13.5
	Total Col1Ave (4 peaks):				11.4	Total Col2Ave (4 peaks):				4.9 RPD = 79*
	Corrected Ave (3 peaks):				5.7	Corrected Ave (3 peaks):				2.1 RPD = 92*
Aroclor-1248	1	6.443	-0.020	151971	4.0	1	6.803	0.008	35610	3.7
Aroclor-1248	2	7.416	-0.024	257139	6.0	2	7.700	-0.003	58227	7.3
Aroclor-1248	3	7.876	0.004	942802	17.4	3	8.219	-0.016	72450	8.8
Aroclor-1248	4	8.093	-0.014	694247	18.4	4	8.559	-0.021	148536	13.8
	Total Col1Ave (4 peaks):				11.5	Total Col2Ave (4 peaks):				8.4 RPD = 31
	Corrected Ave (3 peaks):				9.2	Corrected Ave (3 peaks):				6.6 RPD = 33
Aroclor-1254	1	8.185	-0.004	1157284	23.1	1	8.295	-0.003	208823	28.0
Aroclor-1254	2	8.576	0.015	1177071	35.6	2	8.483	0.009	327673	35.6
Aroclor-1254	3	8.695	-0.002	2686337	38.9	3	8.994	-0.002	636111	90.2
Aroclor-1254	4	9.030	-0.021	2936430	41.3	4	9.143	-0.004	383310	25.4
Aroclor-1254	5	9.358	-0.001	2089501	77.8	5	9.932	0.000	345354	40.6
	Total Col1Ave (5 peaks):				43.3	Total Col2Ave (5 peaks):				44.0 RPD = 1
	Corrected Ave (4 peaks):				34.7	Corrected Ave (4 peaks):				32.4 RPD = 7
Aroclor-1260	1	9.957	-0.008	3190764	66.2	1	10.256	0.000	423736	43.1
Aroclor-1260	2	10.280	0.000	1958863	41.0	2	10.703	-0.003	558653	48.5
Aroclor-1260	3	10.656	0.000	3244665	28.3	3	10.986	0.004	1344440	63.2
Aroclor-1260	4	11.055	-0.001	1886635	33.8	4	11.502	-0.001	301753	52.3
Aroclor-1260	5	11.246	0.001	1456521	48.8	NS	---			----
	Total Col1Ave (5 peaks):				43.6	Total Col2Ave (4 peaks):				51.8 RPD = 17
	Corrected Ave (4 peaks):				38.0	Corrected Ave (3 peaks):				47.9 RPD = 23
Aroclor-1262	1	10.280	-0.002	1958863	35.5	1	10.256	-0.003	423736	28.2
Aroclor-1262	2	10.656	-0.002	3244665	25.1	2	10.703	-0.007	558653	40.7
Aroclor-1262	3	11.055	-0.005	1886635	46.0	3	10.986	0.001	1344440	52.2
Aroclor-1262	4	11.246	-0.002	1456521	25.3	4	11.562	-0.005	560383	33.5
Aroclor-1262	5	11.910	-0.008	1880571	42.6	5	12.303	-0.003	273613	33.9
	Total Col1Ave (5 peaks):				34.9	Total Col2Ave (5 peaks):				37.7 RPD = 8
	Corrected Ave (4 peaks):				32.1	Corrected Ave (4 peaks):				34.1 RPD = 6
Aroclor-1268	1	11.170	-0.005	2150685	17.4	1	11.502	-0.005	301753	11.5

Aroclor-1268	2	11.246	0.000	1456521	10.6	2	11.562	-0.011	560383	22.7
Aroclor-1268	3	11.642	0.009	1100135	10.8	3	11.960	-0.009	84567	4.3
Aroclor-1268	4	12.420	-0.002	772846	2.7	4	12.789	-0.004	120315	2.4

Total Col1Ave (4 peaks): 10.4 Total Col2Ave (4 peaks): 10.2 RPD = 1

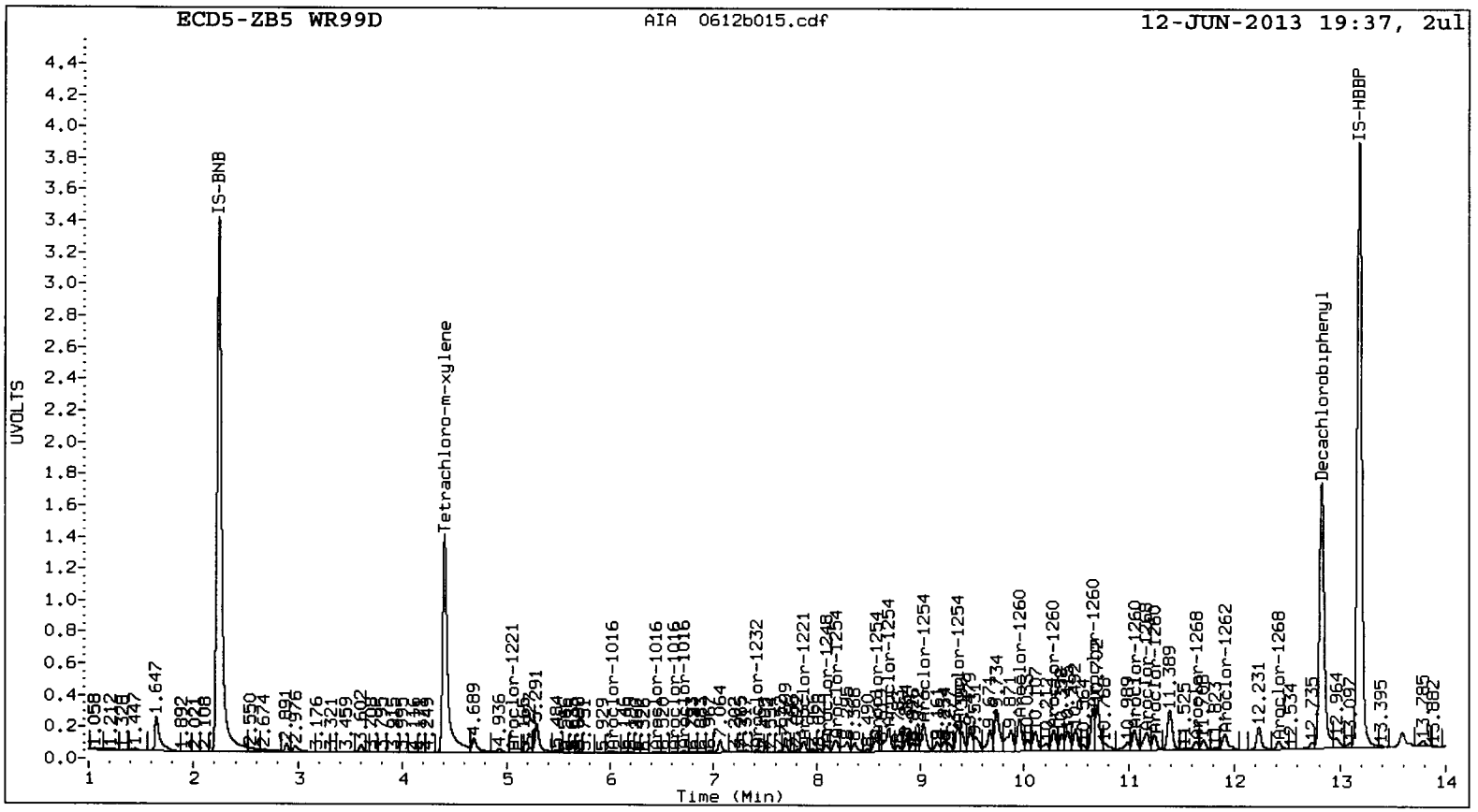
Corrected Ave (3 peaks): 8.0 Corrected Ave (3 peaks): 6.1 RPD = 28

Total PCB Area Col1 (4.507 - 12.726) = 86644000 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 17540432 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

WR99:01946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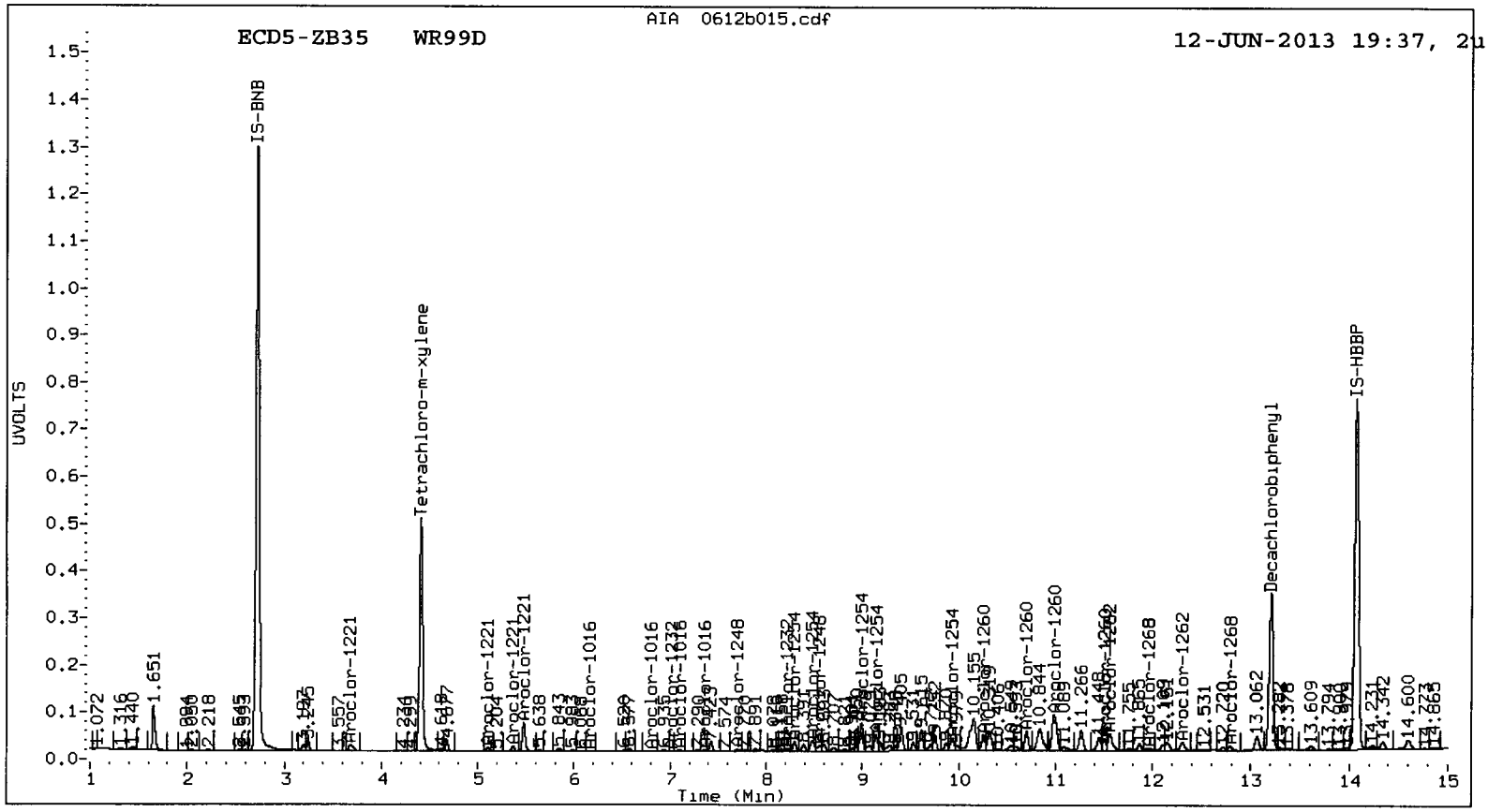
AIA 0612b015.cdf
12-JUN-2013 19:37, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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Time (Min)
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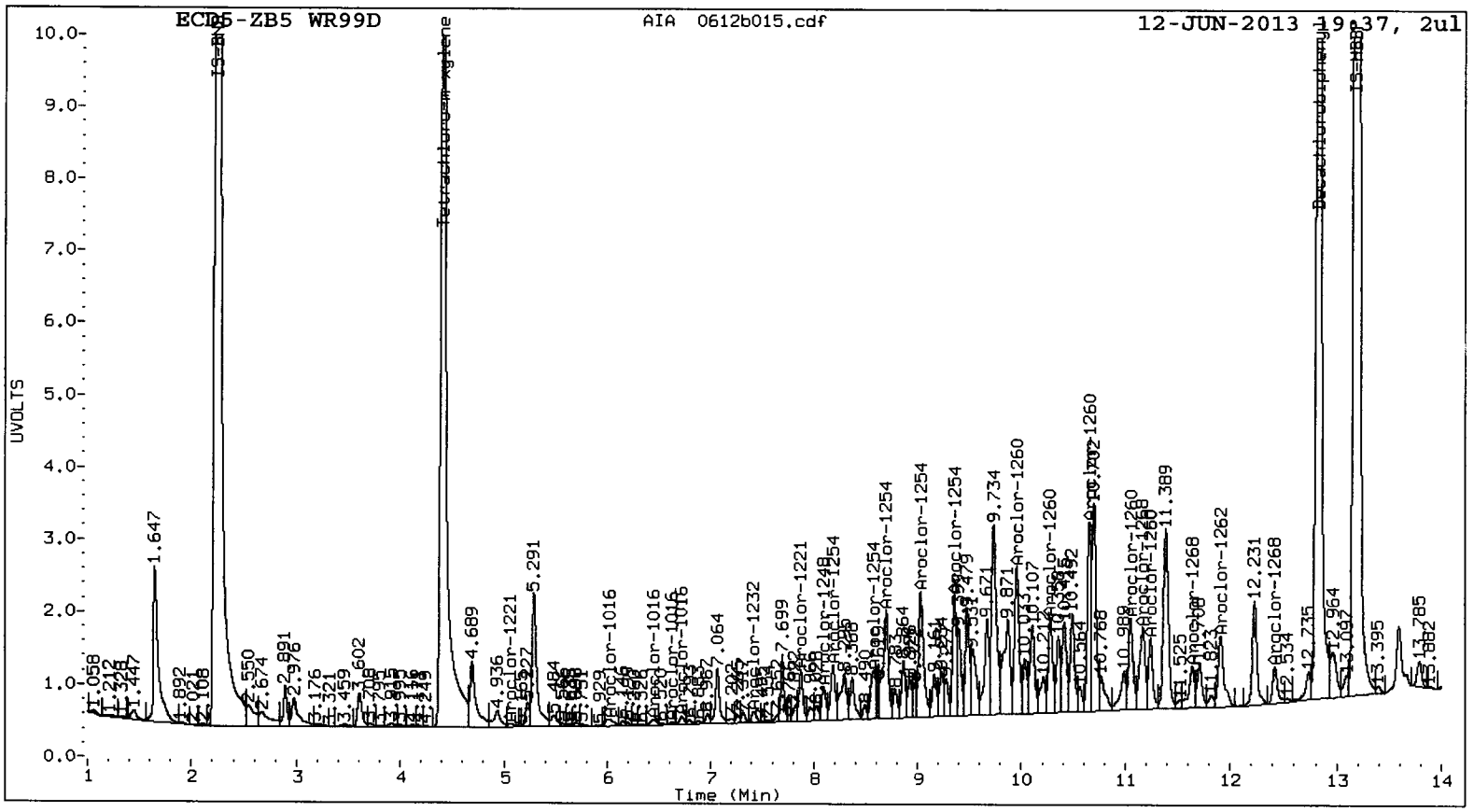
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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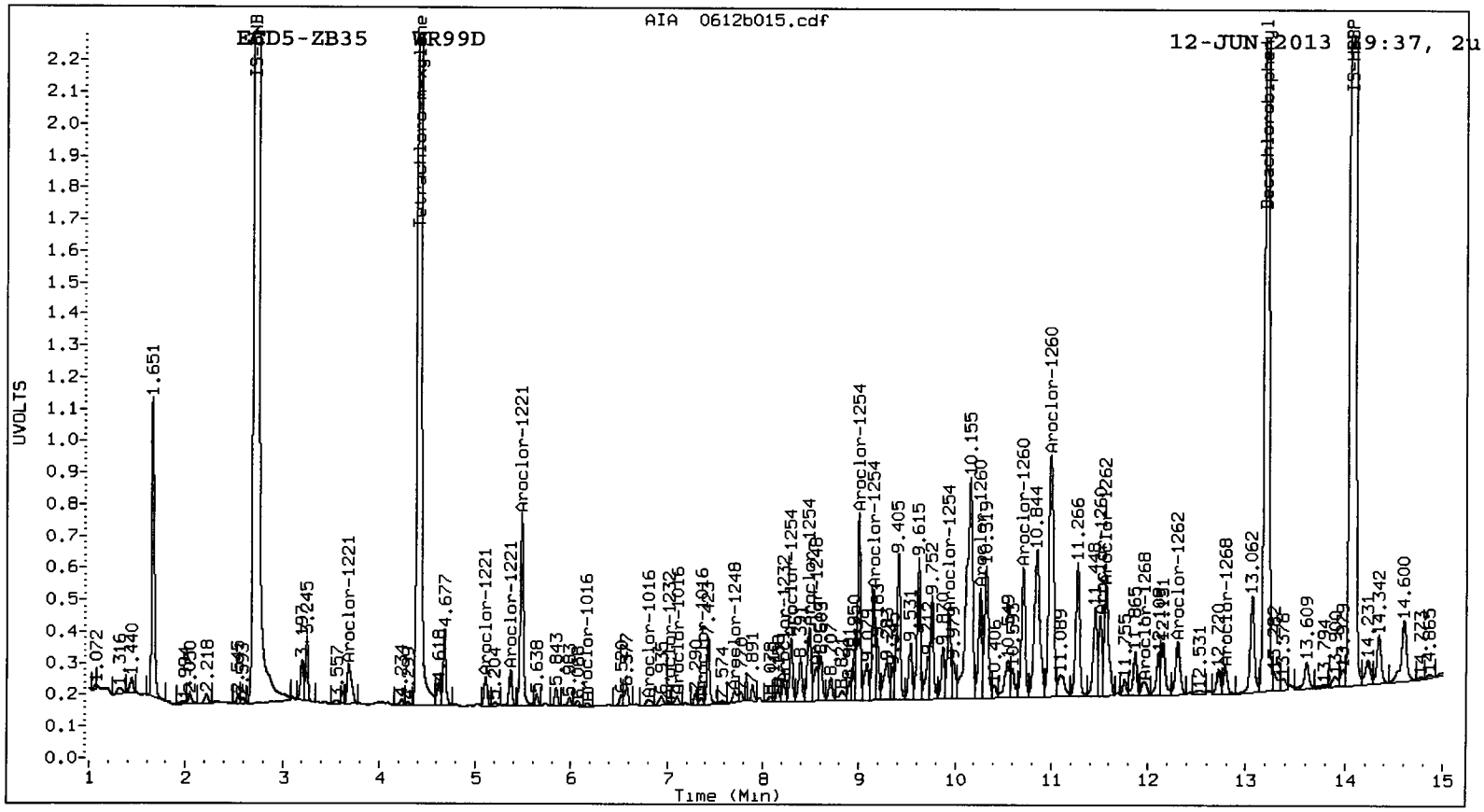
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b016.d
Data file 2: 20130507.b/0612-2.b/0612b016.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WR99DMS
Client ID: KC-VT-1593-2013 MS
Injection Date: 12-JUN-2013 19:57
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	21678242	4.408	0.000	5114367	28.3	25.9	8.9	Tetrachloro-m-xylen
12.826	0.000	29285377	13.201	0.000	4355083	33.2	28.2	16.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	70.8	64.7
Decachlorobiphenyl	82.9	70.5

06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49373113	0.8
Hexabromobiphenyl	50004151	59100434	18.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14604387	-1.6
Hexabromobiphenyl	9345340	10725601	14.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.057	0.000	7611958	342.0	1	6.162	0.000	2757038	330.8
Aroclor-1016	2	6.463	-0.003	25301776	369.1	2	6.795	-0.003	5966103	329.3
Aroclor-1016	3	6.612	-0.003	10241048	333.4	3	7.180	-0.003	1490687	314.7
Aroclor-1016	4	6.723	-0.003	7532185	328.2	4	7.355	0.000	1312683	297.5
Total Col1Ave (4 peaks):					343.2	Total Col2Ave (4 peaks):				318.1 RPD = 8
Corrected Ave (3 peaks):					334.6	Corrected Ave (3 peaks):				313.8 RPD = 6
Aroclor-1221	1	5.058	-0.006	4722266	234.8	1	3.683	-0.011	344615	230.2
Aroclor-1221	2	6.463	-0.006	25301776	4111.1	2	5.093	-0.002	328085	130.9
Aroclor-1221	3	7.876	-0.002	7043682	810.5	3	5.344	-0.001	352096	258.0
Aroclor-1221	NS	---			----	4	5.465	0.005	2178199	507.3
Total Col1Ave (3 peaks):					1718.8	Total Col2Ave (4 peaks):				281.6 RPD = 144*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				206.4
Aroclor-1232	1	6.057	-0.003	7611958	832.3	1	6.162	-0.004	2757038	735.6
Aroclor-1232	2	6.463	-0.007	25301776	903.9	2	6.795	-0.006	5966103	797.3
Aroclor-1232	3	7.438	-0.003	9085800	624.5	3	7.005	-0.006	2369473	759.4
Aroclor-1232	4	7.876	0.002	7043682	421.4	4	8.231	-0.008	293821	112.2
Total Col1Ave (4 peaks):					695.5	Total Col2Ave (4 peaks):				601.1 RPD = 15
Corrected Ave (3 peaks):					626.1	Corrected Ave (3 peaks):				535.7 RPD = 16
Aroclor-1242	1	6.057	-0.001	7611958	428.1	1	6.162	-0.001	2757038	414.4
Aroclor-1242	2	6.463	-0.004	25301776	463.9	2	6.795	-0.004	5966103	408.2
Aroclor-1242	3	6.612	-0.003	10241048	420.8	3	7.005	-0.002	2369473	388.0
Aroclor-1242	4	7.876	0.005	7043682	234.4	4	8.231	-0.004	293821	57.4
Total Col1Ave (4 peaks):					386.8	Total Col2Ave (4 peaks):				317.0 RPD = 20
Corrected Ave (3 peaks):					361.1	Corrected Ave (3 peaks):				284.6 RPD = 24
Aroclor-1248	1	6.463	-0.001	25301776	728.2	1	6.795	0.000	5966103	651.9
Aroclor-1248	2	7.438	-0.001	9085800	232.5	2	7.702	-0.001	1994506	262.8
Aroclor-1248	3	7.876	0.004	7043682	141.8	3	8.231	-0.004	293821	37.4
Aroclor-1248	4	8.107	-0.001	1629501	47.0	4	8.574	-0.006	410736	40.2
Total Col1Ave (4 peaks):					287.4	Total Col2Ave (4 peaks):				248.1 RPD = 15
Corrected Ave (3 peaks):					140.4	Corrected Ave (3 peaks):				113.5 RPD = 21
Aroclor-1254	1	8.190	0.000	7486235	162.6	1	8.295	-0.003	1336916	188.8
Aroclor-1254	2	8.561	0.000	2558350	84.2	2	8.472	-0.002	1659534	189.7
Aroclor-1254	3	8.695	-0.003	8776168	138.5	3	8.993	-0.003	678887	101.3
Aroclor-1254	4	9.028	-0.022	20784572	318.5	4	9.143	-0.003	1031413	71.9
Aroclor-1254	5	9.358	-0.001	30093211	1219.3	5	9.935	0.003	1739340	215.2
Total Col1Ave (5 peaks):					384.6	Total Col2Ave (5 peaks):				153.4 RPD = 86*
Corrected Ave (4 peaks):					175.9	Corrected Ave (4 peaks):				137.8 RPD = 24
Aroclor-1260	1	9.964	0.000	16928390	349.8	1	10.258	0.001	3096028	318.3
Aroclor-1260	2	10.281	0.000	15588628	324.8	2	10.706	0.000	3750434	329.1
Aroclor-1260	3	10.656	-0.001	42773113	371.7	3	10.982	0.000	7885400	374.8
Aroclor-1260	4	11.055	-0.001	21037604	375.3	4	11.502	-0.001	2170298	380.5
Aroclor-1260	5	11.245	0.000	10747990	358.4	NS	---			----
Total Col1Ave (5 peaks):					356.0	Total Col2Ave (4 peaks):				350.7 RPD = 2
Corrected Ave (4 peaks):					351.1	Corrected Ave (3 peaks):				340.7 RPD = 3
Aroclor-1262	1	10.281	-0.002	15588628	281.7	1	10.258	-0.002	3096028	208.7
Aroclor-1262	2	10.656	-0.002	42773113	389.0	2	10.706	-0.004	3750434	276.5
Aroclor-1262	3	11.055	-0.004	21037604	510.9	3	10.982	-0.003	7885400	309.9
Aroclor-1262	4	11.245	-0.002	10747990	185.9	4	11.562	-0.005	5042337	304.9
Aroclor-1262	5	11.914	-0.004	9247748	208.5	5	12.303	-0.003	1783948	223.4
Total Col1Ave (5 peaks):					303.2	Total Col2Ave (5 peaks):				264.7 RPD = 14
Corrected Ave (4 peaks):					251.3	Corrected Ave (4 peaks):				253.4 RPD = 1
Aroclor-1268	1	11.172	-0.003	9506649	76.4	1	11.502	-0.005	2170298	83.8

Aroclor-1268 2	11.245	-0.001	10747990	78.1	2	11.562	-0.011	5042337	206.6
Aroclor-1268 3	11.645	0.012	4680586	45.8	3	11.967	-0.002	150599	7.8
Aroclor-1268 4	12.417	-0.004	10955683	38.1	4	12.788	-0.004	536216	10.7

Total Col1Ave (4 peaks): 59.6 Total Col2Ave (4 peaks): 77.2 RPD = 26

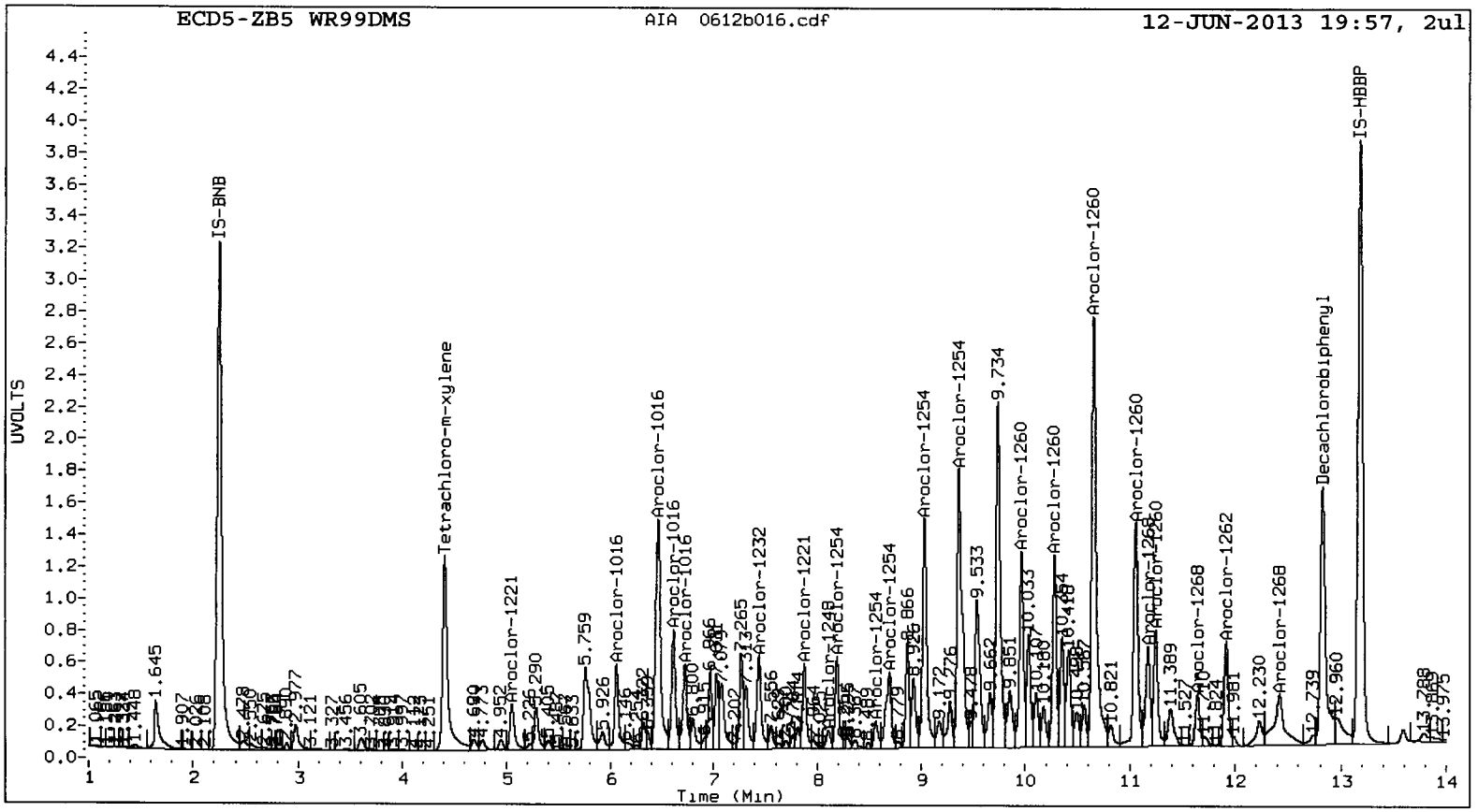
Corrected Ave (3 peaks): 53.4 Corrected Ave (3 peaks): 34.1 RPD = 44*

Total PCB Area Col1 (4.507 - 12.726) = 494316354 Col1 Total PCB = 0.8 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 98225481 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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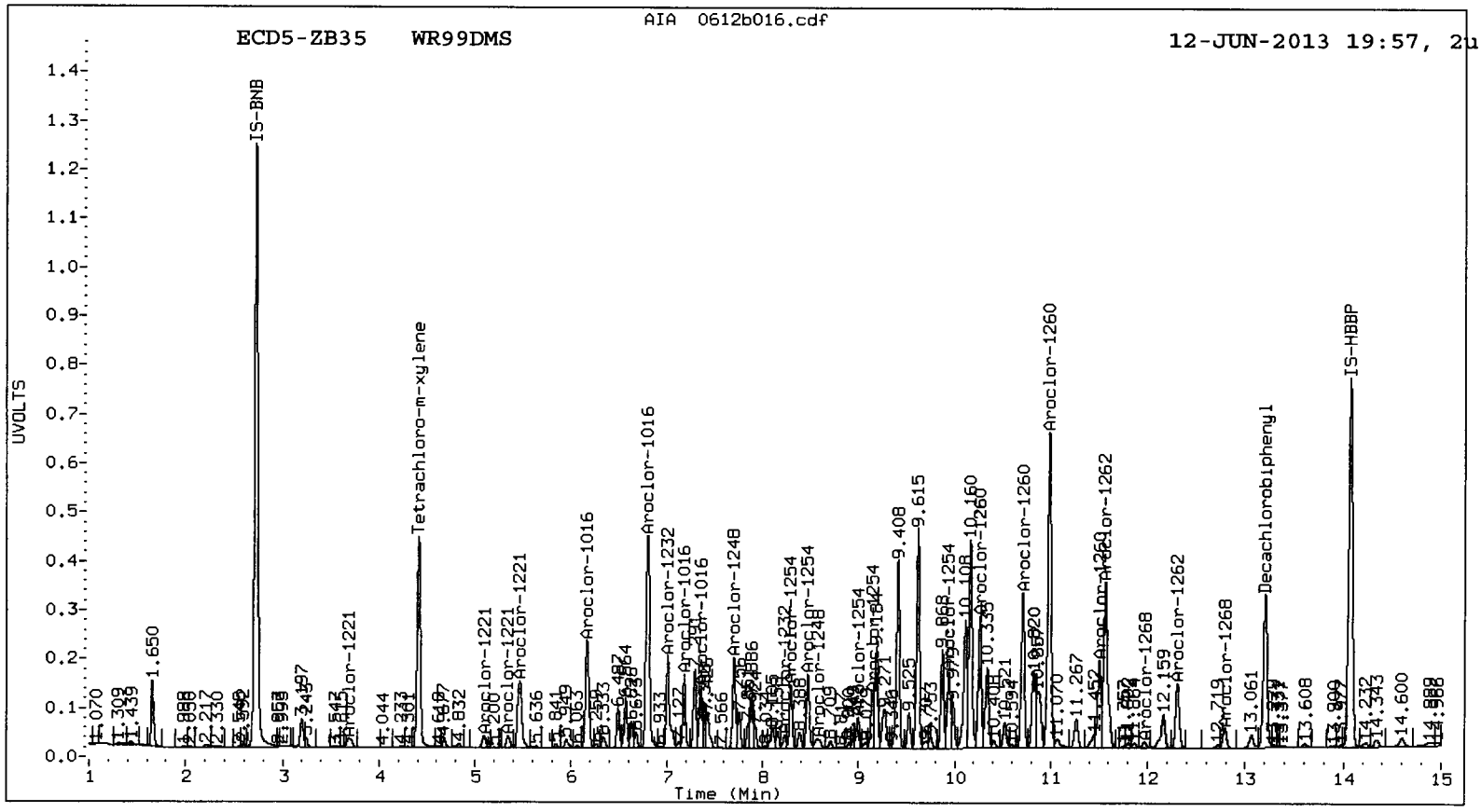
12-JUN-2013 19:57, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
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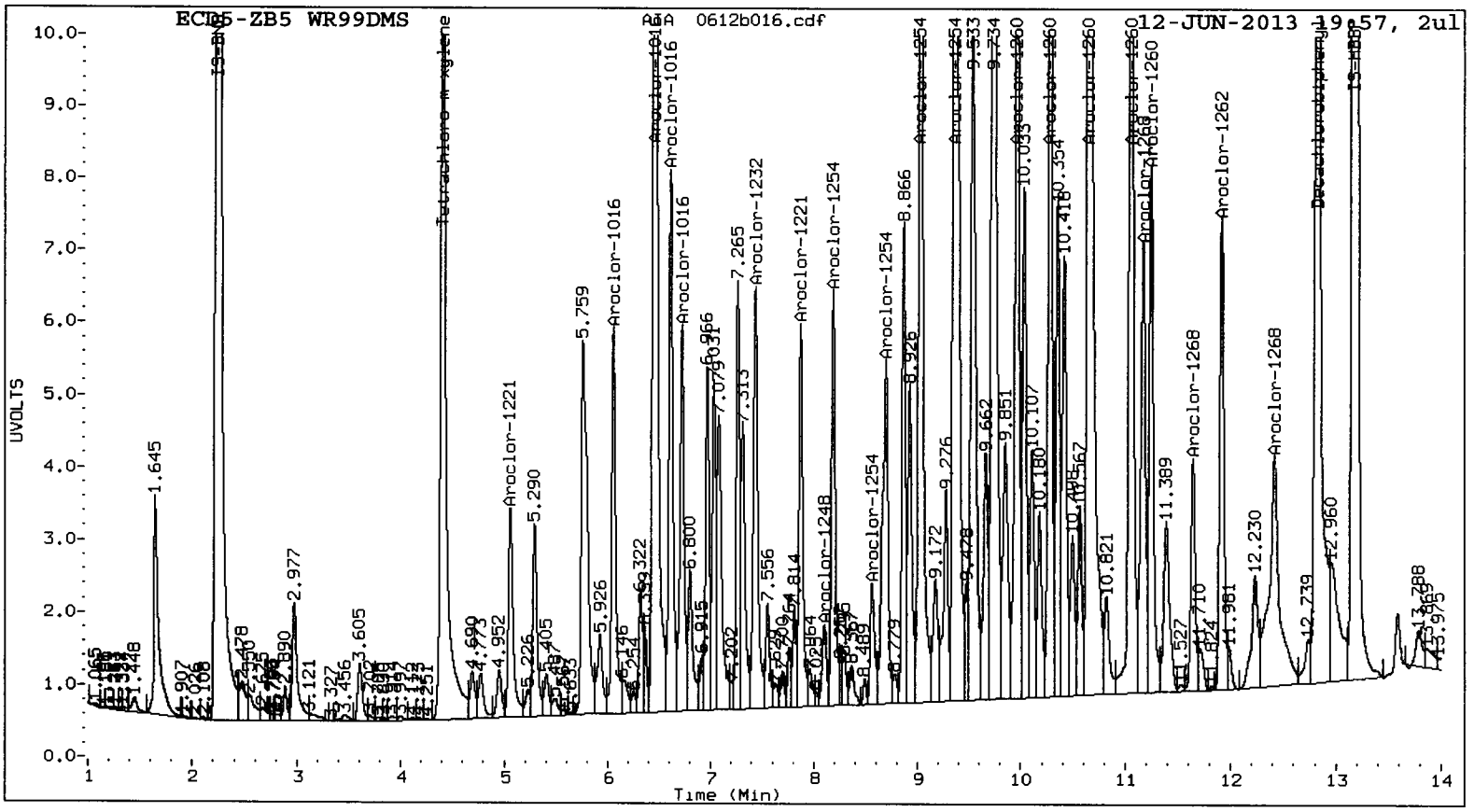
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
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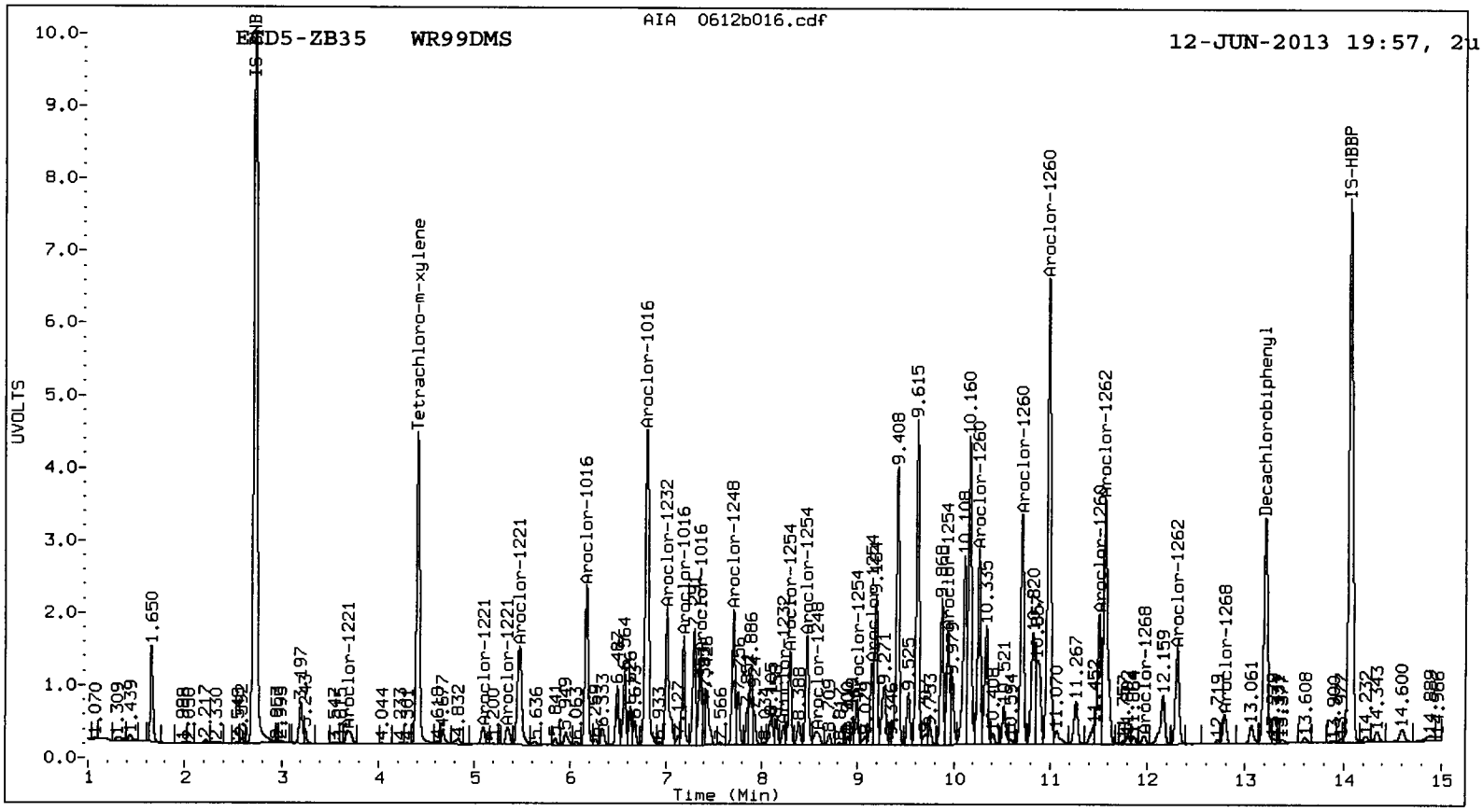
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b017.d
Data file 2: 20130507.b/0612-2.b/0612b017.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WR99DMSD
Client ID: KC-VT-1593-2013 MSD
Injection Date: 12-JUN-2013 20:17
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	23307827	4.408	0.000	5523895	28.2	27.7	1.8	Tetrachloro-m-xylen
12.826	0.000	25164152	13.202	0.001	4370435	29.3	28.9	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	70.5	69.3
Decachlorobiphenyl	73.2	72.2

06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53275204	8.8
Hexabromobiphenyl	50004151	57512484	15.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14741776	-0.7
Hexabromobiphenyl	9345340	10513140	12.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.057	-0.001	7994194	332.9	1	6.161	-0.001	2843452	338.0
Aroclor-1016	2	6.462	-0.004	26479267	358.0	2	6.795	-0.003	6199996	339.0
Aroclor-1016	3	6.612	-0.003	10726090	323.7	3	7.180	-0.002	1516681	317.2
Aroclor-1016	4	6.723	-0.003	7795358	314.8	4	7.354	0.000	1403573	315.2
	Total Col1Ave (4 peaks):				332.3		Total Col2Ave (4 peaks):			327.4 RPD = 2
	Corrected Ave (3 peaks):				323.8		Corrected Ave (3 peaks):			323.5 RPD = 0
Aroclor-1221	1	5.058	-0.006	5204759	239.8	1	3.681	-0.013	168483	111.5
Aroclor-1221	2	6.462	-0.006	26479267	3987.3	2	5.093	-0.002	327680	129.5
Aroclor-1221	3	7.875	-0.003	7156294	763.1	3	5.344	-0.001	369477	268.2
Aroclor-1221	NS	---			----	4	5.459	-0.001	1915428	442.0
	Total Col1Ave (3 peaks):				1663.4		Total Col2Ave (4 peaks):			237.8 RPD = 150*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			169.7
Aroclor-1232	1	6.057	-0.004	7994194	810.1	1	6.161	-0.005	2843452	751.5
Aroclor-1232	2	6.462	-0.007	26479267	876.6	2	6.795	-0.006	6199996	820.9
Aroclor-1232	3	7.438	-0.004	9574331	609.9	3	7.005	-0.006	2463360	782.2
Aroclor-1232	4	7.875	0.001	7156294	396.8	4	8.231	-0.008	307300	116.3
	Total Col1Ave (4 peaks):				673.4		Total Col2Ave (4 peaks):			617.7 RPD = 9
	Corrected Ave (3 peaks):				605.6		Corrected Ave (3 peaks):			550.0 RPD = 10
Aroclor-1242	1	6.057	-0.001	7994194	416.6	1	6.161	-0.001	2843452	423.4
Aroclor-1242	2	6.462	-0.004	26479267	449.9	2	6.795	-0.005	6199996	420.2
Aroclor-1242	3	6.612	-0.003	10726090	408.5	3	7.005	-0.002	2463360	399.6
Aroclor-1242	4	7.875	0.005	7156294	220.7	4	8.231	-0.005	307300	59.5
	Total Col1Ave (4 peaks):				373.9		Total Col2Ave (4 peaks):			325.7 RPD = 14
	Corrected Ave (3 peaks):				348.6		Corrected Ave (3 peaks):			293.1 RPD = 17
Aroclor-1248	1	6.462	-0.001	26479267	706.2	1	6.795	0.000	6199996	671.2
Aroclor-1248	2	7.438	-0.002	9574331	227.1	2	7.702	-0.001	2054106	268.1
Aroclor-1248	3	7.875	0.003	7156294	133.5	3	8.231	-0.004	307300	38.7
Aroclor-1248	4	8.107	0.000	1736983	46.5	4	8.575	-0.006	449561	43.6
	Total Col1Ave (4 peaks):				278.3		Total Col2Ave (4 peaks):			255.4 RPD = 9
	Corrected Ave (3 peaks):				135.7		Corrected Ave (3 peaks):			116.8 RPD = 15
Aroclor-1254	1	8.190	0.000	7694162	154.9	1	8.296	-0.002	1429449	200.0
Aroclor-1254	2	8.560	-0.001	2407265	73.4	2	8.471	-0.002	1701817	192.7
Aroclor-1254	3	8.694	-0.004	8914701	130.4	3	8.993	-0.003	1338940	197.9
Aroclor-1254	4	9.027	-0.023	21258314	301.9	4	9.144	-0.003	1013737	70.0
Aroclor-1254	5	9.358	-0.002	30424846	1142.5	5	9.935	0.003	1737487	213.0
	Total Col1Ave (5 peaks):				360.6		Total Col2Ave (5 peaks):			174.7 RPD = 69*
	Corrected Ave (4 peaks):				165.1		Corrected Ave (4 peaks):			165.2 RPD = 0
Aroclor-1260	1	9.964	-0.001	16835050	357.4	1	10.258	0.001	3106542	325.8
Aroclor-1260	2	10.281	-0.001	15709711	336.3	2	10.706	0.000	3810728	341.2
Aroclor-1260	3	10.656	-0.001	44540613	397.7	3	10.983	0.000	8112885	393.4
Aroclor-1260	4	11.055	-0.001	20776497	380.9	4	11.503	0.001	2214936	396.2
Aroclor-1260	5	11.246	0.001	10656295	365.1	NS	---			----
	Total Col1Ave (5 peaks):				367.5		Total Col2Ave (4 peaks):			364.1 RPD = 1
	Corrected Ave (4 peaks):				359.9		Corrected Ave (3 peaks):			353.4 RPD = 2
Aroclor-1262	1	10.281	-0.001	15709711	291.7	1	10.258	-0.002	3106542	213.6
Aroclor-1262	2	10.656	-0.003	44540613	352.0	2	10.706	-0.004	3810728	286.6
Aroclor-1262	3	11.055	-0.005	20776497	518.5	3	10.983	-0.002	8112885	325.3
Aroclor-1262	4	11.246	-0.001	10656295	189.4	4	11.562	-0.005	5139306	317.0
Aroclor-1262	5	11.914	-0.004	10285078	238.3	5	12.304	-0.002	1830610	233.9
	Total Col1Ave (5 peaks):				318.0		Total Col2Ave (5 peaks):			275.3 RPD = 14
	Corrected Ave (4 peaks):				267.9		Corrected Ave (4 peaks):			262.8 RPD = 2
Aroclor-1268	1	11.172	-0.003	9557763	79.0	1	11.503	-0.004	2214936	87.3

Aroclor-1268 2	11.246	0.000	10656295	79.6	2	11.562	-0.011	5139306	214.8
Aroclor-1268 3	11.645	0.012	5268140	53.0	3	11.968	-0.001	165945	8.8
Aroclor-1268 4	12.420	-0.002	4271694	15.3	4	12.789	-0.004	555377	11.3

Total Col1Ave (4 peaks): 56.7 Total Col2Ave (4 peaks): 80.6 RPD = 35

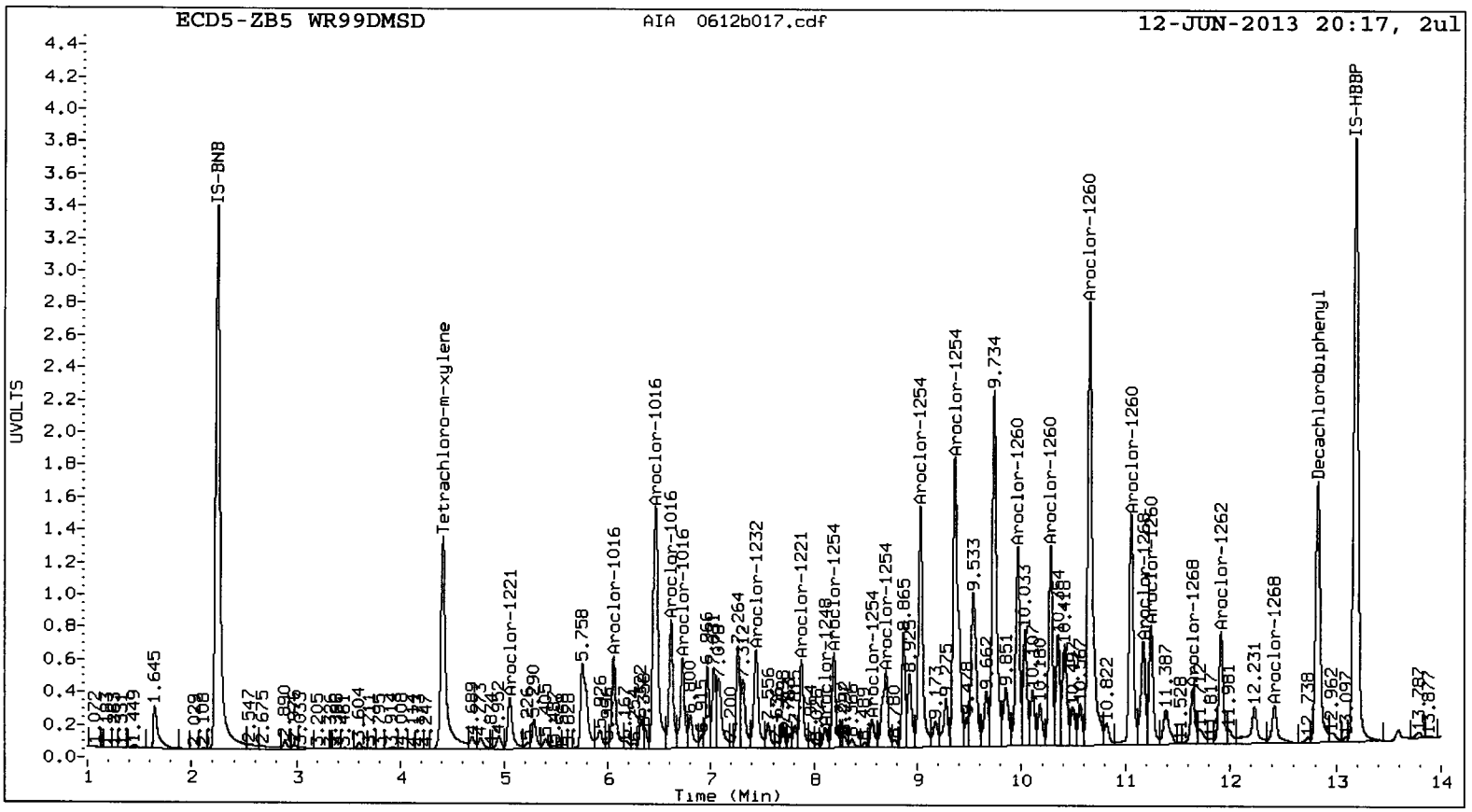
Corrected Ave (3 peaks): 49.1 Corrected Ave (3 peaks): 35.8 RPD = 31

Total PCB Area Col1 (4.507 - 12.726) = 502825457 Col1 Total PCB = 0.8 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 101375758 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

WR09:01955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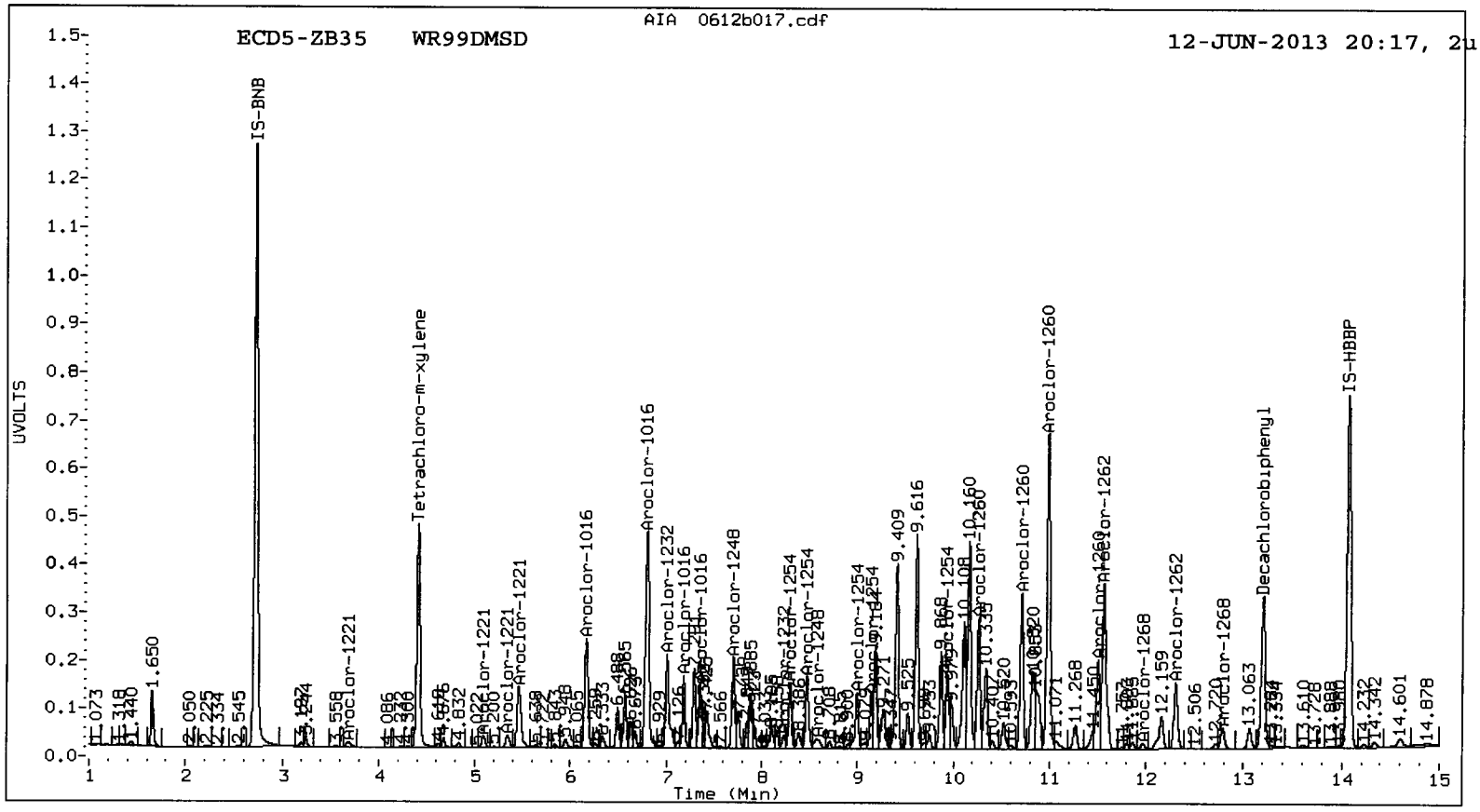
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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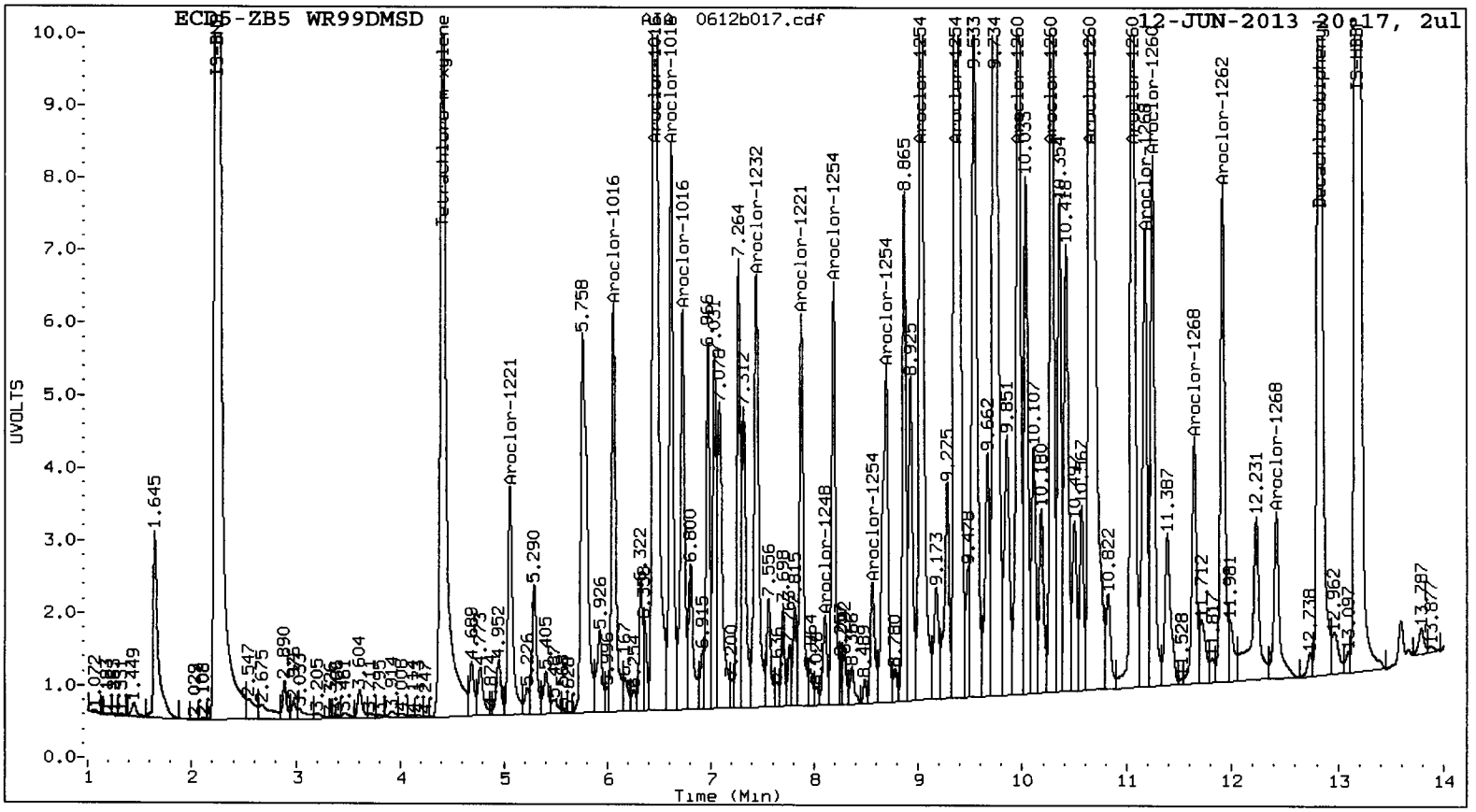
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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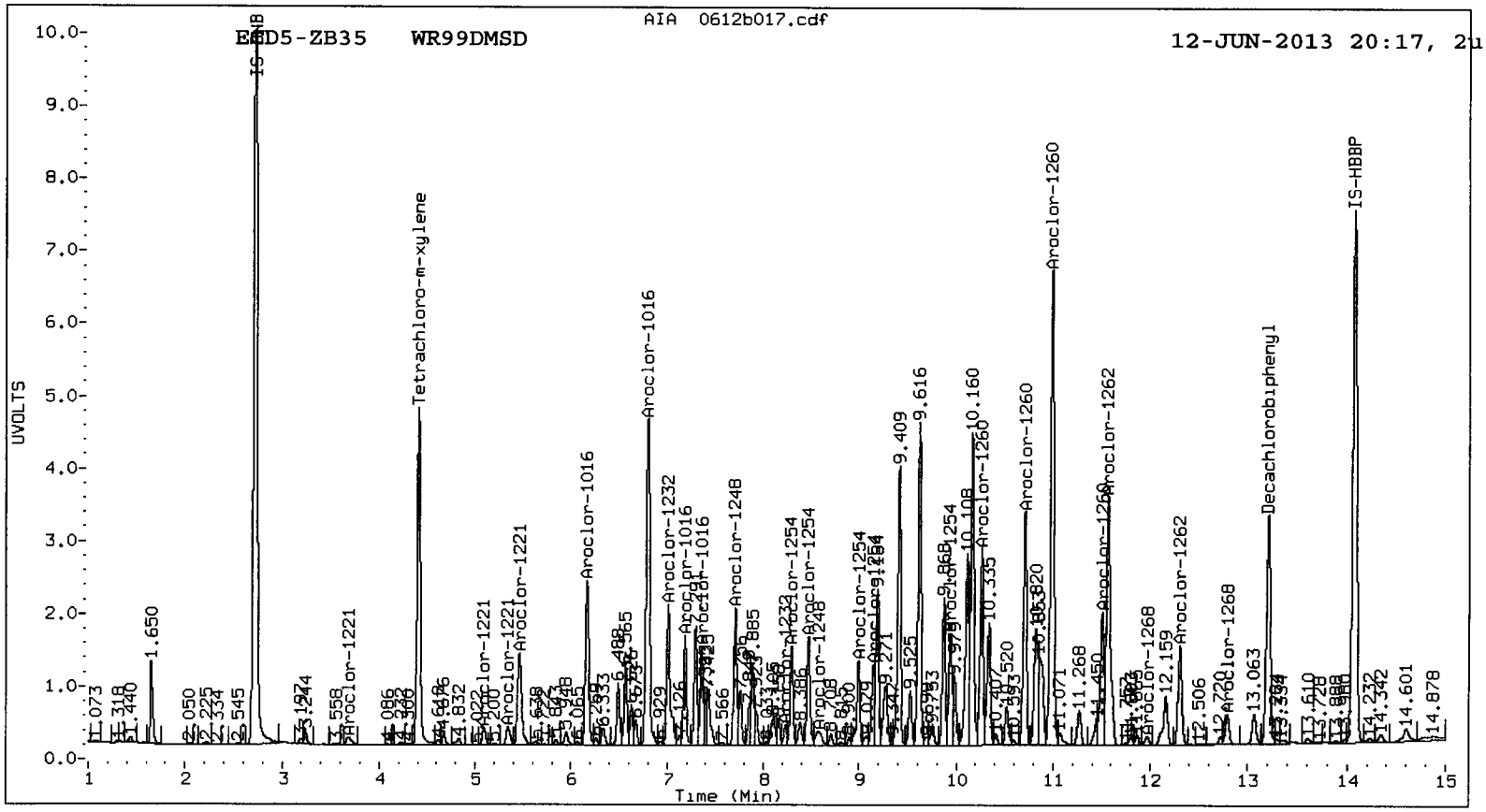
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-DNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b018.d
Data file 2: 20130507.b/0612-2.b/0612b018.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WR99E
Client ID: KC-CB-01-20130530-S
Injection Date: 12-JUN-2013 20:38
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 10.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.407	0.000	3408256	4.408	0.000	747943	4.0	3.6	8.9	Tetrachloro-m-xylen
12.825	-0.001	4145087	13.201	0.000	662088	4.7	4.4	6.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	99.6	91.1
Decachlorobiphenyl	117.3	110.3

06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	55185958	12.7
Hexabromobiphenyl	50004151	59159399	18.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15175126	2.3
Hexabromobiphenyl	9345340	10431045	11.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.058	0.001	60050	2.4	1	6.162	0.000	19401	2.2
Aroclor-1016	2	6.465	-0.001	180862	2.4	2	6.798	0.000	35990	1.9
Aroclor-1016	3	6.619	0.004	85874	2.5	3	---			0.0
Aroclor-1016	4	6.716	-0.010	103332	4.0	4	7.353	-0.001	259073	56.5
Total Col1Ave (4 peaks):					2.8	Total Col2Ave (3 peaks):			20.2	RPD = 151*
Corrected Ave (3 peaks):					2.4	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	5.064	0.000	121148	5.4	1	3.680	-0.014	31918	20.5
Aroclor-1221	2	6.465	-0.004	180862	26.3	2	5.096	0.001	27699	10.6
Aroclor-1221	3	7.876	-0.002	16015455	1648.7	3	5.347	0.002	35127	24.8
Aroclor-1221	NS	---			----	4	5.471	0.011	74236	16.6
Total Col1Ave (3 peaks):					560.1	Total Col2Ave (4 peaks):			18.1	RPD = 187*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			15.9	
Aroclor-1232	1	6.058	-0.002	60050	5.9	1	6.162	-0.004	19401	5.0
Aroclor-1232	2	6.465	-0.005	180862	5.8	2	6.798	-0.003	35990	4.6
Aroclor-1232	3	7.439	-0.002	929176	57.1	3	---			0.0
Aroclor-1232	4	7.876	0.002	16015455	857.3	4	8.233	-0.006	553324	203.4
Total Col1Ave (4 peaks):					231.5	Total Col2Ave (3 peaks):			71.0	RPD = 106*
Corrected Ave (3 peaks):					22.9	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.058	0.000	60050	3.0	1	6.162	-0.001	19401	2.8
Aroclor-1242	2	6.465	-0.002	180862	3.0	2	6.798	-0.002	35990	2.4
Aroclor-1242	3	6.619	0.004	85874	3.2	3	---			0.0
Aroclor-1242	4	7.876	0.006	16015455	476.8	4	8.233	-0.002	553324	104.1
Total Col1Ave (4 peaks):					121.5	Total Col2Ave (3 peaks):			36.4	RPD = 108*
Corrected Ave (3 peaks):					3.0	Corrected Ave: < 3 Peaks				
Aroclor-1248	1	6.465	0.001	180862	4.7	1	6.798	0.003	35990	3.8
Aroclor-1248	2	7.439	0.000	929176	21.3	2	7.702	-0.001	263192	33.4
Aroclor-1248	3	7.876	0.004	16015455	286.4	3	8.233	-0.002	553324	67.8
Aroclor-1248	4	8.111	0.004	6453665	166.7	4	8.564	-0.017	3148657	296.8
Total Col1Ave (4 peaks):					120.2	Total Col2Ave (4 peaks):			100.4	RPD = 18
Corrected Ave (3 peaks):					64.2	Corrected Ave (3 peaks):			35.0	RPD = 59*
Aroclor-1254	1	8.190	0.001	29410312	571.4	1	8.295	-0.003	3084101	419.1
Aroclor-1254	2	8.561	-0.001	24171328	711.5	2	8.471	-0.002	5674927	624.3
Aroclor-1254	3	8.698	0.000	59018106	833.3	3	8.993	-0.003	5167297	742.1
Aroclor-1254	4	9.049	-0.002	71320467	977.8	4	9.143	-0.004	12798731	858.2
Aroclor-1254	5	9.359	0.000	31750371	1151.0	5	9.927	-0.005	9019460	1074.0
Total Col1Ave (5 peaks):					848.7	Total Col2Ave (5 peaks):			743.6	RPD = 13
Corrected Ave (4 peaks):					773.5	Corrected Ave (4 peaks):			660.9	RPD = 16
Aroclor-1260	1	9.963	-0.001	11123962	229.6	1	10.257	0.000	1703312	180.0
Aroclor-1260	2	10.281	0.000	10305483	214.5	2	10.700	-0.006	5584374	505.9
Aroclor-1260	3	10.656	-0.001	23239162	201.7	3	10.981	-0.001	4369458	213.5
Aroclor-1260	4	11.055	-0.001	14185352	252.8	4	11.503	0.000	1202819	216.8
Aroclor-1260	5	11.244	-0.001	5891626	196.2	NS	---			----
Total Col1Ave (5 peaks):					219.0	Total Col2Ave (4 peaks):			278.6	RPD = 24
Corrected Ave (4 peaks):					210.5	Corrected Ave (3 peaks):			203.5	RPD = 3
Aroclor-1262	1	10.281	-0.002	10305483	186.0	1	10.257	-0.003	1703312	118.1
Aroclor-1262	2	10.656	-0.002	23239162	178.6	2	10.700	-0.010	5584374	423.3
Aroclor-1262	3	11.055	-0.004	14185352	344.1	3	10.981	-0.004	4369458	176.6
Aroclor-1262	4	11.244	-0.003	5891626	101.8	4	11.560	-0.007	3025403	188.1
Aroclor-1262	5	11.914	-0.004	4724138	106.4	5	12.303	-0.003	835435	107.6
Total Col1Ave (5 peaks):					183.4	Total Col2Ave (5 peaks):			202.7	RPD = 10
Corrected Ave (4 peaks):					143.2	Corrected Ave (4 peaks):			147.6	RPD = 3
Aroclor-1268	1	11.172	-0.003	5258867	42.2	1	11.503	-0.004	1202819	47.8

Aroclor-1268	2	11.244	-0.002	5891626	42.8	2	11.560	-0.013	3025403	127.5
Aroclor-1268	3	11.642	0.010	2917744	28.5	3	11.965	-0.004	100219	5.3
Aroclor-1268	4	12.418	-0.004	2782911	9.7	4	12.788	-0.005	360220	7.4

Total Col1Ave (4 peaks): 30.8 Total Col2Ave (4 peaks): 47.0 RPD = 42*

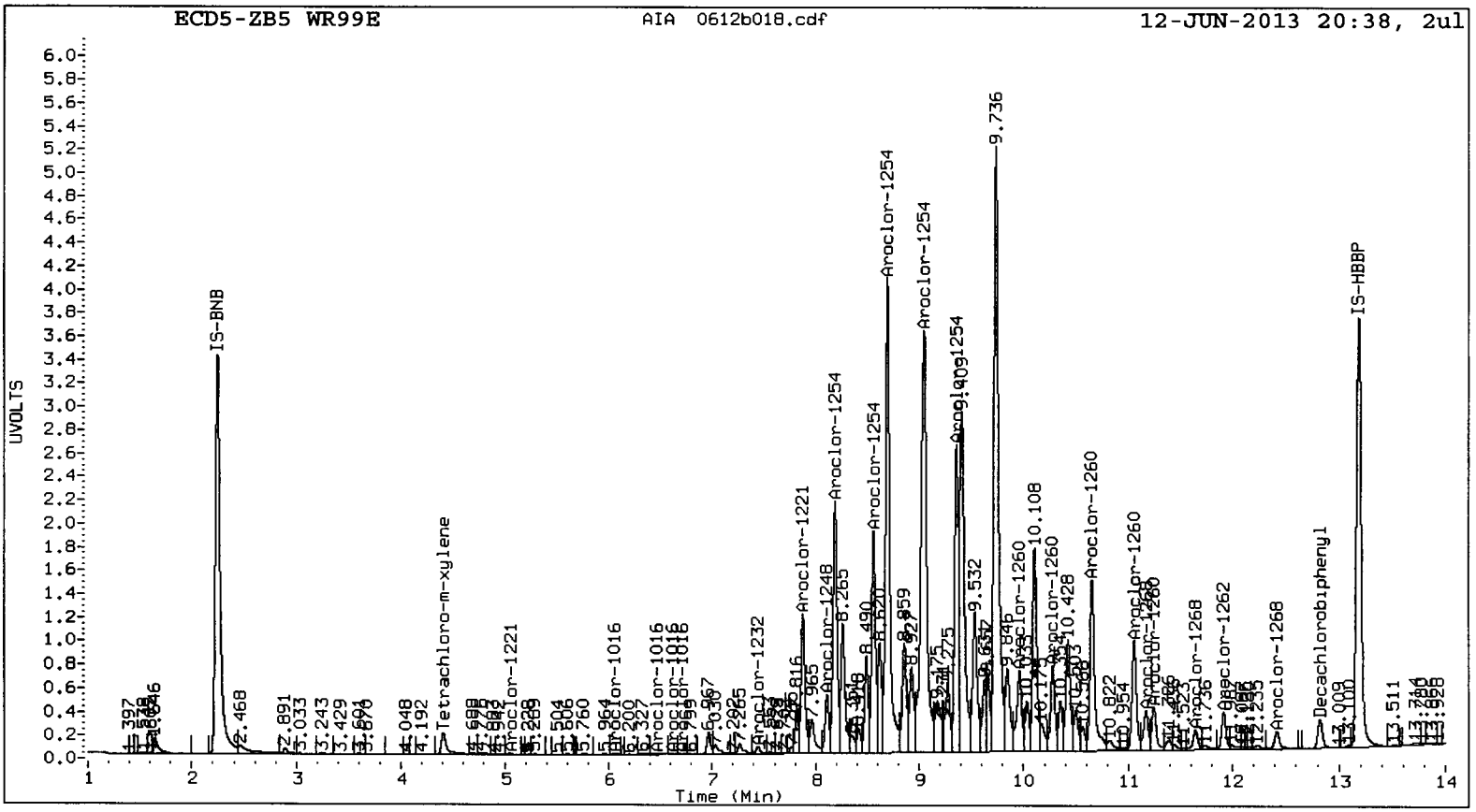
Corrected Ave (3 peaks): 26.8 Corrected Ave (3 peaks): 20.2 RPD = 28

Total PCB Area Col1 (4.507 - 12.726) = 664326452 Col1 Total PCB = 1.0 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 125741257 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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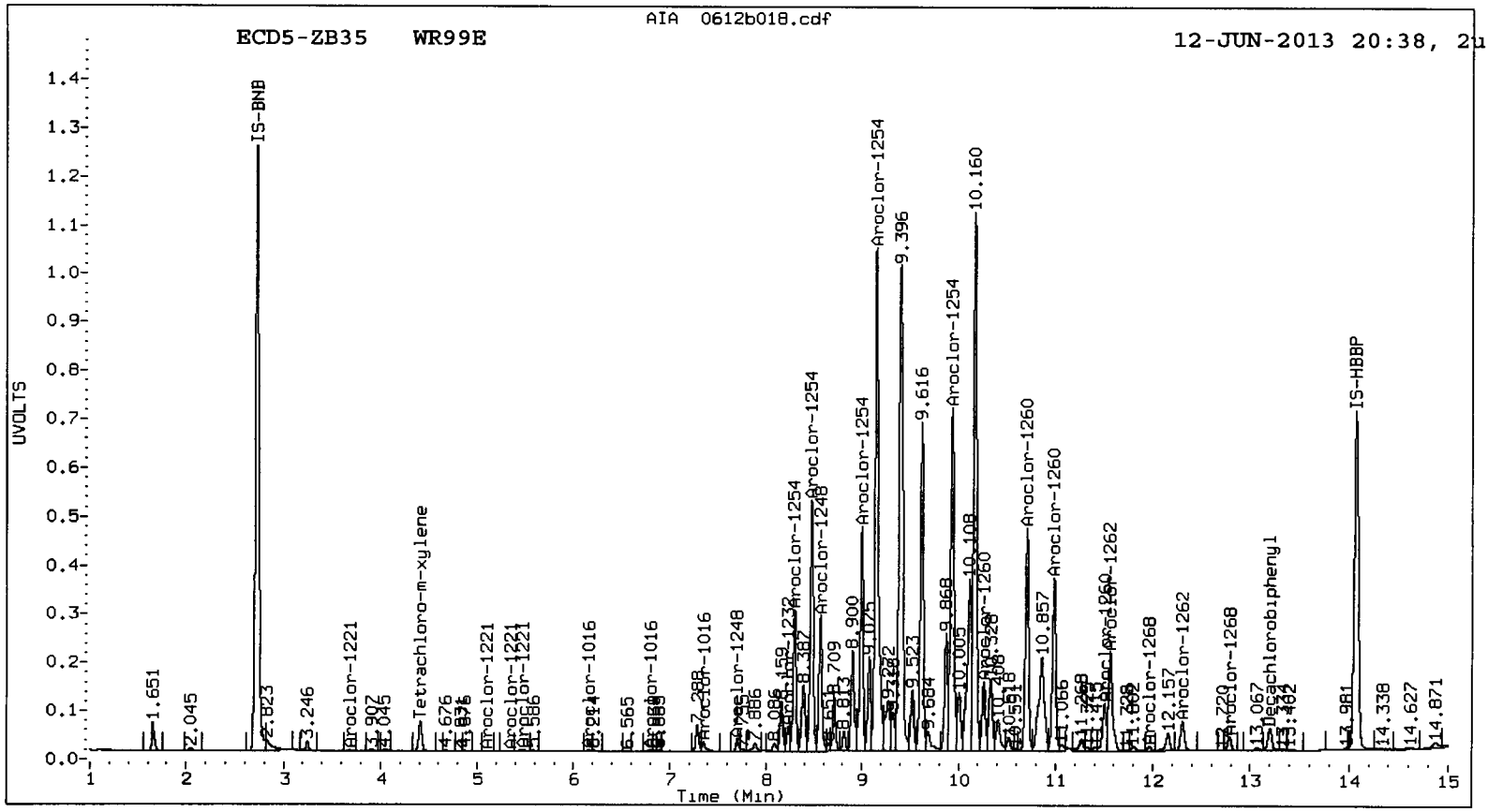
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
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Aroclor-1221
Aroclor-1248
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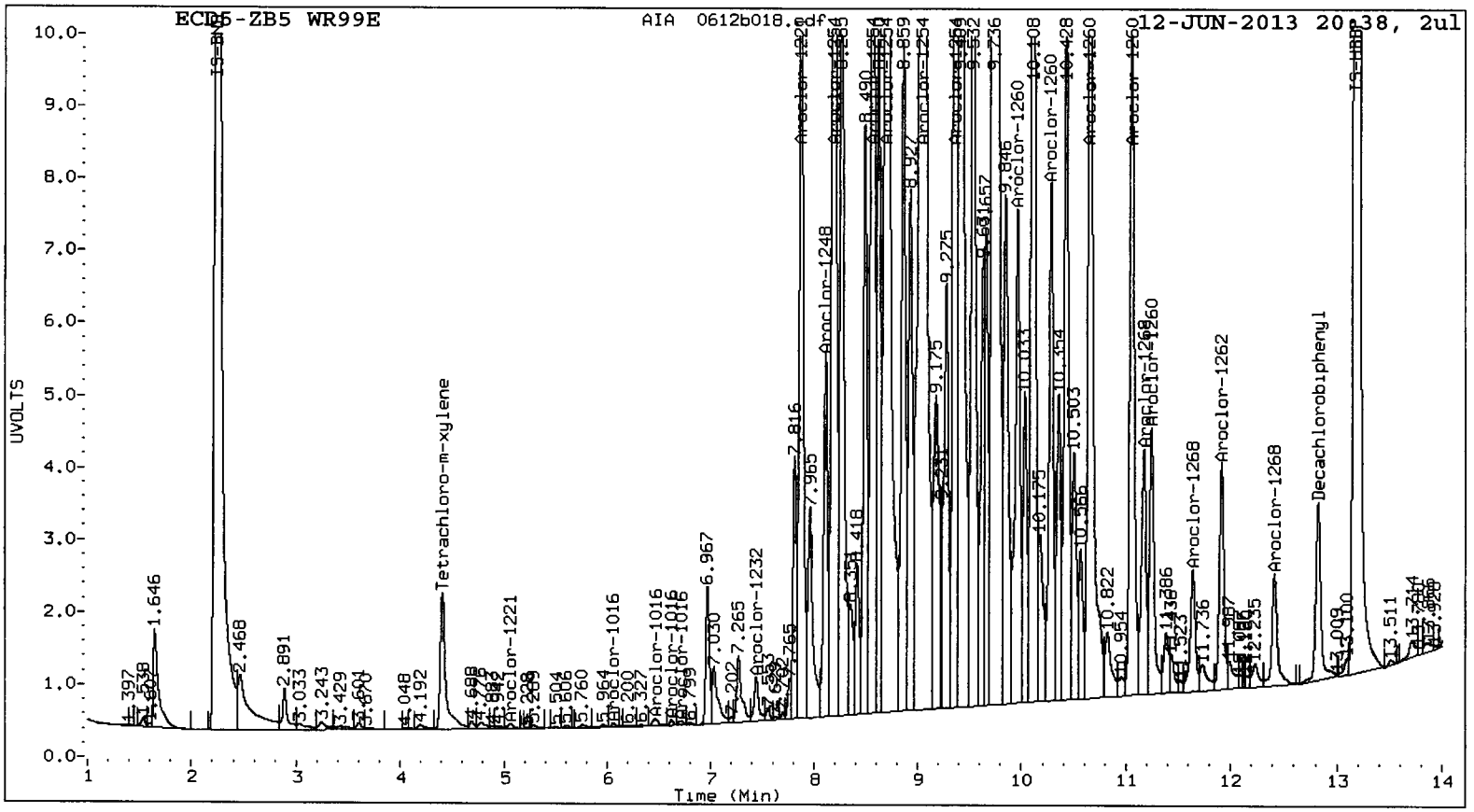
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

WR99:61962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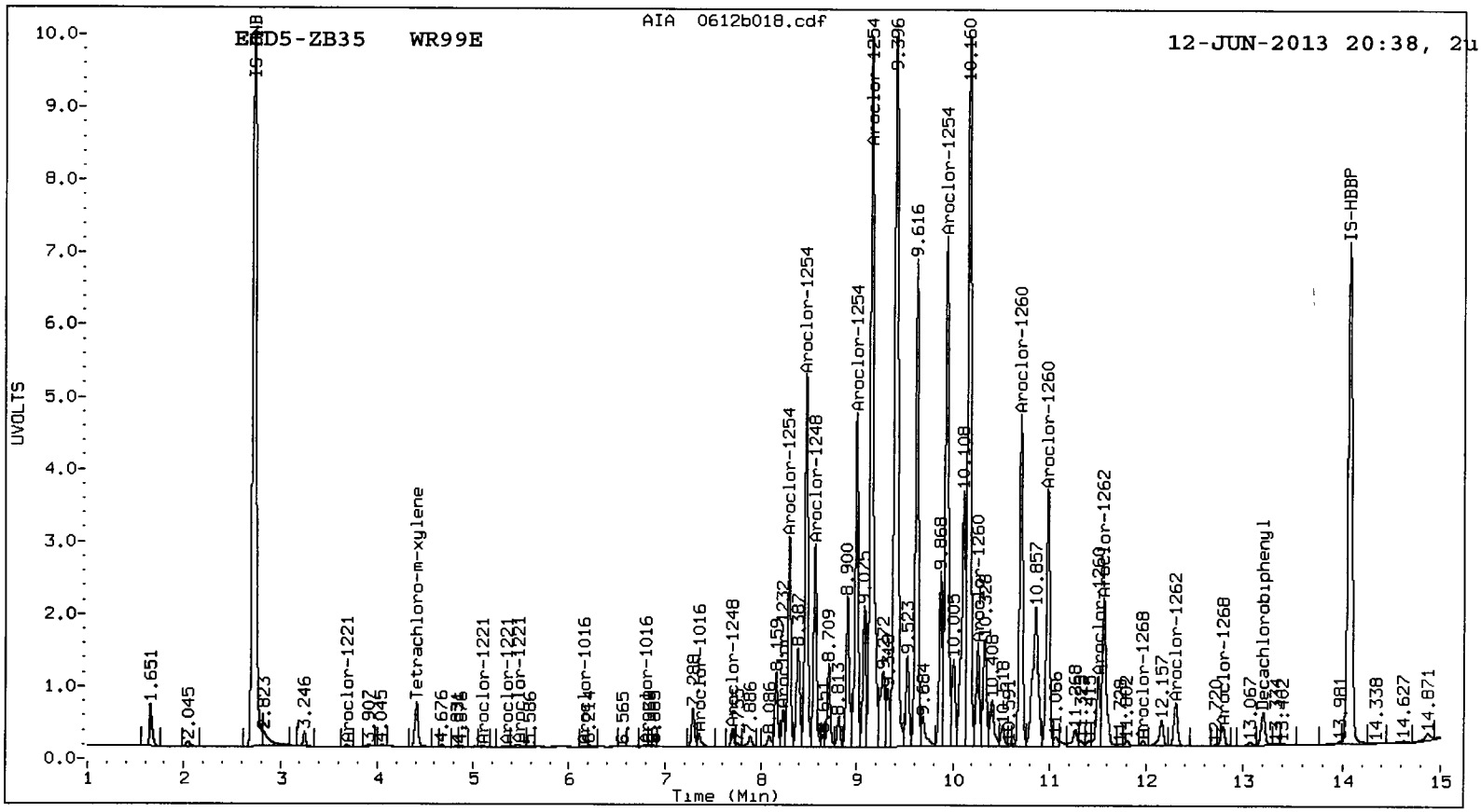
UVOLTS
Time (Min)
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b019.d
Data file 2: 20130507.b/0612-2.b/0612b019.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WR99F
Client ID: KC-DD-2009-20130530
Injection Date: 12-JUN-2013 20:58
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 10.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.406	-0.001	3105537	4.407	-0.001	688887	3.7	3.4	8.3	Tetrachloro-m-xylen
12.825	-0.001	8959947	13.202	0.001	939043	8.8	5.8	40.6*	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	91.5	84.2
Decachlorobiphenyl	220 5	146.1

06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54703262	11.7
Hexabromobiphenyl	50004151	68012891	36.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15119264	1.9
Hexabromobiphenyl	9345340	11168998	19.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.057	-0.001	211083	8.6	1	6.161	-0.001	105284	12.2
Aroclor-1016	2	6.464	-0.002	1679542	22.1	2	6.798	0.000	388787	20.7
Aroclor-1016	3	6.620	0.006	778371	22.9	3	7.181	-0.002	53480	10.9
Aroclor-1016	4	6.722	-0.004	371707	14.6	4	7.353	-0.002	3318106	726.5
	Total Col1Ave (4 peaks):				17.0	Total Col2Ave (4 peaks):				192.6 RPD = 167*
	Corrected Ave (3 peaks):				15.1	Corrected Ave (3 peaks):				14.6 RPD = 3
Aroclor-1221	1	5.061	-0.003	82843	3.7	1	3.677	-0.017	52390	33.8
Aroclor-1221	2	6.464	-0.004	1679542	246.3	2	5.100	0.005	40389	15.6
Aroclor-1221	3	7.876	-0.002	123050120	12778.8	3	5.365	0.020	42727	30.2
Aroclor-1221	NS	---			----	4	5.462	0.002	55432	12.5
	Total Col1Ave (3 peaks):				4342.9	Total Col2Ave (4 peaks):				23.0 RPD = 198*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				19.4
Aroclor-1232	1	6.057	-0.004	211083	20.8	1	6.161	-0.004	105284	27.1
Aroclor-1232	2	6.464	-0.005	1679542	54.2	2	6.798	-0.004	388787	50.2
Aroclor-1232	3	7.437	-0.004	10870281	674.4	3	7.006	-0.005	47246	14.6
Aroclor-1232	4	7.876	0.002	123050120	6644.6	4	8.232	-0.007	6042079	2228.9
	Total Col1Ave (4 peaks):				1848.5	Total Col2Ave (4 peaks):				580.2 RPD = 104*
	Corrected Ave (3 peaks):				249.8	Corrected Ave (3 peaks):				30.6 RPD = 156*
Aroclor-1242	1	6.057	-0.001	211083	10.7	1	6.161	-0.001	105284	15.3
Aroclor-1242	2	6.464	-0.002	1679542	27.8	2	6.798	-0.002	388787	25.7
Aroclor-1242	3	6.620	0.005	778371	28.9	3	7.006	-0.001	47246	7.5
Aroclor-1242	4	7.876	0.006	123050120	3696.0	4	8.232	-0.003	6042079	1140.8
	Total Col1Ave (4 peaks):				940.8	Total Col2Ave (4 peaks):				297.3 RPD = 104*
	Corrected Ave (3 peaks):				22.5	Corrected Ave (3 peaks):				16.2 RPD = 33
Aroclor-1248	1	6.464	0.001	1679542	43.6	1	6.798	0.002	388787	41.0
Aroclor-1248	2	7.437	-0.003	10870281	251.1	2	7.702	0.000	5436255	691.9
Aroclor-1248	3	7.876	0.004	123050120	2235.0	3	8.232	-0.003	6042079	742.8
Aroclor-1248	4	8.110	0.002	47814112	1245.6	4	8.564	-0.016	20729362	1961.1
	Total Col1Ave (4 peaks):				943.8	Total Col2Ave (4 peaks):				859.2 RPD = 9
	Corrected Ave (3 peaks):				513.4	Corrected Ave (3 peaks):				491.9 RPD = 4
Aroclor-1254	1	8.191	0.001	204719266	4012.8	1	8.295	-0.003	22465365	3064.4
Aroclor-1254	2	8.561	0.000	165535490	4915.9	2	8.471	-0.003	37375947	4126.8
Aroclor-1254	3	8.704	0.006	357367013	5090.5	3	8.992	-0.003	35382753	5100.2
Aroclor-1254	4	9.056	0.006	449406506	6215.4	4	9.143	-0.004	82156123	5529.3
Aroclor-1254	5	9.360	0.001	191429623	7000.6	5	9.927	-0.006	63938674	7642.0
	Total Col1Ave (5 peaks):				5447.0	Total Col2Ave (5 peaks):				5092.6 RPD = 7
	Corrected Ave (4 peaks):				5058.6	Corrected Ave (4 peaks):				4455.2 RPD = 13
Aroclor-1260	1	9.964	0.000	64747315	1162.5	1	10.257	0.000	10110151	998.0
Aroclor-1260	2	10.281	0.000	63011470	1140.8	2	10.701	-0.005	35695270	3008.1
Aroclor-1260	3	10.657	0.000	154944996	1169.9	3	10.981	-0.001	29035523	1325.2
Aroclor-1260	4	11.055	-0.001	92111525	1427.9	4	11.502	-0.001	8886962	1496.3
Aroclor-1260	5	11.245	0.000	37370842	1082.8	NS	---			----
	Total Col1Ave (5 peaks):				1196.8	Total Col2Ave (4 peaks):				1706.9 RPD = 35
	Corrected Ave (4 peaks):				1139.0	Corrected Ave (3 peaks):				1273.1 RPD = 11
Aroclor-1262	1	10.281	-0.002	63011470	989.5	1	10.257	-0.003	10110151	654.4
Aroclor-1262	2	10.657	-0.002	154944996	1035.6	2	10.701	-0.009	35695270	2526.8
Aroclor-1262	3	11.055	-0.005	92111525	1943.7	3	10.981	-0.004	29035523	1095.8
Aroclor-1262	4	11.245	-0.003	37370842	561.8	4	11.560	-0.007	20142703	1169.6
Aroclor-1262	5	11.914	-0.004	28708441	562.4	5	12.303	-0.003	5302481	637.7
	Total Col1Ave (5 peaks):				1018.6	Total Col2Ave (5 peaks):				1216.9 RPD = 18
	Corrected Ave (4 peaks):				787.3	Corrected Ave (4 peaks):				889.4 RPD = 12
Aroclor-1268	1	11.171	-0.004	31599498	220.8	1	11.502	-0.005	8886962	329.6

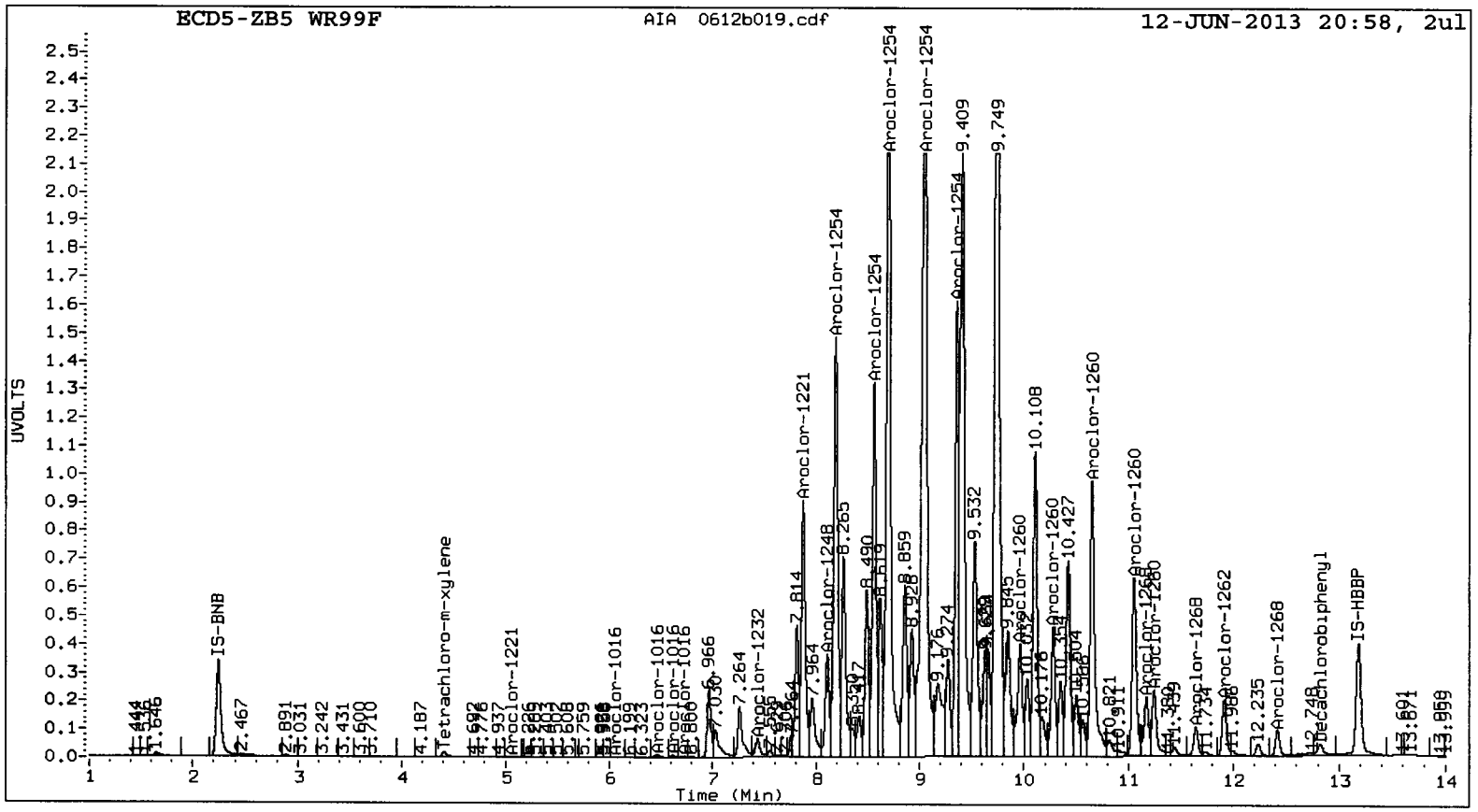
Aroclor-1268 2	11.245	-0.001	37370842	236.1	2	11.560	-0.013	20142703	792.6	
Aroclor-1268 3	11.642	0.010	16001341	136.1	3	11.965	-0.004	661642	32.9	
Aroclor-1268 4	12.418	-0.003	13538760	40.9	4	12.787	-0.005	2332326	44.8	
Total Col1Ave (4 peaks):				158.5	Total Col2Ave (4 peaks):				300.0	RPD = 62*
Corrected Ave (3 peaks):				132.6	Corrected Ave (3 peaks):				135.8	RPD = 2

Total PCB Area Col1 (4.507 - 12.726) = 4238941467 Col1 Total PCB = 6.3 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 840108755 Col2 Total PCB = 6.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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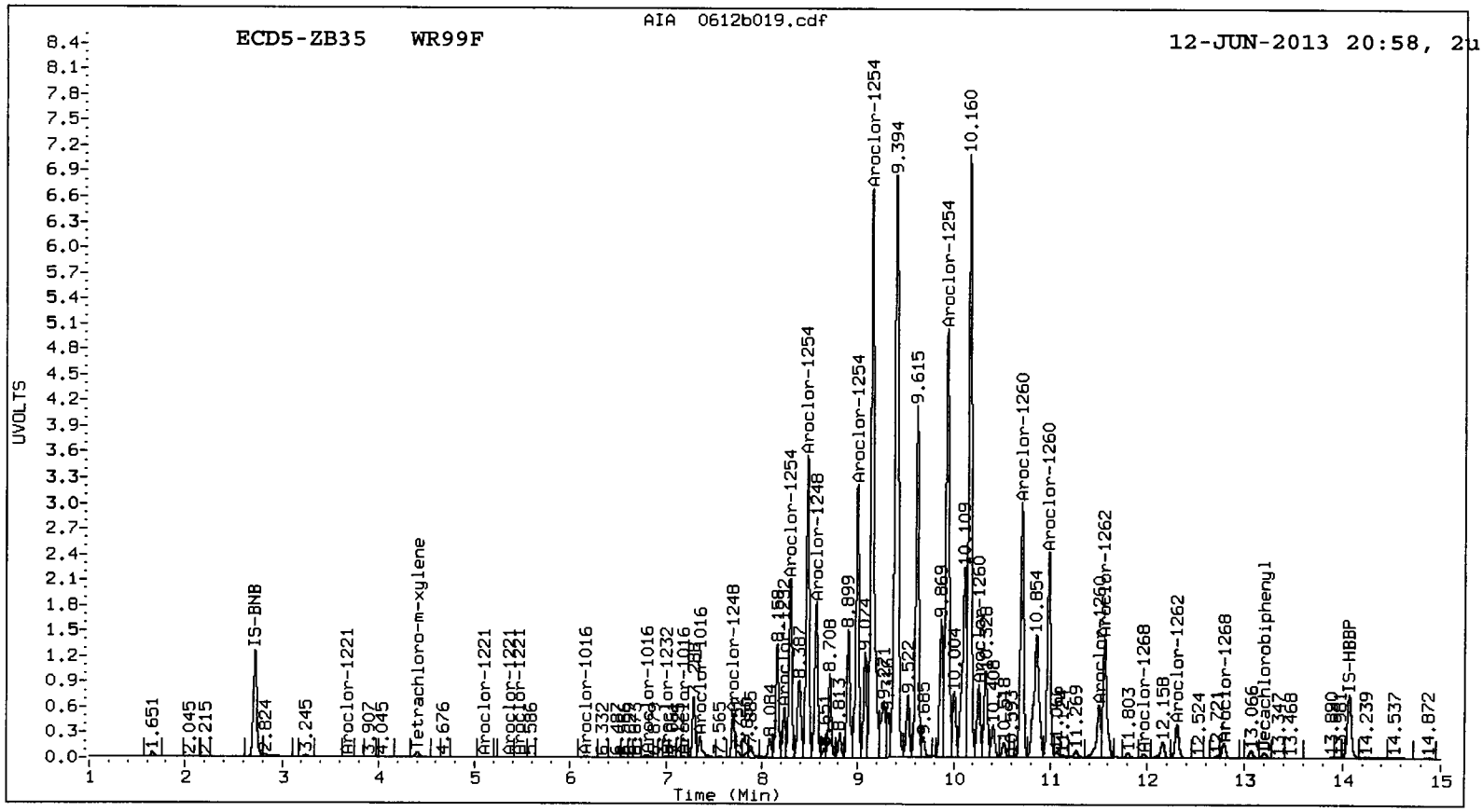
12-JUN-2013 20:58, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Tetrachloro-m-xylene
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Aroclor-1016
Aroclor-1232
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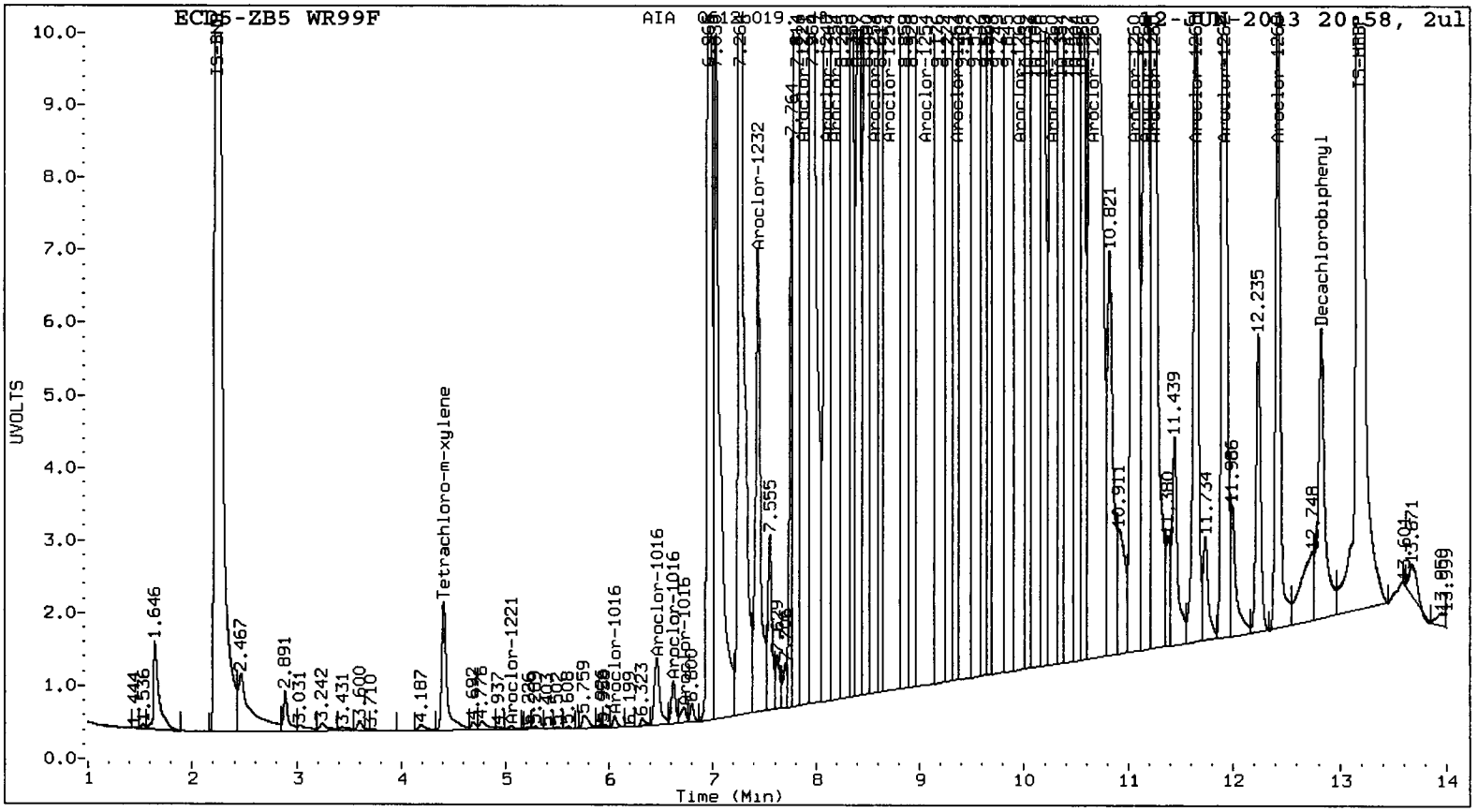
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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12-JUN-2013 20:58, 2ul
UVOLTS
Time (Min)
IS-HBB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
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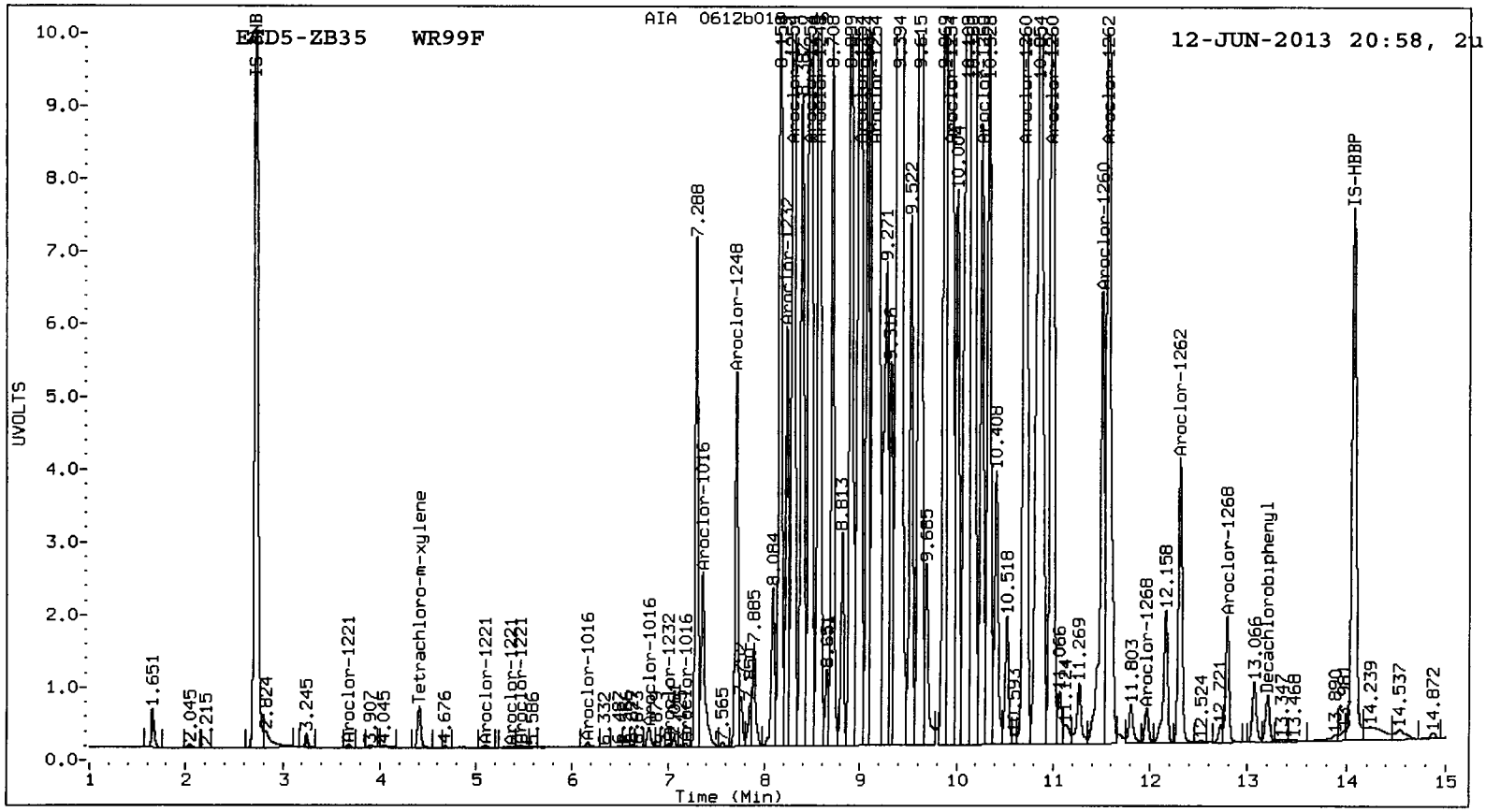
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl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12-JUN-2013 20:58, 2u
UVOLTS
Time (Min)
IS-HBB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b022.d
Data file 2: 20130507.b/0612-2.b/0612b022.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 12-JUN-2013 21:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	38084245	4.408	0.000	8897528	39.3	38.6	1.7	Tetrachloro-m-xylen
12.825	0.000	41225524	13.201	0.000	6462914	40.2	38.1	5.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	98.2	96.5
Decachlorobiphenyl	100.5	95.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	62530670	27.7
Hexabromobiphenyl	50004151	68675704	37.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	17045224	14.9
Hexabromobiphenyl	9345340	11790726	26.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

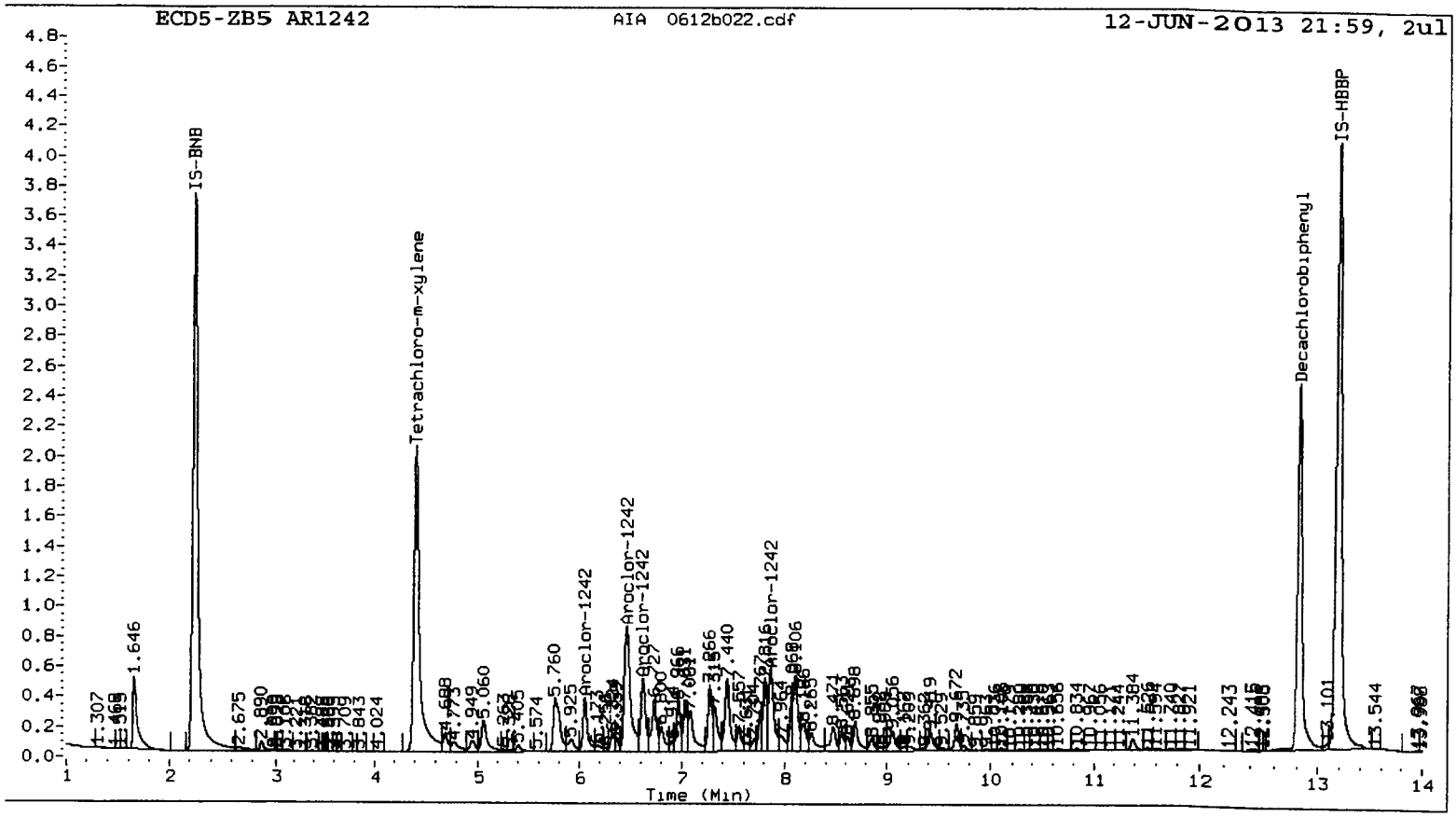
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	6.058	0.000	5605946	248.9	1	6.162	0.000	1864335	240.1
Aroclor-1242	2	6.467	0.000	17286888	250.3	2	6.800	0.000	3903258	228.8
Aroclor-1242	3	6.615	0.000	7666384	248.7	3	7.007	0.000	1697246	238.1
Aroclor-1242	4	7.870	0.000	9179567	241.2	4	8.235	0.000	1410383	236.2
Total Col1Ave (4 peaks):					247.3	Total Col2Ave (4 peaks):				235.8 RPD = 5
Corrected Ave (3 peaks):					246.3	Corrected Ave (3 peaks):				234.4 RPD = 5

Total PCB Area Col1 (4.507 - 12.726) = 164557717 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 31650391 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

WRSD : 01078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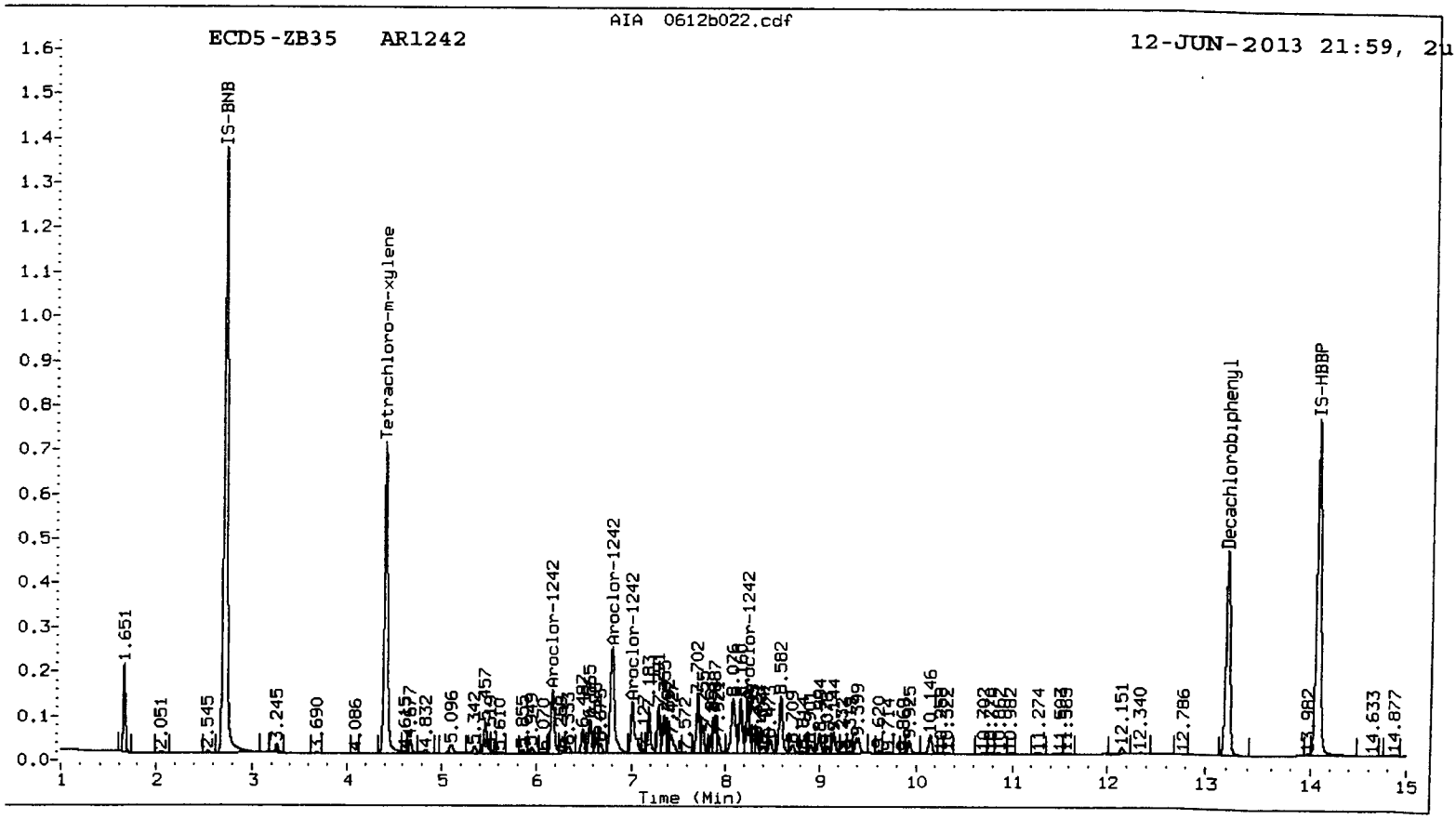
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
Time (Min)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12-JUN-2013 21:59, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b023.d
Data file 2: 20130507.b/0612-2.b/0612b023.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 12-JUN-2013 22:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	36824957	4.408	0.000	8671597	38.7	38.1	1.6	Tetrachloro-m-xylen
12.826	0.000	39100788	13.201	0.000	6156118	37.7	36.0	4.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.7	95.2
Decachlorobiphenyl	94.2	90.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	61395809	25.4
Hexabromobiphenyl	50004151	69432904	38.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16838472	13.5
Hexabromobiphenyl	9345340	11875626	27.1

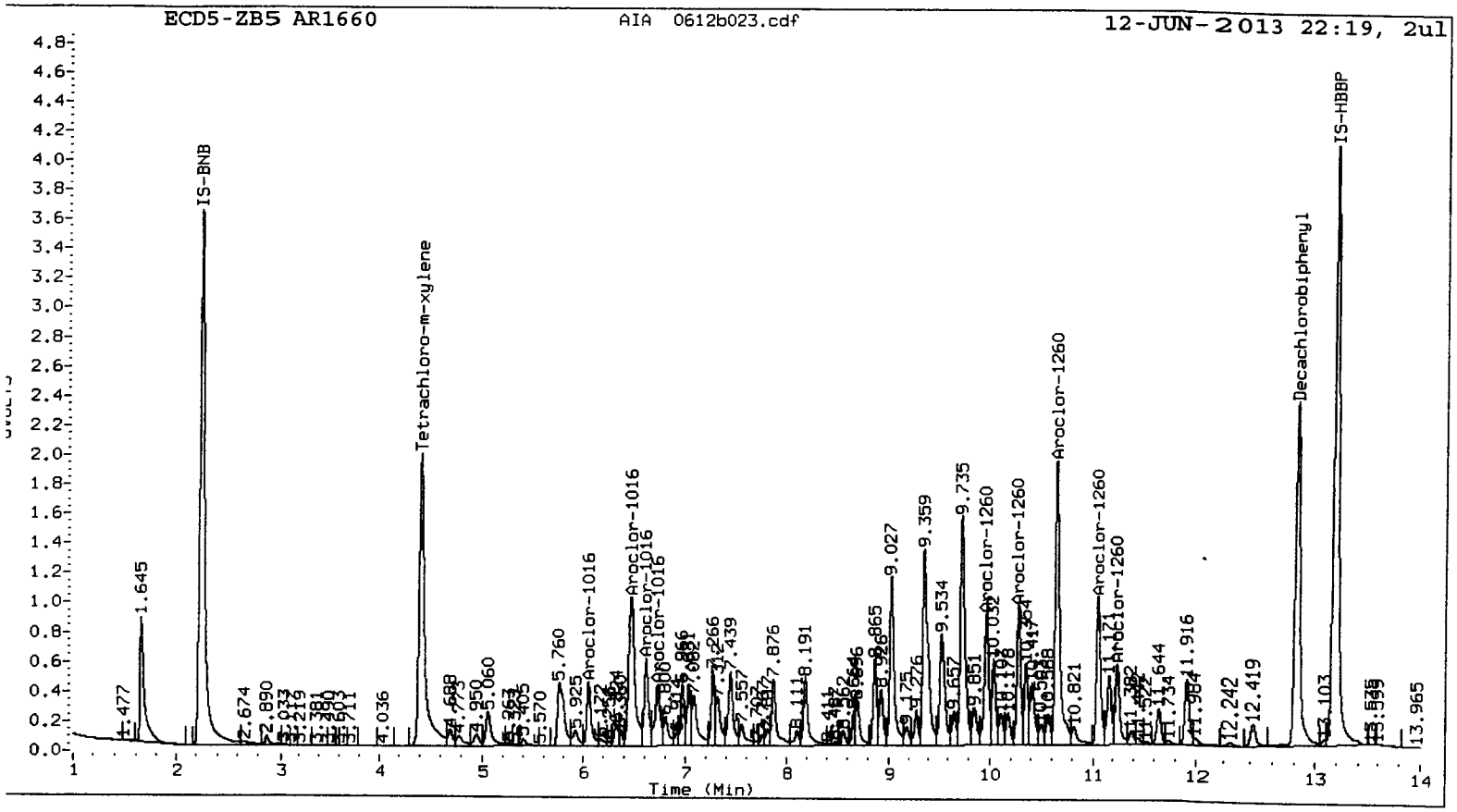
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.057	0.000	6711773	242.5	1	6.162	0.000	2251715	234.4
Aroclor-1016	2	6.466	0.000	20792517	243.9	2	6.798	0.000	4935611	236.3
Aroclor-1016	3	6.615	0.000	9091117	238.0	3	7.183	0.000	1285108	235.3
Aroclor-1016	4	6.726	0.000	6867722	240.7	4	7.355	0.000	1162487	228.5
	Total Col1Ave (4 peaks):				241.3		Total Col2Ave (4 peaks):			233.6 RPD = 3
	Corrected Ave (3 peaks):				240.4		Corrected Ave (3 peaks):			232.7 RPD = 3
Aroclor-1260	1	9.964	0.000	12649600	222.5	1	10.257	0.000	2324638	215.8
Aroclor-1260	2	10.281	0.000	12459532	221.0	2	10.706	0.000	2758014	218.6
Aroclor-1260	3	10.657	0.000	30937284	228.8	3	10.982	0.000	5366886	230.4
Aroclor-1260	4	11.056	0.000	15571747	236.4	4	11.502	0.000	1509506	239.0
Aroclor-1260	5	11.245	0.000	8502367	241.3	NS	---			----
	Total Col1Ave (5 peaks):				230.0		Total Col2Ave (4 peaks):			226.0 RPD = 2
	Corrected Ave (4 peaks):				227.2		Corrected Ave (3 peaks):			221.6 RPD = 2

Total PCB Area Col1 (4.507 - 12.726) = 388456733 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 72438910 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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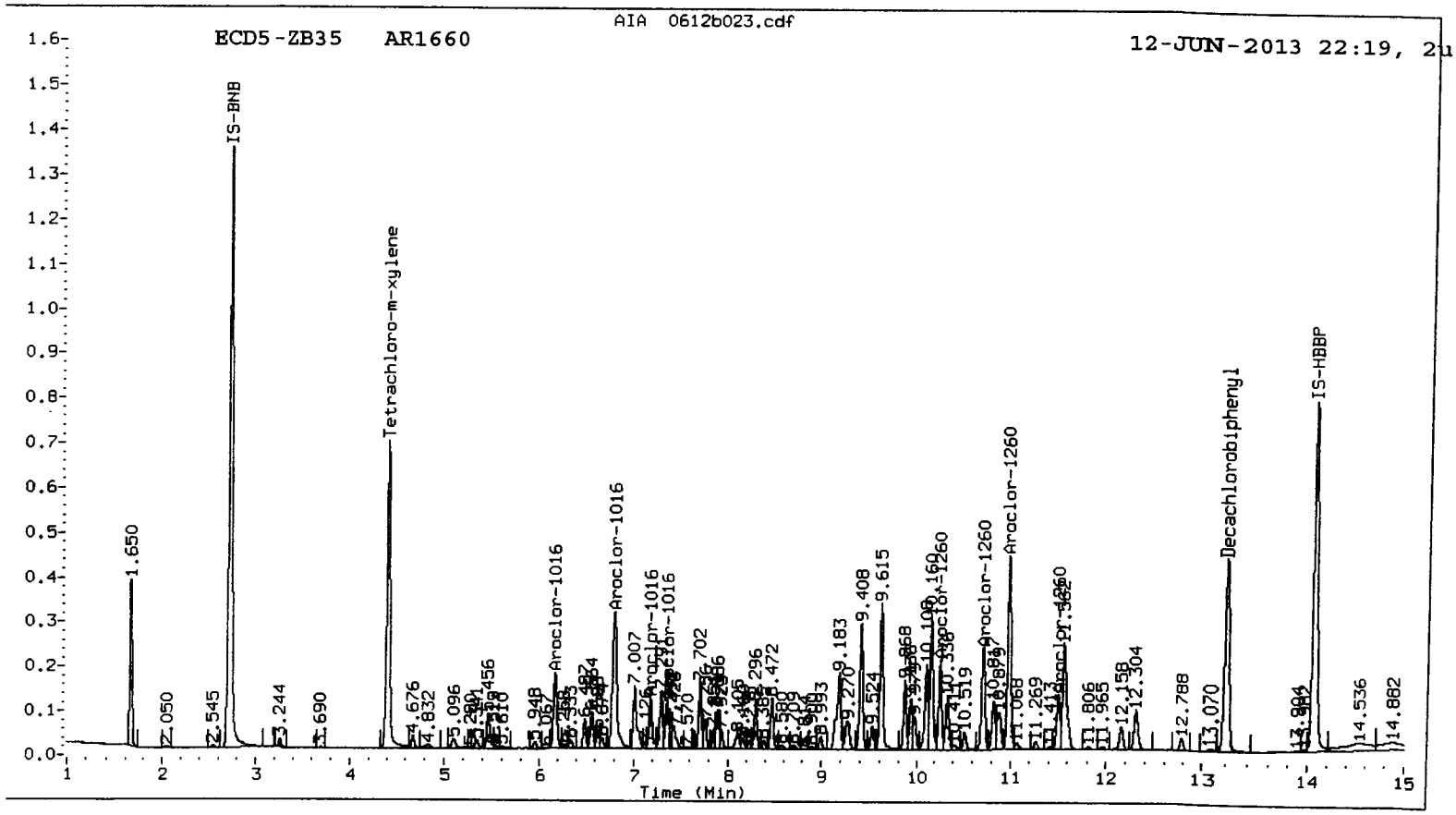
12-JUN-2013 22:19, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)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12-JUN-2013 22:19, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WR99, WS01

Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test TPHD # 3 (DIESMI)
ARI Job No(s) WR99, W521

Page 1 of 1

In-House (5ppm)
Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (wet wt)	Acid Clean (1:1) Y / N	Silica Gel Clean (1:1) Y / N	Final Effective Volume	Volume to Lab	Comments	Verifty Client ID
	WR99 MBS	10.00g	(1:1) Y / N	(1:1) Y / N	1mL	1mL		M 6/4/13
	↓ SBS	10.00g	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
	~~SBS Dup~~	~~10.00g~~	(1:1) Y / N	(1:1) Y / N	~~1mL~~	~~1mL~~		Analyst/Date
	~~QLS~~	~~10.00g~~	(1:1) Y / N	(1:1) Y / N	~~1mL~~	~~1mL~~		Microwave 1 2 3
8	WR99 D	10.15	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
8	↓ DMS	10.12	(1:1) Y / N	(1:1) Y / N	1mL	1mL		M 6/4/13
8	↓ DMSD	10.09	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
8	W521 A	10.04	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		Analyst/Date
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		TurboVap 1 2 3 Pre-Acid/Silica Clean
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		CJZ 6/4/13
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		Analyst/Date
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		TurboVap 1 2 3 ~~Post Acid/Silica Clean~~
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		
Analyst/Date	N 6/4/13				CJZ 6/4/13	CJZ 6/4/13	Reviewed By CJZ 6/4/13	CJZ 6/4/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	O2(2082-5)	450µg/mL	**100**µL	11/19/13	M	SP
Spike	11 (B0A176)	15000µg/mL	**100**µL	5/21/14	M	SP
~~QLS Spike~~	~~18 ( )~~	~~1000µg/mL~~	~~50µL~~			
Extraction Time: 0930				**Balance ID:** B139298 #2		

SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers-dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM to the vessel until the solvent is 1" above soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then let cool 15 min. in cold water bath. Re-homogenize while cool. 7. Collect into turbo tube with sm. funnel containing glasswool and 1" sodium sulfate. 8. Add (2) 10mL DCM rinses to vessel and transfer to turbo tube. 9. TurboVap. 10. Acid/Silica Clean-up?= Y (N) 11. TurboVap (if Silica Clean). 12. Vial in DCM.

A. Need Total Solids Y (N) B. Archive/Freeze Y (N)

Organic Extractions
Reagent and Solutions Identification

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WR99, W521

(8015C) NWTPHD Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Methylene Chloride: (I# 8270)	M 6/4/13
Anhydrous Sodium Sulfate: (I# 8130 + jar date 5/24/13)	
Neutral Glasswool: (I# 7998 + jar date 12/6/12)	
Vialing Station:	Vialing
Methylene Chloride: (I# 8270)	CJB 6/4/13
Concentrated Sulfuric Acid: (I# N/A)	
Silica Gel (SPE) Darts: (I# N/A)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WR99 Client ID: SAIC

Parameter: TPHD Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A, B, C	YL 05/31/13
☒ Standing Water Decanted (Not shared)= A, B,	YL 05/31/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☒ Other (Details)= D flag slightly darker color than DMS, DMSD after microwave	NL 6/4/13
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

TPHD Raw Data
Initial Calibration

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 5/1/13 / 5/9/13 Internal Standard ID N/A Expiration N/A

Endrin/DDT Breakdown <15%? YES / NO / NA		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Diesel/Ak102/Cal Diesel	2091-2	3/15/14	Diesel ICV/Ak102/Cal	2043-1	10/20/13
Mail	2041-4	11/27/13	Mail ICV	2043-2	11/19/13
JetA	2008-1	5/11/13	Ak103 ICV	B000202	11/19/13
Ak103	B000201	11/19/13			
RT	2043-4	10/20/13			
IB	2043-3	10/20/13			

Detail problems, corrective actions and/or other pertinent information below:
Curve for JetA, Diesel, Ak102, Cal diesel (IT diesel same), mail & Ak103.

Analyst: JW **Date:** 5/11/13

Reviewer: [illegible] **Date:** 5/13/13

4099 01081

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

	ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:		0509b032	0509b033	0509b034	0509b035	0509b036	0509b037
INJ.DATE:		09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:		21:43	22:02	22:21	22:41	23:00	23:19

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.560-0.760	+++++	+++++
35	Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
2	C8	0.834	0.839	0.832	0.834	0.831	0.825	0.827	0.727-0.927	0.832	0.005
3	C10	2.251	2.254	2.255	2.256	2.253	2.254	2.254	2.204-2.304	2.254	0.002
4	C12	3.043	3.032	3.033	3.032	3.032	3.033	3.049	2.999-3.099	3.034	0.004
5	C14	3.624	3.622	3.613	3.618	3.618	3.619	3.621	3.571-3.671	3.619	0.004
6	C16	4.118	4.114	4.115	4.119	4.116	4.116	4.116	4.066-4.166	4.116	0.002
7	C18	4.573	4.574	4.570	4.572	4.567	4.565	4.565	4.515-4.615	4.570	0.004
$ 8	o-terph	4.684	4.673	4.676	4.683	4.675	4.681	4.683	4.633-4.733	4.679	0.004
9	C20	4.998	4.992	4.991	4.990	4.987	4.991	4.989	4.939-5.039	4.991	0.004
10	C22	5.391	5.387	5.389	5.386	5.387	5.387	5.386	5.336-5.436	5.388	0.002
11	C24	5.760	5.763	5.757	5.762	5.762	5.758	5.760	5.710-5.810	5.760	0.002
12	C25	5.937	5.939	5.937	5.936	5.936	5.941	5.938	5.888-5.988	5.938	0.002
13	C26	6.113	6.114	6.114	6.112	6.115	6.114	6.114	6.064-6.164	6.114	0.001
14	C28	6.431	6.427	6.429	6.431	6.429	6.431	6.427	6.377-6.477	6.430	0.002
$ 15	Triacon Surr	6.715	6.720	6.726	6.736	6.750	6.767	6.768	6.718-6.818	6.736	0.020
16	C32	6.978	6.975	6.980	6.979	6.977	6.976	6.976	6.926-7.026	6.978	0.002

Reviewer 1 JU Date: 5/10/13
Reviewer 2 [illegible] Date: 5/9/13

23636, 23644

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.218	7.217	7.216	7.216	7.215	7.214	7.210	7.160-7.260	7.216	0.002
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.431	7.435	7.437	7.436	7.436	7.430	7.435	7.385-7.485	7.434	0.003
20 C38	7.637	7.640	7.641	7.634	7.640	7.641	7.639	7.589-7.689	7.639	0.003
21 C40	7.826	7.829	7.832	7.831	7.830	7.827	7.828	7.778-7.878	7.829	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b026	0509b027	0509b028	0509b029	0509b030	0509b031
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	19:47	20:06	20:26	20:45	21:04	21:23

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
35	Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
2	C8	0.842	0.843	0.835	0.832	0.839	0.842	0.821	0.721-0.921	0.839	0.004
3	C10	2.256	2.257	2.255	2.254	2.258	2.266	2.250	2.200-2.300	2.258	0.004
4	C12	3.039	3.039	3.040	3.042	3.044	3.051	3.040	2.990-3.090	3.043	0.005
5	C14	3.620	3.620	3.620	3.620	3.621	3.627	3.620	3.570-3.670	3.621	0.003
6	C16	4.122	4.121	4.118	4.118	4.116	4.119	4.117	4.067-4.167	4.119	0.002
7	C18	4.564	4.564	4.566	4.567	4.567	4.568	4.568	4.518-4.618	4.566	0.002
$ 8	o-terph	4.671	4.671	4.678	4.685	4.694	4.698	4.676	4.626-4.726	4.683	0.011
9	C20	4.992	4.989	4.990	4.991	4.990	4.989	4.989	4.939-5.039	4.990	0.001
10	C22	5.396	5.388	5.389	5.389	5.390	5.392	5.387	5.337-5.437	5.391	0.003
11	C24	5.763	5.760	5.765	5.763	5.763	5.757	5.759	5.709-5.809	5.762	0.003
12	C25	5.934	5.937	5.932	5.935	5.931	5.936	5.934	5.884-5.984	5.934	0.002
13	C26	6.116	6.112	6.117	6.112	6.112	6.116	6.112	6.062-6.162	6.114	0.002
14	C28	6.431	6.428	6.437	6.428	6.431	6.431	6.426	6.376-6.476	6.431	0.003
$ 15	Triacon Surr	6.727	6.726	6.727	6.725	6.722	6.720	6.723	6.673-6.773	6.724	0.003
16	C32	6.982	6.988	6.982	6.981	6.981	6.981	6.976	6.926-7.026	6.982	0.003

Reviewer 1 JU Date: 5/11/13
Reviewer 2 Date: 5/12/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.202	7.223	7.218	7.215	7.211	7.215	7.214	7.164-7.264	7.214	0.007
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.437	7.444	7.442	7.438	7.418	7.443	7.432	7.382-7.482	7.437	0.010
20 C38	7.637	7.640	7.637	7.635	7.637	7.638	7.639	7.589-7.689	7.637	0.002
21 C40	7.834	7.836	7.832	7.829	7.833	7.828	7.833	7.783-7.883	7.832	0.003
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b019	0509b020	0509b021	0509b022	0509b023	0509b024
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	17:30	17:50	18:09	18:29	18:49	19:08

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
35	Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
2	C8	0.836	0.832	0.835	0.839	0.826	0.827	0.836	0.736-0.936	0.833	0.005
3	C10	2.255	2.255	2.254	2.257	2.255	2.254	2.255	2.204-2.304	2.255	0.001
4	C12	3.049	3.033	3.033	3.033	3.033	3.049	3.049	2.999-3.099	3.038	0.008
5	C14	3.626	3.621	3.614	3.617	3.625	3.621	3.626	3.576-3.676	3.621	0.004
6	C16	4.118	4.118	4.115	4.117	4.120	4.116	4.118	4.068-4.168	4.117	0.002
7	C18	4.561	4.567	4.569	4.572	4.567	4.565	4.561	4.511-4.611	4.567	0.004
$ 8	o-terph	4.673	4.682	4.681	4.673	4.672	4.683	4.673	4.623-4.723	4.677	0.005
9	C20	4.984	4.991	4.994	4.988	4.986	4.989	4.984	4.934-5.035	4.989	0.003
10	C22	5.386	5.389	5.387	5.384	5.383	5.386	5.386	5.336-5.436	5.386	0.002
11	C24	5.762	5.760	5.755	5.763	5.761	5.760	5.762	5.712-5.812	5.760	0.003
12	C25	5.938	5.939	5.938	5.935	5.936	5.938	5.938	5.888-5.987	5.937	0.001
13	C26	6.116	6.114	6.113	6.114	6.115	6.114	6.116	6.066-6.166	6.114	0.001
14	C28	6.435	6.428	6.431	6.431	6.429	6.427	6.435	6.385-6.485	6.430	0.003
$ 15	Triacon Surr	6.717	6.720	6.728	6.738	6.752	6.768	6.717	6.667-6.767	6.737	0.020
16	C32	6.975	6.975	6.974	6.980	6.977	6.976	6.975	6.925-7.025	6.976	0.002

Reviewer 1 JU Date: 5/10/13
Reviewer 2 Date: 5/13/13

GSMS-FID-0216

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.215	7.220	7.217	7.214	7.214	7.210	7.215	7.165-7.266	7.215	0.004
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.430	7.432	7.433	7.429	7.429	7.435	7.430	7.380-7.480	7.431	0.002
20 C38	7.634	7.632	7.638	7.637	7.639	7.639	7.634	7.584-7.684	7.637	0.003
21 C40	7.826	7.830	7.830	7.827	7.831	7.828	7.826	7.776-7.876	7.829	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130510.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0510b004	0510b005	0510b006	0510b007	0510b008	0510b009
INJ.DATE:	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013
INJ.TIME:	08:41	09:01	09:20	09:40	10:00	10:20

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
35	Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
2	C8	0.824	0.829	0.831	0.831	0.829	0.829	0.821	0.721-0.921	0.829	0.003
3	C10	2.255	2.255	2.256	2.256	2.254	2.257	2.250	2.200-2.300	2.255	0.001
4	C12	3.037	3.038	3.039	3.039	3.041	3.044	3.040	2.990-3.090	3.040	0.002
5	C14	3.621	3.618	3.619	3.619	3.621	3.625	3.620	3.570-3.670	3.620	0.002
6	C16	4.117	4.116	4.115	4.116	4.120	4.124	4.117	4.067-4.167	4.118	0.003
7	C18	4.564	4.564	4.565	4.569	4.570	4.577	4.568	4.518-4.618	4.568	0.005
$ 8	o-terph	4.670	4.672	4.678	4.686	4.693	4.712	4.676	4.626-4.726	4.685	0.016
9	C20	4.990	4.988	4.987	4.989	4.989	4.994	4.989	4.939-5.039	4.989	0.002
10	C22	5.382	5.389	5.386	5.387	5.385	5.389	5.387	5.337-5.437	5.386	0.003
11	C24	5.759	5.758	5.762	5.761	5.755	5.758	5.759	5.709-5.809	5.759	0.003
12	C25	5.938	5.938	5.931	5.940	5.935	5.935	5.934	5.884-5.984	5.936	0.003
13	C26	6.111	6.113	6.112	6.115	6.109	6.104	6.112	6.062-6.162	6.110	0.004
14	C28	6.432	6.426	6.424	6.426	6.423	6.424	6.426	6.376-6.476	6.426	0.003
$ 15	Triacon Surr	6.720	6.723	6.721	6.726	6.724	6.719	6.723	6.673-6.773	6.722	0.003
16	C32	6.992	6.980	6.980	6.979	6.980	6.979	6.976	6.926-7.026	6.982	0.005

Reviewer 1 JU Date: 5/11/13
Reviewer 2 [illegible] Date: 5/13/13

Chem3 05/13/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130510.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.213	7.211	7.219	7.212	7.218	7.212	7.214	7.164-7.264	7.214	0.004
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.441	7.438	7.418	7.441	7.439	7.439	7.432	7.382-7.482	7.436	0.009
20 C38	7.640	7.634	7.642	7.637	7.637	7.642	7.639	7.589-7.689	7.639	0.003
21 C40	7.833	7.844	7.834	7.835	7.831	7.835	7.833	7.783-7.883	7.835	0.005
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130510.b

ARI Job No.: RT05 Method: i/20130510.b/ftphfid3b.m Instrument: fid3b.i Date: 10-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0802	0510b002.d	RT0510		1	Toluene,
0821	0510b003.d	IB0510		1	NO MANUAL INTEGRATION
0841	0510b004.d	DIESEL 50		1	o-terph,
0901	0510b005.d	DIESEL 100		1	o-terph,
0920	0510b006.d	DIESEL 250		1	o-terph,
0940	0510b007.d	DIESEL 500		1	o-terph,
1000	0510b008.d	DIESEL 1000		1	o-terph,
1020	0510b009.d	DIESEL 2500		1	o-terph,
1040	0510b010.d	DIESEL ICV 250		1	o-terph,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130509.b

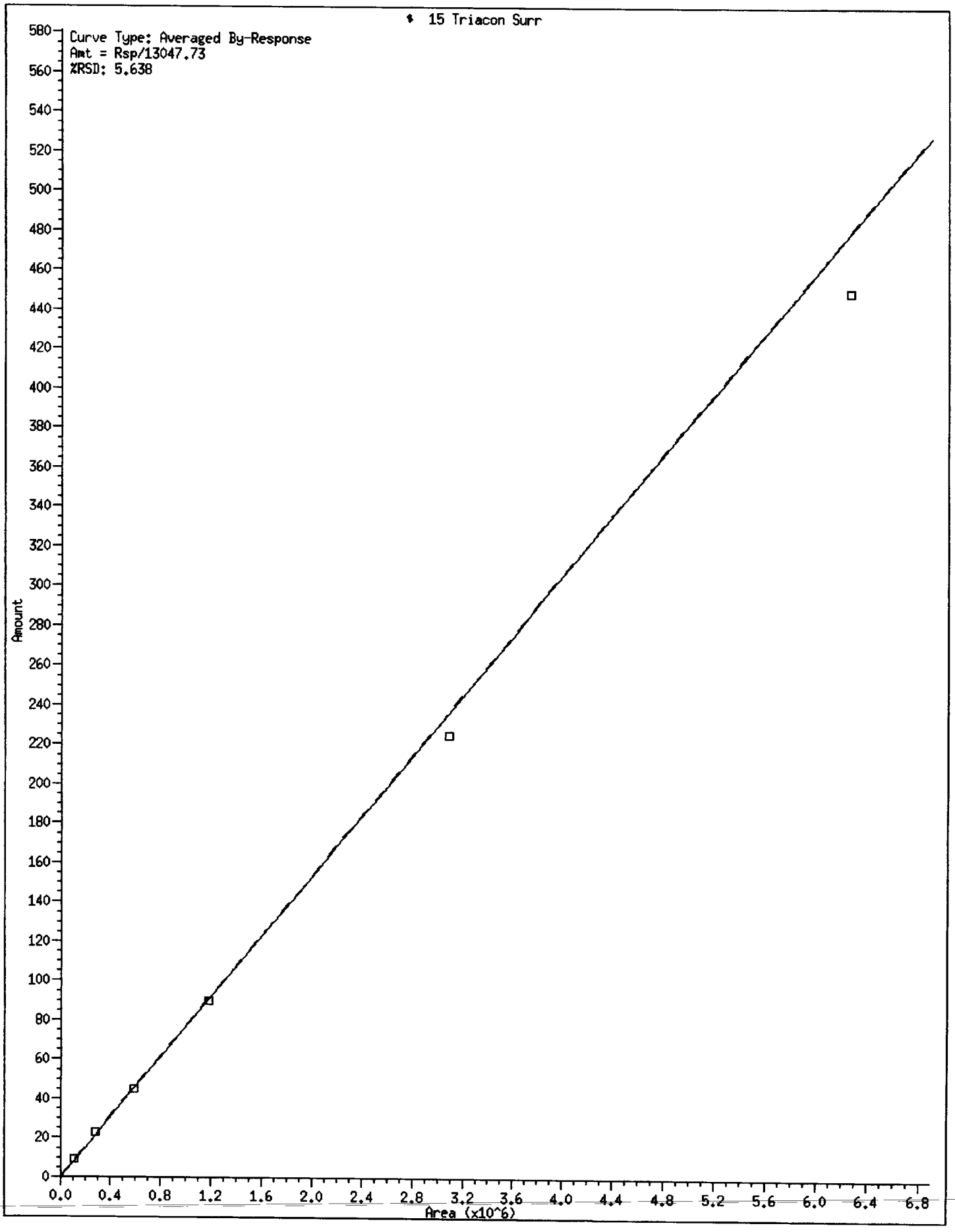
ARI Job No.: RINS Method: i/20130509.b/ftphfid3b.m Instrument: fid3b.i Date: 09-MAY-2013

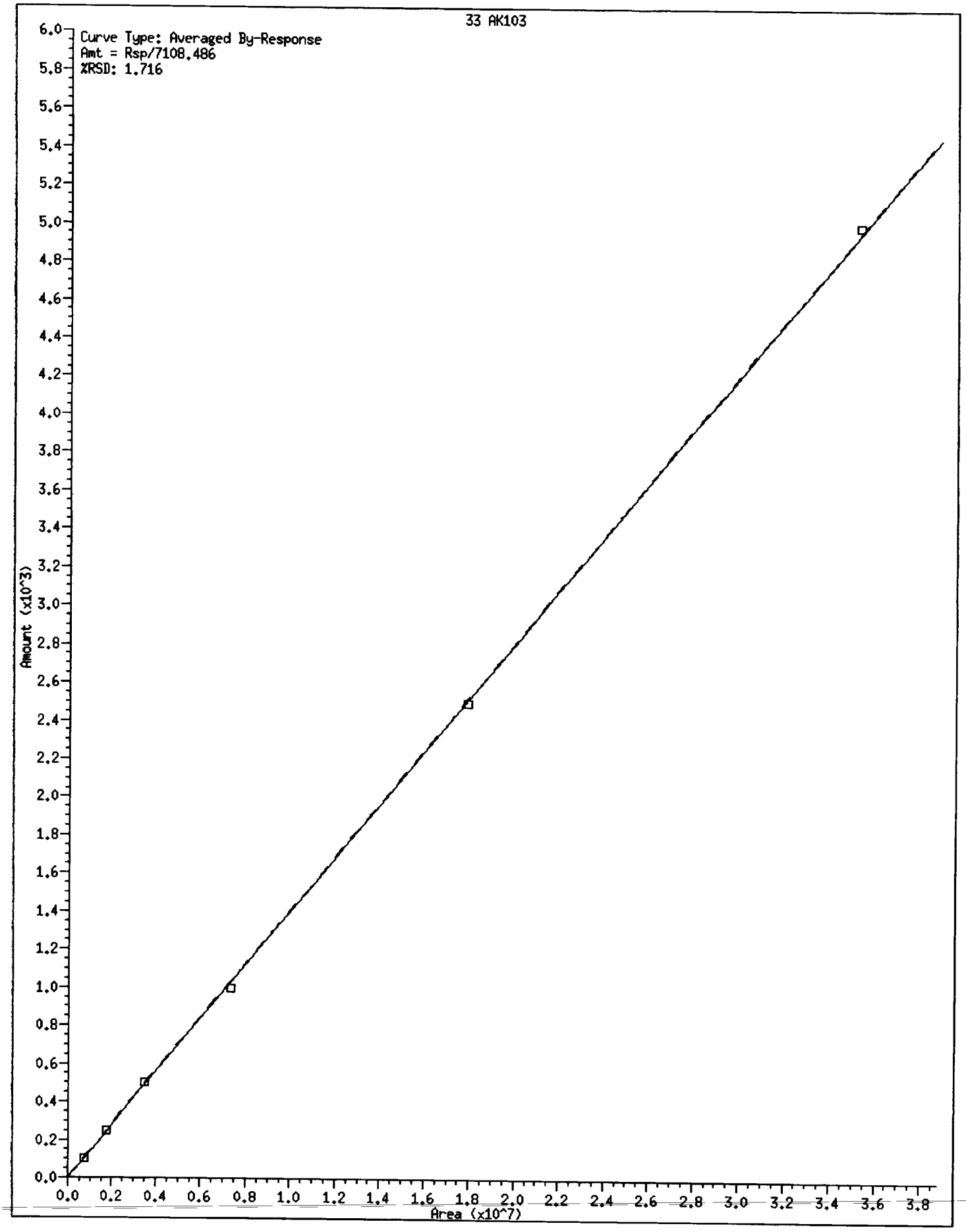
Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0822	0509b001.d	RINSE		1	NO MANUAL INTEGRATION
0840	0509b002.d	RT0509		1	Toluene,
0859	0509b003.d	IB0509		1	NO MANUAL INTEGRATION
0919	0509b004.d	DIESEL#1		1	o-terph,
0938	0509b005.d	MOIL#1		1	Triacon Surr,
1021	0509b006.d	RINSE		1	NO MANUAL INTEGRATION
1040	0509b007.d	RINSE		1	NO MANUAL INTEGRATION
1100	0509b008.d	RT0509		1	Toluene,
1120	0509b009.d	IB0509		1	NO MANUAL INTEGRATION
1140	0509b010.d	DIESEL#1		1	o-terph,
1200	0509b011.d	MOIL#1		1	Triacon Surr,
1514	0509b012.d	DIESEL 50		1	NO MANUAL INTEGRATION
1533	0509b013.d	DIESEL 100		1	NO MANUAL INTEGRATION
1552	0509b014.d	DIESEL 250		1	NO MANUAL INTEGRATION
1612	0509b015.d	DIESEL 500		1	NO MANUAL INTEGRATION
1632	0509b016.d	DIESEL 1000		1	NO MANUAL INTEGRATION
1651	0509b017.d	DIESEL 2500		1	NO MANUAL INTEGRATION
1711	0509b018.d	DIESEL ICV 250		1	NO MANUAL INTEGRATION
1730	0509b019.d	MOIL 100		1	Triacon Surr,
1750	0509b020.d	MOIL 250		1	Triacon Surr,

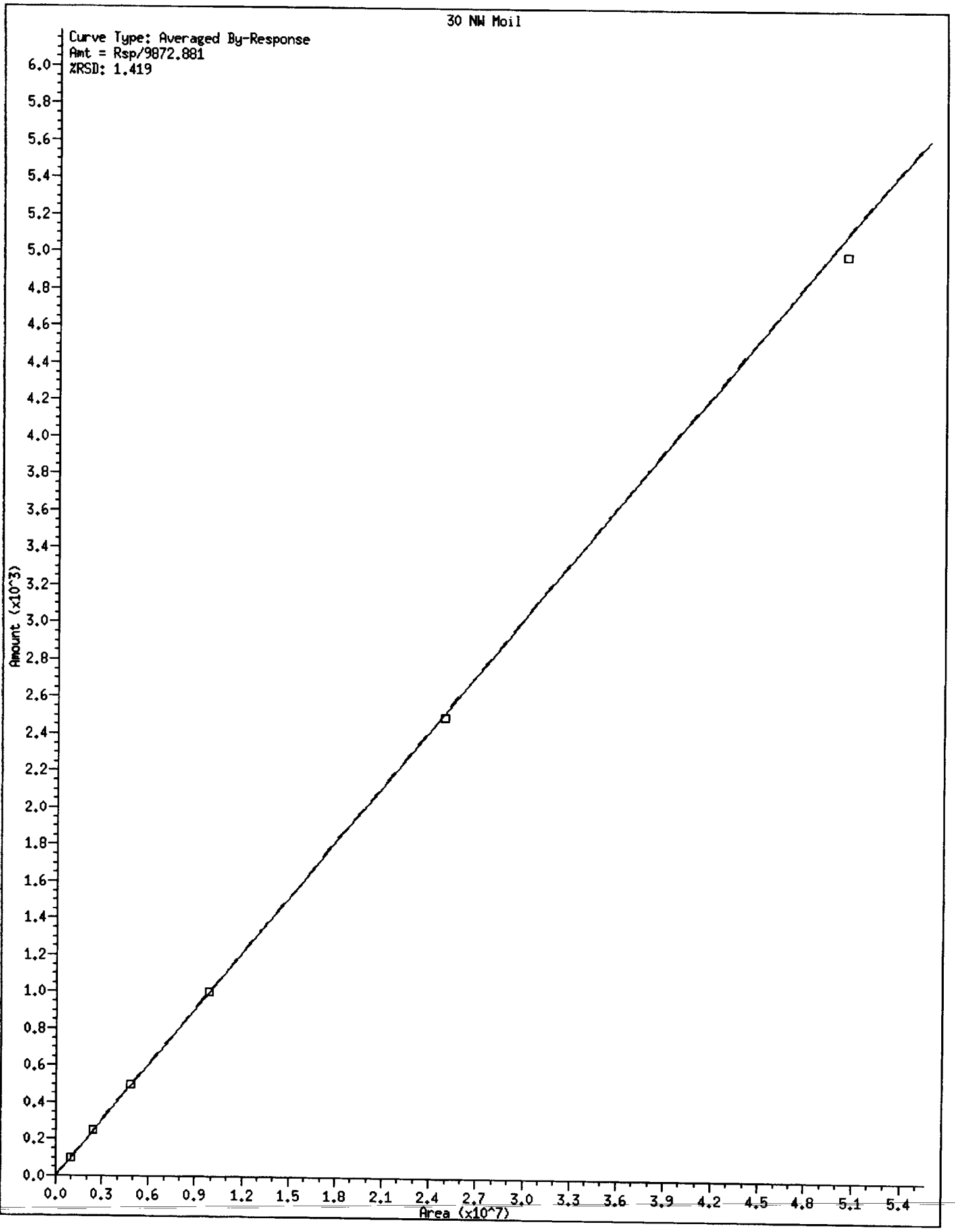
1809 0509b021.d MOIL 500 1 Triacon Surr,

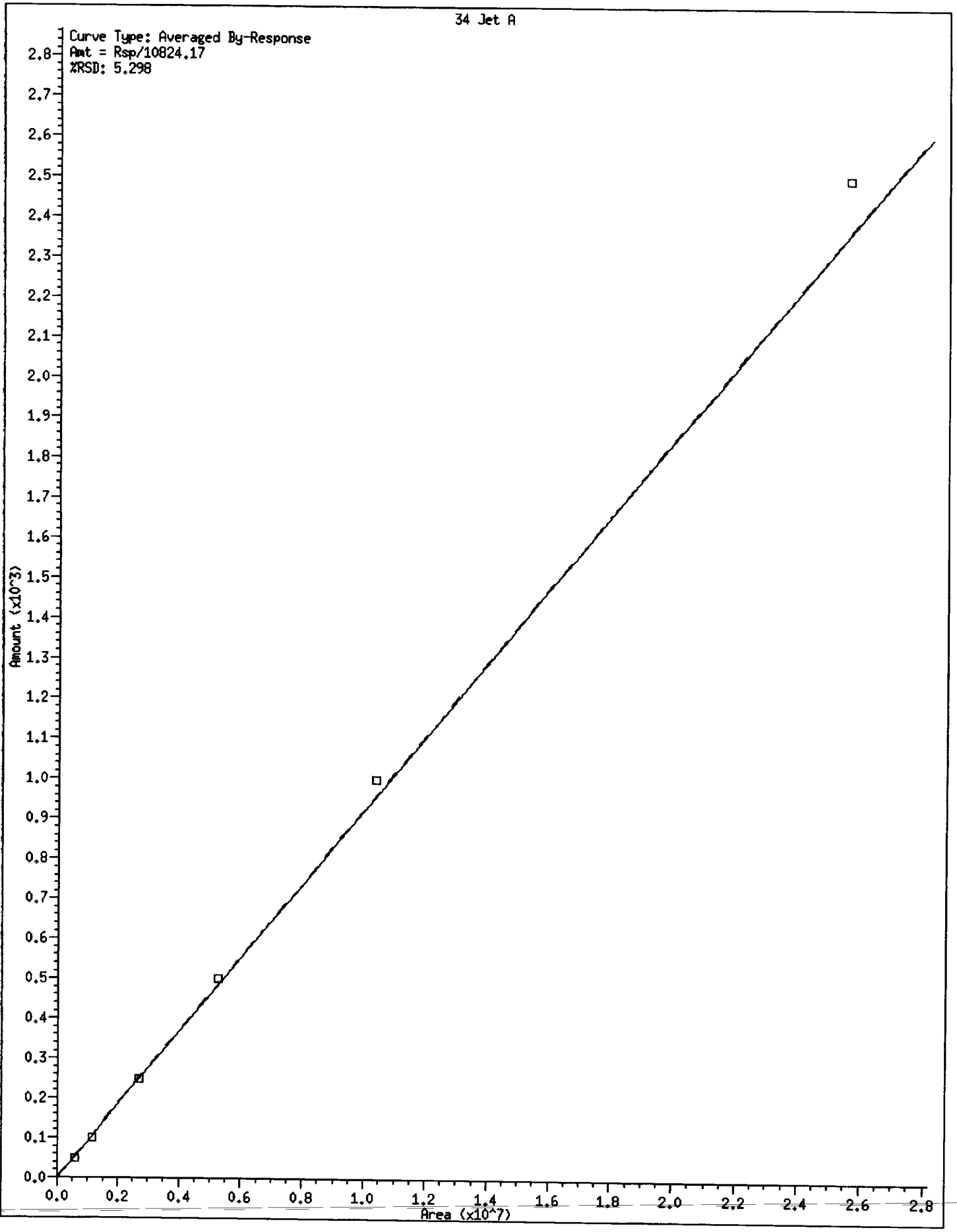
MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130509.b

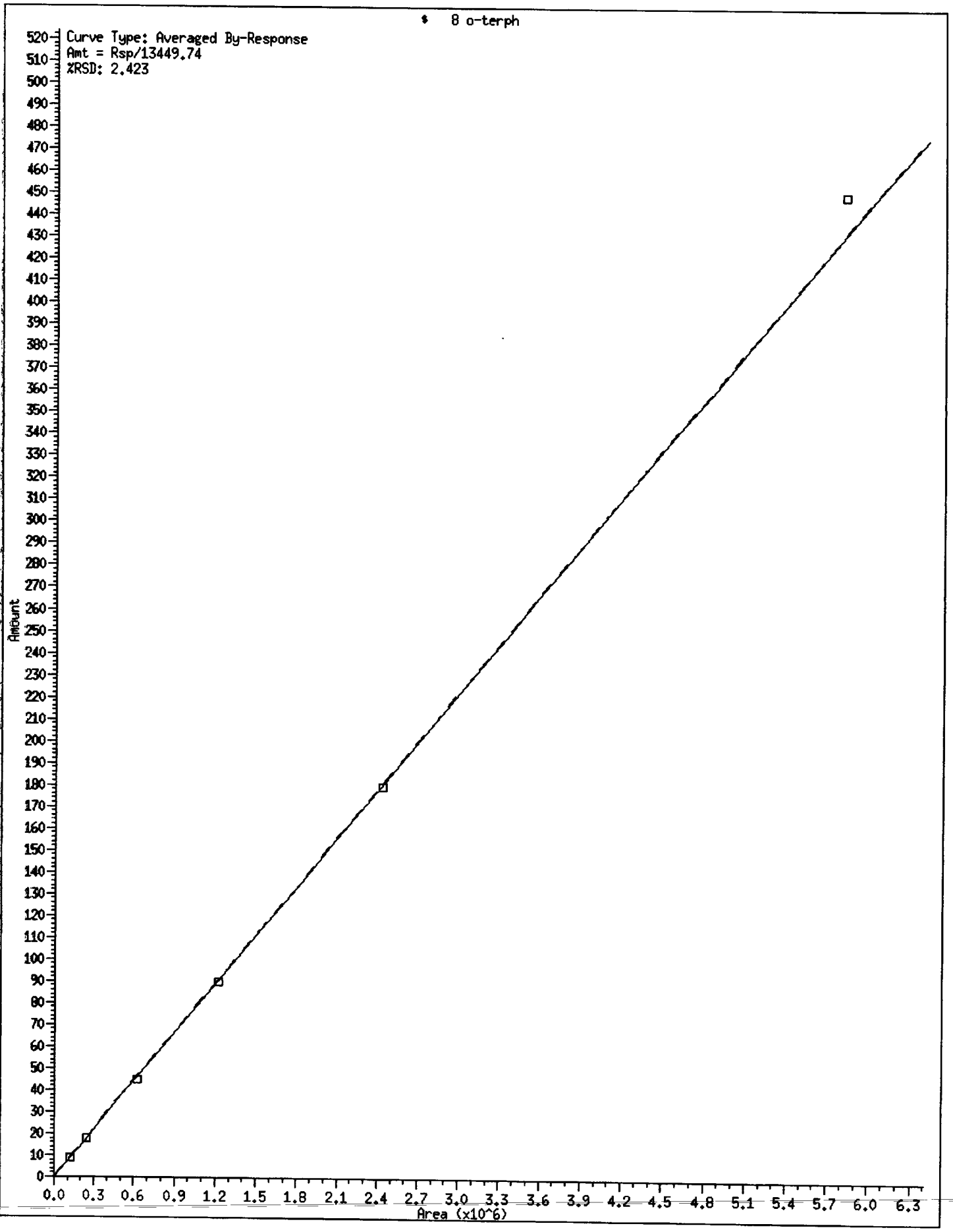
Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1829	0509b022.d	MOIL 1000		1	Triacon Surr,
1849	0509b023.d	MOIL 2500		1	Triacon Surr,
1908	0509b024.d	MOIL 5000		1	Triacon Surr,
1928	0509b025.d	MOIL ICV 500		1	Triacon Surr,
1947	0509b026.d	JETA 50		1	NO MANUAL INTEGRATION
2006	0509b027.d	JETA 100		1	NO MANUAL INTEGRATION
2026	0509b028.d	JETA 250		1	NO MANUAL INTEGRATION
2045	0509b029.d	JETA 500		1	NO MANUAL INTEGRATION
2104	0509b030.d	JETA 1000		1	NO MANUAL INTEGRATION
2123	0509b031.d	JETA 2500		1	o-terph,
2143	0509b032.d	AK103 100		1	Triacon Surr,
2202	0509b033.d	AK103 250		1	Triacon Surr,
2221	0509b034.d	AK103 500		1	Triacon Surr,
2241	0509b035.d	AK103 1000		1	Triacon Surr,
2300	0509b036.d	AK103 2500		1	Triacon Surr,
2319	0509b037.d	AK103 5000		1	Triacon Surr,
2339	0509b038.d	AK103 ICV 500		1	Triacon Surr,

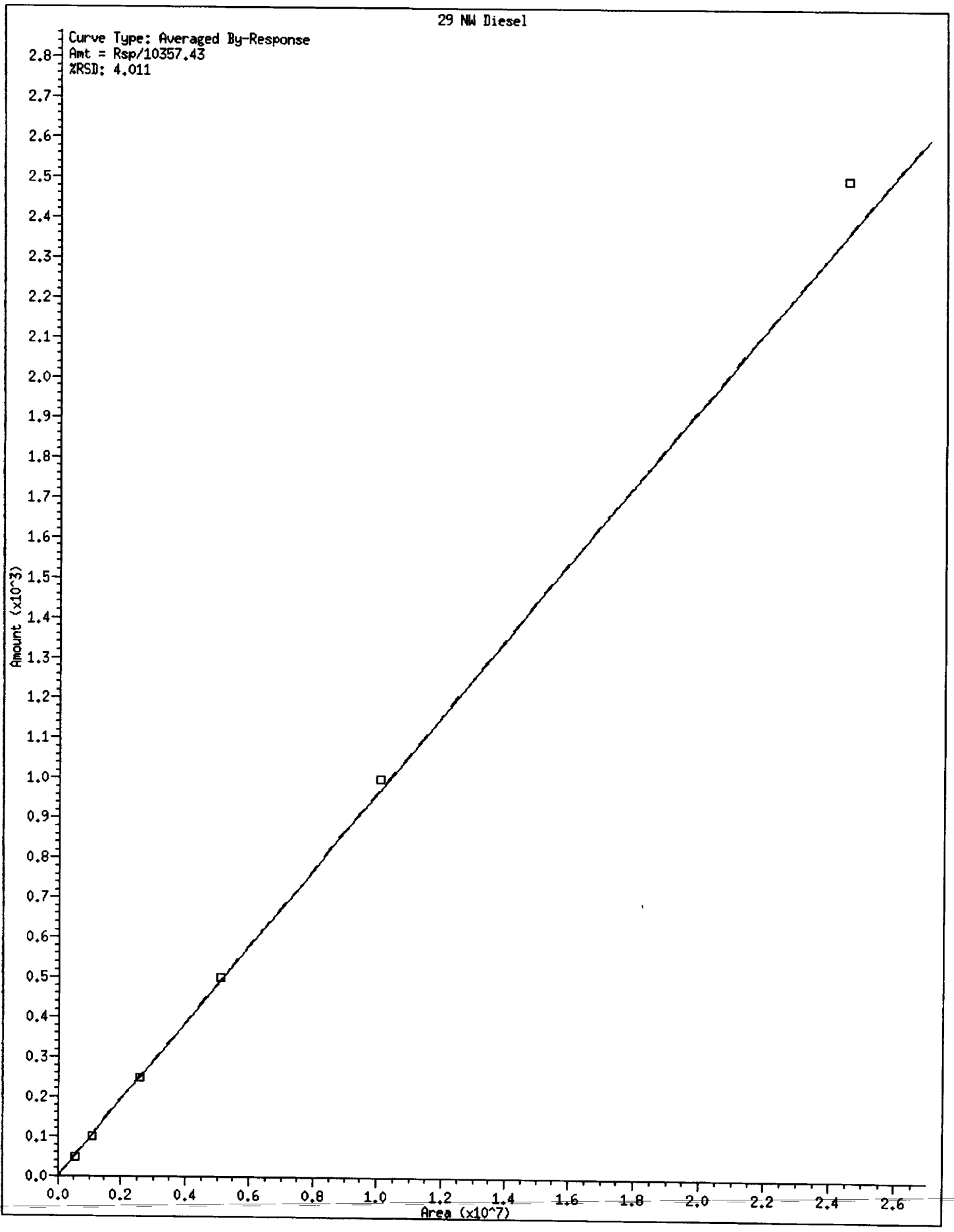

15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/13047.73
%RSD: 5.638
Amount
Area (x10^6)
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500
520
540
560
580
0.0
0.4
0.8
1.2
1.6
2.0
2.4
2.8
3.2
3.6
4.0
4.4
4.8
5.2
5.6
6.0
6.4
6.8

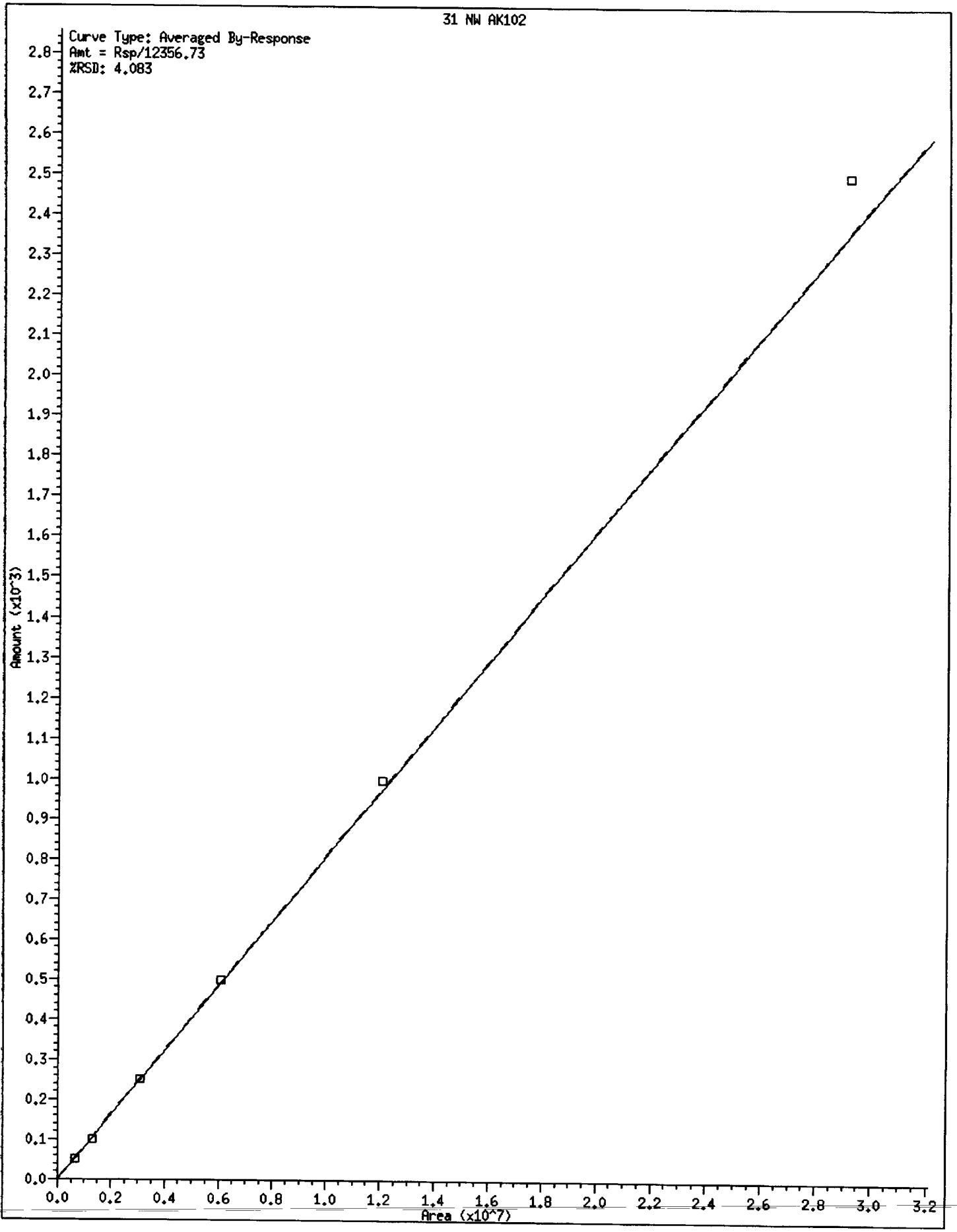

33 AK103
Curve Type: Averaged By-Response
Amt = Rsp/7108.486
%RSD: 1.716
Amount (x10^3)
Area (x10^7)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0


30 NW Moil
Curve Type: Averaged By-Response
Amt = Rsp/9872.881
%RSD: 1.419
Amount (x10^3)
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4
Area (x10^7)


34 Jet A
Curve Type: Averaged By-Response
Amt = Rsp/10824.17
%RSD: 5.298
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8


$ 8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/13449.74
%RSD: 2.423
Amount
Area (x10^6)


29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/10357.43
%RSD: 4.011
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6


31 NW AK102
Curve Type: Averaged By-Response
Amt = Rsp/12356.73
%RSD: 4.083
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130510

Instrument: FID3B.I

Project:

Calibration Date: 10-MAY-2013

SDG No.: 20130510

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	10856	10816	10366	10222	10078	9806	10358	4.0
AK Diesel	12969	12897	12393	12178	12035	11673	12357	4.1
OR Diesel	13048	12968	12457	12240	12092	11727	12422	4.1
Cal Diesel	12938	12873	12366	12154	12013	11647	12332	4.1
o-Terph	13177	13696	13787	13594	13504	12941	13450	2.4

<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges :

WA Diesel	C12-C24	(3.049-5.760)
AK Diesel	C10-C25	(2.254-5.938)
OR Diesel	C10-C28	(2.254-6.427)
Cal Diesel	C10-C24	(2.254-5.760)

Calibration Files	Analysis Time
0510b004.d	10-MAY-2013 08:41
0510b005.d	10-MAY-2013 09:01
0510b006.d	10-MAY-2013 09:20
0510b007.d	10-MAY-2013 09:40
0510b008.d	10-MAY-2013 10:00
0510b009.d	10-MAY-2013 10:20

6a
JET A INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130509

Instrument: FID3B.I

Project:

Calibration Date: 09-MAY-2013

SDG No.: 20130509

Product Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
JET A	11588	11469	10765	10505	10366	10245	10823	5.3
o-Terph	13361	13910	13769	13905	14073	13690	13785	1.8

<- Indicates %RSD outside limits
Quant Ranges : JET A - C10-C18 (2.254-4.565)

Calibration Files	Analysis Time
0509b026.d	09-MAY-2013 19:47
0509b027.d	09-MAY-2013 20:06
0509b028.d	09-MAY-2013 20:26
0509b029.d	09-MAY-2013 20:45
0509b030.d	09-MAY-2013 21:04
0509b031.d	09-MAY-2013 21:23

WR09 : 02002

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130509

Instrument: FID3B.I

Project:

Calibration Date: 09-MAY-2013

SDG No.: 20130509

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	9838	9724	9749	9868	9957	10101	9873	1.4
Triac Surr	12017	12392	13110	13138	13711	13920	13048	5.6

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0509b019.d	09-MAY-2013 17:30
0509b020.d	09-MAY-2013 17:50
0509b021.d	09-MAY-2013 18:09
0509b022.d	09-MAY-2013 18:29
0509b023.d	09-MAY-2013 18:49
0509b024.d	09-MAY-2013 19:08

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130509

Instrument: FID3B.I Project:

Calibration Date: 09-MAY-2013 SDG No.: 20130509

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
AK M.Oil C25-C36	7138	7048	6994	7315	7153	7079	7121	1.6
Triac Surr	11701	12221	12616	13063	12991	13443	12673	5.0

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0509b032.d	09-MAY-2013 21:43
0509b033.d	09-MAY-2013 22:02
0509b034.d	09-MAY-2013 22:21
0509b035.d	09-MAY-2013 22:41
0509b036.d	09-MAY-2013 23:00
0509b037.d	09-MAY-2013 23:19

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	05/10/13	0743	4.69	6.78
02		RT0510	05/10/13	0802	4.68	6.72
03		IB0510	05/10/13	0821	4.68	6.72
04		DIESEL 50	05/10/13	0841	4.67	6.72
05		DIESEL 100	05/10/13	0901	4.67	6.72
06		DIESEL 250	05/10/13	0920	4.68	6.72
07		DIESEL 500	05/10/13	0940	4.69	6.73
08		DIESEL 1000	05/10/13	1000	4.69	6.72
09		DIESEL 2500	05/10/13	1020	4.71	6.72
10		DIESEL ICV 2	05/10/13	1040	4.68	6.72
11		DIESEL#1	05/10/13	1331	4.67	6.78
12		JETA#1	05/10/13	1350	4.68	6.78
13		DIESEL#2	05/10/13	1410	4.68	6.76
14	ZZZZZ	ZZZZZ	05/10/13	1438	4.67	6.72
15	ZZZZZ	ZZZZZ	05/10/13	1457	4.68	6.72
16	ZZZZZ	ZZZZZ	05/10/13	1517	4.68	6.72
17	ZZZZZ	ZZZZZ	05/10/13	1537	4.67	6.72*
18	ZZZZZ	ZZZZZ	05/10/13	1556	4.67	6.71*
19	ZZZZZ	ZZZZZ	05/10/13	1616	4.67	6.72*
20	ZZZZZ	ZZZZZ	05/10/13	1635	4.68	6.72
21	ZZZZZ	ZZZZZ	05/10/13	1655	4.68	6.72
22	ZZZZZ	ZZZZZ	05/10/13	1714	4.68	6.72
23		DIESEL#3	05/10/13	1733	4.68	6.77
24		JETA#2	05/10/13	1753	4.68	6.77
25		MOIL#1	05/10/13	1812	4.68	6.76
26		WP23MBS1	05/10/13	1832	4.68	6.77
27		WP23LCSS1	05/10/13	1851	4.68	6.76
28		WP23A	05/10/13	1910	4.68	6.77
29		WP23A	05/10/13	1930	4.67	6.76
30		WP23B	05/10/13	1949	4.68	6.77
31		WP23B	05/10/13	2009	4.67	6.76
32		WP23C	05/10/13	2029	4.68	6.76

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

UR94 : 02005

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		WP23C	05/10/13	2048	4.67	6.77
02		DIESEL#4	05/10/13	2107	4.68	6.77
03		MOIL#2	05/10/13	2127	4.68	6.76
04		WP24MBS1	05/10/13	2151	4.68	6.76
05		WP24LCSS1	05/10/13	2209	4.68	6.77
06		WN70A	05/10/13	2229	4.68	6.77
07		WP24A	05/10/13	2306	4.69	6.77

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	0822	4.67	6.72
02		RT0509	05/09/13	0840	4.68	6.72
03	ZZZZZ	ZZZZZ	05/09/13	0859	4.68	6.72
04	ZZZZZ	ZZZZZ	05/09/13	0919	4.68	6.73
05	ZZZZZ	ZZZZZ	05/09/13	0938	4.67	6.72
06	ZZZZZ	ZZZZZ	05/09/13	1021	4.67	6.72
07	ZZZZZ	ZZZZZ	05/09/13	1040	4.68	6.72
08		RT0509	05/09/13	1100	4.68	6.72
09	ZZZZZ	ZZZZZ	05/09/13	1120	4.68	6.72
10	ZZZZZ	ZZZZZ	05/09/13	1140	4.68	6.72
11	ZZZZZ	ZZZZZ	05/09/13	1200	4.67	6.72
12	ZZZZZ	ZZZZZ	05/09/13	1514	4.67	6.73
13	ZZZZZ	ZZZZZ	05/09/13	1533	4.67	6.72
14	ZZZZZ	ZZZZZ	05/09/13	1552	4.68	6.72
15	ZZZZZ	ZZZZZ	05/09/13	1612	4.68	6.72
16	ZZZZZ	ZZZZZ	05/09/13	1632	4.69	6.73
17	ZZZZZ	ZZZZZ	05/09/13	1651	4.70	6.73
18		DIESEL ICV 2	05/09/13	1711	4.68	6.72
19		MOIL 100	05/09/13	1730	4.67	6.72
20		MOIL 250	05/09/13	1750	4.68	6.72
21		MOIL 500	05/09/13	1809	4.68	6.73
22		MOIL 1000	05/09/13	1829	4.67	6.74
23		MOIL 2500	05/09/13	1849	4.67	6.75
24		MOIL 5000	05/09/13	1908	4.68	6.77
25		MOIL ICV 500	05/09/13	1928	4.68	6.73
26	ZZZZZ	ZZZZZ	05/09/13	1947	4.67	6.73
27	ZZZZZ	ZZZZZ	05/09/13	2006	4.67	6.73
28	ZZZZZ	ZZZZZ	05/09/13	2026	4.68	6.73
29	ZZZZZ	ZZZZZ	05/09/13	2045	4.68	6.73
30	ZZZZZ	ZZZZZ	05/09/13	2104	4.69	6.72
31	ZZZZZ	ZZZZZ	05/09/13	2123	4.71	6.72
32	ZZZZZ	ZZZZZ	05/09/13	2143	4.68	6.72

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	2202	4.67	6.72
02	ZZZZZ	ZZZZZ	05/09/13	2221	4.68	6.73
03	ZZZZZ	ZZZZZ	05/09/13	2241	4.68	6.74
04	ZZZZZ	ZZZZZ	05/09/13	2300	4.68	6.75
05	ZZZZZ	ZZZZZ	05/09/13	2319	4.68	6.77
06		AK103 ICV 50	05/09/13	2339	4.67	6.72

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b002.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: RT0510
Client ID:
Injection: 10-MAY-2013 08:02
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.651	0.000	278628	291395	WATPHG	(Tol-C12)	1129888	83.65 M
C8	0.821	-0.006	181633	241331	WATPHD	(C12-C24)	1664879	160.74
C10	2.250	-0.004	359200	245154	WATPHM	(C24-C38)	2584330	261.76
C12	3.040	-0.009	358905	230134	AK102	(C10-C25)	2219047	179.58
C14	3.620	-0.001	408094	260963	AK103	(C25-C36)	2235210	314.44
C16	4.117	0.001	379580	245451	OR.DIES	(C10-C28)	3488483	226.79
C18	4.568	0.002	369583	253308				
C20	4.989	0.000	363534	236583				
C22	5.387	0.001	355771	240940				
C24	5.759	-0.001	347940	242813				
C25	5.934	-0.004	345745	237993				
C26	6.112	-0.002	959349	714870				
C28	6.426	-0.001	312314	257280	IT.DIES	(C10-C24)	2207860	160.12
C32	6.976	0.000	424837	286870				
C34	7.214	0.005	432992	287900	CREOSOT	(C8-C22)	1394958	431.43
Filter Peak	----							
C36	7.432	-0.003	430689	302270	BUNKERC	(C10-C38)	4792190	977.04
o-terph	4.676	-0.007	810739	558615	JET-A	(C10-C18)	1383968	127.86
Triacon Surr	6.723	-0.045	927716	705353				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	558615	41.5	92.3
Triacontane	705353	54.1	120.1

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

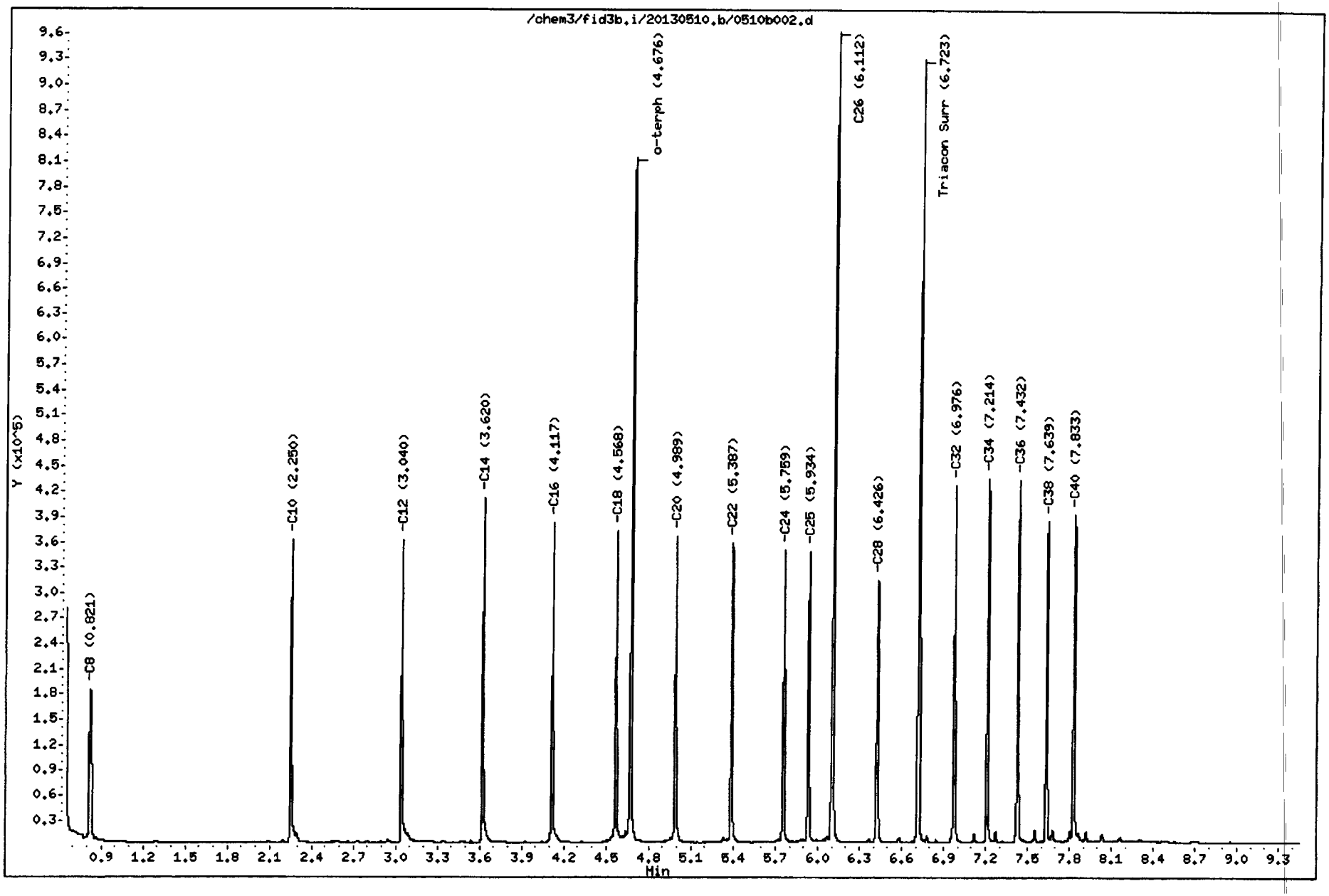
JW 5/11/13

Data File: /chem3/fid3b.i/20130510.b/0510b002.d
Date : 10-MAY-2013 08:02
Client ID:
Sample Info: RT0510

Column phase: RTX-1

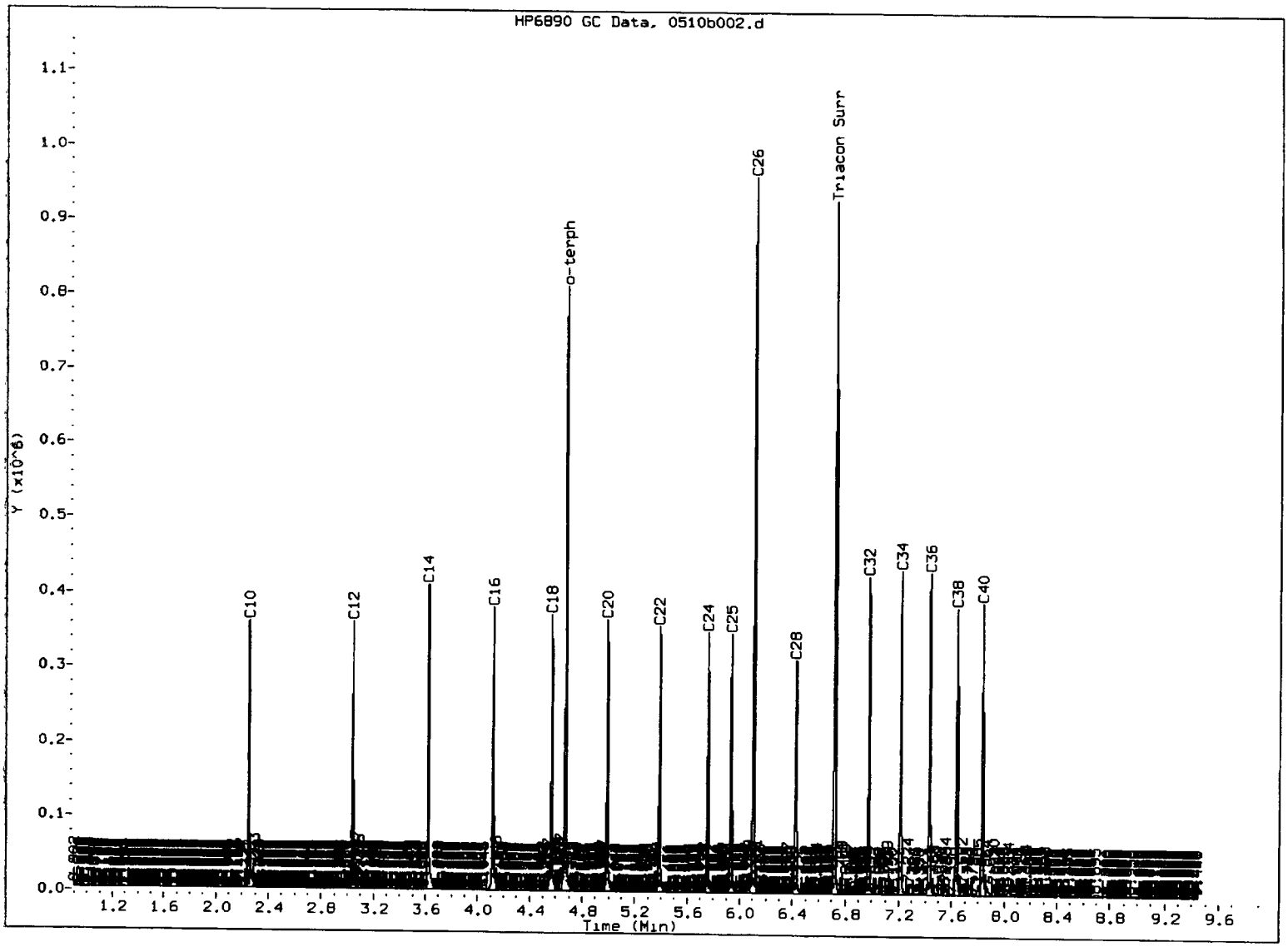
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 RT0510

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b003.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: IB0510
Client ID:
Injection: 10-MAY-2013 08:21
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	82802	6
C8	0.826	-0.002	3227	2790	WATPHD	(C12-C24)	51789	5.00
C10	2.253	-0.001	538	718	WATPHM	(C24-C38)	95461	9.67
C12	3.041	-0.007	348	185	AK102	(C10-C25)	73962	5.99
C14	3.617	-0.004	310	162	AK103	(C25-C36)	71921	10.12
C16	4.116	0.000	197	74	OR.DIES	(C10-C28)	78945	5.13
C18	4.564	-0.001	233	164				
C20	4.994	0.005	271	68				
C22	5.384	-0.003	117	79				
C24	5.753	-0.006	127	110				
C25	5.933	-0.005	24	4				
C26	6.104	-0.009	79	16				
C28	6.433	0.006	531	706	IT.DIES	(C10-C24)	73322	5.32
C32	6.987	0.011	2312	2615				
C34	7.214	0.005	585	115	CREOSOT	(C8-C22)	50403	15.59
Filter Peak	----							
C36	7.418	-0.017	6058	6883	BUNKERC	(C10-C38)	168784	34.41
o-terph	4.677	-0.006	864329	578060	JET-A	(C10-C18)	45532	4.21
Triacon Surr	6.722	-0.046	725287	542624				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	578060	43.0	95.5
Triacontane	542624	41.6	92.4

JCW 5/11/13

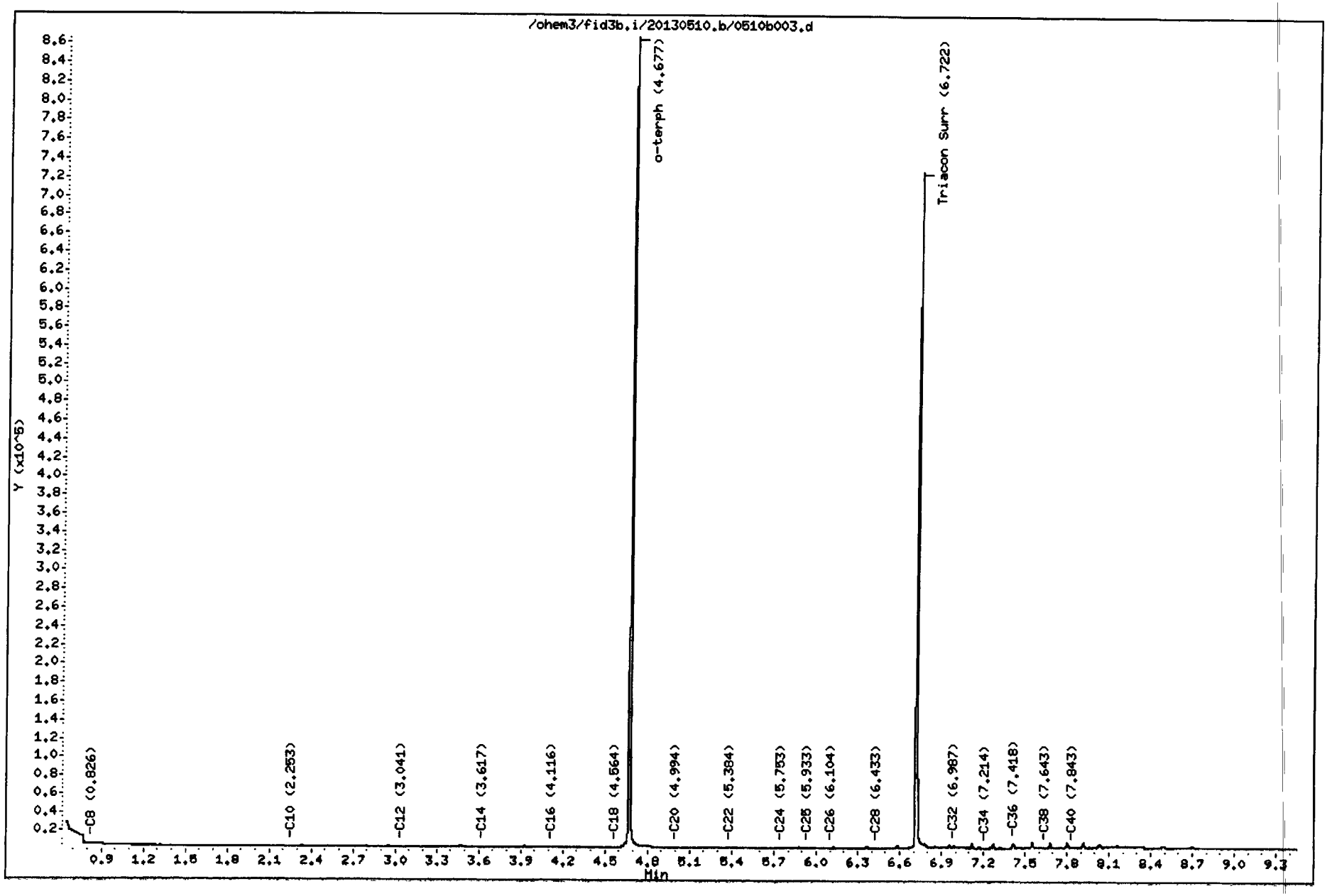
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b003.d
Date : 10-MAY-2013 08:21
Client ID:
Sample Info: IB0510

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b004.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 50
Client ID:
Injection: 10-MAY-2013 08:41
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	193240	14
C8	0.824	-0.004	3186	2701	WATPHD	(C12-C24)	542793	52.41
C10	2.255	0.001	2818	2663	WATPHM	(C24-C38)	33378	3.38
C12	3.037	-0.011	3301	3758	AK102	(C10-C25)	648444	52.48 M
C14	3.621	0.000	7527	8721	AK103	(C25-C36)	20323	2.86
C16	4.117	0.001	11304	11840	OR.DIES	(C10-C28)	652389	42.41 M
C18	4.564	-0.001	12195	11129				
C20	4.990	0.001	4993	2568				
C22	5.382	-0.004	1288	422				
C24	5.759	-0.001	485	174				
C25	5.938	0.000	231	70				
C26	6.111	-0.003	110	48				
C28	6.432	0.006	29	8	IT.DIES	(C10-C24)	646906	46.91
C32	6.992	0.016	117	35				
C34	7.213	0.003	232	62	CREOSOT	(C8-C22)	526977	162.98
Filter Peak	----							
C36	7.441	0.006	446	167	BUNKERC	(C10-C38)	680284	138.70
o-terph	4.670	-0.013	199832	118595	JET-A	(C10-C18)	496912	45.91
Triacon Surr	6.720	-0.048	76	52				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	118595	8.8	19.6
Triacontane	52	0.0	0.0

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b004.d

Date : 10-MAY-2013 08:41

Client ID:

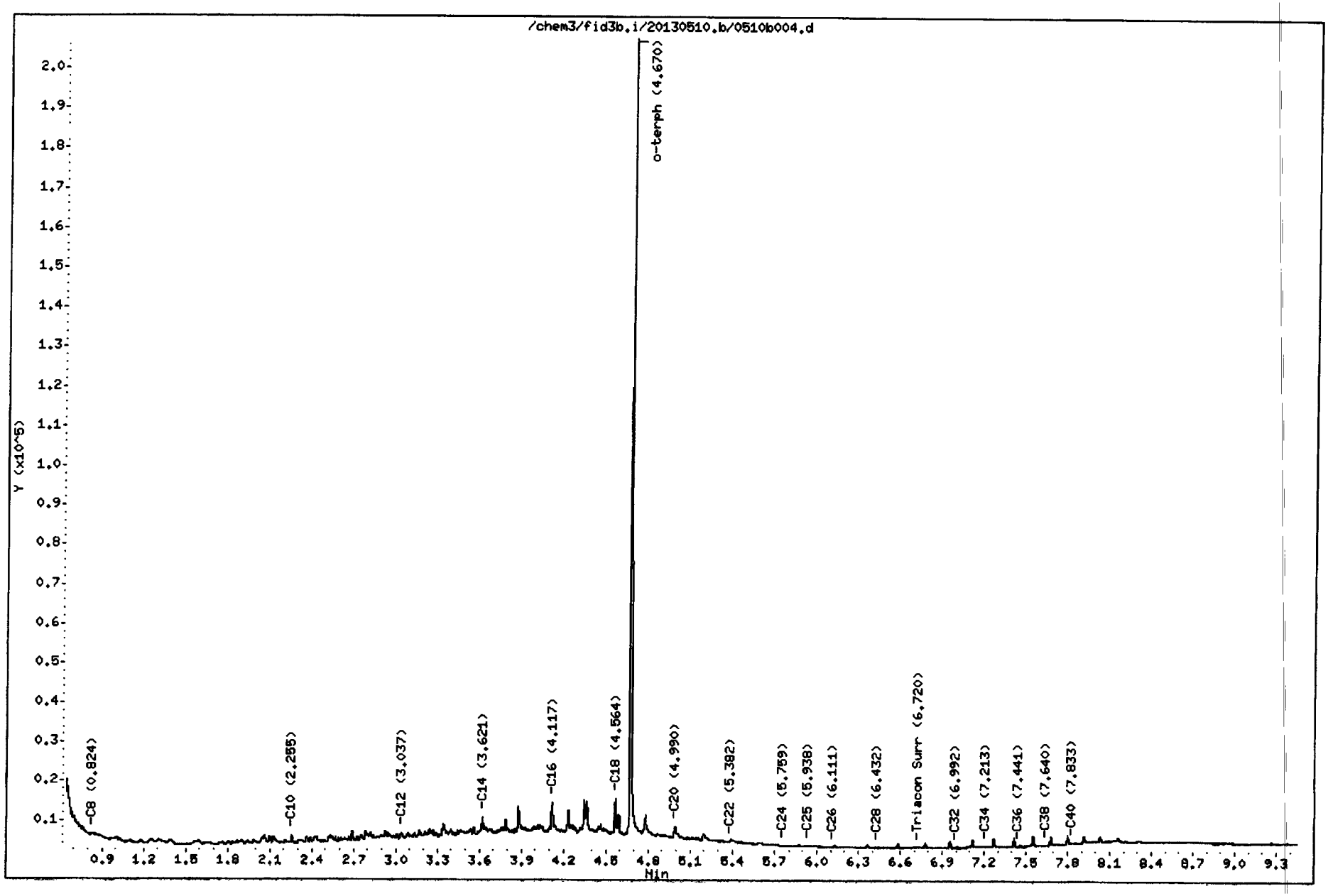
Sample Info: DIESEL 50

Column phase: RTX-1

Instrument: fid3b.i

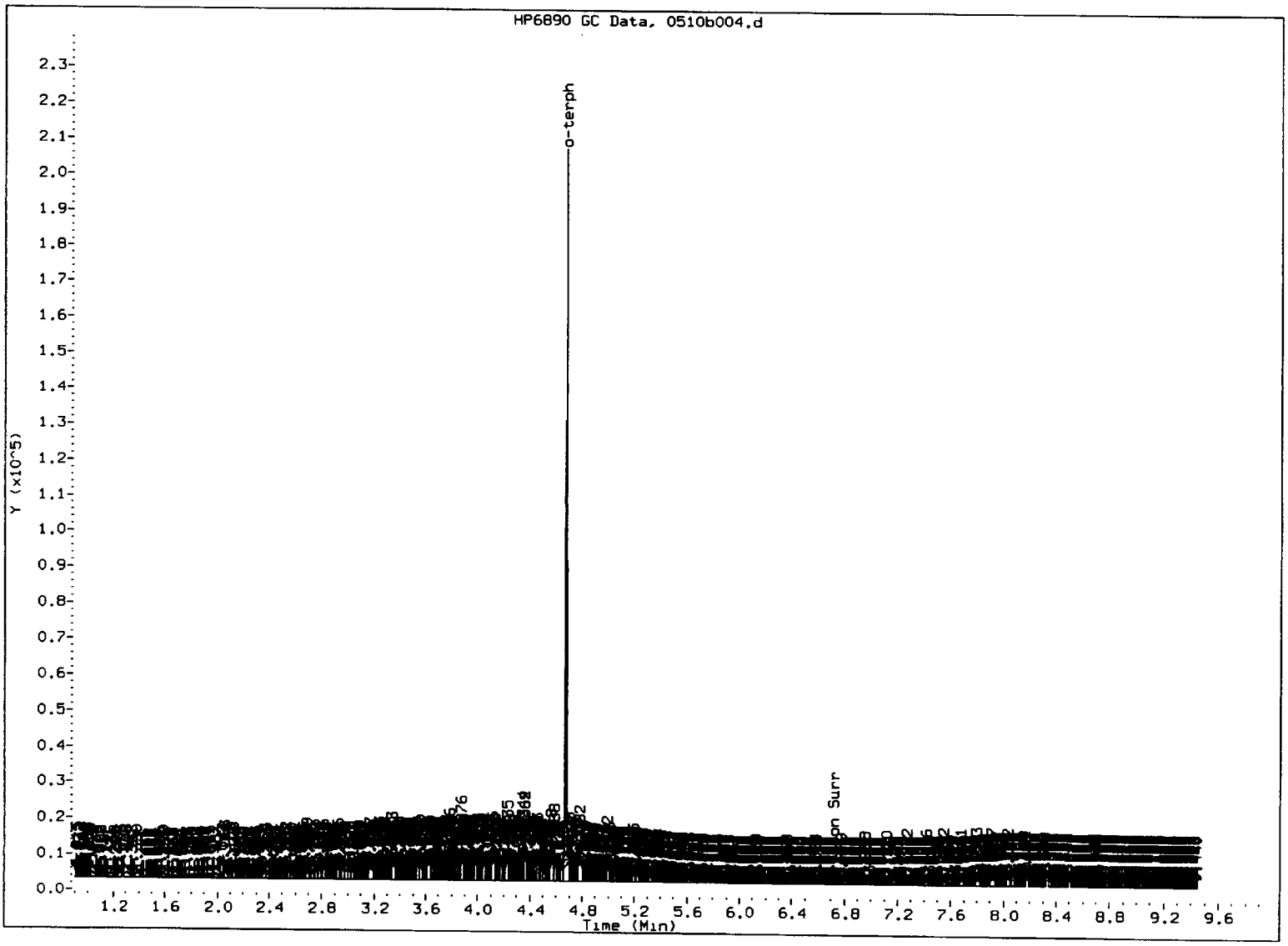
Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 50

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW

Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b005.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 100
Client ID:
Injection: 10-MAY-2013 09:01
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	348905	26
C8	0.829	0.001	4019	3639	WATPHD	(C12-C24)	1081580	104.43
C10	2.255	0.001	5549	5298	WATPHM	(C24-C38)	30498	3.09
C12	3.038	-0.011	8688	11176	AK102	(C10-C25)	1289659	104.37 M
C14	3.618	-0.003	18063	21629	AK103	(C25-C36)	18970	2.67
C16	4.116	0.000	28732	34246	OR.DIES	(C10-C28)	1296754	84.30 M
C18	4.564	-0.001	28511	24397				
C20	4.988	-0.002	13723	21176				
C22	5.389	0.003	5048	4358				
C24	5.758	-0.001	930	234				
C25	5.938	0.000	463	108				
C26	6.113	-0.001	221	51				
C28	6.426	-0.001	46	9	IT.DIES	(C10-C24)	1287251	93.35
C32	6.980	0.004	95	30				
C34	7.211	0.001	189	59	CREOSOT	(C8-C22)	1048198	324.18
Filter Peak	----							
C36	7.438	0.003	375	176	BUNKERC	(C10-C38)	1317749	268.67
o-terph	4.672	-0.011	474682	246523	JET-A	(C10-C18)	984623	90.97
Triacon Surr	6.723	-0.045	53	24				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	246523	18.3	40.7
Triacontane	24	0.0	0.0

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b005.d

Date : 10-MAY-2013 09:01

Client ID:

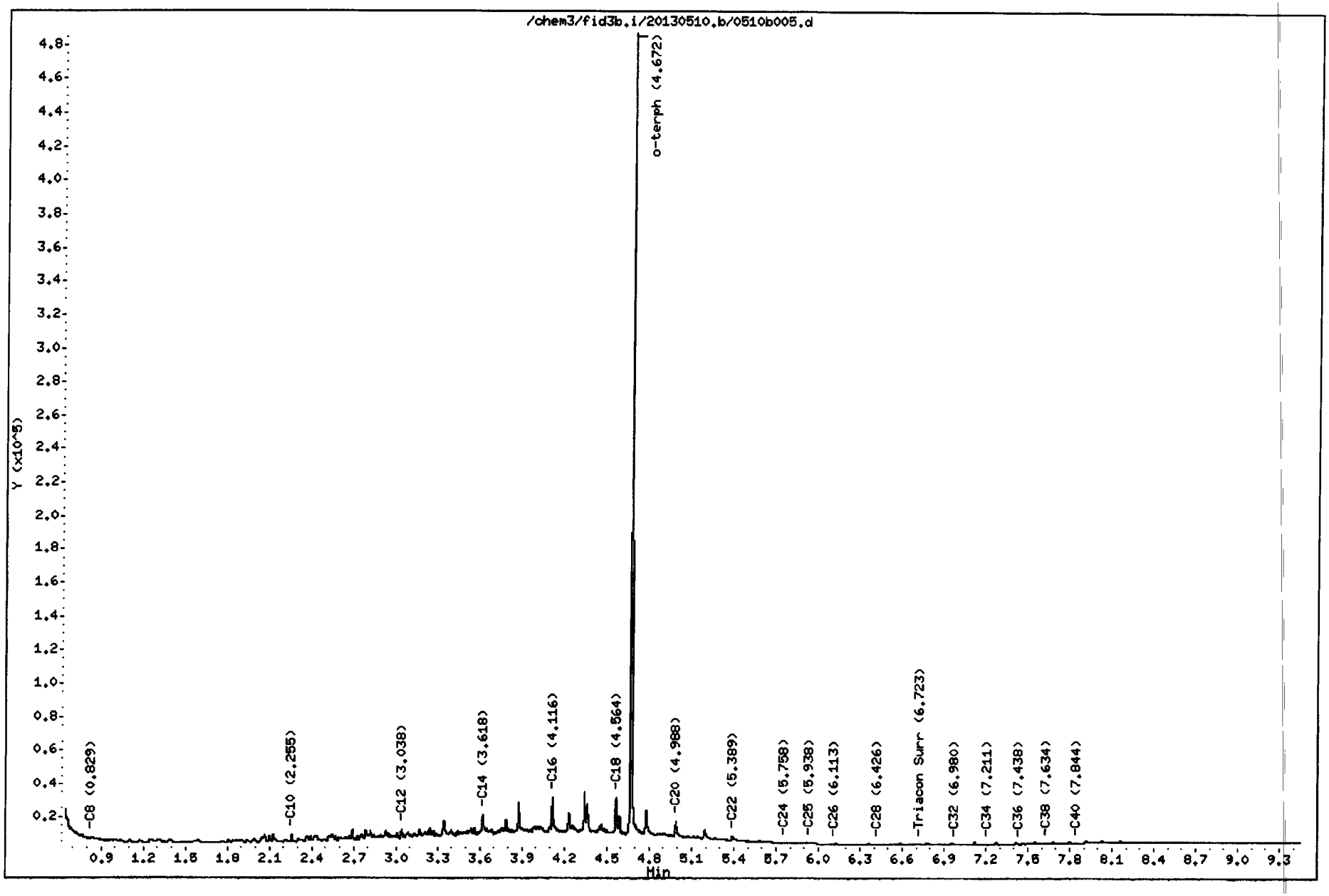
Sample Info: DIESEL 100

Column phase: RTX-1

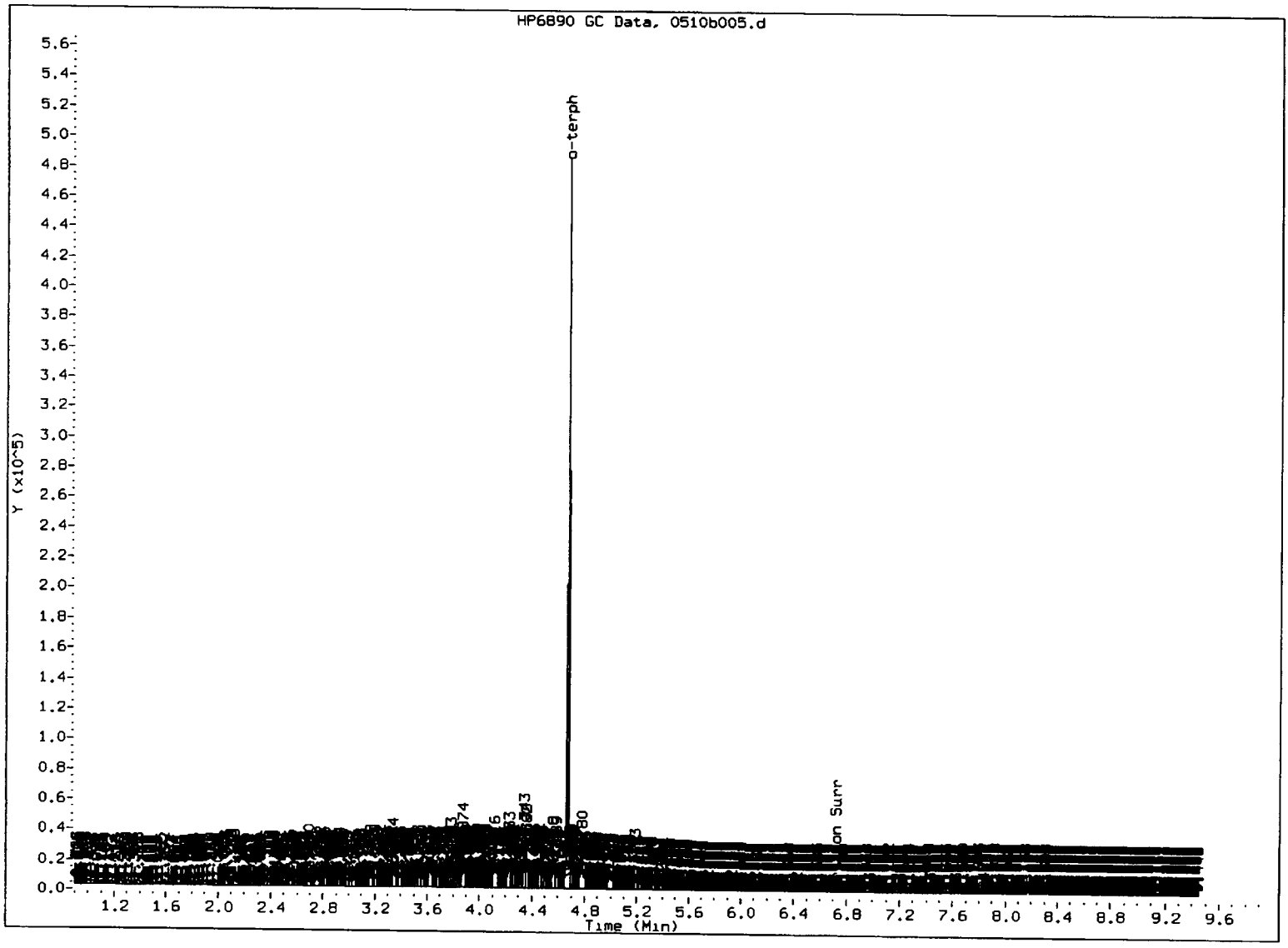
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 100 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b006.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 250
Client ID:
Injection: 10-MAY-2013 09:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	761791	56
C8	0.831	0.004	5218	8810	WATPHD	(C12-C24)	2591545	250.21
C10	2.256	0.002	15216	13003	WATPHM	(C24-C38)	38764	3.93
C12	3.039	-0.009	25438	28143	AK102	(C10-C25)	3098190	250.73 M
C14	3.619	-0.002	52194	51453	AK103	(C25-C36)	25541	3.59
C16	4.115	-0.001	83800	65685	OR.DIES	(C10-C28)	3114136	202.45 M
C18	4.565	0.000	76536	62707				
C20	4.987	-0.002	42799	46284				
C22	5.386	0.000	18091	23066				
C24	5.762	0.002	3061	2619				
C25	5.931	-0.007	1055	187				
C26	6.112	-0.002	544	242				
C28	6.424	-0.003	128	68	IT.DIES	(C10-C24)	3091557	224.20
C32	6.980	0.004	52	12				
C34	7.219	0.010	155	59	CREOSOT	(C8-C22)	2516265	778.22
Filter Peak	----							
C36	7.418	-0.017	1255	1376	BUNKERC	(C10-C38)	3130321	638.22
o-terph	4.678	-0.005	968874	620399	JET-A	(C10-C18)	2379987	219.88
Triacon Surr	6.721	-0.047	32	20				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	620399	46.1	102.5
Triacontane	20	0.0	0.0

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b006.d

Date : 10-MAY-2013 09:20

Client ID:

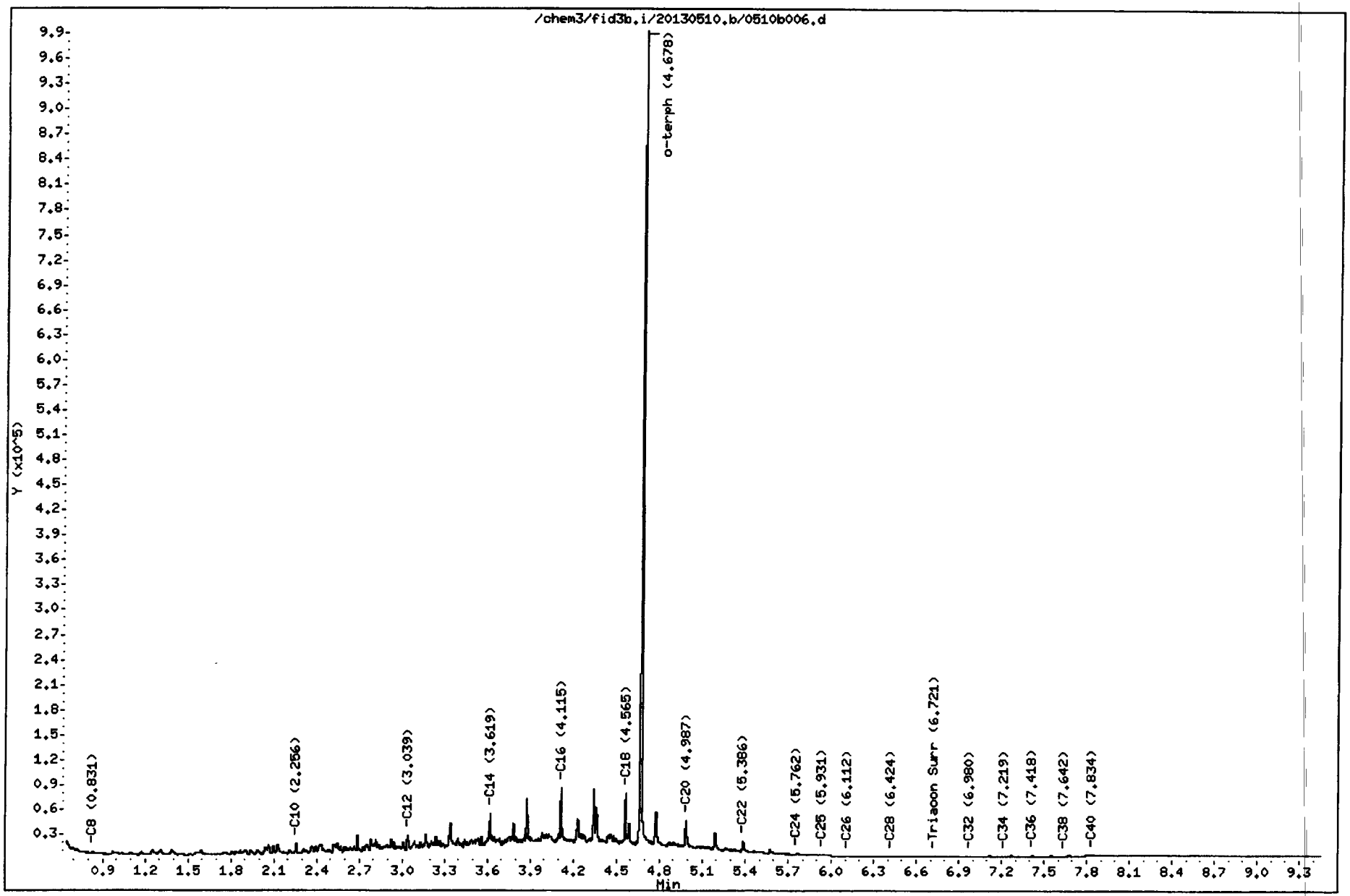
Sample Info: DIESEL 250

Column phase: RTX-1

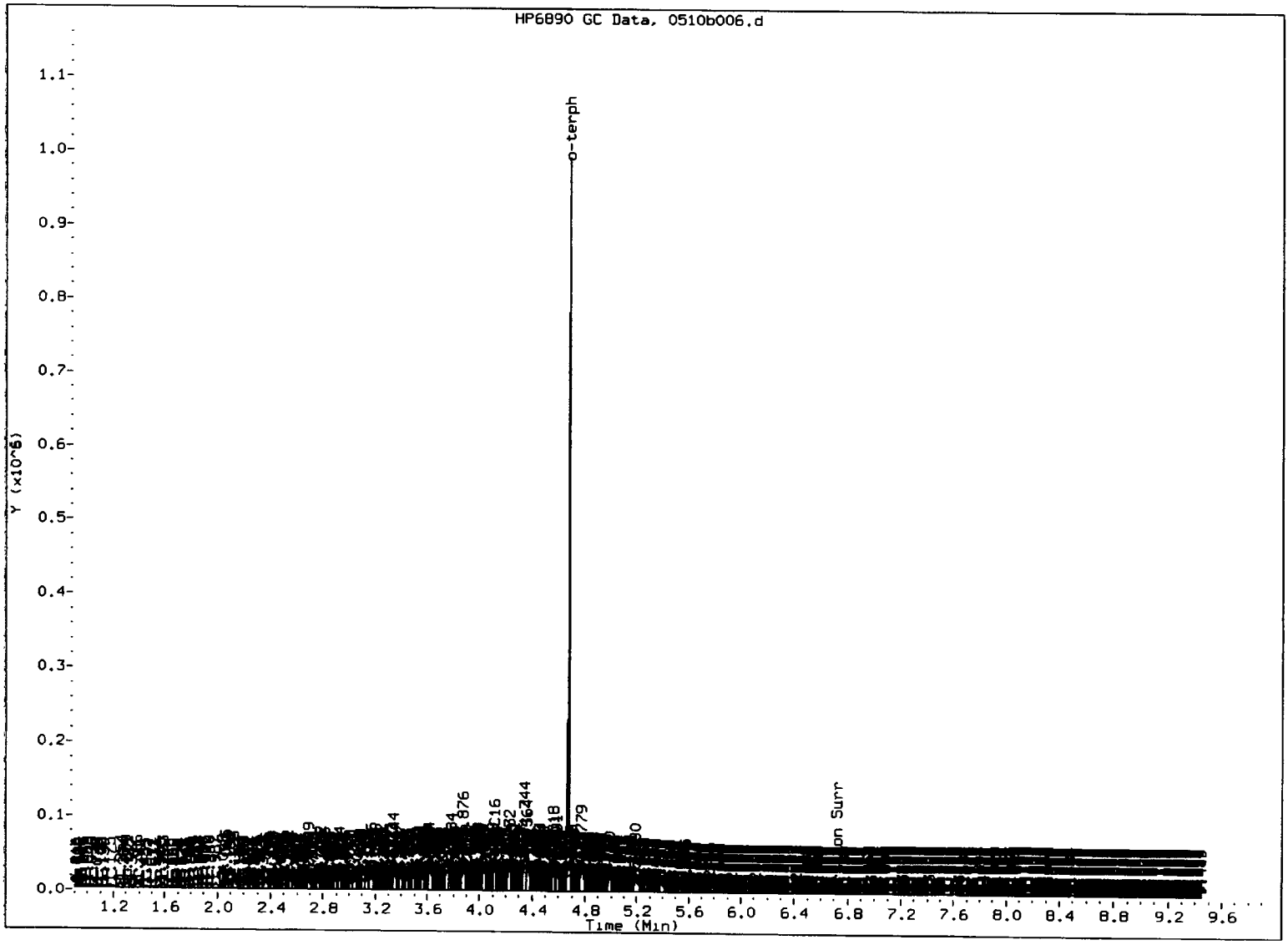
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JCJ Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b007.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 500
Client ID:
Injection: 10-MAY-2013 09:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1423305	105
C8	0.831	0.004	7103	11774	WATPHD	(C12-C24)	5111212	493.48
C10	2.256	0.002	34009	26478	WATPHM	(C24-C38)	56849	5.76
C12	3.039	-0.009	59303	59524	AK102	(C10-C25)	6088980	492.77 M
C14	3.619	-0.002	108417	83752	AK103	(C25-C36)	39698	5.58
C16	4.116	0.000	169964	136442	OR.DIES	(C10-C28)	6120141	397.88 M
C18	4.569	0.003	143941	125900				
C20	4.989	0.000	84653	96402				
C22	5.387	0.000	38580	47857				
C24	5.761	0.001	7758	13975				
C25	5.940	0.002	3274	5094				
C26	6.115	0.001	1168	274				
C28	6.426	0.000	225	21	IT.DIES	(C10-C24)	6077010	440.71
C32	6.979	0.003	47	18				
C34	7.212	0.002	94	30	CREOSOT	(C8-C22)	4959474	1533.85
Filter Peak	----							
C36	7.441	0.006	250	95	BUNKERC	(C10-C38)	6133859	1250.58
o-terph	4.686	0.003	1593055	1223455	JET-A	(C10-C18)	4663065	430.80
Triacon Surr	6.726	-0.042	55	7				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1223455	91.0	202.1
Triacontane	7	0.0	0.0

JW 5/10/13

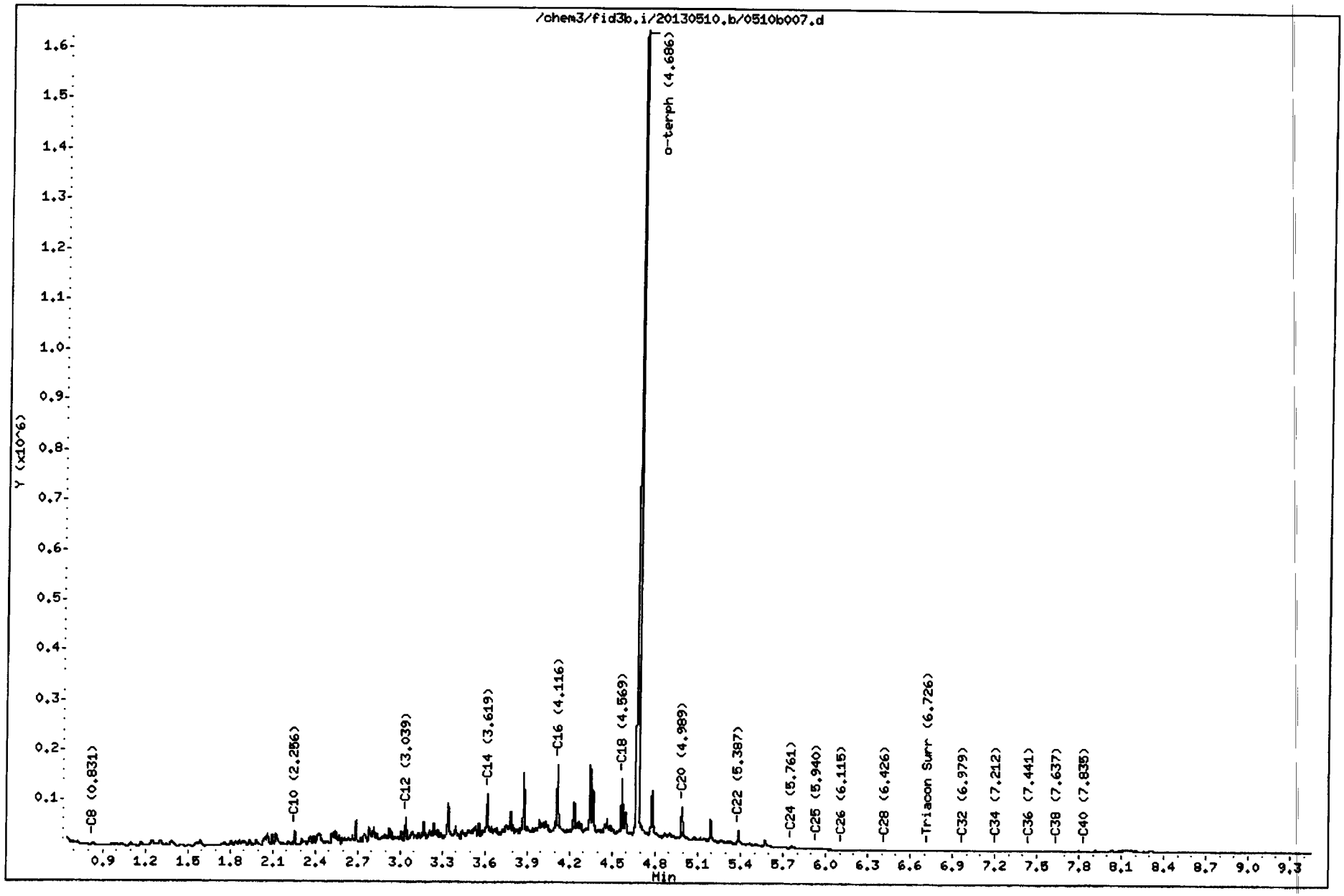
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b007.d
Date : 10-MAY-2013 09:40
Client ID:
Sample Info: DIESEL 500

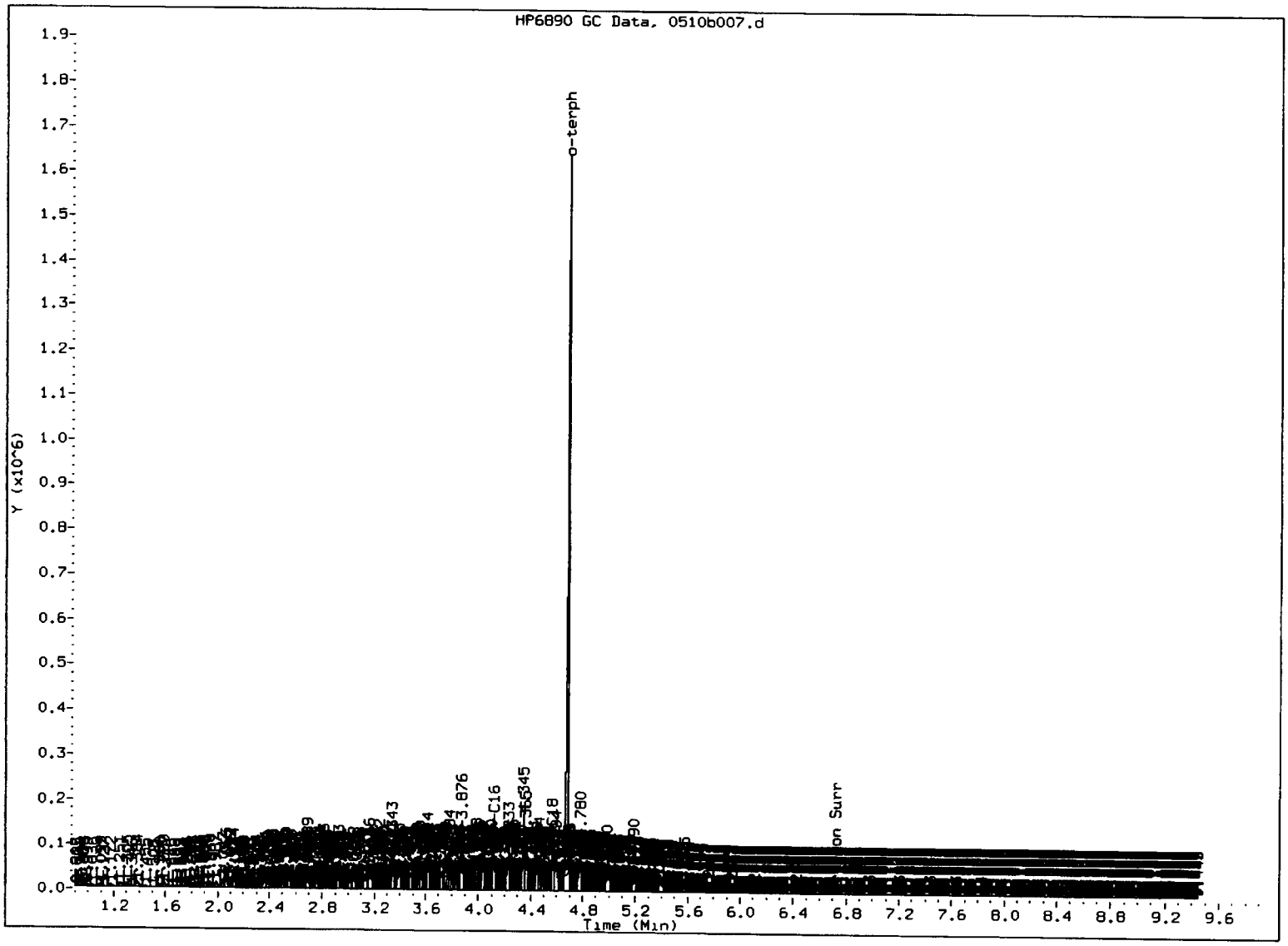
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b008.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 1000
Client ID:
Injection: 10-MAY-2013 10:00
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	2798069	207
C8	0.829	0.002	10964	16863	WATPHD	(C12-C24)	10078402	973.06
C10	2.254	0.000	70986	55849	WATPHM	(C24-C38)	93029	9.42
C12	3.041	-0.008	118758	119188	AK102	(C10-C25)	12035153	973.98 M
C14	3.621	0.000	212328	212133	AK103	(C25-C36)	65721	9.25
C16	4.120	0.003	357392	262718	OR.DIES	(C10-C28)	12092309	786.13 M
C18	4.570	0.004	265151	268202				
C20	4.989	0.000	200624	168107				
C22	5.385	-0.002	91523	83824				
C24	5.755	-0.005	18170	27279				
C25	5.935	-0.003	7287	10768				
C26	6.109	-0.005	2537	3182				
C28	6.423	-0.003	425	193	IT.DIES	(C10-C24)	12013086	871.21
C32	6.980	0.004	27	7				
C34	7.218	0.009	67	32	CREOSOT	(C8-C22)	9778215	3024.17
Filter Peak	----							
C36	7.439	0.004	181	79	BUNKERC	(C10-C38)	12106115	2468.22
o-terph	4.693	0.010	2508161	2430741	JET-A	(C10-C18)	9230123	852.73
Triacon Surr	6.724	-0.044	112	51				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2430741	180.7	401.6
Triacontane	51	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

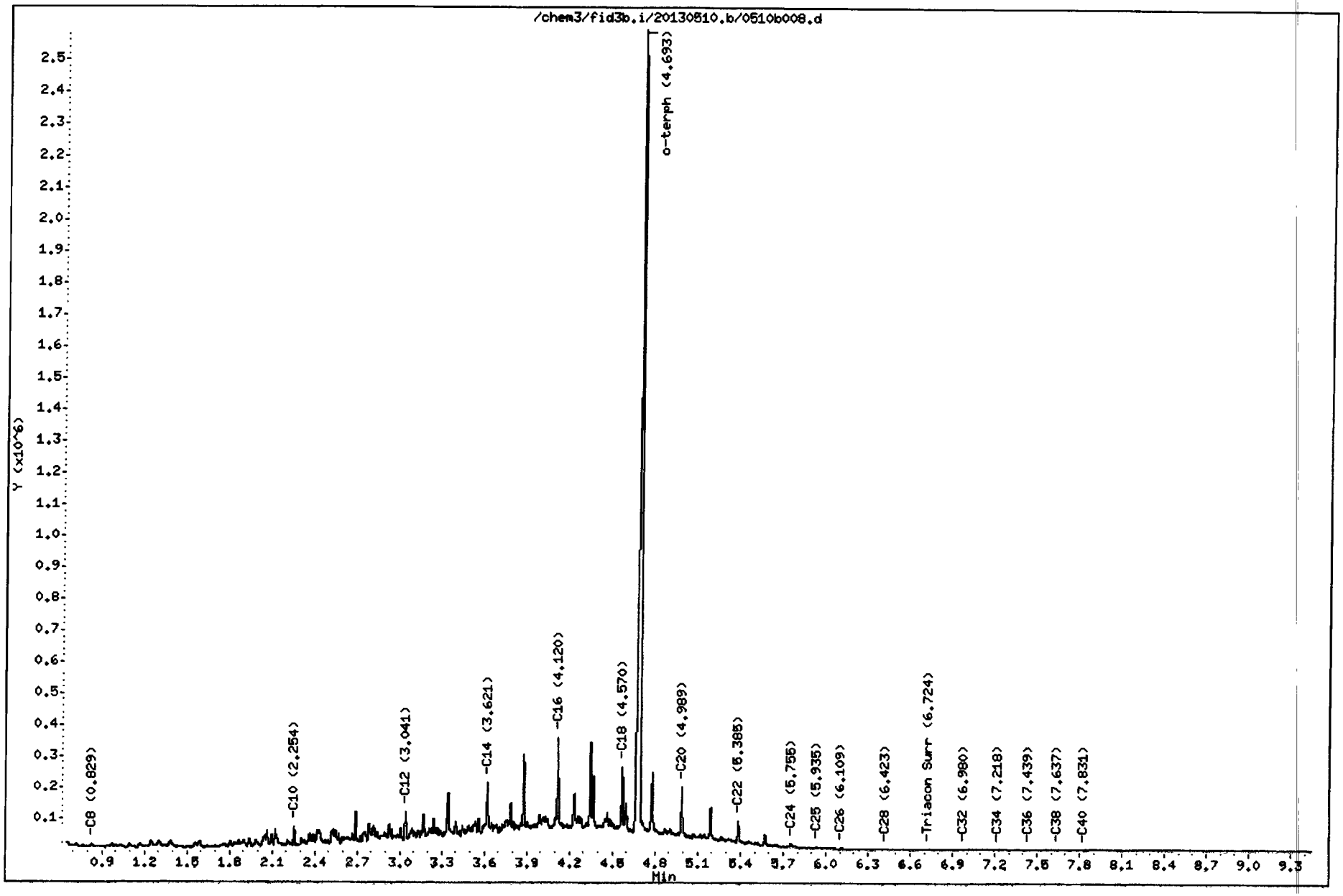
JW 5/11/13

Data File: /chem3/fid3b.i/20130510.b/0510b008.d
Date : 10-MAY-2013 10:00
Client ID:
Sample Info: DIESEL 1000

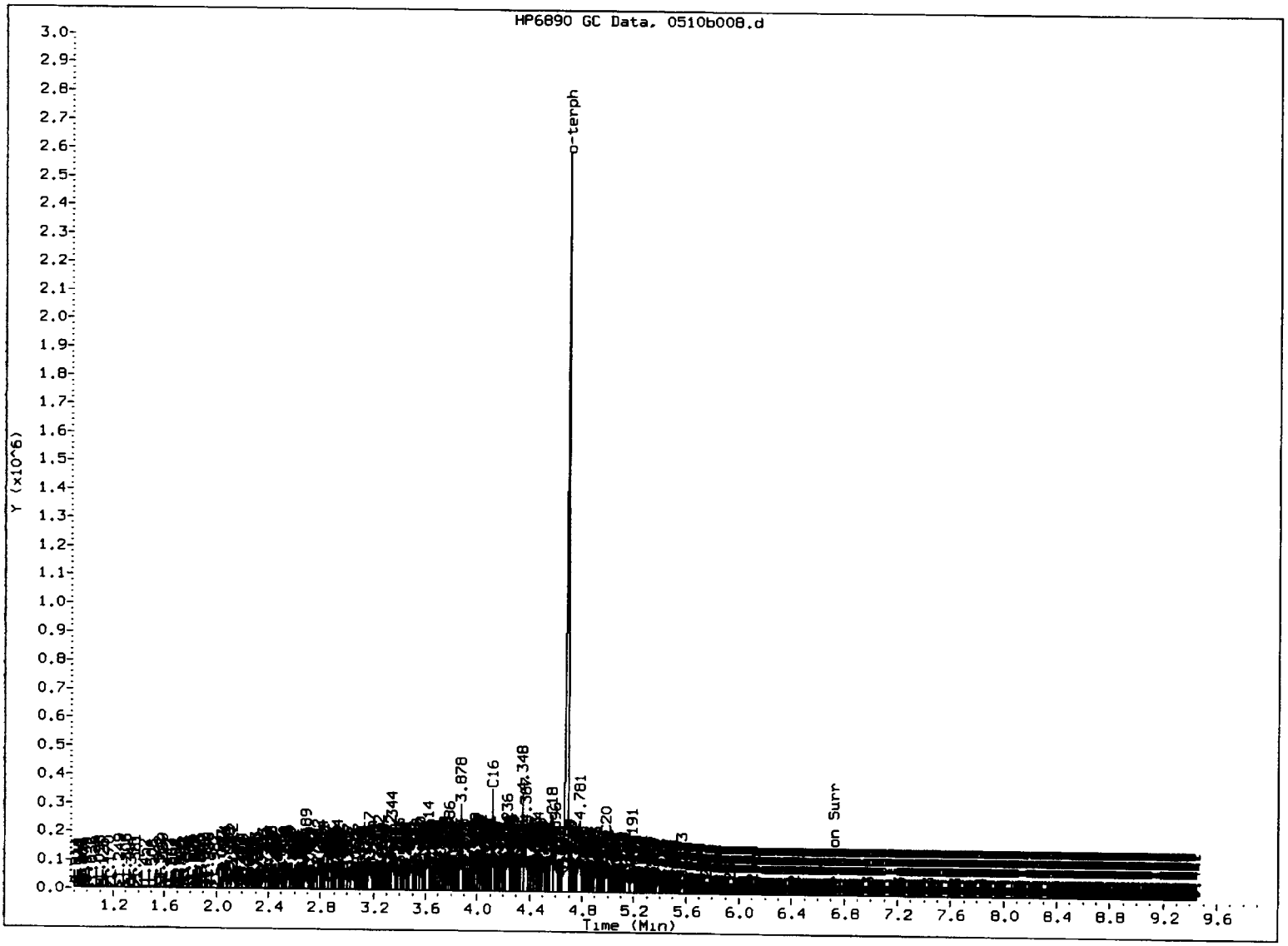
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 1000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JN Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b009.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 2500
Client ID:
Injection: 10-MAY-2013 10:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	6660487	493	
C8	0.829	0.002	21021	28743	WATPHD	(C12-C24)	24516037	2367.00	
C10	2.257	0.003	184252	139283	WATPHM	(C24-C38)	215472	21.82	
C12	3.044	-0.005	272636	289945	AK102	(C10-C25)	29181661	2361.60	M
C14	3.625	0.004	499091	483378	AK103	(C25-C36)	148505	20.89	
C16	4.124	0.008	776125	651861	OR.DIES	(C10-C28)	29317252	1905.95	M
C18	4.577	0.011	612833	708514					
C20	4.994	0.005	468818	417212					
C22	5.389	0.002	229153	205978					
C24	5.758	-0.002	55212	62270					
C25	5.935	-0.003	21112	30434					
C26	6.104	-0.010	7971	8000					
C28	6.424	-0.003	998	176	IT.DIES	(C10-C24)	29118650	2111.73	
C32	6.979	0.003	59	24					
C34	7.212	0.002	34	7	CREOSOT	(C8-C22)	23742752	7343.06	
Filter Peak	----								
C36	7.439	0.004	108	34	BUNKERC	(C10-C38)	29334122	5980.70	
o-terph	4.712	0.029	3746058	5823353	JET-A	(C10-C18)	22333326	2063.28	
Triacon Surr	6.719	-0.049	269	85					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5823353	433.0	962.2
Triacontane	85	0.0	0.0

JW 5/11/13

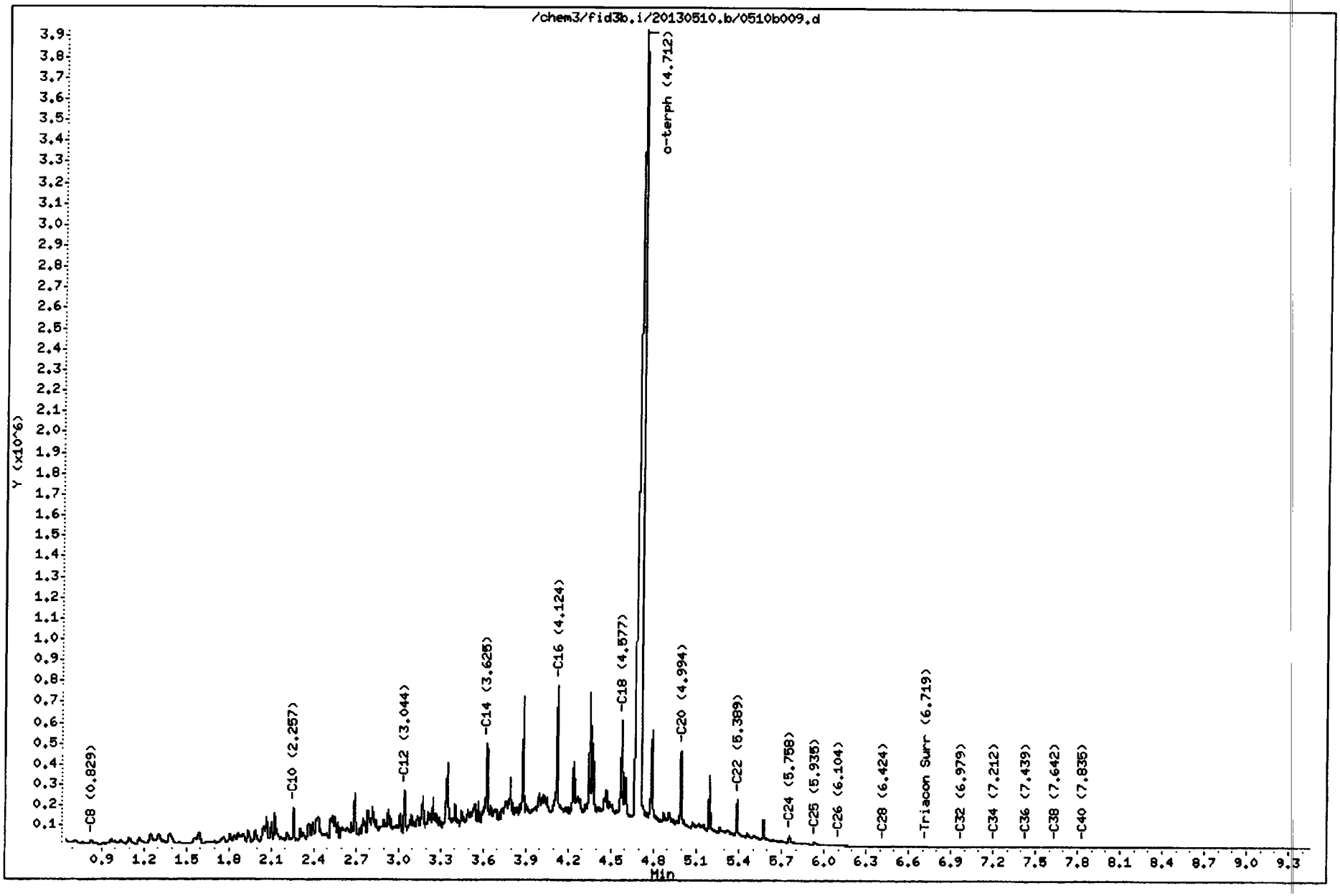
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b009.d
Date : 10-MAY-2013 10:20
Client ID:
Sample Info: DIESEL 2500

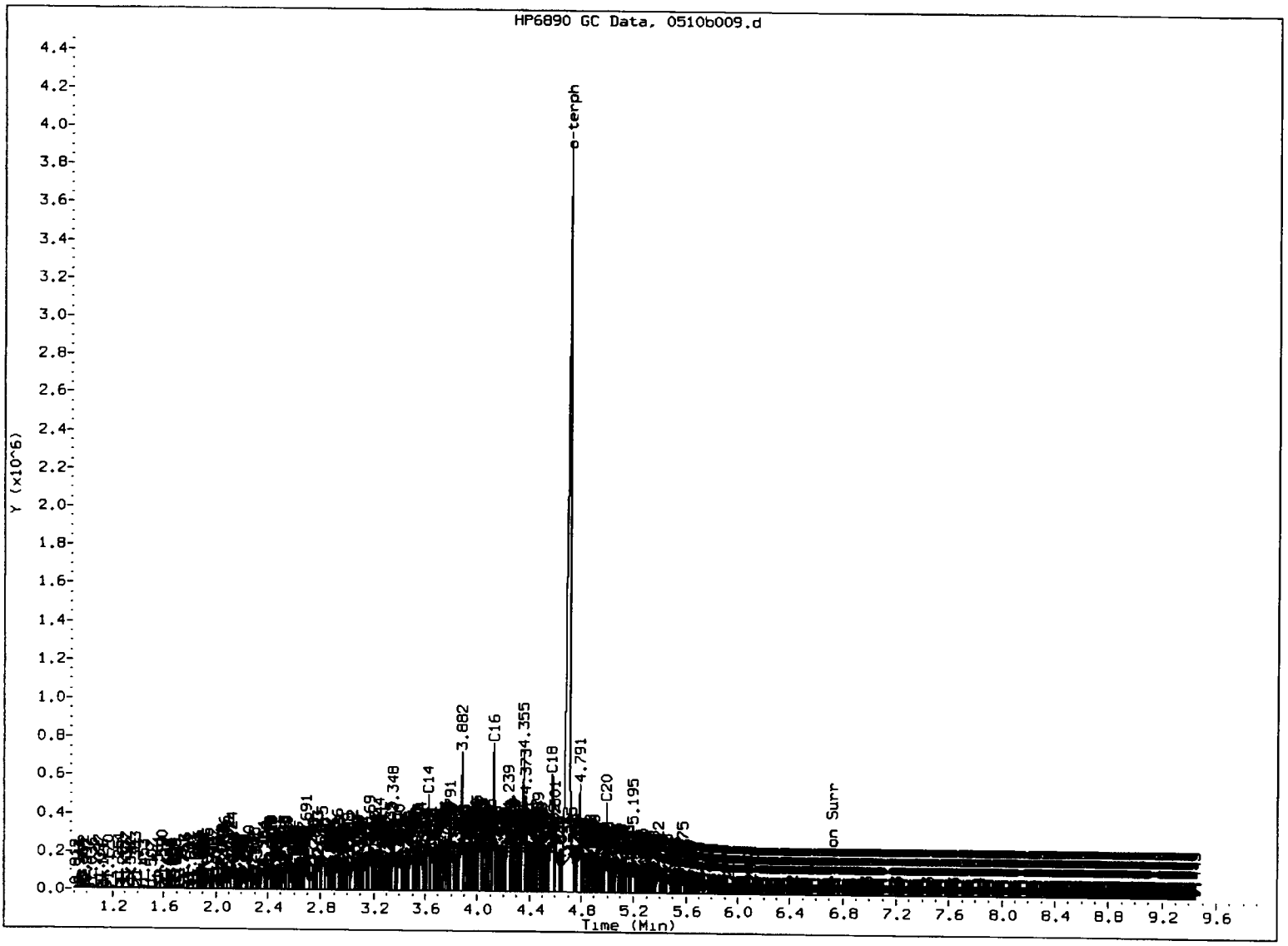
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b010.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL ICV 250
Client ID:
Injection: 10-MAY-2013 10:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1002945	74
C8	0.827	0.000	6470	11047	WATPHD	(C12-C24)	2375892	229.39
C10	2.256	0.003	38320	29591	WATPHM	(C24-C38)	36911	3.74
C12	3.039	-0.009	42860	42439	AK102	(C10-C25)	3107953	251.52 M
C14	3.618	-0.003	60801	55820	AK103	(C25-C36)	25599	3.60
C16	4.115	-0.001	56561	56130	OR.DIES	(C10-C28)	3126225	203.24 M
C18	4.566	0.001	48959	42994				
C20	4.987	-0.002	26988	31212				
C22	5.389	0.003	8625	13454				
C24	5.763	0.003	2460	3264				
C25	5.929	-0.009	1076	453				
C26	6.110	-0.004	601	224				
C28	6.428	0.001	160	83	IT.DIES	(C10-C24)	3102072	224.97
C32	6.984	0.008	36	9				
C34	7.214	0.004	102	46	CREOSOT	(C8-C22)	2319696	717.43
Filter Peak	----							
C36	7.442	0.007	236	116	BUNKERC	(C10-C38)	3138984	639.98
o-terph	4.678	-0.005	962111	602869	JET-A	(C10-C18)	2497954	230.78
Triacon Surr	6.721	-0.047	43	22				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	602869	44.8	99.6
Triacontane	22	0.0	0.0

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b010.d

Date : 10-MAY-2013 10:40

Client ID:

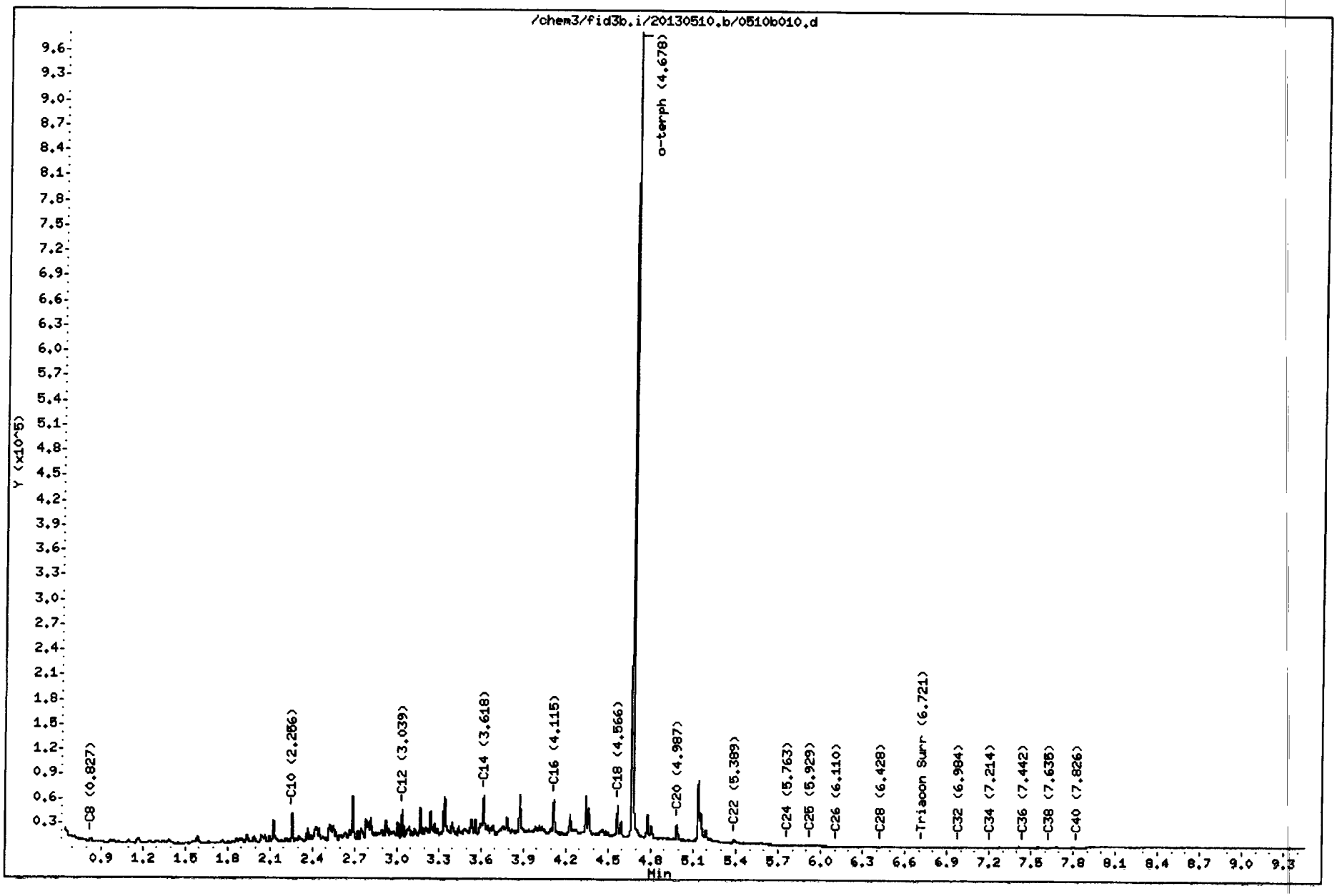
Sample Info: DIESEL ICV 250

Column phase: RTX-1

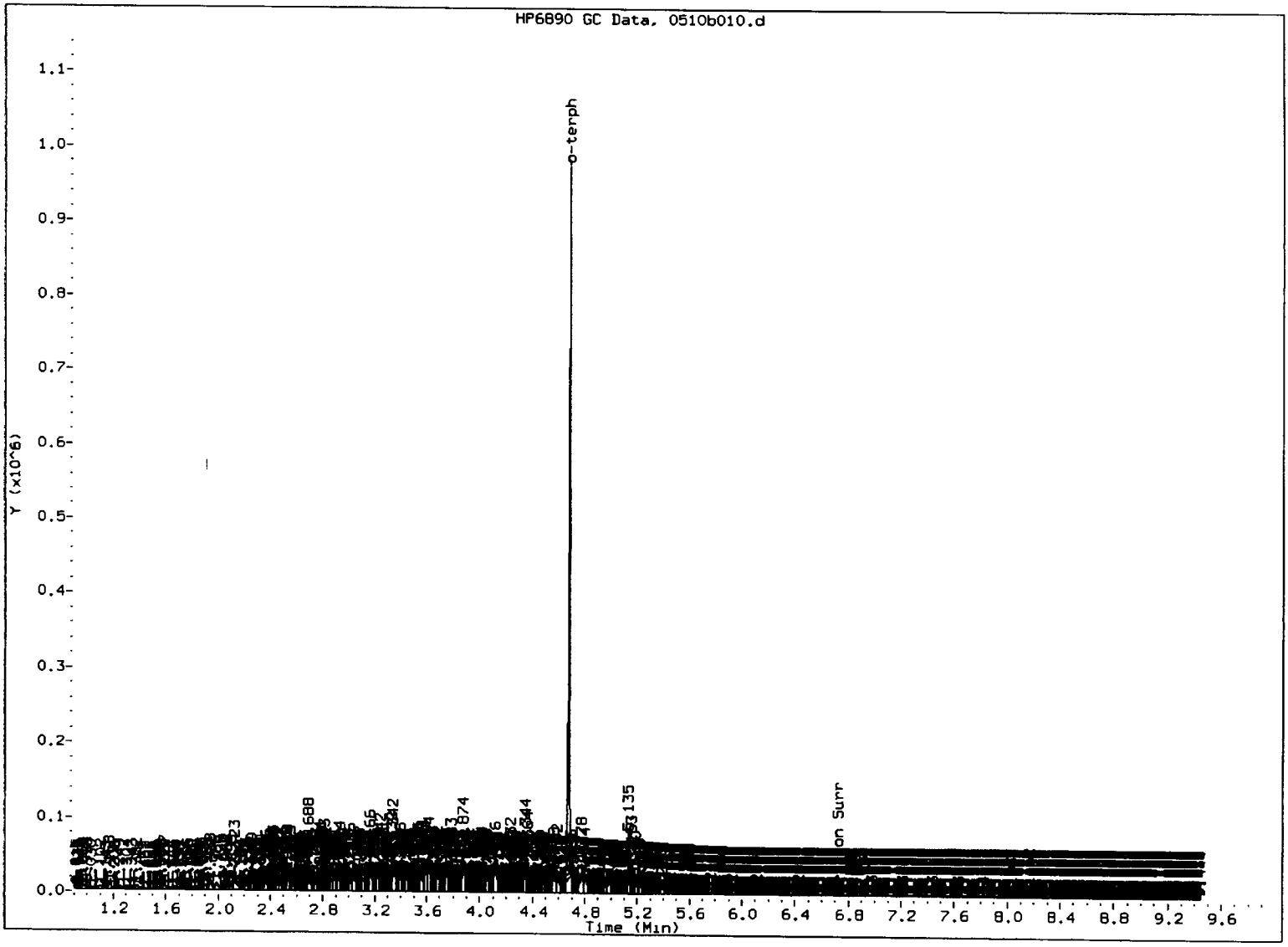
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL ICV 250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b008.d
Method: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: RT0509
Client ID:
Injection: 09-MAY-2013 11:00
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.660	0.000	281983	283611	WATPHG	(Tol-C12)	1136083	84.11 M
C8	0.832	0.005	213148	246004	WATPHD	(C12-C24)	1696380	149.59
C10	2.257	0.003	289258	227833	WATPHM	(C24-C38)	2294807	232.44
C12	3.042	-0.007	342225	251133	AK102	(C10-C25)	2269057	164.51
C14	3.620	-0.001	422171	257259	AK103	(C25-C36)	2029541	285.51
C16	4.118	0.002	397361	260570	OR.DIES	(C10-C28)	3505089	227.87
C18	4.568	0.003	375164	254000				
C20	4.990	0.001	342525	237388				
C22	5.389	0.003	366437	240556				
C24	5.760	0.001	344124	238634				
C25	5.937	-0.001	315093	229769				
C26	6.114	0.001	901378	700157				
C28	6.430	0.004	310083	241137	IT.DIES	(C10-C24)	2255789	163.59
C32	6.977	0.002	359459	246641				
C34	7.215	0.006	364386	243089	CREOSOT	(C8-C22)	1423173	440.15
Filter Peak	----							
C36	7.432	-0.003	319200	238105	BUNKERC	(C10-C38)	4550596	927.78
o-terph	4.677	-0.006	792786	568904	JET-A	(C10-C18)	1411903	130.44
Triacon Surr	6.725	-0.043	855331	640731				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.610 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	568904	39.2	87.1
Triacontane	640731	41.9	93.2

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	13047.7	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	9872.9	09-MAY-2013
AK102	13793.0	22-MAR-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW 5/11/13

Data File: /chem3/fid3b.i/20130509.b/0509b008.d

Date : 09-MAY-2013 11:00

Client ID:

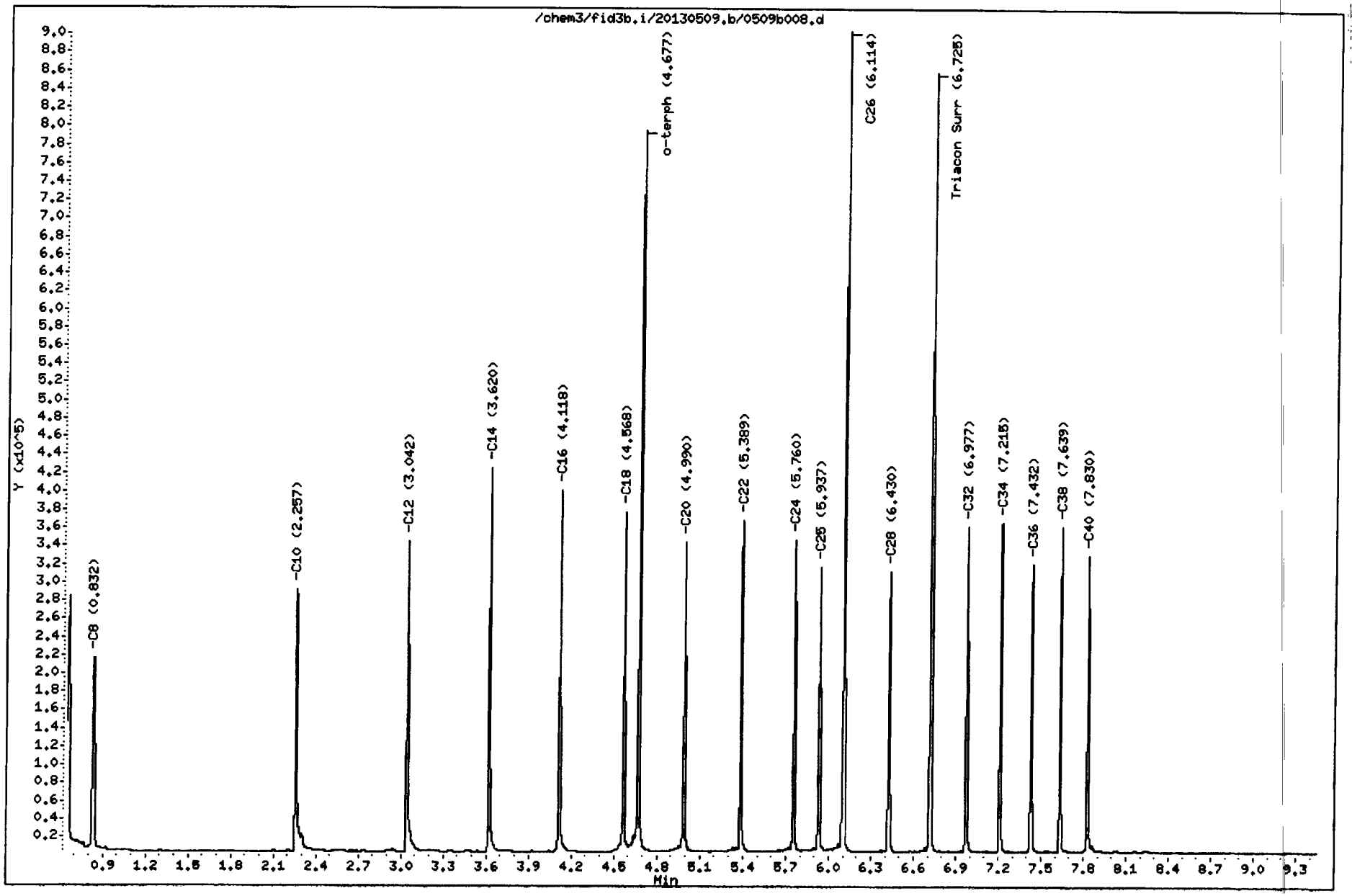
Sample Info: RT0509

Column phase: RTX-1

Instrument: fid3b.i

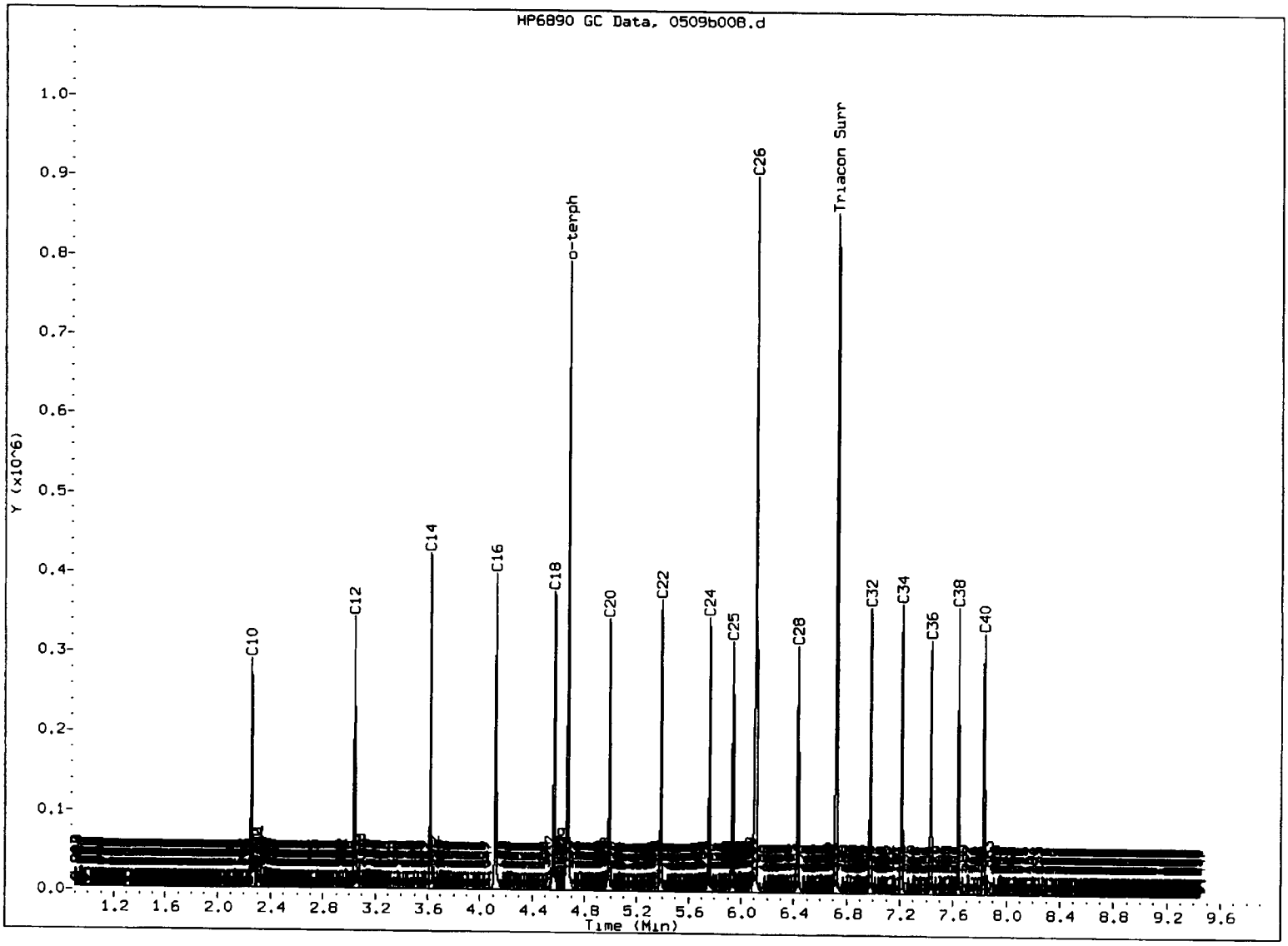
Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 RT0509

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b009.d
Method: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: IB0509
Client ID:
Injection: 09-MAY-2013 11:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	74751	6
C8	0.831	0.003	2498	1726	WATPHD	(C12-C24)	46821	4.13
C10	2.255	0.001	494	237	WATPHM	(C24-C38)	60854	6.16
C12	3.049	0.000	374	88	AK102	(C10-C25)	70320	5.10
C14	3.625	0.004	351	262	AK103	(C25-C36)	48437	6.81
C16	4.122	0.006	171	181	OR.DIES	(C10-C28)	73092	4.75
C18	4.564	-0.001	185	134				
C20	4.991	0.001	329	205				
C22	5.386	-0.001	175	75				
C24	5.760	0.001	95	30				
C25	5.941	0.003	74	42				
C26	6.110	-0.004	236	200				
C28	6.430	0.003	439	449	IT.DIES	(C10-C24)	69995	5.08
C32	6.984	0.008	2639	2753				
C34	7.219	0.009	409	111	CREOSOT	(C8-C22)	45466	14.06
Filter Peak	----							
C36	7.417	-0.018	2269	2595	BUNKERC	(C10-C38)	130849	26.68
o-terph	4.677	-0.006	905522	623043	JET-A	(C10-C18)	45066	4.16
Triacon Surr	6.723	-0.045	696611	521004				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.610 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	623043	42.9	95.4
Triacontane	521004	34.1	75.8

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	13047.7	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	9872.9	09-MAY-2013
AK102	13793.0	22-MAR-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

TW 5/11/13

Data File: /chem3/fid3b.i/20130509.b/0509b009.d

Date : 09-MAY-2013 11:20

Client ID:

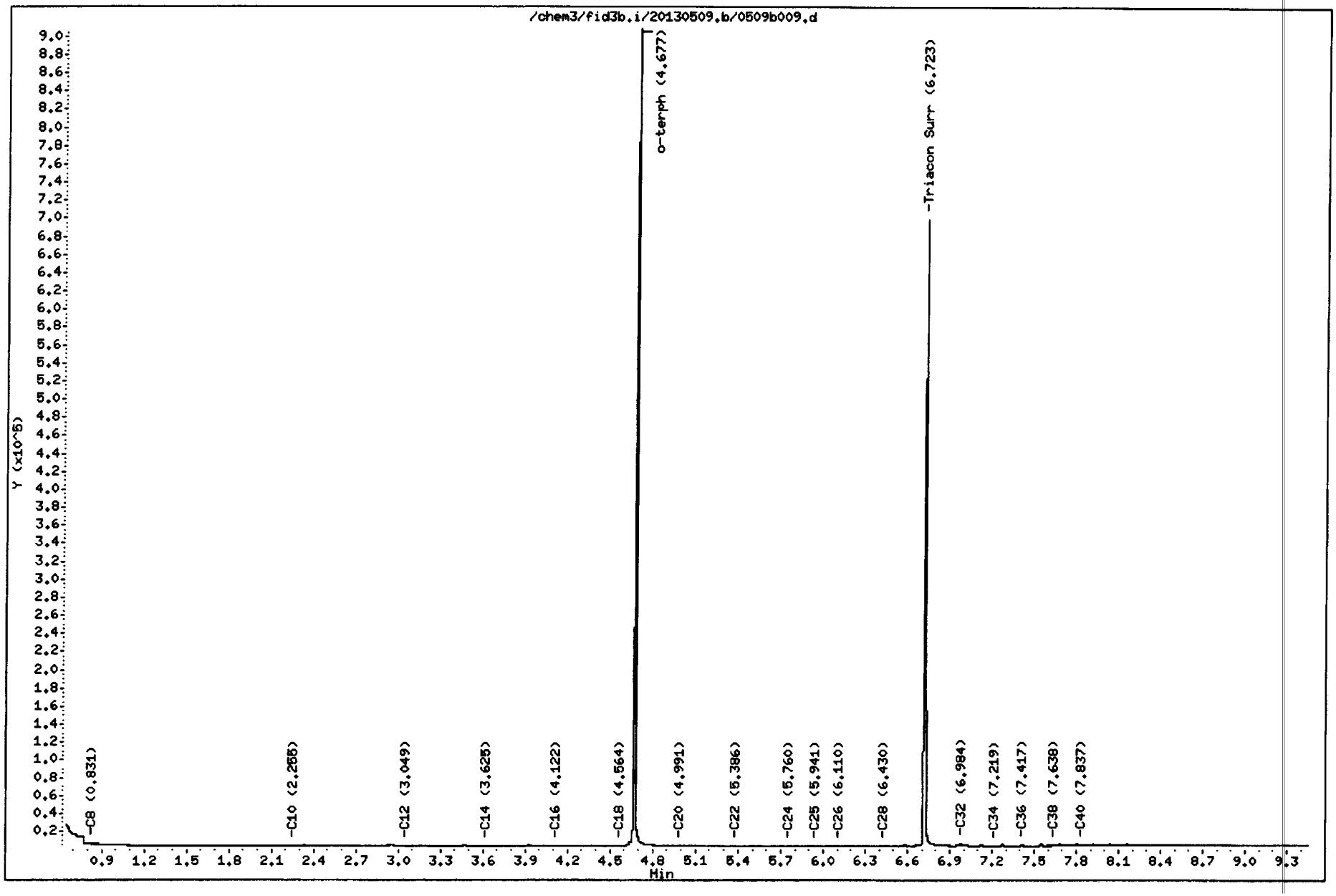
Sample Info: IB0509

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b019.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 100
Client ID:
Injection: 09-MAY-2013 17:30
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	94672	7
C8	0.836	0.009	3898	2935	WATPHD	(C12-C24)	97099	9.37
C10	2.255	0.001	484	102	WATPHM	(C24-C38)	983803	99.65
C12	3.049	0.001	264	128	AK102	(C10-C25)	140753	11.39
C14	3.626	0.005	241	281	AK103	(C25-C36)	839790	118.14 M
C16	4.118	0.002	59	16	OR.DIES	(C10-C28)	374445	24.34
C18	4.561	-0.004	25	4				
C20	4.984	-0.005	176	134				
C22	5.386	0.000	946	428				
C24	5.762	0.002	4158	1297				
C25	5.938	0.000	5674	2319				
C26	6.116	0.002	6483	1793				
C28	6.435	0.008	7386	1030	IT.DIES	(C10-C24)	117897	8.55
C32	6.975	-0.001	11846	9898				
C34	7.215	0.006	11088	4552	CREOSOT	(C8-C22)	32219	9.96
Filter Peak	----							
C36	7.430	-0.005	10949	7546	BUNKERC	(C10-C38)	1101699	224.62
o-terph	4.673	-0.010	198	73	JET-A	(C10-C18)	37057	3.42
Triacon Surr	6.717	-0.051	163999	108151				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	73	0.0	0.0
Triacontane	108151	8.3	18.4

JW 5/11/13

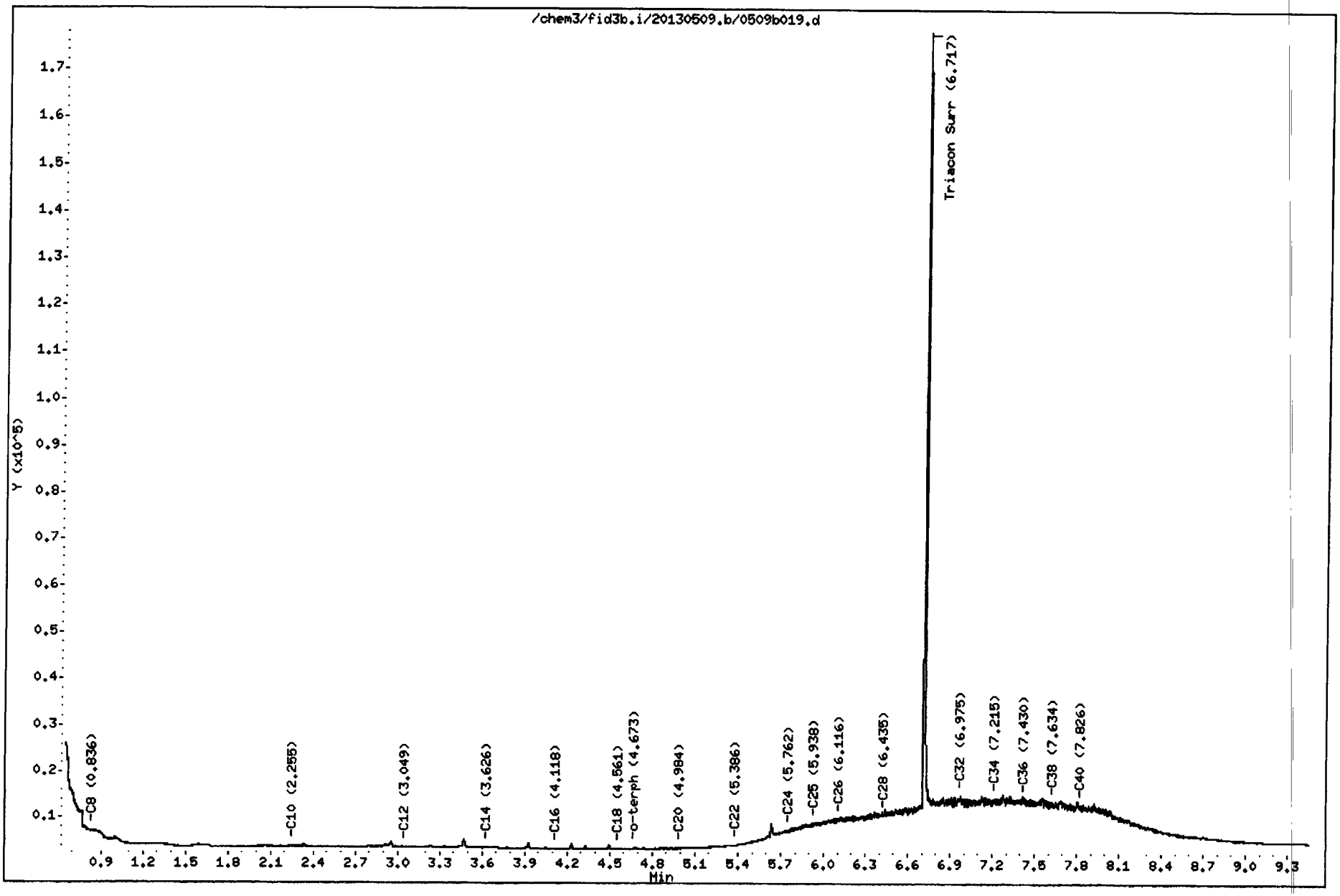
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b019.d
Date : 09-MAY-2013 17:30
Client ID:
Sample Info: MOIL 100

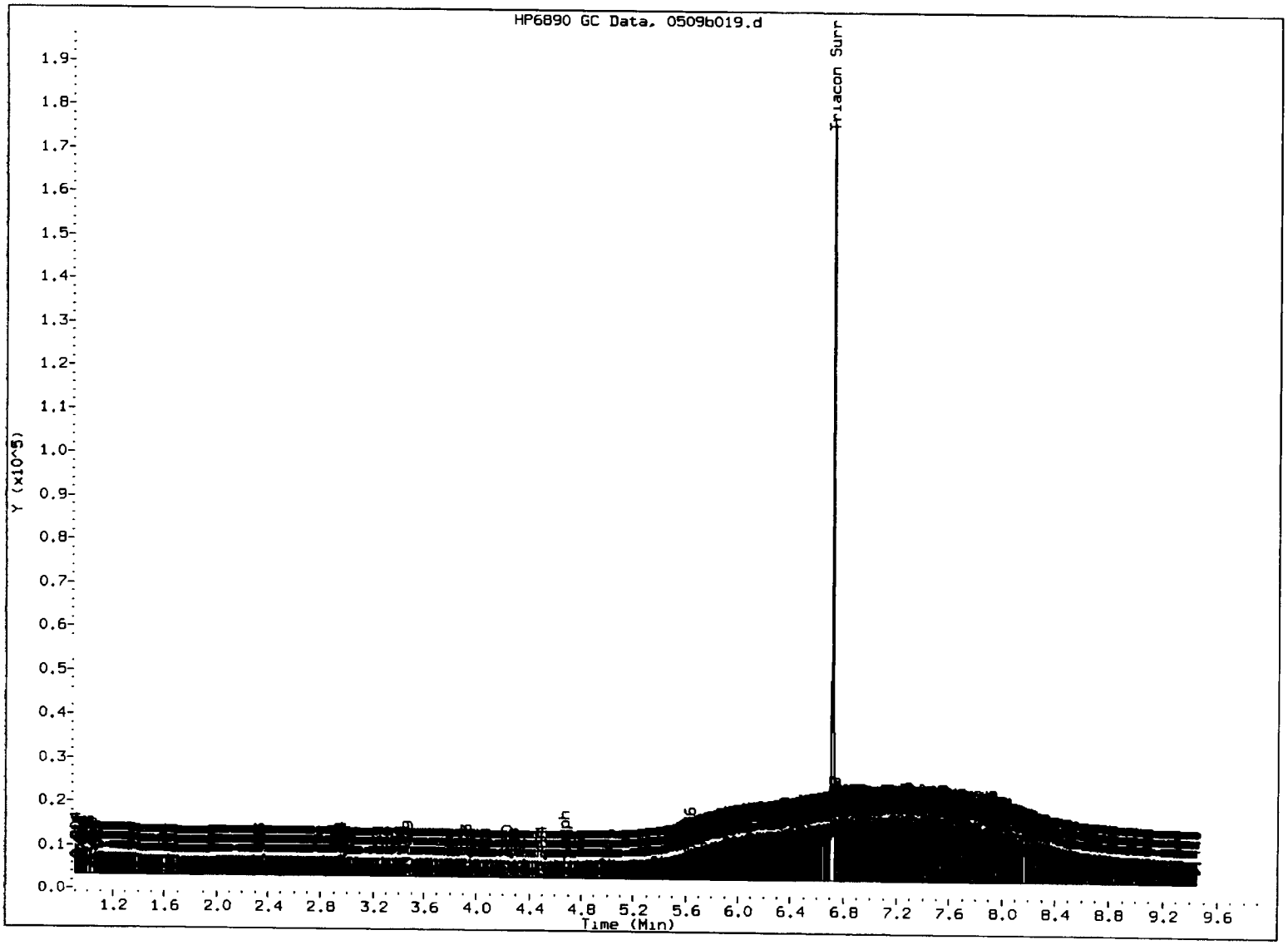
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 100 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b020.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 250
Client ID:
Injection: 09-MAY-2013 17:50
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	94317	7
C8	0.832	0.004	3858	2902	WATPHD	(C12-C24)	222898	21.52
C10	2.255	0.001	548	468	WATPHM	(C24-C38)	2430997	246.23
C12	3.033	-0.016	495	613	AK102	(C10-C25)	302846	24.51
C14	3.621	0.000	227	107	AK103	(C25-C36)	2067243	290.81 M
C16	4.118	0.002	45	9	OR.DIES	(C10-C28)	862677	56.08
C18	4.567	0.002	77	42				
C20	4.991	0.001	463	90				
C22	5.389	0.003	2645	2457				
C24	5.760	0.000	10341	2614				
C25	5.939	0.001	14269	5543				
C26	6.114	0.001	15191	2395				
C28	6.428	0.001	18046	2866	IT.DIES	(C10-C24)	244439	17.73
C32	6.975	-0.001	30803	24376				
C34	7.220	0.011	27589	9147	CREOSOT	(C8-C22)	62726	19.40
Filter Peak	----							
C36	7.432	-0.004	27787	23456	BUNKERC	(C10-C38)	2675436	545.47
o-terph	4.682	-0.001	362	466	JET-A	(C10-C18)	40593	3.75
Triacon Surr	6.720	-0.048	413569	278811				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	466	0.0	0.1
Triacontane	278811	21.4	47.5

JW 5/14/13

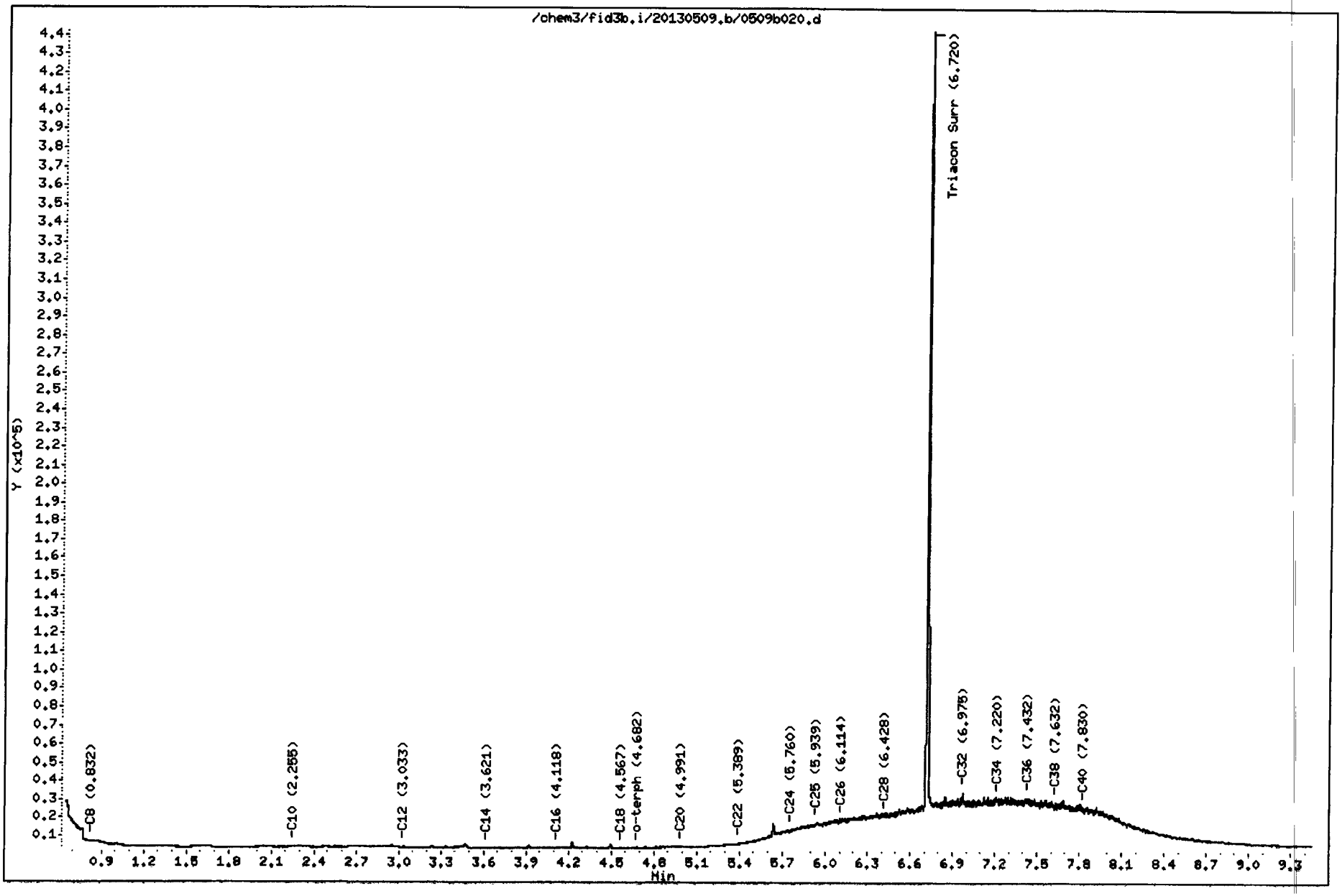
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b020.d
Date : 09-MAY-2013 17:50
Client ID:
Sample Info: MOIL 250

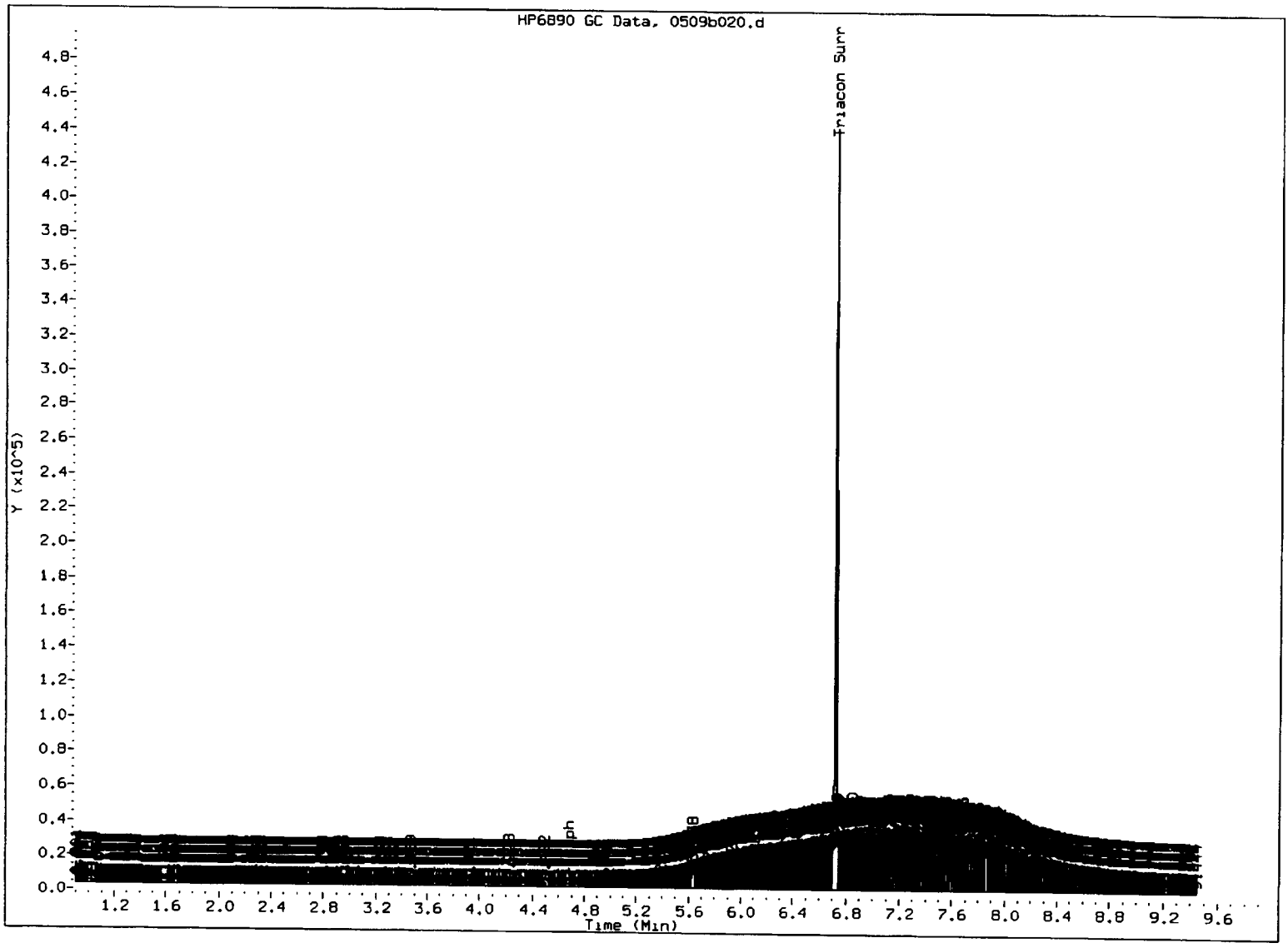
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 MOIL 250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: SU Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b021.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 500
Client ID:
Injection: 09-MAY-2013 18:09
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	86393	6
C8	0.835	0.008	3946	3233	WATPHD	(C12-C24)	451001	43.54
C10	2.254	0.000	528	372	WATPHM	(C24-C38)	4874352	493.71
C12	3.033	-0.016	470	762	AK102	(C10-C25)	583655	47.23
C14	3.614	-0.006	163	21	AK103	(C25-C36)	4174060	587.19 M
C16	4.115	-0.001	57	21	OR.DIES	(C10-C28)	1727286	112.29
C18	4.569	0.004	188	139				
C20	4.994	0.005	1107	174				
C22	5.387	0.001	5301	1027				
C24	5.755	-0.004	22101	17666				
C25	5.938	0.000	27334	7504				
C26	6.113	0.000	31903	17009				
C28	6.431	0.004	40634	16288	IT.DIES	(C10-C24)	471357	34.18
C32	6.974	-0.002	60490	47282				
C34	7.217	0.008	56123	20764	CREOSOT	(C8-C22)	118683	36.71
Filter Peak	----							
C36	7.433	-0.002	53094	12521	BUNKERC	(C10-C38)	5345709	1089.89
o-terph	4.681	-0.002	580	602	JET-A	(C10-C18)	43423	4.01
Triacon Surr	6.728	-0.040	753642	589937				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	602	0.0	0.1
Triacontane	589937	45.2	100.5

JW 5/11/13

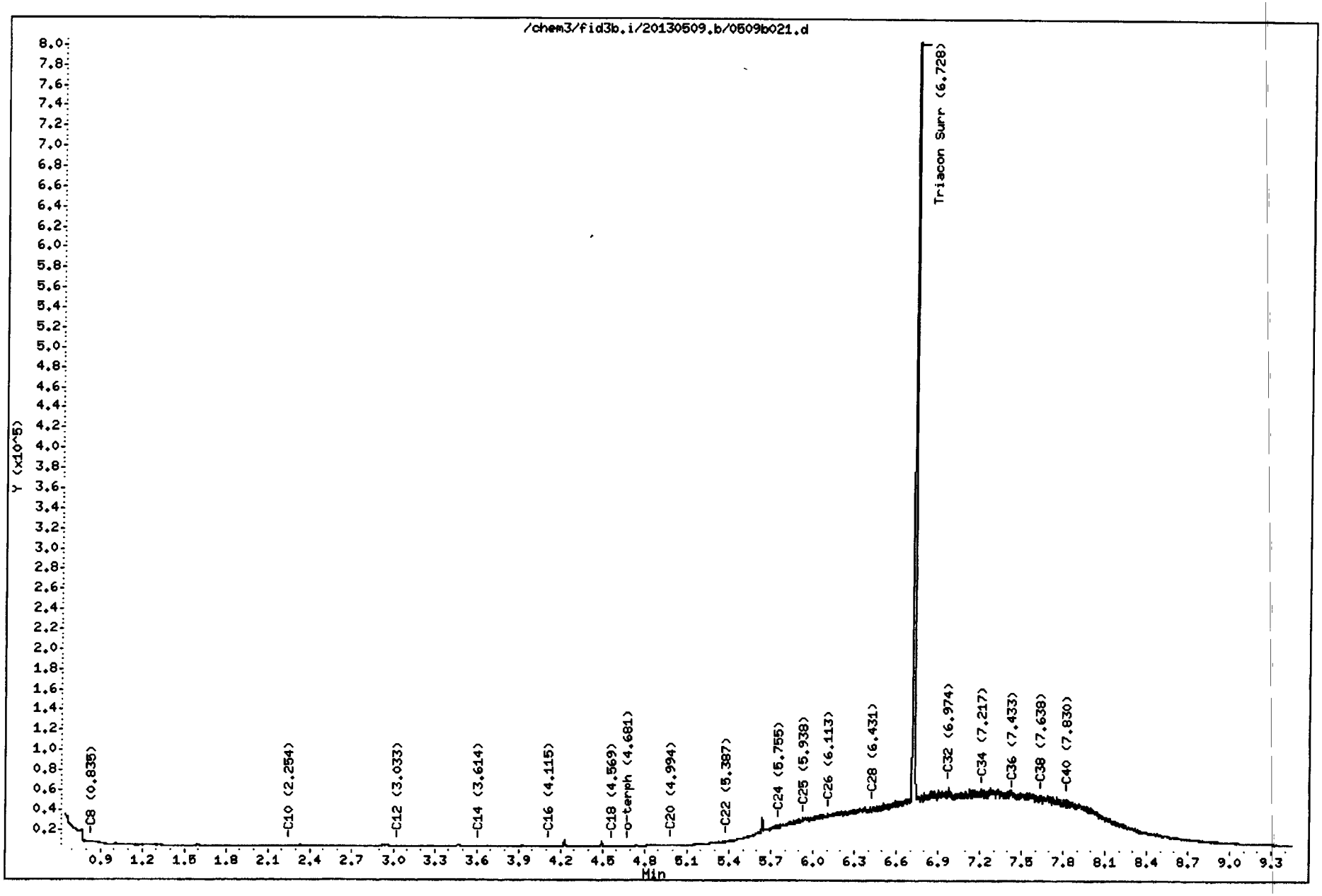
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b021.d
Date : 09-MAY-2013 18:09
Client ID:
Sample Info: MOIL 500

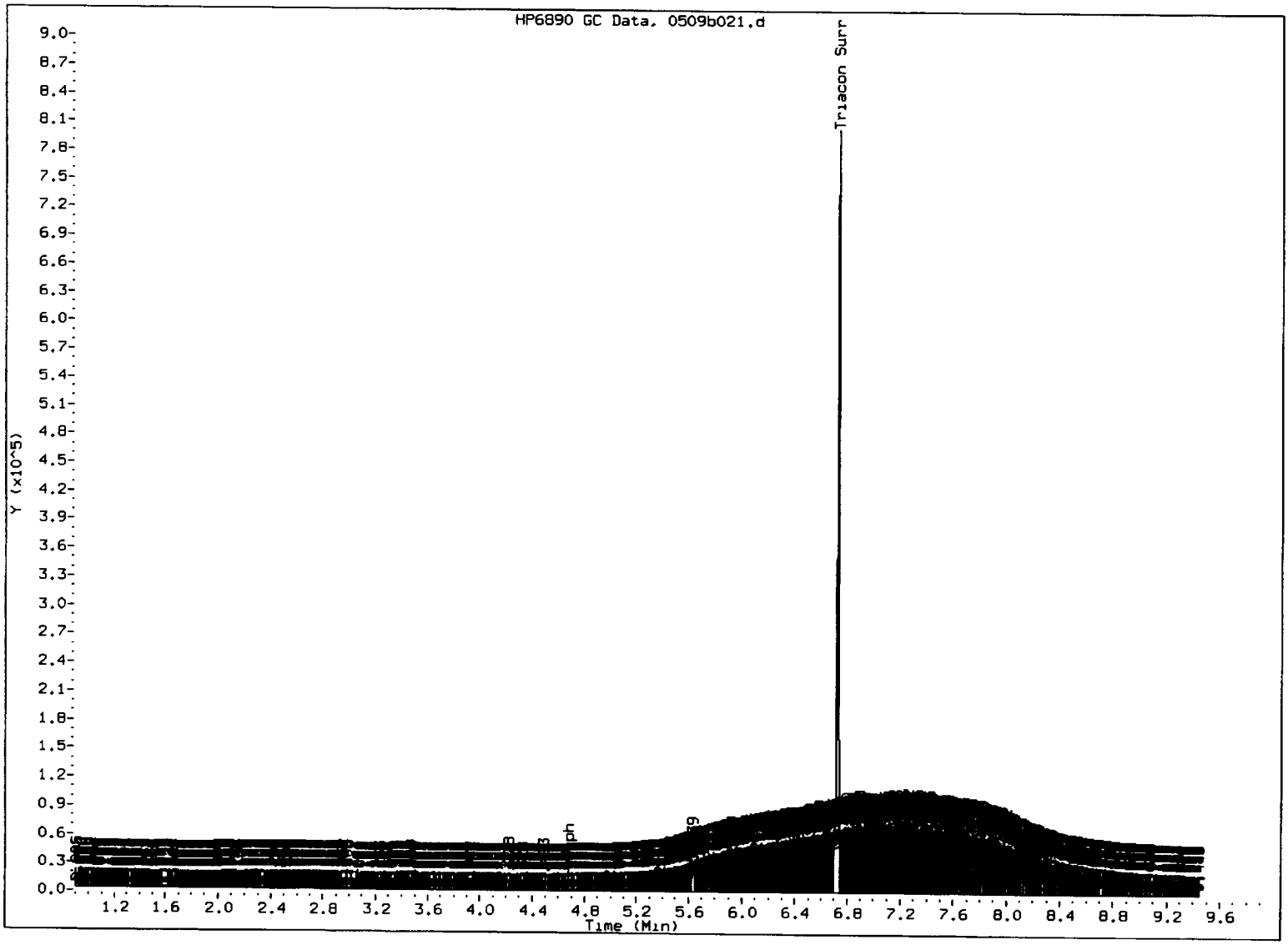
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JH Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b022.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 1000
Client ID:
Injection: 09-MAY-2013 18:29
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	78361	6	
C8	0.839	0.012	3628	3009	WATPHD	(C12-C24)	874331	84.42	
C10	2.257	0.003	680	612	WATPHM	(C24-C38)	9868273	999.53	
C12	3.033	-0.015	596	654	AK102	(C10-C25)	1098523	88.90	
C14	3.617	-0.004	289	86	AK103	(C25-C36)	8411348	1183.28	M
C16	4.117	0.001	178	66	OR.DIES	(C10-C28)	3361297	218.52	
C18	4.572	0.007	532	659					
C20	4.988	-0.001	2555	1127					
C22	5.384	-0.002	10753	8200					
C24	5.763	0.003	39484	12501					
C25	5.935	-0.003	52198	10300					
C26	6.114	0.001	64456	26352					
C28	6.431	0.005	80230	54043	IT.DIES	(C10-C24)	896600	65.02	
C32	6.980	0.004	126900	98292					
C34	7.214	0.005	113236	28858	CREOSOT	(C8-C22)	240131	74.27	
Filter Peak	----								
C36	7.429	-0.006	113184	57310	BUNKERC	(C10-C38)	10764873	2194.76	
o-terph	4.673	-0.009	1385	1372	JET-A	(C10-C18)	61579	5.69	
Triacon Surr	6.738	-0.030	1129632	1182380					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1372	0.1	0.2
Triacontane	1182380	90.6	201.4

JW 5/11/13

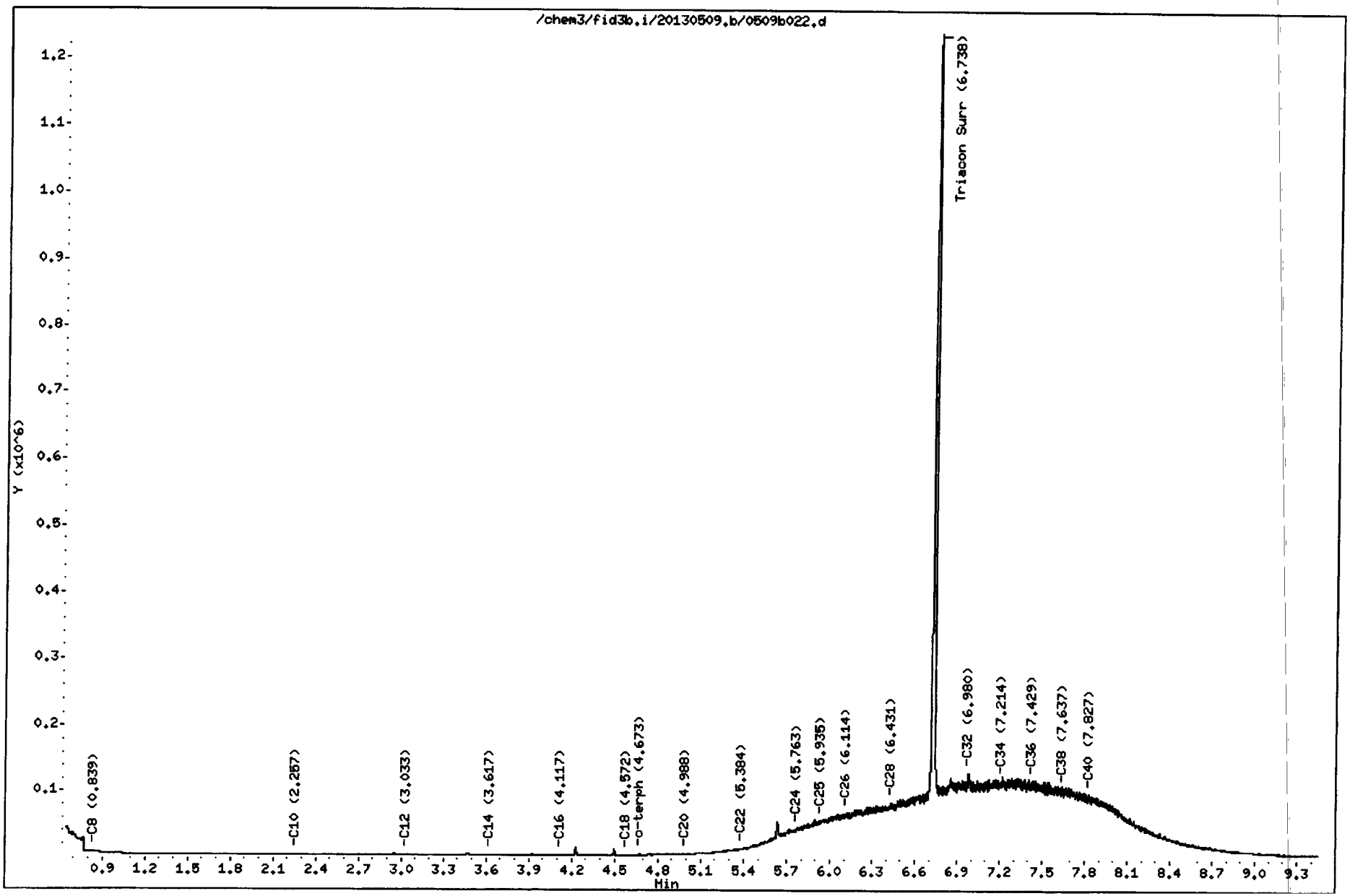
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b022.d
Date : 09-MAY-2013 18:29
Client ID:
Sample Info: MOIL 1000

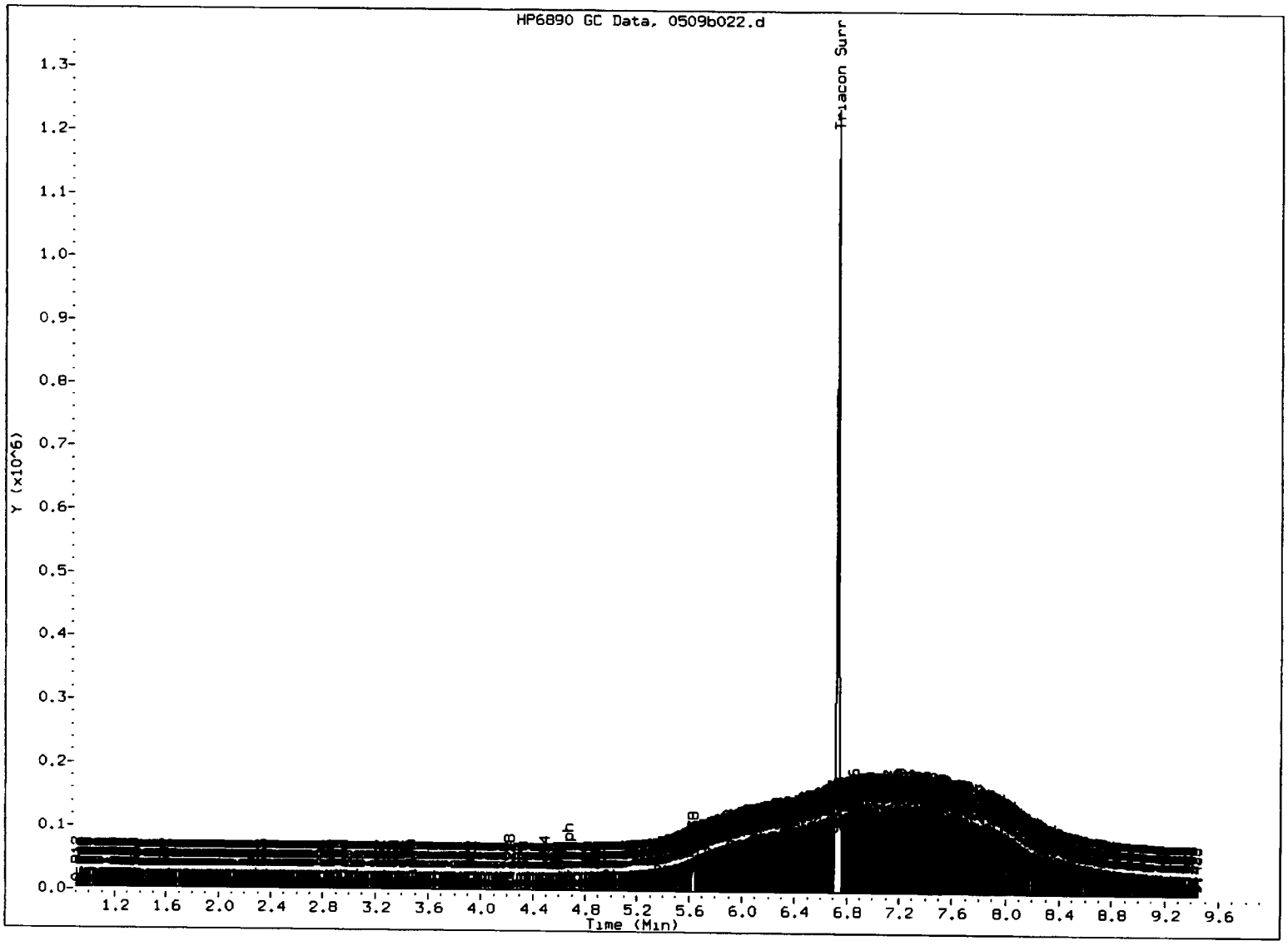
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 1000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/05

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b023.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 2500
Client ID:
Injection: 09-MAY-2013 18:49
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	104794	8
C8	0.826	-0.001	4378	3915	WATPHD	(C12-C24)	2194711	211.90
C10	2.255	0.001	1091	1225	WATPHM	(C24-C38)	24892471	2521.30
C12	3.033	-0.015	939	1080	AK102	(C10-C25)	2729082	220.86
C14	3.625	0.004	646	699	AK103	(C25-C36)	21251517	2989.60 M
C16	4.120	0.004	670	399	OR.DIES	(C10-C28)	8440502	548.73
C18	4.567	0.002	1755	1694				
C20	4.986	-0.003	7164	5835				
C22	5.383	-0.003	27130	11705				
C24	5.761	0.001	95353	13270				
C25	5.936	-0.002	134269	115080				
C26	6.115	0.002	165173	79024				
C28	6.429	0.003	191631	49338	IT.DIES	(C10-C24)	2230539	161.76
C32	6.977	0.002	286800	136356				
C34	7.214	0.004	290279	106480	CREOSOT	(C8-C22)	619583	191.62
Filter Peak	----							
C36	7.429	-0.006	290605	163378	BUNKERC	(C10-C38)	27123010	5529.89
o-terph	4.672	-0.011	3717	2590	JET-A	(C10-C18)	132813	12.27
Triacon Surr	6.752	-0.016	1571362	3084995				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2590	0.2	0.4
Triacontane	3084995	236.4	525.4

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b023.d

Date : 09-MAY-2013 18:49

Client ID:

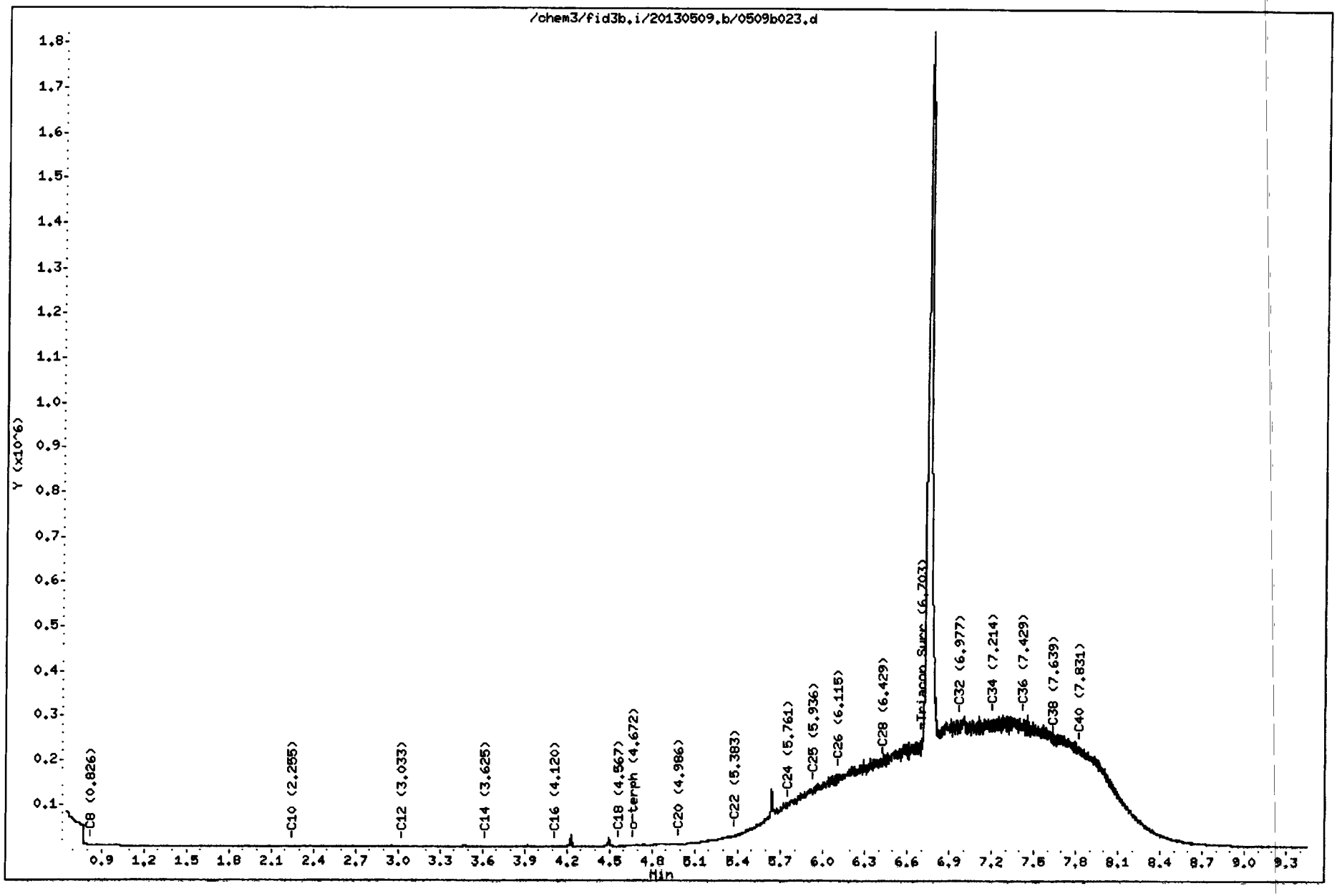
Sample Info: MOIL 2500

Column phase: RTX-1

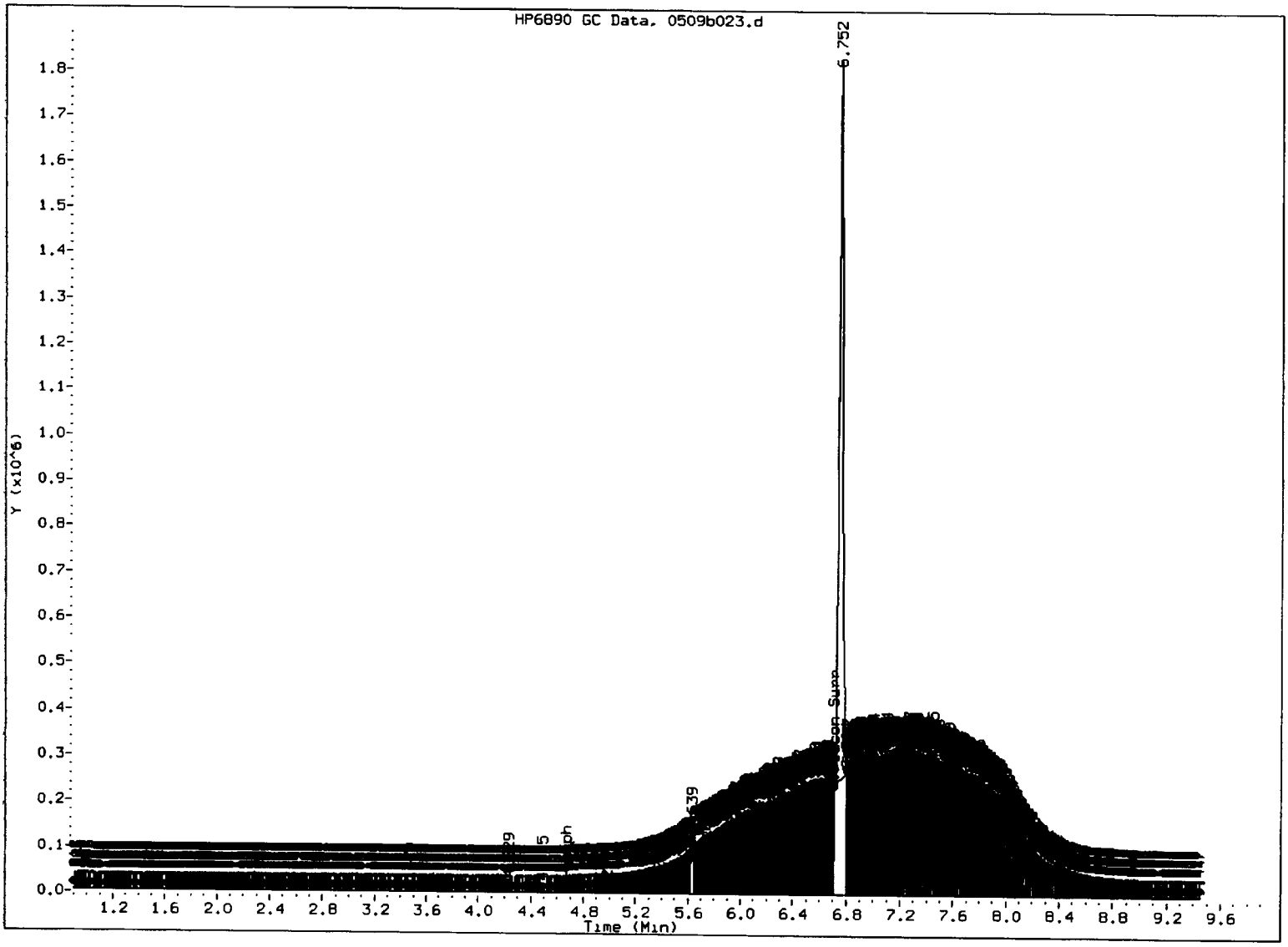
Instrument: fid3b.1

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b024.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 5000
Client ID:
Injection: 09-MAY-2013 19:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	119303	9
C8	0.827	0.000	4466	3961	WATPHD	(C12-C24)	4431911	427.90
C10	2.254	0.000	1905	1725	WATPHM	(C24-C38)	50506527	5115.68
C12	3.049	0.000	894	857	AK102	(C10-C25)	5720466	462.94
C14	3.621	0.000	1125	1543	AK103	(C25-C36)	43024953	6052.62 M
C16	4.116	0.000	1491	1370	OR.DIES	(C10-C28)	17341569	1127.39
C18	4.565	0.000	4021	4376				
C20	4.989	0.000	14741	9616				
C22	5.386	0.000	55046	28683				
C24	5.760	0.000	205583	128372				
C25	5.938	0.000	259983	66571				
C26	6.114	0.000	326387	171329				
C28	6.427	0.000	402848	245127	IT.DIES	(C10-C24)	4481981	325.04
C32	6.976	0.000	582492	328720				
C34	7.210	0.000	585534	435050	CREOSOT	(C8-C22)	1264803	391.17
Filter Peak	----							
C36	7.435	0.000	552961	65445	BUNKERC	(C10-C38)	54988508	11211.16
o-terph	4.683	0.000	5820	1701	JET-A	(C10-C18)	244722	22.61
Triacon Surr	6.768	0.000	1587931	6263834				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1701	0.1	0.3
Triacontane	6263834	480.1	1066.8

JW 5/14/13

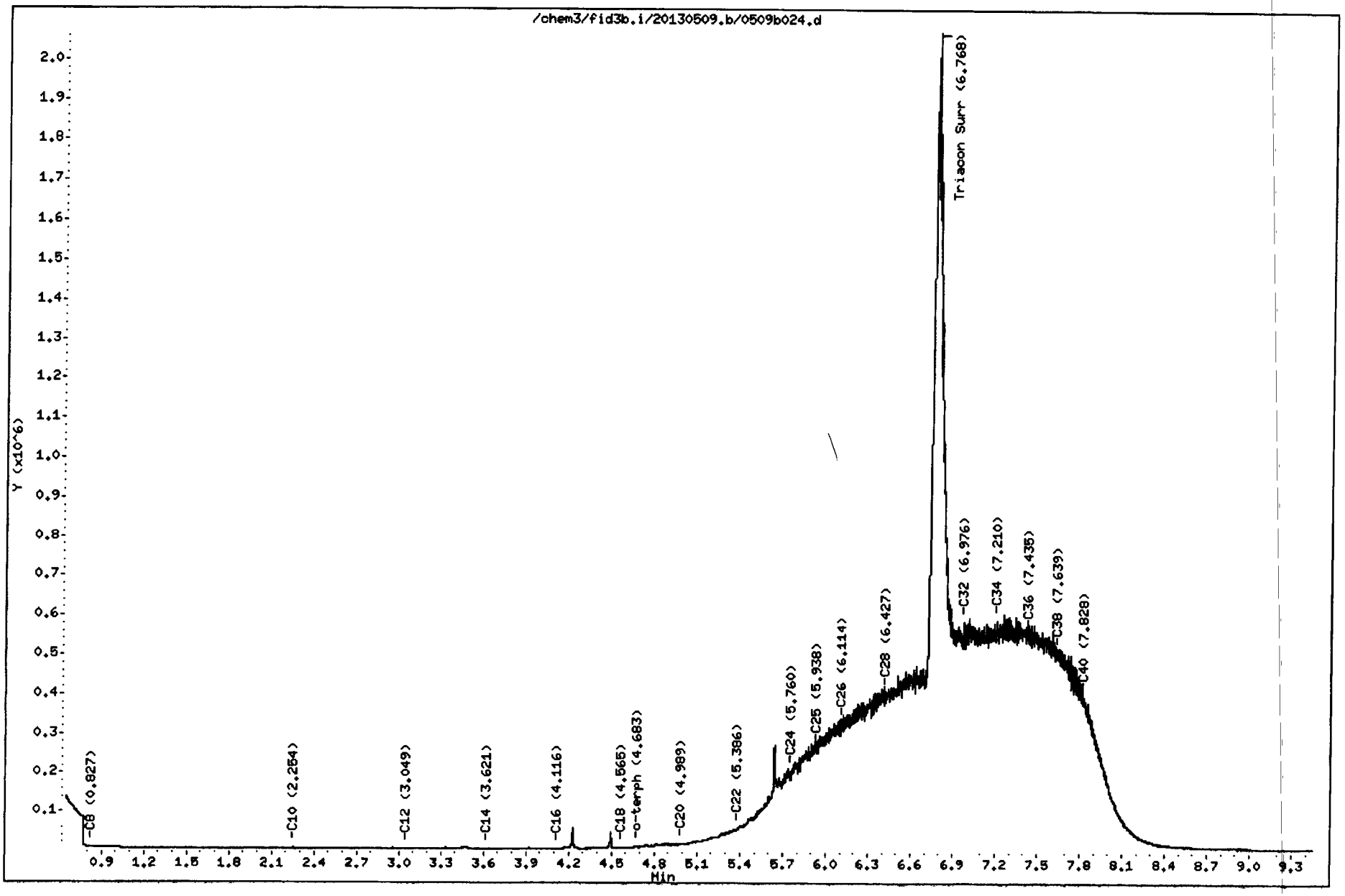
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b024.d
Date : 09-MAY-2013 19:08
Client ID:
Sample Info: MOIL 5000

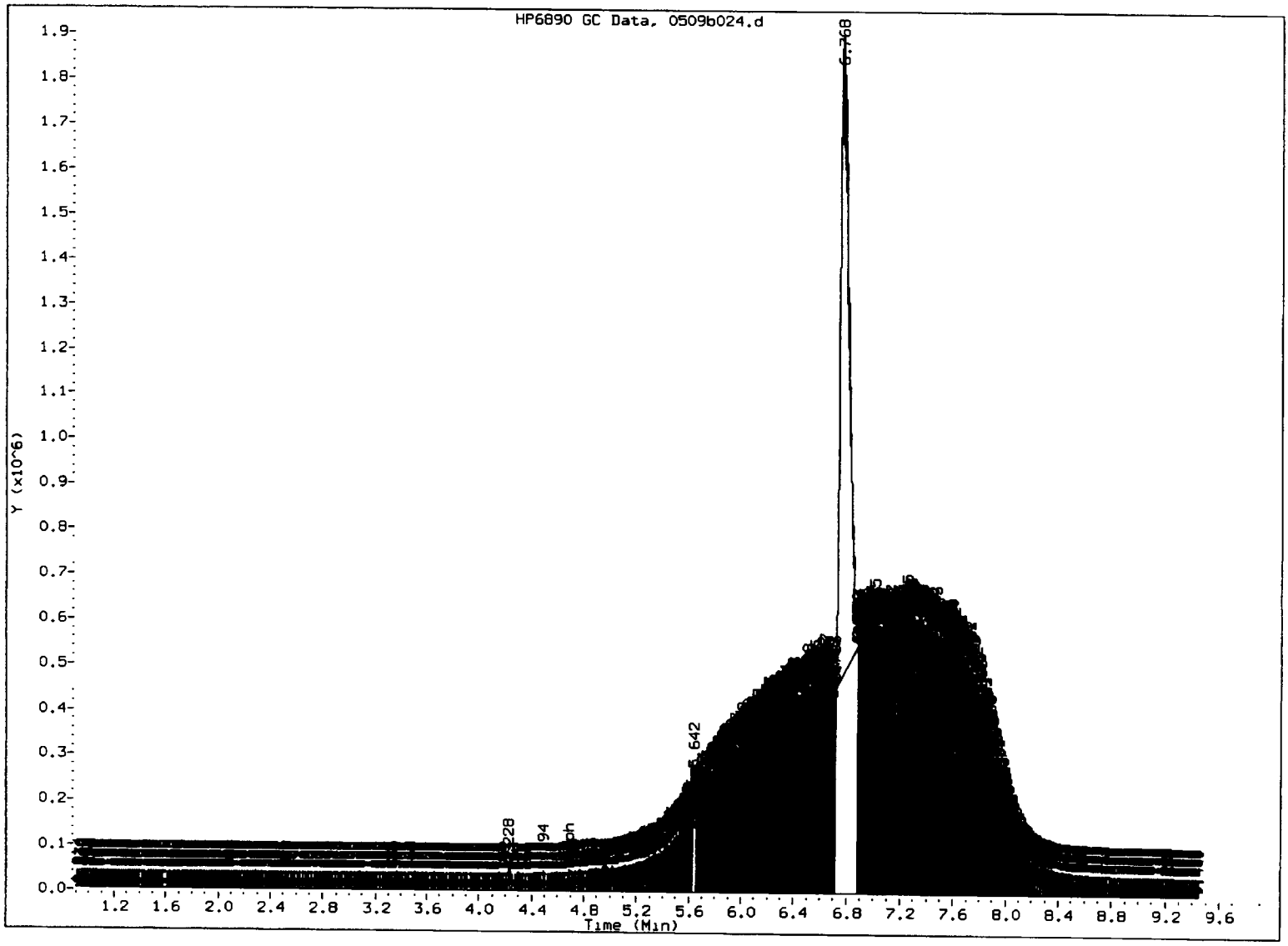
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 5000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/1/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b025.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL ICV 500
Client ID:
Injection: 09-MAY-2013 19:28
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	71814	5
C8	0.827	0.000	3620	2782	WATPHD	(C12-C24)	518173	50.03
C10	2.256	0.002	478	471	WATPHM	(C24-C38)	4554535	461.32
C12	3.033	-0.015	421	481	AK102	(C10-C25)	639973	51.79
C14	3.625	0.005	282	365	AK103	(C25-C36)	3832887	539.20 M
C16	4.114	-0.002	185	70	OR.DIES	(C10-C28)	1677576	109.06
C18	4.563	-0.002	261	181				
C20	4.991	0.002	1248	666				
C22	5.385	-0.001	7293	4094				
C24	5.758	-0.001	21661	6739				
C25	5.935	-0.003	26089	4587				
C26	6.114	0.000	30955	11749				
C28	6.429	0.002	35583	18192	IT.DIES	(C10-C24)	535116	38.81
C32	6.977	0.001	58496	48694				
C34	7.212	0.003	57093	58682	CREOSOT	(C8-C22)	152793	47.26
Filter Peak	----							
C36	7.432	-0.003	56274	27657	BUNKERC	(C10-C38)	5089651	1037.69
o-terph	4.681	-0.002	607	657	JET-A	(C10-C18)	36545	3.38
Triacon Surr	6.727	-0.041	732229	563148				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	657	0.0	0.1
Triacontane	563148	43.2	95.9

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b025.d

Date : 09-MAY-2013 19:28

Client ID:

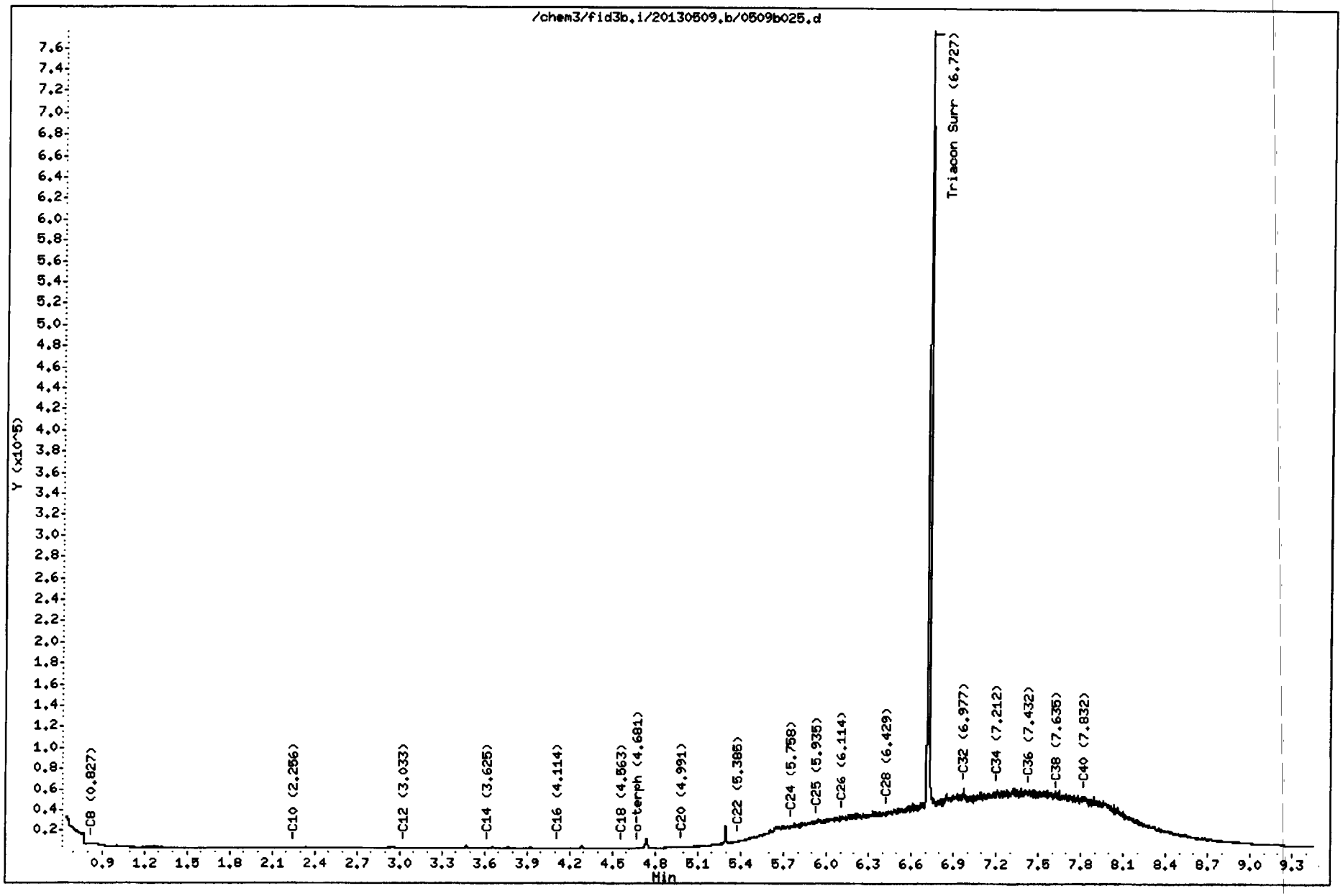
Sample Info: MOIL ICV 500

Column phase: RTX-1

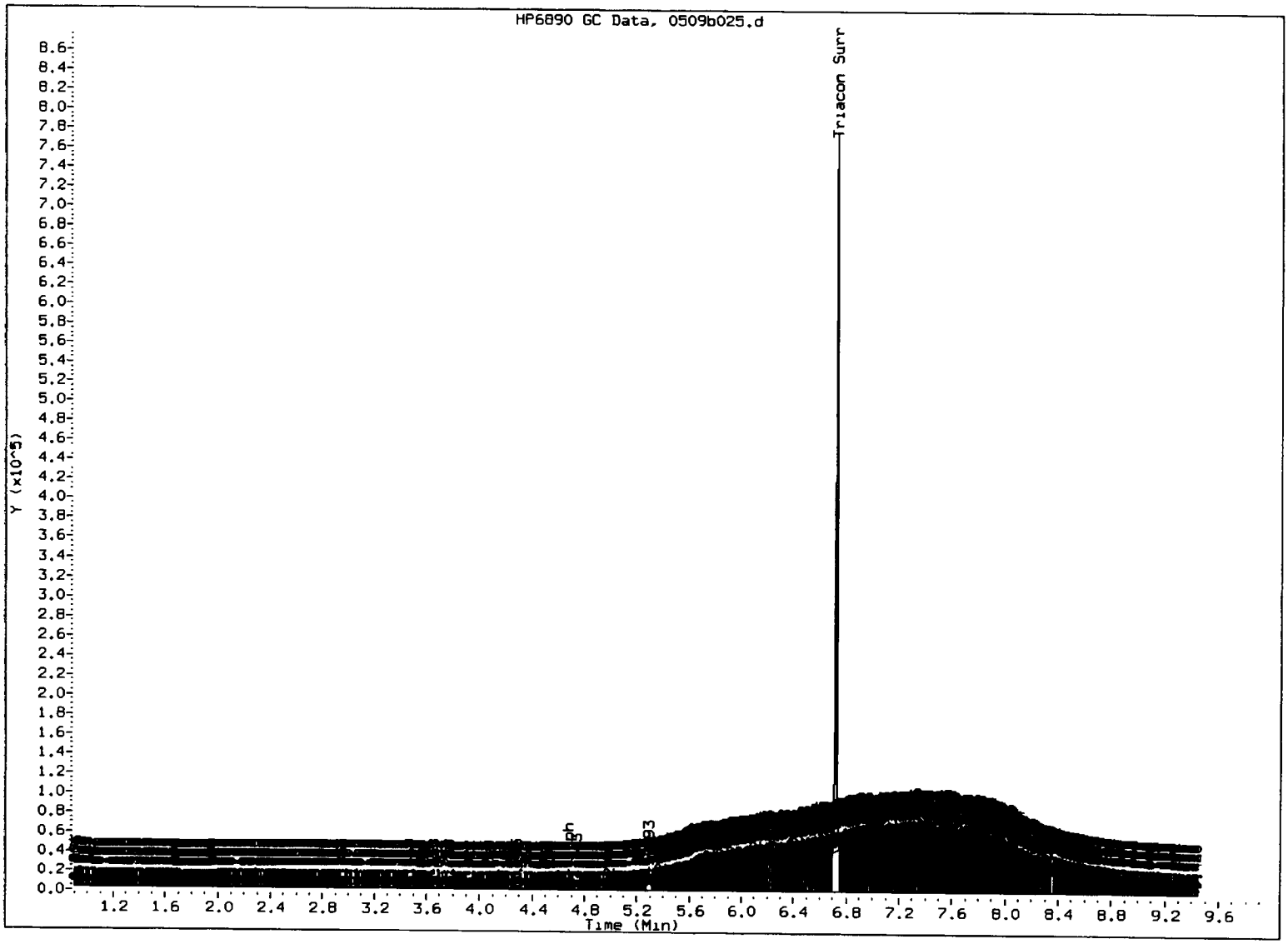
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL ICV 500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: SW Date: 5/11/09

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WR99/WS21 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A (FID-3B) FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 5/9/13 & 5/16/13 Analysis Start Date: 6/4/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	(NA) / Y / N / ✓	Method Blank in Control?	(Y) / N / ✓
Retention times within Windows?	(Y) / (N) / ✓	LCS / LCSD Recovery in Control?	(Y) / N / ✓
CCAL met %D Criteria?	(Y) / N / ✓	LCS / LCSD RPD ≤30%?	(NA) / ___
Surrogate Recovery in Control?	(Y) / (N) / ✓	MS / MSD Recovery in Control?	(Y) / N / ✓
Internal STD. within 50-200%?	(NA) / Y / N / ✓	MS / MSD RPD ≤30%?	(NA) / ___
Manual Integrations?	(Y) / N / ✓	Samples Diluted?	(Y) / N / ✓
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	Y / (N) / ___

Detail problems, corrective actions and/or other pertinent information below

WR99D - DRO/Motor oil

WS21A - Diesel / Motor oil - diesel is weathered

Mineral oil CCAL triac surr shifted outside QC limits due to peak broadening. Surr not required & CCAL pass QC limits no further Corrective action taken as per PM C.O. Surr is also @ QC limit of 15% duration.

(Review 1) Analyst: JW **Date:** 6/12/13

(Review 2) Reviewer: **Date:** 6/12

Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 6/4/13 Analysis: TPHD Analyst: JW

Column 1 Serial No.: 1022005 Column Type: RTX-1

Column 2 Serial No.: Column Type:

GC Method: TPAD3 ICal Date: 5/9/13 & 5/10/13 Injection Volume: 1uL

IS	Ical/Ccal	ICV
	2043-3,4	
	2091-2	
	2041-4	

Document All Maintenance Tasks In Element LIMS

GC LOG SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130604.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	04-JUN-2013 08:13	0604b001.d	1	RINSE	
2	04-JUN-2013 08:32	0604b002.d	1	RT0604	
3	04-JUN-2013 08:51	0604b003.d	1	IB0604	
4	04-JUN-2013 09:11	0604b004.d	1	DIESEL#1	
5	04-JUN-2013 09:30	0604b005.d	1	MOIL#1	
6	04-JUN-2013 09:51	0604b006.d	1	WS31A	A2-W36-S-4
7	04-JUN-2013 10:10	0604b007.d	1	WS31B	A2-W34-S-4
8	04-JUN-2013 10:30	0604b008.d	1	WS31C	A2-W35-S-4
9	04-JUN-2013 11:01	0604b009.d	1	WS31D	A2-W37-S-4
10	04-JUN-2013 11:20	0604b010.d	5	WS31E	A2-W38-S-4
11	04-JUN-2013 11:54	0604b011.d	1	WS31F	A2-W39-S-4
12	04-JUN-2013 12:22	0604b012.d	10	WS31D	A2-W37-S-4
13	04-JUN-2013 12:53	0604b013.d	10	WS31E	A2-W38-S-4
14	04-JUN-2013 13:24	0604b014.d	10	WS31F	A2-W39-S-4
15	04-JUN-2013 13:48	0604b015.d	1	WS31LCSS1	WS31LCSS1
16	04-JUN-2013 14:07	0604b016.d	1	WS31LCSDS1	WS31LCSDS1
17	04-JUN-2013 14:26	0604b017.d	1	WS31MBS1	WS31MBS1
18	04-JUN-2013 14:49	0604b018.d	1	WS31LCSS1	WS31LCSS1
19	04-JUN-2013 15:08	0604b019.d	1	DIESEL#2	
20	04-JUN-2013 15:32	0604b020.d	1	MOIL#2	
21	04-JUN-2013 15:51	0604b021.d	1	WS04MBW1	
22	04-JUN-2013 16:10	0604b022.d	1	WS04LCSW1	
23	04-JUN-2013 16:29	0604b023.d	1	WS04LCSDW1	
24	04-JUN-2013 16:48	0604b024.d	1	WS04B	
25	04-JUN-2013 17:08	0604b025.d	1	WR99MBS1	
26	04-JUN-2013 17:27	0604b026.d	1	WR99LCSS1	
27	04-JUN-2013 17:55	0604b027.d	5	WR99D	
28	04-JUN-2013 18:19	0604b028.d	5	WR99DMS	
29	04-JUN-2013 18:37	0604b029.d	5	WR99DMSD	
30	04-JUN-2013 18:56	0604b030.d	1	WS21A	
31	04-JUN-2013 19:15	0604b031.d	5	WS21A	
32	04-JUN-2013 19:35	0604b032.d	1	DIESEL#3	
33	04-JUN-2013 19:54	0604b033.d	1	MOIL#3	

JW 6/8/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In Element LIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130604.b

ARI Job No.: RT06 Method: i/20130604.b/ftphfid3b.m Instrument: fid3b.i Date: 04-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0832	0604b002.d	RT0604		1	Toluene,
0851	0604b003.d	IB0604		1	NO MANUAL INTEGRATION
1508	0604b019.d	DIESEL#2		1	o-terph,
1532	0604b020.d	MOIL#2		1	Triacon Surr,
1708	0604b025.d	WR99MBS1	WR99MBS1	1	Triacon Surr,
1727	0604b026.d	WR99LCSS1	WR99LCSS1	1	o-terph,
1755	0604b027.d	WR99D	KC-VT-1593	5	o-terph, Triacon Surr,
1819	0604b028.d	WR99DMS	KC-VT-1593	5	o-terph, Triacon Surr,
1837	0604b029.d	WR99DMSD	KC-VT-1593	5	o-terph, Triacon Surr,
1856	0604b030.d	WS21A	KC-IV-SPS-	1	o-terph, Triacon Surr,
1935	0604b032.d	DIESEL#3		1	o-terph,
1954	0604b033.d	MOIL#3		1	Triacon Surr,

ARI 2013-06-04

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b002.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: RT0604
Client ID:
Injection: 04-JUN-2013 08:32
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.659	0.000	244507	295864	WATPHG	(Tol-C12)	1063206	78.72 M
C8	0.829	0.000	161909	94800	WATPHD	(C12-C24)	1756784	169.62
C10	2.239	0.000	328729	224321	WATPHM	(C24-C38)	3119896	316.01
C12	3.039	0.000	324320	217355	AK102	(C10-C25)	2277818	184.34
C14	3.616	0.000	402998	197987	AK103	(C25-C36)	2744810	386.13
C16	4.113	0.000	353616	213185				
C18	4.559	0.000	327561	183620				
C20	4.980	0.000	359180	207040				
C22	5.374	0.000	364187	241027	MSPIRIT	(Tol-C12)	1063206	77.39 M
C24	5.743	0.000	380273	274833				
C25	5.917	0.000	371576	274997				
C26	6.094	0.000	998531	360130				
C28	6.404	0.000	399855	164197				
C32	6.951	0.000	504187	325019				
C34	7.186	0.000	434043	326597				
Filter Peak	----							
C36	7.401	0.000	424157	328889				
o-terph	4.667	0.000	693163	466917	JET-A	(C10-C18)	1258168	116.24
Triacon Surr	6.701	0.000	1147398	827213				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	466917	34.7	77.1
Triacontane	827213	63.4	140.9

JW 6/8/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

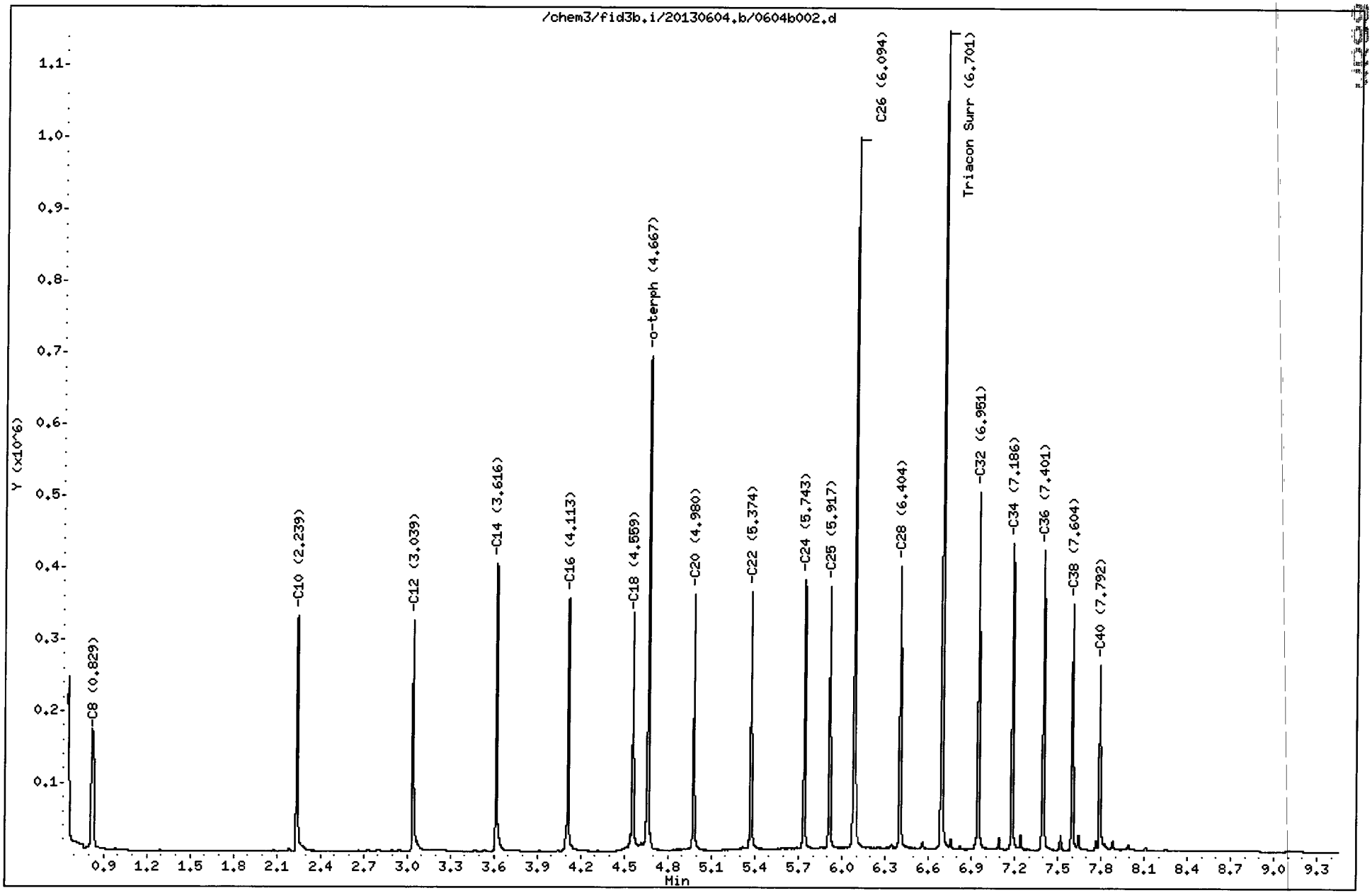
Data File: /chem3/fid3b.i/20130604.b/0604b002.d
Date : 04-JUN-2013 08:32
Client ID:
Sample Info: RT0604

Column phase: RTX-1

Instrument: fid3b.i

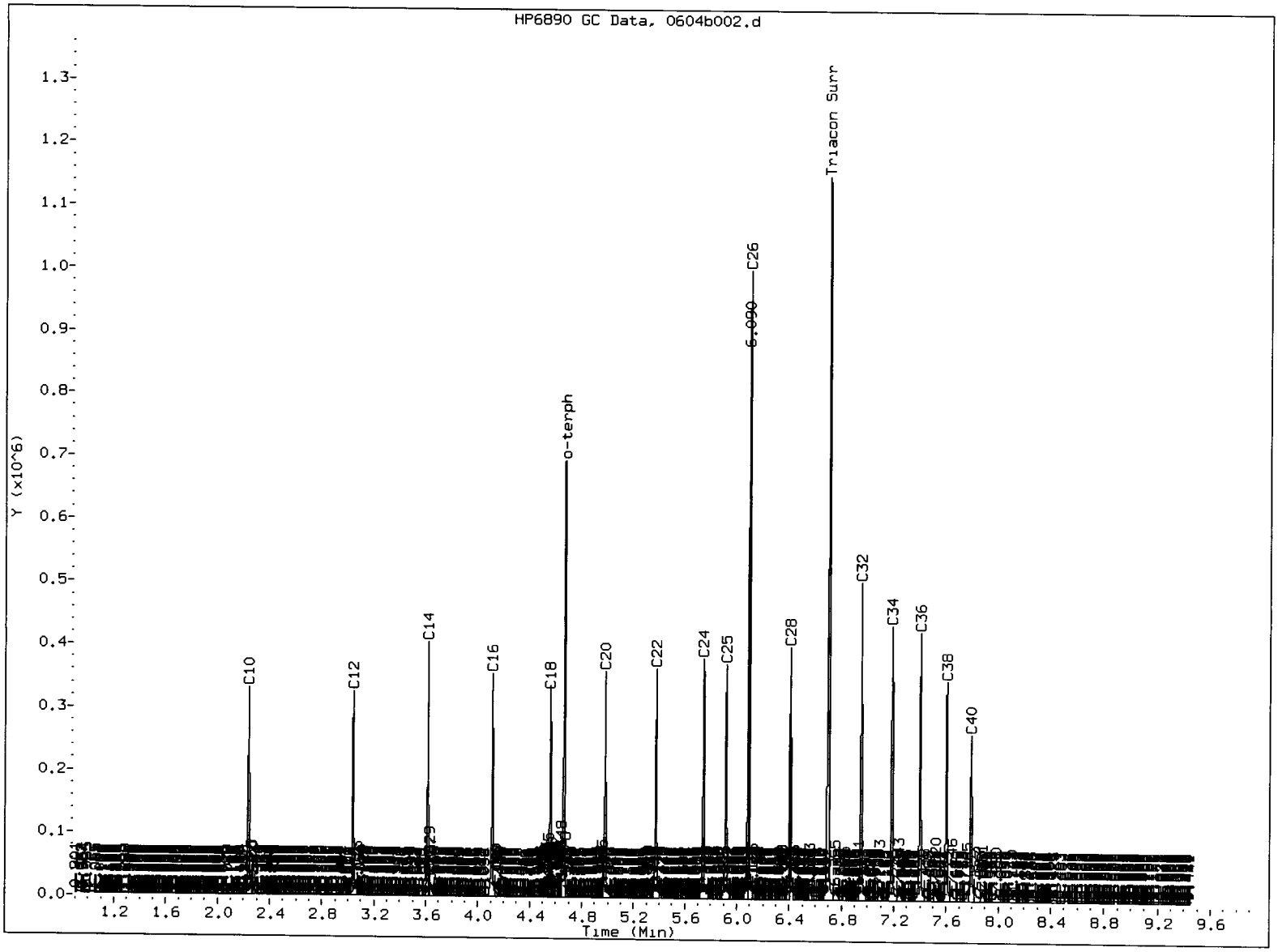
Operator: JW
Column diameter: 0.25

JW 6/8/13



FID:3B-2C/RTX-1 RT0604

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/8/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b003.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: IB0604
Client ID:
Injection: 04-JUN-2013 08:51
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	66695	5
C8	0.824	-0.005	3199	1658	WATPHD	(C12-C24)	62624	6.05
C10	2.238	-0.002	365	350	WATPHM	(C24-C38)	152638	15.46
C12	3.039	0.000	336	116	AK102	(C10-C25)	85295	6.90
C14	3.616	0.000	273	47	AK103	(C25-C36)	124682	17.54
C16	4.114	0.001	161	42				
C18	4.562	0.003	304	228				
C20	4.979	-0.001	325	68				
C22	5.378	0.004	50	35	MSPIRIT	(Tol-C12)	66695	4.85
C24	5.744	0.001	95	37				
C25	5.921	0.004	59	17				
C26	6.087	-0.007	62	18				
C28	6.399	-0.005	153	35				
C32	6.964	0.013	1689	1292				
C34	7.187	0.001	998	664				
Filter Peak	----							
C36	7.386	-0.015	12667	11771				
o-terph	4.669	0.002	911289	573407	JET-A	(C10-C18)	44527	4.11
Triacon Surr	6.697	-0.005	759426	594422				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	573407	42.6	94.7
Triacontane	594422	45.6	101.2

JW 6/8/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b003.d

Date : 04-JUN-2013 08:51

Client ID:

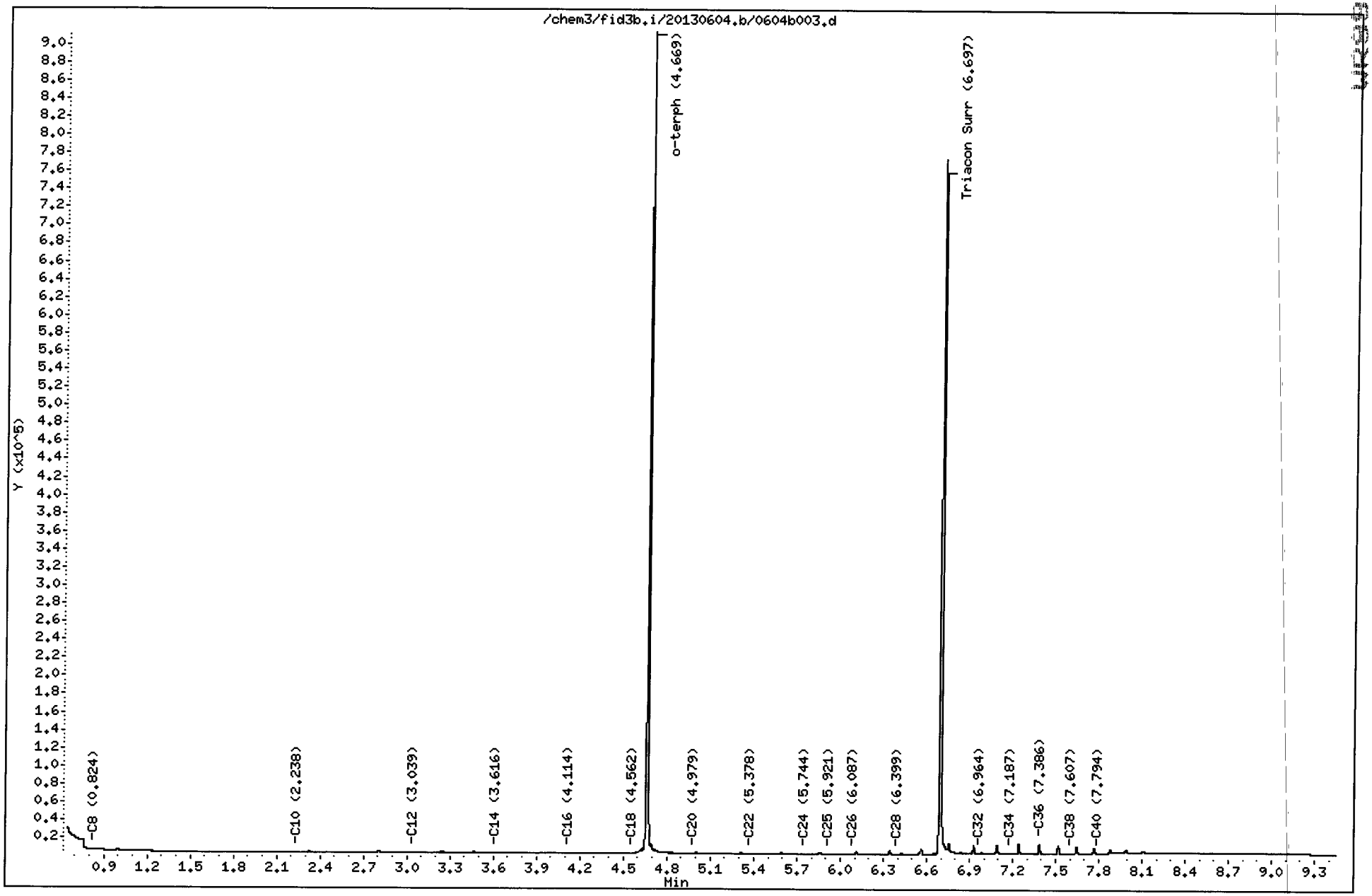
Sample Info: IB0604

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b019.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: DIESEL#2
Client ID:
Injection: 04-JUN-2013 15:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	692398	51
C8	0.831	0.002	4965	7511	WATPHD	(C12-C24)	2357377	227.60
C10	2.239	-0.001	16887	12293	WATPHM	(C24-C38)	52702	5.34
C12	3.037	-0.002	26679	26194	AK102	(C10-C25)	2821698	228.35 M
C14	3.613	-0.003	43611	23857	AK103	(C25-C36)	33344	4.69
C16	4.113	0.000	70070	61774				
C18	4.558	-0.001	76681	55621				
C20	4.978	-0.002	38658	30371				
C22	5.376	0.002	18078	19325	MSPIRIT	(Tol-C12)	692398	50.40
C24	5.739	-0.004	2295	997				
C25	5.914	-0.003	1044	410				
C26	6.093	-0.001	501	167				
C28	6.410	0.006	148	130				
C32	6.958	0.007	61	28				
C34	7.186	0.000	206	70				
Filter Peak	----							
C36	7.387	-0.014	2648	2919				
o-terph	4.671	0.004	878372	574278	JET-A	(C10-C18)	2129331	196.72
Triacon Surr	6.701	0.000	41	12				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	574278	42.7	94.9
Triacontane	12	0.0	0.0

JW 6/8/13

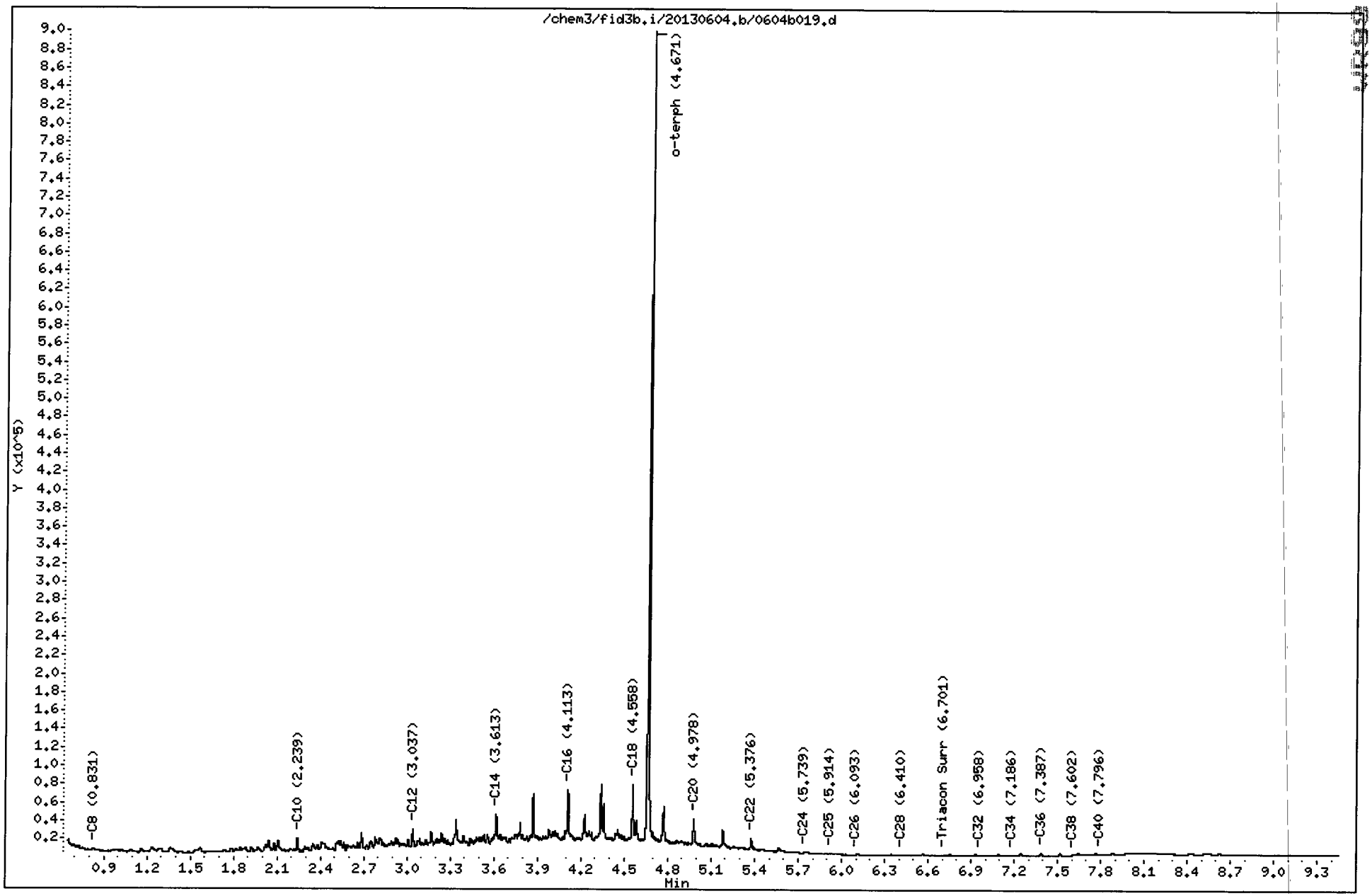
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b019.d
Date : 04-JUN-2013 15:08
Client ID:
Sample Info: DIESEL#2

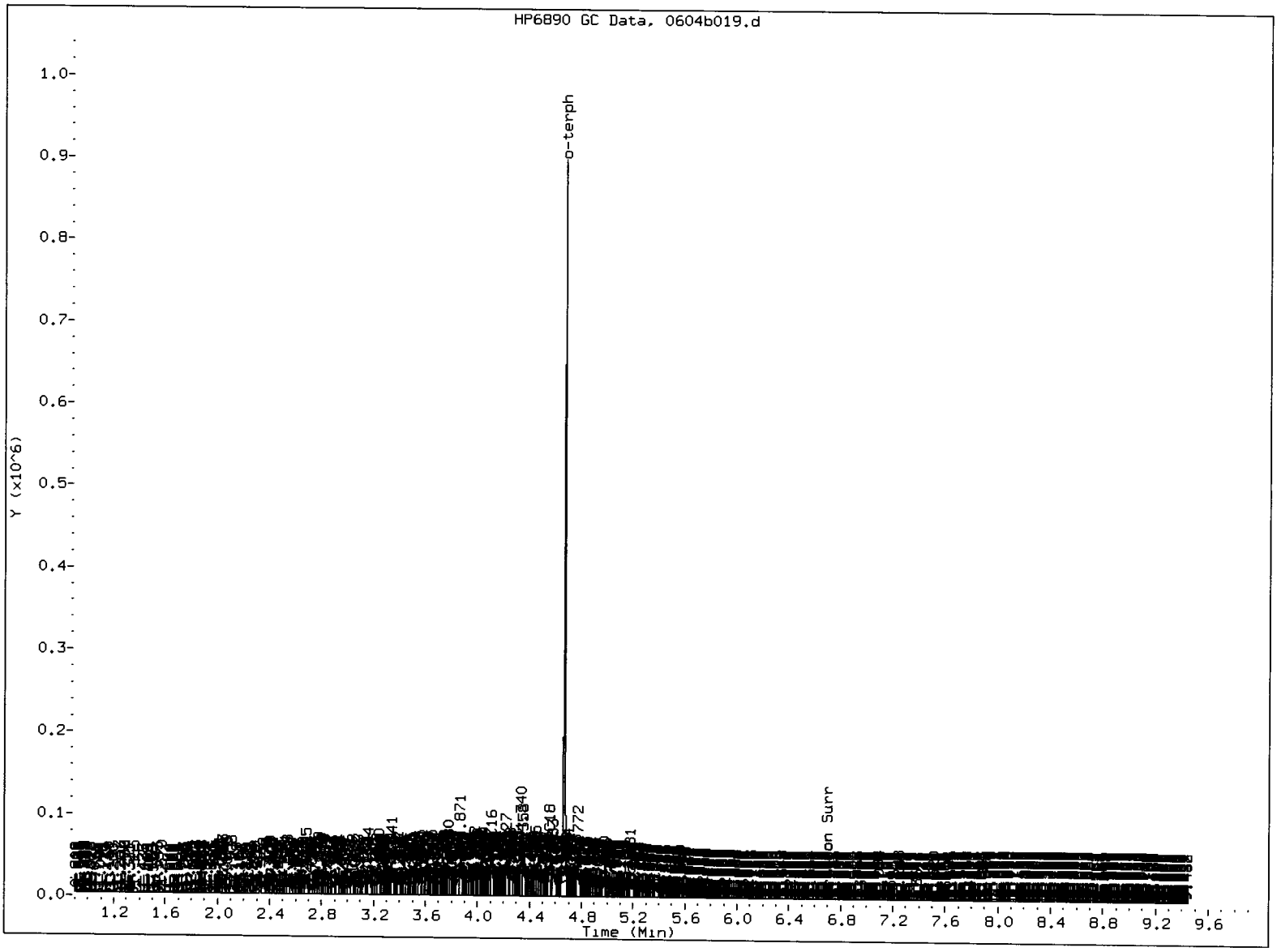
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL#2 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/8/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b020.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: MOIL#2
Client ID:
Injection: 04-JUN-2013 15:32
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	45725	3
C8	0.835	0.007	2629	2181	WATPHD	(C12-C24)	407139	39.31
C10	2.241	0.002	243	159	WATPHM	(C24-C38)	5178434	524.51
C12	3.041	0.002	209	87	AK102	(C10-C25)	527586	42.70
C14	3.616	0.000	217	41	AK103	(C25-C36)	4461837	627.68 M
C16	4.117	0.004	167	129				
C18	4.557	-0.002	239	113				
C20	4.979	-0.001	1014	237				
C22	5.375	0.001	4733	2197	MSPIRIT	(Tol-C12)	45725	3.33
C24	5.743	0.000	19758	5335				
C25	5.917	-0.001	26896	17465				
C26	6.089	-0.005	32582	15289				
C28	6.402	-0.002	40347	19667				
C32	6.952	0.002	68556	24606				
C34	7.183	-0.003	65447	44725				
Filter Peak	----							
C36	7.401	0.000	60825	29230				
o-terph	4.661	-0.006	1975	1551	JET-A	(C10-C18)	38095	3.52
Triacon Surr	6.705	0.003	851884	637155				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1551	0.1	0.3
Triacontane	637155	48.8	108.5

JW 6/8/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b020.d

Date : 04-JUN-2013 15:32

Client ID:

Sample Info: MOIL#2

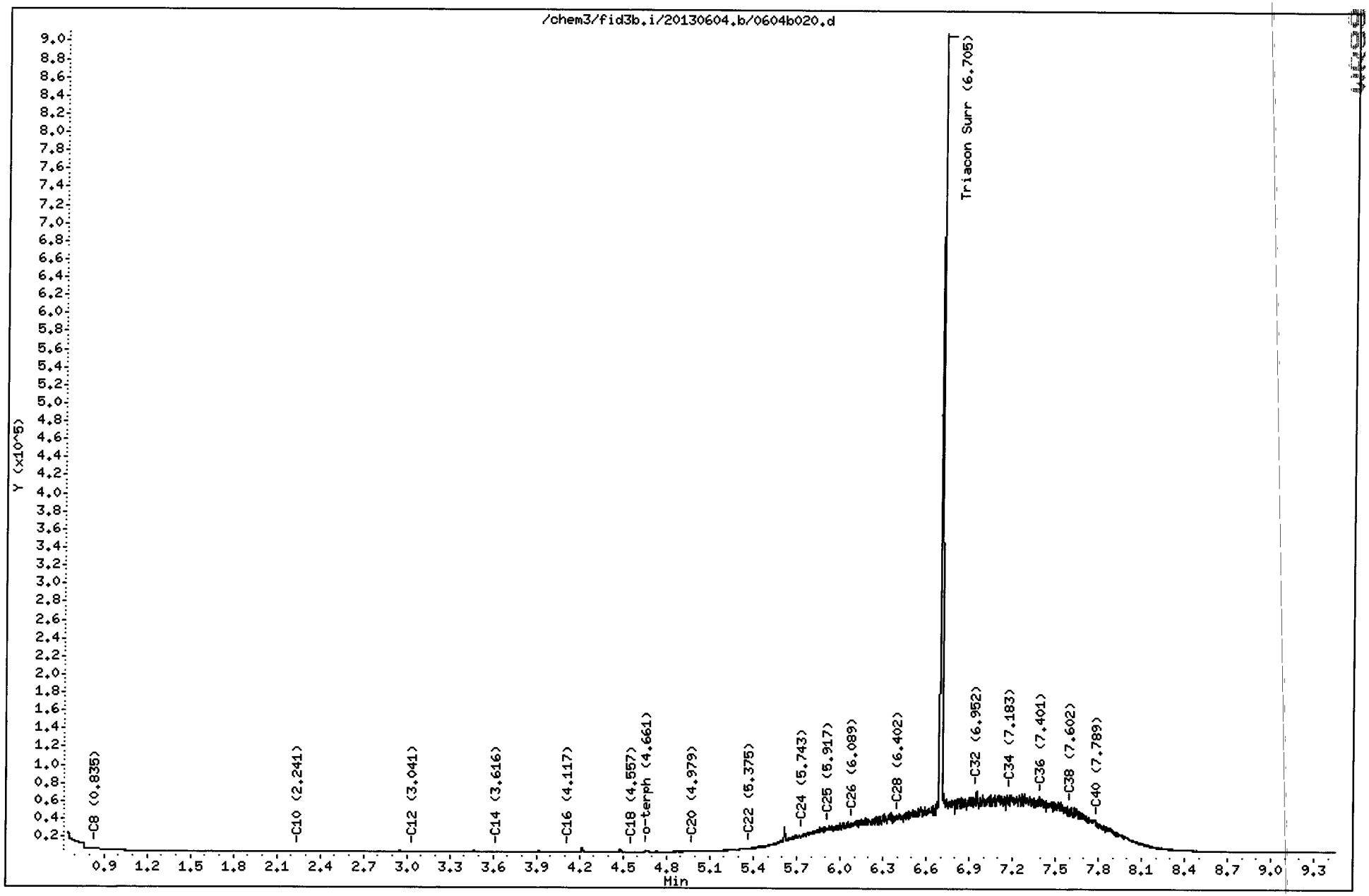
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

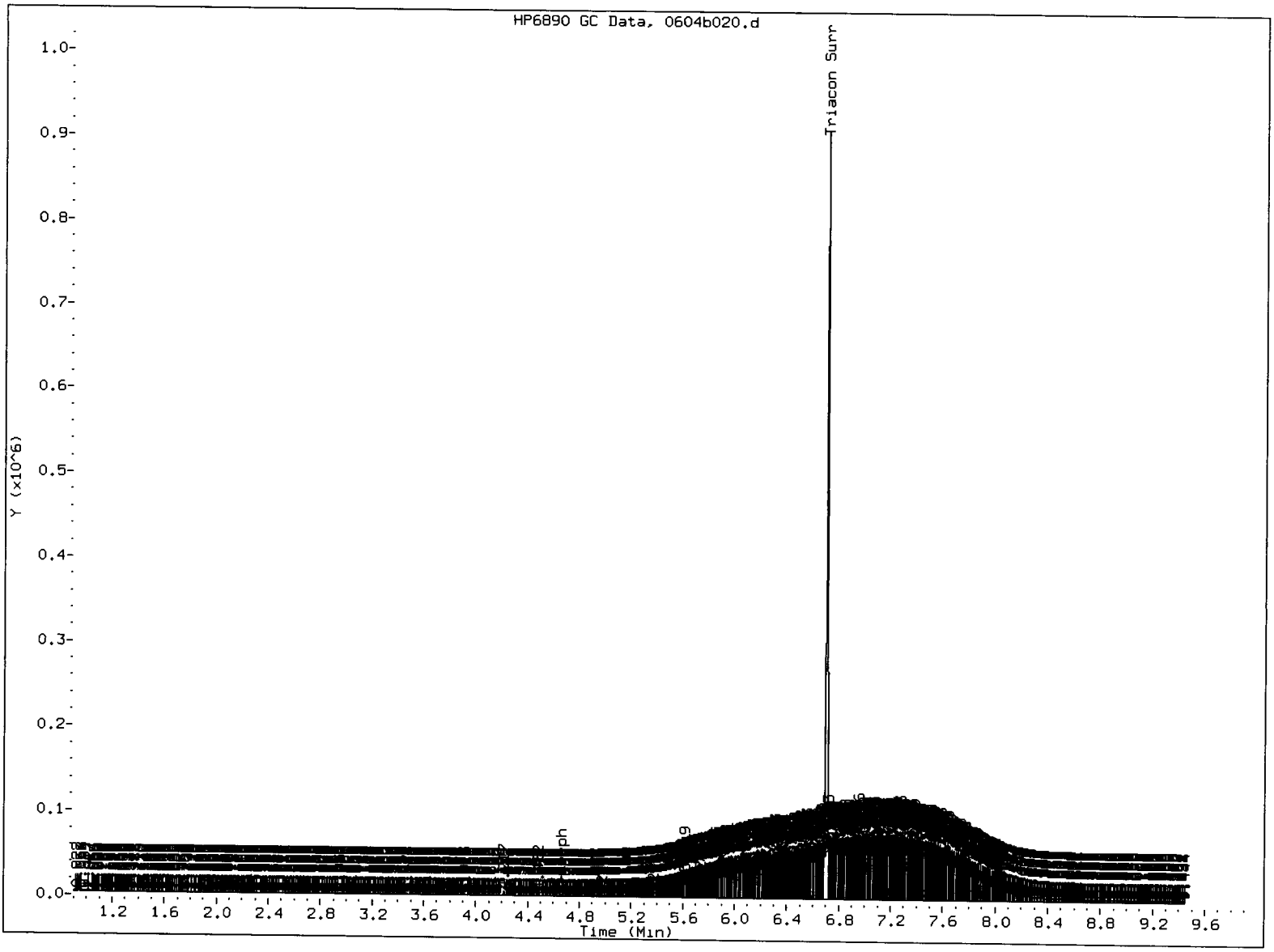
Column diameter: 0.25

JW 6/5/13



FID:3B-2C/RTX-1 MOIL#2

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JH Date: 6/8/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b025.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WR99MBS1
Client ID: WR99MBS1
Injection: 04-JUN-2013 17:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	60939	5
C8	0.825	-0.003	2841	2538	WATPHD	(C12-C24)	90213	8.71
C10	2.247	0.007	266	294	WATPHM	(C24-C38)	103951	10.53
C12	3.037	-0.002	193	32	AK102	(C10-C25)	102880	8.33
C14	3.609	-0.007	156	154	AK103	(C25-C36)	84012	11.82 M
C16	4.114	0.001	479	229				
C18	4.556	-0.003	830	515				
C20	4.977	-0.002	507	219				
C22	5.373	-0.001	199	42	MSPIRIT	(Tol-C12)	60939	4.44
C24	5.746	0.003	44	30				
C25	5.913	-0.004	39	21				
C26	6.093	-0.001	43	22				
C28	6.398	-0.006	272	86				
C32	6.956	0.006	2968	3166				
C34	7.190	0.004	987	603				
Filter Peak	----							
C36	7.389	-0.011	1328	856				
o-terph	4.666	-0.001	984258	545826	JET-A	(C10-C18)	67868	6.27
Triacon Surr	6.722	0.021	877436	633481				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	545826	40.6	90.2
Triacontane	633481	48.6	107.9

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

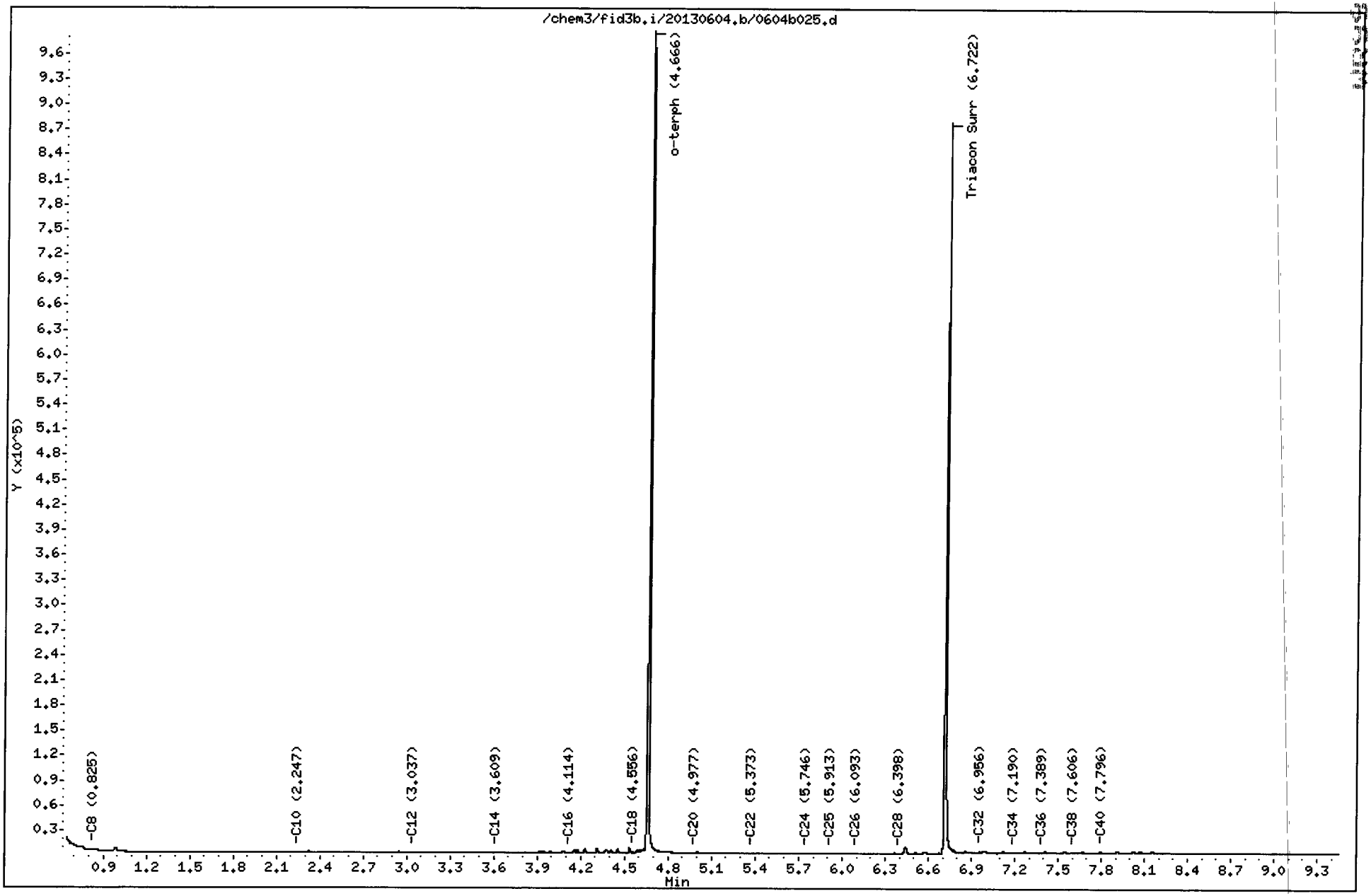
JW 6/6/13

Data File: /chem3/fid3b.i/20130604.b/0604b025.d
Date : 04-JUN-2013 17:08
Client ID: WR99MBS1
Sample Info: WR99MBS1

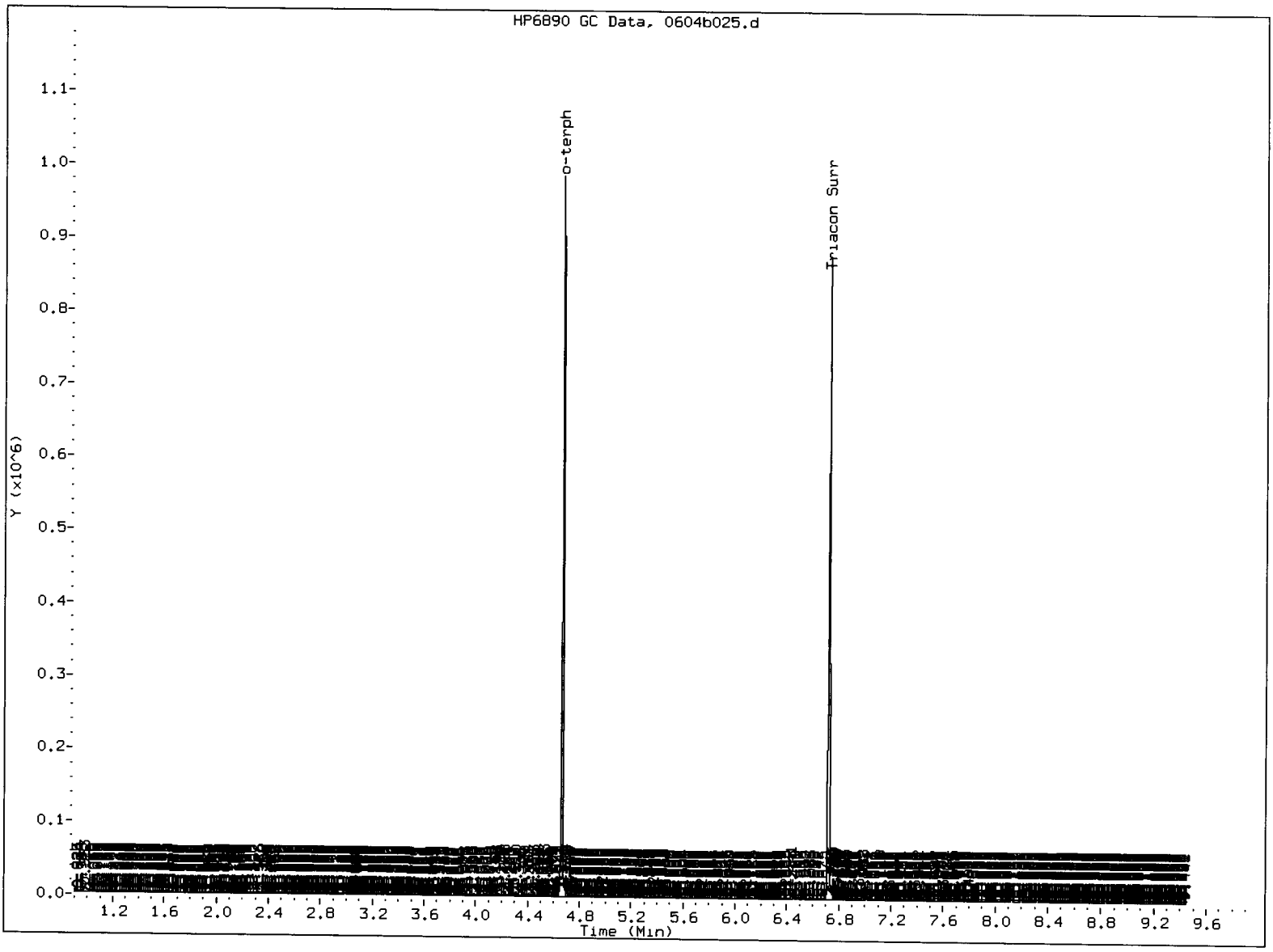
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 WR99MBS1 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction — peak was split
3. Peak not found
5. Skimmed surrogate

Analyst: RV Date: 6/8/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b026.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WR99LCSS1
Client ID: WR99LCSS1
Injection: 04-JUN-2013 17:27
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	3291050	244	
C8	0.829	0.000	9966	11862	WATPHD	(C12-C24)	13259286	1280.17	
C10	2.248	0.009	75793	56746	WATPHM	(C24-C38)	224548	22.74	
C12	3.037	-0.002	149264	64406	AK102	(C10-C25)	15701614	1270.69	M
C14	3.612	-0.004	255988	211491	AK103	(C25-C36)	181478	25.53	
C16	4.109	-0.004	344856	272849					
C18	4.560	0.001	375396	388706					
C20	4.982	0.002	203203	194658					
C22	5.379	0.005	101711	98358	MSPIRIT	(Tol-C12)	3291050	239.55	
C24	5.748	0.005	30547	16819					
C25	5.914	-0.003	7543	2620					
C26	6.094	0.000	6136	1753					
C28	6.403	-0.001	862	261					
C32	6.956	0.006	2472	2418					
C34	7.184	-0.002	145	44					
Filter Peak	----								
C36	7.391	-0.010	346	202					
o-terph	4.668	0.001	861668	516408	JET-A	(C10-C18)	11955646	1104.53	
Triacon Surr	6.721	0.020	887926	649536					

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	516408	38.4	85.3
Triacontane	649536	49.8	110.6

SW 6/8/13

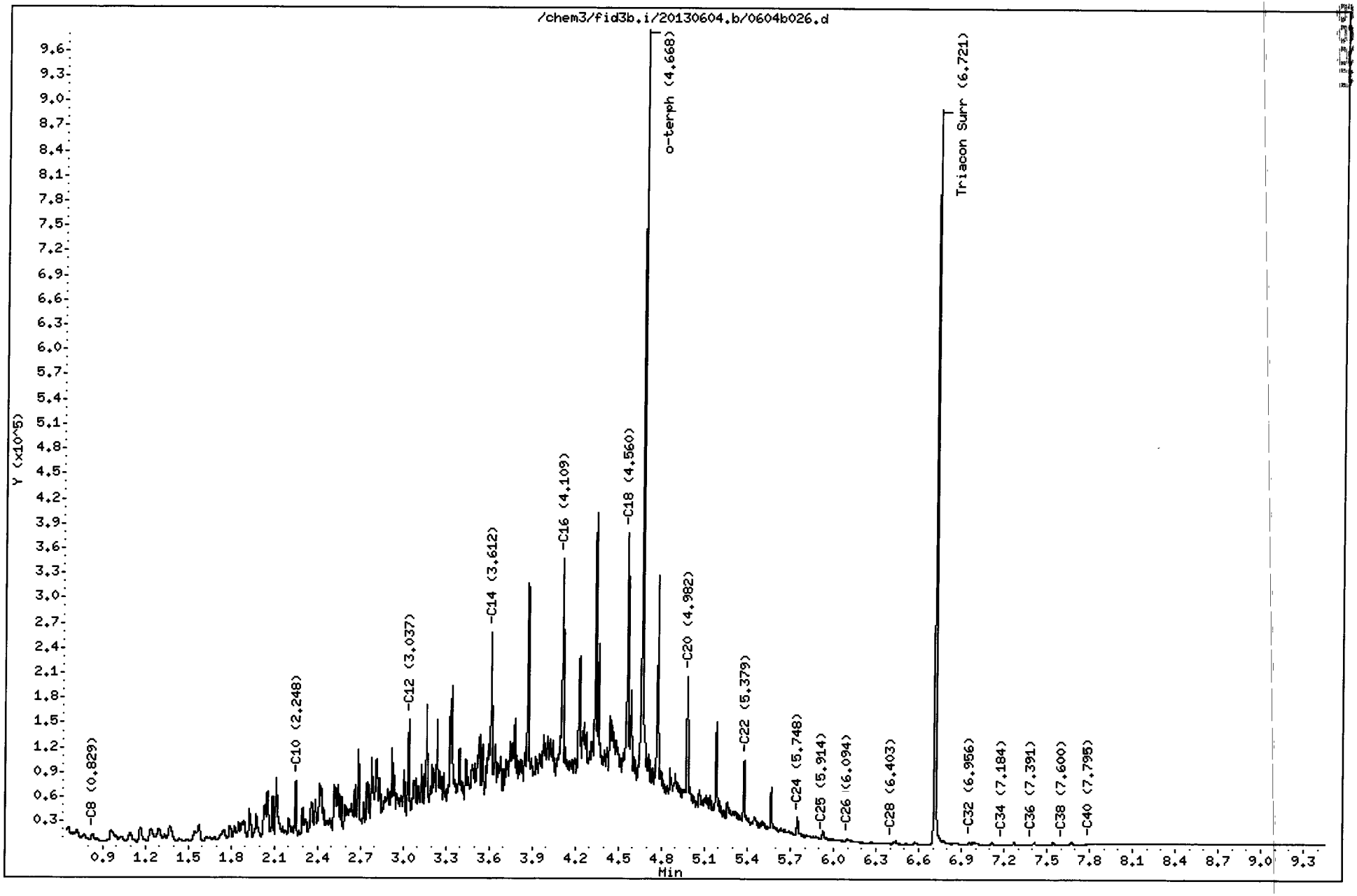
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b026.d
Date : 04-JUN-2013 17:27
Client ID: WR99LCSS1
Sample Info: WR99LCSS1

Column phase: RTX-1

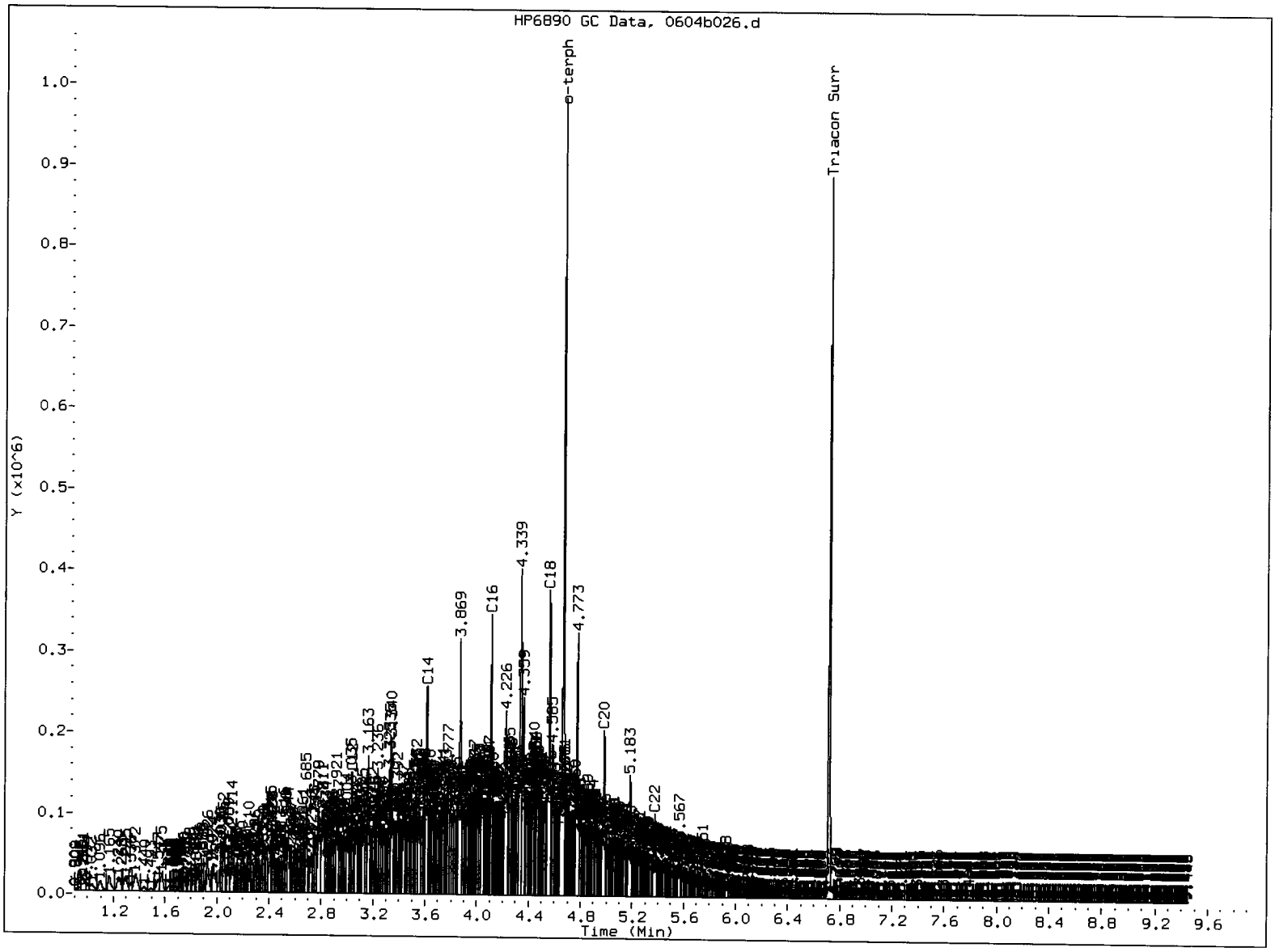
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 WR99LCSS1

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 6/6/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b027.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WR99D
Client ID: KC-VT-1593-20130530
Injection: 04-JUN-2013 17:55
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	117639	9	
C8	0.830	0.001	3121	3344	WATPHD	(C12-C24)	2519413	243.25	
C10	2.238	-0.001	602	130	WATPHM	(C24-C38)	11494402	1164.24	
C12	3.043	0.003	2093	1316	AK102	(C10-C25)	2827156	228.79	M
C14	3.621	0.005	4769	2636	AK103	(C25-C36)	10200492	1434.97	M
C16	4.111	-0.002	4598	2482					
C18	4.565	0.006	8028	3869					
C20	4.979	0.000	18073	11059					
C22	5.376	0.002	34525	23596	MSPIRIT	(Tol-C12)	117639	8.56	
C24	5.744	0.001	99139	47309					
C25	5.918	0.001	62829	12245					
C26	6.093	-0.001	76951	53939					
C28	6.403	-0.001	137570	69142					
C32	6.949	-0.001	128848	61291					
C34	7.185	0.000	111749	37592					
Filter Peak	----								
C36	7.405	0.004	109024	30018					
o-terph	4.656	-0.011	185333	89065	JET-A	(C10-C18)	504247	46.59	
Triacon Surr	6.717	0.015	172461	98042					

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	89065	6.6	73.6
Triacontane	98042	7.5	83.5

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

JW 6/6/13

Data File: /chem3/fid3b.i/20130604.b/0604b027.d

Date : 04-JUN-2013 17:55

Client ID: KC-VT-1593-20130530

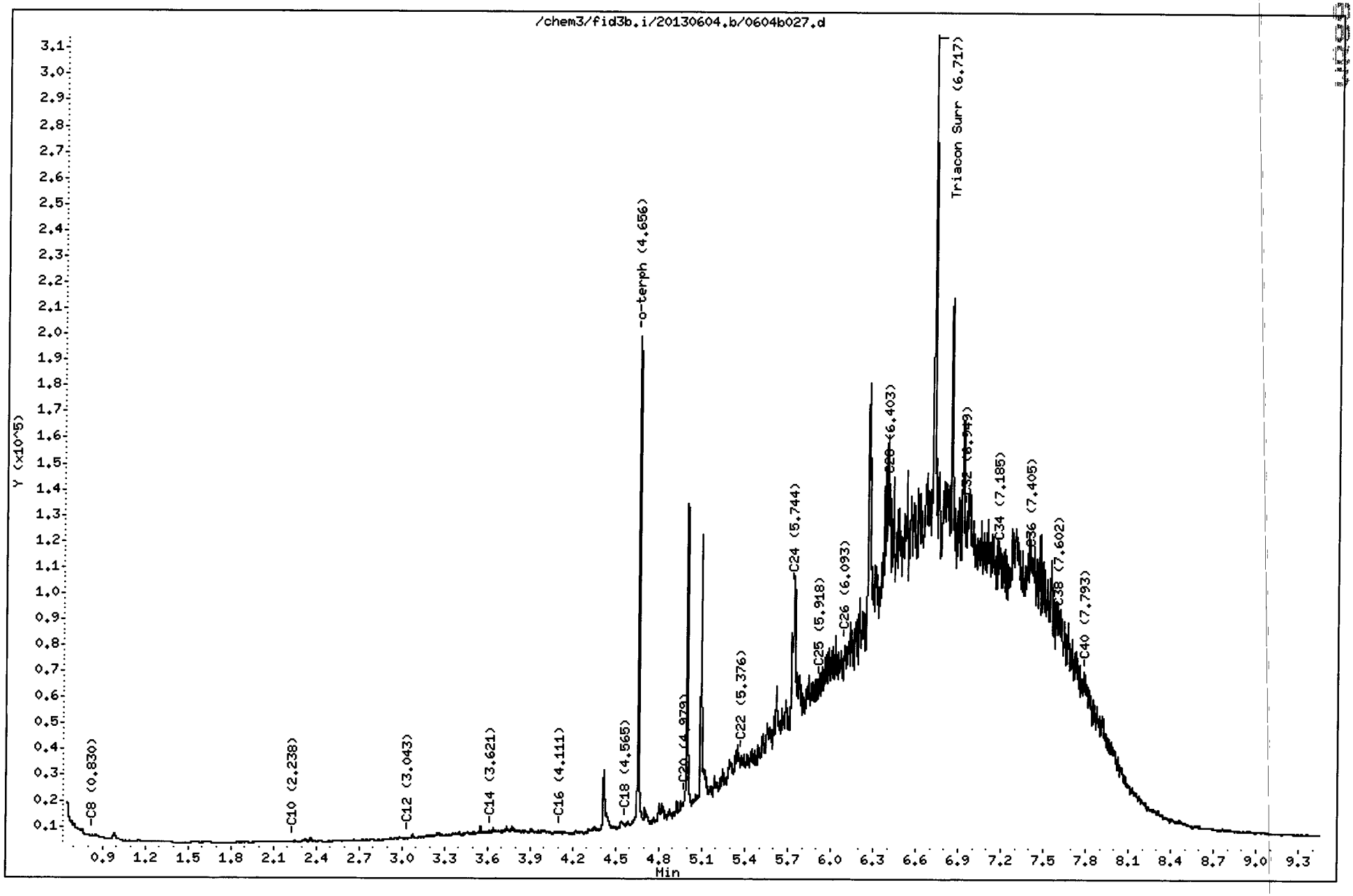
Sample Info: WR99D,5

Instrument: fid3b.i

Operator: JW

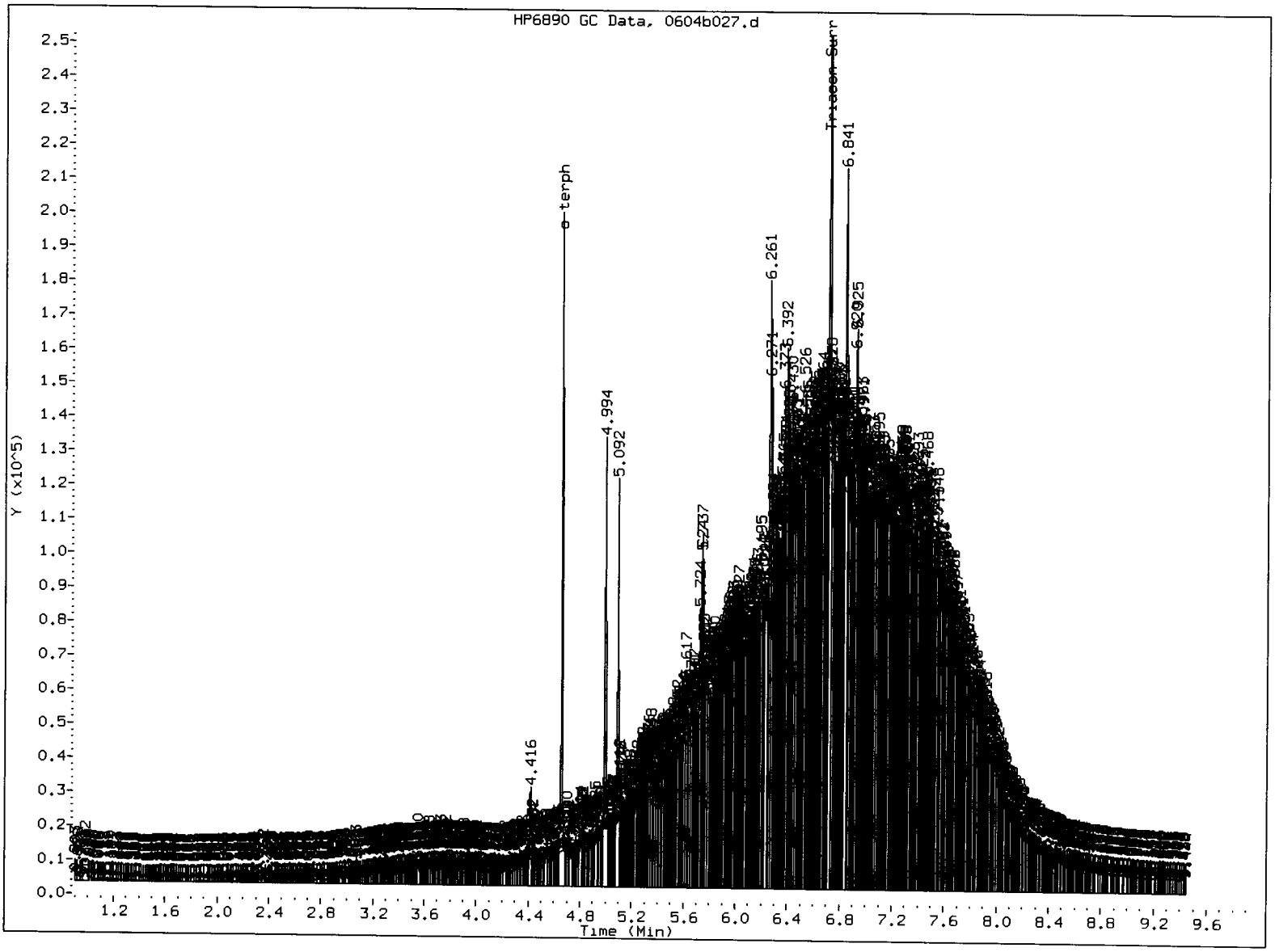
Column phase: RTX-1

Column diameter: 0.25



FID:3B-2C/RTX-1 WR99D

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JO Date: 6/6/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b028.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WR99DMS
Client ID: KC-VT-1593-2013 MS
Injection: 04-JUN-2013 18:19
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	561755	42
C8	0.834	0.005	3320	2680	WATPHD	(C12-C24)	3407727	329.01
C10	2.243	0.004	11374	8854	WATPHM	(C24-C38)	4906907	497.01
C12	3.034	-0.005	24654	24683	AK102	(C10-C25)	3920212	317.25 M
C14	3.613	-0.003	43472	29194	AK103	(C25-C36)	4338844	610.38 M
C16	4.115	0.002	56842	52105				
C18	4.565	0.006	64334	60288				
C20	4.977	-0.003	18149	2496				
C22	5.373	-0.001	18257	3809	MSPIRIT	(Tol-C12)	561755	40.89
C24	5.748	0.005	56473	41972				
C25	5.917	0.000	25201	7531				
C26	6.097	0.003	27669	7423				
C28	6.404	0.000	62917	25277				
C32	6.945	-0.005	60722	38121				
C34	7.187	0.002	48476	9411				
Filter Peak	----							
C36	7.405	0.004	52197	11197				
o-terph	4.666	-0.001	138637	84624	JET-A	(C10-C18)	2243411	207.26
Triacon Surr	6.727	0.026	135503	103876				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	84624	6.3	69.9
Triacontane	103876	8.0	88.5

SW 6/8/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

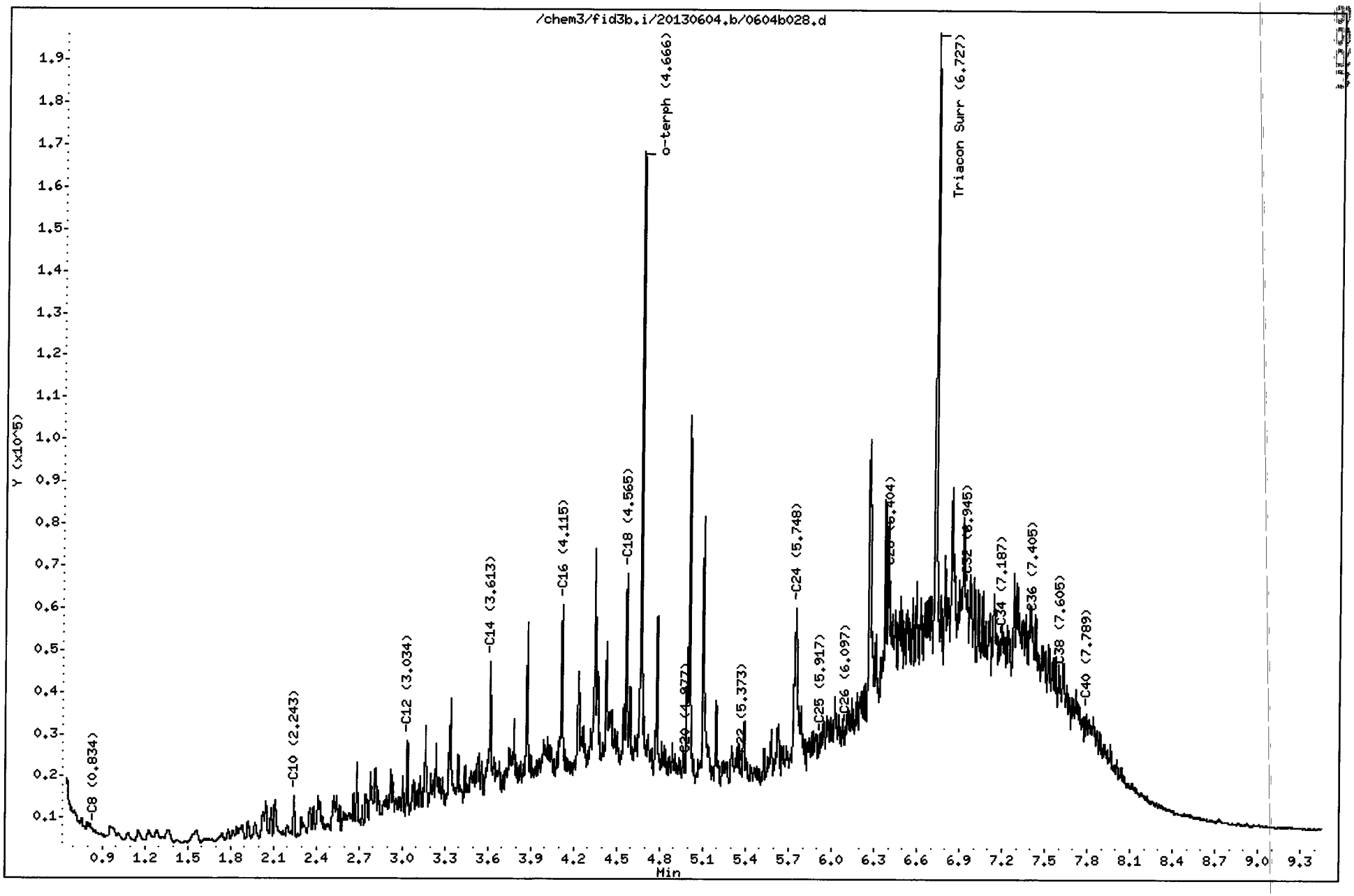
Data File: /chem3/fid3b.i/20130604.b/0604b028.d
Date : 04-JUN-2013 18:19
Client ID: KC-VT-1593-2013 MS
Sample Info: WR99DMS,5

Column phase: RTX-1

Instrument: fid3b.i

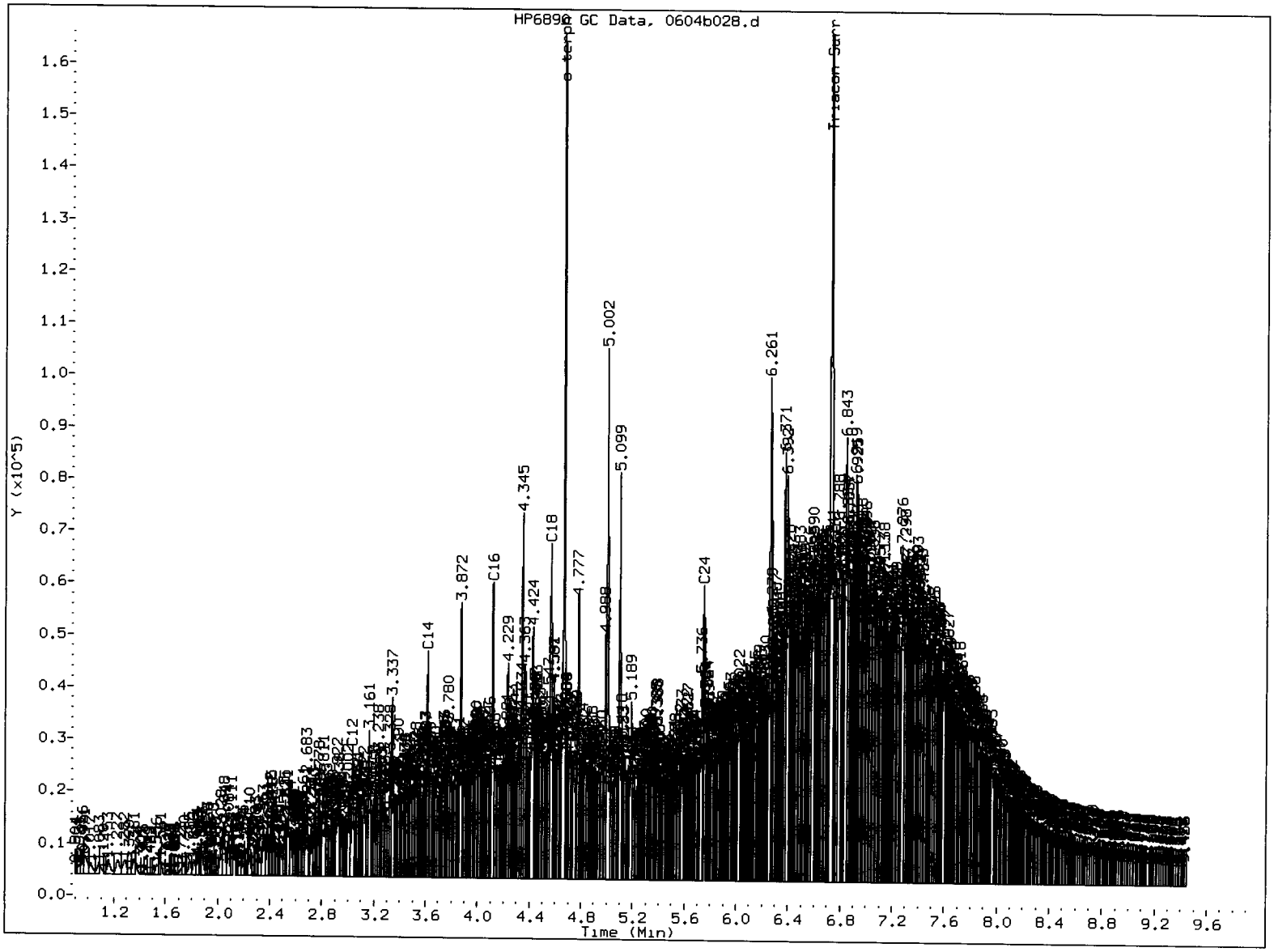
Operator: JW
Column diameter: 0.25

JC 6/6/13



FID:3B-2C/RTX-1 WR99DMS

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JRJ Date: 6/8/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b029.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WR99DMSD
Client ID: KC-VT-1593-2013 MSD
Injection: 04-JUN-2013 18:37
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	603747	45
C8	0.830	0.002	4080	5182	WATPHD	(C12-C24)	3797689	366.66
C10	2.243	0.004	11720	9927	WATPHM	(C24-C38)	5426542	549.64
C12	3.032	-0.008	26168	26419	AK102	(C10-C25)	4340897	351.30 M
C14	3.613	-0.003	49798	45007	AK103	(C25-C36)	4834106	680.05 M
C16	4.113	0.000	73772	56833				
C18	4.563	0.004	75846	71007				
C20	4.975	-0.005	22947	8905				
C22	5.373	-0.001	19847	3503	MSPIRIT	(Tol-C12)	603747	43.95
C24	5.738	-0.005	46918	22336				
C25	5.916	-0.002	28457	14167				
C26	6.092	-0.002	32966	18273				
C28	6.398	-0.006	86192	56534				
C32	6.952	0.001	60607	22642				
C34	7.189	0.004	58155	50059				
Filter Peak	----							
C36	7.399	-0.002	57074	33985				
o-terph	4.667	0.000	178417	90302	JET-A	(C10-C18)	2473862	228.55
Triacon Surr	6.735	0.034	142596	128483				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	90302	6.7	74.6
Triacontane	128483	9.8	109.4

JW 6/6/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

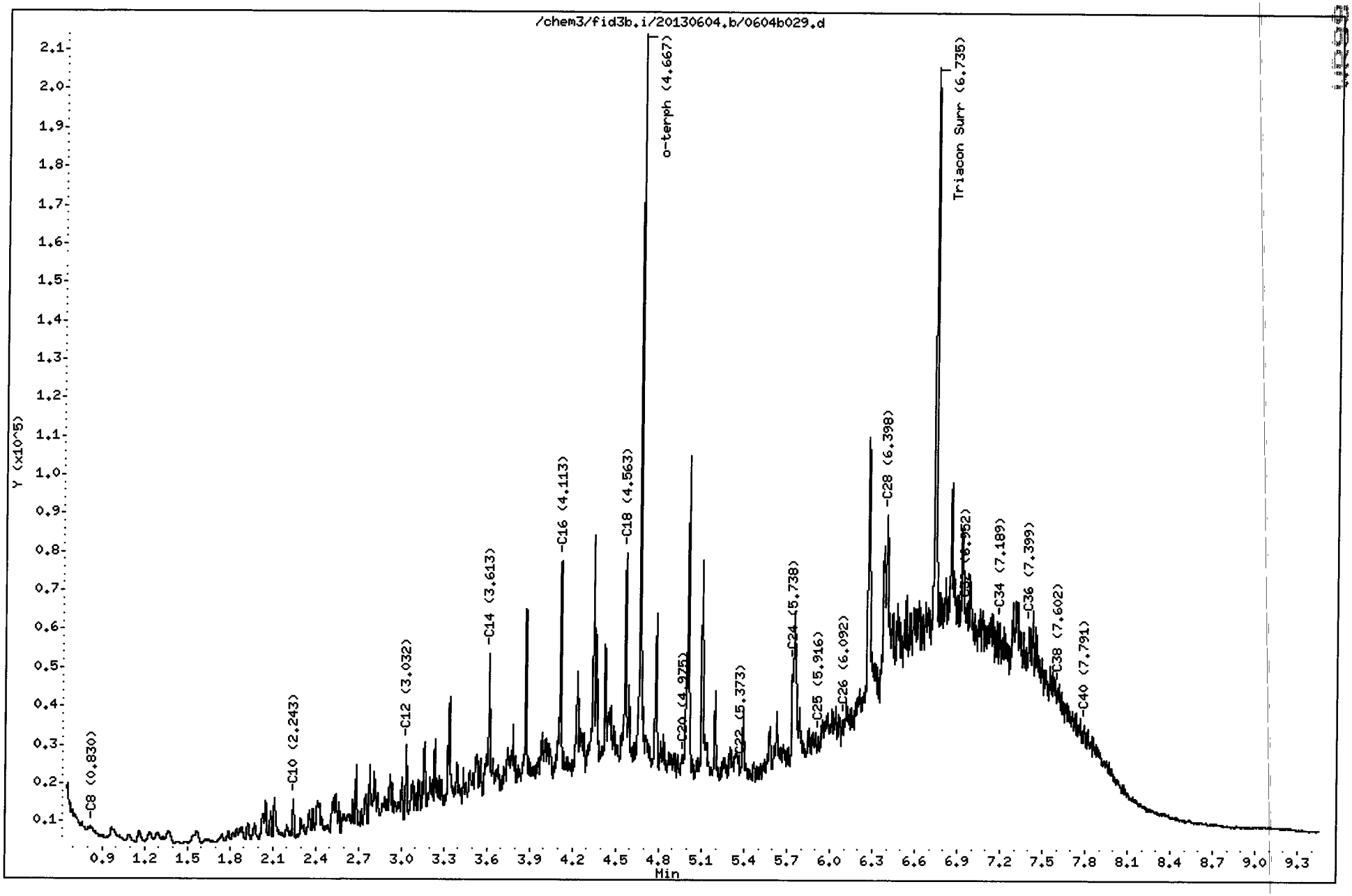
Data File: /chem3/fid3b.i/20130604.b/0604b029.d
Date : 04-JUN-2013 18:37
Client ID: KC-VT-1593-2013 MSD
Sample Info: WR99DMSD,5

Column phase: RTX-1

Instrument: fid3b.i

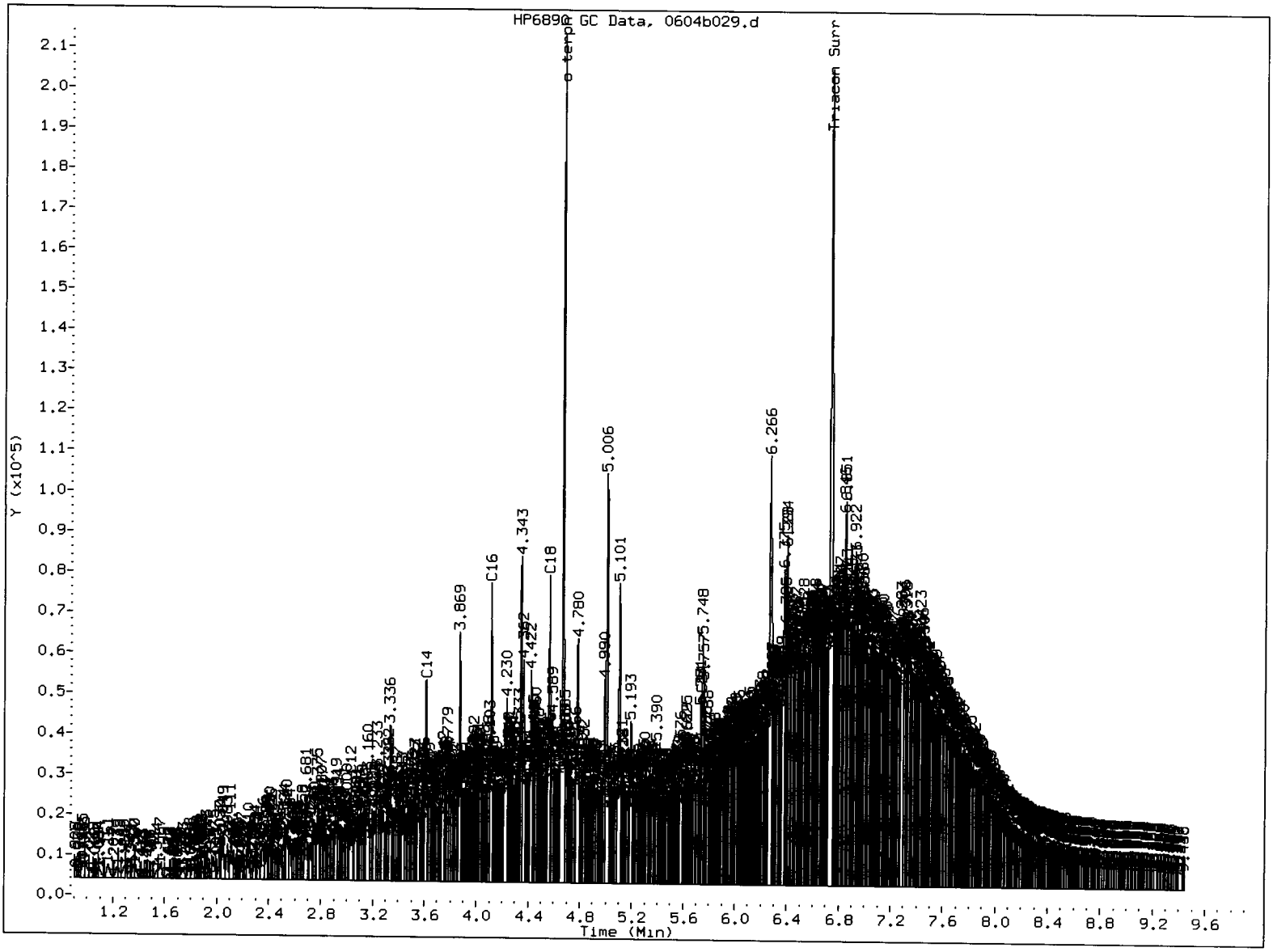
Operator: JW
Column diameter: 0.25

JW 6/8/13



FID:3B-2C/RTX-1 WR99DMSD

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: SW Date: 6/8/12

WR99 : 82069

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b032.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: DIESEL#3
Client ID:
Injection: 04-JUN-2013 19:35
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	627736	46
C8	0.828	-0.001	4043	5551	WATPHD	(C12-C24)	2468390	238.32
C10	2.247	0.008	15810	12131	WATPHM	(C24-C38)	84260	8.53
C12	3.033	-0.006	28959	27387	AK102	(C10-C25)	2908437	235.37 M
C14	3.614	-0.002	47820	47651	AK103	(C25-C36)	53750	7.56
C16	4.113	0.000	73249	57221				
C18	4.552	-0.007	19449	4750				
C20	4.973	-0.006	12217	5439				
C22	5.371	-0.003	6546	3424	MSPIRIT	(Tol-C12)	627736	45.69
C24	5.747	0.004	1998	1082				
C25	5.914	-0.003	1066	512				
C26	6.096	0.002	410	94				
C28	6.409	0.005	36	4				
C32	6.953	0.003	388	45				
C34	7.189	0.003	800	346				
Filter Peak	----							
C36	7.398	-0.003	1199	500				
o-terph	4.677	0.010	946992	609223	JET-A	(C10-C18)	2174509	200.89
Triacon Surr	6.699	-0.002	127	65				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	609223	45.3	100.7
Triacontane	65	0.0	0.0

JW 6/6/13

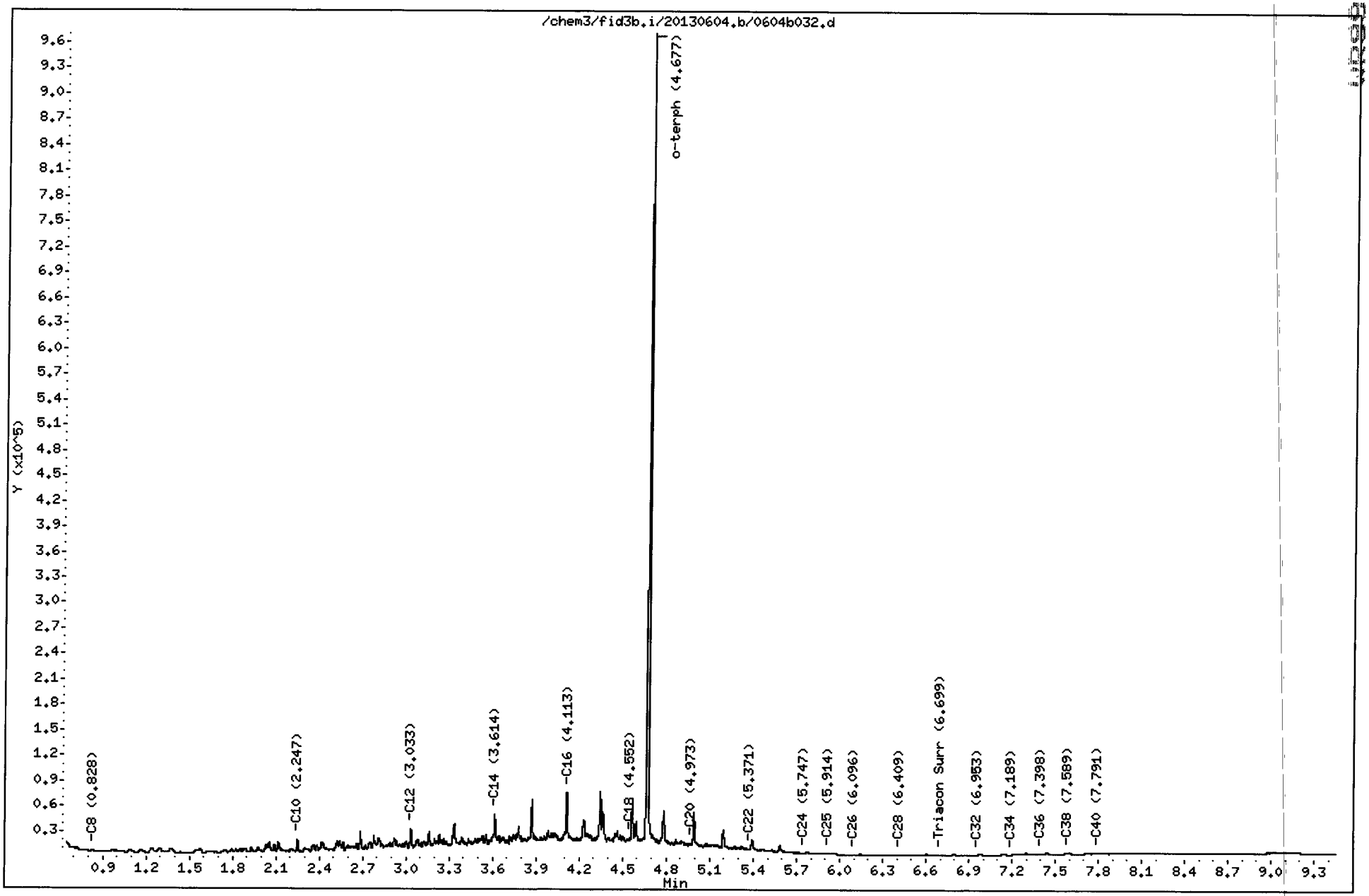
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b032.d
Date : 04-JUN-2013 19:35
Client ID:
Sample Info: DIESEL#3

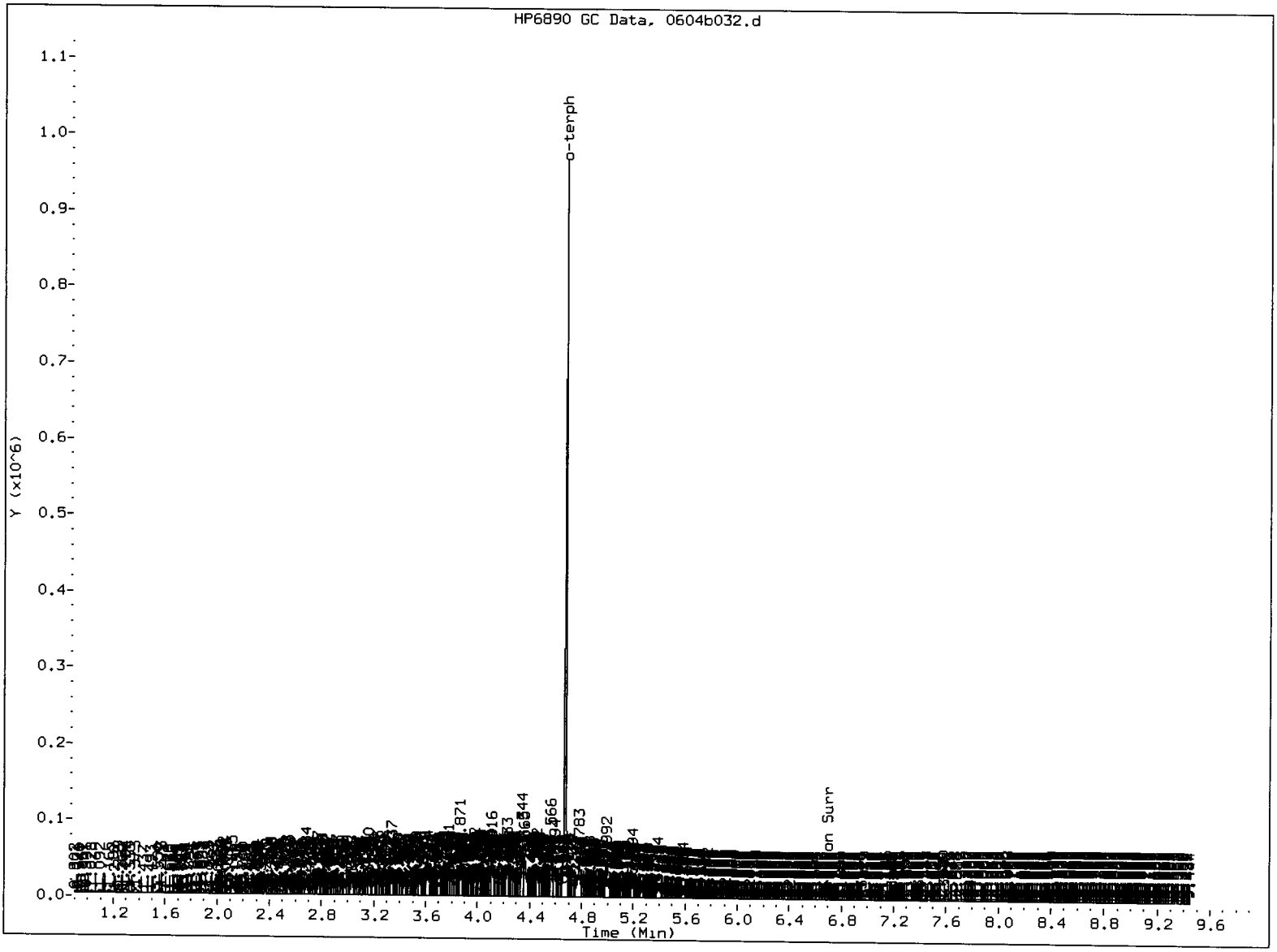
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL#3 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 6/8/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b033.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: MOIL#3
Client ID:
Injection: 04-JUN-2013 19:54
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	56154	4
C8	0.831	0.002	2631	933	WATPHD	(C12-C24)	408909	39.48
C10	2.230	-0.009	262	247	WATPHM	(C24-C38)	5126802	519.28
C12	3.038	-0.001	216	144	AK102	(C10-C25)	528304	42.75
C14	3.621	0.005	203	101	AK103	(C25-C36)	4436491	624.11 M
C16	4.109	-0.004	220	103				
C18	4.557	-0.002	345	91				
C20	4.981	0.001	1028	365				
C22	5.371	-0.003	5665	3180	MSPIRIT	(Tol-C12)	56154	4.09
C24	5.743	0.000	21398	10555				
C25	5.919	0.002	30563	14254				
C26	6.092	-0.002	35064	19873				
C28	6.403	-0.001	45105	16118				
C32	6.950	-0.001	51205	13136				
C34	7.186	0.000	56972	25579				
Filter Peak	----							
C36	7.403	0.002	63602	53202				
o-terph	4.675	0.008	2219	2023	JET-A	(C10-C18)	40203	3.71
Triacon Surr	6.763	0.062	506774	675513				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2023	0.2	0.3
Triacontane	675513	51.8	115.0

JW 6/5/13

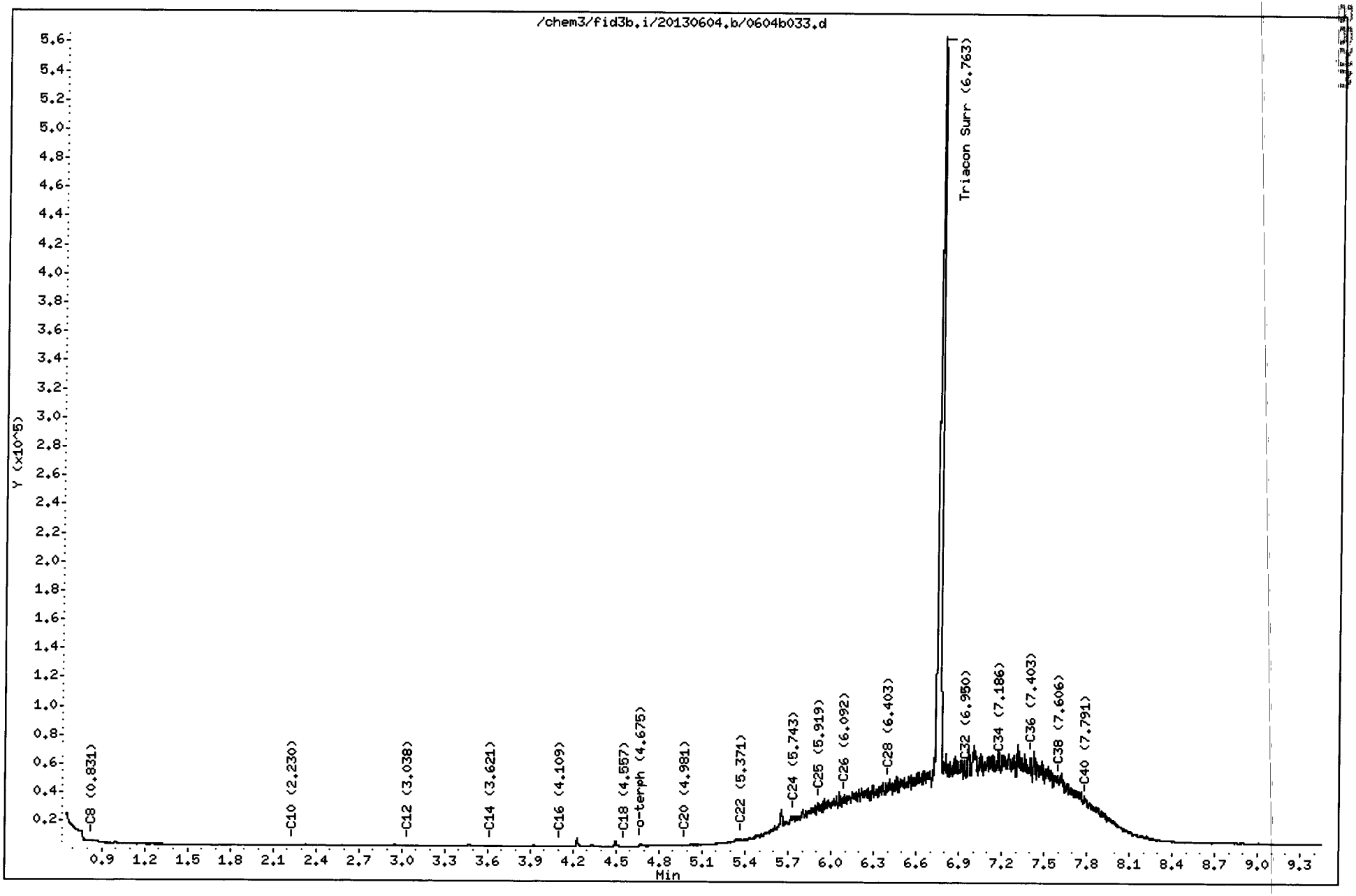
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b033.d
Date : 04-JUN-2013 19:54
Client ID:
Sample Info: MOIL#3

Instrument: fid3b.i

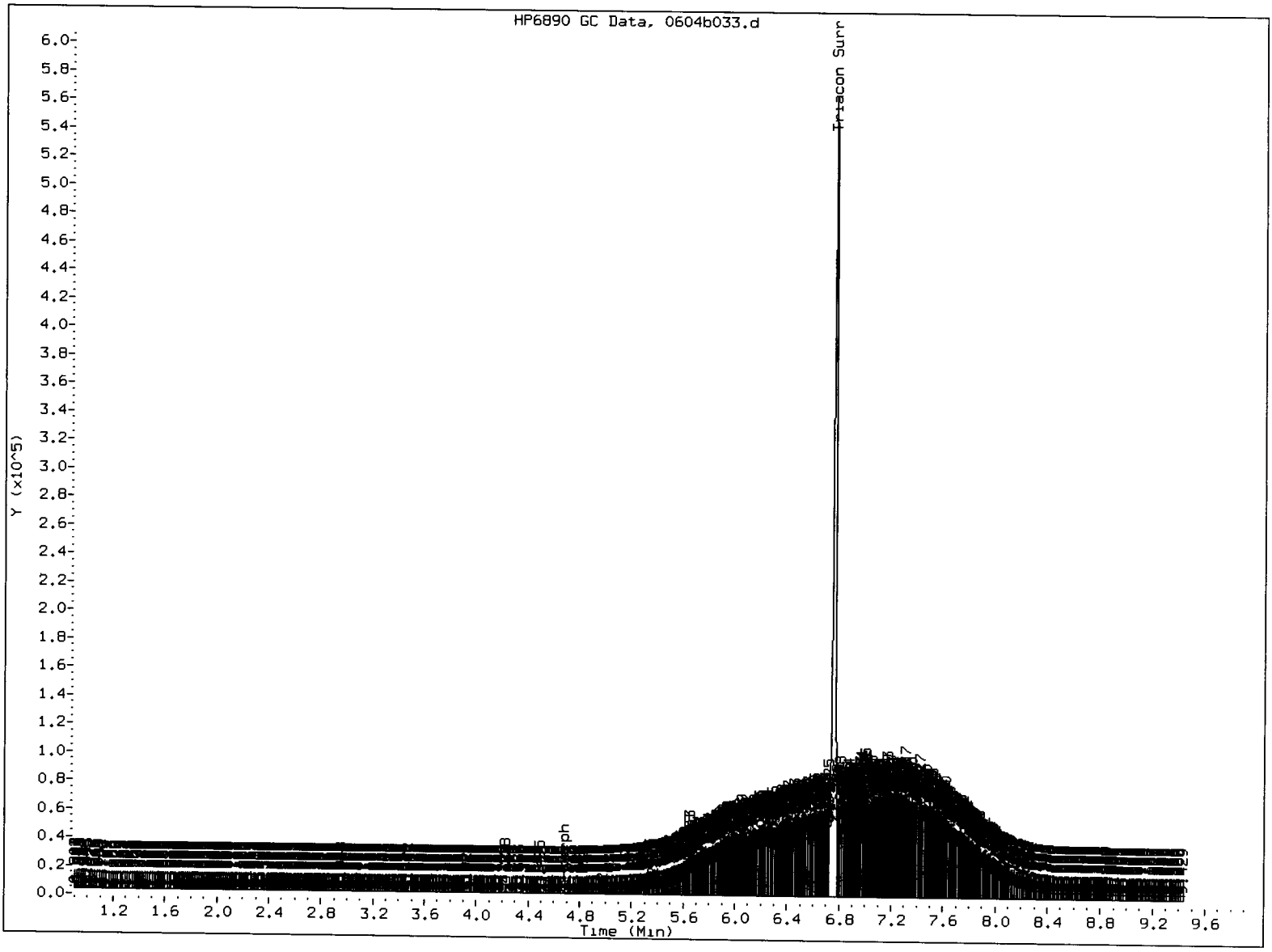
Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 MOIL#3

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/8/12

TPHG Raw Data
Preparation Log

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet
(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.	Client ID	Prep/Extraction Date	MeOH Lot No.	Analyst
Several	Several	6/3/13		PC

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Split Volume (µL)	
1	WS31A	2		X	D6695	33.52	28.017	5.503	5	900	
2	B	2			DH247	33.93	30.032	3.892			
3	C	2			D6695	31.80	28.309	3.491			
4	D	2			DH247	34.66	30.046	4.614			
5	E	2				35.54	30.203	5.337			
6	F	2				35.79	29.967	5.743			
7	WS04A	3			D6695	38.08	28.126	9.964			
8	WS16A	3				32.29	28.320	3.97			
9	B	3				33.17	28.273	4.897			
10	C	2				31.18	28.273	2.907			
11	WS21A	3				34.39	28.099	6.291			
12	MW99D	3		↓	↓	34.76	28.074	6.686	↓	↓	
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:	4005016 PTO					

TPHG Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Curve Date(s): 10/23/12 Internal Standard ID N/A Expiration N/A

BFB Tune Meets Criteria? N/A YES / NO		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria? YES / NO		ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated? N/A	YES / NO	Calibration Points Dropped?	YES / NO
Minimum Response Factors Met N/A	YES / NO	Purge Volume (mL)	5

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	VW758-3	2/1/13	Ultra Scientific	VW765-1	3/13/12
SPEX	VW2541	2/2/12	SPEX	VW765-5	3/27/12

Detail problems, corrective actions and/or other pertinent information below:

MI's for peaks not found, baseline corrections.
TFT inflated on high pt of gas curve due to hydrocarbon interference.
MTBE @ 0.25 & 0.5 pts of BETX curve dropped & low pt FID confirmation dropped as well for MTBE

Analyst: JW **Date:** 10/25/12

Reviewer: [signature] **Date:** 10/26/12

URSG : 021GG

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-2.b/1023a011.d
Level 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Level 3: /chem3/pid1.i/20121023-2.b/1023a009.d
Level 4: /chem3/pid1.i/20121023-2.b/1023a008.d
Level 5: /chem3/pid1.i/20121023-2.b/1023a007.d
Level 6: /chem3/pid1.i/20121023-2.b/1023a006.d
Level 7: /chem3/pid1.i/20121023-2.b/1023a005.d
Level 8: /chem3/pid1.i/20121023-2.b/1023a004.d

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	+++++	+++++	72.00000	75.40000	71.84000	72.14000		
	72.39000	68.24000					72.00167	3.161
2 Benzene	228	254	260	255	246	248		
	247	246					248	3.847
4 Toluene	256	234	210	224	220	219		
	220	216					225	6.342
5 Ethylbenzene	192	200	198	201	196	198		
	199	193					197	1.663
6 M/P-Xylene	216	208	212	220	215	217		
	218	215					215	1.653
7 O-Xylene	160	158	168	171	172	171		
	173	170					168	3.365

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	100.000 Level 7	200.000 Level 8	___ RRF	% RSD
$ 3 TFT(Surr)	38.86364	37.09091	+++++	37.55224	37.30000	36.97744	38.10674	39.27500	37.88085	2.372
$ 8 BB(Surr)	81.36364	78.68182	+++++	80.38806	80.55000	80.24060	82.00562	79.97000	80.45710	1.310

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Average %RSD Results.

Calculated Average %RSD = 2.96423
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Level 2: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Level 3: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Level 4: /chem3/pid1.i/20121023-1.b/1023a008.d/1023a008.cdf
Level 5: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Level 6: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Level 7: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Level 8: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf

Compound	0.000e+00 Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD	
	0.000e+00 Level 7	Level 8							
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
6 MTBE	+++++	472	600	610	595	575			
	561	509					560	9.173	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	RRF	% RSD	
7 nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
9 BENZENE	1572	1618	1515	1498	1392	1352	1307	1232	1436	9.456	
11 nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
12 Toluene	1464	1522	1397	1472	1356	1326	1283	1207	1378	7.690	
13 nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
14 ETHYLBENZENE	132	126	121	118	109	107	103	95.88000	114	10.830	
15 M/P-XYLENE	1612	1580	1476	1417	1290	1260	1226	1156	1377	12.313	
16 O-XYLENE	1504	1538	1492	1414	1330	1289	1249	1171	1373	9.739	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	0.000e+00 Level 7	0.000e+00 Level 8	___ RRF	% RSD	
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 10 TFT(Surr)	33.31818	31.81818	+++++	31.61194	31.34000	30.78195	30.91573	30.69500	31.49728	2.884	
$ 18 BB(Surr)	22.00000	20.54545	+++++	20.70149	20.31000	19.83459	19.84270	18.93000	20.30918	4.677	
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 10.58832
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a004.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a004.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 200
Client ID:
Injection Date: 23-OCT-2012 17:50
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	6139	78345	194.1	TFT(Surr)
15.390	0.003	3786	32155	185.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1708650	4.771 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	1708791	2.361 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	1600978	2.747 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1713577	4.568 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.003	7855	207.4	TFT(Surr)
15.397	0.003	15994	198.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.078	0.001	49204	198.42	Benzene
9.910	0.003	43241	192.19N	Toluene
12.793	0.006	38665	196.10	Ethylbenzene
12.957	0.014	85891	399.48	M/P-Xylene
13.900	0.010	34089	203.10N	O-Xylene
4.650	-0.003	13648	189.55	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

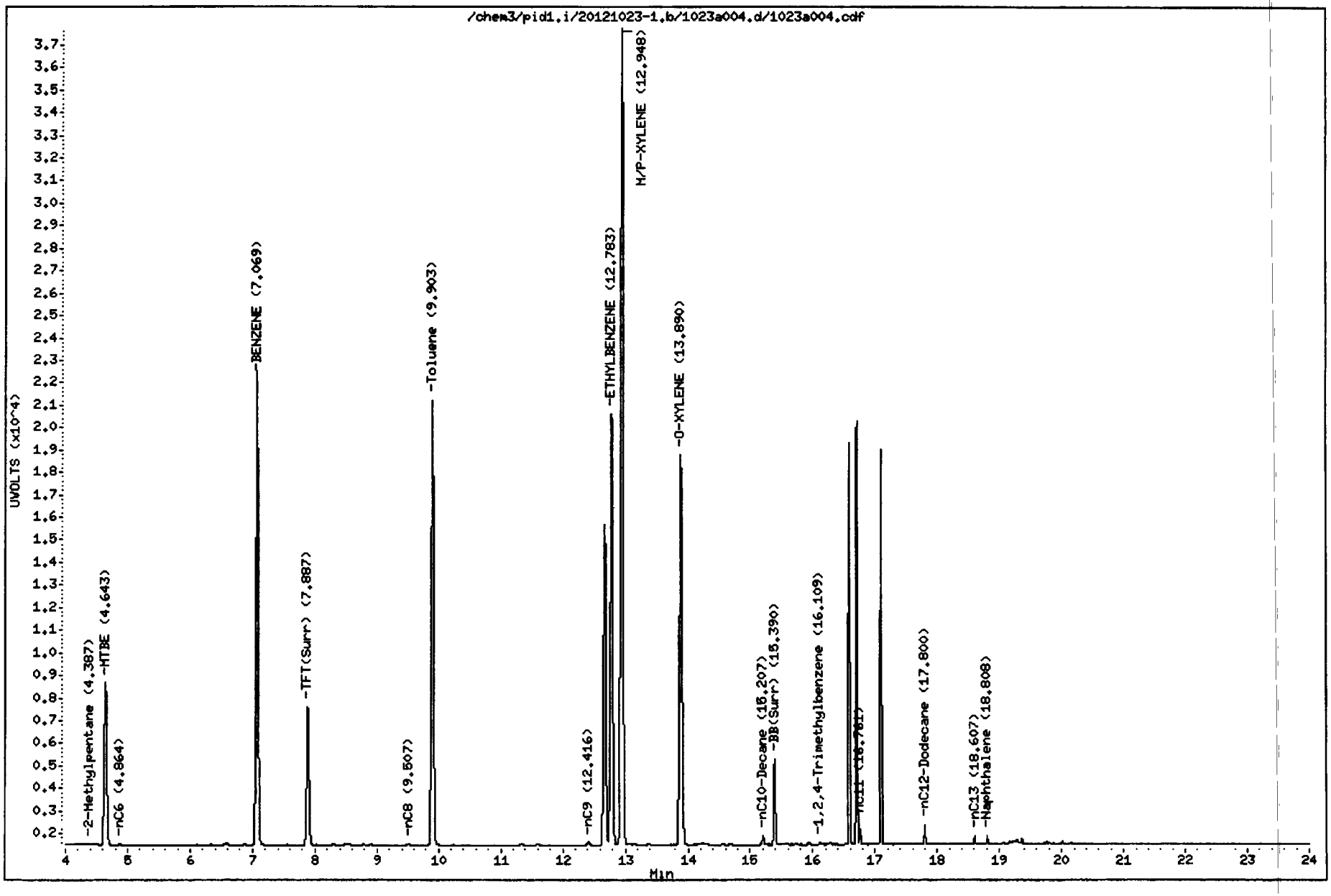
Sample Info: B 200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

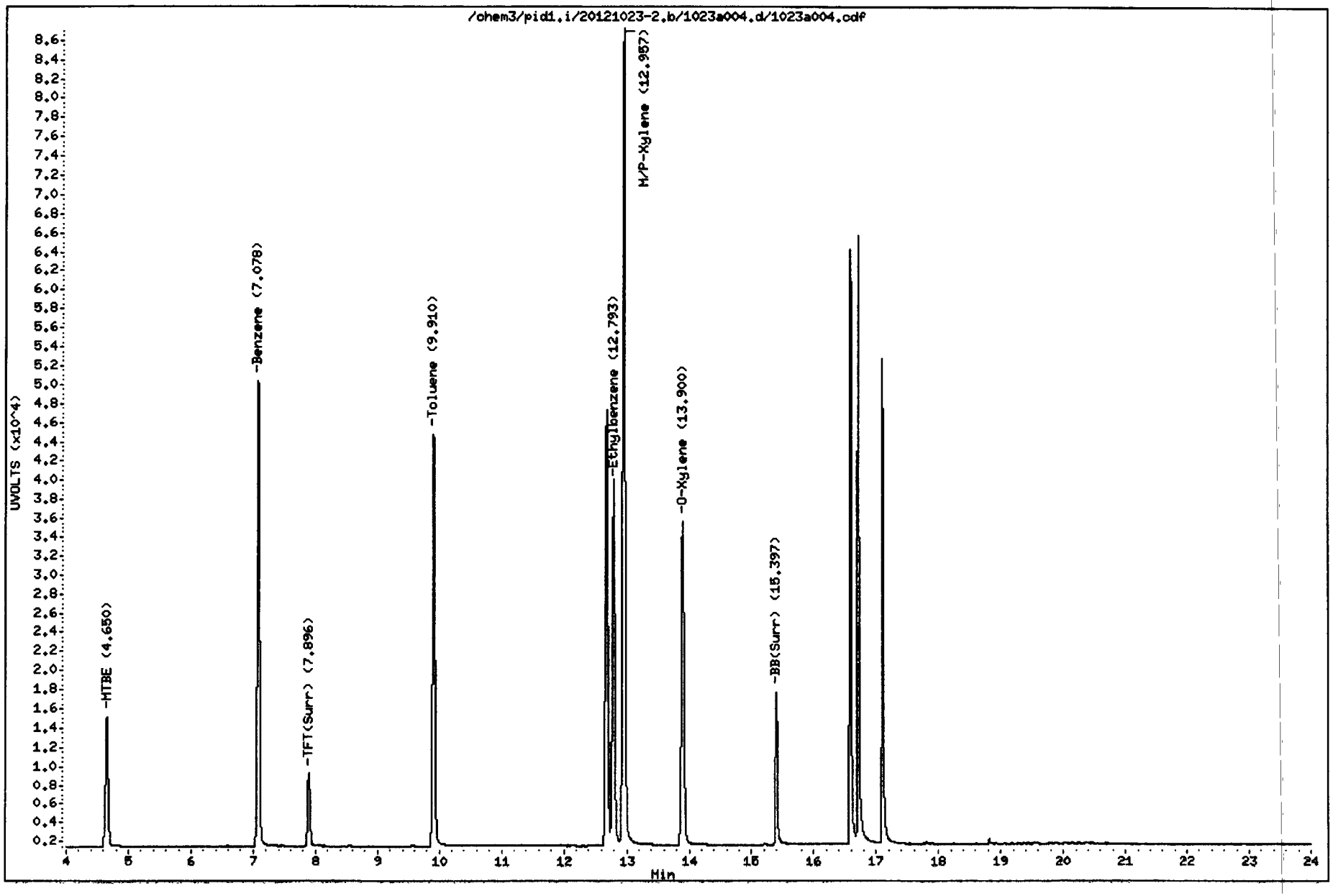
Sample Info: B 200

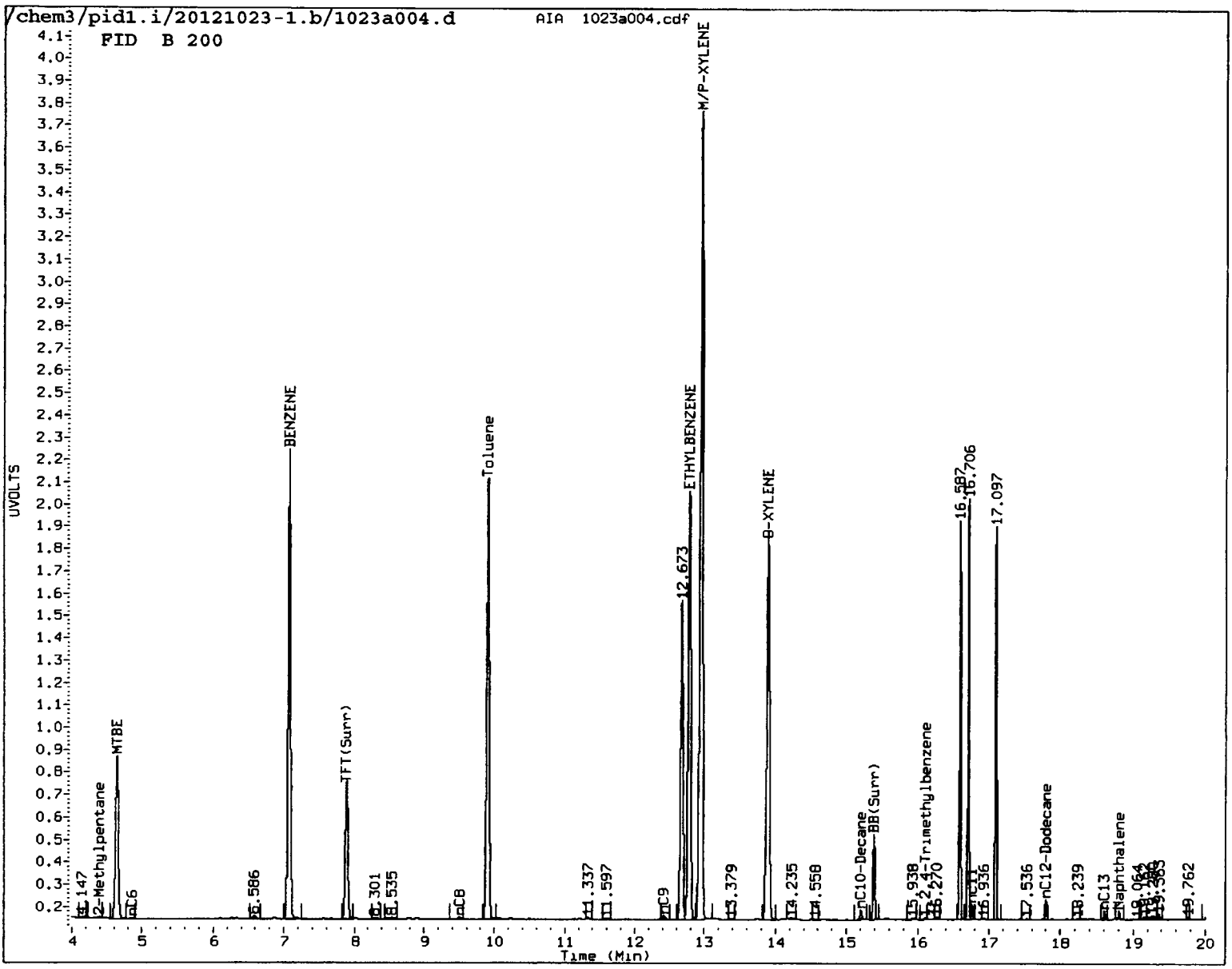
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



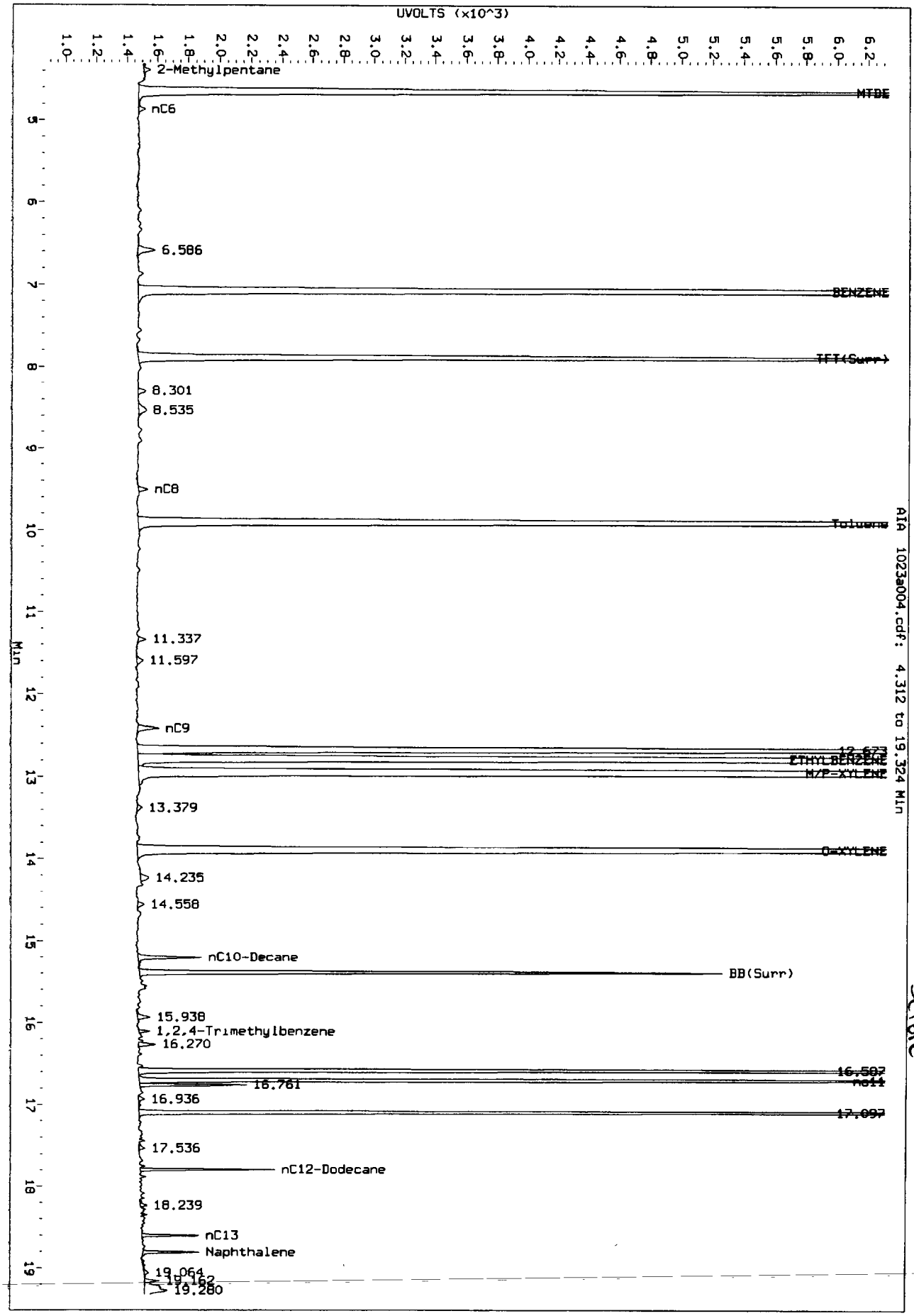


MANUAL INTEGRATION

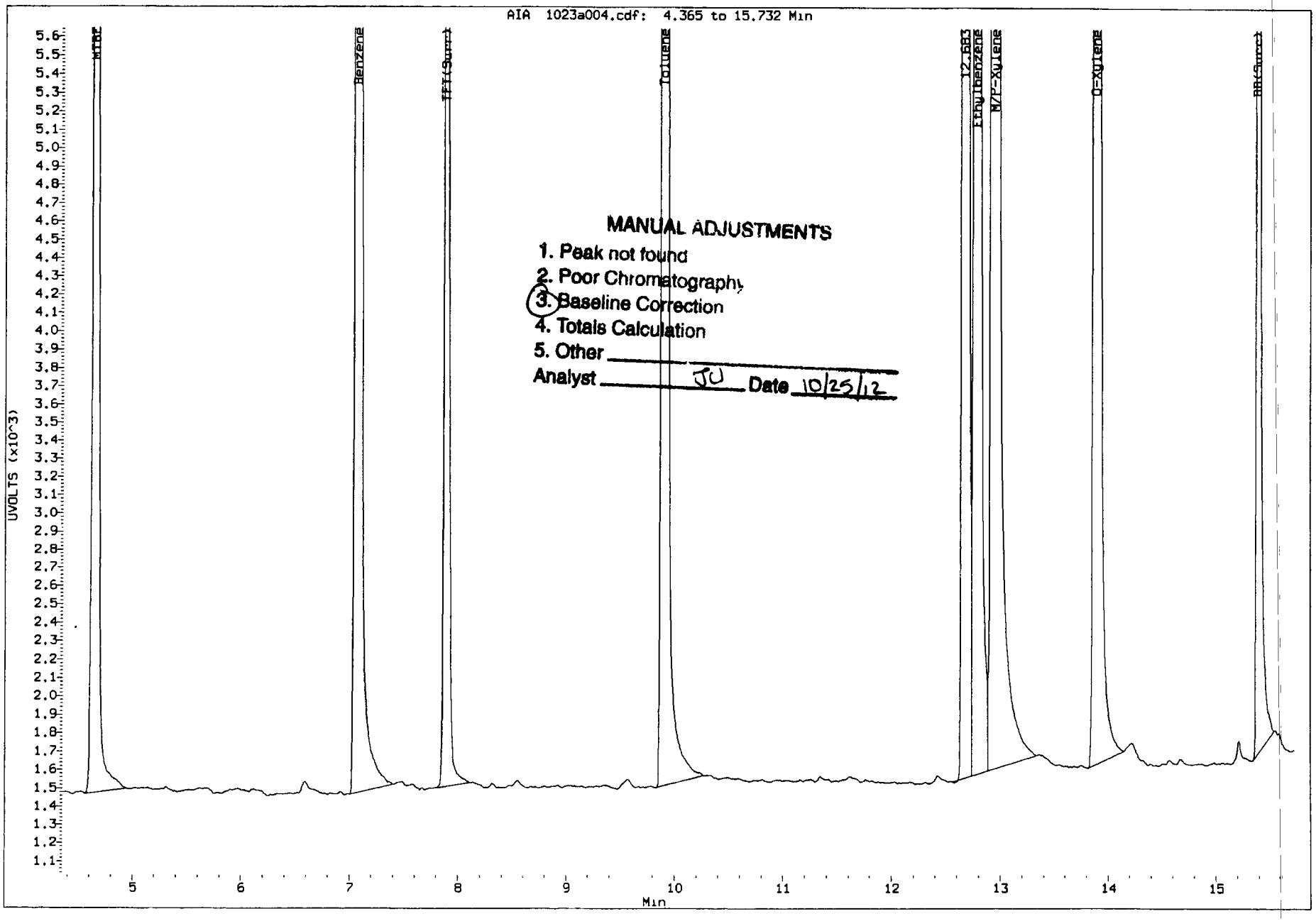
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

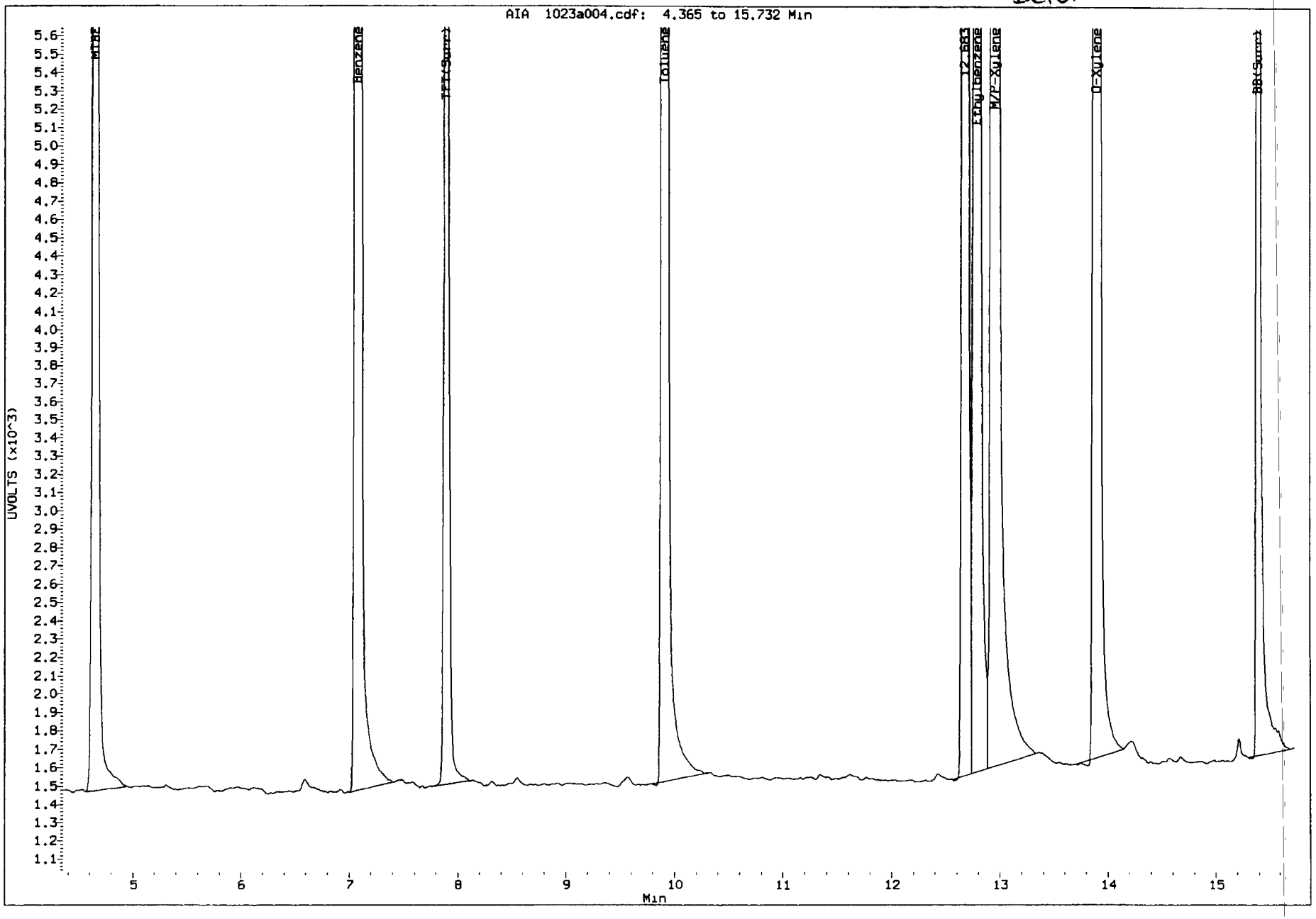

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:
UVOLTS (x10^3)
AIA 1023a004.cdf: 4.312 to 19.324 Min
Min
2-Methylpentane
MTBE
nC6
6.586
BENZENE
TFT(Surr)
8.301
8.535
nC8
Toluene
11.337
11.597
nC9
ETHYLBENZENE
M/P-XYLENE
13.379
O-XYLENE
14.235
14.558
nC10-Decane
BB(Surr)
15.938
1,2,4-Trimethylbenzene
16.270
16.761
16.936
17.536
nC12-Dodecane
18.239
nC13
Naphthalene
19.064
19.280

Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.1/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.1
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a005.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a005.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 100
Client ID:
Injection Date: 23-OCT-2012 18:20
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	5503	70111	174.0	TFT(Surr)
15.387	0.000	3532	29720	173.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	905684	2.529 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	901622	1.246 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	845537	1.451 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	906863	2.418 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	6783	179.1	TFT(Surr)
15.393	0.000	14597	181.4	BB(Surr)

SW8021 (PID)

JW 10/25/12

RT	Shift	Response	Amount	Compound
7.073	-0.003	24688	99.56N	Benzene
9.903	-0.003	22030	97.92N	Toluene
12.785	-0.002	19930	101.08	Ethylbenzene
12.948	0.004	43574	202.66	M/P-Xylene
13.893	0.003	17274	102.92N	O-Xylene
4.650	-0.003	7239	100.54N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

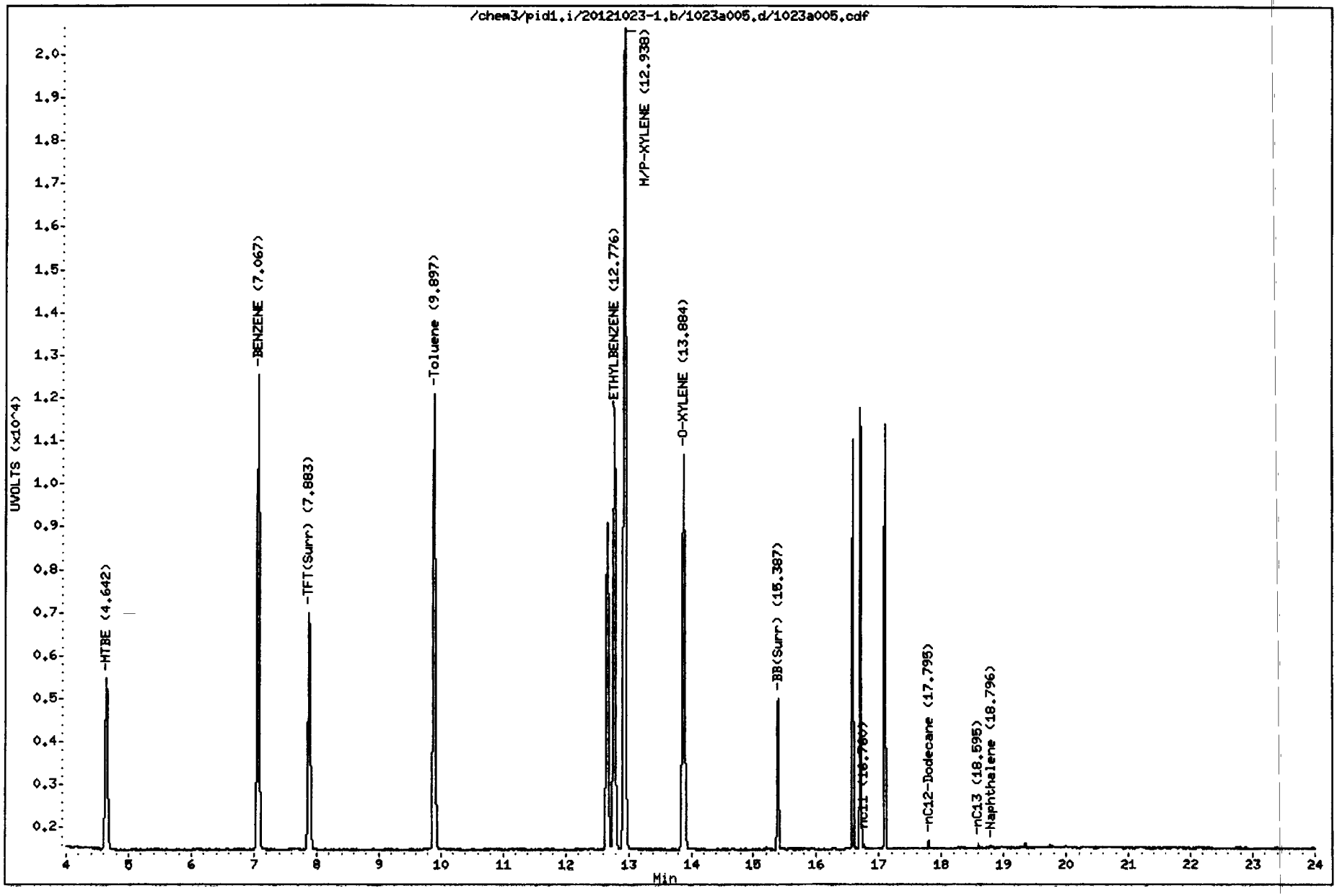
Sample Info: B 100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

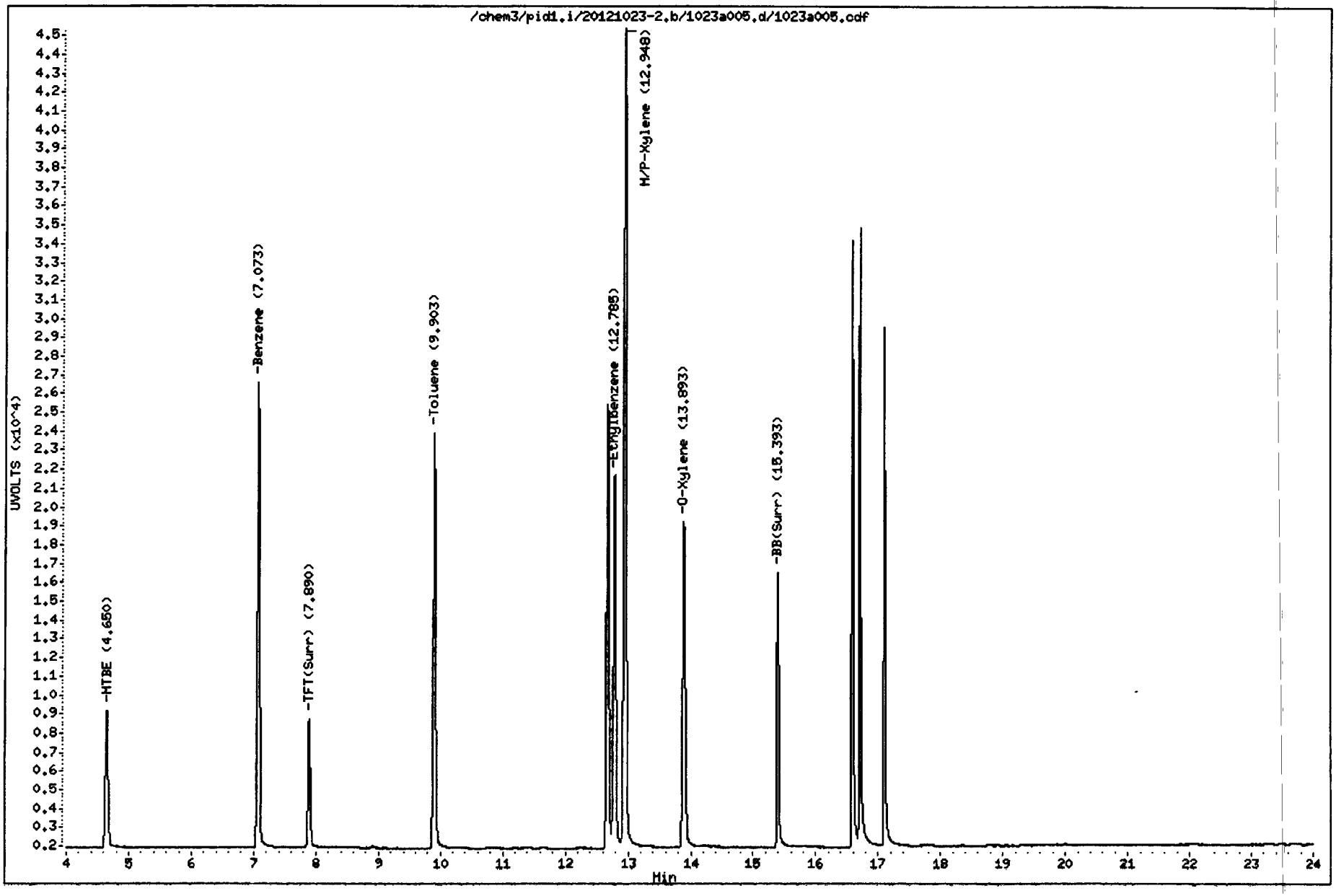
Sample Info: B 100

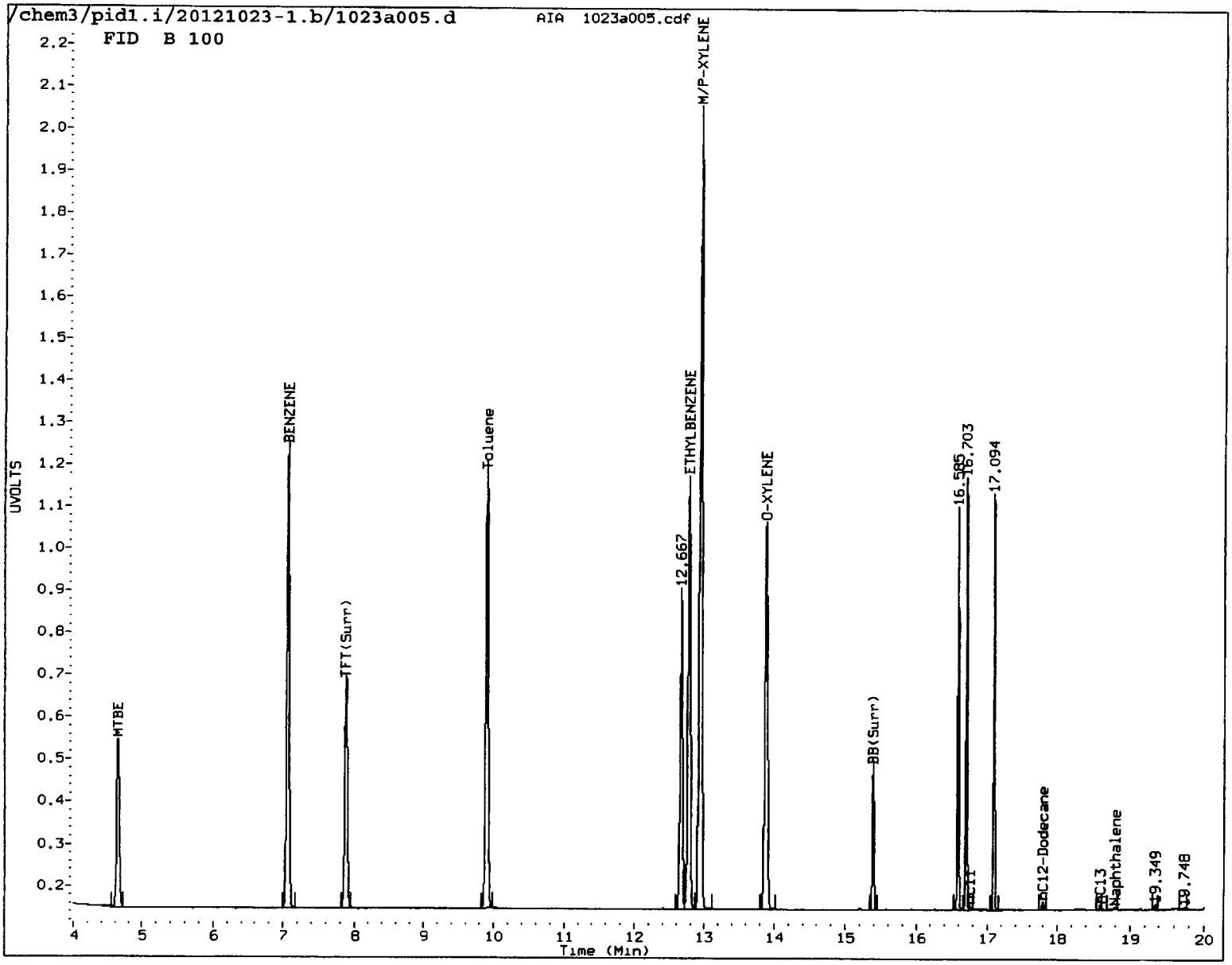
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

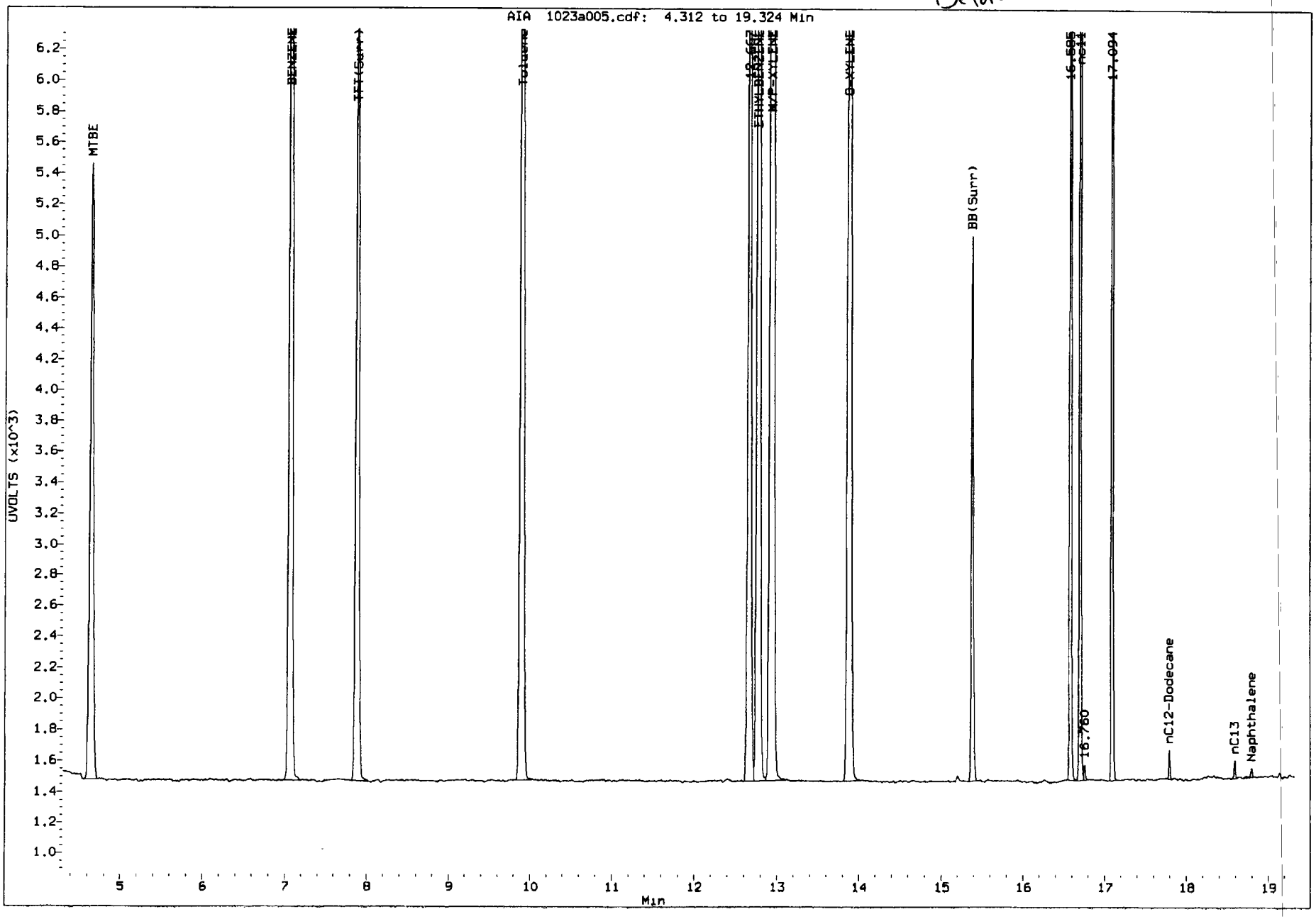
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

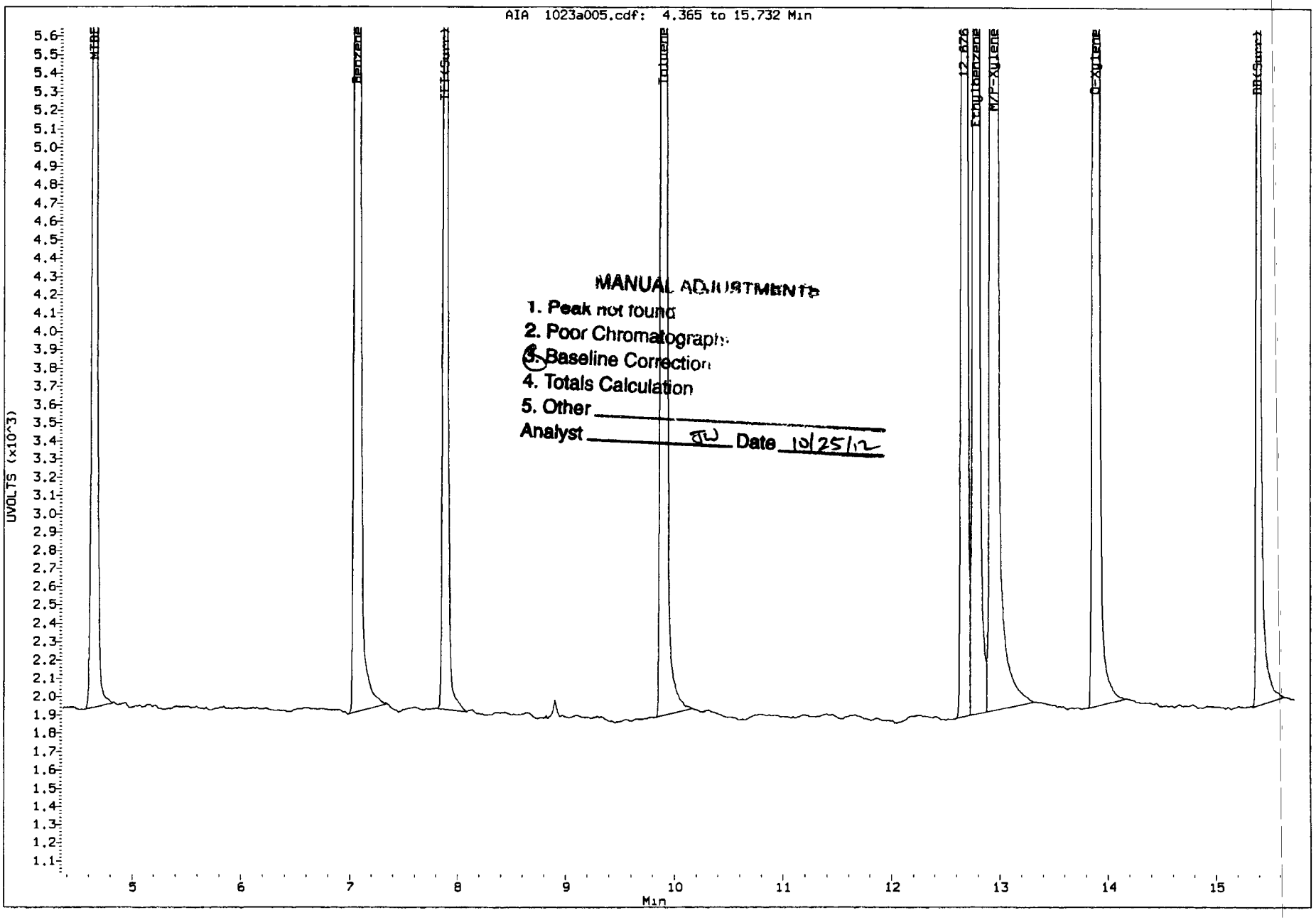
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before

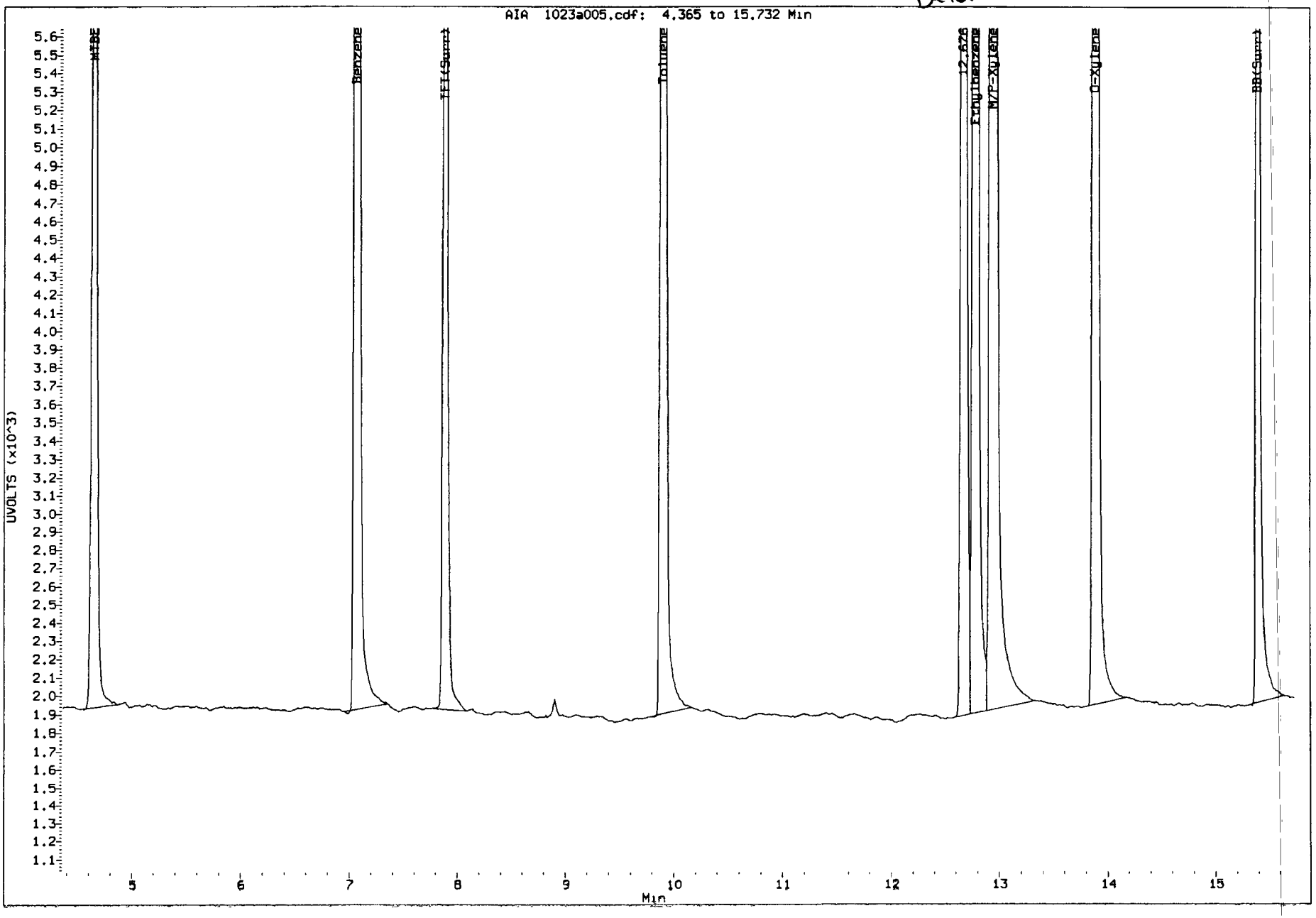


Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a006.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a006.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 50
Client ID:
Injection Date: 23-OCT-2012 18:49
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	4094	52140	129.5	TFT(Surr)
15.387	0.000	2638	22027	129.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	466249	1.302 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	465082	0.643 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	436325	0.749 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	466249	1.243 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	4918	129.8	TFT(Surr)
15.393	0.000	10672	132.6	BB(Surr)

SW8021 (PID)

JW 10/25/12

RT	Shift	Response	Amount	Compound
7.075	-0.002	12380	49.92	Benzene
9.903	-0.003	10965	48.74N	Toluene
12.784	-0.003	9886	50.14	Ethylbenzene
12.946	0.002	21661	100.75	M/P-Xylene
13.890	0.000	8535	50.85N	O-Xylene
4.653	0.000	3607	50.10N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

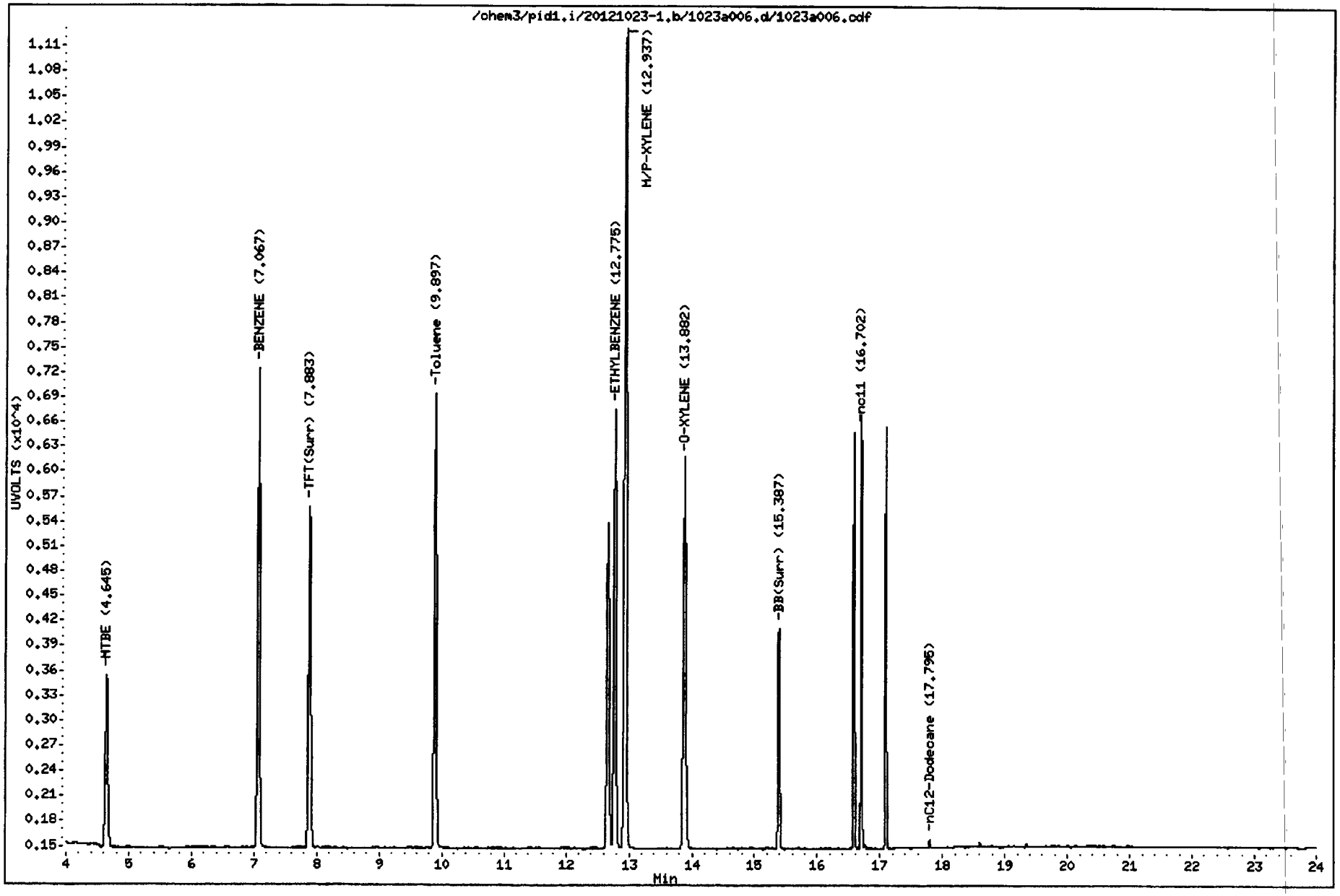
Sample Info: B 50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

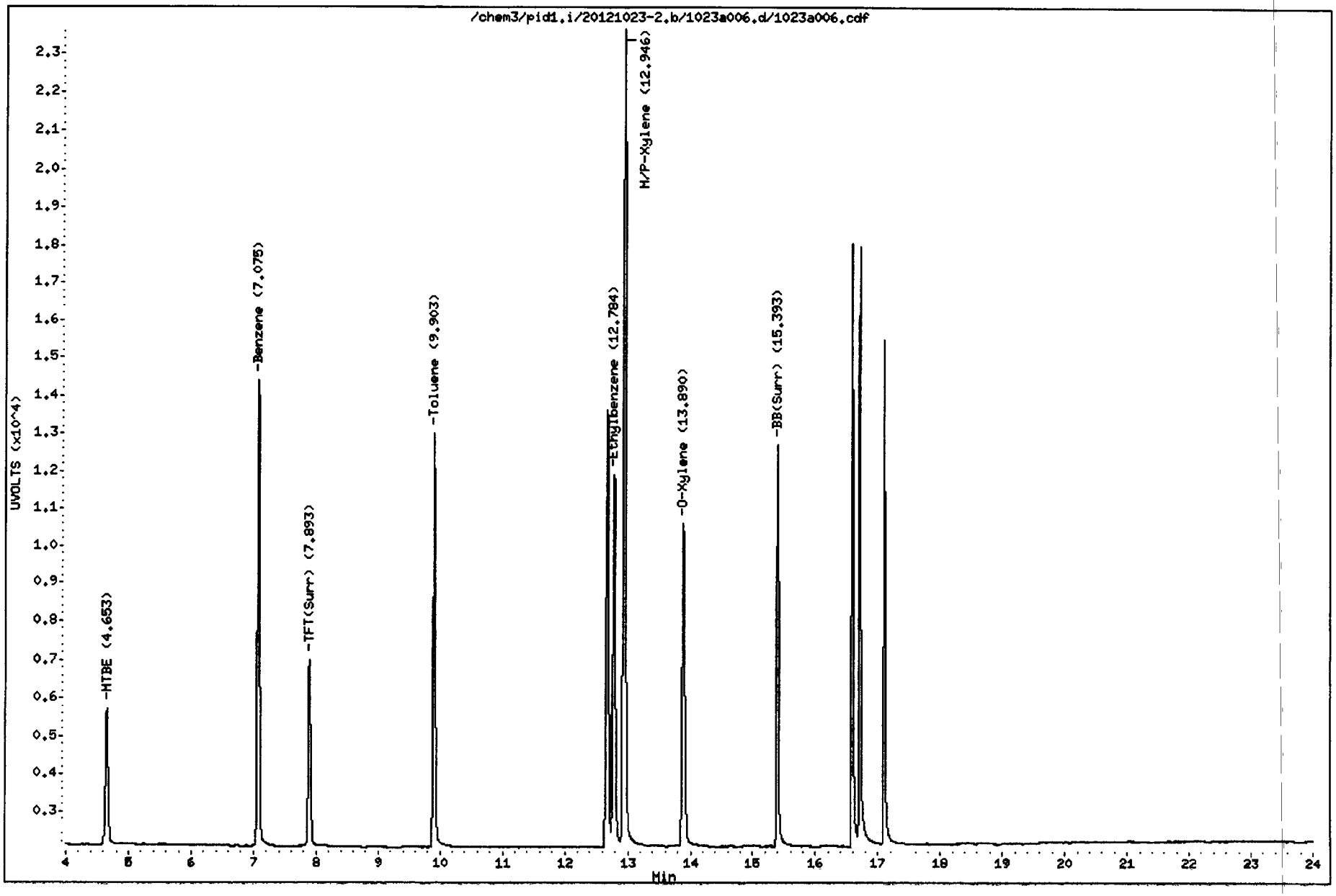
Sample Info: B 50

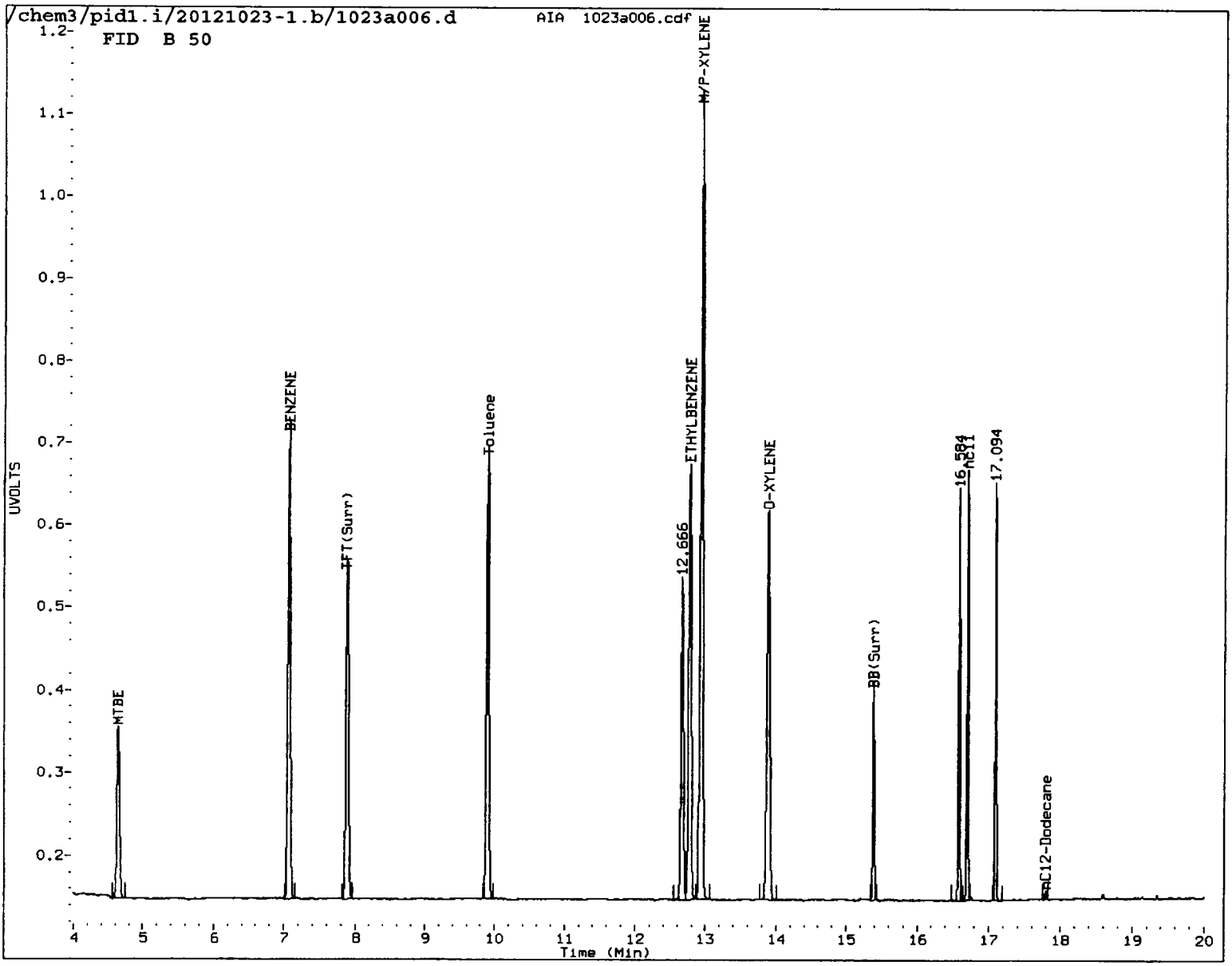
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

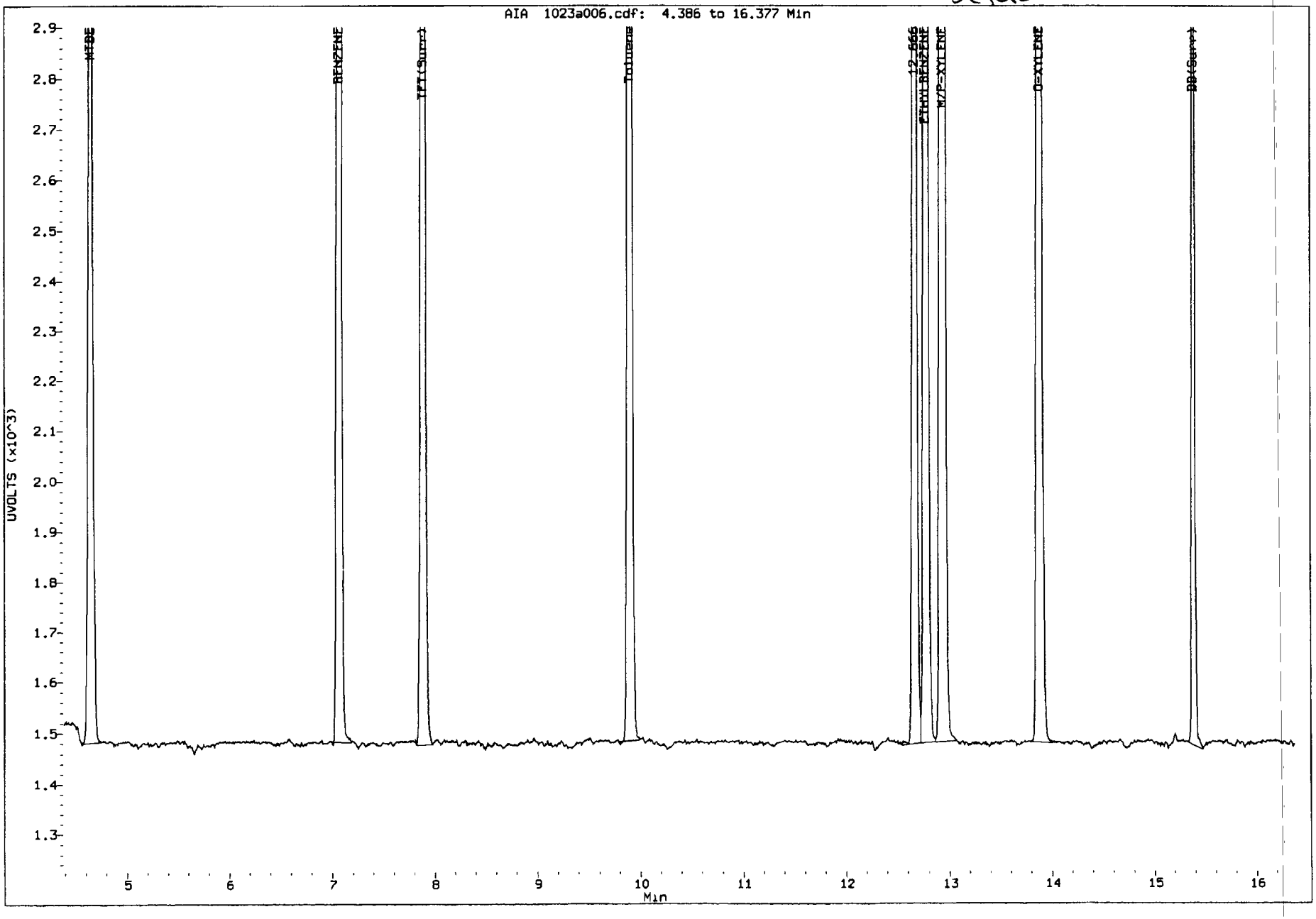
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

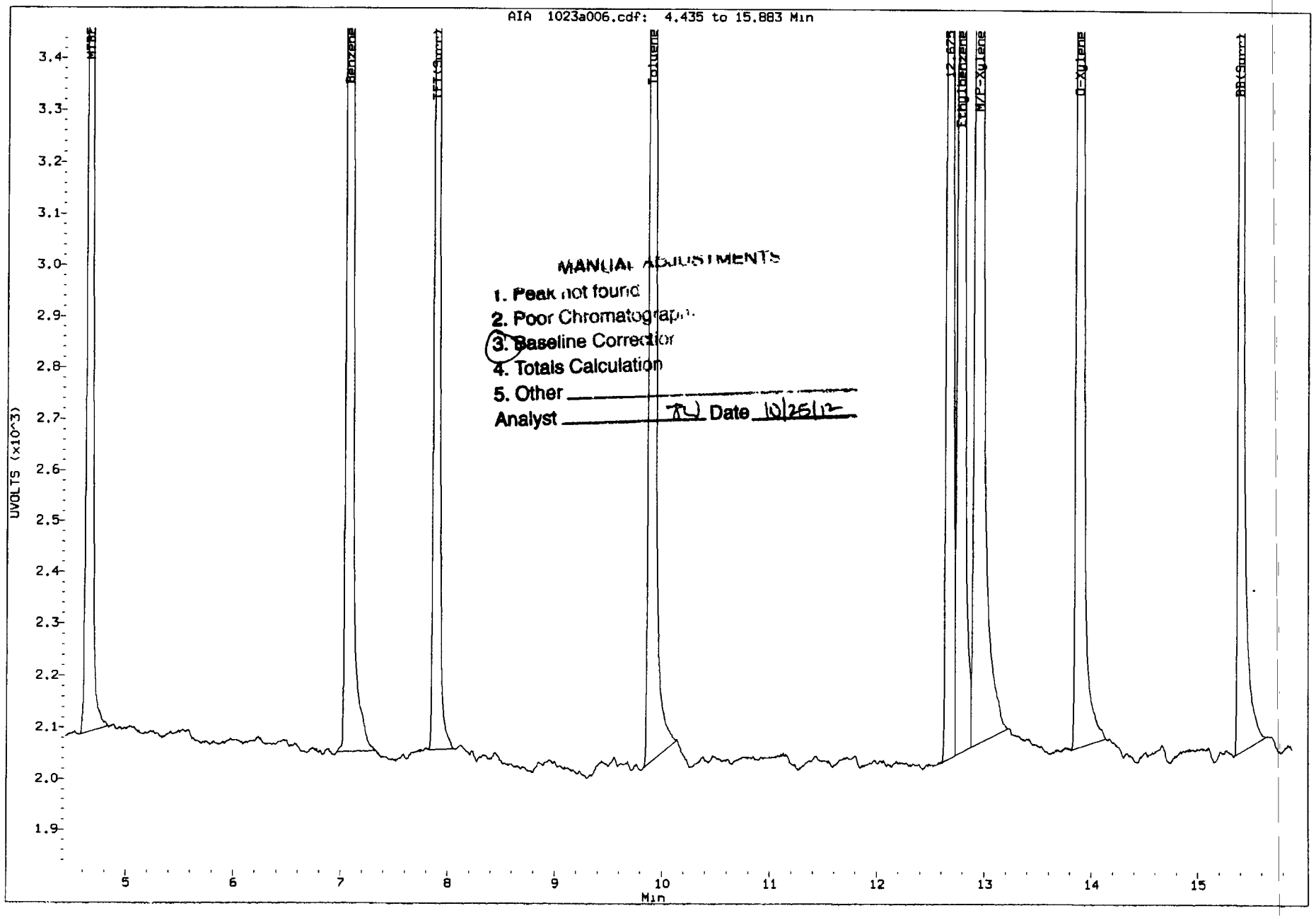
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:



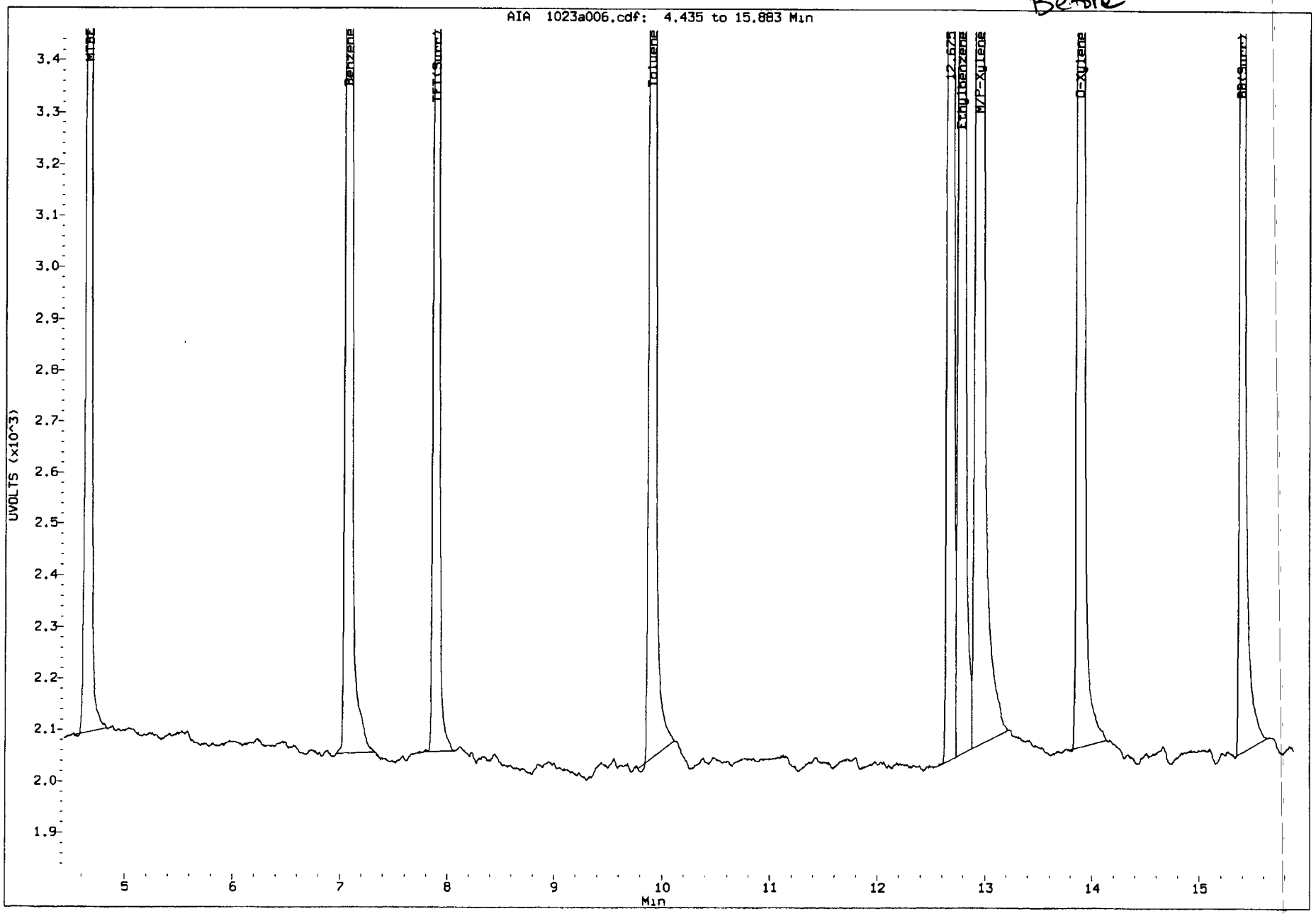
MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other _____

Analyst _____ Date 10/25/12

Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a007.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a007.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 25
Client ID:
Injection Date: 23-OCT-2012 19:18
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	3134	40267	99.2	TFT(Surr)
15.387	0.000	2031	17131	99.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	239603	0.669 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	238961	0.330 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	224080	0.384 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	239603	0.639 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3730	98.5	TFT(Surr)
15.397	0.003	8055	100.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	6159	24.84N	Benzene
9.907	0.000	5498	24.44N	Toluene
12.785	-0.002	4891	24.81	Ethylbenzene
12.946	0.003	10737	49.94	M/P-Xylene
13.893	0.003	4292	25.57N	O-Xylene
4.653	0.000	1796	24.94N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d

Date : 23-OCT-2012 19:18

Client ID:

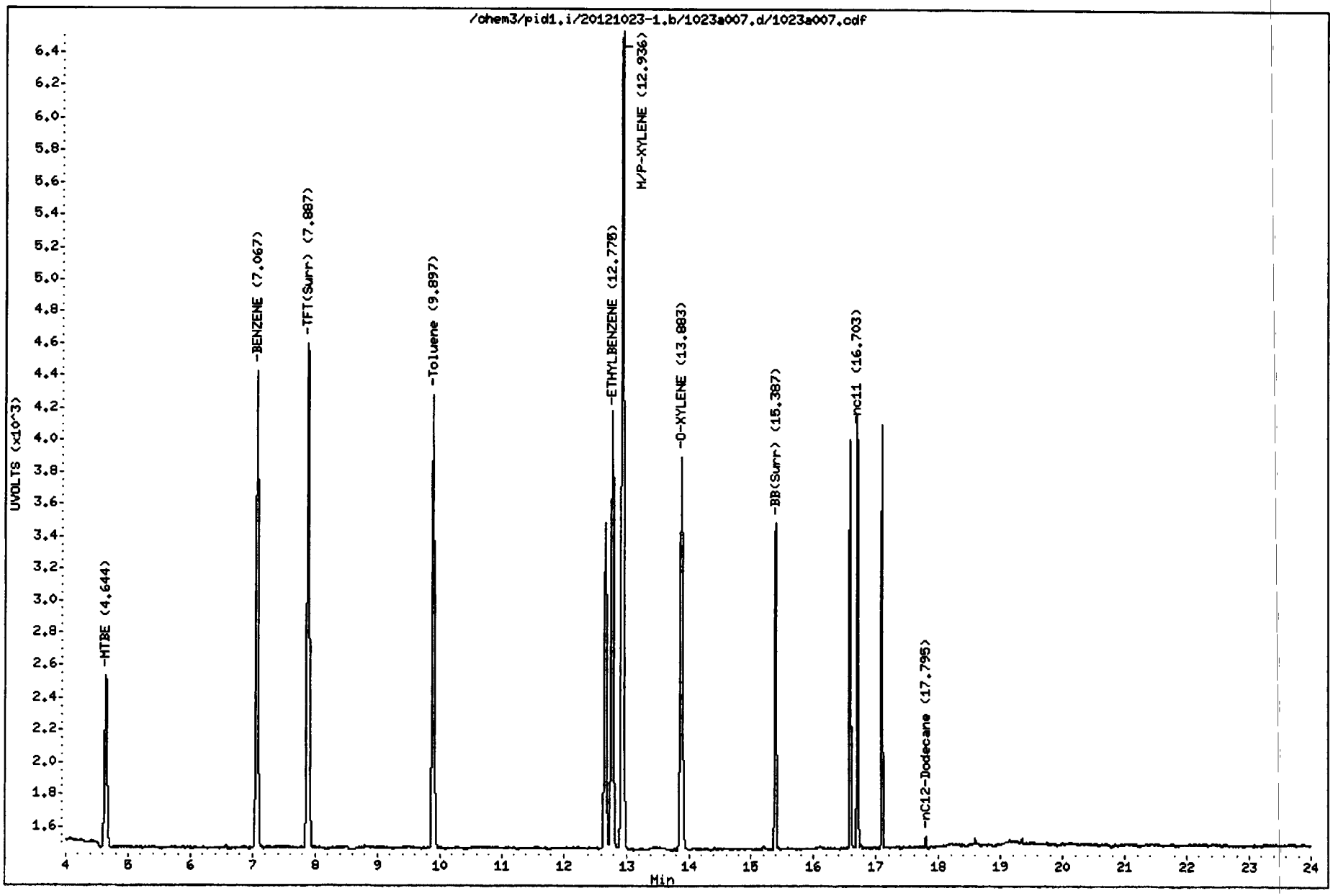
Sample Info: B 25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a007.d

Date : 23-OCT-2012 19:18

Client ID:

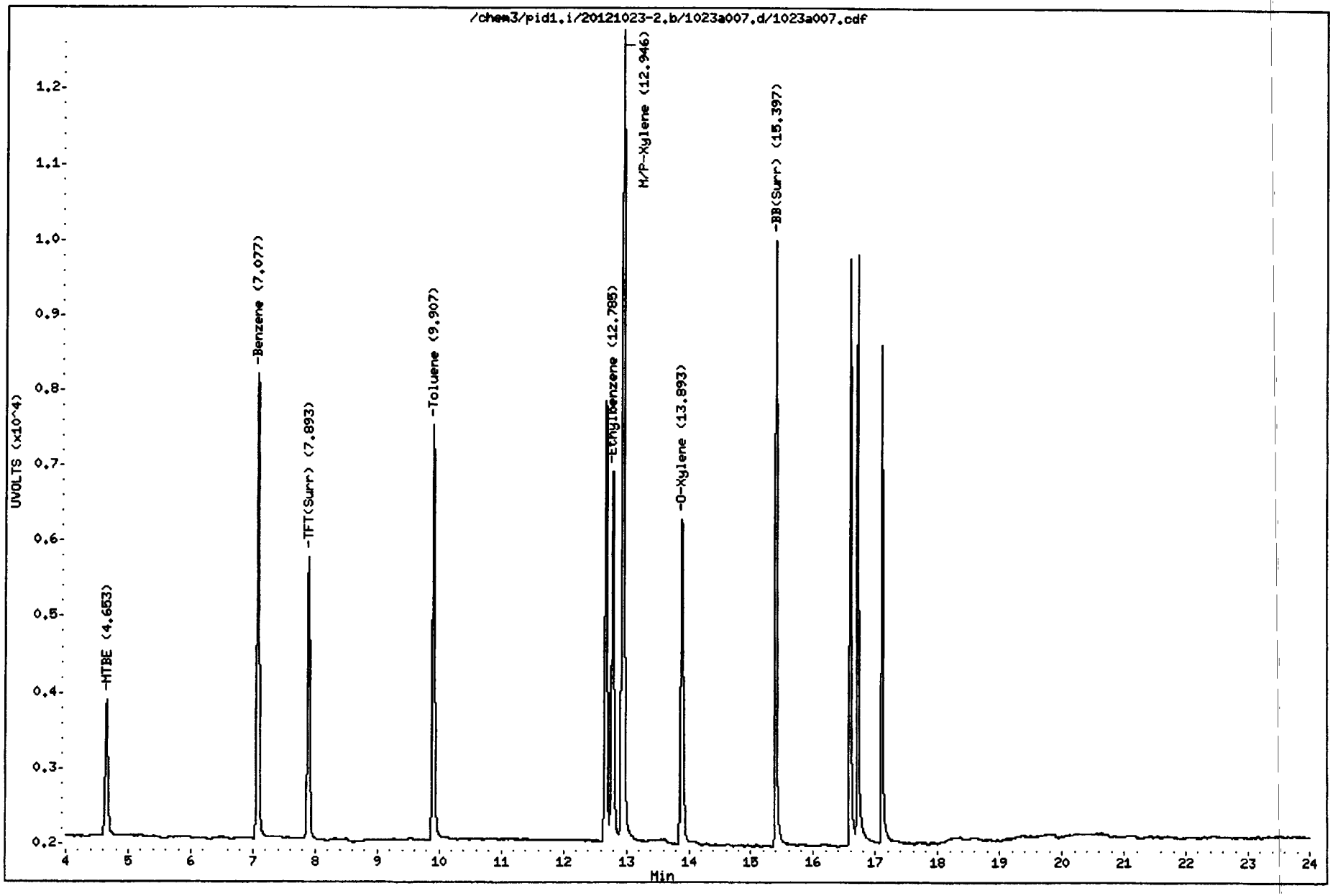
Sample Info: B 25

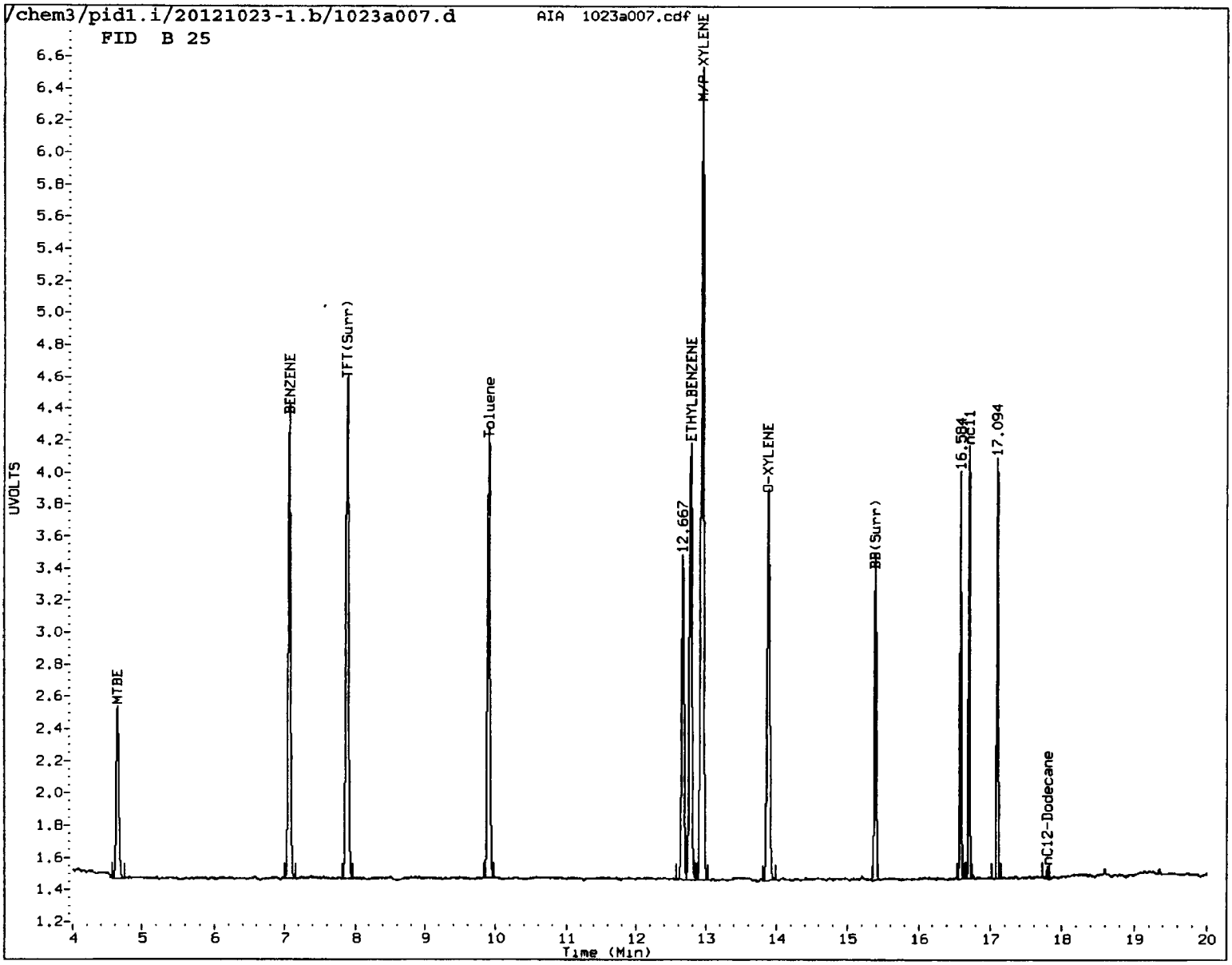
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

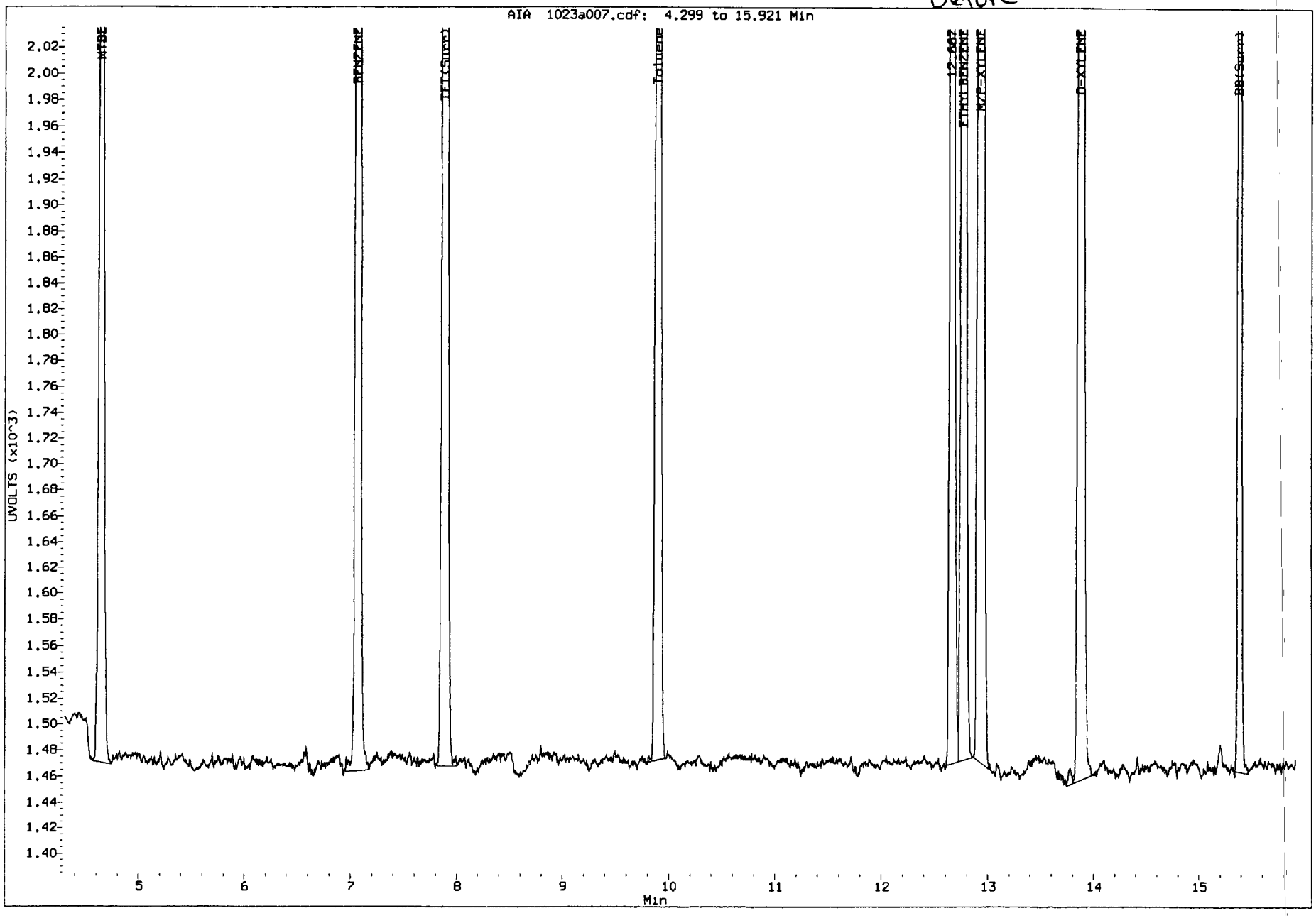
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

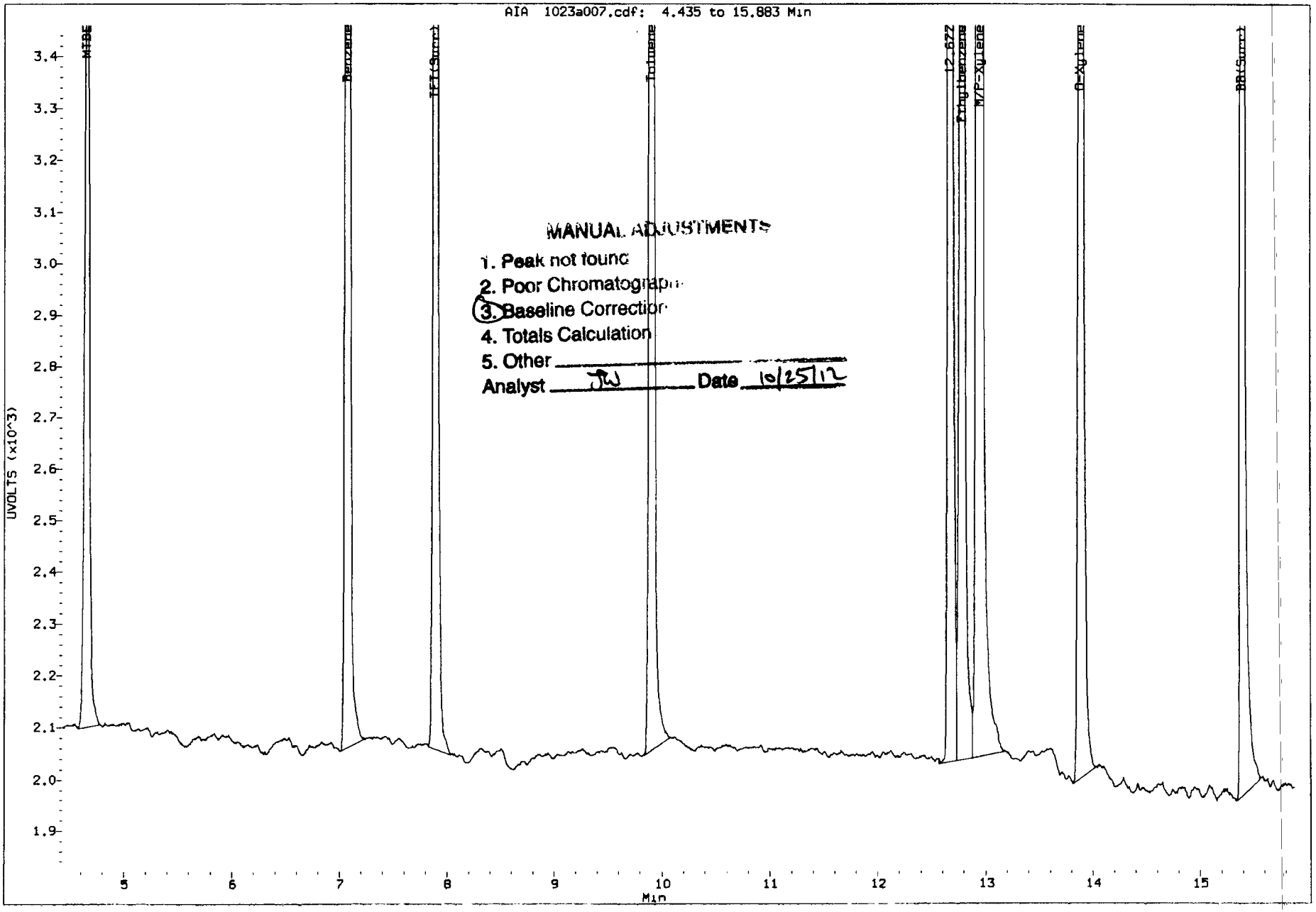
Analyst: JU Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before



Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:



MANUAL ADJUSTMENTS

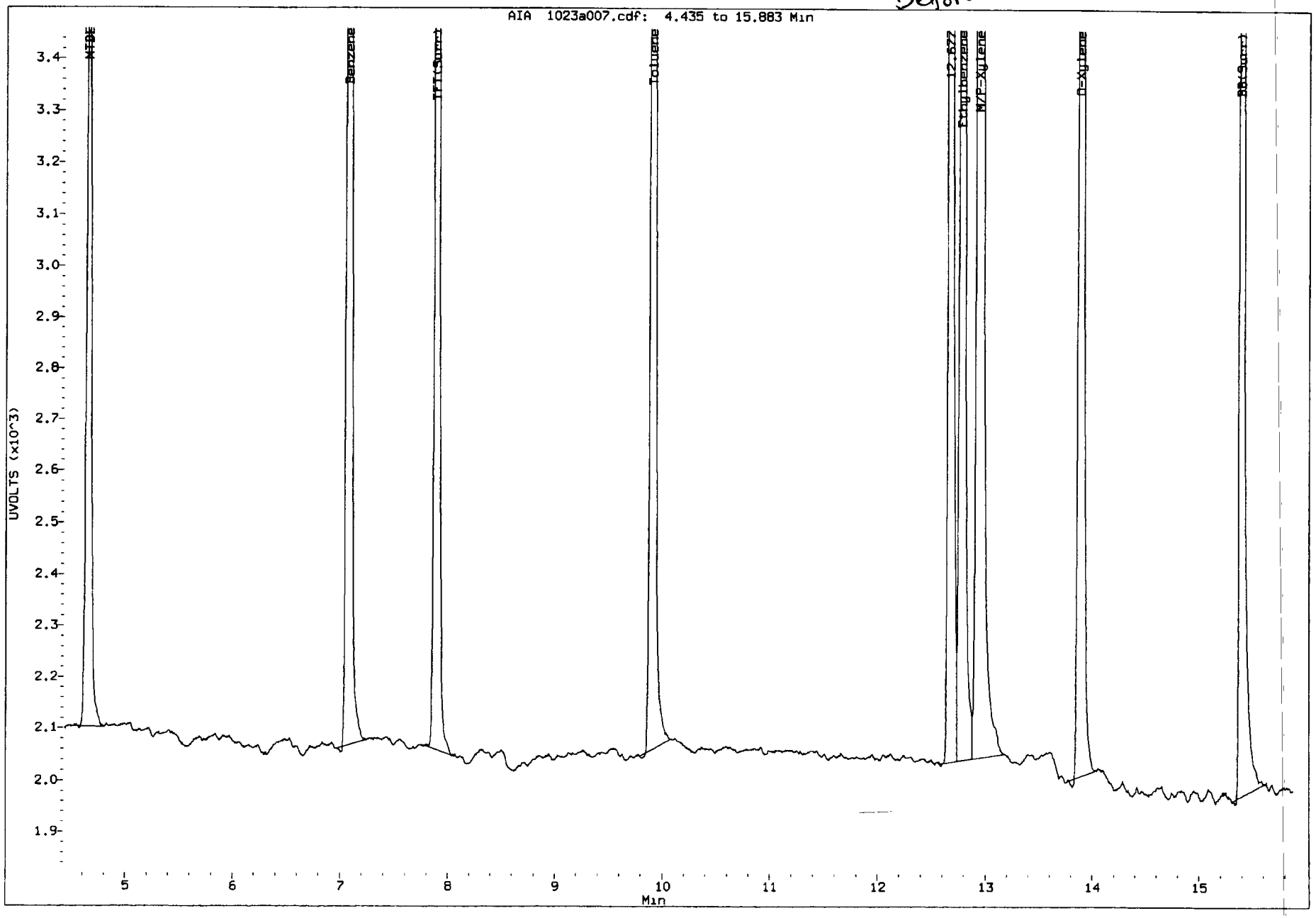
1. Peak not found
2. Poor Chromatograph
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst JW Date 10/25/12

Uncontrolled Copy

Data File: /chem3/pid1.1/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.1
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a008.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a008.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 5
Client ID:
Injection Date: 23-OCT-2012 19:47
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	2118	27080	67.0	TFT(Surr)
15.387	0.000	1387	11721	68.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	52469	0.147 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	51824	0.072 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	48775	0.084 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	52469	0.140 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	2516	66.4	TFT(Surr)
15.393	0.000	5386	66.9	BB(Surr)

JW 10/25/12

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	1275	5.14N	Benzene
9.903	-0.003	1121	4.98N	Toluene
12.785	-0.002	1007	5.11	Ethylbenzene
12.945	0.002	2196	10.21	M/P-Xylene
13.893	0.003	856	5.10N	O-Xylene
4.647	-0.007	377	5.24N	MTBE

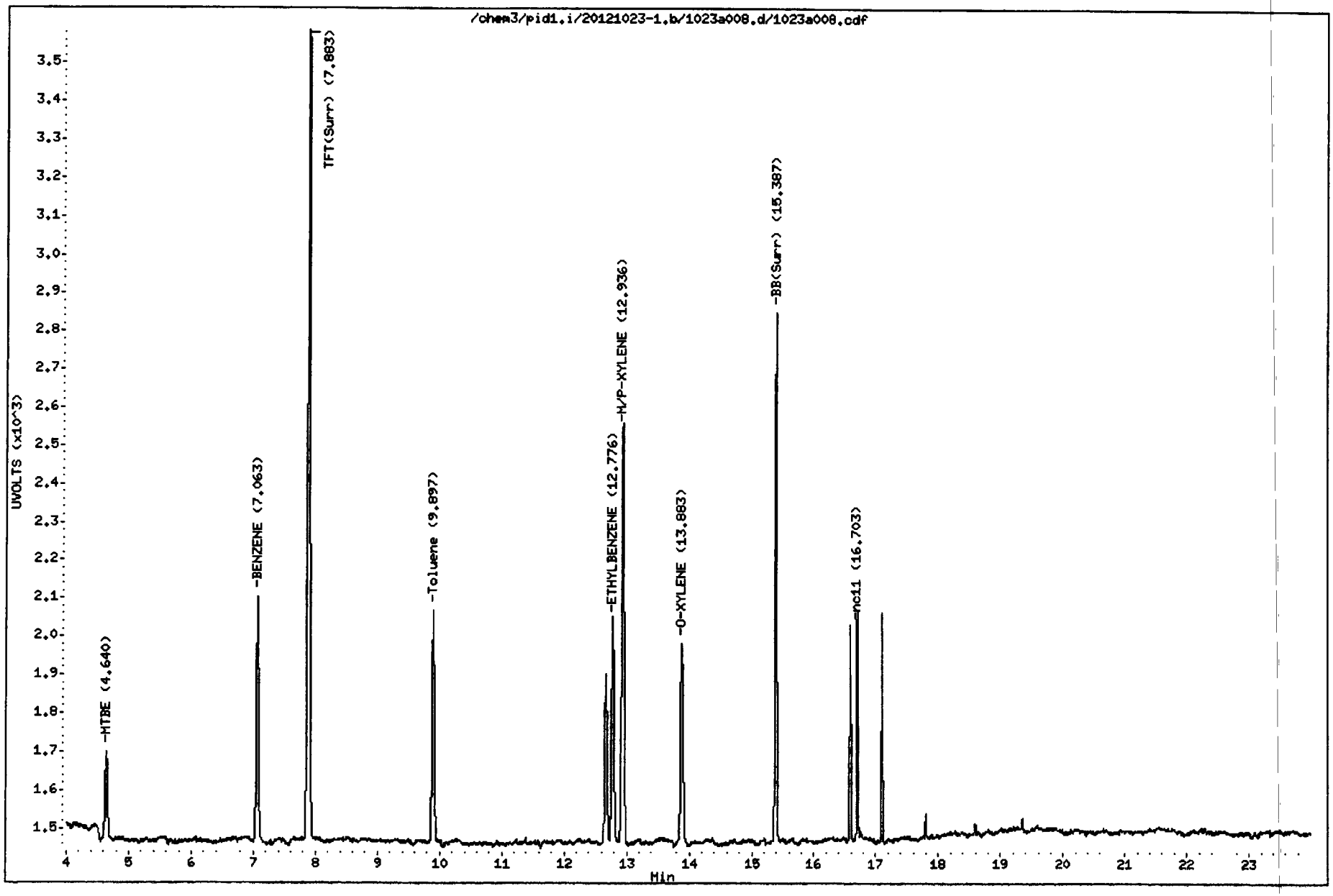
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a008.d
Date : 23-OCT-2012 19:47
Client ID:
Sample Info: B 5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a008.d

Date : 23-OCT-2012 19:47

Client ID:

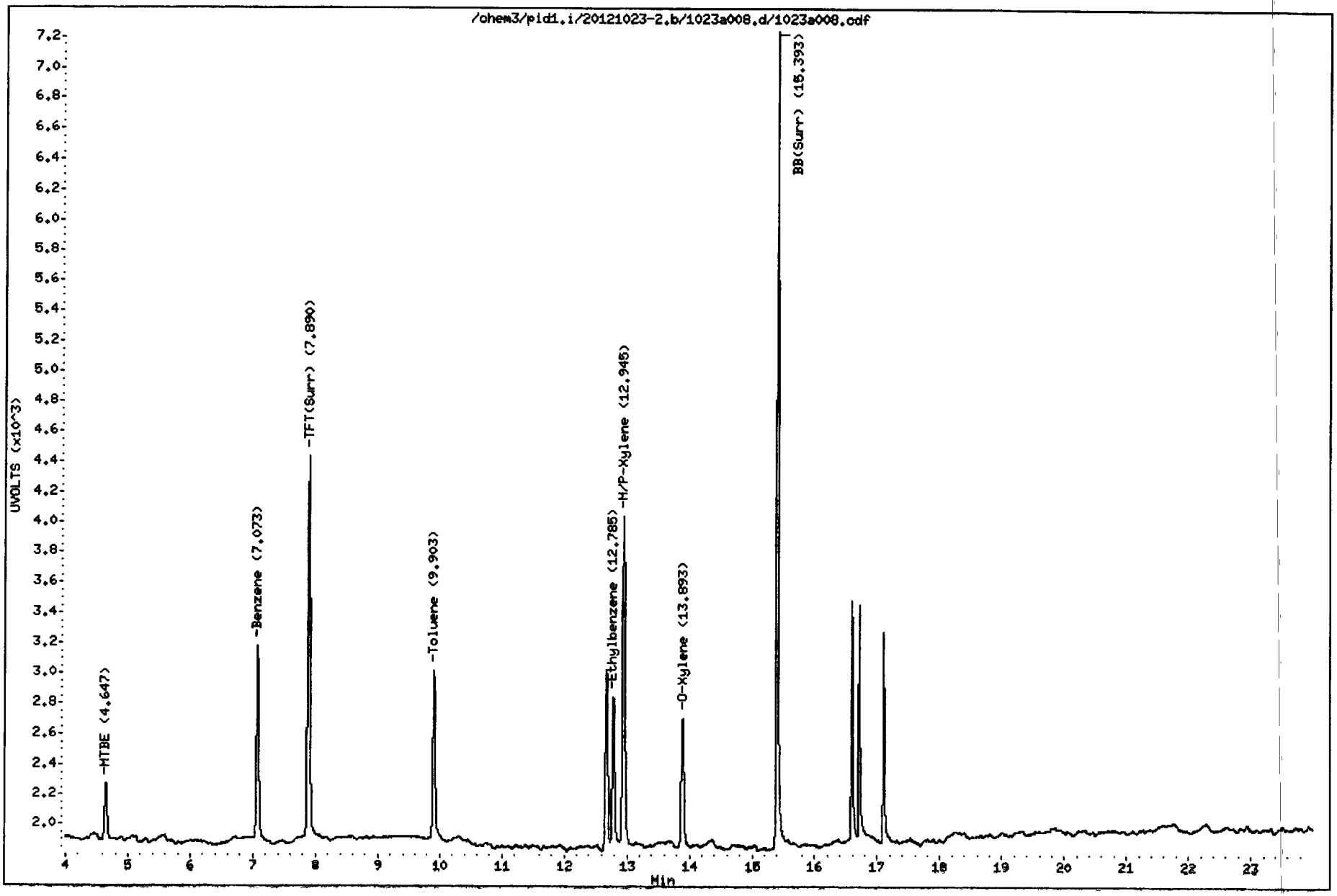
Sample Info: B 5

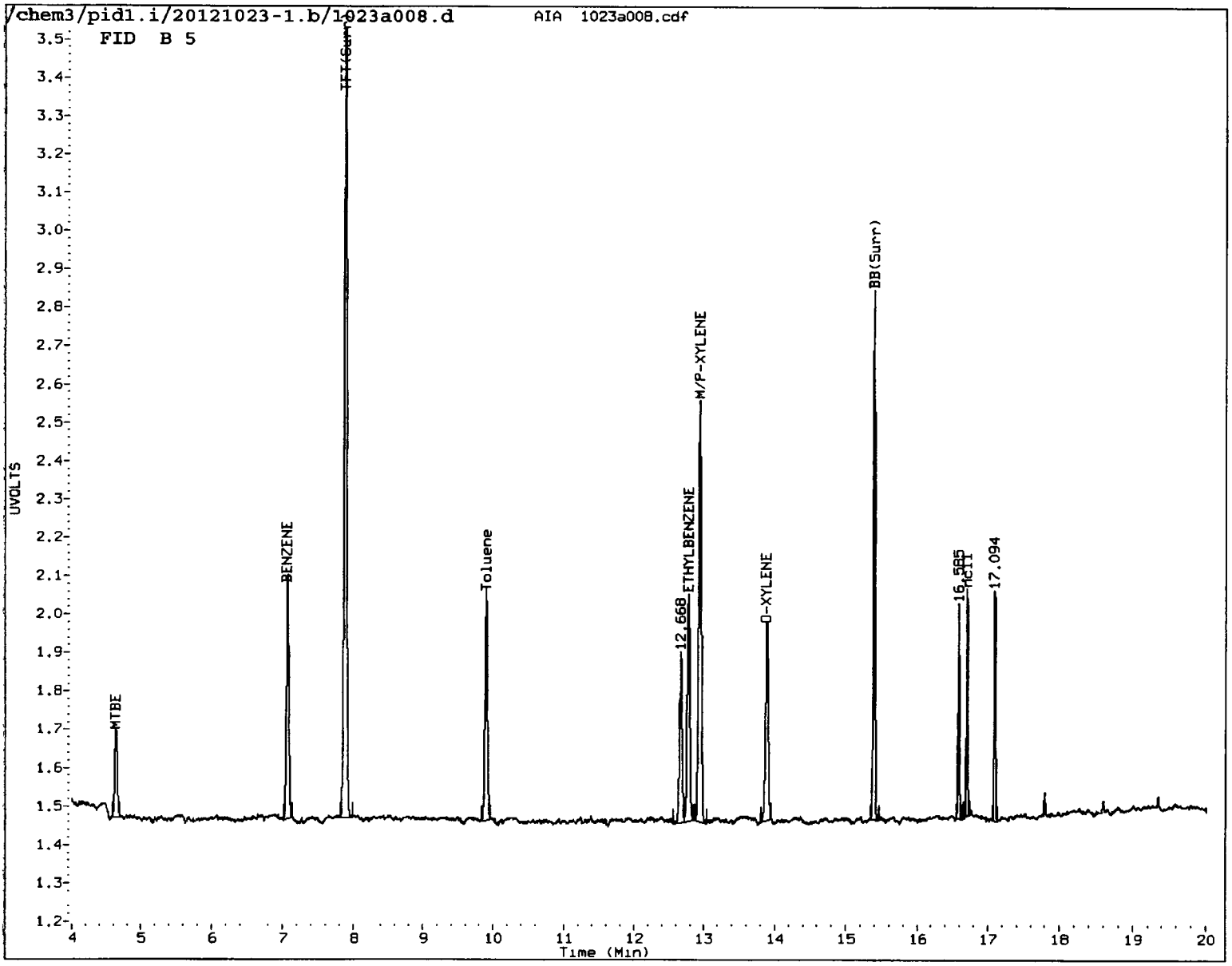
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

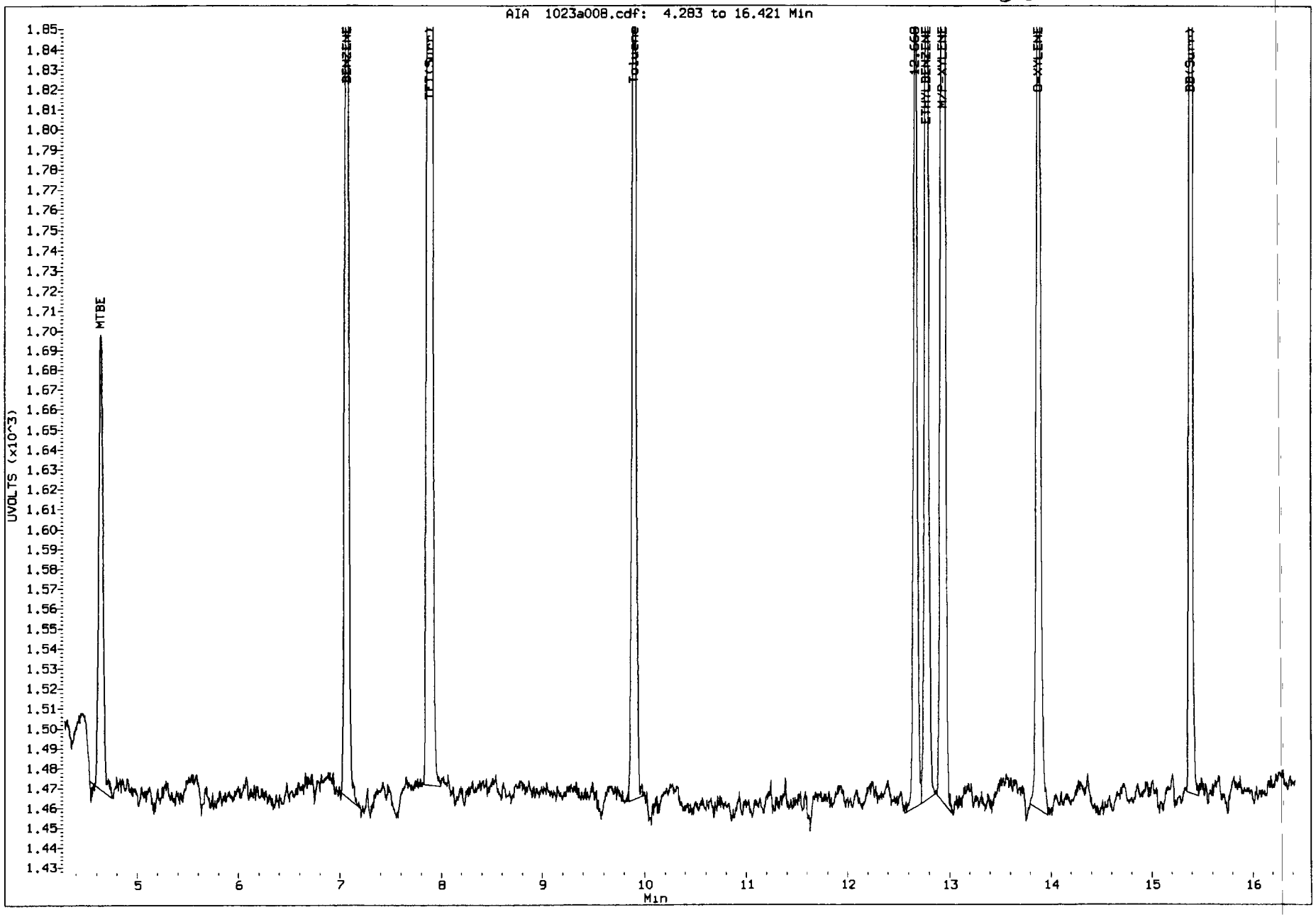
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

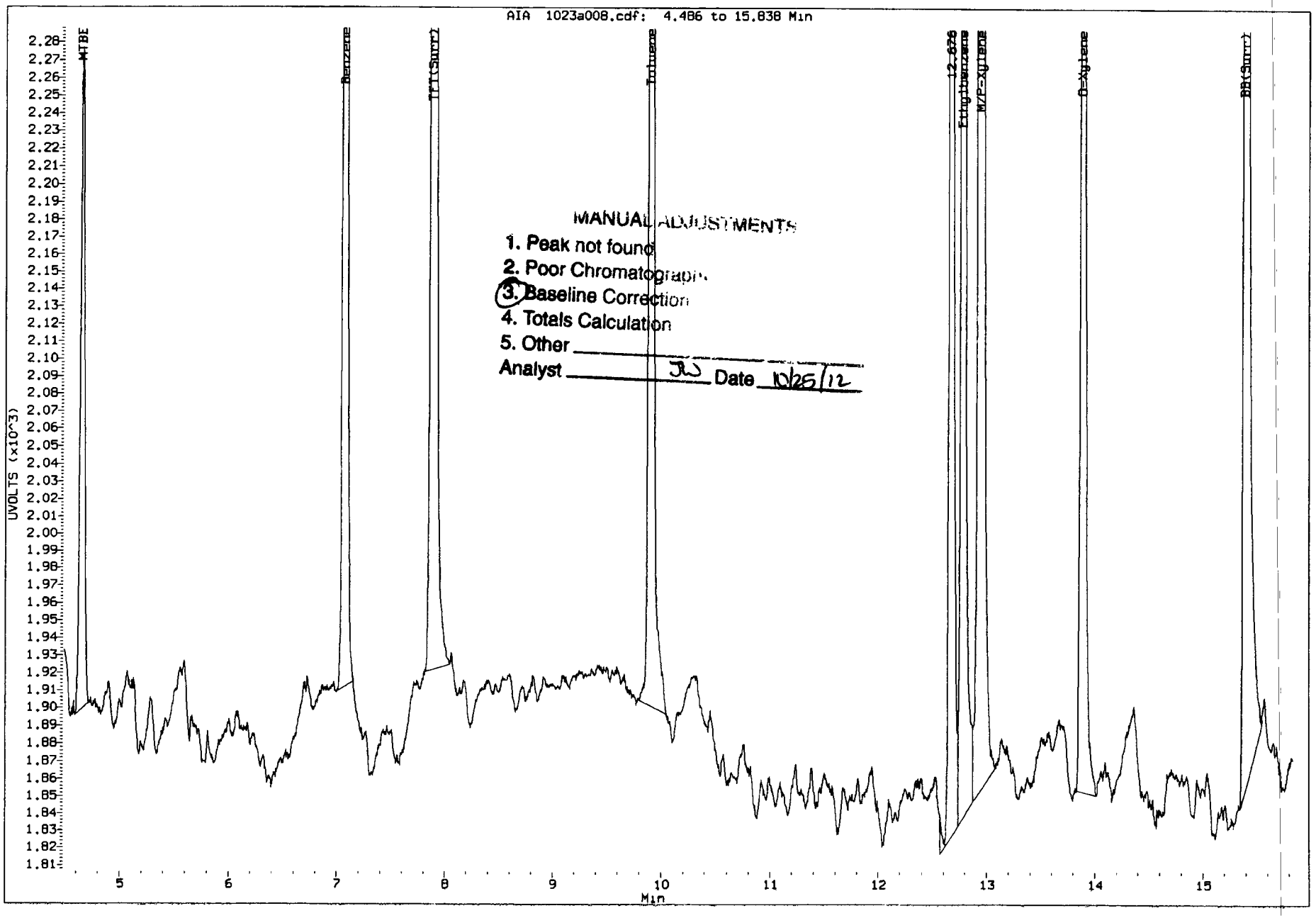
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.1/20121023-1.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.1
Client Sample ID:

Before

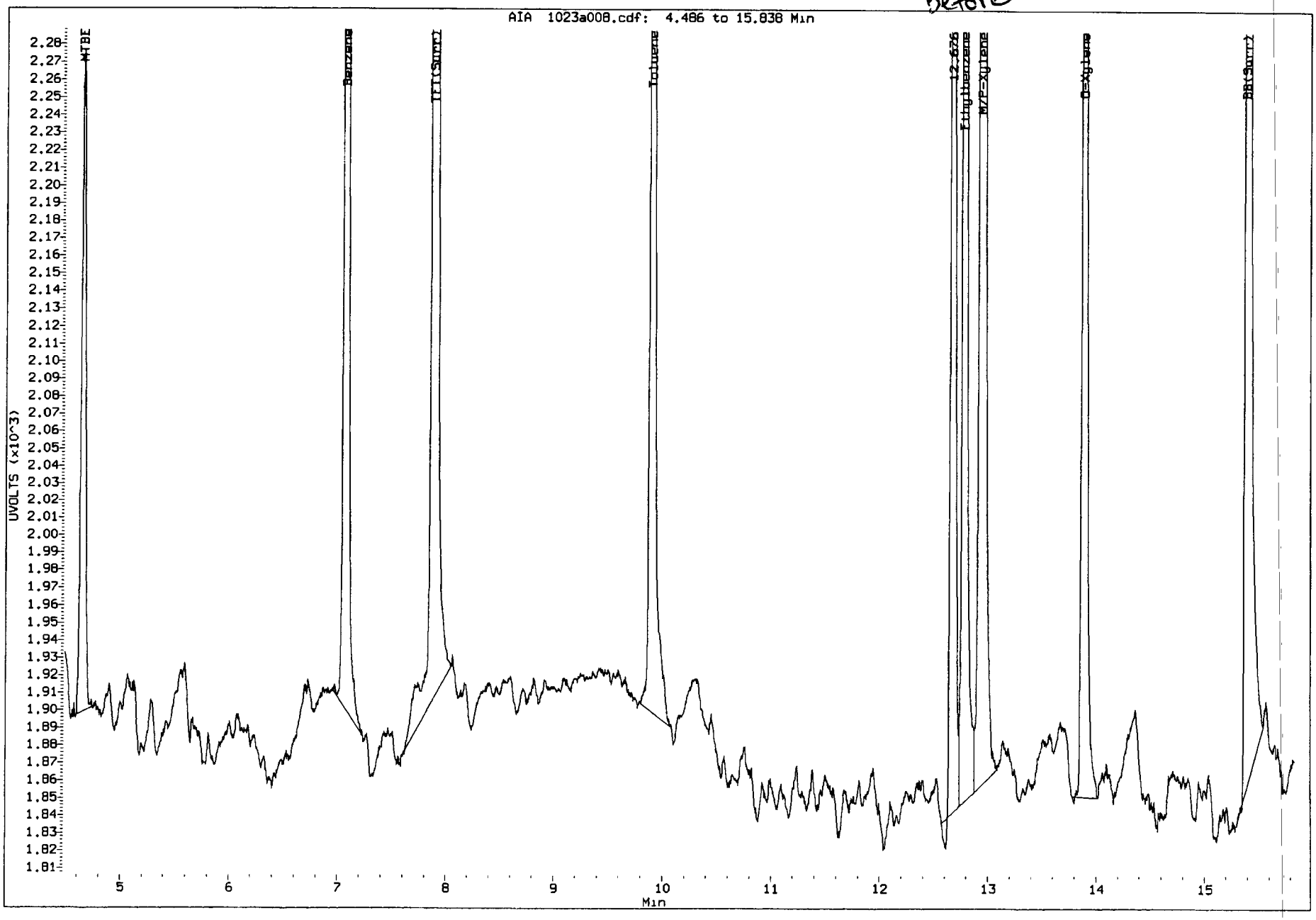


Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:

Before



HP5890 : 02.1.12

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a009.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a009.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 1
Client ID:
Injection Date: 23-OCT-2012 20:16
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	2094	27117	66.3	TFT(Surr)
15.387	0.000	1385	11445	68.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	10704	0.030 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	10312	0.014 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	9711	0.017 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	10704	0.029 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	2495	65.9	TFT(Surr)
15.393	0.000	5333	66.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	260	1.05N	Benzene
9.907	0.000	210	0.93N	Toluene
12.785	-0.001	198	1.00	Ethylbenzene
12.946	0.002	425	1.98	M/P-Xylene
13.893	0.003	168	1.00N	O-Xylene
4.647	-0.007	72	1.00N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

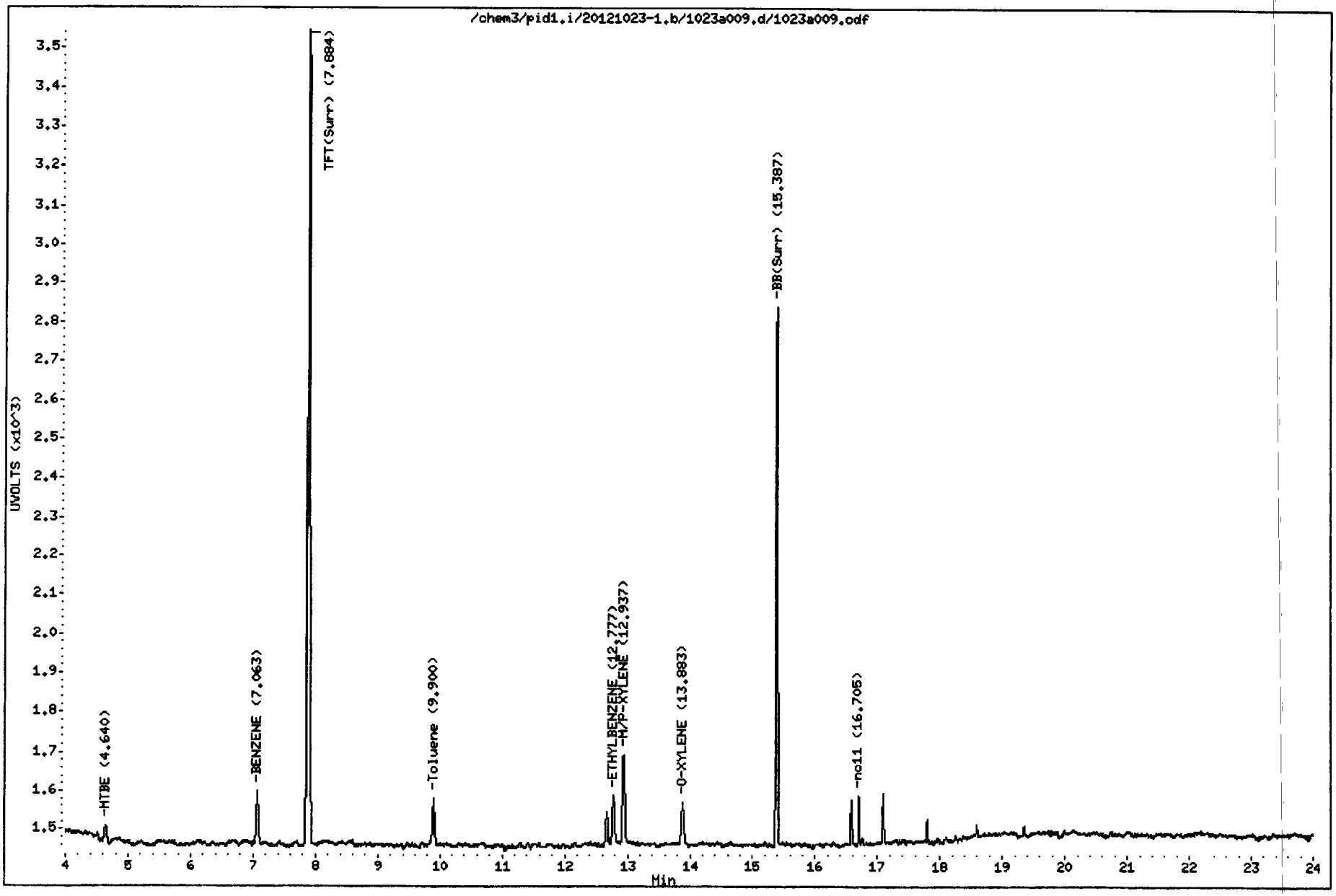
Sample Info: B 1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

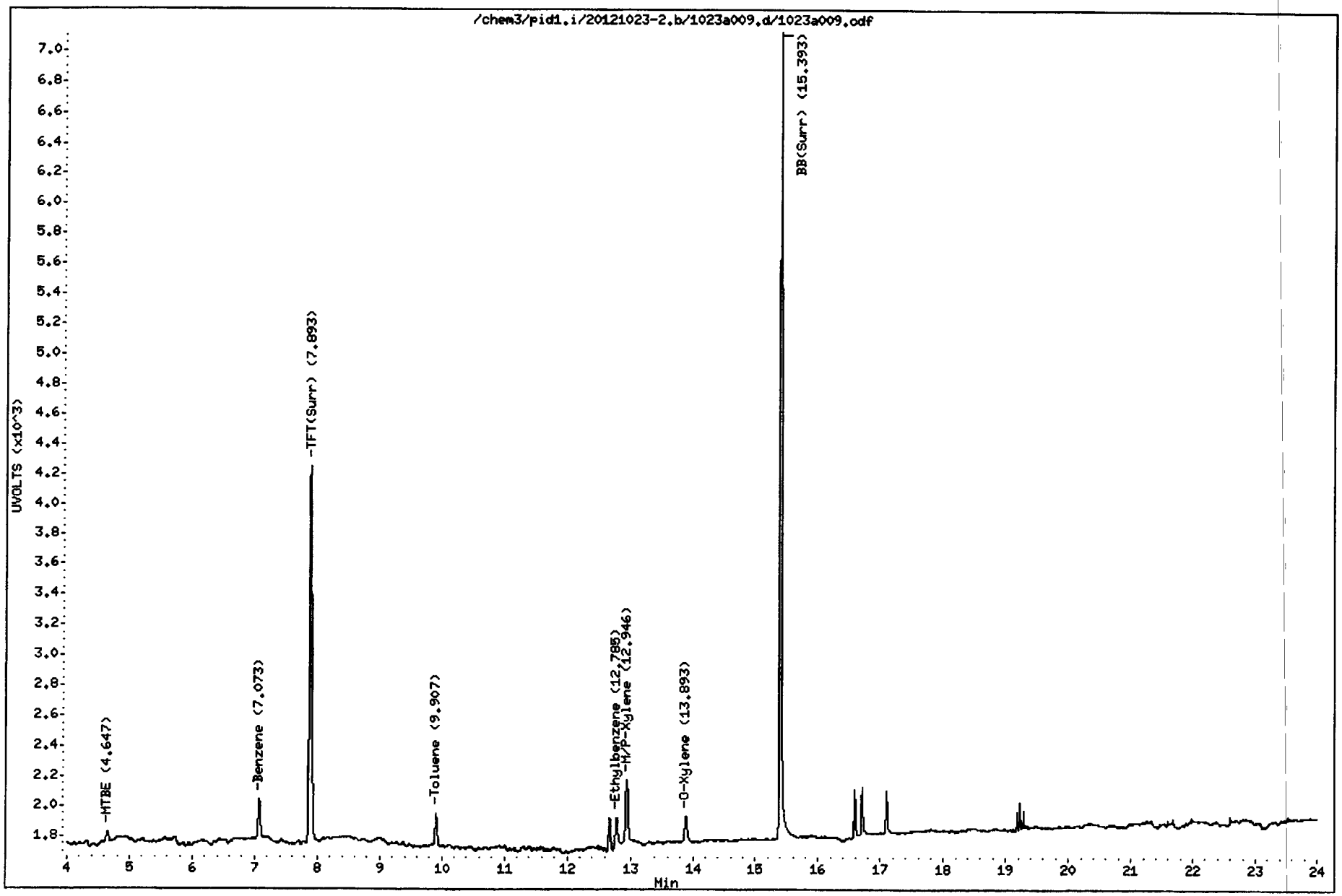
Sample Info: B 1

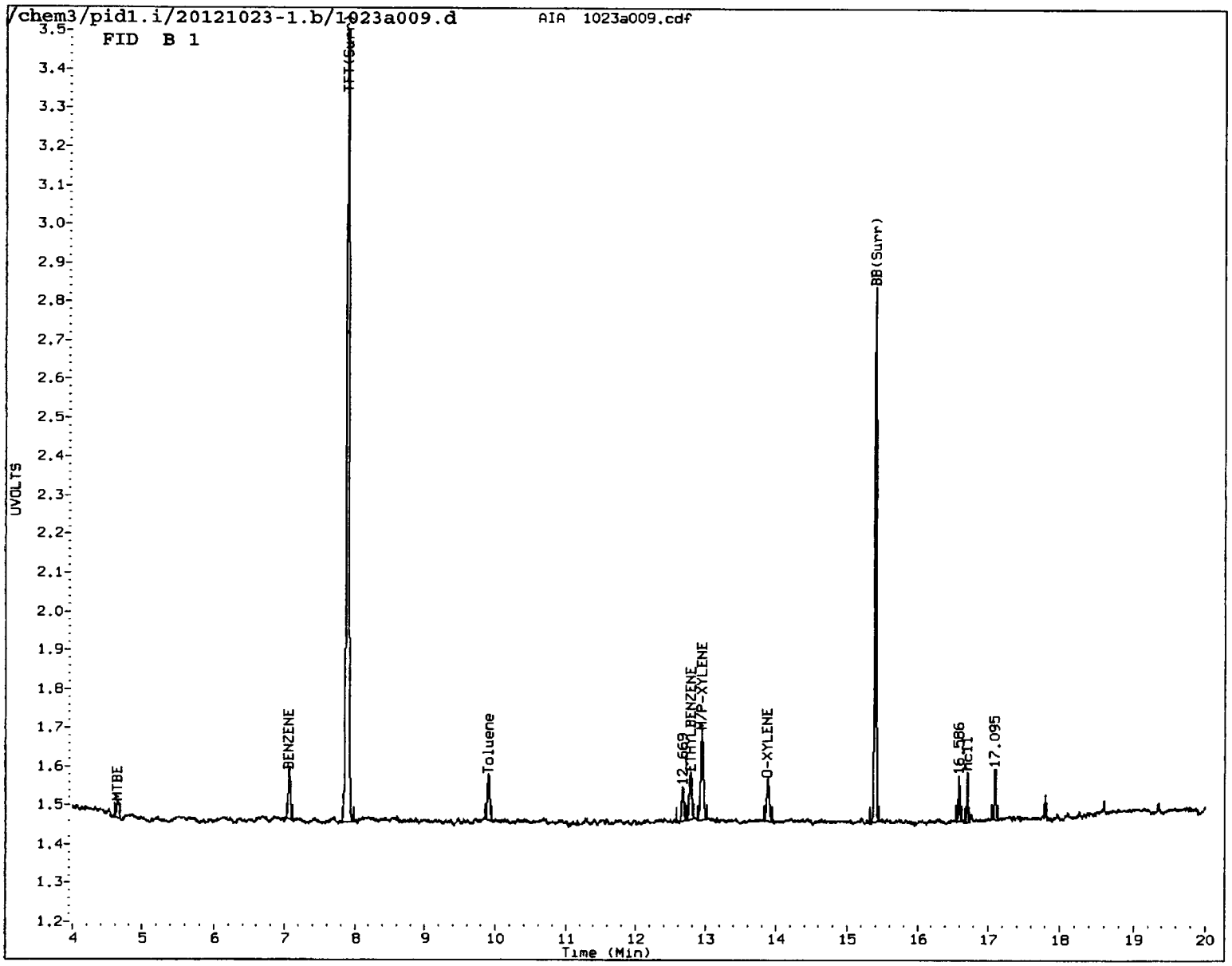
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

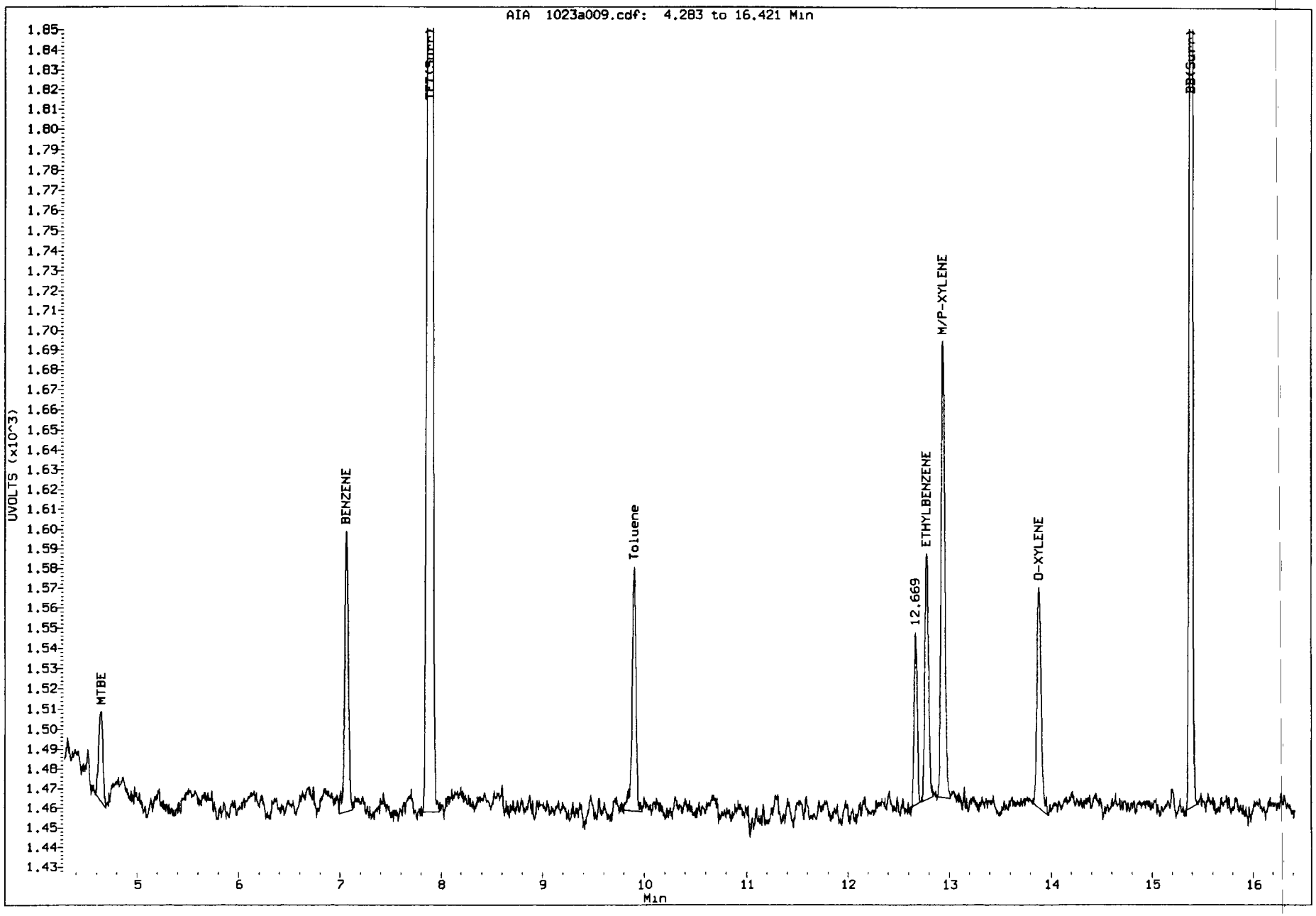
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

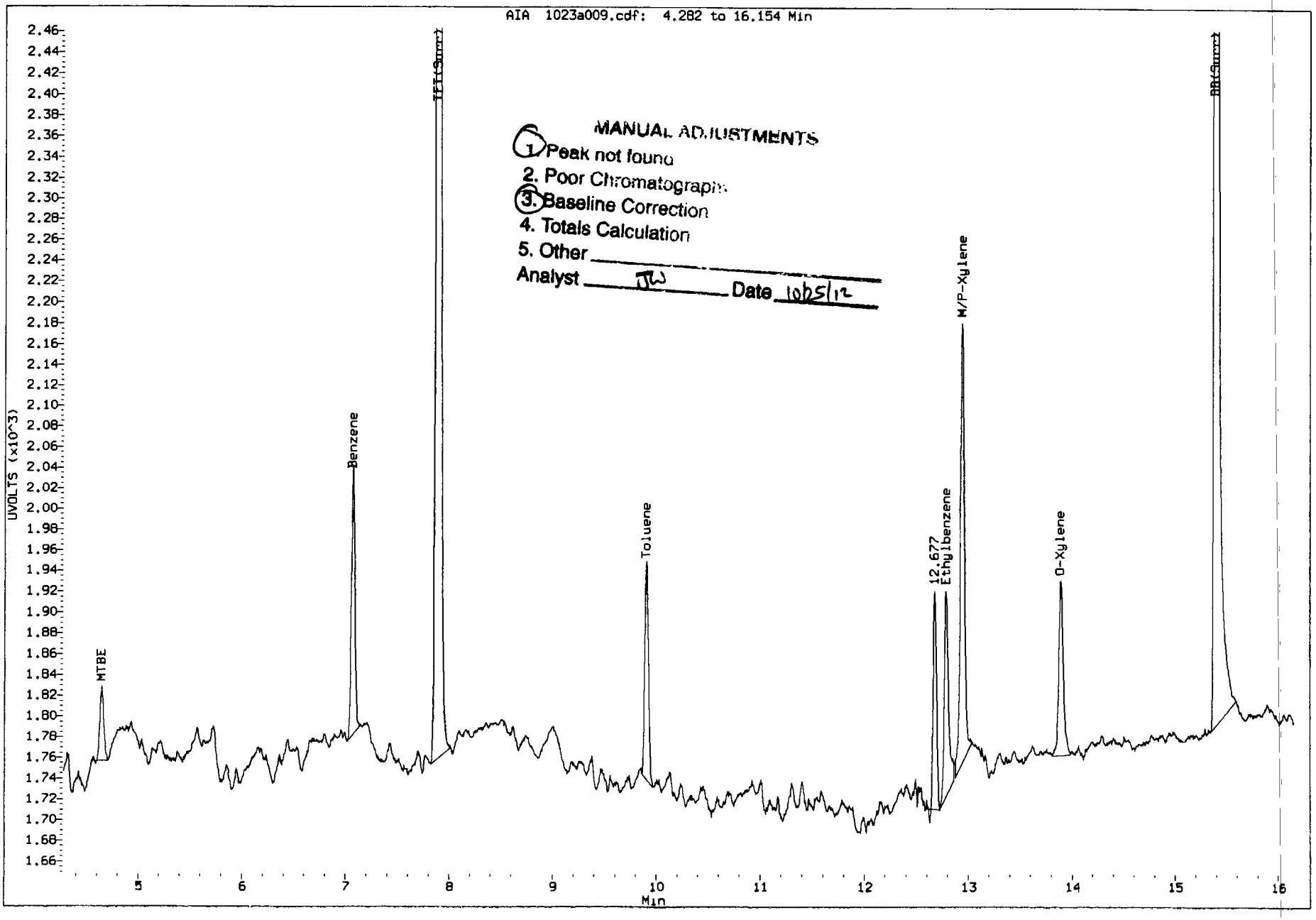
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.1/20121023-1.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.1
Client Sample ID:

Before

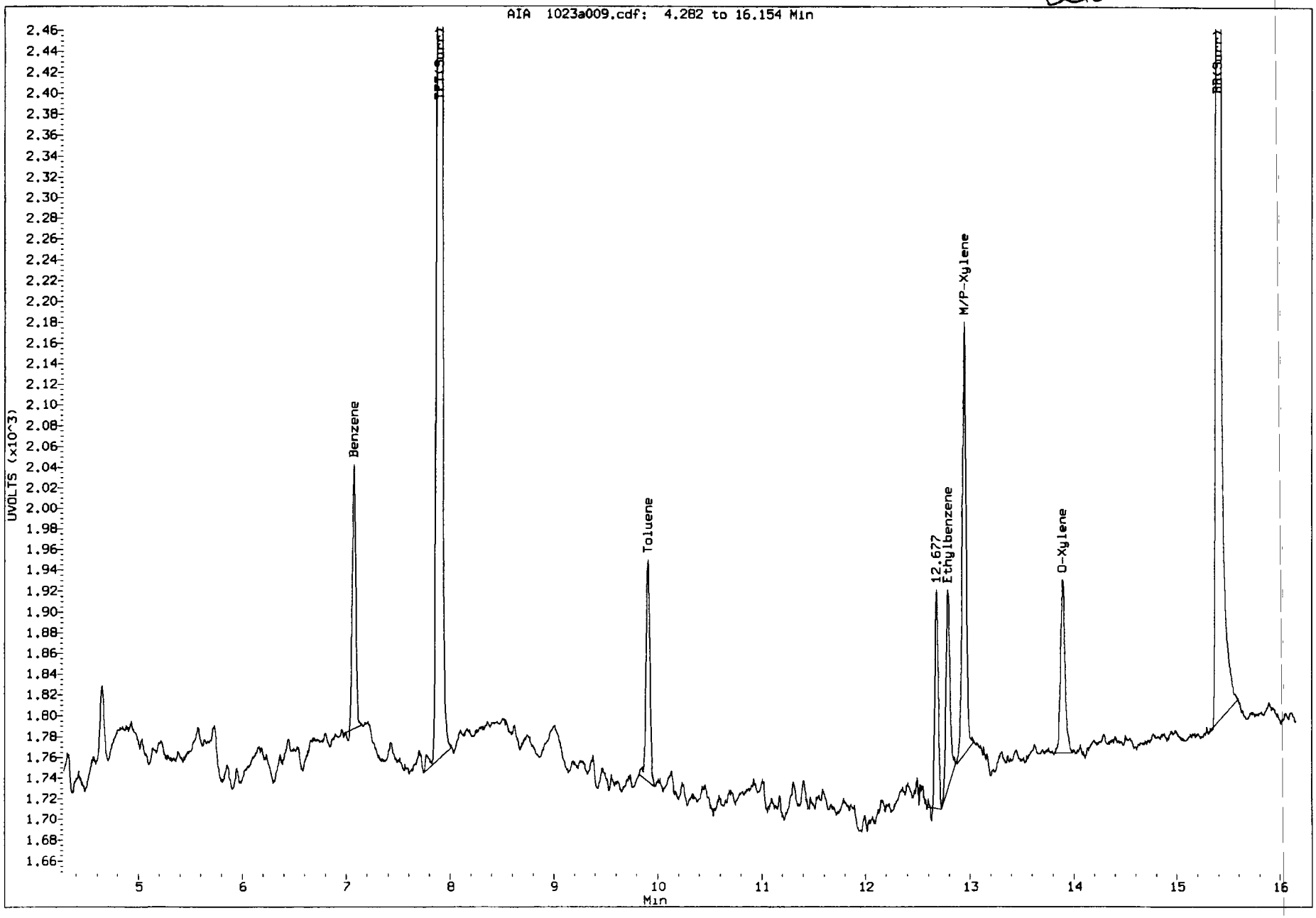


Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a010.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.5
Client ID:
Injection Date: 23-OCT-2012 20:45
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	1400	18008	44.4	TFT(Surr)
15.387	0.000	904	7688	44.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	6242	0.017 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	5520	0.008 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	5284	0.009 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	8749	0.023 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	1632	43.1	TFT(Surr)
15.393	0.000	3462	43.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	127	0.51N	Benzene
9.907	0.000	117	0.52N	Toluene
12.783	-0.003	100	0.51N	Ethylbenzene
12.947	0.003	208	0.97N	M/P-Xylene
13.893	0.003	79	0.47N	O-Xylene
4.653	0.000	32	0.44N	MTBE

JW 10/25/12

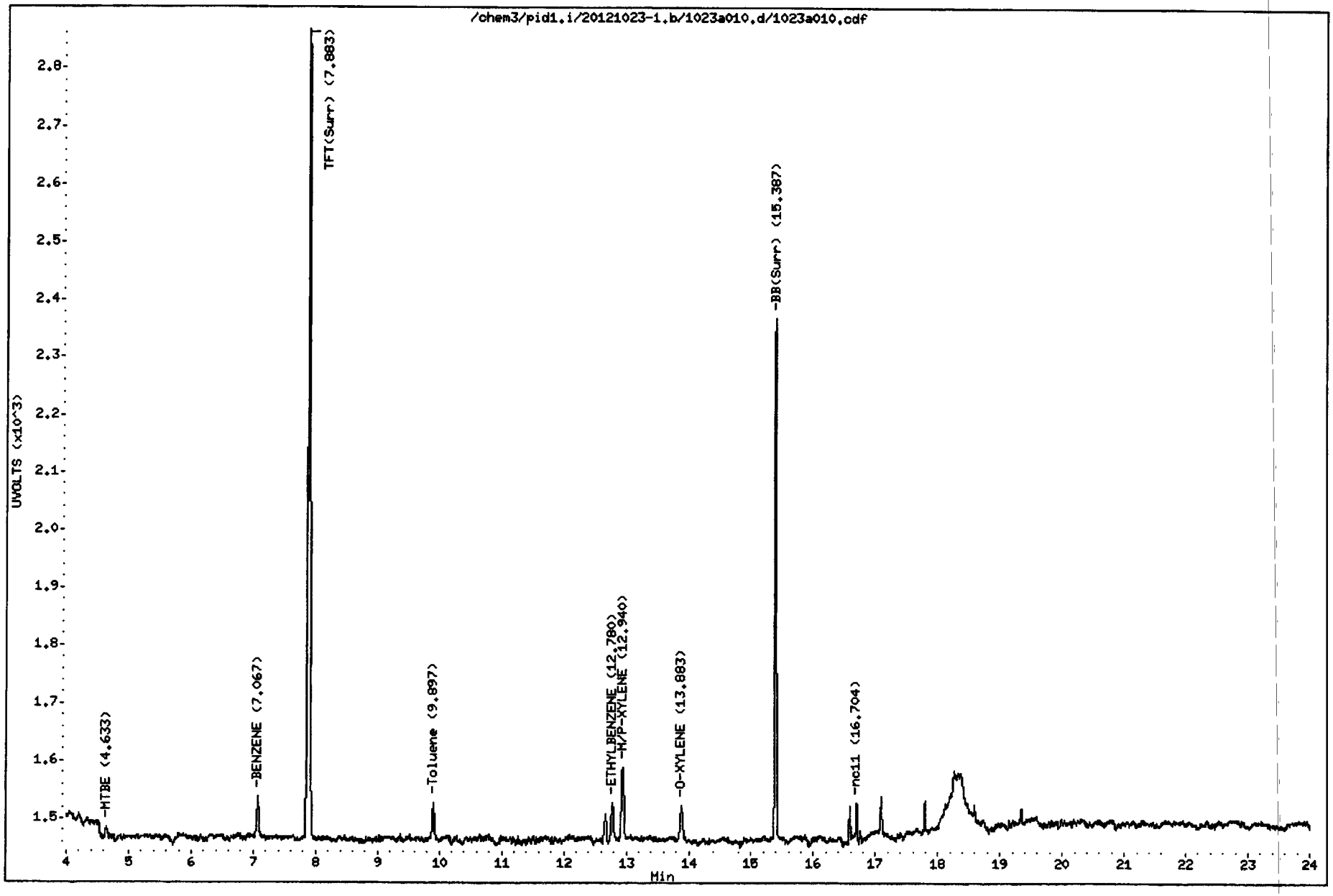
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d
Date : 23-OCT-2012 20:45
Client ID:
Sample Info: B 0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18



Data File: /ohem3/pid1.i/20121023-2.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

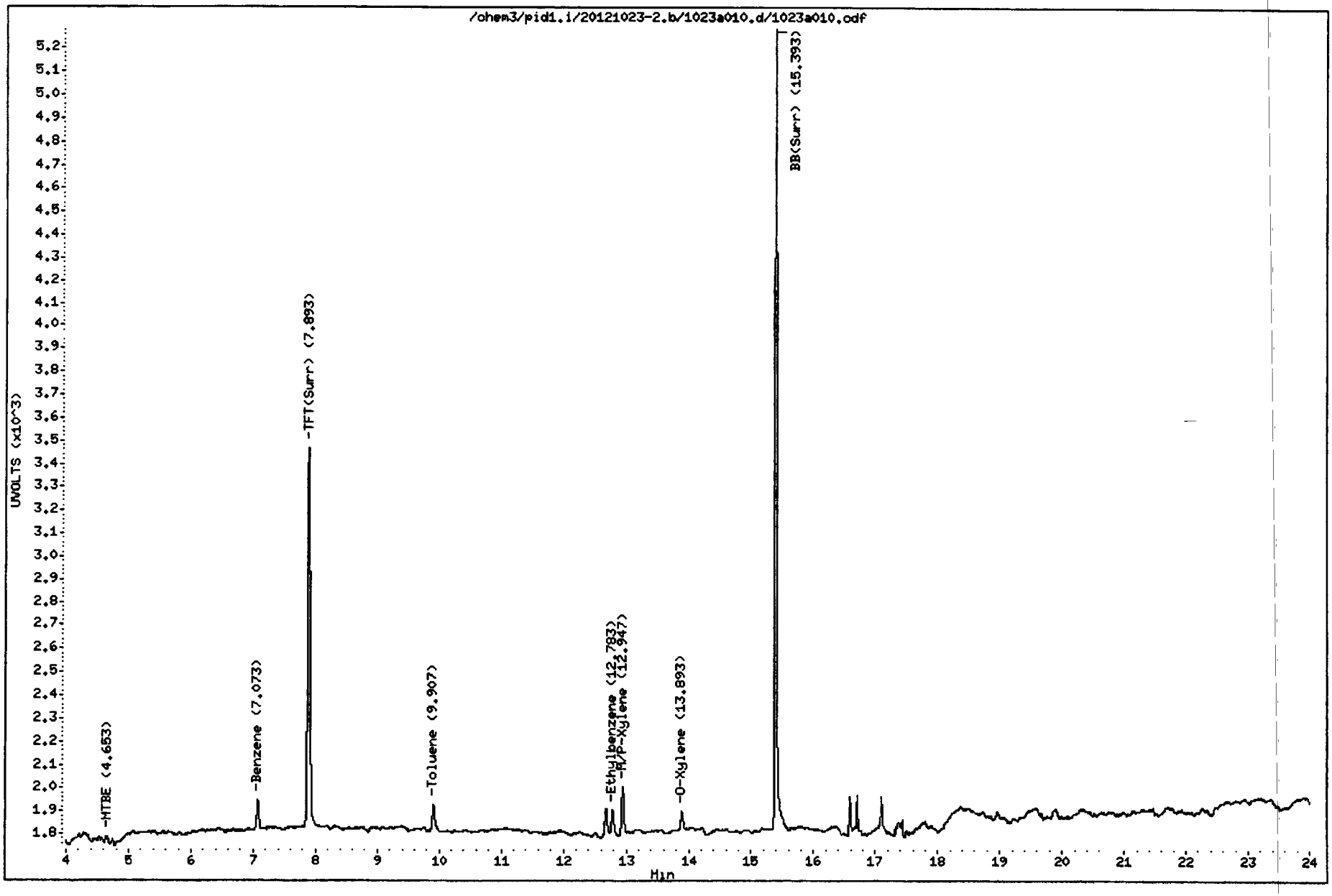
Sample Info: B 0.5

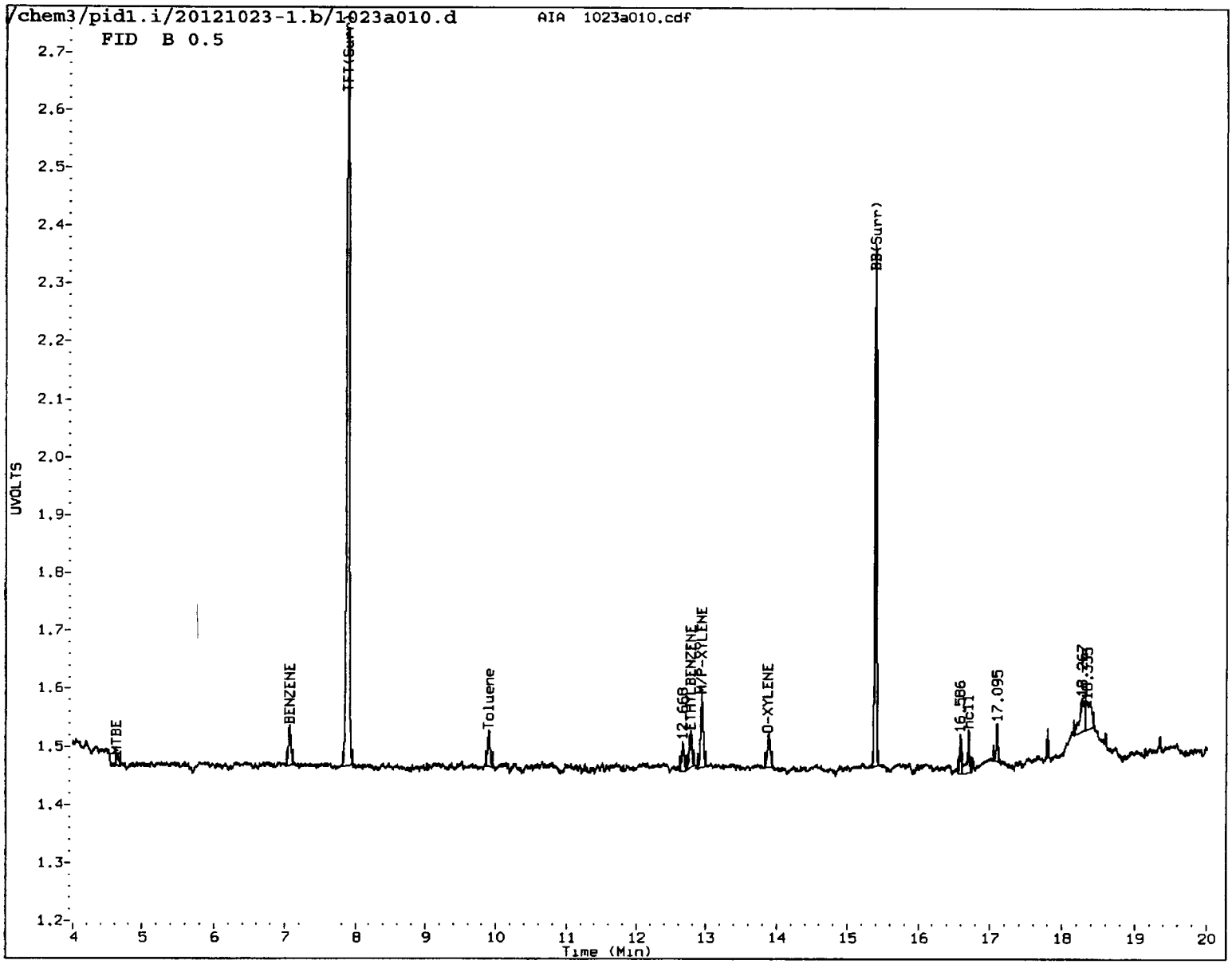
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

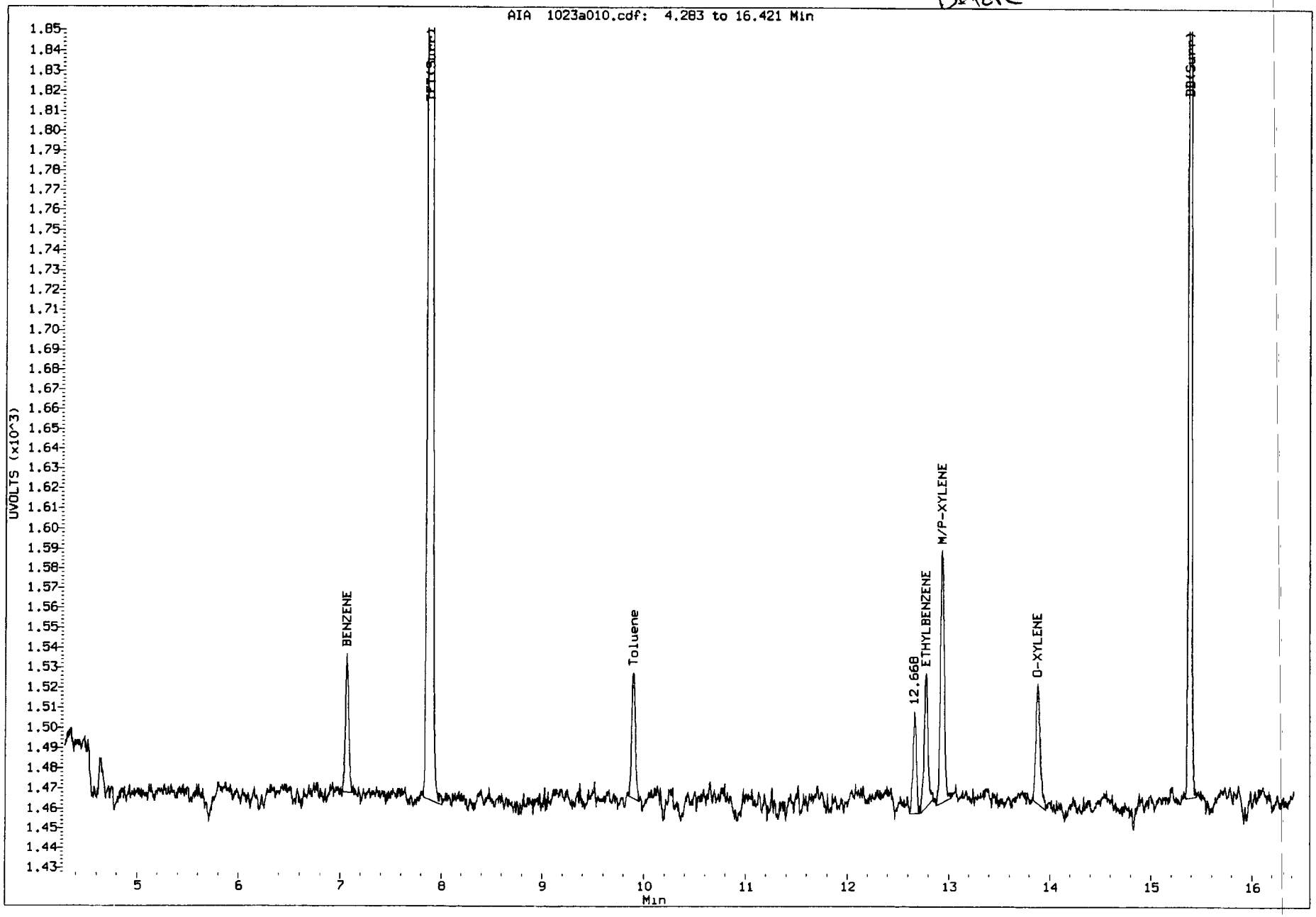
5. Other _____

Analyst: JW Date: 10/25/12

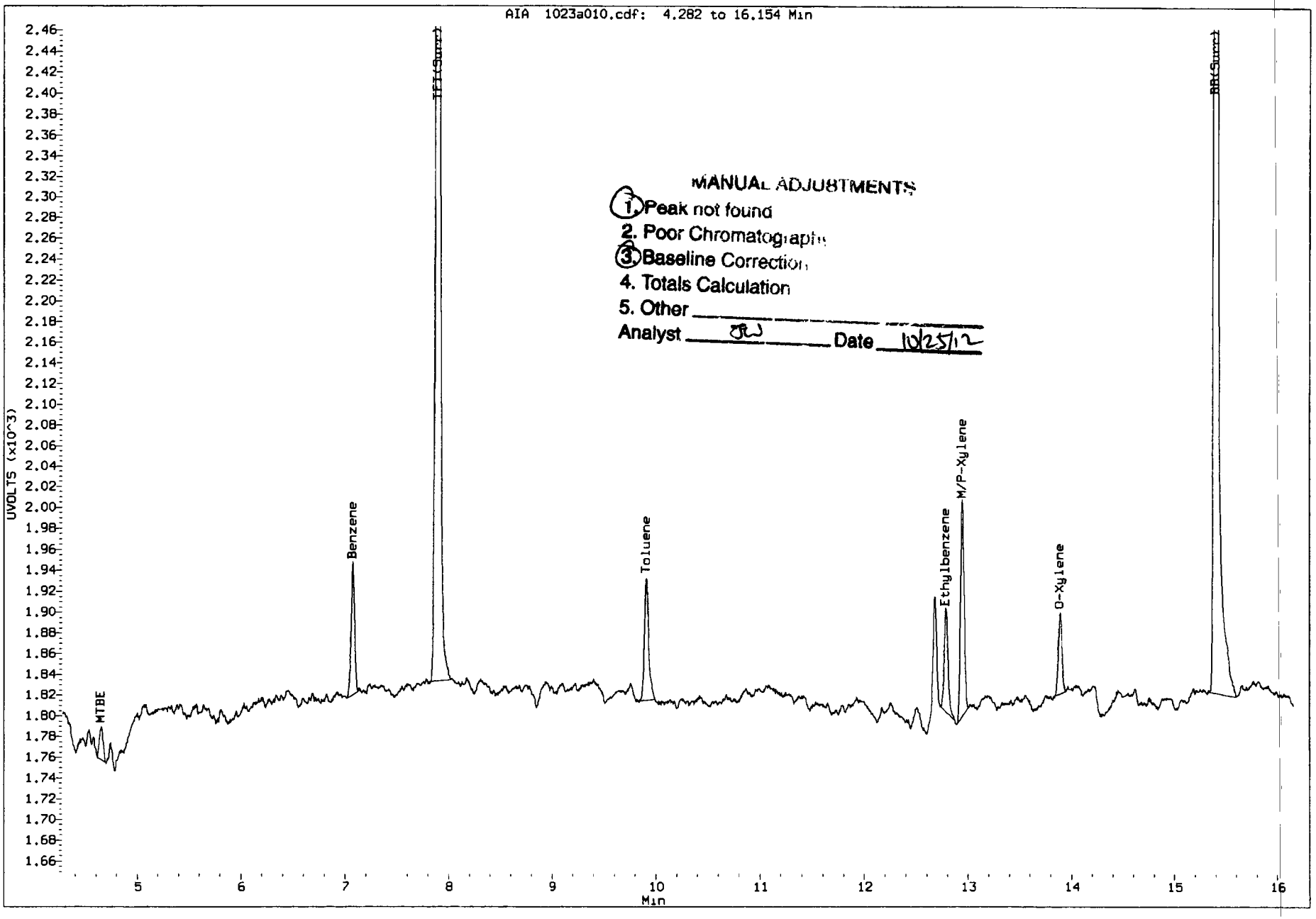
JR99:02153

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:

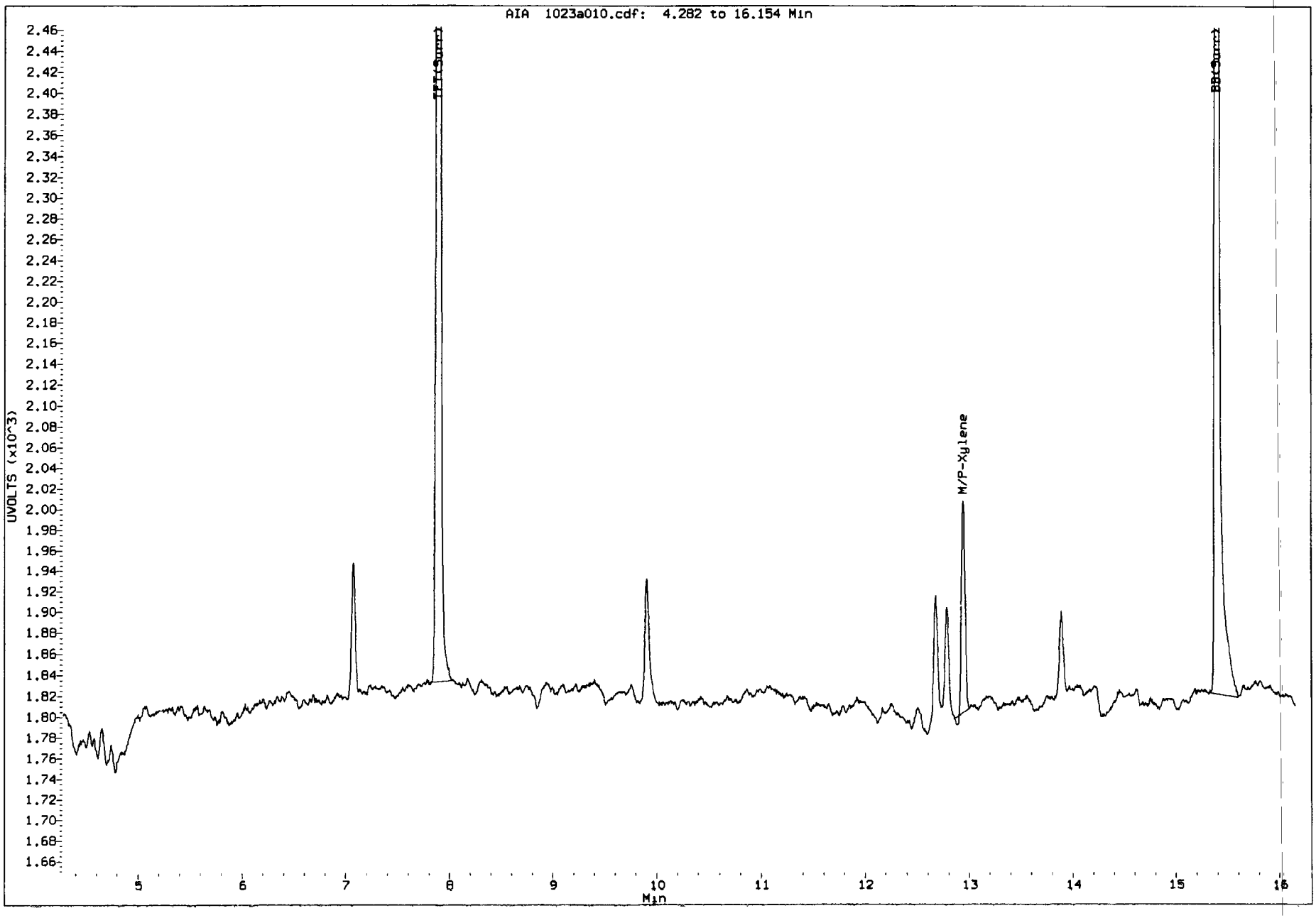
Before



Data File: /chem3/pid1.1/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.1
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a011.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a011.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.25
Client ID:
Injection Date: 23-OCT-2012 21:15
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	733	9325	23.3	TFT(Surr)
15.387	0.000	484	4042	23.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	2310	0.006 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	2530	0.003 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	2276	0.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	2718	0.007 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	855	22.6	TFT(Surr)
15.393	0.000	1790	22.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	57	0.23N	Benzene
9.907	0.000	64	0.28N	Toluene
12.787	0.000	48	0.24N	Ethylbenzene
12.943	0.000	108	0.50N	M/P-Xylene
13.890	0.000	40	0.24N	O-Xylene
ND	---	---	---	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

W99:0215Y

Data File: /chem3/pid1.i/20121023-1.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

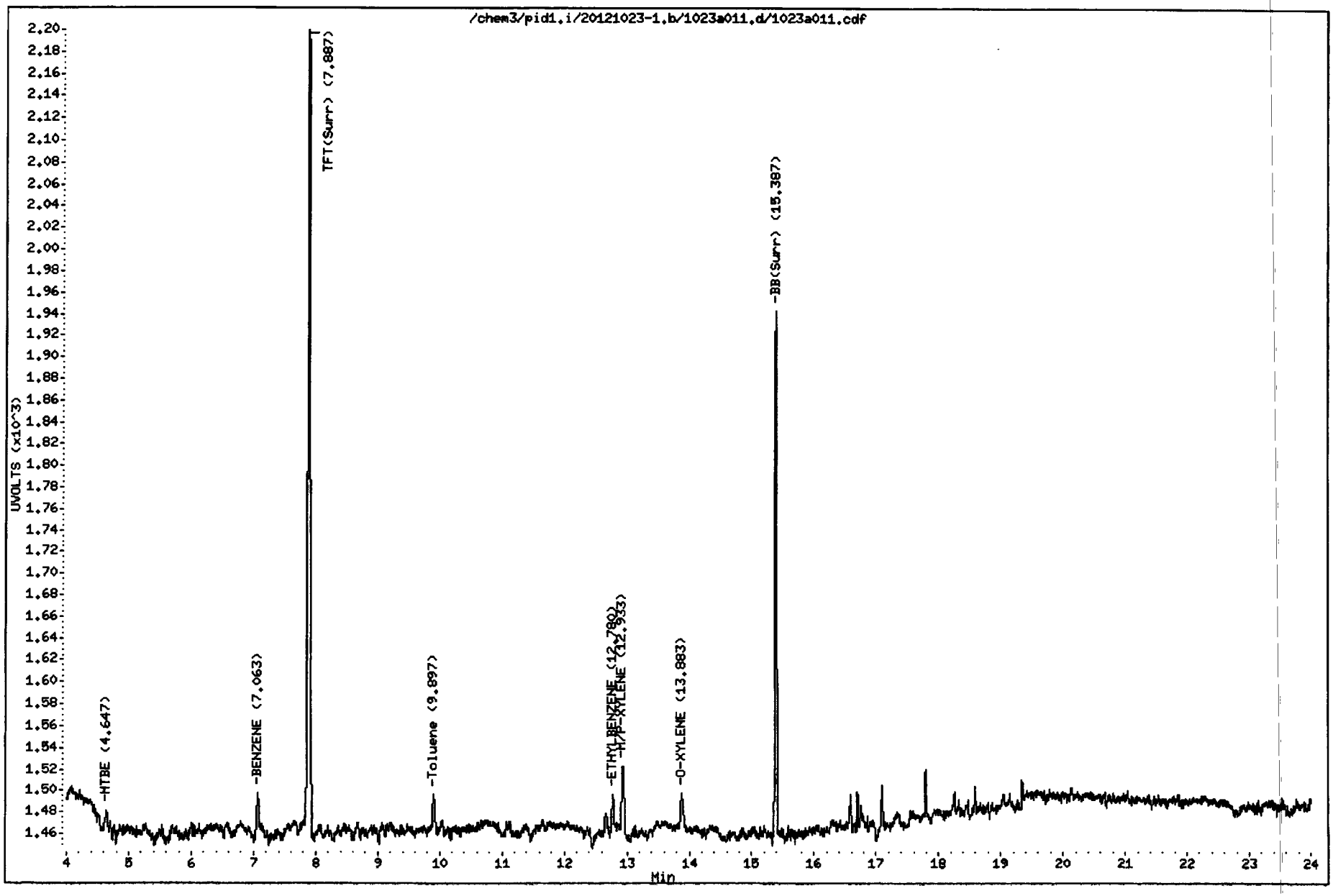
Sample Info: B 0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

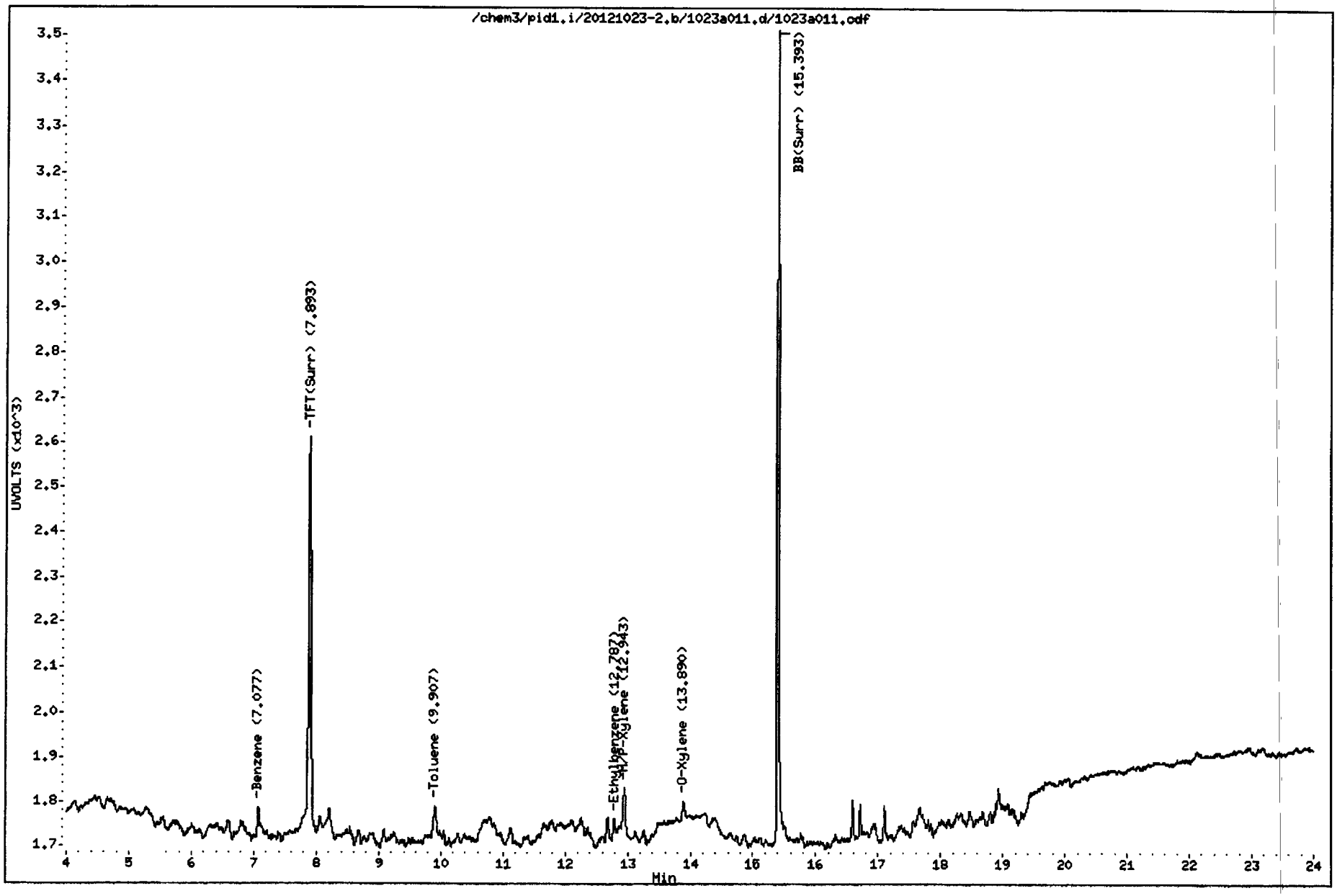
Sample Info: B 0.25

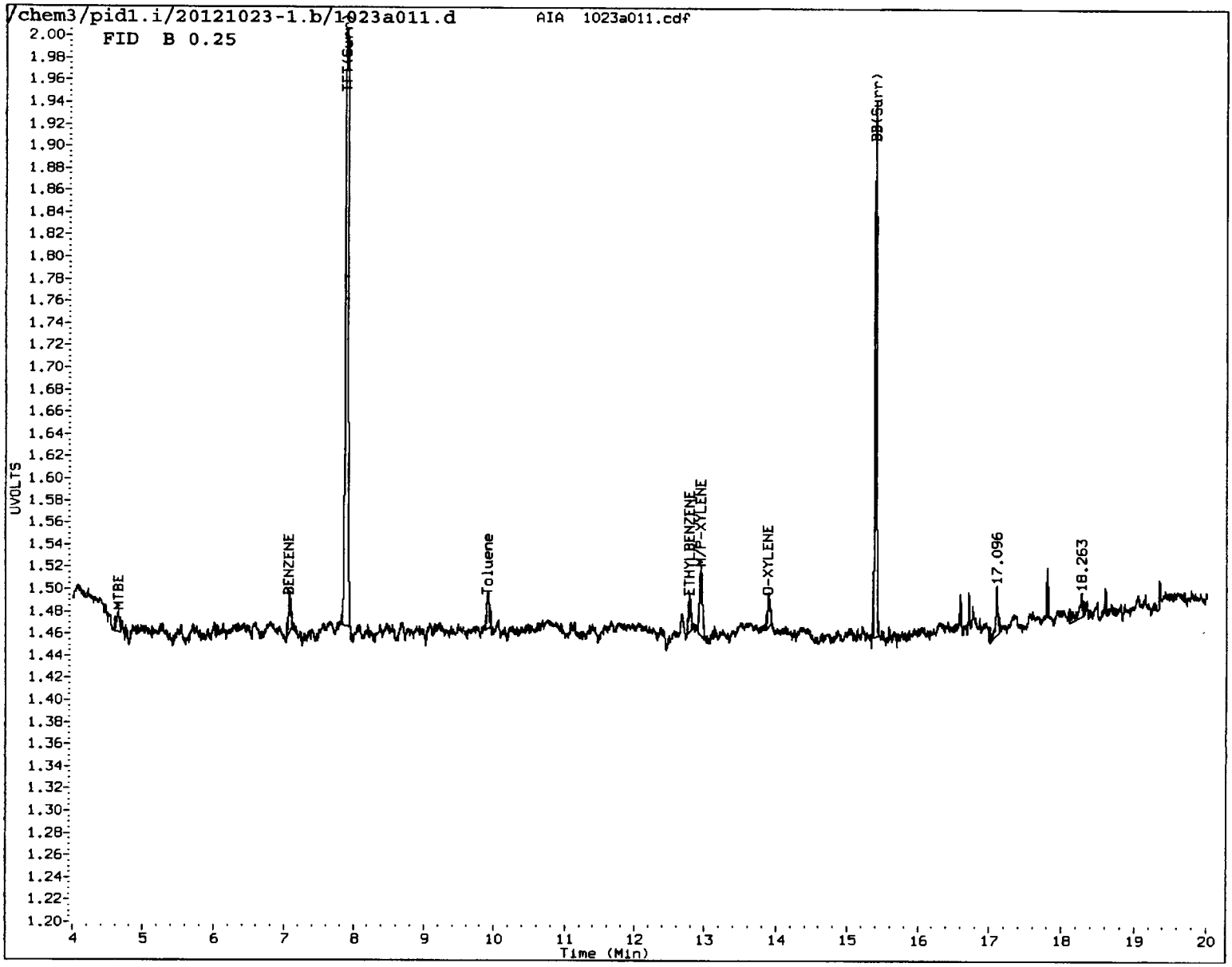
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

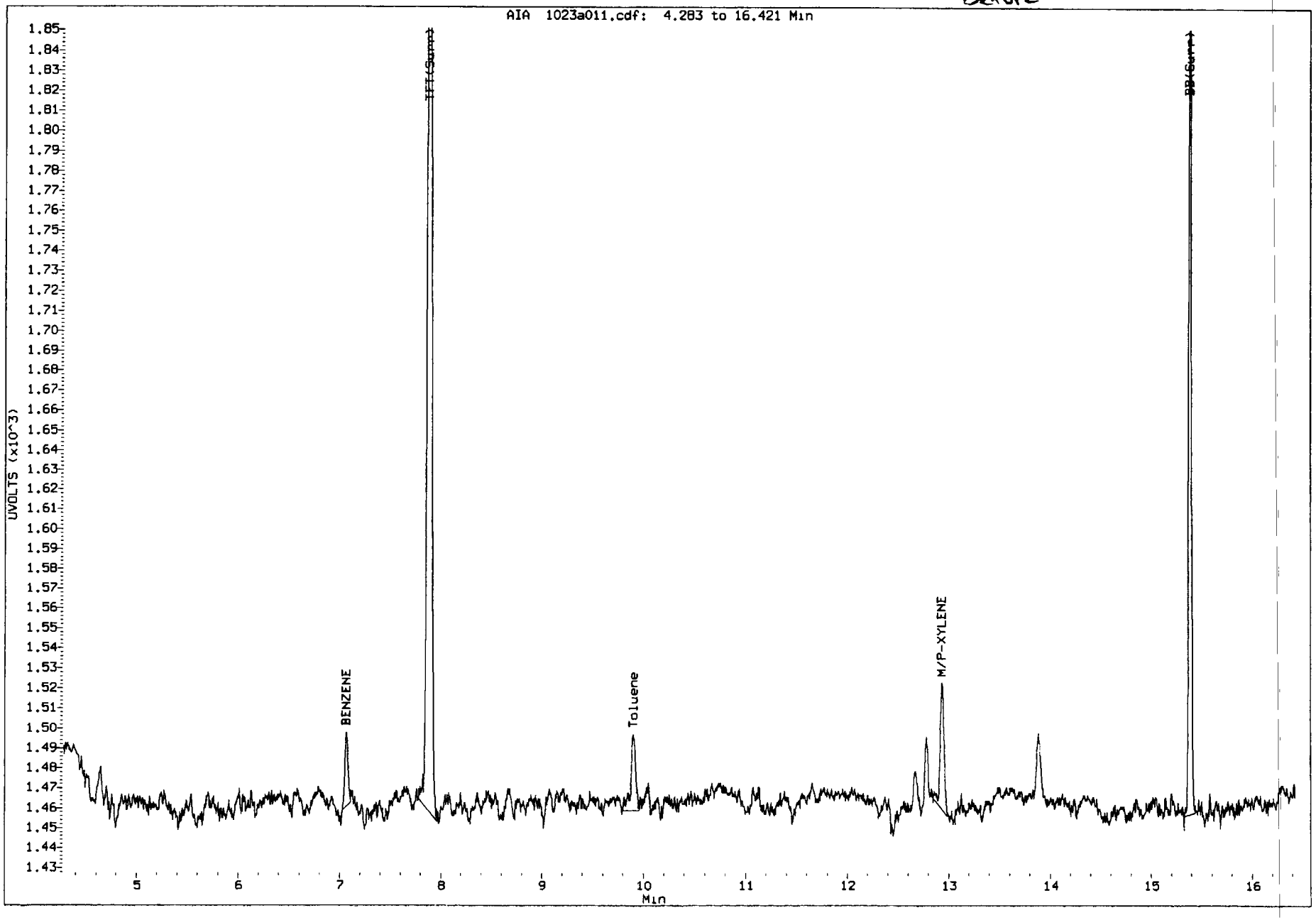
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

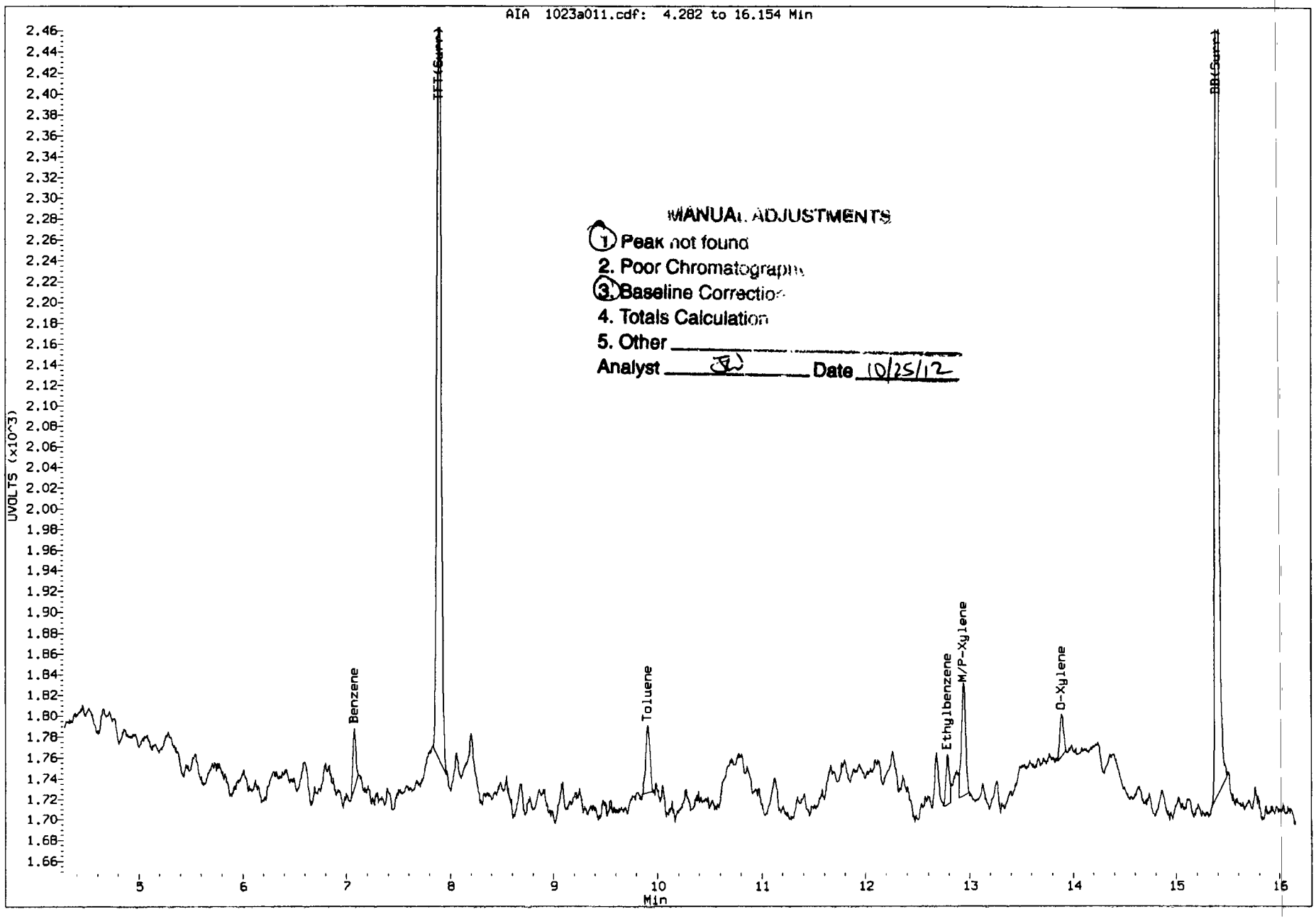
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before

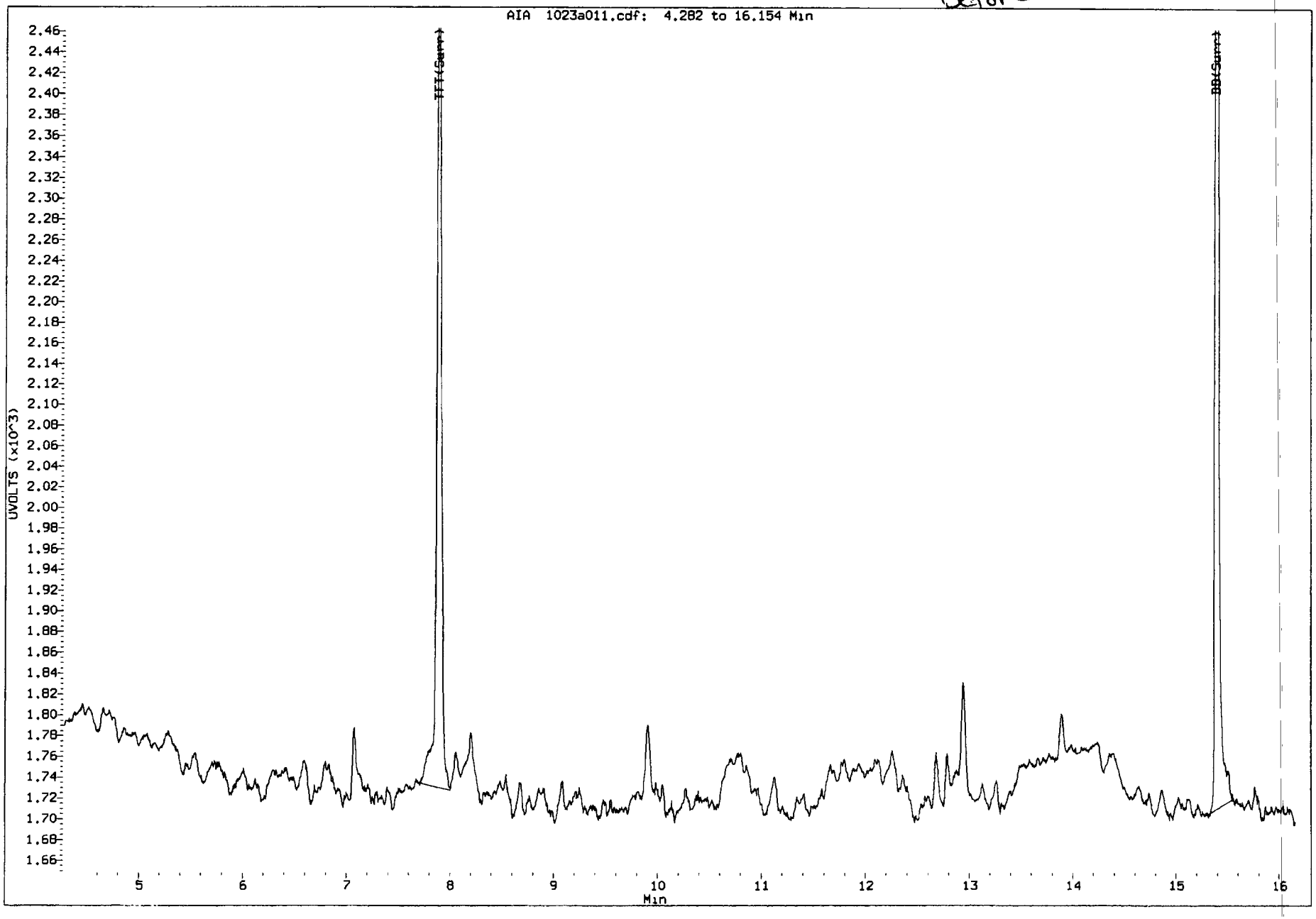


Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a012.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a012.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: BICV
Client ID:
Injection Date: 23-OCT-2012 21:44
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	2989	38262	94.9	TFT(Surr)
15.387	0.000	1972	16638	97.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	256090	0.715
8015C 2MP-TMB	(4.29 to 16.21)	723723	256713	0.355
AK101 nC6-nC10	(4.76 to 15.11)	582885	241615	0.415
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	256090	0.683

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.001	3638	96.0	TFT(Surr)
15.395	0.002	7931	98.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.004	6699	27.01	Benzene
9.905	-0.001	5955	26.47	Toluene
12.785	-0.002	5351	27.14	Ethylbenzene
12.946	0.003	11682	54.33	M/P-Xylene
13.894	0.004	4726	28.16	O-Xylene
4.646	-0.008	1898	26.36	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a012.d

Page 1

Date : 23-OCT-2012 21:44

Client ID:

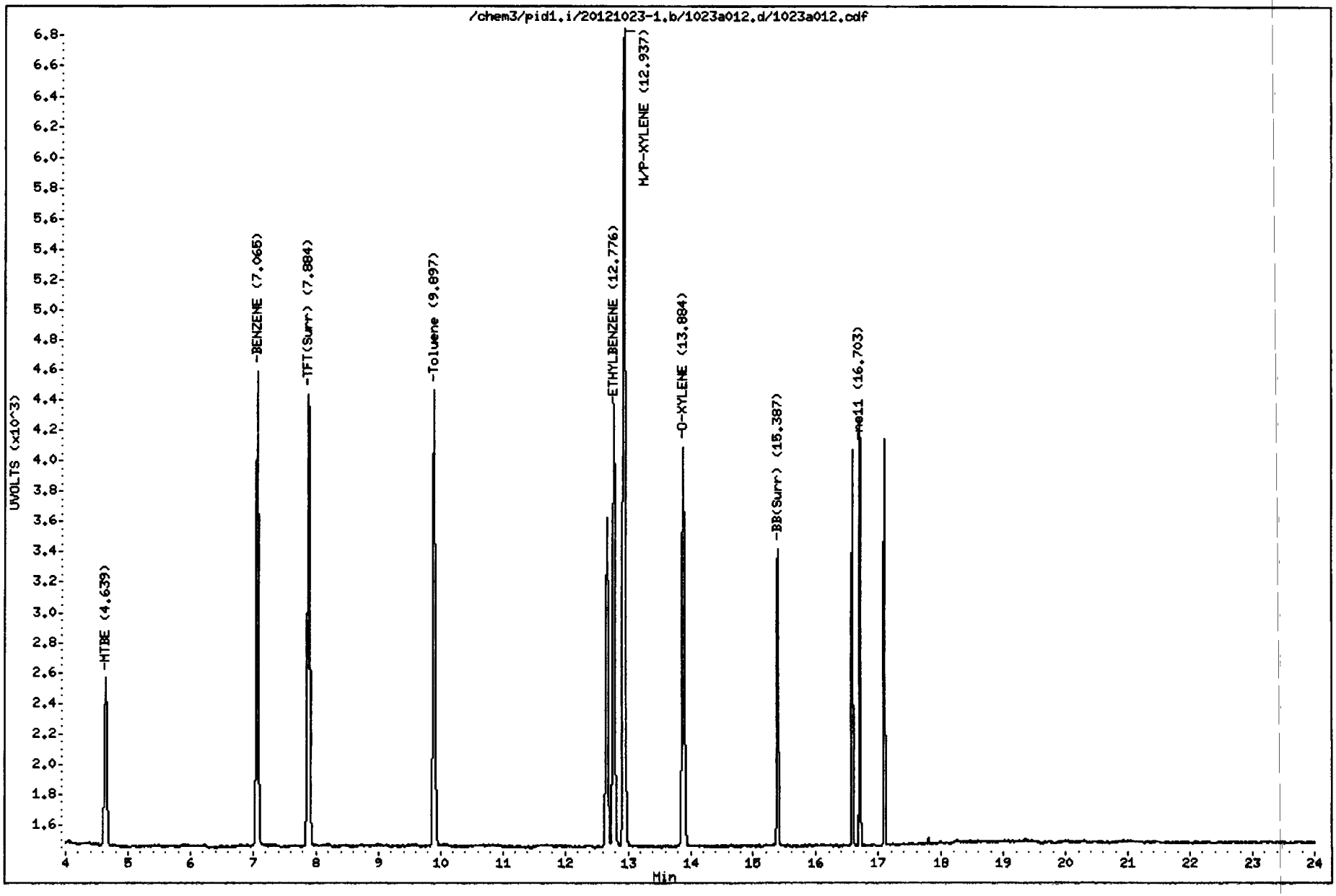
Instrument: pid1.i

Sample Info: BICV

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

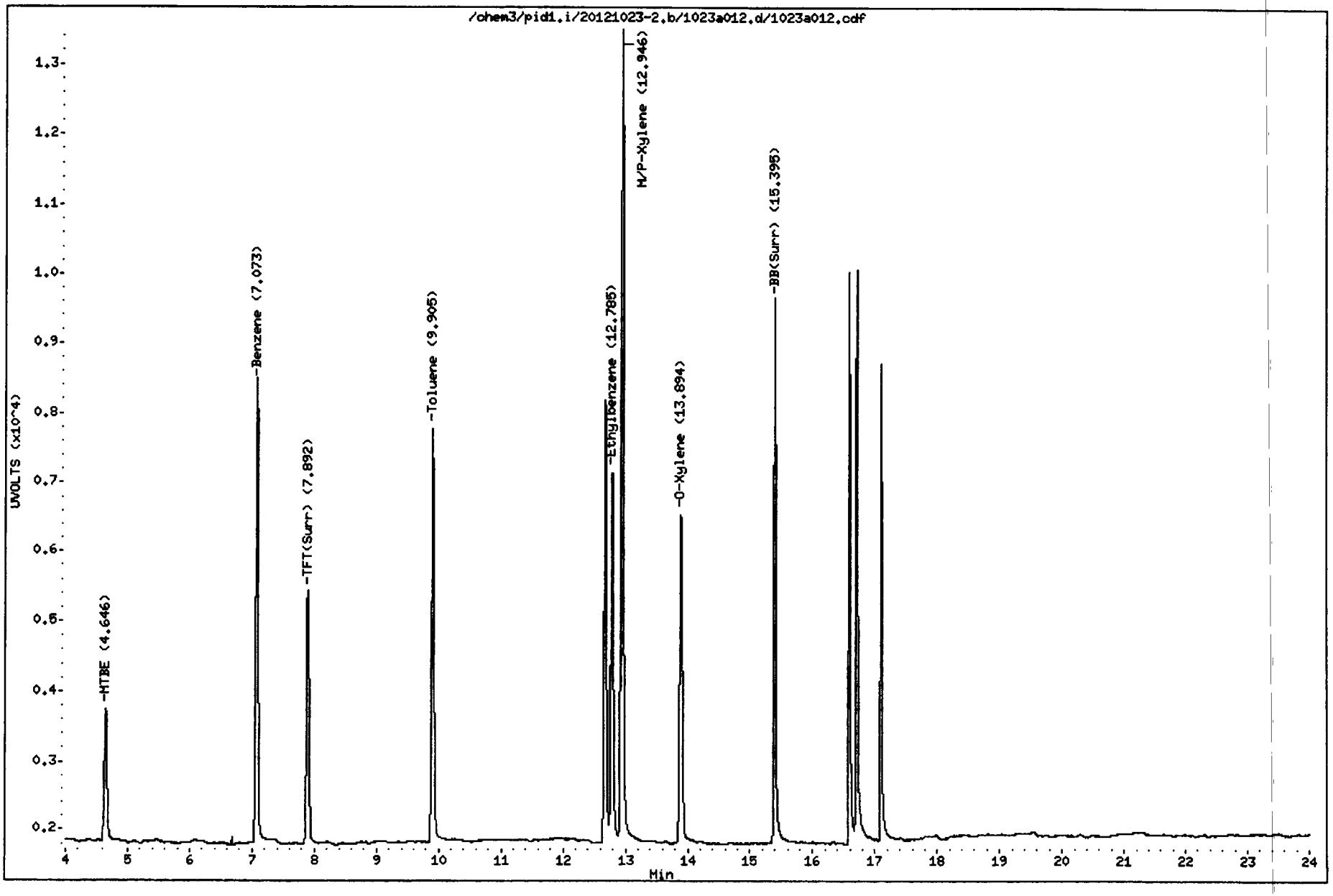
Sample Info: BICV

Instrument: pid1.i

Operator: PC/JW

Column phase: RTX 502-2 PID

Column diameter: 0.18



Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	4.387	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.387	4.317-4.457	4.387	0.000
6	MTBE	4.643	4.642	4.645	4.644	4.640	4.640	4.633	4.647	4.643	4.573-4.713	4.642	0.004
7	nC6	4.864	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.864	4.794-4.934	4.864	0.000
8	nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.864	6.794-6.934	+++++	+++++
9	BENZENE	7.069	7.067	7.067	7.067	7.063	7.063	7.067	7.063	7.069	6.999-7.139	7.066	0.002
$ 10	TFT(Surr)	7.887	7.883	7.883	7.887	7.883	7.884	7.883	7.887	7.887	7.817-7.957	7.885	0.002
11	nC8	9.507	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.507	9.437-9.577	9.507	0.000
12	Toluene	9.903	9.897	9.897	9.897	9.897	9.900	9.897	9.897	9.903	9.833-9.973	9.898	0.002
13	nC9	12.416	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.416	12.346-12.486	12.416	0.000
14	ETHYLBENZENE	12.783	12.776	12.775	12.775	12.776	12.777	12.780	12.780	12.783	12.713-12.853	12.778	0.003
15	M/P-XYLENE	12.948	12.938	12.937	12.936	12.936	12.937	12.940	12.933	12.948	12.878-13.018	12.938	0.004
16	O-XYLENE	13.890	13.884	13.882	13.883	13.883	13.883	13.883	13.883	13.890	13.820-13.960	13.884	0.002
17	nC10-Decane	15.207	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.207	15.137-15.277	15.207	0.000

Reviewer 1 _____ Date: 10/25/12

Reviewer 2 _____ Date: 10/26/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.390	15.387	15.387	15.387	15.387	15.387	15.387	15.387	15.390	15.320-15.460	15.387	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.109	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.109	16.039-16.179	16.109	0.000
21 nc11	16.761	16.760	16.702	16.703	16.703	16.705	16.704	+++++	16.761	16.691-16.831	16.720	0.028
22 nC12-Dodecane	17.800	17.795	17.795	17.795	+++++	+++++	+++++	+++++	17.800	17.730-17.870	17.796	0.003
23 nC13	18.607	18.595	+++++	+++++	+++++	+++++	+++++	+++++	18.607	18.537-18.677	18.601	0.008
24 Naphthalene	18.808	18.796	+++++	+++++	+++++	+++++	+++++	+++++	18.808	18.738-18.878	18.802	0.009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.650	4.650	4.653	4.653	4.647	4.647	4.653	+++++	4.650	4.600-4.700	4.651	0.003
	2 Benzene	7.078	7.073	7.075	7.077	7.073	7.073	7.073	7.077	7.078	7.028-7.128	7.075	0.002
$	3 TFT(Surr)	7.896	7.890	7.893	7.893	7.890	7.893	7.893	7.893	7.896	7.846-7.946	7.893	0.002
	4 Toluene	9.910	9.903	9.903	9.907	9.903	9.907	9.907	9.907	9.910	9.860-9.960	9.906	0.002
	5 Ethylbenzene	12.793	12.785	12.784	12.785	12.785	12.785	12.783	12.787	12.793	12.743-12.843	12.786	0.003
	6 M/P-Xylene	12.957	12.948	12.946	12.946	12.945	12.946	12.947	12.943	12.957	12.908-13.008	12.947	0.004
	7 O-Xylene	13.900	13.893	13.890	13.893	13.893	13.893	13.893	13.890	13.900	13.870-13.930	13.893	0.003
$	8 BB(Surr)	15.397	15.393	15.393	15.397	15.393	15.393	15.393	15.393	15.397	15.347-15.447	15.394	0.002

Reviewer 1 JW Date: 10/25/12
Reviewer 2 Date: 10/24/12

6a
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20121023-1

Instrument/Det: PID1.I/RTX 502-2 FID Project:

Calibration Date: 23-OCT-2012 SDG No.: 20121023-1

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4

Surrogates	RF1	RF2	RF3	RF4	RF5	RF6	Ave RF	%RSD
Rel. Rec.	22	44	67	100	133	178		

<- Indicates %RSD outside limits
Surrogate areas are not included in RF calculation.

Quant Ranges :
- WA Gas: Toluene - nC12
- AK Gas: nC6 - nC10
- NW Gas: Toluene - Naphthalene
- Cal Gas: nC6 - nC12
- 8015 Gas: 2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files	Analysis Time
1023a013.d	23-OCT-2012 22:13
1023a014.d	23-OCT-2012 22:42
1023a015.d	23-OCT-2012 23:11
1023a016.d	23-OCT-2012 23:40
1023a017.d	24-OCT-2012 00:10
1023a018.d	24-OCT-2012 00:39

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a002.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a002.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: RT1023+BCAL1
Client ID:
Injection Date: 23-OCT-2012 10:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3182	41284	101.0	TFT(Surr)
15.387	0.000	2019	16909	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	475541	1.328
8015C 2MP-TMB	(4.29 to 16.21)	723723	578928	0.800
AK101 nC6-nC10	(4.76 to 15.11)	582885	402341	0.690
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	504301	1.344

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.002	3856	101.8	TFT(Surr)
15.394	0.001	8138	101.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.074	-0.003	6292	25.37	Benzene
9.904	-0.002	5539	24.62	Toluene
12.784	-0.002	4977	25.24	Ethylbenzene
12.945	0.002	10971	51.03	M/P-Xylene
13.892	0.002	4338	25.85	O-Xylene
4.650	-0.003	1700	23.61	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a002.d

Date : 23-OCT-2012 10:10

Client ID:

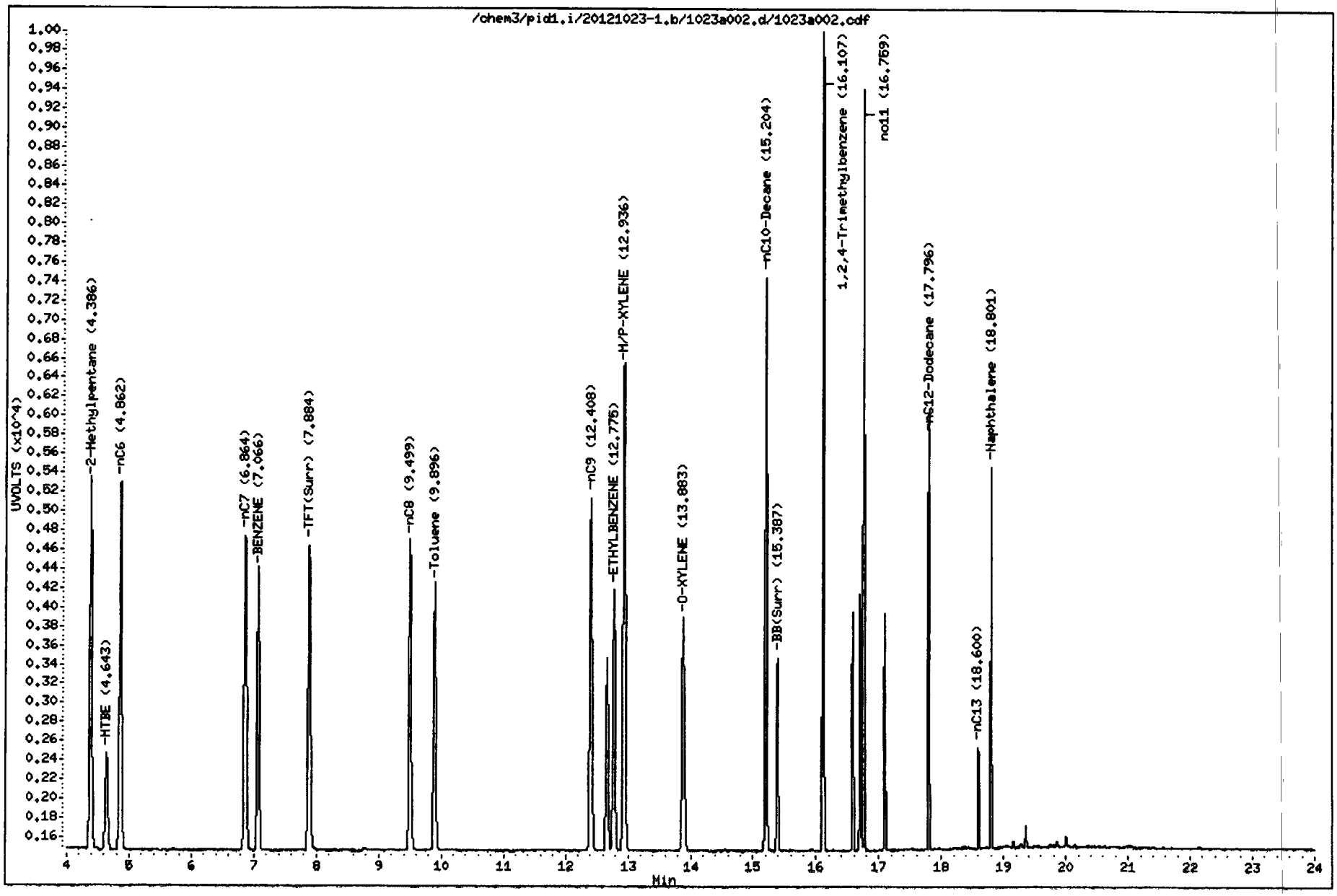
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

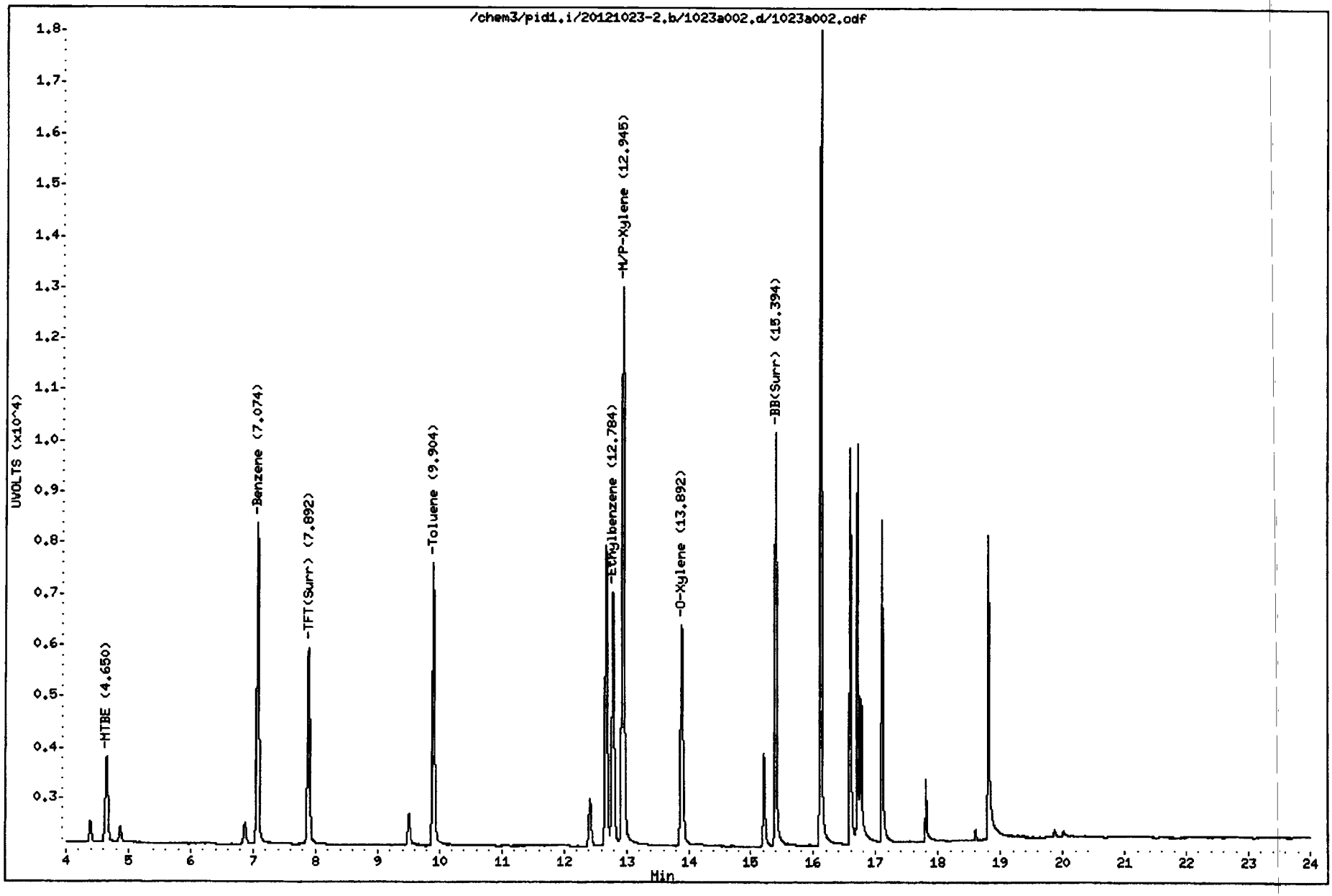


Data File: /chem3/pid1.i/20121023-2.b/1023a002.d
Date : 23-OCT-2012 10:10
Client ID:
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a013.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a013.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.10
Client ID:
Injection Date: 23-OCT-2012 22:13
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.002	2950	38720	93.7	TFT(Surr)
15.387	0.000	1950	16606	96.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	37102	0.104 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	74277	0.103 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	57914	0.099 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	39402	0.105 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3536	93.3	TFT(Surr)
15.395	0.001	7790	96.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.907	0.000	902	4.01	Toluene
12.785	-0.001	223	1.13	Ethylbenzene
12.948	0.005	914	4.25	M/P-Xylene
13.893	0.003	346	2.06	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a013.d

Date : 23-OCT-2012 22:13

Client ID:

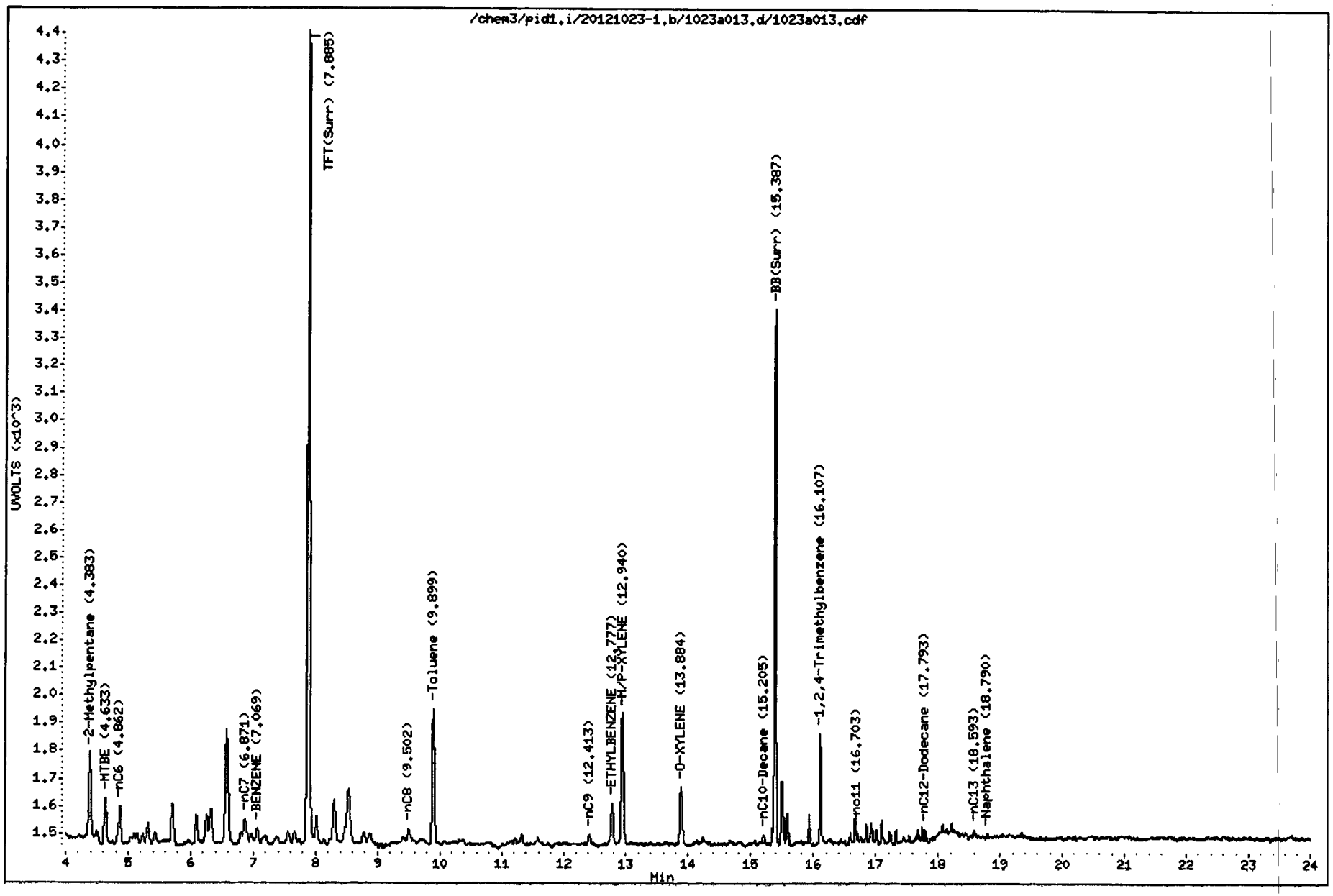
Sample Info: G 0.10

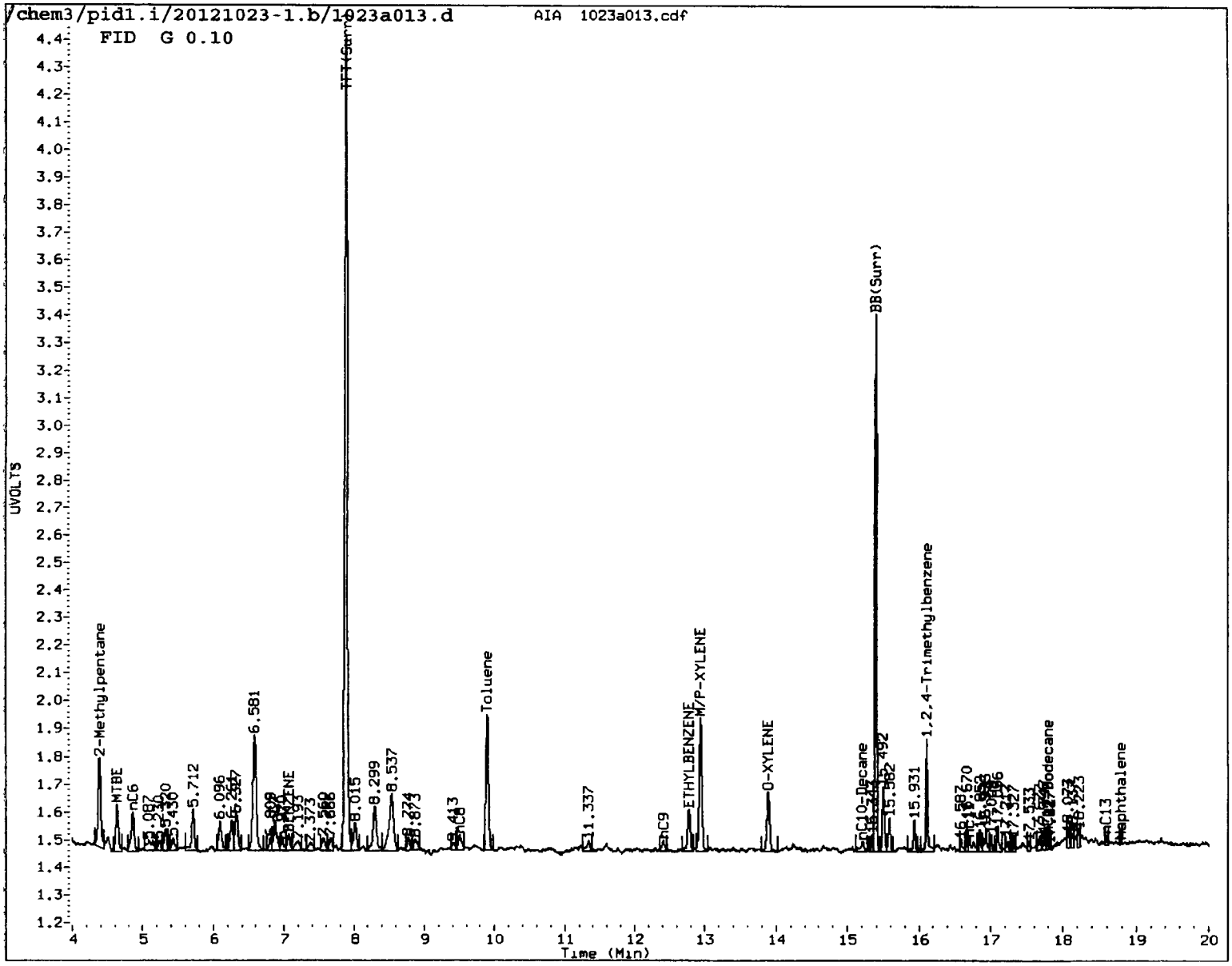
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

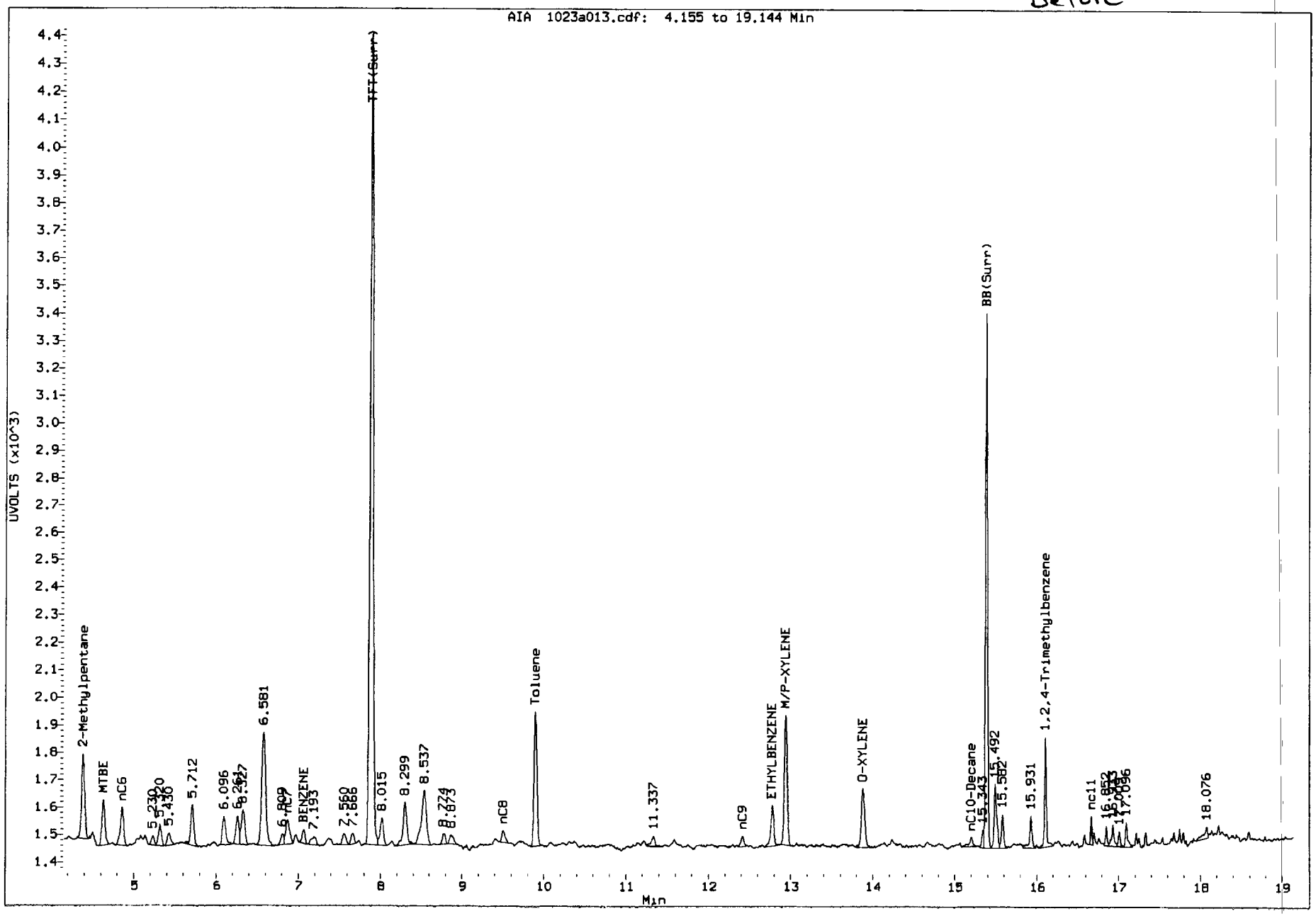
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a013.d/1023a013.cdf
Injection Date: 23-OCT-2012 22:13
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a014.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a014.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.25
Client ID:
Injection Date: 23-OCT-2012 22:42
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	2975	39690	94.5	TFT(Surr)
15.388	0.001	1944	16963	95.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	94864	0.265 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	199011	0.275 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	162246	0.278 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	98768	0.263 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

SW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.000	3597	95.0	TFT(Surr)
15.396	0.002	7867	97.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	225	0.91	Benzene
9.906	0.000	2188	9.72	Toluene
12.786	-0.001	548	2.78	Ethylbenzene
12.948	0.005	2183	10.15	M/P-Xylene
13.894	0.004	795	4.74	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a014.d

Date : 23-OCT-2012 22:42

Client ID:

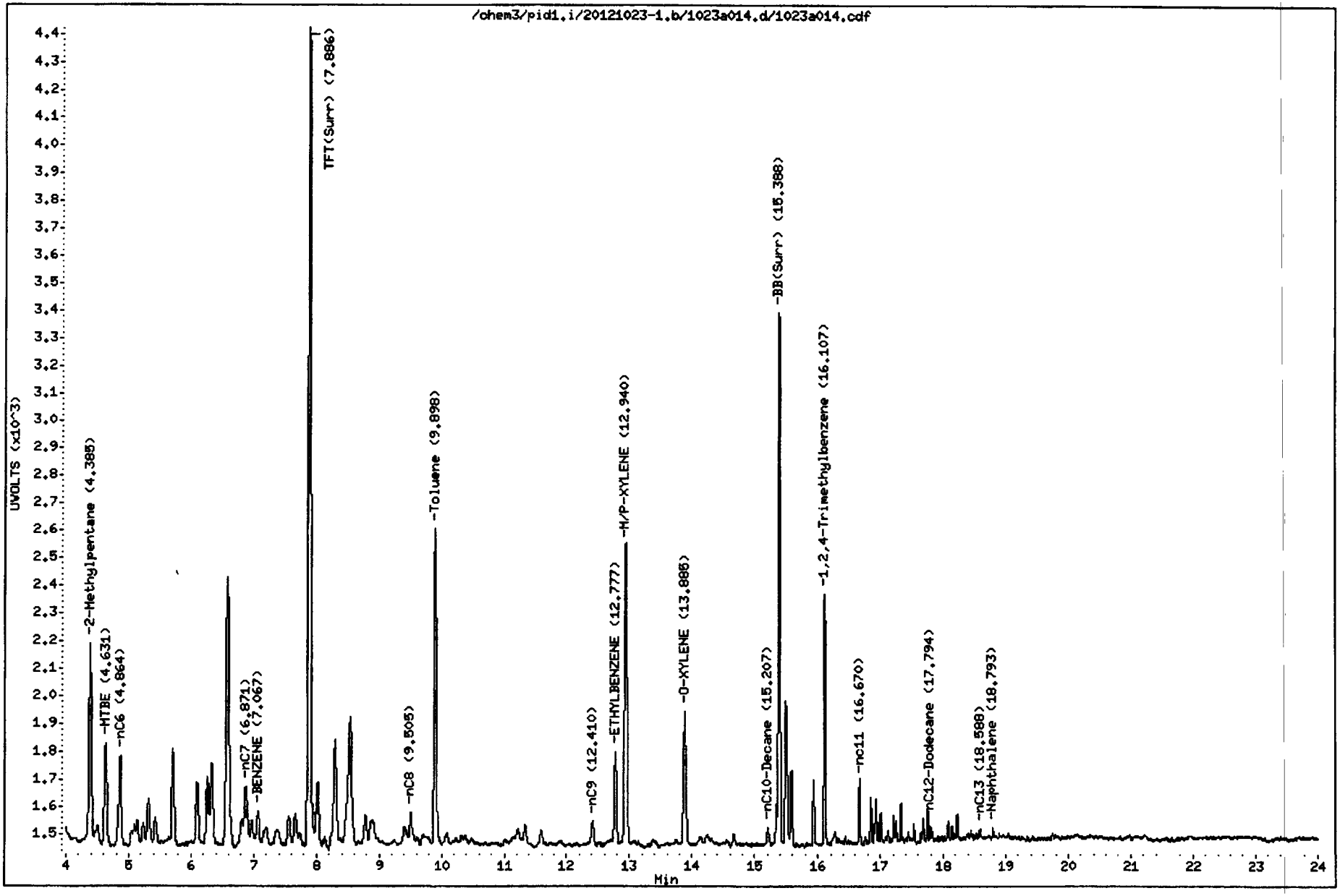
Sample Info: G 0.25

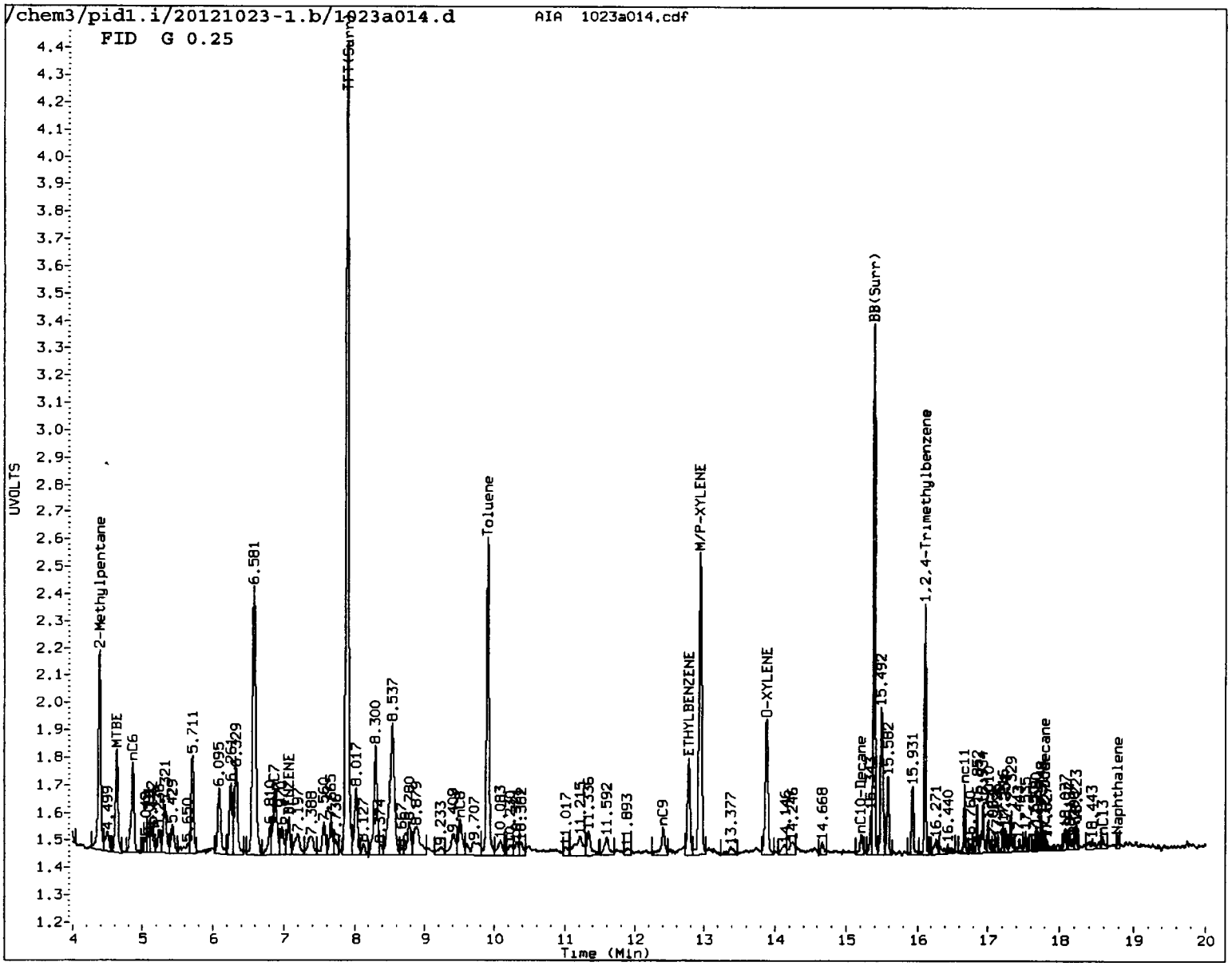
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



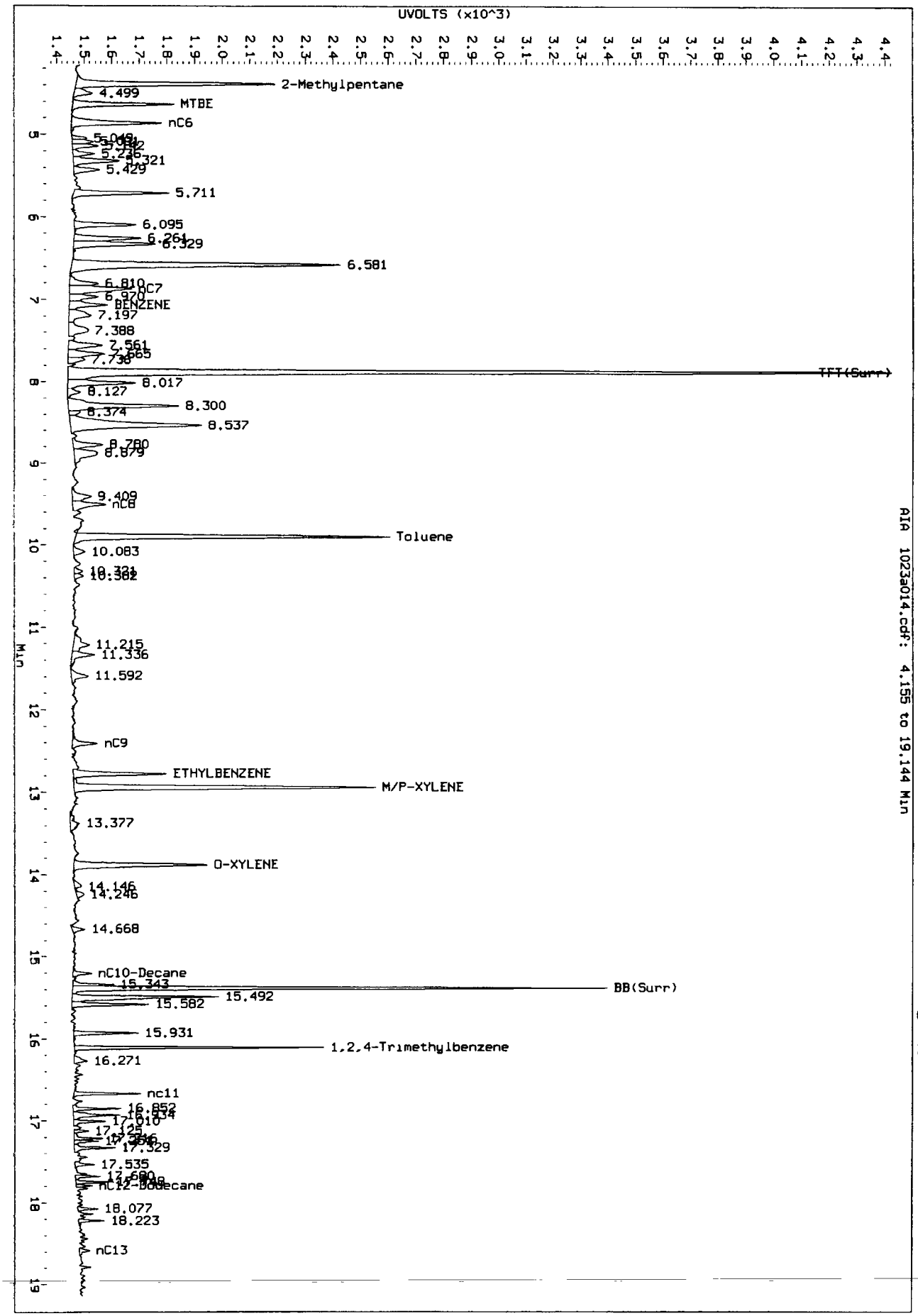


MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12


Data File: /chem3/pid1.i/20121023-1.b/1023a014.d/1023a014.cdf
Injection Date: 23-OCT-2012 22:42
Instrument: pid1.i
Client Sample ID:
UVOLTS (x10^3)
Min
AIA 1023a014.cdf: 4.155 to 19.144 Min
2-Methylpentane
4.499
MTBE
nC6
5.429
5.711
6.095
6.581
nC7
BENZENE
7.197
7.388
TFT(Surr)
8.017
8.300
8.537
9.409
nC8
Toluene
10.083
11.215
11.336
11.592
nC9
ETHYLBENZENE
M/P-XYLENE
13.377
O-XYLENE
14.146
14.246
14.668
nC10-Decane
15.343
BB(Surr)
15.492
15.582
15.931
1,2,4-Trimethylbenzene
16.271
nc11
17.329
17.535
nC12-Dodecane
18.077
18.223
nC13
Before

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a015.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a015.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 1.0
Client ID:
Injection Date: 23-OCT-2012 23:11
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	3079	44718	97.8	TFT(Surr)
15.387	0.000	1964	17721	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	358654	1.002 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	725276	1.002 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	585010	1.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	376837	1.005 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3709	97.9	TFT(Surr)
15.395	0.002	7881	98.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	965	3.89	Benzene
9.906	0.000	9089	40.40	Toluene
12.786	-0.001	2253	11.43	Ethylbenzene
12.949	0.006	9128	42.45	M/P-Xylene
13.894	0.004	3286	19.58	O-Xylene
4.635	-0.019	211	2.93	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a015.d

Date : 23-OCT-2012 23:11

Client ID:

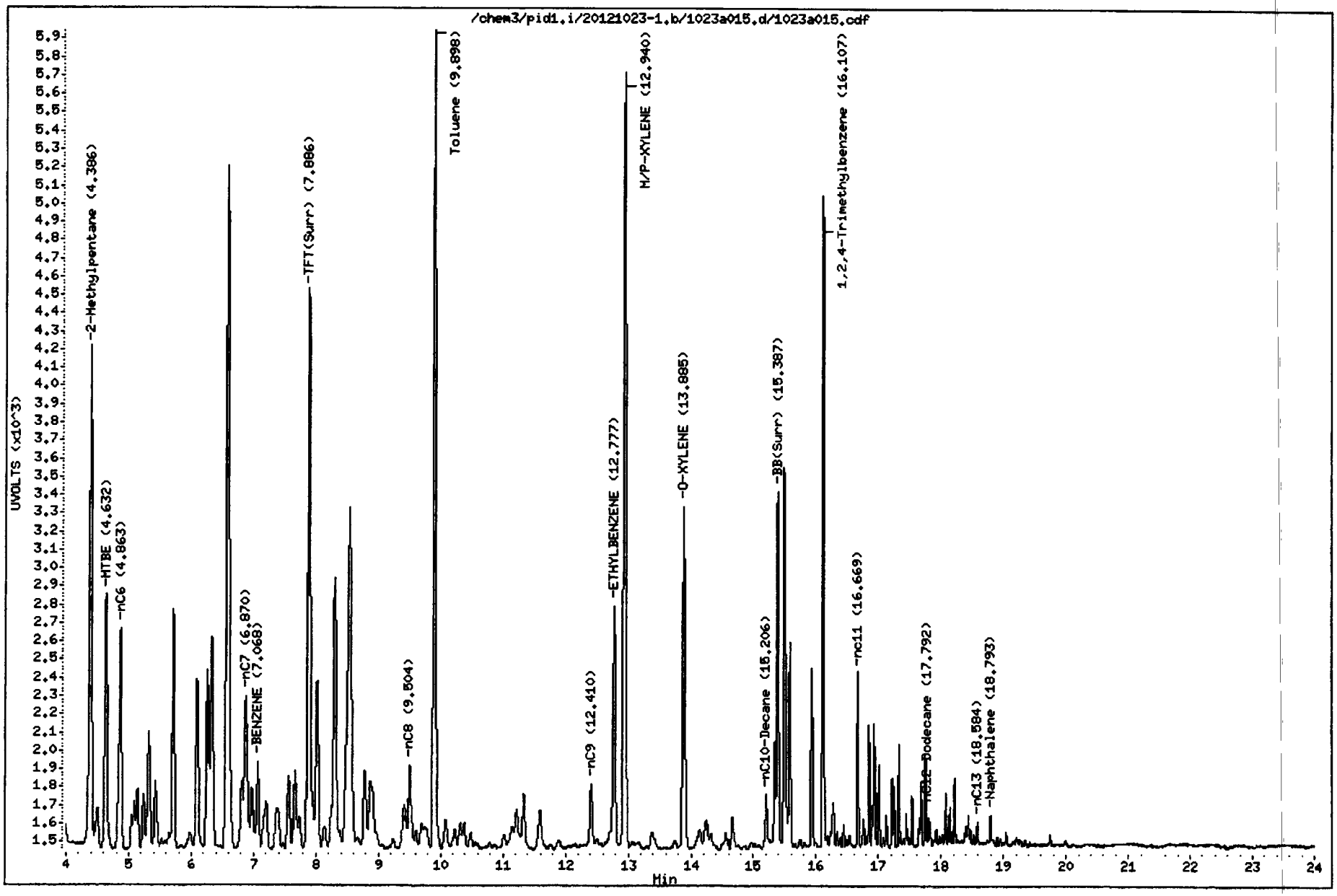
Sample Info: G 1.0

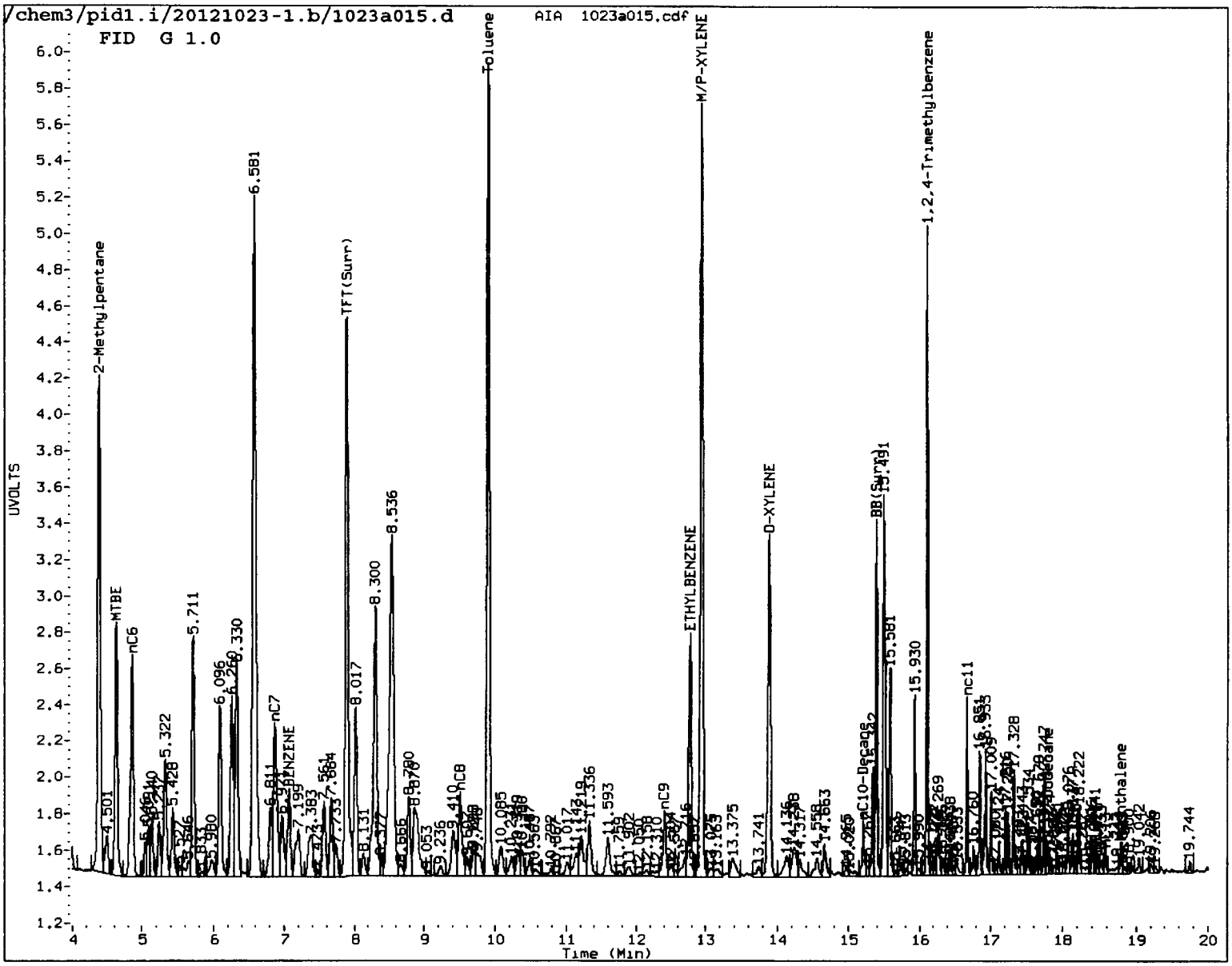
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



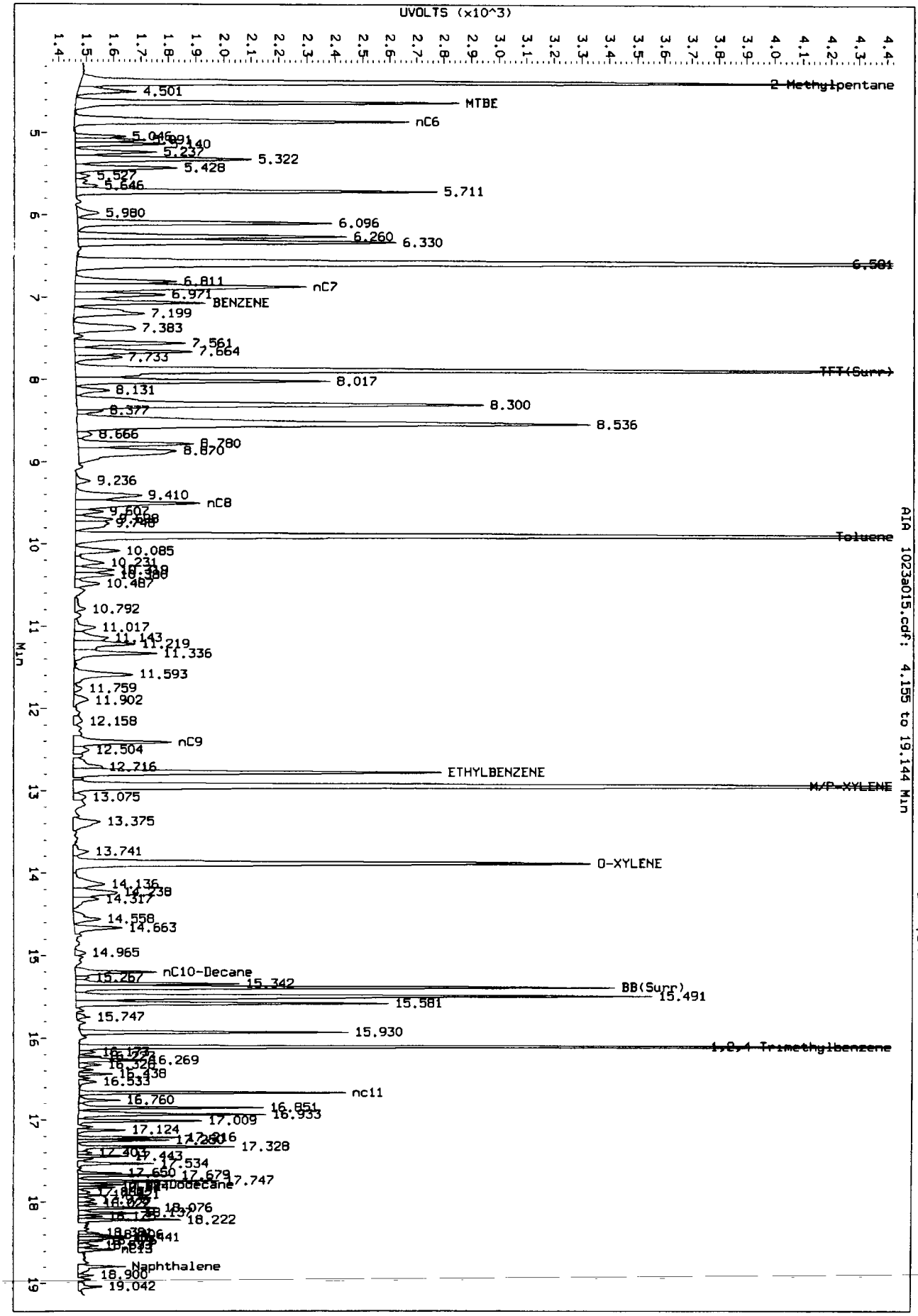


MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: SW Date: 10/25/12



Data File: /chem3/pid1.i/20121023-1.b/1023a015.d/1023a015.cdf
Injection Date: 23-OCT-2012 23:11
Instrument: pid1.i
Client Sample ID:

AIA 1023a015.cdf: 4.155 to 19.144 Min

Before

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a016.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a016.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 2.5
Client ID:
Injection Date: 23-OCT-2012 23:40
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.002	3238	46993	102.8	TFT(Surr)
15.387	0.000	2003	18605	98.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	848232	2.369
8015C 2MP-TMB	(4.29 to 16.21)	723723	1687315	2.331
AK101 nC6-nC10	(4.76 to 15.11)	582885	1358261	2.330
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	884847	2.359

JW 10/25/12

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3774	99.6	TFT(Surr)
15.395	0.002	8059	100.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2255	9.09	Benzene
9.907	0.000	21750	96.67	Toluene
12.785	-0.001	5424	27.51	Ethylbenzene
12.950	0.007	21923	101.96	M/P-Xylene
13.894	0.004	7944	47.33	O-Xylene
4.635	-0.018	486	6.75	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a016.d

Date : 23-OCT-2012 23:40

Client ID:

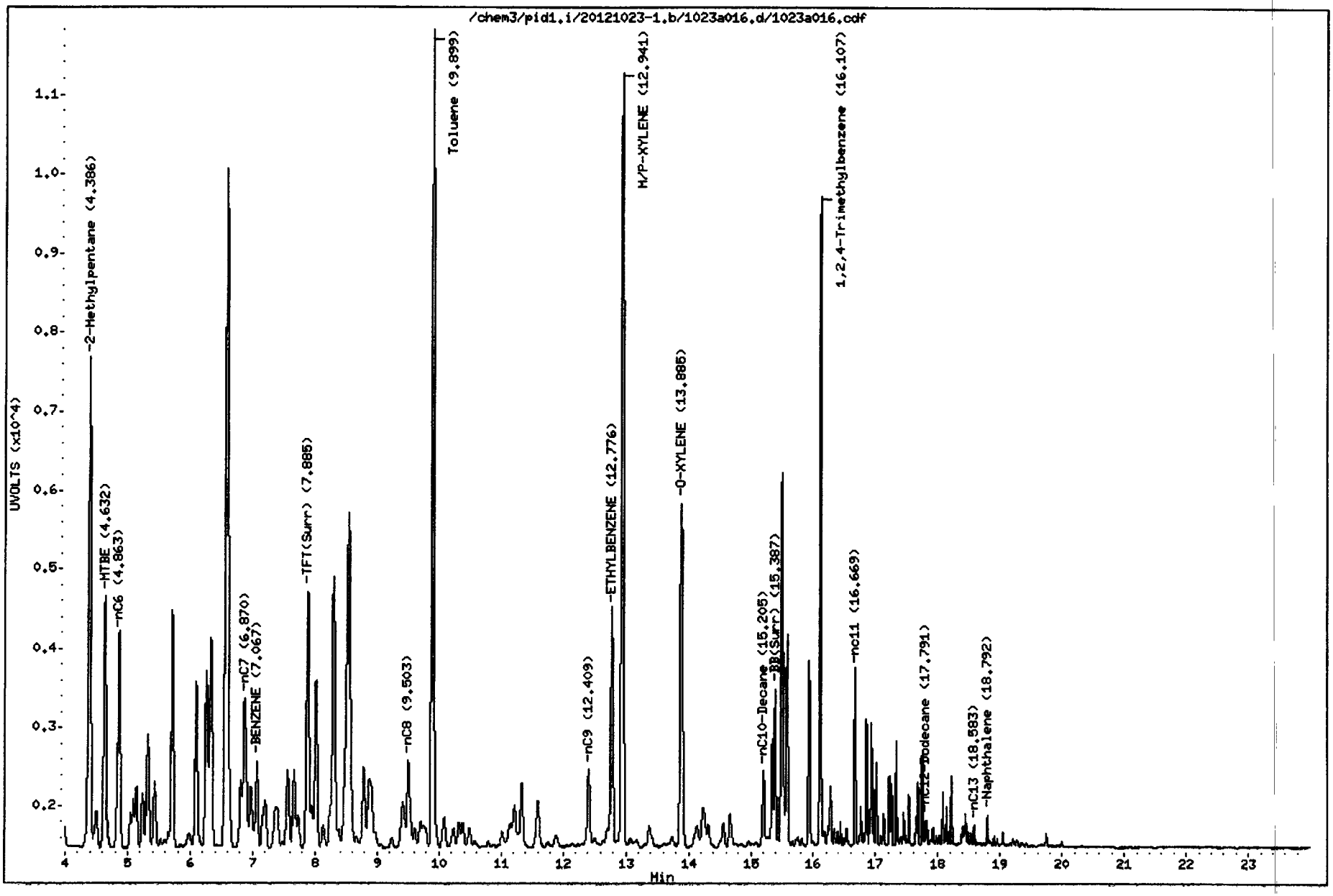
Sample Info: G 2.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a017.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a017.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 5.0
Client ID:
Injection Date: 24-OCT-2012 00:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	3585	55360	113.8	TFT(Surr)
15.387	0.000	2115	18935	104.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1701302	4.751
8015C 2MP-TMB	(4.29 to 16.21)	723723	3352467	4.632
AK101 nC6-nC10	(4.76 to 15.11)	582885	2711219	4.651
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1775567	4.734

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.001	4011	105.9	TFT(Surr)
15.395	0.001	8350	103.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.001	4431	17.87	Benzene
9.908	0.002	42408	188.49	Toluene
12.786	-0.001	10851	55.03	Ethylbenzene
12.952	0.009	43539	202.50	M/P-Xylene
13.895	0.005	15788	94.06	O-Xylene
4.636	-0.018	966	13.42	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a017.d

Date : 24-OCT-2012 00:10

Client ID:

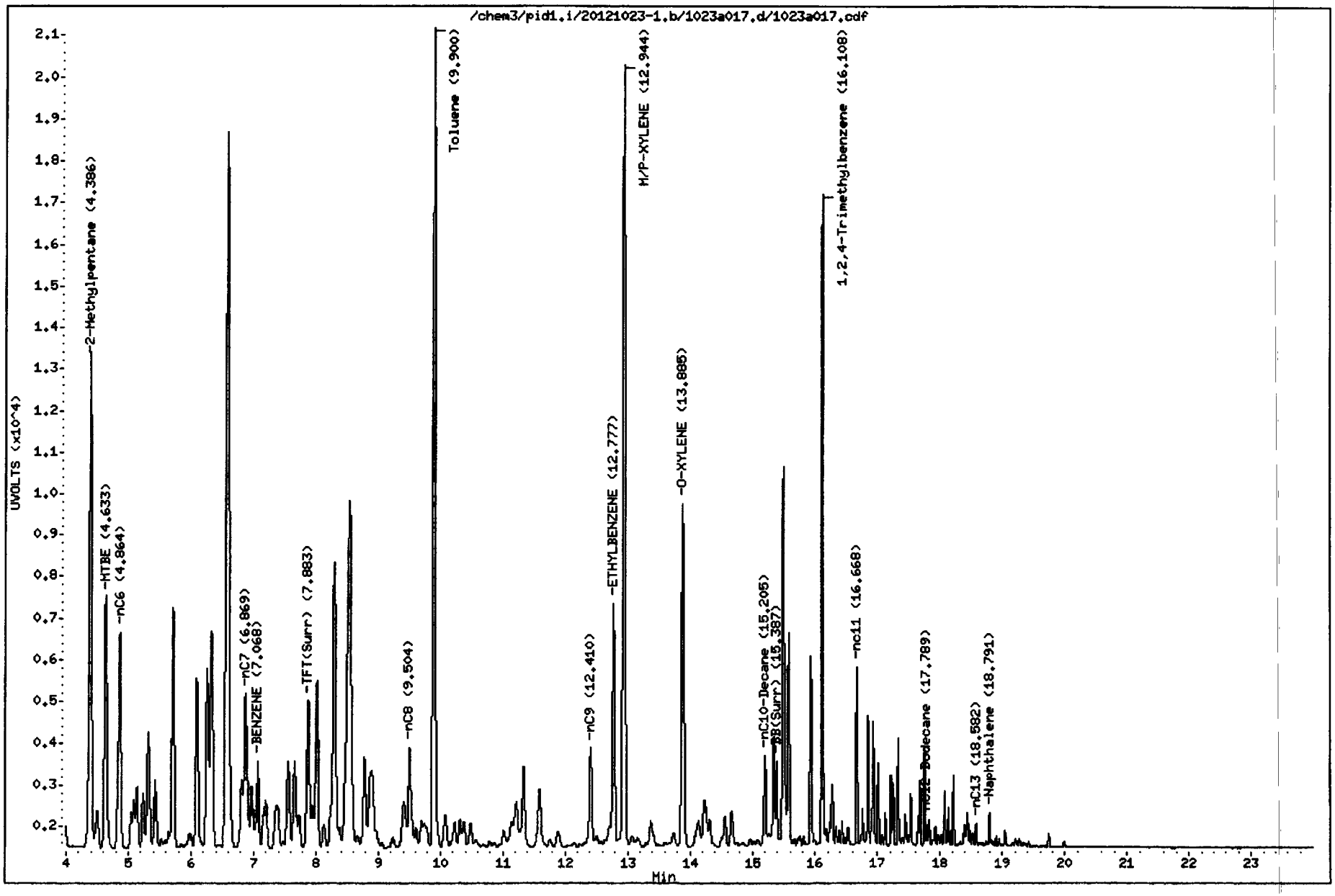
Sample Info: G 5.0

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a018.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a018.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 10
Client ID:
Injection Date: 24-OCT-2012 00:39
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.880	-0.007	4738	79062	150.4	TFT(Surr)
15.388	0.001	2439	22291	120.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	3600012	10.053
8015C 2MP-TMB	(4.29 to 16.21)	723723	7328267	10.126
AK101 nC6-nC10	(4.76 to 15.11)	582885	5986278	10.270
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	3755718	10.013

JW 10/25/12

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.891	-0.003	4903	129.4	TFT(Surr)
15.395	0.002	9209	114.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.076	-0.001	9254	37.32	Benzene
9.912	0.005	88764	394.52	Toluene
12.789	0.002	22870	115.99	Ethylbenzene
12.958	0.015	90897	422.77	M/P-Xylene
13.898	0.008	33138	197.43	O-Xylene
4.636	-0.017	2050	28.47	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a018.d

Date : 24-OCT-2012 00:39

Client ID:

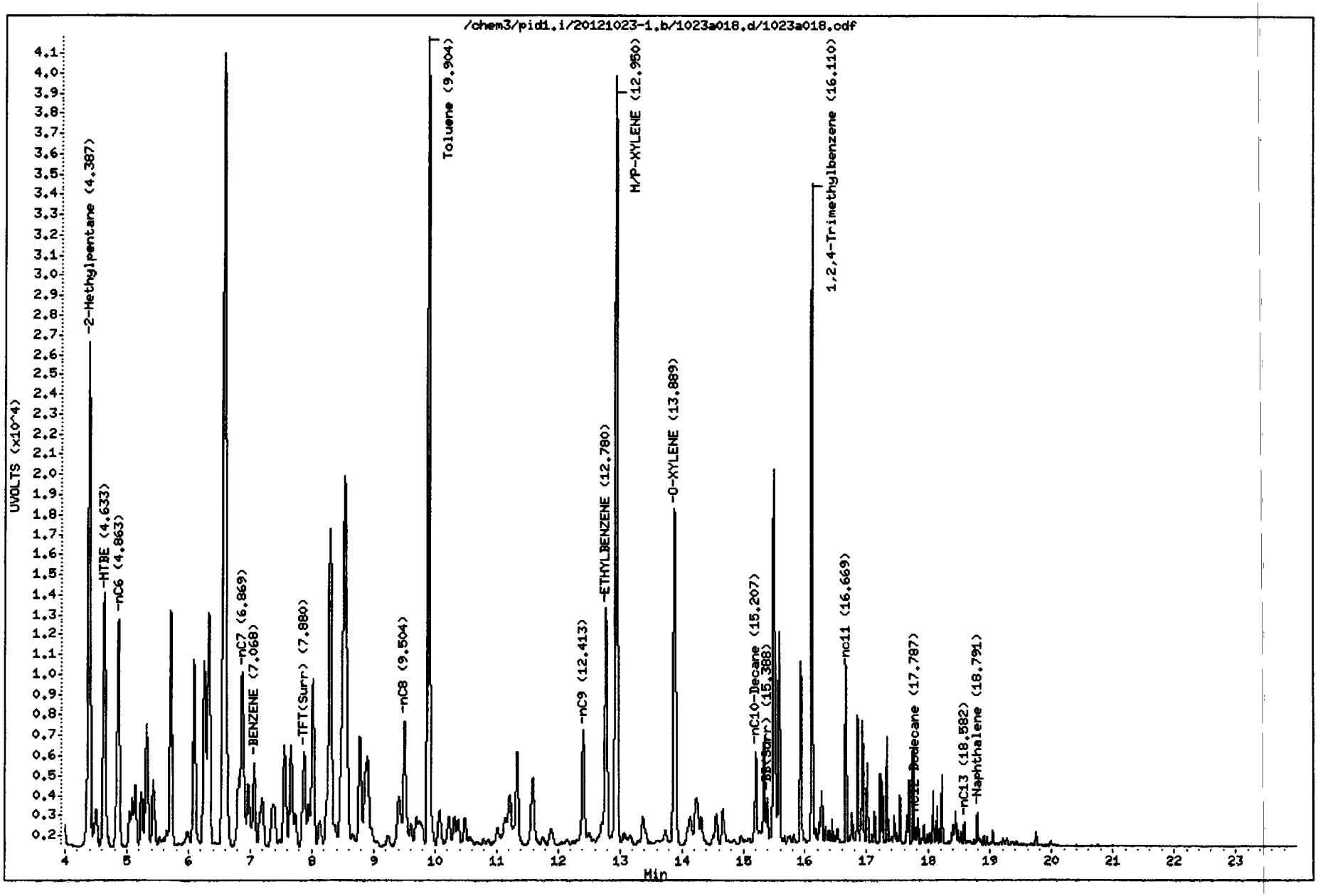
Sample Info: G 10

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a019.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a019.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GICV
Client ID:
Injection Date: 24-OCT-2012 01:08
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3250	47497	103.2	TFT(Surr)
15.387	0.000	2019	19039	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	917898	2.563
8015C 2MP-TMB	(4.29 to 16.21)	723723	1759198	2.431
AK101 nC6-nC10	(4.76 to 15.11)	582885	1408754	2.417
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	972996	2.594

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3791	100.1	TFT(Surr)
15.395	0.002	8074	100.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2306	9.30	Benzene
9.907	0.000	22198	98.66	Toluene
12.785	-0.001	5582	28.31	Ethylbenzene
12.950	0.007	22656	105.37	M/P-Xylene
13.894	0.004	8207	48.90	O-Xylene
4.635	-0.019	542	7.53	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a019.d

Date : 24-OCT-2012 01:08

Client ID:

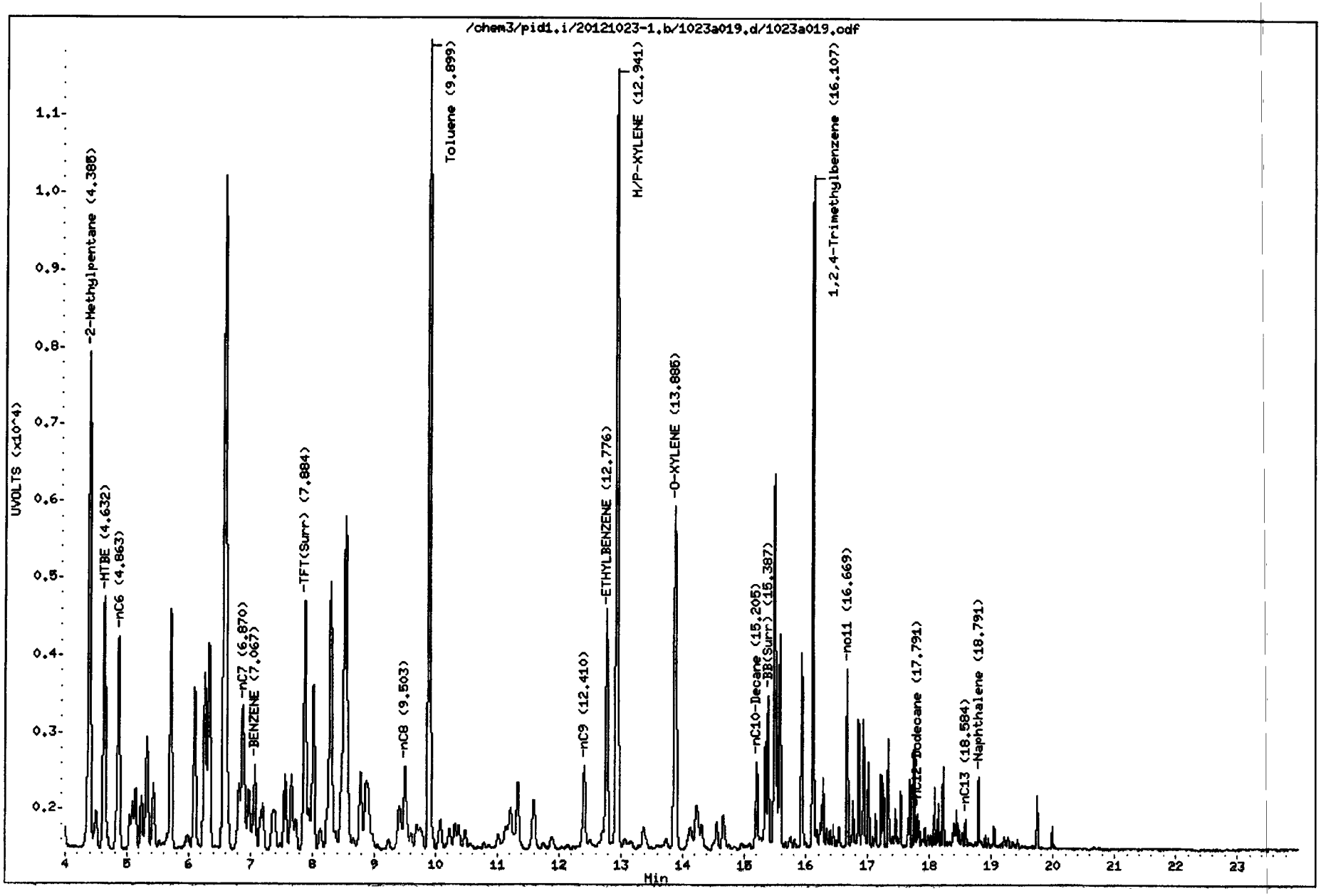
Sample Info: GICV

Instrument: pid1.i

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18



Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
	2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
	3 AK101	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
	4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
	5 2-Methylpentane	4.383	4.385	4.386	4.386	4.386	4.387	4.387	4.317-4.457	4.385	0.001
	6 MTBE	4.633	4.631	4.632	4.632	4.633	4.633	4.647	4.577-4.717	4.632	0.001
	7 nC6	4.862	4.864	4.863	4.863	4.864	4.863	4.864	4.794-4.934	4.863	0.001
$	8 nC7	6.871	6.871	6.870	6.870	6.869	6.869	6.864	6.794-6.934	6.870	0.001
	9 BENZENE	7.069	7.067	7.068	7.067	7.068	7.068	7.063	6.993-7.133	7.068	0.001
$	10 TFT(Surr)	7.885	7.886	7.886	7.885	7.883	7.880	7.887	7.817-7.957	7.884	0.002
	11 nC8	9.502	9.505	9.504	9.503	9.504	9.504	9.507	9.437-9.577	9.504	0.001
	12 Toluene	9.899	9.898	9.898	9.899	9.900	9.904	9.897	9.827-9.967	9.900	0.002
	13 nC9	12.413	12.410	12.410	12.409	12.410	12.413	12.416	12.346-12.486	12.411	0.002
	14 ETHYLBENZENE	12.777	12.777	12.777	12.776	12.777	12.780	12.780	12.710-12.850	12.777	0.001
	15 M/P-XYLENE	12.940	12.940	12.940	12.941	12.944	12.950	12.933	12.863-13.003	12.942	0.004
	16 O-XYLENE	13.884	13.885	13.885	13.885	13.885	13.889	13.883	13.813-13.953	13.885	0.002
	17 nC10-Decane	15.205	15.207	15.206	15.205	15.205	15.207	15.207	15.137-15.277	15.206	0.001

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/26/12

RECEIVED 25 OCT 12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.387	15.388	15.387	15.387	15.387	15.388	15.387	15.317-15.457	15.387	0.000
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.107	16.107	16.107	16.107	16.108	16.110	16.109	16.039-16.179	16.108	0.001
21 nc11	16.703	16.670	16.669	16.669	16.668	16.669	16.704	16.634-16.774	16.675	0.014
22 nC12-Dodecane	17.793	17.794	17.792	17.791	17.789	17.787	17.795	17.725-17.865	17.791	0.003
23 nC13	18.593	18.588	18.584	18.583	18.582	18.582	18.595	18.525-18.665	18.585	0.004
24 Naphthalene	18.790	18.793	18.793	18.792	18.791	18.791	18.796	18.726-18.866	18.792	0.001

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	+++++	+++++	4.635	4.635	4.636	4.636	4.653	4.603-4.703	4.635	0.001
	2 Benzene	+++++	7.075	7.075	7.075	7.075	7.076	7.077	7.027-7.127	7.075	0.000
$	3 TFT(Surr)	7.893	7.894	7.894	7.893	7.892	7.891	7.893	7.843-7.943	7.893	0.001
	4 Toluene	9.907	9.906	9.906	9.907	9.908	9.912	9.907	9.857-9.957	9.908	0.002
	5 Ethylbenzene	12.785	12.786	12.786	12.785	12.786	12.789	12.787	12.737-12.837	12.786	0.001
	6 M/P-Xylene	12.948	12.948	12.949	12.950	12.952	12.958	12.943	12.893-12.993	12.951	0.004
	7 O-Xylene	13.893	13.894	13.894	13.894	13.895	13.898	13.890	13.860-13.920	13.895	0.002
$	8 BB(Surr)	15.395	15.396	15.395	15.395	15.395	15.395	15.393	15.343-15.443	15.395	0.000

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/26/12

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20121023-1.b

ARI Job No.: RINS Method: FID.m Instrument: pid1.i Date: 23-OCT-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0941	1023a001.d	RINSE		1	NO MANUAL INTEGRATION
1010	1023a002.d	RT1023+BCAL1		1	NO MANUAL INTEGRATION
1039	1023a003.d	GCAL1		1	NO MANUAL INTEGRATION
1750	1023a004.d	B 200		1	Toluene, O-XYLENE, TFT(Surr), BB(Surr),
1820	1023a005.d	B 100		1	Toluene, BENZENE, TFT(Surr), BB(Surr),
1849	1023a006.d	B 50		1	Toluene, BENZENE, TFT(Surr), BB(Surr),
1918	1023a007.d	B 25		1	Toluene, BENZENE, O-XYLENE, TFT(Surr), BB(Surr),
1947	1023a008.d	B 5		1	Toluene, MTBE, BENZENE, O-XYLENE,
2016	1023a009.d	B 1		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE,
2045	1023a010.d	B 0.5		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2115	1023a011.d	B 0.25		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2144	1023a012.d	BICV		1	NO MANUAL INTEGRATION
2213	1023a013.d	G 0.10		1	nC12-Dodecane, Naphthalene, nc11, nC13,
2242	1023a014.d	G 0.25		1	Naphthalene,
2311	1023a015.d	G 1.0		1	Naphthalene,
2340	1023a016.d	G 2.5		1	NO MANUAL INTEGRATION
0010	1023a017.d	G 5.0		1	NO MANUAL INTEGRATION
0039	1023a018.d	G 10		1	NO MANUAL INTEGRATION
0108	1023a019.d	GICV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20121023-2.b

ARI Job No.: RINS Method: PIDB.m Instrument: pid1.i Date: 23-OCT-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0941	1023a001.d	RINSE		1	NO MANUAL INTEGRATION
1010	1023a002.d	RT1023+BCAL1		1	NO MANUAL INTEGRATION
1039	1023a003.d	GCAL1		1	NO MANUAL INTEGRATION
1750	1023a004.d	B 200		1	Toluene, O-Xylene, BB(Surr),
1820	1023a005.d	B 100		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1849	1023a006.d	B 50		1	Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1918	1023a007.d	B 25		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1947	1023a008.d	B 5		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2016	1023a009.d	B 1		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2045	1023a010.d	B 0.5		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2115	1023a011.d	B 0.25		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, TFT(Surr), BB(Surr),
2144	1023a012.d	BICV		1	NO MANUAL INTEGRATION
2213	1023a013.d	G 0.10		1	NO MANUAL INTEGRATION
2242	1023a014.d	G 0.25		1	NO MANUAL INTEGRATION
2311	1023a015.d	G 1.0		1	NO MANUAL INTEGRATION
2340	1023a016.d	G 2.5		1	NO MANUAL INTEGRATION
0010	1023a017.d	G 5.0		1	NO MANUAL INTEGRATION
0039	1023a018.d	G 10		1	NO MANUAL INTEGRATION
0108	1023a019.d	GICV		1	NO MANUAL INTEGRATION

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP **404S(Gas)** **410S(BTEX)** **430S(VPH)** **700S(8260C)** **703S(SIM)** **706S(524.3)** **710S(RSK-175)**

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 **PID-1** PID-2 PID-3 FID-6

Curve Date(s): 5/22/13 Surrogate ~~Internal~~ Standard ID VW795-2 Expiration 8/13/13
JH 5/22/13

BFB Tune Meets Criteria?	N/A YES / NO	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated?	YES / NO	Calibration Points Dropped?	YES / NO JH 5/22
Minimum Response Factors Met	YES / NO	Purge Volume (mL)	5mL

0.05 level on FID side for o-xylene

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	VW795-2	8/13/13	Vitra	B000435	11/22/13
Restek	B000332	11/13/13			

Detail problems, corrective actions and/or other pertinent information below:

Calibration for BTEX and surrogates. Surrogates calibrated with BTEX to avoid hydrocarbon interference.

Dropped 0.25 part for o-xylene on the FID side.

Analyst: JH **Date:** 5/22/13

Reviewer: [signature] **Date:** 5/23/13

WR99 : 021199

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 5/22/13 Analysis: BTEX/NWTPH-G Analyst: [signature]

Column 1 Serial No.: 821726 Column Type: RTX502.2

Column 2 Serial No.: _____ Column Type: _____

GC Method: BETX ICal Date: 10/23/13, 5/22/13 Injection Volume: 5 mL

IS	Ical/Ccal	ICV
VW795-2, B000434	B000332 B000432 B000433	B000435 (ICV) B000332 (LCS)
[signature] 5/23/13	[signature] 5/23/13	[signature] 5/23/13

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-1.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0833	0522a001.d	RINSE				1
2	0902	0522a002.d	BCAL0.25	BCAL0.25			1
3	0930	0522a003.d	BCAL0.5	BCAL0.5			1
4	0958	0522a004.d	BCAL1	BCAL1			1
5	1027	0522a005.d	BCAL5	BCAL5			1
6	1056	0522a006.d	BCAL25	BCAL25			1
7	1125	0522a007.d	BCAL50	BCAL50			1
8	1155	0522a008.d	BCAL100	BCAL100			1
9	1224	0522a009.d	BCAL200	BCAL200			1
10	1253	0522a010.d	ICV25	ICV25			1
11	1339	0522a011.d	RT/BCAL 1				1
12	1408	0522a012.d	CCAL 1				1
13	1437	0522a013.d	LCS0522	LCS0522			1
14	1506	0522a014.d	LCSD0522	LCSD0522			1
15	1543	0522a015.d	MB0522				1
16	1612	0522a016.d	WQ46F	A2-F6-S-6	2	Soil	1
17	1641	0522a017.d	WQ46G	A2-F7-S-6	2		1
18	1711	0522a018.d	WQ46H	A2-F8-S-6	3		1
19	1740	0522a019.d	WQ46I	A2-F9-S-6	1		1
20	1809	0522a020.d	WQ46J	A2-F10-S-6	2		1
21	1838	0522a021.d	WQ46K	A2-F11-S-6	2		1
22	1907	0522a022.d	WQ46L	A2-F12-S-6	1		1
23	1937	0522a023.d	BCAL 2	OK			1
24	2006	0522a024.d	CCAL 2	OK			1
25	2035	0522a025.d	WQ46N	A2-F13-S-6	1	Soil	1
26	2104	0522a026.d	WQ46N	A2-F14-S-6	3		1
27	2133	0522a027.d	WQ46O	A2-F15-S-6	2		1
28	2203	0522a028.d	WQ46P	A2-F16-S-6	3		1
29	2232	0522a029.d	WQ46Q	A2-F17-S-6	2		1
30	2301	0522a030.d	WQ46R	A2-F18-S-6	3		1
31	2330	0522a031.d	WQ46S	A2-F19-S-6	1		1
32	2359	0522a032.d	WQ46T	A2-F20-S-6	1		1
33	0029	0522a033.d	WQ38A	MW-R1	1	≤2	1
34	0058	0522a034.d	WQ49F	GTSP-GW-Q2-TB	1		1
35	0127	0522a035.d	BCAL 3	OK			1
36	0156	0522a036.d	CCAL 3	OK			1
37	0225	0522a037.d	WQ49A	GTSP-S-GW-Q2-7-17	2	≤2	1 Rerun
38	0255	0522a038.d	WQ49B	GTSP-SS-GW-Q2-7-17	2		1
39	0324	0522a039.d	WQ49C	GTSP-GW-Q2-EB	1		1
40	0353	0522a040.d	CCAL 4 *	Low			1

[signature] 5/23/13

* File 40 (CCAL 4 failed low, but CCAL 1 file 3 on the following day) ran within 24 hours of the retention time standard and closed the bracket with a passing recovery.

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-1.b/FID.m
Batch File: /chem3/pid1.i/20130522-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0522a002	0522a003	0522a004	0522a005	0522a006	0522a007	0522a008	0522a009	0522a010
INJ.DATE:	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013
INJ.TIME:	09:02	09:30	09:58	10:27	10:56	11:25	11:55	12:24	12:53

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.278	4.208-4.348	+++++	+++++
6	MTBE	4.530	4.540	4.538	4.539	4.537	4.537	4.539	4.538	4.539	4.530	4.460-4.600	4.537	0.003
7	nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.777	4.707-4.847	+++++	+++++
8	nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.820	6.750-6.890	+++++	+++++
9	BENZENE	7.007	7.015	7.010	7.012	7.012	7.012	7.014	7.014	7.013	7.007	6.937-7.077	7.012	0.002
$ 10	TFT(Surr)	7.849	7.848	7.848	7.848	7.848	7.848	7.849	7.848	7.849	7.849	7.779-7.919	7.848	0.001
11	nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.481	9.411-9.551	+++++	+++++
12	Toluene	9.877	9.875	9.873	9.873	9.874	9.873	9.875	9.877	9.874	9.877	9.807-9.947	9.875	0.001
13	nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.404	12.334-12.474	+++++	+++++
14	ETHYLBENZENE	12.763	12.766	12.766	12.764	12.765	12.765	12.767	12.770	12.766	12.763	12.693-12.833	12.766	0.002
15	M/P-XYLENE	12.927	12.929	12.924	12.925	12.926	12.927	12.930	12.935	12.927	12.927	12.857-12.997	12.928	0.003
16	O-XYLENE	13.863	13.873	13.873	13.874	13.874	13.873	13.876	13.879	13.875	13.863	13.793-13.933	13.873	0.004
17	nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.205	15.135-15.275	+++++	+++++

Reviewer 1 _____ Date: 5/22/13
Reviewer 2 _____ Date: 5/23/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-1.b/FID.m
Batch File: /chem3/pid1.i/20130522-1.b
Inst ID: pid1.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18	BB(Surr)	15.383	15.382	15.383	15.382	15.382	15.382	15.382	15.383	15.383	15.383	15.313-15.453	15.383	0.001
$ 19	BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20	1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.106	16.036-16.176	+++++	+++++
21	nc11	+++++	+++++	16.702	16.701	16.701	16.701	16.702	16.704	16.701	16.702	16.632-16.772	16.702	0.001
22	nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.798	17.728-17.868	+++++	+++++
23	nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.602	18.532-18.672	+++++	+++++
24	Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.800	18.730-18.870	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-2.b/PIDB.m
Batch File: /chem3/pid1.i/20130522-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0522a002	0522a003	0522a004	0522a005	0522a006	0522a007	0522a008	0522a009	0522a010
INJ.DATE:	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013
INJ.TIME:	09:02	09:30	09:58	10:27	10:56	11:25	11:55	12:24	12:53

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	MTBE	4.550	4.550	4.543	4.547	4.545	4.545	4.547	4.545	4.546	4.550	4.500-4.600	4.546	0.002
2	Benzene	7.017	7.020	7.020	7.020	7.020	7.020	7.022	7.021	7.021	7.017	6.967-7.067	7.020	0.001
$ 3	TFT(Surr)	7.856	7.856	7.857	7.857	7.856	7.856	7.857	7.856	7.857	7.856	7.806-7.906	7.856	0.001
4	Toluene	9.883	9.883	9.883	9.883	9.882	9.883	9.884	9.885	9.883	9.883	9.833-9.933	9.883	0.001
5	Ethylbenzene	12.773	12.773	12.773	12.774	12.774	12.774	12.776	12.778	12.774	12.773	12.723-12.823	12.774	0.002
6	M/P-Xylene	12.933	12.937	12.934	12.935	12.935	12.936	12.938	12.943	12.936	12.933	12.883-12.983	12.936	0.003
7	O-Xylene	13.883	13.883	13.883	13.883	13.883	13.883	13.884	13.888	13.884	13.883	13.853-13.913	13.884	0.002
$ 8	BB(Surr)	15.390	15.390	15.390	15.390	15.390	15.391	15.390	15.391	15.390	15.390	15.340-15.440	15.390	0.000

Reviewer 1 _____ Date: 5/22/13
Reviewer 2 _____ Date: 5/23/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-1.b

ARI Job No.: BCAL Method: FID.m Instrument: pid1.i Date: 22-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0902	0522a002.d	BCAL0.25	BCAL0.25	1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, BB(Surr),
0930	0522a003.d	BCAL0.5	BCAL0.5	1	O-XYLENE,
0958	0522a004.d	BCAL1	BCAL1	1	Toluene, BENZENE, O-XYLENE, BB(Surr),
1027	0522a005.d	BCAL5	BCAL5	1	NO MANUAL INTEGRATION
1056	0522a006.d	BCAL25	BCAL25	1	NO MANUAL INTEGRATION
1125	0522a007.d	BCAL50	BCAL50	1	NO MANUAL INTEGRATION
1155	0522a008.d	BCAL100	BCAL100	1	NO MANUAL INTEGRATION
1224	0522a009.d	BCAL200	BCAL200	1	NO MANUAL INTEGRATION
1253	0522a010.d	ICV25	ICV25	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-2.b

ARI Job No.: BCAL Method: PIDB.m Instrument: pid1.i Date: 22-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0902	0522a002.d	BCAL0.25	BCAL0.25	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, BB(Surr),
0930	0522a003.d	BCAL0.5	BCAL0.5	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE,
0958	0522a004.d	BCAL1	BCAL1	1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1027	0522a005.d	BCAL5	BCAL5	1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1056	0522a006.d	BCAL25	BCAL25	1	Toluene,
1125	0522a007.d	BCAL50	BCAL50	1	Toluene, BB(Surr),
1155	0522a008.d	BCAL100	BCAL100	1	NO MANUAL INTEGRATION
1224	0522a009.d	BCAL200	BCAL200	1	NO MANUAL INTEGRATION
1253	0522a010.d	ICV25	ICV25	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20130522-1.b/0522a011.d
Level 2: /chem3/pid1.i/20130522-1.b/0522a002.d
Level 3: /chem3/pid1.i/20130522-1.b/0522a003.d
Level 4: /chem3/pid1.i/20130522-1.b/0522a004.d
Level 5: /chem3/pid1.i/20130522-1.b/0522a005.d
Level 6: /chem3/pid1.i/20130522-1.b/0522a006.d
Level 7: /chem3/pid1.i/20130522-1.b/0522a007.d
Level 8: /chem3/pid1.i/20130522-1.b/0522a008.d
Level 9: /chem3/pid1.i/20130522-1.b/0522a009.d

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	___ RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
6 MTBE	+++++	856	1054	902	840	811		
	781	770	744				845	11.680
7 nC6	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
9 BENZENE	+++++	1540	1502	1560	1515	1464		
	1399	1370	1331				1460	5.764
11 nC8	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
12 Toluene	+++++	1480	1582	1694	1476	1414		
	1358	1315	1283				1450	9.565
13 nC9	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
14 ETHYLBENZENE	+++++	124	124	115	113	107		
	103	98.66000	96.17500				110	9.723
15 M/P-XYLENE	+++++	1384	1378	1288	1350	1266		
	1216	1168	1151				1275	7.170

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
16 O-XYLENE	+++++	+++++	972	1265	1407	1326		
	1277	1226	1204				1239	10.946
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
$ 10 TFT(Surr)	+++++	30.63636	30.95455	30.54545	29.88060	29.37000		
	28.75188	28.18539	28.40000				29.59053	3.634
$ 18 BB(Surr)	+++++	20.63636	20.13636	20.50000	19.88060	19.80000		
	19.51128	19.17978	19.32000				19.87055	2.668

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD	
	50.000 Level 7	100.000 Level 8	200.000 Level 9						
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 9.57176
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20130522-2.b/0522a002.d
Level 2: /chem3/pid1.i/20130522-2.b/0522a003.d
Level 3: /chem3/pid1.i/20130522-2.b/0522a004.d
Level 4: /chem3/pid1.i/20130522-2.b/0522a005.d
Level 5: /chem3/pid1.i/20130522-2.b/0522a006.d
Level 6: /chem3/pid1.i/20130522-2.b/0522a007.d
Level 7: /chem3/pid1.i/20130522-2.b/0522a008.d
Level 8: /chem3/pid1.i/20130522-2.b/0522a009.d

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	96.00000	76.00000	73.00000	88.80000	92.28000	90.78000		
	91.10000	89.51500					87.18438	9.361
2 Benzene	184	228	222	232	236	233		
	233	231					225	7.569
4 Toluene	176	178	195	204	210	206		
	207	209					198	6.985
5 Ethylbenzene	132	130	163	173	179	177		
	176	176					163	12.557
6 M/P-Xylene	156	167	172	185	191	189		
	188	191					180	7.306
7 O-Xylene	96.00000	122	143	149	157	156		
	155	159					142	15.542

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
$ 3 TFT(Surr)	31.81818	32.40909	32.47727	32.23881	32.41000	32.24812		
	32.00562	32.27000					32.23464	0.691
$ 8 BB(Surr)	68.18182	69.86364	72.43182	71.70149	73.47000	73.45113		
	73.66854	75.61500					72.29793	3.258

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 7.90855
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a002.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a002.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL0.25
Client ID: BCAL0.25
Injection Date: 22-MAY-2013 09:02
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.000	337	4257	11.4	TFT(Surr)
15.383	0.000	227	1854	11.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	1959	0.005 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	2559	0.004 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	2345	0.004 M
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	1959	0.005 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	350	10.9	TFT(Surr)
15.390	-0.001	750	10.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	-0.005	46	0.20N	Benzene
9.883	-0.001	44	0.22N	Toluene
12.773	-0.005	33	0.20N	Ethylbenzene
12.933	-0.010	78	0.43N	M/P-Xylene
13.883	-0.005	24	0.17N	O-Xylene
4.550	0.005	24	0.28N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a002.d
Lab Smp Id: BCAL0.25 Client Smp ID: BCAL0.25
Inj Date : 22-MAY-2013 09:02
Operator : LH Inst ID: pid1.i
Smp Info : BCAL0.25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:02 Cal File: 0522a002.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
	6 MTBE	4.530	4.538	-0.008	214	0.25000	0.253 (M)
	9 BENZENE	7.007	7.014	-0.007	385	0.25000	0.264 (M)
$	10 TFT(Surr)	7.849	7.848	0.001	337	11.0000	11.39
	12 Toluene	9.877	9.877	0.000	370	0.25000	0.255 (M)
	14 ETHYLBENZENE	12.763	12.770	-0.007	31	0.25000	0.282 (M)
	15 M/P-XYLENE	12.927	12.935	-0.008	692	0.50000	0.543 (M)
	16 O-XYLENE	13.863	13.879	-0.016	547	0.25000	0.403 (M)
$	18 BB(Surr)	15.383	15.383	0.000	227	11.0000	11.42 (M)

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a002.d

Date : 22-MAY-2013 09:02

Client ID: BCAL0.25

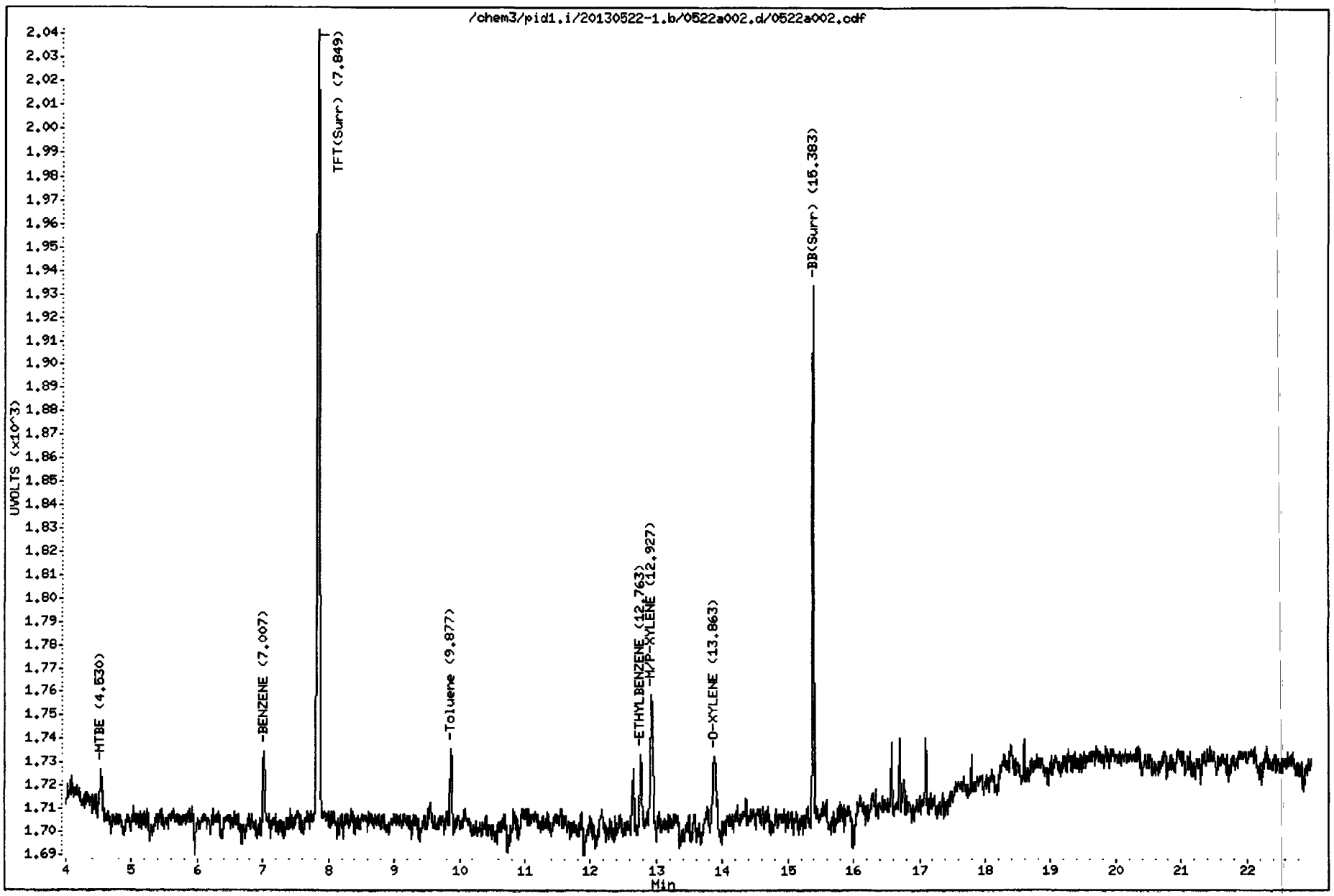
Sample Info: BCAL0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a002.d

Date : 22-MAY-2013 09:02

Client ID: BCAL0.25

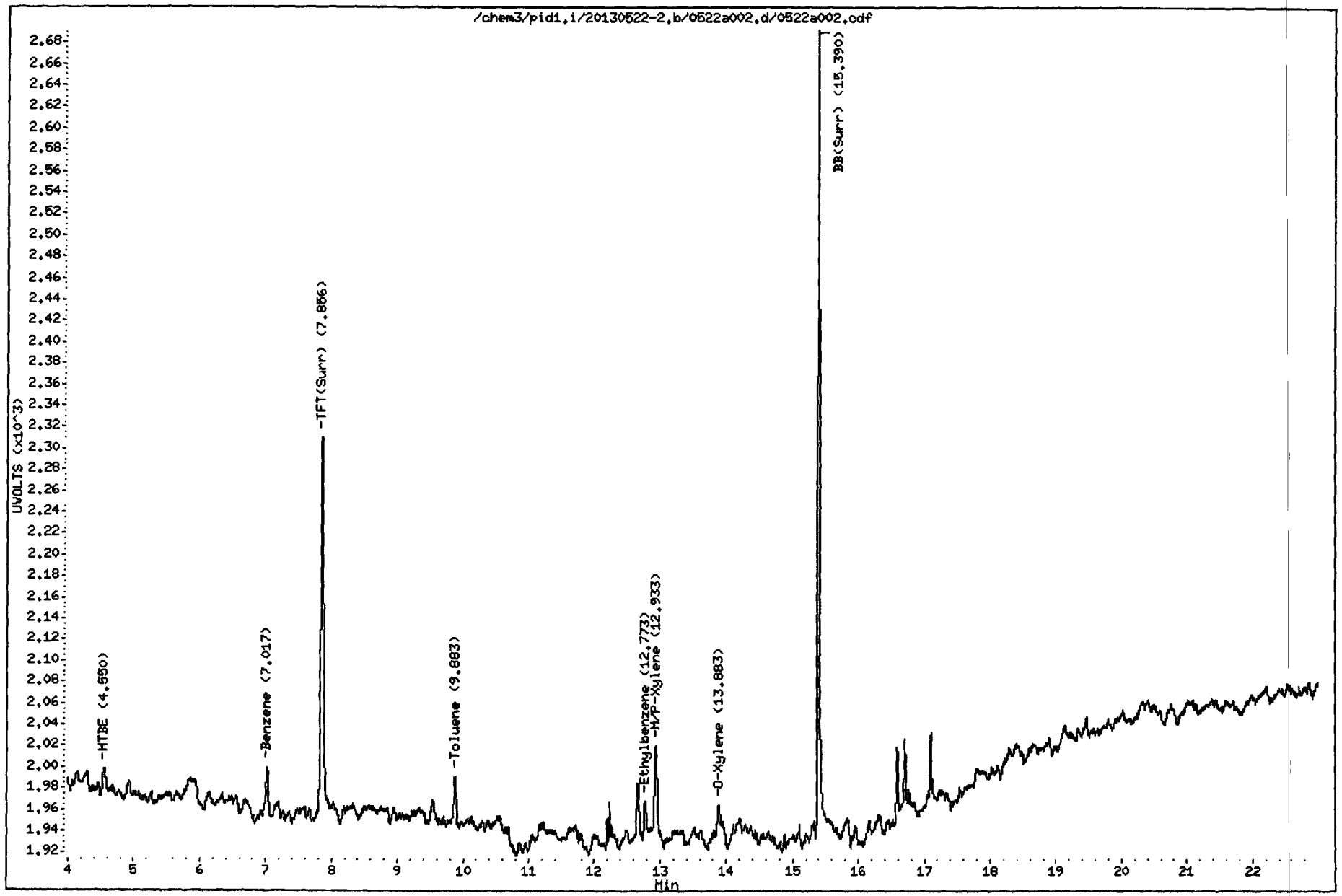
Sample Info: BCAL0.25

Column phase: RTX 502-2 PID

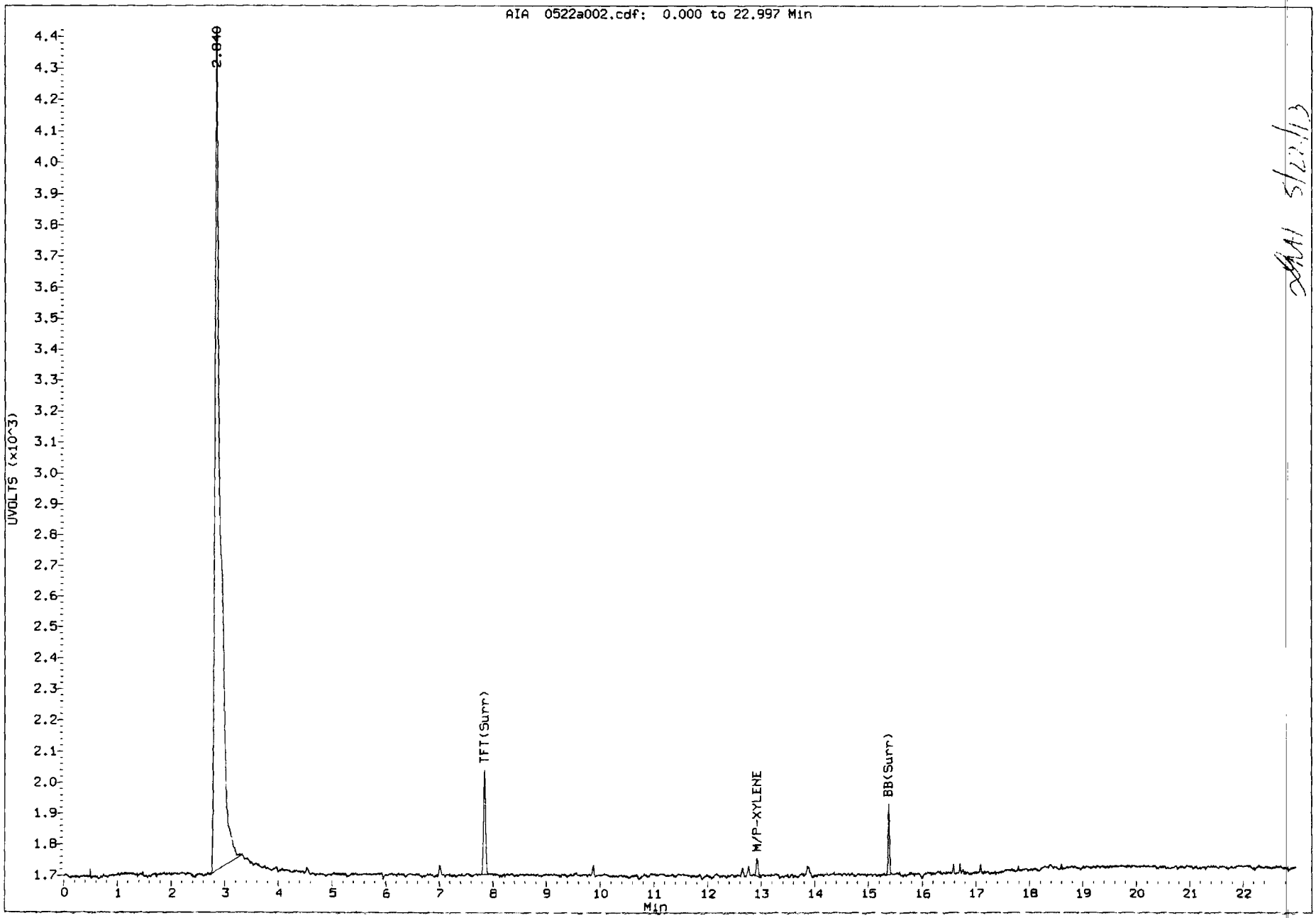
Instrument: pid1.i

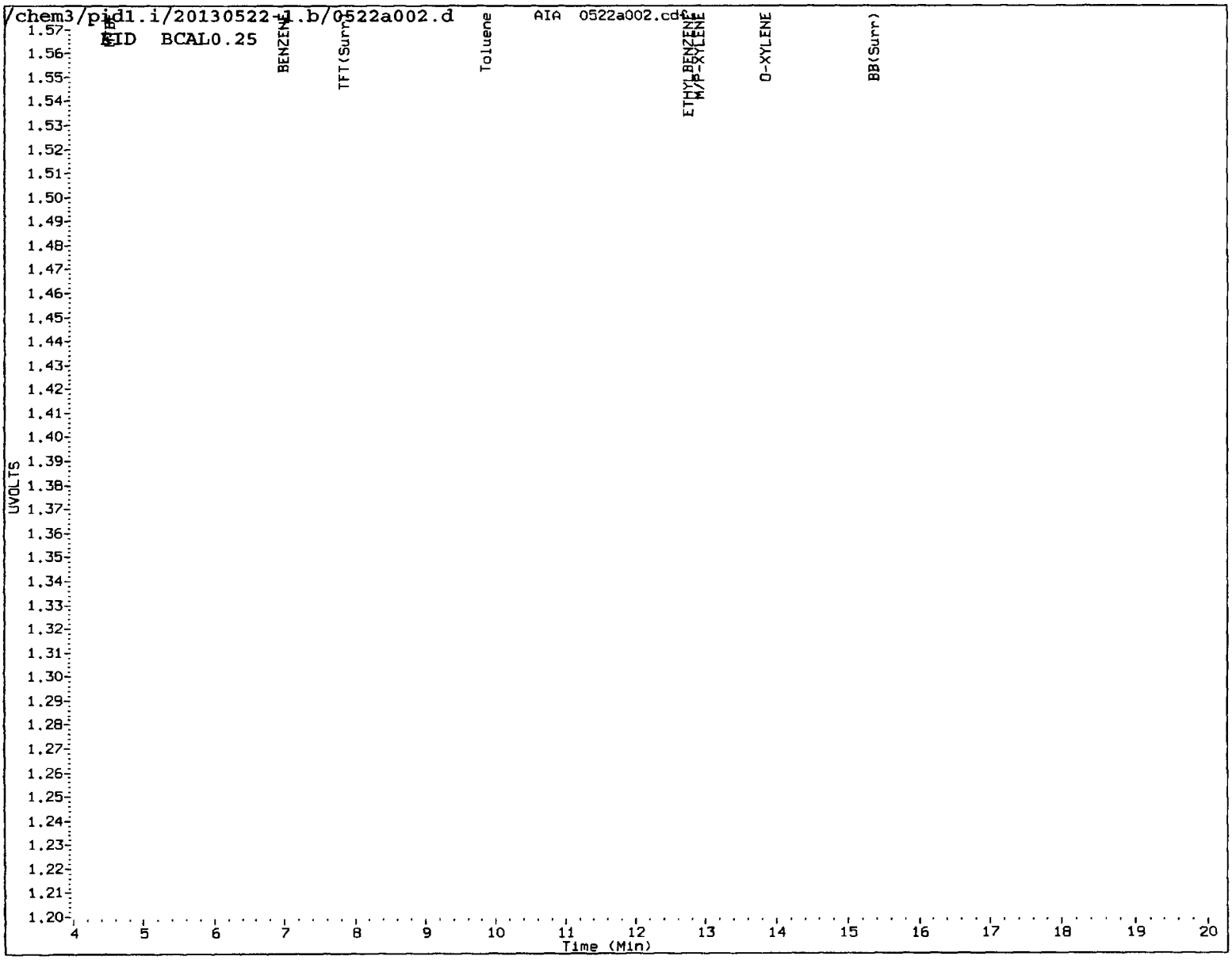
Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-1.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25





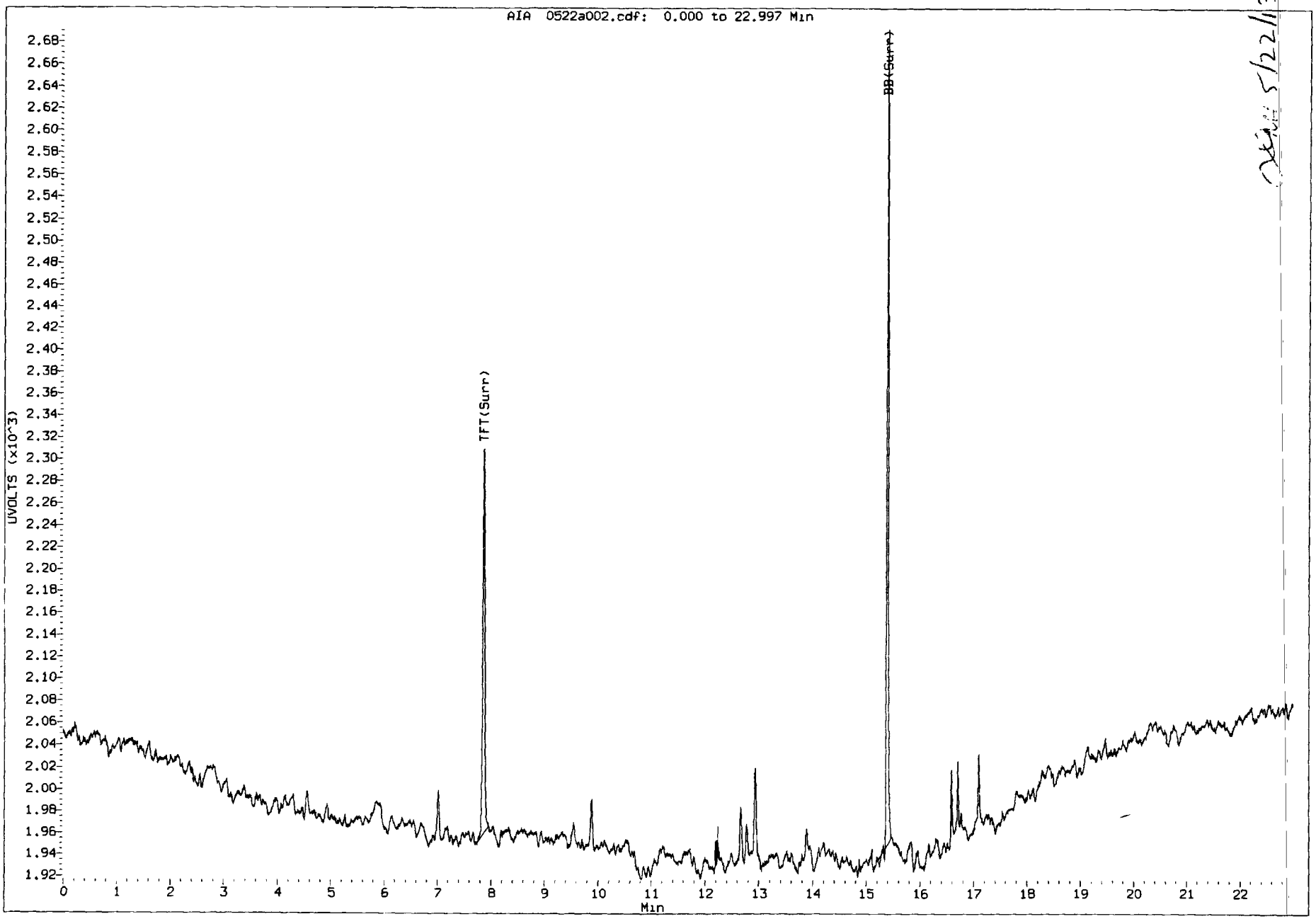
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

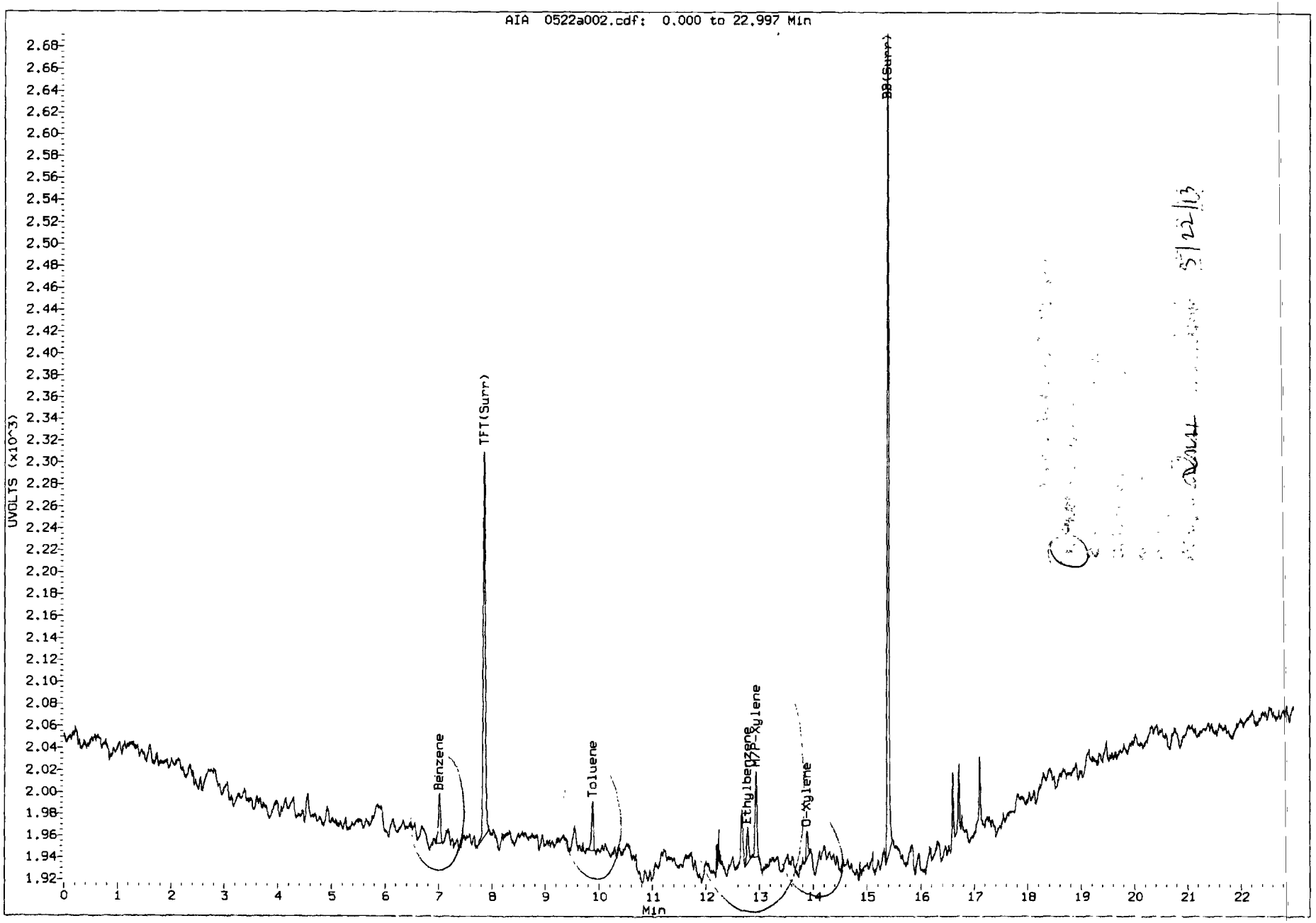
5. Other _____

Analyst: [signature] Date: 5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25



Data File: /chem3/pid1.i/20130522-2.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a003.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a003.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL0.5
Client ID: BCAL0.5
Injection Date: 22-MAY-2013 09:30
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	681	8701	23.0	TFT(Surr)
15.382	0.000	443	3756	22.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	4249	0.012 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	5527	0.008 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	4999	0.009 M
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	4249	0.011 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	713	22.1	TFT(Surr)
15.390	-0.001	1537	21.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	114	0.51N	Benzene
9.883	-0.001	89	0.45N	Toluene
12.773	-0.005	65	0.40N	Ethylbenzene
12.937	-0.007	167	0.93N	M/P-Xylene
13.883	-0.005	61	0.43N	O-Xylene
4.550	0.005	38	0.44N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a003.d
Lab Smp Id: BCAL0.5 Client Smp ID: BCAL0.5
Inj Date : 22-MAY-2013 09:30
Operator : LH Inst ID: pid1.i
Smp Info : BCAL0.5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:30 Cal File: 0522a003.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.540	4.540	0.000	527	0.50000	0.624
9	BENZENE	7.015	7.015	0.000	751	0.50000	0.514
$ 10	TFT(Surr)	7.848	7.848	0.000	681	22.0000	23.01
12	Toluene	9.875	9.875	0.000	791	0.50000	0.545
14	ETHYLBENZENE	12.766	12.766	0.000	62	0.50000	0.563
15	M/P-XYLENE	12.929	12.929	0.000	1378	1.00000	1.08
16	O-XYLENE	13.873	13.873	0.000	486	0.50000	0.358(M)
$ 18	BB(Surr)	15.382	15.382	0.000	443	22.0000	22.29

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a003.d

Date : 22-MAY-2013 09:30

Client ID: BCAL0.5

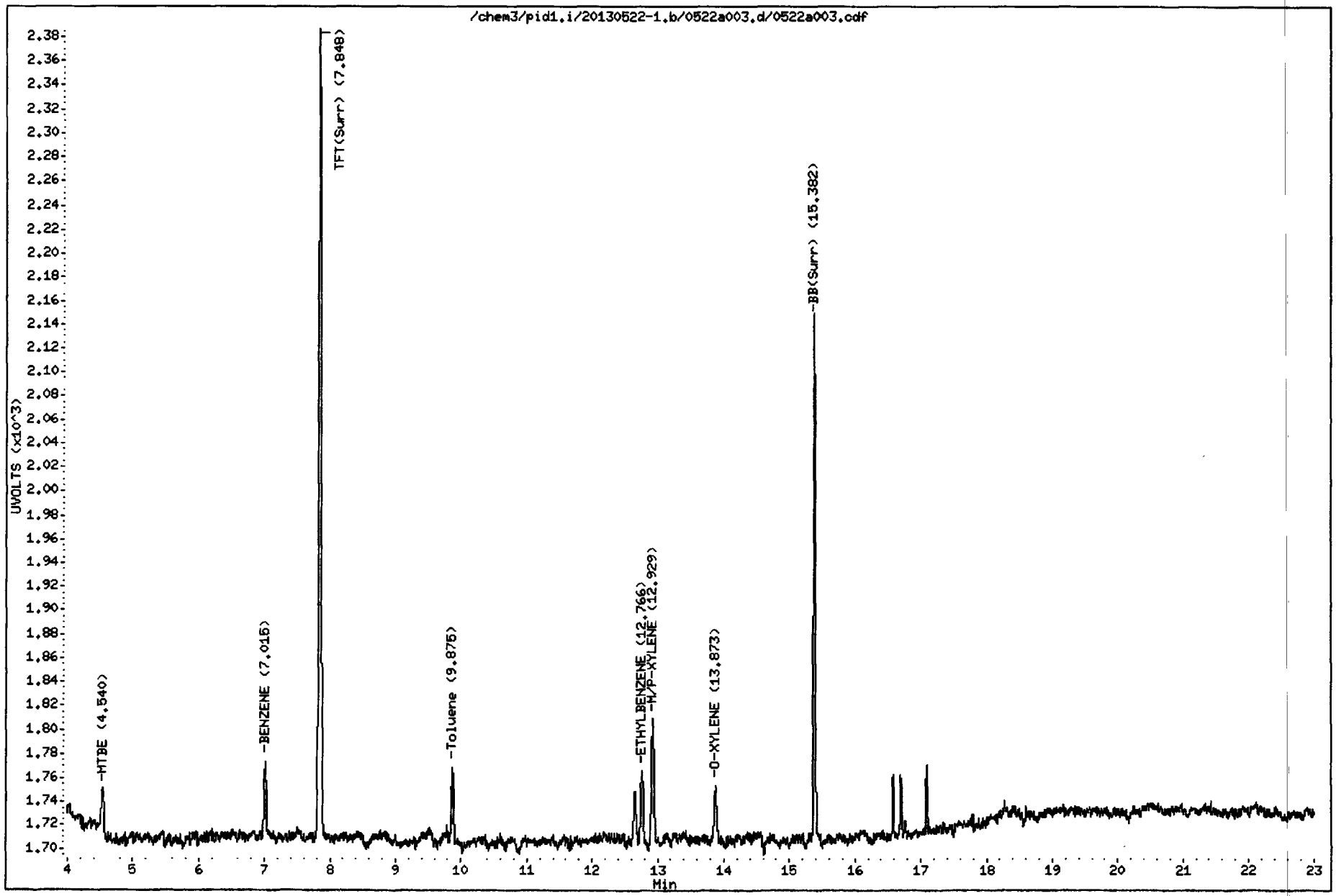
Sample Info: BCAL0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a003.d

Date : 22-MAY-2013 09:30

Client ID: BCAL0.5

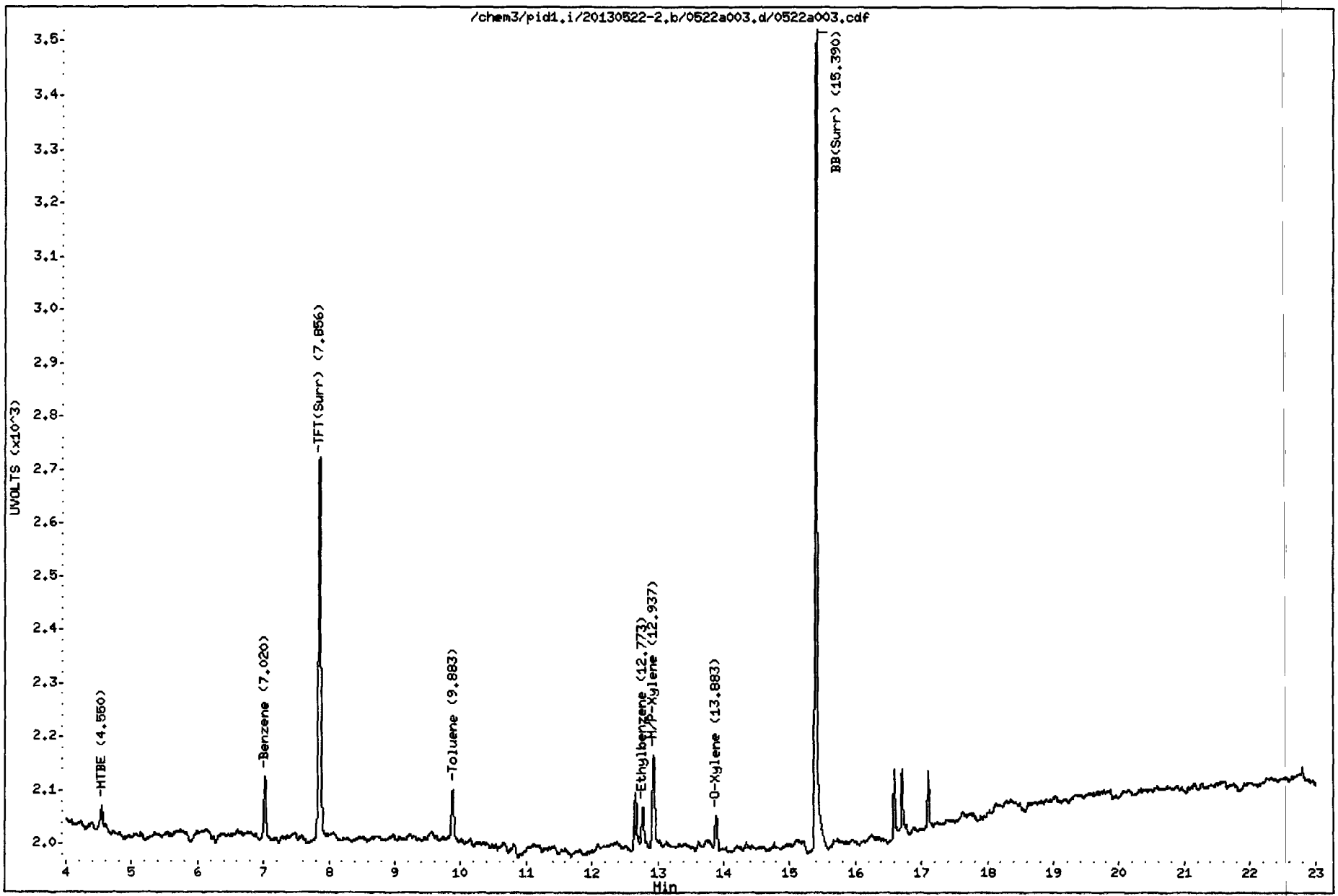
Sample Info: BCAL0.5

Column phase: RTX 502-2 PID

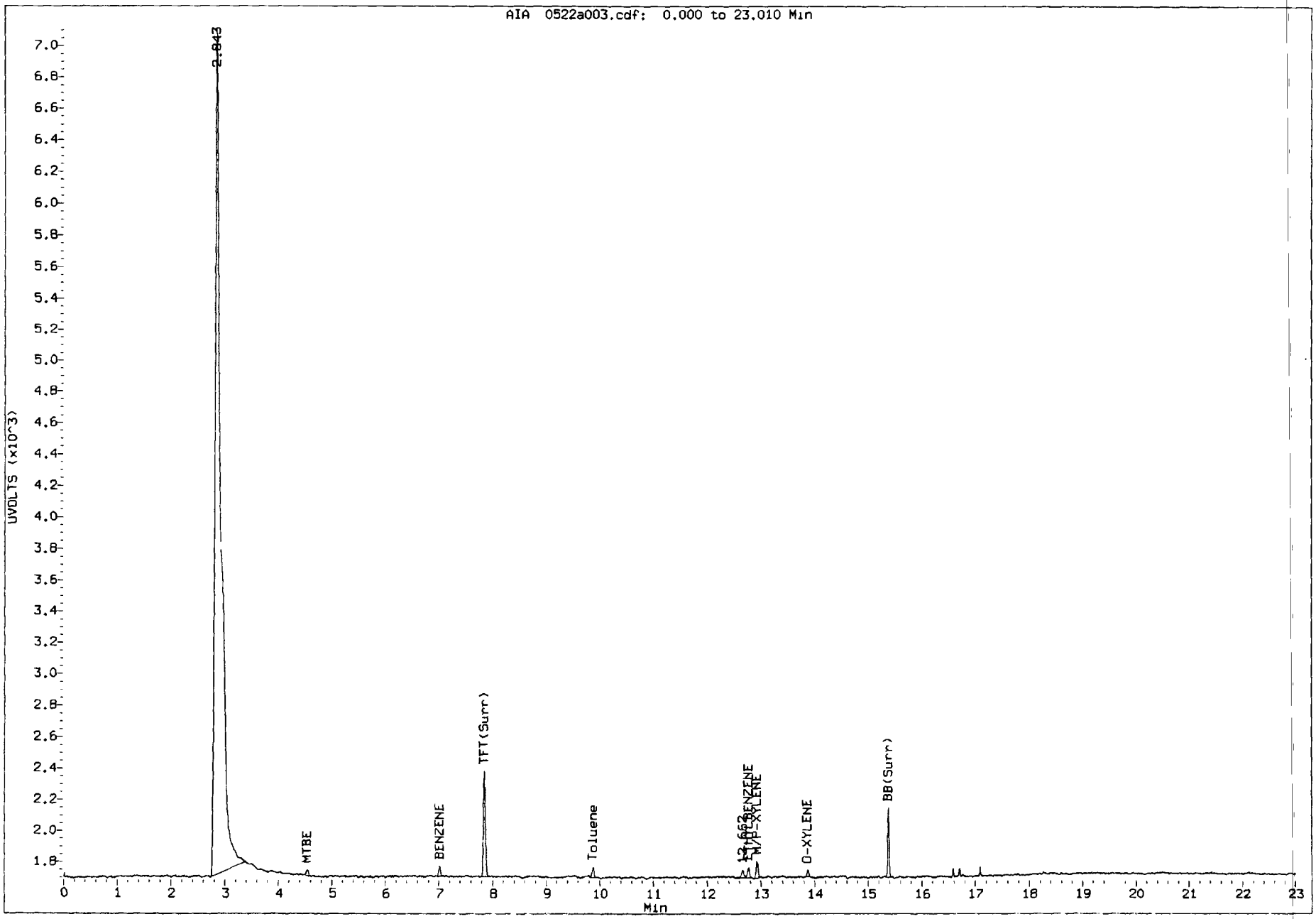
Instrument: pid1.i

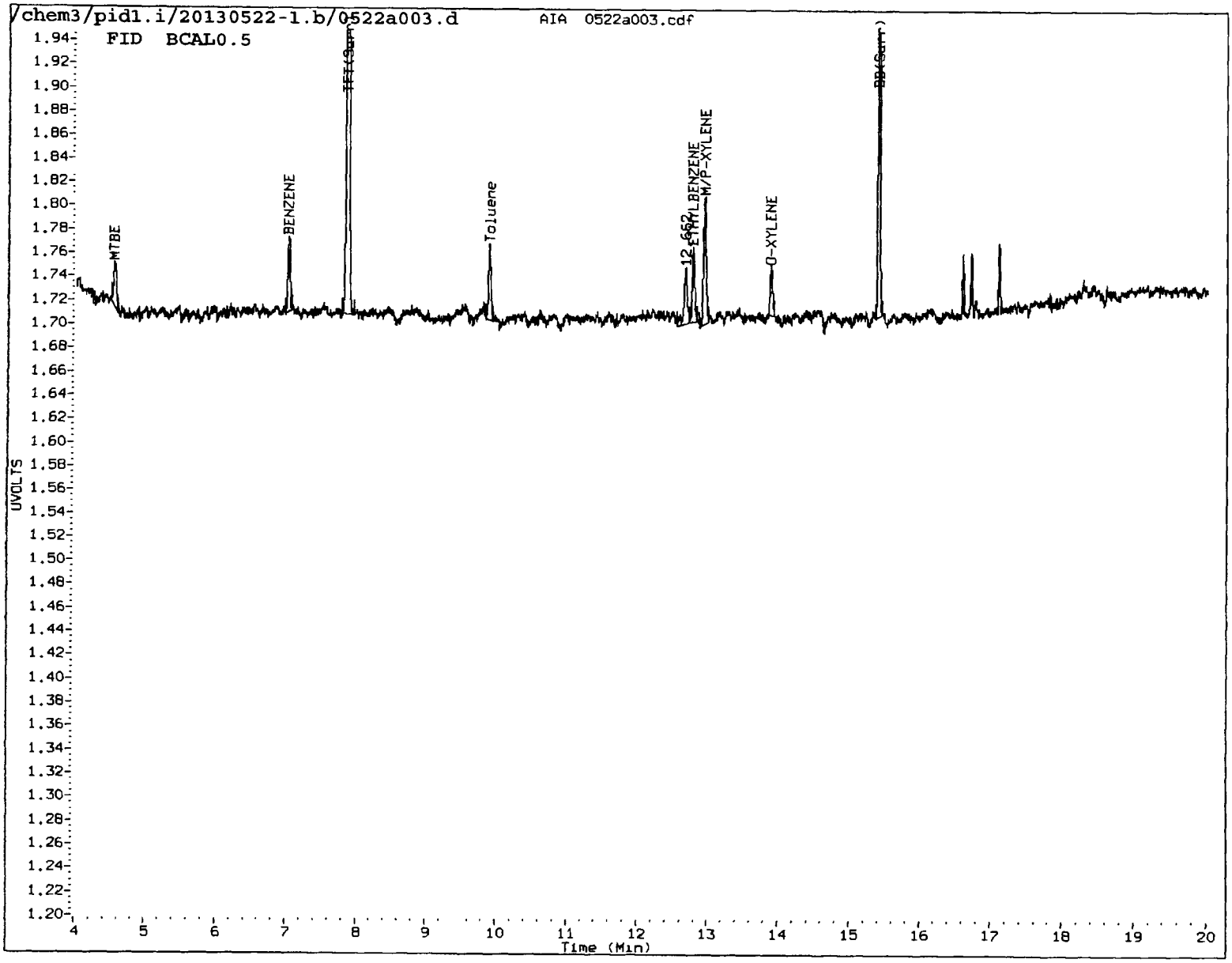
Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-1.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5





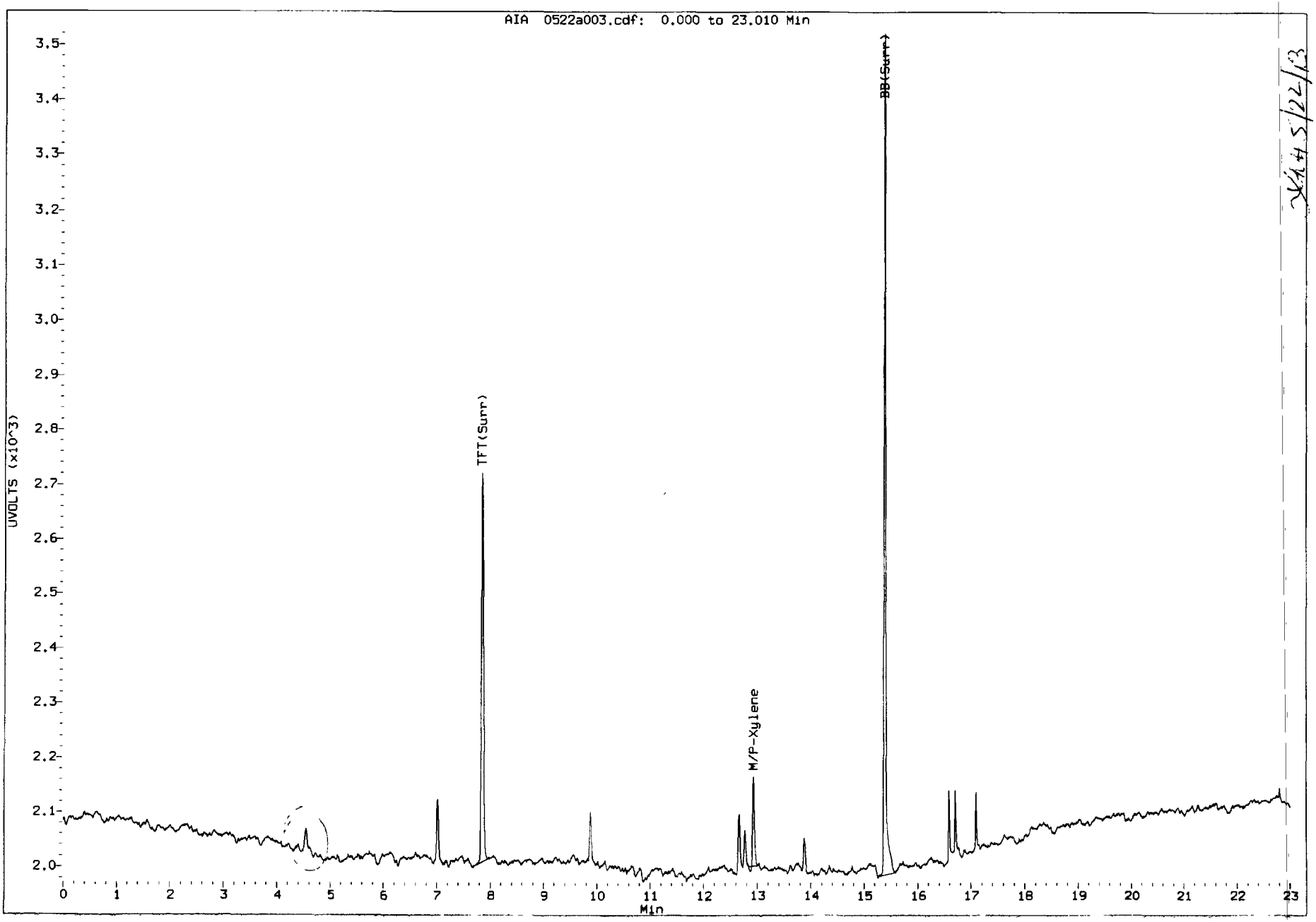
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

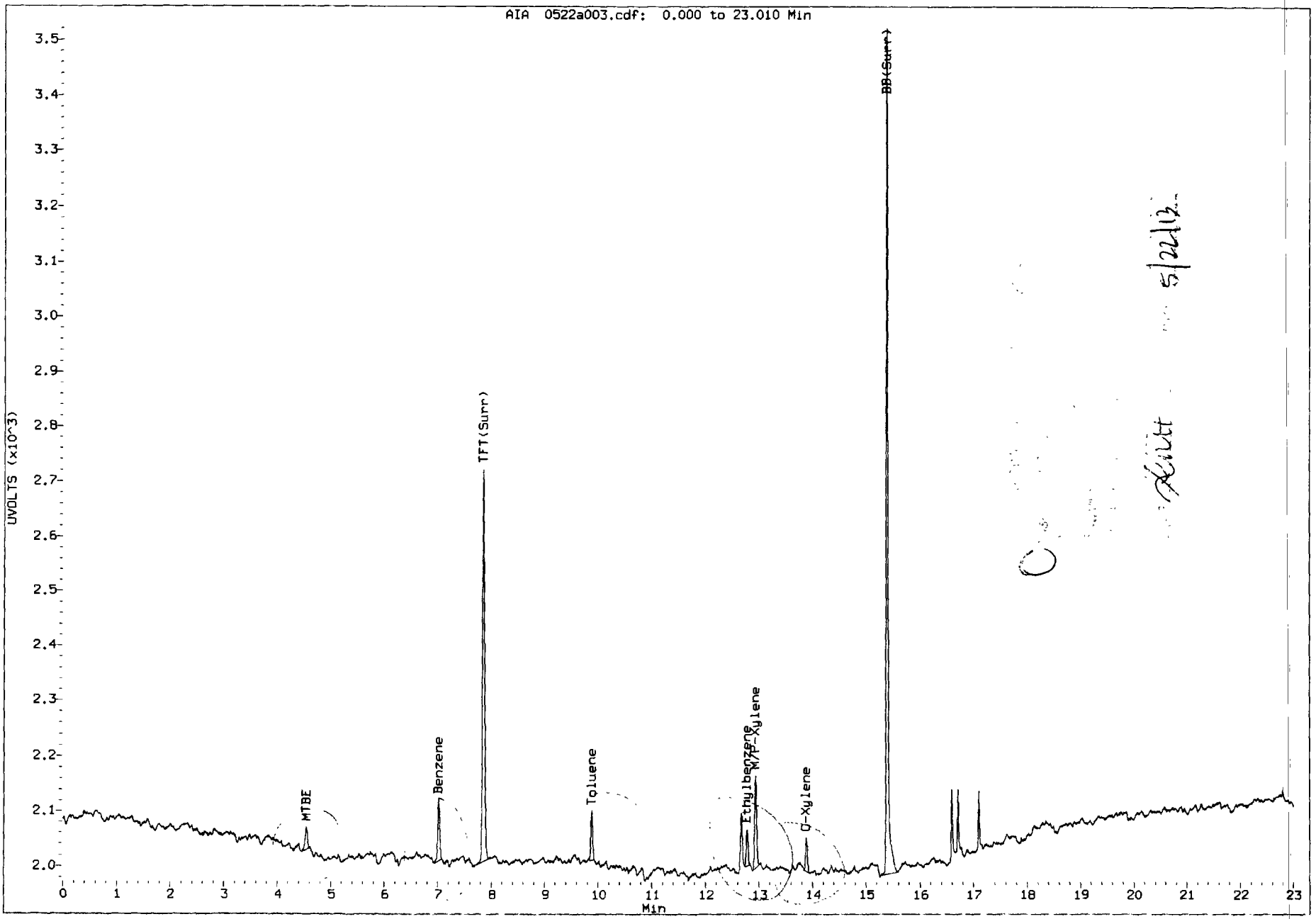
Analyst: _____ Date: 5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5



5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5



5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

2nd A. 5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a004.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a004.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL1
Client ID: BCAL1
Injection Date: 22-MAY-2013 09:58
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	1344	17101	45.4	TFT(Surr)
15.383	0.000	902	7548	45.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	10157	0.028 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	10606	0.015 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	9703	0.017 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	10157	0.027 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	1429	44.3	TFT(Surr)
15.390	-0.001	3187	44.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	222	0.99N	Benzene
9.883	-0.001	195	0.98N	Toluene
12.773	-0.006	163	1.00	Ethylbenzene
12.934	-0.009	345	1.92	M/P-Xylene
13.883	-0.005	143	1.01N	O-Xylene
4.543	-0.002	73	0.84N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a004.d
Lab Smp Id: BCAL1 Client Smp ID: BCAL1
Inj Date : 22-MAY-2013 09:58
Operator : LH Inst ID: pid1.i
Smp Info : BCAL1
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:58 Cal File: 0522a004.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng/mL)	(ng/mL)
6 MTBE	4.538	4.538	0.000	902	1.00000	1.07
9 BENZENE	7.010	7.010	0.000	1560	1.00000	1.07(M)
$ 10 TFT(Surr)	7.848	7.848	0.000	1344	44.0000	45.42
12 Toluene	9.873	9.873	0.000	1694	1.00000	1.17(M)
14 ETHYLBENZENE	12.766	12.766	0.000	115	1.00000	1.04
15 M/P-XYLENE	12.924	12.924	0.000	2576	2.00000	2.02
16 O-XYLENE	13.873	13.873	0.000	1265	1.00000	0.932(M)
$ 18 BB(Surr)	15.383	15.383	0.000	902	44.0000	45.39(M)
21 ncl1	16.702	16.702	0.000	106	1.00000	

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a004.d

Date : 22-MAY-2013 09:58

Client ID: BCAL1

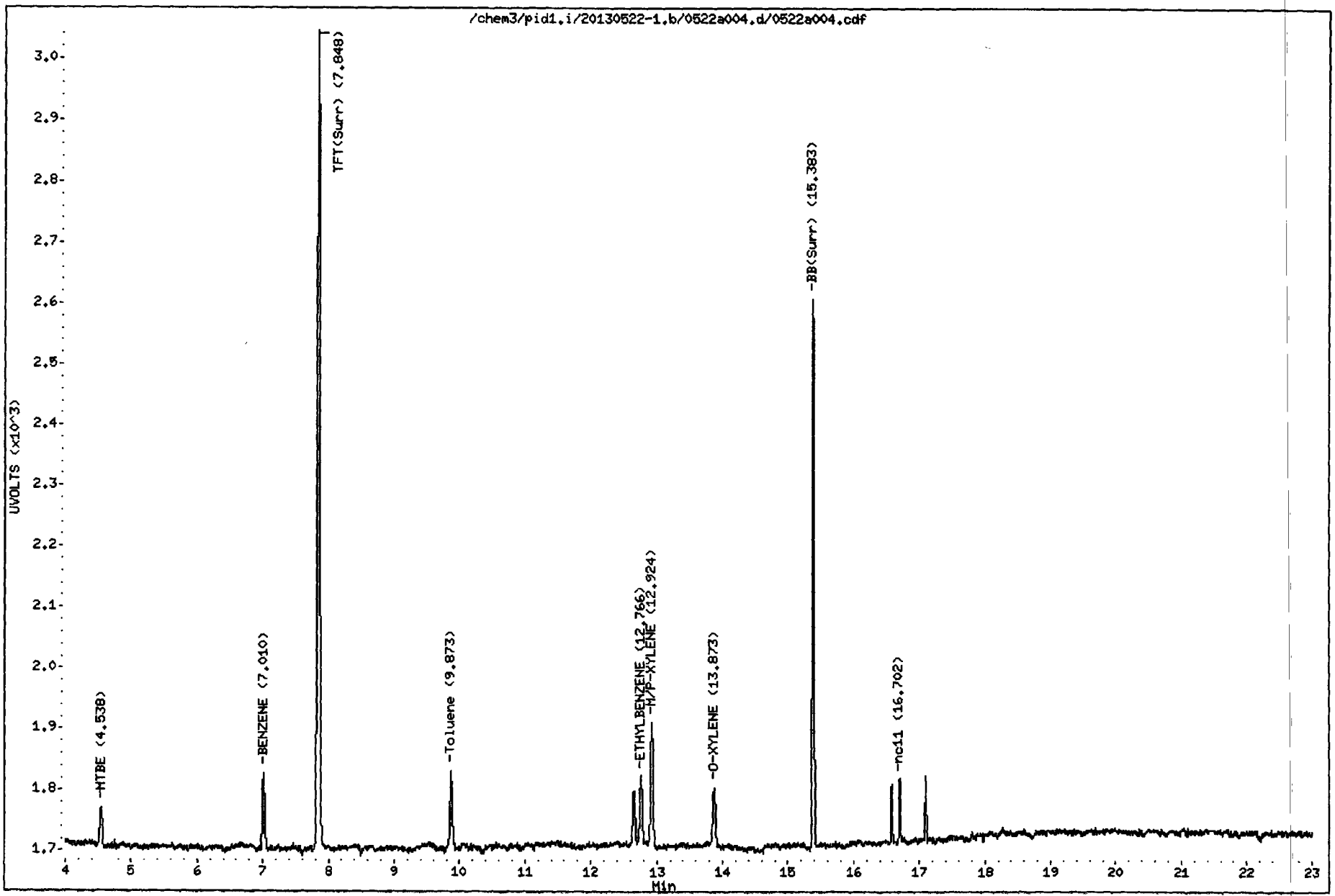
Sample Info: BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a004.d

Page 1

Date : 22-MAY-2013 09:58

Client ID: BCAL1

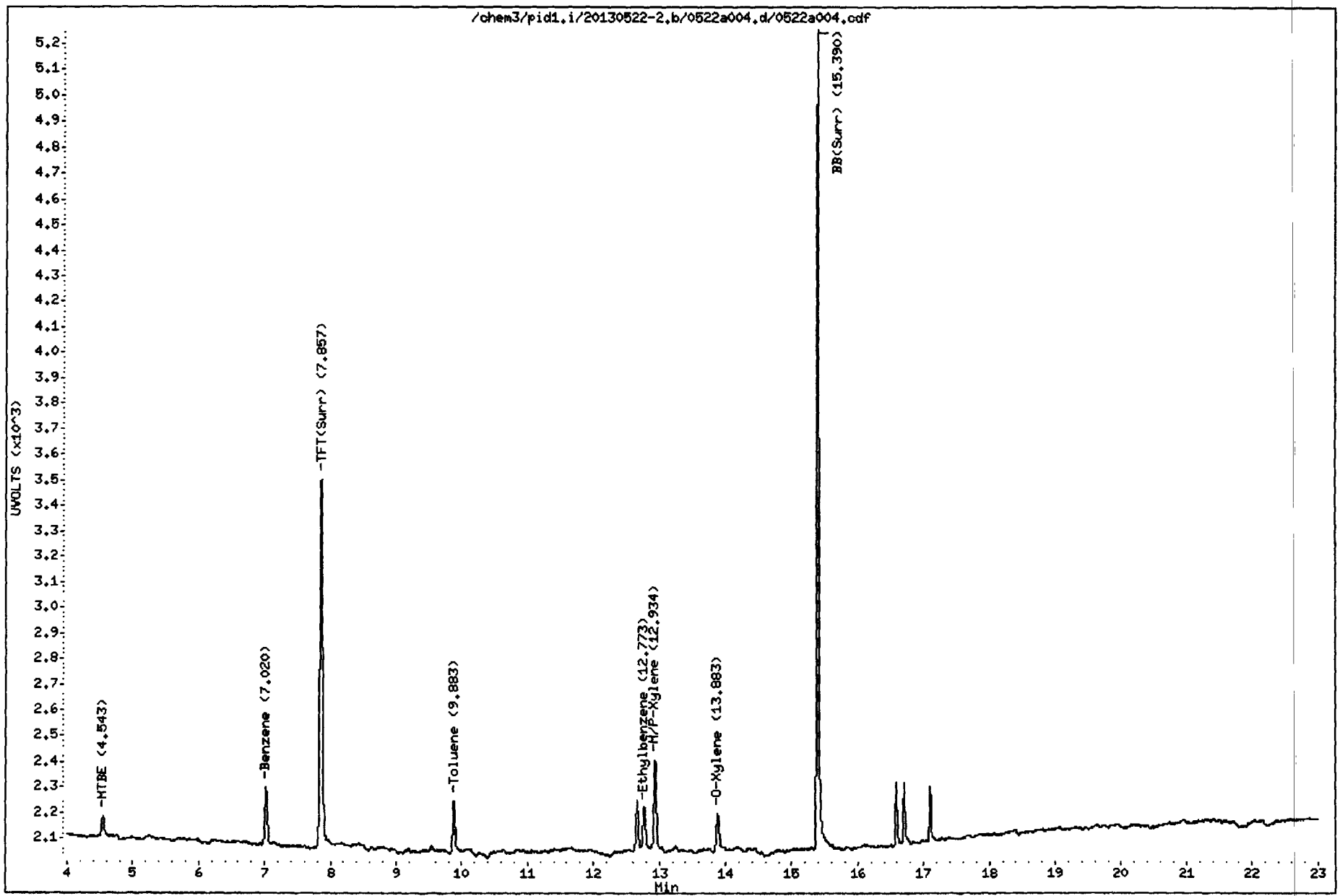
Instrument: pid1.i

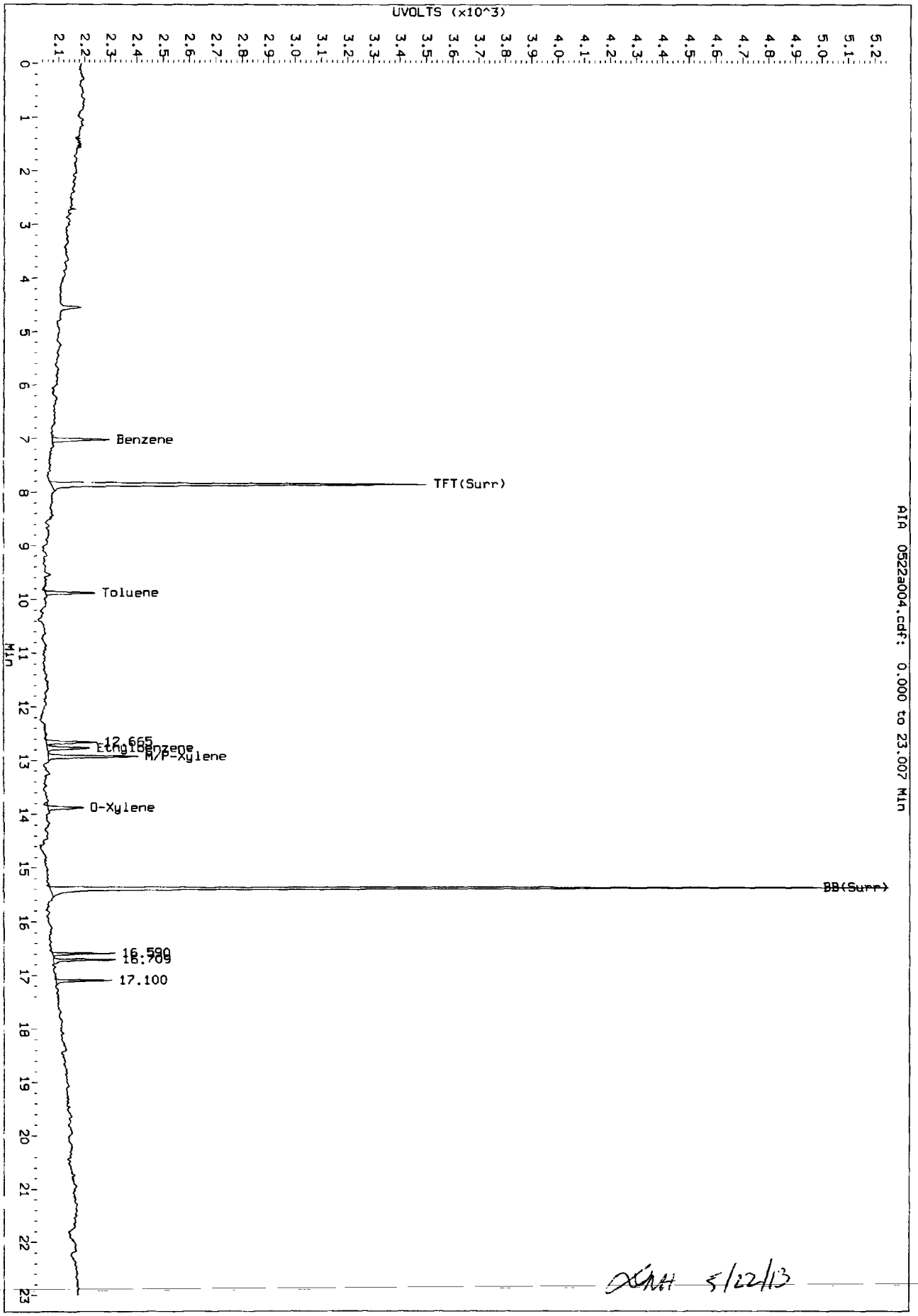
Sample Info: BCAL1

Operator: LH

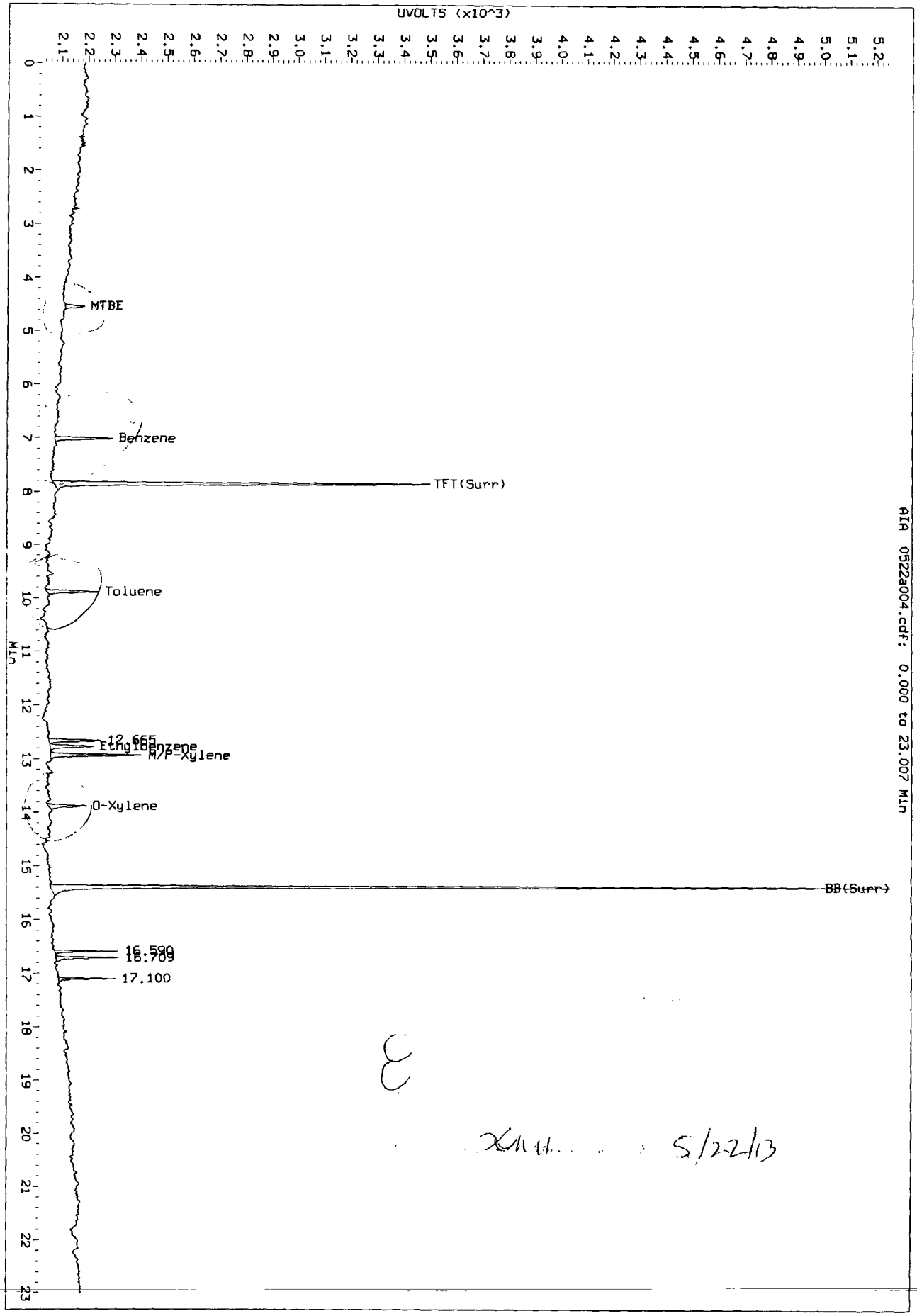
Column phase: RTX 502-2 PID

Column diameter: 0.18




Data File: /chem3/pid1.i/20130522-2.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1
UVOLTS (x10^3)
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.709
17.100
Min
AIA 0522a004.cdf: 0.000 to 23.007 Min

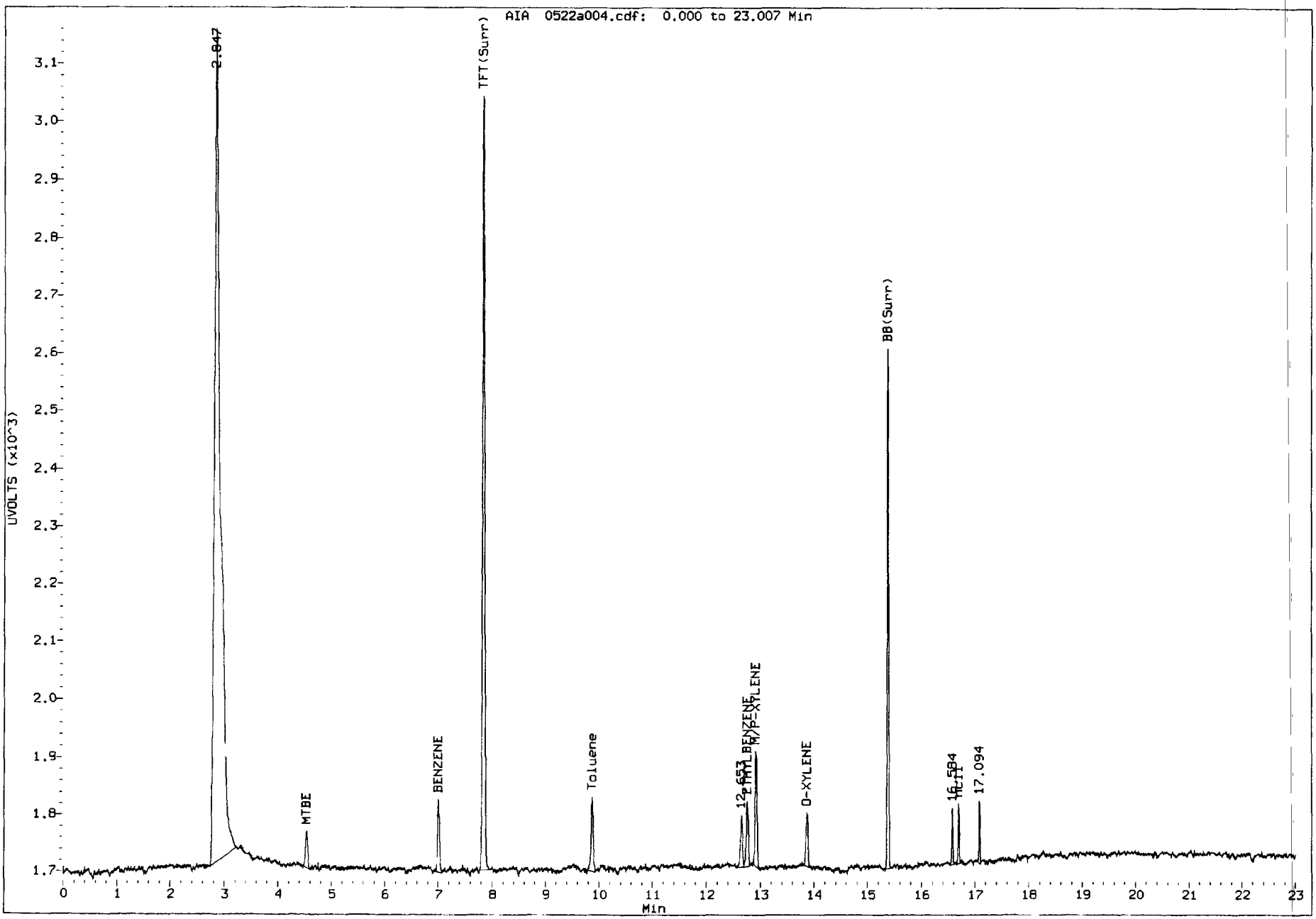
5/22/13

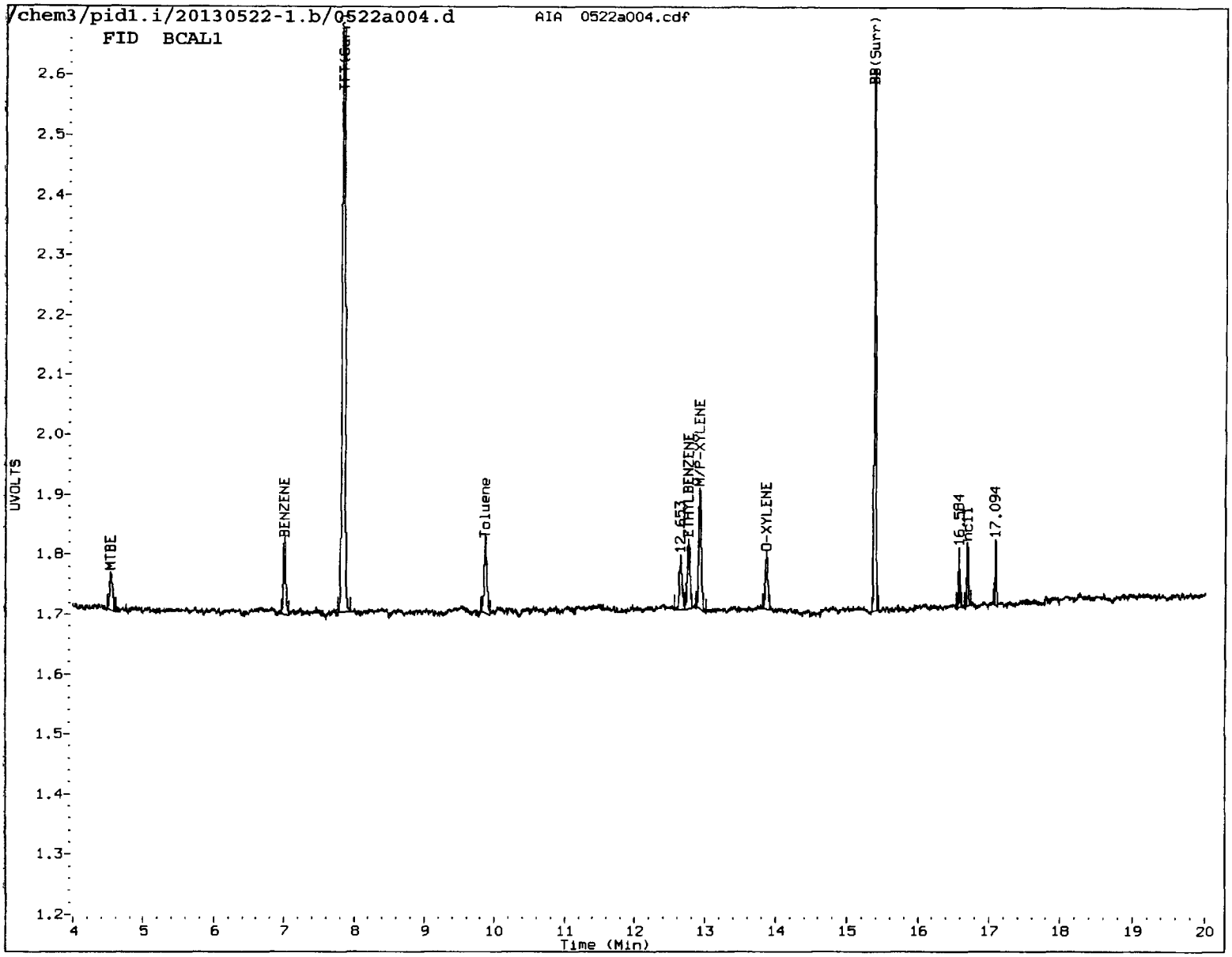

Data File: /chem3/pid1.i/20130522-2.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1
UVOLTS (x10^3)
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.709
17.100
Min
AIA 0522a004.cdf: 0.000 to 23.007 Min

3

5/22/13

Data File: /chem3/pid1.i/20130522-1.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a005.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a005.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL5
Client ID: BCAL5
Injection Date: 22-MAY-2013 10:27
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2002	25277	67.7	TFT(Surr)
15.382	0.000	1332	11311	67.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	49856	0.139
8015C 2MP-TMB	(4.18 to 16.21)	723723	51726	0.071
AK101 nC6-nC10	(4.68 to 15.11)	582885	47527	0.082
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	49856	0.133

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	2160	67.0	TFT(Surr)
15.390	-0.001	4804	66.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	1158	5.15N	Benzene
9.883	-0.001	1018	5.14N	Toluene
12.774	-0.004	864	5.29	Ethylbenzene
12.935	-0.009	1851	10.29	M/P-Xylene
13.883	-0.005	747	5.26N	O-Xylene
4.547	0.002	444	5.09N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a005.d
Lab Smp Id: BCAL5 Client Smp ID: BCAL5
Inj Date : 22-MAY-2013 10:27
Operator : LH Inst ID: pid1.i
Smp Info : BCAL5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 10:27 Cal File: 0522a005.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.539	4.539	0.000	4199	5.00000	4.97
9	BENZENE	7.012	7.012	0.000	7573	5.00000	5.19
$ 10	TFT(Surr)	7.848	7.848	0.000	2002	67.0000	67.66
12	Toluene	9.873	9.873	0.000	7382	5.00000	5.09
14	ETHYLBENZENE	12.764	12.764	0.000	564	5.00000	5.12
15	M/P-XYLENE	12.925	12.925	0.000	13495	10.0000	10.58
16	O-XYLENE	13.874	13.874	0.000	7033	5.00000	5.18
$ 18	BB(Surr)	15.382	15.382	0.000	1332	67.0000	67.03
21	nc11	16.701	16.701	0.000	533	5.00000	

Data File: /chem3/pid1.i/20130522-1.b/0522a005.d

Date : 22-MAY-2013 10:27

Client ID: BCAL5

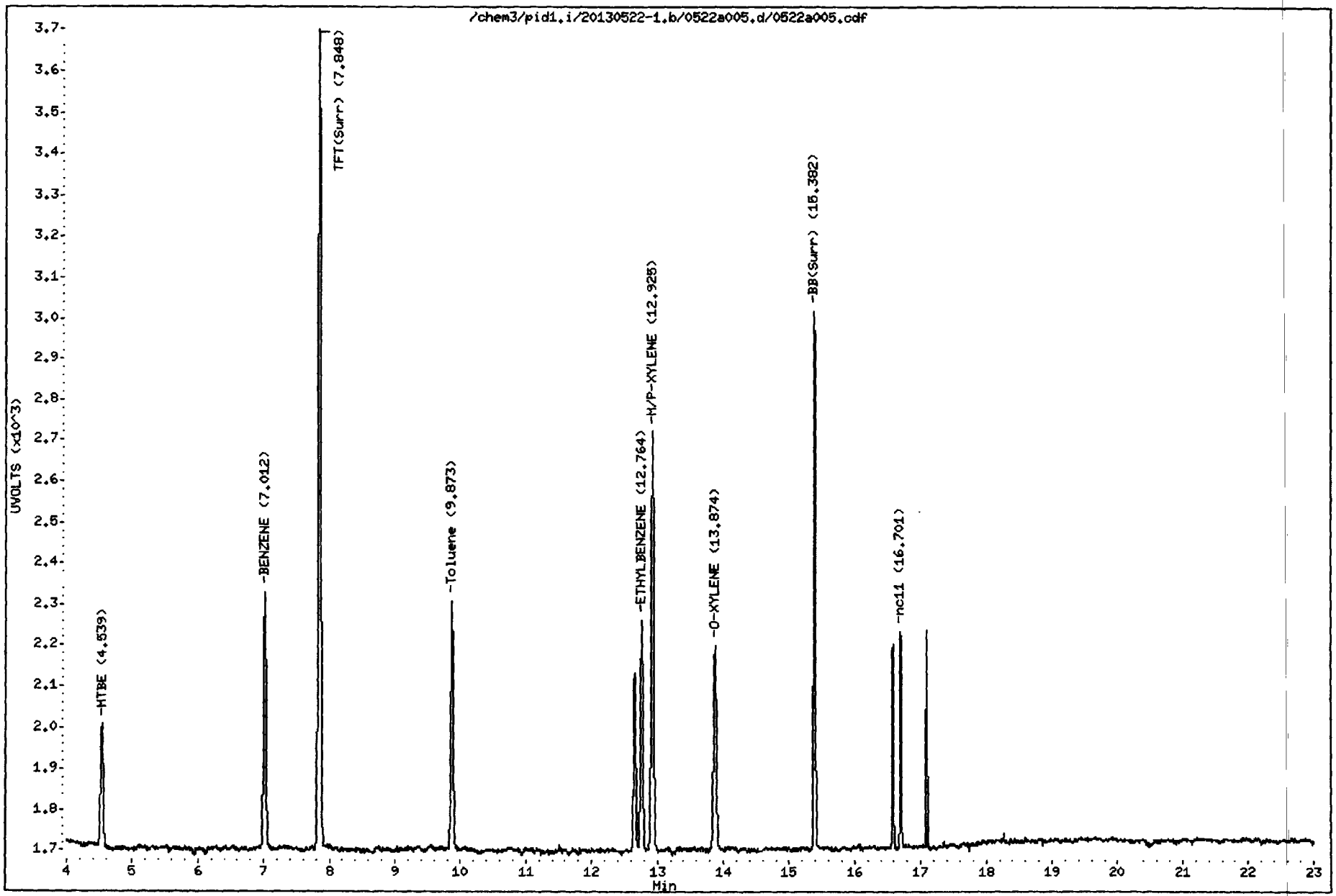
Sample Info: BCAL5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a005.d

Date : 22-MAY-2013 10:27

Client ID: BCAL5

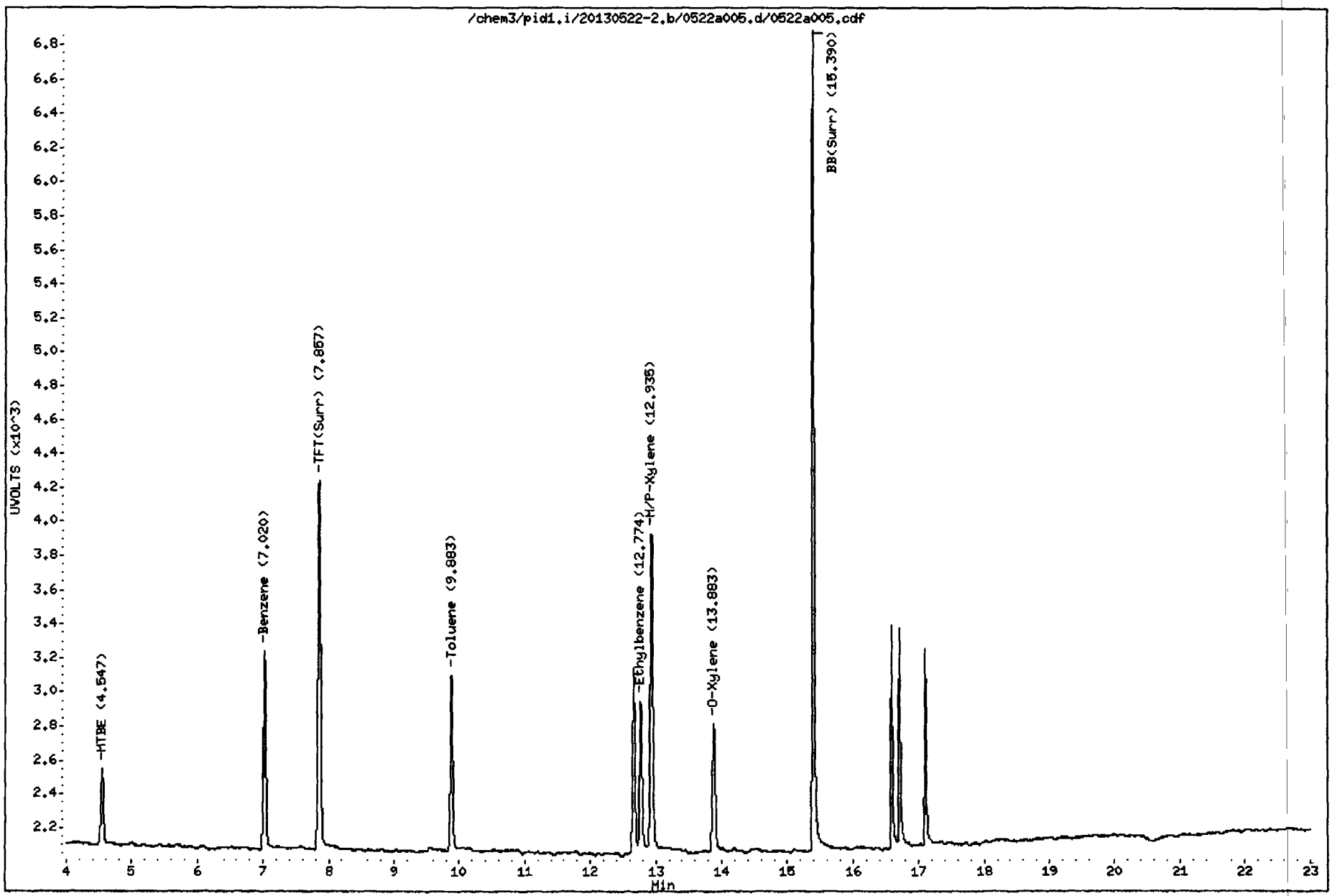
Sample Info: BCAL5

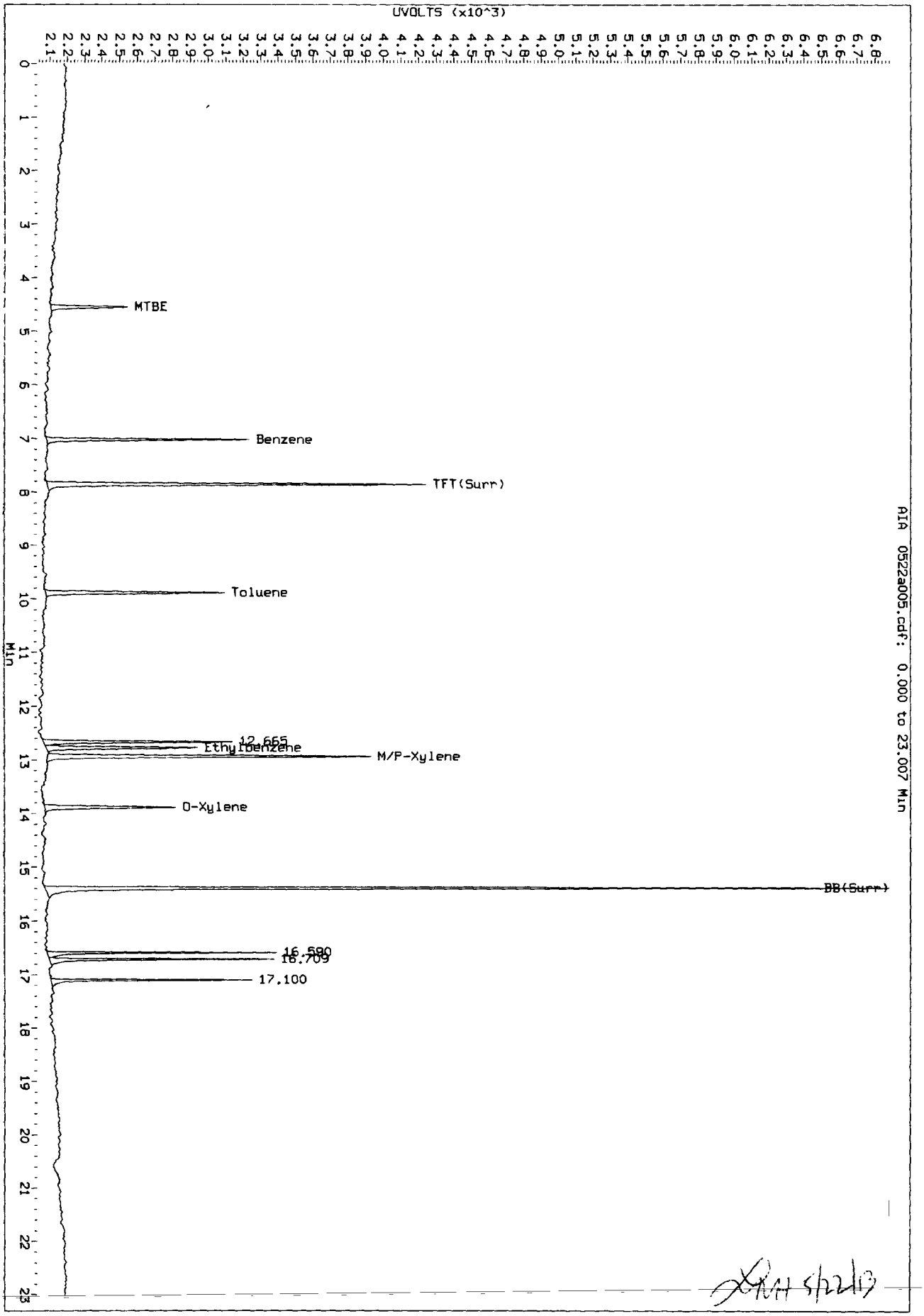
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

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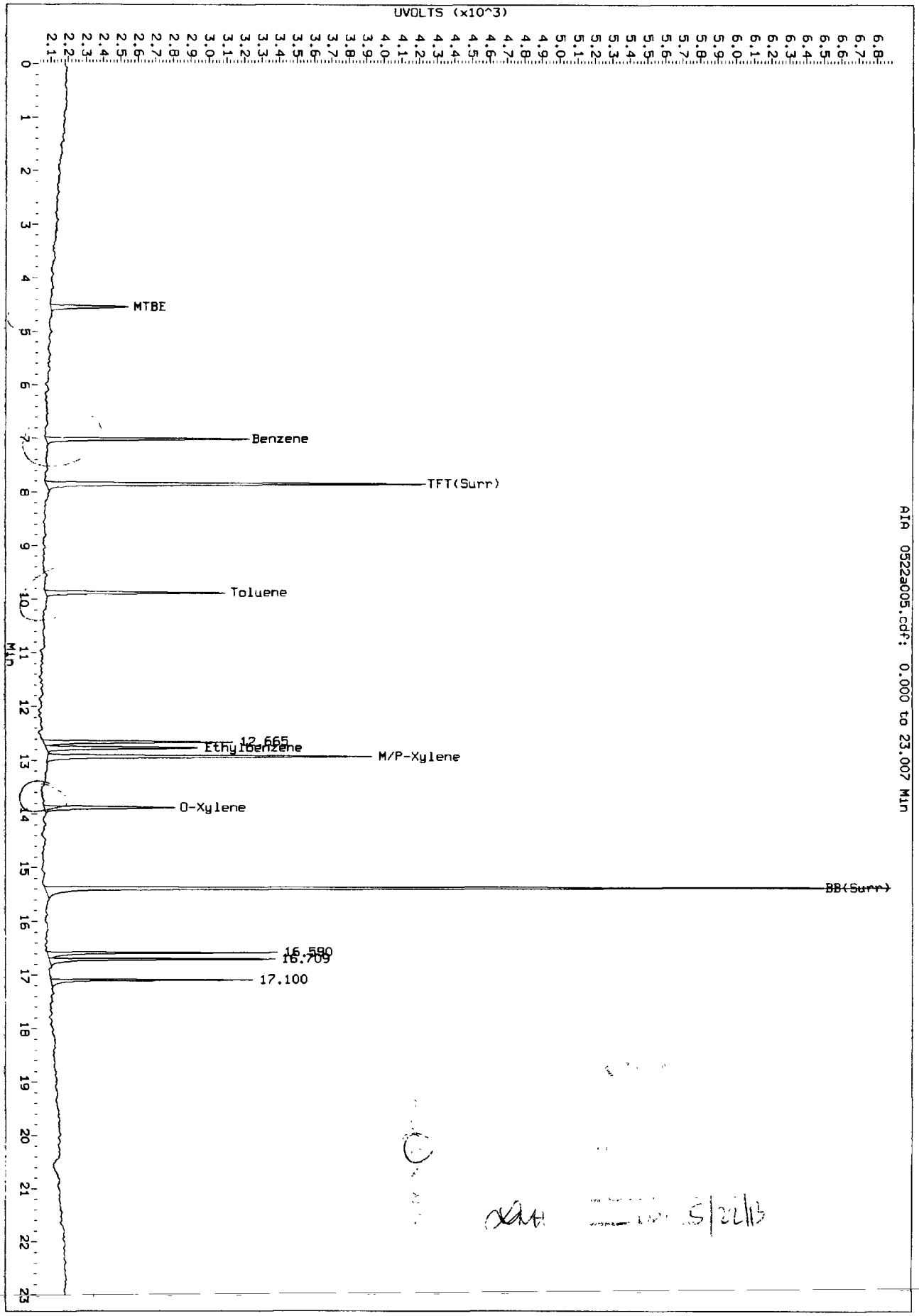
Injection Date: 22-MAY-2013 10:27
Instrument: pid1.i
Client Sample ID: BCAL5
UVOLTS (x10^3)
Min
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.709
17.100
AIA 0522a005.cdf: 0.000 to 23.007 Min


Data File: /chem3/pid1.i/20130522-2.b/0522a005.d/0522a005.cdf
Injection Date: 22-MAY-2013 10:27
Instrument: pid1.i
Client Sample ID: BCAL5
UVOLTS (x10^3)
Min
AIA 0522a005.cdf: 0.000 to 23.007 Min
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.709
17.100

Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a006.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a006.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL25
Client ID: BCAL25
Injection Date: 22-MAY-2013 10:56
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2937	37310	99.3	TFT(Surr)
15.382	0.000	1980	16732	99.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	236762	0.661
8015C 2MP-TMB	(4.18 to 16.21)	723723	245764	0.340
AK101 nC6-nC10	(4.68 to 15.11)	582885	225487	0.387
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	236762	0.631

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3241	100.5	TFT(Surr)
15.390	-0.001	7347	101.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.002	5901	26.25	Benzene
9.883	-0.001	5241	26.45N	Toluene
12.774	-0.005	4467	27.36	Ethylbenzene
12.935	-0.008	9545	53.05	M/P-Xylene
13.883	-0.005	3914	27.56	O-Xylene
4.545	0.000	2307	26.46	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a006.d
Lab Smp Id: BCAL25 Client Smp ID: BCAL25
Inj Date : 22-MAY-2013 10:56
Operator : LH Inst ID: pid1.i
Smp Info : BCAL25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 10:56 Cal File: 0522a006.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.537	4.537	0.000	20276	25.0000	24.00
9	BENZENE	7.012	7.012	0.000	36593	25.0000	25.06
$ 10	TFT(Surr)	7.848	7.848	0.000	2937	100.000	99.25
12	Toluene	9.874	9.874	0.000	35345	25.0000	24.37
14	ETHYLBENZENE	12.765	12.765	0.000	2679	25.0000	24.33
15	M/P-XYLENE	12.926	12.926	0.000	63276	50.0000	49.63
16	O-XYLENE	13.874	13.874	0.000	33141	25.0000	24.40
$ 18	BB(Surr)	15.382	15.382	0.000	1980	100.000	99.64
21	ncl1	16.701	16.701	0.000	2617	25.0000	

Data File: /chem3/pid1.i/20130522-1.b/0522a006.d

Date : 22-MAY-2013 10:56

Client ID: BCAL25

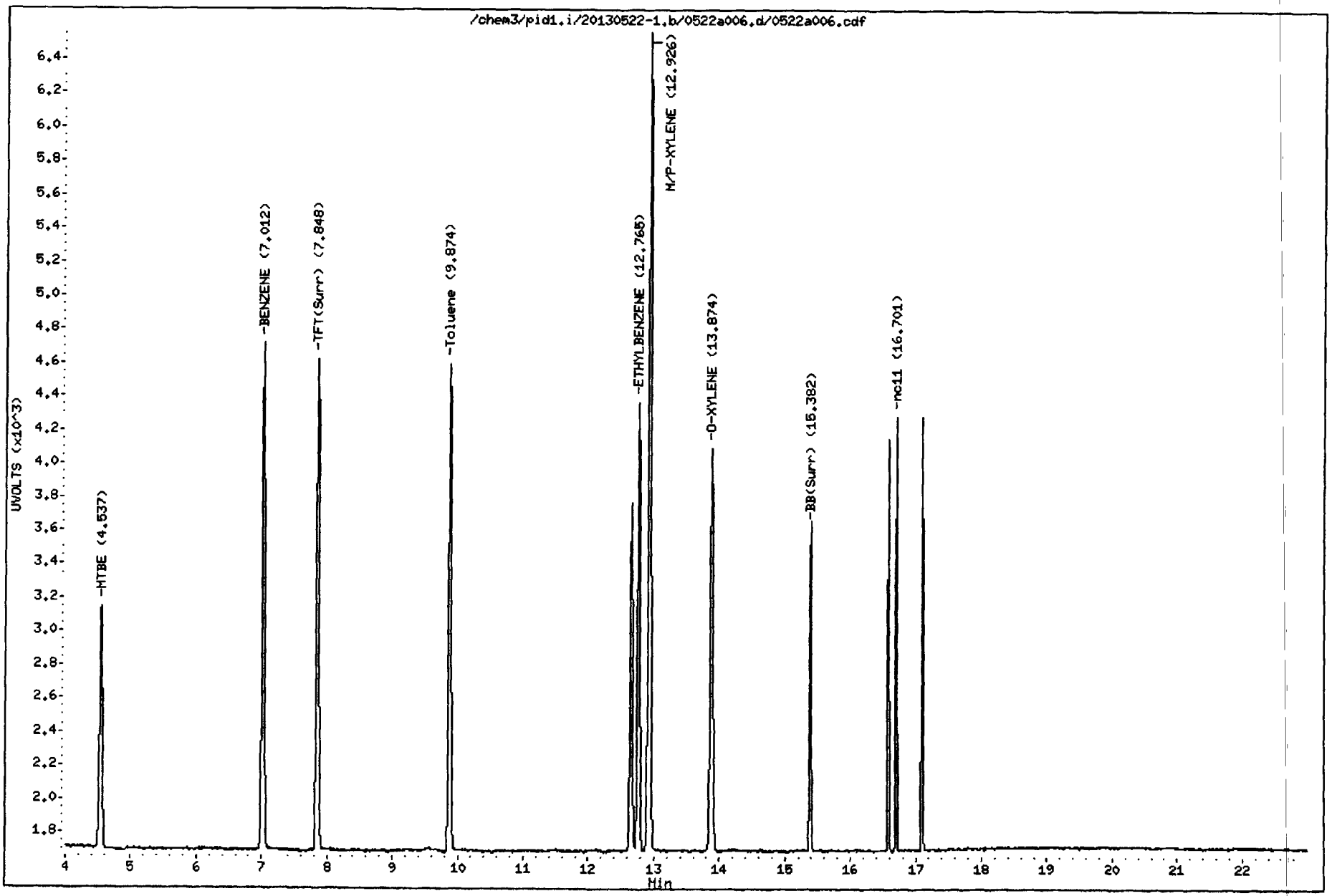
Sample Info: BCAL25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a006.d

Date : 22-MAY-2013 10:56

Client ID: BCAL25

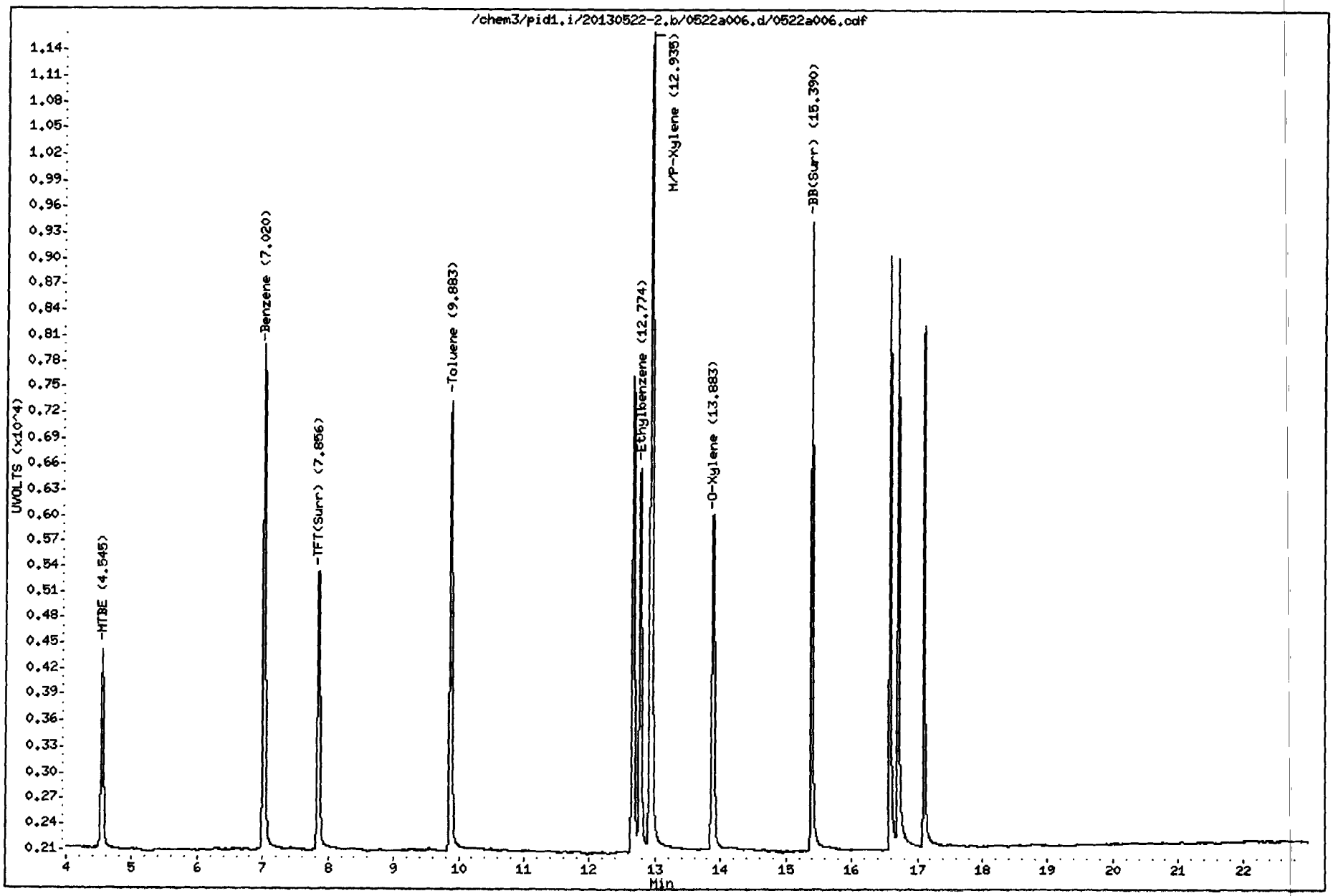
Sample Info: BCAL25

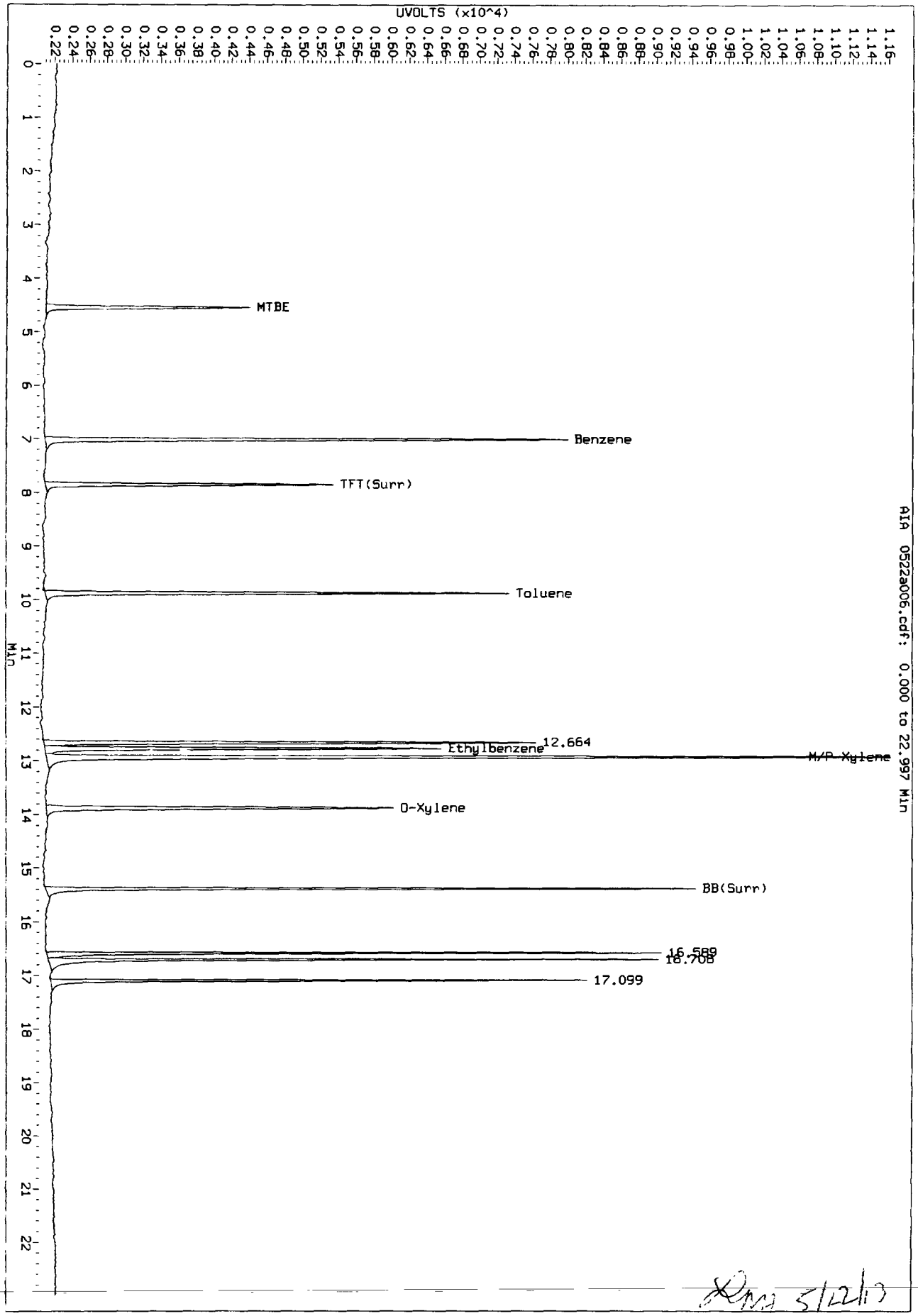
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18




Data File: /chem3/pid1.i/20130522-2.b/0522a006.d/0522a006.cdf
Injection Date: 22-MAY-2013 10:56
Instrument: pid1.i
Client Sample ID: BCAL25
UVOLTS (x10^4)
Min
MTBE
Benzene
TFT(Surr)
Toluene
Ethylbenzene
12.664
M/P-Xylene
O-Xylene
BB(Surr)
16.589
16.708
17.099
AIA 0522a006.cdf: 0.000 to 22.997 Min

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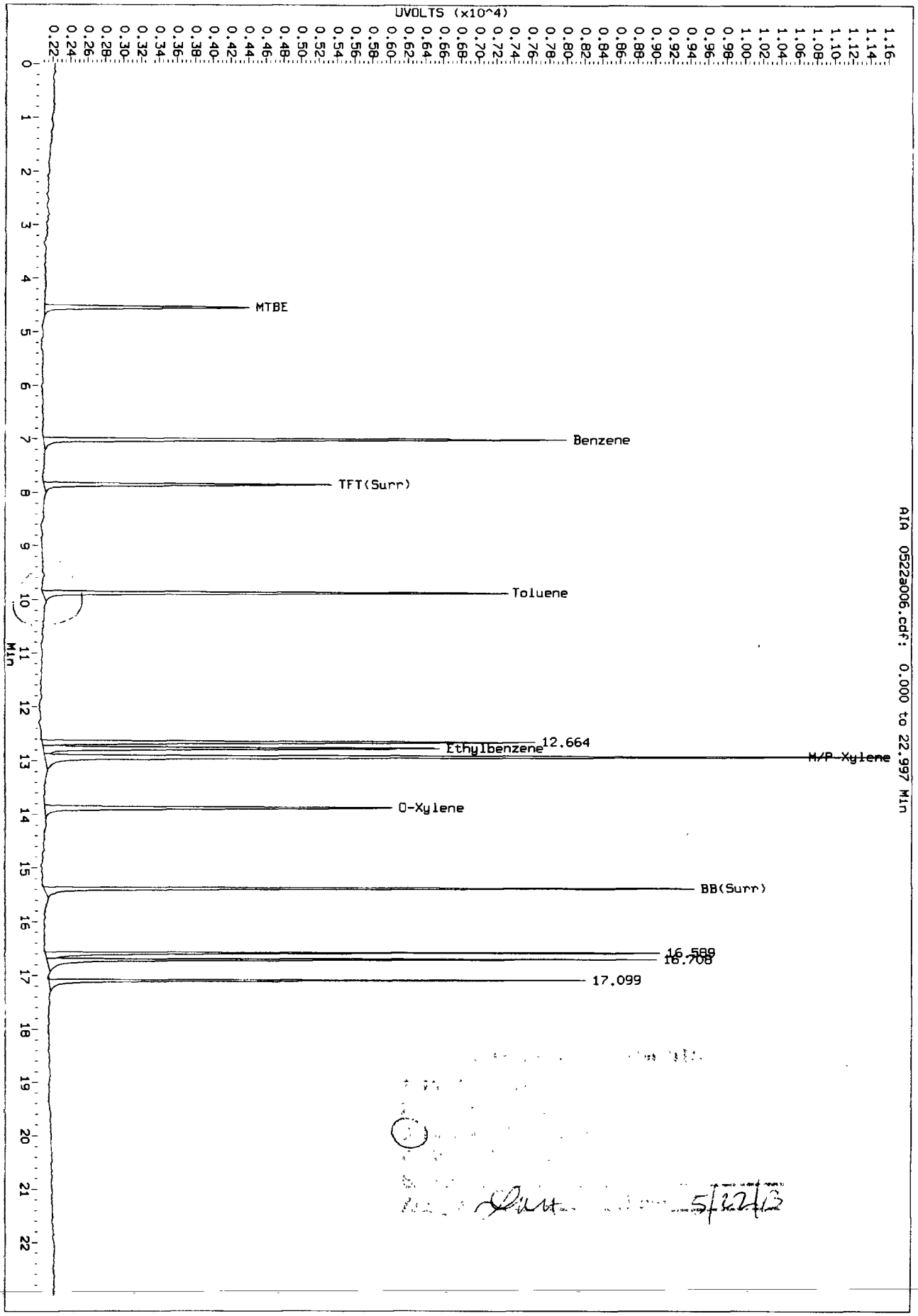
Data File: /chemJ/pid1.i/20130522-2.b/0522a006.d/0522a006.cdf
Injection Date: 22-MAY-2013 10:56
Instrument: pid1.i
Client Sample ID: BCAL25
UVOLTS (x10^4)
Min
MTBE
Benzene
TFT(Surr)
Toluene
Ethylbenzene
12.664
M/P-Xylene
O-Xylene
BB(Surr)
16.589
16.708
17.099
AIA 0522a006.cdf: 0.000 to 22.997 Min
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Analytical Resources Inc.
BETX/Gas Quantitation Report

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Data file 1: /chem3/pid1.i/20130522-1.b/0522a007.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a007.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL50
Client ID: BCAL50
Injection Date: 22-MAY-2013 11:25
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	3824	48740	129.2	TFT(Surr)
15.382	0.000	2595	21730	130.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	455449	1.272
8015C 2MP-TMB	(4.18 to 16.21)	723723	472875	0.653
AK101 nC6-nC10	(4.68 to 15.11)	582885	433822	0.744
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	455449	1.214

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	4289	133.1	TFT(Surr)
15.390	-0.001	9769	135.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	11655	51.84	Benzene
9.883	-0.001	10315	52.06N	Toluene
12.774	-0.004	8873	54.35	Ethylbenzene
12.936	-0.007	18906	105.07	M/P-Xylene
13.883	-0.005	7783	54.81	O-Xylene
4.545	0.000	4539	52.06	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a007.d
Lab Smp Id: BCAL50 Client Smp ID: BCAL50
Inj Date : 22-MAY-2013 11:25
Operator : LH Inst ID: pid1.i
Smp Info : BCAL50
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 11:25 Cal File: 0522a007.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.537	4.537	0.000	39052	50.0000	46.23
	9 BENZENE	7.012	7.012	0.000	69936	50.0000	47.90
$	10 TFT(Surr)	7.848	7.848	0.000	3824	133.000	129.2
	12 Toluene	9.873	9.873	0.000	67882	50.0000	46.81
	14 ETHYLBENZENE	12.765	12.765	0.000	5148	50.0000	46.76
	15 M/P-XYLENE	12.927	12.927	0.000	121551	100.000	95.33
	16 O-XYLENE	13.873	13.873	0.000	63859	50.0000	47.02
$	18 BB(Surr)	15.382	15.382	0.000	2595	133.000	130.6
	21 nc11	16.701	16.701	0.000	4942	50.0000	

Data File: /chem3/pid1.i/20130522-1.b/0522a007.d

Date : 22-MAY-2013 11:25

Client ID: BCAL50

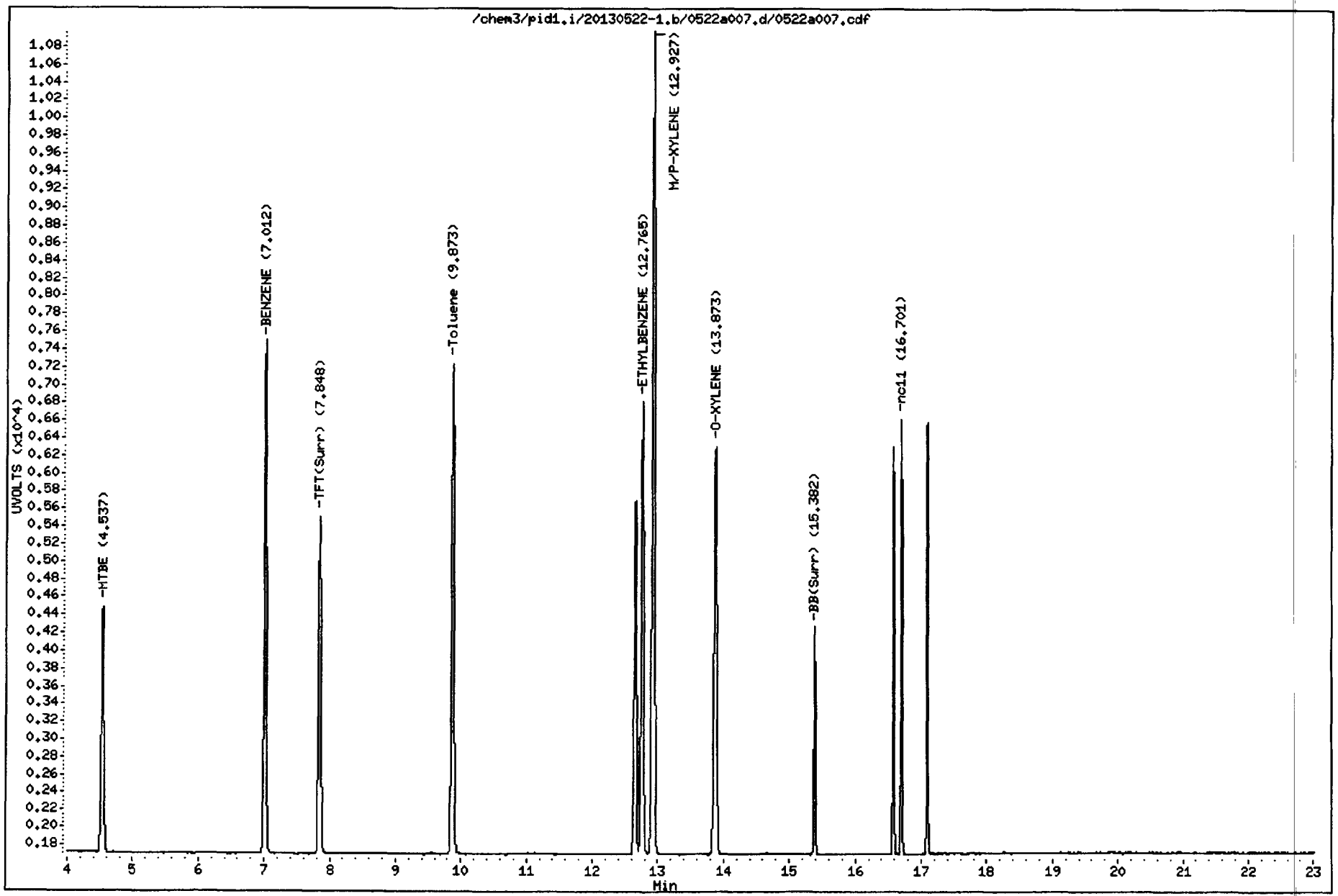
Sample Info: BCAL50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a007.d

Date : 22-MAY-2013 11:25

Client ID: BCAL50

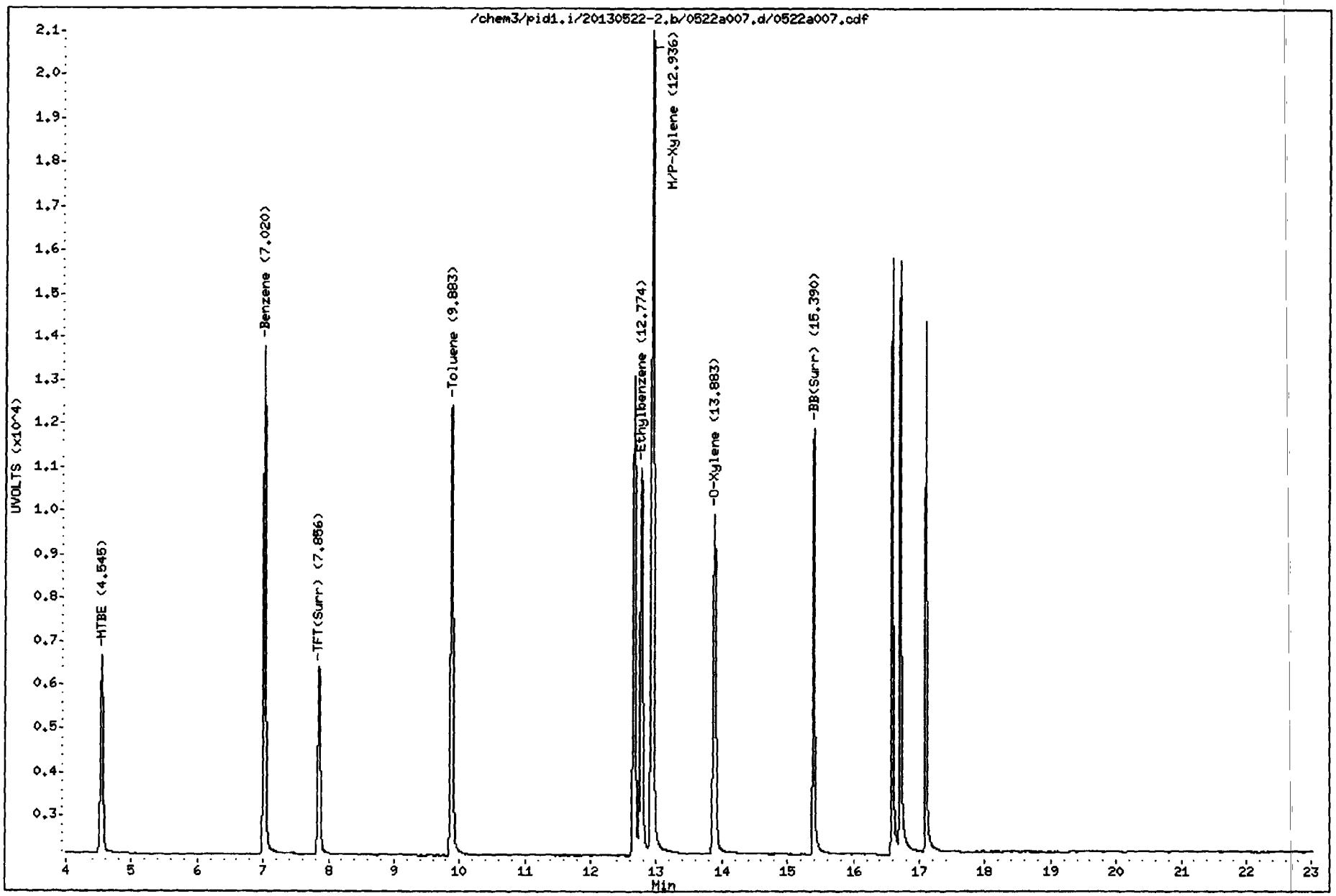
Sample Info: BCAL50

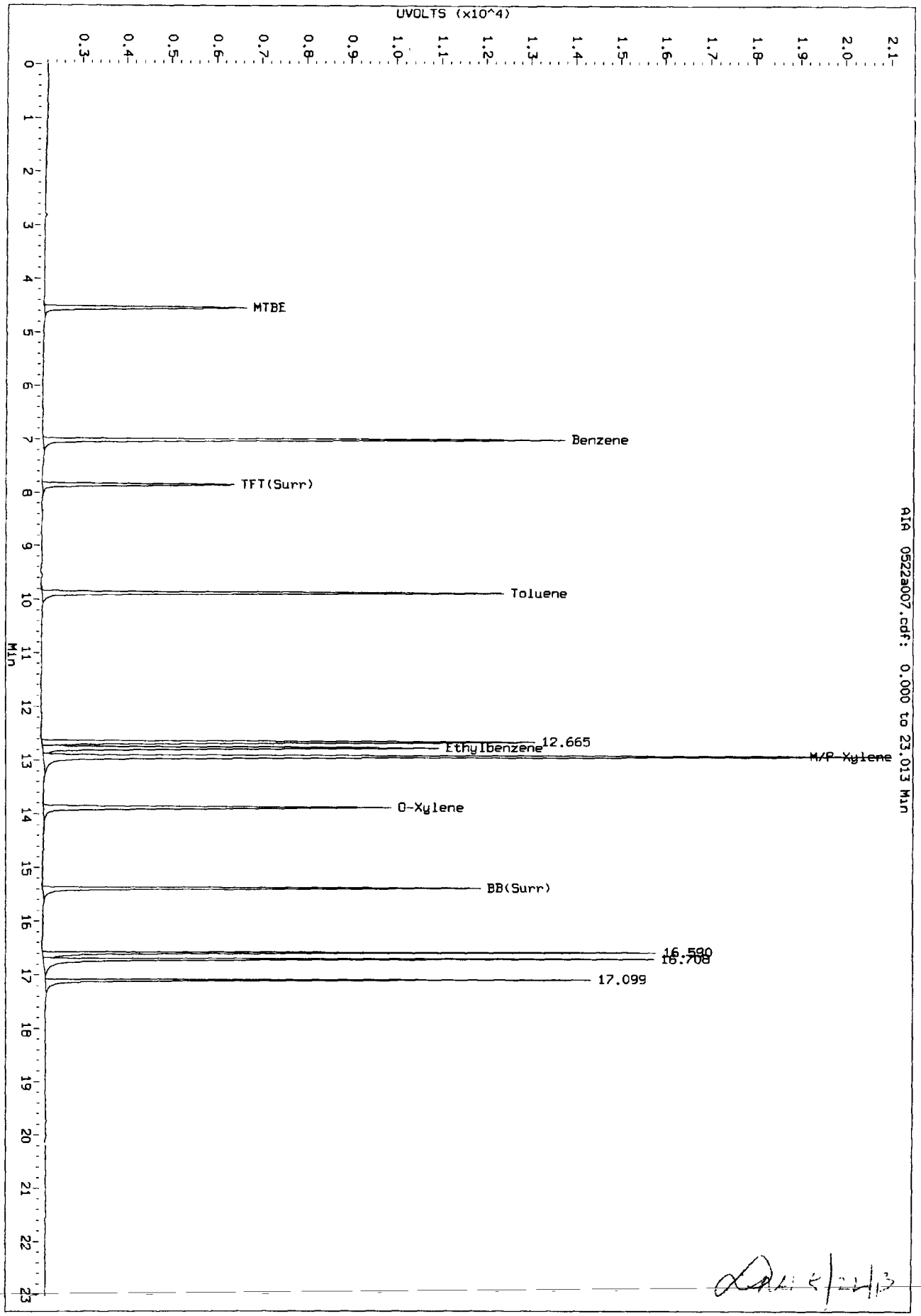
Column phase: RTX 502-2 PID

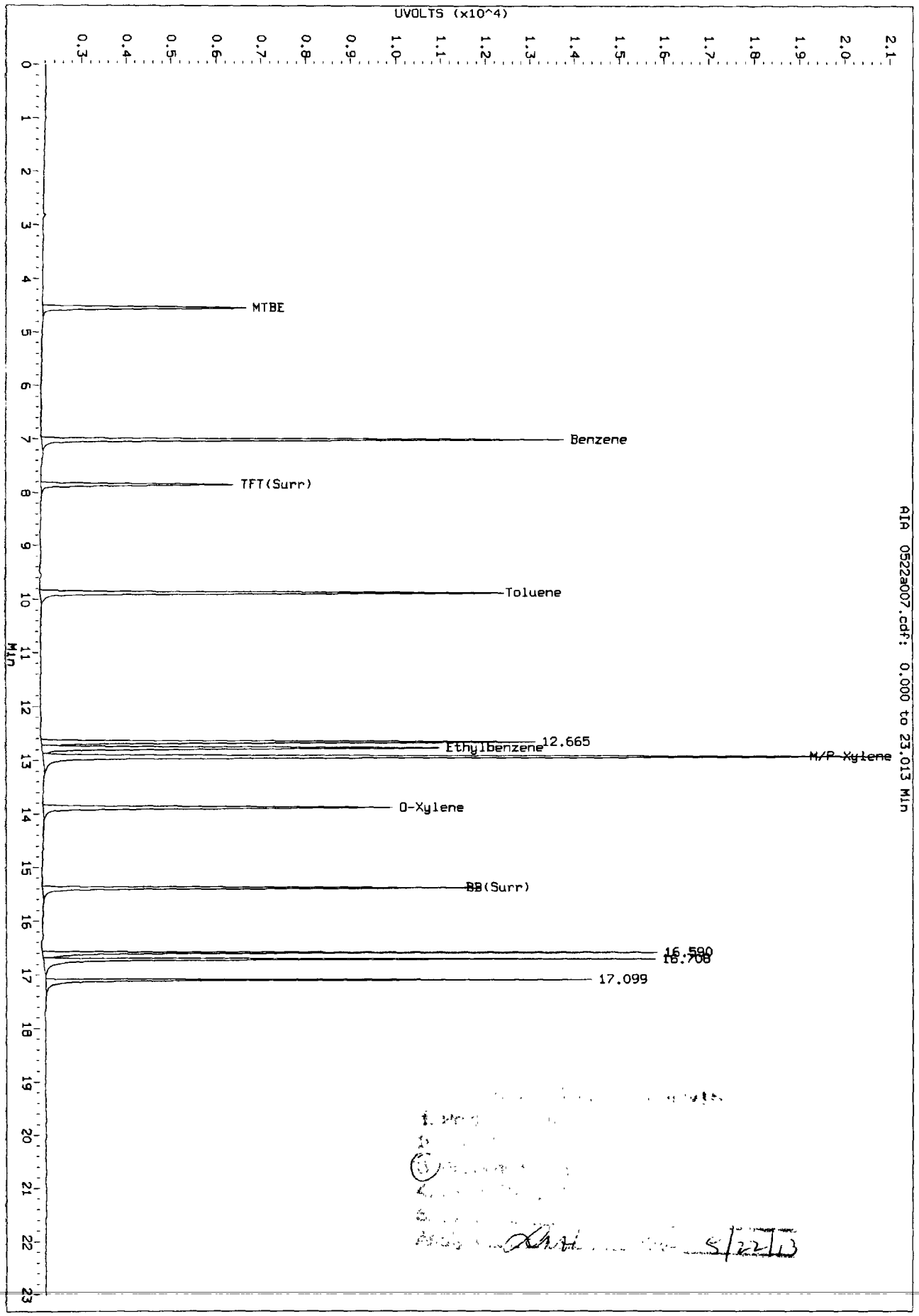
Instrument: pid1.i

Operator: LH

Column diameter: 0.18




Data File: /chem3/pid1.i/20130522-2.b/0522a007.d/0522a007.cdf
Injection Date: 22-MAY-2013 11:25
Instrument: pid1.i
Client Sample ID: BCAL50
UVOLTS (x10^4)
Min
AIA 0522a007.cdf: 0.000 to 23.013 Min
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.708
17.099


Data File: /chem3/pid1.1/20130522-2.b/0522a007.d/0522a007.cdf
Injection Date: 22-MAY-2013 11:25
Instrument: pid1.1
Client Sample ID: BCAL50
UVOLTS (x10^4)
Min
MTBE
Benzene
TFT(Surr)
Toluene
Ethylbenzene
12.665
M/P-Xylene
O-Xylene
BB(Surr)
16.580
16.708
17.099
AIA 0522a007.cdf: 0.000 to 23.013 Min

XAH 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a008.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a008.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL100
Client ID: BCAL100
Injection Date: 22-MAY-2013 11:55
Matrix: WATER
Dilution Factor: 1.000

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.000	5017	64017	169.5	TFT(Surr)
15.382	0.000	3414	28686	171.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	875862	2.446
8015C 2MP-TMB	(4.18 to 16.21)	723723	914919	1.264
AK101 nC6-nC10	(4.68 to 15.11)	582885	837947	1.438
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	875862	2.335

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

==========

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	5697	176.7	TFT(Surr)
15.390	0.000	13113	181.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.022	0.000	23264	103.47	Benzene
9.884	-0.001	20740	104.68	Toluene
12.776	-0.003	17573	107.64	Ethylbenzene
12.938	-0.005	37670	209.35	M/P-Xylene
13.884	-0.004	15483	109.03	O-Xylene
4.547	0.001	9110	104.49	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a008.d
Lab Smp Id: BCAL100 Client Smp ID: BCAL100
Inj Date : 22-MAY-2013 11:55
Operator : LH Inst ID: pid1.i
Smp Info : BCAL100
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 11:55 Cal File: 0522a008.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.539	4.539	0.000	76970	100.000	91.12
9	BENZENE	7.014	7.014	0.000	137016	100.000	93.84
$ 10	TFT(Surr)	7.849	7.849	0.000	5017	178.000	169.5
12	Toluene	9.875	9.875	0.000	131470	100.000	90.66
14	ETHYLBENZENE	12.767	12.767	0.000	9866	100.000	89.61
15	M/P-XYLENE	12.930	12.930	0.000	233700	200.000	183.3
16	O-XYLENE	13.876	13.876	0.000	122598	100.000	90.28
$ 18	BB(Surr)	15.382	15.382	0.000	3414	178.000	171.8
21	nc11	16.702	16.702	0.000	9535	100.000	

Data File: /chem3/pid1.i/20130522-1.b/0522a008.d

Date : 22-MAY-2013 11:55

Client ID: BCAL100

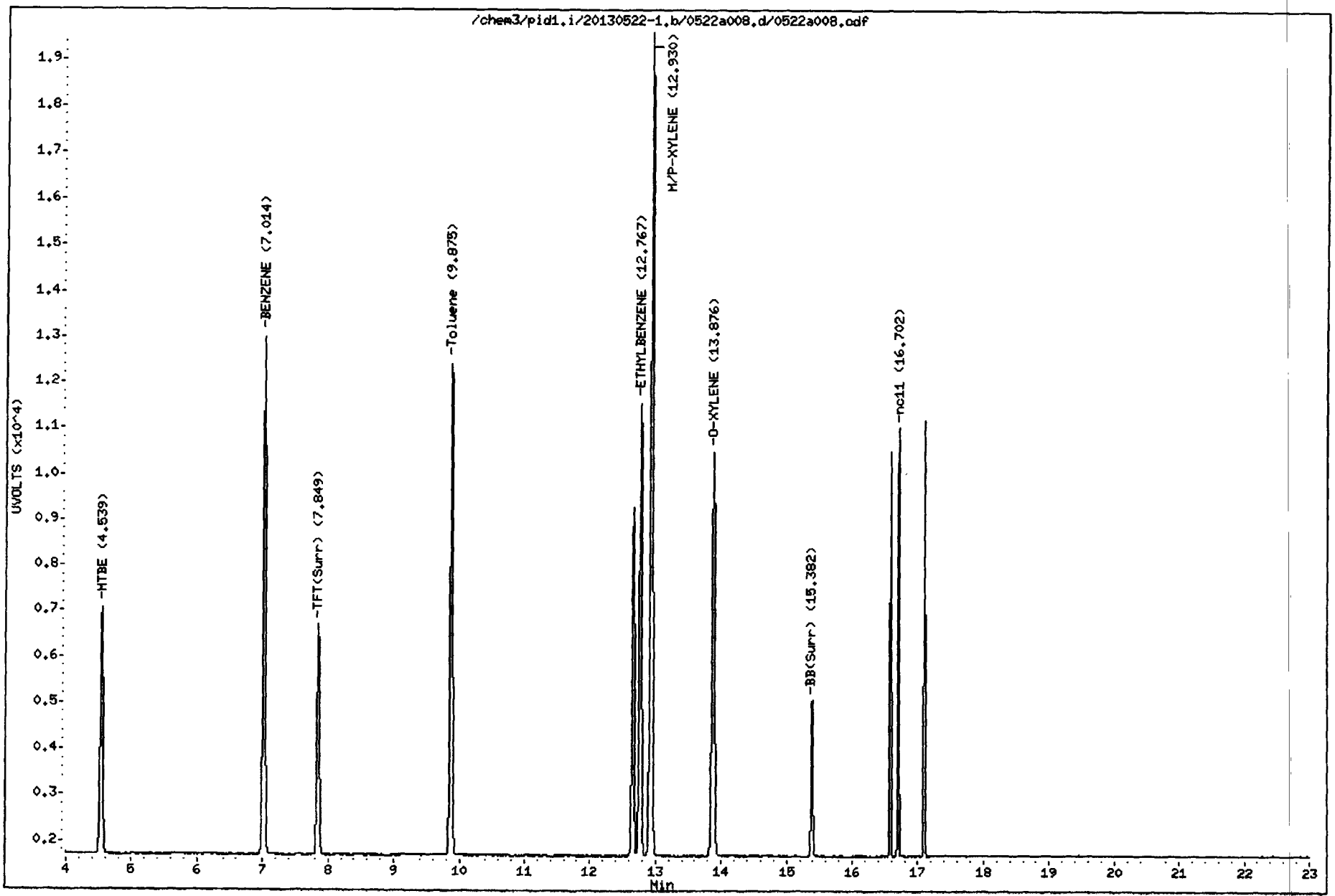
Sample Info: BCAL100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a008.d

Date : 22-MAY-2013 11:55

Client ID: BCAL100

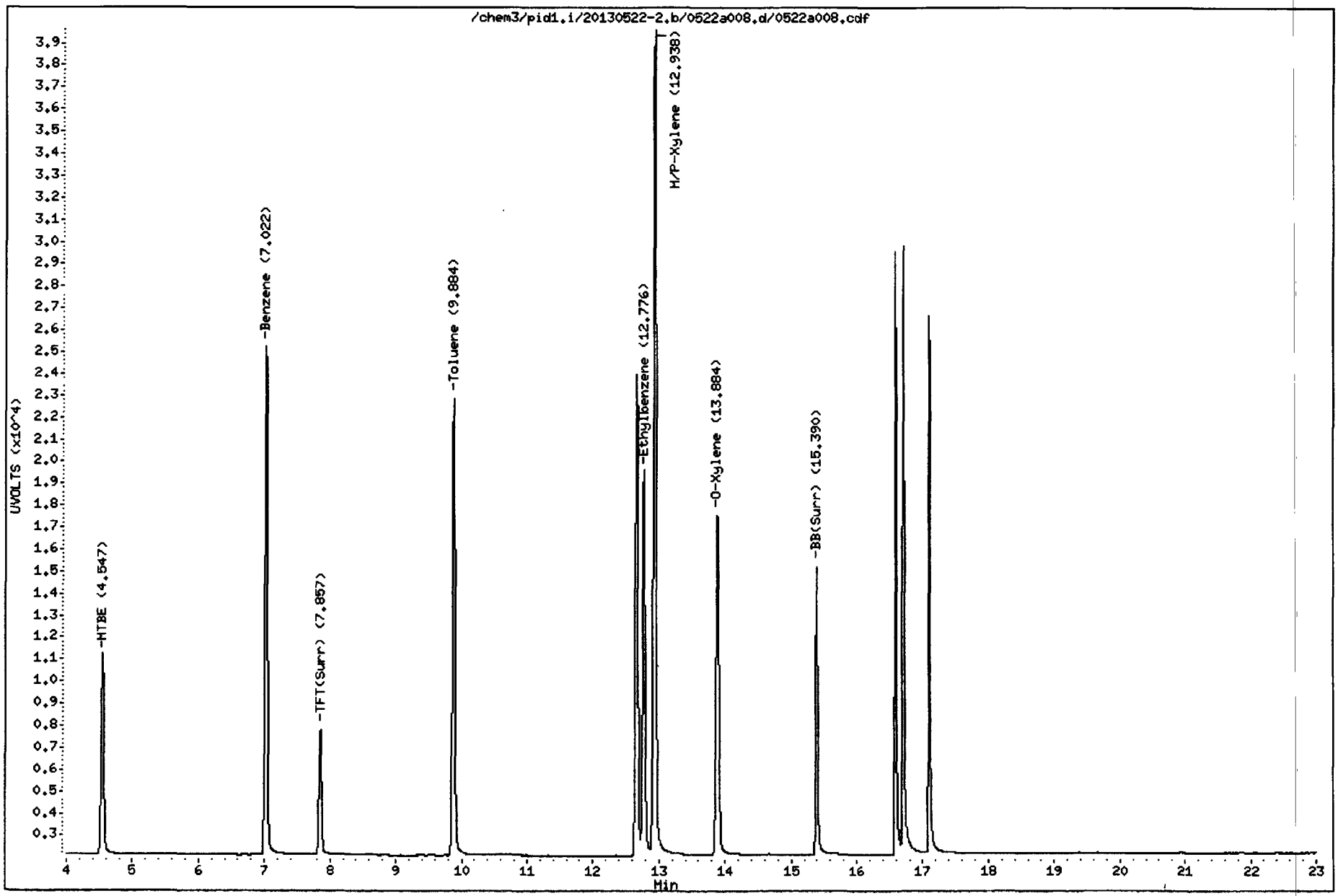
Sample Info: BCAL100

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a009.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a009.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL200
Client ID: BCAL200
Injection Date: 22-MAY-2013 12:24
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	5680	72811	192.0	TFT(Surr)
15.383	0.000	3864	32720	194.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	1723795	4.814
8015C 2MP-TMB	(4.18 to 16.21)	723723	1791026	2.475
AK101 nC6-nC10	(4.68 to 15.11)	582885	1642170	2.817
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	1723795	4.596

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	6454	200.2	TFT(Surr)
15.391	0.000	15123	209.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.021	0.000	46248	205.70	Benzene
9.885	0.000	41824	211.09	Toluene
12.778	0.000	35277	216.08	Ethylbenzene
12.943	0.000	76231	423.66	M/P-Xylene
13.888	0.000	31715	223.34	O-Xylene
4.545	0.000	17903	205.35	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a009.d
Lab Smp Id: BCAL200 Client Smp ID: BCAL200
Inj Date : 22-MAY-2013 12:24
Operator : LH Inst ID: pid1.i
Smp Info : BCAL200
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 12:24 Cal File: 0522a009.d
Als bottle: 1 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng/mL)	(ng/mL)
6 MTBE	4.538	4.538	0.000	148855	200.000	176.2
9 BENZENE	7.014	7.014	0.000	266241	200.000	182.4
$ 10 TFT(Surr)	7.848	7.848	0.000	5680	200.000	192.0
12 Toluene	9.877	9.877	0.000	256545	200.000	176.9
14 ETHYLBENZENE	12.770	12.770	0.000	19235	200.000	174.7
15 M/P-XYLENE	12.935	12.935	0.000	460498	400.000	361.2
16 O-XYLENE	13.879	13.879	0.000	240735	200.000	177.3
$ 18 BB(Surr)	15.383	15.383	0.000	3864	200.000	194.4
21 ncl1	16.704	16.704	0.000	18792	200.000	

Data File: /chem3/pid1.i/20130522-1.b/0522a009.d

Date : 22-MAY-2013 12:24

Client ID: BCAL200

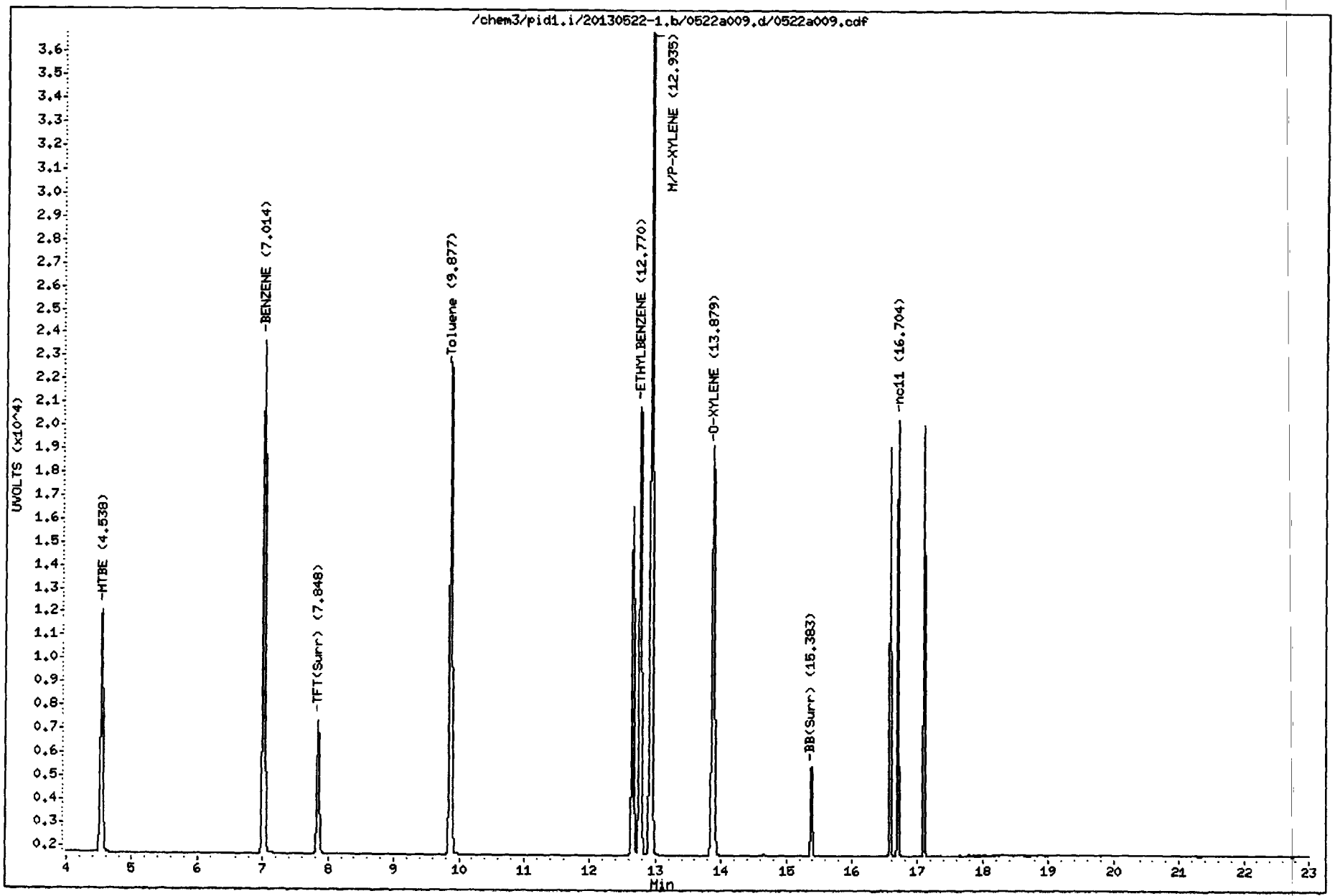
Sample Info: BCAL200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a009.d

Page 1

Date : 22-MAY-2013 12:24

Client ID: BCAL200

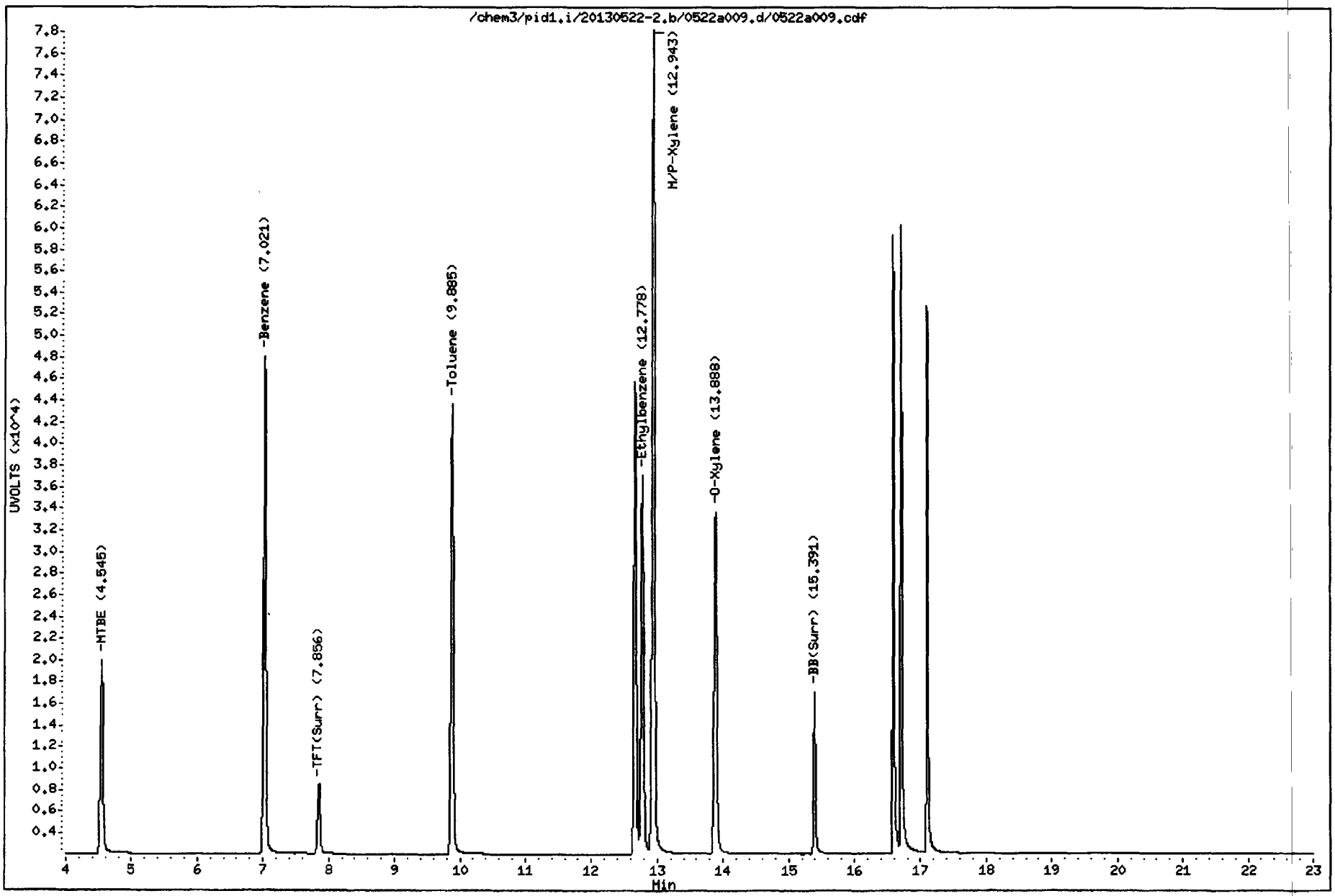
Instrument: pid1.i

Sample Info: BCAL200

Operator: LH

Column phase: RTX 502-2 PID

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a010.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a010.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: ICV25
Client ID: ICV25
Injection Date: 22-MAY-2013 12:53
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	2850	36275	96.3	TFT(Surr)
15.383	0.000	1968	16393	99.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	224528	0.627
8015C 2MP-TMB	(4.18 to 16.21)	723723	231562	0.320
AK101 nC6-nC10	(4.68 to 15.11)	582885	212642	0.365
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	224528	0.599

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3153	97.8	TFT(Surr)
15.390	-0.001	7281	100.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.021	-0.001	5554	24.70	Benzene
9.883	-0.002	4945	24.96	Toluene
12.774	-0.004	4229	25.90	Ethylbenzene
12.936	-0.008	9045	50.27	M/P-Xylene
13.884	-0.004	3733	26.29	O-Xylene
4.546	0.001	2105	24.14	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a010.d
Lab Smp Id: ICV25 Client Smp ID: ICV25
Inj Date : 22-MAY-2013 12:53
Operator : LH Inst ID: pid1.i
Smp Info : ICV25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 16:19 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 12:24 Cal File: 0522a009.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	6 MTBE	4.539	4.538	0.001	18919	22.3965	22.40
	9 BENZENE	7.013	7.014	-0.001	34225	23.4410	23.44
$	10 TFT(Surr)	7.849	7.848	0.001	2850	96.3146	96.31
	12 Toluene	9.874	9.877	-0.003	33117	22.8368	22.84
	14 ETHYLBENZENE	12.766	12.770	-0.004	2520	22.8895	22.89
	15 M/P-XYLENE	12.927	12.935	-0.008	59723	46.8403	46.84
	16 O-XYLENE	13.875	13.879	-0.004	31159	25.1396	25.14
$	18 BB(Surr)	15.383	15.383	0.000	1968	99.0411	99.04
	21 ncl1	16.701	16.704	-0.003	2482		

Data File: /chem3/pid1.i/20130522-1.b/0522a010.d

Date : 22-MAY-2013 12:53

Client ID: ICV25

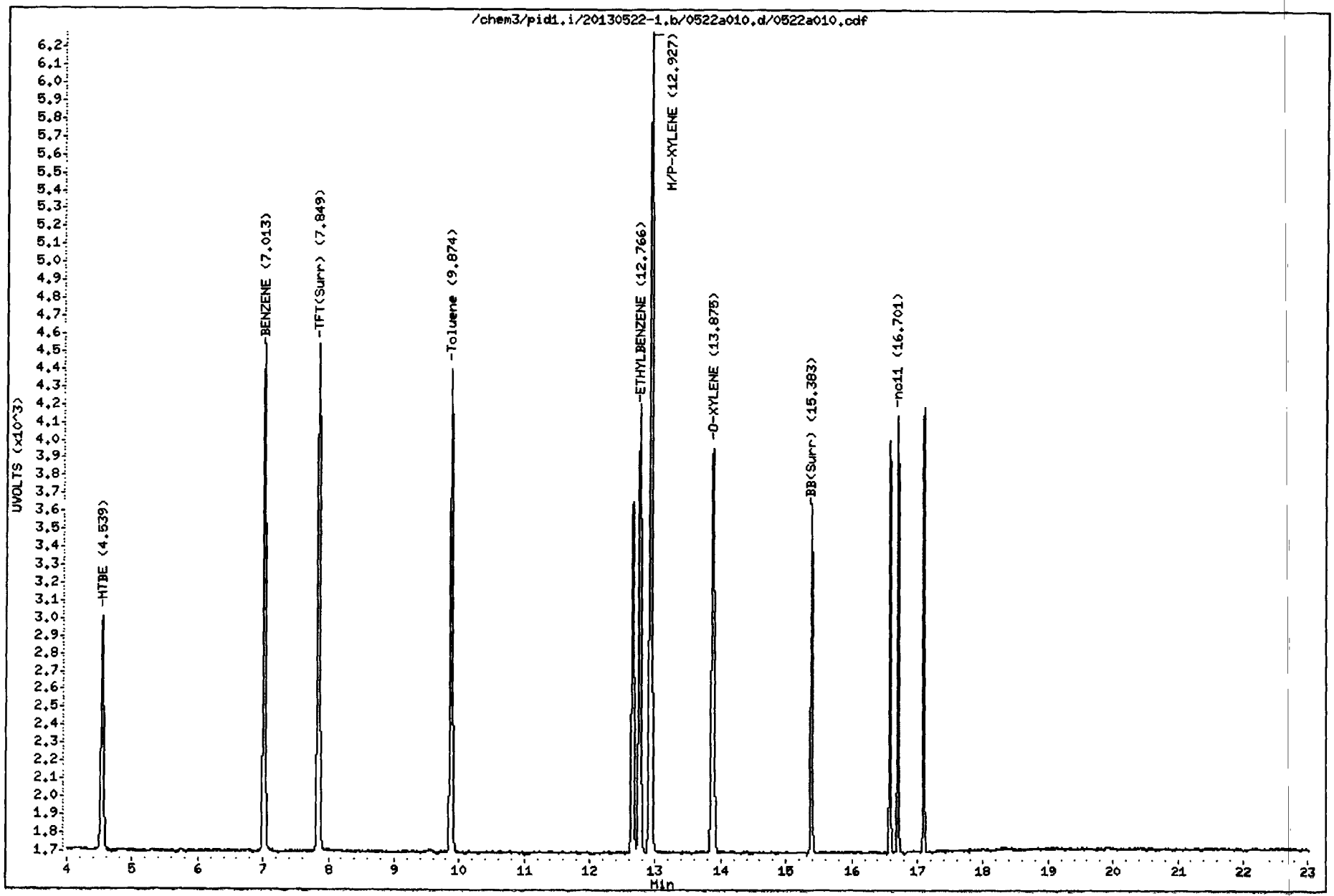
Sample Info: ICV25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a010.d

Date : 22-MAY-2013 12:53

Client ID: ICV25

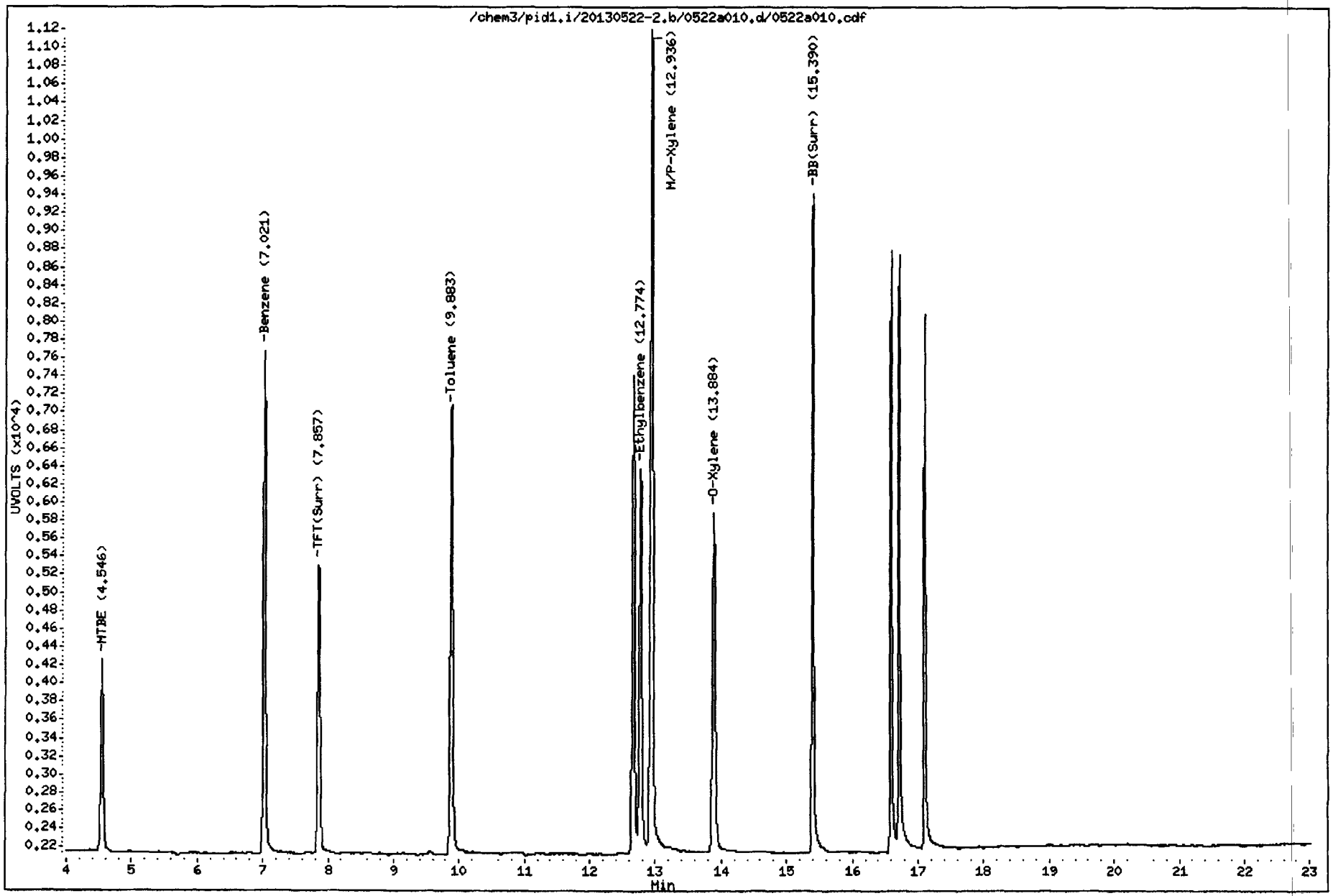
Sample Info: ICV25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



TPHG Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WR99, WS01

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WR99 Client ID: SAIC

METHOD: (**NW-TPH**(Gas)) **8021B**(BTEX) **NW-VPH**(VPH) **8260C**(VOA) **8260C**(SIM VOA) **524.3**(VOA) **RSK-175**(MEE)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 (PID-1) PID-2 PID-3 FID-6

Purge Volume (mL) 5 Curve Date: 10/23/12 5/22/13 Analysis Start Date: 6/3/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA / (Y) / N / ✓	Method Blank In Control?	(Y) / N / ✓
BFB Tune Meets Criteria?	(NA) / Y / N / ✓	Surrogate Recovery in Control?	(Y) / N / ✓
Internal STD within 50-200%?	(NA) / Y / N / ✓	LCS / LCSD Recovery Met?	(Y) / N / ✓
CCAL Meets %D	(Y) / N / ✓	LCS / LCSD RPD ≤30%?	NA / 13%
ICAL Q flag applied?	NA / Y / (N) / ✓	MS / MSD Recovery Met?	(NA) / Y / N / NA
CCAL Q Flag applied	NA / Y / (N) / ✓	MS / MSD RPD ≤30%?	NA / NA
Manual Integrations?	(Y) / N / ✓	Samples Diluted?	Y / (N) / ✓
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	Y / (N) / ✓

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

No QC volume provided

(Review 1)Analyst: PC **Date:** 6/11/13

(Review 2)Reviewer: [signature] **Date:** 6/11/13

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 6/3/13 Analysis: Nutrients/BTEX Analyst: PL

Column 1 Serial No.: 821726 Column Type: RTX502.2

Column 2 Serial No.: — Column Type: —

GC Method: BETA ICal Date: VW3/4y 5/22/13 Injection Volume: 5

IS	Ical/Ccal	ICV
VW795-2	VW794-2	B000206
	B000332	
	B000206	

Document All Maintenance Tasks In StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	1046	0603a001.d	RINSE				1
2	1114	0603a002.d	RT0603+BCAL	RT0603+BCAL			1
3	1143	0603a003.d	GCAL 1	GCAL 1			1
4	1228	0603a004.d	LCS0603				1
5	1256	0603a005.d	LCSD0603				1
6	1325	0603a006.d	MB0603				1
7	1403	0603a007.d	WS31A	A2-W36-S-4			1
8	1431	0603a008.d	WS31B	A2-W34-S-4			1
9	1459	0603a009.d	WS31C	A2-W35-S-4			1
10	1528	0603a010.d	WS31D	A2-W37-S-4			1
11	1556	0603a011.d	WS31E	A2-W38-S-4			1
12	1624	0603a012.d	WS31F	A2-W39-S-4			1
13	1653	0603a013.d	BCAL 2				1
14	1721	0603a014.d	GCAL 2				1
15	1749	0603a015.d	WS04A	PP-PA-15-0513			1
16	1818	0603a016.d	WS04B	Field Blank	1	02	1
17	1846	0603a017.d	WS16A	G-PA-101C(3-4)			1
18	1914	0603a018.d	WS16B	G-PA-101C(6-7)			1
19	1943	0603a019.d	WS16C	G-PA-201C(3-4)			1
20	2011	0603a020.d	WS16D	Trip Blanks	1	02	1
21	2039	0603a021.d	WS21A	KC-IV-SPS-20130531-			1
22	2107	0603a022.d	WR99C	KC-TB-01-20130530-W	2	02	1
23	2136	0603a023.d	WR99D	KC-VT-1593-20130530			1
24	2204	0603a024.d	GCAL 3				1

PL 6/5/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

LRQ9 : 02276

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130603-1.b

ARI Job No.: LCS0 Method: FID.m Instrument: pid1.i Date: 03-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1228	0603a004.d	LCS0603		1	NO MANUAL INTEGRATION
1256	0603a005.d	LCSD0603		1	NO MANUAL INTEGRATION
1325	0603a006.d	MB0603		1	NO MANUAL INTEGRATION
2107	0603a022.d	WR99C	KC-TB-01-2	1	NO MANUAL INTEGRATION
2136	0603a023.d	WR99D	KC-VT-1593	1	NO MANUAL INTEGRATION

PC
6/4/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a002.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a002.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: RT0603+BCAL
Client ID: RT0603+BCAL
Injection Date: 03-JUN-2013 11:14
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2966	38401	100.2	TFT(Surr)
15.379	0.000	1973	16324	99.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	440208	1.229
8015C 2MP-TMB	(4.19 to 16.20)	723723	518739	0.717
AK101 nC6-nC10	(4.68 to 15.10)	582885	365904	0.628
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	469696	1.252

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3291	102.1	TFT(Surr)
15.386	0.000	7290	100.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.022	0.000	5849	26.02	Benzene
9.879	0.000	5236	26.43	Toluene
12.769	0.000	4430	27.14	Ethylbenzene
12.930	0.000	9523	52.92	M/P-Xylene
13.877	0.000	3881	27.33	O-Xylene
4.556	0.000	2120	24.32	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a002.d

Date : 03-JUN-2013 11:14

Client ID: RT0603+BCAL

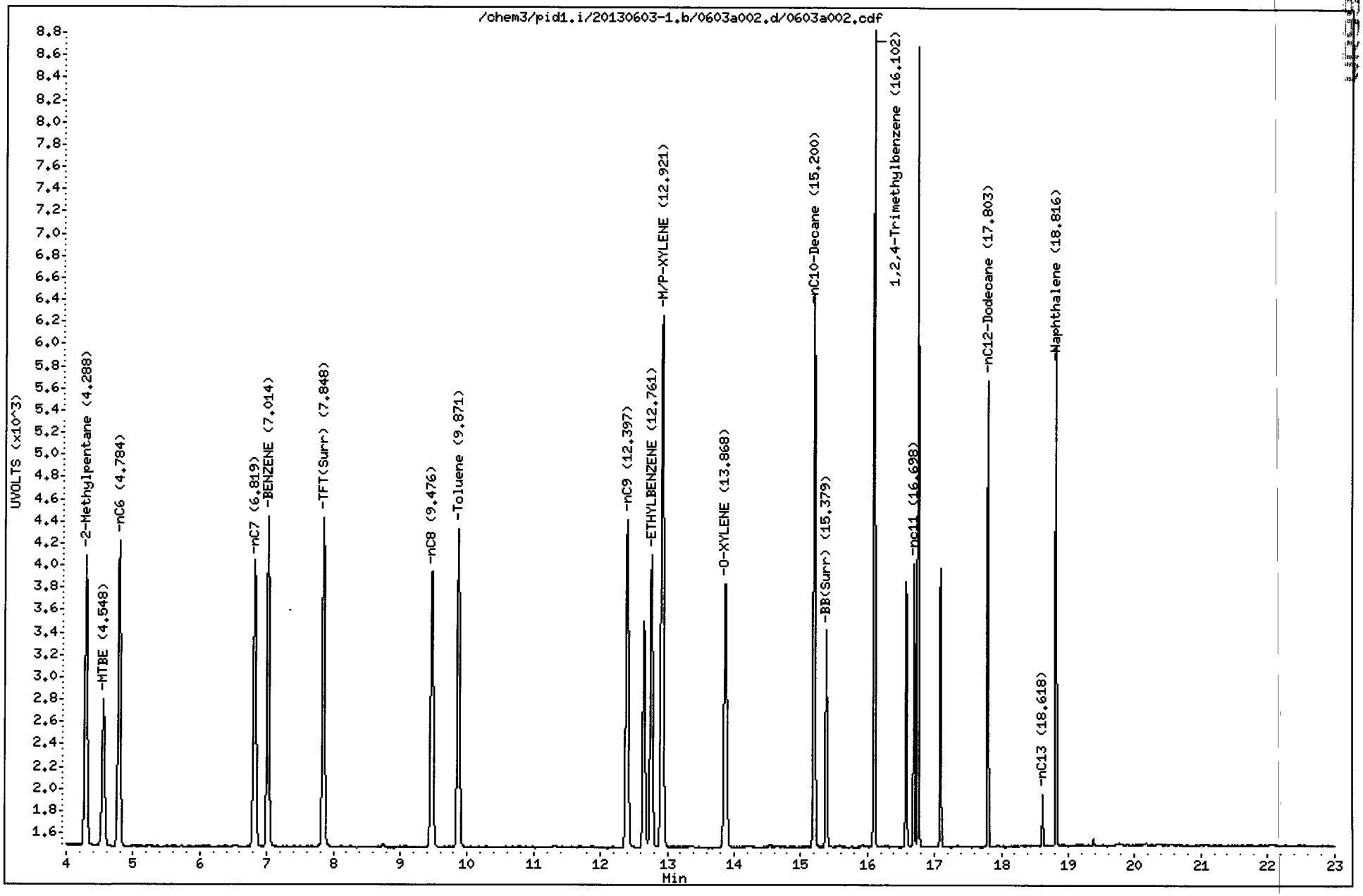
Sample Info: RT0603+BCAL

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a003.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a003.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 1
Client ID: GCAL 1
Injection Date: 03-JUN-2013 11:43
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	3234	47445	109.3	TFT(Surr)
15.380	0.001	2039	17983	102.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	865918	2.418 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	1715077	2.370 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	1385971	2.378 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	909697	2.425 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.001	3459	107.3	TFT(Surr)
15.387	0.001	7475	103.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.023	0.001	2085	9.27	Benzene
9.882	0.002	20242	102.16	Toluene
12.771	0.002	4968	30.43	Ethylbenzene
12.936	0.005	19542	108.61	M/P-Xylene
13.880	0.003	7096	49.97	O-Xylene
4.546	-0.009	320	3.67	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a003.d

Date : 03-JUN-2013 11:43

Client ID: GCAL 1

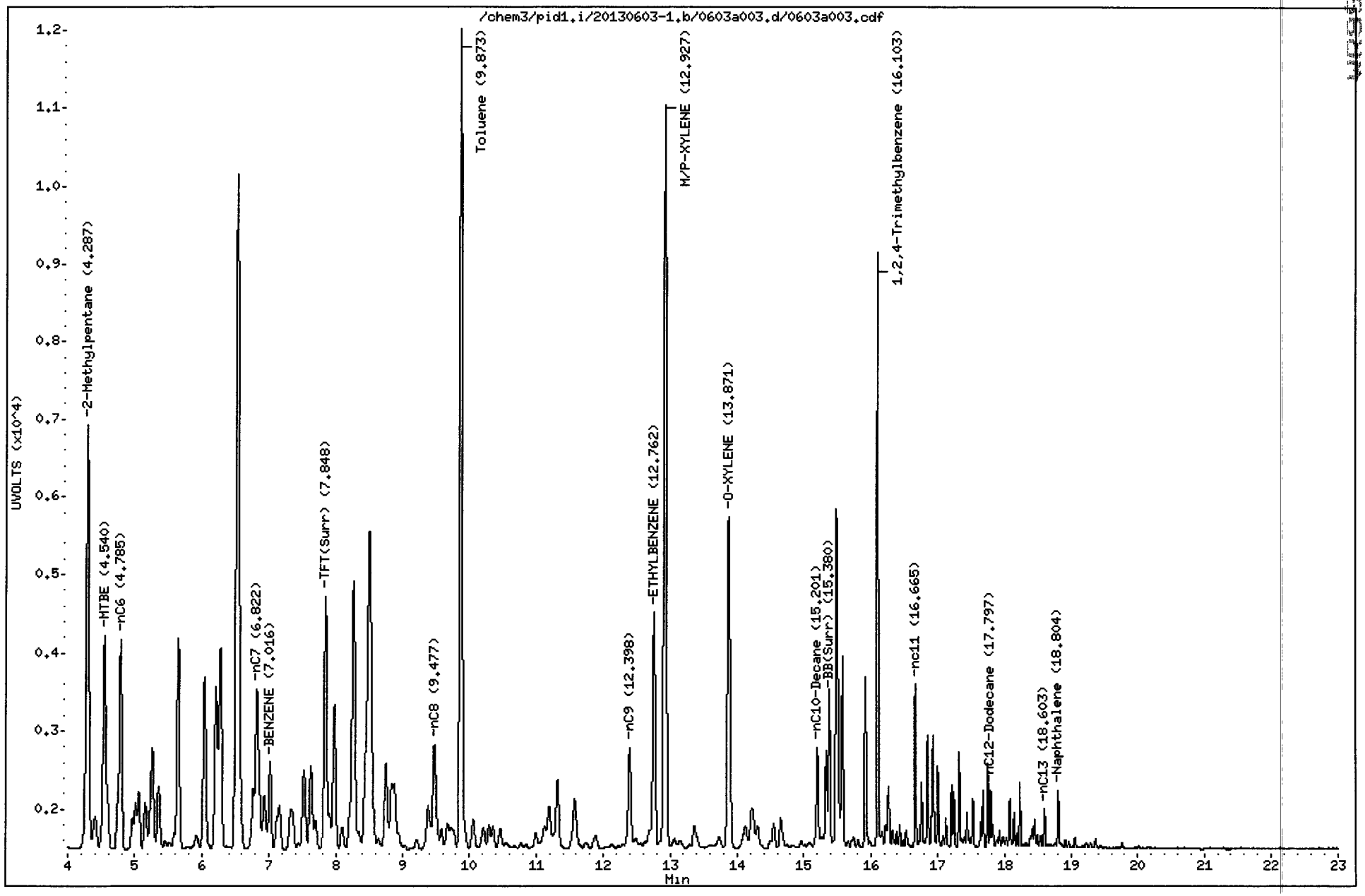
Sample Info: GCAL 1

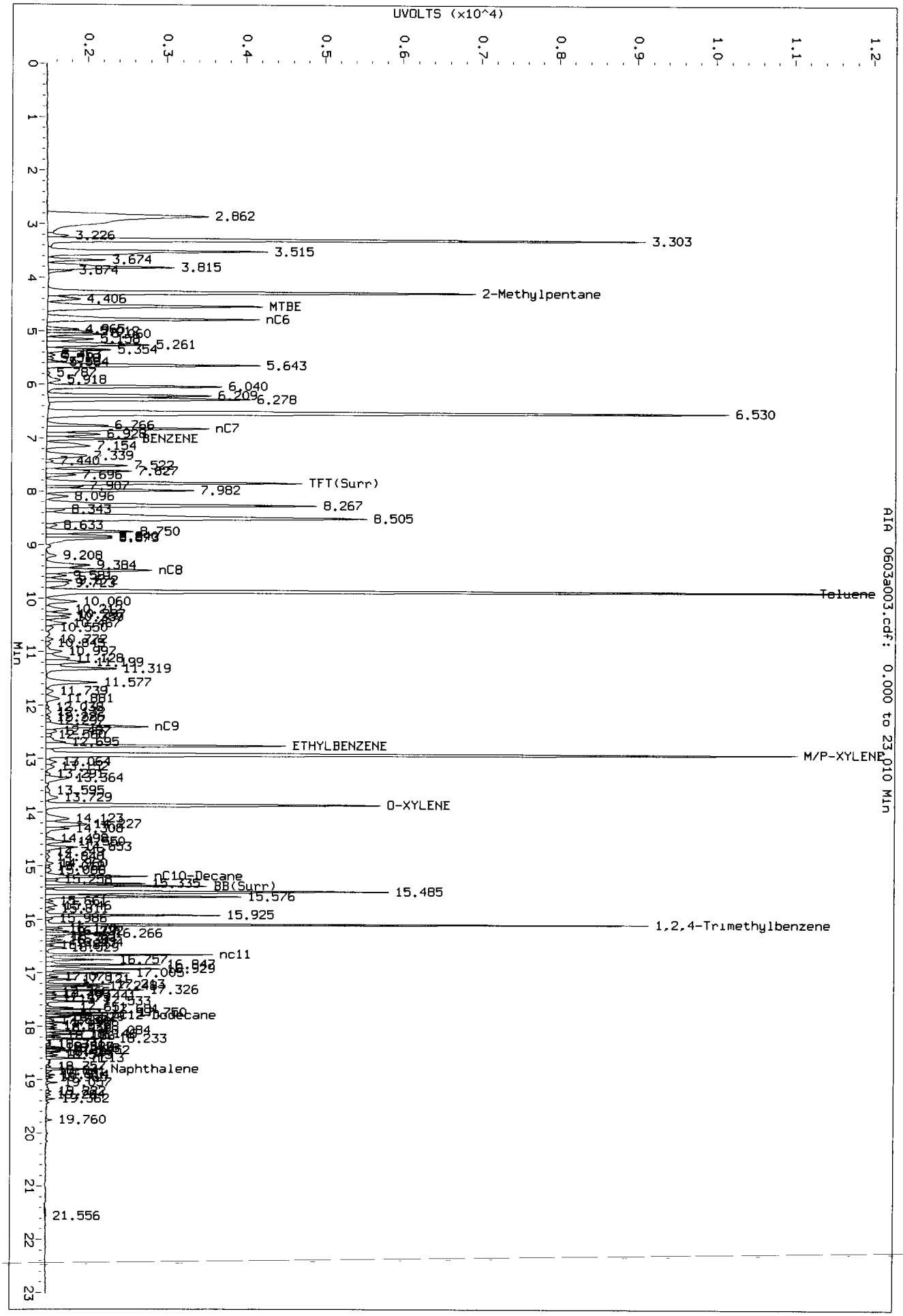
Column phase: RTX 502-2 FID

Instrument: pid1.i

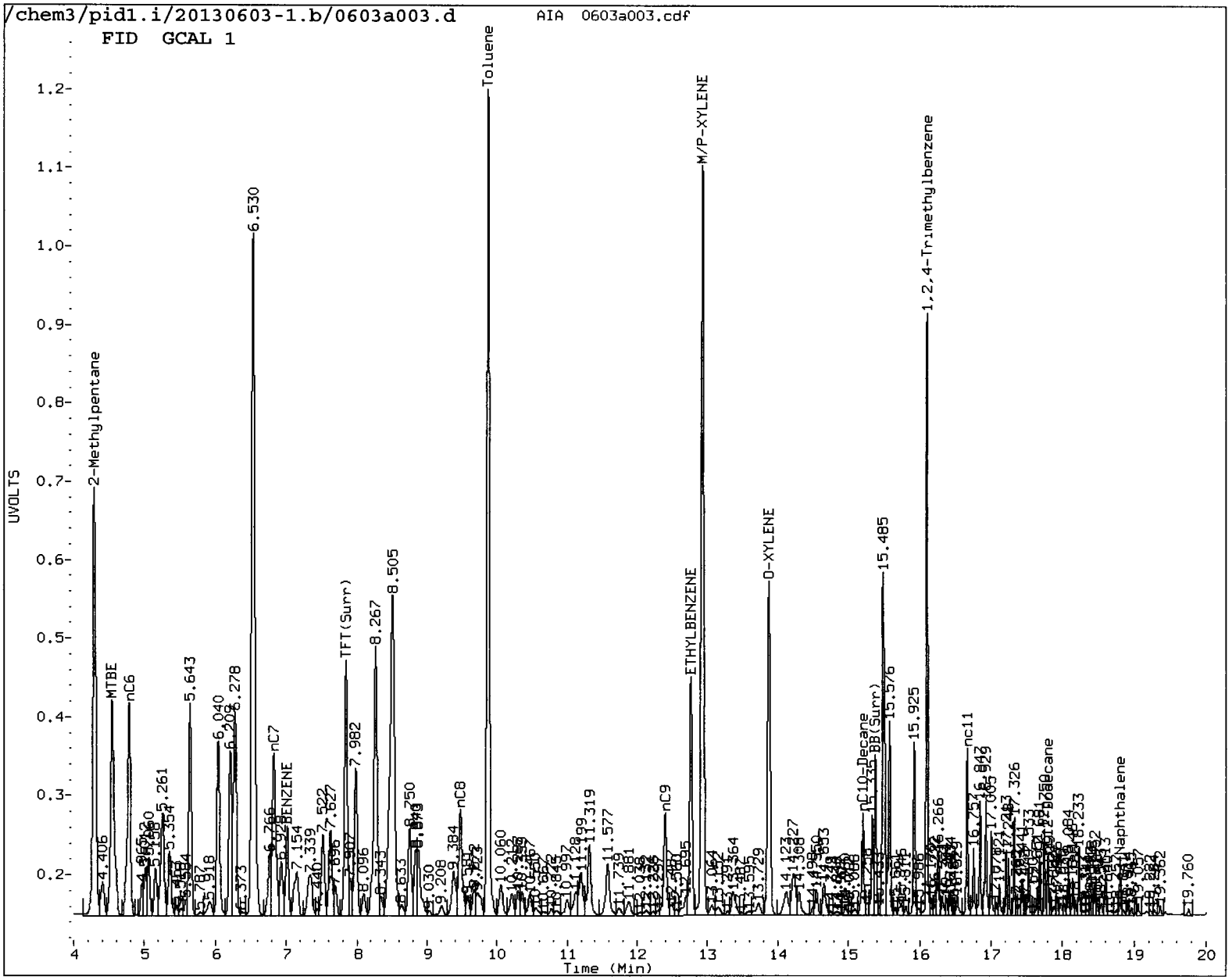
Operator: PC

Column diameter: 0.18




UVOLTS (x10^4)
Min
Data File: /chem3/pid1.i/20130603-1.b/0603a003.d/0603a003.cdf
Injection Date: 03-JUN-2013 11:43
Instrument: pid1.i
Client Sample ID: GCAL 1
AIA 0603a003.cdf: 0.000 to 23.010 Min
2.862
3.226
3.303
3.515
3.674
3.815
3.874
4.406
2-Methylpentane
MTBE
nC6
5.261
5.354
5.643
5.918
6.040
6.209
6.278
6.530
6.766
nC7
BENZENE
7.154
7.339
7.440
7.522
7.696
7.827
TFT(Surr)
7.907
7.982
8.096
8.267
8.343
8.505
8.633
8.750
9.208
9.384
nC8
Toluene
10.060
11.319
11.577
nC9
12.695
ETHYLBENZENE
M/P-XYLENE
13.364
13.595
13.729
O-XYLENE
nC10-Decane
15.335
BB(Surr)
15.485
15.576
15.925
1,2,4-Trimethylbenzene
16.266
nc11
16.757
16.847
17.326
Dodecane
18.233
Naphthalene
19.562
19.760
21.556

6/11/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: FC Date: 6/11/13

MG 6/4/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a004.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a004.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: LCS0603
Client ID:
Injection Date: 03-JUN-2013 12:28
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.853	0.005	2918	41311	98.6	TFT(Surr)
15.383	0.004	1868	16482	94.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	340142	0.950 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	690507	0.954 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	556018	0.954 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	357936	0.954 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.861	0.005	3184	98.8	TFT(Surr)
15.390	0.004	6879	95.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.027	0.005	793	3.53	Benzene
9.886	0.007	7587	38.29	Toluene
12.775	0.006	1849	11.33	Ethylbenzene
12.939	0.009	7331	40.74	M/P-Xylene
13.884	0.007	2655	18.70	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
M Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a004.d

Date : 03-JUN-2013 12:28

Client ID:

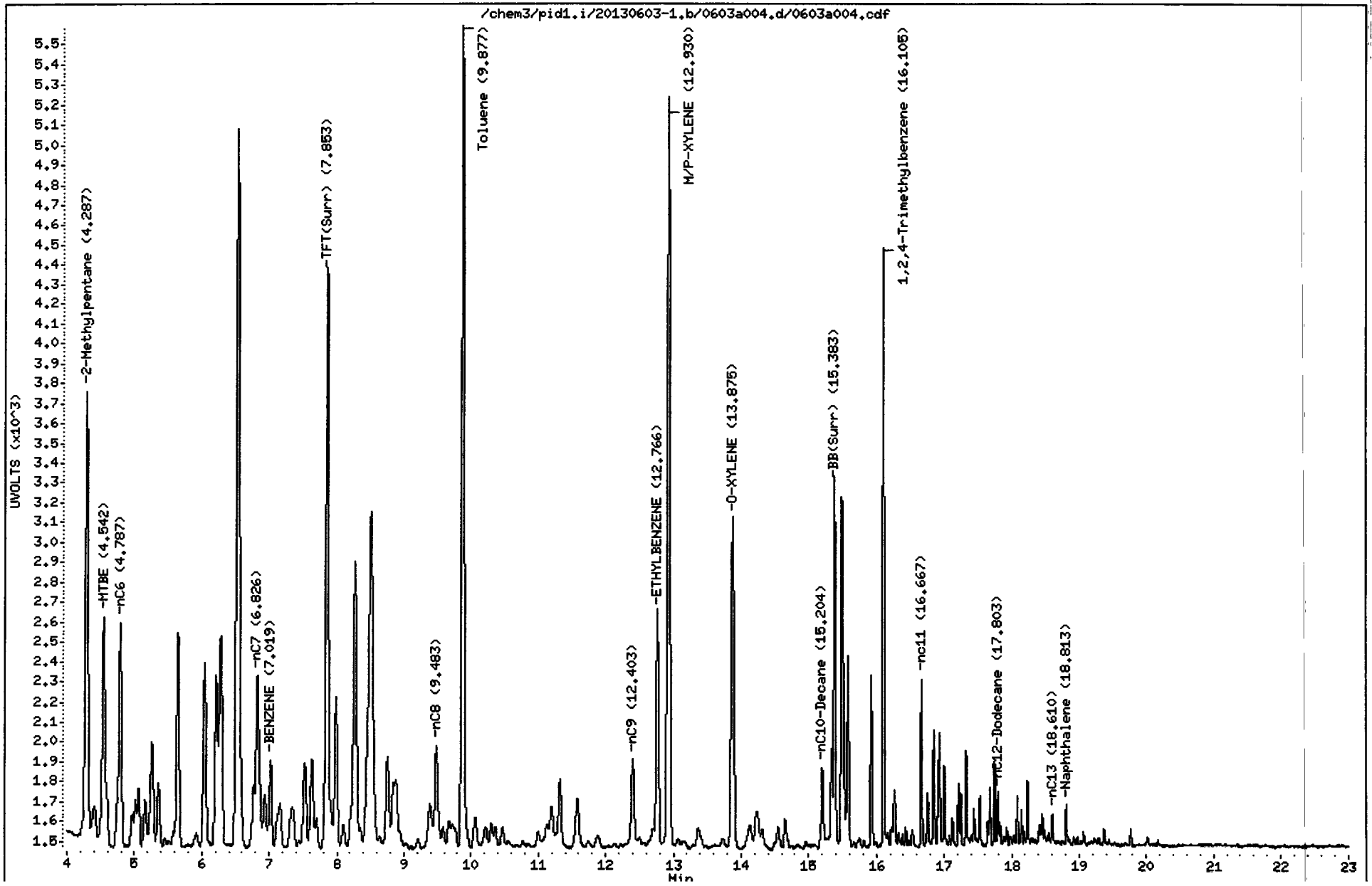
Sample Info: LCS0603

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



Data File: /chem3/pid1.i/20130603-2.b/0603a004.d

Date : 03-JUN-2013 12:28

Client ID:

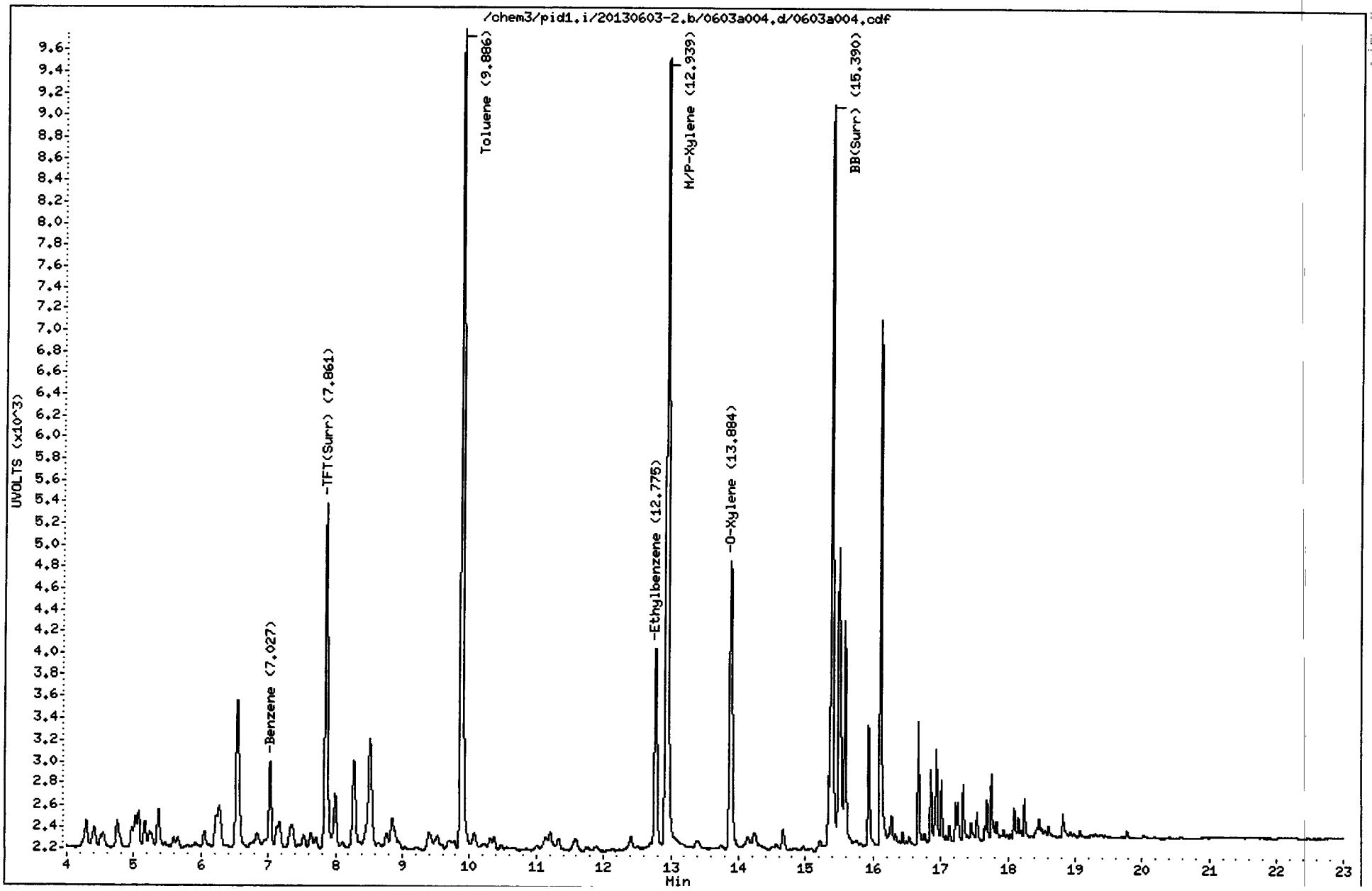
Sample Info: LCS0603

Column phase: RTX 502-2 PID

Instrument: pid1.i

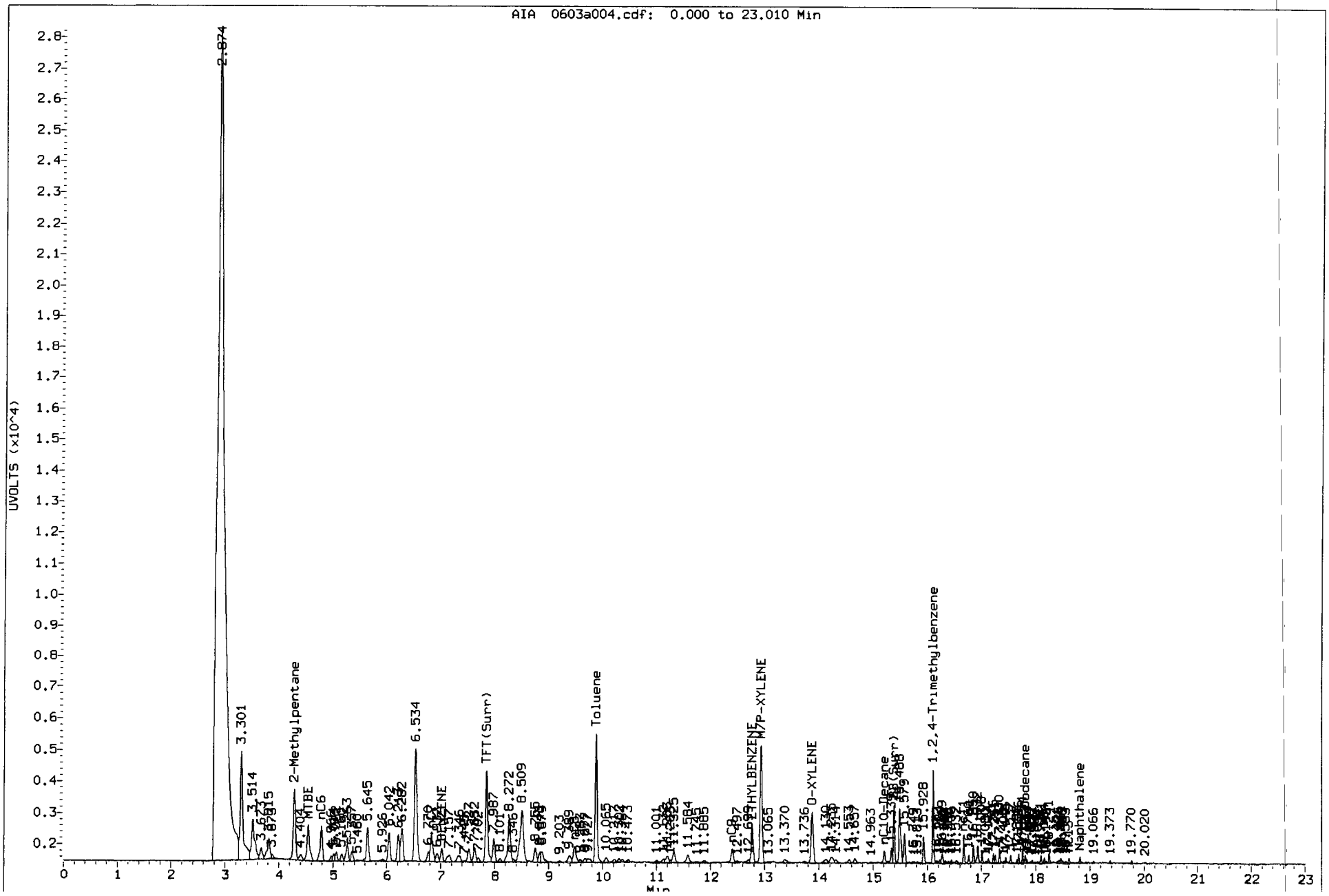
Operator: PC

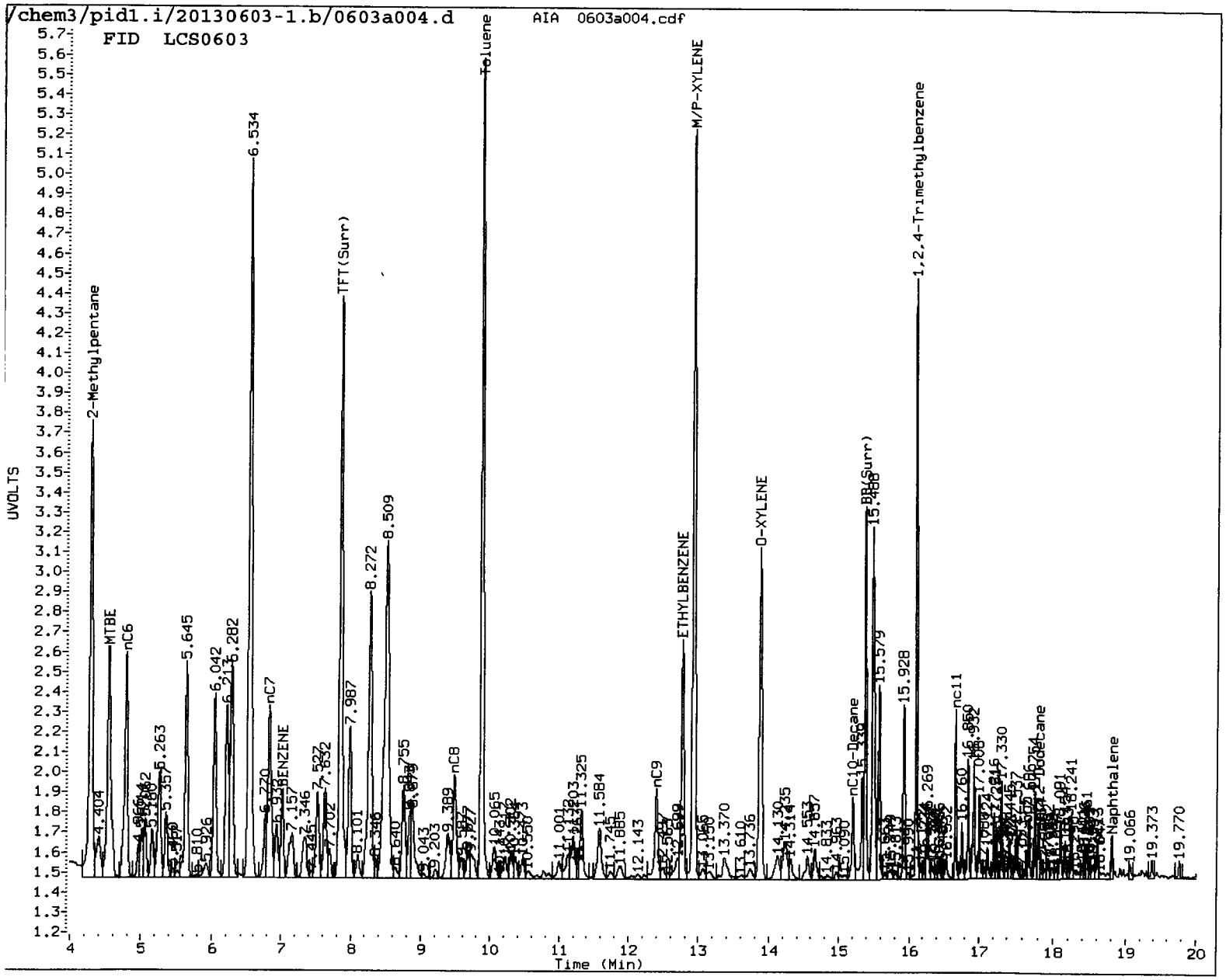
Column diameter: 0.18



MC 6/4/13

Data File: /chem3/pid1.i/20130603-1.b/0603a004.d/0603a004.cdf
Injection Date: 03-JUN-2013 12:28
Instrument: pid1.i
Client Sample ID:





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: MC Date: 6/4/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a005.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a005.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: LCSD0603
Client ID:
Injection Date: 03-JUN-2013 12:56
Matrix: WATER
Dilution Factor: 1.000

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	3039	42719	102.7	TFT(Surr)
15.379	0.001	1960	17127	98.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	333094	0.930 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	659829	0.912 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	527690	0.905 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	348882	0.930 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

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PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3323	103.1	TFT(Surr)
15.387	0.001	7222	99.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.023	0.001	841	3.74	Benzene
9.881	0.002	8097	40.87	Toluene
12.771	0.002	1926	11.80	Ethylbenzene
12.934	0.004	7646	42.49	M/P-Xylene
13.879	0.002	2791	19.65	O-Xylene
ND	---	---	---	MTBE

\ Indicates Peak Area was used for quantitation instead of Height
V Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a005.d

Date : 03-JUN-2013 12:56

Client ID:

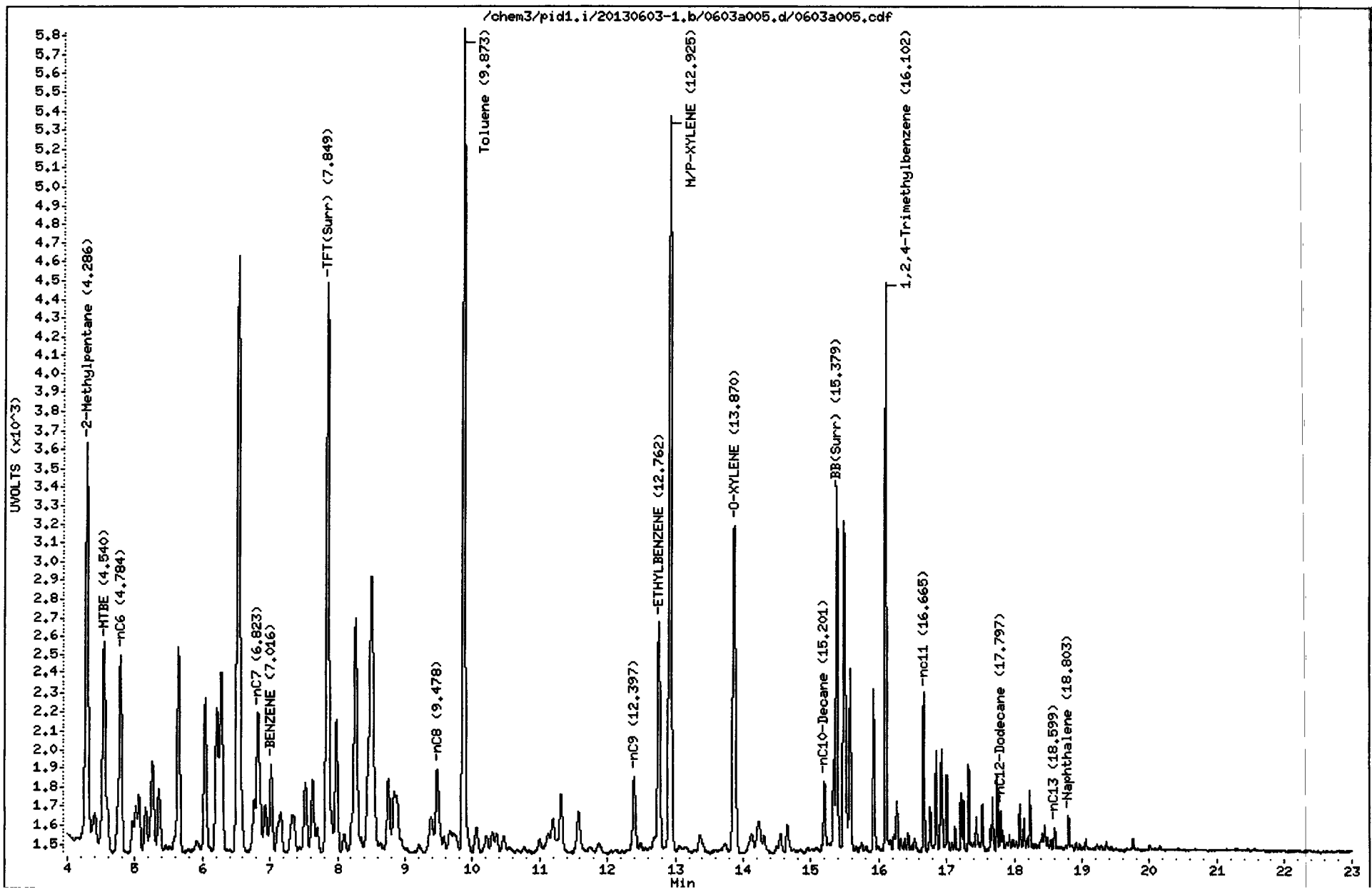
Sample Info: LCSD0603

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



Data File: /chem3/pid1.i/20130603-2.b/0603a005.d

Date : 03-JUN-2013 12:56

Client ID:

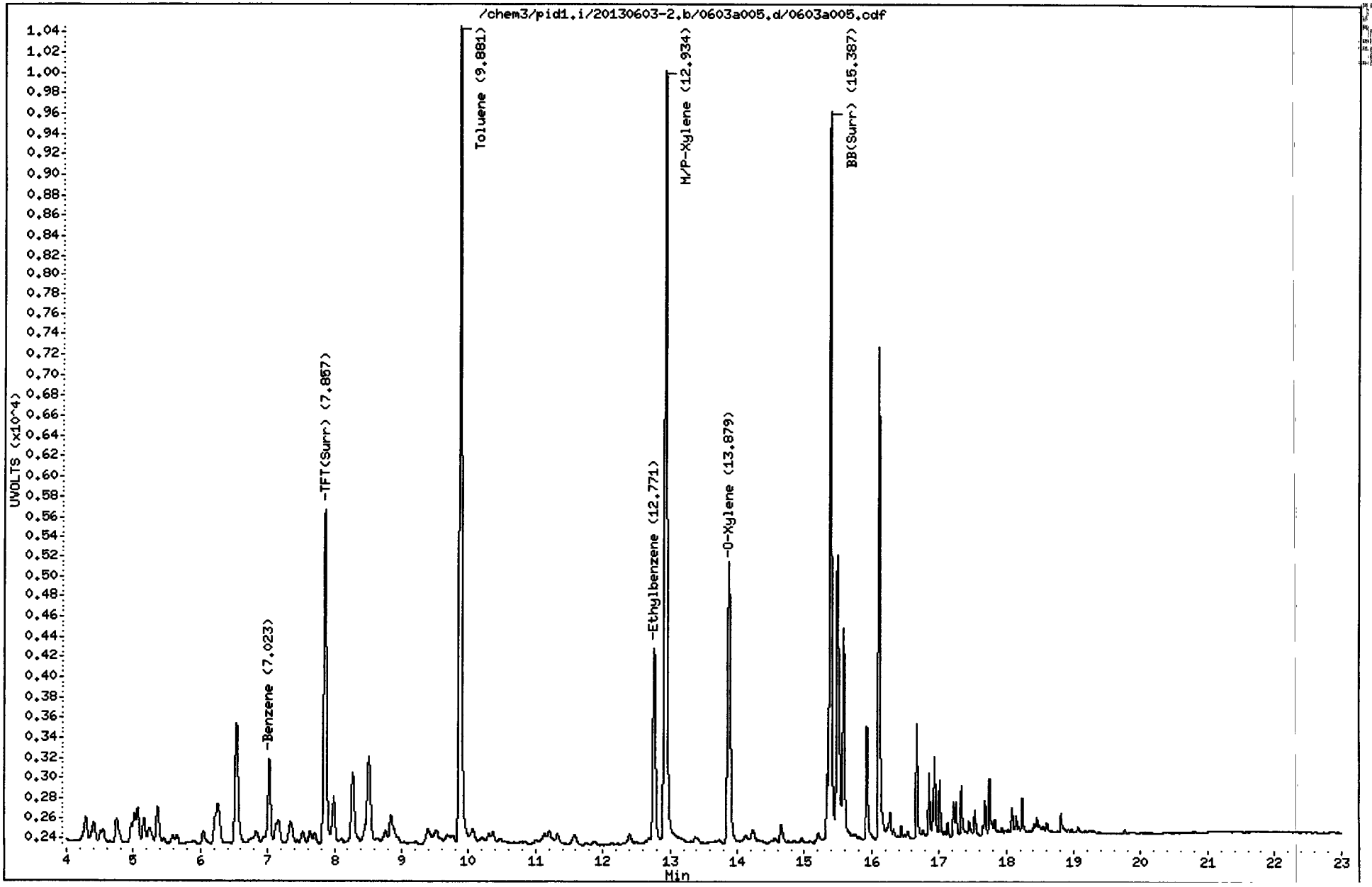
Sample Info: LCSD0603

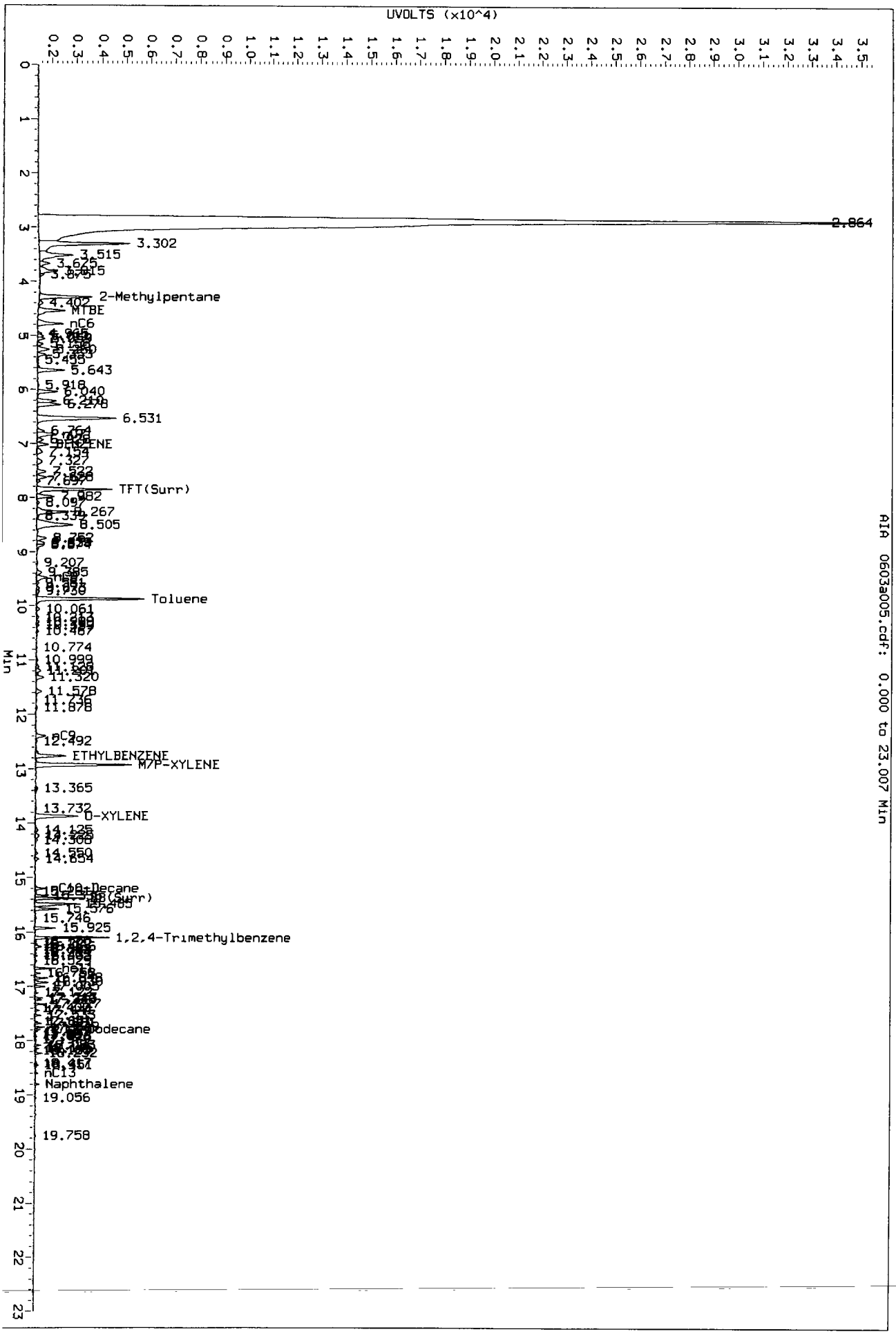
Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 PID

Column diameter: 0.18

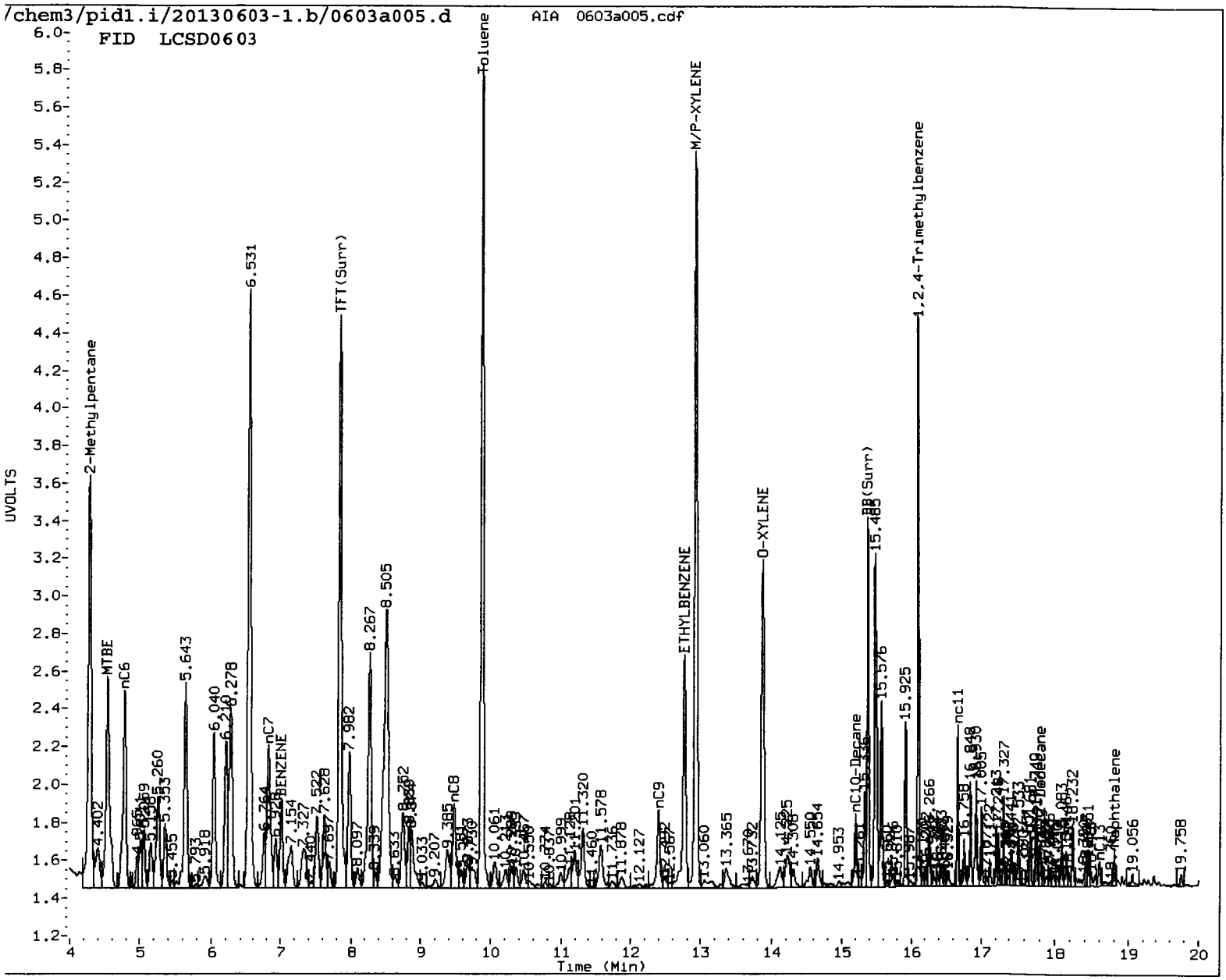




Data File: /chem3/pid1.i/20130603-1.b/0603a005.d/0603a005.cdf
Injection Date: 03-JUN-2013 12:56
Instrument: pid1.i
Client Sample ID:

AIA 0603a005.cdf: 0.000 to 23.007 Min

PC 6/4/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 6/4/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

RC 6/4/13

Data file 1: /chem3/pid1.i/20130603-1.b/0603a006.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a006.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: MB0603
Client ID:
Injection Date: 03-JUN-2013 13:25
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.002	2904	36815	98.1	TFT(Surr)
15.381	0.002	1932	16106	97.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	1763	0.005
8015C 2MP-TMB	(4.19 to 16.20)	723723	3325	0.005
AK101 nC6-nC10	(4.68 to 15.10)	582885	2641	0.005
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	1763	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3198	99.2	TFT(Surr)
15.389	0.002	7042	97.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

\ Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a006.d

Date : 03-JUN-2013 13:25

Client ID:

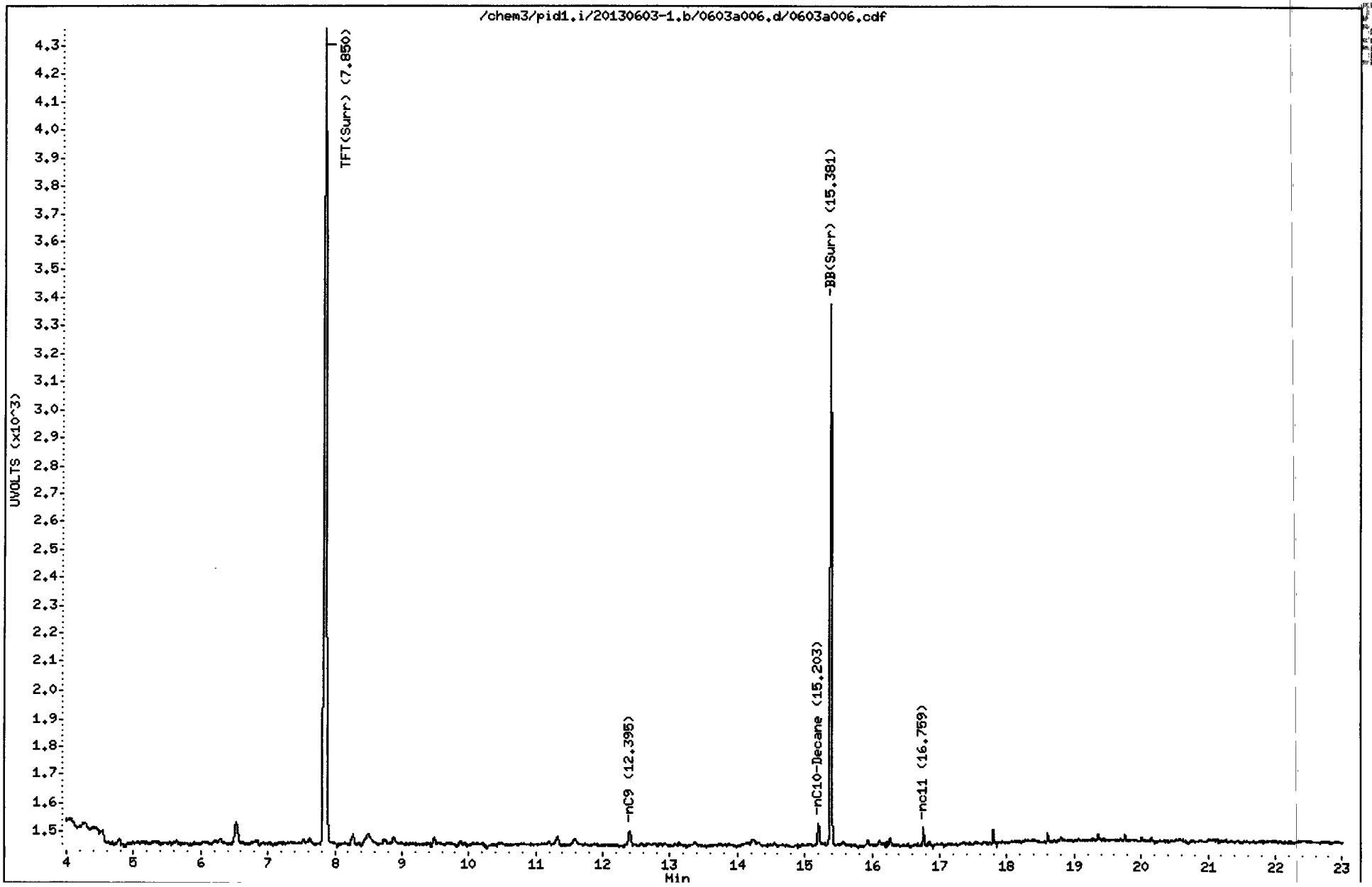
Sample Info: MB0603

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



Data File: /chem3/pid1.i/20130603-2.b/0603a006.d

Date : 03-JUN-2013 13:25

Client ID:

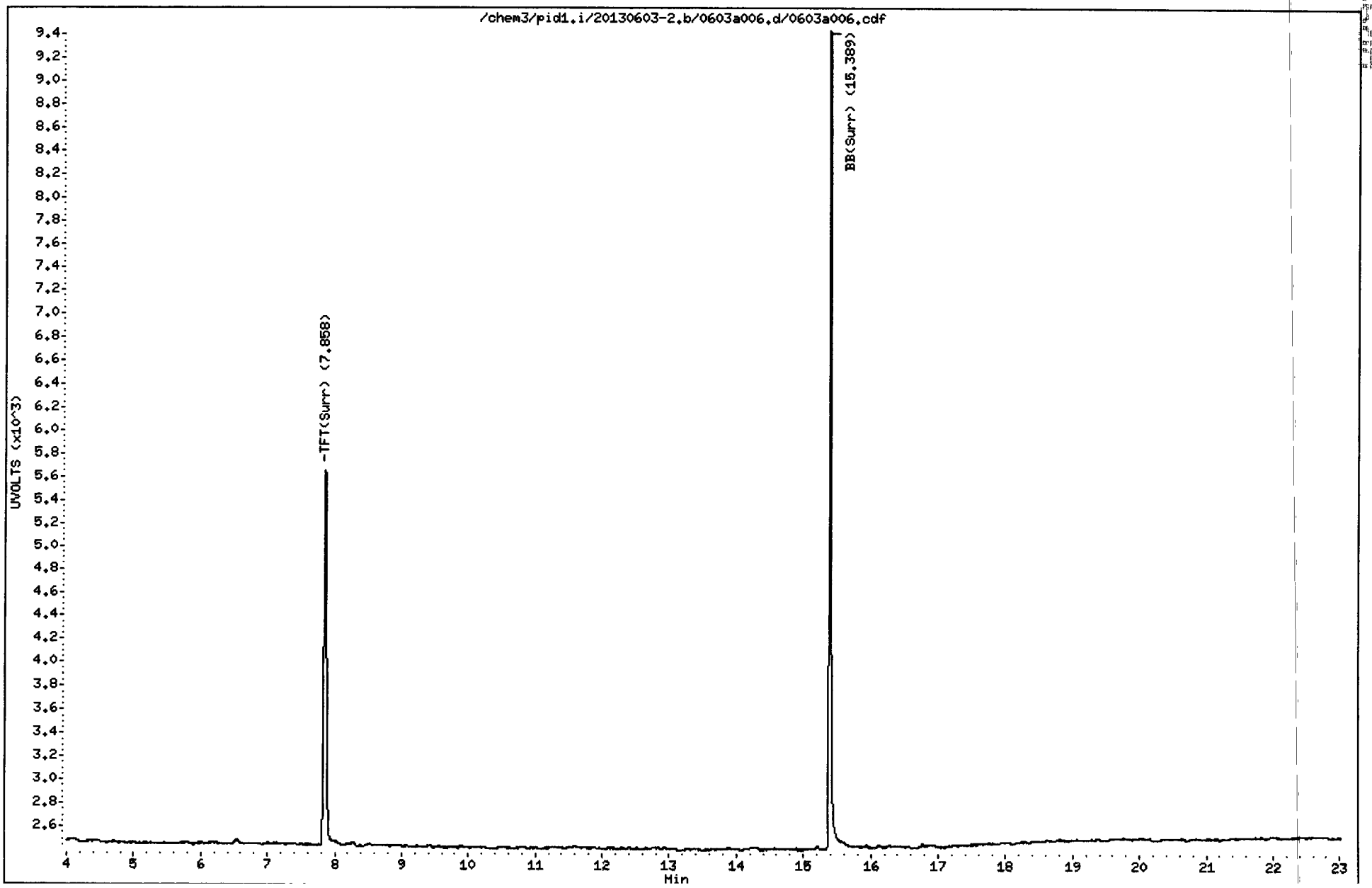
Sample Info: MB0603

Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 PID

Column diameter: 0.18



RC
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a014.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a014.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 2
Client ID:
Injection Date: 03-JUN-2013 17:21
Matrix: WATER
Dilution Factor: 1.000

==========

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.001	3198	46628	108.1	TFT(Surr)
15.380	0.002	1993	18317	100.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	820784	2.292 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	1656460	2.289 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	1340748	2.300 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	857708	2.287 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

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PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3423	106.2	TFT(Surr)
15.389	0.003	7319	101.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.024	0.002	2080	9.25	Benzene
9.883	0.004	19871	100.29	Toluene
12.773	0.004	4869	29.82	Ethylbenzene
12.937	0.007	19335	107.45	M/P-Xylene
13.882	0.005	6959	49.01	O-Xylene
4.545	-0.010	325	3.73	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a014.d

Date : 03-JUN-2013 17:21

Client ID:

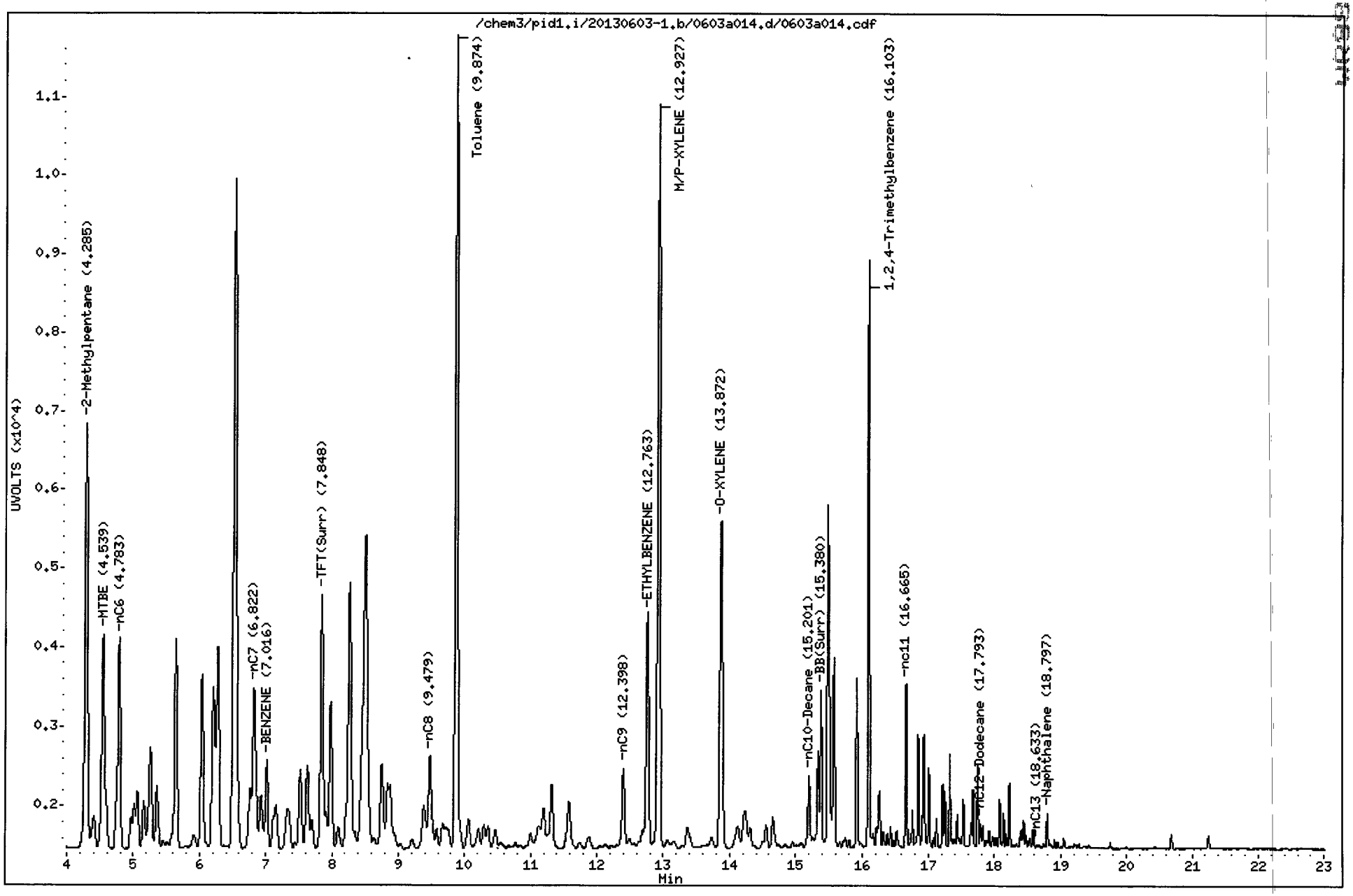
Sample Info: GCAL 2

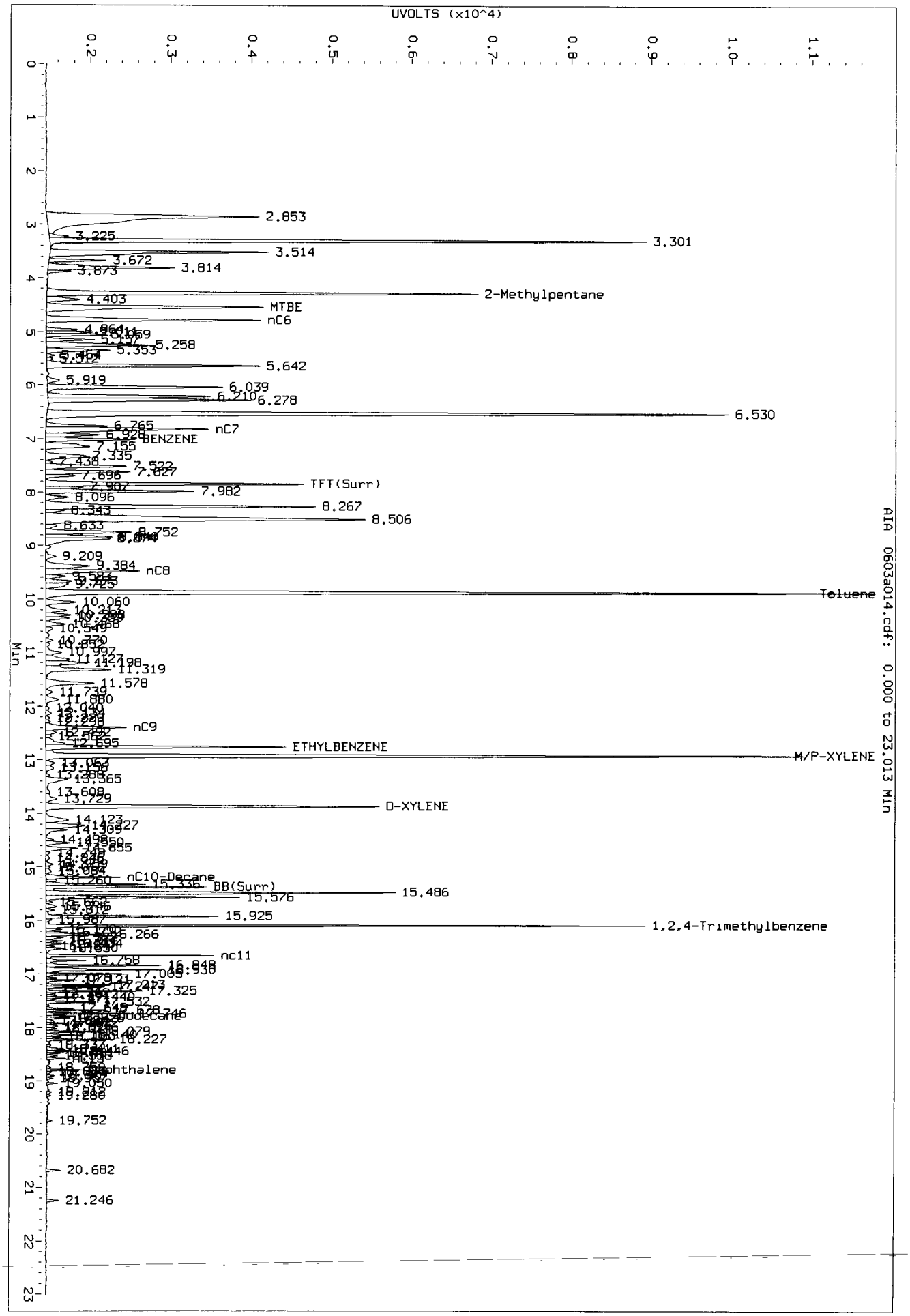
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18





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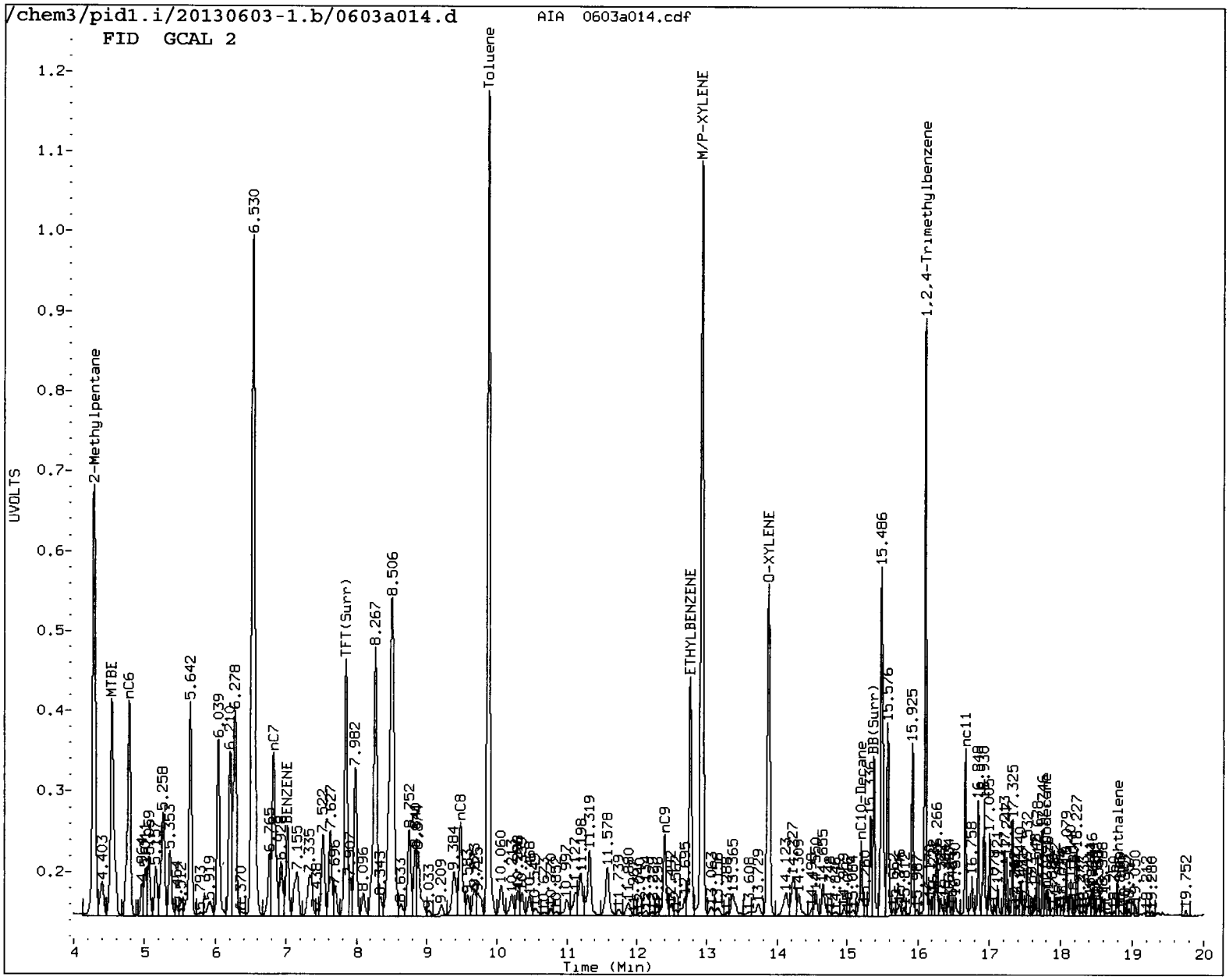
Injection Date: 03-JUN-2013 17:21
Instrument: pid1.i
Client Sample ID:

6/11/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 6/11/13

MC
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a022.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a022.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: WR99C
Client ID: KC-TB-01-20130530-W
Injection Date: 03-JUN-2013 21:07
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.003	2822	36238	95.4	TFT(Surr)
15.380	0.002	1921	16176	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	3146	0.009
8015C 2MP-TMB	(4.19 to 16.20)	723723	0	0.000
AK101 nC6-nC10	(4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	5556	0.015

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.003	3106	96.4	TFT(Surr)
15.388	0.002	7073	97.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a022.d

Date : 03-JUN-2013 21:07

Client ID: KC-TB-01-20130530-W

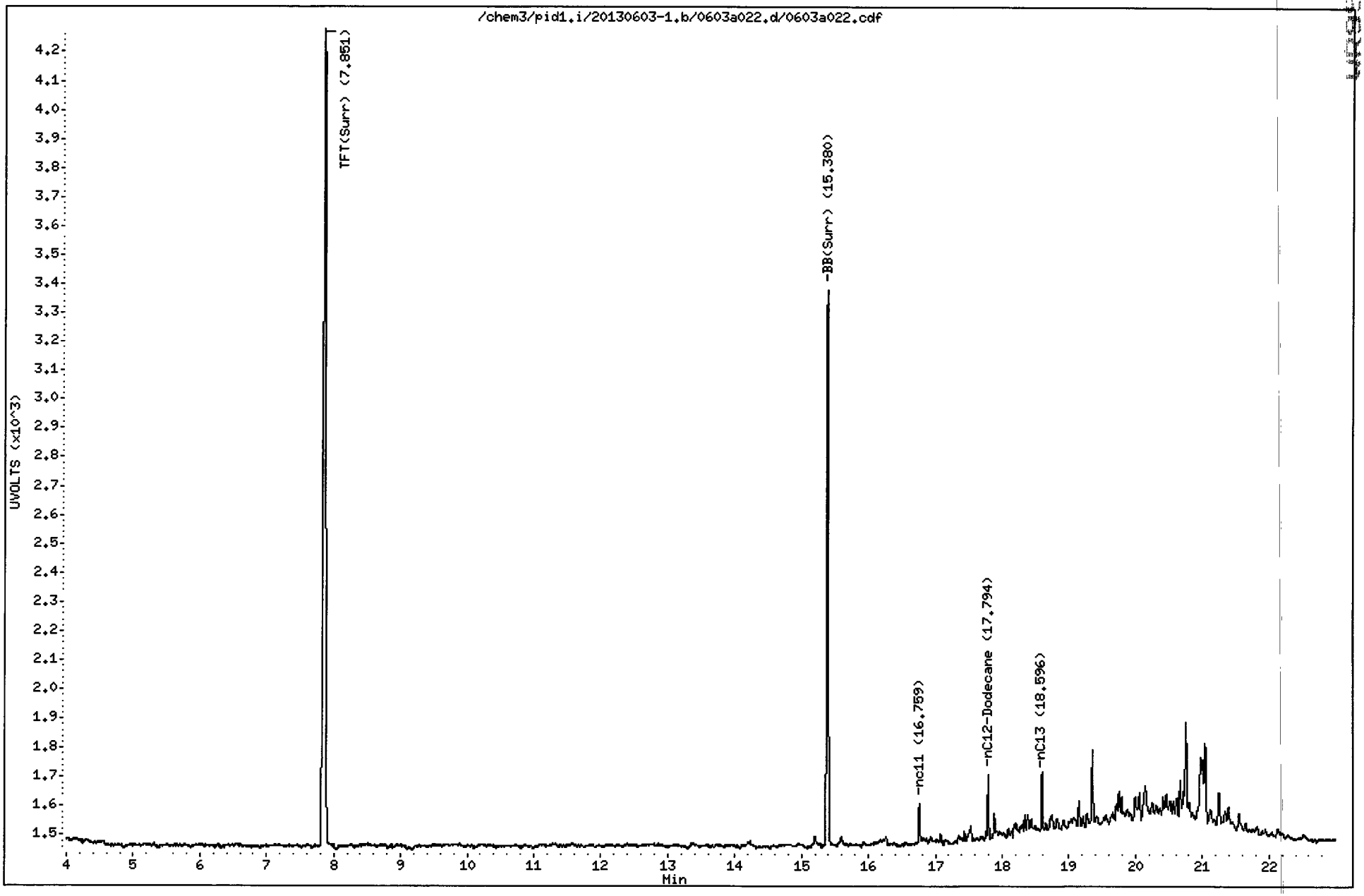
Sample Info: WR99C

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



RC 6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a023.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a023.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: WR99D
Client ID: KC-VT-1593-20130530
Injection Date: 03-JUN-2013 21:36
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.004	2778	35474	93.9	TFT(Surr)
15.381	0.003	1922	16093	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	2636	0.007
8015C 2MP-TMB	(4.19 to 16.20)	723723	1	0.000
AK101 nC6-nC10	(4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	3967	0.011

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.860	0.004	3062	95.0	TFT(Surr)
15.389	0.003	7078	97.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a023.d

Date : 03-JUN-2013 21:36

Client ID: KC-VT-1593-20130530

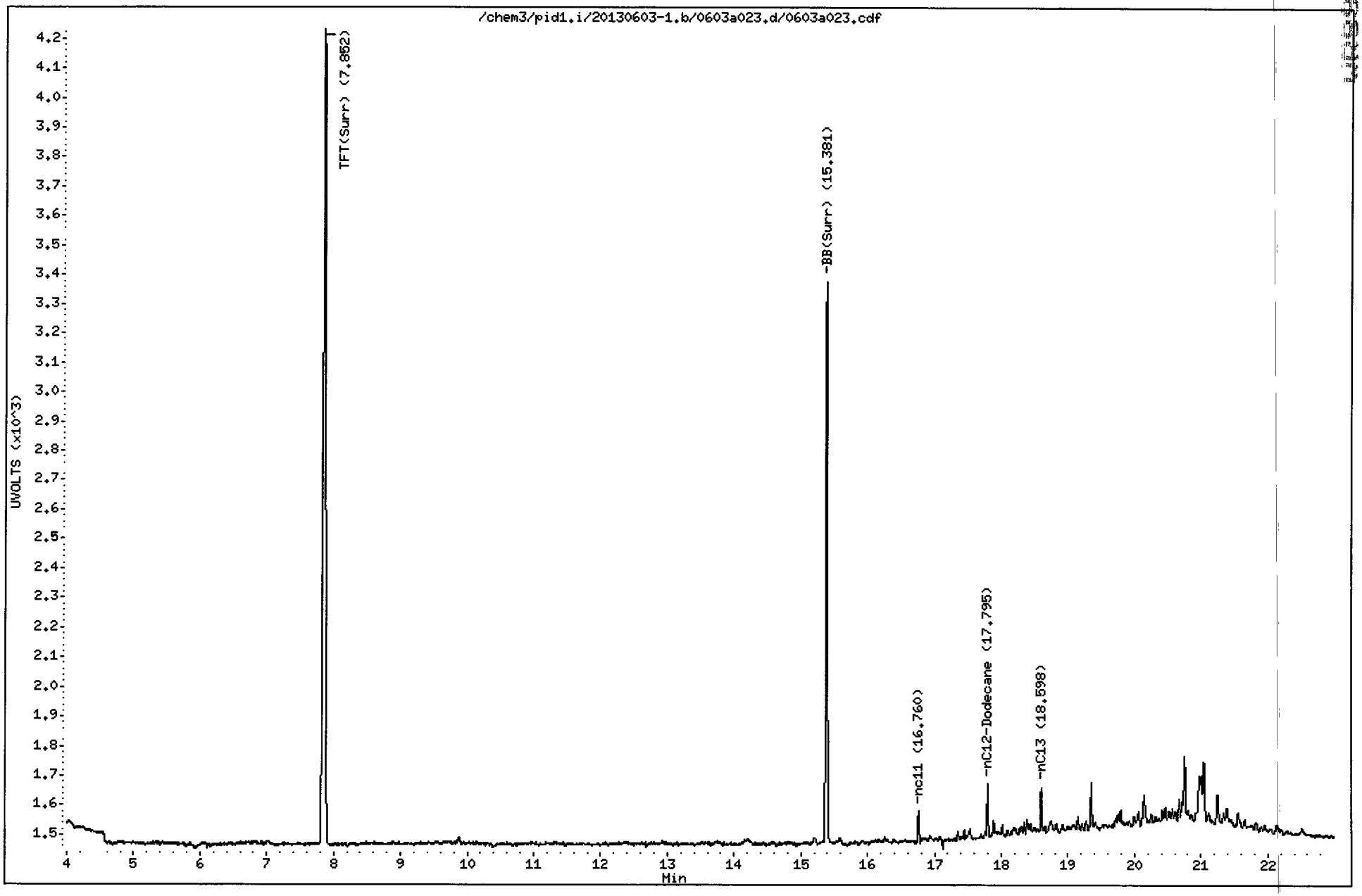
Sample Info: WR99D

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



RC
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a024.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a024.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 3
Client ID:
Injection Date: 03-JUN-2013 22:04
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	3026	44117	102.3	TFT(Surr)
15.380	0.002	1899	16977	95.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	826590	2.308 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	1620600	2.239 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	1306794	2.242 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	867230	2.312 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.003	3161	98.1	TFT(Surr)
15.388	0.002	6989	96.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.025	0.003	2096	9.32	Benzene
9.884	0.004	20274	102.33	Toluene
12.772	0.003	4905	30.04	Ethylbenzene
12.937	0.007	19352	107.55	M/P-Xylene
13.882	0.004	7026	49.48	O-Xylene
4.547	-0.008	309	3.54	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a024.d

Date : 03-JUN-2013 22:04

Client ID:

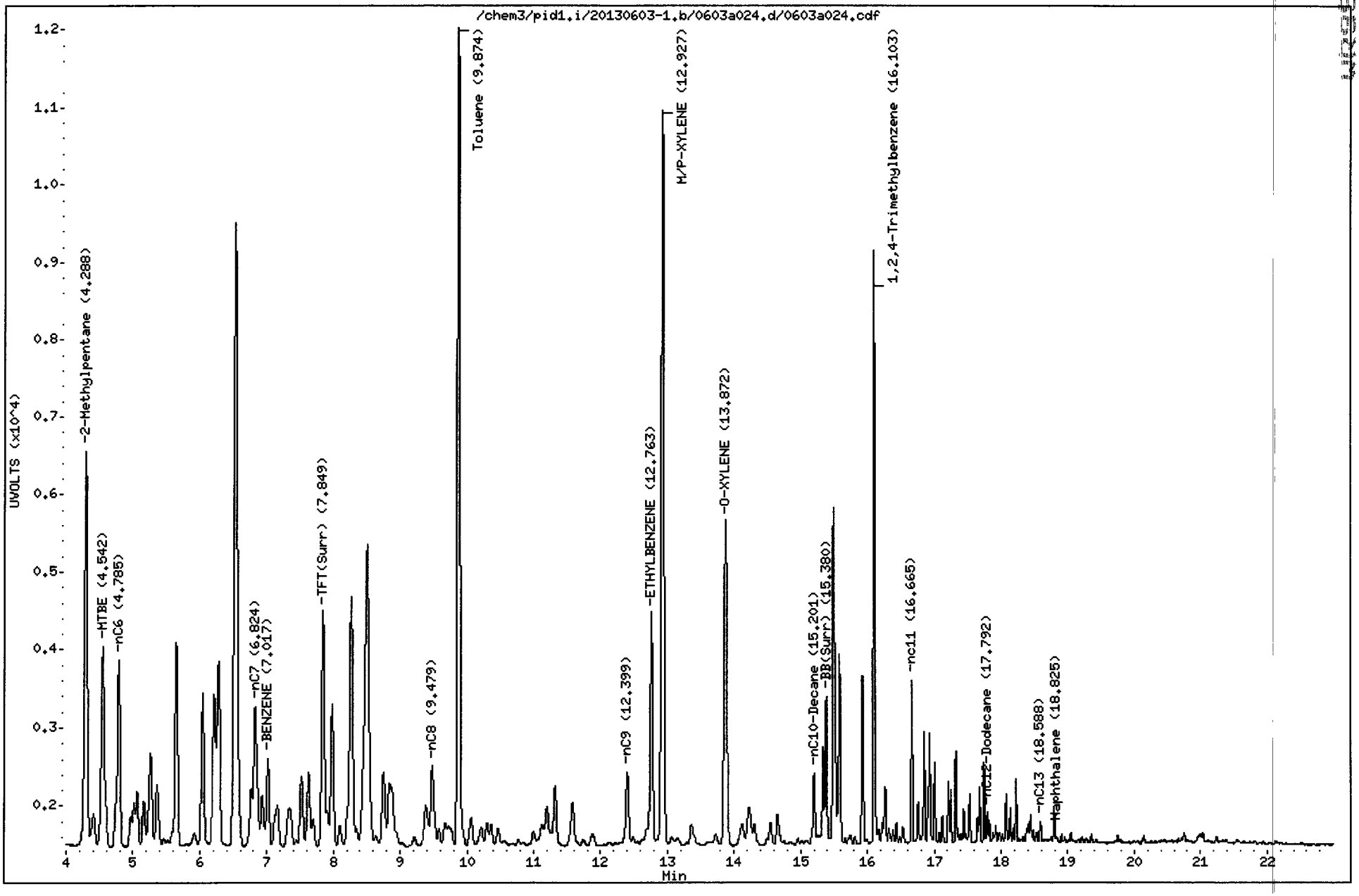
Sample Info: GCAL 3

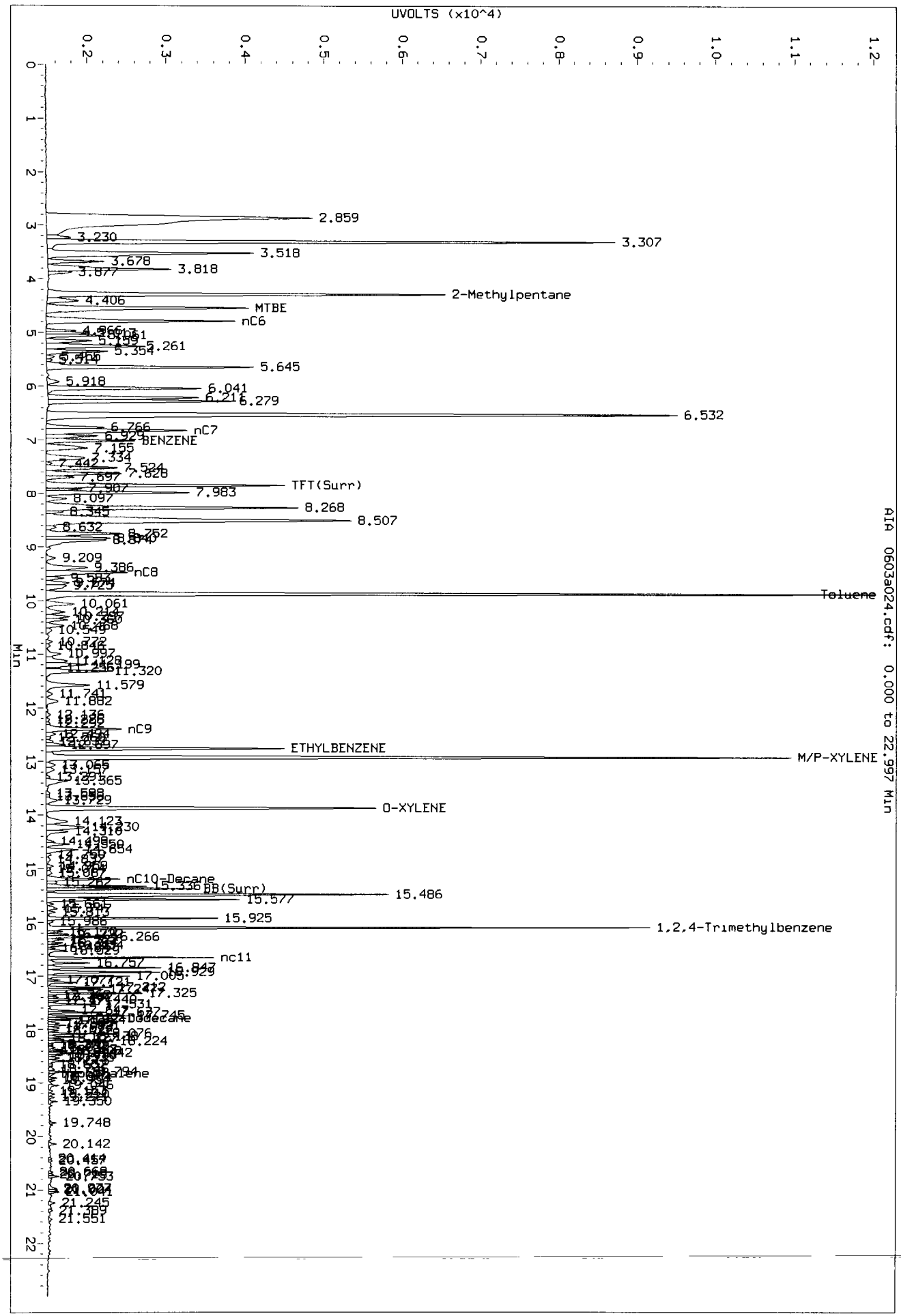
Column phase: RTX 502-2 FID

Instrument: pid1.i

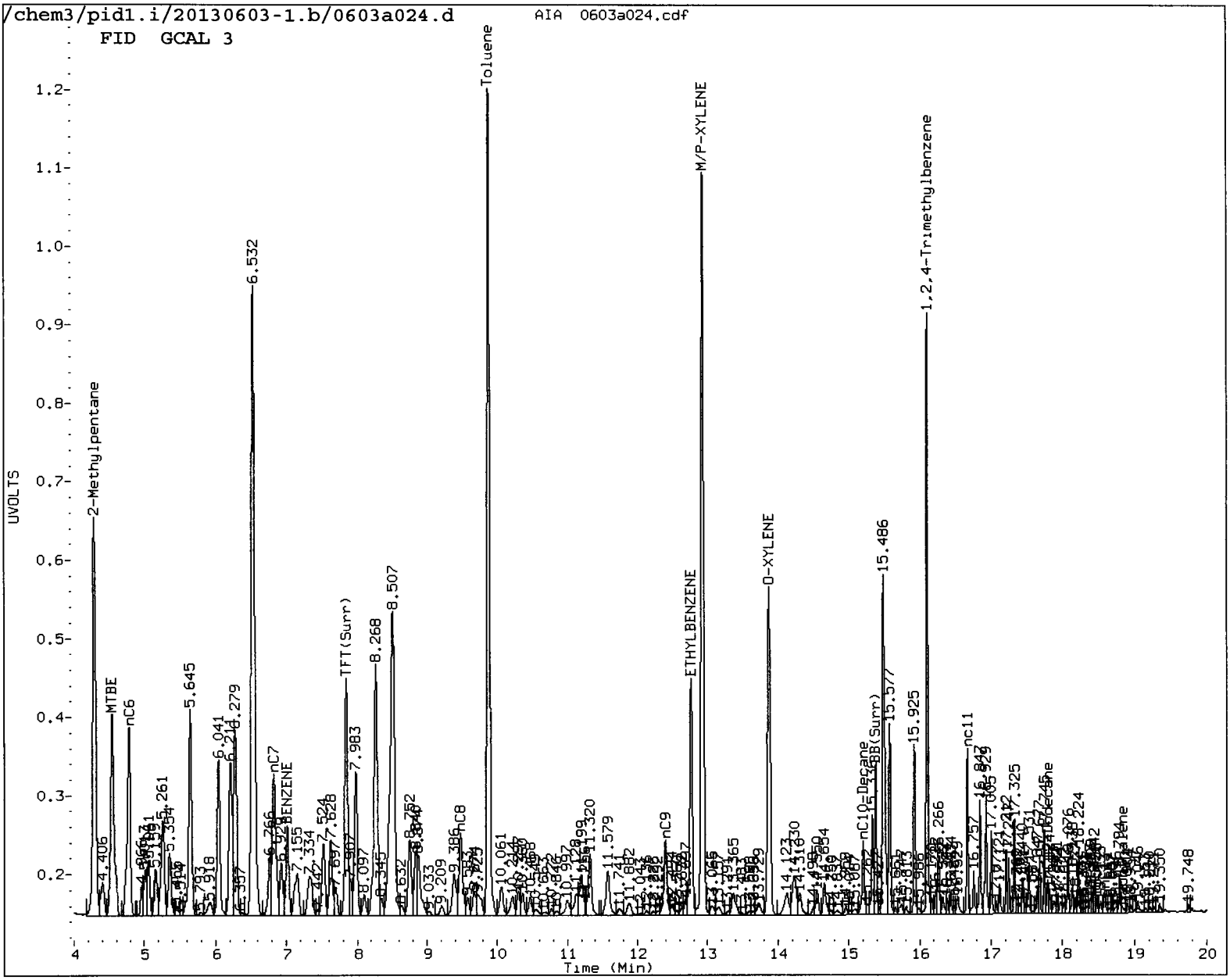
Operator: PC

Column diameter: 0.18




UVOLTS (x10^4)
Min
2.859
3.230
3.307
3.518
3.678
3.818
2-Methylpentane
4.406
MTBE
nC6
5.261
5.354
5.645
5.918
6.041
6.279
6.532
6.766
nC7
BENZENE
7.983
TFT(Surr)
8.268
8.507
nC8
Toluene
11.320
11.579
nC9
ETHYLBENZENE
M/P-XYLENE
O-XYLENE
nC10-Decane
15.336
BB(Surr)
15.486
15.577
15.925
1,2,4-Trimethylbenzene
nc11
16.847
17.325
19.748
20.142
21.245
21.551
Data File: /chem3/pid1.i/20130603-1.b/0603a024.d/0603a024.cdf
Injection Date: 03-JUN-2013 22:04
Instrument: pid1.i
Client Sample ID:
AIA 0603a024.cdf: 0.000 to 22.997 Min

6/11/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 6/11/13

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WR99, WS01

Analytical Resources,Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 6-04-13

Final Volume 25

Final Volume (Hg):

Sample ID WR099 PBSPK, MB1SPK, BSPK, MB2SPK

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	REN	REN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	BS10	BS11	
	0.05	0.05	
Ag	25 ✓		
Al			500
As	25 ✓		
Ba	25		
Be	25 ✓		
Ca			500
Cd	25 ✓		
Co	25		
Cr	25 ✓		
Cu	25 ✓		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25 ✓		
Pb	25 ✓		
Sb		25 ✓	
Se	80 ✓		
Tl	25 ✓		
U	25		
V	25		
Zn	80 ✓		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg		CVA	1.0		
Hg MBSPK		CVA	1.0		
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: CDM Date: 6-04-13 Time: 0715 0735 PM 6-4-13

Matrix: Water Block ID: #2 Block Temp: 91°C Thermometer: MP58

ARI Sample ID	Btl #	pH<2	Prep Code: REN Initial ~~Wt (g)~~ Vol (mL)	Prep Code: REN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
WS22 A	4	✓	50.0	25.0			
" AOLP	4	✓					
" AOPK	4	✓					
" B	4	✓					
" C	4	✓					
" D	4	✓					
" E	4	✓					
" MB	—	✓					
" MBSPK	—	✓					
WS18 A	L	✓					
" B	L	✓					
" MB	—	✓					
" MBSPK	—	✓					
WR09 A	5	✓					
" AOLP	5	✓					
" AOPK	5	✓					
" MB1	—	✓					
" MB1SPK	—	✓					
" B	1	—					
" BOLP	1	—					
" BOPK	1	—					
" MB2	—	—					- Filtered in Lab
" MB2SPK	—	—	50.0	25.0			
				6-4-13 CDM			

Chemical/Reagent ID: HNO_3: MP2495 MP2452 H_2O_2: JB1135 Tube LOT # MMDILKKO

WR09 : 02305

Analytical Resources,Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: LB

Date: 6-06-13

Final Volume 50.0

Final Volume (Hg): 50.0

Sample ID WR999 DSPK, MBSPK
WS21 ASPK, MBSPK

		Prepcode:	SWC		
		Spike Solution:	ICP Routine	ICP No GFA	GFA
		Standard No.:	B507		
		Vol Added (mL):	1.0		
STOCK CONCENTRATION	Ag		50		2.0
	Al		200	200	
	As		200		10
	Ba		200	200	
	Be		50 ↓	50	
	Ca		1000	1000	
	Cd		50		2.0
	Co		50	50	
	Cr		50	50	
	Cu		50 ↓	50	
	Fe		200	200	
	K		1000	1000	
	Mg		1000	1000	
	Mn		50	50	
	Na		1000	1000	
	Ni		50	50	
	Pb		200		10
	Se		200		10
	Sr		50	50	
	Tl		200		10
	V		50	50	
	Zn		50 ↓	50	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	B510	B511	
	1.0	1.0	CB 6/6/13
Ag	25 ↓		
Al			500
As	25 ↓		
Ba	25		
Be	25		
Ca			500
Cd	25 ↓		
Co	25		
Cr	25 ↓		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25 ↓		
Pb	25 ↓		
Sb		25 ↓	
Se	80 ↓		
Tl	25 ↓		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SWM	CVA	1.0	0.05	300743
Hg MBSPK	↓	CVA	1.0	0.10	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm
Analyst: CB
Bath Temp: 95°C
Start Time: 0930
Matrix: Soil
Date: 6-06-13
End Time: 1005

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WS22 A	1	~	0.231	50.c	6/11	Y	
" Adup	1	~	0.229		1		
" Aspk	1	~	0.232		1		
" REF1		~	0.204		1		
" mB1	~	~	~		1		
" mB1spk	~	~	~		1		
WS21 A	7	~	0.280		6/14		
" Adup	7	~	0.275		1		
" Aspk	7	~	0.275		1		
" mB1	~	~	~		1		
" mB1spk	~	~	~		1		
WR99 D	7	-	0.235		6/14		
" Ddup	7	-	0.235		1		
" Dspk	7	-	0.232		1		
" E	2	-	0.205		1		
" F	2	-	0.236		1		
" mB3	~	~	~		1	Y	
" mB3spk	~	~	~	50c	1	Y	
			CB 6-06-13				

Chemical/Reagent ID:

HNO_3: I8169 H_2SO_4: I8044 HCl: ~

5% $K_2S_2O_8$: mp2491 5% $KMnO_4$: mp2475 Digest Tube Lot: mH21KK06

WR99 : 02387

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: CB Date: 06-06-13 Time: 0900

Matrix: Soil Block ID: #5 Block Temp: 95°C Thermometer: M060

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
WS27 A	1	-	1.027	50.0	1.042	50.0	
" ADup	1	-	1.027		1.040		
" ASpk	1	-	1.027		1.044		
" REF1		-	1.002		1.004		
" MB1	-		-		-		
" MB1SPK	-	-	-		-		
WS21 A	7	-	1.057		1.039		
" ADup	7	-	1.059		1.042		
" ASpk	7	-	1.052		1.035		
" MB1	-	-	-		-		
" MB1SPK	-	-	-		-		
WR99 D	7	-	1.013		1.080		
" E	2	-	1.033		1.016		
" F	2	-	1.015		1.033		
" ODup	7	-	1.016		1.081		
" DSpk	7	-	1.016		1.080		
" MB3	-	-	-		-		
" MB3SPK	-	-	-	50.0	-	50.0	
			CB 6-06-13				

Chemical/Reagent ID: HNO_3 : MP2497I H_2O_2 : I8135 Tube lot 4
HCl: I8213 mm0616KKO

WR99 : 02365

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WR99
Unacceptable Blank:	☐	Date of Event:	6-11-13
Unacceptable Duplicate:	☑	Client ID:	SAIC
Unacceptable Spike:	☐	Method/Element:	ICP
Unacceptable Reference:	☐	Prep Code:	SWC

Details of Problem/Recommended Corrective Action:

DDUP/D Cu wide RPD (numbers attached)

Samples Affected:

Corrective Action Taken:

sent

Analyst Initials: BA **Supervisor:** EH

Date: 6/11/13 **Date:** 6-12-13

5049F

Revision 007
6/11/10

WR99 : 02389

WR99

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)									
DUPLICATION:					SPIKE RECOVERY:				
	DUP	BKGD				SPIKE	BKGD		
VOLUME	100	100			VOLUME	100	100		
SAMP WT	1.016	1.013			SAMP WT	1.016	1.0130		
ELEMENT	DUP	BKGD	% RPD		ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	mg/L					mg/L	mg/L	mg/L	
Ag			#DIV/0!		Ag			0.5	0.0
Al			#DIV/0!		Al			2	0.0
As			#DIV/0!		As			2	0.0
B			#DIV/0!		B			0.5	0.0
Ba			#DIV/0!		Ba			2	0.0
Be	0.00056	0.00057	2.07		Be	0.1944	0.00057	0.2	96.9
Ca			#DIV/0!		Ca			10	0.0
Cd			#DIV/0!		Cd			0.5	0.0
Co			#DIV/0!		Co			0.5	0.0
Cr			#DIV/0!		Cr			0.5	0.0
Cu	0.1178	0.09215	24.14		Cu	0.2892	0.09215	0.20	98.4
Fe			#DIV/0!		Fe			2	0.0
K			#DIV/0!		K			10	0.0
Mg			#DIV/0!		Mg			10	0.0
Mn			#DIV/0!		Mn			0.5	0.0
Mo			#DIV/0!		Mo			0.5	0.0
Na			#DIV/0!		Na			10	0.0
Ni			#DIV/0!		Ni			0.5	0.0
Pb			#DIV/0!		Pb			2	0.0
Sb			#DIV/0!		Sb			2	0.0
Se			#DIV/0!		Se			2	0.0
Si			#DIV/0!		Si			10	0.0
Sn			#DIV/0!		Sn			0.5	0.0
Sr			#DIV/0!		Sr			0.5	0.0
Ti			#DIV/0!		Ti			2	0.0
Tl			#DIV/0!		Tl			2	0.0
V			#DIV/0!		V			0.5	0.0
Zn	0.5097	0.461	9.74		Zn	0.6574	0.461	0.2	97.5

TABLE 6

01329 : 6/21/16

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WR99
Unacceptable Blank:	☐	Date of Event:	6-10-13
Unacceptable Duplicate:	☑	Client ID:	SAIC
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	SWN

Details of Problem/Recommended Corrective Action:

See attached

As, Pb high RPD (NOTED) A, D, DD's
Sb, Pb low %R D spk
post spike ok

Samples Affected:

Corrective Action Taken:

Analyst Initials: TT **Supervisor:**

Date: 6-10-13 **Date:** 6-11-13

W299

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)

icpms

DUPLICATION:

	DUP	BKGD
VOLUME	100	100
SAMP WT	1.081	1.08

ELEMENT	DUP	BKGD	% RPD
	ug/l	ug/l	
Be			#VALUE!
Na			#DIV/0!
Mg			#VALUE!
Al			#VALUE!
K			#DIV/0!
Ca			#DIV/0!
V			#DIV/0!
Cr	10.303	10.489	1.88
Fe			#VALUE!
Mn			#VALUE!
Co			#VALUE!
Ni	14.093	16.604	16.45
Cu			#DIV/0!
Zn			#DIV/0!
As	9.258	12.01	25.97
Se	0	0	#DIV/0!
Mo			#DIV/0!
Ag	0	0	#DIV/0!
Cd	0.467	0.461	1.20
Sb	0	0	#DIV/0!
Ba			#DIV/0!
Tl	0	0	#DIV/0!
Pb	20.697	35.092	51.69

SPIKE RECOVERY:

	SPIKE	BKGD
VOLUME	100	100
SAMP WT	1.08	1.0800

ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	ug/l	ug/l	mg/L	#VALUE!
Be			25	0
Na			5000	0
Mg			5000	#VALUE!
Al			5000	#VALUE!
K			5000	0
Ca			5000	0
V			25	0
Cr	35.088	10.489	25	98.396
Fe	0		5000	#VALUE!
Mn			25	#VALUE!
Co			25	#VALUE!
Ni	41.095	16.604	25	97.964
Cu			25	0
Zn			80	0
As	32.08	12.01	25	80.28
Se	77.238	0	80	96.5475
Mo			25	0
Ag	22.157	0	25	88.628
Cd	24.7	0.461	25	96.956
Sb	2.705	0	25	10.82
Ba			25	0
Tl	22.367	0	25	89.468
Pb	44.481	35.092	25	37.556

TABLE 6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Metals Laboratory Analyst Notes

ARI Job No.: WR 99-

Client ID:

Parameter:

Client Project:

List problems, concerns, corrective actions and any other pertinent information
% solids of the samples were prepped on thursday June 6th. The power went out early friday morning June 7th. The Samples were left in the oven greater than 12 hours and was not weighed until monday morning June 10th. The Samples were in the oven 4 more hours after being turn back on monday morning.

Analyst Initials:	CB	Date:	6/10/13

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 6-11-13

ICP 2	Analyst BA 6-12-13	Peer [illegible] 6/12/13	Comment
Logbooks:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	See log
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	See log
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	WR99, WS42
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and QAF's	✓	✓	CAF-WR99, WS42

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 6-10-13 Analysis Date: 6-11-13 Analyst: BA

LR Date: 6-10-13 Page: 1 of 6

All corrections made by analyst unless otherwise noted. BA 6-11-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
zzz		~~STD 0~~ zzzzzz			mix of CV/CB solns.
↓		~~2~~ zzzzzz			
		~~3~~ zzzzzz			
		~~4~~ zzzzzz			
↓		~~5~~ zzzzzz			
		STD 0			B621
		2			B627
		3			B628
		4			B629
		↓ 5			B630
		ICV			B323
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
	✓	DI Check			Ag↑ - RR later
		WS27 MB1	SWC	2	
		A-L	↓	10 ✓	
		A		2	
		ADUP		↓ ✓	
		ASPK		✓	
zzz		~~APOST~~ zzzzzz	↓	↓	

WRG:02816

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 6-11-13 Analyst: BA

LR Date: — Page: 2 of 10

All corrections made by analyst unless otherwise noted. BA 6-11-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WS27 REF1	SWC	2	
		↓ MBISPK	↓	↓	
		CCV2			
		CCB2			
		CRI			
		ICSA			
		ICSAB			
		CCV3			
		CCB3			End WS27
		WT10 MB	TWC		
	✓	↓ ADUP	↓	5	B > LR
	✓	A		↓	↓
	✓	ASPK			
		↓ MBSPK	↓		
		CCV4			
		CCB4			B↑ (C.O.)
		WT10 ADUP	TWC	10	
		↓ A	↓	↓	
		↓ ASPK	↓	↓	
		CCV5			~~B↑~~
		CCB5			B↑ (C.O.)
		WT03 MB1	SWC	2	
		↓ ADUP	↓	↓	
		↓ A	↓	↓	

WR99:02317

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 6-11-13 Analyst: BA

LR Date: — Page: 3 of 6

All corrections made by analyst unless otherwise noted. BA 6-11-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WT03 ASPK	SWC	2	✓
		B	↓	↓	
		C			
		D			
		E			
		MBISPK	↓	↓	✓
		CCV6			
		CCB6			
		WR99 MB3	SWC	2	
	✓	ADUP	↓	↓	Fe >LR
	✓	D			↓
	✓	DSPK			
zzz		~~zzzzz DPOST~~ E			
		F			
		MB3SPK	↓	↓	✓
		CCV7			
		CCB7			
		WS21 MB1	SWC	2	
		ADUP	↓	↓	✓
		A			
		ASPK			✓
zzz		~~zzzzz APOST~~			
		MB1SPK	↓	↓	✓
		CCV8			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 6-11-13 Analyst: BA

LR Date: — Page: 4 of 6

All corrections made by analyst unless otherwise noted. BA 6-11-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CCB8			End WS21
		WR99 DDUP	SWC	5 ✓	Cu↑RPD (CAF)
		D			
		DSPK		✓	
zzz		zzzzzz ~~DPOST~~			
		CCV9			
		CCB9			End WR99
		WS49 MB1	SWC	2	
	✓	ADUP			
	✓	A			Fe > LR
	✓	ASPK			
zzz		zzzzzz ~~APOST~~			
		B			
	✓	C			Fe > LR
	✓	D	BA 6/12/13	✓	↓
		MB1SPK			
		CCV10			
		CCB10			
		WS42 MB1	SWC	2	
		ADUP		✓	Cu, Zn ↑ RPD (CAF)
		A			
		ASPK		✓	Cu, Zn STL
	✓	B			Fe > LR
		D			

WR99:02319

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

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6/11/2013 8:40:31 AM Hg ReAlign... Actual peak offset (nm): 0.004
Drift (nm): -0.000 Slit adjustment: 0

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Analysis Begun

Start Time: 6/11/2013 8:41:59 AM **Plasma On Time: 6/11/2013 7:21:50 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2130611
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Method Loaded
Method Name: 7300bcESI2FAST **Method Last Saved: 8/13/2012 7:13:22 AM**
IEC File: IEC061013.iec **MSF File:**
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: B1 **Date Collected: 6/11/2013 8:42:05 AM**
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: B1

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

BA

6/11/13

Analysis Begun

Start Time: 6/11/2013 9:08:29 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/11/2013 7:21:50 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130611
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: ~~Calib Blank 1~~ ZZZZZZ
BA 6/11/13
Autosampler Location: 1
Date Collected: 6/11/2013 9:08:30 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3046615.4	9685.97	0.32%	100.0	%
ScR 361.383	367556.6	1691.29	0.46%	100.0	%
Ag 328.068†	96669.0	59.98	0.06%	[0.00]	mg/L
Al 308.215†	1817.6	11.56	0.64%	[0.00]	mg/L
As 188.979†	1715.9	5.72	0.33%	[0.00]	mg/L
B 249.677†	3597.4	7.77	0.22%	[0.00]	mg/L
Ba 233.527†	2258.9	6.42	0.28%	[0.00]	mg/L
Be 313.042†	310828.2	1790.18	0.58%	[0.00]	mg/L
Ca 317.933†	13931.5	43.12	0.31%	[0.00]	mg/L
Cd 228.802†	17005.8	45.90	0.27%	[0.00]	mg/L
Co 228.616†	18074.3	58.11	0.32%	[0.00]	mg/L
Cr 267.716†	3082.3	8.42	0.27%	[0.00]	mg/L
Cu 324.752†	147493.5	186.07	0.13%	[0.00]	mg/L
Fe 273.955†	1288.6	5.21	0.40%	[0.00]	mg/L
K 766.490†	23280.3	75.16	0.32%	[0.00]	mg/L
Mg 279.077†	1397.7	7.12	0.51%	[0.00]	mg/L
Mn 257.610†	17970.5	88.07	0.49%	[0.00]	mg/L
Mo 202.031†	9693.5	31.52	0.33%	[0.00]	mg/L
Na 589.592†	354266.6	567.21	0.16%	[0.00]	mg/L
Na 330.237†	498.6	2.97	0.60%	[0.00]	mg/L
Ni 231.604†	1992.1	6.63	0.33%	[0.00]	mg/L
Pb 220.353†	8217.9	28.15	0.34%	[0.00]	mg/L
Sb 206.836†	3354.9	15.62	0.47%	[0.00]	mg/L
Se 196.026†	1362.2	9.57	0.70%	[0.00]	mg/L
Si 288.158†	2107.0	19.09	0.91%	[0.00]	mg/L
Sn 189.927†	1773.0	8.01	0.45%	[0.00]	mg/L
Sr 421.552†	521545.3	1353.59	0.26%	[0.00]	mg/L
Ti 334.903†	10698.5	37.51	0.35%	[0.00]	mg/L
Tl 190.801†	2377.9	7.28	0.31%	[0.00]	mg/L
V 292.402†	69527.5	89.92	0.13%	[0.00]	mg/L
Zn 206.200†	1928.4	9.73	0.50%	[0.00]	mg/L

Sequence No.: 2
Sample ID: ~~STD2~~ ZZZZZZ
BA 6/11/13
Autosampler Location: 2
Date Collected: 6/11/2013 9:12:31 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD2

Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	3053810.6	5436.26	0.18%	100.2	%
ScR 361.383	371527.0	1155.62	0.31%	101.1	%
Ba 233.527†	44670.9	191.96	0.43%	[10]	mg/L
Cd 228.802†	325667.3	1464.77	0.45%	[10]	mg/L
Co 228.616†	367855.8	400.09	0.11%	[10]	mg/L
Cr 267.716†	61999.8	120.14	0.19%	[10]	mg/L
Cu 324.752†	2835712.1	3103.99	0.11%	[10]	mg/L
Mn 257.610†	355775.2	712.47	0.20%	[10]	mg/L
V 292.402†	1388643.7	4249.93	0.31%	[10]	mg/L

Sequence No.: 3
Sample ID: ~~STD3~~ zzzzzz
BA 6/11/13

Autosampler Location: 3
Date Collected: 6/11/2013 9:14:19 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	3048032.2	8386.99	0.28%	100.0	%
ScR 361.383	365182.3	2075.82	0.57%	99.35	%
Ag 328.068†	101598.6	175.87	0.17%	[1.0]	mg/L
As 188.979†	16455.1	45.38	0.28%	[10]	mg/L
B 249.677†	72115.8	320.19	0.44%	[10]	mg/L
Be 313.042†	2941684.5	10819.57	0.37%	[5.0]	mg/L
Na 589.592†	403649.0	2178.56	0.54%	[50]	mg/L
Ni 231.604†	40436.0	230.72	0.57%	[10]	mg/L
Pb 220.353†	75699.2	276.31	0.37%	[10]	mg/L
Se 196.026†	13201.3	54.82	0.42%	[10]	mg/L
Sr 421.552†	5070704.6	7966.79	0.16%	[5]	mg/L
Tl 190.801†	22036.4	87.44	0.40%	[10]	mg/L
Zn 206.200†	38740.4	189.19	0.49%	[10]	mg/L

Sequence No.: 4
Sample ID: ~~STD4~~ zzzzzz
BA 6/11/13

Autosampler Location: 4
Date Collected: 6/11/2013 9:16:54 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	3089289.4	5061.41	0.16%	101.4	%
ScR 361.383	373924.8	2135.18	0.57%	101.7	%
Mo 202.031†	193266.1	1349.12	0.70%	[10]	mg/L
Sb 206.836†	30254.9	164.62	0.54%	[10]	mg/L
Si 288.158†	19288.1	297.83	1.54%	[10]	mg/L
Sn 189.927†	35839.0	358.03	1.00%	[10]	mg/L
Ti 334.903†	211149.9	514.41	0.24%	[10]	mg/L

Sequence No.: 5
Sample ID: ~~STD5~~ zzzzzz
BA 6/11/13

Autosampler Location: 5
Date Collected: 6/11/2013 9:19:09 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2881428.7	9680.38	0.34%	94.58	%
ScR 361.383	369269.6	769.23	0.21%	100.5	%
Al 308.215†	50208.0	72.93	0.15%	[30]	mg/L
Ca 317.933†	414299.1	2219.11	0.54%	[30]	mg/L
Fe 273.955†	128898.8	1460.53	1.13%	[100]	mg/L
K 766.490†	223618.3	643.05	0.29%	[100]	mg/L
Mg 279.077†	41572.1	8.62	0.02%	[30]	mg/L
Na 330.237†	2145.6	2.33	0.11%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	101600	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1674	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1646	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7212	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4467	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	588300	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	13810	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	32570	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	36790	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	6200	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	283600	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1289	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2236	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1386	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	35580	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	19330	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	8073	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	21.46	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4044	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7570	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3025	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1320	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1929	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3584	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	1014000	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	21110	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2204	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	138900	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3874	0.00000	1.000000	

Analysis Begun

Start Time: 6/11/2013 9:27:06 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/11/2013 7:21:50 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130611
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 6/11/2013 9:27:07 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3081754.3	22782.85	0.74%	100.0	%
ScR 361.383	370739.5	1485.55	0.40%	100.0	%
Ag 328.068†	-114.7	23.11	20.14%	[0.00]	mg/L
Al 308.215†	148.4	7.61	5.13%	[0.00]	mg/L
As 188.979†	-5.5	3.10	56.62%	[0.00]	mg/L
B 249.677†	59.8	4.31	7.21%	[0.00]	mg/L
Ba 233.527†	14.7	3.65	24.87%	[0.00]	mg/L
Be 313.042†	822.3	12.06	1.47%	[0.00]	mg/L
Ca 317.933†	122.8	15.42	12.56%	[0.00]	mg/L
Cd 228.802†	342.3	2.39	0.70%	[0.00]	mg/L
Co 228.616†	-52.4	5.19	9.90%	[0.00]	mg/L
Cr 267.716†	-82.7	5.42	6.55%	[0.00]	mg/L
Cu 324.752†	2190.0	40.84	1.87%	[0.00]	mg/L
Fe 273.955†	13.2	1.33	10.08%	[0.00]	mg/L
K 766.490†	527.3	24.28	4.60%	[0.00]	mg/L
Mg 279.077†	70.6	5.53	7.83%	[0.00]	mg/L
Mn 257.610†	122.7	4.00	3.26%	[0.00]	mg/L
Mo 202.031†	45.4	4.72	10.38%	[0.00]	mg/L
Na 589.592†	45.8	35.61	77.82%	[0.00]	mg/L
Na 330.237†	-188.7	2.55	1.35%	[0.00]	mg/L
Ni 231.604†	-27.8	1.50	5.40%	[0.00]	mg/L
Pb 220.353†	51.5	7.56	14.67%	[0.00]	mg/L
Sb 206.836†	44.8	4.43	9.89%	[0.00]	mg/L
Se 196.026†	-31.6	3.79	11.98%	[0.00]	mg/L
Si 288.158†	59.2	5.65	9.54%	[0.00]	mg/L
Sn 189.927†	-2.8	3.44	121.97%	[0.00]	mg/L
Sr 421.552†	361.8	21.60	5.97%	[0.00]	mg/L
Ti 334.903†	-60.4	10.48	17.35%	[0.00]	mg/L
Tl 190.801†	-28.7	2.21	7.71%	[0.00]	mg/L
V 292.402†	182.7	15.94	8.72%	[0.00]	mg/L
Zn 206.200†	15.4	1.41	9.15%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 6/11/2013 9:31:23 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected				Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	3068934.0	5695.42	0.19%	99.58	%
ScR 361.383	374985.7	172.01	0.05%	101.1	%
Ba 233.527†	47852.4	585.35	1.22%	[10]	mg/L
Cd 228.802†	343766.4	46.53	0.01%	[10]	mg/L
Co 228.616†	389547.3	269.02	0.07%	[10]	mg/L
Cr 267.716†	65658.3	133.74	0.20%	[10]	mg/L
Cu 324.752†	3013697.3	7400.29	0.25%	[10]	mg/L
Mn 257.610†	371961.4	1487.24	0.40%	[10]	mg/L
V 292.402†	1474955.7	2812.77	0.19%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 6/11/2013 9:33:11 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	3055704.9	10625.35	0.35%	99.15	%
ScR 361.383	368364.4	1085.93	0.29%	99.36	%
Ag 328.068†	201086.6	996.16	0.50%	[1.0]	mg/L
As 188.979†	18397.1	74.29	0.40%	[10]	mg/L
B 249.677†	76487.0	646.36	0.85%	[10]	mg/L
Be 313.042†	3240096.5	13788.26	0.43%	[5.0]	mg/L
Na 589.592†	765729.2	980.38	0.13%	[50]	mg/L
Ni 231.604†	43218.5	290.28	0.67%	[10]	mg/L
Pb 220.353†	84599.9	434.31	0.51%	[10]	mg/L
Se 196.026†	14742.9	92.01	0.62%	[10]	mg/L
Sr 421.552†	5597974.6	23996.09	0.43%	[5]	mg/L
Tl 190.801†	24834.9	9.32	0.04%	[10]	mg/L
Zn 206.200†	41059.1	320.69	0.78%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 6/11/2013 9:35:46 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	3101068.5	11336.75	0.37%	100.6	%
ScR 361.383	377855.2	967.14	0.26%	101.9	%
Mo 202.031†	204895.7	1361.31	0.66%	[10]	mg/L
Sb 206.836†	33938.6	236.69	0.70%	[10]	mg/L
Si 288.158†	21163.9	125.73	0.59%	[10]	mg/L
Sn 189.927†	37893.9	370.52	0.98%	[10]	mg/L
Ti 334.903†	222520.7	993.83	0.45%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 6/11/2013 9:38:01 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2912395.8	3698.24	0.13%	94.50	%
ScR 361.383	371071.7	837.29	0.23%	100.1	%
Al 308.215†	52174.7	167.33	0.32%	[30]	mg/L
Ca 317.933†	429701.3	482.86	0.11%	[30]	mg/L
Fe 273.955†	130095.5	181.13	0.14%	[100]	mg/L
K 766.490†	247218.7	1055.64	0.43%	[100]	mg/L
Mg 279.077†	43178.8	17.52	0.04%	[30]	mg/L
Na 330.237†	2864.0	11.74	0.41%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	201100	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1739	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1840	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7649	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4785	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	648000	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	14320	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	34380	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	38950	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	6566	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	301400	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1301	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2472	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1439	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	37200	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	20490	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	15310	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.64	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4322	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8460	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3394	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1474	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2116	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3789	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	1120000	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	22250	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2483	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	147500	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4106	0.00000	1.000000	

urgg : 82326

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Analysis Begun

Start Time: 6/11/2013 9:41:22 AM **Plasma On Time: 6/11/2013 7:21:50 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130611
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 7**
Sample ID: ICV **Date Collected: 6/11/2013 9:41:23 AM**
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3034668.4	98.47	%	0.441				0.45%
ScR 361.383	366301.9	98.80	%	0.313				0.32%
Ag 328.068†	210932.9	1.049	mg/L	0.0054	1.049	mg/L	0.0054	0.51%
Al 308.215†	3628.1	2.052	mg/L	0.0054	2.052	mg/L	0.0054	0.26%
As 188.979†	3698.3	2.038	mg/L	0.0199	2.038	mg/L	0.0199	0.98%
B 249.677†	7708.7	1.007	mg/L	0.0039	1.007	mg/L	0.0039	0.39%
Ba 233.527†	4926.8	1.029	mg/L	0.0031	1.029	mg/L	0.0031	0.30%
Be 313.042†	662134.1	1.022	mg/L	0.0026	1.022	mg/L	0.0026	0.26%
Ca 317.933†	28366.5	1.980	mg/L	0.0037	1.980	mg/L	0.0037	0.19%
Cd 228.802†	35847.2	1.033	mg/L	0.0013	1.033	mg/L	0.0013	0.13%
Co 228.616†	39134.2	1.003	mg/L	0.0036	1.003	mg/L	0.0036	0.36%
Cr 267.716†	6864.9	1.045	mg/L	0.0033	1.045	mg/L	0.0033	0.31%
Cu 324.752†	314630.6	1.044	mg/L	0.0040	1.044	mg/L	0.0040	0.38%
Fe 273.955†	2719.5	2.084	mg/L	0.0072	2.084	mg/L	0.0072	0.34%
K 766.490†	49566.1	20.05	mg/L	0.107	20.05	mg/L	0.107	0.53%
Mg 279.077†	2873.7	2.003	mg/L	0.0097	2.003	mg/L	0.0097	0.49%
Mn 257.610†	36800.1	0.9897	mg/L	0.00379	0.9897	mg/L	0.00379	0.38%
Mo 202.031†	20681.2	1.009	mg/L	0.0061	1.009	mg/L	0.0061	0.61%
Na 589.592†	769239.6	50.23	mg/L	0.076	50.23	mg/L	0.076	0.15%
Na 330.237†	1480.3	51.65	mg/L	0.112	51.65	mg/L	0.112	0.22%
Ni 231.604†	4388.4	1.016	mg/L	0.0050	1.016	mg/L	0.0050	0.49%
Pb 220.353†	17429.2	2.061	mg/L	0.0130	2.061	mg/L	0.0130	0.63%
Sb 206.836†	7052.7	2.078	mg/L	0.0158	2.078	mg/L	0.0158	0.76%
Se 196.026†	2984.8	2.023	mg/L	0.0123	2.023	mg/L	0.0123	0.61%
Si 288.158†	4411.1	2.089	mg/L	0.0171	2.089	mg/L	0.0171	0.82%
Sn 189.927†	3768.4	0.9960	mg/L	0.00734	0.9960	mg/L	0.00734	0.74%
Sr 421.552†	1127242.6	1.007	mg/L	0.0006	1.007	mg/L	0.0006	0.06%
Ti 334.903†	22297.2	1.001	mg/L	0.0008	1.001	mg/L	0.0008	0.08%
Tl 190.801†	5149.4	2.065	mg/L	0.0134	2.065	mg/L	0.0134	0.65%
V 292.402†	150727.9	1.026	mg/L	0.0027	1.026	mg/L	0.0027	0.26%
Zn 206.200†	4141.9	1.009	mg/L	0.0025	1.009	mg/L	0.0025	0.25%

Sequence No.: 2
Sample ID: CB

Autosampler Location: 1
Date Collected: 6/11/2013 9:45:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3075712.8	99.80	%	0.495				0.50%
ScR 361.383	372482.6	100.5	%	0.30				0.30%
Ag 328.068†	-9.2	-0.00005	mg/L	0.000240	-0.00005	mg/L	0.000240	526.63%
Al 308.215†	-8.7	-0.00499	mg/L	0.002846	-0.00499	mg/L	0.002846	57.07%
As 188.979†	-1.8	-0.00099	mg/L	0.002377	-0.00099	mg/L	0.002377	240.53%
B 249.677†	13.6	0.00178	mg/L	0.001092	0.00178	mg/L	0.001092	61.37%
Ba 233.527†	-2.5	-0.00051	mg/L	0.000115	-0.00051	mg/L	0.000115	22.33%
Be 313.042†	13.1	0.00002	mg/L	0.000013	0.00002	mg/L	0.000013	62.24%
Ca 317.933†	18.2	0.00127	mg/L	0.000108	0.00127	mg/L	0.000108	8.52%
Cd 228.802†	5.4	0.00016	mg/L	0.000041	0.00016	mg/L	0.000041	24.82%
Co 228.616†	4.2	0.00011	mg/L	0.000204	0.00011	mg/L	0.000204	188.86%
Cr 267.716†	-4.3	-0.00066	mg/L	0.000501	-0.00066	mg/L	0.000501	75.66%
Cu 324.752†	64.7	0.00021	mg/L	0.000135	0.00021	mg/L	0.000135	62.77%
Fe 273.955†	0.8	0.00059	mg/L	0.000725	0.00059	mg/L	0.000725	122.46%
K 766.490†	-27.5	-0.01111	mg/L	0.013370	-0.01111	mg/L	0.013370	120.36%
Mg 279.077†	0.6	0.00040	mg/L	0.005840	0.00040	mg/L	0.005840	>999.9%
Mn 257.610†	-1.9	-0.00005	mg/L	0.000040	-0.00005	mg/L	0.000040	76.58%
Mo 202.031†	10.1	0.00049	mg/L	0.000207	0.00049	mg/L	0.000207	42.06%
Na 589.592†	31.2	0.00204	mg/L	0.002430	0.00204	mg/L	0.002430	119.33%
Na 330.237†	2.2	0.07756	mg/L	0.496266	0.07756	mg/L	0.496266	639.89%
Ni 231.604†	8.0	0.00186	mg/L	0.000292	0.00186	mg/L	0.000292	15.70%
Pb 220.353†	1.0	0.00012	mg/L	0.000236	0.00012	mg/L	0.000236	195.67%
Sb 206.836†	10.4	0.00310	mg/L	0.000686	0.00310	mg/L	0.000686	22.11%
Se 196.026†	5.3	0.00360	mg/L	0.001197	0.00360	mg/L	0.001197	33.24%
Si 288.158†	0.8	0.00038	mg/L	0.000852	0.00038	mg/L	0.000852	224.21%
Sn 189.927†	5.8	0.00154	mg/L	0.001292	0.00154	mg/L	0.001292	83.78%
Sr 421.552†	24.7	0.00002	mg/L	0.000041	0.00002	mg/L	0.000041	183.79%
Ti 334.903†	6.6	0.00030	mg/L	0.000450	0.00030	mg/L	0.000450	151.90%
Tl 190.801†	6.3	0.00252	mg/L	0.001492	0.00252	mg/L	0.001492	59.28%
V 292.402†	-4.0	-0.00003	mg/L	0.000058	-0.00003	mg/L	0.000058	196.44%
Zn 206.200†	1.2	0.00029	mg/L	0.000509	0.00029	mg/L	0.000509	175.98%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 6/11/2013 9:49:43 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3088432.5	100.2	%	0.38				0.38%
ScR 361.383	377396.0	101.8	%	0.14				0.14%
Ag 328.068†	591.3	0.00294	mg/L	0.000110	0.00294	mg/L	0.000110	3.73%
Al 308.215†	86.1	0.04938	mg/L	0.005413	0.04938	mg/L	0.005413	10.96%
As 188.979†	91.9	0.05010	mg/L	0.002547	0.05010	mg/L	0.002547	5.08%
B 249.677†	149.5	0.01955	mg/L	0.000850	0.01955	mg/L	0.000850	4.35%
Ba 233.527†	12.8	0.00267	mg/L	0.001043	0.00267	mg/L	0.001043	39.00%
Be 313.042†	636.1	0.00098	mg/L	0.000019	0.00098	mg/L	0.000019	1.92%
Ca 317.933†	905.5	0.06322	mg/L	0.001305	0.06322	mg/L	0.001305	2.06%
Cd 228.802†	77.3	0.00199	mg/L	0.000021	0.00199	mg/L	0.000021	1.06%
Co 228.616†	119.9	0.00307	mg/L	0.000067	0.00307	mg/L	0.000067	2.18%
Cr 267.716†	33.1	0.00504	mg/L	0.000387	0.00504	mg/L	0.000387	7.68%
Cu 324.752†	665.5	0.00221	mg/L	0.000035	0.00221	mg/L	0.000035	1.57%
Fe 273.955†	71.5	0.05492	mg/L	0.001923	0.05492	mg/L	0.001923	3.50%
K 766.490†	1234.5	0.4993	mg/L	0.00033	0.4993	mg/L	0.00033	0.07%
Mg 279.077†	76.4	0.05308	mg/L	0.005257	0.05308	mg/L	0.005257	9.90%
Mn 257.610†	38.2	0.00103	mg/L	0.000049	0.00103	mg/L	0.000049	4.76%
Mo 202.031†	100.4	0.00490	mg/L	0.000017	0.00490	mg/L	0.000017	0.35%
Na 589.592†	7533.8	0.4919	mg/L	0.00323	0.4919	mg/L	0.00323	0.66%
Na 330.237†	19.3	0.6726	mg/L	0.29953	0.6726	mg/L	0.29953	44.54%
Ni 231.604†	49.3	0.01142	mg/L	0.001437	0.01142	mg/L	0.001437	12.58%
Pb 220.353†	180.6	0.02136	mg/L	0.000807	0.02136	mg/L	0.000807	3.78%
Sb 206.836†	176.5	0.05205	mg/L	0.000644	0.05205	mg/L	0.000644	1.24%
Se 196.026†	70.5	0.04782	mg/L	0.000516	0.04782	mg/L	0.000516	1.08%
Si 288.158†	133.8	0.06323	mg/L	0.005337	0.06323	mg/L	0.005337	8.44%
Sn 189.927†	38.1	0.01009	mg/L	0.000324	0.01009	mg/L	0.000324	3.21%
Sr 421.552†	1138.1	0.00102	mg/L	0.000003	0.00102	mg/L	0.000003	0.28%
Ti 334.903†	114.9	0.00515	mg/L	0.000406	0.00515	mg/L	0.000406	7.87%
Tl 190.801†	125.3	0.05044	mg/L	0.001653	0.05044	mg/L	0.001653	3.28%
V 292.402†	435.1	0.00297	mg/L	0.000102	0.00297	mg/L	0.000102	3.45%
Zn 206.200†	51.6	0.01259	mg/L	0.000292	0.01259	mg/L	0.000292	2.32%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 6/11/2013 9:53:59 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2971540.0	96.42	%	0.306				0.32%
ScR 361.383	362297.1	97.72	%	0.262				0.27%
Ag 328.068†	-194.5	-0.00096	mg/L	0.000123	-0.00096	mg/L	0.000123	12.80%
Al 308.215†	351045.1	201.8	mg/L	0.50	201.8	mg/L	0.50	0.25%
As 188.979†	46.0	0.01796	mg/L	0.002243	0.01796	mg/L	0.002243	12.49%
B 249.677†	-43.1	-0.00564	mg/L	0.002303	-0.00564	mg/L	0.002303	40.83%
Ba 233.527†	150.8	-0.00232	mg/L	0.000614	-0.00232	mg/L	0.000614	26.49%
Be 313.042†	69.5	0.00010	mg/L	0.000022	0.00010	mg/L	0.000022	20.77%
Ca 317.933†	1432504.2	100.0	mg/L	0.55	100.0	mg/L	0.55	0.55%
Cd 228.802†	20.7	0.00047	mg/L	0.000075	0.00047	mg/L	0.000075	16.11%
Co 228.616†	103.3	0.00022	mg/L	0.000034	0.00022	mg/L	0.000034	15.15%
Cr 267.716†	17.4	0.00103	mg/L	0.000619	0.00103	mg/L	0.000619	60.12%
Cu 324.752†	-2399.8	0.00035	mg/L	0.000076	0.00035	mg/L	0.000076	21.92%
Fe 273.955†	261366.3	200.9	mg/L	0.31	200.9	mg/L	0.31	0.16%
K 766.490†	16.7	0.00675	mg/L	0.006670	0.00675	mg/L	0.006670	98.80%
Mg 279.077†	151444.1	105.1	mg/L	0.89	105.1	mg/L	0.89	0.85%
Mn 257.610†	37.7	0.00033	mg/L	0.000144	0.00033	mg/L	0.000144	43.58%
Mo 202.031†	38.7	0.00062	mg/L	0.000032	0.00062	mg/L	0.000032	5.23%
Na 589.592†	74.2	0.00485	mg/L	0.004365	0.00485	mg/L	0.004365	90.09%
Na 330.237†	6.1	-0.2213	mg/L	0.11180	-0.2213	mg/L	0.11180	50.52%
Ni 231.604†	6.2	0.00145	mg/L	0.000856	0.00145	mg/L	0.000856	59.08%
Pb 220.353†	-323.2	-0.00140	mg/L	0.001591	-0.00140	mg/L	0.001591	113.39%
Sb 206.836†	33.5	0.00966	mg/L	0.001707	0.00966	mg/L	0.001707	17.67%
Se 196.026†	51.7	0.01296	mg/L	0.006584	0.01296	mg/L	0.006584	50.80%
Si 288.158†	-38.2	-0.00615	mg/L	0.002584	-0.00615	mg/L	0.002584	42.00%
Sn 189.927†	-90.4	-0.01101	mg/L	0.000694	-0.01101	mg/L	0.000694	6.31%
Sr 421.552†	6130.3	0.00548	mg/L	0.000035	0.00548	mg/L	0.000035	0.64%
Ti 334.903†	192.6	0.00243	mg/L	0.000089	0.00243	mg/L	0.000089	3.66%
Tl 190.801†	-64.2	0.00167	mg/L	0.003159	0.00167	mg/L	0.003159	188.99%
V 292.402†	1460.4	-0.00074	mg/L	0.000391	-0.00074	mg/L	0.000391	52.86%
Zn 206.200†	20.0	0.00362	mg/L	0.000250	0.00362	mg/L	0.000250	6.91%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 6/11/2013 9:58:15 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
A11	230.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2975134.3	96.54	%	0.178				0.18%
ScR 361.383	363004.8	97.91	%	0.251				0.26%
Ag 328.068†	213881.6	1.064	mg/L	0.0025	1.064	mg/L	0.0025	0.23%
Al 308.215†	351002.4	201.8	mg/L	1.47	201.8	mg/L	1.47	0.73%
As 188.979†	1903.8	1.027	mg/L	0.0017	1.027	mg/L	0.0017	0.16%
B 249.677†	-41.7	-0.00746	mg/L	0.001074	-0.00746	mg/L	0.001074	14.40%
Ba 233.527†	4977.1	1.006	mg/L	0.0053	1.006	mg/L	0.0053	0.53%
Be 313.042†	646155.1	0.9969	mg/L	0.00739	0.9969	mg/L	0.00739	0.74%
Ca 317.933†	1428267.6	99.72	mg/L	0.410	99.72	mg/L	0.410	0.41%
Cd 228.802†	35331.1	1.023	mg/L	0.0042	1.023	mg/L	0.0042	0.41%
Co 228.616†	37231.9	0.9532	mg/L	0.00349	0.9532	mg/L	0.00349	0.37%
Cr 267.716†	6710.0	1.020	mg/L	0.0039	1.020	mg/L	0.0039	0.39%
Cu 324.752†	314685.7	1.053	mg/L	0.0046	1.053	mg/L	0.0046	0.44%
Fe 273.955†	258809.4	198.9	mg/L	0.93	198.9	mg/L	0.93	0.47%
K 766.490†	-67.3	-0.02722	mg/L	0.012466	-0.02722	mg/L	0.012466	45.79%
Mg 279.077†	143633.0	99.66	mg/L	0.587	99.66	mg/L	0.587	0.59%
Mn 257.610†	35902.8	0.9647	mg/L	0.00592	0.9647	mg/L	0.00592	0.61%
Mo 202.031†	37.4	0.00051	mg/L	0.000425	0.00051	mg/L	0.000425	83.77%
Na 589.592†	-46.3	-0.00302	mg/L	0.002067	-0.00302	mg/L	0.002067	68.35%
Na 330.237†	13.1	-0.2679	mg/L	0.26776	-0.2679	mg/L	0.26776	99.97%
Ni 231.604†	4165.0	0.9639	mg/L	0.00324	0.9639	mg/L	0.00324	0.34%
Pb 220.353†	8089.4	0.9935	mg/L	0.00283	0.9935	mg/L	0.00283	0.28%
Sb 206.836†	3519.2	1.027	mg/L	0.0068	1.027	mg/L	0.0068	0.66%
Se 196.026†	1548.5	1.027	mg/L	0.0116	1.027	mg/L	0.0116	1.13%
Si 288.158†	-38.8	-0.00252	mg/L	0.003367	-0.00252	mg/L	0.003367	133.86%
Sn 189.927†	-92.1	-0.01096	mg/L	0.001846	-0.01096	mg/L	0.001846	16.84%
Sr 421.552†	6021.9	0.00538	mg/L Conf.	0.000031	0.00538	mg/L	0.000031	0.58%
Ti 334.903†	183.9	0.00186	mg/L	0.000234	0.00186	mg/L	0.000234	12.56%
Tl 190.801†	2285.8	0.9379	mg/L	0.00313	0.9379	mg/L	0.00313	0.33%
V 292.402†	147571.4	0.9941	mg/L	0.00340	0.9941	mg/L	0.00340	0.34%
Zn 206.200†	3954.3	0.9620	mg/L	0.00534	0.9620	mg/L	0.00534	0.56%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 6/11/2013 10:02:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3063258.4	99.40	%	0.232				0.23%
ScR 361.383	366829.8	98.95	%	0.323				0.33%
Ag 328.068†	209402.3	1.042	mg/L	0.0030	1.042	mg/L	0.0030	0.29%
Al 308.215†	3646.7	2.063	mg/L	0.0062	2.063	mg/L	0.0062	0.30%
As 188.979†	3682.7	2.030	mg/L	0.0079	2.030	mg/L	0.0079	0.39%
B 249.677†	7712.5	1.007	mg/L	0.0084	1.007	mg/L	0.0084	0.83%
Ba 233.527†	4961.0	1.036	mg/L	0.0017	1.036	mg/L	0.0017	0.16%
Be 313.042†	661793.6	1.021	mg/L	0.0022	1.021	mg/L	0.0022	0.21%
Ca 317.933†	28403.0	1.983	mg/L	0.0124	1.983	mg/L	0.0124	0.63%
Cd 228.802†	35659.7	1.027	mg/L	0.0002	1.027	mg/L	0.0002	0.02%
Co 228.616†	38868.4	0.9959	mg/L	0.00344	0.9959	mg/L	0.00344	0.35%
Cr 267.716†	6922.4	1.054	mg/L	0.0046	1.054	mg/L	0.0046	0.44%
Cu 324.752†	311852.4	1.035	mg/L	0.0014	1.035	mg/L	0.0014	0.13%
Fe 273.955†	2751.1	2.108	mg/L	0.0090	2.108	mg/L	0.0090	0.43%
K 766.490†	49489.2	20.02	mg/L	0.045	20.02	mg/L	0.045	0.23%
Mg 279.077†	2896.0	2.019	mg/L	0.0041	2.019	mg/L	0.0041	0.21%
Mn 257.610†	36834.3	0.9906	mg/L	0.00270	0.9906	mg/L	0.00270	0.27%
Mo 202.031†	20556.3	1.003	mg/L	0.0026	1.003	mg/L	0.0026	0.26%
Na 589.592†	770322.5	50.30	mg/L	0.076	50.30	mg/L	0.076	0.15%
Na 330.237†	1485.6	51.84	mg/L	0.169	51.84	mg/L	0.169	0.33%
Ni 231.604†	4406.8	1.020	mg/L	0.0062	1.020	mg/L	0.0062	0.61%
Pb 220.353†	17376.9	2.055	mg/L	0.0039	2.055	mg/L	0.0039	0.19%
Sb 206.836†	7035.1	2.072	mg/L	0.0047	2.072	mg/L	0.0047	0.23%
Se 196.026†	2967.9	2.012	mg/L	0.0104	2.012	mg/L	0.0104	0.52%
Si 288.158†	4407.7	2.087	mg/L	0.0165	2.087	mg/L	0.0165	0.79%
Sn 189.927†	3742.1	0.9891	mg/L	0.00096	0.9891	mg/L	0.00096	0.10%
Sr 421.552†	1126550.3	1.006	mg/L	0.0025	1.006	mg/L	0.0025	0.25%
Ti 334.903†	22301.4	1.001	mg/L	0.0033	1.001	mg/L	0.0033	0.33%
Tl 190.801†	5151.8	2.066	mg/L	0.0055	2.066	mg/L	0.0055	0.27%
V 292.402†	149855.1	1.020	mg/L	0.0023	1.020	mg/L	0.0023	0.22%
Zn 206.200†	4173.1	1.017	mg/L	0.0048	1.017	mg/L	0.0048	0.48%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 6/11/2013 10:06:22 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3091447.2	100.3	%	0.23				0.22%
ScR 361.383	374445.0	101.0	%	0.97				0.96%
Ag 328.068†	26.1	0.00013	mg/L	0.000173	0.00013	mg/L	0.000173	133.62%
Al 308.215†	0.3	0.00015	mg/L	0.001608	0.00015	mg/L	0.001608	>999.9%
As 188.979†	0.2	0.00009	mg/L	0.000687	0.00009	mg/L	0.000687	751.21%
B 249.677†	1.6	0.00021	mg/L	0.001415	0.00021	mg/L	0.001415	674.36%
Ba 233.527†	-2.1	-0.00044	mg/L	0.000091	-0.00044	mg/L	0.000091	20.64%
Be 313.042†	37.0	0.00006	mg/L	0.000056	0.00006	mg/L	0.000056	97.63%
Ca 317.933†	13.2	0.00092	mg/L	0.000367	0.00092	mg/L	0.000367	39.71%
Cd 228.802†	1.4	0.00004	mg/L	0.000165	0.00004	mg/L	0.000165	396.14%
Co 228.616†	6.7	0.00017	mg/L	0.000287	0.00017	mg/L	0.000287	167.21%
Cr 267.716†	-5.3	-0.00080	mg/L	0.001077	-0.00080	mg/L	0.001077	133.99%
Cu 324.752†	77.6	0.00026	mg/L	0.000067	0.00026	mg/L	0.000067	26.05%
Fe 273.955†	3.5	0.00267	mg/L	0.001708	0.00267	mg/L	0.001708	64.00%
K 766.490†	9.7	0.00394	mg/L	0.014664	0.00394	mg/L	0.014664	372.38%
Mg 279.077†	3.4	0.00238	mg/L	0.004063	0.00238	mg/L	0.004063	170.49%
Mn 257.610†	-2.1	-0.00006	mg/L	0.000048	-0.00006	mg/L	0.000048	83.94%
Mo 202.031†	12.8	0.00063	mg/L	0.000217	0.00063	mg/L	0.000217	34.69%
Na 589.592†	-12.5	-0.00082	mg/L	0.003784	-0.00082	mg/L	0.003784	462.61%
Na 330.237†	1.5	0.05137	mg/L	0.293683	0.05137	mg/L	0.293683	571.74%
Ni 231.604†	5.4	0.00125	mg/L	0.000193	0.00125	mg/L	0.000193	15.38%
Pb 220.353†	-4.7	-0.00056	mg/L	0.000515	-0.00056	mg/L	0.000515	91.72%
Sb 206.836†	11.7	0.00348	mg/L	0.000678	0.00348	mg/L	0.000678	19.49%
Se 196.026†	-1.3	-0.00089	mg/L	0.003289	-0.00089	mg/L	0.003289	368.49%
Si 288.158†	-1.7	-0.00079	mg/L	0.003100	-0.00079	mg/L	0.003100	390.77%
Sn 189.927†	5.6	0.00147	mg/L	0.000321	0.00147	mg/L	0.000321	21.83%
Sr 421.552†	59.1	0.00005	mg/L	0.000011	0.00005	mg/L	0.000011	20.79%
Ti 334.903†	7.0	0.00032	mg/L	0.000255	0.00032	mg/L	0.000255	80.62%
Tl 190.801†	7.1	0.00288	mg/L	0.001895	0.00288	mg/L	0.001895	65.88%
V 292.402†	32.9	0.00022	mg/L	0.000070	0.00022	mg/L	0.000070	31.76%
Zn 206.200†	4.2	0.00103	mg/L	0.000354	0.00103	mg/L	0.000354	34.25%

Sequence No.: 8
Sample ID: DI CHECK

Dilution: 1.000000X

Autosampler Location: 326
Date Collected: 6/11/2013 10:10:37 AM
Data Type: Original

Nebulizer Parameters: DI CHECK

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: DI CHECK

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3185612.7	103.4	%	0.27				0.26%
ScR 361.383	384049.7	103.6	%	0.29				0.28%
Ag 328.068†	632.0	0.00314	mg/L	0.000143	0.00314	mg/L	0.000143	4.55%
Al 308.215†	9.1	0.00523	mg/L	0.002812	0.00523	mg/L	0.002812	53.76%
As 188.979†	3.4	0.00186	mg/L	0.001001	0.00186	mg/L	0.001001	53.76%
B 249.677†	-10.1	-0.00132	mg/L	0.000703	-0.00132	mg/L	0.000703	53.38%
Ba 233.527†	-2.5	-0.00053	mg/L	0.000446	-0.00053	mg/L	0.000446	83.88%
Be 313.042†	11.0	0.00002	mg/L	0.000025	0.00002	mg/L	0.000025	145.95%
Ca 317.933†	86.8	0.00606	mg/L	0.000288	0.00606	mg/L	0.000288	4.75%
Cd 228.802†	-1.7	-0.00006	mg/L	0.000117	-0.00006	mg/L	0.000117	206.10%
Co 228.616†	8.2	0.00021	mg/L	0.000042	0.00021	mg/L	0.000042	19.90%
Cr 267.716†	0.3	0.00005	mg/L	0.000845	0.00005	mg/L	0.000845	>999.9%
Cu 324.752†	336.2	0.00112	mg/L	0.000099	0.00112	mg/L	0.000099	8.89%
Fe 273.955†	20.8	0.01601	mg/L	0.000913	0.01601	mg/L	0.000913	5.70%
K 766.490†	9.8	0.00396	mg/L	0.004294	0.00396	mg/L	0.004294	108.57%
Mg 279.077†	8.7	0.00602	mg/L	0.003677	0.00602	mg/L	0.003677	61.05%
Mn 257.610†	2.1	0.00006	mg/L	0.000027	0.00006	mg/L	0.000027	47.56%
Mo 202.031†	-7.1	-0.00035	mg/L	0.000101	-0.00035	mg/L	0.000101	29.18%
Na 589.592†	192.5	0.01257	mg/L	0.001542	0.01257	mg/L	0.001542	12.27%
Na 330.237†	-3.7	-0.1286	mg/L	0.35490	-0.1286	mg/L	0.35490	275.94%
Ni 231.604†	7.3	0.00169	mg/L	0.000205	0.00169	mg/L	0.000205	12.17%
Pb 220.353†	11.7	0.00138	mg/L	0.000304	0.00138	mg/L	0.000304	22.07%
Sb 206.836†	-5.0	-0.00146	mg/L	0.001428	-0.00146	mg/L	0.001428	97.62%
Se 196.026†	2.5	0.00172	mg/L	0.002267	0.00172	mg/L	0.002267	131.42%
Si 288.158†	-3.5	-0.00165	mg/L	0.001770	-0.00165	mg/L	0.001770	107.53%
Sn 189.927†	1.2	0.00032	mg/L	0.000705	0.00032	mg/L	0.000705	216.88%
Sr 421.552†	-21.0	-0.00002	mg/L	0.000009	-0.00002	mg/L	0.000009	46.29%
Ti 334.903†	5.8	0.00026	mg/L	0.000170	0.00026	mg/L	0.000170	64.68%
Tl 190.801†	3.1	0.00125	mg/L	0.001175	0.00125	mg/L	0.001175	94.27%
V 292.402†	15.6	0.00010	mg/L	0.000105	0.00010	mg/L	0.000105	100.63%
Zn 206.200†	7.0	0.00169	mg/L	0.000151	0.00169	mg/L	0.000151	8.92%

Sequence No.: 9
Sample ID: WS27 MB1 SWC

Autosampler Location: 304
Date Collected: 6/11/2013 10:14:53 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 MB1 SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3101944.0	100.7	%	0.10				0.10%
ScR 361.383	375408.4	101.3	%	0.26				0.26%
Ag 328.068†	14.2	0.00007	mg/L	0.000147	0.00014	mg/L	0.000293	207.69%
Al 308.215†	3.2	0.00184	mg/L	0.003933	0.00367	mg/L	0.007867	214.12%
As 188.979†	0.3	0.00017	mg/L	0.001559	0.00034	mg/L	0.003119	904.85%
B 249.677†	-9.4	-0.00124	mg/L	0.000416	-0.00247	mg/L	0.000833	33.71%
Ba 233.527†	1.4	0.00030	mg/L	0.000519	0.00059	mg/L	0.001037	175.47%
Be 313.042†	15.2	0.00002	mg/L	0.000034	0.00005	mg/L	0.000068	145.51%
Ca 317.933†	71.9	0.00502	mg/L	0.000650	0.01004	mg/L	0.001300	12.95%
Cd 228.802†	-2.2	-0.00006	mg/L	0.000044	-0.00012	mg/L	0.000088	70.48%
Co 228.616†	0.1	0.00000	mg/L	0.000070	0.00000	mg/L	0.000141	>999.9%
Cr 267.716†	1.7	0.00026	mg/L	0.000426	0.00053	mg/L	0.000853	161.48%
Cu 324.752†	79.0	0.00026	mg/L	0.000051	0.00052	mg/L	0.000103	19.59%
Fe 273.955†	1.7	0.00129	mg/L	0.001666	0.00258	mg/L	0.003333	129.41%
K 766.490†	-3.9	-0.00159	mg/L	0.009779	-0.00319	mg/L	0.019557	613.45%
Mg 279.077†	11.7	0.00814	mg/L	0.006246	0.01628	mg/L	0.012491	76.73%
Mn 257.610†	-3.2	-0.00009	mg/L	0.000110	-0.00017	mg/L	0.000219	126.61%
Mo 202.031†	-4.2	-0.00021	mg/L	0.000090	-0.00041	mg/L	0.000180	43.42%
Na 589.592†	-80.6	-0.00526	mg/L	0.002145	-0.01053	mg/L	0.004289	40.74%
Na 330.237†	2.9	0.1020	mg/L	0.28789	0.2039	mg/L	0.57577	282.38%
Ni 231.604†	5.9	0.00137	mg/L	0.001000	0.00275	mg/L	0.002000	72.84%
Pb 220.353†	1.9	0.00022	mg/L	0.000354	0.00044	mg/L	0.000708	160.50%
Sb 206.836†	-6.3	-0.00187	mg/L	0.001190	-0.00374	mg/L	0.002381	63.67%
Se 196.026†	1.4	0.00092	mg/L	0.002056	0.00183	mg/L	0.004112	224.19%
Si 288.158†	26.3	0.01244	mg/L	0.002024	0.02487	mg/L	0.004048	16.28%
Sn 189.927†	1.8	0.00049	mg/L	0.000997	0.00097	mg/L	0.001994	204.91%
Sr 421.552†	16.6	0.00001	mg/L	0.000003	0.00003	mg/L	0.000005	17.07%
Ti 334.903†	0.4	0.00002	mg/L	0.000104	0.00004	mg/L	0.000208	578.63%
Tl 190.801†	3.7	0.00150	mg/L	0.001140	0.00300	mg/L	0.002281	75.94%
V 292.402†	-5.4	-0.00004	mg/L	0.000055	-0.00007	mg/L	0.000110	154.32%
Zn 206.200†	1.8	0.00045	mg/L	0.000440	0.00090	mg/L	0.000880	97.38%

Sequence No.: 10
Sample ID: WS27 A-L SWC

Autosampler Location: 305
Date Collected: 6/11/2013 10:19:09 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WS27 A-L SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3097678.0	100.5	%	0.30				0.30%
ScR 361.383	378967.6	102.2	%	0.47				0.46%
Ag 328.068†	-58.1	-0.00027	mg/L	0.000084	-0.00266	mg/L	0.000841	31.57%
Al 308.215†	29507.3	16.96	mg/L	0.054	169.6	mg/L	0.54	0.32%
As 188.979†	-59.4	0.00652	mg/L	0.002451	0.06518	mg/L	0.024512	37.61%
B 249.677†	4.1	0.00051	mg/L	0.000587	0.00510	mg/L	0.005865	114.97%
Ba 233.527†	335.8	0.06636	mg/L	0.000281	0.6636	mg/L	0.00281	0.42%
Be 313.042†	196.1	0.00027	mg/L	0.000031	0.00271	mg/L	0.000312	11.49%
Ca 317.933†	104579.7	7.301	mg/L	0.0180	73.01	mg/L	0.180	0.25%
Cd 228.802†	7.2	0.00040	mg/L	0.000102	0.00401	mg/L	0.001021	25.49%
Co 228.616†	419.4	0.00837	mg/L	0.000042	0.08374	mg/L	0.000419	0.50%
Cr 267.716†	148.1	0.02300	mg/L	0.000862	0.2300	mg/L	0.00862	3.75%
Cu 324.752†	6709.4	0.02301	mg/L	0.000083	0.2301	mg/L	0.00083	0.36%
Fe 273.955†	29324.4	22.54	mg/L	0.072	225.4	mg/L	0.72	0.32%
K 766.490†	2721.4	1.101	mg/L	0.0049	11.01	mg/L	0.049	0.44%
Mg 279.077†	6579.3	4.557	mg/L	0.0258	45.57	mg/L	0.258	0.57%
Mn 257.610†	9966.6	0.2679	mg/L	0.00176	2.679	mg/L	0.0176	0.66%
Mo 202.031†	11.9	0.00049	mg/L	0.000153	0.00485	mg/L	0.001525	31.44%
Na 589.592†	15037.6	0.9819	mg/L	0.00362	9.819	mg/L	0.0362	0.37%
Na 330.237†	13.8	0.7848	mg/L	0.13419	7.848	mg/L	1.3419	17.10%
Ni 231.604†	92.5	0.02140	mg/L	0.001089	0.2140	mg/L	0.01089	5.09%
Pb 220.353†	73.9	0.01155	mg/L	0.000638	0.1155	mg/L	0.00638	5.53%
Sb 206.836†	-5.8	-0.00076	mg/L	0.000971	-0.00758	mg/L	0.009715	128.12%
Se 196.026†	8.9	0.00412	mg/L	0.002564	0.04119	mg/L	0.025636	62.24%
Si 288.158†	2657.8	1.256	mg/L	0.0090	12.56	mg/L	0.090	0.72%
Sn 189.927†	-17.8	-0.00351	mg/L	0.001573	-0.03510	mg/L	0.015729	44.82%
Sr 421.552†	78758.0	0.07035	mg/L	0.000110	0.7035	mg/L	0.00110	0.16%
Ti 334.903†	27237.5	1.224	mg/L	0.0036	12.24	mg/L	0.036	0.30%
Tl 190.801†	-5.3	0.00061	mg/L	0.001568	0.00607	mg/L	0.015681	258.33%
V 292.402†	11485.5	0.07613	mg/L	0.000162	0.7613	mg/L	0.00162	0.21%
Zn 206.200†	217.0	0.05297	mg/L	0.000611	0.5297	mg/L	0.00611	1.15%

WRGU-02335

Sequence No.: 11
Sample ID: WS27 A SWC

Autosampler Location: 306
Date Collected: 6/11/2013 10:23:09 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 A SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3089896.8	100.3	%	0.27				0.27%
ScR 361.383	380912.9	102.7	%	0.33				0.32%
Ag 328.068†	-271.3	-0.00124	mg/L	0.000021	-0.00248	mg/L	0.000041	1.66%
Al 308.215†	147458.0	84.77	mg/L	0.172	169.5	mg/L	0.34	0.20%
As 188.979†	-298.4	0.02981	mg/L	0.000603	0.05962	mg/L	0.001206	2.02%
B 249.677†	65.5	0.00846	mg/L	0.001375	0.01692	mg/L	0.002750	16.25%
Ba 233.527†	1669.7	0.3302	mg/L	0.00125	0.6604	mg/L	0.00250	0.38%
Be 313.042†	866.7	0.00118	mg/L	0.000011	0.00237	mg/L	0.000023	0.96%
Ca 317.933†	522647.7	36.49	mg/L	0.073	72.98	mg/L	0.147	0.20%
Cd 228.802†	24.0	0.00165	mg/L	0.000141	0.00331	mg/L	0.000283	8.55%
Co 228.616†	2005.2	0.03965	mg/L	0.000183	0.07930	mg/L	0.000365	0.46%
Cr 267.716†	724.3	0.1125	mg/L	0.00125	0.2251	mg/L	0.00251	1.11%
Cu 324.752†	33474.3	0.1147	mg/L	0.00021	0.2295	mg/L	0.00042	0.18%
Fe 273.955†	144165.0	110.8	mg/L	0.42	221.6	mg/L	0.84	0.38%
K 766.490†	13828.4	5.594	mg/L	0.0479	11.19	mg/L	0.096	0.86%
Mg 279.077†	32563.6	22.55	mg/L	0.036	45.11	mg/L	0.072	0.16%
Mn 257.610†	48884.3	1.314	mg/L	0.0061	2.628	mg/L	0.0122	0.47%
Mo 202.031†	62.1	0.00256	mg/L	0.000384	0.00513	mg/L	0.000768	14.99%
Na 589.592†	75076.1	4.902	mg/L	0.0199	9.805	mg/L	0.0399	0.41%
Na 330.237†	102.7	5.089	mg/L	0.1344	10.18	mg/L	0.269	2.64%
Ni 231.604†	434.4	0.1005	mg/L	0.00193	0.2010	mg/L	0.00385	1.92%
Pb 220.353†	349.8	0.05550	mg/L	0.000117	0.1110	mg/L	0.00023	0.21%
Sb 206.836†	-5.7	0.00316	mg/L	0.002598	0.00632	mg/L	0.005197	82.25%
Se 196.026†	25.6	0.00779	mg/L	0.002435	0.01558	mg/L	0.004871	31.26%
Si 288.158†	12841.9	6.070	mg/L	0.0211	12.14	mg/L	0.042	0.35%
Sn 189.927†	-59.6	-0.00979	mg/L	0.000563	-0.01957	mg/L	0.001125	5.75%
Sr 421.552†	388836.8	0.3473	mg/L	0.00043	0.6946	mg/L	0.00086	0.12%
Ti 334.903†	134791.8	6.055	mg/L	0.0010	12.11	mg/L	0.002	0.02%
Tl 190.801†	-24.6	0.00358	mg/L	0.002476	0.00716	mg/L	0.004953	69.17%
V 292.402†	56586.9	0.3751	mg/L	0.00122	0.7501	mg/L	0.00244	0.32%
Zn 206.200†	1050.8	0.2565	mg/L	0.00089	0.5130	mg/L	0.00179	0.35%

Sequence No.: 12
Sample ID: WS27 ADUP SWC

Autosampler Location: 307
Date Collected: 6/11/2013 10:27:10 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 ADUP SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3089092.7	100.2	%	0.59				0.59%
ScR 361.383	379394.3	102.3	%	0.77				0.75%
Ag 328.068†	-276.9	-0.00127	mg/L	0.000109	-0.00254	mg/L	0.000218	8.61%
Al 308.215†	148566.4	85.41	mg/L	0.113	170.8	mg/L	0.23	0.13%
As 188.979†	-317.5	0.02729	mg/L	0.001307	0.05459	mg/L	0.002615	4.79%
B 249.677†	65.0	0.00839	mg/L	0.000446	0.01678	mg/L	0.000893	5.32%
Ba 233.527†	1689.5	0.3345	mg/L	0.00219	0.6689	mg/L	0.00437	0.65%
Be 313.042†	870.6	0.00119	mg/L	0.000027	0.00238	mg/L	0.000054	2.26%
Ca 317.933†	545649.2	38.10	mg/L	0.117	76.19	mg/L	0.234	0.31%
Cd 228.802†	27.6	0.00182	mg/L	0.000064	0.00363	mg/L	0.000127	3.50%
Co 228.616†	2042.3	0.04019	mg/L	0.000269	0.08037	mg/L	0.000538	0.67%
Cr 267.716†	744.0	0.1154	mg/L	0.00081	0.2308	mg/L	0.00161	0.70%
Cu 324.752†	32712.0	0.1121	mg/L	0.00094	0.2242	mg/L	0.00187	0.84%
Fe 273.955†	142975.5	109.9	mg/L	0.26	219.8	mg/L	0.51	0.23%
K 766.490†	14805.1	5.989	mg/L	0.0219	11.98	mg/L	0.044	0.37%
Mg 279.077†	33669.0	23.32	mg/L	0.080	46.64	mg/L	0.160	0.34%
Mn 257.610†	53725.9	1.444	mg/L	0.0033	2.888	mg/L	0.0066	0.23%
Mo 202.031†	71.6	0.00301	mg/L	0.000355	0.00601	mg/L	0.000710	11.81%
Na 589.592†	81588.0	5.327	mg/L	0.0094	10.65	mg/L	0.019	0.18%
Na 330.237†	114.6	5.564	mg/L	0.0604	11.13	mg/L	0.121	1.09%
Ni 231.604†	439.0	0.1016	mg/L	0.00102	0.2032	mg/L	0.00204	1.01%
Pb 220.353†	383.5	0.05968	mg/L	0.001294	0.1194	mg/L	0.00259	2.17%
Sb 206.836†	4.0	0.00618	mg/L	0.000391	0.01236	mg/L	0.000783	6.33%
Se 196.026†	21.7	0.00509	mg/L	0.004191	0.01017	mg/L	0.008382	82.41%
Si 288.158†	7204.4	3.407	mg/L	0.0185	6.814	mg/L	0.0370	0.54%
Sn 189.927†	-56.8	-0.00879	mg/L	0.000705	-0.01758	mg/L	0.001411	8.02%
Sr 421.552†	409527.7	0.3658	mg/L	0.00075	0.7316	mg/L	0.00150	0.20%
Ti 334.903†	140312.9	6.303	mg/L	0.0099	12.61	mg/L	0.020	0.16%
Tl 190.801†	-27.1	0.00245	mg/L	0.002803	0.00490	mg/L	0.005605	114.39%
V 292.402†	55805.7	0.3697	mg/L	0.00326	0.7394	mg/L	0.00651	0.88%
Zn 206.200†	1113.2	0.2712	mg/L	0.00231	0.5425	mg/L	0.00462	0.85%

Sequence No.: 13
Sample ID: WS27 AASPK SWC

Autosampler Location: 308
Date Collected: 6/11/2013 10:31:11 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 AASPK SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 AASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3070986.1	99.65	%	0.099				0.10%
ScR 361.383	372630.5	100.5	%	0.49				0.49%
Ag 328.068†	101145.0	0.5032	mg/L	0.00108	1.006	mg/L	0.0022	0.21%
Al 308.215†	163006.5	93.70	mg/L	0.034	187.4	mg/L	0.07	0.04%
As 188.979†	3315.4	2.001	mg/L	0.0073	4.002	mg/L	0.0146	0.37%
B 249.677†	79.8	0.00928	mg/L	0.000570	0.01856	mg/L	0.001141	6.15%
Ba 233.527†	11337.3	2.350	mg/L	0.0195	4.700	mg/L	0.0389	0.83%
Be 313.042†	311317.4	0.4801	mg/L	0.00103	0.9603	mg/L	0.00206	0.21%
Ca 317.933†	748476.6	52.26	mg/L	0.035	104.5	mg/L	0.07	0.07%
Cd 228.802†	18126.4	0.5178	mg/L	0.00035	1.036	mg/L	0.0007	0.07%
Co 228.616†	21333.2	0.5351	mg/L	0.00118	1.070	mg/L	0.0024	0.22%
Cr 267.716†	4141.7	0.6318	mg/L	0.00200	1.264	mg/L	0.0040	0.32%
Cu 324.752†	189177.6	0.6314	mg/L	0.00095	1.263	mg/L	0.0019	0.15%
Fe 273.955†	145815.4	112.1	mg/L	0.01	224.2	mg/L	0.03	0.01%
K 766.490†	38670.4	15.64	mg/L	0.059	31.28	mg/L	0.118	0.38%
Mg 279.077†	48378.9	33.54	mg/L	0.027	67.08	mg/L	0.055	0.08%
Mn 257.610†	67203.7	1.807	mg/L	0.0015	3.614	mg/L	0.0031	0.09%
Mo 202.031†	78.0	0.00311	mg/L	0.000369	0.00623	mg/L	0.000738	11.85%
Na 589.592†	243736.7	15.92	mg/L	0.042	31.83	mg/L	0.084	0.26%
Na 330.237†	424.5	16.17	mg/L	0.105	32.34	mg/L	0.209	0.65%
Ni 231.604†	2529.1	0.5844	mg/L	0.00392	1.169	mg/L	0.0078	0.67%
Pb 220.353†	17382.6	2.071	mg/L	0.0012	4.142	mg/L	0.0025	0.06%
Sb 206.836†	21.0	0.00605	mg/L	0.000547	0.01210	mg/L	0.001095	9.05%
Se 196.026†	2948.0	1.989	mg/L	0.0034	3.977	mg/L	0.0068	0.17%
Si 288.158†	9846.4	4.659	mg/L	0.0127	9.317	mg/L	0.0253	0.27%
Sn 189.927†	-69.0	-0.01010	mg/L	0.001682	-0.02020	mg/L	0.003365	16.66%
Sr 421.552†	977687.1	0.8733	mg/L	0.00066	1.747	mg/L	0.0013	0.08%
Ti 334.903†	140416.4	6.307	mg/L	0.0096	12.61	mg/L	0.019	0.15%
Tl 190.801†	4690.5	1.897	mg/L	0.0062	3.795	mg/L	0.0124	0.33%
V 292.402†	127438.7	0.8573	mg/L	0.00128	1.715	mg/L	0.0026	0.15%
Zn 206.200†	3156.4	0.7691	mg/L	0.00484	1.538	mg/L	0.0097	0.63%

Sequence No.: 14
Sample ID: ~~WS27 APOST SWC~~ zzzzzz
Dilution: 2.000000X

BA 6/11/13

Autosampler Location: 309
Date Collected: 6/11/2013 10:35:15 AM
Data Type: Original

Nebulizer Parameters: WS27 APOST SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3067645.3	99.54	%	0.534				0.54%
ScR 361.383	372509.5	100.5	%	0.30				0.30%
Ag 328.068†	104532.9	0.5201	mg/L	0.00362	1.040	mg/L	0.0072	0.70%
Al 308.215†	152399.5	87.60	mg/L	0.150	175.2	mg/L	0.30	0.17%
As 188.979†	3445.9	2.065	mg/L	0.0041	4.130	mg/L	0.0082	0.20%
B 249.677†	72.3	0.00828	mg/L	0.000654	0.01656	mg/L	0.001308	7.90%
Ba 233.527†	11649.0	2.415	mg/L	0.0092	4.831	mg/L	0.0183	0.38%
Be 313.042†	316561.0	0.4882	mg/L	0.00007	0.9765	mg/L	0.00014	0.01%
Ca 317.933†	667683.6	46.61	mg/L	0.180	93.23	mg/L	0.361	0.39%
Cd 228.802†	18552.4	0.5298	mg/L	0.00191	1.060	mg/L	0.0038	0.36%
Co 228.616†	21737.9	0.5459	mg/L	0.00215	1.092	mg/L	0.0043	0.39%
Cr 267.716†	4168.1	0.6360	mg/L	0.00341	1.272	mg/L	0.0068	0.54%
Cu 324.752†	193059.9	0.6444	mg/L	0.00372	1.289	mg/L	0.0074	0.58%
Fe 273.955†	146277.7	112.4	mg/L	0.32	224.9	mg/L	0.65	0.29%
K 766.490†	39340.2	15.91	mg/L	0.025	31.83	mg/L	0.049	0.15%
Mg 279.077†	47213.5	32.73	mg/L	0.088	65.46	mg/L	0.175	0.27%
Mn 257.610†	67335.0	1.810	mg/L	0.0030	3.621	mg/L	0.0060	0.17%
Mo 202.031†	71.5	0.00287	mg/L	0.000122	0.00573	mg/L	0.000245	4.27%
Na 589.592†	231665.3	15.13	mg/L	0.032	30.25	mg/L	0.065	0.21%
Na 330.237†	400.5	15.30	mg/L	0.170	30.59	mg/L	0.340	1.11%
Ni 231.604†	2544.1	0.5878	mg/L	0.00380	1.176	mg/L	0.0076	0.65%
Pb 220.353†	17680.8	2.105	mg/L	0.0080	4.210	mg/L	0.0159	0.38%
Sb 206.836†	23.5	0.00665	mg/L	0.001985	0.01330	mg/L	0.003970	29.84%
Se 196.026†	3062.5	2.067	mg/L	0.0103	4.134	mg/L	0.0205	0.50%
Si 288.158†	13036.1	6.166	mg/L	0.0219	12.33	mg/L	0.044	0.36%
Sn 189.927†	-63.6	-0.00946	mg/L	0.000261	-0.01893	mg/L	0.000523	2.76%
Sr 421.552†	955303.3	0.8533	mg/L	0.00169	1.707	mg/L	0.0034	0.20%
Ti 334.903†	135370.6	6.080	mg/L	0.0089	12.16	mg/L	0.018	0.15%
Tl 190.801†	4836.9	1.956	mg/L	0.0097	3.912	mg/L	0.0194	0.50%
V 292.402†	131652.1	0.8860	mg/L	0.00645	1.772	mg/L	0.0129	0.73%
Zn 206.200†	3087.3	0.7526	mg/L	0.00603	1.505	mg/L	0.0121	0.80%

Sequence No.: 15
Sample ID: WS27 REF1 SWC

Autosampler Location: 310
Date Collected: 6/11/2013 10:39:19 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 REF1 SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WS27 REF1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3088845.6	100.2	%	0.41				0.40%
ScR 361.383	378320.3	102.0	%	0.34				0.34%
Ag 328.068†	223227.1	1.110	mg/L	0.0058	2.221	mg/L	0.0116	0.52%
Al 308.215†	163215.3	93.82	mg/L	0.043	187.6	mg/L	0.09	0.05%
As 188.979†	2374.4	1.362	mg/L	0.0131	2.724	mg/L	0.0263	0.96%
B 249.677†	8450.5	1.104	mg/L	0.0076	2.207	mg/L	0.0153	0.69%
Ba 233.527†	15761.8	3.268	mg/L	0.0066	6.537	mg/L	0.0131	0.20%
Be 313.042†	573162.1	0.8843	mg/L	0.00449	1.769	mg/L	0.0090	0.51%
Ca 317.933†	565921.8	39.51	mg/L	0.128	79.02	mg/L	0.256	0.32%
Cd 228.802†	25084.1	0.7230	mg/L	0.00496	1.446	mg/L	0.0099	0.69%
Co 228.616†	29291.9	0.7458	mg/L	0.00386	1.492	mg/L	0.0077	0.52%
Cr 267.716†	4920.3	0.7526	mg/L	0.00707	1.505	mg/L	0.0141	0.94%
Cu 324.752†	210402.1	0.7042	mg/L	0.00556	1.408	mg/L	0.0111	0.79%
Fe 273.955†	196111.8	150.7	mg/L	0.59	301.5	mg/L	1.18	0.39%
K 766.490†	90622.7	36.66	mg/L	0.153	73.31	mg/L	0.306	0.42%
Mg 279.077†	40540.4	28.08	mg/L	0.125	56.15	mg/L	0.251	0.45%
Mn 257.610†	165509.5	4.450	mg/L	0.0144	8.900	mg/L	0.0289	0.32%
Mo 202.031†	9287.6	0.4527	mg/L	0.00272	0.9055	mg/L	0.00543	0.60%
Na 589.592†	87081.8	5.686	mg/L	0.0051	11.37	mg/L	0.010	0.09%
Na 330.237†	144.4	5.003	mg/L	0.3556	10.01	mg/L	0.711	7.11%
Ni 231.604†	2413.2	0.5581	mg/L	0.00212	1.116	mg/L	0.0042	0.38%
Pb 220.353†	11147.1	1.332	mg/L	0.0080	2.664	mg/L	0.0160	0.60%
Sb 206.836†	1523.4	0.4585	mg/L	0.00172	0.9170	mg/L	0.00344	0.37%
Se 196.026†	2514.1	1.694	mg/L	0.0134	3.388	mg/L	0.0268	0.79%
Si 288.158†	5622.4	2.663	mg/L	0.0031	5.326	mg/L	0.0061	0.12%
Sn 189.927†	6180.8	1.637	mg/L	0.0088	3.274	mg/L	0.0176	0.54%
Sr 421.552†	616765.8	0.5509	mg/L	0.00045	1.102	mg/L	0.0009	0.08%
Ti 334.903†	52630.2	2.362	mg/L	0.0035	4.724	mg/L	0.0069	0.15%
Tl 190.801†	3321.1	1.351	mg/L	0.0079	2.701	mg/L	0.0159	0.59%
V 292.402†	127459.9	0.8587	mg/L	0.00534	1.717	mg/L	0.0107	0.62%
Zn 206.200†	7305.3	1.779	mg/L	0.0048	3.558	mg/L	0.0096	0.27%

Sequence No.: 16
Sample ID: WS27 MB1SPK SWC

Autosampler Location: 311
Date Collected: 6/11/2013 10:42:35 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 MB1SPK SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3081910.5	100.0	%	0.21				0.21%
ScR 361.383	375481.3	101.3	%	0.63				0.62%
Ag 328.068†	104650.2	0.5206	mg/L	0.00339	1.041	mg/L	0.0068	0.65%
Al 308.215†	3553.9	2.036	mg/L	0.0136	4.071	mg/L	0.0272	0.67%
As 188.979†	3759.7	2.043	mg/L	0.0067	4.085	mg/L	0.0135	0.33%
B 249.677†	2.2	-0.00078	mg/L	0.000841	-0.00156	mg/L	0.001683	107.53%
Ba 233.527†	9890.5	2.066	mg/L	0.0177	4.133	mg/L	0.0354	0.86%
Be 313.042†	315418.0	0.4866	mg/L	0.00374	0.9732	mg/L	0.00748	0.77%
Ca 317.933†	140400.1	9.802	mg/L	0.0209	19.60	mg/L	0.042	0.21%
Cd 228.802†	18041.3	0.5140	mg/L	0.00230	1.028	mg/L	0.0046	0.45%
Co 228.616†	19735.8	0.5064	mg/L	0.00341	1.013	mg/L	0.0068	0.67%
Cr 267.716†	3443.5	0.5235	mg/L	0.00494	1.047	mg/L	0.0099	0.94%
Cu 324.752†	152964.1	0.5077	mg/L	0.00258	1.015	mg/L	0.0052	0.51%
Fe 273.955†	2678.7	2.056	mg/L	0.0129	4.112	mg/L	0.0259	0.63%
K 766.490†	24525.8	9.921	mg/L	0.0414	19.84	mg/L	0.083	0.42%
Mg 279.077†	14018.5	9.739	mg/L	0.0198	19.48	mg/L	0.040	0.20%
Mn 257.610†	18206.1	0.4898	mg/L	0.00282	0.9796	mg/L	0.00563	0.58%
Mo 202.031†	23.8	0.00101	mg/L	0.000224	0.00202	mg/L	0.000448	22.18%
Na 589.592†	151888.8	9.918	mg/L	0.0365	19.84	mg/L	0.073	0.37%
Na 330.237†	288.4	9.875	mg/L	0.2728	19.75	mg/L	0.546	2.76%
Ni 231.604†	2116.3	0.4888	mg/L	0.00411	0.9777	mg/L	0.00821	0.84%
Pb 220.353†	17309.9	2.047	mg/L	0.0122	4.093	mg/L	0.0243	0.59%
Sb 206.836†	23.0	0.00160	mg/L	0.000454	0.00320	mg/L	0.000908	28.42%
Se 196.026†	3013.3	2.043	mg/L	0.0007	4.086	mg/L	0.0014	0.03%
Si 288.158†	18.7	0.01227	mg/L	0.004876	0.02454	mg/L	0.009751	39.74%
Sn 189.927†	-21.6	-0.00435	mg/L	0.001272	-0.00870	mg/L	0.002543	29.24%
Sr 421.552†	553778.8	0.4946	mg/L	0.00137	0.9892	mg/L	0.00275	0.28%
Ti 334.903†	42.0	0.00118	mg/L	0.000302	0.00235	mg/L	0.000604	25.67%
Tl 190.801†	5032.6	2.022	mg/L	0.0088	4.043	mg/L	0.0175	0.43%
V 292.402†	75210.3	0.5119	mg/L	0.00282	1.024	mg/L	0.0056	0.55%
Zn 206.200†	2025.7	0.4934	mg/L	0.00448	0.9868	mg/L	0.00897	0.91%

Sequence No.: 17
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 6/11/2013 10:46:36 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3065064.6	99.46	%	0.441				0.44%
ScR 361.383	368378.4	99.36	%	0.407				0.41%
Ag 328.068†	212323.6	1.056	mg/L	0.0030	1.056	mg/L	0.0030	0.29%
Al 308.215†	3637.3	2.058	mg/L	0.0104	2.058	mg/L	0.0104	0.50%
As 188.979†	3707.7	2.044	mg/L	0.0105	2.044	mg/L	0.0105	0.52%
B 249.677†	7707.5	1.007	mg/L	0.0051	1.007	mg/L	0.0051	0.50%
Ba 233.527†	4967.6	1.038	mg/L	0.0096	1.038	mg/L	0.0096	0.93%
Be 313.042†	657491.4	1.014	mg/L	0.0055	1.014	mg/L	0.0055	0.54%
Ca 317.933†	28329.6	1.978	mg/L	0.0074	1.978	mg/L	0.0074	0.37%
Cd 228.802†	35572.1	1.024	mg/L	0.0036	1.024	mg/L	0.0036	0.35%
Co 228.616†	39024.4	0.9999	mg/L	0.00241	0.9999	mg/L	0.00241	0.24%
Cr 267.716†	6882.5	1.048	mg/L	0.0042	1.048	mg/L	0.0042	0.40%
Cu 324.752†	302674.4	1.004	mg/L	0.0010	1.004	mg/L	0.0010	0.10%
Fe 273.955†	2710.7	2.077	mg/L	0.0058	2.077	mg/L	0.0058	0.28%
K 766.490†	49505.1	20.02	mg/L	0.081	20.02	mg/L	0.081	0.40%
Mg 279.077†	2894.5	2.018	mg/L	0.0108	2.018	mg/L	0.0108	0.53%
Mn 257.610†	36537.0	0.9826	mg/L	0.00173	0.9826	mg/L	0.00173	0.18%
Mo 202.031†	20075.0	0.9797	mg/L	0.00588	0.9797	mg/L	0.00588	0.60%
Na 589.592†	773427.1	50.50	mg/L	0.191	50.50	mg/L	0.191	0.38%
Na 330.237†	1477.1	51.54	mg/L	0.444	51.54	mg/L	0.444	0.86%
Ni 231.604†	4411.2	1.021	mg/L	0.0034	1.021	mg/L	0.0034	0.33%
Pb 220.353†	16946.8	2.004	mg/L	0.0094	2.004	mg/L	0.0094	0.47%
Sb 206.836†	7097.0	2.091	mg/L	0.0117	2.091	mg/L	0.0117	0.56%
Se 196.026†	2975.5	2.017	mg/L	0.0111	2.017	mg/L	0.0111	0.55%
Si 288.158†	4400.4	2.084	mg/L	0.0244	2.084	mg/L	0.0244	1.17%
Sn 189.927†	3758.0	0.9933	mg/L	0.00956	0.9933	mg/L	0.00956	0.96%
Sr 421.552†	1126268.9	1.006	mg/L	0.0019	1.006	mg/L	0.0019	0.19%
Ti 334.903†	22268.6	0.9995	mg/L	0.00292	0.9995	mg/L	0.00292	0.29%
Tl 190.801†	5200.9	2.086	mg/L	0.0066	2.086	mg/L	0.0066	0.31%
V 292.402†	151283.7	1.030	mg/L	0.0038	1.030	mg/L	0.0038	0.37%
Zn 206.200†	4139.5	1.008	mg/L	0.0053	1.008	mg/L	0.0053	0.52%

Sequence No.: 18
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 6/11/2013 10:50:40 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3087616.5	100.2	%	0.16				0.16%
ScR 361.383	374330.7	101.0	%	0.47				0.46%
Ag 328.068†	26.1	0.00013	mg/L	0.000067	0.00013	mg/L	0.000067	51.27%
Al 308.215†	-2.0	-0.00117	mg/L	0.001395	-0.00117	mg/L	0.001395	118.91%
As 188.979†	0.8	0.00044	mg/L	0.000889	0.00044	mg/L	0.000889	199.91%
B 249.677†	3.2	0.00042	mg/L	0.000306	0.00042	mg/L	0.000306	73.43%
Ba 233.527†	-2.9	-0.00060	mg/L	0.000182	-0.00060	mg/L	0.000182	30.36%
Be 313.042†	38.8	0.00006	mg/L	0.000032	0.00006	mg/L	0.000032	53.94%
Ca 317.933†	9.7	0.00068	mg/L	0.000697	0.00068	mg/L	0.000697	102.73%
Cd 228.802†	9.3	0.00027	mg/L	0.000112	0.00027	mg/L	0.000112	41.53%
Co 228.616†	1.4	0.00004	mg/L	0.000186	0.00004	mg/L	0.000186	516.54%
Cr 267.716†	-1.1	-0.00016	mg/L	0.000749	-0.00016	mg/L	0.000749	459.93%
Cu 324.752†	137.1	0.00046	mg/L	0.000129	0.00046	mg/L	0.000129	28.46%
Fe 273.955†	2.3	0.00174	mg/L	0.000965	0.00174	mg/L	0.000965	55.35%
K 766.490†	16.8	0.00679	mg/L	0.006212	0.00679	mg/L	0.006212	91.44%
Mg 279.077†	-0.4	-0.00027	mg/L	0.002919	-0.00027	mg/L	0.002919	>999.9%
Mn 257.610†	-2.1	-0.00006	mg/L	0.000168	-0.00006	mg/L	0.000168	291.71%
Mo 202.031†	7.6	0.00037	mg/L	0.000127	0.00037	mg/L	0.000127	34.04%
Na 589.592†	-73.7	-0.00481	mg/L	0.002023	-0.00481	mg/L	0.002023	42.06%
Na 330.237†	2.4	0.08439	mg/L	0.272358	0.08439	mg/L	0.272358	322.74%
Ni 231.604†	5.4	0.00126	mg/L	0.000636	0.00126	mg/L	0.000636	50.57%
Pb 220.353†	-2.1	-0.00025	mg/L	0.000599	-0.00025	mg/L	0.000599	239.80%
Sb 206.836†	8.7	0.00258	mg/L	0.001239	0.00258	mg/L	0.001239	47.98%
Se 196.026†	0.7	0.00050	mg/L	0.006756	0.00050	mg/L	0.006756	>999.9%
Si 288.158†	-0.1	-0.00003	mg/L	0.001714	-0.00003	mg/L	0.001714	>999.9%
Sn 189.927†	1.9	0.00049	mg/L	0.000525	0.00049	mg/L	0.000525	107.11%
Sr 421.552†	21.1	0.00002	mg/L	0.000013	0.00002	mg/L	0.000013	69.37%
Ti 334.903†	6.3	0.00028	mg/L	0.000212	0.00028	mg/L	0.000212	74.54%
Tl 190.801†	4.9	0.00197	mg/L	0.000414	0.00197	mg/L	0.000414	21.05%
V 292.402†	18.0	0.00012	mg/L	0.000112	0.00012	mg/L	0.000112	92.53%
Zn 206.200†	1.2	0.00030	mg/L	0.000467	0.00030	mg/L	0.000467	156.38%

Sequence No.: 19
Sample ID: CRI

Autosampler Location: 301
Date Collected: 6/11/2013 10:54:55 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3091787.5	100.3	%	0.16				0.16%
ScR 361.383	374960.9	101.1	%	0.49				0.48%
Ag 328.068†	618.7	0.00308	mg/L	0.000067	0.00308	mg/L	0.000067	2.18%
Al 308.215†	90.4	0.05186	mg/L	0.003907	0.05186	mg/L	0.003907	7.53%
As 188.979†	91.7	0.05001	mg/L	0.001077	0.05001	mg/L	0.001077	2.15%
B 249.677†	139.1	0.01819	mg/L	0.000063	0.01819	mg/L	0.000063	0.35%
Ba 233.527†	12.7	0.00264	mg/L	0.000442	0.00264	mg/L	0.000442	16.76%
Be 313.042†	620.5	0.00096	mg/L	0.000009	0.00096	mg/L	0.000009	0.93%
Ca 317.933†	787.6	0.05499	mg/L	0.000417	0.05499	mg/L	0.000417	0.76%
Cd 228.802†	85.9	0.00224	mg/L	0.000071	0.00224	mg/L	0.000071	3.16%
Co 228.616†	125.0	0.00320	mg/L	0.000021	0.00320	mg/L	0.000021	0.65%
Cr 267.716†	30.7	0.00467	mg/L	0.000760	0.00467	mg/L	0.000760	16.26%
Cu 324.752†	748.7	0.00248	mg/L	0.000023	0.00248	mg/L	0.000023	0.91%
Fe 273.955†	67.7	0.05203	mg/L	0.000822	0.05203	mg/L	0.000822	1.58%
K 766.490†	1249.8	0.5056	mg/L	0.00554	0.5056	mg/L	0.00554	1.10%
Mg 279.077†	79.1	0.05494	mg/L	0.002473	0.05494	mg/L	0.002473	4.50%
Mn 257.610†	37.5	0.00101	mg/L	0.000115	0.00101	mg/L	0.000115	11.34%
Mo 202.031†	98.5	0.00480	mg/L	0.000029	0.00480	mg/L	0.000029	0.60%
Na 589.592†	7422.5	0.4847	mg/L	0.00358	0.4847	mg/L	0.00358	0.74%
Na 330.237†	16.1	0.5585	mg/L	0.07127	0.5585	mg/L	0.07127	12.76%
Ni 231.604†	50.9	0.01179	mg/L	0.000130	0.01179	mg/L	0.000130	1.10%
Pb 220.353†	169.9	0.02010	mg/L	0.000157	0.02010	mg/L	0.000157	0.78%
Sb 206.836†	169.8	0.05009	mg/L	0.000761	0.05009	mg/L	0.000761	1.52%
Se 196.026†	69.5	0.04711	mg/L	0.001135	0.04711	mg/L	0.001135	2.41%
Si 288.158†	128.9	0.06092	mg/L	0.003374	0.06092	mg/L	0.003374	5.54%
Sn 189.927†	40.5	0.01071	mg/L	0.000924	0.01071	mg/L	0.000924	8.63%
Sr 421.552†	1099.2	0.00098	mg/L	0.000024	0.00098	mg/L	0.000024	2.46%
Ti 334.903†	114.2	0.00512	mg/L	0.000352	0.00512	mg/L	0.000352	6.87%
Tl 190.801†	126.2	0.05078	mg/L	0.001399	0.05078	mg/L	0.001399	2.76%
V 292.402†	429.1	0.00292	mg/L	0.000180	0.00292	mg/L	0.000180	6.14%
Zn 206.200†	47.0	0.01146	mg/L	0.000489	0.01146	mg/L	0.000489	4.26%

Sequence No.: 20
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 6/11/2013 10:59:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2985790.8	96.89	%	0.358				0.37%
ScR 361.383	364889.5	98.42	%	0.600				0.61%
Ag 328.068†	-212.3	-0.00105	mg/L	0.000284	-0.00105	mg/L	0.000284	26.98%
Al 308.215†	350808.9	201.7	mg/L	0.29	201.7	mg/L	0.29	0.14%
As 188.979†	46.0	0.01793	mg/L	0.003430	0.01793	mg/L	0.003430	19.13%
B 249.677†	-54.9	-0.00718	mg/L	0.000739	-0.00718	mg/L	0.000739	10.30%
Ba 233.527†	156.3	-0.00090	mg/L	0.000942	-0.00090	mg/L	0.000942	104.56%
Be 313.042†	66.3	0.00010	mg/L	0.000014	0.00010	mg/L	0.000014	14.17%
Ca 317.933†	1434497.6	100.2	mg/L	0.42	100.2	mg/L	0.42	0.42%
Cd 228.802†	22.7	0.00052	mg/L	0.000088	0.00052	mg/L	0.000088	16.71%
Co 228.616†	96.3	0.00006	mg/L	0.000196	0.00006	mg/L	0.000196	314.30%
Cr 267.716†	7.7	-0.00049	mg/L	0.001032	-0.00049	mg/L	0.001032	209.97%
Cu 324.752†	-2298.5	0.00061	mg/L	0.000081	0.00061	mg/L	0.000081	13.25%
Fe 273.955†	259174.9	199.2	mg/L	1.45	199.2	mg/L	1.45	0.73%
K 766.490†	8.1	0.00327	mg/L	0.008487	0.00327	mg/L	0.008487	259.45%
Mg 279.077†	150748.3	104.6	mg/L	0.59	104.6	mg/L	0.59	0.56%
Mn 257.610†	32.8	0.00019	mg/L	0.000372	0.00019	mg/L	0.000372	194.63%
Mo 202.031†	35.4	0.00045	mg/L	0.000331	0.00045	mg/L	0.000331	72.82%
Na 589.592†	16.7	0.00109	mg/L	0.002095	0.00109	mg/L	0.002095	192.00%
Na 330.237†	1.8	-0.3704	mg/L	0.24855	-0.3704	mg/L	0.24855	67.11%
Ni 231.604†	6.3	0.00148	mg/L	0.000903	0.00148	mg/L	0.000903	60.91%
Pb 220.353†	-343.7	-0.00377	mg/L	0.001176	-0.00377	mg/L	0.001176	31.20%
Sb 206.836†	33.5	0.00966	mg/L	0.001225	0.00966	mg/L	0.001225	12.68%
Se 196.026†	56.8	0.01640	mg/L	0.002357	0.01640	mg/L	0.002357	14.37%
Si 288.158†	-35.1	-0.00473	mg/L	0.001811	-0.00473	mg/L	0.001811	38.33%
Sn 189.927†	-97.6	-0.01289	mg/L	0.001068	-0.01289	mg/L	0.001068	8.29%
Sr 421.552†	6062.3	0.00541	mg/L	0.000056	0.00541	mg/L	0.000056	1.04%
Ti 334.903†	194.9	0.00253	mg/L	0.000436	0.00253	mg/L	0.000436	17.24%
Tl 190.801†	-64.2	0.00148	mg/L	0.001651	0.00148	mg/L	0.001651	111.76%
V 292.402†	1387.5	-0.00115	mg/L	0.000422	-0.00115	mg/L	0.000422	36.62%
Zn 206.200†	20.6	0.00377	mg/L	0.000274	0.00377	mg/L	0.000274	7.27%

Cont.

Sequence No.: 21
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 6/11/2013 11:03:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2987270.5	96.93	%	0.291				0.30%
ScR 361.383	364695.0	98.37	%	0.409				0.42%
Ag 328.068†	215011.6	1.070	mg/L	0.0041	1.070	mg/L	0.0041	0.38%
Al 308.215†	351634.1	202.2	mg/L	0.48	202.2	mg/L	0.48	0.24%
As 188.979†	1898.5	1.024	mg/L	0.0033	1.024	mg/L	0.0033	0.32%
B 249.677†	-52.0	-0.00880	mg/L	0.000579	-0.00880	mg/L	0.000579	6.58%
Ba 233.527†	5043.2	1.020	mg/L	0.0048	1.020	mg/L	0.0048	0.47%
Be 313.042†	644681.2	0.9946	mg/L	0.00219	0.9946	mg/L	0.00219	0.22%
Ca 317.933†	1432537.9	100.0	mg/L	0.34	100.0	mg/L	0.34	0.34%
Cd 228.802†	35159.4	1.018	mg/L	0.0033	1.018	mg/L	0.0033	0.32%
Co 228.616†	37165.4	0.9514	mg/L	0.00480	0.9514	mg/L	0.00480	0.50%
Cr 267.716†	6688.6	1.017	mg/L	0.0052	1.017	mg/L	0.0052	0.51%
Cu 324.752†	314070.6	1.051	mg/L	0.0046	1.051	mg/L	0.0046	0.44%
Fe 273.955†	258714.5	198.9	mg/L	0.95	198.9	mg/L	0.95	0.48%
K 766.490†	-56.5	-0.02286	mg/L	0.013631	-0.02286	mg/L	0.013631	59.62%
Mg 279.077†	144110.2	100.00	mg/L	0.342	100.00	mg/L	0.342	0.34%
Mn 257.610†	35868.1	0.9638	mg/L	0.00373	0.9638	mg/L	0.00373	0.39%
Mo 202.031†	37.1	0.00049	mg/L	0.000144	0.00049	mg/L	0.000144	29.48%
Na 589.592†	-117.4	-0.00766	mg/L	0.002268	-0.00766	mg/L	0.002268	29.59%
Na 330.237†	15.9	-0.1710	mg/L	0.13899	-0.1710	mg/L	0.13899	81.26%
Ni 231.604†	4184.7	0.9684	mg/L	0.00488	0.9684	mg/L	0.00488	0.50%
Pb 220.353†	8045.1	0.9884	mg/L	0.00238	0.9884	mg/L	0.00238	0.24%
Sb 206.836†	3508.5	1.024	mg/L	0.0062	1.024	mg/L	0.0062	0.61%
Se 196.026†	1529.9	1.014	mg/L	0.0060	1.014	mg/L	0.0060	0.59%
Si 288.158†	-45.4	-0.00562	mg/L	0.001788	-0.00562	mg/L	0.001788	31.79%
Sn 189.927†	-97.0	-0.01221	mg/L	0.001805	-0.01221	mg/L	0.001805	14.78%
Sr 421.552†	6081.3	0.00543	mg/L	Cont. 0.000021	0.00543	mg/L	0.000021	0.39%
Ti 334.903†	193.6	0.00228	mg/L	0.000186	0.00228	mg/L	0.000186	8.13%
Tl 190.801†	2276.8	0.9343	mg/L	0.00488	0.9343	mg/L	0.00488	0.52%
V 292.402†	147796.3	0.9956	mg/L	0.00506	0.9956	mg/L	0.00506	0.51%
Zn 206.200†	3946.6	0.9601	mg/L	0.00686	0.9601	mg/L	0.00686	0.71%

Sequence No.: 22
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 6/11/2013 11:07:30 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3058168.5	99.23	%	0.251				0.25%
ScR 361.383	366946.9	98.98	%	0.214				0.22%
Ag 328.068†	210929.0	1.049	mg/L	0.0063	1.049	mg/L	0.0063	0.60%
Al 308.215†	3663.0	2.072	mg/L	0.0060	2.072	mg/L	0.0060	0.29%
As 188.979†	3677.3	2.027	mg/L	0.0071	2.027	mg/L	0.0071	0.35%
B 249.677†	7702.9	1.006	mg/L	0.0038	1.006	mg/L	0.0038	0.37%
Ba 233.527†	4987.6	1.042	mg/L	0.0035	1.042	mg/L	0.0035	0.33%
Be 313.042†	659828.7	1.018	mg/L	0.0019	1.018	mg/L	0.0019	0.18%
Ca 317.933†	28508.2	1.990	mg/L	0.0067	1.990	mg/L	0.0067	0.34%
Cd 228.802†	35558.8	1.024	mg/L	0.0089	1.024	mg/L	0.0089	0.87%
Co 228.616†	39267.8	1.006	mg/L	0.0034	1.006	mg/L	0.0034	0.33%
Cr 267.716†	6906.0	1.051	mg/L	0.0060	1.051	mg/L	0.0060	0.57%
Cu 324.752†	313775.1	1.041	mg/L	0.0031	1.041	mg/L	0.0031	0.29%
Fe 273.955†	2730.4	2.093	mg/L	0.0084	2.093	mg/L	0.0084	0.40%
K 766.490†	49815.7	20.15	mg/L	0.029	20.15	mg/L	0.029	0.15%
Mg 279.077†	2893.9	2.017	mg/L	0.0120	2.017	mg/L	0.0120	0.59%
Mn 257.610†	36467.2	0.9808	mg/L	0.00118	0.9808	mg/L	0.00118	0.12%
Mo 202.031†	20618.8	1.006	mg/L	0.0021	1.006	mg/L	0.0021	0.21%
Na 589.592†	772663.8	50.45	mg/L	0.148	50.45	mg/L	0.148	0.29%
Na 330.237†	1469.8	51.29	mg/L	0.161	51.29	mg/L	0.161	0.31%
Ni 231.604†	4421.0	1.023	mg/L	0.0048	1.023	mg/L	0.0048	0.47%
Pb 220.353†	17408.4	2.059	mg/L	0.0064	2.059	mg/L	0.0064	0.31%
Sb 206.836†	7048.5	2.076	mg/L	0.0019	2.076	mg/L	0.0019	0.09%
Se 196.026†	2957.1	2.004	mg/L	0.0062	2.004	mg/L	0.0062	0.31%
Si 288.158†	4405.5	2.086	mg/L	0.0146	2.086	mg/L	0.0146	0.70%
Sn 189.927†	3734.6	0.9871	mg/L	0.00159	0.9871	mg/L	0.00159	0.16%
Sr 421.552†	1126189.5	1.006	mg/L	0.0004	1.006	mg/L	0.0004	0.04%
Ti 334.903†	22251.8	0.9987	mg/L	0.00145	0.9987	mg/L	0.00145	0.14%
Tl 190.801†	5169.1	2.073	mg/L	0.0052	2.073	mg/L	0.0052	0.25%
V 292.402†	150549.1	1.025	mg/L	0.0054	1.025	mg/L	0.0054	0.53%
Zn 206.200†	4162.2	1.014	mg/L	0.0045	1.014	mg/L	0.0045	0.44%

Sequence No.: 23
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 6/11/2013 11:11:35 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3093157.3	100.4	%	0.12				0.12%
ScR 361.383	375367.1	101.2	%	0.10				0.10%
Ag 328.068†	-5.0	-0.00003	mg/L	0.000097	-0.00003	mg/L	0.000097	388.61%
Al 308.215†	-3.7	-0.00213	mg/L	0.004894	-0.00213	mg/L	0.004894	229.87%
As 188.979†	1.5	0.00085	mg/L	0.001105	0.00085	mg/L	0.001105	130.36%
B 249.677†	-6.4	-0.00083	mg/L	0.000394	-0.00083	mg/L	0.000394	47.33%
Ba 233.527†	-3.1	-0.00065	mg/L	0.000528	-0.00065	mg/L	0.000528	80.94%
Be 313.042†	45.9	0.00007	mg/L	0.000008	0.00007	mg/L	0.000008	11.14%
Ca 317.933†	14.9	0.00104	mg/L	0.000729	0.00104	mg/L	0.000729	69.89%
Cd 228.802†	7.4	0.00021	mg/L	0.000057	0.00021	mg/L	0.000057	26.95%
Co 228.616†	7.2	0.00018	mg/L	0.000045	0.00018	mg/L	0.000045	24.47%
Cr 267.716†	1.4	0.00021	mg/L	0.000410	0.00021	mg/L	0.000410	194.04%
Cu 324.752†	133.4	0.00044	mg/L	0.000060	0.00044	mg/L	0.000060	13.61%
Fe 273.955†	2.9	0.00225	mg/L	0.000835	0.00225	mg/L	0.000835	37.18%
K 766.490†	15.4	0.00621	mg/L	0.013161	0.00621	mg/L	0.013161	211.79%
Mg 279.077†	1.9	0.00134	mg/L	0.001077	0.00134	mg/L	0.001077	80.17%
Mn 257.610†	-1.8	-0.00005	mg/L	0.000106	-0.00005	mg/L	0.000106	215.21%
Mo 202.031†	6.8	0.00033	mg/L	0.000208	0.00033	mg/L	0.000208	63.09%
Na 589.592†	-75.5	-0.00493	mg/L	0.002377	-0.00493	mg/L	0.002377	48.20%
Na 330.237†	-4.4	-0.1529	mg/L	0.35443	-0.1529	mg/L	0.35443	231.79%
Ni 231.604†	9.9	0.00229	mg/L	0.000450	0.00229	mg/L	0.000450	19.69%
Pb 220.353†	-1.1	-0.00013	mg/L	0.000618	-0.00013	mg/L	0.000618	476.26%
Sb 206.836†	14.2	0.00420	mg/L	0.001395	0.00420	mg/L	0.001395	33.24%
Se 196.026†	-0.8	-0.00053	mg/L	0.000468	-0.00053	mg/L	0.000468	88.44%
Si 288.158†	-2.4	-0.00112	mg/L	0.000122	-0.00112	mg/L	0.000122	10.89%
Sn 189.927†	2.2	0.00057	mg/L	0.000776	0.00057	mg/L	0.000776	135.50%
Sr 421.552†	54.1	0.00005	mg/L	0.000026	0.00005	mg/L	0.000026	54.46%
Ti 334.903†	12.2	0.00055	mg/L	0.000252	0.00055	mg/L	0.000252	45.94%
Tl 190.801†	3.7	0.00148	mg/L	0.001395	0.00148	mg/L	0.001395	94.15%
V 292.402†	14.7	0.00010	mg/L	0.000023	0.00010	mg/L	0.000023	22.61%
Zn 206.200†	2.0	0.00050	mg/L	0.000111	0.00050	mg/L	0.000111	22.32%

Sequence No.: 24
Sample ID: WT10 MB TWC

Autosampler Location: 312
Date Collected: 6/11/2013 11:15:50 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WT10 MB TWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WT10 MB TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3100810.2	100.6	%	0.24				0.24%
ScR 361.383	373397.4	100.7	%	0.18				0.18%
Ag 328.068†	-6.5	-0.00003	mg/L	0.000059	-0.00003	mg/L	0.000059	183.49%
Al 308.215†	5.0	0.00290	mg/L	0.001064	0.00290	mg/L	0.001064	36.71%
As 188.979†	-3.1	-0.00167	mg/L	0.000623	-0.00167	mg/L	0.000623	37.18%
B 249.677†	-3.1	-0.00041	mg/L	0.000642	-0.00041	mg/L	0.000642	156.43%
Ba 233.527†	-1.6	-0.00034	mg/L	0.000070	-0.00034	mg/L	0.000070	20.34%
Be 313.042†	11.4	0.00002	mg/L	0.000049	0.00002	mg/L	0.000049	280.67%
Ca 317.933†	44.0	0.00307	mg/L	0.000371	0.00307	mg/L	0.000371	12.06%
Cd 228.802†	1.7	0.00006	mg/L	0.000024	0.00006	mg/L	0.000024	40.71%
Co 228.616†	-1.2	-0.00003	mg/L	0.000129	-0.00003	mg/L	0.000129	433.11%
Cr 267.716†	-2.6	-0.00040	mg/L	0.000298	-0.00040	mg/L	0.000298	74.49%
Cu 324.752†	163.3	0.00054	mg/L	0.000050	0.00054	mg/L	0.000050	9.29%
Fe 273.955†	3.2	0.00249	mg/L	0.001819	0.00249	mg/L	0.001819	72.95%
K 766.490†	-24.4	-0.00986	mg/L	0.005033	-0.00986	mg/L	0.005033	51.05%
Mg 279.077†	6.1	0.00423	mg/L	0.004045	0.00423	mg/L	0.004045	95.69%
Mn 257.610†	3.6	0.00010	mg/L	0.000131	0.00010	mg/L	0.000131	134.91%
Mo 202.031†	-2.5	-0.00012	mg/L	0.000079	-0.00012	mg/L	0.000079	64.30%
Na 589.592†	-77.7	-0.00507	mg/L	0.002476	-0.00507	mg/L	0.002476	48.80%
Na 330.237†	-5.9	-0.2062	mg/L	0.08212	-0.2062	mg/L	0.08212	39.83%
Ni 231.604†	5.4	0.00125	mg/L	0.000846	0.00125	mg/L	0.000846	67.75%
Pb 220.353†	0.6	0.00008	mg/L	0.000371	0.00008	mg/L	0.000371	489.01%
Sb 206.836†	-2.7	-0.00077	mg/L	0.000587	-0.00077	mg/L	0.000587	76.67%
Se 196.026†	3.0	0.00201	mg/L	0.003849	0.00201	mg/L	0.003849	191.69%
Si 288.158†	138.3	0.06532	mg/L	0.005361	0.06532	mg/L	0.005361	8.21%
Sn 189.927†	4.3	0.00114	mg/L	0.000625	0.00114	mg/L	0.000625	54.80%
Sr 421.552†	2.1	0.00000	mg/L	0.000026	0.00000	mg/L	0.000026	>999.9%
Ti 334.903†	-5.5	-0.00025	mg/L	0.000413	-0.00025	mg/L	0.000413	166.28%
Tl 190.801†	2.5	0.00103	mg/L	0.000460	0.00103	mg/L	0.000460	44.87%
V 292.402†	10.8	0.00007	mg/L	0.000096	0.00007	mg/L	0.000096	133.88%
Zn 206.200†	5.8	0.00142	mg/L	0.000028	0.00142	mg/L	0.000028	1.98%

Sequence No.: 25
Sample ID: WT10 ADUP TWC

Del

Dilution: 5.000000X

Autosampler Location: 313
Date Collected: 6/11/2013 11:20:06 AM
Data Type: Original

Nebulizer Parameters: WT10 ADUP TWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WT10 ADUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2579090.5	83.69	%	0.747				0.89%
ScR 361.383	339722.8	91.63	%	0.417				0.46%
Ag 328.068†	-73.1	-0.00036	mg/L	0.000155	-0.00182	mg/L	0.000773	42.50%
Al 308.215†	29.0	0.01516	mg/L	0.001422	0.07580	mg/L	0.007112	9.38%
As 188.979†	87.3	0.04320	mg/L	0.001837	0.2160	mg/L	0.00919	4.25%
B 249.677†	726766.2	95.02	mg/L	0.402	475.1	mg/L	2.01	0.42%
Ba 233.527†	5.8	0.00115	mg/L	0.000243	0.00577	mg/L	0.001214	21.05%
Be 313.042†	108.2	0.00017	mg/L	0.000008	0.00083	mg/L	0.000042	4.98%
Ca 317.933†	797738.3	55.69	mg/L	0.041	278.5	mg/L	0.20	0.07%
Cd 228.802†	10.4	0.00013	mg/L	0.000089	0.00067	mg/L	0.000447	66.41%
Co 228.616†	44.5	0.00113	mg/L	0.000085	0.00563	mg/L	0.000423	7.52%
Cr 267.716†	-1.4	-0.00080	mg/L	0.000821	-0.00400	mg/L	0.004106	102.61%
Cu 324.752†	11133.1	0.03692	mg/L	0.000329	0.1846	mg/L	0.00164	0.89%
Fe 273.955†	383.2	0.2945	mg/L	0.00154	1.473	mg/L	0.0077	0.52%
K 766.490†	7643.6	3.092	mg/L	0.0588	15.46	mg/L	0.294	1.90%
Mg 279.077†	933.9	0.6422	mg/L	0.00476	3.211	mg/L	0.0238	0.74%
Mn 257.610†	2697.2	0.07229	mg/L	0.000225	0.3615	mg/L	0.00112	0.31%
Mo 202.031†	1889.6	0.09152	mg/L	0.000628	0.4576	mg/L	0.00314	0.69%
Na 589.592†	Saturated3							
Na 330.237†	119259.4	4164	mg/L	13.13	20820	mg/L	65.65	0.32%
Ni 231.604†	423.2	0.09792	mg/L	0.001656	0.4896	mg/L	0.00828	1.69%
Pb 220.353†	273.1	0.03222	mg/L	0.000736	0.1611	mg/L	0.00368	2.28%
Sb 206.836†	-38.0	-0.01134	mg/L	0.001382	-0.05672	mg/L	0.006908	12.18%
Se 196.026†	13.9	0.00941	mg/L	0.002162	0.04705	mg/L	0.010811	22.98%
Si 288.158†	86.2	0.04080	mg/L	0.002288	0.2040	mg/L	0.01144	5.61%
Sn 189.927†	-63.6	-0.00965	mg/L	0.001126	-0.04823	mg/L	0.005632	11.68%
Sr 421.552†	300265.9	0.2682	mg/L	0.00095	1.341	mg/L	0.0048	0.36%
Ti 334.903†	100.3	0.00096	mg/L	0.000274	0.00478	mg/L	0.001371	28.66%
Tl 190.801†	8.1	0.00346	mg/L	0.001742	0.01729	mg/L	0.008711	50.39%
V 292.402†	69.1	0.00051	mg/L	0.000159	0.00255	mg/L	0.000796	31.20%
Zn 206.200†	176.5	0.04228	mg/L	0.000281	0.2114	mg/L	0.00141	0.67%

Sequence No.: 26
Sample ID: WT10 A TWC

Dil

Dilution: 5.000000X

Autosampler Location: 314
Date Collected: 6/11/2013 11:24:21 AM
Data Type: Original

Nebulizer Parameters: WT10 A TWC

Analyte	Back Pressure	Flow
A11	234.0 kPa	0.75 L/min

Mean Data: WT10 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2622917.9	85.11	%	0.146				0.17%
ScR 361.383	349224.6	94.20	%	0.387				0.41%
Ag 328.068†	-95.2	-0.00047	mg/L	0.000117	-0.00237	mg/L	0.000586	24.75%
Al 308.215†	23.6	0.01221	mg/L	0.001181	0.06106	mg/L	0.005906	9.67%
As 188.979†	80.7	0.04005	mg/L	0.002942	0.2002	mg/L	0.01471	7.35%
B 249.677†	647087.1	84.60	mg/L	0.181	423.0	mg/L	0.90	0.21%
Ba 233.527†	4.7	0.00093	mg/L	0.000471	0.00465	mg/L	0.002355	50.60%
Be 313.042†	59.1	0.00009	mg/L	0.000021	0.00046	mg/L	0.000103	22.72%
Ca 317.933†	712512.8	49.74	mg/L	0.075	248.7	mg/L	0.38	0.15%
Cd 228.802†	15.1	0.00028	mg/L	0.000087	0.00140	mg/L	0.000436	31.16%
Co 228.616†	40.1	0.00102	mg/L	0.000078	0.00508	mg/L	0.000391	7.70%
Cr 267.716†	-2.3	-0.00087	mg/L	0.000183	-0.00437	mg/L	0.000913	20.90%
Cu 324.752†	9795.7	0.03249	mg/L	0.000105	0.1624	mg/L	0.00052	0.32%
Fe 273.955†	341.8	0.2627	mg/L	0.00161	1.314	mg/L	0.0081	0.61%
K 766.490†	7080.1	2.864	mg/L	0.0184	14.32	mg/L	0.092	0.64%
Mg 279.077†	837.2	0.5758	mg/L	0.00753	2.879	mg/L	0.0376	1.31%
Mn 257.610†	2421.7	0.06491	mg/L	0.000303	0.3246	mg/L	0.00152	0.47%
Mo 202.031†	1688.2	0.08176	mg/L	0.000983	0.4088	mg/L	0.00491	1.20%
Na 589.592†	Saturated3							
Na 330.237†	105625.6	3688	mg/L	7.96	18440	mg/L	39.78	0.22%
Ni 231.604†	376.3	0.08706	mg/L	0.000529	0.4353	mg/L	0.00265	0.61%
Pb 220.353†	242.2	0.02857	mg/L	0.001283	0.1428	mg/L	0.00641	4.49%
Sb 206.836†	-29.1	-0.00873	mg/L	0.001037	-0.04363	mg/L	0.005183	11.88%
Se 196.026†	9.9	0.00669	mg/L	0.001359	0.03346	mg/L	0.006796	20.31%
Si 288.158†	80.4	0.03804	mg/L	0.005264	0.1902	mg/L	0.02632	13.84%
Sn 189.927†	-62.2	-0.01004	mg/L	0.001936	-0.05019	mg/L	0.009678	19.28%
Sr 421.552†	266332.4	0.2379	mg/L	0.00075	1.189	mg/L	0.0038	0.32%
Ti 334.903†	91.9	0.00096	mg/L	0.000245	0.00478	mg/L	0.001225	25.62%
Tl 190.801†	10.9	0.00456	mg/L	0.002873	0.02278	mg/L	0.014364	63.07%
V 292.402†	53.5	0.00040	mg/L	0.000154	0.00200	mg/L	0.000771	38.59%
Zn 206.200†	156.5	0.03748	mg/L	0.000646	0.1874	mg/L	0.00323	1.72%

Sequence No.: 27
Sample ID: WT10 ASPK TWC

Dil

Dilution: 5.000000X

Autosampler Location: 315
Date Collected: 6/11/2013 11:28:37 AM
Data Type: Original

Nebulizer Parameters: WT10 ASPK TWC

Analyte	Back Pressure	Flow
All	238.0 kPa	0.75 L/min

Mean Data: WT10 ASPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2589596.9	84.03	%	0.140				0.17%
ScR 361.383	345713.8	93.25	%	0.730				0.78%
Ag 328.068†	22773.3	0.1133	mg/L	0.00024	0.5664	mg/L	0.00120	0.21%
Al 308.215†	750.3	0.4285	mg/L	0.00531	2.142	mg/L	0.0266	1.24%
As 188.979†	937.8	0.5056	mg/L	0.00390	2.528	mg/L	0.0195	0.77%
B 249.677†	675223.9	88.28	mg/L	0.338	441.4	mg/L	1.69	0.38%
Ba 233.527†	789.0	0.1647	mg/L	0.00145	0.8237	mg/L	0.00724	0.88%
Be 313.042†	57227.4	0.08829	mg/L	0.000334	0.4414	mg/L	0.00167	0.38%
Ca 317.933†	775259.9	54.13	mg/L	0.087	270.6	mg/L	0.43	0.16%
Cd 228.802†	4093.3	0.1164	mg/L	0.00058	0.5821	mg/L	0.00291	0.50%
Co 228.616†	3782.9	0.09706	mg/L	0.000296	0.4853	mg/L	0.00148	0.30%
Cr 267.716†	675.2	0.1021	mg/L	0.00117	0.5104	mg/L	0.00585	1.15%
Cu 324.752†	42289.1	0.1403	mg/L	0.00018	0.7016	mg/L	0.00090	0.13%
Fe 273.955†	878.5	0.6746	mg/L	0.00768	3.373	mg/L	0.0384	1.14%
K 766.490†	12856.1	5.200	mg/L	0.1078	26.00	mg/L	0.539	2.07%
Mg 279.077†	3743.7	2.595	mg/L	0.0212	12.97	mg/L	0.106	0.82%
Mn 257.610†	6177.0	0.1659	mg/L	0.00167	0.8296	mg/L	0.00834	1.01%
Mo 202.031†	1753.1	0.08487	mg/L	0.000465	0.4243	mg/L	0.00232	0.55%
Na 589.592†	Saturated3							
Na 330.237†	110674.0	3864	mg/L	4.93	19320	mg/L	24.65	0.13%
Ni 231.604†	801.8	0.1854	mg/L	0.00115	0.9269	mg/L	0.00573	0.62%
Pb 220.353†	3199.8	0.3783	mg/L	0.00118	1.891	mg/L	0.0059	0.31%
Sb 206.836†	-33.8	-0.01112	mg/L	0.001942	-0.05560	mg/L	0.009708	17.46%
Se 196.026†	762.5	0.5170	mg/L	0.00357	2.585	mg/L	0.0179	0.69%
Si 288.158†	86.0	0.04146	mg/L	0.004636	0.2073	mg/L	0.02318	11.18%
Sn 189.927†	-72.9	-0.01227	mg/L	0.001867	-0.06137	mg/L	0.009334	15.21%
Sr 421.552†	379421.6	0.3389	mg/L	0.00030	1.694	mg/L	0.0015	0.09%
Ti 334.903†	108.2	0.00140	mg/L	0.000184	0.00698	mg/L	0.000921	13.19%
Tl 190.801†	863.9	0.3471	mg/L	0.00127	1.735	mg/L	0.0064	0.37%
V 292.402†	15075.9	0.1026	mg/L	0.00017	0.5132	mg/L	0.00083	0.16%
Zn 206.200†	607.0	0.1472	mg/L	0.00090	0.7359	mg/L	0.00450	0.61%

Sequence No.: 28
Sample ID: WT10 MBSPK TWC

Autosampler Location: 316
Date Collected: 6/11/2013 11:34:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WT10 MBSPK TWC

Analyte	Back Pressure	Flow
All	239.0 kPa	0.75 L/min

Mean Data: WT10 MBSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3091461.2	100.3	%	0.26				0.26%
ScR 361.383	374112.8	100.9	%	0.68				0.67%
Ag 328.068†	105258.6	0.5236	mg/L	0.00400	0.5236	mg/L	0.00400	0.76%
Al 308.215†	3549.3	2.033	mg/L	0.0168	2.033	mg/L	0.0168	0.83%
As 188.979†	3774.3	2.051	mg/L	0.0080	2.051	mg/L	0.0080	0.39%
B 249.677†	1035.1	0.1343	mg/L	0.01066	0.1343	mg/L	0.01066	7.94%
Ba 233.527†	10111.6	2.113	mg/L	0.0058	2.113	mg/L	0.0058	0.27%
Be 313.042†	316929.6	0.4890	mg/L	0.00157	0.4890	mg/L	0.00157	0.32%
Ca 317.933†	142171.4	9.926	mg/L	0.0131	9.926	mg/L	0.0131	0.13%
Cd 228.802†	18057.8	0.5144	mg/L	0.00329	0.5144	mg/L	0.00329	0.64%
Co 228.616†	19831.0	0.5088	mg/L	0.00209	0.5088	mg/L	0.00209	0.41%
Cr 267.716†	3446.4	0.5238	mg/L	0.00182	0.5238	mg/L	0.00182	0.35%
Cu 324.752†	154033.7	0.5112	mg/L	0.00399	0.5112	mg/L	0.00399	0.78%
Fe 273.955†	2659.7	2.041	mg/L	0.0177	2.041	mg/L	0.0177	0.86%
K 766.490†	24811.2	10.04	mg/L	0.042	10.04	mg/L	0.042	0.42%
Mg 279.077†	14788.1	10.27	mg/L	0.050	10.27	mg/L	0.050	0.49%
Mn 257.610†	18983.6	0.5107	mg/L	0.00355	0.5107	mg/L	0.00355	0.69%
Mo 202.031†	22.9	0.00096	mg/L	0.000035	0.00096	mg/L	0.000035	3.61%
Na 589.592†	161221.9	10.53	mg/L	0.067	10.53	mg/L	0.067	0.64%
Na 330.237†	306.1	10.49	mg/L	0.265	10.49	mg/L	0.265	2.53%
Ni 231.604†	2134.3	0.4930	mg/L	0.00200	0.4930	mg/L	0.00200	0.41%
Pb 220.353†	17365.5	2.053	mg/L	0.0101	2.053	mg/L	0.0101	0.49%
Sb 206.836†	15.6	-0.00058	mg/L	0.000739	-0.00058	mg/L	0.000739	127.10%
Se 196.026†	2994.3	2.030	mg/L	0.0061	2.030	mg/L	0.0061	0.30%
Si 288.158†	150.8	0.07471	mg/L	0.003389	0.07471	mg/L	0.003389	4.54%
Sn 189.927†	-27.5	-0.00590	mg/L	0.000677	-0.00590	mg/L	0.000677	11.48%
Sr 421.552†	560453.0	0.5006	mg/L	0.00012	0.5006	mg/L	0.00012	0.02%
Ti 334.903†	22.0	0.00027	mg/L	0.000313	0.00027	mg/L	0.000313	116.23%
Tl 190.801†	5057.2	2.031	mg/L	0.0076	2.031	mg/L	0.0076	0.38%
V 292.402†	76227.3	0.5188	mg/L	0.00346	0.5188	mg/L	0.00346	0.67%
Zn 206.200†	2040.6	0.4970	mg/L	0.00128	0.4970	mg/L	0.00128	0.26%

Sequence No.: 29
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 6/11/2013 11:38:02 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	238.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3075742.5	99.80	%	0.645				0.65%
ScR 361.383	367938.8	99.24	%	0.784				0.79%
Ag 328.068†	214350.5	1.066	mg/L	0.0082	1.066	mg/L	0.0082	0.77%
Al 308.215†	3678.5	2.081	mg/L	0.0194	2.081	mg/L	0.0194	0.93%
As 188.979†	3722.0	2.051	mg/L	0.0172	2.051	mg/L	0.0172	0.84%
B 249.677†	8351.1	1.091	mg/L	0.0078	1.091	mg/L	0.0078	0.71%
Ba 233.527†	5049.9	1.055	mg/L	0.0078	1.055	mg/L	0.0078	0.74%
Be 313.042†	661406.5	1.020	mg/L	0.0040	1.020	mg/L	0.0040	0.39%
Ca 317.933†	28732.3	2.006	mg/L	0.0018	2.006	mg/L	0.0018	0.09%
Cd 228.802†	35907.4	1.034	mg/L	0.0040	1.034	mg/L	0.0040	0.39%
Co 228.616†	39753.9	1.019	mg/L	0.0064	1.019	mg/L	0.0064	0.63%
Cr 267.716†	6986.8	1.064	mg/L	0.0088	1.064	mg/L	0.0088	0.83%
Cu 324.752†	304136.3	1.009	mg/L	0.0024	1.009	mg/L	0.0024	0.24%
Fe 273.955†	2748.9	2.107	mg/L	0.0156	2.107	mg/L	0.0156	0.74%
K 766.490†	49892.7	20.18	mg/L	0.070	20.18	mg/L	0.070	0.35%
Mg 279.077†	2930.9	2.043	mg/L	0.0163	2.043	mg/L	0.0163	0.80%
Mn 257.610†	36573.5	0.9836	mg/L	0.00429	0.9836	mg/L	0.00429	0.44%
Mo 202.031†	20270.1	0.9892	mg/L	0.00304	0.9892	mg/L	0.00304	0.31%
Na 589.592†	779284.6	50.89	mg/L	0.165	50.89	mg/L	0.165	0.32%
Na 330.237†	1496.2	52.21	mg/L	0.423	52.21	mg/L	0.423	0.81%
Ni 231.604†	4480.0	1.037	mg/L	0.0092	1.037	mg/L	0.0092	0.89%
Pb 220.353†	17201.8	2.034	mg/L	0.0146	2.034	mg/L	0.0146	0.72%
Sb 206.836†	7108.4	2.094	mg/L	0.0173	2.094	mg/L	0.0173	0.83%
Se 196.026†	2990.3	2.027	mg/L	0.0155	2.027	mg/L	0.0155	0.77%
Si 288.158†	4449.1	2.107	mg/L	0.0210	2.107	mg/L	0.0210	1.00%
Sn 189.927†	3771.4	0.9968	mg/L	0.00914	0.9968	mg/L	0.00914	0.92%
Sr 421.552†	1130324.5	1.010	mg/L	0.0026	1.010	mg/L	0.0026	0.26%
Ti 334.903†	22374.5	1.004	mg/L	0.0024	1.004	mg/L	0.0024	0.24%
Tl 190.801†	5217.6	2.092	mg/L	0.0173	2.092	mg/L	0.0173	0.83%
V 292.402†	153236.5	1.043	mg/L	0.0071	1.043	mg/L	0.0071	0.68%
Zn 206.200†	4218.1	1.028	mg/L	0.0075	1.028	mg/L	0.0075	0.73%

Sequence No.: 30
Sample ID: CB

Autosampler Location: 1
Date Collected: 6/11/2013 11:42:07 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	238.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3096071.6	100.5	%	0.32				0.31%
ScR 361.383	374719.1	101.1	%	0.48				0.47%
Ag 328.068†	45.1	0.00022	mg/L	0.000197	0.00022	mg/L	0.000197	87.64%
Al 308.215†	1.1	0.00064	mg/L	0.001667	0.00064	mg/L	0.001667	261.49%
As 188.979†	1.4	0.00079	mg/L	0.000442	0.00079	mg/L	0.000442	55.90%
B 249.677†	370.4	0.04843	mg/L	0.002619	0.04843	mg/L	0.002619	5.41%
Ba 233.527†	-3.3	-0.00068	mg/L	0.000207	-0.00068	mg/L	0.000207	30.43%
Be 313.042†	58.8	0.00009	mg/L	0.000019	0.00009	mg/L	0.000019	21.11%
Ca 317.933†	18.1	0.00127	mg/L	0.001001	0.00127	mg/L	0.001001	79.04%
Cd 228.802†	6.1	0.00017	mg/L	0.000057	0.00017	mg/L	0.000057	32.58%
Co 228.616†	6.8	0.00017	mg/L	0.000207	0.00017	mg/L	0.000207	118.93%
Cr 267.716†	-5.1	-0.00078	mg/L	0.000590	-0.00078	mg/L	0.000590	75.61%
Cu 324.752†	230.0	0.00076	mg/L	0.000111	0.00076	mg/L	0.000111	14.61%
Fe 273.955†	2.1	0.00164	mg/L	0.002119	0.00164	mg/L	0.002119	129.09%
K 766.490†	48.8	0.01973	mg/L	0.013297	0.01973	mg/L	0.013297	67.39%
Mg 279.077†	-1.8	-0.00123	mg/L	0.005583	-0.00123	mg/L	0.005583	455.68%
Mn 257.610†	2.5	0.00007	mg/L	0.000133	0.00007	mg/L	0.000133	198.28%
Mo 202.031†	8.9	0.00044	mg/L	0.000216	0.00044	mg/L	0.000216	49.72%
Na 589.592†	3718.3	0.2428	mg/L	0.00841	0.2428	mg/L	0.00841	3.46%
Na 330.237†	1.8	0.06206	mg/L	0.053279	0.06206	mg/L	0.053279	85.86%
Ni 231.604†	10.1	0.00234	mg/L	0.000421	0.00234	mg/L	0.000421	18.01%
Pb 220.353†	5.4	0.00063	mg/L	0.000557	0.00063	mg/L	0.000557	88.01%
Sb 206.836†	8.9	0.00264	mg/L	0.002719	0.00264	mg/L	0.002719	102.98%
Se 196.026†	4.6	0.00312	mg/L	0.003973	0.00312	mg/L	0.003973	127.19%
Si 288.158†	-4.5	-0.00215	mg/L	0.002821	-0.00215	mg/L	0.002821	131.35%
Sn 189.927†	2.6	0.00068	mg/L	0.000201	0.00068	mg/L	0.000201	29.65%
Sr 421.552†	45.3	0.00004	mg/L	0.000023	0.00004	mg/L	0.000023	56.57%
Ti 334.903†	2.6	0.00012	mg/L	0.000124	0.00012	mg/L	0.000124	106.42%
Tl 190.801†	5.6	0.00224	mg/L	0.001413	0.00224	mg/L	0.001413	63.08%
V 292.402†	9.8	0.00006	mg/L	0.000011	0.00006	mg/L	0.000011	16.65%
Zn 206.200†	2.7	0.00066	mg/L	0.000475	0.00066	mg/L	0.000475	72.24%

Sequence No.: 31
Sample ID: WT10 ADUP TWC

Autosampler Location: 341
Date Collected: 6/11/2013 11:46:22 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WT10 ADUP TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: WT10 ADUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2752141.7	89.30	%	0.510				0.57%
ScR 361.383	357060.8	96.31	%	0.536				0.56%
Ag 328.068†	-7.9	-0.00004	mg/L	0.000217	-0.00039	mg/L	0.002170	552.41%
Al 308.215†	12.4	0.00636	mg/L	0.006756	0.06362	mg/L	0.067559	106.18%
As 188.979†	44.7	0.02222	mg/L	0.002539	0.2222	mg/L	0.02539	11.43%
B 249.677†	358582.4	46.88	mg/L	0.180	468.8	mg/L	1.80	0.38%
Ba 233.527†	2.4	0.00047	mg/L	0.000101	0.00469	mg/L	0.001013	21.58%
Be 313.042†	46.5	0.00007	mg/L	0.000010	0.00072	mg/L	0.000098	13.68%
Ca 317.933†	393202.0	27.45	mg/L	0.155	274.5	mg/L	1.55	0.57%
Cd 228.802†	16.6	0.00040	mg/L	0.000037	0.00397	mg/L	0.000369	9.30%
Co 228.616†	23.8	0.00060	mg/L	0.000129	0.00603	mg/L	0.001290	21.39%
Cr 267.716†	-1.3	-0.00049	mg/L	0.000351	-0.00492	mg/L	0.003508	71.27%
Cu 324.752†	5564.1	0.01845	mg/L	0.000182	0.1845	mg/L	0.00182	0.98%
Fe 273.955†	192.5	0.1479	mg/L	0.00210	1.479	mg/L	0.0210	1.42%
K 766.490†	3746.9	1.516	mg/L	0.0353	15.16	mg/L	0.353	2.33%
Mg 279.077†	463.5	0.3188	mg/L	0.00060	3.188	mg/L	0.0060	0.19%
Mn 257.610†	1331.2	0.03568	mg/L	0.000243	0.3568	mg/L	0.00243	0.68%
Mo 202.031†	948.5	0.04594	mg/L	0.000538	0.4594	mg/L	0.00538	1.17%
Na 589.592†	Saturated2							
Na 330.237†	58419.8	2040	mg/L	4.00	20400	mg/L	39.98	0.20%
Ni 231.604†	215.7	0.04991	mg/L	0.001111	0.4991	mg/L	0.01111	2.23%
Pb 220.353†	137.0	0.01616	mg/L	0.000814	0.1616	mg/L	0.00814	5.04%
Sb 206.836†	-19.7	-0.00591	mg/L	0.003322	-0.05912	mg/L	0.033220	56.19%
Se 196.026†	10.1	0.00684	mg/L	0.004829	0.06845	mg/L	0.048285	70.55%
Si 288.158†	38.6	0.01827	mg/L	0.003620	0.1827	mg/L	0.03620	19.81%
Sn 189.927†	-43.7	-0.00800	mg/L	0.000508	-0.08003	mg/L	0.005080	6.35%
Sr 421.552†	147499.0	0.1317	mg/L	0.00027	1.317	mg/L	0.0027	0.21%
Ti 334.903†	48.6	0.00043	mg/L	0.000443	0.00432	mg/L	0.004432	102.52%
Tl 190.801†	8.2	0.00341	mg/L	0.001000	0.03406	mg/L	0.009997	29.35%
V 292.402†	24.9	0.00019	mg/L	0.000109	0.00189	mg/L	0.001088	57.48%
Zn 206.200†	86.7	0.02078	mg/L	0.000102	0.2078	mg/L	0.00102	0.49%

Sequence No.: 32
Sample ID: WT10 A TWC

Autosampler Location: 342
Date Collected: 6/11/2013 11:50:38 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WT10 A TWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT10 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2773877.0	90.01	%	0.217				0.24%
ScR 361.383	359677.9	97.02	%	0.618				0.64%
Ag 328.068†	-29.4	-0.00015	mg/L	0.000136	-0.00146	mg/L	0.001363	93.20%
Al 308.215†	3.1	0.00114	mg/L	0.001864	0.01139	mg/L	0.018636	163.66%
As 188.979†	42.1	0.02099	mg/L	0.001641	0.2099	mg/L	0.01641	7.81%
B 249.677†	321272.5	42.00	mg/L	0.034	420.0	mg/L	0.34	0.08%
Ba 233.527†	3.1	0.00062	mg/L	0.000335	0.00618	mg/L	0.003349	54.21%
Be 313.042†	36.3	0.00006	mg/L	0.000018	0.00056	mg/L	0.000181	32.42%
Ca 317.933†	351612.6	24.55	mg/L	0.104	245.5	mg/L	1.04	0.42%
Cd 228.802†	8.7	0.00017	mg/L	0.000086	0.00168	mg/L	0.000856	50.80%
Co 228.616†	22.6	0.00057	mg/L	0.000133	0.00573	mg/L	0.001325	23.11%
Cr 267.716†	-1.9	-0.00055	mg/L	0.000197	-0.00548	mg/L	0.001969	35.90%
Cu 324.752†	5016.6	0.01664	mg/L	0.000035	0.1664	mg/L	0.00035	0.21%
Fe 273.955†	170.5	0.1311	mg/L	0.00259	1.311	mg/L	0.0259	1.97%
K 766.490†	3516.1	1.422	mg/L	0.0269	14.22	mg/L	0.269	1.89%
Mg 279.077†	415.6	0.2858	mg/L	0.00475	2.858	mg/L	0.0475	1.66%
Mn 257.610†	1195.3	0.03204	mg/L	0.000245	0.3204	mg/L	0.00245	0.76%
Mo 202.031†	842.0	0.04078	mg/L	0.000031	0.4078	mg/L	0.00031	0.08%
Na 589.592†	Saturated2							
Na 330.237†	52366.6	1828	mg/L	1.35	18280	mg/L	13.48	0.07%
Ni 231.604†	191.8	0.04437	mg/L	0.000726	0.4437	mg/L	0.00726	1.64%
Pb 220.353†	122.5	0.01445	mg/L	0.000841	0.1445	mg/L	0.00841	5.82%
Sb 206.836†	-17.8	-0.00533	mg/L	0.001530	-0.05326	mg/L	0.015297	28.72%
Se 196.026†	9.9	0.00673	mg/L	0.001478	0.06734	mg/L	0.014780	21.95%
Si 288.158†	38.4	0.01817	mg/L	0.003915	0.1817	mg/L	0.03915	21.55%
Sn 189.927†	-38.2	-0.00694	mg/L	0.001197	-0.06942	mg/L	0.011971	17.24%
Sr 421.552†	132207.0	0.1181	mg/L	0.00006	1.181	mg/L	0.0006	0.05%
Ti 334.903†	45.9	0.00050	mg/L	0.000283	0.00499	mg/L	0.002834	56.81%
Tl 190.801†	11.5	0.00471	mg/L	0.000961	0.04708	mg/L	0.009612	20.42%
V 292.402†	23.4	0.00018	mg/L	0.000220	0.00176	mg/L	0.002196	124.50%
Zn 206.200†	79.5	0.01905	mg/L	0.000603	0.1905	mg/L	0.00603	3.17%

Sequence No.: 33
Sample ID: WT10 ASPK TWC

Autosampler Location: 343
Date Collected: 6/11/2013 11:54:53 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WT10 ASPK TWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT10 ASPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2747345.3	89.15	%	0.364				0.41%
ScR 361.383	353701.6	95.40	%	1.060				1.11%
Ag 328.068†	10702.2	0.05324	mg/L	0.000299	0.5324	mg/L	0.00299	0.56%
Al 308.215†	365.8	0.2088	mg/L	0.00507	2.088	mg/L	0.0507	2.43%
As 188.979†	443.4	0.2389	mg/L	0.00259	2.389	mg/L	0.0259	1.08%
B 249.677†	334079.1	43.68	mg/L	0.275	436.8	mg/L	2.75	0.63%
Ba 233.527†	364.8	0.07616	mg/L	0.000484	0.7616	mg/L	0.00484	0.64%
Be 313.042†	28639.1	0.04418	mg/L	0.000231	0.4418	mg/L	0.00231	0.52%
Ca 317.933†	381023.4	26.60	mg/L	0.113	266.0	mg/L	1.13	0.42%
Cd 228.802†	1957.9	0.05571	mg/L	0.000127	0.5571	mg/L	0.00127	0.23%
Co 228.616†	1924.7	0.04938	mg/L	0.000225	0.4938	mg/L	0.00225	0.46%
Cr 267.716†	336.4	0.05086	mg/L	0.001336	0.5086	mg/L	0.01336	2.63%
Cu 324.752†	20627.2	0.06845	mg/L	0.000198	0.6845	mg/L	0.00198	0.29%
Fe 273.955†	434.3	0.3335	mg/L	0.00423	3.335	mg/L	0.0423	1.27%
K 766.490†	6069.2	2.455	mg/L	0.0516	24.55	mg/L	0.516	2.10%
Mg 279.077†	1878.9	1.302	mg/L	0.0188	13.02	mg/L	0.188	1.45%
Mn 257.610†	3061.5	0.08224	mg/L	0.000733	0.8224	mg/L	0.00733	0.89%
Mo 202.031†	875.6	0.04240	mg/L	0.000206	0.4240	mg/L	0.00206	0.49%
Na 589.592†	Saturated2							
Na 330.237†	54556.6	1905	mg/L	10.69	19050	mg/L	106.92	0.56%
Ni 231.604†	403.7	0.09334	mg/L	0.001300	0.9334	mg/L	0.01300	1.39%
Pb 220.353†	1591.7	0.1882	mg/L	0.00104	1.882	mg/L	0.0104	0.55%
Sb 206.836†	-18.4	-0.00602	mg/L	0.001260	-0.06018	mg/L	0.012603	20.94%
Se 196.026†	344.2	0.2334	mg/L	0.00509	2.334	mg/L	0.0509	2.18%
Si 288.158†	39.3	0.01897	mg/L	0.005184	0.1897	mg/L	0.05184	27.33%
Sn 189.927†	-44.5	-0.00833	mg/L	0.002430	-0.08329	mg/L	0.024296	29.17%
Sr 421.552†	187117.9	0.1671	mg/L	0.00091	1.671	mg/L	0.0091	0.54%
Ti 334.903†	50.0	0.00054	mg/L	0.000354	0.00544	mg/L	0.003538	65.08%
Tl 190.801†	446.7	0.1795	mg/L	0.00153	1.795	mg/L	0.0153	0.85%
V 292.402†	7482.6	0.05095	mg/L	0.000194	0.5095	mg/L	0.00194	0.38%
Zn 206.200†	286.8	0.06952	mg/L	0.001432	0.6952	mg/L	0.01432	2.06%

Sequence No.: 34
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 6/11/2013 12:00:16 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	243.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3102688.0	100.7	%	0.44				0.44%
ScR 361.383	377287.2	101.8	%	0.11				0.11%
Ag 328.068†	211153.6	1.050	mg/L	0.0069	1.050	mg/L	0.0069	0.66%
Al 308.215†	3623.2	2.049	mg/L	0.0022	2.049	mg/L	0.0022	0.11%
As 188.979†	3673.5	2.025	mg/L	0.0068	2.025	mg/L	0.0068	0.33%
B 249.677†	8313.7	1.086	mg/L	0.0061	1.086	mg/L	0.0061	0.56%
Ba 233.527†	4988.0	1.042	mg/L	0.0058	1.042	mg/L	0.0058	0.56%
Be 313.042†	652936.3	1.007	mg/L	0.0069	1.007	mg/L	0.0069	0.69%
Ca 317.933†	28368.6	1.981	mg/L	0.0060	1.981	mg/L	0.0060	0.31%
Cd 228.802†	35352.9	1.018	mg/L	0.0053	1.018	mg/L	0.0053	0.52%
Co 228.616†	39436.6	1.011	mg/L	0.0059	1.011	mg/L	0.0059	0.58%
Cr 267.716†	6865.4	1.045	mg/L	0.0018	1.045	mg/L	0.0018	0.18%
Cu 324.752†	312409.6	1.036	mg/L	0.0018	1.036	mg/L	0.0018	0.17%
Fe 273.955†	2682.8	2.056	mg/L	0.0040	2.056	mg/L	0.0040	0.19%
K 766.490†	49385.4	19.98	mg/L	0.069	19.98	mg/L	0.069	0.35%
Mg 279.077†	2881.0	2.008	mg/L	0.0023	2.008	mg/L	0.0023	0.12%
Mn 257.610†	36133.8	0.9718	mg/L	0.00131	0.9718	mg/L	0.00131	0.13%
Mo 202.031†	20508.1	1.001	mg/L	0.0039	1.001	mg/L	0.0039	0.39%
Na 589.592†	771978.4	50.41	mg/L	0.184	50.41	mg/L	0.184	0.36%
Na 330.237†	1478.2	51.58	mg/L	0.163	51.58	mg/L	0.163	0.32%
Ni 231.604†	4410.2	1.021	mg/L	0.0020	1.021	mg/L	0.0020	0.20%
Pb 220.353†	17437.3	2.062	mg/L	0.0061	2.062	mg/L	0.0061	0.30%
Sb 206.836†	6997.1	2.061	mg/L	0.0061	2.061	mg/L	0.0061	0.29%
Se 196.026†	2949.0	1.999	mg/L	0.0103	1.999	mg/L	0.0103	0.52%
Si 288.158†	4368.1	2.069	mg/L	0.0083	2.069	mg/L	0.0083	0.40%
Sn 189.927†	3720.3	0.9833	mg/L	0.00502	0.9833	mg/L	0.00502	0.51%
Sr 421.552†	1120037.1	1.000	mg/L	0.0036	1.000	mg/L	0.0036	0.36%
Ti 334.903†	22152.4	0.9943	mg/L	0.00337	0.9943	mg/L	0.00337	0.34%
Tl 190.801†	5163.4	2.071	mg/L	0.0103	2.071	mg/L	0.0103	0.50%
V 292.402†	151232.5	1.029	mg/L	0.0044	1.029	mg/L	0.0044	0.43%
Zn 206.200†	4129.4	1.006	mg/L	0.0021	1.006	mg/L	0.0021	0.21%

Sequence No.: 35
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 6/11/2013 12:04:20 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	242.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3151243.8	102.3	%	0.14				0.14%
ScR 361.383	382794.2	103.3	%	0.24				0.23%
Ag 328.068†	39.5	0.00020	mg/L	0.000026	0.00020	mg/L	0.000026	12.98%
Al 308.215†	2.0	0.00116	mg/L	0.003230	0.00116	mg/L	0.003230	279.44%
As 188.979†	1.8	0.00098	mg/L	0.000374	0.00098	mg/L	0.000374	38.30%
B 249.677†	393.4	0.05144	mg/L	0.002087	0.05144	mg/L	0.002087	4.06%
Ba 233.527†	-1.5	-0.00032	mg/L	0.000312	-0.00032	mg/L	0.000312	97.81%
Be 313.042†	40.7	0.00006	mg/L	0.000022	0.00006	mg/L	0.000022	34.25%
Ca 317.933†	24.0	0.00167	mg/L	0.000884	0.00167	mg/L	0.000884	52.87%
Cd 228.802†	2.1	0.00006	mg/L	0.000141	0.00006	mg/L	0.000141	249.45%
Co 228.616†	5.0	0.00013	mg/L	0.000070	0.00013	mg/L	0.000070	54.42%
Cr 267.716†	-6.3	-0.00096	mg/L	0.000413	-0.00096	mg/L	0.000413	43.16%
Cu 324.752†	256.0	0.00085	mg/L	0.000053	0.00085	mg/L	0.000053	6.29%
Fe 273.955†	2.8	0.00217	mg/L	0.000807	0.00217	mg/L	0.000807	37.13%
K 766.490†	72.2	0.02919	mg/L	0.002700	0.02919	mg/L	0.002700	9.25%
Mg 279.077†	-2.4	-0.00165	mg/L	0.002461	-0.00165	mg/L	0.002461	149.55%
Mn 257.610†	6.3	0.00017	mg/L	0.000117	0.00017	mg/L	0.000117	69.43%
Mo 202.031†	7.6	0.00037	mg/L	0.000185	0.00037	mg/L	0.000185	49.71%
Na 589.592†	5963.5	0.3894	mg/L	0.01221	0.3894	mg/L	0.01221	3.14%
Na 330.237†	10.7	0.3749	mg/L	0.24603	0.3749	mg/L	0.24603	65.62%
Ni 231.604†	7.0	0.00163	mg/L	0.001010	0.00163	mg/L	0.001010	62.06%
Pb 220.353†	-2.5	-0.00030	mg/L	0.000418	-0.00030	mg/L	0.000418	139.12%
Sb 206.836†	7.7	0.00230	mg/L	0.000913	0.00230	mg/L	0.000913	39.73%
Se 196.026†	4.6	0.00310	mg/L	0.004724	0.00310	mg/L	0.004724	152.46%
Si 288.158†	1.1	0.00051	mg/L	0.000839	0.00051	mg/L	0.000839	163.12%
Sn 189.927†	3.7	0.00098	mg/L	0.000261	0.00098	mg/L	0.000261	26.58%
Sr 421.552†	43.2	0.00004	mg/L	0.000009	0.00004	mg/L	0.000009	22.62%
Ti 334.903†	-3.2	-0.00014	mg/L	0.000147	-0.00014	mg/L	0.000147	102.70%
Tl 190.801†	4.7	0.00189	mg/L	0.001553	0.00189	mg/L	0.001553	82.25%
V 292.402†	-8.4	-0.00006	mg/L	0.000032	-0.00006	mg/L	0.000032	53.22%
Zn 206.200†	2.6	0.00064	mg/L	0.000156	0.00064	mg/L	0.000156	24.31%

Sequence No.: 36
Sample ID: WT03 MB1 SWC

Autosampler Location: 317
Date Collected: 6/11/2013 12:08:35 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 MB1 SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3164865.4	102.7	%	0.40				0.39%
ScR 361.383	389073.8	104.9	%	0.81				0.77%
Ag 328.068†	30.7	0.00015	mg/L	0.000284	0.00030	mg/L	0.000568	186.15%
Al 308.215†	5.9	0.00337	mg/L	0.000825	0.00675	mg/L	0.001651	24.46%
As 188.979†	-0.4	-0.00020	mg/L	0.001330	-0.00040	mg/L	0.002659	666.85%
B 249.677†	261.4	0.03418	mg/L	0.001394	0.06836	mg/L	0.002789	4.08%
Ba 233.527†	-2.8	-0.00058	mg/L	0.001065	-0.00116	mg/L	0.002130	183.16%
Be 313.042†	-11.1	-0.00002	mg/L	0.000035	-0.00003	mg/L	0.000071	205.92%
Ca 317.933†	58.1	0.00405	mg/L	0.000616	0.00811	mg/L	0.001232	15.20%
Cd 228.802†	2.1	0.00007	mg/L	0.000227	0.00013	mg/L	0.000454	348.44%
Co 228.616†	-0.7	-0.00002	mg/L	0.000070	-0.00004	mg/L	0.000140	385.90%
Cr 267.716†	-1.0	-0.00015	mg/L	0.000355	-0.00031	mg/L	0.000711	229.33%
Cu 324.752†	305.4	0.00101	mg/L	0.000117	0.00203	mg/L	0.000233	11.51%
Fe 273.955†	2.6	0.00196	mg/L	0.001825	0.00392	mg/L	0.003650	93.08%
K 766.490†	65.2	0.02636	mg/L	0.015591	0.05272	mg/L	0.031183	59.15%
Mg 279.077†	1.8	0.00121	mg/L	0.005016	0.00243	mg/L	0.010033	413.23%
Mn 257.610†	-2.2	-0.00006	mg/L	0.000054	-0.00012	mg/L	0.000109	91.42%
Mo 202.031†	-7.0	-0.00034	mg/L	0.000109	-0.00068	mg/L	0.000218	31.87%
Na 589.592†	4769.2	0.3114	mg/L	0.01154	0.6228	mg/L	0.02308	3.71%
Na 330.237†	11.2	0.3901	mg/L	0.21498	0.7802	mg/L	0.42996	55.11%
Ni 231.604†	8.4	0.00194	mg/L	0.000326	0.00388	mg/L	0.000652	16.83%
Pb 220.353†	-6.1	-0.00072	mg/L	0.000496	-0.00143	mg/L	0.000992	69.16%
Sb 206.836†	-1.7	-0.00050	mg/L	0.000944	-0.00101	mg/L	0.001889	187.57%
Se 196.026†	0.5	0.00032	mg/L	0.000577	0.00065	mg/L	0.001153	178.28%
Si 288.158†	33.6	0.01589	mg/L	0.002749	0.03178	mg/L	0.005497	17.30%
Sn 189.927†	0.8	0.00020	mg/L	0.000643	0.00041	mg/L	0.001287	316.44%
Sr 421.552†	-27.5	-0.00002	mg/L	0.000008	-0.00005	mg/L	0.000017	33.99%
Ti 334.903†	0.5	0.00002	mg/L	0.000154	0.00005	mg/L	0.000308	669.62%
Tl 190.801†	0.9	0.00034	mg/L	0.000546	0.00069	mg/L	0.001092	158.69%
V 292.402†	-2.5	-0.00002	mg/L	0.000034	-0.00004	mg/L	0.000068	187.67%
Zn 206.200†	1.2	0.00031	mg/L	0.000657	0.00061	mg/L	0.001314	215.01%

Sequence No.: 37
Sample ID: WT03 ADUP SWC

Autosampler Location: 318
Date Collected: 6/11/2013 12:12:51 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 ADUP SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3134275.3	101.7	%	0.19				0.19%
ScR 361.383	382427.8	103.2	%	0.26				0.25%
Ag 328.068†	-190.9	-0.00082	mg/L	0.000037	-0.00164	mg/L	0.000074	4.51%
Al 308.215†	173129.8	99.53	mg/L	0.282	199.1	mg/L	0.56	0.28%
As 188.979†	-209.7	0.08890	mg/L	0.002367	0.1778	mg/L	0.00473	2.66%
B 249.677†	372.6	0.04856	mg/L	0.000391	0.09713	mg/L	0.000781	0.80%
Ba 233.527†	3012.7	0.5996	mg/L	0.00247	1.199	mg/L	0.0049	0.41%
Be 313.042†	1198.3	0.00167	mg/L	0.000024	0.00335	mg/L	0.000049	1.45%
Ca 317.933†	1277903.5	89.22	mg/L	0.247	178.4	mg/L	0.49	0.28%
Cd 228.802†	179.6	0.00597	mg/L	0.000089	0.01194	mg/L	0.000178	1.49%
Co 228.616†	2951.5	0.06231	mg/L	0.000243	0.1246	mg/L	0.00049	0.39%
Cr 267.716†	1397.7	0.2162	mg/L	0.00145	0.4323	mg/L	0.00291	0.67%
Cu 324.752†	158795.8	0.5334	mg/L	0.00328	1.067	mg/L	0.0066	0.62%
Fe 273.955†	230841.8	177.4	mg/L	0.78	354.9	mg/L	1.55	0.44%
K 766.490†	18706.5	7.567	mg/L	0.0467	15.13	mg/L	0.093	0.62%
Mg 279.077†	52319.0	36.23	mg/L	0.087	72.47	mg/L	0.173	0.24%
Mn 257.610†	88048.3	2.367	mg/L	0.0071	4.734	mg/L	0.0142	0.30%
Mo 202.031†	227.5	0.00996	mg/L	0.000464	0.01992	mg/L	0.000928	4.66%
Na 589.592†	89958.3	5.874	mg/L	0.0049	11.75	mg/L	0.010	0.08%
Na 330.237†	148.4	6.067	mg/L	0.1405	12.13	mg/L	0.281	2.32%
Ni 231.604†	725.0	0.1678	mg/L	0.00177	0.3355	mg/L	0.00353	1.05%
Pb 220.353†	6875.8	0.8265	mg/L	0.00117	1.653	mg/L	0.0023	0.14%
Sb 206.836†	43.9	0.01722	mg/L	0.000933	0.03443	mg/L	0.001866	5.42%
Se 196.026†	36.1	0.01328	mg/L	0.003020	0.02656	mg/L	0.006039	22.74%
Si 288.158†	2775.4	1.316	mg/L	0.0064	2.631	mg/L	0.0128	0.49%
Sn 189.927†	15.3	0.01689	mg/L	0.001328	0.03377	mg/L	0.002657	7.87%
Sr 421.552†	550359.3	0.4916	mg/L	0.00079	0.9831	mg/L	0.00158	0.16%
Ti 334.903†	145131.0	6.517	mg/L	0.0068	13.03	mg/L	0.014	0.10%
Tl 190.801†	-40.7	0.00584	mg/L	0.001488	0.01167	mg/L	0.002976	25.50%
V 292.402†	65880.9	0.4349	mg/L	0.00350	0.8697	mg/L	0.00701	0.81%
Zn 206.200†	8004.6	1.949	mg/L	0.0049	3.897	mg/L	0.0097	0.25%

Sequence No.: 38
Sample ID: WT03 A SWC

Autosampler Location: 319
Date Collected: 6/11/2013 12:16:54 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 A SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3115726.9	101.1	%	0.20				0.20%
ScR 361.383	380391.1	102.6	%	0.99				0.96%
Ag 328.068†	-196.6	-0.00085	mg/L	0.000029	-0.00170	mg/L	0.000057	3.36%
Al 308.215†	184570.6	106.1	mg/L	0.50	212.2	mg/L	1.00	0.47%
As 188.979†	-215.1	0.08659	mg/L	0.003985	0.1732	mg/L	0.00797	4.60%
B 249.677†	346.9	0.04520	mg/L	0.000651	0.09040	mg/L	0.001302	1.44%
Ba 233.527†	3274.8	0.6567	mg/L	0.00440	1.313	mg/L	0.0088	0.67%
Be 313.042†	1100.1	0.00152	mg/L	0.000040	0.00305	mg/L	0.000081	2.65%
Ca 317.933†	1331330.3	92.95	mg/L	0.238	185.9	mg/L	0.48	0.26%
Cd 228.802†	172.3	0.00578	mg/L	0.000123	0.01157	mg/L	0.000247	2.13%
Co 228.616†	3044.7	0.06482	mg/L	0.000066	0.1296	mg/L	0.00013	0.10%
Cr 267.716†	1453.5	0.2237	mg/L	0.00207	0.4474	mg/L	0.00413	0.92%
Cu 324.752†	143827.8	0.4830	mg/L	0.00300	0.9661	mg/L	0.00600	0.62%
Fe 273.955†	212514.9	163.4	mg/L	0.27	326.7	mg/L	0.54	0.17%
K 766.490†	28321.0	11.46	mg/L	0.036	22.91	mg/L	0.072	0.31%
Mg 279.077†	57543.4	39.87	mg/L	0.073	79.74	mg/L	0.145	0.18%
Mn 257.610†	77940.0	2.095	mg/L	0.0017	4.191	mg/L	0.0033	0.08%
Mo 202.031†	221.5	0.00962	mg/L	0.000327	0.01924	mg/L	0.000654	3.40%
Na 589.592†	106192.5	6.934	mg/L	0.0284	13.87	mg/L	0.057	0.41%
Na 330.237†	180.6	7.246	mg/L	0.1149	14.49	mg/L	0.230	1.59%
Ni 231.604†	759.0	0.1756	mg/L	0.00113	0.3512	mg/L	0.00226	0.64%
Pb 220.353†	6460.4	0.7798	mg/L	0.00211	1.560	mg/L	0.0042	0.27%
Sb 206.836†	53.8	0.02004	mg/L	0.001053	0.04008	mg/L	0.002105	5.25%
Se 196.026†	32.0	0.00978	mg/L	0.003892	0.01956	mg/L	0.007784	39.79%
Si 288.158†	2929.5	1.389	mg/L	0.0177	2.778	mg/L	0.0354	1.27%
Sn 189.927†	16.1	0.01758	mg/L	0.000806	0.03517	mg/L	0.001613	4.59%
Sr 421.552†	573197.1	0.5120	mg/L	0.00115	1.024	mg/L	0.0023	0.22%
Ti 334.903†	145728.5	6.543	mg/L	0.0076	13.09	mg/L	0.015	0.12%
Tl 190.801†	-42.8	0.00303	mg/L	0.003906	0.00607	mg/L	0.007812	128.72%
V 292.402†	66036.3	0.4366	mg/L	0.00310	0.8733	mg/L	0.00621	0.71%
Zn 206.200†	7208.5	1.755	mg/L	0.0082	3.510	mg/L	0.0164	0.47%

Sequence No.: 39
Sample ID: WT03 ASPK SWC

Autosampler Location: 320
Date Collected: 6/11/2013 12:20:57 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 ASPK SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3097314.9	100.5	%	0.83				0.82%
ScR 361.383	377657.3	101.9	%	0.34				0.33%
Ag 328.068†	103004.8	0.5125	mg/L	0.00302	1.025	mg/L	0.0060	0.59%
Al 308.215†	175641.4	101.0	mg/L	0.07	201.9	mg/L	0.14	0.07%
As 188.979†	3489.9	2.078	mg/L	0.0169	4.157	mg/L	0.0338	0.81%
B 249.677†	351.9	0.04482	mg/L	0.002376	0.08964	mg/L	0.004753	5.30%
Ba 233.527†	13205.1	2.732	mg/L	0.0201	5.464	mg/L	0.0402	0.74%
Be 313.042†	313692.2	0.4838	mg/L	0.00073	0.9676	mg/L	0.00145	0.15%
Ca 317.933†	1805191.3	126.0	mg/L	0.42	252.1	mg/L	0.84	0.33%
Cd 228.802†	18462.8	0.5271	mg/L	0.00431	1.054	mg/L	0.0086	0.82%
Co 228.616†	22254.8	0.5587	mg/L	0.00505	1.117	mg/L	0.0101	0.90%
Cr 267.716†	4705.1	0.7176	mg/L	0.00374	1.435	mg/L	0.0075	0.52%
Cu 324.752†	295698.8	0.9871	mg/L	0.00594	1.974	mg/L	0.0119	0.60%
Fe 273.955†	213198.8	163.9	mg/L	0.81	327.7	mg/L	1.62	0.49%
K 766.490†	42396.6	17.15	mg/L	0.030	34.30	mg/L	0.059	0.17%
Mg 279.077†	72661.3	50.37	mg/L	0.225	100.7	mg/L	0.45	0.45%
Mn 257.610†	94990.5	2.554	mg/L	0.0097	5.108	mg/L	0.0194	0.38%
Mo 202.031†	234.0	0.00978	mg/L	0.000568	0.01957	mg/L	0.001135	5.80%
Na 589.592†	247534.0	16.16	mg/L	0.030	32.33	mg/L	0.060	0.18%
Na 330.237†	469.2	16.62	mg/L	0.314	33.23	mg/L	0.628	1.89%
Ni 231.604†	2754.9	0.6367	mg/L	0.00218	1.273	mg/L	0.0044	0.34%
Pb 220.353†	22480.7	2.672	mg/L	0.0238	5.345	mg/L	0.0476	0.89%
Sb 206.836†	58.4	0.01602	mg/L	0.002665	0.03204	mg/L	0.005330	16.64%
Se 196.026†	2966.7	2.000	mg/L	0.0252	4.001	mg/L	0.0503	1.26%
Si 288.158†	4223.2	2.004	mg/L	0.0113	4.007	mg/L	0.0225	0.56%
Sn 189.927†	15.9	0.02173	mg/L	0.001310	0.04347	mg/L	0.002620	6.03%
Sr 421.552†	1278688.1	1.142	mg/L	0.0021	2.284	mg/L	0.0042	0.18%
Ti 334.903†	132282.7	5.937	mg/L	0.0038	11.87	mg/L	0.008	0.06%
Tl 190.801†	4667.3	1.895	mg/L	0.0153	3.790	mg/L	0.0305	0.80%
V 292.402†	135762.0	0.9117	mg/L	0.00650	1.823	mg/L	0.0130	0.71%
Zn 206.200†	12393.2	3.017	mg/L	0.0223	6.035	mg/L	0.0446	0.74%

Sequence No.: 40
Sample ID: WT03 B SWC

Autosampler Location: 321
Date Collected: 6/11/2013 12:24:15 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 B SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3138257.2	101.8	%	0.59				0.58%
ScR 361.383	384352.4	103.7	%	0.70				0.67%
Ag 328.068†	-13.5	0.00006	mg/L	0.000081	0.00012	mg/L	0.000161	131.84%
Al 308.215†	161516.5	92.85	mg/L	0.293	185.7	mg/L	0.59	0.32%
As 188.979†	-235.8	0.06889	mg/L	0.002101	0.1378	mg/L	0.00420	3.05%
B 249.677†	217.2	0.02826	mg/L	0.000337	0.05652	mg/L	0.000674	1.19%
Ba 233.527†	2342.1	0.4587	mg/L	0.00310	0.9174	mg/L	0.00621	0.68%
Be 313.042†	1071.7	0.00148	mg/L	0.000023	0.00297	mg/L	0.000045	1.53%
Ca 317.933†	839815.2	58.63	mg/L	0.219	117.3	mg/L	0.44	0.37%
Cd 228.802†	162.5	0.00558	mg/L	0.000100	0.01115	mg/L	0.000201	1.80%
Co 228.616†	2767.4	0.05798	mg/L	0.000504	0.1160	mg/L	0.00101	0.87%
Cr 267.716†	1312.1	0.2039	mg/L	0.00171	0.4078	mg/L	0.00342	0.84%
Cu 324.752†	180091.1	0.6043	mg/L	0.00298	1.209	mg/L	0.0060	0.49%
Fe 273.955†	236692.7	181.9	mg/L	0.55	363.9	mg/L	1.10	0.30%
K 766.490†	17996.5	7.280	mg/L	0.0436	14.56	mg/L	0.087	0.60%
Mg 279.077†	47044.9	32.57	mg/L	0.114	65.14	mg/L	0.227	0.35%
Mn 257.610†	73790.1	1.984	mg/L	0.0062	3.968	mg/L	0.0125	0.31%
Mo 202.031†	179.6	0.00801	mg/L	0.000282	0.01602	mg/L	0.000565	3.53%
Na 589.592†	82380.7	5.379	mg/L	0.0117	10.76	mg/L	0.023	0.22%
Na 330.237†	126.9	5.569	mg/L	0.1183	11.14	mg/L	0.237	2.12%
Ni 231.604†	821.2	0.1900	mg/L	0.00212	0.3801	mg/L	0.00424	1.12%
Pb 220.353†	6457.3	0.7751	mg/L	0.00391	1.550	mg/L	0.0078	0.50%
Sb 206.836†	49.6	0.01884	mg/L	0.001192	0.03768	mg/L	0.002384	6.33%
Se 196.026†	31.7	0.01102	mg/L	0.007941	0.02203	mg/L	0.015881	72.07%
Si 288.158†	4972.1	2.353	mg/L	0.0120	4.706	mg/L	0.0240	0.51%
Sn 189.927†	13.8	0.01250	mg/L	0.000400	0.02499	mg/L	0.000800	3.20%
Sr 421.552†	419056.0	0.3743	mg/L	0.00079	0.7486	mg/L	0.00158	0.21%
Ti 334.903†	139500.8	6.265	mg/L	0.0180	12.53	mg/L	0.036	0.29%
Tl 190.801†	-42.0	0.00597	mg/L	0.002402	0.01193	mg/L	0.004804	40.26%
V 292.402†	65606.6	0.4328	mg/L	0.00215	0.8656	mg/L	0.00431	0.50%
Zn 206.200†	5463.7	1.330	mg/L	0.0095	2.661	mg/L	0.0191	0.72%

Sequence No.: 41
Sample ID: WT03 C SWC

Autosampler Location: 322
Date Collected: 6/11/2013 12:28:16 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 C SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3098796.9	100.6	%	0.21				0.21%
ScR 361.383	380161.5	102.5	%	0.47				0.45%
Ag 328.068†	-204.0	-0.00088	mg/L	0.000058	-0.00176	mg/L	0.000116	6.58%
Al 308.215†	181548.5	104.4	mg/L	0.12	208.7	mg/L	0.24	0.11%
As 188.979†	-145.3	0.1245	mg/L	0.00143	0.2491	mg/L	0.00286	1.15%
B 249.677†	314.2	0.04094	mg/L	0.000824	0.08187	mg/L	0.001648	2.01%
Ba 233.527†	3547.6	0.7126	mg/L	0.00430	1.425	mg/L	0.0086	0.60%
Be 313.042†	1236.2	0.00173	mg/L	0.000018	0.00345	mg/L	0.000036	1.04%
Ca 317.933†	2352537.3	164.2	mg/L	0.35	328.5	mg/L	0.71	0.22%
Cd 228.802†	161.3	0.00527	mg/L	0.000188	0.01054	mg/L	0.000376	3.57%
Co 228.616†	2855.9	0.05960	mg/L	0.000373	0.1192	mg/L	0.00075	0.63%
Cr 267.716†	1543.1	0.2372	mg/L	0.00077	0.4744	mg/L	0.00154	0.33%
Cu 324.752†	205589.4	0.6883	mg/L	0.00267	1.377	mg/L	0.0053	0.39%
Fe 273.955†	221672.7	170.4	mg/L	0.39	340.8	mg/L	0.78	0.23%
K 766.490†	16065.7	6.499	mg/L	0.0223	13.00	mg/L	0.045	0.34%
Mg 279.077†	53477.0	37.03	mg/L	0.035	74.07	mg/L	0.071	0.10%
Mn 257.610†	84141.9	2.262	mg/L	0.0066	4.523	mg/L	0.0132	0.29%
Mo 202.031†	269.9	0.01107	mg/L	0.000415	0.02215	mg/L	0.000830	3.75%
Na 589.592†	87727.8	5.728	mg/L	0.0203	11.46	mg/L	0.041	0.35%
Na 330.237†	147.0	5.873	mg/L	0.0819	11.75	mg/L	0.164	1.39%
Ni 231.604†	828.4	0.1917	mg/L	0.00185	0.3834	mg/L	0.00369	0.96%
Pb 220.353†	6618.1	0.7974	mg/L	0.00180	1.595	mg/L	0.0036	0.23%
Sb 206.836†	40.7	0.01642	mg/L	0.002151	0.03283	mg/L	0.004301	13.10%
Se 196.026†	39.3	0.01493	mg/L	0.003931	0.02986	mg/L	0.007862	26.33%
Si 288.158†	4542.4	2.151	mg/L	0.0075	4.301	mg/L	0.0149	0.35%
Sn 189.927†	106.5	0.05064	mg/L	0.001397	0.1013	mg/L	0.00279	2.76%
Sr 421.552†	760359.0	0.6791	mg/L	0.00060	1.358	mg/L	0.0012	0.09%
Ti 334.903†	149381.3	6.703	mg/L	0.0105	13.41	mg/L	0.021	0.16%
Tl 190.801†	-37.7	0.00600	mg/L	0.002011	0.01201	mg/L	0.004022	33.49%
V 292.402†	68776.3	0.4548	mg/L	0.00075	0.9097	mg/L	0.00150	0.17%
Zn 206.200†	6346.7	1.544	mg/L	0.0079	3.088	mg/L	0.0157	0.51%

Sequence No.: 42
Sample ID: WT03 D SWC

Autosampler Location: 323
Date Collected: 6/11/2013 12:32:19 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 D SWC

Analyte	Back Pressure	Flow
All	242.0 kPa	0.75 L/min

Mean Data: WT03 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3101249.8	100.6	%	0.59				0.59%
ScR 361.383	378859.5	102.2	%	0.34				0.33%
Ag 328.068†	82.6	0.00053	mg/L	0.000021	0.00105	mg/L	0.000042	3.95%
Al 308.215†	183365.9	105.4	mg/L	0.43	210.8	mg/L	0.86	0.41%
As 188.979†	15.8	0.1984	mg/L	0.00189	0.3968	mg/L	0.00377	0.95%
B 249.677†	323.8	0.04217	mg/L	0.000735	0.08435	mg/L	0.001470	1.74%
Ba 233.527†	5077.5	1.026	mg/L	0.0048	2.052	mg/L	0.0096	0.47%
Be 313.042†	1210.7	0.00171	mg/L	0.000013	0.00342	mg/L	0.000027	0.78%
Ca 317.933†	1967807.9	137.4	mg/L	0.39	274.8	mg/L	0.77	0.28%
Cd 228.802†	637.8	0.01866	mg/L	0.000108	0.03732	mg/L	0.000217	0.58%
Co 228.616†	3359.0	0.07288	mg/L	0.000488	0.1458	mg/L	0.00098	0.67%
Cr 267.716†	1879.7	0.2902	mg/L	0.00233	0.5804	mg/L	0.00467	0.80%
Cu 324.752†	450378.7	1.502	mg/L	0.0120	3.004	mg/L	0.0240	0.80%
Fe 273.955†	268833.0	206.6	mg/L	0.93	413.3	mg/L	1.87	0.45%
K 766.490†	21172.1	8.564	mg/L	0.0345	17.13	mg/L	0.069	0.40%
Mg 279.077†	54658.3	37.83	mg/L	0.158	75.67	mg/L	0.316	0.42%
Mn 257.610†	111762.9	3.005	mg/L	0.0073	6.009	mg/L	0.0146	0.24%
Mo 202.031†	435.1	0.01947	mg/L	0.000226	0.03894	mg/L	0.000453	1.16%
Na 589.592†	73438.9	4.795	mg/L	0.0219	9.591	mg/L	0.0438	0.46%
Na 330.237†	152.9	4.851	mg/L	0.0841	9.702	mg/L	0.1681	1.73%
Ni 231.604†	874.3	0.2023	mg/L	0.00239	0.4046	mg/L	0.00477	1.18%
Pb 220.353†	9837.1	1.175	mg/L	0.0084	2.350	mg/L	0.0168	0.71%
Sb 206.836†	80.7	0.02691	mg/L	0.001069	0.05381	mg/L	0.002138	3.97%
Se 196.026†	38.1	0.01401	mg/L	0.005331	0.02802	mg/L	0.010662	38.06%
Si 288.158†	2827.5	1.341	mg/L	0.0110	2.681	mg/L	0.0220	0.82%
Sn 189.927†	135.1	0.05463	mg/L	0.001371	0.1093	mg/L	0.00274	2.51%
Sr 421.552†	601849.5	0.5376	mg/L	0.00127	1.075	mg/L	0.0025	0.24%
Ti 334.903†	138626.0	6.221	mg/L	0.0166	12.44	mg/L	0.033	0.27%
Tl 190.801†	-54.7	0.00430	mg/L	0.001361	0.00860	mg/L	0.002722	31.66%
V 292.402†	59148.1	0.3882	mg/L	0.00315	0.7764	mg/L	0.00629	0.81%
Zn 206.200†	22496.8	5.478	mg/L	0.0337	10.96	mg/L	0.067	0.61%

Sequence No.: 43
Sample ID: WT03 E SWC

Autosampler Location: 324
Date Collected: 6/11/2013 12:36:22 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 E SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3127902.5	101.5	%	0.12				0.11%
ScR 361.383	382485.8	103.2	%	0.43				0.41%
Ag 328.068†	-168.0	-0.00071	mg/L	0.000122	-0.00142	mg/L	0.000243	17.17%
Al 308.215†	198467.5	114.1	mg/L	0.25	228.2	mg/L	0.51	0.22%
As 188.979†	-199.6	0.1016	mg/L	0.00230	0.2031	mg/L	0.00459	2.26%
B 249.677†	292.8	0.03813	mg/L	0.001268	0.07626	mg/L	0.002537	3.33%
Ba 233.527†	4145.4	0.8374	mg/L	0.00246	1.675	mg/L	0.0049	0.29%
Be 313.042†	1223.1	0.00171	mg/L	0.000009	0.00342	mg/L	0.000017	0.51%
Ca 317.933†	1704904.0	119.0	mg/L	0.29	238.1	mg/L	0.58	0.24%
Cd 228.802†	273.3	0.00871	mg/L	0.000015	0.01742	mg/L	0.000030	0.17%
Co 228.616†	3002.4	0.06316	mg/L	0.000242	0.1263	mg/L	0.00048	0.38%
Cr 267.716†	1814.3	0.2788	mg/L	0.00045	0.5576	mg/L	0.00091	0.16%
Cu 324.752†	183741.0	0.6158	mg/L	0.00037	1.232	mg/L	0.0007	0.06%
Fe 273.955†	221927.1	170.6	mg/L	0.42	341.2	mg/L	0.83	0.24%
K 766.490†	19489.3	7.883	mg/L	0.0021	15.77	mg/L	0.004	0.03%
Mg 279.077†	55906.1	38.73	mg/L	0.037	77.45	mg/L	0.075	0.10%
Mn 257.610†	91572.9	2.462	mg/L	0.0113	4.923	mg/L	0.0226	0.46%
Mo 202.031†	263.4	0.01133	mg/L	0.000720	0.02266	mg/L	0.001439	6.35%
Na 589.592†	77102.4	5.035	mg/L	0.0217	10.07	mg/L	0.043	0.43%
Na 330.237†	149.8	5.375	mg/L	0.0857	10.75	mg/L	0.171	1.59%
Ni 231.604†	917.9	0.2124	mg/L	0.00211	0.4248	mg/L	0.00422	0.99%
Pb 220.353†	4362.3	0.5332	mg/L	0.00179	1.066	mg/L	0.0036	0.34%
Sb 206.836†	33.0	0.01327	mg/L	0.001506	0.02655	mg/L	0.003012	11.35%
Se 196.026†	37.3	0.01247	mg/L	0.002492	0.02493	mg/L	0.004985	19.99%
Si 288.158†	3498.0	1.657	mg/L	0.0052	3.315	mg/L	0.0104	0.31%
Sn 189.927†	-22.9	0.01068	mg/L	0.001208	0.02135	mg/L	0.002416	11.32%
Sr 421.552†	600756.1	0.5366	mg/L	0.00086	1.073	mg/L	0.0017	0.16%
Ti 334.903†	151671.2	6.809	mg/L	0.0072	13.62	mg/L	0.014	0.11%
Tl 190.801†	-43.0	0.00396	mg/L	0.003240	0.00791	mg/L	0.006481	81.90%
V 292.402†	64848.7	0.4283	mg/L	0.00123	0.8566	mg/L	0.00247	0.29%
Zn 206.200†	17342.9	4.223	mg/L	0.0138	8.445	mg/L	0.0276	0.33%

Sequence No.: 44
Sample ID: WT03 MB1SPK SWC

Autosampler Location: 325
Date Collected: 6/11/2013 12:40:25 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 MB1SPK SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3150797.9	102.2	%	0.37				0.36%
ScR 361.383	387866.6	104.6	%	0.13				0.12%
Ag 328.068†	104333.2	0.5190	mg/L	0.00399	1.038	mg/L	0.0080	0.77%
Al 308.215†	3457.2	1.980	mg/L	0.0013	3.960	mg/L	0.0026	0.06%
As 188.979†	3697.3	2.009	mg/L	0.0102	4.018	mg/L	0.0204	0.51%
B 249.677†	70.8	0.00820	mg/L	0.000654	0.01641	mg/L	0.001308	7.98%
Ba 233.527†	9811.9	2.050	mg/L	0.0079	4.100	mg/L	0.0158	0.39%
Be 313.042†	308493.9	0.4759	mg/L	0.00082	0.9519	mg/L	0.00163	0.17%
Ca 317.933†	139337.4	9.728	mg/L	0.0223	19.46	mg/L	0.045	0.23%
Cd 228.802†	17663.0	0.5031	mg/L	0.00413	1.006	mg/L	0.0083	0.82%
Co 228.616†	19618.8	0.5034	mg/L	0.00464	1.007	mg/L	0.0093	0.92%
Cr 267.716†	3347.6	0.5088	mg/L	0.00023	1.018	mg/L	0.0005	0.05%
Cu 324.752†	151604.8	0.5032	mg/L	0.00391	1.006	mg/L	0.0078	0.78%
Fe 273.955†	2600.4	1.996	mg/L	0.0073	3.991	mg/L	0.0147	0.37%
K 766.490†	24139.4	9.764	mg/L	0.0669	19.53	mg/L	0.134	0.68%
Mg 279.077†	14366.6	9.981	mg/L	0.0159	19.96	mg/L	0.032	0.16%
Mn 257.610†	18280.6	0.4918	mg/L	0.00130	0.9836	mg/L	0.00261	0.27%
Mo 202.031†	17.6	0.00071	mg/L	0.000118	0.00142	mg/L	0.000235	16.57%
Na 589.592†	151188.0	9.872	mg/L	0.0154	19.74	mg/L	0.031	0.16%
Na 330.237†	299.1	10.25	mg/L	0.007	20.51	mg/L	0.015	0.07%
Ni 231.604†	2076.5	0.4796	mg/L	0.00132	0.9593	mg/L	0.00265	0.28%
Pb 220.353†	17063.3	2.018	mg/L	0.0137	4.035	mg/L	0.0273	0.68%
Sb 206.836†	16.2	-0.00022	mg/L	0.000653	-0.00044	mg/L	0.001306	294.44%
Se 196.026†	2952.8	2.002	mg/L	0.0137	4.004	mg/L	0.0274	0.69%
Si 288.158†	36.2	0.02052	mg/L	0.002556	0.04103	mg/L	0.005113	12.46%
Sn 189.927†	-24.7	-0.00520	mg/L	0.000652	-0.01039	mg/L	0.001304	12.55%
Sr 421.552†	546322.9	0.4880	mg/L	0.00084	0.9759	mg/L	0.00169	0.17%
Ti 334.903†	93.6	0.00350	mg/L	0.000271	0.00701	mg/L	0.000542	7.74%
Tl 190.801†	4984.6	2.002	mg/L	0.0119	4.005	mg/L	0.0239	0.60%
V 292.402†	75050.9	0.5108	mg/L	0.00357	1.022	mg/L	0.0071	0.70%
Zn 206.200†	1979.4	0.4821	mg/L	0.00209	0.9642	mg/L	0.00417	0.43%

Sequence No.: 45
Sample ID: CV 6

Autosampler Location: 7
Date Collected: 6/11/2013 12:44:26 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3147213.5	102.1	%	0.20				0.20%
ScR 361.383	378143.7	102.0	%	0.32				0.31%
Ag 328.068†	210754.7	1.048	mg/L	0.0038	1.048	mg/L	0.0038	0.36%
Al 308.215†	3635.5	2.057	mg/L	0.0059	2.057	mg/L	0.0059	0.29%
As 188.979†	3649.6	2.012	mg/L	0.0047	2.012	mg/L	0.0047	0.23%
B 249.677†	7751.3	1.012	mg/L	0.0017	1.012	mg/L	0.0017	0.17%
Ba 233.527†	5009.5	1.046	mg/L	0.0055	1.046	mg/L	0.0055	0.52%
Be 313.042†	648296.7	1.000	mg/L	0.0036	1.000	mg/L	0.0036	0.36%
Ca 317.933†	28338.6	1.978	mg/L	0.0015	1.978	mg/L	0.0015	0.07%
Cd 228.802†	35185.7	1.013	mg/L	0.0036	1.013	mg/L	0.0036	0.36%
Co 228.616†	39393.1	1.009	mg/L	0.0064	1.009	mg/L	0.0064	0.63%
Cr 267.716†	6897.5	1.050	mg/L	0.0018	1.050	mg/L	0.0018	0.17%
Cu 324.752†	311002.7	1.032	mg/L	0.0052	1.032	mg/L	0.0052	0.50%
Fe 273.955†	2683.0	2.056	mg/L	0.0060	2.056	mg/L	0.0060	0.29%
K 766.490†	49370.2	19.97	mg/L	0.063	19.97	mg/L	0.063	0.31%
Mg 279.077†	2889.1	2.014	mg/L	0.0053	2.014	mg/L	0.0053	0.26%
Mn 257.610†	35846.8	0.9641	mg/L	0.00313	0.9641	mg/L	0.00313	0.32%
Mo 202.031†	20395.7	0.9953	mg/L	0.00213	0.9953	mg/L	0.00213	0.21%
Na 589.592†	768245.8	50.16	mg/L	0.090	50.16	mg/L	0.090	0.18%
Na 330.237†	1484.6	51.80	mg/L	0.084	51.80	mg/L	0.084	0.16%
Ni 231.604†	4421.3	1.023	mg/L	0.0034	1.023	mg/L	0.0034	0.33%
Pb 220.353†	17312.5	2.047	mg/L	0.0028	2.047	mg/L	0.0028	0.14%
Sb 206.836†	6965.4	2.052	mg/L	0.0053	2.052	mg/L	0.0053	0.26%
Se 196.026†	2926.3	1.984	mg/L	0.0022	1.984	mg/L	0.0022	0.11%
Si 288.158†	4377.3	2.073	mg/L	0.0103	2.073	mg/L	0.0103	0.50%
Sn 189.927†	3679.6	0.9726	mg/L	0.00091	0.9726	mg/L	0.00091	0.09%
Sr 421.552†	1117180.1	0.9978	mg/L	0.00041	0.9978	mg/L	0.00041	0.04%
Ti 334.903†	22131.0	0.9933	mg/L	0.00173	0.9933	mg/L	0.00173	0.17%
Tl 190.801†	5145.7	2.064	mg/L	0.0023	2.064	mg/L	0.0023	0.11%
V 292.402†	150823.0	1.027	mg/L	0.0044	1.027	mg/L	0.0044	0.43%
Zn 206.200†	4132.3	1.007	mg/L	0.0032	1.007	mg/L	0.0032	0.32%

Sequence No.: 46
Sample ID: CB6

Autosampler Location: 1
Date Collected: 6/11/2013 12:48:29 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3175326.7	103.0	%	0.15				0.15%
ScR 361.383	384598.9	103.7	%	0.80				0.77%
Ag 328.068†	60.4	0.00030	mg/L	0.000082	0.00030	mg/L	0.000082	27.42%
Al 308.215†	-0.6	-0.00037	mg/L	0.002576	-0.00037	mg/L	0.002576	703.39%
As 188.979†	3.1	0.00170	mg/L	0.000717	0.00170	mg/L	0.000717	42.21%
B 249.677†	66.2	0.00866	mg/L	0.000516	0.00866	mg/L	0.000516	5.96%
Ba 233.527†	-1.2	-0.00025	mg/L	0.000609	-0.00025	mg/L	0.000609	242.39%
Be 313.042†	162.3	0.00025	mg/L	0.000037	0.00025	mg/L	0.000037	14.71%
Ca 317.933†	25.9	0.00180	mg/L	0.000452	0.00180	mg/L	0.000452	25.07%
Cd 228.802†	8.7	0.00025	mg/L	0.000155	0.00025	mg/L	0.000155	62.89%
Co 228.616†	14.6	0.00037	mg/L	0.000102	0.00037	mg/L	0.000102	27.30%
Cr 267.716†	1.4	0.00022	mg/L	0.000217	0.00022	mg/L	0.000217	99.59%
Cu 324.752†	248.5	0.00082	mg/L	0.000035	0.00082	mg/L	0.000035	4.25%
Fe 273.955†	1.8	0.00137	mg/L	0.001261	0.00137	mg/L	0.001261	92.33%
K 766.490†	24.4	0.00987	mg/L	0.014471	0.00987	mg/L	0.014471	146.69%
Mg 279.077†	1.4	0.00098	mg/L	0.005342	0.00098	mg/L	0.005342	543.77%
Mn 257.610†	6.2	0.00017	mg/L	0.000089	0.00017	mg/L	0.000089	52.75%
Mo 202.031†	12.6	0.00062	mg/L	0.000117	0.00062	mg/L	0.000117	18.96%
Na 589.592†	1290.1	0.08424	mg/L	0.000232	0.08424	mg/L	0.000232	0.28%
Na 330.237†	4.6	0.1590	mg/L	0.20167	0.1590	mg/L	0.20167	126.84%
Ni 231.604†	6.6	0.00152	mg/L	0.000841	0.00152	mg/L	0.000841	55.44%
Pb 220.353†	2.7	0.00032	mg/L	0.000360	0.00032	mg/L	0.000360	111.42%
Sb 206.836†	8.7	0.00258	mg/L	0.001819	0.00258	mg/L	0.001819	70.42%
Se 196.026†	5.3	0.00358	mg/L	0.002593	0.00358	mg/L	0.002593	72.33%
Si 288.158†	4.1	0.00194	mg/L	0.003322	0.00194	mg/L	0.003322	170.88%
Sn 189.927†	3.8	0.00100	mg/L	0.000526	0.00100	mg/L	0.000526	52.80%
Sr 421.552†	220.7	0.00020	mg/L	0.000018	0.00020	mg/L	0.000018	8.99%
Ti 334.903†	7.7	0.00034	mg/L	0.000391	0.00034	mg/L	0.000391	113.96%
Tl 190.801†	7.6	0.00305	mg/L	0.002044	0.00305	mg/L	0.002044	66.92%
V 292.402†	37.2	0.00025	mg/L	0.000116	0.00025	mg/L	0.000116	45.73%
Zn 206.200†	0.9	0.00023	mg/L	0.000222	0.00023	mg/L	0.000222	96.36%

Sequence No.: 47
Sample ID: WR99 MB3 SWC

Autosampler Location: 327
Date Collected: 6/11/2013 12:52:44 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WR99 MB3 SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 MB3 SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3181283.8	103.2	%	0.57				0.55%
ScR 361.383	387579.8	104.5	%	0.20				0.20%
Ag 328.068†	13.5	0.00007	mg/L	0.000089	0.00013	mg/L	0.000178	132.94%
Al 308.215†	-0.0	-0.00002	mg/L	0.002543	-0.00004	mg/L	0.005087	>999.9%
As 188.979†	1.2	0.00066	mg/L	0.000947	0.00133	mg/L	0.001895	142.49%
B 249.677†	51.5	0.00673	mg/L	0.000309	0.01346	mg/L	0.000617	4.58%
Ba 233.527†	-2.9	-0.00061	mg/L	0.000643	-0.00121	mg/L	0.001287	106.00%
Be 313.042†	0.6	0.00000	mg/L	0.000023	0.00000	mg/L	0.000046	>999.9%
Ca 317.933†	60.1	0.00420	mg/L	0.001110	0.00839	mg/L	0.002221	26.46%
Cd 228.802†	6.8	0.00020	mg/L	0.000060	0.00039	mg/L	0.000121	30.81%
Co 228.616†	-1.2	-0.00003	mg/L	0.000126	-0.00006	mg/L	0.000253	398.64%
Cr 267.716†	-4.3	-0.00065	mg/L	0.000576	-0.00130	mg/L	0.001151	88.38%
Cu 324.752†	366.2	0.00122	mg/L	0.000065	0.00243	mg/L	0.000131	5.37%
Fe 273.955†	2.1	0.00160	mg/L	0.000832	0.00320	mg/L	0.001663	52.02%
K 766.490†	-26.8	-0.01082	mg/L	0.009171	-0.02164	mg/L	0.018342	84.74%
Mg 279.077†	3.4	0.00233	mg/L	0.007792	0.00466	mg/L	0.015583	334.46%
Mn 257.610†	-2.7	-0.00007	mg/L	0.000047	-0.00015	mg/L	0.000095	64.44%
Mo 202.031†	-3.6	-0.00017	mg/L	0.000184	-0.00035	mg/L	0.000368	105.85%
Na 589.592†	1072.5	0.07003	mg/L	0.000339	0.1401	mg/L	0.00068	0.48%
Na 330.237†	-6.8	-0.2368	mg/L	0.33903	-0.4737	mg/L	0.67805	143.15%
Ni 231.604†	8.5	0.00197	mg/L	0.000553	0.00394	mg/L	0.001107	28.13%
Pb 220.353†	-4.2	-0.00050	mg/L	0.000235	-0.00099	mg/L	0.000470	47.34%
Sb 206.836†	-6.7	-0.00197	mg/L	0.001552	-0.00393	mg/L	0.003103	78.92%
Se 196.026†	1.6	0.00106	mg/L	0.002418	0.00211	mg/L	0.004835	228.70%
Si 288.158†	14.2	0.00672	mg/L	0.000868	0.01344	mg/L	0.001736	12.91%
Sn 189.927†	2.7	0.00072	mg/L	0.000426	0.00145	mg/L	0.000852	58.92%
Sr 421.552†	-18.5	-0.00002	mg/L	0.000025	-0.00003	mg/L	0.000051	154.03%
Ti 334.903†	-7.4	-0.00033	mg/L	0.000316	-0.00066	mg/L	0.000631	95.10%
Tl 190.801†	-0.1	-0.00004	mg/L	0.001223	-0.00008	mg/L	0.002446	>999.9%
V 292.402†	1.5	0.00001	mg/L	0.000117	0.00002	mg/L	0.000234	>999.9%
Zn 206.200†	1.4	0.00035	mg/L	0.000417	0.00069	mg/L	0.000834	120.64%

Sequence No.: 48
Sample ID: WR99 DDUP SWC

Del

Dilution: 2.000000X

Autosampler Location: 328
Date Collected: 6/11/2013 12:57:00 PM
Data Type: Original

Nebulizer Parameters: WR99 DDUP SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 DDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3158496.7	102.5	%	0.08				0.08%
ScR 361.383	386812.2	104.3	%	0.56				0.53%
Ag 328.068†	-244.9	-0.00111	mg/L	0.000114	-0.00221	mg/L	0.000228	10.33%
Al 308.215†	133046.7	76.48	mg/L	0.335	153.0	mg/L	0.67	0.44%
As 188.979†	-97.9	0.1239	mg/L	0.00286	0.2478	mg/L	0.00571	2.31%
B 249.677†	392.2	0.05117	mg/L	0.000417	0.1023	mg/L	0.00083	0.82%
Ba 233.527†	2488.4	0.4740	mg/L	0.00157	0.9480	mg/L	0.00313	0.33%
Be 313.042†	935.9	0.00129	mg/L	0.000015	0.00259	mg/L	0.000031	1.19%
Ca 317.933†	519700.2	36.28	mg/L	0.111	72.57	mg/L	0.223	0.31%
Cd 228.802†	224.4	0.00692	mg/L	0.000126	0.01385	mg/L	0.000251	1.82%
Co 228.616†	2207.2	0.04367	mg/L	0.000147	0.08734	mg/L	0.000295	0.34%
Cr 267.716†	803.3	0.1309	mg/L	0.00089	0.2619	mg/L	0.00178	0.68%
Cu 324.752†	84365.5	0.2908	mg/L	0.00098	0.5816	mg/L	0.00196	0.34%
Fe 273.955†	354794.4	272.7	mg/L	2.32	545.4	mg/L	4.65	0.85%
K 766.490†	10372.7	4.196	mg/L	0.0233	8.391	mg/L	0.0466	0.56%
Mg 279.077†	38875.7	26.84	mg/L	0.103	53.68	mg/L	0.207	0.38%
Mn 257.610†	129462.3	3.481	mg/L	0.0250	6.962	mg/L	0.0499	0.72%
Mo 202.031†	251.6	0.01181	mg/L	0.000576	0.02362	mg/L	0.001152	4.88%
Na 589.592†	52661.9	3.439	mg/L	0.0208	6.877	mg/L	0.0416	0.61%
Na 330.237†	71.4	3.567	mg/L	0.1836	7.134	mg/L	0.3671	5.15%
Ni 231.604†	615.5	0.1424	mg/L	0.00096	0.2848	mg/L	0.00192	0.67%
Pb 220.353†	1731.6	0.2084	mg/L	0.00192	0.4168	mg/L	0.00384	0.92%
Sb 206.836†	35.0	0.01479	mg/L	0.002624	0.02957	mg/L	0.005249	17.75%
Se 196.026†	31.1	0.01247	mg/L	0.005674	0.02494	mg/L	0.011348	45.50%
Si 288.158†	10183.5	4.815	mg/L	0.0285	9.630	mg/L	0.0569	0.59%
Sn 189.927†	9.7	0.00840	mg/L	0.000356	0.01681	mg/L	0.000712	4.23%
Sr 421.552†	340583.1	0.3042	mg/L	0.00146	0.6084	mg/L	0.00292	0.48%
Ti 334.903†	124515.8	5.593	mg/L	0.0281	11.19	mg/L	0.056	0.50%
Tl 190.801†	-75.9	0.00511	mg/L	0.002637	0.01023	mg/L	0.005274	51.58%
V 292.402†	57189.6	0.3712	mg/L	0.00071	0.7424	mg/L	0.00142	0.19%
Zn 206.200†	5030.9	1.226	mg/L	0.0081	2.451	mg/L	0.0162	0.66%

Sequence No.: 49
Sample ID: WR99 D SWC

Dilution: 2.000000X

Autosampler Location: 329
Date Collected: 6/11/2013 1:01:01 PM
Data Type: Original

Nebulizer Parameters: WR99 D SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3160986.2	102.6	%	0.83				0.81%
ScR 361.383	386525.3	104.3	%	0.69				0.66%
Ag 328.068†	-241.2	-0.00109	mg/L	0.000203	-0.00219	mg/L	0.000407	18.58%
Al 308.215†	131896.8	75.82	mg/L	0.321	151.6	mg/L	0.64	0.42%
As 188.979†	-143.6	0.1003	mg/L	0.00483	0.2007	mg/L	0.00967	4.82%
B 249.677†	150.6	0.01957	mg/L	0.000808	0.03914	mg/L	0.001617	4.13%
Ba 233.527†	2379.2	0.4545	mg/L	0.00315	0.9089	mg/L	0.00631	0.69%
Be 313.042†	918.1	0.00127	mg/L	0.000032	0.00254	mg/L	0.000063	2.49%
Ca 317.933†	567547.9	39.62	mg/L	0.028	79.25	mg/L	0.056	0.07%
Cd 228.802†	206.4	0.00653	mg/L	0.000208	0.01305	mg/L	0.000416	3.19%
Co 228.616†	2287.7	0.04589	mg/L	0.000583	0.09178	mg/L	0.001165	1.27%
Cr 267.716†	695.2	0.1136	mg/L	0.00107	0.2272	mg/L	0.00214	0.94%
Cu 324.752†	64891.5	0.2253	mg/L	0.00258	0.4506	mg/L	0.00517	1.15%
Fe 273.955†	329422.9	253.2	mg/L	1.79	506.4	mg/L	3.57	0.71%
K 766.490†	12079.5	4.886	mg/L	0.0203	9.772	mg/L	0.0407	0.42%
Mg 279.077†	39334.4	27.17	mg/L	0.051	54.34	mg/L	0.103	0.19%
Mn 257.610†	129935.2	3.494	mg/L	0.0197	6.988	mg/L	0.0393	0.56%
Mo 202.031†	155.1	0.00706	mg/L	0.000212	0.01412	mg/L	0.000423	3.00%
Na 589.592†	55713.0	3.638	mg/L	0.0018	7.276	mg/L	0.0035	0.05%
Na 330.237†	79.2	3.871	mg/L	0.1699	7.743	mg/L	0.3398	4.39%
Ni 231.604†	555.3	0.1285	mg/L	0.00204	0.2570	mg/L	0.00409	1.59%
Pb 220.353†	2340.2	0.2813	mg/L	0.00305	0.5625	mg/L	0.00609	1.08%
Sb 206.836†	33.2	0.01431	mg/L	0.001137	0.02862	mg/L	0.002274	7.95%
Se 196.026†	23.9	0.00766	mg/L	0.005307	0.01531	mg/L	0.010614	69.33%
Si 288.158†	12573.4	5.944	mg/L	0.0409	11.89	mg/L	0.082	0.69%
Sn 189.927†	-45.7	-0.00578	mg/L	0.000479	-0.01155	mg/L	0.000958	8.30%
Sr 421.552†	372187.7	0.3324	mg/L	0.00143	0.6649	mg/L	0.00286	0.43%
Ti 334.903†	125543.7	5.639	mg/L	0.0242	11.28	mg/L	0.048	0.43%
Tl 190.801†	-72.8	0.00374	mg/L	0.002272	0.00748	mg/L	0.004543	60.70%
V 292.402†	53668.8	0.3483	mg/L	0.00354	0.6966	mg/L	0.00708	1.02%
Zn 206.200†	4561.5	1.112	mg/L	0.0057	2.223	mg/L	0.0113	0.51%

Sequence No.: 50
Sample ID: WR99 DSPK SWC

Dil

Dilution: 2.000000X

Autosampler Location: 330
Date Collected: 6/11/2013 1:05:02 PM
Data Type: Original

Nebulizer Parameters: WR99 DSPK SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 DSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3149489.1	102.2	%	0.35				0.34%
ScR 361.383	380803.9	102.7	%	0.20				0.19%
Ag 328.068†	102139.4	0.5082	mg/L	0.00316	1.016	mg/L	0.0063	0.62%
Al 308.215†	151044.6	86.82	mg/L	0.175	173.6	mg/L	0.35	0.20%
As 188.979†	3421.2	2.040	mg/L	0.0145	4.081	mg/L	0.0290	0.71%
B 249.677†	148.8	0.01828	mg/L	0.001606	0.03656	mg/L	0.003213	8.79%
Ba 233.527†	12427.2	2.559	mg/L	0.0068	5.118	mg/L	0.0135	0.26%
Be 313.042†	309462.9	0.4773	mg/L	0.00131	0.9546	mg/L	0.00263	0.28%
Ca 317.933†	711370.9	49.67	mg/L	0.126	99.33	mg/L	0.253	0.25%
Cd 228.802†	18230.7	0.5206	mg/L	0.00255	1.041	mg/L	0.0051	0.49%
Co 228.616†	21800.4	0.5467	mg/L	0.00184	1.093	mg/L	0.0037	0.34%
Cr 267.716†	4235.7	0.6500	mg/L	0.00507	1.300	mg/L	0.0101	0.78%
Cu 324.752†	212973.0	0.7154	mg/L	0.00594	1.431	mg/L	0.0119	0.83%
Fe 273.955†	293290.2	225.4	mg/L	0.50	450.9	mg/L	1.00	0.22%
K 766.490†	35090.2	14.19	mg/L	0.039	28.39	mg/L	0.079	0.28%
Mg 279.077†	62740.5	43.45	mg/L	0.109	86.90	mg/L	0.218	0.25%
Mn 257.610†	145783.9	3.920	mg/L	0.0080	7.840	mg/L	0.0159	0.20%
Mo 202.031†	117.2	0.00505	mg/L	0.000301	0.01011	mg/L	0.000601	5.95%
Na 589.592†	217082.4	14.17	mg/L	0.018	28.35	mg/L	0.036	0.13%
Na 330.237†	380.9	14.24	mg/L	0.268	28.48	mg/L	0.536	1.88%
Ni 231.604†	2693.3	0.6224	mg/L	0.00408	1.245	mg/L	0.0082	0.66%
Pb 220.353†	19053.1	2.261	mg/L	0.0121	4.522	mg/L	0.0243	0.54%
Sb 206.836†	46.1	0.01286	mg/L	0.001721	0.02572	mg/L	0.003442	13.38%
Se 196.026†	2908.0	1.962	mg/L	0.0150	3.924	mg/L	0.0300	0.77%
Si 288.158†	10678.8	5.053	mg/L	0.0208	10.11	mg/L	0.042	0.41%
Sn 189.927†	-47.1	-0.00476	mg/L	0.001336	-0.00951	mg/L	0.002672	28.09%
Sr 421.552†	1017937.8	0.9092	mg/L	0.00083	1.818	mg/L	0.0017	0.09%
Ti 334.903†	127816.2	5.741	mg/L	0.0088	11.48	mg/L	0.018	0.15%
Tl 190.801†	4623.3	1.886	mg/L	0.0078	3.772	mg/L	0.0156	0.41%
V 292.402†	129087.2	0.8632	mg/L	0.00746	1.726	mg/L	0.0149	0.86%
Zn 206.200†	6614.1	1.611	mg/L	0.0072	3.223	mg/L	0.0143	0.45%

Sequence No.: 51
Sample ID: ~~WR99 DPOST SWC~~ ZZZZZZ
Dilution: 2.000000X BA 6/11/13

Autosampler Location: 331
Date Collected: 6/11/2013 1:08:20 PM
Data Type: Original

Nebulizer Parameters: WR99 DPOST SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 DPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3137327.5	101.8	%	0.42				0.42%
ScR 361.383	379382.2	102.3	%	0.55				0.54%
Ag 328.068†	105066.0	0.5227	mg/L	0.00336	1.045	mg/L	0.0067	0.64%
Al 308.215†	137408.1	78.98	mg/L	0.055	158.0	mg/L	0.11	0.07%
As 188.979†	3599.7	2.136	mg/L	0.0116	4.273	mg/L	0.0232	0.54%
B 249.677†	161.2	0.01989	mg/L	0.001228	0.03977	mg/L	0.002455	6.17%
Ba 233.527†	12514.1	2.572	mg/L	0.0478	5.143	mg/L	0.0957	1.86%
Be 313.042†	315800.9	0.4871	mg/L	0.00079	0.9741	mg/L	0.00158	0.16%
Ca 317.933†	718929.6	50.19	mg/L	0.093	100.4	mg/L	0.19	0.19%
Cd 228.802†	18630.5	0.5317	mg/L	0.00183	1.063	mg/L	0.0037	0.34%
Co 228.616†	22133.6	0.5549	mg/L	0.00133	1.110	mg/L	0.0027	0.24%
Cr 267.716†	4128.5	0.6354	mg/L	0.00736	1.271	mg/L	0.0147	1.16%
Cu 324.752†	224685.0	0.7557	mg/L	0.00509	1.511	mg/L	0.0102	0.67%
Fe 273.955†	334303.0	257.0	mg/L	1.01	513.9	mg/L	2.01	0.39%
K 766.490†	37711.2	15.25	mg/L	0.083	30.51	mg/L	0.166	0.54%
Mg 279.077†	57091.7	39.51	mg/L	0.536	79.01	mg/L	1.073	1.36%
Mn 257.610†	149834.4	4.029	mg/L	0.0117	8.058	mg/L	0.0234	0.29%
Mo 202.031†	152.7	0.00678	mg/L	0.000338	0.01357	mg/L	0.000675	4.98%
Na 589.592†	213769.4	13.96	mg/L	0.013	27.92	mg/L	0.026	0.09%
Na 330.237†	379.1	14.16	mg/L	0.137	28.32	mg/L	0.273	0.96%
Ni 231.604†	2698.3	0.6236	mg/L	0.00692	1.247	mg/L	0.0138	1.11%
Pb 220.353†	19612.8	2.324	mg/L	0.0095	4.647	mg/L	0.0191	0.41%
Sb 206.836†	56.1	0.01603	mg/L	0.002196	0.03206	mg/L	0.004392	13.70%
Se 196.026†	3027.8	2.044	mg/L	0.0131	4.089	mg/L	0.0263	0.64%
Si 288.158†	12729.1	6.021	mg/L	0.0810	12.04	mg/L	0.162	1.35%
Sn 189.927†	-47.0	-0.00467	mg/L	0.001464	-0.00935	mg/L	0.002928	31.33%
Sr 421.552†	943597.7	0.8428	mg/L	0.00053	1.686	mg/L	0.0011	0.06%
Ti 334.903†	127108.1	5.709	mg/L	0.0049	11.42	mg/L	0.010	0.09%
Tl 190.801†	4745.4	1.939	mg/L	0.0053	3.878	mg/L	0.0105	0.27%
V 292.402†	129483.9	0.8642	mg/L	0.00613	1.728	mg/L	0.0123	0.71%
Zn 206.200†	6686.5	1.629	mg/L	0.0271	3.258	mg/L	0.0542	1.66%

Sequence No.: 52
Sample ID: WR99 E SWC

Autosampler Location: 332
Date Collected: 6/11/2013 1:11:39 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WR99 E SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WR99 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3176463.2	103.1	%	0.28				0.28%
ScR 361.383	387929.0	104.6	%	0.13				0.12%
Ag 328.068†	-148.9	-0.00064	mg/L	0.000107	-0.00129	mg/L	0.000214	16.67%
Al 308.215†	125360.0	72.06	mg/L	0.288	144.1	mg/L	0.58	0.40%
As 188.979†	-184.6	0.08505	mg/L	0.002748	0.1701	mg/L	0.00550	3.23%
B 249.677†	130.3	0.01690	mg/L	0.000697	0.03381	mg/L	0.001394	4.12%
Ba 233.527†	2092.3	0.4107	mg/L	0.00069	0.8214	mg/L	0.00137	0.17%
Be 313.042†	862.9	0.00119	mg/L	0.000015	0.00238	mg/L	0.000030	1.24%
Ca 317.933†	539773.5	37.68	mg/L	0.070	75.37	mg/L	0.139	0.18%
Cd 228.802†	969.1	0.02885	mg/L	0.000197	0.05769	mg/L	0.000393	0.68%
Co 228.616†	2509.7	0.05238	mg/L	0.000171	0.1048	mg/L	0.00034	0.33%
Cr 267.716†	1086.8	0.1693	mg/L	0.00083	0.3387	mg/L	0.00166	0.49%
Cu 324.752†	92040.9	0.3111	mg/L	0.00038	0.6223	mg/L	0.00077	0.12%
Fe 273.955†	204586.9	157.3	mg/L	0.58	314.5	mg/L	1.16	0.37%
K 766.490†	11125.4	4.500	mg/L	0.0286	9.000	mg/L	0.0571	0.63%
Mg 279.077†	38264.4	26.49	mg/L	0.088	52.97	mg/L	0.175	0.33%
Mn 257.610†	63797.3	1.715	mg/L	0.0054	3.431	mg/L	0.0108	0.32%
Mo 202.031†	100.5	0.00442	mg/L	0.000486	0.00883	mg/L	0.000973	11.01%
Na 589.592†	56891.9	3.715	mg/L	0.0160	7.430	mg/L	0.0319	0.43%
Na 330.237†	78.0	3.836	mg/L	0.1569	7.671	mg/L	0.3138	4.09%
Ni 231.604†	602.8	0.1395	mg/L	0.00065	0.2790	mg/L	0.00131	0.47%
Pb 220.353†	7808.6	0.9316	mg/L	0.00169	1.863	mg/L	0.0034	0.18%
Sb 206.836†	22.4	0.01043	mg/L	0.001870	0.02085	mg/L	0.003739	17.93%
Se 196.026†	25.1	0.00891	mg/L	0.006673	0.01782	mg/L	0.013346	74.88%
Si 288.158†	8815.8	4.169	mg/L	0.0064	8.337	mg/L	0.0128	0.15%
Sn 189.927†	-32.6	-0.00251	mg/L	0.001186	-0.00501	mg/L	0.002372	47.33%
Sr 421.552†	453730.9	0.4053	mg/L	0.00169	0.8105	mg/L	0.00338	0.42%
Ti 334.903†	130333.7	5.855	mg/L	0.0176	11.71	mg/L	0.035	0.30%
Tl 190.801†	-36.5	0.00524	mg/L	0.002391	0.01048	mg/L	0.004782	45.63%
V 292.402†	49618.1	0.3257	mg/L	0.00081	0.6515	mg/L	0.00163	0.25%
Zn 206.200†	5449.6	1.328	mg/L	0.0022	2.655	mg/L	0.0043	0.16%

Sequence No.: 53
Sample ID: WR99 F SWC

Autosampler Location: 333
Date Collected: 6/11/2013 1:15:40 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WR99 F SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3126564.8	101.5	%	0.16				0.16%
ScR 361.383	384017.1	103.6	%	0.92				0.89%
Ag 328.068†	1349.1	0.00685	mg/L	0.000060	0.01369	mg/L	0.000121	0.88%
Al 308.215†	194908.2	112.1	mg/L	0.45	224.1	mg/L	0.90	0.40%
As 188.979†	-212.9	0.06364	mg/L	0.002151	0.1273	mg/L	0.00430	3.38%
B 249.677†	275.1	0.03574	mg/L	0.000892	0.07149	mg/L	0.001784	2.50%
Ba 233.527†	4469.8	0.9061	mg/L	0.00710	1.812	mg/L	0.0142	0.78%
Be 313.042†	1370.0	0.00194	mg/L	0.000030	0.00388	mg/L	0.000059	1.53%
Ca 317.933†	876482.1	61.19	mg/L	0.305	122.4	mg/L	0.61	0.50%
Cd 228.802†	4230.7	0.1239	mg/L	0.00069	0.2479	mg/L	0.00138	0.56%
Co 228.616†	4915.0	0.1142	mg/L	0.00030	0.2283	mg/L	0.00060	0.26%
Cr 267.716†	4695.6	0.7182	mg/L	0.00454	1.436	mg/L	0.0091	0.63%
Cu 324.752†	283387.8	0.9464	mg/L	0.00295	1.893	mg/L	0.0059	0.31%
Fe 273.955†	215244.6	165.4	mg/L	1.53	330.9	mg/L	3.05	0.92%
K 766.490†	13463.0	5.446	mg/L	0.0153	10.89	mg/L	0.031	0.28%
Mg 279.077†	52984.6	36.71	mg/L	0.136	73.41	mg/L	0.272	0.37%
Mn 257.610†	95067.4	2.556	mg/L	0.0182	5.112	mg/L	0.0364	0.71%
Mo 202.031†	916.3	0.04391	mg/L	0.000406	0.08781	mg/L	0.000812	0.92%
Na 589.592†	78332.9	5.115	mg/L	0.0152	10.23	mg/L	0.030	0.30%
Na 330.237†	162.2	5.470	mg/L	0.1820	10.94	mg/L	0.364	3.33%
Ni 231.604†	1219.4	0.2822	mg/L	0.00225	0.5643	mg/L	0.00449	0.80%
Pb 220.353†	23883.2	2.841	mg/L	0.0126	5.681	mg/L	0.0252	0.44%
Sb 206.836†	65.1	0.01623	mg/L	0.002912	0.03246	mg/L	0.005824	17.94%
Se 196.026†	32.5	0.00943	mg/L	0.003765	0.01886	mg/L	0.007529	39.92%
Si 288.158†	6273.1	2.969	mg/L	0.0154	5.938	mg/L	0.0308	0.52%
Sn 189.927†	58.0	0.02447	mg/L	0.001016	0.04893	mg/L	0.002032	4.15%
Sr 421.552†	381129.8	0.3404	mg/L	0.00135	0.6808	mg/L	0.00270	0.40%
Ti 334.903†	128030.1	5.750	mg/L	0.0272	11.50	mg/L	0.054	0.47%
Tl 190.801†	-35.0	0.00592	mg/L	0.000303	0.01184	mg/L	0.000606	5.12%
V 292.402†	69901.5	0.4652	mg/L	0.00100	0.9304	mg/L	0.00201	0.22%
Zn 206.200†	21151.6	5.151	mg/L	0.0342	10.30	mg/L	0.068	0.66%

Sequence No.: 54
Sample ID: WR99 MB3SPK SWC

Autosampler Location: 334
Date Collected: 6/11/2013 1:19:41 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WR99 MB3SPK SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WR99 MB3SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3154201.4	102.4	%	0.08				0.08%
ScR 361.383	384282.4	103.7	%	0.98				0.95%
Ag 328.068†	104942.7	0.5220	mg/L	0.00342	1.044	mg/L	0.0068	0.66%
Al 308.215†	3498.5	2.004	mg/L	0.0189	4.007	mg/L	0.0378	0.94%
As 188.979†	3753.3	2.039	mg/L	0.0095	4.079	mg/L	0.0190	0.47%
B 249.677†	36.7	0.00373	mg/L	0.000423	0.00745	mg/L	0.000847	11.36%
Ba 233.527†	10004.7	2.090	mg/L	0.0160	4.181	mg/L	0.0321	0.77%
Be 313.042†	312404.1	0.4820	mg/L	0.00331	0.9639	mg/L	0.00663	0.69%
Ca 317.933†	140686.1	9.822	mg/L	0.0462	19.64	mg/L	0.092	0.47%
Cd 228.802†	17917.7	0.5104	mg/L	0.00232	1.021	mg/L	0.0046	0.45%
Co 228.616†	19742.9	0.5065	mg/L	0.00238	1.013	mg/L	0.0048	0.47%
Cr 267.716†	3404.6	0.5175	mg/L	0.00419	1.035	mg/L	0.0084	0.81%
Cu 324.752†	151437.1	0.5026	mg/L	0.00287	1.005	mg/L	0.0057	0.57%
Fe 273.955†	2615.6	2.007	mg/L	0.0165	4.015	mg/L	0.0330	0.82%
K 766.490†	24289.2	9.825	mg/L	0.0230	19.65	mg/L	0.046	0.23%
Mg 279.077†	14620.0	10.16	mg/L	0.081	20.31	mg/L	0.161	0.79%
Mn 257.610†	18559.5	0.4993	mg/L	0.00390	0.9986	mg/L	0.00781	0.78%
Mo 202.031†	20.1	0.00083	mg/L	0.000044	0.00166	mg/L	0.000087	5.28%
Na 589.592†	151461.7	9.890	mg/L	0.0650	19.78	mg/L	0.130	0.66%
Na 330.237†	290.1	9.937	mg/L	0.3166	19.87	mg/L	0.633	3.19%
Ni 231.604†	2121.7	0.4901	mg/L	0.00425	0.9802	mg/L	0.00851	0.87%
Pb 220.353†	17262.6	2.041	mg/L	0.0098	4.082	mg/L	0.0197	0.48%
Sb 206.836†	6.1	-0.00332	mg/L	0.002586	-0.00664	mg/L	0.005173	77.84%
Se 196.026†	3007.4	2.039	mg/L	0.0028	4.078	mg/L	0.0056	0.14%
Si 288.158†	17.7	0.01181	mg/L	0.003424	0.02362	mg/L	0.006848	29.00%
Sn 189.927†	-27.6	-0.00595	mg/L	0.000362	-0.01189	mg/L	0.000725	6.09%
Sr 421.552†	548265.9	0.4897	mg/L	0.00240	0.9794	mg/L	0.00481	0.49%
Ti 334.903†	74.8	0.00265	mg/L	0.000203	0.00530	mg/L	0.000405	7.64%
Tl 190.801†	5044.5	2.026	mg/L	0.0036	4.053	mg/L	0.0073	0.18%
V 292.402†	75053.3	0.5109	mg/L	0.00337	1.022	mg/L	0.0067	0.66%
Zn 206.200†	2025.0	0.4932	mg/L	0.00416	0.9864	mg/L	0.00833	0.84%

Sequence No.: 55
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 6/11/2013 1:23:42 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3109430.9	100.9	%	0.27				0.26%
ScR 361.383	374657.3	101.1	%	0.60				0.60%
Ag 328.068†	217279.0	1.081	mg/L	0.0050	1.081	mg/L	0.0050	0.46%
Al 308.215†	3707.5	2.098	mg/L	0.0166	2.098	mg/L	0.0166	0.79%
As 188.979†	3770.5	2.078	mg/L	0.0067	2.078	mg/L	0.0067	0.32%
B 249.677†	7856.1	1.026	mg/L	0.0067	1.026	mg/L	0.0067	0.65%
Ba 233.527†	5118.8	1.069	mg/L	0.0089	1.069	mg/L	0.0089	0.83%
Be 313.042†	661532.0	1.021	mg/L	0.0046	1.021	mg/L	0.0046	0.45%
Ca 317.933†	28945.9	2.021	mg/L	0.0086	2.021	mg/L	0.0086	0.43%
Cd 228.802†	35914.2	1.034	mg/L	0.0093	1.034	mg/L	0.0093	0.90%
Co 228.616†	40209.9	1.030	mg/L	0.0077	1.030	mg/L	0.0077	0.74%
Cr 267.716†	7034.1	1.071	mg/L	0.0081	1.071	mg/L	0.0081	0.76%
Cu 324.752†	306925.9	1.018	mg/L	0.0016	1.018	mg/L	0.0016	0.15%
Fe 273.955†	2733.0	2.094	mg/L	0.0159	2.094	mg/L	0.0159	0.76%
K 766.490†	50211.2	20.31	mg/L	0.029	20.31	mg/L	0.029	0.14%
Mg 279.077†	2948.9	2.056	mg/L	0.0184	2.056	mg/L	0.0184	0.90%
Mn 257.610†	36536.9	0.9826	mg/L	0.00281	0.9826	mg/L	0.00281	0.29%
Mo 202.031†	20398.6	0.9955	mg/L	0.00921	0.9955	mg/L	0.00921	0.93%
Na 589.592†	783275.7	51.15	mg/L	0.119	51.15	mg/L	0.119	0.23%
Na 330.237†	1497.8	52.26	mg/L	0.247	52.26	mg/L	0.247	0.47%
Ni 231.604†	4524.2	1.047	mg/L	0.0089	1.047	mg/L	0.0089	0.85%
Pb 220.353†	17322.7	2.049	mg/L	0.0198	2.049	mg/L	0.0198	0.97%
Sb 206.836†	7179.8	2.115	mg/L	0.0065	2.115	mg/L	0.0065	0.31%
Se 196.026†	3006.7	2.038	mg/L	0.0094	2.038	mg/L	0.0094	0.46%
Si 288.158†	4468.8	2.116	mg/L	0.0083	2.116	mg/L	0.0083	0.39%
Sn 189.927†	3791.7	1.002	mg/L	0.0059	1.002	mg/L	0.0059	0.59%
Sr 421.552†	1136112.3	1.015	mg/L	0.0023	1.015	mg/L	0.0023	0.23%
Ti 334.903†	22566.9	1.013	mg/L	0.0019	1.013	mg/L	0.0019	0.19%
Tl 190.801†	5295.3	2.124	mg/L	0.0054	2.124	mg/L	0.0054	0.25%
V 292.402†	155286.4	1.057	mg/L	0.0062	1.057	mg/L	0.0062	0.59%
Zn 206.200†	4240.6	1.033	mg/L	0.0083	1.033	mg/L	0.0083	0.80%

Sequence No.: 56
Sample ID: CB-7

Autosampler Location: 1
Date Collected: 6/11/2013 1:27:47 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3103831.2	100.7	%	0.20				0.20%
ScR 361.383	377237.9	101.8	%	0.52				0.52%
Ag 328.068†	31.3	0.00016	mg/L	0.000206	0.00016	mg/L	0.000206	132.34%
Al 308.215†	0.8	0.00046	mg/L	0.006281	0.00046	mg/L	0.006281	>999.9%
As 188.979†	3.3	0.00179	mg/L	0.000999	0.00179	mg/L	0.000999	55.88%
B 249.677†	33.4	0.00436	mg/L	0.000842	0.00436	mg/L	0.000842	19.29%
Ba 233.527†	2.9	0.00060	mg/L	0.000621	0.00060	mg/L	0.000621	103.12%
Be 313.042†	162.7	0.00025	mg/L	0.000022	0.00025	mg/L	0.000022	8.86%
Ca 317.933†	5.4	0.00038	mg/L	0.000519	0.00038	mg/L	0.000519	138.26%
Cd 228.802†	13.6	0.00039	mg/L	0.000144	0.00039	mg/L	0.000144	37.25%
Co 228.616†	10.5	0.00027	mg/L	0.000029	0.00027	mg/L	0.000029	10.97%
Cr 267.716†	2.9	0.00044	mg/L	0.000755	0.00044	mg/L	0.000755	170.61%
Cu 324.752†	273.7	0.00091	mg/L	0.000096	0.00091	mg/L	0.000096	10.62%
Fe 273.955†	3.5	0.00270	mg/L	0.000900	0.00270	mg/L	0.000900	33.40%
K 766.490†	33.1	0.01339	mg/L	0.010320	0.01339	mg/L	0.010320	77.09%
Mg 279.077†	-1.8	-0.00126	mg/L	0.002801	-0.00126	mg/L	0.002801	222.13%
Mn 257.610†	10.1	0.00027	mg/L	0.000166	0.00027	mg/L	0.000166	61.31%
Mo 202.031†	12.5	0.00061	mg/L	0.000082	0.00061	mg/L	0.000082	13.41%
Na 589.592†	805.9	0.05262	mg/L	0.003216	0.05262	mg/L	0.003216	6.11%
Na 330.237†	-3.2	-0.1125	mg/L	0.29000	-0.1125	mg/L	0.29000	257.69%
Ni 231.604†	6.8	0.00157	mg/L	0.001025	0.00157	mg/L	0.001025	65.35%
Pb 220.353†	3.1	0.00036	mg/L	0.000703	0.00036	mg/L	0.000703	193.23%
Sb 206.836†	9.8	0.00288	mg/L	0.001723	0.00288	mg/L	0.001723	59.80%
Se 196.026†	3.8	0.00256	mg/L	0.002892	0.00256	mg/L	0.002892	112.77%
Si 288.158†	-0.3	-0.00015	mg/L	0.003759	-0.00015	mg/L	0.003759	>999.9%
Sn 189.927†	6.1	0.00160	mg/L	0.000181	0.00160	mg/L	0.000181	11.33%
Sr 421.552†	183.7	0.00016	mg/L	0.000021	0.00016	mg/L	0.000021	12.64%
Ti 334.903†	4.2	0.00019	mg/L	0.000478	0.00019	mg/L	0.000478	254.59%
Tl 190.801†	8.6	0.00347	mg/L	0.000494	0.00347	mg/L	0.000494	14.24%
V 292.402†	27.2	0.00019	mg/L	0.000146	0.00019	mg/L	0.000146	78.66%
Zn 206.200†	5.3	0.00129	mg/L	0.000478	0.00129	mg/L	0.000478	37.14%

Sequence No.: 57
Sample ID: WS21 MB1 SWC

Autosampler Location: 335
Date Collected: 6/11/2013 1:32:02 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS21 MB1 SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WS21 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3128592.2	101.5	%	0.43				0.43%
ScR 361.383	383148.1	103.3	%	0.96				0.93%
Ag 328.068†	25.8	0.00013	mg/L	0.000108	0.00026	mg/L	0.000216	83.85%
Al 308.215†	7.8	0.00451	mg/L	0.002323	0.00902	mg/L	0.004645	51.52%
As 188.979†	1.7	0.00095	mg/L	0.001449	0.00189	mg/L	0.002899	153.02%
B 249.677†	31.8	0.00415	mg/L	0.000257	0.00830	mg/L	0.000515	6.20%
Ba 233.527†	-0.8	-0.00017	mg/L	0.000312	-0.00033	mg/L	0.000624	186.54%
Be 313.042†	16.5	0.00003	mg/L	0.000040	0.00005	mg/L	0.000080	156.37%
Ca 317.933†	84.5	0.00590	mg/L	0.000482	0.01180	mg/L	0.000964	8.17%
Cd 228.802†	6.7	0.00019	mg/L	0.000166	0.00038	mg/L	0.000332	87.46%
Co 228.616†	3.8	0.00010	mg/L	0.000040	0.00020	mg/L	0.000081	41.16%
Cr 267.716†	-0.1	-0.00002	mg/L	0.000554	-0.00004	mg/L	0.001108	>999.9%
Cu 324.752†	264.8	0.00088	mg/L	0.000121	0.00176	mg/L	0.000243	13.81%
Fe 273.955†	6.5	0.00497	mg/L	0.000852	0.00994	mg/L	0.001704	17.15%
K 766.490†	4.9	0.00199	mg/L	0.011121	0.00398	mg/L	0.022242	558.44%
Mg 279.077†	1.0	0.00071	mg/L	0.004362	0.00141	mg/L	0.008724	616.78%
Mn 257.610†	-1.0	-0.00003	mg/L	0.000055	-0.00005	mg/L	0.000109	202.06%
Mo 202.031†	0.7	0.00003	mg/L	0.000043	0.00007	mg/L	0.000086	130.41%
Na 589.592†	600.7	0.03923	mg/L	0.002913	0.07845	mg/L	0.005826	7.43%
Na 330.237†	7.7	0.2687	mg/L	0.50964	0.5374	mg/L	1.01928	189.66%
Ni 231.604†	4.0	0.00092	mg/L	0.000378	0.00184	mg/L	0.000756	41.12%
Pb 220.353†	-6.5	-0.00077	mg/L	0.000597	-0.00154	mg/L	0.001193	77.68%
Sb 206.836†	-4.6	-0.00135	mg/L	0.000181	-0.00270	mg/L	0.000361	13.39%
Se 196.026†	3.9	0.00261	mg/L	0.000956	0.00522	mg/L	0.001913	36.61%
Si 288.158†	17.3	0.00817	mg/L	0.001950	0.01634	mg/L	0.003900	23.87%
Sn 189.927†	3.7	0.00098	mg/L	0.000315	0.00196	mg/L	0.000630	32.19%
Sr 421.552†	-2.6	-0.00000	mg/L	0.000020	-0.00000	mg/L	0.000039	842.11%
Ti 334.903†	3.5	0.00015	mg/L	0.000566	0.00031	mg/L	0.001132	365.35%
Tl 190.801†	3.4	0.00137	mg/L	0.001142	0.00273	mg/L	0.002285	83.60%
V 292.402†	5.8	0.00004	mg/L	0.000110	0.00008	mg/L	0.000221	282.54%
Zn 206.200†	4.5	0.00109	mg/L	0.000281	0.00218	mg/L	0.000562	25.78%

Sequence No.: 58
Sample ID: WS21 ADUP SWC

Autosampler Location: 336
Date Collected: 6/11/2013 1:36:19 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS21 ADUP SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WS21 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3108032.2	100.9	%	0.66				0.65%
ScR 361.383	382446.6	103.2	%	0.35				0.34%
Ag 328.068†	-161.2	-0.00072	mg/L	0.000162	-0.00143	mg/L	0.000323	22.55%
Al 308.215†	97324.6	55.95	mg/L	0.208	111.9	mg/L	0.42	0.37%
As 188.979†	-271.9	0.02409	mg/L	0.000736	0.04818	mg/L	0.001472	3.06%
B 249.677†	74.9	0.00971	mg/L	0.000532	0.01942	mg/L	0.001064	5.48%
Ba 233.527†	975.5	0.1861	mg/L	0.00058	0.3722	mg/L	0.00116	0.31%
Be 313.042†	595.7	0.00079	mg/L	0.000014	0.00159	mg/L	0.000028	1.76%
Ca 317.933†	430723.4	30.07	mg/L	0.136	60.14	mg/L	0.271	0.45%
Cd 228.802†	52.7	0.00238	mg/L	0.000105	0.00477	mg/L	0.000209	4.39%
Co 228.616†	1686.8	0.03267	mg/L	0.000280	0.06534	mg/L	0.000560	0.86%
Cr 267.716†	492.3	0.07748	mg/L	0.000575	0.1550	mg/L	0.00115	0.74%
Cu 324.752†	24604.8	0.08519	mg/L	0.000553	0.1704	mg/L	0.00111	0.65%
Fe 273.955†	136628.2	105.0	mg/L	0.88	210.0	mg/L	1.75	0.83%
K 766.490†	8264.5	3.343	mg/L	0.0391	6.686	mg/L	0.0782	1.17%
Mg 279.077†	25258.2	17.48	mg/L	0.076	34.96	mg/L	0.152	0.43%
Mn 257.610†	34626.5	0.9309	mg/L	0.00612	1.862	mg/L	0.0122	0.66%
Mo 202.031†	51.1	0.00211	mg/L	0.000355	0.00422	mg/L	0.000711	16.84%
Na 589.592†	61659.6	4.026	mg/L	0.0078	8.052	mg/L	0.0156	0.19%
Na 330.237†	79.8	4.138	mg/L	0.1590	8.276	mg/L	0.3181	3.84%
Ni 231.604†	288.5	0.06677	mg/L	0.001707	0.1335	mg/L	0.00341	2.56%
Pb 220.353†	525.6	0.06983	mg/L	0.000999	0.1397	mg/L	0.00200	1.43%
Sb 206.836†	2.7	0.00526	mg/L	0.001834	0.01052	mg/L	0.003668	34.88%
Se 196.026†	10.9	0.00107	mg/L	0.002123	0.00214	mg/L	0.004247	198.41%
Si 288.158†	8452.7	3.996	mg/L	0.0079	7.992	mg/L	0.0158	0.20%
Sn 189.927†	-55.9	-0.00976	mg/L	0.000540	-0.01952	mg/L	0.001080	5.53%
Sr 421.552†	265198.0	0.2369	mg/L	0.00079	0.4737	mg/L	0.00158	0.33%
Ti 334.903†	120515.9	5.414	mg/L	0.0197	10.83	mg/L	0.039	0.36%
Tl 190.801†	-31.5	0.00039	mg/L	0.002640	0.00078	mg/L	0.005279	676.92%
V 292.402†	43486.2	0.2867	mg/L	0.00216	0.5734	mg/L	0.00432	0.75%
Zn 206.200†	968.9	0.2363	mg/L	0.00162	0.4726	mg/L	0.00323	0.68%

Sequence No.: 59
Sample ID: WS21 A SWC

Autosampler Location: 337
Date Collected: 6/11/2013 1:40:19 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS21 A SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WS21 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3131067.8	101.6	%	0.36				0.35%
ScR 361.383	384694.2	103.8	%	0.87				0.84%
Ag 328.068†	-221.6	-0.00101	mg/L	0.000022	-0.00203	mg/L	0.000044	2.16%
Al 308.215†	106079.4	60.98	mg/L	0.210	122.0	mg/L	0.42	0.34%
As 188.979†	-256.2	0.02482	mg/L	0.003132	0.04965	mg/L	0.006264	12.62%
B 249.677†	72.0	0.00932	mg/L	0.000573	0.01864	mg/L	0.001145	6.14%
Ba 233.527†	1121.0	0.2149	mg/L	0.00425	0.4299	mg/L	0.00851	1.98%
Be 313.042†	664.5	0.00090	mg/L	0.000015	0.00180	mg/L	0.000031	1.72%
Ca 317.933†	413396.7	28.86	mg/L	0.111	57.72	mg/L	0.222	0.38%
Cd 228.802†	70.4	0.00286	mg/L	0.000075	0.00572	mg/L	0.000150	2.63%
Co 228.616†	1780.6	0.03539	mg/L	0.000196	0.07077	mg/L	0.000392	0.55%
Cr 267.716†	493.4	0.07785	mg/L	0.000117	0.1557	mg/L	0.00023	0.15%
Cu 324.752†	29933.8	0.1033	mg/L	0.00067	0.2066	mg/L	0.00134	0.65%
Fe 273.955†	148644.1	114.3	mg/L	0.30	228.5	mg/L	0.61	0.27%
K 766.490†	9739.0	3.939	mg/L	0.0208	7.879	mg/L	0.0415	0.53%
Mg 279.077†	28464.9	19.70	mg/L	0.078	39.41	mg/L	0.157	0.40%
Mn 257.610†	35322.8	0.9497	mg/L	0.00322	1.899	mg/L	0.0064	0.34%
Mo 202.031†	47.6	0.00195	mg/L	0.000491	0.00391	mg/L	0.000982	25.13%
Na 589.592†	64433.3	4.207	mg/L	0.0217	8.415	mg/L	0.0435	0.52%
Na 330.237†	84.8	4.245	mg/L	0.1247	8.490	mg/L	0.2494	2.94%
Ni 231.604†	314.8	0.07284	mg/L	0.000654	0.1457	mg/L	0.00131	0.90%
Pb 220.353†	497.2	0.06715	mg/L	0.000870	0.1343	mg/L	0.00174	1.30%
Sb 206.836†	8.2	0.00673	mg/L	0.001295	0.01347	mg/L	0.002590	19.23%
Se 196.026†	19.4	0.00628	mg/L	0.003726	0.01255	mg/L	0.007452	59.38%
Si 288.158†	5333.6	2.522	mg/L	0.0176	5.045	mg/L	0.0352	0.70%
Sn 189.927†	-53.9	-0.00945	mg/L	0.002050	-0.01891	mg/L	0.004100	21.69%
Sr 421.552†	265343.1	0.2370	mg/L	0.00073	0.4740	mg/L	0.00146	0.31%
Ti 334.903†	115056.1	5.169	mg/L	0.0187	10.34	mg/L	0.037	0.36%
Tl 190.801†	-31.6	0.00156	mg/L	0.004134	0.00312	mg/L	0.008268	265.23%
V 292.402†	45163.8	0.2977	mg/L	0.00166	0.5955	mg/L	0.00331	0.56%
Zn 206.200†	1013.6	0.2469	mg/L	0.00288	0.4939	mg/L	0.00576	1.17%

Sequence No.: 60
Sample ID: WS21 ASPK SWC

Autosampler Location: 338
Date Collected: 6/11/2013 1:44:19 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS21 ASPK SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WS21 ASPK SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3101003.7	100.6	%	0.66				0.65%
ScR 361.383	377233.2	101.8	%	0.16				0.16%
Ag 328.068†	102435.9	0.5096	mg/L	0.00201	1.019	mg/L	0.0040	0.39%
Al 308.215†	100121.1	57.55	mg/L	0.239	115.1	mg/L	0.48	0.42%
As 188.979†	3392.5	1.997	mg/L	0.0136	3.993	mg/L	0.0272	0.68%
B 249.677†	77.0	0.00893	mg/L	0.000342	0.01785	mg/L	0.000684	3.83%
Ba 233.527†	10989.6	2.279	mg/L	0.0097	4.557	mg/L	0.0194	0.43%
Be 313.042†	311592.4	0.4806	mg/L	0.00079	0.9612	mg/L	0.00157	0.16%
Ca 317.933†	545631.4	38.09	mg/L	0.169	76.19	mg/L	0.339	0.44%
Cd 228.802†	18108.1	0.5170	mg/L	0.00378	1.034	mg/L	0.0076	0.73%
Co 228.616†	21292.8	0.5367	mg/L	0.00368	1.073	mg/L	0.0074	0.69%
Cr 267.716†	3891.9	0.5941	mg/L	0.00256	1.188	mg/L	0.0051	0.43%
Cu 324.752†	178535.4	0.5961	mg/L	0.00500	1.192	mg/L	0.0100	0.84%
Fe 273.955†	137265.2	105.5	mg/L	1.11	211.0	mg/L	2.22	1.05%
K 766.490†	32758.1	13.25	mg/L	0.080	26.50	mg/L	0.160	0.60%
Mg 279.077†	40760.8	28.25	mg/L	0.130	56.51	mg/L	0.261	0.46%
Mn 257.610†	51021.0	1.372	mg/L	0.0114	2.744	mg/L	0.0228	0.83%
Mo 202.031†	64.5	0.00263	mg/L	0.000211	0.00526	mg/L	0.000421	8.00%
Na 589.592†	214809.4	14.03	mg/L	0.062	28.05	mg/L	0.124	0.44%
Na 330.237†	374.9	14.09	mg/L	0.085	28.19	mg/L	0.169	0.60%
Ni 231.604†	2381.2	0.5502	mg/L	0.00050	1.100	mg/L	0.0010	0.09%
Pb 220.353†	17622.4	2.091	mg/L	0.0124	4.183	mg/L	0.0248	0.59%
Sb 206.836†	25.0	0.00626	mg/L	0.001380	0.01252	mg/L	0.002759	22.04%
Se 196.026†	2925.3	1.977	mg/L	0.0134	3.954	mg/L	0.0267	0.68%
Si 288.158†	9986.6	4.724	mg/L	0.0185	9.449	mg/L	0.0371	0.39%
Sn 189.927†	-58.7	-0.00950	mg/L	0.000843	-0.01900	mg/L	0.001686	8.87%
Sr 421.552†	828728.7	0.7402	mg/L	0.00378	1.480	mg/L	0.0076	0.51%
Ti 334.903†	107763.7	4.840	mg/L	0.0198	9.681	mg/L	0.0397	0.41%
Tl 190.801†	4782.4	1.934	mg/L	0.0135	3.868	mg/L	0.0269	0.70%
V 292.402†	115973.2	0.7805	mg/L	0.00557	1.561	mg/L	0.0111	0.71%
Zn 206.200†	2957.9	0.7209	mg/L	0.00087	1.442	mg/L	0.0017	0.12%

Sequence No.: 61
Sample ID: ~~WS21 APOST SWC~~ 222222
BA 6/11/13
Dilution: 2.000000X

Autosampler Location: 339
Date Collected: 6/11/2013 1:48:23 PM
Data Type: Original

Nebulizer Parameters: WS21 APOST SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WS21 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3102105.5	100.7	%	0.63				0.63%
ScR 361.383	375581.2	101.3	%	0.38				0.38%
Ag 328.068†	108159.3	0.5381	mg/L	0.00303	1.076	mg/L	0.0061	0.56%
Al 308.215†	111830.3	64.28	mg/L	0.185	128.6	mg/L	0.37	0.29%
As 188.979†	3581.3	2.112	mg/L	0.0240	4.224	mg/L	0.0480	1.14%
B 249.677†	76.1	0.00875	mg/L	0.001143	0.01751	mg/L	0.002286	13.05%
Ba 233.527†	11559.6	2.396	mg/L	0.0089	4.792	mg/L	0.0178	0.37%
Be 313.042†	324917.3	0.5011	mg/L	0.00229	1.002	mg/L	0.0046	0.46%
Ca 317.933†	565374.5	39.47	mg/L	0.110	78.94	mg/L	0.220	0.28%
Cd 228.802†	19010.2	0.5427	mg/L	0.00517	1.085	mg/L	0.0103	0.95%
Co 228.616†	22273.0	0.5610	mg/L	0.00573	1.122	mg/L	0.0115	1.02%
Cr 267.716†	4057.5	0.6196	mg/L	0.00297	1.239	mg/L	0.0059	0.48%
Cu 324.752†	193043.3	0.6447	mg/L	0.00298	1.289	mg/L	0.0060	0.46%
Fe 273.955†	151565.3	116.5	mg/L	0.31	233.0	mg/L	0.62	0.27%
K 766.490†	35980.6	14.55	mg/L	0.050	29.11	mg/L	0.101	0.35%
Mg 279.077†	43852.6	30.39	mg/L	0.061	60.79	mg/L	0.122	0.20%
Mn 257.610†	54515.2	1.466	mg/L	0.0033	2.932	mg/L	0.0066	0.22%
Mo 202.031†	61.7	0.00248	mg/L	0.000144	0.00496	mg/L	0.000289	5.82%
Na 589.592†	226804.5	14.81	mg/L	0.059	29.62	mg/L	0.118	0.40%
Na 330.237†	396.1	14.93	mg/L	0.145	29.86	mg/L	0.290	0.97%
Ni 231.604†	2511.3	0.5802	mg/L	0.00229	1.160	mg/L	0.0046	0.39%
Pb 220.353†	18392.1	2.183	mg/L	0.0213	4.367	mg/L	0.0426	0.98%
Sb 206.836†	27.9	0.00725	mg/L	0.000231	0.01450	mg/L	0.000461	3.18%
Se 196.026†	3112.4	2.103	mg/L	0.0270	4.207	mg/L	0.0540	1.28%
Si 288.158†	5465.8	2.589	mg/L	0.0190	5.177	mg/L	0.0379	0.73%
Sn 189.927†	-61.4	-0.00997	mg/L	0.000489	-0.01993	mg/L	0.000978	4.91%
Sr 421.552†	851521.8	0.7606	mg/L	0.00224	1.521	mg/L	0.0045	0.29%
Ti 334.903†	116578.4	5.236	mg/L	0.0138	10.47	mg/L	0.028	0.26%
Tl 190.801†	5014.4	2.028	mg/L	0.0198	4.057	mg/L	0.0396	0.98%
V 292.402†	122876.9	0.8267	mg/L	0.00400	1.653	mg/L	0.0080	0.48%
Zn 206.200†	3128.9	0.7622	mg/L	0.00193	1.524	mg/L	0.0039	0.25%

Sequence No.: 62
Sample ID: WS21 MB1SPK SWC

Autosampler Location: 340
Date Collected: 6/11/2013 1:52:27 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS21 MB1SPK SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WS21 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3103121.1	100.7	%	0.28				0.28%
ScR 361.383	375945.8	101.4	%	0.56				0.55%
Ag 328.068†	107219.1	0.5333	mg/L	0.00232	1.067	mg/L	0.0046	0.43%
Al 308.215†	3632.4	2.081	mg/L	0.0208	4.161	mg/L	0.0415	1.00%
As 188.979†	3798.2	2.064	mg/L	0.0104	4.127	mg/L	0.0208	0.50%
B 249.677†	24.8	0.00216	mg/L	0.000347	0.00432	mg/L	0.000693	16.04%
Ba 233.527†	10253.8	2.142	mg/L	0.0099	4.285	mg/L	0.0199	0.46%
Be 313.042†	318554.9	0.4915	mg/L	0.00196	0.9829	mg/L	0.00393	0.40%
Ca 317.933†	143515.8	10.02	mg/L	0.057	20.04	mg/L	0.113	0.56%
Cd 228.802†	18160.0	0.5173	mg/L	0.00281	1.035	mg/L	0.0056	0.54%
Co 228.616†	20016.2	0.5135	mg/L	0.00243	1.027	mg/L	0.0049	0.47%
Cr 267.716†	3530.4	0.5367	mg/L	0.00473	1.073	mg/L	0.0095	0.88%
Cu 324.752†	154598.4	0.5131	mg/L	0.00221	1.026	mg/L	0.0044	0.43%
Fe 273.955†	2710.2	2.080	mg/L	0.0147	4.160	mg/L	0.0294	0.71%
K 766.490†	24932.7	10.09	mg/L	0.048	20.17	mg/L	0.095	0.47%
Mg 279.077†	14270.0	9.914	mg/L	0.0335	19.83	mg/L	0.067	0.34%
Mn 257.610†	18357.3	0.4939	mg/L	0.00211	0.9877	mg/L	0.00421	0.43%
Mo 202.031†	18.0	0.00073	mg/L	0.000174	0.00145	mg/L	0.000349	23.98%
Na 589.592†	155278.7	10.14	mg/L	0.032	20.28	mg/L	0.063	0.31%
Na 330.237†	300.8	10.30	mg/L	0.314	20.61	mg/L	0.627	3.04%
Ni 231.604†	2181.7	0.5039	mg/L	0.00181	1.008	mg/L	0.0036	0.36%
Pb 220.353†	17437.4	2.062	mg/L	0.0112	4.124	mg/L	0.0224	0.54%
Sb 206.836†	13.8	-0.00125	mg/L	0.001640	-0.00251	mg/L	0.003281	130.75%
Se 196.026†	3012.8	2.043	mg/L	0.0047	4.085	mg/L	0.0095	0.23%
Si 288.158†	13.0	0.00961	mg/L	0.000739	0.01923	mg/L	0.001477	7.68%
Sn 189.927†	-26.6	-0.00565	mg/L	0.000144	-0.01131	mg/L	0.000288	2.55%
Sr 421.552†	563128.5	0.5030	mg/L	0.00164	1.006	mg/L	0.0033	0.33%
Ti 334.903†	73.4	0.00257	mg/L	0.000207	0.00514	mg/L	0.000415	8.06%
Tl 190.801†	5121.0	2.057	mg/L	0.0074	4.114	mg/L	0.0147	0.36%
V 292.402†	76542.5	0.5210	mg/L	0.00192	1.042	mg/L	0.0038	0.37%
Zn 206.200†	2078.2	0.5062	mg/L	0.00330	1.012	mg/L	0.0066	0.65%

Sequence No.: 63
Sample ID: CV 8

Autosampler Location: 7
Date Collected: 6/11/2013 1:56:28 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3087676.4	100.2	%	0.42				0.42%
ScR 361.383	370785.3	100.0	%	0.29				0.29%
Ag 328.068†	216465.8	1.077	mg/L	0.0007	1.077	mg/L	0.0007	0.07%
Al 308.215†	3730.7	2.111	mg/L	0.0044	2.111	mg/L	0.0044	0.21%
As 188.979†	3736.8	2.060	mg/L	0.0110	2.060	mg/L	0.0110	0.53%
B 249.677†	7911.4	1.033	mg/L	0.0023	1.033	mg/L	0.0023	0.22%
Ba 233.527†	5160.6	1.078	mg/L	0.0034	1.078	mg/L	0.0034	0.31%
Be 313.042†	668957.4	1.032	mg/L	0.0048	1.032	mg/L	0.0048	0.47%
Ca 317.933†	29152.9	2.035	mg/L	0.0057	2.035	mg/L	0.0057	0.28%
Cd 228.802†	35986.7	1.036	mg/L	0.0067	1.036	mg/L	0.0067	0.65%
Co 228.616†	40419.2	1.036	mg/L	0.0008	1.036	mg/L	0.0008	0.08%
Cr 267.716†	7085.5	1.079	mg/L	0.0010	1.079	mg/L	0.0010	0.10%
Cu 324.752†	319169.6	1.059	mg/L	0.0020	1.059	mg/L	0.0020	0.19%
Fe 273.955†	2754.5	2.111	mg/L	0.0134	2.111	mg/L	0.0134	0.64%
K 766.490†	50816.1	20.56	mg/L	0.039	20.56	mg/L	0.039	0.19%
Mg 279.077†	2964.2	2.066	mg/L	0.0027	2.066	mg/L	0.0027	0.13%
Mn 257.610†	36946.4	0.9937	mg/L	0.00221	0.9937	mg/L	0.00221	0.22%
Mo 202.031†	20910.1	1.020	mg/L	0.0042	1.020	mg/L	0.0042	0.41%
Na 589.592†	792484.1	51.75	mg/L	0.055	51.75	mg/L	0.055	0.11%
Na 330.237†	1515.5	52.88	mg/L	0.163	52.88	mg/L	0.163	0.31%
Ni 231.604†	4545.6	1.052	mg/L	0.0022	1.052	mg/L	0.0022	0.21%
Pb 220.353†	17749.8	2.099	mg/L	0.0081	2.099	mg/L	0.0081	0.39%
Sb 206.836†	7137.6	2.102	mg/L	0.0095	2.102	mg/L	0.0095	0.45%
Se 196.026†	2998.7	2.033	mg/L	0.0064	2.033	mg/L	0.0064	0.31%
Si 288.158†	4497.5	2.130	mg/L	0.0116	2.130	mg/L	0.0116	0.54%
Sn 189.927†	3774.0	0.9975	mg/L	0.00409	0.9975	mg/L	0.00409	0.41%
Sr 421.552†	1152006.6	1.029	mg/L	0.0007	1.029	mg/L	0.0007	0.07%
Ti 334.903†	22823.1	1.024	mg/L	0.0013	1.024	mg/L	0.0013	0.13%
Tl 190.801†	5284.4	2.119	mg/L	0.0117	2.119	mg/L	0.0117	0.55%
V 292.402†	154339.7	1.051	mg/L	0.0011	1.051	mg/L	0.0011	0.10%
Zn 206.200†	4257.7	1.037	mg/L	0.0033	1.037	mg/L	0.0033	0.32%

Sequence No.: 64
Sample ID: CB 8

Autosampler Location: 1
Date Collected: 6/11/2013 2:00:31 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3121992.8	101.3	%	0.30				0.30%
ScR 361.383	378044.9	102.0	%	0.05				0.05%
Ag 328.068†	37.1	0.00018	mg/L	0.000041	0.00018	mg/L	0.000041	22.30%
Al 308.215†	1.9	0.00108	mg/L	0.001517	0.00108	mg/L	0.001517	140.84%
As 188.979†	0.2	0.00013	mg/L	0.000225	0.00013	mg/L	0.000225	166.53%
B 249.677†	25.0	0.00326	mg/L	0.000179	0.00326	mg/L	0.000179	5.49%
Ba 233.527†	-2.1	-0.00043	mg/L	0.000341	-0.00043	mg/L	0.000341	78.92%
Be 313.042†	135.2	0.00021	mg/L	0.000021	0.00021	mg/L	0.000021	9.84%
Ca 317.933†	17.4	0.00122	mg/L	0.000460	0.00122	mg/L	0.000460	37.81%
Cd 228.802†	12.9	0.00037	mg/L	0.000079	0.00037	mg/L	0.000079	21.08%
Co 228.616†	9.8	0.00025	mg/L	0.000167	0.00025	mg/L	0.000167	66.57%
Cr 267.716†	-3.2	-0.00049	mg/L	0.000317	-0.00049	mg/L	0.000317	64.51%
Cu 324.752†	260.9	0.00087	mg/L	0.000128	0.00087	mg/L	0.000128	14.80%
Fe 273.955†	4.7	0.00364	mg/L	0.001850	0.00364	mg/L	0.001850	50.78%
K 766.490†	22.6	0.00914	mg/L	0.013867	0.00914	mg/L	0.013867	151.71%
Mg 279.077†	-1.8	-0.00126	mg/L	0.001515	-0.00126	mg/L	0.001515	120.14%
Mn 257.610†	4.5	0.00012	mg/L	0.000103	0.00012	mg/L	0.000103	84.87%
Mo 202.031†	11.4	0.00056	mg/L	0.000259	0.00056	mg/L	0.000259	46.57%
Na 589.592†	661.3	0.04318	mg/L	0.002696	0.04318	mg/L	0.002696	6.24%
Na 330.237†	-4.8	-0.1670	mg/L	0.29102	-0.1670	mg/L	0.29102	174.26%
Ni 231.604†	4.5	0.00103	mg/L	0.000651	0.00103	mg/L	0.000651	63.16%
Pb 220.353†	2.4	0.00028	mg/L	0.000600	0.00028	mg/L	0.000600	215.09%
Sb 206.836†	7.9	0.00235	mg/L	0.000503	0.00235	mg/L	0.000503	21.43%
Se 196.026†	4.6	0.00314	mg/L	0.002931	0.00314	mg/L	0.002931	93.29%
Si 288.158†	-7.5	-0.00355	mg/L	0.001307	-0.00355	mg/L	0.001307	36.84%
Sn 189.927†	5.4	0.00143	mg/L	0.000822	0.00143	mg/L	0.000822	57.29%
Sr 421.552†	207.8	0.00019	mg/L	0.000012	0.00019	mg/L	0.000012	6.44%
Ti 334.903†	3.8	0.00017	mg/L	0.000454	0.00017	mg/L	0.000454	264.74%
Tl 190.801†	7.4	0.00300	mg/L	0.002148	0.00300	mg/L	0.002148	71.62%
V 292.402†	23.5	0.00016	mg/L	0.000079	0.00016	mg/L	0.000079	50.42%
Zn 206.200†	3.1	0.00077	mg/L	0.000371	0.00077	mg/L	0.000371	48.46%

Sequence No.: 65
Sample ID: WR99 DDUP SWC

Autosampler Location: 344
Date Collected: 6/11/2013 2:04:46 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WR99 DDUP SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 DDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3123859.7	101.4	%	0.76				0.75%
ScR 361.383	381261.7	102.8	%	0.72				0.70%
Ag 328.068†	-55.1	-0.00023	mg/L	0.000068	-0.00114	mg/L	0.000342	29.99%
Al 308.215†	54235.7	31.18	mg/L	0.175	155.9	mg/L	0.87	0.56%
As 188.979†	-43.4	0.04928	mg/L	0.002154	0.2464	mg/L	0.01077	4.37%
B 249.677†	159.7	0.02084	mg/L	0.001004	0.1042	mg/L	0.00502	4.82%
Ba 233.527†	1020.9	0.1942	mg/L	0.00160	0.9709	mg/L	0.00798	0.82%
Be 313.042†	404.2	0.00056	mg/L	0.000014	0.00281	mg/L	0.000071	2.53%
Ca 317.933†	213031.1	14.87	mg/L	0.115	74.36	mg/L	0.574	0.77%
Cd 228.802†	95.5	0.00295	mg/L	0.000056	0.01475	mg/L	0.000282	1.91%
Co 228.616†	929.4	0.01850	mg/L	0.000288	0.09249	mg/L	0.001439	1.56%
Cr 267.716†	337.4	0.05499	mg/L	0.000441	0.2749	mg/L	0.00220	0.80%
Cu 324.752†	34145.4	0.1178	mg/L	0.00060	0.5891	mg/L	0.00300	0.51%
Fe 273.955†	147587.2	113.4	mg/L	0.67	567.2	mg/L	3.37	0.59%
K 766.490†	4148.5	1.678	mg/L	0.0050	8.390	mg/L	0.0248	0.30%
Mg 279.077†	15908.2	10.98	mg/L	0.077	54.91	mg/L	0.383	0.70%
Mn 257.610†	53463.7	1.438	mg/L	0.0093	7.188	mg/L	0.0463	0.64%
Mo 202.031†	113.5	0.00535	mg/L	0.000289	0.02675	mg/L	0.001446	5.41%
Na 589.592†	21447.9	1.400	mg/L	0.0108	7.002	mg/L	0.0538	0.77%
Na 330.237†	25.9	1.343	mg/L	0.1789	6.716	mg/L	0.8947	13.32%
Ni 231.604†	262.9	0.06083	mg/L	0.001034	0.3042	mg/L	0.00517	1.70%
Pb 220.353†	716.9	0.08615	mg/L	0.000658	0.4308	mg/L	0.00329	0.76%
Sb 206.836†	18.7	0.00733	mg/L	0.001684	0.03665	mg/L	0.008421	22.97%
Se 196.026†	10.8	0.00378	mg/L	0.004298	0.01891	mg/L	0.021489	113.63%
Si 288.158†	4424.4	2.092	mg/L	0.0135	10.46	mg/L	0.068	0.65%
Sn 189.927†	-5.8	0.00086	mg/L	0.000545	0.00430	mg/L	0.002723	63.27%
Sr 421.552†	139761.2	0.1248	mg/L	0.00075	0.6242	mg/L	0.00376	0.60%
Ti 334.903†	51214.3	2.301	mg/L	0.0167	11.50	mg/L	0.083	0.72%
Tl 190.801†	-34.0	0.00114	mg/L	0.000644	0.00572	mg/L	0.003221	56.31%
V 292.402†	23555.7	0.1528	mg/L	0.00114	0.7642	mg/L	0.00571	0.75%
Zn 206.200†	2092.0	0.5097	mg/L	0.00410	2.548	mg/L	0.0205	0.80%

Sequence No.: 66
Sample ID: WR99 D SWC

Autosampler Location: 345
Date Collected: 6/11/2013 2:08:48 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WR99 D SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 D SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3121249.5	101.3	%	0.51				0.51%
ScR 361.383	382761.0	103.2	%	0.33				0.32%
Ag 328.068†	-75.8	-0.00033	mg/L	0.000070	-0.00167	mg/L	0.000352	21.12%
Al 308.215†	53826.9	30.94	mg/L	0.106	154.7	mg/L	0.53	0.34%
As 188.979†	-61.4	0.04000	mg/L	0.000969	0.2000	mg/L	0.00484	2.42%
B 249.677†	61.4	0.00797	mg/L	0.001030	0.03987	mg/L	0.005152	12.92%
Ba 233.527†	984.5	0.1881	mg/L	0.00023	0.9404	mg/L	0.00113	0.12%
Be 313.042†	411.5	0.00057	mg/L	0.000013	0.00287	mg/L	0.000065	2.25%
Ca 317.933†	233155.7	16.28	mg/L	0.029	81.39	mg/L	0.145	0.18%
Cd 228.802†	81.9	0.00261	mg/L	0.000121	0.01303	mg/L	0.000603	4.63%
Co 228.616†	965.2	0.01949	mg/L	0.000185	0.09747	mg/L	0.000925	0.95%
Cr 267.716†	286.0	0.04677	mg/L	0.001275	0.2339	mg/L	0.00637	2.73%
Cu 324.752†	26528.5	0.09215	mg/L	0.000356	0.4608	mg/L	0.00178	0.39%
Fe 273.955†	136068.7	104.6	mg/L	0.86	523.0	mg/L	4.30	0.82%
K 766.490†	4912.9	1.987	mg/L	0.0022	9.936	mg/L	0.0111	0.11%
Mg 279.077†	16121.1	11.14	mg/L	0.044	55.68	mg/L	0.221	0.40%
Mn 257.610†	53558.0	1.440	mg/L	0.0093	7.201	mg/L	0.0467	0.65%
Mo 202.031†	68.2	0.00312	mg/L	0.000078	0.01560	mg/L	0.000390	2.50%
Na 589.592†	22809.7	1.489	mg/L	0.0017	7.447	mg/L	0.0084	0.11%
Na 330.237†	26.1	1.366	mg/L	0.2556	6.829	mg/L	1.2781	18.71%
Ni 231.604†	233.6	0.05405	mg/L	0.000742	0.2703	mg/L	0.00371	1.37%
Pb 220.353†	986.0	0.1184	mg/L	0.00082	0.5919	mg/L	0.00411	0.69%
Sb 206.836†	11.8	0.00531	mg/L	0.000365	0.02657	mg/L	0.001823	6.86%
Se 196.026†	9.4	0.00285	mg/L	0.000905	0.01426	mg/L	0.004527	31.76%
Si 288.158†	5355.9	2.532	mg/L	0.0063	12.66	mg/L	0.032	0.25%
Sn 189.927†	-30.1	-0.00537	mg/L	0.000238	-0.02683	mg/L	0.001192	4.44%
Sr 421.552†	152864.3	0.1365	mg/L	0.00041	0.6827	mg/L	0.00205	0.30%
Ti 334.903†	51640.7	2.320	mg/L	0.0078	11.60	mg/L	0.039	0.34%
Tl 190.801†	-27.8	0.00245	mg/L	0.000368	0.01223	mg/L	0.001840	15.05%
V 292.402†	22221.7	0.1442	mg/L	0.00081	0.7211	mg/L	0.00404	0.56%
Zn 206.200†	1891.8	0.4610	mg/L	0.00140	2.305	mg/L	0.0070	0.30%

Sequence No.: 67
Sample ID: WR99 DSPK SWC

Autosampler Location: 346
Date Collected: 6/11/2013 2:12:48 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WR99 DSPK SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WR99 DSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3118011.6	101.2	%	0.23				0.22%
ScR 361.383	381389.1	102.9	%	0.50				0.48%
Ag 328.068†	41563.4	0.2068	mg/L	0.00056	1.034	mg/L	0.0028	0.27%
Al 308.215†	60964.6	35.04	mg/L	0.148	175.2	mg/L	0.74	0.42%
As 188.979†	1411.7	0.8412	mg/L	0.00513	4.206	mg/L	0.0257	0.61%
B 249.677†	51.4	0.00624	mg/L	0.000996	0.03118	mg/L	0.004982	15.98%
Ba 233.527†	5075.0	1.045	mg/L	0.0067	5.225	mg/L	0.0337	0.65%
Be 313.042†	126078.5	0.1944	mg/L	0.00060	0.9722	mg/L	0.00302	0.31%
Ca 317.933†	290724.7	20.30	mg/L	0.033	101.5	mg/L	0.16	0.16%
Cd 228.802†	7501.1	0.2142	mg/L	0.00043	1.071	mg/L	0.0021	0.20%
Co 228.616†	9140.0	0.2293	mg/L	0.00005	1.147	mg/L	0.0002	0.02%
Cr 267.716†	1724.4	0.2647	mg/L	0.00249	1.323	mg/L	0.0125	0.94%
Cu 324.752†	86074.6	0.2892	mg/L	0.00060	1.446	mg/L	0.0030	0.21%
Fe 273.955†	120331.4	92.49	mg/L	0.497	462.5	mg/L	2.49	0.54%
K 766.490†	14161.9	5.728	mg/L	0.0067	28.64	mg/L	0.033	0.12%
Mg 279.077†	25296.0	17.52	mg/L	0.098	87.59	mg/L	0.489	0.56%
Mn 257.610†	59576.9	1.602	mg/L	0.0065	8.010	mg/L	0.0324	0.40%
Mo 202.031†	56.4	0.00248	mg/L	0.000134	0.01241	mg/L	0.000672	5.42%
Na 589.592†	87662.8	5.724	mg/L	0.0261	28.62	mg/L	0.131	0.46%
Na 330.237†	154.8	5.788	mg/L	0.1664	28.94	mg/L	0.832	2.88%
Ni 231.604†	1109.3	0.2563	mg/L	0.00237	1.282	mg/L	0.0119	0.92%
Pb 220.353†	7988.9	0.9479	mg/L	0.00263	4.739	mg/L	0.0132	0.28%
Sb 206.836†	17.3	0.00479	mg/L	0.001645	0.02394	mg/L	0.008223	34.35%
Se 196.026†	1197.3	0.8079	mg/L	0.00247	4.040	mg/L	0.0124	0.31%
Si 288.158†	4482.2	2.121	mg/L	0.0103	10.60	mg/L	0.051	0.48%
Sn 189.927†	-37.6	-0.00680	mg/L	0.000389	-0.03400	mg/L	0.001943	5.71%
Sr 421.552†	413949.9	0.3697	mg/L	0.00080	1.849	mg/L	0.0040	0.22%
Ti 334.903†	52231.9	2.346	mg/L	0.0051	11.73	mg/L	0.026	0.22%
Tl 190.801†	1964.7	0.8010	mg/L	0.00030	4.005	mg/L	0.0015	0.04%
V 292.402†	53000.0	0.3544	mg/L	0.00165	1.772	mg/L	0.0082	0.46%
Zn 206.200†	2698.5	0.6574	mg/L	0.00621	3.287	mg/L	0.0310	0.94%

Sequence No.: 68
Sample ID: ~~WR99 DPOST SWC~~ ZZZZZZ
Dilution: 5.000000X

Autosampler Location: 347
Date Collected: 6/11/2013 2:16:50 PM
Data Type: Original

BA 6/11/13

Nebulizer Parameters: WR99 DPOST SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 DPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3051692.2	99.02	%	0.217				0.22%
ScR 361.383	374925.1	101.1	%	0.28				0.28%
Ag 328.068†	110314.3	0.5488	mg/L	0.00320	2.744	mg/L	0.0160	0.58%
Al 308.215†	58823.1	33.81	mg/L	0.053	169.0	mg/L	0.26	0.16%
As 188.979†	3829.0	2.155	mg/L	0.0073	10.78	mg/L	0.036	0.34%
B 249.677†	61.9	0.00694	mg/L	0.001217	0.03472	mg/L	0.006083	17.52%
Ba 233.527†	11363.5	2.356	mg/L	0.0130	11.78	mg/L	0.065	0.55%
Be 313.042†	323565.1	0.4991	mg/L	0.00146	2.496	mg/L	0.0073	0.29%
Ca 317.933†	385934.1	26.94	mg/L	0.085	134.7	mg/L	0.42	0.31%
Cd 228.802†	18762.9	0.5348	mg/L	0.00349	2.674	mg/L	0.0174	0.65%
Co 228.616†	21383.8	0.5433	mg/L	0.00103	2.716	mg/L	0.0051	0.19%
Cr 267.716†	3808.8	0.5822	mg/L	0.00246	2.911	mg/L	0.0123	0.42%
Cu 324.752†	191013.6	0.6381	mg/L	0.00210	3.191	mg/L	0.0105	0.33%
Fe 273.955†	141305.5	108.6	mg/L	0.34	543.1	mg/L	1.70	0.31%
K 766.490†	30495.6	12.34	mg/L	0.040	61.68	mg/L	0.201	0.33%
Mg 279.077†	32614.7	22.59	mg/L	0.082	113.0	mg/L	0.41	0.36%
Mn 257.610†	73418.2	1.974	mg/L	0.0048	9.872	mg/L	0.0239	0.24%
Mo 202.031†	86.9	0.00387	mg/L	0.000031	0.01935	mg/L	0.000153	0.79%
Na 589.592†	181742.5	11.87	mg/L	0.024	59.34	mg/L	0.119	0.20%
Na 330.237†	331.6	11.84	mg/L	0.201	59.22	mg/L	1.005	1.70%
Ni 231.604†	2399.8	0.5544	mg/L	0.00370	2.772	mg/L	0.0185	0.67%
Pb 220.353†	18745.8	2.218	mg/L	0.0083	11.09	mg/L	0.042	0.37%
Sb 206.836†	27.1	0.00466	mg/L	0.000376	0.02330	mg/L	0.001880	8.07%
Se 196.026†	3125.6	2.116	mg/L	0.0127	10.58	mg/L	0.063	0.60%
Si 288.158†	5450.1	2.580	mg/L	0.0087	12.90	mg/L	0.043	0.34%
Sn 189.927†	-48.1	-0.00864	mg/L	0.001390	-0.04319	mg/L	0.006951	16.09%
Sr 421.552†	728823.5	0.6510	mg/L	0.00041	3.255	mg/L	0.0020	0.06%
Ti 334.903†	52872.0	2.374	mg/L	0.0026	11.87	mg/L	0.013	0.11%
Tl 190.801†	5096.8	2.061	mg/L	0.0115	10.31	mg/L	0.058	0.56%
V 292.402†	102380.2	0.6896	mg/L	0.00404	3.448	mg/L	0.0202	0.59%
Zn 206.200†	4011.6	0.9773	mg/L	0.00333	4.887	mg/L	0.0167	0.34%

Sequence No.: 69
Sample ID: CV 9

Autosampler Location: 7
Date Collected: 6/11/2013 2:20:51 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
A11	240.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3078176.2	99.88	%	0.394				0.39%
ScR 361.383	371945.9	100.3	%	0.56				0.56%
Ag 328.068†	217471.9	1.082	mg/L	0.0059	1.082	mg/L	0.0059	0.55%
Al 308.215†	3744.4	2.118	mg/L	0.0138	2.118	mg/L	0.0138	0.65%
As 188.979†	3780.0	2.084	mg/L	0.0070	2.084	mg/L	0.0070	0.33%
B 249.677†	7923.9	1.035	mg/L	0.0070	1.035	mg/L	0.0070	0.68%
Ba 233.527†	5209.1	1.088	mg/L	0.0123	1.088	mg/L	0.0123	1.13%
Be 313.042†	672921.2	1.038	mg/L	0.0036	1.038	mg/L	0.0036	0.35%
Ca 317.933†	29307.5	2.046	mg/L	0.0047	2.046	mg/L	0.0047	0.23%
Cd 228.802†	36234.7	1.044	mg/L	0.0075	1.044	mg/L	0.0075	0.72%
Co 228.616†	40348.3	1.034	mg/L	0.0070	1.034	mg/L	0.0070	0.68%
Cr 267.716†	7116.2	1.083	mg/L	0.0068	1.083	mg/L	0.0068	0.63%
Cu 324.752†	319765.6	1.061	mg/L	0.0072	1.061	mg/L	0.0072	0.67%
Fe 273.955†	2758.7	2.114	mg/L	0.0068	2.114	mg/L	0.0068	0.32%
K 766.490†	50846.8	20.57	mg/L	0.092	20.57	mg/L	0.092	0.45%
Mg 279.077†	2981.4	2.078	mg/L	0.0103	2.078	mg/L	0.0103	0.50%
Mn 257.610†	36977.8	0.9945	mg/L	0.00461	0.9945	mg/L	0.00461	0.46%
Mo 202.031†	21094.9	1.029	mg/L	0.0037	1.029	mg/L	0.0037	0.36%
Na 589.592†	794510.5	51.88	mg/L	0.106	51.88	mg/L	0.106	0.20%
Na 330.237†	1513.2	52.80	mg/L	0.252	52.80	mg/L	0.252	0.48%
Ni 231.604†	4584.0	1.061	mg/L	0.0037	1.061	mg/L	0.0037	0.35%
Pb 220.353†	17934.2	2.121	mg/L	0.0108	2.121	mg/L	0.0108	0.51%
Sb 206.836†	7199.1	2.120	mg/L	0.0080	2.120	mg/L	0.0080	0.38%
Se 196.026†	3024.8	2.050	mg/L	0.0018	2.050	mg/L	0.0018	0.09%
Si 288.158†	4516.8	2.139	mg/L	0.0242	2.139	mg/L	0.0242	1.13%
Sn 189.927†	3803.0	1.005	mg/L	0.0069	1.005	mg/L	0.0069	0.69%
Sr 421.552†	1153205.2	1.030	mg/L	0.0022	1.030	mg/L	0.0022	0.21%
Ti 334.903†	22890.1	1.027	mg/L	0.0042	1.027	mg/L	0.0042	0.41%
Tl 190.801†	5340.1	2.142	mg/L	0.0078	2.142	mg/L	0.0078	0.37%
V 292.402†	155335.6	1.057	mg/L	0.0071	1.057	mg/L	0.0071	0.67%
Zn 206.200†	4285.9	1.044	mg/L	0.0059	1.044	mg/L	0.0059	0.57%

Sequence No.: 70
Sample ID: CB 9

Autosampler Location: 1
Date Collected: 6/11/2013 2:24:55 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3148599.4	102.2	%	0.35				0.34%
ScR 361.383	383224.0	103.4	%	0.51				0.49%
Ag 328.068†	37.8	0.00019	mg/L	0.000230	0.00019	mg/L	0.000230	122.41%
Al 308.215†	7.2	0.00411	mg/L	0.003271	0.00411	mg/L	0.003271	79.62%
As 188.979†	1.3	0.00071	mg/L	0.001265	0.00071	mg/L	0.001265	177.21%
B 249.677†	18.8	0.00245	mg/L	0.000453	0.00245	mg/L	0.000453	18.46%
Ba 233.527†	-2.1	-0.00045	mg/L	0.000421	-0.00045	mg/L	0.000421	93.85%
Be 313.042†	117.6	0.00018	mg/L	0.000019	0.00018	mg/L	0.000019	10.43%
Ca 317.933†	16.0	0.00112	mg/L	0.000802	0.00112	mg/L	0.000802	71.64%
Cd 228.802†	11.8	0.00034	mg/L	0.000270	0.00034	mg/L	0.000270	78.71%
Co 228.616†	13.4	0.00034	mg/L	0.000034	0.00034	mg/L	0.000034	10.01%
Cr 267.716†	-4.1	-0.00063	mg/L	0.000612	-0.00063	mg/L	0.000612	97.22%
Cu 324.752†	246.5	0.00082	mg/L	0.000079	0.00082	mg/L	0.000079	9.64%
Fe 273.955†	3.0	0.00234	mg/L	0.001007	0.00234	mg/L	0.001007	43.04%
K 766.490†	9.2	0.00373	mg/L	0.005751	0.00373	mg/L	0.005751	154.02%
Mg 279.077†	1.8	0.00123	mg/L	0.005954	0.00123	mg/L	0.005954	484.76%
Mn 257.610†	4.9	0.00013	mg/L	0.000040	0.00013	mg/L	0.000040	30.63%
Mo 202.031†	13.8	0.00067	mg/L	0.000357	0.00067	mg/L	0.000357	52.90%
Na 589.592†	600.8	0.03923	mg/L	0.002281	0.03923	mg/L	0.002281	5.82%
Na 330.237†	5.9	0.2043	mg/L	0.23879	0.2043	mg/L	0.23879	116.90%
Ni 231.604†	10.7	0.00248	mg/L	0.000820	0.00248	mg/L	0.000820	33.08%
Pb 220.353†	-3.2	-0.00038	mg/L	0.001086	-0.00038	mg/L	0.001086	282.65%
Sb 206.836†	8.2	0.00243	mg/L	0.002259	0.00243	mg/L	0.002259	93.07%
Se 196.026†	2.8	0.00191	mg/L	0.001589	0.00191	mg/L	0.001589	83.00%
Si 288.158†	0.4	0.00019	mg/L	0.000311	0.00019	mg/L	0.000311	161.05%
Sn 189.927†	3.1	0.00083	mg/L	0.000374	0.00083	mg/L	0.000374	45.24%
Sr 421.552†	222.0	0.00020	mg/L	0.000005	0.00020	mg/L	0.000005	2.44%
Ti 334.903†	9.5	0.00043	mg/L	0.000042	0.00043	mg/L	0.000042	9.81%
Tl 190.801†	3.4	0.00139	mg/L	0.001257	0.00139	mg/L	0.001257	90.60%
V 292.402†	29.8	0.00020	mg/L	0.000133	0.00020	mg/L	0.000133	66.53%
Zn 206.200†	3.5	0.00085	mg/L	0.000200	0.00085	mg/L	0.000200	23.44%

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (ICP-MS) GFA CVA **Analysis Date:** 6-6-13

MS1	Analyst BA 6-6-13	Peer 6-10-13	Comment
Logbooks			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Performance Verification			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	
Samples			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	See log
Carry-over	✓	✓	
Method/QC Samples			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Delivery			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analytic Notes and Comments	—	—	

UP99 : 02097

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Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 6-6-13 **Analyst:** BA **Page:** 1 of 3

All corrections made by analyst unless otherwise noted. BA 6-6-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			3035-5
		1			B587
		2			B588
		3			B589
		4			B590
		Rinse sample			
		ICV			3023-4
		ICB			
		CCV1			
		CCB1			
		Low Check			
		ICSA			
		ICSAB			
		LR200			Be↓
		LR300			
		CCV2			
		CCB2			
		WR99 MB1	REN	2	
		ADUP			Sc↑ (RR Sc)
		A			
		ASPK			
zzz		~~APOST~~ zzzzzz			
		MB1SPK			
		CCV3			

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ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 6-6-13 **Analyst:** BA **Page:** 2 of 3

All corrections made by analyst unless otherwise noted. BA 6-6-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB3			
		WB99 MB1	REN	2	
		BDUP			Sc↑ (BRC-)
		B			
		BSPK			
zzz		~~BPOST~~ zzzzzz			
		MB2SPK			
		CCV4			
		CCB4			
		WB99 ADUP	REN	5	Cr
		A			
		ASPK			
zzz		~~APOST~~ zzzzzz			
		BDUP			Cr
		B			
		BSPK			
zzz		~~BPOST~~ zzzzzz			
		CCV5			Li↑, Be↓
		CCB5			End WB99
		WS38 MB1	SWN	20	Li↑ (NB)
		WS39 A	BA 6/6/13		
		WS38 ADUP			
		A			
		ASPK			

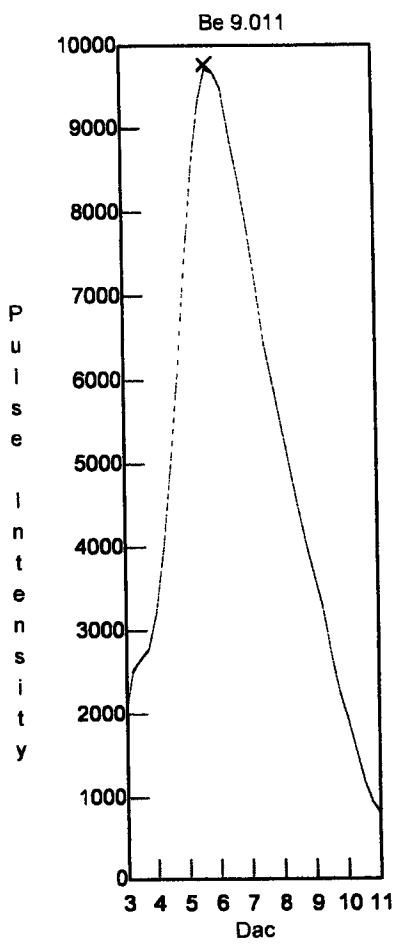
WB99 : 82399

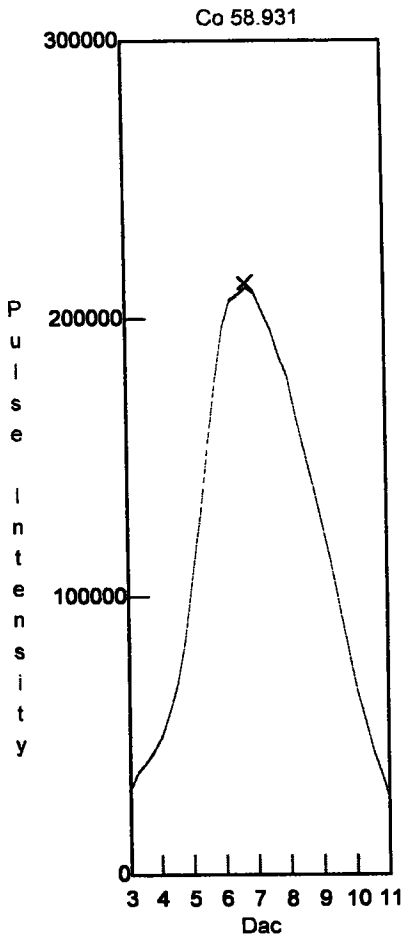
Instrument Tuning Report

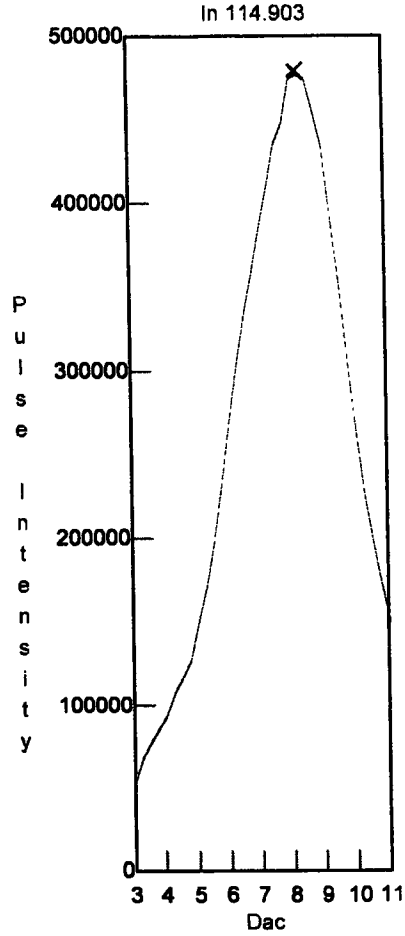
File Name: Default.tun
File Path: C:\Elandata\Tuning\Default.tun

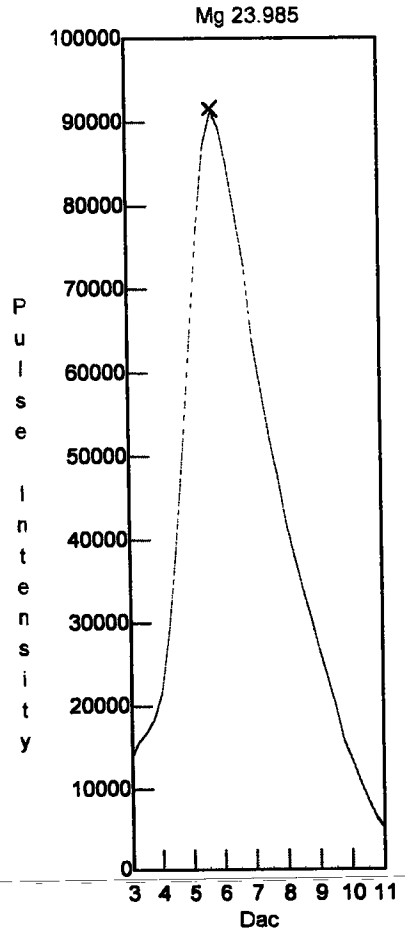
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Be	9.012	8.976	2010	2170	0.685	
Mg	23.985	23.979	5646	2274	0.685	
Co	58.933	58.879	14141	2537	0.700	
In	114.904	114.928	27789	2982	0.688	
Pb	207.977	207.976	50443	3726	0.692	

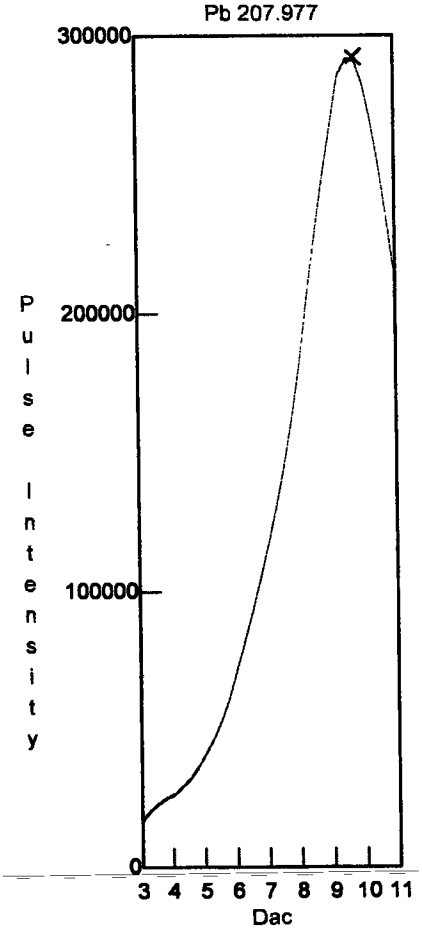
10-6-15

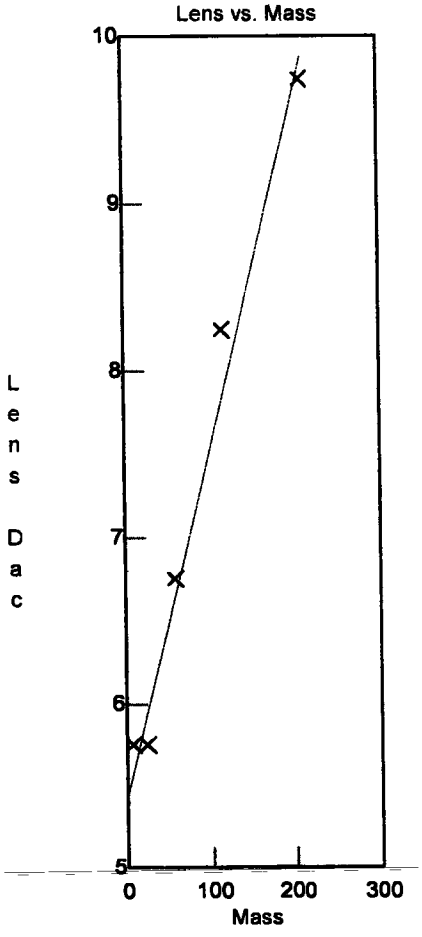

Be 9.011
Pulse Intensity
Dac


Co 58.931
Pulse Intensity
Dac


In 114.903
Pulse Intensity
Dac


Mg 23.985
Pulse Intensity
Dac


Pb 207.977
Pulse Intensity
Dac


Lens vs. Mass
Lens Dac
Mass

Daily Performance Report

Sample ID: Sample
Sample Date/Time: Thursday, June 06, 2013 09:05:44
Sample Description:
Sample File: 1119.sam
Method File: C:\Elandata\Method\aridailyperf.mth
Dataset File: C:\Elandata\Dataset\daily performance\Sample.1557
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Number of Replicates: 5
Dual Detector Mode: Dual

Neb 0.94

Summary

	Analyte	Mass	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24	34752.550	618.514	1.780
	In	115	354801.838	2679.898	0.755
	Pb	208	212367.616	3095.704	1.458
⌈>	Ba	138	249692.719	2609.099	1.045
⌊	Ba++	69	0.014	0.000	1.420
⌈>	Ce	140	302991.169	2527.339	0.834
⌊	CeO	156	0.029	0.001	2.502
	Bkgd	220	9.501	3.812	40.126

Mg w/in PE specs

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 09:41:48
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L				340477	1
⌊	Be	9		ug/L				17	22
	C	13		mg/L				7601	4
	Cl	37		mg/L				2724241	0
⌈>	Sc	45		ug/L				374261	0
|	V	51		ug/L				3136	6
|	V-1	51		ug/L				2927	2
|	Cr	52		ug/L				9400	2
|	Cr	53		ug/L				995	5
|	Mn	55		ug/L				664	39
⌊	Co	59		ug/L				95	13
⌈>	Ge	72		ug/L				339810	0
|	Ni	60		ug/L				111	66
|	Ni	62		ug/L				76	22
|	Cu	63		ug/L				336	18
|	Cu	65		ug/L				162	26
|	Zn	66		ug/L				767	29
|	Zn	67		ug/L				197	14
|	Zn	68		ug/L				7221	2
|	As	75		ug/L				253	19
|	As-1	75		ug/L				9785	1
|	Se	82		ug/L				-6	156
|	Se	78		ug/L				9985	1
⌊	Mo	98		ug/L				88	26
	Y	89		ug/L				315904	0
	Kr	83		ug/L				198	0
⌈>	In	115		ug/L				321132	0
|	Ag	107		ug/L				55	12
|	Cd	111		ug/L				161	4
|	Cd	114		ug/L				47	7
|	Sb	121		ug/L				41	14
|	Sb	123		ug/L				35	28
|	Ba	135		ug/L				60	6
⌊	Ba	137		ug/L				80	17
⌈>	Tb	159		ug/L				372039	0
|	Tl	205		ug/L				279	8
|	Pb	208		ug/L				733	30
|	Bi	209		ug/L				303712	0
|	Th	232		ug/L				38	19
⌊	U	238		ug/L				12	43

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 09:47:36
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	338006 ✓	2
[	Be	9	10.000	ug/L	0.248	2	17	5354	0
	C	13		mg/L			7601	6452	2
	Cl	37		mg/L			2724241	2728085	0
[>	Sc	45		ug/L			374261	379073 ✓	0
[	V	51	10.000	ug/L	0.033	0	3136	165362	0
[	V-1	51	10.000	ug/L	0.034	0	2927	166804	0
[	Cr	52	10.000	ug/L	0.027	0	9400	144946	0
[	Cr	53	10.000	ug/L	0.029	0	995	16840	0
[	Mn	55	10.000	ug/L	0.181	1	664	217809	2
[	Co	59	10.000	ug/L	0.042	0	95	159217	0
[>	Ge	72		ug/L			339810	340821 ✓	0
[	Ni	60	10.000	ug/L	0.189	1	111	33243	1
[	Ni	62	10.000	ug/L	0.112	1	76	4881	1
[	Cu	63	10.000	ug/L	0.096	0	336	71751	0
[	Cu	65	10.000	ug/L	0.117	1	162	33220	1
[	Zn	66	10.000	ug/L	0.119	1	767	22665	0
[	Zn	67	10.000	ug/L	0.190	1	197	3895	1
[	Zn	68	10.000	ug/L	0.192	1	7221	22391	1
[	As	75	10.000	ug/L	0.113	1	253	19895	0
[	As-1	75	10.000	ug/L	0.097	0	9785	28881	0
[	Se	82	10.000	ug/L	0.219	2	-6	2304	1
[	Se	78	10.000	ug/L	0.147	1	9985	15324	0
[	Mo	98	10.000	ug/L	0.089	0	88	66854	0
	Y	89		ug/L			315904	317473	0
	Kr	83		ug/L			198	203	4
[>	In	115		ug/L			321132	321701 ✓	0
[	Ag	107	10.000	ug/L	0.079	0	55	113648	0
[	Cd	111	10.000	ug/L	0.004	0	161	28177	0
[	Cd	114	10.000	ug/L	0.049	0	47	63781	0
[	Sb	121	10.000	ug/L	0.056	0	41	85028	0
[	Sb	123	10.000	ug/L	0.080	0	35	63769	0
[	Ba	135	10.000	ug/L	0.206	2	60	21309	1
[	Ba	137	10.000	ug/L	0.011	0	80	36585	0
[>	Tb	159		ug/L			372039	369520 ✓	0
[	Tl	205	10.000	ug/L	0.047	0	279	267372	0
[	Pb	208	10.000	ug/L	0.061	0	733	373727	0
[	Bi	209		ug/L			303712	303280	0
[	Th	232	10.000	ug/L	0.227	2	38	436708	1
[	U	238	10.000	ug/L	0.017	0	12	460312	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 09:53:25
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	338876 ✓	1
[	Be	9	19.922	ug/L	0.282	1	17	10516	0
	C	13		mg/L			7601	6544	0
	Cl	37		mg/L			2724241	2710308	0
[>	Sc	45		ug/L			374261	377648 ✓	0
[	V	51	19.988	ug/L	0.064	0	3136	325311	0
[	V-1	51	19.986	ug/L	0.066	0	2927	328229	0
[	Cr	52	19.995	ug/L	0.182	0	9400	278984	1
[	Cr	53	19.988	ug/L	0.207	1	995	32458	1
[	Mn	55	20.047	ug/L	0.223	1	664	438393	1
[	Co	59	20.031	ug/L	0.046	0	95	319601	0
[>	Ge	72		ug/L			339810	340582 ✓	0
[	Ni	60	19.974	ug/L	0.101	0	111	65906	0
[	Ni	62	19.937	ug/L	0.286	1	76	9530	1
[	Cu	63	19.949	ug/L	0.016	0	336	141250	0
[	Cu	65	19.968	ug/L	0.097	0	162	65702	0
[	Zn	66	19.911	ug/L	0.089	0	767	43580	0
[	Zn	67	19.826	ug/L	0.456	2	197	7277	2
[	Zn	68	19.936	ug/L	0.188	0	7221	37036	0
[	As	75	20.027	ug/L	0.172	0	253	39776	0
[	As-1	75	20.036	ug/L	0.087	0	9785	48261	0
[	Se	82	20.019	ug/L	0.266	1	-6	4635	0
[	Se	78	20.052	ug/L	0.117	0	9985	20759	0
[	Mo	98	19.992	ug/L	0.079	0	88	133258	0
	Y	89		ug/L			315904	318405	0
	Kr	83		ug/L			198	209	3
[>	In	115		ug/L			321132	322051 ✓	1
[	Ag	107	19.956	ug/L	0.107	0	55	225030	0
[	Cd	111	19.932	ug/L	0.182	0	161	55306	0
[	Cd	114	20.030	ug/L	0.347	1	47	128615	0
[	Sb	121	19.958	ug/L	0.194	0	41	168432	0
[	Sb	123	19.972	ug/L	0.232	1	35	126762	0
[	Ba	135	19.950	ug/L	0.341	1	60	42079	0
[	Ba	137	19.961	ug/L	0.134	0	80	72461	0
[>	Tb	159		ug/L			372039	369434 ✓	0
[	Tl	205	20.009	ug/L	0.101	0	279	535543	0
[	Pb	208	19.972	ug/L	0.195	0	733	741310	0
[	Bi	209		ug/L			303712	305449	0
[	Th	232	20.069	ug/L	0.182	0	38	888459	0
[	U	238	20.080	ug/L	0.177	0	12	939150	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 09:59:13
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	325503 ✓	3
[	Be	9	50.082	ug/L	0.628	1	17	25575	1
	C	13		mg/L			7601	5642	1
	Cl	37		mg/L			2724241	2729805	0
[>	Sc	45		ug/L			374261	379361 ✓	0
[	V	51	50.115	ug/L	0.289	0	3136	824031	1
[	V-1	51	50.097	ug/L	0.303	0	2927	830048	1
[	Cr	52	50.169	ug/L	0.550	1	9400	700504	1
[	Cr	53	50.108	ug/L	0.343	0	995	81081	0
[	Mn	55	50.098	ug/L	0.518	1	664	1110458	1
[	Co	59	50.016	ug/L	0.416	0	95	802754	1
[>	Ge	72		ug/L			339810	342711 ✓	0
[	Ni	60	49.976	ug/L	0.110	0	111	165360	0
[	Ni	62	50.001	ug/L	0.964	1	76	23938	2
[	Cu	63	49.936	ug/L	0.729	1	336	353040	2
[	Cu	65	49.911	ug/L	0.160	0	162	163555	0
[	Zn	66	49.752	ug/L	0.313	0	767	105800	0
[	Zn	67	49.878	ug/L	0.525	1	197	17905	1
[	Zn	68	49.783	ug/L	0.966	1	7221	80576	2
[	As	75	49.985	ug/L	0.647	1	253	99372	1
[	As-1	75	50.018	ug/L	0.546	1	9785	106640	1
[	Se	82	49.933	ug/L	0.533	1	-6	11566	1
[	Se	78	50.031	ug/L	0.213	0	9985	37148	0
[	Mo	98	50.115	ug/L	0.389	0	88	339899	0
	Y	89		ug/L			315904	316619	1
	Kr	83		ug/L			198	208	0
[>	In	115		ug/L			321132	322223 ✓	0
[	Ag	107	50.000	ug/L	0.337	0	55	564071	1
[	Cd	111	49.999	ug/L	0.688	1	161	138564	1
[	Cd	114	49.924	ug/L	0.590	1	47	318249	0
[	Sb	121	50.084	ug/L	0.538	1	41	426418	0
[	Sb	123	50.039	ug/L	0.368	0	35	318995	1
[	Ba	135	50.102	ug/L	0.391	0	60	106732	0
[	Ba	137	50.094	ug/L	0.506	1	80	183556	1
[>	Tb	159		ug/L			372039	373706 ✓	0
[	Tl	205	49.996	ug/L	0.344	0	279	1352631	0
[	Pb	208	49.917	ug/L	0.546	1	733	1857734	0
[	Bi	209		ug/L			303712	302128	0
[	Th	232	50.157	ug/L	0.492	0	38	2281923	0
[	U	238	50.231	ug/L	1.324	2	12	2432332	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 10:05:01
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	305423 ✓	3
[	Be	9	100.304	ug/L	2.363	2	17	48525	1
	C	13		mg/L			7601	5955	0
	Cl	37		mg/L			2724241	2751664	0
[>	Sc	45		ug/L			374261	385526 ✓	1
[	V	51	100.346	ug/L	0.723	0	3136	1693055	1
[	V-1	51	100.303	ug/L	0.582	0	2927	1702993	1
[	Cr	52	100.155	ug/L	1.275	1	9400	1418731	1
[	Cr	53	100.013	ug/L	2.406	2	995	163494	1
[	Mn	55	99.944	ug/L	1.714	1	664	2246313	1
[	Co	59	99.957	ug/L	1.255	1	95	1628107	2
[>	Ge	72		ug/L			339810	343695 ✓	0
[	Ni	60	100.018	ug/L	0.506	0	111	331982	1
[	Ni	62	100.187	ug/L	0.349	0	76	48324	1
[	Cu	63	100.002	ug/L	0.306	0	336	708711	1
[	Cu	65	99.881	ug/L	0.309	0	162	326771	0
[	Zn	66	99.954	ug/L	1.281	1	767	212067	1
[	Zn	67	99.712	ug/L	1.743	1	197	35361	2
[	Zn	68	99.607	ug/L	0.753	0	7221	152460	0
[	As	75	99.935	ug/L	0.453	0	253	198558	1
[	As-1	75	100.012	ug/L	0.411	0	9785	204031	1
[	Se	82	99.738	ug/L	0.425	0	-6	22976	1
[	Se	78	99.999	ug/L	0.513	0	9985	64375	1
[	Mo	98	100.483	ug/L	0.644	0	88	694597	1
	Y	89		ug/L			315904	324822	0
	Kr	83		ug/L			198	224	1
[>	In	115		ug/L			321132	325773 ✓	1
[	Ag	107	99.674	ug/L	0.757	0	55	1124617	1
[	Cd	111	100.088	ug/L	1.759	1	161	281066	1
[	Cd	114	100.169	ug/L	1.197	1	47	649166	0
[	Sb	121	100.064	ug/L	1.184	1	41	863125	1
[	Sb	123	100.120	ug/L	0.644	0	35	647815	1
[	Ba	135	99.737	ug/L	0.806	0	60	212883	0
[	Ba	137	100.068	ug/L	0.655	0	80	371454	0
[>	Tb	159		ug/L			372039	372618 ✓	0
[	Tl	205	100.661	ug/L	0.597	0	279	2776387	0
[	Pb	208	100.073	ug/L	0.493	0	733	3722021	0
[	Bi	209		ug/L			303712	304019	0
[	Th	232	100.614	ug/L	0.564	0	38	4659640	0
[	U	238	100.385	ug/L	0.775	0	12	4910361	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse Sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 10:11:21
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			340477	307595 ✓	1
	Be	9	0.009	ug/L	0.007	80	17	19	16
	C	13		mg/L			7601	6951	1
	Cl	37		mg/L			2724241	2784825	0
>	Sc	45		ug/L			374261	387828 ✓	1
	V	51	0.005	ug/L	0.004	78	3136	3337	3
	V-1	51	-0.031	ug/L	0.010	30	2927	2506	4
	Cr	52	-0.011	ug/L	0.009	85	9400	9592	3
	Cr	53	-0.130	ug/L	0.036	27	995	818	5
	Mn	55	-0.000	ug/L	0.004	8957	664	687	10
	Co	59	0.001	ug/L	0.001	79	95	119	13
>	Ge	72		ug/L			339810	347430 ✓	0
	Ni	60	-0.012	ug/L	0.003	22	111	73	12
	Ni	62	0.020	ug/L	0.029	139	76	88	15
	Cu	63	0.000	ug/L	0.004	757	336	347	7
	Cu	65	-0.001	ug/L	0.002	159	162	162	4
	Zn	66	-0.050	ug/L	0.025	50	767	677	7
	Zn	67	-0.071	ug/L	0.025	35	197	176	5
	Zn	68	-0.016	ug/L	0.164	1043	7221	7360	3
	As	75	-0.006	ug/L	0.020	360	253	247	16
	As-1	75	0.048	ug/L	0.079	165	9785	10099	1
	Se	82	0.006	ug/L	0.041	697	-6	-5	179
	Se	78	0.188	ug/L	0.297	158	9985	10312	1
	Mo	98	0.009	ug/L	0.003	30	88	151	12
	Y	89		ug/L			315904	328350	1
	Kr	83		ug/L			198	200	2
>	In	115		ug/L			321132	333673 ✓	1
	Ag	107	0.007	ug/L	0.002	33	55	136	18
	Cd	111	0.009	ug/L	0.003	27	161	194	4
	Cd	114	0.001	ug/L	0.001	140	47	54	11
	Sb	121	0.122	ug/L	0.034	28	41	1118	25
	Sb	123	0.117	ug/L	0.032	27	35	807	25
	Ba	135	0.004	ug/L	0.005	129	60	71	13
	Ba	137	0.001	ug/L	0.001	97	80	88	5
>	Tb	159		ug/L			372039	376869 ✓	1
	Tl	205	0.008	ug/L	0.003	33	279	510	13
	Pb	208	0.002	ug/L	0.001	92	733	802	5
	Bi	209		ug/L			303712	321086	1
	Th	232	0.043	ug/L	0.011	25	38	2024	23
	U	238	0.004	ug/L	0.002	52	12	188	47

Quantitative Analysis - Calibration Report

Sample Date/Time: Thursday, June 06, 2013 10:05:01
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

Analyte	Mass	r Corr Coeff	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	1.0000	0.0016	10	20	50	100	
C	13							
Cl	37							
Sc	45							
V	51	1.0000	0.0437	10	20	50	100	
V-1	51	1.0000	0.0440	10	20	50	100	
Cr	52	1.0000	0.0365	10	20	50	100	
Cr	53	1.0000	0.0042	10	20	50	100	
Mn	55	1.0000	0.0583	10	20	50	100	
Co	59	1.0000	0.0422	10	20	50	100	
Ge	72							
Ni	60	1.0000	0.0097	10	20	50	100	
Ni	62	1.0000	0.0014	10	20	50	100	
Cu	63	1.0000	0.0206	10	20	50	100	
Cu	65	1.0000	0.0095	10	20	50	100	
Zn	66	1.0000	0.0062	10	20	50	100	
Zn	67	1.0000	0.0010	10	20	50	100	
Zn	68	1.0000	0.0042	10	20	50	100	
As	75	1.0000	0.0058	10	20	50	100	
As-1	75	1.0000	0.0056	10	20	50	100	
Se	82	1.0000	0.0007	10	20	50	100	
Se	78	1.0000	0.0016	10	20	50	100	
Mo	98	1.0000	0.0201	10	20	50	100	
Y	89							
Kr	83							
In	115							
Ag	107	1.0000	0.0346	10	20	50	100	
Cd	111	1.0000	0.0086	10	20	50	100	
Cd	114	1.0000	0.0199	10	20	50	100	
Sb	121	1.0000	0.0265	10	20	50	100	
Sb	123	1.0000	0.0199	10	20	50	100	
Ba	135	1.0000	0.0066	10	20	50	100	
Ba	137	1.0000	0.0114	10	20	50	100	
Tb	159							
Tl	205	0.9999	0.0740	10	20	50	100	
Pb	208	1.0000	0.0998	10	20	50	100	
Bi	209							
Th	232	0.9999	0.1243	10	20	50	100	
U	238	1.0000	0.1313	10	20	50	100	

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 10:18:18
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			340477	318577 ✓	2
⌊	Be	9	49.680	ug/L	0.729	1	17	25085	0
	C	13		mg/L			7601	7052	1
	Cl	37		mg/L			2724241	2680297	0
⌈>	Sc	45		ug/L			374261	391644 ✓	0
|	V	51	51.630	ug/L	0.893	1	3136	886454	1
|	V-1	51	51.902	ug/L	0.749	1	2927	896647	1
|	Cr	52	51.408	ug/L	0.617	1	9400	744557	1
|	Cr	53	52.320	ug/L	0.050	0	995	87394	0
|	Mn	55	52.759	ug/L	0.509	0	664	1204930	0
⌊	Co	59	52.717	ug/L	0.269	0	95	872233	0
⌈>	Ge	72		ug/L			339810	346585 ✓	1
|	Ni	60	53.545	ug/L	0.507	0	111	179272	1
|	Ni	62	53.193	ug/L	0.613	1	76	25909	1
|	Cu	63	53.149	ug/L	0.099	0	336	379980	0
|	Cu	65	52.555	ug/L	0.435	0	162	173458	0
|	Zn	66	51.939	ug/L	0.441	0	767	111503	1
|	Zn	67	52.141	ug/L	0.391	0	197	18740	0
|	Zn	68	51.809	ug/L	0.393	0	7221	83498	0
|	As	75	52.698	ug/L	0.104	0	253	105706	1
|	As-1	75	52.345	ug/L	0.148	0	9785	112438	0
|	Se	82	82.154	ug/L	0.319	0	-6	19083	0
|	Se	78	83.198	ug/L	0.944	1	9985	55716	0
⌊	Mo	98	51.878	ug/L	0.069	0	88	361669	1
	Y	89		ug/L			315904	334923	0
	Kr	83		ug/L			198	214	2
⌈>	In	115		ug/L			321132	339290 ✓	0
|	Ag	107	51.072	ug/L	0.227	0	55	600157	0
|	Cd	111	48.882	ug/L	0.478	0	161	143070	1
|	Cd	114	49.016	ug/L	0.074	0	47	330899	0
|	Sb	121	49.784	ug/L	0.248	0	41	447282	0
|	Sb	123	50.352	ug/L	0.087	0	35	339338	0
|	Ba	135	51.115	ug/L	0.696	1	60	113663	1
⌊	Ba	137	50.651	ug/L	0.419	0	80	195870	0
⌈>	Tb	159		ug/L			372039	387015 ✓	0
|	Tl	205	50.671	ug/L	0.057	0	279	1451727	0
|	Pb	208	52.700	ug/L	0.293	0	733	2036143	0
|	Bi	209		ug/L			303712	321702	0
|	Th	232	51.661	ug/L	0.387	0	38	2484908	0
⌊	U	238	52.109	ug/L	0.497	0	12	2647306	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 10:24:36
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			340477	302966	1
	Be	9	0.011	ug/L	0.006	55	17	20	12
	C	13		mg/L			7601	7024	1
	Cl	37		mg/L			2724241	2801718	0
>	Sc	45		ug/L			374261	388365	0
	V	51	-0.001	ug/L	0.004	600	3136	3243	2
	V-1	51	-0.033	ug/L	0.004	11	2927	2468	2
	Cr	52	-0.007	ug/L	0.002	33	9400	9652	0
	Cr	53	-0.116	ug/L	0.004	3	995	843	0
	Mn	55	-0.002	ug/L	0.001	64	664	654	3
	Co	59	0.001	ug/L	0.001	144	95	112	17
>	Ge	72		ug/L			339810	348648	0
	Ni	60	-0.009	ug/L	0.001	6	111	82	2
	Ni	62	0.059	ug/L	0.012	19	76	107	4
	Cu	63	-0.001	ug/L	0.004	644	336	341	8
	Cu	65	-0.008	ug/L	0.002	26	162	141	4
	Zn	66	-0.052	ug/L	0.006	10	767	676	1
	Zn	67	-0.077	ug/L	0.050	64	197	175	9
	Zn	68	-0.097	ug/L	0.113	116	7221	7265	1
	As	75	-0.012	ug/L	0.017	140	253	234	13
	As-1	75	0.010	ug/L	0.037	360	9785	10059	0
	Se	82	-0.011	ug/L	0.047	428	-6	-9	116
	Se	78	0.074	ug/L	0.144	196	9985	10285	0
	Mo	98	0.001	ug/L	0.002	215	88	98	16
	Y	89		ug/L			315904	327726	0
	Kr	83		ug/L			198	204	2
>	In	115		ug/L			321132	328695	0
	Ag	107	0.005	ug/L	0.001	22	55	117	11
	Cd	111	0.001	ug/L	0.003	294	161	168	4
	Cd	114	0.001	ug/L	0.001	174	47	53	15
	Sb	121	0.036	ug/L	0.008	21	41	353	19
	Sb	123	0.040	ug/L	0.008	20	35	294	17
	Ba	135	0.004	ug/L	0.004	97	60	70	12
	Ba	137	0.002	ug/L	0.002	111	80	87	7
>	Tb	159		ug/L			372039	376090	1
	Tl	205	0.002	ug/L	0.001	51	279	330	6
	Pb	208	0.000	ug/L	0.001	275	733	750	2
	Bi	209		ug/L			303712	315542	0
	Th	232	0.023	ug/L	0.006	24	38	1106	23
	U	238	0.002	ug/L	0.001	39	12	127	35

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 10:30:05
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	291238	2
[	Be	9	52.572	ug/L	0.732	1	17	24267	1
	C	13		mg/L			7601	5451	0
	Cl	37		mg/L			2724241	2871833	1
[>	Sc	45		ug/L			374261	386006	0
[	V	51	50.269	ug/L	0.590	1	3136	850809	1
[	V-1	51	50.349	ug/L	0.601	1	2927	857458	1
[	Cr	52	50.632	ug/L	0.555	1	9400	722903	1
[	Cr	53	50.892	ug/L	0.459	0	995	83814	1
[	Mn	55	50.938	ug/L	0.595	1	664	1146693	1
[	Co	59	51.028	ug/L	0.806	1	95	832166	1
[>	Ge	72		ug/L			339810	350223	0
[	Ni	60	50.239	ug/L	0.697	1	111	169982	2
[	Ni	62	51.046	ug/L	0.230	0	76	25127	0
[	Cu	63	50.265	ug/L	0.335	0	336	363158	1
[	Cu	65	50.725	ug/L	0.035	0	162	169190	0
[	Zn	66	50.974	ug/L	0.717	1	767	110598	2
[	Zn	67	51.429	ug/L	0.291	0	197	18683	1
[	Zn	68	50.925	ug/L	0.419	0	7221	83064	0
[	As	75	50.221	ug/L	0.127	0	253	101808	1
[	As-1	75	50.134	ug/L	0.215	0	9785	109247	1
[	Se	82	50.106	ug/L	0.363	0	-6	11758	1
[	Se	78	49.753	ug/L	0.193	0	9985	37807	1
[	Mo	98	49.620	ug/L	0.141	0	88	349558	0
	Y	89		ug/L			315904	327302	0
	Kr	83		ug/L			198	209	3
[>	In	115		ug/L			321132	331625	0
[	Ag	107	50.666	ug/L	0.359	0	55	581945	1
[	Cd	111	50.140	ug/L	0.262	0	161	143431	0
[	Cd	114	49.827	ug/L	0.135	0	47	328769	0
[	Sb	121	49.792	ug/L	0.174	0	41	437253	0
[	Sb	123	49.742	ug/L	0.426	0	35	327656	1
[	Ba	135	49.813	ug/L	0.332	0	60	108270	0
[	Ba	137	48.913	ug/L	0.575	1	80	184878	1
[>	Tb	159		ug/L			372039	372746	0
[	Tl	205	49.544	ug/L	0.994	2	279	1366975	1
[	Pb	208	50.480	ug/L	0.460	0	733	1878430	0
[	Bi	209		ug/L			303712	308733	0
[	Th	232	50.840	ug/L	0.758	1	38	2355185	0
[	U	238	51.022	ug/L	0.771	1	12	2496420	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 10:36:23
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	290823 ✓	1
[	Be	9	0.020	ug/L	0.013	67	17	23	27
	C	13		mg/L			7601	6964	1
	Cl	37		mg/L			2724241	2896392	0
[>	Sc	45		ug/L			374261	385227 ✓	1
[	V	51	-0.007	ug/L	0.003	43	3136	3106	1
[	V-1	51	-0.027	ug/L	0.004	14	2927	2553	2
[	Cr	52	-0.027	ug/L	0.016	61	9400	9299	3
[	Cr	53	-0.093	ug/L	0.005	5	995	873	2
[	Mn	55	-0.002	ug/L	0.001	77	664	649	2
[	Co	59	0.001	ug/L	0.000	13	95	113	1
[>	Ge	72		ug/L			339810	349573 ✓	0
[	Ni	60	-0.012	ug/L	0.002	13	111	73	7
[	Ni	62	0.063	ug/L	0.029	45	76	109	12
[	Cu	63	-0.002	ug/L	0.003	155	336	330	7
[	Cu	65	-0.003	ug/L	0.003	95	162	157	6
[	Zn	66	-0.074	ug/L	0.026	35	767	630	8
[	Zn	67	-0.088	ug/L	0.044	50	197	171	8
[	Zn	68	-0.192	ug/L	0.059	30	7221	7144	1
[	As	75	0.010	ug/L	0.014	143	253	279	10
[	As-1	75	-0.094	ug/L	0.022	23	9785	9881	0
[	Se	82	-0.006	ug/L	0.048	857	-6	-8	137
[	Se	78	-0.340	ug/L	0.089	26	9985	10084	0
[	Mo	98	0.001	ug/L	0.001	202	88	95	9
	Y	89		ug/L			315904	324950	1
	Kr	83		ug/L			198	211	2
[>	In	115		ug/L			321132	329995 ✓	0
[	Ag	107	0.005	ug/L	0.003	56	55	110	26
[	Cd	111	0.004	ug/L	0.007	171	161	176	10
[	Cd	114	0.001	ug/L	0.000	46	47	55	5
[	Sb	121	0.046	ug/L	0.011	23	41	445	20
[	Sb	123	0.047	ug/L	0.013	27	35	344	23
[	Ba	135	-0.003	ug/L	0.002	63	60	56	6
[	Ba	137	0.003	ug/L	0.005	150	80	94	20
[>	Tb	159		ug/L			372039	369213 ✓	0
[	Tl	205	0.003	ug/L	0.001	25	279	365	6
[	Pb	208	-0.001	ug/L	0.001	209	733	704	7
[	Bi	209		ug/L			303712	310004	0
[	Th	232	0.031	ug/L	0.006	19	38	1451	19
[	U	238	0.002	ug/L	0.001	53	12	124	48

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 10:41:51
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	293399 ✓	1
[	Be	9	0.199	ug/L	0.025	12	17	107	10
	C	13		mg/L			7601	5034	1
	Cl	37		mg/L			2724241	2868795	0
[>	Sc	45		ug/L			374261	380438 ✓	0
[	V	51	0.187	ug/L	0.016	8	3136	6291	3
[	V-1	51	0.167	ug/L	0.003	1	2927	5772	0
[	Cr	52	0.452	ug/L	0.018	4	9400	15826	1
[	Cr	53	0.381	ug/L	0.025	6	995	1622	3
[	Mn	55	0.499	ug/L	0.008	1	664	11746	1
[	Co	59	0.208	ug/L	0.004	2	95	3436	2
[>	Ge	72		ug/L			339810	347111 ✓	0
[	Ni	60	0.499	ug/L	0.030	6	111	1786	6
[	Ni	62	0.551	ug/L	0.034	6	76	346	4
[	Cu	63	0.522	ug/L	0.016	3	336	4075	3
[	Cu	65	0.506	ug/L	0.006	1	162	1838	1
[	Zn	66	4.042	ug/L	0.011	0	767	9412	0
[	Zn	67	3.529	ug/L	0.152	4	197	1458	4
[	Zn	68	3.984	ug/L	0.139	3	7221	13240	1
[	As	75	0.223	ug/L	0.015	6	253	705	4
[	As-1	75	0.153	ug/L	0.030	19	9785	10295	0
[	Se	82	0.529	ug/L	0.106	20	-6	116	21
[	Se	78	0.362	ug/L	0.082	22	9985	10398	0
[	Mo	98	0.199	ug/L	0.014	7	88	1481	6
	Y	89		ug/L			315904	327351	0
	Kr	83		ug/L			198	215	4
[>	In	115		ug/L			321132	330099 ✓	0
[	Ag	107	0.191	ug/L	0.006	3	55	2240	2
[	Cd	111	0.108	ug/L	0.011	10	161	471	5
[	Cd	114	0.099	ug/L	0.002	2	47	701	2
[	Sb	121	0.212	ug/L	0.007	3	41	1897	3
[	Sb	123	0.218	ug/L	0.006	2	35	1463	1
[	Ba	135	0.490	ug/L	0.019	3	60	1121	3
[	Ba	137	0.490	ug/L	0.024	4	80	1925	5
[>	Tb	159		ug/L			372039	369398 ✓	0
[	Tl	205	0.189	ug/L	0.002	1	279	5431	1
[	Pb	208	0.097	ug/L	0.003	2	733	4288	1
[	Bi	209		ug/L			303712	309744	0
[	Th	232	0.207	ug/L	0.003	1	38	9560	0
[	U	238	0.195	ug/L	0.005	2	12	9446	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 10:47:19
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	357440 ✓	2
[	Be	9	0.001	ug/L	0.007	529	17	18	24
	C	13		mg/L			7601	24233	1
	Cl	37		mg/L			2724241	4868804	0
[>	Sc	45		ug/L			374261	376339 ✓	0
[	V	51	0.204	ug/L	0.007	3	3136	6500	2
[	V-1	51	0.516	ug/L	0.015	2	2927	11483	2
[	Cr	52	0.458	ug/L	0.001	0	9400	15741	0
[	Cr	53	1.495	ug/L	0.071	4	995	3372	3
[	Mn	55	0.069	ug/L	0.003	4	664	2182	3
[	Co	59	0.021	ug/L	0.001	3	95	435	2
[>	Ge	72		ug/L			339810	332789 ✓	1
[	Ni	60	0.511	ug/L	0.022	4	111	1751	2
[	Ni	62	3.915	ug/L	0.077	1	76	1900	1
[	Cu	63	0.536	ug/L	0.019	3	336	4007	2
[	Cu	65	0.618	ug/L	0.015	2	162	2115	2
[	Zn	66	2.251	ug/L	0.076	3	767	5357	1
[	Zn	67	2.400	ug/L	0.216	8	197	1012	6
[	Zn	68	1.428	ug/L	0.050	3	7221	9086	0
[	As	75	0.077	ug/L	0.022	28	253	395	10
[	As-1	75	-0.008	ug/L	0.098	1271	9785	9567	1
[	Se	82	-0.069	ug/L	0.018	25	-6	-22	19
[	Se	78	-0.205	ug/L	0.352	171	9985	9669	0
[	Mo	98	399.466	ug/L	5.668	1	88	2673168	0
	Y	89		ug/L			315904	310429	0
	Kr	83		ug/L			198	231	1
[>	In	115		ug/L			321132	316538 ✓	0
[	Ag	107	0.025	ug/L	0.004	17	55	331	14
[	Cd	111	0.091	ug/L	0.021	22	161	408	13
[	Cd	114	0.640	ug/L	0.019	2	47	4077	2
[	Sb	121	0.070	ug/L	0.002	2	41	629	2
[	Sb	123	0.072	ug/L	0.002	3	35	484	3
[	Ba	135	0.052	ug/L	0.004	8	60	167	5
[	Ba	137	0.050	ug/L	0.006	12	80	260	9
[>	Tb	159		ug/L			372039	371072 ✓	0
[	Tl	205	0.013	ug/L	0.002	13	279	633	6
[	Pb	208	0.039	ug/L	0.004	9	733	2179	5
[	Bi	209		ug/L			303712	296276	0
[	Th	232	0.044	ug/L	0.005	10	38	2065	10
[	U	238	0.001	ug/L	0.000	25	12	48	18

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 10:53:17
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	391940 ✓	2
[	Be	9	0.007	ug/L	0.006	87	17	24	18
	C	13		mg/L			7601	45029	0
	Cl	37		mg/L			2724241	4695192	1
[>	Sc	45		ug/L			374261	362076 ✓	0
[	V	51	-0.039	ug/L	0.085	216	3136	2411	56
[	V-1	51	0.418	ug/L	0.032	7	2927	9483	5
[	Cr	52	19.991	ug/L	0.334	1	9400	273233	1
[	Cr	53	21.086	ug/L	0.216	1	995	33136	0
[	Mn	55	19.606	ug/L	0.148	0	664	414393	0
[	Co	59	19.301	ug/L	0.074	0	95	295302	0
[>	Ge	72		ug/L			339810	321195 ✓	0
[	Ni	60	19.999	ug/L	0.085	0	111	62119	0
[	Ni	62	23.057	ug/L	0.391	1	76	10448	1
[	Cu	63	19.363	ug/L	0.154	0	336	128498	1
[	Cu	65	19.814	ug/L	0.214	1	162	60703	0
[	Zn	66	20.216	ug/L	0.149	0	767	40660	0
[	Zn	67	18.266	ug/L	0.181	0	197	6205	1
[	Zn	68	19.062	ug/L	0.137	0	7221	32786	0
[	As	75	19.329	ug/L	0.041	0	253	36082	0
[	As-1	75	19.721	ug/L	0.043	0	9785	45022	0
[	Se	82	-0.029	ug/L	0.030	100	-6	-12	50
[	Se	78	0.026	ug/L	0.172	674	9985	9451	0
[	Mo	98	404.582	ug/L	4.191	1	88	2613296	0
	Y	89		ug/L			315904	300963	0
	Kr	83		ug/L			198	226	3
[>	In	115		ug/L			321132	307545 ✓	0
[	Ag	107	18.982	ug/L	0.131	0	55	202220	0
[	Cd	111	19.390	ug/L	0.100	0	161	51532	0
[	Cd	114	19.799	ug/L	0.092	0	47	121183	0
[	Sb	121	0.065	ug/L	0.004	6	41	572	6
[	Sb	123	0.065	ug/L	0.005	7	35	433	6
[	Ba	135	0.042	ug/L	0.003	8	60	143	5
[	Ba	137	0.043	ug/L	0.006	13	80	226	8
[>	Tb	159		ug/L			372039	365007 ✓	0
[	Tl	205	0.019	ug/L	0.000	2	279	789	2
[	Pb	208	0.033	ug/L	0.002	6	733	1917	3
[	Bi	209		ug/L			303712	291272	0
[	Th	232	0.028	ug/L	0.003	9	38	1302	7
[	U	238	0.003	ug/L	0.000	12	12	174	11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 10:59:14
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	359544 ✓	4
[	Be	9	179.143	ug/L	3.878	2	17	102007	2
	C	13		mg/L			7601	6146	3
	Cl	37		mg/L			2724241	2644808	2
[>	Sc	45		ug/L			374261	373780 ✓	1
[	V	51	198.208	ug/L	3.818	1	3136	3239519	3
[	V-1	51	199.071	ug/L	2.775	1	2927	3274358	2
[	Cr	52	194.948	ug/L	4.432	2	9400	2668929	3
[	Cr	53	197.897	ug/L	0.875	0	995	312730	1
[	Mn	55	200.392	ug/L	2.794	1	664	4366578	2
[	Co	59	197.108	ug/L	1.903	0	95	3112425	2
[>	Ge	72		ug/L			339810	331350 ✓	1
[	Ni	60	195.705	ug/L	3.588	1	111	626164	2
[	Ni	62	196.195	ug/L	2.365	1	76	91158	1
[	Cu	63	191.669	ug/L	1.976	1	336	1309229	1
[	Cu	65	191.136	ug/L	0.586	0	162	602746	1
[	Zn	66	189.846	ug/L	0.542	0	767	387640	1
[	Zn	67	191.037	ug/L	1.868	0	197	65140	2
[	Zn	68	191.496	ug/L	0.505	0	7221	276092	1
[	As	75	194.869	ug/L	0.294	0	253	373030	1
[	As-1	75	195.844	ug/L	0.229	0	9785	376030	1
[	Se	82	195.424	ug/L	1.266	0	-6	43405	0
[	Se	78	198.977	ug/L	1.241	0	9985	113846	1
[	Mo	98	201.372	ug/L	1.077	0	88	1341857	1
	Y	89		ug/L			315904	312159	0
	Kr	83		ug/L			198	244	2
[>	In	115		ug/L			321132	317665 ✓	1
[	Ag	107	198.414	ug/L	1.928	0	55	2182882	1
[	Cd	111	194.640	ug/L	1.497	0	161	532866	0
[	Cd	114	196.012	ug/L	0.663	0	47	1238769	1
[	Sb	121	197.999	ug/L	2.311	1	41	1665389	1
[	Sb	123	198.003	ug/L	0.837	0	35	1249260	1
[	Ba	135	203.131	ug/L	1.007	0	60	422741	1
[	Ba	137	201.776	ug/L	2.258	1	80	730263	0
[>	Tb	159		ug/L			372039	377865 ✓	1
[	Tl	205	198.721	ug/L	1.752	0	279	5557688	1
[	Pb	208	200.147	ug/L	1.585	0	733	7547686	0
[	Bi	209		ug/L			303712	291797	0
[	Th	232	204.732	ug/L	0.853	0	38	9614853	1
[	U	238	203.143	ug/L	2.026	0	12	10076692	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 11:05:30
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	315673 ✓	4
[	Be	9	285.390	ug/L	4.332	1	17	142678	3
	C	13		mg/L			7601	5818	4
	Cl	37		mg/L			2724241	2737224	0
[>	Sc	45		ug/L			374261	392041 ✓	0
[	V	51	299.749	ug/L	4.768	1	3136	5136412	2
[	V-1	51	299.874	ug/L	4.139	1	2927	5171781	2
[	Cr	52	296.702	ug/L	3.666	1	9400	4254646	1
[	Cr	53	297.185	ug/L	5.634	1	995	492085	2
[	Mn	55	303.637	ug/L	4.169	1	664	6939034	2
[	Co	59	301.111	ug/L	3.992	1	95	4987074	2
[>	Ge	72		ug/L			339810	349440 ✓	1
[	Ni	60	292.741	ug/L	1.910	0	111	987729	2
[	Ni	62	292.312	ug/L	2.813	0	76	143208	2
[	Cu	63	294.365	ug/L	1.176	0	336	2120396	1
[	Cu	65	287.346	ug/L	3.578	1	162	955611	2
[	Zn	66	281.920	ug/L	1.258	0	767	606717	1
[	Zn	67	285.291	ug/L	3.252	1	197	102472	0
[	Zn	68	282.304	ug/L	1.118	0	7221	425718	1
[	As	75	288.806	ug/L	1.327	0	253	582937	1
[	As-1	75	290.001	ug/L	1.340	0	9785	582406	1
[	Se	82	284.091	ug/L	1.342	0	-6	66553	1
[	Se	78	287.994	ug/L	1.707	0	9985	169195	1
[	Mo	98	312.480	ug/L	5.803	1	88	2196316	3
	Y	89		ug/L			315904	327337	1
	Kr	83		ug/L			198	275	7
[>	In	115		ug/L			321132	334995 ✓	1
[	Ag	107	296.342	ug/L	2.524	0	55	3437952	1
[	Cd	111	290.556	ug/L	3.957	1	161	838761	1
[	Cd	114	291.344	ug/L	3.849	1	47	1941502	1
[	Sb	121	301.078	ug/L	1.608	0	41	2670527	1
[	Sb	123	294.046	ug/L	2.614	0	35	1956273	1
[	Ba	135	300.326	ug/L	3.136	1	60	659040	1
[	Ba	137	296.023	ug/L	1.705	0	80	1129804	1
[>	Tb	159		ug/L			372039	384107 ✓	0
[	Tl	205	302.036	ug/L	5.015	1	279	8586959	1
[	Pb	208	308.025	ug/L	1.441	0	733	11808172	0
[	Bi	209		ug/L			303712	285613	1
[	Th	232	310.558	ug/L	6.027	1	38	14826133	2
[	U	238	310.894	ug/L	1.281	0	12	15676298	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 11:11:46
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	313257 ✓	2
[	Be	9	49.316	ug/L	0.904	1	17	24484	1
	C	13		mg/L			7601	5366	2
	Cl	37		mg/L			2724241	2786932	2
[>	Sc	45		ug/L			374261	397671 ✓	0
[	V	51	49.668	ug/L	0.374	0	3136	866033	0
[	V-1	51	49.803	ug/L	0.252	0	2927	873772	0
[	Cr	52	50.079	ug/L	0.349	0	9400	736711	0
[	Cr	53	50.521	ug/L	0.568	1	995	85723	1
[	Mn	55	51.233	ug/L	0.493	0	664	1188139	0
[	Co	59	50.589	ug/L	0.429	0	95	849951	1
[>	Ge	72		ug/L			339810	354267 ✓	0
[	Ni	60	51.141	ug/L	0.440	0	111	175022	1
[	Ni	62	51.138	ug/L	0.196	0	76	25463	0
[	Cu	63	51.008	ug/L	0.248	0	336	372778	0
[	Cu	65	50.621	ug/L	0.173	0	162	170791	0
[	Zn	66	50.883	ug/L	0.367	0	767	111667	0
[	Zn	67	51.051	ug/L	0.377	0	197	18760	0
[	Zn	68	51.104	ug/L	0.466	0	7221	84292	0
[	As	75	49.665	ug/L	0.600	1	253	101840	0
[	As-1	75	49.768	ug/L	0.505	1	9785	109775	0
[	Se	82	51.203	ug/L	0.958	1	-6	12154	1
[	Se	78	51.681	ug/L	0.828	1	9985	39323	1
[	Mo	98	49.897	ug/L	0.621	1	88	355573	1
	Y	89		ug/L			315904	333030	0
	Kr	83		ug/L			198	216	0
[>	In	115		ug/L			321132	341502 ✓	1
[	Ag	107	50.537	ug/L	0.562	1	55	597697	1
[	Cd	111	49.872	ug/L	0.420	0	161	146909	1
[	Cd	114	50.008	ug/L	0.702	1	47	339773	1
[	Sb	121	49.207	ug/L	0.374	0	41	444955	0
[	Sb	123	49.053	ug/L	0.546	1	35	332702	0
[	Ba	135	49.567	ug/L	0.361	0	60	110938	0
[	Ba	137	49.568	ug/L	0.213	0	80	192938	1
[>	Tb	159		ug/L			372039	387059 ✓	1
[	Tl	205	50.052	ug/L	0.510	1	279	1434123	1
[	Pb	208	51.319	ug/L	0.252	0	733	1983149	1
[	Bi	209		ug/L			303712	319330	0
[	Th	232	52.965	ug/L	0.145	0	38	2548070	1
[	U	238	52.805	ug/L	0.272	0	12	2682939	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 11:18:04
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	303941 ✓	1
[	Be	9	0.011	ug/L	0.020	184	17	20	46
	C	13		mg/L			7601	6956	1
	Cl	37		mg/L			2724241	2941479	0
[>	Sc	45		ug/L			374261	386183 ✓	1
|	V	51	0.000	ug/L	0.006	4385	3136	3238	2
|	V-1	51	0.016	ug/L	0.005	33	2927	3289	2
|	Cr	52	-0.027	ug/L	0.007	27	9400	9325	2
|	Cr	53	0.026	ug/L	0.018	66	995	1070	3
|	Mn	55	0.007	ug/L	0.002	23	664	842	3
[	Co	59	0.004	ug/L	0.000	4	95	162	3
[>	Ge	72		ug/L			339810	347038 ✓	0
|	Ni	60	-0.005	ug/L	0.003	68	111	98	10
|	Ni	62	0.129	ug/L	0.028	22	76	140	9
|	Cu	63	0.015	ug/L	0.005	35	336	449	8
|	Cu	65	0.008	ug/L	0.007	94	162	190	12
|	Zn	66	-0.073	ug/L	0.010	13	767	628	3
|	Zn	67	-0.074	ug/L	0.041	55	197	175	7
|	Zn	68	-0.087	ug/L	0.042	48	7221	7246	0
|	As	75	-0.000	ug/L	0.021	96328	253	258	17
|	As-1	75	-0.048	ug/L	0.066	137	9785	9898	1
|	Se	82	0.010	ug/L	0.020	189	-6	-4	106
|	Se	78	-0.128	ug/L	0.292	228	9985	10127	1
[	Mo	98	0.013	ug/L	0.003	26	88	180	13
	Y	89		ug/L			315904	321815	0
	Kr	83		ug/L			198	209	2
[>	In	115		ug/L			321132	332895 ✓	0
|	Ag	107	0.009	ug/L	0.002	21	55	158	13
|	Cd	111	0.008	ug/L	0.003	43	161	189	4
|	Cd	114	0.001	ug/L	0.001	109	47	55	11
|	Sb	121	0.123	ug/L	0.019	15	41	1128	14
|	Sb	123	0.119	ug/L	0.021	17	35	822	16
|	Ba	135	-0.003	ug/L	0.001	34	60	56	4
[	Ba	137	0.002	ug/L	0.001	55	80	91	5
[>	Tb	159		ug/L			372039	368739 ✓	0
|	Tl	205	0.007	ug/L	0.001	14	279	475	6
|	Pb	208	0.002	ug/L	0.000	9	733	797	0
|	Bi	209		ug/L			303712	313098	0
|	Th	232	0.047	ug/L	0.009	19	38	2214	19
[	U	238	0.005	ug/L	0.001	10	12	252	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 06, 2013 11:23:32
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	316818 ✓	1
[	Be	9	U 0.017	ug/L	0.004	25	17	24	7
	C	13		mg/L			7601	7200	2
	Cl	37		mg/L			2724241	2917163	0
[>	Sc	45		ug/L			374261	329525 ✓	0
[	V	51	0.038	ug/L	0.002	4	3136	3303	1
[	V-1	51	0.035	ug/L	0.002	6	2927	3077	0
[	Cr	52	U 0.123	ug/L	0.014	11	9400	9754	1
[	Cr	53	0.111	ug/L	0.026	23	995	1030	2
[	Mn	55	0.076	ug/L	0.001	1	664	2038	1
[	Co	59	0.002	ug/L	0.001	27	95	118	7
[>	Ge	72		ug/L			339810	354035 ✓	0
[	Ni	60	U -0.010	ug/L	0.001	12	111	82	4
[	Ni	62	0.080	ug/L	0.032	40	76	119	13
[	Cu	63	U 0.047	ug/L	0.005	11	336	691	5
[	Cu	65	0.039	ug/L	0.003	7	162	299	3
[	Zn	66	U 0.033	ug/L	0.002	5	767	871	0
[	Zn	67	0.008	ug/L	0.071	880	197	208	12
[	Zn	68	-0.010	ug/L	0.081	780	7221	7507	1
[	As	75	U 0.014	ug/L	0.011	74	253	292	7
[	As-1	75	-0.104	ug/L	0.047	44	9785	9987	1
[	Se	82	U 0.023	ug/L	0.086	378	-6	-1	1402
[	Se	78	-0.359	ug/L	0.176	49	9985	10202	1
[	Mo	98	0.012	ug/L	0.009	78	88	178	37
	Y	89		ug/L			315904	332490	0
	Kr	83		ug/L			198	215	5
[>	In	115		ug/L			321132	338933 ✓	0
[	Ag	107	U 0.007	ug/L	0.001	19	55	137	10
[	Cd	111	U 0.005	ug/L	0.005	112	161	184	8
[	Cd	114	-0.001	ug/L	0.001	164	47	44	21
[	Sb	121	U 0.069	ug/L	0.010	15	41	662	13
[	Sb	123	0.072	ug/L	0.007	10	35	519	8
[	Ba	135	-0.003	ug/L	0.004	138	60	58	13
[	Ba	137	0.005	ug/L	0.004	66	80	105	13
[>	Tb	159		ug/L			372039	380507 ✓	0
[	Tl	205	U -0.001	ug/L	0.001	186	279	270	10
[	Pb	208	U -0.002	ug/L	0.000	8	733	679	0
[	Bi	209		ug/L			303712	319352	0
[	Th	232	0.029	ug/L	0.004	13	38	1394	12
[	U	238	0.002	ug/L	0.000	18	12	93	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 06, 2013 11:29:29
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

No Cr

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	313671 ✓	0
[	Be	9	U 0.027	ug/L	0.011	39	17	29	17
	C	13		mg/L			7601	11040	0
	Cl	37		mg/L			2724241	3021011	0
[>	Sc	45		ug/L			374261	487808	1
[	V	51	7.566	ug/L	0.115	1	3136	165304	1
[	V-1	51	7.550	ug/L	0.114	1	2927	165716	1
[	Cr	52	1.450	ug/L	0.047	3	9400	38064	2
[	Cr	53	1.526	ug/L	0.048	3	995	4432	1
[	Mn	55	237.724	ug/L	1.987	0	664	6759352	0
[	Co	59	0.149	ug/L	0.002	1	95	3196	1
[>	Ge	72		ug/L			339810	358546 ✓	0
[	Ni	60	7.973	ug/L	0.119	1	111	27715	1
[	Ni	62	7.947	ug/L	0.062	0	76	4073	1
[	Cu	63	28.170	ug/L	0.429	1	336	208521	1
[	Cu	65	28.098	ug/L	0.374	1	162	96024	1
[	Zn	66	11.411	ug/L	0.098	0	767	25973	0
[	Zn	67	10.724	ug/L	0.160	1	197	4153	1
[	Zn	68	11.732	ug/L	0.071	0	7221	25455	0
[	As	75	0.665	ug/L	0.006	0	253	1643	0
[	As-1	75	0.452	ug/L	0.023	5	9785	11239	0
[	Se	82	U 0.306	ug/L	0.015	4	-6	66	5
[	Se	78	-0.437	ug/L	0.101	23	9985	10288	0
[	Mo	98	0.602	ug/L	0.010	1	88	4436	2
	Y	89		ug/L			315904	363586	0
	Kr	83		ug/L			198	219	1
[>	In	115		ug/L			321132	336931 ✓	1
[	Ag	107	U 0.015	ug/L	0.001	7	55	231	4
[	Cd	111	U 0.019	ug/L	0.004	21	161	225	5
[	Cd	114	0.019	ug/L	0.001	3	47	180	2
[	Sb	121	U 0.131	ug/L	0.009	6	41	1211	5
[	Sb	123	0.134	ug/L	0.004	3	35	936	2
[	Ba	135	2.663	ug/L	0.094	3	60	5939	3
[	Ba	137	2.668	ug/L	0.020	0	80	10325	1
[>	Tb	159		ug/L			372039	380592 ✓	0
[	Tl	205	U -0.001	ug/L	0.001	150	279	264	11
[	Pb	208	0.233	ug/L	0.002	0	733	9617	0
[	Bi	209		ug/L			303712	301413	0
[	Th	232	0.061	ug/L	0.006	9	38	2905	8
[	U	238	0.016	ug/L	0.000	0	12	819	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 06, 2013 11:35:26
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

No S

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	327118 ✓	0
[	Be	9	U 0.028	ug/L	0.019	67	17	30	31
	C	13		mg/L			7601	12175	1
	Cl	37		mg/L			2724241	3045302	0
[>	Sc	45		ug/L			374261	490007	0
[	V	51	7.607	ug/L	0.029	0	3136	166927	1
[	V-1	51	7.578	ug/L	0.038	0	2927	167072	1
[	Cr	52	1.468	ug/L	0.023	1	9400	38550	0
[	Cr	53	1.501	ug/L	0.027	1	995	4402	1
[	Mn	55	236.994	ug/L	0.322	0	664	6769206	0
[	Co	59	0.154	ug/L	0.004	2	95	3305	2
[>	Ge	72		ug/L			339810	361683 ✓	1
[	Ni	60	7.920	ug/L	0.069	0	111	27771	0
[	Ni	62	7.981	ug/L	0.103	1	76	4125	0
[	Cu	63	27.783	ug/L	0.364	1	336	207445	1
[	Cu	65	27.824	ug/L	0.234	0	162	95916	1
[	Zn	66	11.306	ug/L	0.122	1	767	25967	1
[	Zn	67	10.852	ug/L	0.085	0	197	4237	1
[	Zn	68	11.956	ug/L	0.215	1	7221	26020	1
[	As	75	0.656	ug/L	0.014	2	253	1639	0
[	As-1	75	0.424	ug/L	0.039	9	9785	11280	0
[	Se	82	U 0.288	ug/L	0.017	5	-6	62	7
[	Se	78	-0.542	ug/L	0.115	21	9985	10318	0
[	Mo	98	0.608	ug/L	0.011	1	88	4513	2
	Y	89		ug/L			315904	366972	0
	Kr	83		ug/L			198	217	2
[>	In	115		ug/L			321132	342922 ✓	1
[	Ag	107	U 0.013	ug/L	0.001	7	55	215	4
[	Cd	111	U 0.020	ug/L	0.007	36	161	232	9
[	Cd	114	0.022	ug/L	0.003	11	47	202	9
[	Sb	121	U 0.116	ug/L	0.006	5	41	1098	4
[	Sb	123	0.115	ug/L	0.009	8	35	822	6
[	Ba	135	2.670	ug/L	0.024	0	60	6061	2
[	Ba	137	2.665	ug/L	0.022	0	80	10498	1
[>	Tb	159		ug/L			372039	387816 ✓	0
[	Tl	205	U -0.003	ug/L	0.001	26	279	216	9
[	Pb	208	0.238	ug/L	0.002	0	733	9957	0
[	Bi	209		ug/L			303712	307640	0
[	Th	232	0.037	ug/L	0.001	3	38	1802	3
[	U	238	0.016	ug/L	0.000	1	12	823	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 06, 2013 11:41:23
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

No Cr

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	340422 ✓	0
[	Be	9	23.064	ug/L	0.388	1	17	12455	0
	C	13		mg/L			7601	10404	1
	Cl	37		mg/L			2724241	3036569	0
[>	Sc	45		ug/L			374261	491336	1
[	V	51	27.142	ug/L	0.370	1	3136	586597	1
[	V-1	51	27.133	ug/L	0.264	0	2927	589909	1
[	Cr	52	20.796	ug/L	0.341	1	9400	385171	1
[	Cr	53	20.902	ug/L	0.171	0	995	44583	0
[	Mn	55	261.913	ug/L	0.546	0	664	7501252	1
[	Co	59	19.489	ug/L	0.239	1	95	404651	2
[>	Ge	72		ug/L			339810	357034 ✓	0
[	Ni	60	31.977	ug/L	0.363	1	111	110338	1
[	Ni	62	32.041	ug/L	0.952	2	76	16107	2
[	Cu	63	52.473	ug/L	0.306	0	336	386473	1
[	Cu	65	52.510	ug/L	0.210	0	162	178547	1
[	Zn	66	84.743	ug/L	0.589	0	767	186896	0
[	Zn	67	78.467	ug/L	0.312	0	197	28950	0
[	Zn	68	84.429	ug/L	0.651	0	7221	135406	1
[	As	75	25.196	ug/L	0.088	0	253	52202	0
[	As-1	75	24.259	ug/L	0.209	0	9785	59197	0
[	Se	82	72.091	ug/L	0.484	0	-6	17249	0
[	Se	78	72.445	ug/L	0.487	0	9985	51336	0
[	Mo	98	24.679	ug/L	0.207	0	88	177288	1
	Y	89		ug/L			315904	362099	0
	Kr	83		ug/L			198	220	2
[>	In	115		ug/L			321132	337271 ✓	0
[	Ag	107	23.208	ug/L	0.190	0	55	271133	1
[	Cd	111	23.367	ug/L	0.193	0	161	68071	1
[	Cd	114	23.266	ug/L	0.194	0	47	156152	0
[	Sb	121	24.385	ug/L	0.139	0	41	217802	0
[	Sb	123	24.323	ug/L	0.147	0	35	162959	0
[	Ba	135	26.890	ug/L	0.135	0	60	59470	0
[	Ba	137	26.552	ug/L	0.162	0	80	102106	0
[>	Tb	159		ug/L			372039	386067 ✓	0
[	Tl	205	23.029	ug/L	0.232	1	279	658319	0
[	Pb	208	23.871	ug/L	0.135	0	733	920452	0
[	Bi	209		ug/L			303712	305785	0
[	Th	232	23.176	ug/L	0.084	0	38	1112125	0
[	U	238	23.637	ug/L	0.266	1	12	1197946	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WR99 APOST REN~~ 222222
Sample Dil Factor: 2 BA 6/6/13
Comments:
Sample Date/Time: Thursday, June 06, 2013 11:47:22
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			340477	344819 ✓	2
	Be	9	23.782	ug/L	0.525	2	17	13004	1
	C	13		mg/L			7601	12545	1
	Cl	37		mg/L			2724241	3023945	0
>	Sc	45		ug/L			374261	478678	1
	V	51	27.540	ug/L	0.811	2	3136	579640	1
	V-1	51	27.597	ug/L	0.730	2	2927	584333	1
	Cr	52	21.408	ug/L	0.362	1	9400	385915	0
	Cr	53	21.731	ug/L	0.102	0	995	45109	1
	Mn	55	257.485	ug/L	6.842	2	664	7182422	1
	Co	59	20.412	ug/L	0.179	0	95	412826	0
>	Ge	72		ug/L			339810	354526 ✓	0
	Ni	60	32.201	ug/L	0.084	0	111	110327	0
	Ni	62	32.456	ug/L	0.508	1	76	16201	1
	Cu	63	51.912	ug/L	0.099	0	336	379652	0
	Cu	65	51.675	ug/L	0.455	0	162	174468	0
	Zn	66	86.656	ug/L	0.726	0	767	189754	0
	Zn	67	79.964	ug/L	0.321	0	197	29291	0
	Zn	68	85.442	ug/L	0.338	0	7221	135974	0
	As	75	25.868	ug/L	0.060	0	253	53211	0
	As-1	75	24.607	ug/L	0.093	0	9785	59478	0
	Se	82	74.864	ug/L	0.456	0	-6	17788	0
	Se	78	74.239	ug/L	0.588	0	9985	51980	0
	Mo	98	24.798	ug/L	0.112	0	88	176890	0
	Y	89		ug/L			315904	360523	0
	Kr	83		ug/L			198	220	5
>	In	115		ug/L			321132	333583 ✓	1
	Ag	107	24.386	ug/L	0.174	0	55	281754	0
	Cd	111	24.053	ug/L	0.334	1	161	69291	0
	Cd	114	23.984	ug/L	0.393	1	47	159186	0
	Sb	121	24.496	ug/L	0.518	2	41	216355	0
	Sb	123	24.578	ug/L	0.380	1	35	162848	0
	Ba	135	27.750	ug/L	0.489	1	60	60691	1
	Ba	137	27.331	ug/L	0.452	1	80	103933	0
>	Tb	159		ug/L			372039	382785 ✓	0
	Tl	205	23.746	ug/L	0.289	1	279	672994	0
	Pb	208	24.601	ug/L	0.288	1	733	940483	0
	Bi	209		ug/L			303712	306746	0
	Th	232	24.635	ug/L	0.248	1	38	1171993	0
	U	238	24.597	ug/L	0.257	1	12	1235963	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 06, 2013 11:53:21
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	356114 ✓	0
[	Be	9	23.381	ug/L	0.599	2	17	13208	2
	C	13		mg/L			7601	8591	1
	Cl	37		mg/L			2724241	2888023	0
[>	Sc	45		ug/L			374261	388648 ✓	0
[	V	51	23.742	ug/L	0.068	0	3136	406284	0
[	V-1	51	23.842	ug/L	0.075	0	2927	410398	0
[	Cr	52	24.221	ug/L	0.240	0	9400	353273	0
[	Cr	53	24.546	ug/L	0.264	1	995	41235	0
[	Mn	55	24.734	ug/L	0.282	1	664	560925	0
[	Co	59	24.723	ug/L	0.127	0	95	405973	0
[>	Ge	72		ug/L			339810	351640 ✓	0
[	Ni	60	25.045	ug/L	0.117	0	111	85134	0
[	Ni	62	25.611	ug/L	0.566	2	76	12697	2
[	Cu	63	25.388	ug/L	0.114	0	336	184338	0
[	Cu	65	25.446	ug/L	0.154	0	162	85302	0
[	Zn	66	77.995	ug/L	0.739	0	767	169473	0
[	Zn	67	71.016	ug/L	0.312	0	197	25824	0
[	Zn	68	76.694	ug/L	0.429	0	7221	121822	0
[	As	75	24.828	ug/L	0.143	0	253	50666	0
[	As-1	75	23.637	ug/L	0.124	0	9785	57067	0
[	Se	82	75.743	ug/L	0.328	0	-6	17850	0
[	Se	78	75.504	ug/L	0.526	0	9985	52259	0
[	Mo	98	23.915	ug/L	0.052	0	88	169203	0
	Y	89		ug/L			315904	327624	0
	Kr	83		ug/L			198	215	2
[>	In	115		ug/L			321132	339615 ✓	1
[	Ag	107	24.578	ug/L	0.308	1	55	289097	1
[	Cd	111	23.969	ug/L	0.280	1	161	70295	0
[	Cd	114	23.814	ug/L	0.351	1	47	160912	0
[	Sb	121	23.747	ug/L	0.453	1	41	213528	0
[	Sb	123	23.714	ug/L	0.358	1	35	159959	0
[	Ba	135	24.046	ug/L	0.415	1	60	53547	1
[	Ba	137	24.013	ug/L	0.456	1	80	92973	0
[>	Tb	159		ug/L			372039	385135 ✓	0
[	Tl	205	24.166	ug/L	0.261	1	279	689091	0
[	Pb	208	24.837	ug/L	0.248	0	733	955311	0
[	Bi	209		ug/L			303712	323387	0
[	Th	232	22.960	ug/L	0.153	0	38	1099072	0
[	U	238	23.930	ug/L	0.372	1	12	1209919	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 11:59:20
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	352053 ✓	0
[	Be	9	50.049	ug/L	0.257	0	17	27933	0
	C	13		mg/L			7601	6255	0
	Cl	37		mg/L			2724241	2964231	0
[>	Sc	45		ug/L			374261	384133 ✓	0
[	V	51	49.764	ug/L	0.597	1	3136	838168	0
[	V-1	51	49.654	ug/L	0.619	1	2927	841516	1
[	Cr	52	49.824	ug/L	0.512	1	9400	708059	0
[	Cr	53	49.456	ug/L	0.574	1	995	81081	0
[	Mn	55	49.413	ug/L	0.174	0	664	1106954	0
[	Co	59	50.236	ug/L	0.612	1	95	815243	1
[>	Ge	72		ug/L			339810	347435 ✓	0
[	Ni	60	49.892	ug/L	0.532	1	111	167453	0
[	Ni	62	50.295	ug/L	1.224	2	76	24561	2
[	Cu	63	49.964	ug/L	0.255	0	336	358112	0
[	Cu	65	50.114	ug/L	0.293	0	162	165818	0
[	Zn	66	50.052	ug/L	0.732	1	767	107735	0
[	Zn	67	50.082	ug/L	0.983	1	197	18052	1
[	Zn	68	50.384	ug/L	1.015	2	7221	81606	1
[	As	75	49.823	ug/L	0.334	0	253	100196	0
[	As-1	75	49.804	ug/L	0.412	0	9785	107729	0
[	Se	82	49.701	ug/L	0.571	1	-6	11570	0
[	Se	78	49.652	ug/L	0.777	1	9985	37449	0
[	Mo	98	49.055	ug/L	0.374	0	88	342818	0
	Y	89		ug/L			315904	319501	0
	Kr	83		ug/L			198	220	3
[>	In	115		ug/L			321132	331822 ✓	0
[	Ag	107	50.311	ug/L	0.730	1	55	578172	0
[	Cd	111	49.687	ug/L	0.187	0	161	142217	0
[	Cd	114	49.952	ug/L	0.431	0	47	329782	0
[	Sb	121	49.836	ug/L	0.277	0	41	437888	0
[	Sb	123	50.077	ug/L	0.315	0	35	330046	0
[	Ba	135	50.113	ug/L	0.482	0	60	108983	0
[	Ba	137	49.539	ug/L	0.560	1	80	187347	0
[>	Tb	159		ug/L			372039	376863 ✓	0
[	Tl	205	49.140	ug/L	0.673	1	279	1370832	0
[	Pb	208	49.975	ug/L	0.322	0	733	1880221	0
[	Bi	209		ug/L			303712	308579	0
[	Th	232	51.669	ug/L	0.412	0	38	2420066	0
[	U	238	51.270	ug/L	0.406	0	12	2536450	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 12:05:39
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	357005 ✓	1
[	Be	9	0.021	ug/L	0.016	76	17	30	32
	C	13		mg/L			7601	7634	2
	Cl	37		mg/L			2724241	2937076	0
[>	Sc	45		ug/L			374261	375517 ✓	0
[	V	51	-0.003	ug/L	0.011	397	3136	3099	5
[	V-1	51	-0.019	ug/L	0.007	35	2927	2631	4
[	Cr	52	-0.017	ug/L	0.007	39	9400	9196	1
[	Cr	53	-0.069	ug/L	0.017	24	995	889	3
[	Mn	55	0.000	ug/L	0.001	1820	664	668	3
[	Co	59	0.003	ug/L	0.001	38	95	142	12
[>	Ge	72		ug/L			339810	340486 ✓	0
[	Ni	60	-0.009	ug/L	0.004	48	111	82	17
[	Ni	62	0.295	ug/L	0.041	13	76	217	8
[	Cu	63	-0.004	ug/L	0.005	104	336	306	9
[	Cu	65	-0.004	ug/L	0.001	32	162	148	3
[	Zn	66	-0.087	ug/L	0.012	13	767	586	3
[	Zn	67	-0.064	ug/L	0.027	41	197	175	5
[	Zn	68	-0.248	ug/L	0.050	20	7221	6877	1
[	As	75	-0.000	ug/L	0.007	1919	253	252	6
[	As-1	75	-0.116	ug/L	0.006	5	9785	9581	0
[	Se	82	-0.011	ug/L	0.061	581	-6	-9	154
[	Se	78	-0.376	ug/L	0.020	5	9985	9803	0
[	Mo	98	0.002	ug/L	0.004	190	88	102	24
	Y	89		ug/L			315904	313696	0
	Kr	83		ug/L			198	209	4
[>	In	115		ug/L			321132	327503 ✓	0
[	Ag	107	0.007	ug/L	0.001	11	55	135	7
[	Cd	111	0.003	ug/L	0.008	233	161	173	12
[	Cd	114	0.002	ug/L	0.001	30	47	60	6
[	Sb	121	0.050	ug/L	0.011	21	41	472	19
[	Sb	123	0.050	ug/L	0.015	29	35	361	27
[	Ba	135	-0.001	ug/L	0.003	467	60	60	9
[	Ba	137	0.002	ug/L	0.002	71	80	89	6
[>	Tb	159		ug/L			372039	366626 ✓	0
[	Tl	205	0.004	ug/L	0.001	29	279	373	8
[	Pb	208	0.001	ug/L	0.000	43	733	742	1
[	Bi	209		ug/L			303712	310709	0
[	Th	232	0.036	ug/L	0.009	23	38	1691	22
[	U	238	0.003	ug/L	0.001	29	12	152	26

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 06, 2013 12:11:06
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	379380 ✓	0
[	Be	9	U 0.004	ug/L	0.007	162	17	21	20
	C	13		mg/L			7601	8522	1
	Cl	37		mg/L			2724241	2916054	1
[>	Sc	45		ug/L			374261	281954 ✓	0
[	V	51	0.076	ug/L	0.018	24	3136	3292	5
[	V-1	51	0.041	ug/L	0.007	16	2927	2719	2
[	Cr	52	U 0.245	ug/L	0.013	5	9400	9602	0
[	Cr	53	0.128	ug/L	0.043	33	995	901	6
[	Mn	55	0.119	ug/L	0.009	7	664	2458	5
[	Co	59	0.004	ug/L	0.001	12	95	122	6
[>	Ge	72		ug/L			339810	347808 ✓	0
[	Ni	60	U 0.003	ug/L	0.003	120	111	122	8
[	Ni	62	0.288	ug/L	0.010	3	76	218	2
[	Cu	63	U 0.049	ug/L	0.006	11	336	697	6
[	Cu	65	0.049	ug/L	0.001	1	162	330	1
[	Zn	66	U 0.394	ug/L	0.016	4	767	1628	2
[	Zn	67	0.382	ug/L	0.086	22	197	338	8
[	Zn	68	-0.026	ug/L	0.035	134	7221	7352	1
[	As	75	U -0.008	ug/L	0.013	166	253	243	10
[	As-1	75	-0.240	ug/L	0.036	14	9785	9544	0
[	Se	82	U -0.024	ug/L	0.060	252	-6	-12	113
[	Se	78	-0.793	ug/L	0.099	12	9985	9784	0
[	Mo	98	-0.001	ug/L	0.003	570	88	87	22
	Y	89		ug/L			315904	325022	0
	Kr	83		ug/L			198	216	3
[>	In	115		ug/L			321132	340172 ✓	0
[	Ag	107	U 0.002	ug/L	0.000	7	55	85	2
[	Cd	111	U 0.009	ug/L	0.009	100	161	197	12
[	Cd	114	0.002	ug/L	0.002	94	47	61	17
[	Sb	121	U 0.028	ug/L	0.004	13	41	291	11
[	Sb	123	0.029	ug/L	0.004	12	35	232	9
[	Ba	135	0.036	ug/L	0.010	29	60	143	15
[	Ba	137	0.044	ug/L	0.007	15	80	255	11
[>	Tb	159		ug/L			372039	382713 ✓	0
[	Tl	205	U -0.003	ug/L	0.001	29	279	190	14
[	Pb	208	U 0.008	ug/L	0.000	2	733	1065	0
[	Bi	209		ug/L			303712	323315	0
[	Th	232	0.023	ug/L	0.003	14	38	1127	14
[	U	238	0.001	ug/L	0.000	7	12	79	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 BDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 06, 2013 12:17:04
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

No Cr

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	369779 ✓	1
[	Be	9	U 0.020	ug/L	0.009	42	17	30	17
	C	13		mg/L			7601	12905	1
	Cl	37		mg/L			2724241	2925813	0
[>	Sc	45		ug/L			374261	471033	1
[	V	51	6.555	ug/L	0.043	0	3136	138799	0
[	V-1	51	6.524	ug/L	0.035	0	2927	138781	0
[	Cr	52	1.488	ug/L	0.011	0	9400	37410	0
[	Cr	53	1.496	ug/L	0.033	2	995	4221	1
[	Mn	55	232.907	ug/L	2.456	1	664	6394472	0
[	Co	59	0.147	ug/L	0.001	0	95	3037	0
[>	Ge	72		ug/L			339810	347052 ✓	0
[	Ni	60	7.720	ug/L	0.065	0	111	25980	1
[	Ni	62	7.813	ug/L	0.139	1	76	3877	1
[	Cu	63	25.855	ug/L	0.314	1	336	185279	1
[	Cu	65	25.785	ug/L	0.198	0	162	85307	0
[	Zn	66	10.398	ug/L	0.038	0	767	22978	0
[	Zn	67	9.984	ug/L	0.227	2	197	3756	2
[	Zn	68	10.610	ug/L	0.160	1	7221	22988	1
[	As	75	0.595	ug/L	0.007	1	253	1451	0
[	As-1	75	0.258	ug/L	0.022	8	9785	10498	0
[	Se	82	U 0.196	ug/L	0.008	4	-6	38	5
[	Se	78	-0.906	ug/L	0.059	6	9985	9701	0
[	Mo	98	0.616	ug/L	0.008	1	88	4390	1
	Y	89		ug/L			315904	349494	1
	Kr	83		ug/L			198	231	1
[>	In	115		ug/L			321132	331669 ✓	1
[	Ag	107	U 0.011	ug/L	0.002	14	55	181	8
[	Cd	111	U 0.015	ug/L	0.013	86	161	208	16
[	Cd	114	0.020	ug/L	0.004	22	47	181	16
[	Sb	121	U 0.092	ug/L	0.003	3	41	847	4
[	Sb	123	0.097	ug/L	0.005	5	35	675	3
[	Ba	135	2.533	ug/L	0.047	1	60	5566	1
[	Ba	137	2.483	ug/L	0.025	0	80	9465	1
[>	Tb	159		ug/L			372039	382266 ✓	1
[	Tl	205	U -0.002	ug/L	0.000	6	279	217	2
[	Pb	208	0.135	ug/L	0.003	1	733	5914	2
[	Bi	209		ug/L			303712	307725	0
[	Th	232	0.037	ug/L	0.003	8	38	1780	7
[	U	238	0.015	ug/L	0.002	9	12	785	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 06, 2013 12:23:01
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

No Cr

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	363480 ✓	1
[	Be	9	U 0.012	ug/L	0.006	51	17	25	13
	C	13		mg/L			7601	12043	0
	Cl	37		mg/L			2724241	2860145	0
[>	Sc	45		ug/L			374261	463287	1
[	V	51	6.541	ug/L	0.069	1	3136	136221	0
[	V-1	51	6.505	ug/L	0.053	0	2927	136104	0
[	Cr	52	1.354	ug/L	0.011	0	9400	34527	1
[	Cr	53	1.348	ug/L	0.041	3	995	3864	3
[	Mn	55	234.080	ug/L	3.963	1	664	6320307	0
[	Co	59	0.143	ug/L	0.007	4	95	2917	3
[>	Ge	72		ug/L			339810	340280 ✓	0
[	Ni	60	7.799	ug/L	0.100	1	111	25728	0
[	Ni	62	7.811	ug/L	0.233	2	76	3799	1
[	Cu	63	26.095	ug/L	0.276	1	336	183328	0
[	Cu	65	25.854	ug/L	0.177	0	162	83861	0
[	Zn	66	10.436	ug/L	0.123	1	767	22608	0
[	Zn	67	9.787	ug/L	0.233	2	197	3614	2
[	Zn	68	10.362	ug/L	0.119	1	7221	22182	1
[	As	75	0.602	ug/L	0.006	0	253	1436	1
[	As-1	75	0.229	ug/L	0.072	31	9785	10238	0
[	Se	82	U 0.299	ug/L	0.074	24	-6	61	27
[	Se	78	-0.991	ug/L	0.261	26	9985	9465	0
[	Mo	98	0.580	ug/L	0.011	1	88	4057	1
	Y	89		ug/L			315904	343670	0
	Kr	83		ug/L			198	212	6
[>	In	115		ug/L			321132	325406 ✓	0
[	Ag	107	U 0.010	ug/L	0.001	10	55	167	7
[	Cd	111	U 0.005	ug/L	0.015	324	161	176	23
[	Cd	114	0.017	ug/L	0.003	19	47	157	13
[	Sb	121	U 0.092	ug/L	0.000	0	41	836	1
[	Sb	123	0.094	ug/L	0.004	3	35	640	4
[	Ba	135	2.546	ug/L	0.036	1	60	5488	1
[	Ba	137	2.517	ug/L	0.028	1	80	9414	2
[>	Tb	159		ug/L			372039	380491 ✓	0
[	Tl	205	U -0.003	ug/L	0.000	6	279	194	3
[	Pb	208	0.139	ug/L	0.001	0	733	6046	0
[	Bi	209		ug/L			303712	305186	0
[	Th	232	0.028	ug/L	0.002	8	38	1359	8
[	U	238	0.015	ug/L	0.001	5	12	765	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 BSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 06, 2013 12:29:00
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

No Cr

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	366132 ✓	2
[	Be	9	22.266	ug/L	0.339	1	17	12930	1
	C	13		mg/L			7601	10472	1
	Cl	37		mg/L			2724241	2835426	0
[>	Sc	45		ug/L			374261	463247	0
[	V	51	25.626	ug/L	0.191	0	3136	522406	1
[	V-1	51	25.627	ug/L	0.235	0	2927	525533	1
[	Cr	52	20.600	ug/L	0.069	0	9400	359880	1
[	Cr	53	20.713	ug/L	0.357	1	995	41666	1
[	Mn	55	247.902	ug/L	1.260	0	664	6694181	1
[	Co	59	19.466	ug/L	0.077	0	95	381036	0
[>	Ge	72		ug/L			339810	338765 ✓	0
[	Ni	60	31.276	ug/L	0.853	2	111	102395	2
[	Ni	62	31.397	ug/L	0.090	0	76	14979	1
[	Cu	63	48.767	ug/L	0.428	0	336	340825	1
[	Cu	65	48.644	ug/L	0.378	0	162	156953	1
[	Zn	66	83.295	ug/L	1.129	1	767	174309	1
[	Zn	67	76.626	ug/L	0.483	0	197	26828	0
[	Zn	68	82.275	ug/L	0.677	0	7221	125378	0
[	As	75	25.015	ug/L	0.155	0	253	49176	0
[	As-1	75	23.518	ug/L	0.087	0	9785	54752	1
[	Se	82	73.107	ug/L	0.697	0	-6	16597	1
[	Se	78	71.593	ug/L	0.323	0	9985	48255	1
[	Mo	98	24.387	ug/L	0.317	1	88	166223	1
	Y	89		ug/L			315904	341889	0
	Kr	83		ug/L			198	215	0
[>	In	115		ug/L			321132	328031 ✓	1
[	Ag	107	22.806	ug/L	0.369	1	55	259106	1
[	Cd	111	23.072	ug/L	0.122	0	161	65370	1
[	Cd	114	23.091	ug/L	0.285	1	47	150717	1
[	Sb	121	23.703	ug/L	0.162	0	41	205899	1
[	Sb	123	23.670	ug/L	0.237	1	35	154226	0
[	Ba	135	26.820	ug/L	0.291	1	60	57685	0
[	Ba	137	26.385	ug/L	0.274	1	80	98676	1
[>	Tb	159		ug/L			372039	377390 ✓	0
[	Tl	205	23.444	ug/L	0.224	0	279	655084	0
[	Pb	208	24.278	ug/L	0.200	0	733	915117	1
[	Bi	209		ug/L			303712	308278	1
[	Th	232	23.450	ug/L	0.173	0	38	1099978	1
[	U	238	24.443	ug/L	0.029	0	12	1210943	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WR99-BPOST REN~~ zzzzzz
Sample Dil Factor: 2 BA 6/6/13
Comments:
Sample Date/Time: Thursday, June 06, 2013 12:34:57
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			340477	364065 ✓	0
⌊	Be	9	22.958	ug/L	0.508	2	17	13258	1
	C	13		mg/L			7601	11709	1
	Cl	37		mg/L			2724241	2792145	0
⌈>	Sc	45		ug/L			374261	456880	1
⌈	V	51	26.353	ug/L	0.175	0	3136	529775	2
⌈	V-1	51	26.354	ug/L	0.081	0	2927	532917	2
⌈	Cr	52	21.140	ug/L	0.123	0	9400	363952	2
⌈	Cr	53	21.254	ug/L	0.242	1	995	42131	0
⌈	Mn	55	253.761	ug/L	2.875	1	664	6758636	2
⌊	Co	59	20.061	ug/L	0.228	1	95	387337	2
⌈>	Ge	72		ug/L			339810	332426 ✓	0
⌈	Ni	60	31.896	ug/L	0.162	0	111	102472	1
⌈	Ni	62	32.204	ug/L	0.329	1	76	15075	1
⌈	Cu	63	49.911	ug/L	0.677	1	336	342290	1
⌈	Cu	65	49.714	ug/L	0.168	0	162	157395	1
⌈	Zn	66	85.328	ug/L	0.473	0	767	175217	1
⌈	Zn	67	77.884	ug/L	1.130	1	197	26754	1
⌈	Zn	68	83.952	ug/L	0.850	1	7221	125394	0
⌈	As	75	25.734	ug/L	0.160	0	253	49639	1
⌈	As-1	75	24.389	ug/L	0.052	0	9785	55361	1
⌈	Se	82	74.691	ug/L	0.543	0	-6	16641	1
⌈	Se	78	73.804	ug/L	0.107	0	9985	48512	0
⌊	Mo	98	25.227	ug/L	0.061	0	88	168732	1
	Y	89		ug/L			315904	338780	1
	Kr	83		ug/L			198	215	4
⌈>	In	115		ug/L			321132	322872 ✓	0
⌈	Ag	107	23.631	ug/L	0.139	0	55	264295	1
⌈	Cd	111	23.558	ug/L	0.321	1	161	65697	1
⌈	Cd	114	23.677	ug/L	0.114	0	47	152131	1
⌈	Sb	121	24.647	ug/L	0.028	0	41	210743	0
⌈	Sb	123	24.748	ug/L	0.078	0	35	158736	1
⌈	Ba	135	27.183	ug/L	0.139	0	60	57553	1
⌊	Ba	137	27.051	ug/L	0.069	0	80	99581	0
⌈>	Tb	159		ug/L			372039	373759 ✓	1
⌈	Tl	205	23.986	ug/L	0.193	0	279	663777	0
⌈	Pb	208	24.861	ug/L	0.081	0	733	928058	1
⌈	Bi	209		ug/L			303712	306091	2
⌈	Th	232	25.351	ug/L	0.122	0	38	1177691	1
⌊	U	238	25.196	ug/L	0.075	0	12	1236244	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 06, 2013 12:40:54
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	388775 ✓	0
[	Be	9	21.934	ug/L	0.332	1	17	13529	1
	C	13		mg/L			7601	8007	0
	Cl	37		mg/L			2724241	2707300	0
[>	Sc	45		ug/L			374261	383293 ✓	0
[	V	51	23.755	ug/L	0.355	1	3136	400875	0
[	V-1	51	23.820	ug/L	0.406	1	2927	404339	0
[	Cr	52	24.165	ug/L	0.256	1	9400	347625	1
[	Cr	53	24.375	ug/L	0.331	1	995	40389	0
[	Mn	55	24.866	ug/L	0.155	0	664	556164	0
[	Co	59	24.755	ug/L	0.085	0	95	400897	0
[>	Ge	72		ug/L			339810	340201 ✓	0
[	Ni	60	25.294	ug/L	0.167	0	111	83181	0
[	Ni	62	25.758	ug/L	0.069	0	76	12354	0
[	Cu	63	25.800	ug/L	0.215	0	336	181228	0
[	Cu	65	25.721	ug/L	0.272	1	162	83413	1
[	Zn	66	77.198	ug/L	0.426	0	767	162291	0
[	Zn	67	70.805	ug/L	0.236	0	197	24910	0
[	Zn	68	75.836	ug/L	0.867	1	7221	116616	0
[	As	75	25.052	ug/L	0.180	0	253	49457	0
[	As-1	75	23.444	ug/L	0.244	1	9785	54838	0
[	Se	82	75.336	ug/L	0.717	0	-6	17175	0
[	Se	78	73.574	ug/L	0.780	1	9985	49521	0
[	Mo	98	23.999	ug/L	0.115	0	88	164272	0
	Y	89		ug/L			315904	325864	0
	Kr	83		ug/L			198	211	1
[>	In	115		ug/L			321132	340628 ✓	0
[	Ag	107	24.300	ug/L	0.113	0	55	286722	1
[	Cd	111	23.426	ug/L	0.197	0	161	68922	0
[	Cd	114	23.566	ug/L	0.112	0	47	159742	0
[	Sb	121	23.609	ug/L	0.165	0	41	212966	0
[	Sb	123	23.691	ug/L	0.111	0	35	160308	0
[	Ba	135	24.101	ug/L	0.258	1	60	53837	0
[	Ba	137	24.108	ug/L	0.221	0	80	93637	0
[>	Tb	159		ug/L			372039	391141 ✓	0
[	Tl	205	24.526	ug/L	0.262	1	279	710369	1
[	Pb	208	25.161	ug/L	0.072	0	733	982901	0
[	Bi	209		ug/L			303712	334722	1
[	Th	232	24.318	ug/L	0.334	1	38	1182150	0
[	U	238	24.632	ug/L	0.230	0	12	1264790	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 12:46:52
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	377869 ✓	1
[	Be	9	47.156	ug/L	0.595	1	17	28248	1
	C	13		mg/L			7601	5926	3
	Cl	37		mg/L			2724241	2780275	1
[>	Sc	45		ug/L			374261	379249 ✓	0
[	V	51	48.747	ug/L	0.370	0	3136	810703	1
[	V-1	51	48.981	ug/L	0.502	1	2927	819654	1
[	Cr	52	48.915	ug/L	0.412	0	9400	686519	1
[	Cr	53	49.693	ug/L	0.992	1	995	80439	2
[	Mn	55	49.962	ug/L	0.630	1	664	1105079	1
[	Co	59	49.472	ug/L	0.319	0	95	792684	1
[>	Ge	72		ug/L			339810	337729 ✓	0
[	Ni	60	50.181	ug/L	0.703	1	111	163728	1
[	Ni	62	50.045	ug/L	0.819	1	76	23755	0
[	Cu	63	49.677	ug/L	0.412	0	336	346105	0
[	Cu	65	49.833	ug/L	0.349	0	162	160292	1
[	Zn	66	50.389	ug/L	0.814	1	767	105431	1
[	Zn	67	50.326	ug/L	0.425	0	197	17634	1
[	Zn	68	50.058	ug/L	0.349	0	7221	78861	1
[	As	75	49.737	ug/L	0.357	0	253	97228	0
[	As-1	75	49.382	ug/L	0.314	0	9785	103912	0
[	Se	82	50.443	ug/L	0.275	0	-6	11415	0
[	Se	78	49.232	ug/L	0.162	0	9985	36180	0
[	Mo	98	48.875	ug/L	0.320	0	88	332021	0
	Y	89		ug/L			315904	311899	0
	Kr	83		ug/L			198	208	3
[>	In	115		ug/L			321132	324847 ✓	0
[	Ag	107	49.976	ug/L	0.360	0	55	562275	0
[	Cd	111	50.116	ug/L	0.246	0	161	140431	0
[	Cd	114	50.443	ug/L	0.637	1	47	326026	1
[	Sb	121	49.935	ug/L	0.115	0	41	429544	0
[	Sb	123	50.489	ug/L	0.390	0	35	325775	0
[	Ba	135	50.421	ug/L	0.628	1	60	107351	1
[	Ba	137	50.332	ug/L	0.154	0	80	186352	0
[>	Tb	159		ug/L			372039	379662 ✓	0
[	Tl	205	49.807	ug/L	0.280	0	279	1399852	0
[	Pb	208	50.883	ug/L	0.237	0	733	1928644	0
[	Bi	209		ug/L			303712	314242	0
[	Th	232	53.725	ug/L	0.442	0	38	2535185	0
[	U	238	52.807	ug/L	0.379	0	12	2631879	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 12:53:11
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			340477	378463 ✓	0
	Be	9	0.005	ug/L	0.012	238	17	22	33
	C	13		mg/L			7601	7284	1
	Cl	37		mg/L			2724241	2769831	0
>	Sc	45		ug/L			374261	372737 ✓	0
	V	51	-0.011	ug/L	0.006	54	3136	2949	3
	V-1	51	-0.043	ug/L	0.003	6	2927	2208	2
	Cr	52	-0.050	ug/L	0.010	19	9400	8684	1
	Cr	53	-0.157	ug/L	0.008	4	995	744	1
	Mn	55	0.004	ug/L	0.003	71	664	750	8
	Co	59	0.005	ug/L	0.002	49	95	173	22
>	Ge	72		ug/L			339810	331341 ✓	0
	Ni	60	-0.006	ug/L	0.005	76	111	89	16
	Ni	62	0.321	ug/L	0.027	8	76	223	5
	Cu	63	0.002	ug/L	0.004	225	336	340	8
	Cu	65	-0.002	ug/L	0.004	178	162	151	8
	Zn	66	-0.076	ug/L	0.019	24	767	593	6
	Zn	67	-0.078	ug/L	0.075	96	197	166	15
	Zn	68	-0.511	ug/L	0.093	18	7221	6322	1
	As	75	0.010	ug/L	0.012	124	253	264	8
	As-1	75	-0.397	ug/L	0.034	8	9785	8798	0
	Se	82	0.016	ug/L	0.050	323	-6	-3	371
	Se	78	-1.384	ug/L	0.091	6	9985	9012	0
	Mo	98	0.003	ug/L	0.004	114	88	108	23
	Y	89		ug/L			315904	309075	1
	Kr	83		ug/L			198	203	4
>	In	115		ug/L			321132	324085 ✓	0
	Ag	107	0.009	ug/L	0.001	9	55	155	6
	Cd	111	0.008	ug/L	0.004	51	161	184	6
	Cd	114	0.003	ug/L	0.001	32	47	69	9
	Sb	121	0.049	ug/L	0.014	28	41	463	25
	Sb	123	0.053	ug/L	0.016	30	35	375	27
	Ba	135	0.001	ug/L	0.005	382	60	64	16
	Ba	137	0.005	ug/L	0.005	105	80	98	18
>	Tb	159		ug/L			372039	370071 ✓	1
	Tl	205	0.007	ug/L	0.002	25	279	466	9
	Pb	208	0.004	ug/L	0.002	47	733	886	8
	Bi	209		ug/L			303712	318912	0
	Th	232	0.040	ug/L	0.010	23	38	1899	22
	U	238	0.005	ug/L	0.002	39	12	275	37

W899 · 02435

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 ADUP REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 06, 2013 12:58:38
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			340477	389340 ✓	0
	Be	9	0.018	ug/L	0.009	48	17	30	17
	C	13		mg/L			7601	9221	1
	Cl	37		mg/L			2724241	2740522	0
>	Sc	45		ug/L			374261	401829 ✓	0
	V	51	3.426	ug/L	0.027	0	3136	63494	0
	V-1	51	3.383	ug/L	0.022	0	2927	62896	0
	Cr	52	0.633	ug/L	0.023	3	9400	19370	1
	Cr	53	0.549	ug/L	0.003	0	995	1997	0
	Mn	55	109.857	ug/L	0.381	0	664	2573509	0
	Co	59	0.065	ug/L	0.002	3	95	1201	3
>	Ge	72		ug/L			339810	325980 ✓	0
	Ni	60	3.315	ug/L	0.030	0	111	10538	1
	Ni	62	3.475	ug/L	0.081	2	76	1660	1
	Cu	63	11.709	ug/L	0.096	0	336	78991	1
	Cu	65	11.676	ug/L	0.140	1	162	36367	1
	Zn	66	5.263	ug/L	0.036	0	767	11288	0
	Zn	67	4.966	ug/L	0.129	2	197	1850	2
	Zn	68	5.111	ug/L	0.045	0	7221	13991	0
	As	75	0.272	ug/L	0.018	6	253	755	5
	As-1	75	-0.131	ug/L	0.046	34	9785	9146	1
	Se	82	0.100	ug/L	0.067	66	-6	15	94
	Se	78	-1.312	ug/L	0.122	9	9985	8903	0
	Mo	98	0.243	ug/L	0.008	3	88	1678	2
	Y	89		ug/L			315904	319072	0
	Kr	83		ug/L			198	198	1
>	In	115		ug/L			321132	320133 ✓	1
	Ag	107	0.011	ug/L	0.003	32	55	175	20
	Cd	111	0.005	ug/L	0.008	141	161	176	11
	Cd	114	0.014	ug/L	0.003	23	47	139	16
	Sb	121	0.057	ug/L	0.004	6	41	520	5
	Sb	123	0.057	ug/L	0.006	10	35	395	8
	Ba	135	1.109	ug/L	0.021	1	60	2386	1
	Ba	137	1.105	ug/L	0.024	2	80	4110	1
>	Tb	159		ug/L			372039	373563 ✓	0
	Tl	205	-0.003	ug/L	0.001	20	279	192	9
	Pb	208	0.102	ug/L	0.002	2	733	4535	1
	Bi	209		ug/L			303712	309238	0
	Th	232	0.039	ug/L	0.006	14	38	1839	14
	U	238	0.008	ug/L	0.001	7	12	381	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 A REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 06, 2013 13:04:34
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			340477	393320 ✓	0
	Be	9	0.014	ug/L	0.008	60	17	28	17
	C	13		mg/L			7601	8984	1
	Cl	37		mg/L			2724241	2702390	0
>	Sc	45		ug/L			374261	399128 ✓	0
	V	51	3.368	ug/L	0.017	0	3136	62065	1
	V-1	51	3.332	ug/L	0.012	0	2927	61579	1
	Cr	52	0.605	ug/L	0.014	2	9400	18833	1
	Cr	53	0.542	ug/L	0.024	4	995	1972	1
	Mn	55	109.337	ug/L	0.945	0	664	2544075	0
	Co	59	0.065	ug/L	0.002	2	95	1200	1
>	Ge	72		ug/L			339810	327665 ✓	0
	Ni	60	3.281	ug/L	0.026	0	111	10485	0
	Ni	62	3.441	ug/L	0.049	1	76	1653	1
	Cu	63	11.529	ug/L	0.049	0	336	78180	0
	Cu	65	11.393	ug/L	0.093	0	162	35675	0
	Zn	66	5.095	ug/L	0.125	2	767	11008	2
	Zn	67	4.874	ug/L	0.108	2	197	1828	1
	Zn	68	4.743	ug/L	0.121	2	7221	13553	1
	As	75	0.272	ug/L	0.008	2	253	759	1
	As-1	75	-0.239	ug/L	0.033	13	9785	8992	0
	Se	82	0.160	ug/L	0.070	43	-6	28	53
	Se	78	-1.656	ug/L	0.147	8	9985	8771	0
	Mo	98	0.243	ug/L	0.002	0	88	1689	0
	Y	89		ug/L			315904	316703	0
	Kr	83		ug/L			198	195	3
>	In	115		ug/L			321132	316389 ✓	0
	Ag	107	0.008	ug/L	0.000	3	55	143	3
	Cd	111	0.006	ug/L	0.001	16	161	175	1
	Cd	114	0.011	ug/L	0.001	9	47	118	5
	Sb	121	0.048	ug/L	0.005	9	41	447	7
	Sb	123	0.051	ug/L	0.005	10	35	355	9
	Ba	135	1.118	ug/L	0.033	2	60	2377	2
	Ba	137	1.112	ug/L	0.013	1	80	4085	0
>	Tb	159		ug/L			372039	370750 ✓	0
	Tl	205	-0.004	ug/L	0.000	6	279	164	4
	Pb	208	0.105	ug/L	0.001	0	733	4624	0
	Bi	209		ug/L			303712	312723	1
	Th	232	0.021	ug/L	0.001	6	38	1021	6
	U	238	0.007	ug/L	0.001	10	12	337	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 ASPK REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 06, 2013 13:10:31
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	396970 ✓	0
[	Be	9	8.866	ug/L	0.288	3	17	5595	2
	C	13		mg/L			7601	8297	0
	Cl	37		mg/L			2724241	2693939	0
[>	Sc	45		ug/L			374261	402156 ✓	0
[	V	51	12.149	ug/L	0.216	1	3136	216766	1
[	V-1	51	12.135	ug/L	0.162	1	2927	217671	0
[	Cr	52	9.399	ug/L	0.094	1	9400	148028	0
[	Cr	53	9.409	ug/L	0.107	1	995	17016	1
[	Mn	55	119.778	ug/L	0.163	0	664	2808183	0
[	Co	59	8.854	ug/L	0.035	0	95	150510	1
[>	Ge	72		ug/L			339810	323905 ✓	0
[	Ni	60	13.124	ug/L	0.104	0	111	41143	0
[	Ni	62	13.397	ug/L	0.065	0	76	6152	0
[	Cu	63	21.814	ug/L	0.169	0	336	145944	1
[	Cu	65	21.357	ug/L	0.113	0	162	65971	0
[	Zn	66	36.581	ug/L	0.357	0	767	73608	1
[	Zn	67	33.730	ug/L	0.253	0	197	11397	0
[	Zn	68	35.877	ug/L	0.080	0	7221	56156	0
[	As	75	10.549	ug/L	0.120	1	253	19968	1
[	As-1	75	9.624	ug/L	0.116	1	9785	26933	1
[	Se	82	31.519	ug/L	0.315	0	-6	6838	0
[	Se	78	29.879	ug/L	0.154	0	9985	24801	0
[	Mo	98	9.895	ug/L	0.035	0	88	64536	0
	Y	89		ug/L			315904	312928	0
	Kr	83		ug/L			198	194	1
[>	In	115		ug/L			321132	318888 ✓	0
[	Ag	107	9.307	ug/L	0.090	0	55	102834	0
[	Cd	111	9.673	ug/L	0.051	0	161	26737	0
[	Cd	114	9.664	ug/L	0.121	1	47	61353	1
[	Sb	121	9.919	ug/L	0.062	0	41	83789	0
[	Sb	123	9.907	ug/L	0.107	1	35	62775	0
[	Ba	135	10.956	ug/L	0.148	1	60	22943	0
[	Ba	137	10.956	ug/L	0.096	0	80	39880	0
[>	Tb	159		ug/L			372039	373368 ✓	0
[	Tl	205	9.606	ug/L	0.091	0	279	265747	0
[	Pb	208	10.021	ug/L	0.026	0	733	374121	0
[	Bi	209		ug/L			303712	312130	0
[	Th	232	9.704	ug/L	0.067	0	38	450362	0
[	U	238	9.975	ug/L	0.035	0	12	488911	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WR99 APOST REN~~ zzzzzz
Sample Dil Factor: 5 BA 6/6/13
Comments:
Sample Date/Time: Thursday, June 06, 2013 13:16:28
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			340477	396523	1
	Be	9	22.089	ug/L	0.693	3	17	13892	1
	C	13		mg/L			7601	8708	0
	Cl	37		mg/L			2724241	2680297	0
>	Sc	45		ug/L			374261	392292	0
	V	51	25.070	ug/L	0.276	1	3136	432838	0
	V-1	51	25.128	ug/L	0.144	0	2927	436407	0
	Cr	52	22.540	ug/L	0.291	1	9400	332506	0
	Cr	53	22.786	ug/L	0.175	0	995	38714	1
	Mn	55	129.920	ug/L	1.220	0	664	2971094	0
	Co	59	22.092	ug/L	0.267	1	95	366177	0
>	Ge	72		ug/L			339810	314819	0
	Ni	60	27.520	ug/L	0.166	0	111	83741	0
	Ni	62	27.931	ug/L	0.379	1	76	12391	1
	Cu	63	36.139	ug/L	0.213	0	336	234799	1
	Cu	65	36.236	ug/L	0.172	0	162	108686	0
	Zn	66	85.046	ug/L	0.322	0	767	165381	0
	Zn	67	77.815	ug/L	0.891	1	197	25315	0
	Zn	68	83.358	ug/L	0.330	0	7221	117962	0
	As	75	26.264	ug/L	0.304	1	253	47969	0
	As-1	75	24.471	ug/L	0.396	1	9785	52572	0
	Se	82	80.340	ug/L	0.507	0	-6	16951	0
	Se	78	78.252	ug/L	0.717	0	9985	48152	0
	Mo	98	0.235	ug/L	0.012	5	88	1567	4
	Y	89		ug/L			315904	307631	0
	Kr	83		ug/L			198	202	1
>	In	115		ug/L			321132	314187	0
	Ag	107	23.589	ug/L	0.330	1	55	256717	1
	Cd	111	24.124	ug/L	0.088	0	161	65460	0
	Cd	114	24.124	ug/L	0.230	0	47	150827	0
	Sb	121	0.052	ug/L	0.002	3	41	469	3
	Sb	123	0.051	ug/L	0.002	4	35	349	4
	Ba	135	25.820	ug/L	0.076	0	60	53197	0
	Ba	137	25.616	ug/L	0.017	0	80	91769	0
>	Tb	159		ug/L			372039	364831	0
	Tl	205	24.570	ug/L	0.247	1	279	663695	0
	Pb	208	25.358	ug/L	0.077	0	733	923986	0
	Bi	209		ug/L			303712	306677	0
	Th	232	25.606	ug/L	0.290	1	38	1161064	0
	U	238	25.218	ug/L	0.384	1	12	1207743	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 BDUP REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 06, 2013 13:22:27
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	401800 ✓	1
[	Be	9	0.007	ug/L	0.012	164	17	24	28
	C	13		mg/L			7601	8073	1
	Cl	37		mg/L			2724241	2661268	0
[>	Sc	45		ug/L			374261	395110 ✓	0
[	V	51	2.921	ug/L	0.029	1	3136	53726	0
[	V-1	51	2.894	ug/L	0.036	1	2927	53358	0
[	Cr	52	0.590	ug/L	0.017	2	9400	18427	1
[	Cr	53	0.549	ug/L	0.038	6	995	1964	2
[	Mn	55	107.081	ug/L	0.540	0	664	2466556	0
[	Co	59	0.063	ug/L	0.003	5	95	1153	3
[>	Ge	72		ug/L			339810	317983 ✓	0
[	Ni	60	3.218	ug/L	0.021	0	111	9983	0
[	Ni	62	3.369	ug/L	0.112	3	76	1572	3
[	Cu	63	10.761	ug/L	0.093	0	336	70838	0
[	Cu	65	10.608	ug/L	0.155	1	162	32243	0
[	Zn	66	4.390	ug/L	0.063	1	767	9302	0
[	Zn	67	4.153	ug/L	0.106	2	197	1539	1
[	Zn	68	4.181	ug/L	0.022	0	7221	12395	0
[	As	75	0.244	ug/L	0.022	9	253	685	5
[	As-1	75	-0.269	ug/L	0.069	25	9785	8672	0
[	Se	82	0.109	ug/L	0.045	41	-6	17	55
[	Se	78	-1.655	ug/L	0.196	11	9985	8512	0
[	Mo	98	0.254	ug/L	0.006	2	88	1709	1
	Y	89		ug/L			315904	309641	0
	Kr	83		ug/L			198	201	2
[>	In	115		ug/L			321132	315672 ✓	1
[	Ag	107	0.008	ug/L	0.003	34	55	138	19
[	Cd	111	0.004	ug/L	0.006	160	161	169	10
[	Cd	114	0.006	ug/L	0.002	26	47	85	11
[	Sb	121	0.039	ug/L	0.001	3	41	366	3
[	Sb	123	0.041	ug/L	0.003	6	35	294	4
[	Ba	135	1.006	ug/L	0.034	3	60	2139	2
[	Ba	137	1.026	ug/L	0.029	2	80	3767	2
[>	Tb	159		ug/L			372039	371071 ✓	0
[	Tl	205	-0.003	ug/L	0.001	29	279	203	11
[	Pb	208	0.052	ug/L	0.001	2	733	2674	2
[	Bi	209		ug/L			303712	306752	1
[	Th	232	0.034	ug/L	0.008	24	38	1587	24
[	U	238	0.008	ug/L	0.001	17	12	426	17

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 B REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 06, 2013 13:28:27
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	405321 ✓	1
[	Be	9	0.005	ug/L	0.009	186	17	23	24
	C	13		mg/L			7601	7993	1
	Cl	37		mg/L			2724241	2650772	0
[>	Sc	45		ug/L			374261	393507 ✓	0
[	V	51	2.915	ug/L	0.033	1	3136	53405	0
[	V-1	51	2.894	ug/L	0.024	0	2927	53143	0
[	Cr	52	0.533	ug/L	0.005	1	9400	17543	0
[	Cr	53	0.514	ug/L	0.046	9	995	1898	4
[	Mn	55	106.092	ug/L	0.456	0	664	2433903	0
[	Co	59	0.061	ug/L	0.002	4	95	1107	3
[>	Ge	72		ug/L			339810	318095 ✓	0
[	Ni	60	3.159	ug/L	0.022	0	111	9805	0
[	Ni	62	3.365	ug/L	0.084	2	76	1571	2
[	Cu	63	10.723	ug/L	0.046	0	336	70615	0
[	Cu	65	10.529	ug/L	0.118	1	162	32017	1
[	Zn	66	4.366	ug/L	0.014	0	767	9260	0
[	Zn	67	4.096	ug/L	0.098	2	197	1521	2
[	Zn	68	3.928	ug/L	0.033	0	7221	12057	0
[	As	75	0.255	ug/L	0.011	4	253	704	2
[	As-1	75	-0.328	ug/L	0.026	7	9785	8571	0
[	Se	82	0.185	ug/L	0.043	23	-6	33	27
[	Se	78	-1.897	ug/L	0.062	3	9985	8394	0
[	Mo	98	0.238	ug/L	0.004	1	88	1603	1
	Y	89		ug/L			315904	310978	0
	Kr	83		ug/L			198	185	4
[>	In	115		ug/L			321132	313462 ✓	0
[	Ag	107	0.005	ug/L	0.001	11	55	112	5
[	Cd	111	-0.000	ug/L	0.015	6535	161	157	25
[	Cd	114	0.008	ug/L	0.000	4	47	94	2
[	Sb	121	0.036	ug/L	0.000	0	41	342	0
[	Sb	123	0.040	ug/L	0.006	15	35	284	13
[	Ba	135	1.046	ug/L	0.021	1	60	2208	2
[	Ba	137	1.023	ug/L	0.017	1	80	3732	1
[>	Tb	159		ug/L			372039	367309 ✓	0
[	Tl	205	-0.004	ug/L	0.001	18	279	166	12
[	Pb	208	0.052	ug/L	0.002	3	733	2621	2
[	Bi	209		ug/L			303712	309778	0
[	Th	232	0.016	ug/L	0.001	6	38	771	6
[	U	238	0.006	ug/L	0.000	2	12	317	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 BSPK REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 06, 2013 13:34:26
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			340477	402628 ✓	1
	Be	9	8.648	ug/L	0.135	1	17	5535	1
	C	13		mg/L			7601	7738	0
	Cl	37		mg/L			2724241	2647963	0
>	Sc	45		ug/L			374261	391510 ✓	0
	V	51	11.350	ug/L	0.155	1	3136	197362	1
	V-1	51	11.414	ug/L	0.104	0	2927	199503	0
	Cr	52	9.086	ug/L	0.028	0	9400	139644	0
	Cr	53	9.348	ug/L	0.190	2	995	16464	2
	Mn	55	113.136	ug/L	1.309	1	664	2582199	0
	Co	59	8.794	ug/L	0.042	0	95	145538	0
>	Ge	72		ug/L			339810	314194 ✓	0
	Ni	60	12.923	ug/L	0.083	0	111	39300	0
	Ni	62	13.201	ug/L	0.028	0	76	5882	0
	Cu	63	20.280	ug/L	0.208	1	336	131632	0
	Cu	65	20.274	ug/L	0.164	0	162	60755	0
	Zn	66	35.915	ug/L	0.122	0	767	70113	0
	Zn	67	32.712	ug/L	0.447	1	197	10727	1
	Zn	68	35.043	ug/L	0.415	1	7221	53361	0
	As	75	10.553	ug/L	0.231	2	253	19376	1
	As-1	75	9.496	ug/L	0.188	1	9785	25898	1
	Se	82	31.882	ug/L	0.735	2	-6	6709	2
	Se	78	29.798	ug/L	0.260	0	9985	24017	0
	Mo	98	9.867	ug/L	0.110	1	88	62427	1
	Y	89		ug/L			315904	306595	1
	Kr	83		ug/L			198	188	4
>	In	115		ug/L			321132	314662 ✓	0
	Ag	107	9.304	ug/L	0.114	1	55	101436	0
	Cd	111	9.640	ug/L	0.086	0	161	26292	0
	Cd	114	9.548	ug/L	0.008	0	47	59815	0
	Sb	121	9.685	ug/L	0.050	0	41	80732	0
	Sb	123	9.632	ug/L	0.018	0	35	60229	0
	Ba	135	10.640	ug/L	0.249	2	60	21989	2
	Ba	137	10.601	ug/L	0.070	0	80	38080	0
>	Tb	159		ug/L			372039	369410 ✓	0
	Tl	205	9.594	ug/L	0.085	0	279	262593	0
	Pb	208	9.917	ug/L	0.035	0	733	366339	0
	Bi	209		ug/L			303712	308267	0
	Th	232	9.564	ug/L	0.041	0	38	439138	0
	U	238	9.948	ug/L	0.015	0	12	482428	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WR99-BPOST-REN~~ ZZZZZZ
Sample Dil Factor: 5 BA 6/6/13
Comments:
Sample Date/Time: Thursday, June 06, 2013 13:40:24
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	415525	0
[	Be	9	21.005	ug/L	0.300	1	17	13848	1
	C	13		mg/L			7601	7752	1
	Cl	37		mg/L			2724241	2575040	0
[>	Sc	45		ug/L			374261	397548 ✓	0
[	V	51	24.370	ug/L	0.083	0	3136	426507	0
[	V-1	51	24.372	ug/L	0.152	0	2927	429063	0
[	Cr	52	22.484	ug/L	0.351	1	9400	336156	1
[	Cr	53	22.530	ug/L	0.120	0	995	38803	0
[	Mn	55	129.049	ug/L	0.109	0	664	2990814	0
[	Co	59	21.974	ug/L	0.214	0	95	369108	0
[>	Ge	72		ug/L			339810	315862 ✓	0
[	Ni	60	27.975	ug/L	0.382	1	111	85403	0
[	Ni	62	28.112	ug/L	0.185	0	76	12512	0
[	Cu	63	35.574	ug/L	0.372	1	336	231887	0
[	Cu	65	35.370	ug/L	0.405	1	162	106443	0
[	Zn	66	86.438	ug/L	0.888	1	767	168630	0
[	Zn	67	79.108	ug/L	0.786	0	197	25818	0
[	Zn	68	84.323	ug/L	1.357	1	7221	119643	1
[	As	75	25.994	ug/L	0.261	1	253	47636	0
[	As-1	75	24.299	ug/L	0.078	0	9785	52441	0
[	Se	82	81.091	ug/L	1.200	1	-6	17165	0
[	Se	78	79.369	ug/L	0.666	0	9985	48869	0
[	Mo	98	0.237	ug/L	0.004	1	88	1586	1
	Y	89		ug/L			315904	312226	1
	Kr	83		ug/L			198	191	4
[>	In	115		ug/L			321132	316782 ✓	1
[	Ag	107	23.536	ug/L	0.452	1	55	258215	0
[	Cd	111	24.268	ug/L	0.323	1	161	66388	0
[	Cd	114	24.141	ug/L	0.218	0	47	152172	0
[	Sb	121	0.049	ug/L	0.004	8	41	450	8
[	Sb	123	0.049	ug/L	0.005	9	35	344	7
[	Ba	135	25.740	ug/L	0.428	1	60	53465	1
[	Ba	137	25.662	ug/L	0.363	1	80	92681	0
[>	Tb	159		ug/L			372039	376128 ✓	0
[	Tl	205	24.063	ug/L	0.142	0	279	670148	0
[	Pb	208	24.990	ug/L	0.018	0	733	938791	0
[	Bi	209		ug/L			303712	310976	1
[	Th	232	25.286	ug/L	0.332	1	38	1182085	1
[	U	238	25.236	ug/L	0.024	0	12	1246053	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 13:46:24
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	418705	0
[	Be	9	42.553	ug/L	0.461	1	17	28249	1
	C	13		mg/L			7601	5460	2
	Cl	37		mg/L			2724241	2540445	0
[>	Sc	45		ug/L			374261	373516 ✓	0
[	V	51	47.976	ug/L	0.443	0	3136	785882	1
[	V-1	51	48.017	ug/L	0.374	0	2927	791424	1
[	Cr	52	48.689	ug/L	0.279	0	9400	673058	1
[	Cr	53	48.811	ug/L	0.080	0	995	77827	0
[	Mn	55	50.772	ug/L	0.324	0	664	1105983	1
[	Co	59	49.174	ug/L	0.417	0	95	776005	1
[>	Ge	72		ug/L			339810	321278 ✓	1
[	Ni	60	50.826	ug/L	0.444	0	111	157755	1
[	Ni	62	51.411	ug/L	0.254	0	76	23215	1
[	Cu	63	49.862	ug/L	0.574	1	336	330477	1
[	Cu	65	49.923	ug/L	0.603	1	162	152749	1
[	Zn	66	50.892	ug/L	0.475	0	767	101285	0
[	Zn	67	50.555	ug/L	0.157	0	197	16850	0
[	Zn	68	50.794	ug/L	0.453	0	7221	76024	1
[	As	75	49.934	ug/L	0.255	0	253	92860	0
[	As-1	75	49.534	ug/L	0.242	0	9785	99127	0
[	Se	82	53.486	ug/L	0.635	1	-6	11515	2
[	Se	78	52.310	ug/L	0.370	0	9985	35981	1
[	Mo	98	49.990	ug/L	0.600	1	88	323035	0
	Y	89		ug/L			315904	312579	1
	Kr	83		ug/L			198	193	5
[>	In	115		ug/L			321132	325520 ✓	0
[	Ag	107	48.880	ug/L	0.812	1	55	551069	1
[	Cd	111	49.098	ug/L	0.426	0	161	137860	0
[	Cd	114	49.762	ug/L	0.549	1	47	322295	1
[	Sb	121	48.435	ug/L	0.175	0	41	417502	0
[	Sb	123	48.710	ug/L	0.270	0	35	314948	0
[	Ba	135	50.077	ug/L	0.147	0	60	106839	0
[	Ba	137	49.780	ug/L	0.520	1	80	184696	1
[>	Tb	159		ug/L			372039	381733 ✓	0
[	Tl	205	49.597	ug/L	0.015	0	279	1401565	0
[	Pb	208	51.211	ug/L	0.099	0	733	1951639	0
[	Bi	209		ug/L			303712	318327	0
[	Th	232	53.580	ug/L	0.427	0	38	2541993	0
[	U	238	53.642	ug/L	0.218	0	12	2688013	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 06, 2013 13:52:42
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060613.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			340477	395523 ✓	0
[	Be	9	0.015	ug/L	0.008	55	17	29	17
	C	13		mg/L			7601	6824	1
	Cl	37		mg/L			2724241	2670182	0
[>	Sc	45		ug/L			374261	351495 ✓	0
[	V	51	-0.018	ug/L	0.006	31	3136	2663	3
[	V-1	51	-0.051	ug/L	0.005	9	2927	1963	3
[	Cr	52	-0.063	ug/L	0.014	22	9400	8027	3
[	Cr	53	-0.170	ug/L	0.008	4	995	683	1
[	Mn	55	0.001	ug/L	0.002	128	664	650	5
[	Co	59	0.004	ug/L	0.000	7	95	144	2
[>	Ge	72		ug/L			339810	311115 ✓	0
[	Ni	60	-0.010	ug/L	0.000	3	111	70	2
[	Ni	62	0.207	ug/L	0.037	18	76	160	9
[	Cu	63	-0.007	ug/L	0.001	17	336	262	2
[	Cu	65	-0.010	ug/L	0.001	7	162	120	2
[	Zn	66	-0.077	ug/L	0.008	10	767	555	2
[	Zn	67	-0.118	ug/L	0.034	28	197	143	8
[	Zn	68	-0.557	ug/L	0.005	0	7221	5876	0
[	As	75	0.009	ug/L	0.017	181	253	248	11
[	As-1	75	-0.437	ug/L	0.032	7	9785	8191	0
[	Se	82	0.037	ug/L	0.045	122	-6	1	594
[	Se	78	-1.513	ug/L	0.079	5	9985	8398	0
[	Mo	98	0.002	ug/L	0.004	250	88	90	25
	Y	89		ug/L			315904	294544	1
	Kr	83		ug/L			198	189	2
[>	In	115		ug/L			321132	309879 ✓	1
[	Ag	107	0.005	ug/L	0.001	21	55	112	11
[	Cd	111	0.002	ug/L	0.001	53	161	160	2
[	Cd	114	0.002	ug/L	0.001	61	47	60	13
[	Sb	121	0.042	ug/L	0.009	20	41	387	19
[	Sb	123	0.040	ug/L	0.015	37	35	279	34
[	Ba	135	-0.003	ug/L	0.005	187	60	52	18
[	Ba	137	0.003	ug/L	0.003	98	80	88	12
[>	Tb	159		ug/L			372039	361920 ✓	0
[	Tl	205	0.005	ug/L	0.001	19	279	402	7
[	Pb	208	0.002	ug/L	0.001	43	733	784	4
[	Bi	209		ug/L			303712	311230	0
[	Th	232	0.035	ug/L	0.009	24	38	1630	24
[	U	238	0.004	ug/L	0.001	20	12	182	19

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (ICP-MS) GFA CVA **Analysis Date:** 6-10-13

M2 Xcell Nexion SID	Analyst MG-11	Peer EL 6-11-13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See logs
ICB/CCB	✓	✓	↓
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WR99 WS21
Matrix Duplicates	✓	✓	↓
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analyst Notes and CAF's	✓	✓	CAF WR99, WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-10-13 **Analyst:** [illegible] **Page:** 1 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			B524
		1			B525
		2			B631
		3			B632
		4			B633
		5			B634
		Rinse Sample			
		ICV			B523
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			
		LR200			
		LR300			
		B1			Sb C.O.
		CCV2			
		CCB2			
		WS21 MB1	SWN	20	
		DI Check			RR (Zn 5.7 ppb)
		LRA P197		10	Se 51 high w/in EMA Page 52
		WS21 AD40	SWN	20 ✓	
		[illegible]	[illegible]	[illegible]	6-11-13 See next pg

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-10-13 **Analyst:** [illegible] **Page:** 2 of 4

All corrections made by analyst unless otherwise noted. AT 6-10-13 / AT 6/11/13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WS21 A	SWN	20	CAF
WS		ASpk			Sb Low %R
		APost			0.20 mL spk #2 1/10 0.06 mL spk #1 1/10 Sb
↓		↓ MBLSpk	↓	↓ ✓	
		CCV3			
		CCB3			
		WR299 MBS3	SWN	20	
		E			
		F			
		DDup			Pb As high RPD
		D			CAF
		DSpk			Sb Pb Low %R
		D Post			0.06 mL spk #2 1/10 0.06 mL spk #1 1/10 Pb Sb
		↓ MBSSpk	↓	↓ ✓	
		CCV4			
		CCB4			
		DL Check		✓	
		WS22 MBS1	SWN	20	
		A-L		1.00 ✓	
		A			
		ADup		✓	
		ASpk		✓	
zz		~~APost~~		↓	
		↓ Ref	↓	50 ✓	

AT 6/11/13

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Monday, June 10, 2013 08.18:40
Sample Description:
Method File: C.\NexIONData\Method\Daily Performancenew.mth
Dataset File: C:\NexIONData\Dataset\Default\Daily Performance Check.2080
MassCal File: C:\NexIONData\MassCal\Default.tun
Conditions File: C:\NexIONData\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3528.9	3528.947	30.775	0.9	Standard
	Mg	24.0	20382.4	20382.368	344.445	1.7	Standard
	In	114.9	41139.1	41139.103	391.391	1.0	Standard
	Pb	208.0	17181.7	17181.695	103.724	0.6	Standard
	U	238.1	28738.5	28738.476	395.090	1.4	Standard
⌈	CeO	155.9	822.2	0.022	0.001	4.9	Standard
| >	Ce	139.9	36941.6	36941.636	238.141	0.6	Standard
⌊	Ce++	70.0	855.4	0.023	0.001	2.2	Standard
	Bkgd	220.0	0.0	0.000	0.000		Standard

Current Conditions File Data

Current Value	Description
1.08	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1700.00	Analog Stage Voltage
800.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.08	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B
0.00	KED RPa

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 6/10/2013 8:18:33 AM
nd Time: 6/10/2013 8:35:12 AM

aily Performance Check - [Failed]
Obtained Intensity (Be 9.0122): 3528.95
Obtained Intensity (Mg 23.985): 20382.37
Obtained Intensity (In 114.904): 41139.10 - <Target not achieved>
Obtained Intensity (Pb 207.977): 17181.69 - <Target not achieved>
Obtained Intensity (U 238.05): 28738.48 - <Target not achieved>
Obtained Intensity (Bkgd 220): 0.00
Obtained Formula (CeO 155.9 / Ce 139.905): 0.022 (=822.24 / 36941.64)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.023 (=855.38 / 36941.64)

orch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.64 mm	-0.46 mm	90869.75

ebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.06
Obtained Intensity (In 114.904): 70380.96
Obtained Formula (CeO 155.9 / Ce 139.905): 0.016 (=1015.06 / 61532.34)

ass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.692)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.705)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.702)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.728)

utoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.996; Intercept = -13.05

aily Performance Check - [Failed]
Obtained Intensity (Be 9.0122): 5452.85
Obtained Intensity (Mg 23.985): 48341.84
Obtained Intensity (In 114.904): 71914.95
Obtained Intensity (Pb 207.977): 30487.34
Obtained Intensity (U 238.05): 53245.78
Obtained Intensity (Bkgd 220): 0.13
Obtained Formula (CeO 155.9 / Ce 139.905): 0.019 (=1204.02 / 64809.78)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.034 (=2193.29 / 64809.78) - <Target not achieved>

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 6/10/2013 8:36:29 AM
nd Time: 6/10/2013 8:39:04 AM

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 4247.35
Obtained Intensity (Mg 23.985): 33303.35
Obtained Intensity (In 114.904): 62125.59
Obtained Intensity (Pb 207.977): 27874.74
Obtained Intensity (U 238.05): 48396.13
Obtained Intensity (Bkgd 220): 0.13
Obtained Formula (CeO 155.9 / Ce 139.905): 0.012 (=711.43 / 59548.09)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.024 (=1423.65 / 59548.09)

Reb 1-24

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Monday, June 10, 2013 09:20:59
Sample Description.
Method File: C:\NexIONData\Method\Daily Performancenew.mth
Dataset File: C:\NexIONData\Dataset\Default\Daily Performance Check.2095
MassCal File: C:\NexIONData\MassCal\Default.tun
Conditions File: C:\NexIONData\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq Dead Time (ns): 60
Current Dead Time (ns). 60
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4476.7	4476.669	77.263	1.7	Standard
	Mg	24.0	35455.7	35455.742	442.517	1.2	Standard
	In	114.9	70955.5	70955.539	315.392	0.4	Standard
	Pb	208.0	32412.2	32412.180	215.512	0.7	Standard
	U	238.1	58875.3	58875.259	534.040	0.9	Standard
⌈	CeO	155.9	805.0	0.012	0.000	2.7	Standard
| >	Ce	139.9	69819.6	69819.609	431.156	0.6	Standard
⌊	Ce++	70.0	1625.2	0.023	0.000	1.0	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

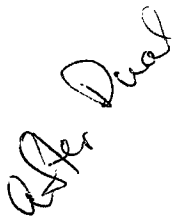
Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1700.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B
0.00	KED RPa

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 6/10/2013 9:20:58 AM
nd Time: 6/10/2013 9:23:33 AM



aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 4476.67
Obtained Intensity (Mg 23.985): 35455.74
Obtained Intensity (In 114.904): 70955.54
Obtained Intensity (Pb 207.977): 32412.18
Obtained Intensity (U 238.05): 58875.26
Obtained Intensity (Bkgd 220): 0.03
Obtained Formula (CeO 155.9 / Ce 139.905): 0.012 (=804.97 / 69819.61)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.023 (=1625.16 / 69819.61)

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 09:53:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				1073783	2
	Be	9		ug/L				20	11
	C	13		ug/L				96438	1
	Cl	37		ug/L				4537351	0
>	Sc	45		ug/L				1037261	0
	V	51		ug/L				6297	1
	V-1	51		ug/L				92	11
	Cr	52		ug/L				18914	1
	Cr	53		ug/L				153	4
	Mn	55		ug/L				1535	53
	Co	59		ug/L				301	5
>	Ge	72		ug/L				585419	0
	Ni	60		ug/L				50	6
	Ni	62		ug/L				70	10
	Cu	63		ug/L				274	6
	Cu	65		ug/L				124	3
	Zn	66		ug/L				1259	2
	Zn	67		ug/L				196	9
	Zn	68		ug/L				985	2
	As	75		ug/L				205	7
	As-1	75		ug/L				8804	0
	Se	82		ug/L				2	217
	Se	78		ug/L				8883	0
	Mo	98		ug/L				21	22
	Y	89		ug/L				393396	1
	Kr	83		ug/L				387	2
>	In	115		ug/L				873328	1
	Ag	107		ug/L				28	21
	Cd	111		ug/L				91	10
	Cd	114		ug/L				35	15
	Sb	121		ug/L				177	2
	Sb	123		ug/L				133	6
	Ba	135		ug/L				525	2
	Ba	137		ug/L				900	2
>	Tb	159		ug/L				1029579	0
	Tl	205		ug/L				75	17
	Pb	208		ug/L				577	3
	Bi	209		ug/L				2413416	1
	Th	232		ug/L				112	6
	U	238		ug/L				6	36

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 09:57:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1083392	1
	Be	9	0.200	ug/L	0.006	2	20	718	4
	C	13		ug/L			96438	93522	2
	Cl	37		ug/L			4537351	4547822	0
>	Sc	45		ug/L			1037261	1047822	0
	V	51	0.200	ug/L	0.008	3	6297	10295	1
	V-1	51	0.500	ug/L	0.013	2	92	4232	2
	Cr	52	0.500	ug/L	0.038	7	18914	26986	2
	Cr	53	0.500	ug/L	0.046	9	153	1110	7
	Mn	55	0.500	ug/L	0.006	1	1535	12718	1
	Co	59	0.200	ug/L	0.009	4	301	3925	4
>	Ge	72		ug/L			585419	591114	1
	Ni	60	0.500	ug/L	0.017	3	50	1790	3
	Ni	62	0.500	ug/L	0.057	11	70	345	8
	Cu	63	0.500	ug/L	0.021	4	274	4153	3
	Cu	65	0.500	ug/L	0.015	2	124	1866	3
	Zn	66	4.000	ug/L	0.235	5	1259	9201	4
	Zn	67	4.000	ug/L	0.129	3	196	1415	2
	Zn	68	4.000	ug/L	0.214	5	985	6383	3
	As	75	0.200	ug/L	0.016	8	205	573	6
	As-1	75	0.200	ug/L	0.064	32	8804	9268	1
	Se	82	0.500	ug/L	0.041	8	2	109	9
	Se	78	0.500	ug/L	0.198	39	8883	9250	1
	Mo	98	0.200	ug/L	0.011	5	21	966	5
	Y	89		ug/L			393396	409278	2
	Kr	83		ug/L			387	389	3
>	In	115		ug/L			873328	871321	2
	Ag	107	0.200	ug/L	0.009	4	28	1849	3
	Cd	111	0.100	ug/L	0.005	5	91	523	2
	Cd	114	0.100	ug/L	0.008	8	35	1054	7
	Sb	121	0.200	ug/L	0.008	4	177	2753	2
	Sb	123	0.200	ug/L	0.009	4	133	2016	4
	Ba	135	0.500	ug/L	0.037	7	525	1888	3
	Ba	137	0.500	ug/L	0.007	1	900	3274	1
>	Tb	159		ug/L			1029579	1040944	1
	Tl	205	0.200	ug/L	0.004	1	75	6822	1
	Pb	208	0.100	ug/L	0.000	0	577	4705	1
	Bi	209		ug/L			2413416	2445253	0
	Th	232	0.200	ug/L	0.016	7	112	6399	7
	U	238	0.200	ug/L	0.003	1	6	8994	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:01:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1073783	1123457	1
Be	9	10.000	ug/L	0.100	0	20	34677	1
C	13		ug/L			96438	91279	3
Cl	37		ug/L			4537351	4669317	0
> Sc	45		ug/L			1037261	1087618	1
V	51	10.000	ug/L	0.127	1	6297	219397	0
V-1	51	10.015	ug/L	0.110	1	92	214214	0
Cr	52	10.002	ug/L	0.131	1	18914	194241	0
Cr	53	10.000	ug/L	0.093	0	153	20291	0
Mn	55	10.001	ug/L	0.272	2	1535	246858	2
Co	59	10.000	ug/L	0.091	0	301	180893	0
> Ge	72		ug/L			585419	607521	0
Ni	60	10.001	ug/L	0.126	1	50	37860	1
Ni	62	9.999	ug/L	0.092	0	70	5451	1
Cu	63	10.001	ug/L	0.140	1	274	83377	1
Cu	65	10.001	ug/L	0.085	0	124	38075	0
Zn	66	10.090	ug/L	0.117	1	1259	23090	0
Zn	67	10.182	ug/L	0 315	3	196	3798	2
Zn	68	10.148	ug/L	0.360	3	985	16507	2
As	75	10.000	ug/L	0.166	1	205	20513	0
As-1	75	10.000	ug/L	0.245	2	8804	28937	0
Se	82	10.001	ug/L	0.077	0	2	2274	0
Se	78	9.997	ug/L	0 381	3	8883	14465	0
Mo	98	10.000	ug/L	0.136	1	21	48640	1
Y	89		ug/L			393396	414639	1
Kr	83		ug/L			387	372	2
> In	115		ug/L			873328	892526	1
Ag	107	10.000	ug/L	0.167	1	28	93963	1
Cd	111	10.000	ug/L	0.155	1	91	43835	0
Cd	114	10.000	ug/L	0.014	0	35	108773	1
Sb	121	10.000	ug/L	0.052	0	177	130028	0
Sb	123	10.000	ug/L	0.128	1	133	98277	0
Ba	135	10.006	ug/L	0.269	2	525	38345	1
Ba	137	10.007	ug/L	0.112	1	900	66832	0
> Tb	159		ug/L			1029579	1055989	1
Tl	205	10.000	ug/L	0.281	2	75	347037	1
Pb	208	10.000	ug/L	0.155	1	577	466972	0
Bi	209		ug/L			2413416	2457893	0
Th	232	10.001	ug/L	0.245	2	112	452946	2
U	238	10.000	ug/L	0.152	1	6	462175	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:06:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1073783	1097575	0
	Be	9	20.177	ug/L	0.155	0	20	70844	1
	C	13		ug/L			96438	93191	3
	Cl	37		ug/L			4537351	4624322	1
>	Sc	45		ug/L			1037261	1068961	1
	V	51	20.076	ug/L	0.372	1	6297	432770	1
	V-1	51	20.075	ug/L	0.463	2	92	428322	1
	Cr	52	20.086	ug/L	0.353	1	18914	369752	0
	Cr	53	20.064	ug/L	0.663	3	153	40359	1
	Mn	55	20.094	ug/L	0.526	2	1535	495053	2
	Co	59	20.058	ug/L	0.328	1	301	360448	1
>	Ge	72		ug/L			585419	615321	1
	Ni	60	19.933	ug/L	0.563	2	50	75355	2
	Ni	62	19.927	ug/L	0.120	0	70	10774	1
	Cu	63	19.948	ug/L	0.535	2	274	166378	1
	Cu	65	19.838	ug/L	0.373	1	124	73973	1
	Zn	66	20.068	ug/L	0.715	3	1259	45721	2
	Zn	67	20.125	ug/L	0.144	0	196	7560	2
	Zn	68	20.167	ug/L	0.336	1	985	33128	1
	As	75	19.986	ug/L	0.195	0	205	41196	0
	As-1	75	20.031	ug/L	0.397	1	8804	49678	0
	Se	82	19.832	ug/L	0.093	0	2	4417	0
	Se	78	20.017	ug/L	0.864	4	8883	20014	1
	Mo	98	19.947	ug/L	0.368	1	21	97213	1
	Y	89		ug/L			393396	412883	0
	Kr	83		ug/L			387	432	3
>	In	115		ug/L			873328	888411	0
	Ag	107	20.019	ug/L	0.057	0	28	187918	0
	Cd	111	19.967	ug/L	0.291	1	91	86467	1
	Cd	114	20.013	ug/L	0.124	0	35	217218	0
	Sb	121	19.981	ug/L	0.291	1	177	257451	1
	Sb	123	20.013	ug/L	0.186	0	133	196185	0
	Ba	135	20.079	ug/L	0.380	1	525	77270	2
	Ba	137	20.069	ug/L	0.402	2	900	134358	2
>	Tb	159		ug/L			1029579	1054208	0
	Tl	205	19.963	ug/L	0.226	1	75	686571	0
	Pb	208	19.968	ug/L	0.207	1	577	924419	0
	Bi	209		ug/L			2413416	2423930	0
	Th	232	20.075	ug/L	0.336	1	112	921370	1
	U	238	20.008	ug/L	0.127	0	6	924854	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:10:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1070317	2
	Be	9	50.004	ug/L	0.881	1	20	171199	1
	C	13		ug/L			96438	93457	1
	Cl	37		ug/L			4537351	4589730	0
>	Sc	45		ug/L			1037261	1054410	1
	V	51	49.958	ug/L	1.223	2	6297	1048240	1
	V-1	51	49.963	ug/L	1.317	2	92	1047422	1
	Cr	52	50.036	ug/L	1.136	2	18914	882925	1
	Cr	53	50.045	ug/L	1.571	3	153	99508	1
	Mn	55	49.877	ug/L	1.361	2	1535	1194929	0
	Co	59	49.740	ug/L	1.057	2	301	858772	0
>	Ge	72		ug/L			585419	599006	0
	Ni	60	49.980	ug/L	1.159	2	50	183491	1
	Ni	62	50.051	ug/L	0.605	1	70	26368	0
	Cu	63	49.788	ug/L	1.724	3	274	395468	2
	Cu	65	50.032	ug/L	0.397	0	124	182028	0
	Zn	66	50.060	ug/L	0.940	1	1259	109751	1
	Zn	67	50.098	ug/L	1.000	1	196	18191	1
	Zn	68	49.873	ug/L	1.238	2	985	77333	2
	As	75	49.983	ug/L	0.997	1	205	99807	1
	As-1	75	49.987	ug/L	0.907	1	8804	107088	0
	Se	82	50.159	ug/L	0.919	1	2	11049	1
	Se	78	50.187	ug/L	0.148	0	8883	35655	0
	Mo	98	50.028	ug/L	1.033	2	21	238009	1
	Y	89		ug/L			393396	408372	1
	Kr	83		ug/L			387	426	5
>	In	115		ug/L			873328	873027	0
	Ag	107	49.684	ug/L	1.203	2	28	444205	2
	Cd	111	49.891	ug/L	0.524	1	91	209903	1
	Cd	114	49.889	ug/L	0.635	1	35	526176	0
	Sb	121	50.027	ug/L	0.801	1	177	634847	0
	Sb	123	49.997	ug/L	0.270	0	133	481294	0
	Ba	135	50.139	ug/L	1.348	2	525	191454	2
	Ba	137	50.118	ug/L	0.284	0	900	332277	0
>	Tb	159		ug/L			1029579	1050154	0
	Tl	205	49.817	ug/L	0.871	1	75	1675929	0
	Pb	208	49.800	ug/L	0.671	1	577	2250582	0
	Bi	209		ug/L			2413416	2370933	1
	Th	232	50.204	ug/L	0.882	1	112	2342777	0
	U	238	50.159	ug/L	0.445	0	6	2346985	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:15:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1087337	1
	Be	9	98.674	ug/L	2.561	2	20	328669	1
	C	13		ug/L			96438	91151	3
	Cl	37		ug/L			4537351	4622622	1
>	Sc	45		ug/L			1037261	1042534	1
	V	51	100.415	ug/L	2.904	2	6297	2105913	2
	V-1	51	100.301	ug/L	2.632	2	92	2100131	1
	Cr	52	100.214	ug/L	2.360	2	18914	1741632	0
	Cr	53	99.820	ug/L	1.674	1	153	194955	0
	Mn	55	100.281	ug/L	1.392	1	1535	2396794	1
	Co	59	100.349	ug/L	2.600	2	301	1732766	0
>	Ge	72		ug/L			585419	596524	1
	Ni	60	99.205	ug/L	1.266	1	50	353300	0
	Ni	62	99.810	ug/L	2.808	2	70	51960	2
	Cu	63	99.787	ug/L	1.054	1	274	783608	1
	Cu	65	99.645	ug/L	1.030	1	124	356689	1
	Zn	66	99.803	ug/L	0.808	0	1259	215234	0
	Zn	67	99.601	ug/L	2.200	2	196	35353	1
	Zn	68	99.540	ug/L	1.269	1	985	150420	0
	As	75	99.664	ug/L	0.993	0	205	195803	0
	As-1	75	99.711	ug/L	1.039	1	8804	201955	0
	Se	82	99.361	ug/L	1.894	1	2	21337	0
	Se	78	99.524	ug/L	2.295	2	8883	60687	0
	Mo	98	100.241	ug/L	2 503	2	21	478722	2
	Y	89		ug/L			393396	404051	1
	Kr	83		ug/L			387	463	1
>	In	115		ug/L			873328	860137	2
	Ag	107	99.568	ug/L	5.161	5	28	863844	2
	Cd	111	99.707	ug/L	2.792	2	91	409022	1
	Cd	114	99.813	ug/L	4.500	4	35	1029945	1
	Sb	121	100.175	ug/L	3.222	3	177	1259036	0
	Sb	123	100.032	ug/L	2.895	2	133	949146	0
	Ba	135	100.256	ug/L	3.524	3	525	379702	1
	Ba	137	100.185	ug/L	3.030	3	900	657292	1
>	Tb	159		ug/L			1029579	1040643	0
	Tl	205	100.482	ug/L	1.068	1	75	3404561	0
	Pb	208	100.326	ug/L	0.766	0	577	4542024	0
	Bi	209		ug/L			2413416	2296744	1
	Th	232	100.068	ug/L	0.733	0	112	4638236	1
	U	238	100.101	ug/L	0.372	0	6	4657155	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:21:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1073783	1081928	1
	Be	9	0.016	ug/L	0.018	116	20	73	85
	C	13		ug/L			96438	93554	4
	Cl	37		ug/L			4537351	4636234	0
>	Sc	45		ug/L			1037261	1072147	1
	V	51	0.005	ug/L	0.010	191	6297	6616	3
	V-1	51	0.009	ug/L	0.012	134	92	281	89
	Cr	52	-0.018	ug/L	0.021	115	18914	19227	0
	Cr	53	-0.006	ug/L	0.014	238	153	146	18
	Mn	55	-0.013	ug/L	0.010	73	1535	1262	19
	Co	59	0.006	ug/L	0.009	152	301	411	37
>	Ge	72		ug/L			585419	598312	1
	Ni	60	0.021	ug/L	0.009	40	50	125	22
	Ni	62	0.073	ug/L	0.044	60	70	109	20
	Cu	63	0.022	ug/L	0.011	48	274	456	17
	Cu	65	0.015	ug/L	0.008	54	124	182	15
	Zn	66	0.220	ug/L	0 029	13	1259	1761	5
	Zn	67	0.182	ug/L	0.046	25	196	265	7
	Zn	68	0.222	ug/L	0.022	9	985	1341	0
	As	75	-0.000	ug/L	0.013	7031	205	209	13
	As-1	75	-0.086	ug/L	0.078	91	8804	8830	0
	Se	82	0.021	ug/L	0.025	116	2	7	75
	Se	78	-0.273	ug/L	0.319	116	8883	8934	0
	Mo	98	0.023	ug/L	0.004	16	21	133	11
	Y	89		ug/L			393396	412537	0
	Kr	83		ug/L			387	411	9
>	In	115		ug/L			873328	883696	0
	Ag	107	0.006	ug/L	0.003	49	28	83	32
	Cd	111	0.012	ug/L	0.013	108	91	144	39
	Cd	114	0.021	ug/L	0.035	161	35	263	139
	Sb	121	0.215	ug/L	0.055	25	177	2958	23
	Sb	123	0.216	ug/L	0.056	26	133	2238	24
	Ba	135	0.053	ug/L	0.048	90	525	738	25
	Ba	137	0.054	ug/L	0.043	80	900	1273	22
>	Tb	159		ug/L			1029579	1040477	0
	Tl	205	0.024	ug/L	0.033	135	75	888	124
	Pb	208	0.025	ug/L	0.028	114	577	1700	74
	Bi	209		ug/L			2413416	2447369	1
	Th	232	0.213	ug/L	0.018	8	112	9979	8
	U	238	0.016	ug/L	0.019	118	6	751	116

Sample Information

Sample Date/Time: Monday, June 10, 2013 10:15:53
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**0.9997**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**1.0000**	0.020	0.20	10	20	50	100
V-1	51	**1.0000**	0.020	0.50	10	20	50	100
Cr	52	**1.0000**	0.016	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.023	0.50	10	20	50	100
Co	59	**1.0000**	0.017	0.20	10	20	50	100
Ge	72							
Ni	60	**0.9999**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**1.0000**	0.013	0.50	10	20	50	100
Cu	65	**1.0000**	0.006	0.50	10	20	50	100
Zn	66	**1.0000**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**1.0000**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9998**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.008	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.010	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**1.0000**	0.033	0.20	10	20	50	100
Pb	208	**1.0000**	0.043	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.045	0.20	10	20	50	100
U	238	**1.0000**	0.045	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:28:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1104870	2
[	Be	9	50.688	ug/L	1.541	3	20	171522	1
	C	13		ug/L			96438	95013	1
	Cl	37		ug/L			4537351	4569659	1
[>	Sc	45		ug/L			1037261	1086566	0
[	V	51	49.195	ug/L	1.052	2	6297	1078922	2
[	V-1	51	49.170	ug/L	0.752	1	92	1073312	1
[	Cr	52	49.327	ug/L	0.963	1	18914	903722	1
[	Cr	53	49.238	ug/L	0.381	0	153	100326	0
[	Mn	55	50.837	ug/L	1.385	2	1535	1267191	2
[	Co	59	49.919	ug/L	0.408	0	301	898819	0
[>	Ge	72		ug/L			585419	604558	0
[	Ni	60	52.414	ug/L	1.324	2	50	189200	1
[	Ni	62	51.498	ug/L	0.946	1	70	27208	1
[	Cu	63	51.576	ug/L	1.001	1	274	410597	1
[	Cu	65	50.751	ug/L	1.111	2	124	184198	2
[	Zn	66	50.055	ug/L	0.344	0	1259	110053	0
[	Zn	67	51.346	ug/L	1.124	2	196	18573	2
[	Zn	68	51.202	ug/L	1.169	2	985	78908	1
[	As	75	50.884	ug/L	0.160	0	205	101423	0
[	As-1	75	50.832	ug/L	0.192	0	8804	108804	0
[	Se	82	78.794	ug/L	0.485	0	2	16954	0
[	Se	78	79.093	ug/L	0.651	0	8883	50762	0
[	Mo	98	50.402	ug/L	0 872	1	21	243970	1
	Y	89		ug/L			393396	423357	1
	Kr	83		ug/L			387	441	2
[>	In	115		ug/L			873328	882817	0
[	Ag	107	50.463	ug/L	0.484	0	28	449775	1
[	Cd	111	49.019	ug/L	0.884	1	91	206521	1
[	Cd	114	48.849	ug/L	1.299	2	35	517716	1
[	Sb	121	50.628	ug/L	0.263	0	177	653546	0
[	Sb	123	50.823	ug/L	0.495	0	133	495241	0
[	Ba	135	50.661	ug/L	0.674	1	525	197304	1
[	Ba	137	50.646	ug/L	0.492	0	900	341651	1
[>	Tb	159		ug/L			1029579	1065845	0
[	Tl	205	49.174	ug/L	0.352	0	75	1706572	0
[	Pb	208	50.141	ug/L	0.115	0	577	2325317	0
[	Bi	209		ug/L			2413416	2375613	0
[	Th	232	49.829	ug/L	0.658	1	112	2365548	0
[	U	238	49.553	ug/L	0.245	0	6	2361285	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:35:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1063542	1
	Be	9	0.001	ug/L	0.002	160	20	23	21
	C	13		ug/L			96438	92615	2
	Cl	37		ug/L			4537351	4480051	1
>	Sc	45		ug/L			1037261	1049888	0
	V	51	0.005	ug/L	0.005	99	6297	6478	1
	V-1	51	0.002	ug/L	0.001	35	92	139	11
	Cr	52	0.003	ug/L	0.009	288	18914	19199	0
	Cr	53	-0.006	ug/L	0.007	116	153	142	10
	Mn	55	-0.012	ug/L	0.009	79	1535	1269	18
	Co	59	0.006	ug/L	0.012	201	301	409	51
>	Ge	72		ug/L			585419	594395	1
	Ni	60	0.023	ug/L	0.015	65	50	133	41
	Ni	62	0.044	ug/L	0.006	14	70	94	4
	Cu	63	0.019	ug/L	0.018	94	274	427	33
	Cu	65	0.018	ug/L	0.012	66	124	189	22
	Zn	66	0.207	ug/L	0.026	12	1259	1720	2
	Zn	67	0.194	ug/L	0 048	24	196	267	5
	Zn	68	0.198	ug/L	0.028	13	985	1295	2
	As	75	-0.002	ug/L	0.014	583	205	203	13
	As-1	75	-0.074	ug/L	0.125	168	8804	8795	1
	Se	82	-0.046	ug/L	0.052	112	2	-7	150
	Se	78	-0.273	ug/L	0.458	167	8883	8876	1
	Mo	98	0.008	ug/L	0.004	43	21	59	28
	Y	89		ug/L			393396	412390	1
	Kr	83		ug/L			387	420	2
>	In	115		ug/L			873328	881264	1
	Ag	107	0.002	ug/L	0.001	64	28	46	26
	Cd	111	-0.000	ug/L	0.004	841	91	90	18
	Cd	114	0.002	ug/L	0.002	69	35	59	29
	Sb	121	0.038	ug/L	0.012	32	177	662	22
	Sb	123	0.037	ug/L	0.013	36	133	491	24
	Ba	135	0.036	ug/L	0.003	9	525	668	1
	Ba	137	0.024	ug/L	0.008	32	900	1067	6
>	Tb	159		ug/L			1029579	1056149	1
	Tl	205	0.004	ug/L	0 001	20	75	204	13
	Pb	208	0.007	ug/L	0.002	23	577	925	7
	Bi	209		ug/L			2413416	2443684	0
	Th	232	0.094	ug/L	0.002	1	112	4541	3
	U	238	0.003	ug/L	0.001	21	6	154	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:39:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1069247	4
	Be	9	49.822	ug/L	1.647	3	20	163100	2
	C	13		ug/L			96438	88723	2
	Cl	37		ug/L			4537351	4605775	1
>	Sc	45		ug/L			1037261	1045239	3
	V	51	49.023	ug/L	2.390	4	6297	1033277	2
	V-1	51	49.209	ug/L	2.298	4	92	1032303	1
	Cr	52	49.174	ug/L	1.894	3	18914	866092	1
	Cr	53	49.808	ug/L	1.699	3	153	97557	0
	Mn	55	49.075	ug/L	2.084	4	1535	1175867	0
	Co	59	48.856	ug/L	1.026	2	301	845860	1
>	Ge	72		ug/L			585419	598945	1
	Ni	60	50.586	ug/L	0.845	1	50	180930	2
	Ni	62	48.943	ug/L	1.105	2	70	25618	1
	Cu	63	50.655	ug/L	0.625	1	274	399508	0
	Cu	65	49.581	ug/L	0.934	1	124	178251	1
	Zn	66	49.408	ug/L	0.540	1	1259	107632	0
	Zn	67	51.102	ug/L	1.206	2	196	18308	1
	Zn	68	51.411	ug/L	0 782	1	985	78488	0
	As	75	49.731	ug/L	0.934	1	205	98200	1
	As-1	75	49.667	ug/L	0.824	1	8804	105523	1
	Se	82	50.602	ug/L	0.780	1	2	10787	1
	Se	78	49.801	ug/L	0.344	0	8883	35031	1
	Mo	98	49.376	ug/L	0.550	1	21	236776	0
	Y	89		ug/L			393396	407059	1
	Kr	83		ug/L			387	426	3
>	In	115		ug/L			873328	864861	1
	Ag	107	49.422	ug/L	1.257	2	28	431552	2
	Cd	111	50.085	ug/L	0.938	1	91	206704	0
	Cd	114	50.367	ug/L	0.680	1	35	522975	0
	Sb	121	49.731	ug/L	0.616	1	177	628861	0
	Sb	123	49.610	ug/L	0 669	1	133	473578	0
	Ba	135	50.166	ug/L	0.991	1	525	191394	1
	Ba	137	50.367	ug/L	0.884	1	900	332816	1
>	Tb	159		ug/L			1029579	1045672	2
	Tl	205	49.173	ug/L	1.001	2	75	1673765	0
	Pb	208	49.207	ug/L	0.885	1	577	2238225	0
	Bi	209		ug/L			2413416	2361563	0
	Th	232	50.378	ug/L	1.630	3	112	2345291	1
	U	238	50.537	ug/L	1.536	3	6	2361554	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:45:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1039815	2
	Be	9	0.002	ug/L	0.003	122	20	26	32
	C	13		ug/L			96438	92330	2
	Cl	37		ug/L			4537351	4469730	1
>	Sc	45		ug/L			1037261	1035784	0
	V	51	0.012	ug/L	0.002	17	6297	6537	1
	V-1	51	0.002	ug/L	0.001	34	92	139	11
	Cr	52	0.029	ug/L	0.013	45	18914	19382	1
	Cr	53	-0.005	ug/L	0.017	362	153	144	23
	Mn	55	-0.008	ug/L	0.021	274	1535	1354	37
	Co	59	0.021	ug/L	0.039	184	301	670	101
>	Ge	72		ug/L			585419	586587	2
	Ni	60	0.043	ug/L	0.048	113	50	200	85
	Ni	62	0.034	ug/L	0.046	138	70	87	27
	Cu	63	0.037	ug/L	0.045	122	274	563	63
	Cu	65	0.031	ug/L	0.036	114	124	234	54
	Zn	66	0.239	ug/L	0.014	5	1259	1764	2
	Zn	67	0.243	ug/L	0.034	14	196	281	5
	Zn	68	0.247	ug/L	0.032	12	985	1352	4
	As	75	0.009	ug/L	0.020	225	205	223	19
	As-1	75	0.016	ug/L	0.115	699	8804	8850	0
	Se	82	0.002	ug/L	0.005	308	2	2	38
	Se	78	0.063	ug/L	0.492	787	8883	8928	0
	Mo	98	0.015	ug/L	0.004	25	21	91	20
	Y	89		ug/L			393396	399937	0
	Kr	83		ug/L			387	410	0
>	In	115		ug/L			873328	865027	1
	Ag	107	0.004	ug/L	0.004	98	28	67	58
	Cd	111	0.003	ug/L	0.003	99	91	103	13
	Cd	114	0.002	ug/L	0.003	149	35	58	61
	Sb	121	0.088	ug/L	0.017	19	177	1293	15
	Sb	123	0.090	ug/L	0.018	20	133	991	17
	Ba	135	0.030	ug/L	0.005	15	525	634	2
	Ba	137	0.029	ug/L	0.005	18	900	1082	3
>	Tb	159		ug/L			1029579	1012567	1
	Tl	205	0.003	ug/L	0.002	47	75	184	29
	Pb	208	0.010	ug/L	0.002	15	577	988	7
	Bi	209		ug/L			2413416	2378756	1
	Th	232	0.136	ug/L	0.001	0	112	6249	1
	U	238	0.004	ug/L	0.001	32	6	167	32

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:49:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1023323	3
	Be	9	0.210	ug/L	0.010	4	20	677	6
	C	13		ug/L			96438	86506	1
	Cl	37		ug/L			4537351	4337493	0
>	Sc	45		ug/L			1037261	1021698	1
	V	51	0.205	ug/L	0.003	1	6297	10399	1
	V-1	51	0.194	ug/L	0.001	0	92	4072	1
	Cr	52	0.508	ug/L	0.012	2	18914	27187	0
	Cr	53	0.470	ug/L	0.021	4	153	1049	3
	Mn	55	0.473	ug/L	0.006	1	1535	12577	1
	Co	59	0.203	ug/L	0.008	4	301	3725	4
>	Ge	72		ug/L			585419	585135	0
	Ni	60	0.512	ug/L	0.026	5	50	1839	4
	Ni	62	0.494	ug/L	0 053	10	70	322	8
	Cu	63	0.497	ug/L	0 015	2	274	4098	2
	Cu	65	0.483	ug/L	0.011	2	124	1821	1
	Zn	66	3.580	ug/L	0.068	1	1259	8786	1
	Zn	67	3.353	ug/L	0.031	0	196	1357	0
	Zn	68	3.607	ug/L	0.028	0	985	6296	0
	As	75	0.208	ug/L	0.014	6	205	604	4
	As-1	75	0.181	ug/L	0 046	25	8804	9144	0
	Se	82	0.477	ug/L	0.027	5	2	101	5
	Se	78	0.429	ug/L	0.193	44	8883	9096	0
	Mo	98	0.208	ug/L	0.004	1	21	993	1
	Y	89		ug/L			393396	405411	0
	Kr	83		ug/L			387	415	2
>	In	115		ug/L			873328	853973	1
	Ag	107	0.200	ug/L	0.011	5	28	1754	4
	Cd	111	0.104	ug/L	0.006	5	91	512	3
	Cd	114	0.103	ug/L	0.004	4	35	1092	2
	Sb	121	0.224	ug/L	0.009	3	177	2963	2
	Sb	123	0.225	ug/L	0.006	2	133	2254	1
	Ba	135	0.362	ug/L	0.007	2	525	1874	0
	Ba	137	0.362	ug/L	0.014	3	900	3232	1
>	Tb	159		ug/L			1029579	1008469	0
	Tl	205	0.206	ug/L	0.002	1	75	6822	1
	Pb	208	0.096	ug/L	0.001	0	577	4790	0
	Bi	209		ug/L			2413416	2367840	1
	Th	232	0.199	ug/L	0.008	4	112	9058	3
	U	238	0.201	ug/L	0.004	2	6	9069	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:54:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1173447	1
	Be	9	0.004	ug/L	0.002	47	20	36	16
	C	13		ug/L			96438	199500	1
	Cl	37		ug/L			4537351	11532020	3
>	Sc	45		ug/L			1037261	1107911	1
	V	51	0.152	ug/L	0.011	7	6297	10100	2
	V-1	51	0.827	ug/L	0.040	4	92	18496	5
	Cr	52	0.569	ug/L	0.024	4	18914	30603	0
	Cr	53	2.882	ug/L	0.094	3	153	6143	3
	Mn	55	0.028	ug/L	0.005	17	1535	2361	5
	Co	59	0.012	ug/L	0.002	16	301	540	7
>	Ge	72		ug/L			585419	595900	1
	Ni	60	0.303	ug/L	0.008	2	50	1127	3
	Ni	62	3.745	ug/L	0.284	7	70	2015	6
	Cu	63	0.941	ug/L	0.058	6	274	7652	4
	Cu	65	0.331	ug/L	0.003	0	124	1311	1
	Zn	66	0.540	ug/L	0.048	8	1259	2438	3
	Zn	67	4.812	ug/L	0.131	2	196	1896	1
	Zn	68	0.035	ug/L	0.010	28	985	1055	2
	As	75	0.096	ug/L	0.018	18	205	397	10
	As-1	75	0.053	ug/L	0.033	62	8804	9064	1
	Se	82	-0.087	ug/L	0.053	61	2	-16	72
	Se	78	0.009	ug/L	0.187	2187	8883	9045	0
	Mo	98	404.273	ug/L	4.645	1	21	1928520	0
	Y	89		ug/L			393396	410279	2
	Kr	83		ug/L			387	567	6
>	In	115		ug/L			873328	894130	2
	Ag	107	0.017	ug/L	0.003	15	28	183	11
	Cd	111	0.165	ug/L	0.012	7	91	797	5
	Cd	114	0.258	ug/L	0.005	2	35	2801	1
	Sb	121	0.073	ug/L	0.004	6	177	1140	6
	Sb	123	0.075	ug/L	0.005	6	133	876	5
	Ba	135	-0.075	ug/L	0.003	4	525	244	5
	Ba	137	-0.082	ug/L	0.000	0	900	363	2
>	Tb	159		ug/L			1029579	1093615	0
	Tl	205	0.037	ug/L	0.001	2	75	1398	2
	Pb	208	0.037	ug/L	0.001	1	577	2368	2
	Bi	209		ug/L			2413416	2327197	0
	Th	232	0.096	ug/L	0.021	21	112	4801	20
	U	238	0.001	ug/L	0.000	15	6	52	14

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:00:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1166319	2
[	Be	9	-0.001	ug/L	0.001	142	20	20	13
	C	13		ug/L			96438	200910	2
	Cl	37		ug/L			4537351	11400734	2
[>	Sc	45		ug/L			1037261	1105167	1
[	V	51	-0.005	ug/L	0.108	2137	6297	6606	37
[	V-1	51	0.845	ug/L	0.029	3	92	18857	1
[	Cr	52	19.112	ug/L	0 187	0	18914	368467	1
[	Cr	53	21.941	ug/L	0.427	1	153	45554	1
[	Mn	55	18.820	ug/L	0.244	1	1535	478174	1
[	Co	59	18.675	ug/L	0.204	1	301	342179	1
[>	Ge	72		ug/L			585419	569526	1
[	Ni	60	21.116	ug/L	0.258	1	50	71833	0
[	Ni	62	23.540	ug/L	0.690	2	70	11749	1
[	Cu	63	21.040	ug/L	0.134	0	274	157957	1
[	Cu	65	19.829	ug/L	0.163	0	124	67860	1
[	Zn	66	20.066	ug/L	0.511	2	1259	42291	2
[	Zn	67	22.225	ug/L	0.407	1	196	7680	1
[	Zn	68	19.168	ug/L	0.278	1	985	28428	1
[	As	75	19.622	ug/L	0.213	1	205	36964	1
[	As-1	75	20.015	ug/L	0.300	1	8804	45546	1
[	Se	82	-0.123	ug/L	0.066	53	2	-22	57
[	Se	78	0.582	ug/L	0.355	60	8883	8928	0
[	Mo	98	411.911	ug/L	1.282	0	21	1878213	1
	Y	89		ug/L			393396	393044	2
	Kr	83		ug/L			387	547	4
[>	In	115		ug/L			873328	889860	0
[	Ag	107	19.128	ug/L	0.437	2	28	171843	1
[	Cd	111	19.553	ug/L	0.261	1	91	83088	0
[	Cd	114	19.627	ug/L	0.491	2	35	209690	1
[	Sb	121	0.071	ug/L	0.004	5	177	1102	5
[	Sb	123	0.066	ug/L	0.001	1	133	785	0
[	Ba	135	-0.084	ug/L	0.002	1	525	205	3
[	Ba	137	-0.094	ug/L	0.004	4	900	280	8
[>	Tb	159		ug/L			1029579	1108204	0
[	Tl	205	0.039	ug/L	0.000	0	75	1478	0
[	Pb	208	0.027	ug/L	0.004	13	577	1934	9
[	Bi	209		ug/L			2413416	2324601	0
[	Th	232	0.037	ug/L	0.001	3	112	1964	3
[	U	238	0.001	ug/L	0.000	2	6	33	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:07:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1079881	0
	Be	9	198.938	ug/L	6.682	3	20	658120	2
	C	13		ug/L			96438	91889	2
	Cl	37		ug/L			4537351	4676401	0
>	Sc	45		ug/L			1037261	1049203	1
	V	51	194.102	ug/L	3.980	2	6297	4090740	0
	V-1	51	194.343	ug/L	3.188	1	92	4095236	0
	Cr	52	190.504	ug/L	4.331	2	18914	3314834	1
	Cr	53	191.341	ug/L	0.840	0	153	376014	1
	Mn	55	193.978	ug/L	2 540	1	1535	4664340	0
	Co	59	186.433	ug/L	1.197	0	301	3240351	1
>	Ge	72		ug/L			585419	545138	1
	Ni	60	206.757	ug/L	2.080	1	50	672852	0
	Ni	62	200.183	ug/L	1.484	0	70	95179	0
	Cu	63	201.378	ug/L	2.951	1	274	1444778	0
	Cu	65	198.323	ug/L	3.391	1	124	648561	0
	Zn	66	195.740	ug/L	4.401	2	1259	384633	2
	Zn	67	202.218	ug/L	1.279	0	196	65413	1
	Zn	68	199.525	ug/L	7.774	3	985	274548	2
	As	75	203.025	ug/L	1.897	0	205	364294	0
	As-1	75	203.542	ug/L	2.223	1	8804	368186	0
	Se	82	201.627	ug/L	2.789	1	2	39112	0
	Se	78	201.169	ug/L	3.217	1	8883	103641	0
	Mo	98	207.398	ug/L	1.038	0	21	905260	1
	Y	89		ug/L			393396	382875	2
	Kr	83		ug/L			387	542	1
>	In	115		ug/L			873328	863038	0
	Ag	107	188.222	ug/L	2.039	1	28	1639934	0
	Cd	111	194.736	ug/L	2.016	1	91	801846	1
	Cd	114	200.883	ug/L	0.730	0	35	2081500	0
	Sb	121	203.368	ug/L	1 499	0	177	2565936	1
	Sb	123	200.125	ug/L	1.308	0	133	1906104	0
	Ba	135	201.268	ug/L	1.368	0	525	764766	0
	Ba	137	203.157	ug/L	1 518	0	900	1337020	0
>	Tb	159		ug/L			1029579	1053177	0
	Tl	205	194.132	ug/L	1.241	0	75	6656829	0
	Pb	208	195.273	ug/L	1.417	0	577	8946224	0
	Bi	209		ug/L			2413416	2241350	0
	Th	232	193.553	ug/L	0.688	0	112	9079433	1
	U	238	191.391	ug/L	4.031	2	6	9010598	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:14:22
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1073783	1034353	2
	Be	9	283.183	ug/L	1.293	0	20	897445	2
	C	13		ug/L			96438	88888	1
	Cl	37		ug/L			4537351	4578702	2
>	Sc	45		ug/L			1037261	1015080	0
	V	51	292.216	ug/L	4.820	1	6297	5956921	2
	V-1	51	291.268	ug/L	5.220	1	92	5939505	2
	Cr	52	295.401	ug/L	2.821	0	18914	4963925	1
	Cr	53	292.124	ug/L	1.791	0	153	555354	1
	Mn	55	294.404	ug/L	2.241	0	1535	6849123	0
	Co	59	287.985	ug/L	6.300	2	301	4842865	2
>	Ge	72		ug/L			585419	538840	1
	Ni	60	301.980	ug/L	3.688	1	50	971319	0
	Ni	62	303.625	ug/L	7.907	2	70	142627	0
	Cu	63	306.517	ug/L	3.143	1	274	2173820	1
	Cu	65	295.557	ug/L	2 553	0	124	955386	0
	Zn	66	280.910	ug/L	0.709	0	1259	545142	1
	Zn	67	293.078	ug/L	2.436	0	196	93625	1
	Zn	68	291.534	ug/L	5.019	1	985	396155	0
	As	75	298.056	ug/L	2.372	0	205	528563	1
	As-1	75	299.239	ug/L	1.066	0	8804	531267	1
	Se	82	294.081	ug/L	6.369	2	2	56380	1
	Se	78	294.922	ug/L	2.671	0	8883	146384	0
	Mo	98	309.095	ug/L	1.847	0	21	1333488	1
	Y	89		ug/L			393396	379037	0
	Kr	83		ug/L			387	628	2
>	In	115		ug/L			873328	830438	0
	Ag	107	287.031	ug/L	0.995	0	28	2406338	0
	Cd	111	286.973	ug/L	2.669	0	91	1137003	1
	Cd	114	294.815	ug/L	2.211	0	35	2939228	0
	Sb	121	302.222	ug/L	1.897	0	177	3668883	0
	Sb	123	307.003	ug/L	2 364	0	133	2813657	1
	Ba	135	308.085	ug/L	5.008	1	525	1126289	2
	Ba	137	311.988	ug/L	1.725	0	900	1975210	0
>	Tb	159		ug/L			1029579	1038392	1
	Tl	205	291.211	ug/L	2.436	0	75	9845346	0
	Pb	208	290.612	ug/L	2.011	0	577	13126696	0
	Bi	209		ug/L			2413416	2184563	1
	Th	232	287.763	ug/L	6.232	2	112	13306887	1
	U	238	284.026	ug/L	4.237	1	6	13184764	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:21:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1073783	1008368	0
	Be	9	0.011	ug/L	0.013	118	20	53	76
	C	13		ug/L			96438	82602	2
	Cl	37		ug/L			4537351	4446274	1
>	Sc	45		ug/L			1037261	1002303	0
	V	51	0.020	ug/L	0.008	37	6297	6497	2
	V-1	51	0.013	ug/L	0.007	54	92	359	42
	Cr	52	0.038	ug/L	0.030	77	18914	18905	2
	Cr	53	0.014	ug/L	0.012	88	153	173	13
	Mn	55	-0.005	ug/L	0.007	134	1535	1373	11
	Co	59	0.006	ug/L	0.007	101	301	399	28
>	Ge	72		ug/L			585419	553733	0
	Ni	60	0.002	ug/L	0.006	291	50	54	39
	Ni	62	0.255	ug/L	0.173	67	70	189	44
	Cu	63	0.012	ug/L	0.014	116	274	344	28
	Cu	65	-0.001	ug/L	0.003	288	124	113	10
	Zn	66	-0.328	ug/L	0.002	0	1259	537	0
	Zn	67	-0.307	ug/L	0 015	4	196	85	5
	Zn	68	-0.312	ug/L	0.021	6	985	497	6
	As	75	0.023	ug/L	0.027	116	205	236	20
	As-1	75	0.299	ug/L	0.024	8	8804	8865	0
	Se	82	-0.020	ug/L	0.116	565	2	-1	1374
	Se	78	1.154	ug/L	0.027	2	8883	8958	0
	Mo	98	0.045	ug/L	0.003	6	21	218	6
	Y	89		ug/L			393396	388143	1
	Kr	83		ug/L			387	459	10
>	In	115		ug/L			873328	845847	0
	Ag	107	0.009	ug/L	0.002	21	28	101	14
	Cd	111	0.004	ug/L	0.004	84	91	105	12
	Cd	114	0.003	ug/L	0.000	0	35	67	0
	Sb	121	0.345	ug/L	0 050	14	177	4441	14
	Sb	123	0.347	ug/L	0.051	14	133	3371	14
	Ba	135	-0.128	ug/L	0.001	0	525	31	12
	Ba	137	-0.128	ug/L	0 001	0	900	46	15
>	Tb	159		ug/L			1029579	1000731	1
	Tl	205	0.020	ug/L	0.002	10	75	737	8
	Pb	208	-0.001	ug/L	0.003	438	577	528	27
	Bi	209		ug/L			2413416	2335663	0
	Th	232	0.187	ug/L	0.011	6	112	8435	6
	U	238	0.013	ug/L	0.009	70	6	603	69

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:27:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			1073783	1075330	2
	Be	**9**	**51.041**	ug/L	1.414	2	20	168104	0
	C	**13**		ug/L			96438	83736	1
	Cl	**37**		ug/L			4537351	4476543	1
>	**Sc**	**45**		ug/L			1037261	1057126	1
	V	**51**	**49.121**	ug/L	0.501	1	6297	1048118	1
	V-1	**51**	**49.168**	ug/L	0.705	1	92	1044108	1
	Cr	**52**	**48.708**	ug/L	0.379	0	18914	868481	1
	Cr	**53**	**48.867**	ug/L	1.291	2	153	96856	1
	Mn	**55**	**49.321**	ug/L	0.574	1	1535	1196159	0
	Co	**59**	**49.104**	ug/L	1.167	2	301	860038	1
>	**Ge**	**72**		ug/L			585419	583963	0
	Ni	**60**	**51.333**	ug/L	1.133	2	50	178999	2
	Ni	**62**	**50.214**	ug/L	0.140	0	70	25629	0
	Cu	**63**	**52.055**	ug/L	0.740	1	274	400338	2
	Cu	**65**	**50.631**	ug/L	0.358	0	124	177485	0
	Zn	**66**	**50.902**	ug/L	0.495	0	1259	108081	0
	Zn	**67**	**51.355**	ug/L	0 706	1	196	17941	1
	Zn	**68**	**52.880**	ug/L	0.282	0	985	78694	0
	As	**75**	**50.933**	ug/L	0.396	0	205	98057	0
	As-1	**75**	**51.221**	ug/L	0.378	0	8804	105830	0
	Se	**82**	**52.191**	ug/L	0.372	0	2	10847	0
	Se	**78**	**52.758**	ug/L	0.653	1	8883	35657	1
	Mo	**98**	**50.168**	ug/L	0 393	0	21	234586	1
	Y	**89**		ug/L			393396	408252	1
	Kr	**83**		ug/L			387	454	4
>	**In**	**115**		ug/L			873328	882222	1
	Ag	**107**	**48.952**	ug/L	0.600	1	28	435963	0
	Cd	**111**	**50.362**	ug/L	0.477	0	91	212026	0
	Cd	**114**	**49.966**	ug/L	0.455	0	35	529222	0
	Sb	**121**	**49.333**	ug/L	0.774	1	177	636315	0
	Sb	**123**	**49.553**	ug/L	0.601	1	133	482508	0
	Ba	**135**	**50.492**	ug/L	1.080	2	525	196484	1
	Ba	**137**	**50.289**	ug/L	1.322	2	900	338921	1
>	**Tb**	**159**		ug/L			1029579	1070939	0
	Tl	**205**	**48.171**	ug/L	0.509	1	75	1679725	0
	Pb	**208**	**47.956**	ug/L	0.604	1	577	2234545	0
	Bi	**209**		ug/L			2413416	2371724	0
	Th	**232**	**49.152**	ug/L	1.124	2	112	2344507	1
	U	**238**	**48.921**	ug/L	0.513	1	6	2342223	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:34:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1073783	1074985	1
	Be	**9**	**0.001**	ug/L	0.001	59	20	24	7
	C	**13**		ug/L			96438	90347	2
	Cl	**37**		ug/L			4537351	4520205	1
>	**Sc**	**45**		ug/L			1037261	1070136	0
	V	**51**	**0.011**	ug/L	0.010	93	6297	6724	3
	V-1	**51**	**0.005**	ug/L	0.001	10	92	210	5
	Cr	**52**	**0.021**	ug/L	0.035	167	18914	19880	3
	Cr	**53**	**0.003**	ug/L	0.003	115	153	163	3
	Mn	**55**	**-0.012**	ug/L	0.001	8	1535	1297	1
	Co	**59**	**-0.004**	ug/L	0.001	26	301	243	7
>	**Ge**	**72**		ug/L			585419	593688	1
	Ni	**60**	**0.014**	ug/L	0.001	7	50	100	3
	Ni	**62**	**0.049**	ug/L	0.037	75	70	96	18
	Cu	**63**	**0.009**	ug/L	0.001	6	274	347	1
	Cu	**65**	**0.007**	ug/L	0.004	52	124	151	7
	Zn	**66**	**0.216**	ug/L	0.021	9	1259	1738	1
	Zn	**67**	**0.141**	ug/L	0.026	18	196	249	4
	Zn	**68**	**0.250**	ug/L	0.010	3	985	1373	1
	As	**75**	**0.018**	ug/L	0.012	65	205	242	8
	As-1	**75**	**0.045**	ug/L	0.053	117	8804	9015	0
	Se	**82**	**-0.011**	ug/L	0.037	346	2	0	3439
	Se	**78**	**0.184**	ug/L	0.209	113	8883	9102	0
	Mo	**98**	**0.017**	ug/L	0.001	6	21	101	6
	Y	**89**		ug/L			393396	424350	0
	Kr	**83**		ug/L			387	453	0
>	**In**	**115**		ug/L			873328	905787	2
	Ag	**107**	**0.002**	ug/L	0.001	72	28	46	24
	Cd	**111**	**-0.001**	ug/L	0.003	407	91	91	14
	Cd	**114**	**0.001**	ug/L	0.001	99	35	46	22
	Sb	**121**	**0.121**	ug/L	0.020	16	177	1789	14
	Sb	**123**	**0.124**	ug/L	0.024	18	133	1382	17
	Ba	**135**	**0.026**	ug/L	0.006	24	525	649	2
	Ba	**137**	**0.023**	ug/L	0.007	29	900	1093	3
>	**Tb**	**159**		ug/L			1029579	1071155	2
	Tl	**205**	**0.005**	ug/L	0 000	5	75	266	5
	Pb	**208**	**0.007**	ug/L	0.001	12	577	948	2
	Bi	**209**		ug/L			2413416	2439261	0
	Th	**232**	**0.128**	ug/L	0.007	5	112	6195	2
	U	**238**	**0.003**	ug/L	0.000	13	6	136	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS21 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 11:40:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass		Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6			ug/L			1073783	1109346	1
	Be	9		0.002	ug/L	0.002	112	20	26	22
	C	13			ug/L			96438	106079	2
	Cl	37			ug/L			4537351	4419337	1
>	Sc	45			ug/L			1037261	1095075	1
	V	51		0.019	ug/L	0.001	7	6297	7057	0
	V-1	51		0.004	ug/L	0.001	23	92	185	11
	Cr	52		0.056	ug/L	0.006	10	18914	20987	0
	Cr	53	S	0.006	ug/L	0.004	65	153	174	5
	Mn	55		-0.015	ug/L	0.001	4	1535	1235	1
	Co	59		0.002	ug/L	0.000	27	301	348	2
>	Ge	72			ug/L			585419	610650	0
	Ni	60	S	-0.000	ug/L	0.001	907	50	51	9
	Ni	62		0.038	ug/L	0.027	70	70	93	14
	Cu	63		0.025	ug/L	0.002	6	274	486	3
	Cu	65		0.028	ug/L	0.006	21	124	231	8
	Zn	66		0.543	ug/L	0.026	4	1259	2505	1
	Zn	67		0.490	ug/L	0.070	14	196	382	6
	Zn	68		0.557	ug/L	0.068	12	985	1884	5
	As	75	S	0.003	ug/L	0.017	541	205	220	16
	As-1	75		-0.079	ug/L	0.026	32	8804	9028	1
	Se	82		-0.028	ug/L	0.036	128	2	-3	226
	Se	78	S	-0.258	ug/L	0.126	48	8883	9128	1
	Mo	98		0.006	ug/L	0 001	9	21	51	5
	Y	89			ug/L			393396	425726	1
	Kr	83			ug/L			387	455	7
>	In	115	S		ug/L			873328	898179	1
	Ag	107		0.002	ug/L	0.001	48	28	46	18
	Cd	111	S	0.000	ug/L	0.002	1520	91	94	8
	Cd	114		0.000	ug/L	0.001	256	35	38	18
	Sb	121	S	0.045	ug/L	0.011	23	177	768	16
	Sb	123		0.046	ug/L	0.009	19	133	587	13
	Ba	135		-0.123	ug/L	0.000	0	525	56	3
	Ba	137		-0.123	ug/L	0.002	1	900	86	14
>	Tb	159			ug/L			1029579	1079007	1
	Tl	205	S	0.004	ug/L	0.000	4	75	209	1
	Pb	208		-0.000	ug/L	0 001	581	577	597	6
	Bi	209	S		ug/L			2413416	2469221	1
	Th	232		0.068	ug/L	0.007	9	112	3408	10
	U	238		0.001	ug/L	0.000	24	6	52	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:44:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

RR

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1059225	1
	Be	9	0.001	ug/L	0.001	122	20	23	17
	C	13		ug/L			96438	83621	5
	Cl	37		ug/L			4537351	4295598	2
>	Sc	45		ug/L			1037261	1057213	1
	V	51	0.009	ug/L	0.003	38	6297	6602	1
	V-1	51	0.007	ug/L	0.000	5	92	244	2
	Cr	52	-0.000	ug/L	0.021	5950	18914	19272	2
	Cr	53	-0.006	ug/L	0 010	168	153	144	14
	Mn	55	0.018	ug/L	0.002	8	1535	2010	0
	Co	59	-0.004	ug/L	0.000	7	301	242	1
>	Ge	72		ug/L			585419	596685	0
	Ni	60	0.061	ug/L	0.003	5	50	267	3
	Ni	62	0.091	ug/L	0.019	21	70	119	7
	Cu	63	0.351	ug/L	0.012	3	274	3036	2
	Cu	65	0.340	ug/L	0.012	3	124	1344	2
	Zn	66	5.778	ug/L	0.151	2	1259	13673	1
	Zn	67	5.517	ug/L	0.122	2	196	2147	1
	Zn	68	5.644	ug/L	0.048	0	985	9479	1
	As	75	0.015	ug/L	0.010	66	205	237	7
	As-1	75	-0.004	ug/L	0.027	607	8804	8965	0
	Se	82	0.029	ug/L	0.046	157	2	8	111
	Se	78	0.035	ug/L	0.084	238	8883	9072	0
	Mo	98	0.005	ug/L	0 001	9	21	47	4
	Y	89		ug/L			393396	416719	2
	Kr	83		ug/L			387	445	6
>	In	115		ug/L			873328	892899	0
	Ag	107	0.002	ug/L	0.001	36	28	49	14
	Cd	111	-0.001	ug/L	0.002	318	91	90	11
	Cd	114	0.002	ug/L	0.001	50	35	54	16
	Sb	121	0.020	ug/L	0.007	32	177	447	19
	Sb	123	0.023	ug/L	0.007	31	133	359	19
	Ba	135	-0.098	ug/L	0.003	3	525	154	8
	Ba	137	-0.097	ug/L	0.004	3	900	259	9
>	Tb	159		ug/L			1029579	1041810	0
	Tl	205	0.003	ug/L	0.001	28	75	175	16
	Pb	208	0.018	ug/L	0.001	6	577	1408	3
	Bi	209		ug/L			2413416	2435412	1
	Th	232	0.011	ug/L	0.003	22	112	630	18
	U	238	0.001	ug/L	0.001	73	6	44	62

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ERAP197
Sample Dil Factor: 10
Comments:
Sample Date/Time: Monday, June 10, 2013 11:48:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1073783	1082207	0
	Be	9	6.388	ug/L	0.082	1	20	21202	1
	C	13		ug/L			96438	90416	2
	Cl	37		ug/L			4537351	4365069	1
>	Sc	45		ug/L			1037261	1076296	1
	V	51	50.438	ug/L	1.520	3	6297	1095387	2
	V-1	51	50.747	ug/L	1.356	2	92	1097102	1
	Cr	52	55.981	ug/L	0.174	0	18914	1013319	0
	Cr	53	57.013	ug/L	0.561	0	153	115053	1
	Mn	55	48.279	ug/L	0.660	1	1535	1192179	0
	Co	59	91.029	ug/L	0.876	0	301	1623183	0
>	Ge	72		ug/L			585419	600011	1
	Ni	60	75.183	ug/L	1.271	1	50	269321	0
	Ni	62	73.537	ug/L	1.789	2	70	38526	1
	Cu	63	32.748	ug/L	0.283	0	274	258856	0
	Cu	65	32.464	ug/L	0 536	1	124	116969	1
	Zn	66	50.651	ug/L	0.382	0	1259	110508	0
	Zn	67	51.010	ug/L	0.896	1	196	18314	2
	Zn	68	52.254	ug/L	1.698	3	985	79893	2
	As	75	22.806	ug/L	0.419	1	205	45226	1
	As-1	75	22.532	ug/L	0.395	1	8804	52886	1
	Se	82	34.136	ug/L	0.865	2	2	7289	1
	Se	78	33.353	ug/L	0.730	2	8883	26508	0
	Mo	98	57.591	ug/L	0.955	1	21	276653	0
	Y	89		ug/L			393396	417405	0
	Kr	83		ug/L			387	454	1
>	In	115		ug/L			873328	897754	0
	Ag	107	40.532	ug/L	0.694	1	28	367380	1
	Cd	111	14.948	ug/L	0.225	1	91	64107	1
	Cd	114	15.195	ug/L	0.208	1	35	163800	0
	Sb	121	31.694	ug/L	0.390	1	177	416105	0
	Sb	123	31.879	ug/L	0.250	0	133	315956	0
	Ba	135	46.946	ug/L	0.502	1	525	185973	1
	Ba	137	46.819	ug/L	1.233	2	900	321210	2
>	Tb	159		ug/L			1029579	1083086	0
	Tl	205	17.730	ug/L	0.168	0	75	625314	0
	Pb	208	209.950	ug/L	0 727	0	577	9892147	0
	Bi	209		ug/L			2413416	2431727	0
	Th	232	0.011	ug/L	0.001	7	112	628	5
	U	238	0.002	ug/L	0.000	14	6	110	13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS21 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 11:52:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1073783	1099534	3
	Be	9	0.102	ug/L	0.003	2	20	363	1
	C	13		ug/L			96438	98320	1
	Cl	37		ug/L			4537351	4350995	0
>	Sc	45		ug/L			1037261	1120933	2
	V	51	22.626	ug/L	1.051	4	6297	515241	2
	V-1	51	22.602	ug/L	1.078	4	92	508652	2
	Cr	52	7.467	ug/L	0.153	2	18914	158448	0
	Cr	53	7.452	ug/L	0.256	3	153	15797	1
	Mn	55	86.661	ug/L	3.264	3	1535	2226325	1
	Co	59	3.167	ug/L	0.127	4	301	59090	1
>	Ge	72		ug/L			585419	599367	1
	Ni	60	7.114	ug/L	0.282	3	50	25500	3
	Ni	62	7.872	ug/L	0.077	0	70	4184	2
	Cu	63	8.294	ug/L	0.183	2	274	65692	1
	Cu	65	8.426	ug/L	0.189	2	124	30424	2
	Zn	66	22.929	ug/L	0.503	2	1259	50672	1
	Zn	67	23.617	ug/L	0.833	3	196	8575	2
	Zn	68	22.957	ug/L	0.399	1	985	35635	1
	As	75	1.757	ug/L	0.011	0	205	3674	1
	As-1	75	1.727	ug/L	0.082	4	8804	12372	0
	Se	82	0.044	ug/L	0.041	93	2	11	74
	Se	78	-0.008	ug/L	0.309	3879	8883	9089	0
	Mo	98	0.170	ug/L	0.009	5	21	835	5
	Y	89		ug/L			393396	512633	1
	Kr	83		ug/L			387	493	5
>	In	115		ug/L			873328	901522	1
	Ag	107	0.037	ug/L	0.003	7	28	364	5
	Cd	111	0.123	ug/L	0.008	6	91	623	5
	Cd	114	0.104	ug/L	0.003	3	35	1159	2
	Sb	121	0.051	ug/L	0.003	6	177	851	6
	Sb	123	0.053	ug/L	0.007	12	133	662	10
	Ba	135	17.806	ug/L	0.412	2	525	71153	0
	Ba	137	17.856	ug/L	0.422	2	900	123573	0
>	Tb	159		ug/L			1029579	1095478	1
	Tl	205	0.028	ug/L	0.002	5	75	1070	3
	Pb	208	5.701	ug/L	0.104	1	577	272243	0
	Bi	209		ug/L			2413416	2395575	0
	Th	232	0.621	ug/L	0.018	2	112	30424	1
	U	238	0.104	ug/L	0.000	0	6	5120	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS21 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 11:56:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1095081	0
	Be	9	0.108	ug/L	0 006	5	20	381	4
	C	13		ug/L			96438	102192	2
	Cl	37		ug/L			4537351	4427945	1
>	Sc	45		ug/L			1037261	1118581	2
	V	51	24.155	ug/L	0.960	3	6297	548504	1
	V-1	51	24.121	ug/L	0.969	4	92	541768	1
	Cr	52	6.995	ug/L	0.123	1	18914	149418	1
	Cr	53	6.957	ug/L	0.151	2	153	14730	0
	Mn	55	90.940	ug/L	0.443	0	1535	2332472	1
	Co	59	3.041	ug/L	0.073	2	301	56660	0
>	Ge	72		ug/L			585419	593534	2
	Ni	60	6.468	ug/L	0.138	2	50	22960	0
	Ni	62	7.468	ug/L	0.195	2	70	3933	0
	Cu	63	8.365	ug/L	0.200	2	274	65600	1
	Cu	65	8.545	ug/L	0.493	5	124	30519	3
	Zn	66	26.884	ug/L	0.702	2	1259	58597	0
	Zn	67	27.844	ug/L	0.286	1	196	9976	1
	Zn	68	27.262	ug/L	0.846	3	985	41699	1
	As	75	1.794	ug/L	0.043	2	205	3710	0
	As-1	75	1.776	ug/L	0.125	7	8804	12344	0
	Se	82	0.087	ug/L	0.021	24	2	20	23
	Se	78	0.070	ug/L	0.296	425	8883	9039	1
	Mo	98	0.135	ug/L	0.006	4	21	663	2
	Y	89		ug/L			393396	506822	1
	Kr	83		ug/L			387	483	1
>	In	115		ug/L			873328	897548	1
	Ag	107	0.034	ug/L	0.002	4	28	338	5
	Cd	111	0.159	ug/L	0.013	8	91	773	7
	Cd	114	0.137	ug/L	0.003	2	35	1511	3
	Sb	121	0.025	ug/L	0.004	15	177	515	8
	Sb	123	0.028	ug/L	0.005	16	133	411	9
	Ba	135	17.445	ug/L	0.423	2	525	69410	0
	Ba	137	17.531	ug/L	0.273	1	900	120809	0
>	Tb	159		ug/L			1029579	1080697	2
	Tl	205	0.031	ug/L	0.001	4	75	1182	1
	Pb	208	6.317	ug/L	0.157	2	577	297438	0
	Bi	209		ug/L			2413416	2376830	0
	Th	232	0.694	ug/L	0.015	2	112	33524	0
	U	238	0.117	ug/L	0.003	2	6	5656	0

LCS 6-10-13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SW21 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:01:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1073783	1106992	1
	Be	9	25.409	ug/L	0.180	0	20	86194	0
	C	13		ug/L			96438	102268	1
	Cl	37		ug/L			4537351	4484389	2
>	Sc	45		ug/L			1037261	1132109	0
	V	51	47.774	ug/L	0.980	2	6297	1091895	2
	V-1	51	47.758	ug/L	0.994	2	92	1086230	2
	Cr	52	30.596	ug/L	0.108	0	18914	591926	0
	Cr	53	30.622	ug/L	0.298	0	153	65076	1
	Mn	55	119.546	ug/L	1.207	1	1535	3102908	1
	Co	59	26.681	ug/L	0.234	0	301	500699	0
>	Ge	72		ug/L			585419	589887	1
	Ni	60	33.119	ug/L	0 536	1	50	116666	1
	Ni	62	33.204	ug/L	0.527	1	70	17140	0
	Cu	63	33.801	ug/L	1.086	3	274	262594	1
	Cu	65	34.090	ug/L	0.483	1	124	120738	0
	Zn	66	107.708	ug/L	1.148	1	1259	229601	1
	Zn	67	101.652	ug/L	0.866	0	196	35682	2
	Zn	68	105.035	ug/L	1.689	1	985	156893	1
	As	75	27.974	ug/L	0.242	0	205	54494	1
	As-1	75	27.049	ug/L	0.573	2	8804	60632	0
	Se	82	81.705	ug/L	0.704	0	2	17152	0
	Se	78	80.186	ug/L	2.288	2	8883	50080	1
	Mo	98	23.004	ug/L	0 586	2	21	108637	1
	Y	89		ug/L			393396	518347	1
	Kr	83		ug/L			387	508	3
>	In	115		ug/L			873328	898554	0
	Ag	107	23.243	ug/L	0.437	1	28	210879	2
	Cd	111	24.569	ug/L	0.170	0	91	105408	0
	Cd	114	24.870	ug/L	0.285	1	35	268324	0
	Sb	121	6.100	ug/L	0.012	0	177	80310	0
	Sb	123	6.078	ug/L	0 064	1	133	60407	0
	Ba	135	44.538	ug/L	0.144	0	525	176621	0
	Ba	137	44.577	ug/L	0.036	0	900	306172	0
>	Tb	159		ug/L			1029579	1081123	0
	Tl	205	23.436	ug/L	0.096	0	75	825060	0
	Pb	208	29.687	ug/L	0.209	0	577	1396680	0
	Bi	209		ug/L			2413416	2396651	0
	Th	232	23.575	ug/L	0.313	1	112	1135247	1
	U	238	23.253	ug/L	0.184	0	6	1123887	0

LS #6-10-13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WA21 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:05:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1078648	1
	Be	9	26.005	ug/L	0.132	0	20	85961	1
	C	13		ug/L			96438	101519	2
	Cl	37		ug/L			4537351	4427061	0
>	Sc	45		ug/L			1037261	1100421	1
	V	51	46.774	ug/L	0.246	0	6297	1039219	0
	V-1	51	46.985	ug/L	0.111	0	92	1038676	0
	Cr	52	30.267	ug/L	0.685	2	18914	569334	1
	Cr	53	31.063	ug/L	0.169	0	153	64161	0
	Mn	55	112.480	ug/L	0.422	0	1535	2837795	0
	Co	59	26.894	ug/L	0.204	0	301	490545	0
>	Ge	72		ug/L			585419	589944	1
	Ni	60	32.012	ug/L	0.327	1	50	112783	0
	Ni	62	31.895	ug/L	0.948	2	70	16467	1
	Cu	63	33.855	ug/L	0.638	1	274	263072	0
	Cu	65	33.481	ug/L	0.785	2	124	118589	1
	Zn	66	105.225	ug/L	0.659	0	1259	224354	1
	Zn	67	100.965	ug/L	2.140	2	196	35438	1
	Zn	68	106.141	ug/L	3.235	3	985	158532	1
	As	75	27.964	ug/L	0.095	0	205	54481	1
	As-1	75	26.960	ug/L	0.480	1	8804	60471	0
	Se	82	82.765	ug/L	0.946	1	2	17376	0
	Se	78	81.028	ug/L	2.337	2	8883	50517	1
	Mo	98	25.464	ug/L	0.542	2	21	120269	0
	Y	89		ug/L			393396	503512	0
	Kr	83		ug/L			387	528	6
>	In	115		ug/L			873328	910994	1
	Ag	107	23.426	ug/L	0.431	1	28	215454	1
	Cd	111	24.148	ug/L	0.273	1	91	105032	0
	Cd	114	23.982	ug/L	0.317	1	35	262318	0
	Sb	121	23.804	ug/L	0.378	1	177	317151	0
	Sb	123	23.638	ug/L	0.338	1	133	237757	0
	Ba	135	40.879	ug/L	0.245	0	525	164400	1
	Ba	137	41.162	ug/L	0.617	1	900	286675	0
>	Tb	159		ug/L			1029579	1088925	0
	Tl	205	22.963	ug/L	0.248	1	75	814195	0
	Pb	208	29.368	ug/L	0.214	0	577	1391638	0
	Bi	209		ug/L			2413416	2369165	1
	Th	232	23.225	ug/L	0.468	2	112	1126429	1
	U	238	22.828	ug/L	0.142	0	6	1111350	0

035 #C 10-13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WA21 MBSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:09:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1090625	1
	Be	9	24.649	ug/L	0.681	2	20	82359	1
	C	13		ug/L			96438	92667	1
	Cl	37		ug/L			4537351	4472382	2
>	Sc	45		ug/L			1037261	1049026	1
	V	51	24.380	ug/L	0.736	3	6297	519255	1
	V-1	51	24.321	ug/L	0.573	2	92	512459	0
	Cr	52	24.937	ug/L	0.948	3	18914	450387	2
	Cr	53	24.730	ug/L	0.515	2	153	48720	1
	Mn	55	25.298	ug/L	0.851	3	1535	609425	1
	Co	59	25.182	ug/L	0.685	2	301	437775	1
>	Ge	72		ug/L			585419	590463	1
	Ni	60	25.918	ug/L	0.489	1	50	91398	0
	Ni	62	24.887	ug/L	0.130	0	70	12880	1
	Cu	63	25.990	ug/L	0.592	2	274	202202	1
	Cu	65	26.352	ug/L	0.938	3	124	93443	2
	Zn	66	80.671	ug/L	0.986	1	1259	172446	0
	Zn	67	75.105	ug/L	1.689	2	196	26435	1
	Zn	68	81.851	ug/L	0.950	1	985	122609	0
	As	75	25.811	ug/L	0.060	0	205	50349	1
	As-1	75	25.052	ug/L	0.131	0	8804	56876	1
	Se	82	80.269	ug/L	0.952	1	2	16867	0
	Se	78	79.369	ug/L	1.131	1	8883	49718	0
	Mo	98	25.015	ug/L	0.206	0	21	118273	0
	Y	89		ug/L			393396	409984	1
	Kr	83		ug/L			387	474	3
>	In	115		ug/L			873328	898510	0
	Ag	107	23.876	ug/L	0 296	1	28	216593	0
	Cd	111	24.279	ug/L	0.178	0	91	104155	0
	Cd	114	24.580	ug/L	0.408	1	35	265173	0
	Sb	121	24.362	ug/L	0.305	1	177	320145	0
	Sb	123	24.626	ug/L	0.349	1	133	244308	1
	Ba	135	24.823	ug/L	0.435	1	525	98667	1
	Ba	137	24.955	ug/L	0.164	0	900	171794	0
>	Tb	159		ug/L			1029579	1052647	0
	Tl	205	24.030	ug/L	0.329	1	75	823682	1
	Pb	208	24.369	ug/L	0.031	0	577	1116429	0
	Bi	209		ug/L			2413416	2398777	0
	Th	232	23.000	ug/L	0.387	1	112	1078398	1
	U	238	23.402	ug/L	0.291	1	6	1101319	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 12:13:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1073783	1037195	2
	Be	9	51.751	ug/L	1.770	3	20	164385	1
	C	13		ug/L			96438	85009	1
	Cl	37		ug/L			4537351	4442440	1
>	Sc	45		ug/L			1037261	1040770	1
	V	51	48.574	ug/L	0.608	1	6297	1020335	0
	V-1	51	48.508	ug/L	0.821	1	92	1014040	0
	Cr	52	48.433	ug/L	0.635	1	18914	850223	1
	Cr	53	48.206	ug/L	1.177	2	153	94061	0
	Mn	55	48.950	ug/L	0.910	1	1535	1169119	3
	Co	59	48.543	ug/L	0.794	1	301	837103	1
>	Ge	72		ug/L			585419	582950	0
	Ni	60	50.439	ug/L	0.608	1	50	175576	0
	Ni	62	49.139	ug/L	0.343	0	70	25038	0
	Cu	63	49.419	ug/L	0.917	1	274	379388	1
	Cu	65	49.664	ug/L	0 346	0	124	173795	0
	Zn	66	49.601	ug/L	0.921	1	1259	105161	1
	Zn	67	50.703	ug/L	0.383	0	196	17685	0
	Zn	68	51.376	ug/L	1.059	2	985	76343	1
	As	75	49.828	ug/L	0.104	0	205	95771	0
	As-1	75	49.650	ug/L	0.064	0	8804	102678	0
	Se	82	51.835	ug/L	0.611	1	2	10755	0
	Se	78	50.732	ug/L	0.465	0	8883	34568	0
	Mo	98	50.405	ug/L	0.178	0	21	235283	1
	Y	89		ug/L			393396	404038	1
	Kr	83		ug/L			387	467	5
>	In	115		ug/L			873328	858339	0
	Ag	107	47.843	ug/L	1.216	2	28	414596	2
	Cd	111	49.740	ug/L	0.404	0	91	203748	0
	Cd	114	50.031	ug/L	0.525	1	35	515579	0
	Sb	121	49.410	ug/L	0.321	0	177	620117	0
	Sb	123	50.283	ug/L	0.502	0	133	476392	0
	Ba	135	51.297	ug/L	0.287	0	525	194234	0
	Ba	137	50.662	ug/L	0.441	0	900	332253	0
>	Tb	159		ug/L			1029579	1039744	1
	Tl	205	47.108	ug/L	0.485	1	75	1594744	0
	Pb	208	47.576	ug/L	0.384	0	577	2152272	0
	Bi	209		ug/L			2413416	2297513	1
	Th	232	48.926	ug/L	0.615	1	112	2265752	1
	U	238	49.312	ug/L	0.784	1	6	2291993	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 12:20:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1013444	4
	Be	9	0.001	ug/L	0.001	89	20	22	17
	C	13		ug/L			96438	82479	1
	Cl	37		ug/L			4537351	4302792	2
>	Sc	45		ug/L			1037261	1027197	2
	V	51	0.005	ug/L	0.008	143	6297	6347	2
	V-1	51	0.001	ug/L	0.000	20	92	115	2
	Cr	52	-0.000	ug/L	0.025	12575	18914	18726	2
	Cr	53	-0.015	ug/L	0.002	16	153	123	5
	Mn	55	-0.021	ug/L	0.002	8	1535	1014	3
	Co	59	-0.003	ug/L	0.001	46	301	246	7
>	Ge	72		ug/L			585419	566933	1
	Ni	60	0.001	ug/L	0.001	83	50	53	7
	Ni	62	0.009	ug/L	0.025	267	70	72	16
	Cu	63	-0.009	ug/L	0.003	28	274	196	9
	Cu	65	-0.012	ug/L	0.004	36	124	80	16
	Zn	66	-0.195	ug/L	0.024	12	1259	822	5
	Zn	67	-0.220	ug/L	0.058	26	196	116	17
	Zn	68	-0.178	ug/L	0.020	11	985	700	3
	As	75	0.034	ug/L	0.011	31	205	262	7
	As-1	75	0.059	ug/L	0.053	89	8804	8634	1
	Se	82	0.012	ug/L	0.059	504	2	4	250
	Se	78	0.248	ug/L	0.210	84	8883	8725	1
	Mo	98	0.011	ug/L	0.001	12	21	69	9
	Y	89		ug/L			393396	399901	1
	Kr	83		ug/L			387	467	3
>	In	115		ug/L			873328	862158	0
	Ag	107	0.002	ug/L	0.000	27	28	44	9
	Cd	111	0.000	ug/L	0 001	4021	91	90	4
	Cd	114	0.001	ug/L	0.001	81	35	44	19
	Sb	121	0.089	ug/L	0.024	26	177	1298	22
	Sb	123	0.091	ug/L	0.023	25	133	995	21
	Ba	135	-0.073	ug/L	0.005	6	525	241	6
	Ba	137	-0.072	ug/L	0.003	4	900	415	4
>	Tb	159		ug/L			1029579	1021524	0
	Tl	205	0.003	ug/L	0.000	15	75	163	8
	Pb	208	-0.002	ug/L	0 001	30	577	496	4
	Bi	209		ug/L			2413416	2339724	0
	Th	232	0.106	ug/L	0 010	9	112	4910	8
	U	238	0.002	ug/L	0 000	12	6	114	11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 MB3 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:26:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1056614	2
	Be	9	0.001	ug/L	0.001	116	20	23	17
	C	13		ug/L			96438	90134	2
	Cl	37		ug/L			4537351	4286964	1
>	Sc	45		ug/L			1037261	1044151	2
	V	51	0.003	ug/L	0.006	200	6297	6403	1
	V-1	51	0.001	ug/L	0.001	62	92	112	11
	Cr	52	0.000	ug/L	0.027	13199	18914	19036	0
	Cr	53	-0.007	ug/L	0.008	105	153	139	8
	Mn	55	-0.001	ug/L	0.004	501	1535	1527	3
	Co	59	-0.005	ug/L	0.000	9	301	215	2
>	Ge	72		ug/L			585419	567914	1
	Ni	60	-0.000	ug/L	0.003	541	50	47	19
	Ni	62	-0.012	ug/L	0.013	108	70	62	9
	Cu	63	-0.003	ug/L	0.003	93	274	245	6
	Cu	65	-0.006	ug/L	0.003	55	124	100	10
	Zn	66	-0.092	ug/L	0.016	17	1259	1033	2
	Zn	67	-0.108	ug/L	0.010	8	196	154	2
	Zn	68	-0.076	ug/L	0.009	12	985	847	1
	As	75	0.034	ug/L	0.024	69	205	263	18
	As-1	75	0.109	ug/L	0.049	44	8804	8742	0
	Se	82	-0.034	ug/L	0.053	156	2	-4	242
	Se	78	0.442	ug/L	0.218	49	8883	8834	0
	Mo	98	0.006	ug/L	0 001	23	21	46	13
	Y	89		ug/L			393396	404980	1
	Kr	83		ug/L			387	500	4
>	In	115		ug/L			873328	879438	0
	Ag	107	0.001	ug/L	0.000	32	28	35	5
	Cd	111	-0.003	ug/L	0.003	104	91	80	16
	Cd	114	-0.001	ug/L	0.001	54	35	25	20
	Sb	121	0.026	ug/L	0.006	23	177	511	15
	Sb	123	0.026	ug/L	0.008	31	133	383	20
	Ba	135	-0.128	ug/L	0.003	2	525	34	39
	Ba	137	-0.109	ug/L	0.031	28	900	176	116
>	Tb	159		ug/L			1029579	1039188	1
	Tl	205	0.001	ug/L	0.000	31	75	108	10
	Pb	208	-0.002	ug/L	0 001	40	577	513	4
	Bi	209		ug/L			2413416	2342347	1
	Th	232	0.046	ug/L	0.002	3	112	2229	3
	U	238	0.001	ug/L	0.000	31	6	46	26

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:30:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1054549	0
	Be	9	0.156	ug/L	0.012	7	20	524	6
	C	13		ug/L			96438	102542	1
	Cl	37		ug/L			4537351	4337466	1
>	Sc	45		ug/L			1037261	1115426	0
	V	51	29.345	ug/L	0.673	2	6297	663361	1
	V-1	51	29.399	ug/L	0.783	2	92	658769	2
	Cr	52	20.210	ug/L	0.251	1	18914	392150	1
	Cr	53	20.437	ug/L	0.263	1	153	42844	1
	Mn	55	184.430	ug/L	3.407	1	1535	4715486	1
	Co	59	4.922	ug/L	0.045	0	301	91264	0
>	Ge	72		ug/L			585419	580749	1
	Ni	60	14.852	ug/L	0.311	2	50	51527	0
	Ni	62	16.360	ug/L	0.332	2	70	8349	0
	Cu	63	32.478	ug/L	0 387	1	274	248471	1
	Cu	65	32.435	ug/L	0.556	1	124	113100	0
	Zn	66	142.320	ug/L	0.750	0	1259	298310	2
	Zn	67	134.614	ug/L	2.684	1	196	46444	0
	Zn	68	141.993	ug/L	1 764	1	985	208470	0
	As	75	7.598	ug/L	0.138	1	205	14717	0
	As-1	75	7.618	ug/L	0.218	2	8804	23085	0
	Se	82	0.062	ug/L	0.026	41	2	15	33
	Se	78	0.047	ug/L	0 354	745	8883	8834	0
	Mo	98	0.363	ug/L	0.011	3	21	1706	1
	Y	89		ug/L			393396	534304	0
	Kr	83		ug/L			387	576	5
>	In	115		ug/L			873328	874729	0
	Ag	107	0.081	ug/L	0.004	5	28	741	5
	Cd	111	3.358	ug/L	0.060	1	91	14101	1
	Cd	114	3.330	ug/L	0.034	1	35	35002	0
	Sb	121	0.076	ug/L	0.003	3	177	1145	2
	Sb	123	0.074	ug/L	0.003	3	133	852	3
	Ba	135	40.965	ug/L	0.736	1	525	158171	1
	Ba	137	41.015	ug/L	0.510	1	900	274286	0
>	Tb	159		ug/L			1029579	1058020	2
	Tl	205	0.037	ug/L	0.002	4	75	1340	2
	Pb	208	107.438	ug/L	1.720	1	577	4944231	0
	Bi	209		ug/L			2413416	2305228	0
	Th	232	0.771	ug/L	0.026	3	112	36454	1
	U	238	0.180	ug/L	0 004	1	6	8535	1

WR99 : 82106

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:34:39
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1073783	1072975	2
	Be	9	0.226	ug/L	0.004	1	20	763	3
	C	13		ug/L			96438	127686	2
	Cl	37		ug/L			4537351	4482825	1
>	Sc	45		ug/L			1037261	1128343	1
	V	51	41.600	ug/L	0.280	0	6297	948466	0
	V-1	51	41.627	ug/L	0 439	1	92	943594	1
	Cr	52	42.733	ug/L	0.856	2	18914	815692	0
	Cr	53	42.816	ug/L	0.607	1	153	90615	1
	Mn	55	252.250	ug/L	4.857	1	1535	6522910	1
	Co	59	10.292	ug/L	0.183	1	301	192676	1
>	Ge	72		ug/L			585419	575472	1
	Ni	60	31.008	ug/L	0.564	1	50	106553	0
	Ni	62	31.705	ug/L	0.663	2	70	15968	0
	Cu	63	98.971	ug/L	0.972	0	274	749719	0
	Cu	65	97.778	ug/L	2.094	2	124	337584	0
	Zn	66	540.714	ug/L	23.865	4	1259	1118922	2
	Zn	67	495.377	ug/L	8.706	1	196	168843	0
	Zn	68	527.398	ug/L	8.755	1	985	764590	0
	As	75	5.334	ug/L	0.115	2	205	10298	0
	As-1	75	5.347	ug/L	0.238	4	8804	18633	0
	Se	82	0.193	ug/L	0 065	33	2	41	30
	Se	78	0.333	ug/L	0.500	149	8883	8895	0
	Mo	98	2.153	ug/L	0.064	2	21	9938	1
	Y	89		ug/L			393396	566589	0
	Kr	83		ug/L			387	611	3
>	In	115		ug/L			873328	881568	0
	Ag	107	0.695	ug/L	0.013	1	28	6215	1
	Cd	111	11.880	ug/L	0.174	1	91	50049	0
	Cd	114	12.044	ug/L	0.147	1	35	127503	0
	Sb	121	0.235	ug/L	0.005	2	177	3210	1
	Sb	123	0.236	ug/L	0.005	1	133	2429	1
	Ba	135	90.677	ug/L	0.999	1	525	352227	0
	Ba	137	90.650	ug/L	0.792	0	900	609883	0
>	Tb	159		ug/L			1029579	1058284	1
	Tl	205	0.061	ug/L	0.002	2	75	2172	1
	Pb	208	150.790	ug/L	2.261	1	577	6941091	0
	Bi	209		ug/L			2413416	2291986	0
	Th	232	0.750	ug/L	0.022	2	112	35462	1
	U	238	0.584	ug/L	0.012	2	6	27627	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 DDUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:38:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1073783	1100266	0
	Be	9	0.176	ug/L	0.007	4	20	613	4
	C	13		ug/L			96438	112212	2
	Cl	37		ug/L			4537351	4415380	1
>	Sc	45		ug/L			1037261	1111264	1
	V	51	31.178	ug/L	0.413	1	6297	701721	0
	V-1	51	31.135	ug/L	0.406	1	92	695038	0
	Cr	52	10.303	ug/L	0.099	0	18914	209071	0
	Cr	53	10.249	ug/L	0.081	0	153	21487	0
	Mn	55	356.541	ug/L	14.107	3	1535	9077411	2
	Co	59	4.160	ug/L	0.006	0	301	76903	1
>	Ge	72		ug/L			585419	581929	0
	Ni	60	14.093	ug/L	0.320	2	50	49011	2
	Ni	62	15.230	ug/L	0.131	0	70	7794	0
	Cu	63	20.819	ug/L	0.388	1	274	159715	2
	Cu	65	21.021	ug/L	0.408	1	124	73499	1
	Zn	66	115.089	ug/L	0.692	0	1259	241951	1
	Zn	67	111.057	ug/L	1.485	1	196	38435	0
	Zn	68	116.065	ug/L	0.513	0	985	170947	0
	As	75	9.258	ug/L	0.020	0	205	17929	0
	As-1	75	9.212	ug/L	0.016	0	8804	26146	0
	Se	82	0.055	ug/L	0.041	74	2	13	61
	Se	78	-0.308	ug/L	0.069	22	8883	8674	0
	Mo	98	0.633	ug/L	0.020	3	21	2968	3
	Y	89		ug/L			393396	525588	0
	Kr	83		ug/L			387	568	3
>	In	115		ug/L			873328	888820	0
	Ag	107	0.041	ug/L	0.002	5	28	398	4
	Cd	111	0.467	ug/L	0.007	1	91	2072	1
	Cd	114	0.422	ug/L	0.014	3	35	4540	2
	Sb	121	0.049	ug/L	0 003	5	177	813	5
	Sb	123	0.050	ug/L	0 004	7	133	622	6
	Ba	135	59.109	ug/L	0.627	1	525	231673	0
	Ba	137	59.443	ug/L	1.487	2	900	403485	1
>	Tb	159		ug/L			1029579	1073842	2
	Tl	205	0.030	ug/L	0.000	1	75	1117	3
	Pb	208	20.697	ug/L	0.327	1	577	967195	0
	Bi	209		ug/L			2413416	2306548	0
	Th	232	0.723	ug/L	0.009	1	112	34690	1
	U	238	0.199	ug/L	0.004	1	6	9574	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:42:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1099708	0
	Be	9	0.182	ug/L	0.001	0	20	635	0
	C	13		ug/L			96438	116884	1
	Cl	37		ug/L			4537351	4496042	2
>	Sc	45		ug/L			1037261	1123527	1
	V	51	32.461	ug/L	0.898	2	6297	738216	1
	V-1	51	32.454	ug/L	0.867	2	92	732327	1
	Cr	52	10.489	ug/L	0.068	0	18914	214838	1
	Cr	53	10.566	ug/L	0.081	0	153	22393	2
	Mn	55	373.850	ug/L	6.734	1	1535	9624644	1
	Co	59	4.885	ug/L	0.082	1	301	91225	1
>	Ge	72		ug/L			585419	578266	0
	Ni	60	16.604	ug/L	0.324	1	50	57367	1
	Ni	62	17.271	ug/L	0.204	1	70	8774	0
	Cu	63	20.848	ug/L	0.442	2	274	158937	2
	Cu	65	21.033	ug/L	0.319	1	124	73083	1
	Zn	66	126.707	ug/L	0.654	0	1259	264564	0
	Zn	67	121.420	ug/L	2.015	1	196	41739	1
	Zn	68	128.180	ug/L	1.219	0	985	187512	1
	As	75	12.010	ug/L	0 110	0	205	23052	0
	As-1	75	12.011	ug/L	0 175	1	8804	31231	0
	Se	82	0.072	ug/L	0.028	38	2	17	33
	Se	78	-0.244	ug/L	0 244	99	8883	8651	0
	Mo	98	0.557	ug/L	0.016	2	21	2599	2
	Y	89		ug/L			393396	548577	1
	Kr	83		ug/L			387	576	3
>	In	115		ug/L			873328	883868	1
	Ag	107	0.039	ug/L	0.003	7	28	372	7
	Cd	111	0.461	ug/L	0.007	1	91	2038	1
	Cd	114	0.435	ug/L	0.008	1	35	4655	1
	Sb	121	0.094	ug/L	0.003	2	177	1391	3
	Sb	123	0.090	ug/L	0.003	2	133	1015	3
	Ba	135	49.719	ug/L	1.077	2	525	193854	1
	Ba	137	50.110	ug/L	0 528	1	900	338413	0
>	Tb	159		ug/L			1029579	1073036	1
	Tl	205	0.036	ug/L	0.000	1	75	1351	0
	Pb	208	35.092	ug/L	0.435	1	577	1638384	0
	Bi	209		ug/L			2413416	2303025	1
	Th	232	0.729	ug/L	0.014	1	112	34975	1
	U	238	0.176	ug/L	0.003	1	6	8462	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 DSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:47:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1040798	2
[	Be	9	25.664	ug/L	0.747	2	20	81830	1
	C	13		ug/L			96438	103696	0
	Cl	37		ug/L			4537351	4487217	1
[>	Sc	45		ug/L			1037261	1090201	1
[	V	51	53.360	ug/L	1.411	2	6297	1173354	1
[	V-1	51	53.097	ug/L	1 264	2	92	1162668	1
[	Cr	52	35.088	ug/L	1.185	3	18914	650598	2
[	Cr	53	34.269	ug/L	0.789	2	153	70100	1
[	Mn	55	476.305	ug/L	13.950	2	1535	11897309	1
[	Co	59	27.555	ug/L	0.891	3	301	497853	2
[>	Ge	72		ug/L			585419	561829	1
[	Ni	60	41.095	ug/L	0.716	1	50	137856	0
[	Ni	62	41.311	ug/L	0.576	1	70	20296	1
[	Cu	63	46.225	ug/L	1.253	2	274	341947	1
[	Cu	65	45.712	ug/L	0.620	1	124	154205	2
[	Zn	66	215.601	ug/L	4.844	2	1259	436452	1
[	Zn	67	205.575	ug/L	1.033	0	196	68528	0
[	Zn	68	214.267	ug/L	5 538	2	985	303813	1
[	As	75	32.800	ug/L	0.507	1	205	60823	1
[	As-1	75	32.092	ug/L	0.361	1	8804	66946	0
[	Se	82	77.238	ug/L	1.087	1	2	15445	2
[	Se	78	76.303	ug/L	0.219	0	8883	45810	1
[	Mo	98	22.471	ug/L	0.283	1	21	101088	0
	Y	89		ug/L			393396	517706	1
	Kr	83		ug/L			387	609	6
[>	In	115		ug/L			873328	848346	2
[	Ag	107	22.157	ug/L	0.303	1	28	189752	1
[	Cd	111	24.700	ug/L	0.646	2	91	100005	0
[	Cd	114	25.009	ug/L	0.493	1	35	254676	0
[	Sb	121	2.705	ug/L	0.102	3	177	33699	1
[	Sb	123	2.689	ug/L	0.064	2	133	25298	1
[	Ba	135	82.531	ug/L	2.887	3	525	308391	1
[	Ba	137	83.315	ug/L	3.280	3	900	539154	1
[>	Tb	159		ug/L			1029579	1045022	2
[	Tl	205	22.367	ug/L	0.679	3	75	760743	0
[	Pb	208	44.481	ug/L	1.210	2	577	2021647	0
[	Bi	209		ug/L			2413416	2258272	1
[	Th	232	23.141	ug/L	0.829	3	112	1076550	0
[	U	238	22.875	ug/L	0.816	3	6	1068117	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 DPOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:51:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			1073783	1094187	2
	Be	9	25.928	ug/L	0 569	2	20	86931	2
	C	13		ug/L			96438	121573	1
	Cl	37		ug/L			4537351	4496191	0
>	Sc	45		ug/L			1037261	1112678	2
	V	51	56.057	ug/L	0.766	1	6297	1257914	1
	V-1	51	56.072	ug/L	0.493	0	92	1253321	1
	Cr	52	33.859	ug/L	1.030	3	18914	641440	1
	Cr	53	34.012	ug/L	0.303	0	153	71013	1
	Mn	55	397.509	ug/L	13.810	3	1535	10133097	2
	Co	59	27.861	ug/L	0.232	0	301	513812	1
>	Ge	72		ug/L			585419	576607	0
	Ni	60	41.579	ug/L	0.111	0	50	143175	1
	Ni	62	41.477	ug/L	0.213	0	70	20915	0
	Cu	63	45.703	ug/L	0.788	1	274	347044	0
	Cu	65	46.071	ug/L	0.574	1	124	159482	1
	Zn	66	206.777	ug/L	3.070	1	1259	429705	0
	Zn	67	194.893	ug/L	5.501	2	196	66680	2
	Zn	68	206.299	ug/L	4 444	2	985	300291	1
	As	75	38.239	ug/L	0.670	1	205	72737	1
	As-1	75	37.274	ug/L	0.763	2	8804	78401	1
	Se	82	82.259	ug/L	0 321	0	2	16881	0
	Se	78	80.262	ug/L	0.678	0	8883	49000	0
	Mo	98	25.930	ug/L	0.175	0	21	119731	1
	Y	89		ug/L			393396	547303	1
	Kr	83		ug/L			387	611	1
>	In	115		ug/L			873328	881391	0
	Ag	107	23.669	ug/L	0.335	1	28	210630	1
	Cd	111	24.429	ug/L	0.244	0	91	102806	0
	Cd	114	24.761	ug/L	0.462	1	35	262046	1
	Sb	121	24.118	ug/L	0.250	1	177	310924	0
	Sb	123	24.605	ug/L	0.125	0	133	239450	0
	Ba	135	75.567	ug/L	0.609	0	525	293572	0
	Ba	137	75.159	ug/L	0.415	0	900	505736	0
>	Tb	159		ug/L			1029579	1077201	1
	Tl	205	22.679	ug/L	0.317	1	75	795404	0
	Pb	208	57.156	ug/L	0.874	1	577	2678321	0
	Bi	209		ug/L			2413416	2307566	0
	Th	232	22.840	ug/L	0.289	1	112	1095768	0
	U	238	22.431	ug/L	0.631	2	6	1079927	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WR99 MB3SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:55:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1073783	1059366	0
	Be	**9**	**25.223**	ug/L	0.277	1	20	81890	1
	C	**13**		ug/L			96438	92531	2
	Cl	**37**		ug/L			4537351	4403265	0
>	**Sc**	**45**		ug/L			1037261	1038971	0
	V	**51**	**23.223**	ug/L	0.113	0	6297	490321	0
	V-1	**51**	**23.285**	ug/L	0.287	1	92	486035	0
	Cr	**52**	**23.714**	ug/L	0.087	0	18914	425290	0
	Cr	**53**	**23.923**	ug/L	0.680	2	153	46687	2
	Mn	**55**	**23.351**	ug/L	0.078	0	1535	557464	0
	Co	**59**	**23.225**	ug/L	0.781	3	301	399998	2
>	**Ge**	**72**		ug/L			585419	559582	0
	Ni	**60**	**25.532**	ug/L	0.118	0	50	85341	1
	Ni	**62**	**24.847**	ug/L	0.085	0	70	12186	0
	Cu	**63**	**25.848**	ug/L	0.599	2	274	190605	2
	Cu	**65**	**25.465**	ug/L	0.599	2	124	85589	1
	Zn	**66**	**79.930**	ug/L	0.921	1	1259	161935	0
	Zn	**67**	**73.692**	ug/L	1.124	1	196	24587	1
	Zn	**68**	**79.401**	ug/L	1.178	1	985	112764	2
	As	**75**	**26.003**	ug/L	0.455	1	205	48071	2
	As-1	**75**	**24.965**	ug/L	0.624	2	8804	53743	2
	Se	**82**	**80.252**	ug/L	0.591	0	2	15982	0
	Se	**78**	**78.415**	ug/L	1.205	1	8883	46652	0
	Mo	**98**	**25.032**	ug/L	0.349	1	21	112157	0
	Y	**89**		ug/L			393396	402793	0
	Kr	**83**		ug/L			387	517	3
>	**In**	**115**		ug/L			873328	874580	1
	Ag	**107**	**23.493**	ug/L	0.528	2	28	207416	1
	Cd	**111**	**23.903**	ug/L	0.237	0	91	99808	0
	Cd	**114**	**24.219**	ug/L	0.219	0	35	254315	0
	Sb	**121**	**24.237**	ug/L	0.092	0	177	310042	1
	Sb	**123**	**24.359**	ug/L	0.333	1	133	235222	1
	Ba	**135**	**24.660**	ug/L	0.499	2	525	95403	0
	Ba	**137**	**24.400**	ug/L	0.428	1	900	163506	1
>	**Tb**	**159**		ug/L			1029579	1029016	0
	Tl	**205**	**23.012**	ug/L	0.222	0	75	771044	0
	Pb	**208**	**23.451**	ug/L	0.049	0	577	1050293	0
	Bi	**209**		ug/L			2413416	2306010	0
	Th	**232**	**22.213**	ug/L	0.168	0	112	1018176	1
	U	**238**	**22.661**	ug/L	0.091	0	6	1042554	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 12:59:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1017112	0
[	Be	9	51.294	ug/L	1.093	2	20	159880	2
	C	13		ug/L			96438	87219	3
	Cl	37		ug/L			4537351	4399321	0
[>	Sc	45		ug/L			1037261	1002753.	2
[	V	51	48.542	ug/L	0.757	1	6297	982355	1
[	V-1	51	48.756	ug/L	0.833	1	92	981943	0
[	Cr	52	48.700	ug/L	0.858	1	18914	823464	0
[	Cr	53	49.432	ug/L	1.217	2	153	92919	0
[	Mn	55	47.868	ug/L	0.734	1	1535	1101092	0
[	Co	59	48.880	ug/L	0.438	0	301	812131	1
[>	Ge	72		ug/L			585419	546981	1
[	Ni	60	50.723	ug/L	0.898	1	50	165655	0
[	Ni	62	49.056	ug/L	0.831	1	70	23452	1
[	Cu	63	50.085	ug/L	0.832	1	274	360753	0
[	Cu	65	50.225	ug/L	1.249	2	124	164898	1
[	Zn	66	50.140	ug/L	0.945	1	1259	99729	1
[	Zn	67	51.989	ug/L	0.596	1	196	17009	0
[	Zn	68	51.243	ug/L	0.444	0	985	71452	0
[	As	75	50.807	ug/L	0.649	1	205	91617	0
[	As-1	75	50.615	ug/L	0.660	1	8804	98047	0
[	Se	82	52.988	ug/L	0.644	1	2	10315	0
[	Se	78	51.881	ug/L	0.995	1	8883	32979	0
[	Mo	98	51.149	ug/L	0.686	1	21	224002	0
	Y	89		ug/L			393396	383422	2
	Kr	83		ug/L			387	470	7
[>	In	115		ug/L			873328	851674	1
[	Ag	107	47.192	ug/L	0.183	0	28	405769	1
[	Cd	111	48.521	ug/L	0.386	0	91	197208	1
[	Cd	114	48.554	ug/L	0.272	0	35	496488	1
[	Sb	121	49.080	ug/L	0.732	1	177	611149	1
[	Sb	123	49.209	ug/L	0.932	1	133	462535	0
[	Ba	135	49.957	ug/L	0.320	0	525	187699	1
[	Ba	137	50.161	ug/L	0.461	0	900	326406	0
[>	Tb	159		ug/L			1029579	1010319	2
[	Tl	205	46.699	ug/L	0.410	0	75	1536075	1
[	Pb	208	46.865	ug/L	0.851	1	577	2059795	1
[	Bi	209		ug/L			2413416	2223048	0
[	Th	232	49.030	ug/L	1.215	2	112	2205667	0
[	U	238	49.006	ug/L	0.862	1	6	2213042	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 13:06:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1073783	1031533	2
	Be	**9**	**0.002**	ug/L	0.002	108	20	24	24
	C	**13**		ug/L			96438	86395	2
	Cl	**37**		ug/L			4537351	4319789	1
>	**Sc**	**45**		ug/L			1037261	998532	1
	V	**51**	**-0.007**	ug/L	0.006	81	6297	5918	1
	V-1	**51**	**-0.000**	ug/L	0.000	112	92	86	4
	Cr	**52**	**-0.038**	ug/L	0.022	58	18914	17584	1
	Cr	**53**	**-0.014**	ug/L	0.002	11	153	122	1
	Mn	**55**	**-0.020**	ug/L	0.001	3	1535	1024	2
	Co	**59**	**-0.003**	ug/L	0.001	41	301	236	8
>	**Ge**	**72**		ug/L			585419	543190	1
	Ni	**60**	**0.002**	ug/L	0.001	39	50	51	4
	Ni	**62**	**-0.017**	ug/L	0.006	37	70	57	5
	Cu	**63**	**-0.009**	ug/L	0.003	35	274	192	10
	Cu	**65**	**-0.008**	ug/L	0.002	32	124	90	9
	Zn	**66**	**-0.206**	ug/L	0.003	1	1259	766	1
	Zn	**67**	**-0.210**	ug/L	0.062	29	196	115	17
	Zn	**68**	**-0.169**	ug/L	0.027	15	985	682	5
	As	**75**	**0.038**	ug/L	0.019	48	205	258	11
	As-1	**75**	**0.123**	ug/L	0.048	39	8804	8386	0
	Se	**82**	**0.006**	ug/L	0.026	464	2	3	147
	Se	**78**	**0.522**	ug/L	0.167	31	8883	8488	0
	Mo	**98**	**0.009**	ug/L	0.001	13	21	59	10
	Y	**89**		ug/L			393396	391508	0
	Kr	**83**		ug/L			387	479	2
>	**In**	**115**		ug/L			873328	853650	0
	Ag	**107**	**0.001**	ug/L	0.001	104	28	36	23
	Cd	**111**	**-0.001**	ug/L	0.000	8	91	85	0
	Cd	**114**	**0.000**	ug/L	0.000	62	35	39	6
	Sb	**121**	**0.083**	ug/L	0.018	21	177	1214	19
	Sb	**123**	**0.084**	ug/L	0.022	26	133	918	23
	Ba	**135**	**-0.072**	ug/L	0.004	5	525	242	7
	Ba	**137**	**-0.070**	ug/L	0.002	2	900	426	3
>	**Tb**	**159**		ug/L			1029579	997103	1
	Tl	**205**	**0.003**	ug/L	0.001	29	75	161	16
	Pb	**208**	**-0.002**	ug/L	0.001	35	577	467	8
	Bi	**209**		ug/L			2413416	2264269	0
	Th	**232**	**0.104**	ug/L	0.009	9	112	4713	7
	U	**238**	**0.003**	ug/L	0.001	25	6	119	22

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) **Analysis Date:** 6-10-13

	Analyst 6-10 DM	Peer 6/11/13	Comment
Logbook			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	—	
Matrix QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
	—	—	

UR99 : 02495

Mercury Analysis Log

Analyst: DM Date: 6-10-13

Instrument: CETAC Page: 1 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments
STD	0.0	SMM	1X		
"	0.1				
"	0.5				
"	1.0				
"	2.0				
"	5.0				
"	10.0				
ICV				8.00	Beg in CLP %R = 100 ✓
ICB				-0.04	✓
CCV1				4.04	%R = 101 ✓
CCB1				-0.02	✓
CRA				0.11	✓
WR57	MB1			0.01	✓
"	MB1SPK			1.98	%R = 99 ✓
"	MB1SPD			2.08	%R = 104 ✓
"	A				
"	B				
"	C				
"	D				
W549	MB1			0.01	✓
"	MB1SPK			1.99	%R = 100 ✓
CCV2				4.05	%R = 101 ✓
CCB2				-0.01	✓
W549	A			0.08	
"	ADUP			0.00	RPD = 12.5 ✓
"	ASPK			1.00	%R = 98 ✓
"	B				
"	C				
"	D				
W534	MB1	↓	↓	0.01	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2505

14% NH_2OH/NaCl: MP2477

Standard ID:

Standard: 3536-15

ICV/CCV: 59-6

Mercury Analysis Log

Analyst: DM Date: 6.10.13

Instrument: CETAC Page: 2 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
WS34	MB1SPK	5mm	1X	1.97	%R=99	√
"	MB1SPD			1.97	%R=99	√
"	A					
CCV3				4.08	%R=102	√
CCB3				-0.01		√
WS35	MB1			0.00		√
"	MB1SPK			1.96	%R=98	√
"	MB1SPD			2.02	%R=101	√
"	A					
WS20	MB1			0.00		√
"	MB1SPK			2.07	%R=104	√
"	A			0.55		
"	ADUP			0.48		√
"	ASPK			1.53	%R=98	√
"	B					
CCV4				4.12	%R=103	√
CCB4				-0.01		√
WS20	C					
"	D					
"	E					
WS27	MB1			0.01		√
"	MB1SPK		↓	2.02	%R=101	√
"	REF1		5X	6.61	6.10 mg/kg	√
"	A		1X	0.07		
"	ADUP			0.10		√
"	ASPK			1.15	%R=115	√
WS21	MB1			0.00		√
CCV5				4.14	%R=104	√
CCB5				-0.01		√
WS21	MB1SPK	↓	↓	2.06	%R=103	√

Chemical/Reagent ID:

10% $SnCl_2$: MP2505 14% NH_2OH/NaCl: MP2477

Standard ID:

Standard: 3036-15 ICV/CCV: 59-6

WR99 : 02497

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 6-10-13

Page: 3 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
WS21	A	5MM	1X	0.03		
"	ADUP			0.09	NO RPD: Undetected	✓
"	ASPK			1.12	%R = 112	✓
WR99	MB3			-0.00		✓
"	MB3SPK			2.07	%R = 104	✓
"	D			0.05		
"	DDUP			0.06	NO RPD: Undetected	✓
"	DSPK			1.16	%R = 116	✓
"	E					
CCV6				4.13	%R = 103	✓
CCB6				-0.01		✓
WR99	F					
CCV7				4.06	%R = 102	✓
CCB7				-0.01	END CLP	✓
WT03	MB1			0.00		✓
"	MB1SPK			1.07	%R = 99	✓
"	A			0.25		
"	ADUP			0.23		✓
"	ASPK			1.31	%R = 106	✓
"	B					
"	C					
"	D					
"	E					
WS48	MB1			0.01		✓
CCV				4.16	%R = 104	✓
CCB				-0.01		✓
WS48	MB1SPK			1.98	%R = 99	✓
"	A					
"	B					
WS61	MB1	↓	↓	0.01		✓

6-11-13

Chemical/Reagent ID:

10% $SnCl_2$: MP2505

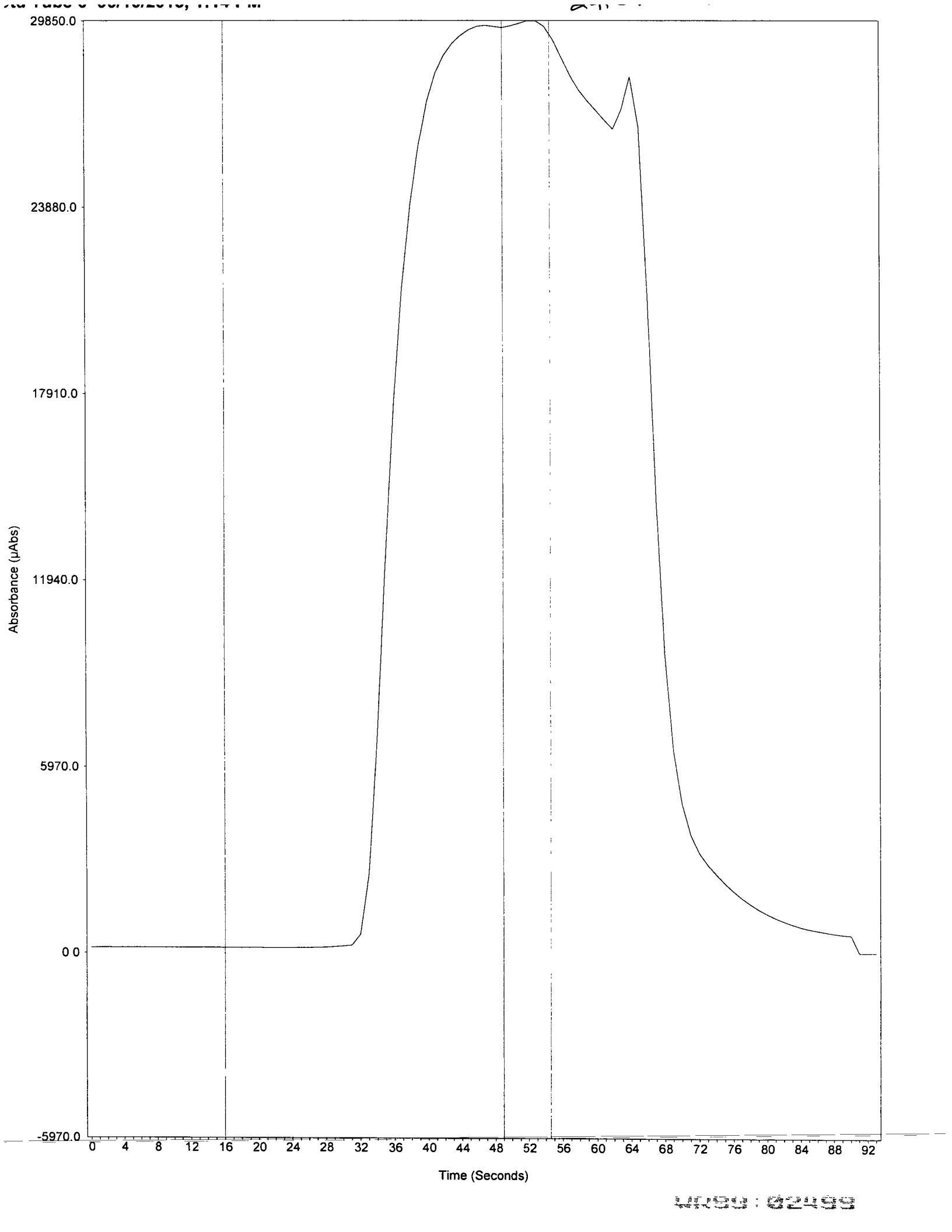
14% NH_2OH/NaCl: MP247

Standard ID:

Standard: 3036-15

ICV/CCV: 59-6

UR99 : 02498


29850.0
23880.0
17910.0
11940.0
5970.0
0 0
-5970.0
Absorbance (µAbs)
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92
Time (Seconds)

CETAC Hg Analysis Report - 13061000.DB - Monday, June 10, 2013, 3:54:06 PM

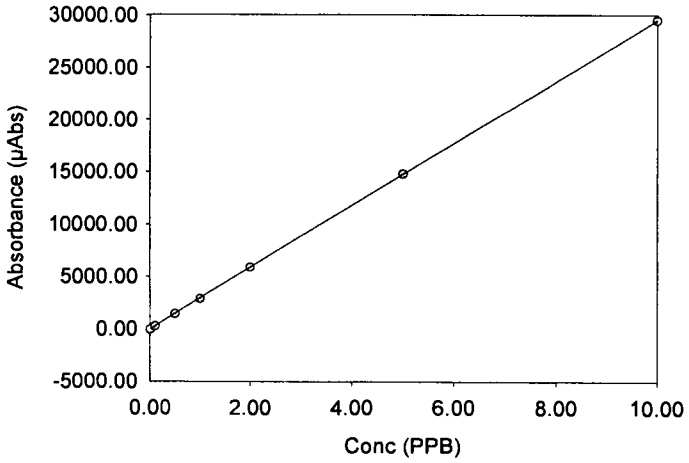
Analyst
Date Started Monday, June 10, 2013, 13:13:07
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	10-Jun-2013, 13:13	10.00	0.28	29600.00	1.00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	10-Jun-2013, 13:15	0.00	1.96	-41.30	1.00	
Standard #1	10-Jun-2013, 13:17	0.10	1.46	281.00	1.00	
Standard #2	10-Jun-2013, 13:19	0.50	0.68	1440.00	1.00	
Standard #3	10-Jun-2013, 13:20	1.00	0.31	2890.00	1.00	
Standard #4	10-Jun-2013, 13:22	2.00	0.15	5910.00	1.00	
Standard #5	10-Jun-2013, 13:24	5.00	0.42	14800.00	1.00	
Standard #6	10-Jun-2013, 13:25	10.00	0.25	29600.00	1.00	

Calibration Data



Int.	0.000
Slope	2956.512
Correlation	0.99999

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	10-Jun-2013, 13:27	8.00	0.50	23700.00	1.00	
ICB	10-Jun-2013, 13:29	-0.04	1.52	-104.00	1.00	

Begin CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 13:31	4.04	0.50	11900.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 13:32	-0.02	5.88	-47.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	10-Jun-2013, 13:34	0.11	1.64	320.00	1.00	
WR57 MB1 SMM	10-Jun-2013, 13:35	0.01	3.31	15.30	1.00	
WR57 MB1SPK SMM	10-Jun-2013, 13:37	1.98	0.26	5850.00	1.00	
WR57 MB1SPD SMM	10-Jun-2013, 13:39	2.08	0.33	6150.00	1.00	
WR57 A SMM	10-Jun-2013, 13:40	0.51	0.66	1500.00	1.00	
WR57 B SMM	10-Jun-2013, 13:42	0.30	0.38	889.00	1.00	
WR57 C SMM	10-Jun-2013, 13:43	0.20	0.33	594.00	1.00	
WR57 D SMM	10-Jun-2013, 13:45	0.48	0.64	1430.00	1.00	
WS49 MB1 SMM	10-Jun-2013, 13:47	0.01	5.21	41.20	1.00	
WS49 MB1SPK SMM	10-Jun-2013, 13:48	1.99	0.49	5870.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 13:50	4.05	0.19	12000.00	1.00	

Analyst
Date Started Monday, June 10, 2013, 13:52:10
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 13:52	-0.01	5.77	-26.70	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS49 A SMM	10-Jun-2013, 13:53	0.68	0.29	2010.00	1.00	
WS49 ADUP SMM	10-Jun-2013, 13:55	0.60	0.44	1770.00	1.00	
WS49 ASPK SMM	10-Jun-2013, 13:56	1.66	0.16	4920.00	1.00	
WS49 B SMM	10-Jun-2013, 13:58	0.36	0.29	1060.00	1.00	
WS49 C SMM	10-Jun-2013, 14:00	1.15	0.36	3390.00	1.00	
WS49 D SMM	10-Jun-2013, 14:01	0.31	0.43	906.00	1.00	
WS34 MB1 SMM	10-Jun-2013, 14:03	0.01	12.70	24.90	1.00	
WS34 MB1SPK SMM	10-Jun-2013, 14:04	1.97	0.13	5840.00	1.00	
WS34 MB1SPD SMM	10-Jun-2013, 14:06	1.97	0.16	5820.00	1.00	
WS34 A SMM	10-Jun-2013, 14:08	0.09	0.29	268.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 14:09	4.08	0.18	12100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 14:11	-0.01	5.43	-21.90	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS35 MB1 SMM	10-Jun-2013, 14:13	0.00	71.90	4.73	1.00	
WS35 MB1SPK SMM	10-Jun-2013, 14:14	1.96	0.14	5780.00	1.00	
WS35 MB1SPD SMM	10-Jun-2013, 14:16	2.02	0.39	5960.00	1.00	
WS35 A SMM	10-Jun-2013, 14:18	0.12	0.25	367.00	1.00	
WS20 MB1 SMM	10-Jun-2013, 14:19	0.00	64.80	7.62	1.00	
WS20 MB1SPK SMM	10-Jun-2013, 14:21	2.07	0.33	6120.00	1.00	
WS20 A SMM	10-Jun-2013, 14:22	0.55	0.28	1620.00	1.00	
WS20 ADUP SMM	10-Jun-2013, 14:24	0.48	0.56	1410.00	1.00	
WS20 ASPK SMM	10-Jun-2013, 14:26	1.53	0.30	4530.00	1.00	
WS20 B SMM	10-Jun-2013, 14:27	0.46	0.35	1350.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 14:29	4.12	0.14	12200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 14:31	-0.01	9.74	-21.20	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS20 C SMM	10-Jun-2013, 14:32	0.79	0.38	2330.00	1.00	
WS20 D SMM	10-Jun-2013, 14:34	0.55	0.27	1620.00	1.00	
WS20 E SMM	10-Jun-2013, 14:36	0.57	0.28	1670.00	1.00	
WS27 MB1 SMM	10-Jun-2013, 14:37	0.01	9.84	25.70	1.00	
WS27 MB1SPK SMM	10-Jun-2013, 14:39	2.02	0.44	5960.00	1.00	
WS27 REF1 SMM	10-Jun-2013, 14:40	6.61	0.18	19600.00	1.00	
WS27 A SMM	10-Jun-2013, 14:42	0.07	0.61	199.00	1.00	
WS27 ADUP SMM	10-Jun-2013, 14:44	0.10	0.76	305.00	1.00	
WS27 ASPK SMM	10-Jun-2013, 14:45	1.15	0.43	3390.00	1.00	
WS21 MB1 SMM	10-Jun-2013, 14:47	0.00	29.00	5.43	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 14:48	4.14	0.36	12200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 14:50	-0.01	5.74	-28.80	1.00	

CETAC Hg Analysis Report - 13061000.DB - Monday, June 10, 2013, 3:54:07 PM

Analyst
Date Started Monday, June 10, 2013, 14:52:17
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS21 MB1SPK SMM	10-Jun-2013, 14:52	2.06	0.50	6090.00	1.00	
WS21 A SMM	10-Jun-2013, 14:53	0.03	2.30	81.10	1.00	
WS21 ADUP SMM	10-Jun-2013, 14:55	0.09	0.95	263.00	1.00	
WS21 ASPK SMM	10-Jun-2013, 14:57	1.12	0.23	3300.00	1.00	
WR99 MB3 SMM	10-Jun-2013, 14:58	-0.00	187.00	-2.85	1.00	
WR99 MB3SPK SMM	10-Jun-2013, 15:00	2.07	0.31	6110.00	1.00	
WR99 D SMM	10-Jun-2013, 15:02	0.05	3.61	161.00	1.00	
WR99 DDUP SMM	10-Jun-2013, 15:03	0.06	0.84	179.00	1.00	
WR99 DSPK SMM	10-Jun-2013, 15:05	1.16	0.36	3420.00	1.00	
WR99 E SMM	10-Jun-2013, 15:06	0.22	1.02	639.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 15:08	4.13	0.40	12200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 15:10	-0.01	7.39	-27.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WR99 F SMM	10-Jun-2013, 15:11	8.33	0.32	24600.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 15:13	4.06	0.16	12000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 15:15	-0.01	1.89	-23.60	1.00	END CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WT03 MB1 SMM	10-Jun-2013, 15:17	0.00	9.42	6.49	1.00	
WT03 MB1SPK SMM	10-Jun-2013, 15:18	1.97	0.28	5810.00	1.00	
WT03 A SMM	10-Jun-2013, 15:20	0.25	0.60	730.00	1.00	
WT03 ADUP SMM	10-Jun-2013, 15:22	0.23	0.42	685.00	1.00	
WT03 ASPK SMM	10-Jun-2013, 15:23	1.31	0.17	3880.00	1.00	
WT03 B SMM	10-Jun-2013, 15:25	0.23	0.11	676.00	1.00	
WT03 C SMM	10-Jun-2013, 15:26	0.22	0.54	655.00	1.00	
WT03 D SMM	10-Jun-2013, 15:28	0.35	0.29	1020.00	1.00	
WT03 E SMM	10-Jun-2013, 15:30	0.22	0.37	661.00	1.00	
WS48 MB1 SMM	10-Jun-2013, 15:31	0.01	17.50	14.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 15:33	4.16	0.27	12300.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 15:34	-0.01	76.60	-18.10	1.00	

6-11-13

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS48 MB1SPK SMM	10-Jun-2013, 15:36	1.98	0.18	5870.00	1.00	
WS48 A SMM	10-Jun-2013, 15:38	0.04	1.48	130.00	1.00	
WS48 B SMM	10-Jun-2013, 15:39	0.64	0.24	1900.00	1.00	
WS61 MB1 SMM	10-Jun-2013, 15:41	0.01	9.61	20.40	1.00	
WS61 MB1SPK SMM	10-Jun-2013, 15:43	2.01	0.26	5930.00	1.00	
WS61 A SMM	10-Jun-2013, 15:44	0.07	3.35	201.00	1.00	
WS61 ADUP SMM	10-Jun-2013, 15:46	0.14	0.72	401.00	1.00	
WS61 ASPK SMM	10-Jun-2013, 15:47	1.16	0.17	3430.00	1.00	
WS61 B SMM	10-Jun-2013, 15:49	0.10	0.83	301.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 15:51	4.17	0.20	12300.00	1.00	

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1.40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0.10 PPB
Calibration Standard #2 Conc.:	0.50 PPB
Calibration Standard #3 Conc.:	1.00 PPB
Calibration Standard #4 Conc.:	2.00 PPB
Calibration Standard #5 Conc.:	5.00 PPB
Calibration Standard #6 Conc.:	10.00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% .. 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 .. 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: 3mm Instrument: CETAC
Analyst: DM Date: 6.06.13
Bath Temp: 95°C Start Time: 1425 End Time: 1455

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	3036-15	0.01		0.1	2
STD2		0.05		0.5	2
STD3		0.10		1.0	2
STD4		0.20		2.0	2
STD5		0.50		5.0	2
STD6		1.00		10.0	2
CRA	↓	0.01		0.1	1
ICB/CCB	—	0.00		0.0	3
ICV/LCS	59-6	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:

HNO_3: IBK9 H_2SO_4: I8044 HCl: —

5% $K_2S_2O_8$: MP2491 5% $KMnO_4$: MP2475

Prep Code: _____ Instrument: _____
Analyst: _____ Date: _____
Bath Temp: _____ Start Time: _____ End Time: _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:

HNO_3: _____ H_2SO_4: _____ HCl: _____

5% $K_2S_2O_8$: _____ 5% $KMnO_4$: _____

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm
Analyst: CB
Bath Temp: 95°C
Start Time: 0930
Matrix: Soil
Date: 6-06-13
End Time: 1000

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WS527 A	1	-	0.231	50c	6/11, 1	Y	
" ADup	1	-	0.229		1		
" ASpk	1	-	0.232		1		
" REF1		-	0.204		1		
" mB1	-	-	-		1		
" mB1Spk	-	-	-		1		
WS521 A	7	-	0.280		6/14, 1		
" ADup	7	-	0.275		1		
" ASpk	7	-	0.275		1		
" mB1	-	-	-		1		
" mB1Spk	-	-	-		1		
WR99 D	7	-	0.235		6/14, 1		
" DDup	7	-	0.235		1		
" DSpk	7	-	0.232		1		
" E	2	-	0.205		1		
" F	2	-	0.236		1		
" mB3	-	-	-		1	Y	
" mB3Spk	-	-	-	50c	1	Y	
			CB 6-06-13				

Chemical/Reagent ID:

HNO_3: I8169 H_2SO_4: I8044 HCl: -

5% $K_2S_2O_8$: mp2491 5% $KMnO_4$: mp2475 Digest Tube Lot: mH21K506

Mercury Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WR99, WS01

SPIKING LOG

Analyst: DM **Final Volume** _____ **Sample ID** W301 AESPK, MBISPK

Date: 6-04-13 **Final Volume (Hg):** 20

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
	Ag	50		2.0
S	Al	200	200	
T	As	200		10
O	Ba	200	200	
C	Be	50	50	
K	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
C	Cr	50	50	
O	Cu	50	50	
N	Fe	200	200	
C	K	1000	1000	
E	Mg	1000	1000	
N	Mn	50	50	
T	Na	1000	1000	
R	Ni	50	50	
A	Pb	200		10
T	Se	200		10
I	Sr	50	50	
O	Tl	200		10
N	V	50	50	
	Zn	50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	TLA	CVA	1.0	0.92	3007-14
Hg MBSPK	↓	CVA	1.0	0.04	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 6-04-13

Final Volume _____

Final Volume (Hg): 20

Sample ID WG91 BSPK, MBSPK

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	DLM	CVA	1.0	0.02	3057-14
Hg MBSPK	↓	CVA	1.0	0.04	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: TLM | DLM
Analyst: DM
Bath Temp: 95°C
Start Time: 0735
Matrix: Water
Date: 6-04-13
End Time: 0935

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WS01 A	1	✓	20.0	20.0	1	Y	
" ADUP	1	✓			1		
" ASPK	1	✓			1		
" MB1	—	✓			1		
" MB1SPK	—	✓			1		
" B	1	—			1		
" BDUP	1	—			1		
" BSPK	1	—			1		DLM
" MB2	—	—			1		
" MB2SPK	—	—	20.0	20.0	1	Y	
			6-4-13 DM				

Chemical/Reagent ID:

HNO_3: IB149 | MP2452
H_2SO_4: IB044
HCl: —
5% $K_2S_2O_8$: MP2491
5% $KMnO_4$: MP2475
Digest Tube Lot: MM01LKK0

Mercury Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WR99, WS01

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA)

Analysis Date: 6-11-13

Low Level	Analyst CB 6-11-13	Peer 6/11/13	Comment
Sample Data			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
QC			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Precision			
RSD's & SD's	✓	✓	
Internal Standards	-	—	
Carry-over	-	—	
Matrix			
CRI/CRA	✓	✓	
ICSA/ICSAB	-	—	
Post Spikes/Serial Dilutions	-	—	
Analytic Spikes	-	—	
Matrix			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Other			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
N	-	—	

WR99 : 82511

Mercury Analysis Log

Analyst: CB **Date:** 6-11-13

Instrument: CETAC **Page:** 1 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb) ppt	Comments
STD 0.0	TLM	1x		
" 20.0				
" 50.0				
" 100.0				
" 200.0				
" 400.0				
" 1000.0				
ICV			469.38	Besi's CLP %R=94 ✓
ICB			-1.23	✓
CCV1			490.02	%R=98 ✓
CCB1			-1.61	✓
CRA			16.55	✓
WS01 MB1			0.33	✓
" MB1SPK			181.45	%R=91 ✓
" A			0.79	
" ADup			-0.15	NO RPD: undetected ✓
" ASPK	TLM		89.58	%R=90 ✓
" MB2	DLM		-1.23	✓
" MB2SPK			184.22	%R=92 ✓
" B			0.15	
" BDup	DLM		0.47	NO RPD: undetected ✓
CCV2	TLM		496.20	%R=99 ✓
CCB2	TLM		-0.83	✓
WS01 BSPK	DLM		90.88	%R=91 ✓
CCV3	TLM		513.27 ~~496.2~~	CB 6/11/13 %R=103 ✓
CCB3			-1.07	✓
WS03 MB			-1.48	✓
" MBSPK			183.05	%R=92 ✓
" A				
" B		6-12-13	-0.19	

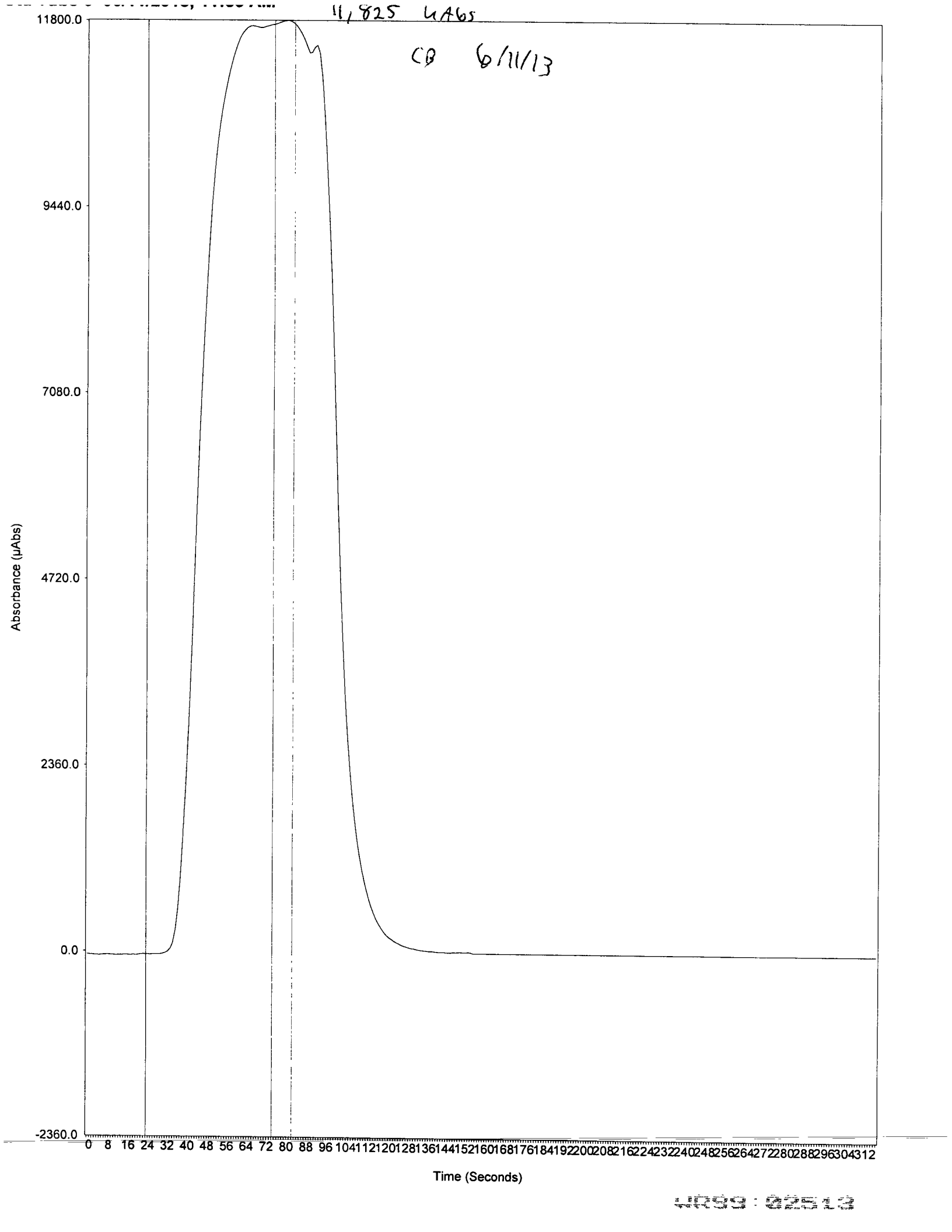
Chemical/Reagent ID:

10% $SnCl_2$: MP2505 **14% NH_2OH/NaCl:** MP2477

Standard ID:

Standard: 3030-16 **ICV/CCV:** 3037-1

W09:02512


11,825 uAbs
CB 6/11/13
11800.0
9440.0
7080.0
4720.0
2360.0
0.0
-2360.0
Absorbance (µAbs)
0 8 16 24 32 40 48 56 64 72 80 88 96 104 112 120 128 136 144 152 160 168 176 184 192 200 208 216 224 232 240 248 256 264 272 280 288 296 304 312
Time (Seconds)

CETAC Hg Analysis Report - 13061100.DB - Tuesday, June 11, 2013, 3:08:19 PM

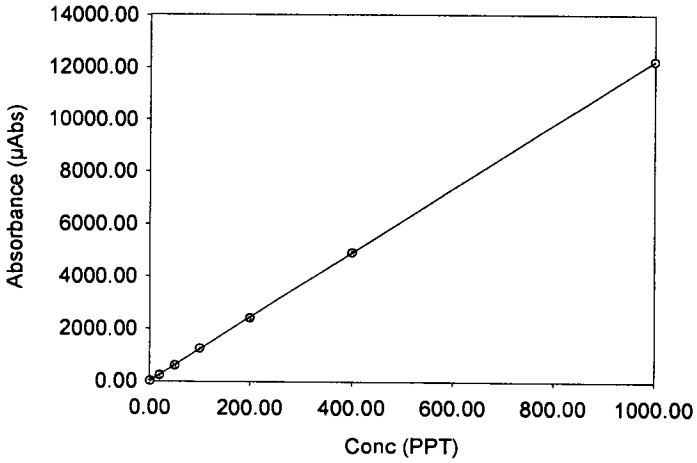
Analyst
Date Started Tuesday, June 11, 2013, 11:52:37
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Std Tube 6	11-Jun-2013, 11:52	1000.00	0.13	11800.00	11805	11829	11842	11826	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	11-Jun-2013, 11:55	0.00	32.10	12.50	8	10	15	16	
Standard #1	11-Jun-2013, 11:58	20.00	1.41	235.00	240	235	233	233	
Standard #2	11-Jun-2013, 12:00	50.00	0.43	612.00	610	609	613	614	
Standard #3	11-Jun-2013, 12:03	100.00	0.04	1260.00	1256	1255	1256	1255	
Standard #4	11-Jun-2013, 12:06	200.00	0.14	2420.00	2416	2417	2417	2410	
Standard #5	11-Jun-2013, 12:08	400.00	0.11	4920.00	4910	4921	4921	4919	
Standard #6	11-Jun-2013, 12:11	1000.00	0.10	12300.00	12244	12260	12269	12244	

Calibration Data



Int.	0.000
Slope	12.256
Correlation	0.99999

TLM

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
ICV	11-Jun-2013, 12:15	469.00	0.10	5750.00	5757	5756	5753	5744	
ICB	11-Jun-2013, 12:18	-1.23	15.50	-15.10	-13	-13	-18	-17	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	11-Jun-2013, 12:21	490.00	0.07	6010.00	6001	6003	6010	6008	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	11-Jun-2013, 12:23	-1.61	7.66	-19.70	-19	-22	-18	-20	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
CRA	11-Jun-2013, 12:26	16.60	0.66	203.00	203	203	201	204	
WS01 MB1 TLM	11-Jun-2013, 12:29	0.33	24.10	4.03	4	3	5	4	
WS01 MB1SPK TLM	11-Jun-2013, 12:31	181.00	0.11	2220.00	2221	2225	2227	2223	
WS01 A TLM	11-Jun-2013, 12:34	0.79	19.00	9.68	11	8	8	11	
WS01 ADUP TLM	11-Jun-2013, 12:37	-0.15	198.00	-1.85	-4	-5	-2	3	
WS01 ASPK TLM	11-Jun-2013, 12:39	89.60	0.11	1100.00	1096	1098	1099	1097	
WS01 MB2 DLM	11-Jun-2013, 12:42	-1.23	13.90	-15.10	-18	-16	-13	-14	
WS01 MB2SPK DLM	11-Jun-2013, 12:45	184.00	0.12	2260.00	2257	2261	2257	2255	
WS01 B DLM	11-Jun-2013, 12:48	0.15	154.00	1.84	0	3	5	-1	
WS01 BDUP DLM	11-Jun-2013, 12:50	0.47	62.30	5.78	7	0	8	8	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	11-Jun-2013, 12:53	496.00	0.18	6080.00	6066	6080	6090	6089	

CETAC Hg Analysis Report - 13061100.DB - Tuesday, June 11, 2013, 3:08:20 PM

Analyst
Date Started Tuesday, June 11, 2013, 12:56:13
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	11-Jun-2013, 12:56	-0.83	30.70	-10.20	-8	-7	-14	-12	
WS01 BSPK DLM	11-Jun-2013, 12:58	90.90	0.19	1110.00	1115	1112	1112	1116	
QC Standard	11-Jun-2013, 13:01	513.00	0.75	6290.00	6330	6322	6283	6227	
QC Blank	11-Jun-2013, 13:04	-1.07	32.40	-13.10	-7	-14	-14	-18	
WS03 MB TLM	11-Jun-2013, 13:07	-1.48	4.58	-18.10	-17	-19	-17	-19	
WS03 MBSPK TLM	11-Jun-2013, 13:09	183.00	0.26	2240.00	2249	2247	2243	2236	
WS03 A TLM	11-Jun-2013, 13:12	0.12	256.00	1.42	3	-4	4	3	
WS03 B TLM	11-Jun-2013, 13:15	-0.19	106.00	-2.27	-4	-4	-2	1	
WS03 BDUP TLM	11-Jun-2013, 13:17	-0.41	27.50	-5.04	-5	-7	-5	-3	
WS03 BSPK TLM	11-Jun-2013, 13:20	82.70	0.21	1010.00	1016	1011	1012	1014	
WS03 C TLM	11-Jun-2013, 13:23	-0.20	143.00	-2.41	3	-4	-5	-4	
WS23 MB TLM	11-Jun-2013, 13:25	-0.54	29.00	-6.67	-8	-7	-8	-4	
WS23 MBSPK TLM	11-Jun-2013, 13:28	190.00	0.17	2330.00	2332	2334	2332	2325	
WS23 A TLM	11-Jun-2013, 13:31	57.70	0.65	707.00	713	709	703	704	
QC Standard	11-Jun-2013, 13:34	510.00	0.18	6240.00	6229	6247	6256	6247	
QC Blank	11-Jun-2013, 13:36	-1.55	5.91	-19.00	-18	-18	-20	-20	
WS23 B TLM	11-Jun-2013, 13:39	-0.22	75.90	-2.67	-3	-3	-4	0	
WS23 BDUP TLM	11-Jun-2013, 13:42	-1.19	24.40	-14.60	-12	-11	-17	-18	
WS23 BSPK TLM	11-Jun-2013, 13:44	89.40	0.23	1100.00	1099	1096	1094	1093	
WS23 C TLM	11-Jun-2013, 13:47	-0.71	52.70	-8.65	-12	-13	-6	-4	
WS23 D TLM	11-Jun-2013, 13:50	-0.50	20.70	-6.09	-5	-7	-7	-5	
WS23 E TLM	11-Jun-2013, 13:53	-0.40	41.50	-4.94	-6	-7	-4	-2	
QC Standard	11-Jun-2013, 13:55	511.00	0.11	6260.00	6253	6263	6269	6265	
QC Blank	11-Jun-2013, 13:58	-0.53	60.00	-6.50	-11	-5	-2	-8	
WS92 MB1 TLM	11-Jun-2013, 14:01	-0.34	55.40	-4.21	-2	-4	-3	-7	
WS92 MB1SPK TLM	11-Jun-2013, 14:04	196.00	0.01	2410.00	2408	2408	2408	2408	
WS92 A TLM	11-Jun-2013, 14:07	18.30	1.86	224.00	228	226	223	219	
WS92 B TLM	11-Jun-2013, 14:09	4.47	6.29	54.80	53	58	58	51	
WS92 BDUP TLM	11-Jun-2013, 14:12	3.15	1.43	38.60	39	39	38	38	
WS92 BSPK TLM	11-Jun-2013, 14:15	111.00	0.45	1360.00	1362	1363	1358	1350	
WS92 C TLM	11-Jun-2013, 14:17	0.87	47.30	10.60	3	11	15	13	
WS92 D TLM	11-Jun-2013, 14:20	1.03	19.80	12.60	10	12	12	16	
WS92 MB2 DLM	11-Jun-2013, 14:23	0.96	13.60	11.70	10	13	13	11	
WS92 MB2SPK DLM	11-Jun-2013, 14:25	204.00	0.07	2500.00	2498	2497	2494	2495	

Analyst	
Date Created:	Wednesday, November 27, 2002
Worksheet	LOW LEVEL CALIB 20 TO 1000 PPT
Comment	
Sip Duration (Sec.):	55
Rinse Duration (Sec.):	100
Read Delay:	75
Integration Time/Replicate:	2.00
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	20
Baseline Point 1 End Time:	24
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	148
Baseline Point 2 End Time:	152
Gas Flow (ml/min):	30
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	2
Calibration Standard #1 Conc.:	20.00 PPT
Calibration Standard #2 Conc.:	50.00 PPT
Calibration Standard #3 Conc.:	100.00 PPT
Calibration Standard #4 Conc.:	200.00 PPT
Calibration Standard #5 Conc.:	400.00 PPT
Calibration Standard #6 Conc.:	1000.00 PPT
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 200, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 90% .. 110%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -20 .. 20,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: Smm Instrument: CETAC
Analyst: DM Date: 6-06-13
Bath Temp: 95°C Start Time: 1425 End Time: 1455

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	3036-15	0.01	↓	0.1	2
STD2	↓	0.05	↓	0.5	2
STD3	↓	0.10	↓	1.0	2
STD4	↓	0.20	↓	2.0	2
STD5	↓	0.50	↓	5.0	2
STD6	↓	1.00	↓	10.0	2
CRA	↓	0.01	↓	0.1	1
ICB/CCB	—	0.00	↓	0.0	3
ICV/LCS	5016	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:
HNO_3: I8149 H_2SO_4: I8044 HCl: —
5% $K_2S_2O_8$: MP2491 5% $KMnO_4$: MP2475

Prep Code: TLM Digested 20.0mL Instrument: CETAC
Analyst: DM Date: 6-11-13
Bath Temp: 95°C Start Time: 0815 End Time: 1015

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	100.0	0.0	1
STD1	3036-16	0.02	↓	0.02	1
STD2	↓	0.05	↓	0.05	1
STD3	↓	0.10	↓	0.1	1
STD4	↓	0.20	↓	0.2	1
STD5	↓	~~0.50~~ 0.4	↓	0.4	1
STD6	↓	1.00	↓	1.0	1
CRA	↓	0.02	↓	0.02	1
ICB/CCB	—	0.00	↓	0.0	1
ICV/LCS	5051-1	1.0	↓	0.5	1
CCV	↓	1.0	100.0	0.5	1

Chemical/Reagent ID:
HNO_3: I8149 H_2SO_4: I8044 HCl: —
5% $K_2S_2O_8$: MP2491 5% $KMnO_4$: MP2475

WRG-02517

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: TLM | DLM Matrix: Water
Analyst: DM Date: 6-04-13
Bath Temp: 95°C Start Time: 0735 End Time: 0935

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WS01 A	1	✓	20.0	20.0	2/14 1	Y	
" ADUP	1	✓			1		
" ASPK	1	✓			1		
" MB1	—	✓			1		
" MB1SPK	—	✓			1		
" B	1	—			1		DLM
" BDUP	1	—			1		
" BSPK	1	—			1		
" MB2	—	—			1		
" MB2SPK	—	—	20.0	20.0	1	Y	

6-4-13 DM

Chemical/Reagent ID:

HNO_3: IB149 | MP3452 H_2SO_4: IB044 HCl: —

5% $K_2S_2O_8$: MP2491 5% $KMnO_4$: MP2475 Digest Tube Lot: MM01LKK0

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WR99, WS01

TOC, Aqueous Data Summary (Apollo 9000) DATE: 5/31/13 9:33
EPA 9060 A, SM 5310 B-00 ANALYST: MAP
Analysis Mode: **NPOC** *Instrument:* ***Apollo 9000***

Detection Limits (mgC/L)
MRL = 1.5 **upper blank =** 1.5 **lower blank =** -1.5

Calibration Data
Stock ID: ARI 00137-12 | factor (m): 11.74 | r²: 1.00000
Curve Date: 5/15/2013 | intercept (b_{cal}): 0 | sys blk (b_{sys}):
Curve ID: NPOC Cal 051513

LCS, Verification Standard and Inorganic Sparge Check

	Organic Carbon			Inorganic carbon		
Source:	**ERA 0408-13-02**			**ARI # 00128-6**		
Conc:	5,000	*mg/L*		1,000	*mg/L*	
dilution:	1.00	*mL to*	mg C/ L	5.00	*mL to*	mg C/ L
Volume:	250	*mL =*	[redacted]	250	*mL =*	[redacted]

Sample Data

SAMPLE ID	Dilution Factor	Carbon (mg C/L) *enter Form as TC, TIC, NPOC* Form	# reps	mean	stdev	Measured	Report as	Notes: *will flag if RSD >5%*	
ICV	1	NPOC	3	20.2900		[redacted]			
ICB	1	NPOC	3	0.0674		[redacted]			
0.5 ppm	1	NPOC	3	0.6272		[redacted]			
IC Sparge Check	1	NPOC	3	20.4200		[redacted]			
WR92 DOC FB	1	DOC	3	0.1125		[redacted]			MarineSamp
WR92 A DOC	1	DOC	3	1.3290		[redacted]			MarineSamp
WR92 A DOCdup	1	DOC	3	1.3190		[redacted]			MarineSamp
WR92 A DOCms	1	DOC	3	20.9000		[redacted]			MarineSamp
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*	MarineSamp
WR92 B DOC	1	DOC	3	1.7820		[redacted]			MarineSamp
WR92 C DOC	1	DOC	3	1.7100		[redacted]			MarineSamp
WR92 D DOC	1	DOC	3	0.0354		[redacted]			MarineSamp
CCV	1	NPOC	3	20.4100		[redacted]			
CCB	1	NPOC	3	0.0650		[redacted]			
CCV	1	NPOC	3	20.3100		[redacted]			
CCB	1	NPOC	3	0.0655		[redacted]			
WR99 DOC FB	1	NPOC	3	0.1287		[redacted]			
WR99 A DOC	1	DOC	3	10.8200		[redacted]			
WR99 A TOC	1	NPOC	3	10.7900		[redacted]			
WR99 A TOCdup	1	NPOC	3	10.8500		[redacted]			
WR99 A TOCms	1	NPOC	3	30.4100		[redacted]			
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*	
CCV	1	NPOC	3	20.3800		[redacted]			
CCB	1	NPOC	3	0.0921		[redacted]			

	Type	Analysis	Sample Nam	Sample ID	Origin	Manual Diluti	Result	Notes
1	Unknown	NPOC	Rinse	Rinse Blank	NPOC CAL	1.000	NPOC:0.04	
2	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:20.2	Control valu
3	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.06	Control valu
4	Control	NPOC	Sparge Chec	Untitled	Sparge Che	1.000	NPOC:0.62	Control valu
5	Control	NPOC	DQL	0.5 mg/L	DQL.tpl	1.000	NPOC:20.4	Control valu
6	Unknown	NPOC	DOC	WR92 FB	NPOC CAL	1.000	NPOC:0.11	
7	Unknown	NPOC	DOC	WR92 A	NPOC CAL	1.000	NPOC:1.32	
8	Unknown	NPOC	DOC	WR92 Adup	NPOC CAL	1.000	NPOC:1.31	
9	Unknown	NPOC	DOC	WR92 Ams	NPOC CAL	1.000	NPOC:20.9	
10	Unknown	NPOC	DOC	WR92 B	NPOC CAL	1.000	NPOC:1.78	
11	Unknown	NPOC	DOC	WR92 C	NPOC CAL	1.000	NPOC:1.71	
12	Unknown	NPOC	DOC	WR92 D	NPOC CAL	1.000	NPOC:0.03	
13	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:20.4	Control valu
14	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.06	Control valu
15	Unknown	NPOC	Rinse	Final Rinse	NPOC CAL	1.000	NPOC:0.02	
16	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:20.3	Control valu
17	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.06	Control valu
18	Unknown	NPOC	DOC	WR99 FB	NPOC CAL	1.000	NPOC:0.12	
19	Unknown	NPOC	DOC	WR99 A	NPOC CAL	1.000	NPOC:10.8	
20	Unknown	NPOC	TOC	WR99 A	NPOC CAL	1.000	NPOC:10.7	
21	Unknown	NPOC	TOC	WR99 Adup	NPOC CAL	1.000	NPOC:10.8	
22	Unknown	NPOC	TOC	WR99 Ams 20ppm	NPOC CAL	1.000	NPOC:30.4	
23	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:20.3	Control valu
24	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.09	Control valu

Cal & SPK: ARI 00137-12

Verification: ERA 0408-13-02

WBG : 82524

	Status	Date / Time	Vial
1	Completed	5/31/2013 1	0, 0, 0, 0, 0
2	Completed	5/31/2013 1	1
3	Completed	5/31/2013 1	2
4	Completed	5/31/2013 1	3
5	Completed	5/31/2013 1	4
6	Completed	5/31/2013 1	10
7	Completed	5/31/2013 1	11
8	Completed	5/31/2013 1:	12
9	Completed	5/31/2013 1:	13
10	Completed	5/31/2013 1:	14
11	Completed	5/31/2013 2:	15
12	Completed	5/31/2013 2:	16
13	Completed	5/31/2013 2:	1
14	Completed	5/31/2013 3:	2
15	Completed	5/31/2013 4:	0, 0, 0, 0, 0
16	Completed	5/31/2013 4:	1
17	Completed	5/31/2013 5:	2
18	Completed	5/31/2013 5:	17
19	Completed	5/31/2013 5:	18
20	Completed	5/31/2013 6:	19
21	Completed	5/31/2013 6:	20
22	Completed	5/31/2013 6:	21
23	Completed	5/31/2013 7:	1
24	Completed	5/31/2013 7:	2

TOC-L Cal Curve Information
C:\TOC-L\CalCurves\NPOC CAL 051513.2013 05 15 10 31 37.cal

Date of Creation	5/15/2013 12:45:24 PM
User	Ursula
System	TOC-L SUSPENDED SOLIDS

Cal. Curve

Sample Name:	NPOC CAL 051513
Sample ID:	NPOC CAL 051513
Object ID	0L-10000101463-10101000-1332AD3190ED-0000
Cal. Curve:	NPOC CAL 051513.2013 05 15 10 31 37.cal
Status	Completed
Comment:	

Standard	NPOC

Conc: 0.000mg/L

1	0.6809	150uL	1.000	*******		5/15/2013 10:38:40 AM
2	0.5849	150uL	1.000	*******		5/15/2013 10:42:08 AM
3	0.6495	150uL	1.000	*******		5/15/2013 10:45:41 AM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	0.6384
SD Area	0.04895
CV Area	7.67%
Vial	0

Conc: 0.5000mg/L

1	6.086	150uL	10.00	*******	E	5/15/2013 10:56:48 AM
2	6.289	150uL	10.00	*******		5/15/2013 11:01:50 AM
3	6.314	150uL	10.00	*******		5/15/2013 11:06:43 AM
4	6.209	150uL	10.00	*******		5/15/2013 11:11:20 AM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	6.271
SD Area	0.05485
CV Area	0.87%
Vial	10

Conc: 1.000mg/L

1	12.19	150uL	5.000	*******		5/15/2013 11:20:46 AM
2	12.55	150uL	5.000	*******		5/15/2013 11:24:49 AM
3	12.29	150uL	5.000	*******		5/15/2013 11:28:47 AM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	12.34
SD Area	0.1858
CV Area	1.51%
Vial	10

Conc: 5.000mg/L

1	57.68	150uL	1.000	*******		5/15/2013 11:38:08 AM
2	58.53	150uL	1.000	*******		5/15/2013 11:42:32 AM
3	57.74	150uL	1.000	*******		5/15/2013 11:46:55 AM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	57.98
SD Area	0.4744
CV Area	0.82%
Vial	10

Conc: 10.00mg/L

1	115.6	150uL	5.000	*******		5/15/2013 11:58:47 AM
2	116.1	150uL	5.000	*******		5/15/2013 12:03:11 PM
3	115.8	150uL	5.000	*******		5/15/2013 12:07:43 PM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	115.8
SD Area	0.2517
CV Area	0.22%
Vial	11

Conc: 25.00mg/L

1	293.2	150uL	2.000	*******		5/15/2013 12:17:46 PM
2	293.2	150uL	2.000	*******		5/15/2013 12:22:15 PM
3	294.4	150uL	2.000	*******		5/15/2013 12:26:45 PM

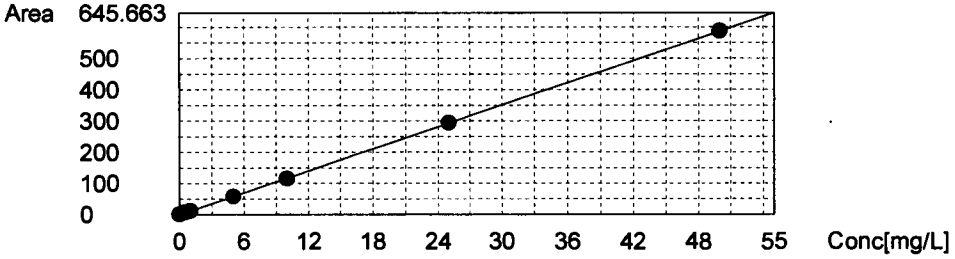
Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	293.6
SD Area	0.6928
CV Area	0.24%
Vial	11

Conc: 50.00mg/L

1	588.6	150uL	1.000	*******		5/15/2013 12:36:24 PM
2	585.9	150uL	1.000	*******		5/15/2013 12:40:54 PM
3	586.4	150uL	1.000	*******		5/15/2013 12:45:24 PM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	587.0
SD Area	1.436
CV Area	0.24%
Vial	11

Slope:	11.74
Intercept	0.000
r^2	1.0000
r	1.0000
Zero Shift	Yes



TOC-Control L Report

MIKE
2013_05_31_001 tlx

Instr.Information

Instrument Options: TOC/ASI/IC Unit/
Catalyst: Regular Sensitivity

Sample

Sample Name: Rinse
Sample ID: Rinse Blank
Origin: NPOC CAL 051513.cal
Status: Completed
Chk. Result:

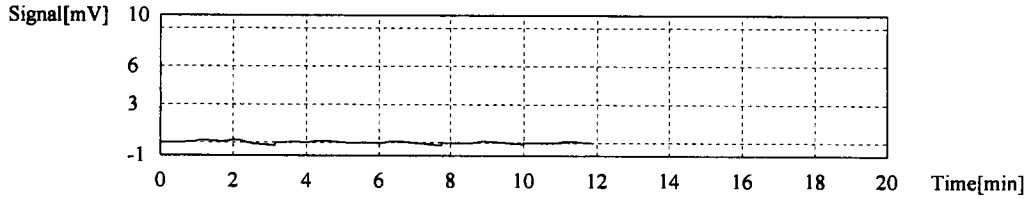
Unknown	NPOC	1 000	NPOC:0 04155mg/L

1. Det

Anal.: NPOC

1	1 634	0 1392mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 9 33 21 AM
2	0 4251	0 03622mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 9 36 28 AM
3	0 9027	0 07692mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 9:40.27 AM
4	0 7246	0 06175mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 9 43 39 AM
5	0.3457	0 02946mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 9 46 49 AM

Mean Area 0.4985
Mean Conc 0.04248mg/L

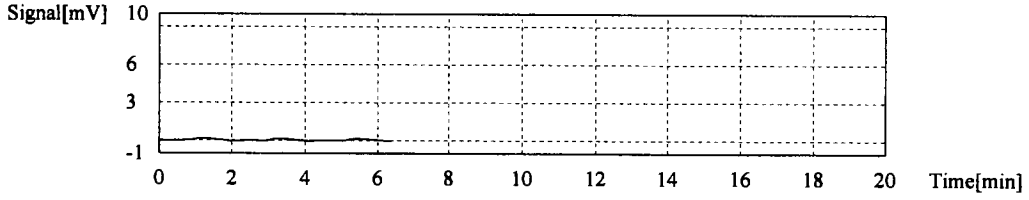


2. Det

Anal.: NPOC

1	0.6464	0 05508mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 9 55.24 AM
2	0 6546	0 05578mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 9.58 56 AM
3	0 5660	0.04823mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 10:02 24 AM

Mean Area 0.6223
Mean Conc. 0.05303mg/L



3. Det

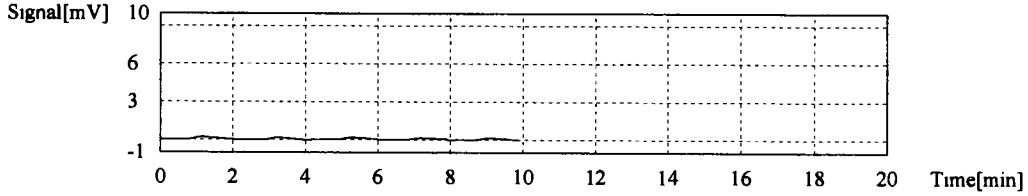
Anal.: NPOC

TOC-Control L Report

MIKE
2013_05_31_001.tlx

1	0 6662	0 05677mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 10 10.59 AM
2	0.6353	0 05414mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 10.14:25 AM
3	0 4651	0 03963mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 10 17·48 AM
4	0 3639	0 03101mg/L	150uL	1 000	E	NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 10 21 17 AM
5	0 5309	0 04524mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 10:24·51 AM

Mean Area 0.6108
Mean Conc. 0.05205mg/L

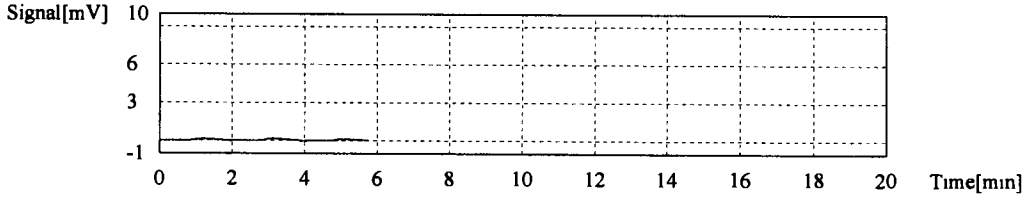


4. Det

Anal.: NPOC

1	0 4125	0 03515mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 10·33 18 AM
2	0 4480	0 03818mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 10:36.44 AM
3	0 3097	0 02639mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 10.40 13 AM

Mean Area 0.3901
Mean Conc. 0 03324mg/L

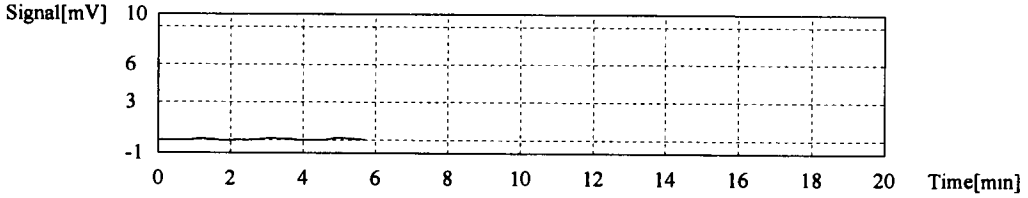


5. Det

Anal.: NPOC

1	0 2388	0 02035mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 10 48 37 AM
2	0 3084	0 02628mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 10 52 05 AM
3	0 4009	0 03416mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 10.55·35 AM

Mean Area 0.3160
Mean Conc 0.02693mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 101.4 / Control exceeds range!

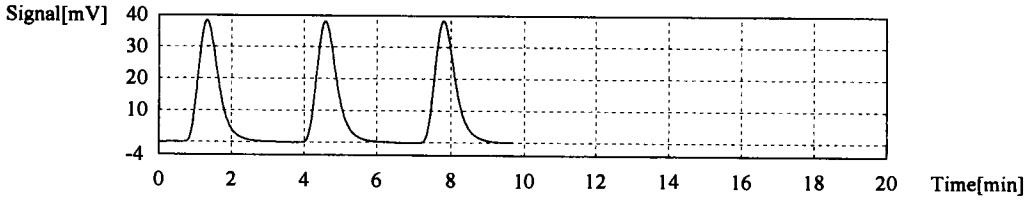
Control	NPOC	1 000	NPOC 20 29ppm

1. Det.

Anal.: NPOC

1	149 1	20 19ppm	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	5/31/2013 11 06 30 AM
2	150 7	20 40ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	5/31/2013 11 10 44 AM
3	149 7	20.27ppm	100uL	1.000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27.cal	5/31/2013 11 14 56 AM

Mean Area 149.8
Mean Conc. 20.29ppm



Control Sample

Sample Name. ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.06741 / Control within range!

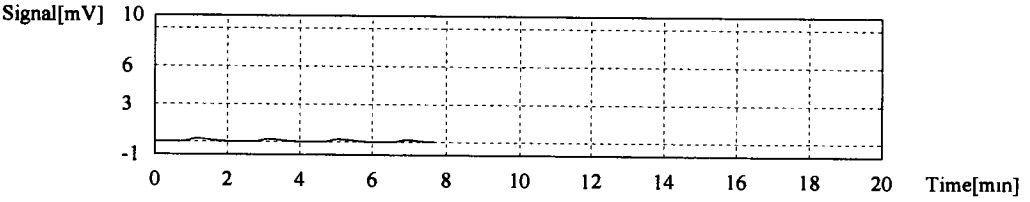
Control	NPOC	1 000	NPOC 0 06741mg/L

1. Det.

Anal.: NPOC

1	0.8261	0 1119mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	5/31/2013 11:24:48 AM
2	0 5707	0.07727mg/L	100uL	1.000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	5/31/2013 11 28 12 AM
3	0 5063	0 06855mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	5/31/2013 11 31 43 AM
4	0 4165	0 05639mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	5/31/2013 11 35.12 AM

Mean Area 0.4978
Mean Conc. 0 06741mg/L



Control Sample

TOC-Control L Report

MIKE
2013_05_31_001.tlx

Sample Name: Sparge Check
Sample ID: Untitled
Method: Sparge Check.tpl
Status Completed
Chk. Result Control value. 3.136 / Control exceeds range!

Reversed with DQL

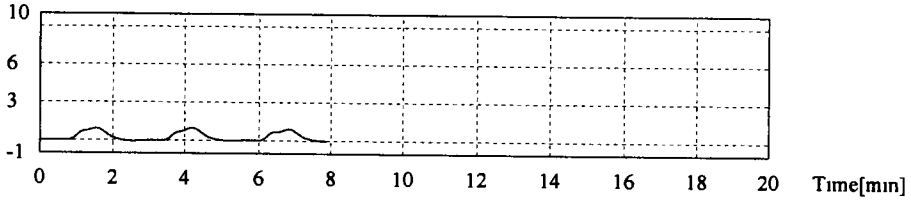
Control	NPOC	1 000	NPOC 0 6272mg/L

1. Det

Anal.: NPOC

1	4 612	0.6245mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	5/31/2013 11:45:33 AM
2	4 711	0.6379mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	5/31/2013 11:49:08 AM
3	4 573	0 6192mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	5/31/2013 11:52 44 AM

Mean Area 4.632
Mean Conc 0.6272mg/L



Control Sample

Sample Name: DQL
Sample ID: 0.5 mg/L
Method. DQL.tpl
Status Completed
Chk. Result Control value. 20.42 / Control exceeds range!

Reversed with sparge

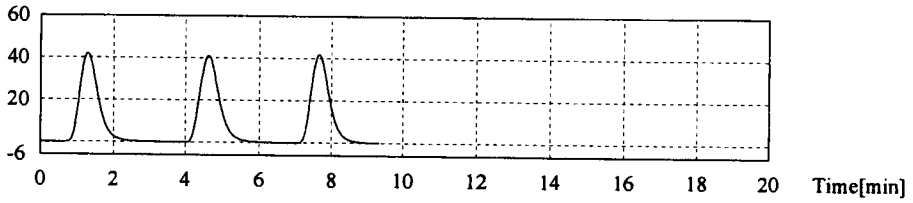
Control	NPOC	1 000	NPOC 20 42mg/L

1. Det.

Anal.: NPOC

1	149 9	20 30mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27.cal	5/31/2013 12 03.38 PM
2	151 3	20 49mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	5/31/2013 12.07.32 PM
3	151 3	20 49mg/L	100uL	1.000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	5/31/2013 12 11 25 PM

Mean Area 150.8
Mean Conc. 20 42mg/L



Sample

Sample Name: DOC
Sample ID: WR92 FB
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

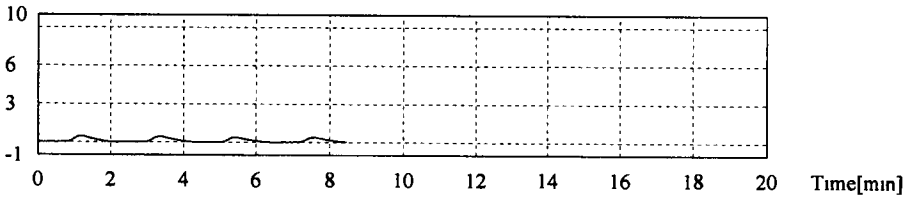
Unknown	NPOC	1 000	NPOC 0 1125mg/L

1. Det

Anal.: NPOC

1	1.630	0.1389mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 12 21 03 PM
2	1 364	0 1162mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 12 24.27 PM
3	1 286	0 1096mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 12 27.58 PM
4	1 311	0 1117mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 12 31 25 PM

Mean Area 1.320
Mean Conc. 0.1125mg/L



Sample

Sample Name: DOC
Sample ID: WR92 A
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

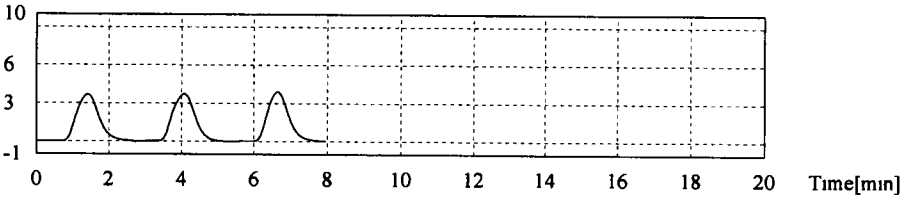
Unknown	NPOC	1 000	NPOC 1 329mg/L

1. Det

Anal.: NPOC

1	15 51	1 322mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 12:41:46 PM
2	15 83	1 349mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 12 45 23 PM
3	15 44	1 316mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 12 49.01 PM

Mean Area 15.59
Mean Conc. 1.329mg/L



Sample

Sample Name: DOC
Sample ID: WR92 Adup
Origin: NPOC CAL 051513 cal
Status Completed
Chk. Result

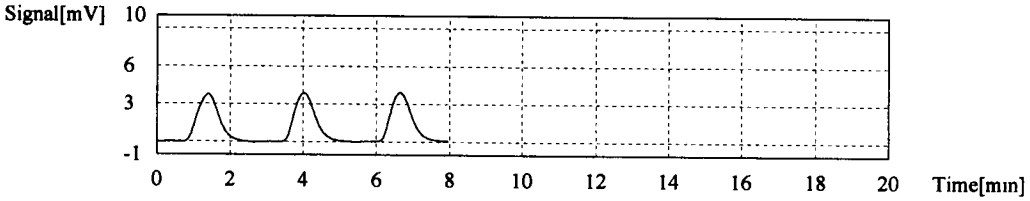
Unknown	NPOC	1 000	NPOC 1 319mg/L

1. Det

Anal.: NPOC

1	15.43	1 315mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 12 59 34 PM
2	15.50	1 321mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 1:03 11 PM
3	15 50	1 321mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 1 06 48 PM

Mean Area 15.48
Mean Conc. 1.319mg/L



Sample

Sample Name. DOC
Sample ID: WR92 Ams
Origin: NPOC CAL 051513 cal
Status Completed
Chk. Result

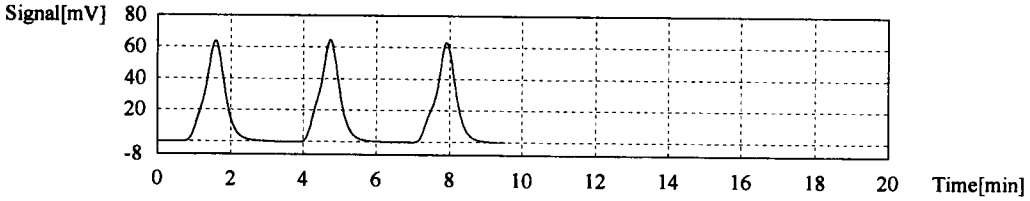
Unknown	NPOC	1 000	NPOC.20 90mg/L

1. Det

Anal.: NPOC

1	244 1	20.80mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 1 24 32 PM
2	246 2	20.98mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 1 28.38 PM
3	245 4	20 91mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 1 32.50 PM

Mean Area 245.2
Mean Conc. 20.90mg/L



Sample

Sample Name: DOC
Sample ID: WR92 B
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

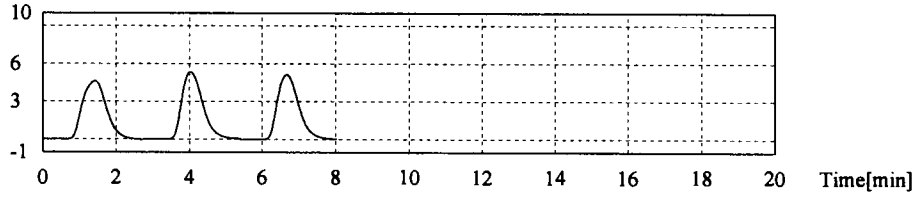
Unknown	NPOC	1 000	NPOC 1 782mg/L

1. Det

Anal.: NPOC

1	20.94	1 784mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 1 43:27 PM
2	20 91	1 782mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 1 47:04 PM
3	20 90	1 781mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 1.50 41 PM

Mean Area 20.92
Mean Conc. 1 782mg/L



Sample

Sample Name: DOC
Sample ID: WR92 C
Origin: NPOC CAL 051513.cal
Status Completed
Chk Result

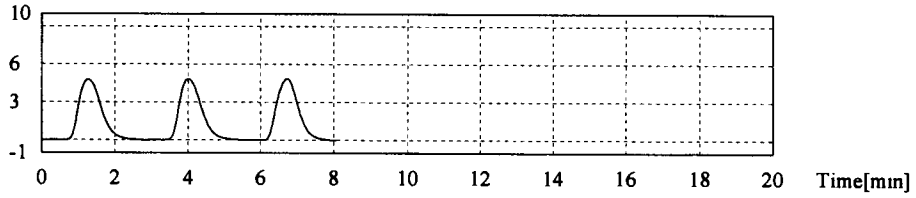
Unknown	NPOC	1 000	NPOC 1 710mg/L

1. Det

Anal.: NPOC

1	20 13	1 715mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 2.01 17 PM
2	20 00	1 704mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 2 04 55 PM
3	20 08	1 711mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 2 08 34 PM

Mean Area 20.07
Mean Conc. 1 710mg/L



TOC-Control L Report

MIKE
2013_05_31_001 tlx

Sample

Sample Name: DOC
Sample ID WR92 D
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

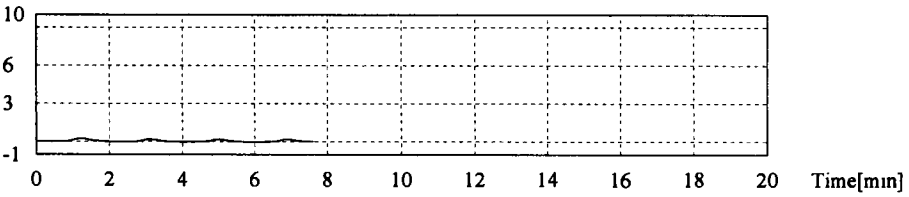
Unknown	NPOC	1.000	NPOC:0.03539mg/L

1. Det

Anal.: NPOC

1	0 5741	0 04892mg/L	150uL	1 000	E	NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 2 18:20 PM
2	0 4170	0 03553mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 2 21 49 PM
3	0 3460	0 02948mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 2 25 18 PM
4	0 4830	0 04116mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 2 28:47 PM

Mean Area 0.4153
Mean Conc. 0.03539mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 102.0 / Control exceeds range!

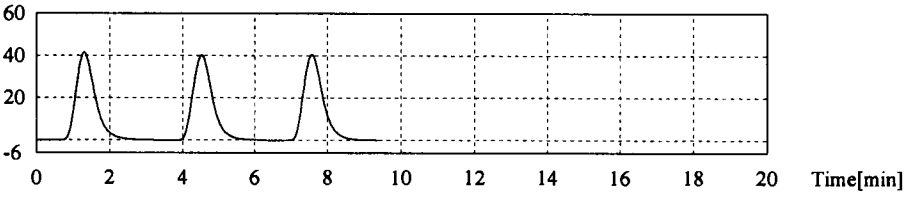
Control	NPOC	1 000	NPOC:20 41ppm

1. Det.

Anal.: NPOC

1	151 1	20 46ppm	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	5/31/2013 2 39 42 PM
2	151 2	20 47ppm	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	5/31/2013 2 43.46 PM
3	149 9	20.30ppm	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	5/31/2013 2 47:51 PM

Mean Area 150.7
Mean Conc. 20.41ppm



WR92 : 62532

TOC-Control L Report

MIKE
2013_05_31_001 tlx

Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.06497 / Control within range!

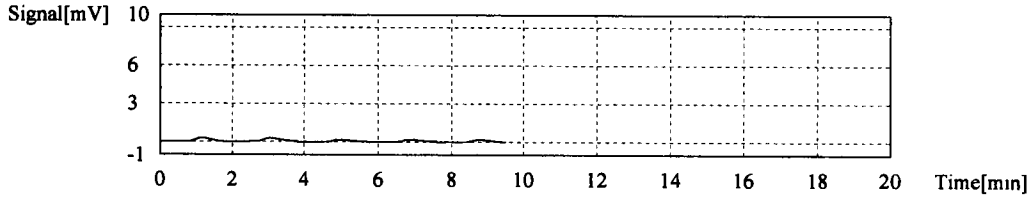
Control	NPOC	1 000	NPOC.0 06497mg/L

1 Det.

Anal.: NPOC

1	0 7531	0.1020mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	5/31/2013 2:57:37 PM
2	0 7274	0 09849mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	5/31/2013 3 01 07 PM
3	0 4424	0.05990mg/L	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	5/31/2013 3 04 37 PM
4	0 4539	0 06146mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	5/31/2013 3 08 07 PM
5	0 5433	0 07356mg/L	100uL	1.000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	5/31/2013 3 11 37 PM

Mean Area 0.4799
Mean Conc. 0.06497mg/L



Sample

Sample Name: Rinse
Sample ID: Final Rinse
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

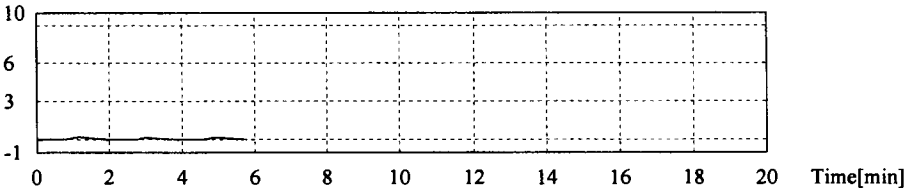
Unknown	NPOC	1 000	NPOC:0.02874mg/L

1. Det

Anal.: NPOC

1	0.4450	0 03792mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 3:19:06 PM
2	0 3168	0 02700mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 3.22:35 PM
3	0.3925	0 03345mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 3 26 05 PM

Mean Area 0.3848
Mean Conc 0.03279mg/L

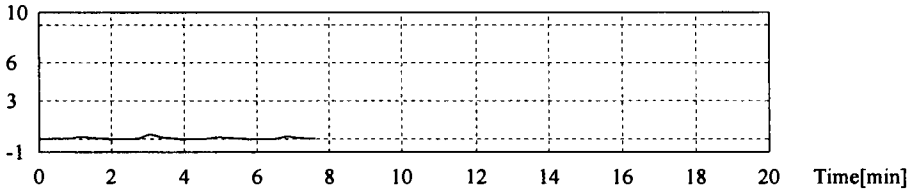


2. Det

Anal.: NPOC

1	0 3011	0 02566mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 3 33.34 PM
2	0 9138	0 07787mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 3:37:02 PM
3	0 2684	0 02287mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 3:40:31 PM
4	0 4022	0 03427mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 3.44.00 PM

Mean Area 0.3239
Mean Conc. 0.02760mg/L

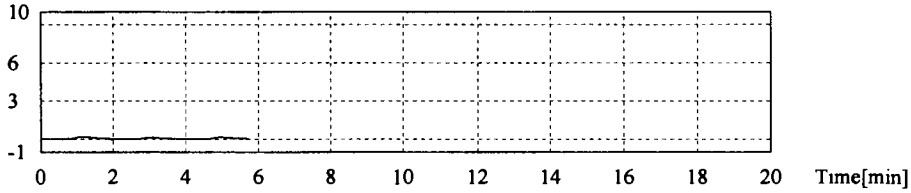


3. Det

Anal.: NPOC

1	0.3934	0 03352mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 3:51:28 PM
2	0 2906	0 02476mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 3 54 57 PM
3	0.3169	0 02700mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 3 58 26 PM

Mean Area 0.3336
Mean Conc. 0.02843mg/L

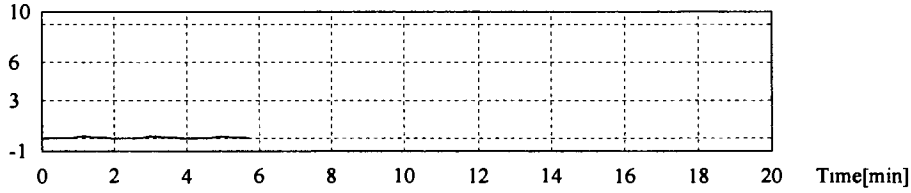


4. Det

Anal.: NPOC

1	0.2369	0 02019mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 4:05.54 PM
2	0 3183	0 02712mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 4:09 24 PM
3	0.3806	0.03243mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 4:12 52 PM

Mean Area 0.3119
Mean Conc. 0.02658mg/L

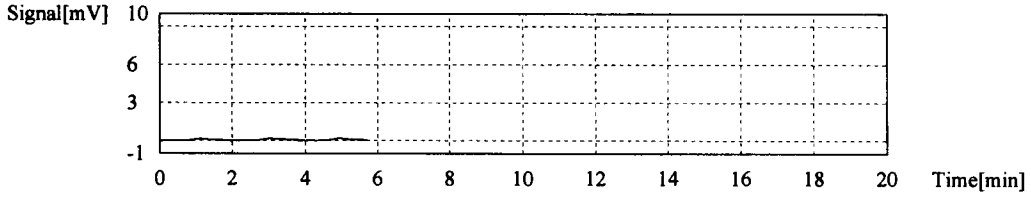


5. Det

Anal.: NPOC

1	0 2368	0 02018mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 4:20.21 PM
2	0 3980	0.03392mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 4 23 49 PM
3	0 3619	0 03084mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 4 27 18 PM

Mean Area 0.3322
Mean Conc. 0.02831mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 101.5 / Control exceeds range!

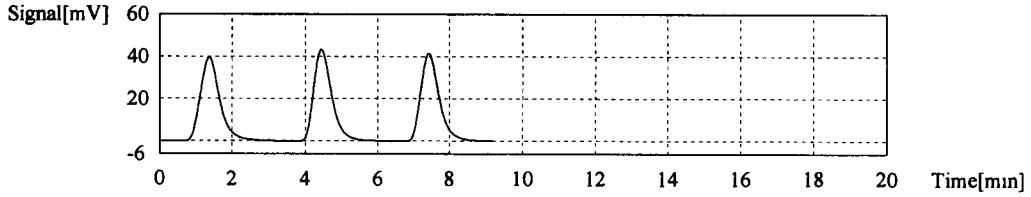
Control	NPOC	1 000	NPOC 20 31ppm

1. Det.

Anal.: NPOC

1	148 5	20.11ppm	100uL	1 000	NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	5/31/2013 4:38:26 PM
2	150 8	20 42ppm	100uL	1 000	NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	5/31/2013 4:42.23 PM
3	150 6	20 39ppm	100uL	1.000	NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	5/31/2013 4.46:25 PM

Mean Area 150.0
Mean Conc. 20.31ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.06550 / Control within range!

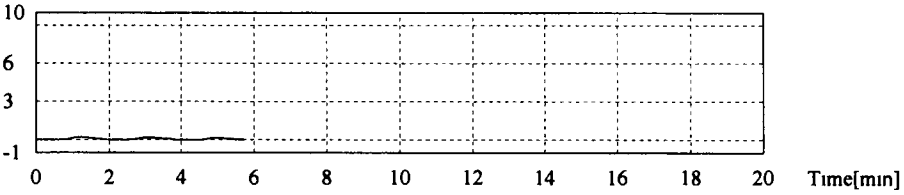
Control	NPOC	1 000	NPOC 0 06550mg/L

1. Det.

Anal.: NPOC

1	0 5730	0.07758mg/L	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	5/31/2013 4:56:11 PM
2	0 4497	0 06089mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	5/31/2013 4:59.41 PM
3	0 4285	0 05802mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	5/31/2013 5 03 11 PM

Mean Area 0.4837
Mean Conc. 0.06550mg/L



Sample

Sample Name: DOC
Sample ID: WR99 FB
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

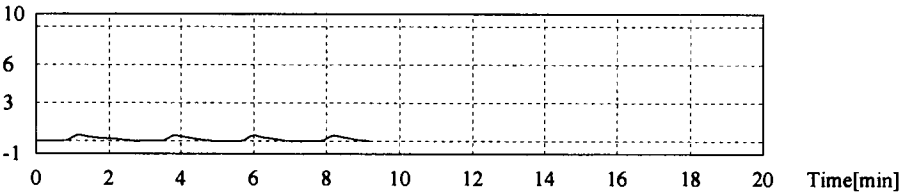
Unknown	NPOC	1.000	NPOC 0 1287mg/L

1. Det

Anal.: NPOC

1	2.128	0.1813mg/L	150uL	1.000	E	NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 5:13:43 PM
2	1.468	0 1251mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 5:16:50 PM
3	1 608	0.1370mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 5.20:24 PM
4	1 454	0 1239mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 5:23.47 PM

Mean Area 1.510
Mean Conc 0.1287mg/L



Sample

WR99 : 02536

Sample Name: DOC
Sample ID: WR99 A
Origin. NPOC CAL 051513.cal
Status Completed
Chk Result

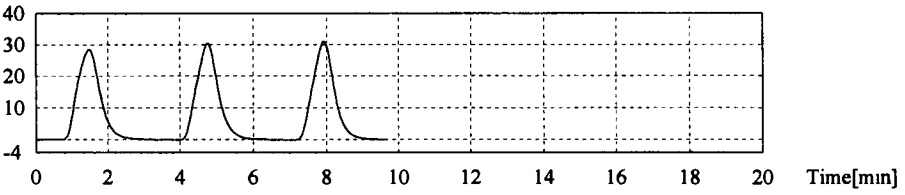
Unknown	NPOC	1.000	NPOC 10 82mg/L

1. Det

Anal.: NPOC

1	125.2	10 67mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 5.34 46 PM
2	127.6	10.87mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 5 38 54 PM
3	128.1	10 92mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 5 43 02 PM

Mean Area 127.0
Mean Conc. 10.82mg/L



Sample

Sample Name: TOC
Sample ID: WR99 A
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

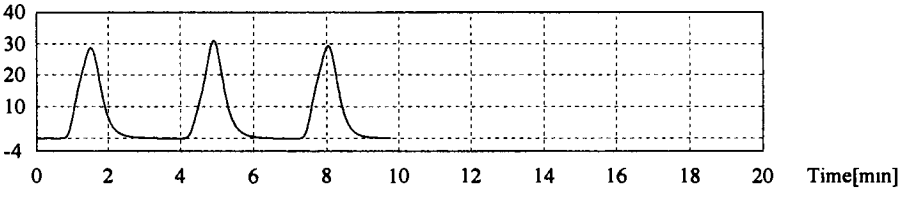
Unknown	NPOC	1 000	NPOC 10.79mg/L

1. Det

Anal.: NPOC

1	126 2	10 75mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 5 54.16 PM
2	127 5	10 86mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 5.58.25 PM
3	126 3	10 76mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 6.02.37 PM

Mean Area 126.7
Mean Conc. 10 79mg/L



Sample

TOC-Control L Report

MIKE
2013_05_31_001.tlx

Sample Name: TOC
Sample ID: WR99 Adup
Origin: NPOC CAL 051513 cal
Status Completed
Chk. Result

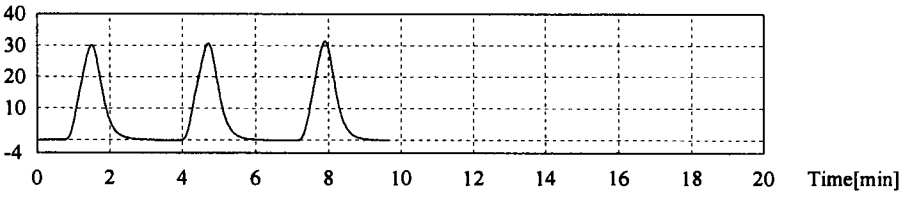
Unknown	NPOC	1 000	NPOC 10 85mg/L

1. Det

Anal.: NPOC

1	125 7	10 71mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 6:13:42 PM
2	127 5	10 86mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 6 17 52 PM
3	128 8	10 98mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	5/31/2013 6:22:05 PM

Mean Area 127.3
Mean Conc. 10.85mg/L



Sample

Sample Name. TOC
Sample ID: WR99 Ams 20ppm
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

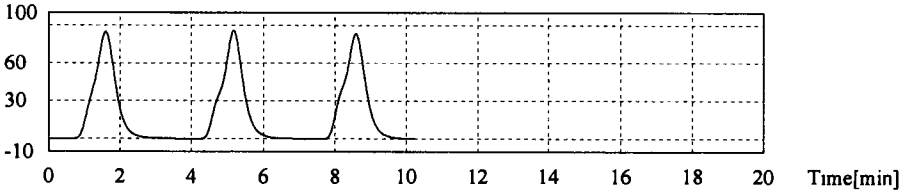
Unknown	NPOC	1 000	NPOC 30 41mg/L

1. Det

Anal.: NPOC

1	355 2	30.27mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	5/31/2013 6 33:29 PM
2	357 4	30 46mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	5/31/2013 6.37:54 PM
3	358 1	30.52mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	5/31/2013 6.42.10 PM

Mean Area 356.9
Mean Conc. 30.41mg/L



Control Sample

TOC-Control L Report

MIKE
2013_05_31_001.tlx

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value· 101.9 / Control exceeds range!

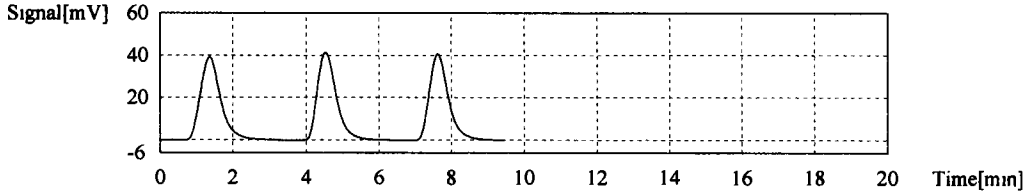
Control	NPOC	1 000	NPOC.20.38ppm

1. Det.

Anal.: NPOC

1	150 7	20 40ppm	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	5/31/2013 6.53 21 PM
2	150 7	20 40ppm	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	5/31/2013 6 57 24 PM
3	150 1	20 32ppm	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	5/31/2013 7 01 32 PM

Mean Area 150.5
Mean Conc. 20.38ppm



Control Sample

Sample Name· ICB/CCB
Sample ID.
Method· ICB CCB.tpl
Status Completed
Chk. Result Control value: 0 09213 / Control within range!

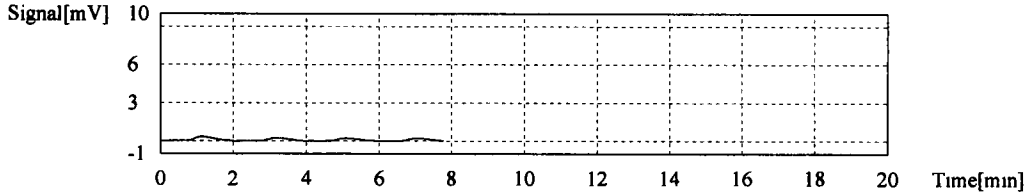
Control	NPOC	1 000	NPOC·0 09213mg/L

1. Det.

Anal.: NPOC

1	0 9886	0 1339mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	5/31/2013 7 11 24 PM
2	0 7025	0.09512mg/L	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	5/31/2013 7 14.49 PM
3	0 6840	0 09261mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	5/31/2013 7.18.24 PM
4	0 6549	0.08867mg/L	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	5/31/2013 7.21 50 PM

Mean Area 0.6805
Mean Conc. 0.09213mg/L



Analytical Resources, Incorporated
Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	5/3/13		Buffer	Source	Lot #	pH	Temp.
Time:	9:35		2.00	Ricca	1211549	2.00	19.8
Analyst:	ee		4.00	Fisher	115~~47~~	4.00	20.1
			7.00	Ricca	1211266	7.02	20.0
			10.00	Fisher	126248	10.06	20.1
			12.00	Ricca	1212~~64~~	11.99	20.2
			Verification	Fisher	124864	7.00	20.3

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
ee	9:45	ICV	7.00	7.00			20.3
		WR99 Au	6.78	6.78			21.1
		↓ dup	6.80	6.80			21.2
		CCV	7.01	7.01			20.7
MPL	13:09	ICV	6.98	6.98			20.6
↓	↓	WS10	5.43 →	7.41	7.40 BOD		~~+6.6~~ 19.6
		CCV	7.01	7.01			20.5
		CCV					
		CCV					

6/4/13

TOTAL SUSPENDED SOLIDS / VOLATILE SUSPENDED SOLIDS (TSS / TVSS)

Methods : SM 2540 D-97, 2540 E-97

DATE: 6/3/2013

ANALYST: KE 7:04

Instrumentation

Drying Ovens: 12

Muffle Furnace: N / A

Analytical Balance: 1123230597

make no entries to shaded cells
they are calculated !!

TSS (mg/l) calculated as:
Final dry wt (mg) = (minimum Dry Wt - Tare Wt)*1000
TSS = [(Final Dry Wt)/ ml Sample] * 1000
if dy wt < 1mg, TSS = <1mg / mL sample * 1000
with "<" flag

Loss on ignition (LOI) = TVSS (mg/L) calculated as:
LOI (mg) = Dry wt(mg) -((min ash wt - tare wt) * 1000)
TVSS (mg/L) = LOI / mL sample * 1000
if LOI <1mg, TVSS = <1mg / mL sample * 1000
with "<" flag

LCS source: *Cellulose, MP Biomedicals Lot# **6399J*** 0.05 grams to 1000 mL = **50** ***mg/L TSS***

SAMPLE ID	DISH #	filtered (mL)	TARE WT (grams)	DRY WT 104C (grams) 1	2	3	4	DryWT (mg)	TSS (mg/L)	ASH WT 550C (grams) 1	2	3	4	LOI (mg)	TVSS (mg/l)
Cal Weight ID			CV-02	CV-02	CV-02	CV-02	CV-02			CV-02	CV-02	CV-02	CV-02		
Date & Time				6/4/13 8:32 KE	6/4/13 10:24 KE										
Cal Wt (g) 10.0000				10.0000	10.0000										
record weights to 4 places				*Cal OK!*	*Cal OK!*										
BLANK		1000	0.1233	0.1233	0.1234	STOP		0.0	< 1						
LCS # 00616- 05		1000	0.1247	0.1742	0.1741	STOP		49.4	49.4	98.8%	% Recovery				
WR99 A2		480	0.1242	0.1250	0.1250	STOP		0.8	< 2.1						
WR99 A2 dup		480	0.1243	0.1251	0.1251	STOP		0.8	< 2.1						
								RPD =	*NA*					*RPD =*	*NA*
WS29 A3		930	0.1249	0.1251	0.1251	STOP		0.2	< 1.1						
WS47 A4		940	0.1243	0.1250	0.1249	STOP		0.6	< 1.1						

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 6/3/2013 (A)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE 8:10

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: 62790918520

Batch drying time

record times as mm/dd/yy hh:mm

6/3/2013 8:10 date/time in oven KE

6/4/2013 6:12 date/time out KE

elapsed hrs = 22.0

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	6/3/13 8:52 KE	6/3/13 7:51 KE	6/4/13 7:53 KE					6/4/13 9:00 KE	6/4/13 9:58 KE				
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000					10.0000	10.0000				
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*					*Cal OK!*	*Cal OK!*				

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.1157	1.1155			0.00		1.1154	1.1152	OK	0.00		
WR99 D6		6.4999	1.1112	5.0135			3.90	72.42%						
WR99 D6 dup		6.4011	1.0721	4.9077			3.84	71.98%						
							RPD =	0.61%				RPD =	NA	
WR99 D6 trp		6.3154	1.1102	4.9050			3.79	72.90%						
							RSD =	0.64%				RSD =	NA	
WR99 E1		6.7013	1.0715	5.0436			3.97	70.65%						
WR99 F1		6.2597	1.1256	4.2530			3.13	60.91%						
WS09 A2		6.9928	1.1432	5.0848			3.94	67.38%	4.9509	4.9438	OK	3.80	35,772	3.58%
WS09 A2 dup		6.9440	1.1137	5.0259			3.91	67.10%	4.8941	4.8869	OK	3.77	35,530	3.55%
							RPD =	0.42%				RPD =	0.68%	
WS09 A2 trp		6.3348	1.1061	4.6138			3.51	67.09%	4.4966	4.4890	OK	3.38	35,679	3.56%
							RSD =	0.25%				RSD =	0.36%	
WS09 B2		6.7822	1.0736	4.6019			3.53	61.81%	4.4549	4.4476	OK	3.37	43,732	4.37%
WS20 A1		7.5244	1.0646	3.7877			2.72	42.15%						
WS20 A1 dup		7.5230	1.0740	3.7880			2.71	42.08%						
							RPD =	0.17%				RPD =	NA	
WS20 A1 trp		7.3935	1.0965	3.7717			2.68	42.48%						
							RSD =	0.51%				RSD =	NA	
WS20 B1		6.9931	1.0630	3.5112			2.45	41.28%						
WS20 C1		8.4161	1.1603	4.3309			3.17	43.70%						
WS20 D1		8.2983	1.0394	4.1474			3.11	42.82%						

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 6/3/2013 (A)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE 8:10

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: 62790918520

Batch drying time			*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm			*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
6/3/2013 8:10	date/time in oven	KE	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
6/4/2013 6:12	date/time out	KE		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs =	22.0			*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	6/3/13 8:52 KE	6/3/13 7:51 KE	6/4/13 7:53 KE					6/4/13 9:00 KE	6/4/13 9:58 KE				
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000					10.0000	10.0000				
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*					*Cal OK!*	*Cal OK!*				

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
WS20 E1		7.5763	1.1349	4.1542			3.02	46.87%						
WS20 F1		7.8777	1.1115	4.0107			2.90	42.85%						
WS21 A6		7.6409	1.1184	5.8363			4.72	72.33%						
WS21 A6 dup		7.9422	1.0728	6.0253			4.95	72.10%						
							RPD =	0.33%				RPD =	NA	
WS21 A6 trp		7.8934	1.0659	6.0315			4.97	72.73%						
							RSD =	0.44%				RSD =	NA	
WS27 A1		6.8289	1.0834	6.2466			5.16	89.87%						
WS27 A1 dup		7.2680	1.0664	6.6522			5.59	90.07%						
							RPD =	0.23%				RPD =	NA	
WS27 A1 trp		7.1499	1.0337	6.5446			5.51	90.10%						
							RSD =	0.14%				RSD =	NA	

Entered - Edited

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(A) (1) 6-3-13 (2)

Analyst: (1)	Date: 6-3-13	Oven ID: 612	Balance ID: 1123230597
Time in Oven: 8:10	Time Out of Oven: 7:36	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID		CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:		6-3-13 8:52	6-3-13 7:51	3-4-13 7:53				6-4-13 9:00	6-4-13 9:58	
Cal Weight (10.0000):		10.0000 (1)	10.0000 (2)	10.0000 (1)				10.0000 (1)	10.0000 (2)	
Sample ID	Dish #	Sample	Tare	Dry Weight 104°C			Dry Weight	Ash Weight 550°C		
				1	2	3	grams	1	2	3
BLANK	1	Ø	1.1157	1.1155				1.1154	1.1152	
WR99 D6	2	6.4999	1.1112	5.0135						
↓ ND6	3	6.4011	1.0721	4.9077						
↓ ↓ D6	4	6.3154	1.1102	4.9050						
↓ E1	5	6.7013	1.0715	5.0436						
↓ F1	6	6.2597	1.1256	4.2530						
WS09 A12	7	6.9928	1.1432	5.0848				4.9509	4.9438	
↓ A12	8	6.9440	1.1137	5.0259				4.8941	4.8869	
↓ A12	9	6.3348	1.1061	4.6138				4.4966	4.4890	
↓ B2	10	6.8822	1.0736	4.6019				4.4549	4.4476	
WS20 A1	11	7.5244	1.0646	3.7877						
↓ ND A1	12	7.5230	1.0740	3.88 (1)	3.7880					
↓ ↓ D A1	13	7.3935	1.0965	3.7717						
↓ B1	14	6.9931	1.0630	3.5112						
↓ C1	15	8.4161	1.1603	4.3309						
↓ D1	16	8.2983	1.0394	4.1474						
↓ E1	17	7.5763	1.1349	4.1542						
↓ F1	18	7.8777	1.1115	4.0107						
WS21 A6	19	7.6709	1.1184	5.8363						
↓ ND A6	20	7.9422	1.0728	6.0253						
↓ ↓ D A6	21	7.8934	1.0659	6.0315						
WS27 A1	22	6.8289	1.0834	6.2466						
↓ ND A1	23	7.2680	1.0664	6.6522						
6053F ↓ ↓ A1	24	7.1499	1.0337	6.5446						

TOC Solids Prep Log

DATE: 6/3/2013

ANALYST: KE 12:46 (A)

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

HCL 10% ID:

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

HCL ID:

make no entry to shaded cells, they are calculated

Sample ID ARI #	Client	IC Test + / -	Gravimetric Data (grams) Tare Wt.	Wet wt.	70°C dry wt	% Solids	*Sample description & notes (homogeneity and exclusions)*
Blank			13.0550		13.0549	-0.1 mg	
WR99 D6		-	13.1082	18.6833	17.2718	74.68%	
WR99 D6 dup		-	13.0819	18.8969	17.4081	74.40%	RPD = 0.38%
WR99 D6 trip		-	13.0053	18.2293	17.0020	76.51%	RSD = 1.52%
WR99 E1		-	13.0595	18.8122	17.3522	74.62%	
WR99 F1		-	13.1812	18.4948	16.5879	84.11%	
WS09 A2		+-	13.1517	20.3616	18.2935	71.32%	
WS09 A2 dup		+-	13.0697	19.7305	17.8214	71.34%	RPD = 0.03%
WS09 A2 trip		+-	13.0796	20.2560	18.1843	71.13%	RSD = 0.16%
WS09 B2		+-	13.0971	19.5687	17.5430	68.70%	
WS20 A1		-	13.1226	20.5040	16.4545	45.14%	
WS20 A1 dup		-	13.0599	19.6257	16.0383	45.36%	RPD = 0.49%
WS20 A1 trip		-	13.2880	20.2044	16.3990	44.98%	RSD = 0.43%
WS20 B1		-	13.2043	19.6206	16.0213	43.90%	
WS20 C1		-	13.0222	20.6382	16.5276	46.03%	
WS20 D1		-	13.1059	21.1130	16.7542	45.56%	
WS20 E1		-	13.0262	19.2933	16.1207	49.38%	
WS20 F1		-	13.1999	20.8709	16.6208	44.60%	
WS21 A6		-	13.1003	19.9497	18.2782	75.60%	
WS21 A6 dup		-	13.1775	19.4643	17.9423	75.79%	RPD = 0.26%
WS21 A6 trip		-	13.0419	20.3015	18.4785	74.89%	RSD = 0.63%
WS27 A1		-	13.2282	18.9641	17.6588	77.24%	
WS27 A1 dup		-	13.0679	18.8446	18.4191	92.63%	RPD = 18.12%
WS27 A1 trip		-	13.1891	18.9020	18.4858	92.71%	RSD = 10.18%
WR57 A2		+-	13.0176	19.1423	16.5351	57.43%	
WR57 B3		-	13.2422	18.7523	14.6801	26.10%	
WR57 B3 dup		-	13.2283	19.6971	14.9199	26.15%	RPD = 0.21%
WR57 B3 trip		-	12.9976	19.6398	14.7234	25.98%	RSD = 0.33%
WR57 C2		-	13.1283	18.5906	14.9846	33.98%	
WR57 D2		-	13.0937	19.0706	15.8479	46.08%	

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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (K) (1) 6-3-13 (2) (A) Date 6-3-13 12:46

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.0590	Ø	13.0549		
WR99 D6		-	13.1082	18.6833	17.2718		V-wet Rusty Sand
" D6		-	13.0819	18.8964	17.4081		↓
" D6		-	13.0053	18.2293	17.0020		
E1		-	13.0595	18.8122	17.3522		V-wet Sand
↓ F1		-	13.1812	18.4948	16.5879		thick Sealant
WS09 A2		+ -	13.1517	20.3616	18.2935		Thick Black Sealant
" A2		+ -	13.0697	19.7305	17.8214		↓
" A2		+ -	13.0796	20.2560	18.1843		
↓ B2		+ -	13.0971	19.5687	17.5430		↓
WS20 A1		-	13.1226	20.5040	~~16.0383~~ (2)	16.4545	Smooth Sealant
" A1		-	13.0599	19.6257	16.0383		↓
" A1		-	13.2880	20.2044	16.3990		
B1		-	13.2043	19.6206	16.0213		
C1		-	13.0222	20.6382	16.5276		
D1		-	13.1059	21.1130	16.7542		
E1		-	13.0262	19.2933	16.1207		
↓ F1		-	13.1999	20.8709	16.6208		↓
WS21 A6		-	13.1003	19.9497	18.2782		Rusty Water & Sand
" A6		-	13.1775	19.4643	17.9423		↓
↓ " A6		-	13.0419	20.3015	18.4785		↓
WS27 A1		-	13.2282	18.9641	17.6588		~~Oily Sealant + Pine needles & Dirt~~ Sand ↑
" A1		-	13.0679	18.8446	18.4191		↓
↓ " A1		-	13.1891	~~18.8918~~ (2)	18.9020	18.4858	
WR97 A2		+ -	13.0176	19.1423	16.5351		Oily Soil Pine Needles + Dirt
B3		-	13.2422	~~6.5239~~	18.7523	14.6801	Very Sandy Sealant
" B3		-	13.2283	6.2 (1)	19.6971	14.9199	With heavy
" B3		-	12.9976	19.6998	14.7234		Debi
C2		-	13.1283	18.5906	14.9846		
↓ D2		-	13.0937	19.0702	15.8479		

WR99 : 02546

06/5/13

CONDUCTIVITY BENCHSHEET (EPA 120.1) Date / Time : 6/5/13 11:42

EPA 120.1, SM 2510 B-97, EPA 9050A Analyst : KE

Temperature compensated to 25 °C

INSTRUMENT: Orion Model 115 SN:002482 ELECTRODE: Orion 011510 SN:KU9020 K= 1 cm-1

Direct Calibration			**Cell Constant Adjustment**	
1413 Calibration Standard	0.01 N KCl		*1413 Calibration Standard*	0.01N KCl
ARI #	**00613-06**		ARI #	
µS/cm =	1,413		*Current value*	*Cal Temp (°C)*
Cal Temp (°C) =	20.8			*Expected*
input µS =	1304		Adjust to	*Displayed*
Cell constant =	0.9858			*%*

Calibration Verification Standard *Record Certified Values*

Source:	RICCA CHEMICAL COMPANY	*µS / cm =*	1000
Lot Number:	# 1302913	*TDS (mg/l) =*	

Sample Data

(NOTE: if requested, switch MODE to read TDS) Enter dilution as mL final / mL sample

ARI Number	Sample Dilution	Temp (C)	CONDUCTIVITY @ 25C (mS/cm)	CONDUCTIVITY @ 25C (µS/cm)	TDS (mg/L)	*Notes & Flags*
ICB		23.5		0.4		*OK!*
ICV		21.1		990		*99.00%*
WR99 A4		23.7		384		
WR99 A4 dup		23.8		381		*RPD =0.78 %*
CCB		23.3		0.5		*OK!*
CCV		21.2		998		*99.80%*

CONDUCTIVITY BENCHSHEET (EPA 120.1) Date / Time : 6-5-13

EPA 120.1, SM 2510 B-97, EPA 9050A Analyst : (A) 11:42

Temperature compensated to 25 °C

INSTRUMENT: Orion Model 115 SN:002482 ELECTRODE: Orion 011510 SN:KU9020 K= 1 cm-1

Direct Calibration

1413 Calibration Standard 0.01 N KCl

ARI # 00613-06

µS/cm = 1,413

Cal Temp (°C) = 20.8

input µS =

Cell constant = 0.9858

Cell Constant Adjustment

1413 Calibration Standard 0.01N KCl

ARI #

Current value *Cal Temp (°C)*

Expected

Adjust to *Displayed*

%

Calibration Verification Standard *Record Certified Values*

Source: RICCA CHEMICAL COMPANY *µS / cm* = 1000

Lot Number: # 1302913 *TDS (mg/l)* =

Sample Data

(NOTE: If requested, switch MODE to read TDS) Enter dilution as mL final / mL sample

ARI Number	Sample Dilution	Temp (C)	CONDUCTIVITY @ 25C (mS/cm)	CONDUCTIVITY @ 25C (µS/cm)	TDS (mg/L)	Notes & Flags
ICB		23.5		0.4		
ICV		21.1		998		
WR99 A4		23.7		384		
↓ mA4		23.8		381		
CCB		23.3		0.5		
CCV		21.2		998		
CCB						
CCV						
				6-5-13 (A)		
CCB						
CCV						

Amount Summary

Sequence Details

Name:	**MAY3113CDE**	*Calibration.*	**MAY2313RR**	**ARI # 616-02**
Directory.	**Instrument Data\2013 DATA\MAY 2013**	*Calibration exp:*	**7/23/2013**	
Data Vault:	**ChromeleonLocal**	*Queue Start:*		
No of Injections	**16.000**	*User:*		

By Component

		ERA 130312	ERA 210312	ERA 490412	ERA 370911	ERA 240312	ERA 220912	ERA 030112
Name	Dilution	Amount n.a. Fluoride	Amount n.a Chloride	Amount n.a. Nitrite	Amount n.a Bromide	Amount n.a. Sulfate	Amount n.a Nitrate	Amount n.a. Phosphate
RINSE	1.0	n a.	n.a.	n.a.	n a	n a.	n.a	n a.
ICV	1 0	3 042	2.966	2 988	2 958	2.972	2.941	2 835
%R=		**101.4%**	**98.9%**	**99.6%**	**98.6%**	**99.1%**	**98.0%**	**94.5%**
ICB	1.0	n.a	n.a.	n a.	n a	n.a.	n.a.	n a
LOW	1.0	0.085	0.093	0 083	0 075	0.080	0.075	0 073
WR99 A4	1 0	0.239	12.488	0 011	0 070	10.597	0.123	n.a
WR99 A4 dup	1 0	0.239	12 493	0 011	0.070	10.596	0.123	n a
%RPD=		**0.01%**	**0.04%**			**0.01%**	**0.05%**	
WR99 A4 ms	1.0	2.259	14 433	2 036	1.841	12.558	2.115	1.920
%R=		**101.0%**	**97.3%**	**101.8%**	**92.1%**	**98.0%**	**99.6%**	**96.0%**
SPK=	**0.05**	***mL 200ppm intstock to***		***5.0***	***mLsample=***	***2.00 ppm***		
WR84 A5 10X	10.0	0.238	24.573	n.a	n a.	44 615	5.695	n a
WR84 A5 dup 10X	10 0	n a	23.996	n.a.	n.a.	43.458	5.527	n.a
%RPD=		**#VALUE!**	**2.37%**			**2.63%**	**2.99%**	
WR84 A5 ms20X	20.0	19.954	41.601	20.041	17.340	59.062	24 598	16 557
%R=		**98.6%**	**85.1%**	**100.2%**	**86.7%**	**72.2%**	**94.5%**	**82.8%**
SPK=	**0.10**	***mL 200ppm intstock to***		***1.0***	***mLsample=***	***20.00 ppm***		
WR99 A4 5X	5 0	0.201	12 038	n a.	n a	9.903	0.106	n.a
WR99 A4 dup 5X	5.0	0 233	12.050	n a	n a.	9.913	0.106	n a
%RPD=		**14.54%**	**0.10%**			**0.10%**	**0.75%**	
WR99 A4 ms 5X	5.0	10 025	21.250	9.849	8 959	19.337	9 708	9.116
%R=		**98.2%**	**92.1%**	**98.5%**	**89.6%**	**94.3%**	**96.0%**	**91.2%**
SPK=	**0.05**	***mL 200ppm intstock to***		***1.0***	***mLsample=***	***10.00 ppm***		
CCV	1.0	3 026	2.978	3.007	2.971	2.966	2.955	2 870
%R=		**100.9%**	**99.3%**	**100.2%**	**99.0%**	**98.9%**	**98.5%**	**95.7%**
CCB	1 0	0 016	n.a.	n.a	n a	n.a.	n.a.	n a
STOP	1 0	n a	n.a.	n.a	n a	n a	n.a	n a

Sequence Overview

Sequence Details

Name:	**MAY3113CDE**	*Queue Start:*	**2013-05-31T15:08:03-**
Directory:	**Instrument Data\2013 DATA\MAY 2013**	*Created By:*	**pat**
Data Vault:	**ChromeleonLocal**		
No. of Injections:	**16**		

Injection Details

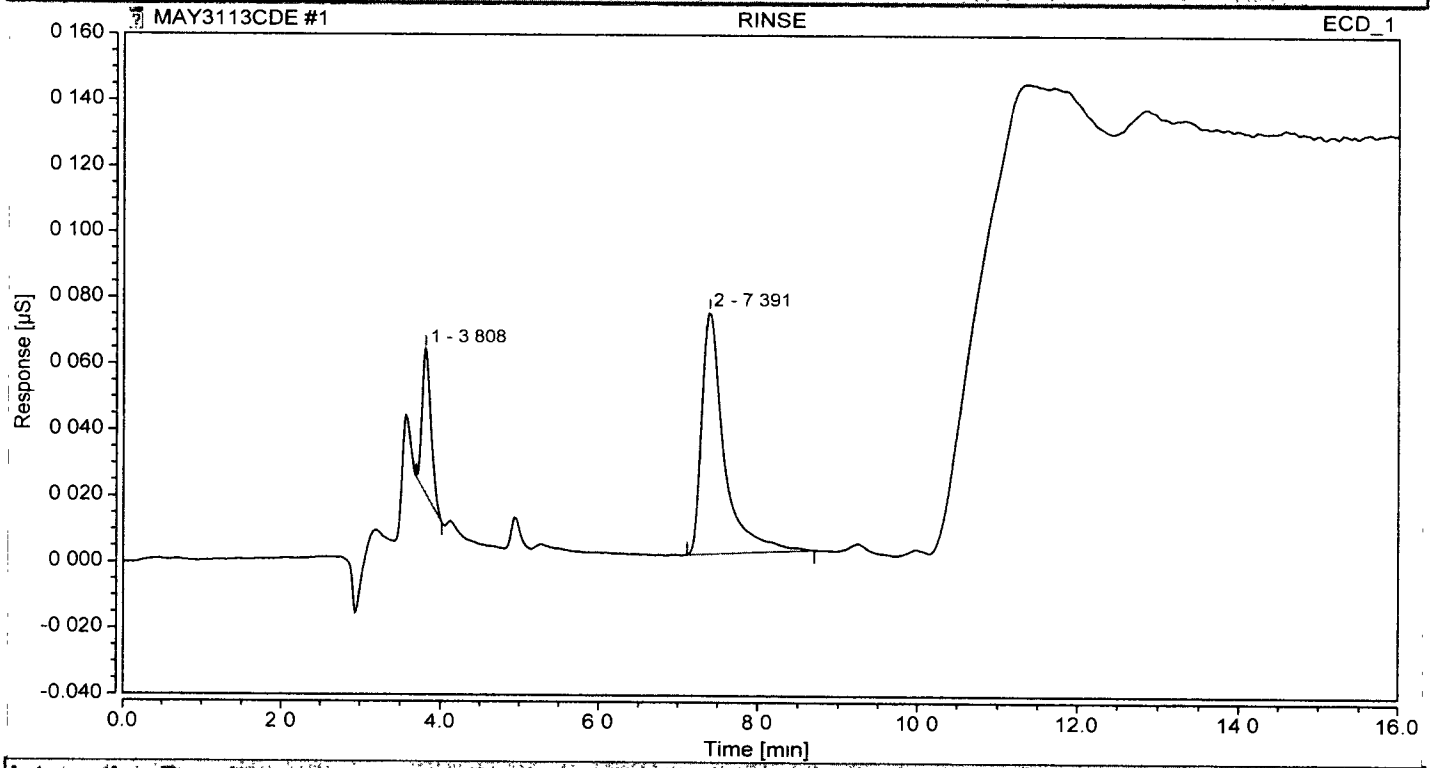
No.	Injection Name	Position	Type	Level	Dilution	Inject Time
1	RINSE	1	Unknown		1.0	31/May/13 15:08:03
2	ICV	2	Check Standard	06	1.0	31/May/13 15:26:49
3	ICB	3	Blank		1.0	31/May/13 15:46:00
4	LOW	4	Unknown		1.0	31/May/13 16:05:17
5	WR99 A4	5	Unknown		1.0	31/May/13 16:24:39
6	WR99 A4 dup	6	Unknown		1.0	31/May/13 16:44:06
7	WR99 A4 ms	7	Unknown		1.0	31/May/13 17:03:39
8	WR84 A5 10X	8	Unknown		10.0	31/May/13 17:23:17
9	WR84 A5 dup 10X	9	Unknown		10.0	31/May/13 17:43:02
10	WR84 A5 ms20X	10	Unknown		20.0	31/May/13 18:02:51
11	WR99 A4 5X	11	Unknown		5.0	31/May/13 18:22:46
12	WR99 A4 dup 5X	12	Unknown		5.0	31/May/13 18:42:47
13	WR99 A4 ms 5X	13	Unknown		5.0	31/May/13 19:02:53
14	CCV	2	Check Standard	06	1.0	01/Jun/13 13:22:44
15	CCB	3	Blank		1.0	01/Jun/13 13:43:56
16	STOP	1	Unknown		1.0	01/Jun/13 14:05:17

Chromatogram and Results

Injection Details

Injection Name:	*RINSE*	Inject Number:	1
Vial Number.	*1*	User:	pat
Injection Type	*Unknown*	Sequence:	MAY3113CDE
Dilution Factor	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*31/05/13 15:08*		

Chromatogram



Integration Results

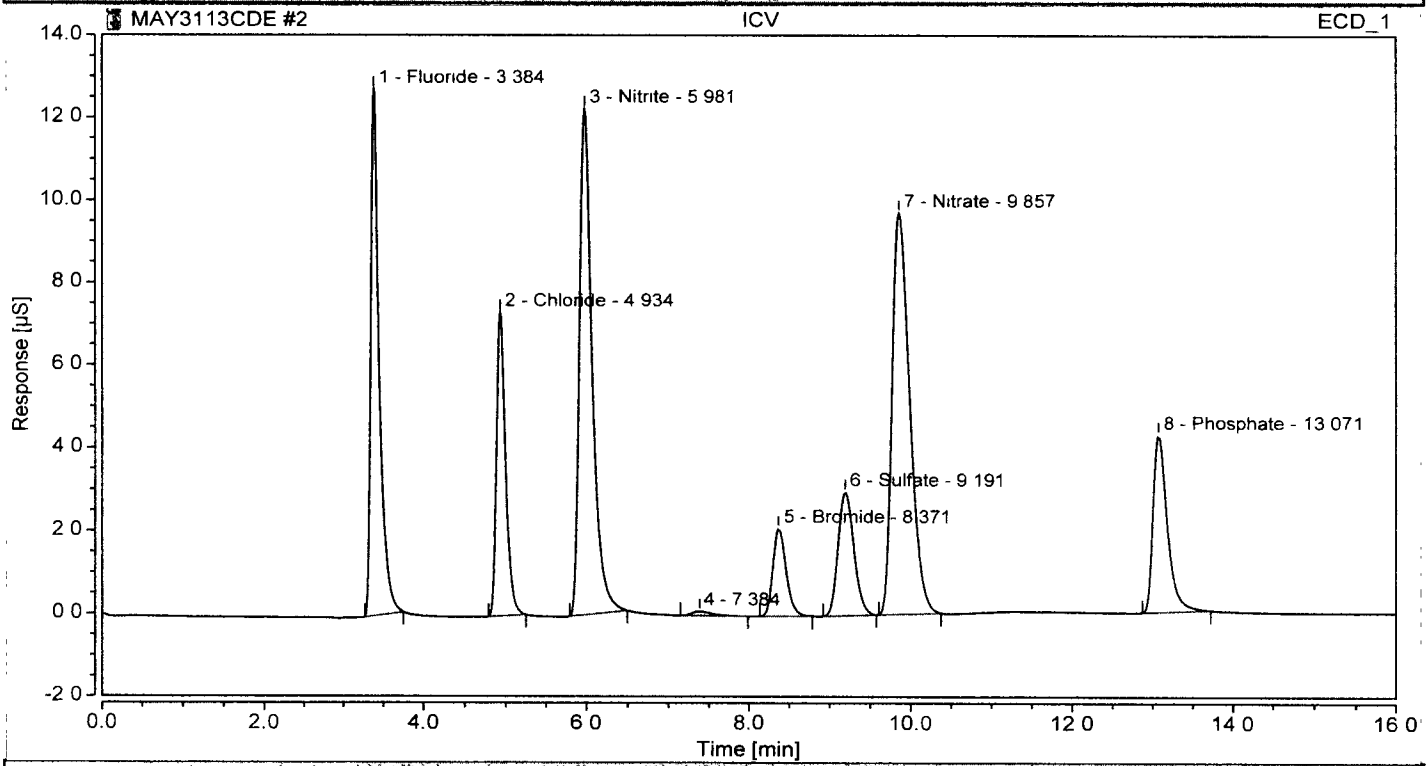
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	3.81	0.006	0.044	FALSE	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	7.39	0.024	0.073	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*ICV*	Inject Number:	2
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	MAY3113CDE
Dilution Factor:	*1 0*		
Instrument Method.	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*31/05/13 15:26*		

Chromatogram



Integration Results

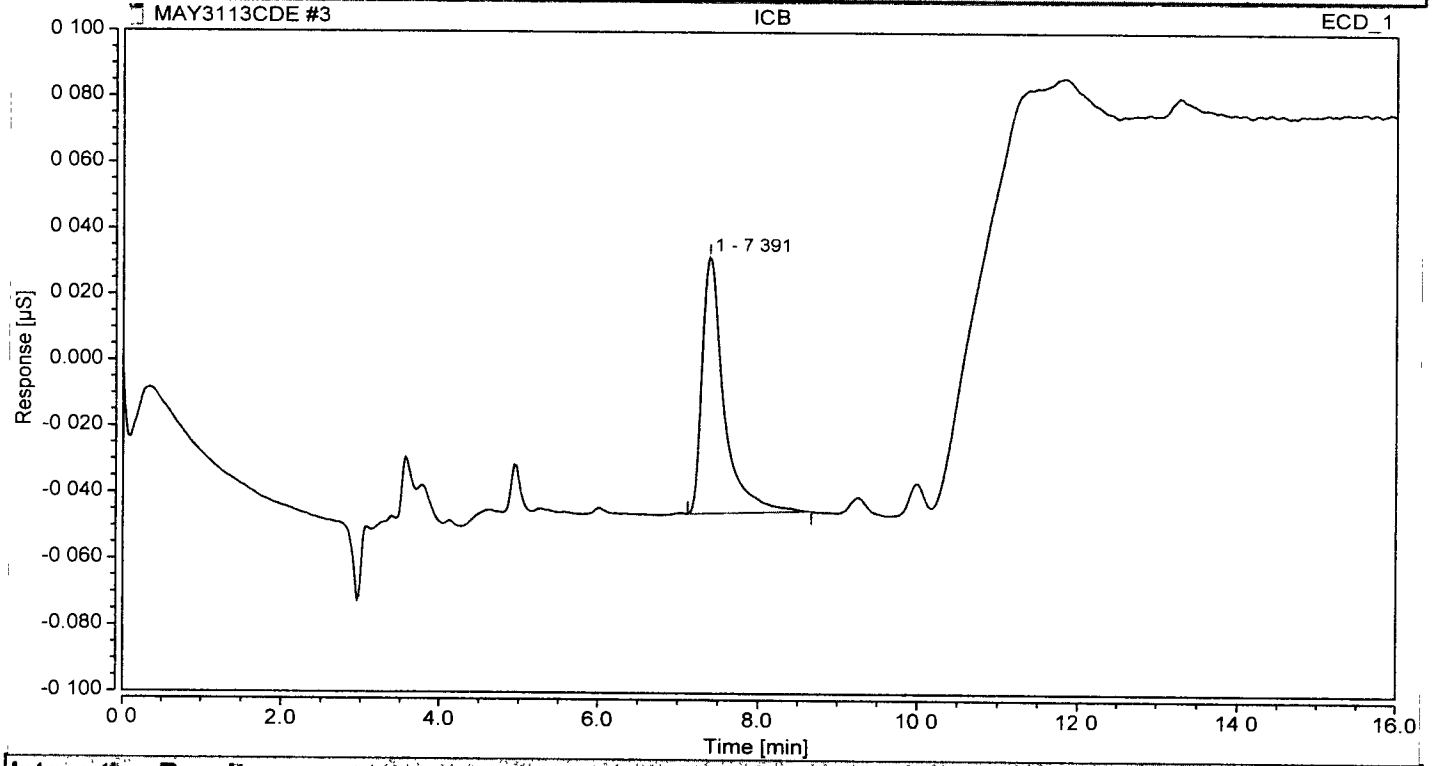
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.042	3.38	1.570	12.740	FALSE	1.40
2	Chloride	1.0	2.966	4.93	0.950	7.330	FALSE	-1.12
3	Nitrite	1.0	2.988	5.98	2.178	12.234	FALSE	-0.39
4		1.0	n.a.	7.38	0.029	0.096	FALSE	n.a.
5	Bromide	1.0	2.958	8.37	0.402	2.113	FALSE	-1.41
6	Sulfate	1.0	2.972	9.19	0.675	2.981	FALSE	-0.92
7	Nitrate	1.0	2.941	9.86	2.412	9.699	FALSE	-1.95
8	Phosphate	1.0	2.835	13.07	0.885	4.266	FALSE	-5.52

Chromatogram and Results

Injection Details

Injection Name:	*ICB*	Inject Number:	3
Vial Number:	*3*	User.	pat
Injection Type:	*Blank*	Sequence:	MAY3113CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*31/05/13 15:46*		

Chromatogram



Integration Results

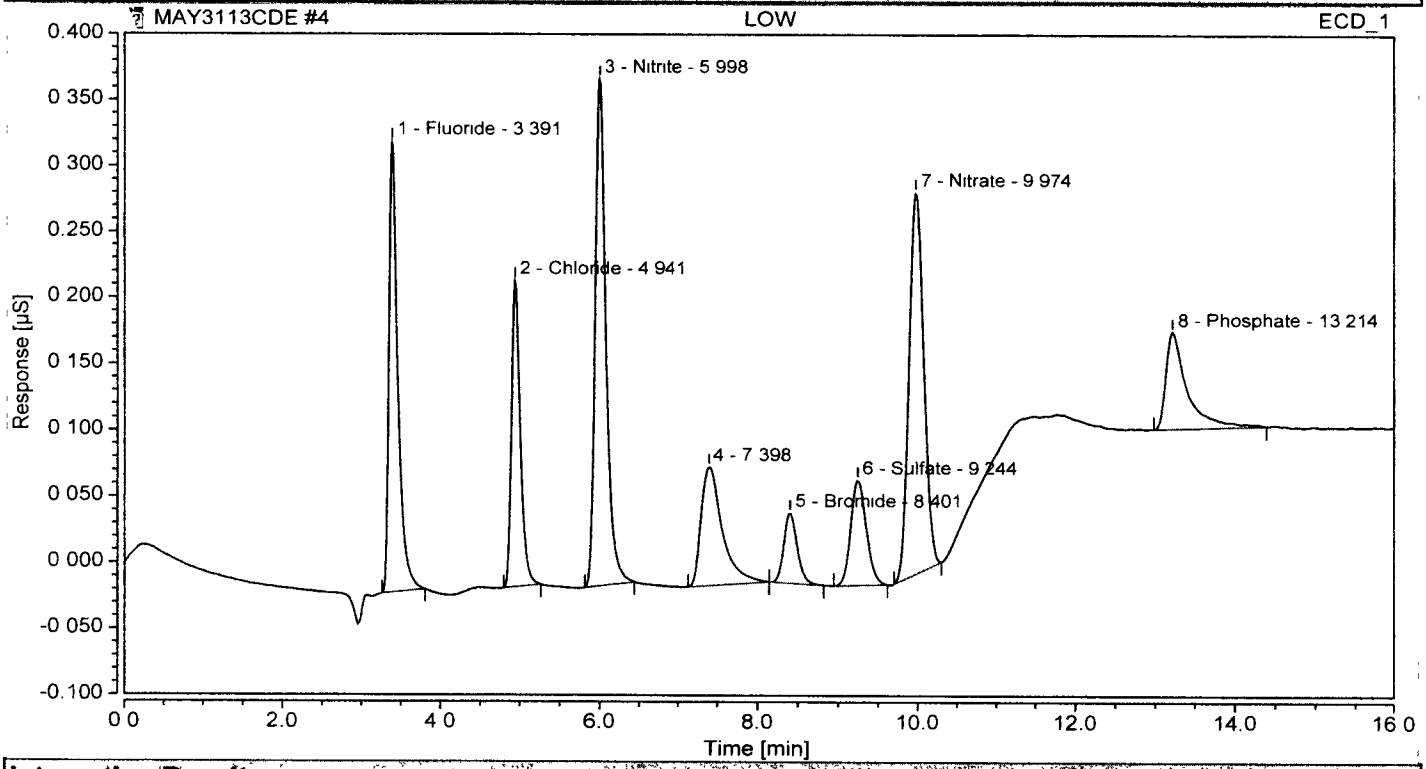
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.39	0.024	0.078	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*LOW*	Inject Number:	4
Vial Number:	*4*	User:	pat
Injection Type.	*Unknown*	Sequence:	MAY3113CDE
Dilution Factor:	*1 0*		
Instrument Method:	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time:	*31/05/13 16:05*		

Chromatogram



Integration Results

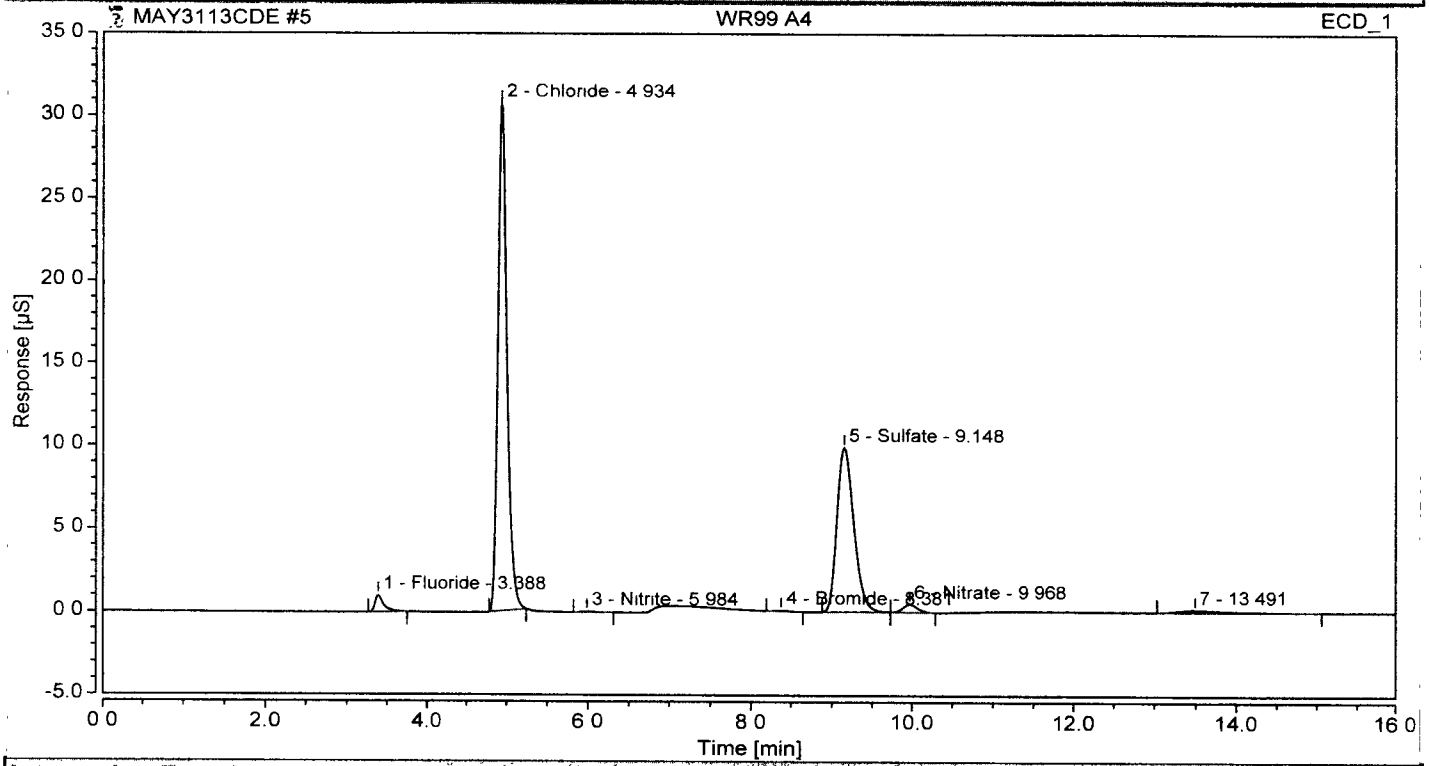
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.085	3.39	0.044	0.341	FALSE	n.a.
2	Chloride	1.0	0.093	4.94	0.030	0.231	FALSE	n.a.
3	Nitrite	1.0	0.083	6.00	0.061	0.384	FALSE	n.a.
4		1.0	n.a.	7.40	0.028	0.090	FALSE	n.a.
5	Bromide	1.0	0.075	8.40	0.010	0.053	FALSE	n.a.
6	Sulfate	1.0	0.080	9.24	0.018	0.080	FALSE	n.a.
7	Nitrate	1.0	0.075	9.97	0.062	0.289	FALSE	n.a.
8	Phosphate	1.0	0.073	13.21	0.023	0.073	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WR99 A4*	Inject Number:	5
Vial Number	*5*	User.	pat
Injection Type:	*Unknown*	Sequence:	MAY3113CDE
Dilution Factor	*1 0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*31/05/13 16:24*		

Chromatogram



Integration Results

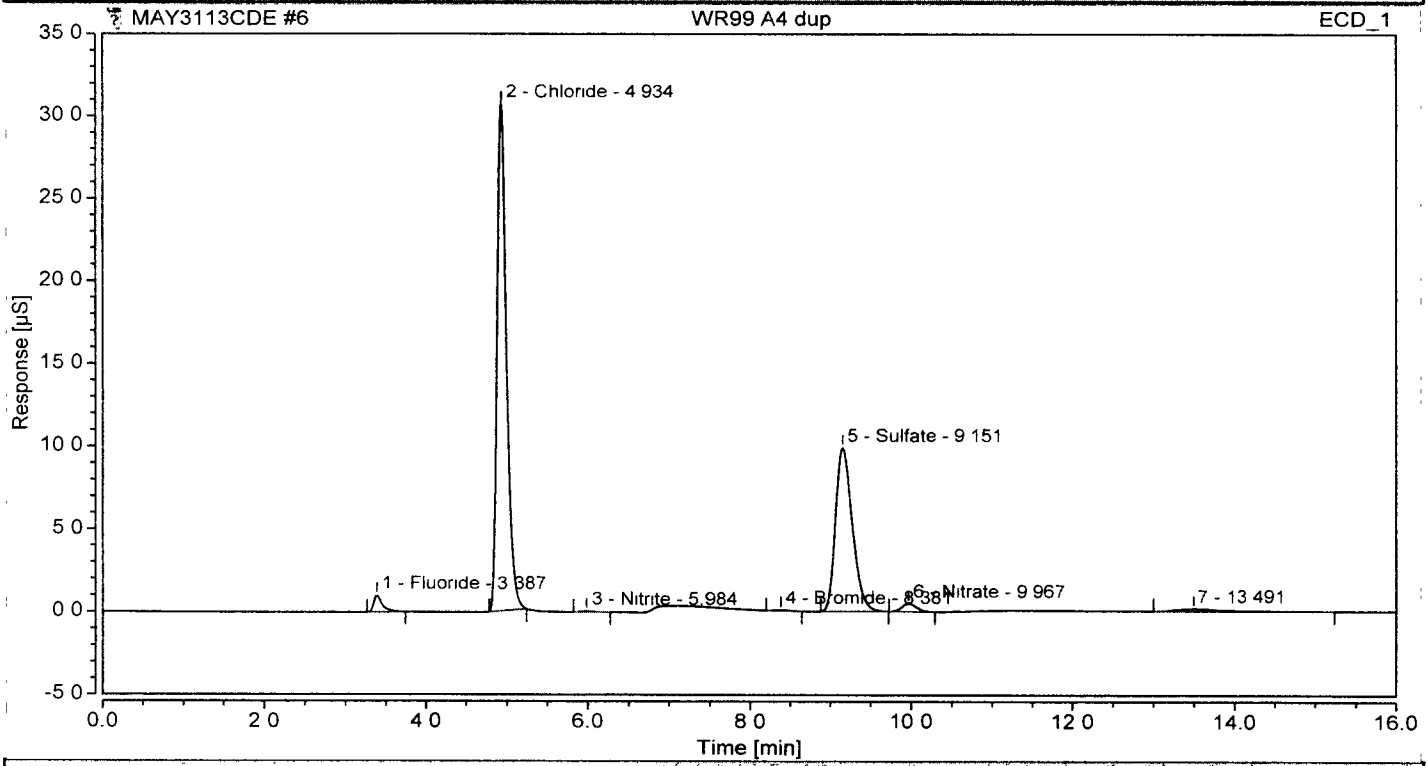
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.239	3.39	0.123	0.999	FALSE	n.a.
2	Chloride	1.0	12.488	4.93	4.001	30.723	FALSE	n.a.
3	Nitrite	1.0	0.011	5.98	0.008	0.054	FALSE	n.a.
4	Bromide	1.0	0.070	8.38	0.009	0.053	FALSE	n.a.
5	Sulfate	1.0	10.597	9.15	2.406	9.889	FALSE	n.a.
6	Nitrate	1.0	0.123	9.97	0.101	0.478	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7		1.0	n.a.	13.49	0.086	0.144	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WR99 A4 dup*	Inject Number.	6
Vial Number.	*6*	User.	pat
Injection Type.	*Unknown*	Sequence.	MAY3113CDE
Dilution Factor.	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodai*		
Injection Date/Time.	*31/05/13 16:44*		

Chromatogram



Integration Results

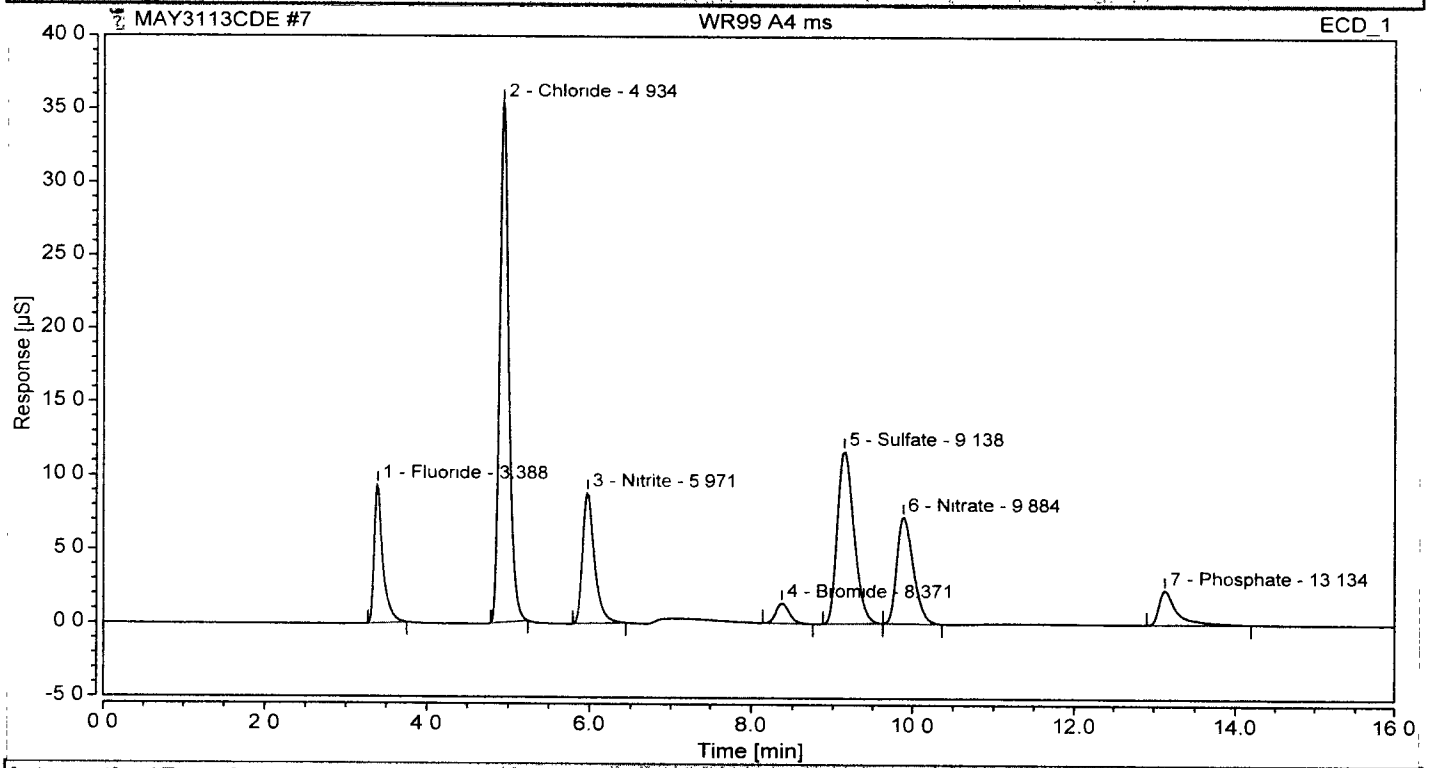
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.239	3.39	0.123	1.002	FALSE	n.a.
2	Chloride	1.0	12.493	4.93	4.003	30.700	FALSE	n.a.
3	Nitrite	1.0	0.011	5.98	0.008	0.054	FALSE	n.a.
4	Bromide	1.0	0.070	8.38	0.009	0.054	FALSE	n.a.
5	Sulfate	1.0	10.596	9.15	2.405	9.876	FALSE	n.a.
6	Nitrate	1.0	0.123	9.97	0.101	0.478	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7		1.0	n.a.	13.49	0.087	0.141	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WR99 A4 ms*	Inject Number:	7
Vial Number	*7*	User.	pat
Injection Type.	*Unknown*	Sequence:	MAY3113CDE
Dilution Factor	*1 0*		
Instrument Method.	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time.	*31/05/13 17:03*		

Chromatogram



Integration Results

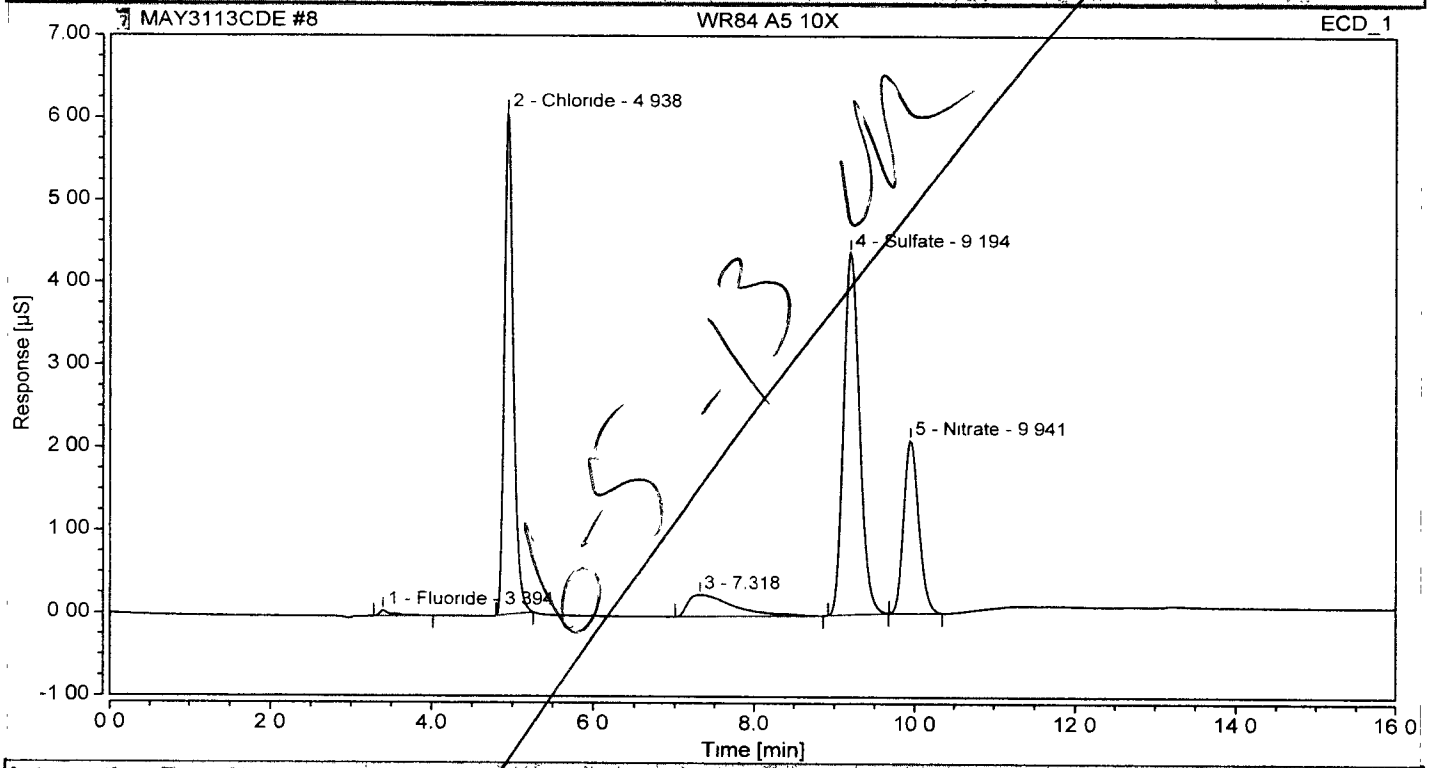
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.259	3.39	1.166	9.400	FALSE	n.a.
2	Chloride	1.0	14.433	4.93	4.624	35.386	FALSE	n.a.
3	Nitrite	1.0	2.036	5.97	1.484	8.874	FALSE	n.a.
4	Bromide	1.0	1.841	8.37	0.250	1.360	FALSE	n.a.
5	Sulfate	1.0	12.558	9.14	2.851	11.691	FALSE	n.a.
6	Nitrate	1.0	2.115	9.88	1.735	7.232	FALSE	n.a.
7	Phosphate	1.0	1.920	13.13	0.599	2.323	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WR84 A5 10X*	Inject Number:	8
Vial Number	*8*	User:	pat
Injection Type	*Unknown*	Sequence:	MAY3113CDE
Dilution Factor.	*10 0*		
Instrument Method:	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time:	*31/05/13 17:23*		

Chromatogram



Integration Results

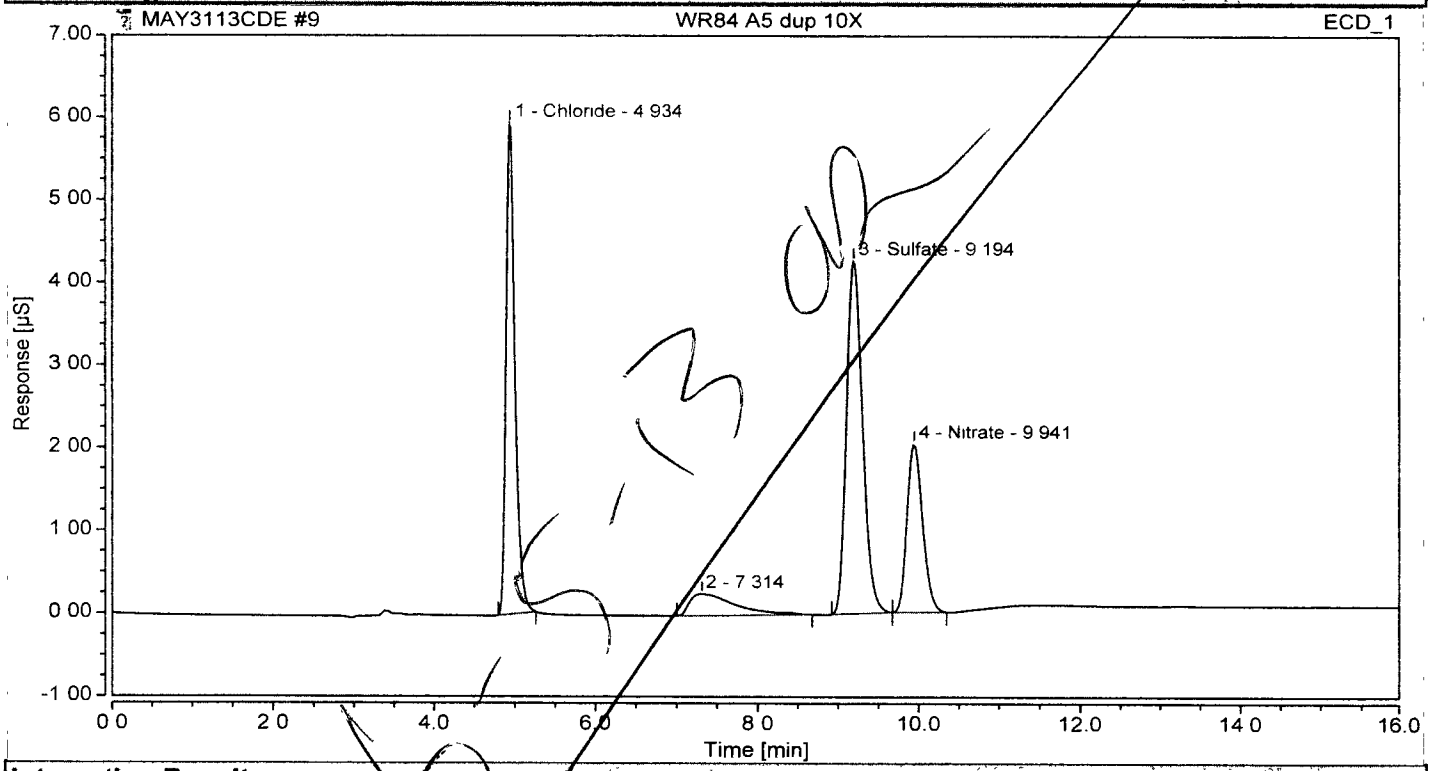
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	10.0	0.238	3.39	0.012	0.065	FALSE	n.a.
2	Chloride	10.0	24.573	4.94	0.787	6.076	FALSE	n.a.
n.a.	Nitrite	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		10.0	n.a.	7.32	0.175	0.260	FALSE	n.a.
n.a.	Bromide	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	10.0	44.615	9.19	1.013	4.373	FALSE	n.a.
5	Nitrate	10.0	5.695	9.94	0.467	2.089	FALSE	n.a.
n.a.	Phosphate	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WR84 A5 dup 10X*	Inject Number	9
Vial Number	*9*	User.	pat
Injection Type	*Unknown*	Sequence:	MAY3113CDE
Dilution Factor.	*10 0*		
Instrument Method.	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time.	*31/05/13 17:43*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	10.0	23.996	4.93	0.769	5.938	FALSE	n.a.
n.a.	Nitrite	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		10.0	n.a.	7.31	0.169	0.259	FALSE	n.a.
n.a.	Bromide	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	10.0	43.458	9.19	0.986	4.262	FALSE	n.a.
4	Nitrate	10.0	5.527	9.94	0.453	2.031	FALSE	n.a.
n.a.	Phosphate	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

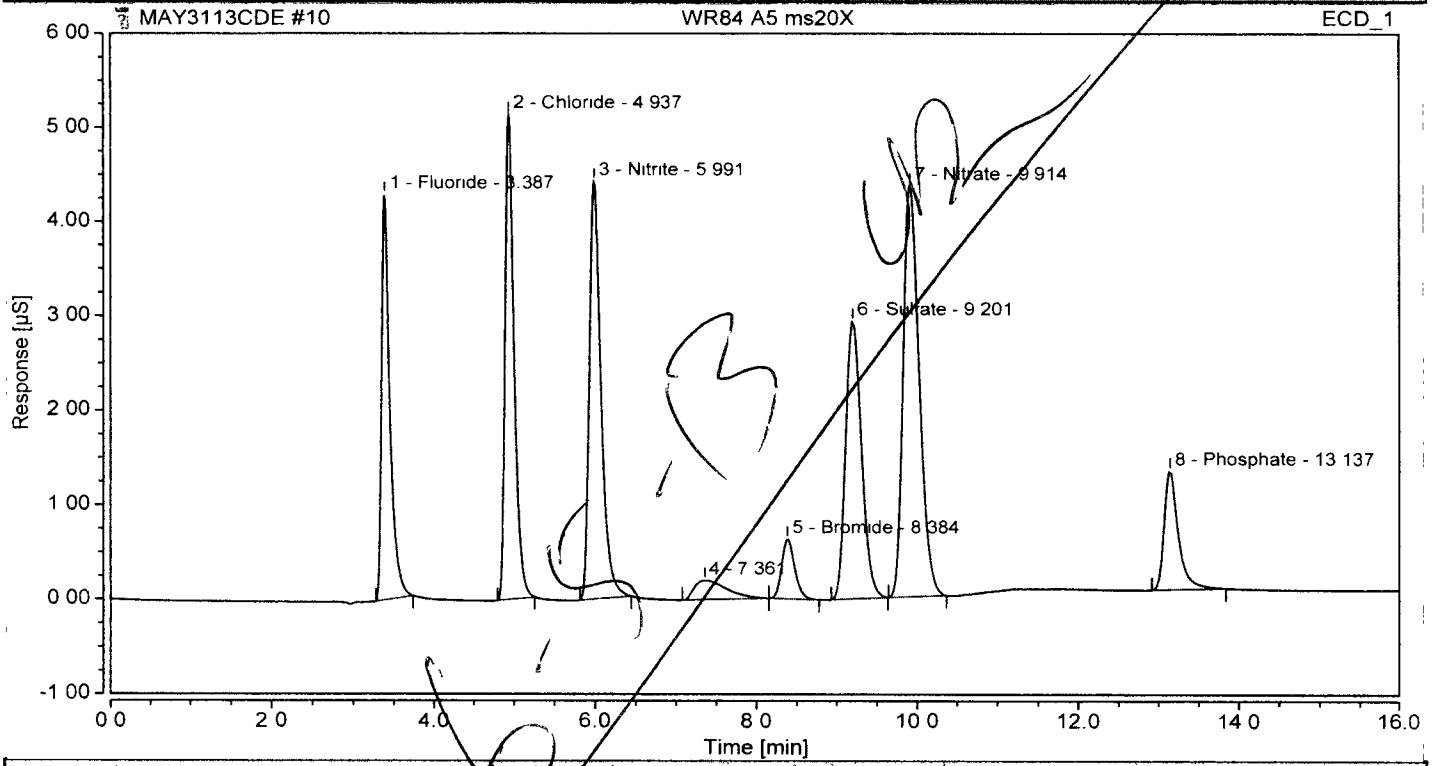
WR99 : 82559

Chromatogram and Results

Injection Details

Injection Name.	*WR84 A5 ms20X*	Inject Number:	10
Vial Number	*10*	User:	pat
Injection Type	*Unknown*	Sequence:	MAY3113CDE
Dilution Factor	*20.0*		
Instrument Method	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time.	*31/05/13 18.02*		

Chromatogram



Integration Results

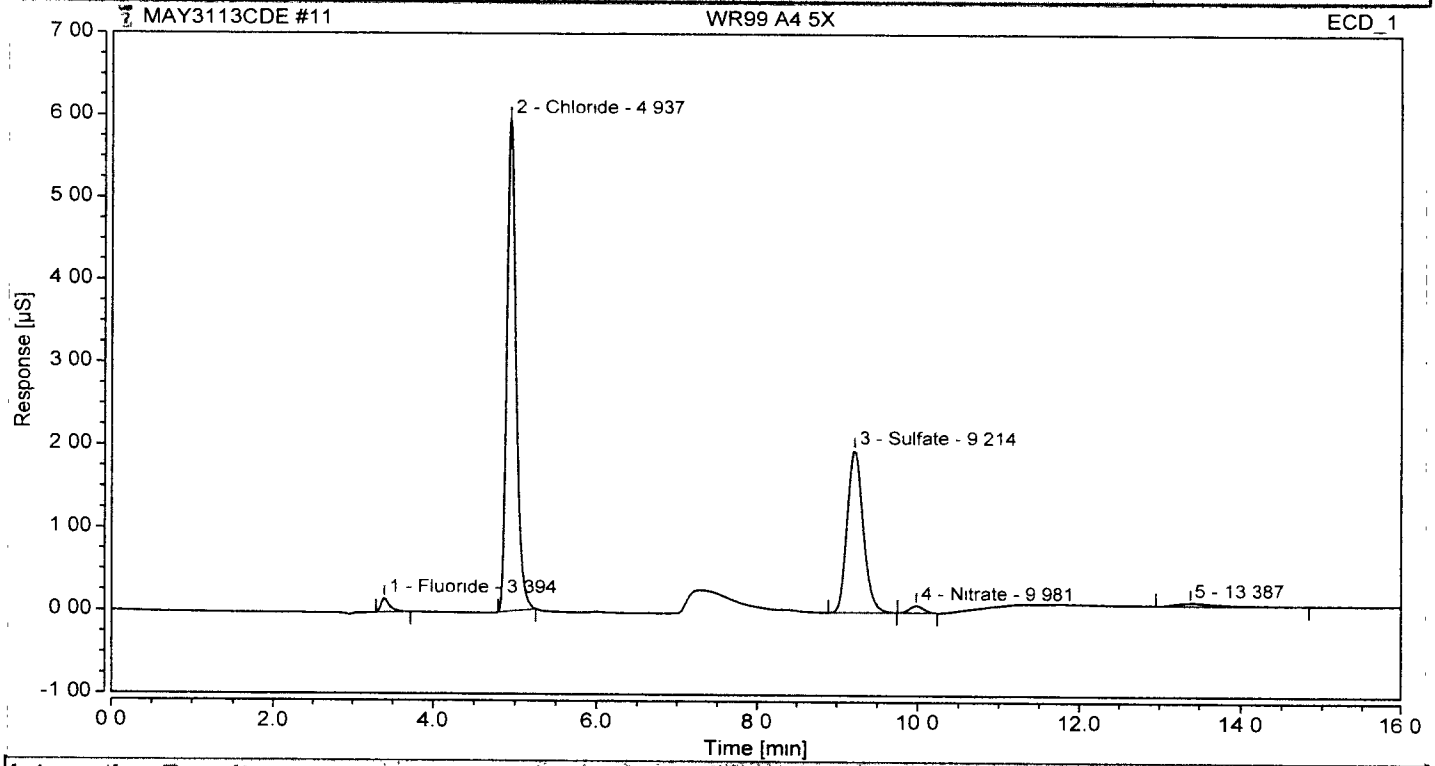
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	20.0	19.954	3.39	0.515	4.294	FALSE	n.a.
2	Chloride	20.0	41.601	4.94	0.666	5.140	FALSE	n.a.
3	Nitrite	20.0	20.041	5.99	0.730	4.425	FALSE	n.a.
4		20.0	n.a.	7.36	0.094	0.202	FALSE	n.a.
5	Bromide	20.0	17.340	8.38	0.118	0.632	FALSE	n.a.
6	Sulfate	20.0	59.062	9.20	0.670	2.940	FALSE	n.a.
7	Nitrate	20.0	24.598	9.91	1.009	4.352	FALSE	n.a.
8	Phosphate	20.0	16.557	13.14	0.258	1.259	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WR99 A4 5X*	Inject Number:	11
Vial Number	*11*	User	pat
Injection Type.	*Unknown*	Sequence	MAY3113CDE
Dilution Factor	*5.0*		
Instrument Method.	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time.	*31/05/13 18.22*		

Chromatogram



Integration Results

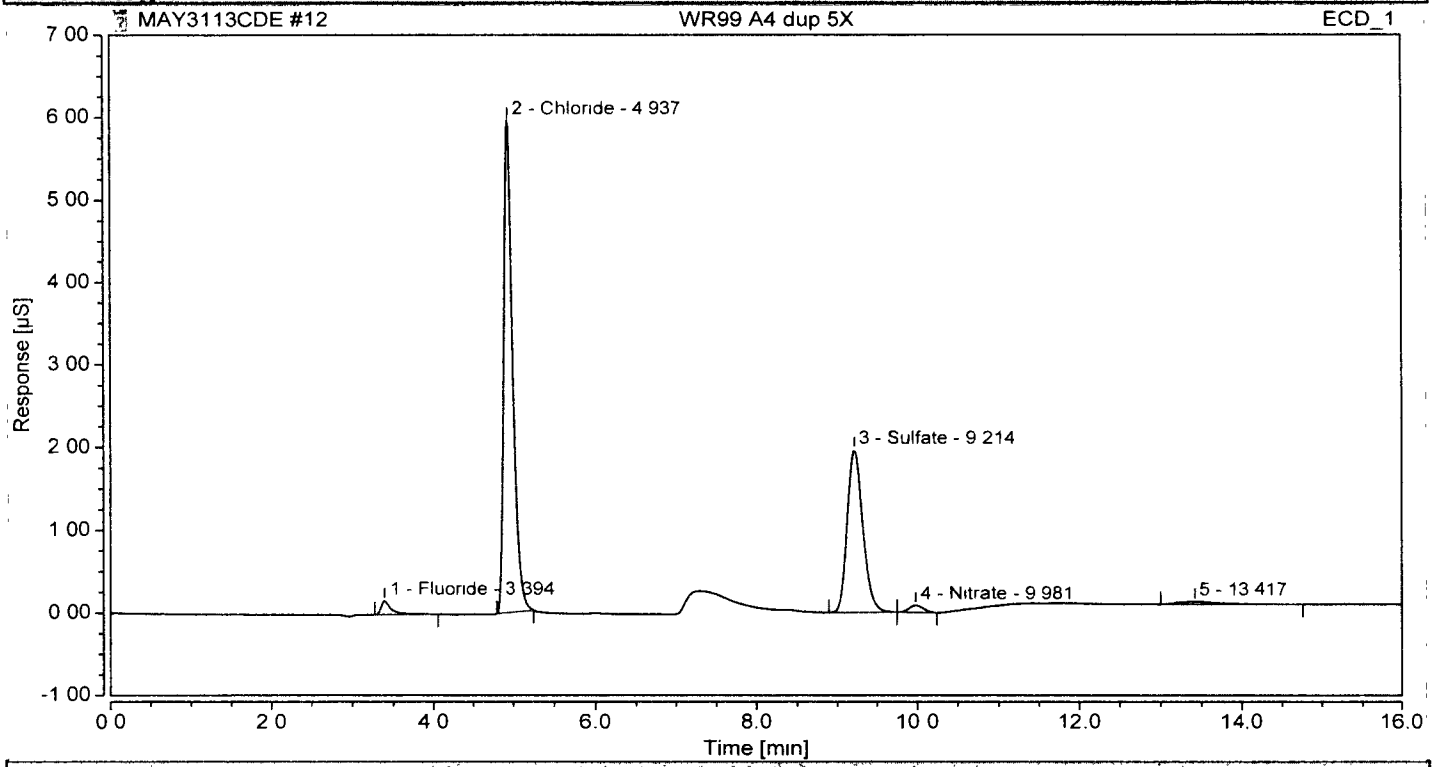
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	0.201	3.39	0.021	0.164	FALSE	n.a.
2	Chloride	5.0	12.038	4.94	0.771	5.959	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	5.0	9.903	9.21	0.450	1.960	FALSE	n.a.
4	Nitrate	5.0	0.106	9.98	0.017	0.085	FALSE	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		5.0	n.a.	13.39	0.020	0.034	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WR99 A4 dup 5X*	Inject Number	12
Vial Number.	*12*	User	pat
Injection Type.	*Unknown*	Sequence:	MAY3113CDE
Dilution Factor:	*5 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time:	*31/05/13 18 42*		

Chromatogram



Integration Results

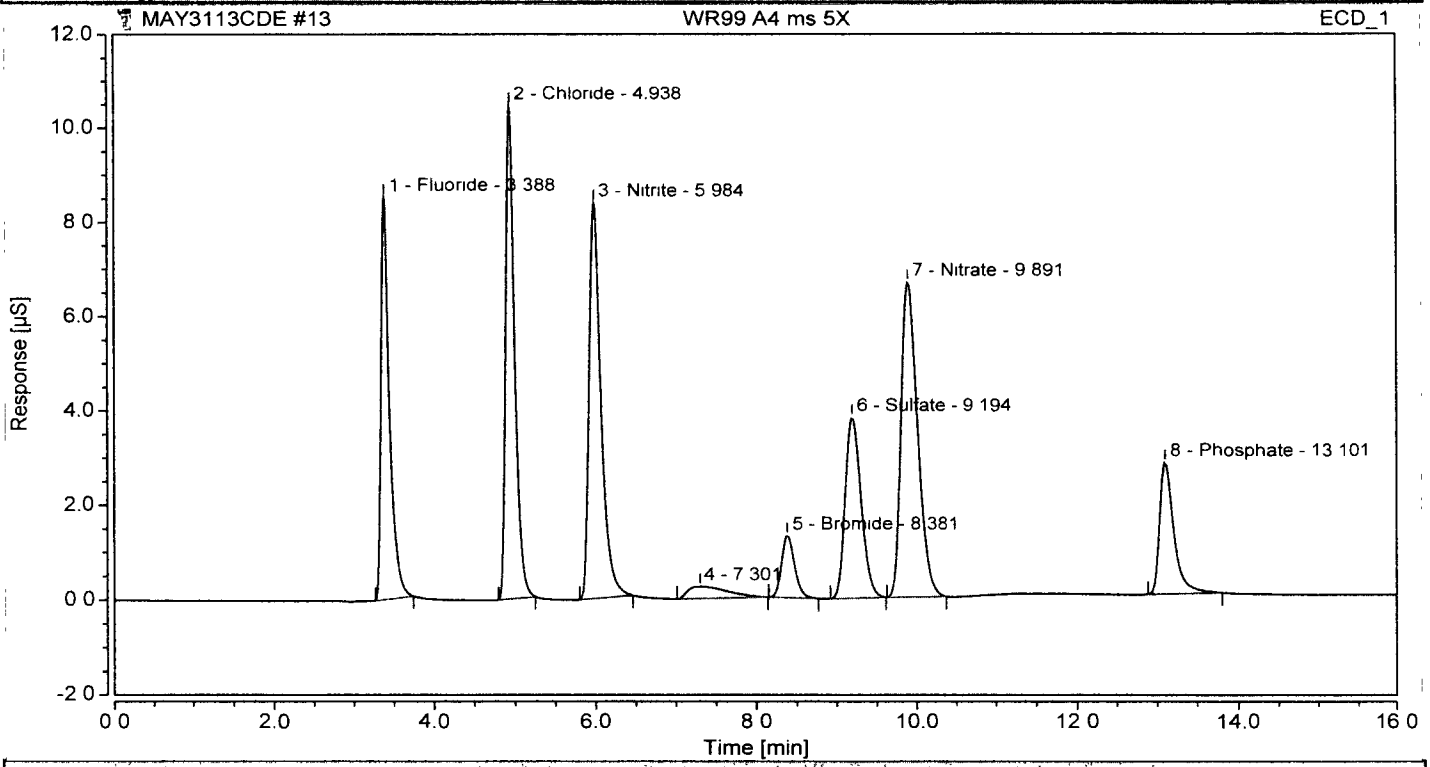
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	0.233	3.39	0.024	0.165	FALSE	n.a.
2	Chloride	5.0	12.050	4.94	0.772	5.961	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	5.0	9.913	9.21	0.450	1.961	FALSE	n.a.
4	Nitrate	5.0	0.106	9.98	0.017	0.085	FALSE	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		5.0	n.a.	13.42	0.019	0.033	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WR99 A4 ms 5X*	Inject Number.	13
Vial Number:	*13*	User.	pat
Injection Type	*Unknown*	Sequence:	MAY3113CDE
Dilution Factor.	*5 0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time.	*31/05/13 19.02*		

Chromatogram



Integration Results

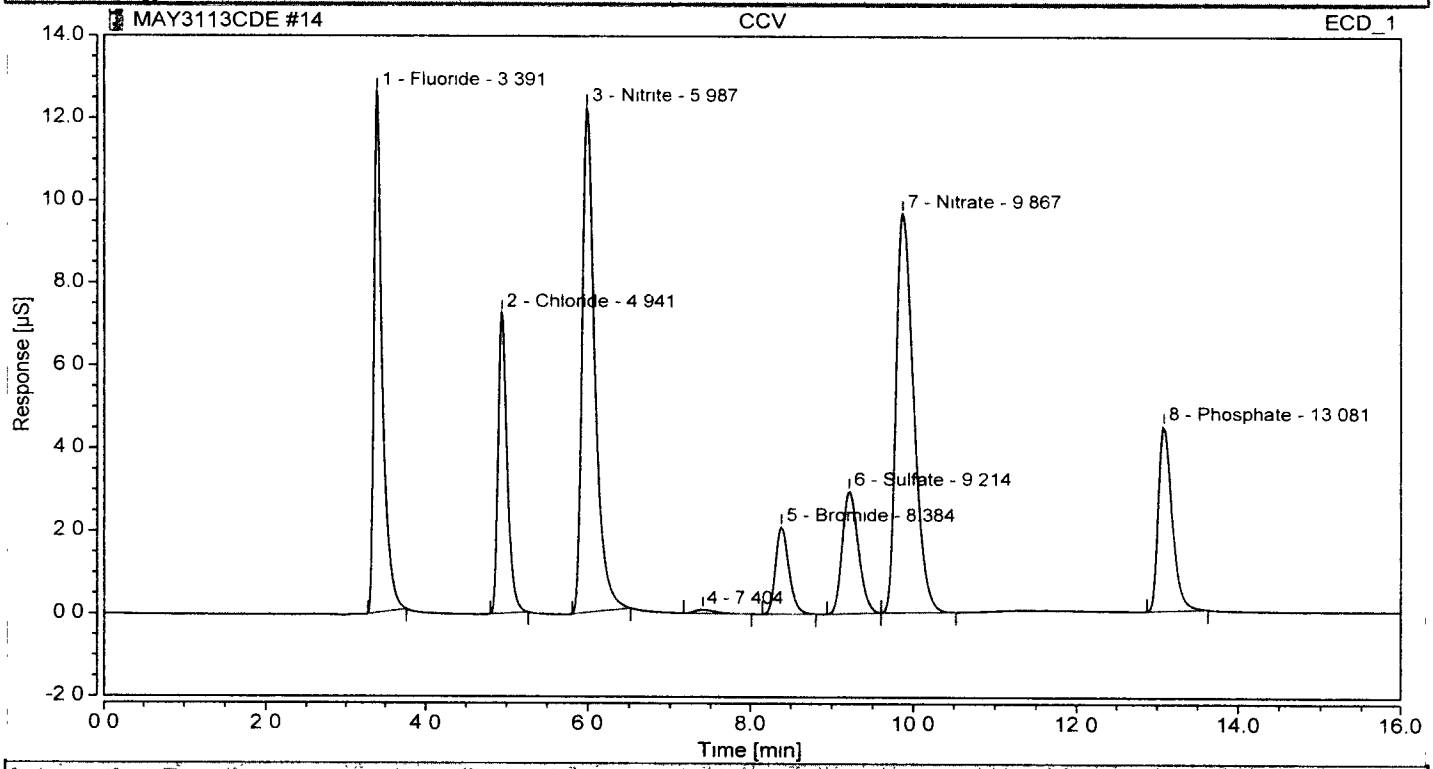
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	10.025	3.39	1.035	8.524	FALSE	n.a.
2	Chloride	5.0	21.250	4.94	1.362	10.450	FALSE	n.a.
3	Nitrite	5.0	9.849	5.98	1.436	8.387	FALSE	n.a.
4		5.0	n.a.	7.30	0.140	0.249	FALSE	n.a.
5	Bromide	5.0	8.959	8.38	0.243	1.304	FALSE	n.a.
6	Sulfate	5.0	19.337	9.19	0.878	3.821	FALSE	n.a.
7	Nitrate	5.0	9.708	9.89	1.592	6.665	FALSE	n.a.
8	Phosphate	5.0	9.116	13.10	0.569	2.780	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*CCV*	Inject Number:	14
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence.	MAY3113CDE
Dilution Factor	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*01/06/13 13:22*		

Chromatogram



Integration Results

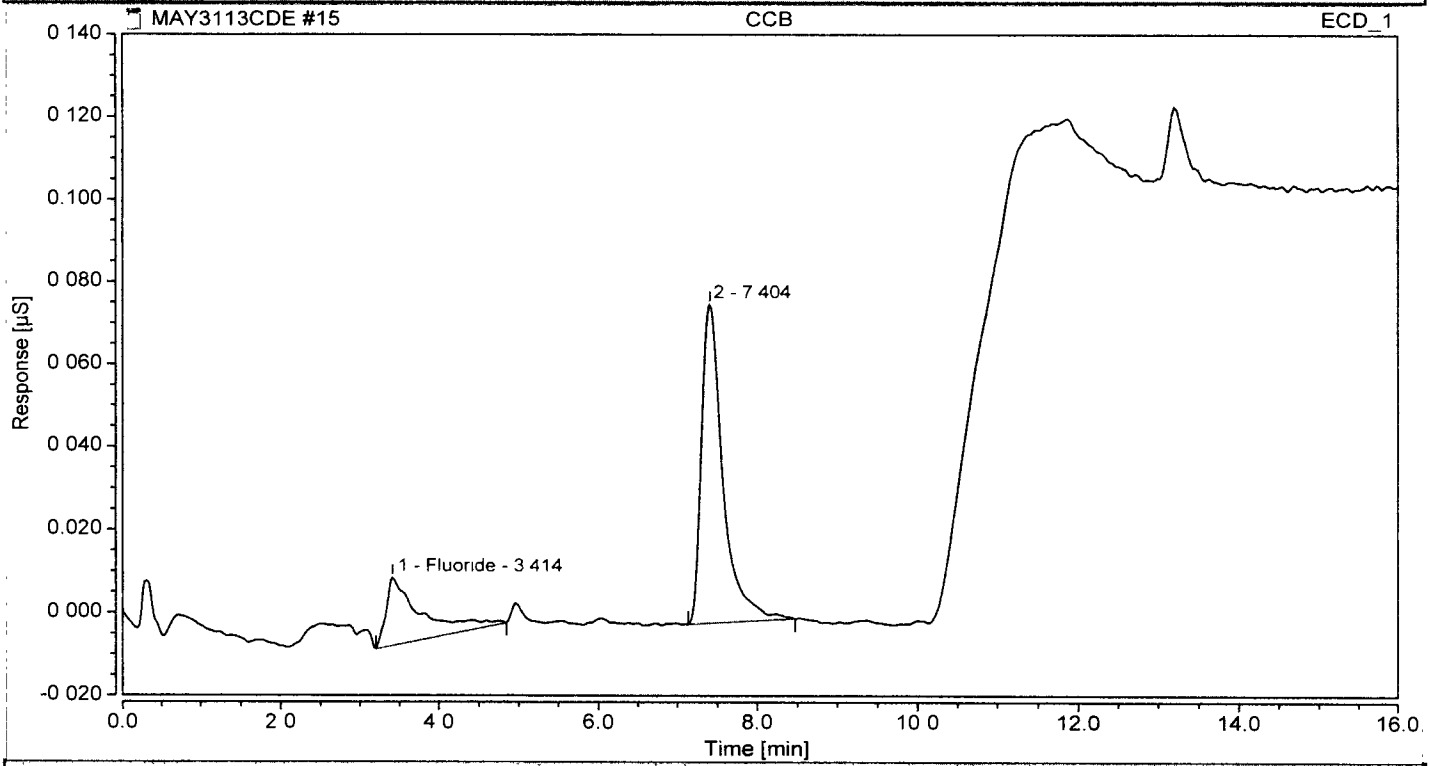
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.026	3.39	1.562	12.627	FALSE	0.87
2	Chloride	1.0	2.978	4.94	0.954	7.261	FALSE	-0.74
3	Nitrite	1.0	3.007	5.99	2.192	12.226	FALSE	0.25
4		1.0	n.a.	7.40	0.025	0.086	FALSE	n.a.
5	Bromide	1.0	2.971	8.38	0.404	2.106	FALSE	-0.95
6	Sulfate	1.0	2.966	9.21	0.673	2.959	FALSE	-1.14
7	Nitrate	1.0	2.955	9.87	2.424	9.653	FALSE	-1.49
8	Phosphate	1.0	2.870	13.08	0.896	4.471	FALSE	-4.34

Chromatogram and Results

Injection Details

Injection Name:	*CCB*	Inject Number:	15
Vial Number.	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	MAY3113CDE
Dilution Factor.	*1.0*		
Instrument Method.	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*01/06/13 13:43*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.016	3.41	0.008	0.016	FALSE	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	7.40	0.024	0.077	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*STOP*	Inject Number:	16
Vial Number:	*1*	User:	pat
Injection Type:	*Unknown*	Sequence:	MAY3113CDE
Dilution Factor:	*1.0*		
Instrument Method.	*SHUTDOWN*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*01/06/13 14:05*		

Chromatogram

Can't read channel ECD_1 from injection #16 - STOP
Channel is not available

Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev
			n.a.	min	natogram in con	matogram in		n.a.

Calibration

CALIBRATION FILE NAME: MAY2313RR

Calibration Details — Fluoride

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	1.9371
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9999

Calibration Results — Fluoride

No	Injection Name	Calibration Level	X Value Fluoride	Y Value Fluoride	Amount mg/l Fluoride	Area µS*min Fluoride	Height µS Fluoride
1	STD1	01	0.0437	0.1000	0.0847	0.044	0.345
2	STD2	02	0.2465	0.5000	0.4774	0.246	2.058
3	STD3	03	0.5150	1.0000	0.9977	0.515	4.296
4	STD4	04	1.3017	2.5000	2.5216	1.302	10.658
5	STD5	05	2.5770	5.0000	4.9920	2.577	20.470

Calibration Details — Chloride

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	3 1205
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9995

Calibration Results — Chloride

No.	Injection Name	Calibration Level	X Value Chloride	Y Value Chloride	Amount mg/l Chloride	Area µS*min Chloride	Height µS Chloride
1	STD1	01	0.0297	0.1000	0.0927	0.030	0.227
2	STD2	02	0.1451	0.5000	0.4527	0.145	1.120
3	STD3	03	0.3025	1.0000	0.9440	0.303	2.330
4	STD4	04	0.7874	2.5000	2.4570	0.787	6.013
5	STD5	05	1.6138	5.0000	5.0359	1.614	12.265

Calibration Details — Nitrite

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	1.3718
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9998

Calibration Results — Nitrite

No.	Injection Name	Calibration Level	X Value Nitrite	Y Value Nitrite	Amount mg/l Nitrite	Area µS*min Nitrite	Height µS Nitrite
1	STD1	01	0.0644	0.1000	0.0884	0.064	0.405
2	STD2	02	0.3583	0.5000	0.4915	0.358	2.212
3	STD3	03	0.7416	1.0000	1.0173	0.742	4.433
4	STD4	04	1.8526	2.5000	2.5414	1.853	10.468
5	STD5	05	3.6277	5.0000	4.9764	3.628	19.511

Calibration Details — Bromide

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	7 3523
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0.9981

Calibration Results — Bromide

No	Injection Name	Calibration Level	X Value Bromide	Y Value Bromide	Amount mg/l Bromide	Area µS*min Bromide	Height µS Bromide
1	STD1	01	0.0103	0.1000	0.0754	0.010	0.053
2	STD2	02	0.0571	0.5000	0.4198	0.057	0.295
3	STD3	03	0.1217	1.0000	0.8948	0.122	0.634
4	STD4	04	0.3283	2.5000	2.4138	0.328	1.709
5	STD5	05	0.6891	5.0000	5.0667	0.689	3.562

WR99 : 02567

Calibration Details	**Sulfate**		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	4 4029
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9988

Calibration Results — **Sulfate**

No	Injection Name	Calibration Level	X Value Sulfate	Y Value Sulfate	Amount mg/l Sulfate	Area µS*min Sulfate	Height µS Sulfate
1	STD1	01	0.0188	0.1000	0.0828	0.019	0.082
2	STD2	02	0.0972	0.5000	0.4279	0.097	0.430
3	STD3	03	0.2082	1.0000	0.9165	0.208	0.922
4	STD4	04	0.5542	2.5000	2.4403	0.554	2.441
5	STD5	05	1.1471	5.0000	5.0504	1.147	5.017

Calibration Details	**Nitrate**		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	1.2190
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0.9994

Calibration Results — **Nitrate**

No	Injection Name	Calibration Level	X Value Nitrate	Y Value Nitrate	Amount mg/l Nitrate	Area µS*min Nitrate	Height µS Nitrate
1	STD1	01	0.0615	0.1000	0.0750	0.062	0.286
2	STD2	02	0.3635	0.5000	0.4431	0.363	1.613
3	STD3	03	0.7771	1.0000	0.9473	0.777	3.349
4	STD4	04	2.0213	2.5000	2.4640	2.021	8.179
5	STD5	05	4.1286	5.0000	5.0329	4.129	15.253

Calibration Details	**Phosphate**		
Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	3 1994
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9974

Calibration Results — **Phosphate**

No	Injection Name	Calibration Level	X Value Phosphate	Y Value Phosphate	Amount mg/l Phosphate	Area µS*min Phosphate	Height µS Phosphate
1	STD1	01	0.0222	0.1000	0.0710	0.022	0.094
2	STD2	02	0.1242	0.5000	0.3972	0.124	0.609
3	STD3	03	0.2753	1.0000	0.8808	0.275	1.415
4	STD4	04	0.7508	2.5000	2.4020	0.751	3.811
5	STD5	05	1.5864	5.0000	5.0755	1.586	7.410

ALKALINITY BENCHSHEET methods: **SM 2320 B-97** Date/Time: 6/10/13 11:25

pH meter verification **pH meter ID: ACCUMET AR60** **Buret ID: 01G30627** Analyst: APD

Buffer pH **7.00** **pH Probe ID : AR60**

Measured pH 7.02 *Calibration OK* **Acid ARI ID:** 10052C

Partitioning Calculations

T=Total, P=Phenolphthalein

Obs	HCO3	CO3	OH
P =0	T	0	0
P< 0.5T	T - 2P	2P	0
P= 0.5T	0	2P	0
P> 0.5T	0	2(T - P)	2P - T
P =T	0	0	T

Standardization of acid titrant ***(titration to pH 4.5)***

ARI ID: *00139-04*

grams Na2CO3 = **0.6274** *to* **250** *ml DI*

Normality Na2CO3 = 0.0474

Assumed Acid Normality = **0.02**

Standardized Acid Normality= 0.0194 ***OK!***

BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.00	5	13.00	0.018
2	0.00	5	12.05	0.020
3	0.00	5	11.64	0.020
AVERAGE	0.00			0.019

Calibration Verification Standard (second source sodium carbonate solution)

ARI ID: *00139-05* *mg/L CaCO3*

grams Na2CO3 = **0.6263** *grams in* **250** *mL =* *2364*

dilution: **5.0** *mL to* **100** *CVS =* **118.2**

DQL Std (2ppm) *dilute* **0.085** *mL stock to 100 mL DI =* **2.0**

Laboratory Control Standard (LCS)

Source: *p206-506* *mg/L CaCO3* **41.90**

SAMPLE DATA

Alk (mg/L CaCO3 = [(mL acid X Nacid) X 50,000] / mL sample *(shaded cells are calculated, make no entries)*

low level = {(((2 X mL4.5)-mL4.2] X Nacid) X 50,000} / mL sample

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4 pH=8.3	ml H2SO4 pH =4.5	ml H2SO4 pH=4.2	ALK (mg CaCO3/l) Phenolph	ALK (mg CaCO3/l) TOT HIGH	ALK (mg CaCO3/l) TOT LOW	Partitioning (mg/l CaCO3) HCO3	Partitioning (mg/l CaCO3) CO3	Partitioning (mg/l CaCO3) OH	(mg/l) FREE CO2
ICV		10.42	100	21.3	5.55	11.48	11.59	53.6	111.4		94.2% *OK!*			
ICB		4.98	75	22.3		0.04		0.0		1.0	1.0	0.0	0.0	21.7
DQL Std (2ppm)		8.25	100	22.3		0.37		0.0		7.2				
LCS		8.80	50	19.0	0.98	2.18	2.24	19.0	42.3		100.9% *OK!*			
WS79 A2		4.53	50	22.3		0.06	0.08	0.0		0.8	0.8	0.0	0.0	45.8
WS79 B2		5.27	50	22.3		0.09	0.11	0.0		1.4	1.4	0.0	0.0	14.6
WS79 C2		4.24	50	22.2				0.0		pH <4.5	0.0	0.0	0.0	0.0
WS79 D2		4.35	50	22.1			0.06	0.0		pH <4.5	0.0	0.0	0.0	0.0
WS79 E2		5.93	50	22.4		0.44	0.48	0.0		7.8	7.8	0.0	0.0	18.2
WS79 F2		6.37	50	22.2		0.47	0.50	0.0		8.5	8.5	0.0	0.0	7.3
WS79 F2 dup		6.38	50	22.2		0.48	0.51	0.0		8.7	8.7	0.0	0.0	7.3
RPD =										*2.2%*	*2.2%*			*0.1%*
CCV		10.34	100	22.3	5.57	11.50	11.62	54.0	111.6		*94.4%* *OK!*			0.0
WS79 G2		7.34	50	22.3		2.05	2.16	0.0	39.8		39.8	0.0	0.0	3.6
WS79 H2		5.98	50	22.4		4.34	4.37	0.0	84.2		84.2	0.0	0.0	176.3
WS79 I2		4.44	50	22.4			0.06	0.0		pH <4.5	0.0	0.0	0.0	0.0
WS79 K2		4.26	50	22.5				0.0		pH <4.5	0.0	0.0	0.0	0.0
WS79 L2		4.69	50	22.6		0.06	0.12	0.0		0.0	0.0	0.0	0.0	0.0
WS79 M2		4.69	50	22.5		0.04	0.10	0.0		-0.4	-0.4	0.0	0.0	-15.8
WS79 N2		4.87	50	22.7		0.07	0.10	0.0		0.8	0.8	0.0	0.0	20.9
WS79 N2 dup		4.87	50	22.8		0.04	0.09	0.0		-0.1	-0.1	0.0	0.0	-2.1
RPD =										*244.4%*	*244.4%*			*244.4%*
WS79 O2		4.28	50	22.6				0.0		pH <4.5	0.0	0.0	0.0	0.0
WS99 A3		6.95	50	22.9		8.62	8.76	0.0	167.2		167.2	0.0	0.0	37.5
CCV		10.30	100	22.7	5.52	11.36	11.56	53.5	110.2		*93.2%* *OK!*			
CCB		5.07	75	23.1		0.08	0.10	0.0		0.8	0.8	0.0	0.0	13.2

SAMPLE DATA

Alk (mg/L CaCO3 = [{mL acid X Nacid) X 50,000] / mL sample *(shaded cells are calculated, make no entries)*

low level = {{{(2 X mL4.5)-mL4.2] X Nacid) X 50,000} / mL sample

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4			ALK (mg CaCO3/l)			Partitioning (mg/l CaCO3)			(mg/l)
					pH=8.3	pH =4.5	pH=4.2	Phenolph	TOT HIGH	TOT LOW	HCO3	CO3	OH	FREE CO2
LCS-2		8.77	50	22.2	0.87	2.04	2.12	16.9	39.6		*94.5% OK!*			
WR78 A6		6.98	50	22.9		0.93	1.05	0.0		15.7	15.7	0.0	0.0	3.3
WR78 A6 dup		6.97	50	22.8		0.97	1.04	0.0		17.5	17.5	0.0	0.0	3.7
RPD =										*10.5%*	*10.5%*			*12.8%*
WR78 B6		7.37	50	22.7		3.25	3.40	0.0	63.1		63.1	0.0	0.0	5.4
WR78 D6		7.66	50	22.6		5.15	5.30	0.0	99.9		99.9	0.0	0.0	4.4
WR78 E6		6.91	50	22.7		4.40	4.56	0.0	85.4		85.4	0.0	0.0	21.0
WR78 F6		6.89	50	22.7		4.40	4.55	0.0	85.4		85.4	0.0	0.0	22.0
CCV		10.34	100	22.9	5.52	11.30	11.50	53.5	109.6		*92.8% OK!*			0.0

ALKALINITY BENCHSHEET

methods: SM 2320 B-97

Date/Time: 6/10/13 11:25

Analyst: AP10

pH meter verification — pH meter ID: ACCUMET AR60 — Buret ID: 01G30627

Buffer pH: 7.00 — pH Probe ID: AR60

Measured pH: 7.02 — must agree within 0.1 pH un — Acid ARI ID: 10052C

Standardization of acid titrant *(titration to pH 4.5)*

ARI ID: 00139-04

grams Na2CO3 =	0.6274	to 250	ml DI
Normality Na2CO3 =	0.0474		
Assumed Acid Normality =	0.02		
Standardized Acid Normality=			

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0	5	13.00	
2	0	5	12.05	
3	0	5	11.64	
AVERAGE				

Partitioning Calculations (T=Total, P=Phenolphthalein)			
Obs	HCO3	CO3	OH
P =0	T	0	0
P< 0.5T	T - 2P	2P	0
P= 0.5T	0	2P	0
P> 0.5T	0	2(T - P)	2P - T
P =T	0	0	T

Calibration Verification Standard (second source sodium carbonate solution)

ARI ID: 00139-05

grams Na2CO3 = ~~0.6274~~ 0.6273 grams in 250 mL = 2368 — mg/L CaCO3

dilution: 5.0 mL to 100 — CVS = 118.4

DQL Std (2ppm) — dilute 0.084 mL stock to 100 mL DI = 2.0

Laboratory Control Standard (LCS)

Source: P206-506 — mg/L CaCO3: ~~49.10~~ 41.9

SAMPLE DATA

Alk (mg/L CaCO3 = [(mL acid X Nacid) X 50,000] / mL sample — (shaded cells are calculated, make no entries)

low level = {((2 X mL4.5)-mL4.2] X Nacid) X 50,000) / mL sample

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4 pH=8.3	ml H2SO4 pH =4.5	ml H2SO4 pH=4.2	ALK (mg CaCO3/l) Phenolph	ALK TOT HIGH	ALK TOT LOW	Partitioning (mg/l CaCO3) HCO3	CO3	OH	(mg/l) FREE CO2
ICV		10.42	100	21.3	5.55	11.48	11.59							
ICB		4.98	~~50~~ 75	22.2	—	0.04								
DQL Std (2ppm)		8.25	100	22.3	—	0.07								
LCS		8.80	50	19.0	0.98	2.18	~~0.34~~							
W379A2		~~4.50~~	50	22.3	—	0.06	0.08							
~~A2 Dup~~	B2	5.27	50	22.3	—	0.09	0.11							
~~B2~~	C2	4.24	50	22.2	—	—	—							
~~C2~~	D2	4.35	50	22.1	—	—	0.06							
~~D2~~	E2	5.93	50	22.4	—	0.44	0.48							
~~E2~~	F2	6.37	50	22.2	—	0.47	0.50							
~~F2~~	F2 Dup	~~6.25~~	50	22.2	—	0.48	0.51							
CCV		10.34	100	22.3	5.57	11.50	11.62							
W379G2		7.34	50	22.3	—	2.05	2.16							
H2		6.96	50	22.4	—	4.34	4.37							
I2		4.49	50	22.4	—	—	0.06							
K2		4.26	50	22.5	—	—	—							
L2		~~4.69~~ 4.69	50	22.6	—	0.06	0.12							
M2		4.69	50	22.5	—	0.04	0.10							
N2		4.67	50	22.7	—	0.07	0.10							
~~O2~~	N2 Dup	4.87	50	22.8	—	0.04	0.09							
~~W379A2~~	O2	~~4.28~~	50	22.6	—	—	—							
~~Eq. Point~~	A3	6.95	50	22.9	—	8.62	8.76							
CCV		10.50	100	22.7	5.52	11.36	11.56							
CCB		5.07	75	23.1	—	0.08	0.10							
LCS		8.77	50	22.2	0.87	2.04	2.12							
W378 A6		6.98	50	22.9	~~0.93~~	0.93	1.05							

① 4.53 APD
② 6.38 APD
③ 224 APD

SAMPLE DATA

Alk (mg/L CaCO3 = [{mL acid X Nacid) X 50,000] / mL sample *(shaded cells are calculated, make no entries)*

low level = {{{(2 X mL4.5)-mL4.2] X Nacid) X 50,000} / mL sample

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4			ALK (mg CaCO3/l)			Partitioning (mg/l CaCO3)			(mg/l)
					pH=8.3	pH =4.5	pH=4.2	Phenolph	TOT HIGH	TOT LOW	HCO3	CO3	OH	FREE CO2
WR78A6	dup	6.97	50	22.8	—	0.97	1.04							
WR78B6		7.37	30	22.7	—	3.25	3.40							
D6		7.66	50	22.6	—	5.15	5.30							
E6		6.91	50	22.7	—	4.40	4.56							
F6		6.89	50	22.7	—	4.40	4.55							
CCV		10.34	100	22.9	5.52	11.30	11.50							
CCV														
CCV														

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Conventionals Laboratory
Analyst Notes

ARI Job No.: WR99

Client ID:

Parameter: Cl/NO3

Client Project:

List problems, concerns, corrective actions and any other pertinent information
The IC experienced a loss of connectivity during closing CCV. The IC connection was resolved the next day and continued the run.

Analyst Initials:	UDE	Date:	6-6-13

3147F

WR99:02573

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Conventionals Laboratory Analyst Notes

ARI Job No.: WR99 Client ID: SAIC

Parameter: DOC/TOC Client Project: PSDDA

List problems, concerns, corrective actions and any other pertinent information

Sample split, then preserved + filtered and preserved for TOC-DOC. 5-31-13 cm

Analyst Initials:		Date:	5-31-13

3147F

Revision 007
6/11/10

WR99 : 02574

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: WR99, WS01

Sample: KC-VT-1593-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99D_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 11:59:52AM
Reported: 6/18/2013 12:09:39PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 85 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	75.2	1.8	117.79691
917.3	0.125	73.0	2.3	104.98660
866.0	0.208	70.2	2.7	93.56941
817.5	0.291	67.1	3.1	83.39382
771.8	0.374	63.7	3.4	74.32482
728.6	0.457	60.1	3.6	66.24207
687.9	0.540	56.4	3.7	59.03831
649.4	0.623	52.6	3.8	52.61795
613.1	0.706	48.8	3.8	46.89579
578.8	0.789	45.2	3.7	41.79592
546.4	0.872	41.7	3.5	37.25065
515.8	0.955	38.5	3.2	33.19968
487.0	1.038	35.6	2.9	29.58925
459.7	1.121	32.6	3.0	26.37144
434.0	1.204	29.6	3.0	23.50357
409.7	1.287	26.6	3.0	20.94758
386.8	1.370	23.5	3.0	18.66955
365.2	1.453	20.6	2.9	16.63926
344.7	1.536	17.8	2.8	14.82975
325.5	1.619	15.2	2.6	13.21703
307.3	1.702	12.8	2.4	11.77969
290.1	1.786	10.6	2.2	10.49866
273.8	1.869	8.8	1.8	9.35694
258.5	1.952	7.3	1.5	8.33938
244.1	2.035	6.2	1.1	7.43248
230.4	2.118	5.3	0.9	6.62421
217.5	2.201	4.5	0.8	5.90383
205.4	2.284	3.9	0.6	5.26179
193.9	2.367	3.4	0.5	4.68958
183.0	2.450	2.9	0.4	4.17959
172.8	2.533	2.6	0.3	3.72507
163.1	2.616	2.4	0.2	3.31997
154.0	2.699	2.2	0.2	2.95892
145.4	2.782	2.0	0.1	2.63714
137.2	2.865	1.9	0.1	2.35036
129.6	2.948	1.8	0.1	2.09476
122.3	3.031	1.8	0.1	1.86696
115.5	3.114	1.7	0.1	1.66393
109.0	3.197	1.6	0.1	1.48298
102.9	3.280	1.5	0.1	1.32170

Sample: KC-VT-1593-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99D_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 11:59:52AM
Reported: 6/18/2013 12:09:39PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 85 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
97.16	3.363	1.4	0.1	1.17797
91.73	3.447	1.3	0.1	1.04987
86.60	3.530	1.3	0.1	0.93569
81.75	3.613	1.2	0.1	0.83394
77.18	3.696	1.1	0.1	0.74325
72.86	3.779	1.1	0.1	0.66242
68.79	3.862	1.0	0.0	0.59038
64.94	3.945	1.0	0.0	0.52618
61.31	4.028	1.0	0.0	0.46896
57.88	4.111	1.0	0.0	0.41796
54.64	4.194	1.0	0.0	0.37251
51.58	4.277	1.0	0.0	0.33200
48.70	4.360	1.0	0.0	0.29589
45.97	4.443	1.0	0.0	0.26371
43.40	4.526	1.0	0.0	0.23504
40.97	4.609	1.0	0.0	0.20948
38.68	4.692	1.0	0.0	0.18670
36.52	4.775	0.9	0.0	0.16639
34.47	4.858	0.9	0.0	0.14830
32.55	4.941	0.9	0.0	0.13217
30.73	5.024	0.9	0.0	0.11780
29.01	5.107	0.9	0.0	0.10499
27.38	5.191	0.9	0.0	0.09357
25.85	5.274	0.8	0.0	0.08339
24.41	5.357	0.8	0.0	0.07432
23.04	5.440	0.8	0.0	0.06624
21.75	5.523	0.8	0.0	0.05904
20.54	5.606	0.7	0.0	0.05262
19.39	5.689	0.7	0.0	0.04690
18.30	5.772	0.7	0.0	0.04180
17.28	5.855	0.7	0.0	0.03725
16.31	5.938	0.7	0.0	0.03320
15.40	6.021	0.7	0.0	0.02959
14.54	6.104	0.6	0.0	0.02637
13.72	6.187	0.6	0.0	0.02350
12.96	6.270	0.6	0.0	0.02095
12.23	6.353	0.6	0.0	0.01867
11.55	6.436	0.6	0.0	0.01664
10.90	6.519	0.6	0.0	0.01483
10.29	6.602	0.6	0.0	0.01322

Sample: KC-VT-1593-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99D_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 11:59:52AM
Reported: 6/18/2013 12:09:39PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 85 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	0.6	0.0	0.01178
9.173	6.768	0.6	0.0	0.01050
8.660	6.851	0.5	0.0	0.00936
8.175	6.935	0.5	0.0	0.00834
7.718	7.018	0.5	0.0	0.00743
7.286	7.101	0.5	0.0	0.00662
6.879	7.184	0.5	0.0	0.00590
6.494	7.267	0.5	0.0	0.00526
6.131	7.350	0.5	0.0	0.00469
5.788	7.433	0.5	0.0	0.00418
5.464	7.516	0.5	0.0	0.00373
5.158	7.599	0.5	0.0	0.00332
4.870	7.682	0.5	0.0	0.00296
4.597	7.765	0.5	0.0	0.00264
4.340	7.848	0.4	0.0	0.00235
4.097	7.931	0.4	0.0	0.00209
3.868	8.014	0.4	0.0	0.00187
3.652	8.097	0.4	0.0	0.00166
3.447	8.180	0.4	0.0	0.00148
3.255	8.263	0.4	0.0	0.00132
3.073	8.346	0.4	0.0	0.00118
2.901	8.429	0.4	0.0	0.00105
2.738	8.512	0.4	0.0	0.00094
2.585	8.595	0.3	0.0	0.00083
2.441	8.679	0.3	0.0	0.00074
2.304	8.762	0.3	0.0	0.00066
2.175	8.845	0.3	0.0	0.00059
2.054	8.928	0.3	0.0	0.00053
1.939	9.011	0.3	0.0	0.00047
1.830	9.094	0.3	0.0	0.00042
1.728	9.177	0.3	0.0	0.00037
1.631	9.260	0.3	0.0	0.00033
1.540	9.343	0.3	0.0	0.00030
1.454	9.426	0.2	0.0	0.00026
1.372	9.509	0.2	0.0	0.00024
1.296	9.592	0.2	0.0	0.00021
1.223	9.675	0.2	0.0	0.00019
1.155	9.758	0.2	0.0	0.00017
1.090	9.841	0.2	0.0	0.00015
1.029	9.924	0.2	0.0	0.00013

Sample: KC-VT-1593-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99D_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 11:59:52AM
Reported: 6/18/2013 12:09:39PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 85 kCnts/s
Reynolds Number: 0.42

Report by Size Table

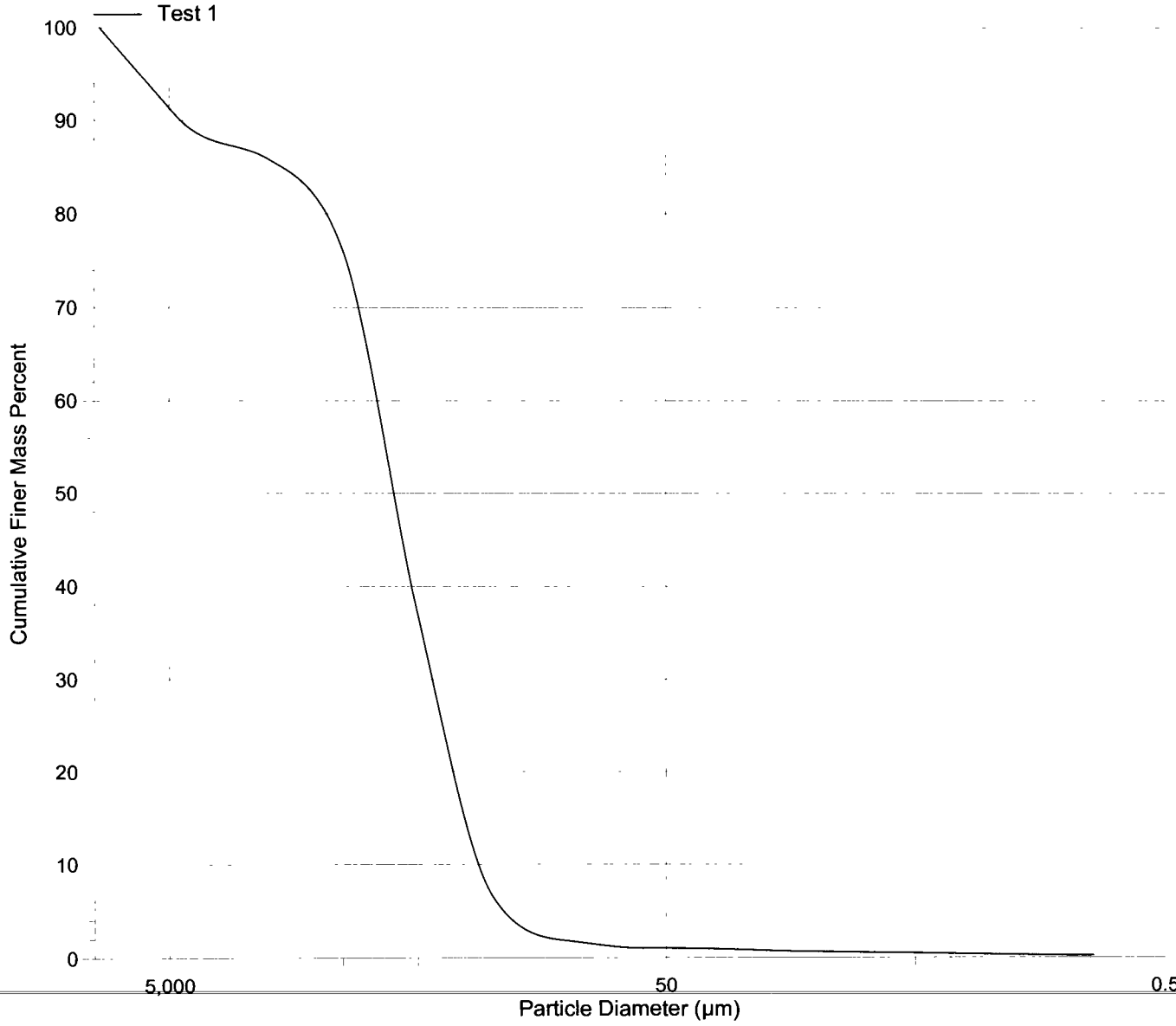
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	1.0	0.8
4750	90.7	9.3	31.00	0.9	0.1
2000	85.9	4.8	15.60	0.7	0.2
1000	76.2	9.7	7.800	0.5	0.1
500.0	36.9	39.3	3.900	0.4	0.1
250.0	6.6	30.3	2.000	0.3	0.1
125.0	1.8	4.8	1.000	0.2	0.1

Sample: KC-VT-1593-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99D_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 11:59:52AM
Reported: 6/18/2013 12:09:39PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 85 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



ANALYTICAL RESOURCES, INC.
SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WR99 ARI Sample No. E Client Sample No. KC-CB-01-20130530-S

Set-up Date: 6.10.13 Sample Description: brown silty sand, organic debris, gravel.

Sieve Set # 1 Date Sieved: 6/12/13

SOLIDS CONTENT

Moisture Content	Initials ey
Container No.	171
Tare Weight	1.6354
Wet Weight + Tare	84.2548
Dry Weight + Tare	64.2456

Test Sample	Initials ey
Container No.	171
Tare Weight	50.4182
Wet Weight + Tare	127.9573
Washed Sample Dry Weight + Tare	106.2533

SIEVE ANALYSIS
Initials ML

Sieve Size	Weight Retained
Tare	50.4219
4	53.1728
10	57.8127
18	65.1241
35	78.9589
60	96.8685
120	103.1336
230	105.3821
PAN	0.7410

SEDIGRAPH ANALYSIS
Initials ey
Date Sedigraphed 6.18.13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	17

Sample: KC-CB-01-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99E.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 12:25:20PM
Reported: 6/18/2013 12:34:39PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 91 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	74.2	1.5	117.80987
917.3	0.125	72.7	1.6	104.99815
866.0	0.208	71.0	1.7	93.57970
817.5	0.291	69.2	1.8	83.40300
771.8	0.374	67.3	1.9	74.33300
728.6	0.457	65.3	2.0	66.24936
687.9	0.540	63.3	2.0	59.04480
649.4	0.623	61.2	2.1	52.62373
613.1	0.706	59.1	2.1	46.90095
578.8	0.789	56.9	2.2	41.80052
546.4	0.872	54.7	2.2	37.25475
515.8	0.955	52.6	2.2	33.20333
487.0	1.038	50.4	2.2	29.59250
459.7	1.121	48.0	2.4	26.37434
434.0	1.204	45.4	2.6	23.50616
409.7	1.287	42.7	2.7	20.94989
386.8	1.370	39.9	2.8	18.67161
365.2	1.453	37.1	2.8	16.64109
344.7	1.536	34.3	2.8	14.83138
325.5	1.619	31.5	2.8	13.21848
307.3	1.702	28.9	2.7	11.78099
290.1	1.786	26.4	2.5	10.49982
273.8	1.869	24.1	2.3	9.35797
258.5	1.952	22.1	2.0	8.34030
244.1	2.035	20.3	1.8	7.43330
230.4	2.118	18.8	1.5	6.62494
217.5	2.201	17.4	1.4	5.90448
205.4	2.284	16.2	1.2	5.26237
193.9	2.367	15.1	1.1	4.69010
183.0	2.450	14.2	0.9	4.18005
172.8	2.533	13.4	0.8	3.72548
163.1	2.616	12.7	0.7	3.32033
154.0	2.699	12.0	0.6	2.95925
145.4	2.782	11.5	0.5	2.63743
137.2	2.865	11.0	0.5	2.35062
129.6	2.948	10.6	0.4	2.09499
122.3	3.031	10.1	0.4	1.86716
115.5	3.114	9.7	0.4	1.66411
109.0	3.197	9.3	0.4	1.48314
102.9	3.280	8.9	0.4	1.32185

WR99 : 02582

Sample: KC-CB-01-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99E.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 12:25:20PM
Reported: 6/18/2013 12:34:39PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 91 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
97.16	3.363	8.4	0.4	1.17810
91.73	3.447	8.0	0.4	1.04998
86.60	3.530	7.7	0.4	0.93580
81.75	3.613	7.3	0.3	0.83403
77.18	3.696	7.0	0.3	0.74333
72.86	3.779	6.8	0.2	0.66249
68.79	3.862	6.6	0.2	0.59045
64.94	3.945	6.5	0.1	0.52624
61.31	4.028	6.5	0.0	0.46901
57.88	4.111	6.5	0.0	0.41801
54.64	4.194	6.5	0.0	0.37255
51.58	4.277	6.5	0.0	0.33203
48.70	4.360	6.4	0.0	0.29593
45.97	4.443	6.4	0.1	0.26374
43.40	4.526	6.3	0.1	0.23506
40.97	4.609	6.2	0.1	0.20950
38.68	4.692	6.0	0.1	0.18672
36.52	4.775	5.9	0.2	0.16641
34.47	4.858	5.7	0.2	0.14831
32.55	4.941	5.5	0.2	0.13218
30.73	5.024	5.3	0.2	0.11781
29.01	5.107	5.1	0.2	0.10500
27.38	5.191	5.0	0.2	0.09358
25.85	5.274	4.8	0.2	0.08340
24.41	5.357	4.7	0.1	0.07433
23.04	5.440	4.5	0.1	0.06625
21.75	5.523	4.4	0.1	0.05904
20.54	5.606	4.3	0.1	0.05262
19.39	5.689	4.2	0.1	0.04690
18.30	5.772	4.0	0.1	0.04180
17.28	5.855	3.9	0.1	0.03725
16.31	5.938	3.8	0.1	0.03320
15.40	6.021	3.7	0.1	0.02959
14.54	6.104	3.6	0.1	0.02637
13.72	6.187	3.5	0.1	0.02351
12.96	6.270	3.4	0.1	0.02095
12.23	6.353	3.3	0.1	0.01867
11.55	6.436	3.2	0.1	0.01664
10.90	6.519	3.1	0.1	0.01483
10.29	6.602	3.1	0.1	0.01322

Sample: KC-CB-01-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99E.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 12:25:20PM
Reported: 6/18/2013 12:34:39PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 91 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	3.0	0.1	0.01178
9.173	6.768	2.9	0.1	0.01050
8.660	6.851	2.9	0.1	0.00936
8.175	6.935	2.8	0.1	0.00834
7.718	7.018	2.7	0.1	0.00743
7.286	7.101	2.6	0.1	0.00662
6.879	7.184	2.5	0.1	0.00590
6.494	7.267	2.5	0.1	0.00526
6.131	7.350	2.4	0.1	0.00469
5.788	7.433	2.3	0.1	0.00418
5.464	7.516	2.2	0.1	0.00373
5.158	7.599	2.1	0.1	0.00332
4.870	7.682	2.0	0.1	0.00296
4.597	7.765	1.9	0.1	0.00264
4.340	7.848	1.8	0.1	0.00235
4.097	7.931	1.7	0.1	0.00209
3.868	8.014	1.6	0.1	0.00187
3.652	8.097	1.5	0.1	0.00166
3.447	8.180	1.5	0.1	0.00148
3.255	8.263	1.4	0.1	0.00132
3.073	8.346	1.3	0.1	0.00118
2.901	8.429	1.2	0.1	0.00105
2.738	8.512	1.2	0.1	0.00094
2.585	8.595	1.1	0.1	0.00083
2.441	8.679	1.0	0.1	0.00074
2.304	8.762	1.0	0.1	0.00066
2.175	8.845	0.9	0.0	0.00059
2.054	8.928	0.9	0.0	0.00053
1.939	9.011	0.9	0.0	0.00047
1.830	9.094	0.8	0.0	0.00042
1.728	9.177	0.8	0.0	0.00037
1.631	9.260	0.8	0.0	0.00033
1.540	9.343	0.8	0.0	0.00030
1.454	9.426	0.7	0.0	0.00026
1.372	9.509	0.7	0.0	0.00024
1.296	9.592	0.7	0.0	0.00021
1.223	9.675	0.6	0.0	0.00019
1.155	9.758	0.6	0.0	0.00017
1.090	9.841	0.6	0.0	0.00015
1.029	9.924	0.6	0.0	0.00013

Sample: KC-CB-01-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99E.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 12:25:20PM
Reported: 6/18/2013 12:34:39PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 91 kCnts/s
Reynolds Number: 0.42

Report by Size Table

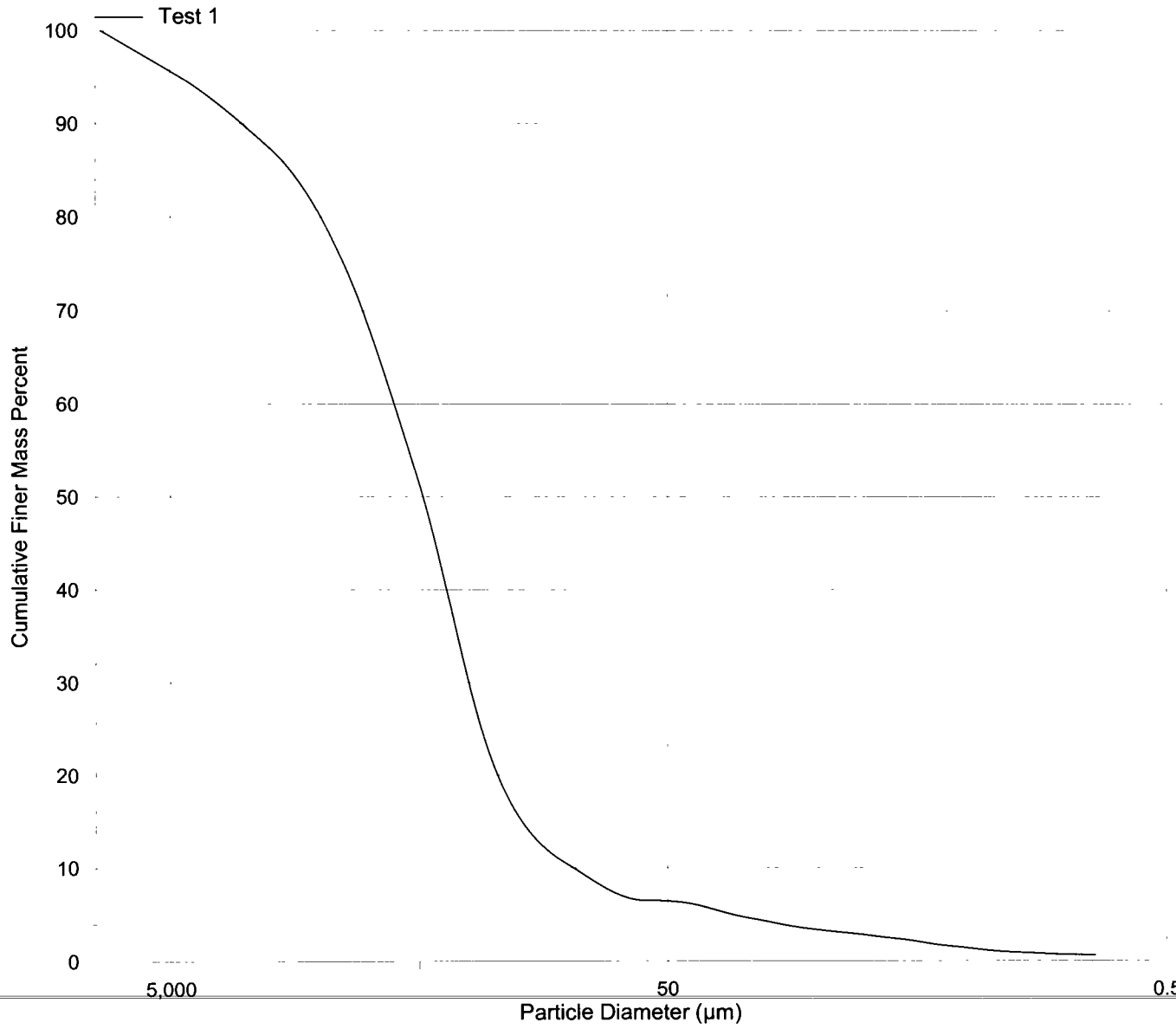
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	6.5	3.8
4750	95.3	4.7	31.00	5.4	1.1
2000	87.4	7.9	15.60	3.7	1.7
1000	75.0	12.4	7.800	2.7	1.0
500.0	51.4	23.6	3.900	1.6	1.1
250.0	21.0	30.4	2.000	0.9	0.7
125.0	10.3	10.7	1.000	0.6	0.3

Sample: KC-CB-01-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99E.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 12:25:20PM
Reported: 6/18/2013 12:34:39PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 91 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



ANALYTICAL RESOURCES, INC.
SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WR99 ARI Sample No. F Client Sample No. KC-DD-2009-20130530-S

Set-up Date: 6.10.13 Sample Description: brown clayey silt.

Sieve Set # 2 Date Sieved: 6/12/13

SOLIDS CONTENT

Moisture Content	Initials ej
Container No.	219
Tare Weight	1.6113
Wet Weight + Tare	32.0551
Dry Weight + Tare	21.6620

Test Sample	Initials ej
Container No.	219
Tare Weight	49.7838
Wet Weight + Tare	72.7778
Washed Sample Dry Weight + Tare	59.2778

SIEVE ANALYSIS
Initials ML

Sieve Size	Weight Retained
Tare	49.7881
4	49.7881
10	50.4374
18	51.3987
35	53.3480
60	56.1314
120	58.0521
230	59.0467
PAN	0.3715

SEDIGRAPH ANALYSIS
Initials ej
Date Sedigraphed 6.18.13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	34

WR99 : 02537

Sample: KC-DD-2009-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99F_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 1:06:35PM
Reported: 6/18/2013 1:16:02PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 88 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	89.0	0.7	117.79547
917.3	0.125	88.2	0.8	104.98532
866.0	0.208	87.4	0.9	93.56827
817.5	0.291	86.5	0.9	83.39281
771.8	0.374	85.5	1.0	74.32392
728.6	0.457	84.4	1.0	66.24126
687.9	0.540	83.3	1.1	59.03759
649.4	0.623	82.2	1.1	52.61730
613.1	0.706	81.0	1.2	46.89522
578.8	0.789	79.8	1.2	41.79541
546.4	0.872	78.5	1.3	37.25020
515.8	0.955	77.2	1.3	33.19927
487.0	1.038	75.9	1.3	29.58888
459.7	1.121	74.5	1.4	26.37112
434.0	1.204	73.0	1.5	23.50329
409.7	1.287	71.4	1.6	20.94733
386.8	1.370	69.8	1.6	18.66932
365.2	1.453	68.2	1.6	16.63905
344.7	1.536	66.6	1.6	14.82957
325.5	1.619	64.9	1.6	13.21687
307.3	1.702	63.3	1.6	11.77955
290.1	1.786	61.8	1.6	10.49853
273.8	1.869	60.3	1.5	9.35683
258.5	1.952	58.9	1.4	8.33928
244.1	2.035	57.6	1.3	7.43239
230.4	2.118	56.3	1.3	6.62413
217.5	2.201	55.1	1.2	5.90376
205.4	2.284	53.9	1.2	5.26173
193.9	2.367	52.7	1.1	4.68952
183.0	2.450	51.6	1.1	4.17954
172.8	2.533	50.6	1.1	3.72502
163.1	2.616	49.6	1.0	3.31993
154.0	2.699	48.6	1.0	2.95889
145.4	2.782	47.6	0.9	2.63711
137.2	2.865	46.8	0.9	2.35033
129.6	2.948	45.9	0.8	2.09473
122.3	3.031	45.1	0.8	1.86693
115.5	3.114	44.3	0.8	1.66391
109.0	3.197	43.5	0.8	1.48296
102.9	3.280	42.8	0.7	1.32169

Sample: KC-DD-2009-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99F_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

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Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 88 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
97.16	3.363	42.1	0.7	1.17795
91.73	3.447	41.4	0.7	1.04985
86.60	3.530	40.8	0.6	0.93568
81.75	3.613	40.3	0.5	0.83393
77.18	3.696	39.8	0.5	0.74324
72.86	3.779	39.5	0.4	0.66241
68.79	3.862	39.2	0.3	0.59038
64.94	3.945	39.0	0.2	0.52617
61.31	4.028	38.9	0.1	0.46895
57.88	4.111	38.8	0.1	0.41795
54.64	4.194	38.8	0.1	0.37250
51.58	4.277	38.7	0.1	0.33199
48.70	4.360	38.5	0.1	0.29589
45.97	4.443	38.4	0.2	0.26371
43.40	4.526	38.2	0.2	0.23503
40.97	4.609	37.9	0.3	0.20947
38.68	4.692	37.6	0.3	0.18669
36.52	4.775	37.2	0.4	0.16639
34.47	4.858	36.8	0.4	0.14830
32.55	4.941	36.4	0.5	0.13217
30.73	5.024	35.9	0.5	0.11780
29.01	5.107	35.4	0.5	0.10499
27.38	5.191	34.8	0.5	0.09357
25.85	5.274	34.2	0.6	0.08339
24.41	5.357	33.6	0.7	0.07432
23.04	5.440	32.8	0.8	0.06624
21.75	5.523	32.0	0.8	0.05904
20.54	5.606	31.1	0.9	0.05262
19.39	5.689	30.2	0.9	0.04690
18.30	5.772	29.4	0.8	0.04180
17.28	5.855	28.6	0.8	0.03725
16.31	5.938	27.9	0.7	0.03320
15.40	6.021	27.2	0.7	0.02959
14.54	6.104	26.5	0.6	0.02637
13.72	6.187	25.9	0.6	0.02350
12.96	6.270	25.3	0.6	0.02095
12.23	6.353	24.6	0.7	0.01867
11.55	6.436	24.0	0.7	0.01664
10.90	6.519	23.3	0.7	0.01483
10.29	6.602	22.7	0.7	0.01322

Sample: KC-DD-2009-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99F_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
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Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 88 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	22.0	0.6	0.01178
9.173	6.768	21.4	0.6	0.01050
8.660	6.851	20.8	0.6	0.00936
8.175	6.935	20.2	0.6	0.00834
7.718	7.018	19.6	0.6	0.00743
7.286	7.101	19.0	0.6	0.00662
6.879	7.184	18.5	0.6	0.00590
6.494	7.267	17.9	0.6	0.00526
6.131	7.350	17.3	0.6	0.00469
5.788	7.433	16.7	0.6	0.00418
5.464	7.516	16.1	0.6	0.00373
5.158	7.599	15.4	0.7	0.00332
4.870	7.682	14.7	0.7	0.00296
4.597	7.765	14.0	0.7	0.00264
4.340	7.848	13.3	0.7	0.00235
4.097	7.931	12.6	0.7	0.00209
3.868	8.014	12.0	0.7	0.00187
3.652	8.097	11.3	0.6	0.00166
3.447	8.180	10.8	0.6	0.00148
3.255	8.263	10.2	0.5	0.00132
3.073	8.346	9.7	0.5	0.00118
2.901	8.429	9.2	0.5	0.00105
2.738	8.512	8.8	0.5	0.00094
2.585	8.595	8.4	0.4	0.00083
2.441	8.679	8.0	0.4	0.00074
2.304	8.762	7.6	0.4	0.00066
2.175	8.845	7.3	0.3	0.00059
2.054	8.928	7.0	0.3	0.00053
1.939	9.011	6.7	0.3	0.00047
1.830	9.094	6.5	0.3	0.00042
1.728	9.177	6.2	0.3	0.00037
1.631	9.260	5.9	0.3	0.00033
1.540	9.343	5.6	0.3	0.00030
1.454	9.426	5.2	0.4	0.00026
1.372	9.509	4.9	0.3	0.00024
1.296	9.592	4.6	0.3	0.00021
1.223	9.675	4.4	0.2	0.00019
1.155	9.758	4.1	0.3	0.00017
1.090	9.841	3.8	0.3	0.00015
1.029	9.924	3.2	0.5	0.00013

Sample: KC-DD-2009-20130530-S
Operator: eg
Submitter: SAIC
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Material/Liquid: AriSamp / Water
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Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 88 kCnts/s
Reynolds Number: 0.42

Report by Size Table

Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	38.9	6.5
4750	100.0	0.0	31.00	35.9	3.0
2000	95.7	4.3	15.60	27.3	8.6
1000	89.4	6.3	7.800	19.7	7.6
500.0	76.5	12.9	3.900	12.1	7.7
250.0	58.1	18.4	2.000	6.9	5.2
125.0	45.4	12.7	1.000	3.2	3.6

Sample: KC-DD-2009-20130530-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WR99\WR99F_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
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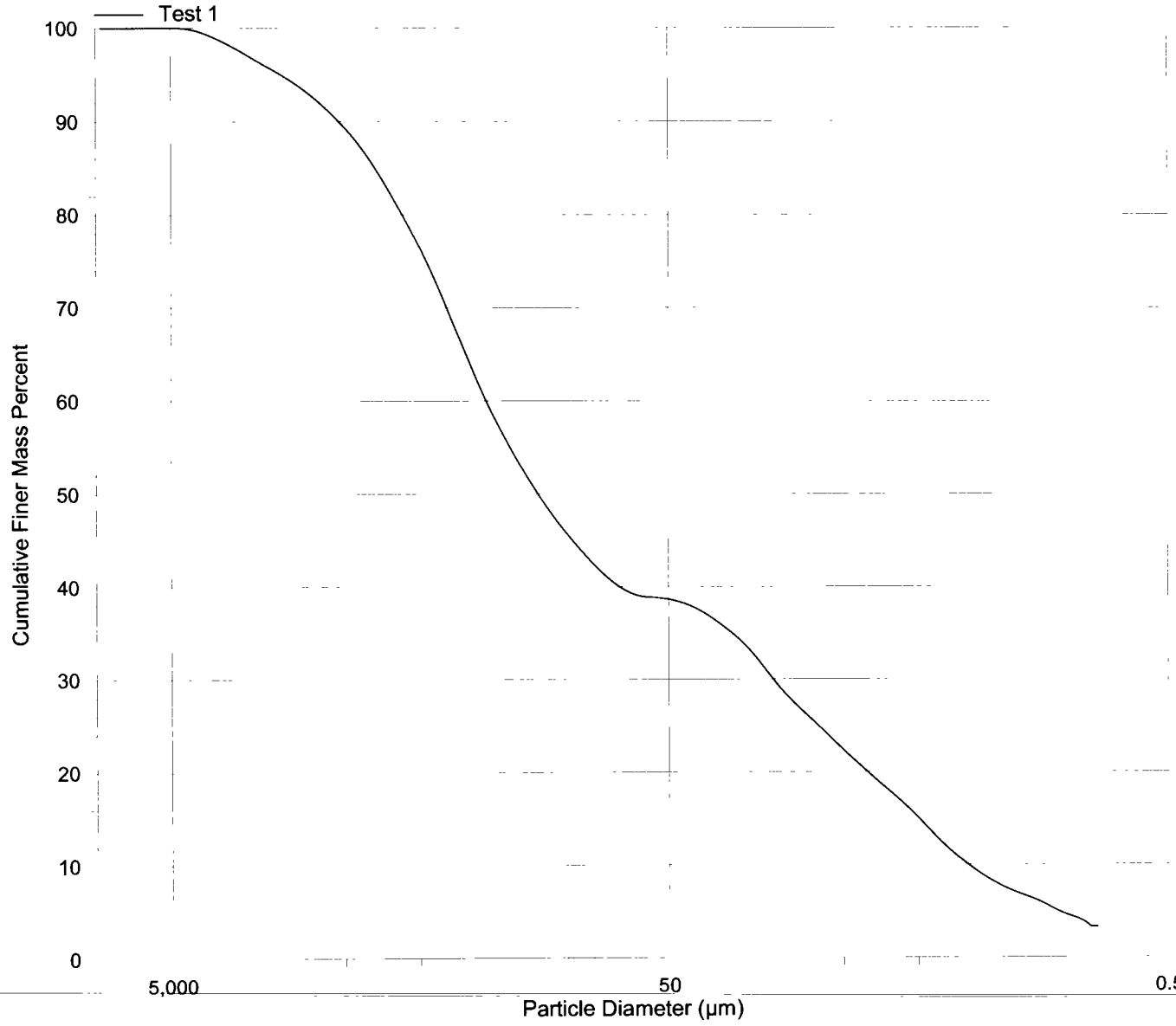
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 88 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



ANALYTICAL RESOURCES, INC.
SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WR99 ARI Sample No. D Client Sample No. KC-VT-1593-20130530-S

Set-up Date: 6·10·13 Sample Description: brownish red silty sand w/some gravel

Sieve Set # 2 Date Sieved: 6/12/13

SOLIDS CONTENT

Moisture Content	Initials ly
Container No.	163
Tare Weight	1.6203
Wet Weight + Tare	68.2391
Dry Weight + Tare	51.2306

Test Sample	Initials ly
Container No.	163
Tare Weight	49.8755
Wet Weight + Tare	200.9249
Washed Sample Dry Weight + Tare	162.2325

SIEVE ANALYSIS
Initials ML

Sieve Size	Weight Retained
Tare	49.8897 ML
4	60.3062
10	65.7774
18	76.6551
35	117.8711
60	154.9074
120	160.4035
230	161.2818
PAN	0.6768 ML

SEDIGRAPH ANALYSIS
Initials ly
Date Sedigraphed 6·18·13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	2

Table of Contents: ARI Job WS21

Client: SAIC

Project: 209977 NPDES Sampling Support

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Signature

June-20-2013
Date

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BC

Signature

June-20-2013

Date

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Client: SAIC

Project: 209977 NPDES Sampling Support

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RC

Signature

June-20-2013

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 21, 2013

Christine Nancarrow
SAIC
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

RE: Project: NPDES Sampling Support, 209977
ARI Job No.: WS21

Dear Christine:

Please find enclosed the Chain-of-Custody record (COC), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details of the analyses are discussed in the Case Narrative.

An electronic copy of this data package will be kept on file with ARI. Should you have any questions or problems, please feel free to contact me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile WS21

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: WS21

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WSZ	Turn-around Requested:	Date: 5/31/13	
ARI Client Company: **SAIC**	Phone: **206.300.2144**	Page: 1 of 1	
Client Contact: **Christine Nancarrow**	**nancarrowc@saic.com**	No. of Coolers: 1	Cooler Temps: 3
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: CW / CN / MP		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	PCB Aroclors (EPA 8082)	SVOCs (EPA 8270 PAH EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-Dx)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	Notes/Comments
					Analysis Requested (Sediment Sample)											
KC-IV-SD-20130531-S	5/31/13	1019	Sediment	11	X	X	X	X	X	X	X	X	X	X	X	TPH - Gas (NWTPH-Gx)
~~EC~~ KC-TB-02	4/15/13	12	Water	1						X						

CW 5/31/13

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Do not dispose of Samples w/o prior written authorization from SAIC PM	Printed Name: Corey H. Wilson	Printed Name: [illegible]	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 5/31/13 1048	Date & Time: 5-31-13 [illegible]	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: SAIC Project Name: NPDES

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WS21 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry): 5.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 5/31/13 Time: 1230

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	(NA)	YES	NO
Were all VOC vials free of air bubbles?	NA	(YES)	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA	4/15/13	

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

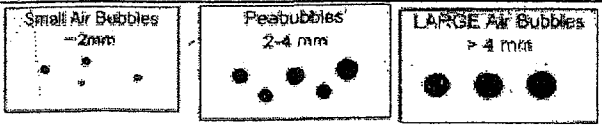
Samples Logged by: JM Date: 5/31/13 Time: 1426

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WS21

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job No.: WS21

Sample Receipt

One water sample and one sediment sample were received on May 31, 2013 under ARI job WS21. The cooler temperature measured by IR thermometer following ARI SOP was 5.3°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles by SW8260C

The samples were analyzed within the recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 6/4/13 was outside the 20% control limit high for Chloroethane, Acrolein, Iodomethane, Methylene Chloride, and trans-1,2-Dichloroethene. All detected results for these compounds have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Acetone was present in **MB-061113A** at a level that was greater than the reporting limit. All detected results associated with this method blank have been flagged with a "B" qualifier. No corrective action was taken.

Methylene Chloride was present in **MB-060413A** at a level that was greater than the reporting limit. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries of Methylene Chloride and Acrolein were outside the control limits high for **LCS-060413A**. All other percent recoveries were within control limits. No corrective action was taken.

The LCS percent recovery of Methyl tert-Butyl Ether was outside the control limits high for **LCS-061113A**. All other percent recoveries were within control limits. No corrective action was taken.

Semivolatiles by SW8270D

The sample was extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration fell outside the 20% control limit low for Hexachlorocyclopentadiene and 2,4-Dinitrophenol. All detected results for these compounds have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

SIM Semivolatiles by SW78270-SIM

The sample was extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration was outside the 20% control limit high for Butylbenzylphthalate. All detected results for this compound have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Diethylphthalate was present in **MB-060813** at a level that was greater than the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries were within control limits.

Dioxin/Furans by SW1613B

The sample was extracted and analyzed within the method recommended holding times.

Analysis was performed using the application specific RTX-Dioxin 2 column, which has a unique isomer separation for the 2378-TCDF, eliminating the need for second column confirmation.

Initial and continuing calibration results were within method requirements.

Both extraction and cleanup surrogates had recoveries within control limits.

The method blank contained reportable responses below the reporting limit for several compounds. Associated sample results were greater than ten times the levels found in the method blank. No corrective action was taken.

The OPR (Ongoing Precision and Accuracy or LCS) percent recoveries were within control limits.

Specific results have been "EMPC"-flagged indicating a response not meeting requirements of positive identification. The EMPC values are treated as undetects under some programs and as hits under programs with more conservative protocols.

The TEQ is presented with WHO2005 with ND=0 for undetects and ND=1/2 for undetects, with EMPCs included as hits.

Pesticides by SW8081

The sample was extracted and analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS percent recoveries were within control limits.

Aroclor PCBs by SW8082

The sample was extracted and analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

NWTPH-Dx

The sample was extracted and analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS percent recovery was within control limits.

NWTPH-Gx

The sample was analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

Metals and Mercury

The sample and associated laboratory QC were digested and analyzed within method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike percent recovery of antimony fell outside the control limits low for sample **KC-IV-SPS-20130531-S**. A post digestion spike was performed and the recovery was within control limits. All relevant data have been flagged with an "N" qualifier on the appropriate Form V. No further corrective action was taken.

The duplicate RPDs were within control limits.

General Chemistry

The sample and associated laboratory QC were initially prepared and analyzed within method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recovery was within control limits.

The SRM percent recovery was within limits.

The matrix spike percent recovery and replicate RPDs were within the control limit.

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: SAIC	**ARI Job No.:** WS21
Client Project: NPDES Sampling Support	**Client Project No.:** 209977

Case Narrative

1. One sample was submitted for analysis on May 31, 2013.
2. The sample was submitted for grain size analysis by means of X-ray diffraction using a Sedigraph 5120. The values are calculated using Stokes' Law of sedimentation and Beer's law of extinction.
3. The sample was run in a single batch and one sample from another job was chosen for triplicate analysis.
4. The standard operating procedure calls for the sample to be measured on the #4 (4750 µm) sieve, down to the 1.0 µm particle size with the Sedigraph 5120. If there were no particles measured at these extremes, the data is not included in the report.
5. Organic material does not absorb X-rays, and is not included in the fine portion of the analysis.
6. The sample appeared to be contaminated with a fuel/oil-like substance.
7. The data is provided in summary tables and plots.
8. There were no other noted anomalies in the sample or methods on this project.

Released by: _____ Date: June 18, 2013
Technician

Reviewed by: _____ Date: 6/18/13
Geotechnical Laboratory Manager

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WS21
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	KC-IV-SPS-20130531-S	WS21A	13-11678	Sediment	05/31/13 10:19	05/31/13 12:50
2.	KC-TB-02	WS21B	13-11679	Water	05/31/13	05/31/13 12:50

WS21 : 209912

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Duplicate RPD is not within established control limits
B	Reported value is less than the CRDL but ≥ the Reporting Limit
N	Matrix Spike recovery not within established control limits
NA	Not Applicable, analyte not spiked
H	The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
L	Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Flagged value is not within established control limits
B	Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
J	Estimated concentration when the value is less than ARI's established reporting limits
D	The spiked compound was not detected due to sample extract dilution
E	Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

Geotechnical Data

A	The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
F	Samples were frozen prior to particle size determination
SM	Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
SS	Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
W	Weight of sample in some pipette aliquots was below the level required for accurate weighting

DL[1] LOD[1], LOQ[1] and Control Limits Summary VOA Analysis of Soil (EPA Method 8260C)					
Analyte	**DL[1,5] µg/kg**	**LOD[1] µg/kg**	**LOQ[1] µg/kg**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
Dichlorodifluoromethane	0.207	0.5	**1.0**	67 – 142	≤ 40
Chloromethane	0.263	0.5	**1.0**	65 – 129	≤ 40
Vinyl Chloride	0.235	0.5	**1.0**	74 – 134	≤ 40
Bromomethane	0.187	0.5	**1.0**	40 – 172	≤ 40
Chloroethane	0.462	0.5	**1.0**	53 – 154	≤ 40
Trichlorofluoromethane	0.266	0.5	**1.0**	57 – 161	≤ 40
Acrolein*	3.809	25	**50.0**	60 – 130	≤ 40
Acetone*	0.482	2.5	**5.0**	48 – 132	≤ 40
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.287	1.0	**2.0**	72 – 142	≤ 40
1,1-Dichloroethene	0.336	0.5	**1.0**	73 – 138	≤ 40
Bromoethane	0.440	1.0	**2.0**	74 – 132	≤ 40
Iodomethane (Methyl Iodide)	0.215	0.5	**1.0**	34 – 181	≤ 40
Methylene Chloride	0.635	1.0	**2.0**	61 – 128	≤ 40
Carbon Disulfide	0.559	1.0	**1.0**	72 – 146	≤ 40
Acrylonitrile	1.026	2.5	**5.0**	59 – 124	≤ 40
Methyl-t-butyl ether (MTBE)	0.231	0.5	**1.0**	68 – 124	≤ 40
trans-1,2-Dichloroethene	0.266	0.5	**1.0**	73 – 131	≤ 40
Vinyl Acetate	0.381	2.5	**5.0**	54 – 138	≤ 40
1,1-Dichloroethane	0.203	0.5	**1.0**	65 – 139	≤ 40
2-Butanone*	0.513	2.5	**5.0**	64 – 120	≤ 40
2,2-Dichloropropane	0.292	0.5	**1.0**	77 – 137	≤ 40
cis-1,2-Dichloroethene	0.240	0.5	**1.0**	75 – 124	≤ 40
Chloroform	0.234	0.5	**1.0**	75 – 126	≤ 40
Bromochloromethane	0.323	0.5	**1.0**	69 – 133	≤ 40
1,1,1-Trichloroethane	0.226	0.5	**1.0**	78 – 133	≤ 40
1,1-Dichloropropene	0.312	0.5	**1.0**	80 – 123	≤ 40
Carbon Tetrachloride	0.213	0.5	**1.0**	76 – 136	≤ 40
1,2-Dichloroethane	0.191	0.5	**1.0**	77 – **120**	≤ 40
Benzene	0.296	0.5	**1.0**	80 – **120**	≤ 40
Trichloroethene	0.212	0.5	**1.0**	80 – 120	≤ 40
1,2-Dichloropropane	0.162	0.5	**1.0**	74 – **120**	≤ 40
Bromodichloromethane	0.254	0.5	**1.0**	80 – 122	≤ 40
Dibromomethane	0.147	0.5	**1.0**	80 – **120**	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary VOA Analysis of Soil (EPA Method 8260C)					
Analyte	**DL[1,5] µg/kg**	**LOD[1] µg/kg**	**LOQ[1] µg/kg**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
2-Chloroethyl Vinyl Ether	0.276	2.5	**5.0**	20 – 157	≤ 40
4-Methyl-2-Pentanone*	0.420	2.5	**5.0**	70 – 124	≤ 40
cis-1,3-Dichloropropene	0.226	0.5	**1.0**	80 – 124	≤ 40
Toluene	0.151	0.5	**1.0**	78 – **120**	≤ 40
trans-1,3-Dichloropropene	0.216	0.5	**1.0**	80 – 126	≤ 40
1,1,2-Trichloroethane	0.286	0.5	**1.0**	77 – **120**	≤ 40
1,2-Dibromoethane (Ethylene Dibromide)	0.176	0.5	**1.0**	79 – **120**	≤ 40
2-Hexanone*	0.439	2.5	**5.0**	62 – 128	≤ 40
1,3-Dichloropropane	0.209	0.5	**1.0**	77 – **120**	≤ 40
Tetrachloroethene	0.257	0.5	**1.0**	76 – 131	≤ 40
Dibromochloromethane	0.266	0.5	**1.0**	77 – 123	≤ 40
Chlorobenzene	0.219	0.5	**1.0**	80 – **120**	≤ 40
1,1,1,2-Tetrachloroethane	0.233	0.5	**1.0**	80 – **120**	≤ 40
Ethyl Benzene	0.202	0.5	**1.0**	**80** – **120**	≤ 40
m,p-Xylene	0.392	0.5	**1.0**	**80** – 123	≤ 40
o-Xylene	0.224	0.5	**1.0**	**80** – **120**	≤ 40
Styrene	0.138	0.5	**1.0**	**80** – 122	≤ 40
Bromoform	0.297	0.5	**1.0**	63 – **120**	≤ 40
Isopropyl Benzene	0.233	0.5	**1.0**	77 – 127	≤ 40
1,1,2,2-Tetrachloroethane	0.253	0.5	**1.0**	71 – **120**	≤ 40
1,2,3-Trichloropropane	0.517	1.0	**2.0**	75 – **120**	≤ 40
trans-1,4-Dichloro-2-Butene	0.437	2.5	**5.0**	62 – 127	≤ 40
n-Propyl Benzene	0.272	0.5	**1.0**	76 – 126	≤ 40
Bromobenzene	0.153	0.5	**1.0**	75 – **120**	≤ 40
1,3,5-Trimethylbenzene	0.254	0.5	**1.0**	77 – 126	≤ 40
2-Chlorotoluene	0.300	0.5	**1.0**	76 – 120	≤ 40
4-Chlorotoluene	0.277	0.5	**1.0**	75 – 121	≤ 40
t-Butylbenzene	0.306	0.5	**1.0**	77 – 125	≤ 40
1,2,4-Trimethylbenzene	0.230	0.5	**1.0**	77 – 125	≤ 40
s-Butylbenzene	0.240	0.5	**1.0**	77 – 127	≤ 40
4-Isopropyl Toluene	0.236	0.5	**1.0**	78 – 131	≤ 40
1,3-Dichlorobenzene	0.227	0.5	**1.0**	76 – 120	≤ 40
1,4-Dichlorobenzene	0.232	0.5	**1.0**	75 – **120**	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary VOA Analysis of Soil (EPA Method 8260C)					
Analyte	**DL[1,5] µg/kg**	**LOD[1] µg/kg**	**LOQ[1] µg/kg**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
n-Butylbenzene	0.262	0.5	**1.0**	75 – 134	≤ 40
1,2-Dichlorobenzene	0.293	0.5	**1.0**	77 – **120**	≤ 40
1,2-Dibromo-3-Chloropropane	0.586	2.5	**5.0**	61 – 128	≤ 40
1,2,4-Trichlorobenzene	0.332	2.5	**5.0**	75 – 130	≤ 40
Hexachloro-1,3-Butadiene	0.410	2.5	**5.0**	72 – 135	≤ 40
Naphthalene	0.429	2.5	**5.0**	71 – 122	≤ 40
1,2,3-Trichlorobenzene	0.305	2.5	**5.0**	76 – 122	≤ 40
Surrogate Standards			**MB / LCS**	**Samples**	**RPD**
1,2-Dichloroethane-d_4			**80** – 122	**80** – 149	≤ 40
1,2-Dichlorobenzene-d_4			**80 – 120**	**80 – 120**	≤ 40
Toluene-d_8			**80 – 120**	77 – **120**	≤ 40
4-Bromofluorobenzene			**80 – 120**	**80 – 120**	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Control limits calculated using all data from 1/1/12 through 5/31/12.
(3) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

(4) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that:
a. ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit or
b. Control limits for analyzes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.
(5) MDL study QD19 – 3/8/10

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS, MS Control Limits (%)		RPD[2]
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Full Scan	SIM	
Phenol	8.65	10	**20**	2.56	5	**5**	34 – 105	30 – 160	≤ 40
bis-(2-Chloroethyl)ether	3.35	10	**20**	--	--	--	36 – **100**	--	≤ 40
2-Chlorophenol	2.39	10	**20**	--	--	--	39 – **100**	--	≤ 40
1,3-Dichlorobenzene	2.63	10	**20**	1.31	2.5	**5**	40 – **100**	30 – **100**	≤ 40
1,4-Dichlorobenzene	2.86	10	**20**	1.19	2.5	**5**	39 – **100**	36 – **100**	≤ 40
1,2-Dichlorobenzene	2.50	10	**20**	1.10	2.5	**5**	40 – **100**	36 – **100**	≤ 40
Benzyl alcohol	6.09	10	**20**	7.04	10	**20**[3]	19 – 117	25 – 123	≤ 40
2,2'-oxy-*bis*-(1-Chloropropane)	3.76	10	**20**	--	--	--	32 – **100**	--	≤ 40
2-Methylphenol	5.25	10	**20**	1.81	2.5	**5**	28 – **100**	26 – **100**	≤ 40
Hexachloroethane	2.94	10	**20**	--	--	--	38 – **100**	--	≤ 40
N-Nitroso-di-n-propylamine	3.36	10	**20**	9.48	10	**12**[3]	34 – **100**	30 – 160	≤ 40
4-Methylphenol[6]	6.63	10	**20**	2.52	5	**10**	29 – 100	30 – 160	≤ 40
Nitrobenzene	4.06	10	**20**	--	--	--	36 – **100**	--	≤ 40
Isophorone	2.86	10	**20**	--	--	--	37 – 101	--	≤ 40
2-Nitrophenol	38.7	50	**100**	--	--	--	30 – 112	--	≤ 40
2,4-Dimethylphenol	3.46	20	**40**	2.89	10	**20**	**10** – 100	10 – 103	≤ 40
bis-(2-Chloroethoxy)methane	2.00	10	**20**	--	--	--	39 – **100**	--	≤ 40
2,4-Dichlorophenol	21.5	100	**200**	--	--	--	28 – 112	--	≤ 40
1,2,4-Trichlorobenzene	3.48	10	**20**	1.86	2.5	**5**	35 – 103	35 – **100**	≤ 40
Naphthalene	2.76	10	**20**	--	--	--	43 – 100	--	≤ 40
Benzoic acid	101	200	**400**[5]	--	--	--	**10** – 107	--	≤ 40
4-Chloroaniline	22.3	135	**270**[4]	--	--	--	11 – **100**	--	≤ 40
Hexachlorobutadiene	4.57	10	**20**	0.96	2.5	**5**	37 – **100**	34 – **100**	≤ 40
4-Chloro-3-methylphenol	15.1	50	**100**	--	--	--	32 – 117	--	≤ 40
2-Methylnaphthalene	3.06	10	**20**	--	--	--	43 – **100**	--	≤ 40
Hexachlorocyclopentadiene	66.4	200	**400**[4]	--	--	--	**10** – 103	--	≤ 40
2,4,6-Trichlorophenol	22.4	50	**100**	--	--	--	30 – 113	--	≤ 40
2,4,5-Trichlorophenol	21.4	50	**100**	--	--	--	28 – 118	--	≤ 40
2-Chloronaphthalene	2.64	10	**20**	--	--	--	40 – **100**	--	≤ 40
2-Nitroaniline	18.4	50	**100**	--	--	--	31 – 126	--	≤ 40
Acenaphthylene	5.71	10	**20**	--	--	--	42 – 102	--	≤ 40
Dimethylphthalate	2.90	10	**20**	1.34	2.5	**5**	43 – 114	38 – 112	≤ 40
2,6-Dinitrotoluene	30.6	50	**100**	--	--	--	33 – 123	--	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS, MS Control Limits (%)		RPD[2]
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Full Scan	SIM	
Acenaphthene	3.28	10	**20**	--	--	--	45 – **100**	--	≤ 40
3-Nitroaniline	22.5	50	**100**	--	--	--	22 – 113	--	≤ 40
2,4-Dinitrophenol	111	425	**850**[4]	--	--	--	**10** – 105	--	≤ 40
Dibenzofuran	4.10	10	**20**	--	--	--	43 – 103	--	≤ 40
4-Nitrophenol	34.7	50	**100**	--	--	--	15 – 138	--	≤ 40
2,4-Dinitrotoluene	19.5	50	**100**	--	--	--	35 – 127	--	≤ 40
Fluorene	4.35	10	**20**	--	--	--	45 – 107	--	≤ 40
4-Chlorophenyl-phenylether	5.29	10	**20**	--	--	--	32 – 116	--	≤ 40
Diethylphthalate	36.6	50	**50**[3]	3.26	5.0	**5.0**	50 – 120	55 – 104	≤ 40
4-Nitroaniline	37.9	50	**100**	--	--	--	24 – 125	--	≤ 40
4,6-Dinitro-2-methylphenol	21.2	100	**200**	--	--	--	24 – 119	--	≤ 40
N-Nitrosodiphenylamine	5.39	10	**20**	1.38	10	**20**	36 – 111	27 – 115	≤ 40
4-Bromophenyl-phenylether	5.03	10	**20**	--	--	--	39 – 114	--	≤ 40
Hexachlorobenzene	4.29	10	**20**	1.26	2.5	**5**	33 – 113	32 – 106	≤ 40
Pentachlorophenol	48.5	100	**200**[4]	14.3	25	**50**	16 – 120	26 – 106	≤ 40
Phenanthrene	3.64	10	**20**	--	--	--	49 – 112	--	≤ 40
Anthracene	4.50	10	**20**	--	--	--	45 – 106	--	≤ 40
Carbazole	2.69	10	**20**	--	--	--	43 – 135	--	≤ 40
Di-n-butylphthalate	8.16	10	**20**	--	--	--	48 – 126	--	≤ 40
Fluoranthene	2.91	10	**20**	--	--	--	53 – 118	--	≤ 40
Pyrene	1.94	10	**20**	--	--	--	48 – 121	--	≤ 40
Butylbenzylphthalate	6.14	10	**20**	2.89	5.0	**5**	45 – 132	32 – 142	≤ 40
Benzo(a)anthracene	3.29	10	**20**	--	--	--	49 – 115	--	≤ 40
3,3'-Dichlorobenzidine	17.8	75	**150**[4]	--	--	--	**10** – **100**	--	≤ 40
Chrysene	3.75	10	**20**	--	--	--	47 – 115	--	≤ 40
bis-(2-Ethylhexyl)phthalate	14.6	20	**25**[3]	--	--	--	34 – 130	--	≤ 40
Di-n-octylphthalate	5.84	10	**20**	--	--	--	28 – 124	--	≤ 40
Benzo(b)fluoranthene[7]	3.47	10	**20**	--	--	--	42 – 132	--	≤ 40
Benzo(k)fluoranthene[7]	4.18	10	**20**	--	--	--	39 – 129	--	≤ 40
Benzofluoranthene-Total[8]	6.67	20	**40**	--	--	--	30 – 160	--	≤ 40
Benzo(a)pyrene	5.45	10	**20**	--	--	--	42 – 113	--	≤ 40
Indeno(1,2,3-cd)pyrene	4.68	10	**20**	--	--	--	42 – 123	--	≤ 40
Dibenzo(a,h)anthracene	4.31	10	**20**	2.02	2.5	**5**	30 – 133	28 – 125	≤ 40
Benzo(g,h,i)perylene	4.40	10	**20**	--	--	--	38 – 126	--	≤ 40
N-Nitrosodimethylamine	14.1	50	**100**	3.15	13	**25**	17 – **100**	30 – 160	≤ 40
Aniline	40.0	270	**540**[4]	--	--	--	**10** – 134	--	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS, MS Control Limits (%)		RPD[2]
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Full Scan	SIM	
Pyridine	32.7	75	**150**[4]	--	--	--	**10** – 147	--	≤ 40
1-Methylnaphthalene	2.68	10	**20**	--	--	--	42 – **100**	--	≤ 40
Azobenzene (1,2-DP-Hydrazine)	2.98	10	**20**	--	--	--	35 – 112	--	≤ 40
Retene [9]	4.01	10	**20**	--	--	--	30 – 160	--	≤ 40
Surrogate Standards							MB / LCS	Samples	RPD
2-Fluorophenol							32 – **100**	27 – **100**	≤ 40
Phenol-d_5							32 – 101	29 – **100**	≤ 40
2-Chlorophenol-d_4							36 – 101	31 – **100**	≤ 40
1,2-Dichlorobenzene-d_4							37 – **100**	32 – **100**	≤ 40
Nitrobenzene-d_5							33 –102	30 – **100**	≤ 40
2-Fluorobiphenyl							35 –101	35 – **100**	≤ 40
2,4,6-Tribromophenol							23 – 133	24 – 134	≤ 40
p-Terphenyl-d_{14}							42 – 124	37 – 111	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD), Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(3) Spiked at 5 ppb
(4) Spiked at 100 ppb
(5) Spiked at 200 ppb
(6) 3-Methylphenol (not calibrated) co-elutes with 4-Methylphennol (calibrated)
(7) Benzo(b)fluoranthene and Benzo(k)fluoranthene are reported as separate analytes only when the height of the valley between the isomer peaks is less than than 50% of the average of the two peak heights, otherwise total Benzofluoranthenes are reported.
(8) Benzo(b)fluoranthene + Benzo(j)fluoranthene + Benzo(k)fluoranthene (only the b & k isomers are calibrated)
(9) LOD study WC15 (2/5/13)

DL[1], LOD[1], LOQ[1] and Control Limits Summary
Analysis of Sediment Samples for Dioxins & Furans
EPA Method 1613B

Soxhlet (EPA Method 3540C) Extraction using 10 g sample with extract concentrated to 0.02 mL final volume. ARI Bench Sheet 3083F

LOD Spike level = LOQ = 0.1 ppt (ng/kg) = 1 pg/g

Analyte	DL[1] pg/g	LOD[1] pg/g	LOQ[1] pg/g	OPR Control Limit[2,3]	Sample Replicate RPD[3,4]
2,3,7,8-TCDF	0.230	**0.5**	**1**	75 – 158	≤ 25
2,3,7,8-TCDD	0.274	**0.5**	**1**	67 – 158	≤ 25
1,2,3,7,8-PeCDF	0.832	**2.5**	**2.5**	80 – 134	≤ 25
2,3,4,7,8-PeCDF	1.076	**2.5**	**1**	68 – 160	≤ 25
1,2,3,7,8-PeCDD	0.647	**2.5**	**1**	70 – 142	≤ 25
1,2,3,4,7,8-HxCDF	0.991	**2.5**	**2.5**	72 – 134	≤ 25
1,2,3,6,7,8-HxCDF	0.769	**2.5**	**2.5**	84 – 130	≤ 25
2,3,4,6,7,8-HxCDF	0.904	**2.5**	**2.5**	70 – 156	≤ 25
1,2,3,7,8,9-HxCDF	0.857	**2.5**	**2.5**	78 – 130	≤ 25
1,2,3,4,7,8-HxCDD	0.481	**2.5**	**2.5**	70 – 164	≤ 25
1,2,3,6,7,8-HxCDD	0.561	**2.5**	**2.5**	76 – 134	≤ 25
1,2,3,7,8,9-HxCDD	0.886	**2.5**	**2.5**	64 – 162	≤ 25
1,2,3,4,6,7,8-HpCDF	1.165	**2.5**	**2.5**	82 – 122	≤ 25
1,2,3,4,7,8,9-HpCDF	0.688	**2.5**	**2.5**	78 – 138	≤ 25
1,2,3,4,6,7,8-HpCDD	0.828	**2.5**	**2.5**	70 – 140	≤ 25
OCDF	2.176	**5.0**	**5**	63 – 170	≤ 25
OCDD	7.452	**5.0**	**5**	78 – 144	≤ 25

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S

(2) Ongoing precision and recovery (OPR) analyzes as specified in the referenced method.

(3) Method specified control limits.

(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

4

DL[1], LOD[1], LOQ[1] and Control Limits Summary
Analysis of Soil/Sediment Samples for Chlorinated Pesticides
EPA Method 8081B

Microwave (EPA Method 3546) Extraction using 12.5g (dry weight) sample with extract concentrated to 2.5 mL final volume. ARI Bench Sheet 3046F

LOD Spike level = LOQ Concentration

Analyte	DL[1,2] µg/kg	LOD[1] µg/kg	LOQ[1] µg/kg	LCS Control Limit[3,4]	Replicate RPD[5]
alpha-BHC	0.081	0.25	**0.5**	68 – 115	≤ 40
beta-BHC	0.139	0.25	**0.5**	60 – 126	≤ 40
gamma-BHC (Lindane)	0.048	0.25	**0.5**	68 – 134	≤ 40
delta-BHC	0.082	0.25	**0.5**	71 – 154	≤ 40
Heptachlor	0.132	0.25	**0.5**	66 – 115	≤ 40
Aldrin	0.055	0.25	**0.5**	66 – 115	≤ 40
Heptachlor Epoxide	0.085	0.25	**0.5**	65 – 127	≤ 40
trans-Chlordane (*beta*-Chlordane, *gamma*-Chlordane)	0.077	0.25	**0.5**	73 – 136	≤ 40
cis-Chlordane (*alpha*-chlordane)	0.051	0.25	**0.5**	77 – 124	≤ 40
Endosulfan I	0.072	0.25	**0.5**	28 – **100**	≤ 40
4,4'-DDE	0.124	0.5	**1.0**	71 – 149	≤ 40
Dieldrin	0.100	0.5	**1.0**	74 – 131	≤ 40
Endrin	0.215	0.5	**1.0**	72 – 135	≤ 40
Endosulfan II	0.116	0.5	**1.0**	37 – 110	≤ 40
4,4'-DDD	0.135	0.5	**1.0**	76 – 137	≤ 40
Endrin Aldehyde	0.218	0.5	**1.0**	38 – 109	≤ 40
4,4'-DDT	0.192	0.5	**1.0**	58 – 144	≤ 40
Endosulfan Sulfate	0.192	0.5	**1.0**	47 – 148	≤ 40
Endrin Ketone	0.119	0.5	**1.0**	29 – 165	≤ 40
Methoxychlor	0.698	2.5	**5.0**	65 – 123	≤ 40
Hexachlorobutadiene	0.138	0.5	**1.0**	43 – 104	≤ 40
Hexachlorobenzene	0.094	0.5	**1.0**	62 – 119	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
Tetrachloro-*m*-xylene (TCMX)			47 – 124	34 – 169	≤ 40
Decachlorobiphenyl			60 – 149	36 – 182	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation as defined in ARI SOP 1018S.
(2) MDL study QZ38
(3) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(4) Control limits calculated using all data from 1/1/12 through 7/31/12.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

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Quality Control Criteria for Analysis of Solid Matrix Samples for Aroclors (Polychlorinated Biphenyls – PCB) EPA Method 8082B

Extraction Bench Sheet	Extraction	DL[1] (ppb)	LOD[1] (ppb)	LOQ[1] (ppb)	Analyte	Spike Recovery Control Limits (%)[2,3,5]			RPD[4]
						LCS	MB/LCS Surrogate	Sample Surrogate	
Soil / Sediment Samples (Microwave Extraction – EPA Method 3546)									
PCB 15-3067F	12g to 4 mL	10.69	17	33	Aroclor 1016	62 – 111	--	--	≤ 40
		14.42	17	33	Aroclor 1260	59 – 118	--	--	
PCB 08-3025F		--	--	--	TCMX	--	58 – 112	53 – 116	
		--	--	--	DCBP	--	59 – 115	35 – 133	
PCB 05-3017F	5 g to 5 mL[6]	8.00	10	20	Aroclor 1016	56 – 115	--	--	≤ 40
		9.28	10	20	Aroclor 1260	58 – 120	--	--	
PCB 06-3026F		--	--	--	TCMX	--	52 – 117	57 – 109	
		--	--	--	DCBP	--	61 – 114	54 – 115	
PCB 18-3098F	5 g to 2.5 mL[6]	4.61	5	10	Aroclor 1016	66 – 114	--	--	≤ 40
		4.97	5	10	Aroclor 1260	63 – 120	--	--	
PCB06-3026F		--	--	--	TCMX	--	57 – 114	71 – 108	
		--	--	--	DCBP	--	59 – 118	53 – 126	
PCB 19-3099F	12.5 g to 2.5 mL[6]	1.56	2	4	Aroclor 1016	64 – **100**	--	--	≤ 40
		0.589	2	4	Aroclor 1260	64 – 107	--	--	
PCB 06-3026F		--	--	--	TCMX	--	54 – **100**	45 – 102	
		--	--	--	DCBP	--	64 – 105	37 – 128	
Soil / Sediment Samples Medium Level (Vortex Extraction – EPA Method 3546)									
PCB 12-3019F	5 g to 40 mL	38.2	400	800	Aroclor 1016	30 – 160	--	--	≤ 40
		73.1	400	800	Aroclor 1260	30 – 160	--	--	
		--	--	--	TCMX	--	30 – 160	30 – 160	
		--	--	--	DCBP	--	30 – 160	30 – 160	

(1) Detection Limit (DL), Limit of Detection (LOD) & Limit of Quantitation (LOQ) are defined in ARI SOP 1018S.
(2) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(3) 30 – 160 are default limits used when there is insufficient data to calculate historic control limits
(4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(5) Control Limits calculated usng all data generated between 6/1/12 and 12/31/12

Analytical Resources, Incorporated
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Quality Control Criteria
Total Petroleum Hydrocarbons
(Diesel & Motor Oil)

Analysis Code	Analyte[5]	DL[1] ppm	LOD[1] ppm	LOQ[2] ppm	Spike % Recovery Control Limits[3]			RPD[4]
					LCS	MB/LCS Surrogate	Sample Surrogate	
HCIWVX	NWTPH-HCID – Water Samples	--	--	0.50 [7]	--	--	50-150	≤ 40
HCISVX	NWTPH-HCID – Solid Samples	--	--	50 [7]	--	--	50-150	
Aqueous Samples – No Extract Clean-up – Separatory Funnel Extraction – 500 to 1.0 mL								
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.022	0.05	0.1	64-112	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.022	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.044	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [9]	0.1	0.2	60-120 [6]	60-120	50-150	
Aqueous Samples – With Acid and/or Silica Gel Clean-up – Separatory Funnel Extraction – 500 to 1.0 mL								
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.039	0.05	0.1	61-104	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.042	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.010	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [8]	0.1	0.2	60-120 [6]	60-120	50-150	
Solid Matrix Samples – No Extract Clean-up – Microwave Extraction – 10 g to 1 mL								
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.35	2.5	5	62-119	50-150	50-150	≤ 40
DIESMI	DRO – NWTPH-Dext Jet A	2.22 [11]	2.5	5	60 – 130 [8]	50-150	50-150	
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.43	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	2.48	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [9]	5	10	60-120 [6]	60-120	50-150	
Solid Matrix Samples – With Acid and/or Silica Gel Clean-up – Microwave Extraction – 10 g to 1 mL								
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.28	2.5	5	60-108	50-150	50-150	≤ 40
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.06	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	1.57	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [10]	5	10	60-120 [6]	60-120	50-150	

(1) DL (Detection Limit) and LOD (Limit of Detection) as defined in ARI SOP 1018S.
(2) Limit of Quantitation as defined in ARI SOP 1018S. The spike concentration used to determine the DL and the concentration of the lowest standard used to calibrate the GC-FID instrument.
(3) All surrogate recovery limits are specified in the published methods (AK102, AK103 & NWTPH-Dext). The surrogate standard is o-Terphenyl.
(4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$
(5) DRO = Diesel Range Organics and RRO = Residual Range Organics as defined in the methods referenced in footnote 3.
(6) Method specified LCS acceptance limits.
(7) Method specified reporting limits
(8) Default LCS control limits pending calculation of historic limits
(9) MDL study QD55 completed 2/12/10
(10) MDL study QD35 completed 1/29/10
(11) LOD Study UI44 completed 2/28/12

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Quality Control Criteria
Gasoline and BTEX

Method	Analyte	DL[1]	LOD[1]	LOQ[1]	Spike % Recovery Control Limits			RPD[3]
					LCS	MB/LCS Surrogate	Sample Surrogate	
Aqueous Samples 5 mL purge volume (DL, LOD & LOQ values in µg/L (ppb) for BTEX and mg/L (ppm) for gasoline								
NWTPH-G	Toluene – Naphthalene	0.057	0.125	0.25	**80 – 120**	--	--	≤ 40
8015B	2-methylpentane – 1,2,4-Trimethylbenzene	0.031	0.125	0.25	**80 – 120**	--	--	
WA-TPH-G	Toluene – nC_{12})	0.087	0.125	0.25	**80 – 120**	--	--	
AK-101	nC_6 – nC_{12}	0.032	0.050	0.10	**80 – 120**	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 - 120**	**80 – 120**	
	Bromobenzene	--	--	--	--	**80 - 120**	**80 – 120**	
8021B	Benzene	0.094	0.5	1.0	76 – **120**	--	--	≤ 40
8021B	Toluene	0.113	0.5	1.0	77 – 122	--	--	
8021B	Ethylbenzene	0.117	0.5	1.0	68 – **120**	--	--	
8021B	m/p-Xylene	0.265	1.0	2.0	75 – **120**	--	--	
8021B	o-Xylene	0.136	0.5	1.0	75 – 121	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 – 120**	**80 - 120**	
	Bromobenzene	--	--	--	--	**80 – 120**	77 - **120**	
Solid Samples (DL, LOD & LOQ values in µg/kg (ppb) for BTEX and mg/kg (ppm) for gasoline								
NWTPH-G	Toluene – Naphthalene	1.66	2.5	5	**80 – 120**	--	--	≤ 40
8015B	2-methylpentane – 1,2,4-Trimethylbenzene	1.57	2.5	5	**80 – 120**	--	--	
WA-TPH-G	Toluene – nC_{12})	1.54	2.5	5	**80 – 120**	--	--	
AK-101	nC_6 – nC_{12}	1.84	2.5	5	**80** – 127	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 - 120**	65-128	
	Bromobenzene	--	--	--	--	**80 - 120**	52-149	
8021B	Benzene	4.59	12.5	25	78 – **120**	--	--	≤ 40
8021B	Toluene	7.13	12.5	25	80 – **120**	--	--	
8021B	Ethylbenzene	4.98	12.5	25	73 – **120**	--	--	
8021B	m/p-Xylene	11.9	25.0	50	79 – **120**	--	--	
8021B	o-Xylene	6.23	12.5	25	80 – **120**	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 - 120**	69 – 126	
	Bromobenzene	--	--	--	--	**80 - 120**	49 – 143	

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S.
(2) Highlighted control limits (bold font) are adjusted from the calculated values as follows:
a) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
b) Control limits for analytes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.
(3) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(4) Default control limits pending sufficient data to calculate historic limits.

Quality Control Parameters for Metals Analysis-ICP-OES EPA Methods 200.7 and 6010C

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ mg/kg	LOQ mg/kg
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(6) ARI does not analyze for Silicon in solids or tissue samples

Quality Control Parameters for Metals Analysis ICP-MS EPA Methods 200.8 or 6020A								
Analyte	Mass	Aqueous Samples[2]			Spike Recovery		RPD[3]	Solids[2]
		DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ[1] mg/kg
Aluminum	27	1.601	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Antimony	121	0.010	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
	123	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #1	75	0.048	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #2	75	0.092	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Barium	135	0.020	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	137	0.019	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Beryllium	9	0.021	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Cadmium	111	0.010	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
	114	0.005	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Calcium	43	3.983	25	**50.0**	75 – 125	80 – 120	≤ 20	**50.0**
Chromium	52	0.045	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	53	0.118	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Cobalt	59	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Copper	63	0.158	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	65	0.236	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Iron	54	5.753	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
	57	3.876	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Lead	208	0.046	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Magnesium	24	0.297	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Manganese	55	0.022	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Molybdenum	98	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Nickel	60	0.079	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	62	0.089	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Potassium	39	2.944	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Selenium	82	0.127	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	78	0.324	0.25	**2.0**	75 – 125	80 – 120	≤ 20	**2.0**
Silver	107	0.008	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Sodium	23	2.833	50	**100.0**	75 – 125	80 – 120	≤ 20	**100.0**
Thorium[4]	232	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Thallium	205	0.004	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Uranium[4]	238	0.003	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Vanadium	51	0.043	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Zinc	66	0.497	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	67	0.531	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	68	0.524	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume Solids LOQ based on 100% solids using 1.0 g sample 100 mL final volume.
(3) Relative Percent Difference in replicate analyzes. $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$ where C_0=Original, C_D=Duplicate
(4) ARI has no accreditation for these elements.

Quality Control Parameters for Mercury Analysis using CVAA
EPA Methods 7470A or 245.1 for Aqueous Samples
EPA Methods 7471B or 245.5 for Solid Samples

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[2]	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	**LOD[1] mg/kg**	**LOQ[1] mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.025[3]	75 – 125	80 – 120	≤ 20
	Tissue Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	**LOD[1] mg/kg**	**LOQ[1] mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.005[4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

Volatile Analysis
Report and Summary QC Forms

ARI Job ID: WS21

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: KC-IV-SPS-20130531-S**
 SAMPLE

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/11/13 16:01

Sample Amount: 5.32 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 19.0%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.25	0.9	< 0.9 U
74-83-9	Bromomethane	0.18	0.9	< 0.9 U
75-01-4	Vinyl Chloride	0.22	0.9	< 0.9 U
75-00-3	Chloroethane	0.43	0.9	< 0.9 U
75-09-2	**Methylene Chloride**	**0.60**	**1.9**	**2.0**
67-64-1	Acetone	0.45	4.7	< 4.7 U
75-15-0	**Carbon Disulfide**	**0.53**	**0.9**	**7.3**
75-35-4	1,1-Dichloroethene	0.32	0.9	< 0.9 U
75-34-3	1,1-Dichloroethane	0.19	0.9	< 0.9 U
156-60-5	trans-1,2-Dichloroethene	0.25	0.9	< 0.9 U
156-59-2	cis-1,2-Dichloroethene	0.23	0.9	< 0.9 U
67-66-3	Chloroform	0.22	0.9	< 0.9 U
107-06-2	1,2-Dichloroethane	0.18	0.9	< 0.9 U
78-93-3	2-Butanone	0.48	4.7	< 4.7 U
71-55-6	1,1,1-Trichloroethane	0.21	0.9	< 0.9 U
56-23-5	Carbon Tetrachloride	0.20	0.9	< 0.9 U
108-05-4	Vinyl Acetate	0.36	4.7	< 4.7 U
75-27-4	Bromodichloromethane	0.24	0.9	< 0.9 U
78-87-5	1,2-Dichloropropane	0.15	0.9	< 0.9 U
10061-01-5	cis-1,3-Dichloropropene	0.21	0.9	< 0.9 U
79-01-6	Trichloroethene	0.20	0.9	< 0.9 U
124-48-1	Dibromochloromethane	0.25	0.9	< 0.9 U
79-00-5	1,1,2-Trichloroethane	0.27	0.9	< 0.9 U
71-43-2	Benzene	0.28	0.9	< 0.9 U
10061-02-6	trans-1,3-Dichloropropene	0.20	0.9	< 0.9 U
110-75-8	2-Chloroethylvinylether	0.26	4.7	< 4.7 U
75-25-2	Bromoform	0.28	0.9	< 0.9 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.39	4.7	< 4.7 U
591-78-6	2-Hexanone	0.41	4.7	< 4.7 U
127-18-4	Tetrachloroethene	0.24	0.9	< 0.9 U
79-34-5	1,1,2,2-Tetrachloroethane	0.24	0.9	< 0.9 U
108-88-3	Toluene	0.14	0.9	< 0.9 U
108-90-7	Chlorobenzene	0.21	0.9	< 0.9 U
100-41-4	Ethylbenzene	0.19	0.9	< 0.9 U
100-42-5	Styrene	0.13	0.9	< 0.9 U
75-69-4	Trichlorofluoromethane	0.25	0.9	< 0.9 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.27	1.9	< 1.9 U
179601-23-1	m,p-Xylene	0.37	0.9	< 0.9 U
95-47-6	o-Xylene	0.21	0.9	< 0.9 U
95-50-1	1,2-Dichlorobenzene	0.28	0.9	< 0.9 U
541-73-1	1,3-Dichlorobenzene	0.21	0.9	< 0.9 U
106-46-7	1,4-Dichlorobenzene	0.22	0.9	< 0.9 U
107-02-8	Acrolein	3.6	47	< 47 U

WS21 : 209932

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Date Analyzed: 06/11/13 16:01

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.20	0.9	< 0.9 U
74-96-4	Bromoethane	0.41	1.9	< 1.9 U
107-13-1	Acrylonitrile	0.97	4.7	< 4.7 U
563-58-6	1,1-Dichloropropene	0.29	0.9	< 0.9 U
74-95-3	Dibromomethane	0.14	0.9	< 0.9 U
630-20-6	1,1,1,2-Tetrachloroethane	0.22	0.9	< 0.9 U
96-12-8	1,2-Dibromo-3-chloropropane	0.55	4.7	< 4.7 U
96-18-4	1,2,3-Trichloropropane	0.49	1.9	< 1.9 U
110-57-6	trans-1,4-Dichloro-2-butene	0.41	4.7	< 4.7 U
108-67-8	1,3,5-Trimethylbenzene	0.24	0.9	< 0.9 U
95-63-6	1,2,4-Trimethylbenzene	0.22	0.9	< 0.9 U
87-68-3	Hexachlorobutadiene	0.39	4.7	< 4.7 U
106-93-4	1,2-Dibromoethane	0.17	0.9	< 0.9 U
74-97-5	Bromochloromethane	0.30	0.9	< 0.9 U
75-71-8	Dichlorodifluoromethane	0.19	0.9	< 0.9 U
594-20-7	2,2-Dichloropropane	0.27	0.9	< 0.9 U
142-28-9	1,3-Dichloropropane	0.20	0.9	< 0.9 U
98-82-8	Isopropylbenzene	0.22	0.9	< 0.9 U
103-65-1	n-Propylbenzene	0.26	0.9	< 0.9 U
108-86-1	Bromobenzene	0.14	0.9	< 0.9 U
95-49-8	2-Chlorotoluene	0.28	0.9	< 0.9 U
106-43-4	4-Chlorotoluene	0.26	0.9	< 0.9 U
98-06-6	tert-Butylbenzene	0.29	0.9	< 0.9 U
135-98-8	sec-Butylbenzene	0.23	0.9	< 0.9 U
99-87-6	4-Isopropyltoluene	0.22	0.9	< 0.9 U
104-51-8	n-Butylbenzene	0.25	0.9	< 0.9 U
120-82-1	1,2,4-Trichlorobenzene	0.31	4.7	< 4.7 U
91-20-3	Naphthalene	0.40	4.7	< 4.7 U
87-61-6	1,2,3-Trichlorobenzene	0.29	4.7	< 4.7 U
1634-04-4	Methyl tert-Butyl Ether	0.22	0.9	< 0.9 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	111%
d8-Toluene	101%
Bromofluorobenzene	105%
d4-1,2-Dichlorobenzene	101%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: KC-TB-02**
Page 1 of 2 **SAMPLE**

Lab Sample ID: WS21B
LIMS ID: 13-11679
Matrix: Water
Data Release Authorized:
Reported: 06/13/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/04/13 18:47

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.13	1.0	< 1.0 U
74-83-9	Bromomethane	0.43	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.25	1.0	< 1.0 U
75-00-3	Chloroethane	0.19	1.0	< 1.0 U
75-09-2	Methylene Chloride	0.19	2.0	< 2.0 U
67-64-1	Acetone	3.0	10	< 10 U
75-15-0	Carbon Disulfide	0.18	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.30	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.21	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.20	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.10	1.0	< 1.0 U
67-66-3	Chloroform	0.19	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.24	1.0	< 1.0 U
78-93-3	2-Butanone	2.0	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.18	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.23	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.22	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.19	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.23	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.29	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.23	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.26	1.0	< 1.0 U
71-43-2	Benzene	0.25	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.22	5.0	< 5.0 U
75-25-2	Bromoform	0.29	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.37	5.0	< 5.0 U
591-78-6	2-Hexanone	0.93	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.09	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	1.0	< 1.0 U
108-88-3	Toluene	0.18	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.14	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.18	1.0	< 1.0 U
100-42-5	Styrene	0.12	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.18	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.18	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.36	2.0	< 2.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.20	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.28	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.28	1.0	< 1.0 U
107-02-8	Acrolein	1.9	10	< 10 U
74-88-4	Iodomethane	0.26	1.0	< 1.0 U
74-96-4	Bromoethane	0.42	2.0	< 2.0 U
107-13-1	Acrylonitrile	0.50	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.27	1.0	< 1.0 U
74-95-3	Dibromomethane	0.29	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.29	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.44	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: KC-TB-02**
 SAMPLE

Lab Sample ID: WS21B
LIMS ID: 13-11679
Matrix: Water
Date Analyzed: 06/04/13 18:47

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
96-18-4	1,2,3-Trichloropropane	0.54	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.86	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.14	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.15	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.18	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.20	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.25	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.10	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.17	5.0	< 5.0 U
98-82-8	Isopropylbenzene	0.30	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.12	1.0	< 1.0 U
108-86-1	Bromobenzene	0.24	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.14	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.21	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.40	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.13	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.35	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.37	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	0.34	5.0	< 5.0 U
91-20-3	Naphthalene	0.23	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	0.32	5.0	< 5.0 U
1634-04-4	Methyl tert-Butyl Ether	0.16	1.0	< 1.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	112%
d8-Toluene	102%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	103%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-061113A	Method Blank	Low	107%	101%	100%	102%	0
LCS-061113A	Lab Control	Low	102%	101%	101%	99.4%	0
LCSD-061113A	Lab Control Dup	Low	104%	101%	100%	101%	0
WS21A	KC-IV-SPS-20130531-S	Low	111%	101%	105%	101%	0

	LCS/MB LIMITS		QC LIMITS	
SW8260C	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	80-122	76-120	80-149	69-120
(TOL) = d8-Toluene	80-120	80-120	77-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	80-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 13-11678 to 13-11678

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-060413A	Method Blank	5	113%	102%	101%	103%	0
LCS-060413A	Lab Control	5	108%	101%	102%	101%	0
LCSD-060413A	Lab Control Dup	5	110%	101%	101%	102%	0
WS21B	KC-TB-02	5	112%	102%	103%	103%	0

	LCS/MB LIMITS	QC LIMITS
SW8260C		
(DCE) = d4-1,2-Dichloroethane	80-122	80-125
(TOL) = d8-Toluene	80-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120

Prep Method: SW5030B
Log Number Range: 13-11679 to 13-11679

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-061113A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-061113A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/13/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/11/13 14:40
LCSD: 06/11/13 15:13

Sample Amount LCS: 5.00 g-dry-wt
LCSD: 5.00 g-dry-wt
Purge Volume LCS: 5.0 mL
LCSD: 5.0 mL
Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	54.3	50.0	109%	51.8	50.0	104%	4.7%
Bromomethane	51.9	50.0	104%	50.0	50.0	100%	3.7%
Vinyl Chloride	56.1	50.0	112%	51.3	50.0	103%	8.9%
Chloroethane	57.9	50.0	116%	53.7	50.0	107%	7.5%
Methylene Chloride	58.6	50.0	117%	44.1	50.0	88.2%	28.2%
Acetone	160 B	250	64.0%	157 B	250	62.8%	1.9%
Carbon Disulfide	43.9	50.0	87.8%	46.2	50.0	92.4%	5.1%
1,1-Dichloroethene	43.6	50.0	87.2%	45.6	50.0	91.2%	4.5%
1,1-Dichloroethane	59.3	50.0	119%	57.5	50.0	115%	3.1%
trans-1,2-Dichloroethene	62.5	50.0	125%	50.2	50.0	100%	21.8%
cis-1,2-Dichloroethene	53.0	50.0	106%	51.3	50.0	103%	3.3%
Chloroform	53.4	50.0	107%	51.8	50.0	104%	3.0%
1,2-Dichloroethane	50.9	50.0	102%	49.8	50.0	99.6%	2.2%
2-Butanone	253	250	101%	257	250	103%	1.6%
1,1,1-Trichloroethane	54.1	50.0	108%	52.5	50.0	105%	3.0%
Carbon Tetrachloride	53.7	50.0	107%	51.4	50.0	103%	4.4%
Vinyl Acetate	53.0	50.0	106%	52.1	50.0	104%	1.7%
Bromodichloromethane	52.3	50.0	105%	51.0	50.0	102%	2.5%
1,2-Dichloropropane	52.3	50.0	105%	51.0	50.0	102%	2.5%
cis-1,3-Dichloropropene	53.2	50.0	106%	52.0	50.0	104%	2.3%
Trichloroethene	53.4	50.0	107%	51.3	50.0	103%	4.0%
Dibromochloromethane	51.2	50.0	102%	50.7	50.0	101%	1.0%
1,1,2-Trichloroethane	51.8	50.0	104%	50.9	50.0	102%	1.8%
Benzene	53.9	50.0	108%	52.6	50.0	105%	2.4%
trans-1,3-Dichloropropene	53.4	50.0	107%	52.3	50.0	105%	2.1%
2-Chloroethylvinylether	54.5	50.0	109%	54.0	50.0	108%	0.9%
Bromoform	49.2	50.0	98.4%	50.8	50.0	102%	3.2%
4-Methyl-2-Pentanone (MIBK)	259	250	104%	262	250	105%	1.2%
2-Hexanone	251	250	100%	256	250	102%	2.0%
Tetrachloroethene	53.4	50.0	107%	51.1	50.0	102%	4.4%
1,1,2,2-Tetrachloroethane	48.7	50.0	97.4%	50.6	50.0	101%	3.8%
Toluene	53.3	50.0	107%	51.6	50.0	103%	3.2%
Chlorobenzene	52.9	50.0	106%	51.3	50.0	103%	3.1%
Ethylbenzene	55.4	50.0	111%	54.1	50.0	108%	2.4%
Styrene	56.1	50.0	112%	54.6	50.0	109%	2.7%
Trichlorofluoromethane	54.8	50.0	110%	52.2	50.0	104%	4.9%
1,1,2-Trichloro-1,2,2-trifluoroetha	43.9	50.0	87.8%	45.6	50.0	91.2%	3.8%

WS21 : 209977

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-061113A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-061113A QC Report No: WS21-SAIC
LIMS ID: 13-11678 Project: NPDES Sampling Support
Matrix: Sediment 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
m,p-Xylene	111	100	111%	107	100	107%	3.7%
o-Xylene	54.1	50.0	108%	52.6	50.0	105%	2.8%
1,2-Dichlorobenzene	50.3	50.0	101%	50.3	50.0	101%	0.0%
1,3-Dichlorobenzene	52.2	50.0	104%	51.6	50.0	103%	1.2%
1,4-Dichlorobenzene	51.6	50.0	103%	51.2	50.0	102%	0.8%
Acrolein	176	250	70.4%	174	250	69.6%	1.1%
Iodomethane	39.9	50.0	79.8%	40.9	50.0	81.8%	2.5%
Bromoethane	42.3	50.0	84.6%	43.3	50.0	86.6%	2.3%
Acrylonitrile	57.5	50.0	115%	58.0	50.0	116%	0.9%
1,1-Dichloropropene	52.7	50.0	105%	51.3	50.0	103%	2.7%
Dibromomethane	50.9	50.0	102%	50.3	50.0	101%	1.2%
1,1,1,2-Tetrachloroethane	51.7	50.0	103%	50.5	50.0	101%	2.3%
1,2-Dibromo-3-chloropropane	46.1	50.0	92.2%	50.0	50.0	100%	8.1%
1,2,3-Trichloropropane	48.3	50.0	96.6%	49.7	50.0	99.4%	2.9%
trans-1,4-Dichloro-2-butene	49.9	50.0	99.8%	50.2	50.0	100%	0.6%
1,3,5-Trimethylbenzene	54.8	50.0	110%	54.6	50.0	109%	0.4%
1,2,4-Trimethylbenzene	55.0	50.0	110%	54.7	50.0	109%	0.5%
Hexachlorobutadiene	53.2	50.0	106%	53.1	50.0	106%	0.2%
1,2-Dibromoethane	50.7	50.0	101%	50.5	50.0	101%	0.4%
Bromochloromethane	53.1	50.0	106%	49.1	50.0	98.2%	7.8%
Dichlorodifluoromethane	53.6	50.0	107%	52.9	50.0	106%	1.3%
2,2-Dichloropropane	53.9	50.0	108%	51.8	50.0	104%	4.0%
1,3-Dichloropropane	51.3	50.0	103%	50.9	50.0	102%	0.8%
Isopropylbenzene	55.1	50.0	110%	55.6	50.0	111%	0.9%
n-Propylbenzene	55.3	50.0	111%	54.9	50.0	110%	0.7%
Bromobenzene	50.1	50.0	100%	50.2	50.0	100%	0.2%
2-Chlorotoluene	53.0	50.0	106%	53.0	50.0	106%	0.0%
4-Chlorotoluene	53.6	50.0	107%	53.2	50.0	106%	0.7%
tert-Butylbenzene	54.7	50.0	109%	54.9	50.0	110%	0.4%
sec-Butylbenzene	55.4	50.0	111%	55.3	50.0	111%	0.2%
4-Isopropyltoluene	56.8	50.0	114%	56.1	50.0	112%	1.2%
n-Butylbenzene	57.1	50.0	114%	56.2	50.0	112%	1.6%
1,2,4-Trichlorobenzene	54.4	50.0	109%	53.6	50.0	107%	1.5%
Naphthalene	51.8	50.0	104%	54.2	50.0	108%	4.5%
1,2,3-Trichlorobenzene	51.3	50.0	103%	51.8	50.0	104%	1.0%
Methyl tert-Butyl Ether	62.8	50.0	126%	59.8	50.0	120%	4.9%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	102%	104%
d8-Toluene	101%	101%
Bromofluorobenzene	101%	100%
d4-1,2-Dichlorobenzene	99.4%	101%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-060413A**
Page 1 of 2 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-060413A
LIMS ID: 13-11679
Matrix: Water
Data Release Authorized: MW
Reported: 06/13/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/04/13 13:11
LCSD: 06/04/13 13:35

Sample Amount LCS: 5.00 mL
LCSD: 5.00 mL
Purge Volume LCS: 5.0 mL
LCSD: 5.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	40.9	50.0	81.8%	44.2	50.0	88.4%	7.8%
Bromomethane	50.0	50.0	100%	51.1	50.0	102%	2.2%
Vinyl Chloride	54.7	50.0	109%	52.8	50.0	106%	3.5%
Chloroethane	55.3 Q	50.0	111%	60.3 Q	50.0	121%	8.7%
Methylene Chloride	77.1 QB	50.0	154%	79.3 QB	50.0	159%	2.8%
Acetone	252	250	101%	253	250	101%	0.4%
Carbon Disulfide	43.4	50.0	86.8%	45.1	50.0	90.2%	3.8%
1,1-Dichloroethene	42.9	50.0	85.8%	45.4	50.0	90.8%	5.7%
1,1-Dichloroethane	51.0	50.0	102%	53.6	50.0	107%	5.0%
trans-1,2-Dichloroethene	58.9 Q	50.0	118%	61.8 Q	50.0	124%	4.8%
cis-1,2-Dichloroethene	50.1	50.0	100%	52.4	50.0	105%	4.5%
Chloroform	50.9	50.0	102%	49.7	50.0	99.4%	2.4%
1,2-Dichloroethane	45.4	50.0	90.8%	46.5	50.0	93.0%	2.4%
2-Butanone	262	250	105%	266	250	106%	1.5%
1,1,1-Trichloroethane	50.4	50.0	101%	53.7	50.0	107%	6.3%
Carbon Tetrachloride	46.3	50.0	92.6%	48.8	50.0	97.6%	5.3%
Vinyl Acetate	51.2	50.0	102%	53.4	50.0	107%	4.2%
Bromodichloromethane	45.6	50.0	91.2%	47.3	50.0	94.6%	3.7%
1,2-Dichloropropane	45.7	50.0	91.4%	47.8	50.0	95.6%	4.5%
cis-1,3-Dichloropropene	47.3	50.0	94.6%	48.8	50.0	97.6%	3.1%
Trichloroethene	45.7	50.0	91.4%	47.7	50.0	95.4%	4.3%
Dibromochloromethane	45.0	50.0	90.0%	46.1	50.0	92.2%	2.4%
1,1,2-Trichloroethane	46.0	50.0	92.0%	47.3	50.0	94.6%	2.8%
Benzene	46.6	50.0	93.2%	48.6	50.0	97.2%	4.2%
trans-1,3-Dichloropropene	46.8	50.0	93.6%	48.6	50.0	97.2%	3.8%
2-Chloroethylvinylether	49.1	50.0	98.2%	50.2	50.0	100%	2.2%
Bromoform	43.8	50.0	87.6%	45.6	50.0	91.2%	4.0%
4-Methyl-2-Pentanone (MIBK)	239	250	95.6%	250	250	100%	4.5%
2-Hexanone	232	250	92.8%	240	250	96.0%	3.4%
Tetrachloroethene	45.4	50.0	90.8%	46.6	50.0	93.2%	2.6%
1,1,2,2-Tetrachloroethane	42.7	50.0	85.4%	44.2	50.0	88.4%	3.5%
Toluene	46.4	50.0	92.8%	47.8	50.0	95.6%	3.0%
Chlorobenzene	44.6	50.0	89.2%	45.9	50.0	91.8%	2.9%
Ethylbenzene	47.0	50.0	94.0%	48.7	50.0	97.4%	3.6%
Styrene	47.4	50.0	94.8%	49.0	50.0	98.0%	3.3%
Trichlorofluoromethane	50.3	50.0	101%	53.1	50.0	106%	5.4%
1,1,2-Trichloro-1,2,2-trifluoroetha	43.7	50.0	87.4%	45.3	50.0	90.6%	3.6%
m,p-Xylene	94.2	100	94.2%	98.1	100	98.1%	4.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-060413A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-060413A QC Report No: WS21-SAIC
LIMS ID: 13-11679 Project: NPDES Sampling Support
Matrix: Water 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	47.3	50.0	94.6%	49.0	50.0	98.0%	3.5%
1,2-Dichlorobenzene	42.8	50.0	85.6%	44.0	50.0	88.0%	2.8%
1,3-Dichlorobenzene	43.9	50.0	87.8%	45.2	50.0	90.4%	2.9%
1,4-Dichlorobenzene	42.9	50.0	85.8%	44.0	50.0	88.0%	2.5%
Acrolein	465 Q	250	186%	478 Q	250	191%	2.8%
Iodomethane	51.4 Q	50.0	103%	61.2 Q	50.0	122%	17.4%
Bromoethane	57.3	50.0	115%	59.1	50.0	118%	3.1%
Acrylonitrile	49.6	50.0	99.2%	51.0	50.0	102%	2.8%
1,1-Dichloropropene	45.9	50.0	91.8%	48.2	50.0	96.4%	4.9%
Dibromomethane	45.0	50.0	90.0%	45.8	50.0	91.6%	1.8%
1,1,1,2-Tetrachloroethane	44.3	50.0	88.6%	46.1	50.0	92.2%	4.0%
1,2-Dibromo-3-chloropropane	43.0	50.0	86.0%	44.2	50.0	88.4%	2.8%
1,2,3-Trichloropropane	42.9	50.0	85.8%	43.9	50.0	87.8%	2.3%
trans-1,4-Dichloro-2-butene	42.7	50.0	85.4%	44.0	50.0	88.0%	3.0%
1,3,5-Trimethylbenzene	46.2	50.0	92.4%	47.8	50.0	95.6%	3.4%
1,2,4-Trimethylbenzene	46.6	50.0	93.2%	48.0	50.0	96.0%	3.0%
Hexachlorobutadiene	43.8	50.0	87.6%	45.8	50.0	91.6%	4.5%
1,2-Dibromoethane	46.2	50.0	92.4%	48.1	50.0	96.2%	4.0%
Bromochloromethane	50.3	50.0	101%	52.9	50.0	106%	5.0%
Dichlorodifluoromethane	47.6	50.0	95.2%	51.8	50.0	104%	8.5%
2,2-Dichloropropane	50.6	50.0	101%	53.2	50.0	106%	5.0%
1,3-Dichloropropane	44.4	50.0	88.8%	46.0	50.0	92.0%	3.5%
Isopropylbenzene	46.6	50.0	93.2%	48.7	50.0	97.4%	4.4%
n-Propylbenzene	46.1	50.0	92.2%	47.6	50.0	95.2%	3.2%
Bromobenzene	42.6	50.0	85.2%	44.4	50.0	88.8%	4.1%
2-Chlorotoluene	44.6	50.0	89.2%	46.2	50.0	92.4%	3.5%
4-Chlorotoluene	44.8	50.0	89.6%	45.7	50.0	91.4%	2.0%
tert-Butylbenzene	45.6	50.0	91.2%	47.7	50.0	95.4%	4.5%
sec-Butylbenzene	46.5	50.0	93.0%	48.2	50.0	96.4%	3.6%
4-Isopropyltoluene	47.6	50.0	95.2%	49.2	50.0	98.4%	3.3%
n-Butylbenzene	48.3	50.0	96.6%	49.5	50.0	99.0%	2.5%
1,2,4-Trichlorobenzene	46.0	50.0	92.0%	46.1	50.0	92.2%	0.2%
Naphthalene	45.2	50.0	90.4%	45.8	50.0	91.6%	1.3%
1,2,3-Trichlorobenzene	44.6	50.0	89.2%	45.1	50.0	90.2%	1.1%
Methyl tert-Butyl Ether	54.1	50.0	108%	56.0	50.0	112%	3.5%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	108%	110%
d8-Toluene	101%	101%
Bromofluorobenzene	102%	101%
d4-1,2-Dichlorobenzene	101%	102%

4A

VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0611

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WS21

Project: NPDES SAMPLING

Lab File ID: MB0611

Lab Sample ID: MB0611

Date Analyzed: 06/11/13

Time Analyzed: 1537

Instrument ID: NT5

Heated Purge: (Y/N) Y

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0611	LCS0611	LCS0611	1440
02	LCS0611	LCS0611	LCS0611A	1513
03	KC-IV-SPS-20	WS21A	WS21A	1601
04				
05				
06				
07				
08				
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30				

COMMENTS:

WS21 : 060112

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-061113A**
Page 1 of 2 **METHOD BLANK**

Lab Sample ID: MB-061113A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/11/13 15:37

Sample Amount: 5.00 g-dry-wt
Purge Volume: 5.0 mL
Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.26	1.0	< 1.0 U
74-83-9	Bromomethane	0.19	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.24	1.0	< 1.0 U
75-00-3	Chloroethane	0.46	1.0	< 1.0 U
75-09-2	Methylene Chloride	0.64	2.0	< 2.0 U
67-64-1	**Acetone**	**0.48**	**5.0**	**9.7**
75-15-0	Carbon Disulfide	0.56	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.34	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.20	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.27	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.24	1.0	< 1.0 U
67-66-3	Chloroform	0.23	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.19	1.0	< 1.0 U
78-93-3	2-Butanone	0.51	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.23	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.21	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.38	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.25	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.16	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.21	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.27	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.29	1.0	< 1.0 U
71-43-2	Benzene	0.30	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.22	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.28	5.0	< 5.0 U
75-25-2	Bromoform	0.30	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.42	5.0	< 5.0 U
591-78-6	2-Hexanone	0.44	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.26	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.25	1.0	< 1.0 U
108-88-3	Toluene	0.15	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.22	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.20	1.0	< 1.0 U
100-42-5	Styrene	0.14	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.27	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.29	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.39	1.0	< 1.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.29	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.23	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.23	1.0	< 1.0 U
107-02-8	Acrolein	3.8	50	< 50 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-061113A**
 METHOD BLANK

Lab Sample ID: MB-061113A
LIMS ID: 13-11678
Matrix: Sediment
Date Analyzed: 06/11/13 15:37

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.22	1.0	< 1.0 U
74-96-4	Bromoethane	0.44	2.0	< 2.0 U
107-13-1	Acrylonitrile	1.0	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.31	1.0	< 1.0 U
74-95-3	Dibromomethane	0.15	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.23	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.59	5.0	< 5.0 U
96-18-4	1,2,3-Trichloropropane	0.52	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.44	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.25	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.23	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.41	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.32	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.21	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.29	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.21	1.0	< 1.0 U
98-82-8	Isopropylbenzene	0.23	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.27	1.0	< 1.0 U
108-86-1	Bromobenzene	0.15	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.30	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.28	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.31	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.24	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.24	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.26	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	0.33	5.0	< 5.0 U
91-20-3	Naphthalene	0.43	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	0.30	5.0	< 5.0 U
1634-04-4	Methyl tert-Butyl Ether	0.23	1.0	< 1.0 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	101%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	102%

WS21 : 209977

4A

VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0604

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WS21

Project: NPDES SAMPLING

Lab File ID: MB0604

Lab Sample ID: MB0604

Date Analyzed: 06/04/13

Time Analyzed: 1359

Instrument ID: NT5

Heated Purge: (Y/N) Y

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0604	LCS0604	LCS0604	1311
02	LCS0604	LCS0604	LCS0604A	1335
03	KC-TB-02	WS21B	WS21B	1847
04				
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COMMENTS:

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-060413A**
Page 1 of 2 **METHOD BLANK**

Lab Sample ID: MB-060413A
LIMS ID: 13-11679
Matrix: Water
Data Release Authorized: MW
Reported: 06/13/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/04/13 13:59

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.13	1.0	< 1.0 U
74-83-9	Bromomethane	0.43	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.25	1.0	< 1.0 U
75-00-3	Chloroethane	0.19	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.19**	**2.0**	**5.4**
67-64-1	Acetone	3.0	10	< 10 U
75-15-0	Carbon Disulfide	0.18	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.30	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.21	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.20	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.10	1.0	< 1.0 U
67-66-3	Chloroform	0.19	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.24	1.0	< 1.0 U
78-93-3	2-Butanone	2.0	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.18	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.23	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.22	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.19	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.23	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.29	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.23	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.26	1.0	< 1.0 U
71-43-2	Benzene	0.25	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.22	5.0	< 5.0 U
75-25-2	Bromoform	0.29	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.37	5.0	< 5.0 U
591-78-6	2-Hexanone	0.93	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.09	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	1.0	< 1.0 U
108-88-3	Toluene	0.18	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.14	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.18	1.0	< 1.0 U
100-42-5	Styrene	0.12	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.18	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.18	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.36	2.0	< 2.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.20	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.28	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.28	1.0	< 1.0 U
107-02-8	Acrolein	1.9	10	< 10 U
74-88-4	Iodomethane	0.26	1.0	< 1.0 U
74-96-4	Bromoethane	0.42	2.0	< 2.0 U
107-13-1	Acrylonitrile	0.50	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.27	1.0	< 1.0 U
74-95-3	Dibromomethane	0.29	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.29	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.44	5.0	< 5.0 U

WS21 : 060413

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-060413A**
 METHOD BLANK

Lab Sample ID: MB-060413A
LIMS ID: 13-11679
Matrix: Water
Date Analyzed: 06/04/13 13:59

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
96-18-4	1,2,3-Trichloropropane	0.54	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.86	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.14	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.15	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.18	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.20	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.25	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.10	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.17	5.0	< 5.0 U
98-82-8	Isopropylbenzene	0.30	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.12	1.0	< 1.0 U
108-86-1	Bromobenzene	0.24	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.14	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.21	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.40	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.13	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.35	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.37	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	0.34	5.0	< 5.0 U
91-20-3	Naphthalene	0.23	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	0.32	5.0	< 5.0 U
1634-04-4	Methyl tert-Butyl Ether	0.16	1.0	< 1.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	113%
d8-Toluene	102%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	103%

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SDG No.: WS21

Lab File ID: BFB0524 BFB Injection Date: 05/24/13

Instrument ID: NT5 BFB Injection Time: 0656

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.4
75	30.0 - 66.0% of mass 95	46.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	81.5
175	4.0 - 9.0% of mass 174	6.1 (7.4)1
176	95.0 - 101.0% of mass 174	78.8 (96.7)1
177	5.0 - 9.0% of mass 176	5.1 (6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	IC0524	2000524	05/24/13	0818
02	VSTD150	IC0524	1500524	05/24/13	0842
03	VSTD100	IC0524	1000524	05/24/13	0906
04	VSTD50	IC0524	0500524	05/24/13	0930
05	VSTD10	IC0524	0100524	05/24/13	0954
06	VSTD5	IC0524	0050524	05/24/13	1018
07	VSTD2	IC0524	0020524	05/24/13	1042
08	VSTD1	IC0524	0010524	05/24/13	1106
09	ICV0524	ICV0524	ICV0524	05/24/13	1146
10					
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WS21 : 00016

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SDG No.: WS21

Lab File ID: BFB0604 BFB Injection Date: 06/04/13

Instrument ID: NT5 BFB Injection Time: 1045

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.0
75	30.0 - 66.0% of mass 95	45.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.2 (0.3)1
174	50.0 - 101.0% of mass 95	82.7
175	4.0 - 9.0% of mass 174	6.2 (7.5)1
176	95.0 - 101.0% of mass 174	80.3 (97.1)1
177	5.0 - 9.0% of mass 176	5.3 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	CC0604	CC0604A	06/04/13	1235
02	LCS0604	LCS0604	LCS0604	06/04/13	1311
03	LCS0604	LCS0604	LCS0604A	06/04/13	1335
04	MB0604	MB0604	MB0604	06/04/13	1359
05	KC-TB-02	WS21B	WS21B	06/04/13	1847
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WS21 : 060513

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SDG No.: WS21

Lab File ID: BFB0611A BFB Injection Date: 06/11/13

Instrument ID: NT5 BFB Injection Time: 0810

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	19.4
75	30.0 - 66.0% of mass 95	45.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	83.2
175	4.0 - 9.0% of mass 174	5.9 (7.1)1
176	95.0 - 101.0% of mass 174	79.8 (95.9)1
177	5.0 - 9.0% of mass 176	5.3 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD1	IC0611	0010611	06/11/13	0833
02	VSTD200	IC0611	2000611	06/11/13	0857
03	VSTD150	IC0611	1500611	06/11/13	0921
04	VSTD50	IC0611	0500611	06/11/13	1009
05	VSTD5	IC0611	0050611	06/11/13	1057
06	VSTD2	IC0611	0020611	06/11/13	1120
07	VSTD10	IC0611	0100611	06/11/13	1221
08	VSTD100	IC0611	1000611	06/11/13	1245
09	ICV0611	ICV0611	ICV0611	06/11/13	1404
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SDG No.: WS21

Lab File ID: BFB0611A BFB Injection Date: 06/11/13

Instrument ID: NT5 BFB Injection Time: 0810

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	19.4
75	30.0 - 66.0% of mass 95	45.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	83.2
175	4.0 - 9.0% of mass 174	5.9 (7.1)1
176	95.0 - 101.0% of mass 174	79.8 (95.9)1
177	5.0 - 9.0% of mass 176	5.3 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	IC0611	0500611	06/11/13	1009
02	LCS0611	LCS0611	LCS0611	06/11/13	1440
03	LCS0611	LCS0611	LCS0611A	06/11/13	1513
04	MB0611	MB0611	MB0611	06/11/13	1537
05	KC-IV-SPS-201305	WS21A	WS21A	06/11/13	1601
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF1: 0010524 RF2: 0020524 RF5: 0050524
RF10: 0100524 RF50: 0500524

COMPOUND	RF1	RF2	RF5	RF10	RF50
Chloromethane	1.286	1.469	1.500	1.592	1.280
Vinyl Chloride	1.212	1.316	1.281	1.310	1.149
Bromomethane	0.750	0.816	0.746	0.746	0.637
Chloroethane	0.743	0.791	0.778	0.796	0.694
Trichlorofluoromethane	1.284	1.419	1.455	1.550	1.203
Acrolein			0.165	0.111	0.152
112Trichloro122Trifluoroetha	0.699	0.757	0.751	0.667	0.552
Acetone	0.388	0.404	0.351	0.413	0.337
1,1-Dichloroethene	0.776	0.810	0.852	0.750	0.638
Bromoethane	0.554	0.639	0.485	0.454	0.389
Iodomethane	0.549	0.614	0.534	0.495	0.494
Methylene Chloride			0.868	0.595	0.870
Acrylonitrile	0.446	0.518	0.514	0.528	0.478
Carbon Disulfide	2.531	2.591	2.821	2.426	2.112
Trans-1,2-Dichloroethene	0.956	1.048	1.009	1.152	0.895
Vinyl Acetate	2.414	2.704	2.768	2.952	2.603
1,1-Dichloroethane	1.838	2.174	2.188	2.376	1.878
2-Butanone	0.119	0.134	0.134	0.139	0.134
2,2-Dichloropropane	1.386	1.648	1.649	1.762	1.355
Cis-1,2-Dichloroethene	1.011	1.124	1.135	1.200	0.972
Chloroform	1.622	1.821	1.790	1.937	1.601
Bromochloromethane	0.431	0.485	0.497	0.504	0.432
1,1,1-Trichloroethane	1.452	1.586	1.660	1.788	1.397
1,1-Dichloropropene	0.429	0.493	0.519	0.592	0.433
Carbon Tetrachloride	0.403	0.441	0.458	0.488	0.386
1,2-Dichloroethane	0.420	0.478	0.491	0.503	0.430
Benzene	1.303	1.486	1.559	1.738	1.313
Trichloroethene	0.320	0.362	0.372	0.394	0.309
1,2-Dichloropropane	0.363	0.410	0.427	0.447	0.368
Bromodichloromethane	0.408	0.444	0.461	0.481	0.408
Dibromomethane	0.189	0.195	0.204	0.211	0.181
2-Chloroethyl Vinyl Ether	0.172	0.188	0.210	0.239	0.226
4-Methyl-2-Pentanone	0.137	0.164	0.175	0.185	0.175
Cis 1,3-dichloropropene	0.473	0.548	0.588	0.637	0.540
Toluene	0.896	0.938	0.968	1.040	0.823
Trans 1,3-Dichloropropene	0.437	0.501	0.545	0.572	0.495
2-Hexanone	0.207	0.244	0.265	0.282	0.265

WS21 : 00052

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF1: 0010524 RF2: 0020524 RF5: 0050524
RF10: 0100524 RF50: 0500524

COMPOUND	RF1	RF2	RF5	RF10	RF50
1,1,2-Trichloroethane	0.256	0.303	0.302	0.319	0.276
1,3-Dichloropropane	0.434	0.468	0.494	0.528	0.454
Tetrachloroethene	0.290	0.339	0.343	0.383	0.287
Chlorodibromomethane	0.262	0.274	0.295	0.315	0.273
1,2-Dibromoethane	0.252	0.273	0.292	0.308	0.271
Chlorobenzene	0.770	0.867	0.906	0.950	0.751
Ethyl Benzene	1.281	1.460	1.564	1.708	1.338
1,1,1,2-Tetrachloroethane	0.268	0.295	0.302	0.318	0.267
m,p-xylene	0.449	0.535	0.588	0.634	0.505
o-Xylene	0.386	0.471	0.520	0.602	0.486
Styrene	0.681	0.818	0.928	1.024	0.839
Bromoform	0.339	0.378	0.401	0.419	0.373
1,1,2,2-Tetrachloroethane	0.574	0.646	0.680	0.706	0.624
1,2,3-Trichloropropane	0.182	0.196	0.206	0.217	0.192
Trans-1,4-Dichloro 2-Butene	0.243	0.251	0.254	0.274	0.233
N-Propyl Benzene	2.658	3.020	3.324	3.678	2.728
Bromobenzene	0.602	0.651	0.700	0.743	0.582
Isopropyl Benzene	1.960	2.328	2.676	3.016	2.305
2-Chloro Toluene	1.613	1.770	1.967	2.149	1.676
4-Chloro Toluene	1.649	1.883	2.067	2.284	1.751
T-Butyl Benzene	1.396	1.746	1.981	2.199	1.704
1,3,5-Trimethyl Benzene	1.620	2.004	2.245	2.524	1.945
1,2,4-Trimethylbenzene	1.585	1.942	2.213	2.491	1.930
S-Butyl Benzene	2.225	2.716	3.015	3.326	2.511
4-Isopropyl Toluene	1.675	2.064	2.381	2.700	2.068
1,3-Dichlorobenzene	1.122	1.242	1.305	1.406	1.088
1,4-Dichlorobenzene	1.239	1.313	1.359	1.459	1.110
N-Butyl Benzene	1.558	1.973	2.208	2.537	1.935
1,2-Dichlorobenzene	1.123	1.221	1.266	1.344	1.053
1,2-Dibromo 3-Chloropropane	0.108	0.135	0.129	0.135	0.126
1,2,4-Trichlorobenzene	0.702	0.786	0.840	0.939	0.762
Hexachloro 1,3-Butadiene	0.456	0.516	0.555	0.593	0.452
Naphthalene	1.665	1.727	1.837	2.065	1.887
1,2,3-Trichlorobenzene	0.702	0.774	0.822	0.875	0.741
Dichlorodifluoromethane	0.764	0.714	0.729	0.734	0.652
Methyl tert butyl ether	2.718	3.069	3.167	3.337	2.916

WS21 : 05015

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF1: 0010524 RF2: 0020524 RF5: 0050524
RF10: 0100524 RF50: 0500524

COMPOUND	RF1	RF2	RF5	RF10	RF50
d4-1,2-Dichloroethane	1.138	1.160	1.142	1.122	1.114
d8-Toluene	1.424	1.438	1.420	1.410	1.410
4-Bromofluorobenzene	0.531	0.535	0.535	0.531	0.532
d4-1,2-Dichlorobenzene	0.993	0.994	0.995	0.997	0.984
Dibromofluoromethane	1.129	1.142	1.132	1.117	1.123

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF100: 1000524 RF150: 1500524 RF200: 2000524

COMPOUND	RF100	RF150	RF200
Chloromethane	1.549	1.531	1.540
Vinyl Chloride	1.515	1.588	1.552
Bromomethane	0.694	0.666	0.644
Chloroethane	0.755	0.683	0.613
Trichlorofluoromethane	1.462	1.466	1.478
Acrolein	0.118	0.124	
112Trichloro122Trifluoroetha	0.670	0.730	0.920
Acetone	0.274		
1,1-Dichloroethene	0.771	0.816	0.980
Bromoethane	0.450	0.455	0.561
Iodomethane	0.713	0.760	
Methylene Chloride	0.586	0.588	0.693
Acrylonitrile	0.511	0.490	
Carbon Disulfide	2.505	2.620	3.042
Trans-1,2-Dichloroethene	0.699	0.668	0.777
Vinyl Acetate	2.824	2.692	2.573
1,1-Dichloroethane	2.215	2.178	
2-Butanone	0.142	0.135	0.132
2,2-Dichloropropane	1.648	1.660	1.675
Cis-1,2-Dichloroethene	1.146	1.135	1.146
Chloroform	1.872	1.853	1.859
Bromochloromethane	0.496	0.493	0.497
1,1,1-Trichloroethane	1.705	1.707	1.721
1,1-Dichloropropene	0.528	0.537	0.540
Carbon Tetrachloride	0.471	0.479	0.482
1,2-Dichloroethane	0.482	0.471	0.465
Benzene	1.525	1.457	1.378
Trichloroethene	0.370	0.377	0.380
1,2-Dichloropropane	0.436	0.430	0.428
Bromodichloromethane	0.474	0.466	0.466
Dibromomethane	0.206	0.202	0.201
2-Chloroethyl Vinyl Ether	0.256	0.250	0.245
4-Methyl-2-Pentanone	0.183	0.172	0.163
Cis 1,3-dichloropropene	0.621	0.610	0.600
Toluene	0.959	0.934	0.902
Trans 1,3-Dichloropropene	0.560	0.547	0.538
2-Hexanone	0.270	0.261	0.251

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF100: 1000524 RF150: 1500524 RF200: 2000524

COMPOUND	RF100	RF150	RF200
1,1,2-Trichloroethane	0.310	0.304	0.301
1,3-Dichloropropane	0.512	0.508	0.495
Tetrachloroethene	0.347	0.360	0.363
Chlorodibromomethane	0.312	0.312	0.308
1,2-Dibromoethane	0.303	0.297	0.293
Chlorobenzene	0.858	0.850	0.816
Ethyl Benzene	1.504	1.423	1.310
1,1,1,2-Tetrachloroethane	0.312	0.314	0.310
m,p-xylene	0.574	0.553	0.519
o-Xylene	0.576	0.577	0.567
Styrene	0.965	0.935	0.890
Bromoform	0.422	0.427	0.403
1,1,2,2-Tetrachloroethane	0.688	0.698	0.657
1,2,3-Trichloropropane	0.210	0.211	0.198
Trans-1,4-Dichloro 2-Butene	0.258	0.270	0.237
N-Propyl Benzene	3.110	3.006	2.654
Bromobenzene	0.681	0.703	0.675
Isopropyl Benzene	2.687	2.636	2.343
2-Chloro Toluene	1.959	1.984	1.827
4-Chloro Toluene	2.041	2.058	1.934
T-Butyl Benzene	2.018	2.037	1.867
1,3,5-Trimethyl Benzene	2.270	2.274	2.067
1,2,4-Trimethylbenzene	2.242	2.225	2.026
S-Butyl Benzene	2.886	2.801	2.487
4-Isopropyl Toluene	2.404	2.366	2.142
1,3-Dichlorobenzene	1.256	1.269	1.194
1,4-Dichlorobenzene	1.283	1.302	1.249
N-Butyl Benzene	2.290	2.290	2.111
1,2-Dichlorobenzene	1.193	1.203	1.163
1,2-Dibromo 3-Chloropropane	0.130	0.135	0.128
1,2,4-Trichlorobenzene	0.886	0.934	0.947
Hexachloro 1,3-Butadiene	0.529	0.556	0.560
Naphthalene	2.033	2.026	1.882
1,2,3-Trichlorobenzene	0.830	0.869	0.871
Dichlorodifluoromethane	0.743	0.951	0.765
Methyl tert butyl ether	3.223	1.751	

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

LAB FILE ID: RF100: 1000524 RF150: 1500524 RF200: 2000524

COMPOUND	RF100	RF150	RF200
d4-1,2-Dichloroethane	1.112	1.112	1.094
d8-Toluene	1.408	1.407	1.395
4-Bromofluorobenzene	0.532	0.526	0.523
d4-1,2-Dichlorobenzene	0.974	0.979	0.978
Dibromofluoromethane	1.125	1.121	1.122

WS21 : 00057

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
Chloromethane	AVRG	1.468	8.2
Vinyl Chloride	AVRG	1.365	12.1
Bromomethane	AVRG	0.712	8.7
Chloroethane	AVRG	0.732	8.7
Trichlorofluoromethane	AVRG	1.415	8.0
Acrolein	AVRG	0.134	17.4
112Trichloro122Trifluoroetha	AVRG	0.718	14.5
Acetone	AVRG	0.361	14.4
1,1-Dichloroethene	AVRG	0.799	12.1
Bromoethane	AVRG	0.498	16.1
Iodomethane	AVRG	0.594	17.8
Methylene Chloride	AVRG	0.700	19.5
Acrylonitrile	AVRG	0.498	5.8
Carbon Disulfide	AVRG	2.581	10.6
Trans-1,2-Dichloroethene	AVRG	0.900	19.2
Vinyl Acetate	AVRG	2.691	6.1
1,1-Dichloroethane	AVRG	2.121	9.1
2-Butanone	AVRG	0.134	5.0
2,2-Dichloropropane	AVRG	1.598	9.1
Cis-1,2-Dichloroethene	AVRG	1.109	6.9
Chloroform	AVRG	1.794	6.7
Bromochloromethane	AVRG	0.479	6.3
1,1,1-Trichloroethane	AVRG	1.627	8.5
1,1-Dichloropropene	AVRG	0.509	10.9
Carbon Tetrachloride	AVRG	0.451	8.5
1,2-Dichloroethane	AVRG	0.467	6.2
Benzene	AVRG	1.470	9.8
Trichloroethene	AVRG	0.360	8.3
1,2-Dichloropropane	AVRG	0.414	7.6
Bromodichloromethane	AVRG	0.451	6.4
Dibromomethane	AVRG	0.199	4.9
2-Chloroethyl Vinyl Ether	AVRG	0.223	13.7
4-Methyl-2-Pentanone	AVRG	0.169	8.9
Cis 1,3-dichloropropene	AVRG	0.577	9.4
Toluene	AVRG	0.932	6.8
Trans 1,3-Dichloropropene	AVRG	0.524	8.4
2-Hexanone	AVRG	0.256	8.9

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

WS21 : 00052

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
1,1,2-Trichloroethane	AVRG	0.296	6.8
1,3-Dichloropropane	AVRG	0.487	6.6
Tetrachloroethene	AVRG	0.339	10.1
Chlorodibromomethane	AVRG	0.294	7.2
1,2-Dibromoethane	AVRG	0.286	6.7
Chlorobenzene	AVRG	0.846	7.8
Ethyl Benzene	AVRG	1.449	9.9
1,1,1,2-Tetrachloroethane	AVRG	0.298	6.8
m,p-xylene	AVRG	0.544	10.4
o-Xylene	AVRG	0.523	13.8
Styrene	AVRG	0.885	12.0
Bromoform	AVRG	0.395	7.6
1,1,2,2-Tetrachloroethane	AVRG	0.659	6.7
1,2,3-Trichloropropane	AVRG	0.201	5.7
Trans-1,4-Dichloro 2-Butene	AVRG	0.252	5.8
N-Propyl Benzene	AVRG	3.022	11.8
Bromobenzene	AVRG	0.667	8.0
Isopropyl Benzene	AVRG	2.494	13.0
2-Chloro Toluene	AVRG	1.868	9.6
4-Chloro Toluene	AVRG	1.958	10.2
T-Butyl Benzene	AVRG	1.869	13.4
1,3,5-Trimethyl Benzene	AVRG	2.118	12.9
1,2,4-Trimethylbenzene	AVRG	2.082	13.1
S-Butyl Benzene	AVRG	2.746	12.5
4-Isopropyl Toluene	AVRG	2.225	13.8
1,3-Dichlorobenzene	AVRG	1.235	8.2
1,4-Dichlorobenzene	AVRG	1.289	7.8
N-Butyl Benzene	AVRG	2.113	14.0
1,2-Dichlorobenzene	AVRG	1.196	7.4
1,2-Dibromo 3-Chloropropane	AVRG	0.128	7.0
1,2,4-Trichlorobenzene	AVRG	0.850	10.8
Hexachloro 1,3-Butadiene	AVRG	0.527	9.6
Naphthalene	AVRG	1.890	7.7
1,2,3-Trichlorobenzene	AVRG	0.810	8.1
Dichlorodifluoromethane	AVRG	0.756	11.4
Methyl tert butyl ether	AVRG	2.883	18.7

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

WS21 : 00053

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 05/24/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
d4-1,2-Dichloroethane	AVRG	1.124	1.9
d8-Toluene	AVRG	1.414	0.9
4-Bromofluorobenzene	AVRG	0.531	0.8
d4-1,2-Dichlorobenzene	AVRG	0.987	0.9
Dibromofluoromethane	AVRG	1.126	0.7

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

WS21 : 000150

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF1: 0010611 RF2: 0020611 RF5: 0050611
RF10: 0100611 RF50: 0500611

COMPOUND	RF1	RF2	RF5	RF10	RF50
Chloromethane	2.153	1.611	1.834	1.644	1.664
Vinyl Chloride	1.999	1.531	1.631	1.738	1.655
Bromomethane	1.114	0.870	0.911	0.928	0.797
Chloroethane	1.256	1.020	1.010	1.073	0.971
Trichlorofluoromethane	2.072	1.607	1.768	1.763	1.586
Acrolein	0.299	0.258	0.229	0.268	0.277
112Trichloro122Trifluoroetha	1.173	0.975	1.013	1.000	0.978
Acetone	0.531	0.417	0.267	0.513	0.244
1,1-Dichloroethene	1.433	1.089	1.154	1.115	1.120
Bromoethane	0.880	0.677	0.689	0.739	0.740
Iodomethane	0.906	0.647	0.652	0.716	0.866
Methylene Chloride		1.966	1.258	1.395	1.115
Acrylonitrile	0.616	0.621	0.591	0.530	0.521
Carbon Disulfide	4.581	3.660	3.851	3.733	3.705
Trans-1,2-Dichloroethene	1.515	1.193	1.061	1.311	1.048
Vinyl Acetate	3.533	3.350	3.554	3.131	3.375
1,1-Dichloroethane	3.048	2.608	2.759	2.638	2.161
2-Butanone	0.169	0.163	0.171	0.142	0.177
2,2-Dichloropropane	2.465	1.871	2.036	1.989	1.868
Cis-1,2-Dichloroethene	1.598	1.421	1.447	1.361	1.349
Chloroform	2.680	2.251	2.357	2.182	2.195
Bromochloromethane	0.710	0.581	0.650	0.622	0.592
1,1,1-Trichloroethane	2.293	1.932	2.076	2.012	1.927
1,1-Dichloropropene	0.616	0.513	0.621	0.523	0.513
Carbon Tetrachloride	0.541	0.441	0.466	0.461	0.438
1,2-Dichloroethane	0.568	0.498	0.513	0.453	0.478
Benzene	1.848	1.573	1.690	1.553	1.523
Trichloroethene	0.416	0.358	0.397	0.364	0.354
1,2-Dichloropropane	0.493	0.434	0.450	0.401	0.431
Bromodichloromethane	0.536	0.462	0.479	0.445	0.468
Dibromomethane	0.220	0.201	0.210	0.186	0.204
2-Chloroethyl Vinyl Ether	0.198	0.203	0.236	0.210	0.251
4-Methyl-2-Pentanone	0.170	0.174	0.186	0.161	0.189
Cis 1,3-dichloropropene	0.683	0.582	0.643	0.591	0.618
Toluene	1.208	1.013	1.058	0.969	0.941
Trans 1,3-Dichloropropene	0.594	0.528	0.569	0.517	0.559
2-Hexanone	0.237	0.250	0.268	0.231	0.268

WS21:00061

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF1: 0010611 RF2: 0020611 RF5: 0050611
RF10: 0100611 RF50: 0500611

COMPOUND	RF1	RF2	RF5	RF10	RF50
1,1,2-Trichloroethane	0.322	0.301	0.323	0.288	0.313
1,3-Dichloropropane	0.519	0.481	0.494	0.443	0.492
Tetrachloroethene	0.385	0.307	0.345	0.339	0.312
Chlorodibromomethane	0.320	0.274	0.292	0.269	0.295
1,2-Dibromoethane	0.331	0.304	0.311	0.269	0.305
Chlorobenzene	0.984	0.847	0.897	0.831	0.809
Ethyl Benzene	1.753	1.453	1.603	1.526	1.436
1,1,1,2-Tetrachloroethane	0.341	0.287	0.305	0.278	0.287
m,p-xylene	0.650	0.542	0.601	0.569	0.540
o-Xylene	0.584	0.497	0.560	0.533	0.535
Styrene	0.924	0.840	0.965	0.891	0.909
Bromoform	0.416	0.362	0.385	0.349	0.392
1,1,2,2-Tetrachloroethane	0.676	0.605	0.633	0.584	0.658
1,2,3-Trichloropropane	0.201	0.192	0.197	0.178	0.198
Trans-1,4-Dichloro 2-Butene	0.248	0.219	0.228	0.219	0.250
N-Propyl Benzene	3.619	2.969	3.277	3.239	2.876
Bromobenzene	0.743	0.640	0.652	0.621	0.621
Isopropyl Benzene	2.849	2.445	2.710	2.669	2.470
2-Chloro Toluene	2.185	1.817	1.949	1.905	1.796
4-Chloro Toluene	2.174	1.906	2.031	1.988	1.852
T-Butyl Benzene	2.032	1.759	1.964	1.919	1.813
1,3,5-Trimethyl Benzene	2.403	2.042	2.252	2.216	2.067
1,2,4-Trimethylbenzene	2.370	1.999	2.235	2.175	2.048
S-Butyl Benzene	3.215	2.741	2.984	2.947	2.639
4-Isopropyl Toluene	2.525	2.170	2.410	2.402	2.172
1,3-Dichlorobenzene	1.497	1.217	1.239	1.213	1.135
1,4-Dichlorobenzene	1.526	1.255	1.297	1.233	1.153
N-Butyl Benzene	2.436	2.050	2.260	2.325	2.050
1,2-Dichlorobenzene	1.426	1.209	1.220	1.138	1.100
1,2-Dibromo 3-Chloropropane	0.128	0.129	0.119	0.113	0.126
1,2,4-Trichlorobenzene	0.954	0.797	0.827	0.831	0.791
Hexachloro 1,3-Butadiene	0.629	0.490	0.531	0.526	0.466
Naphthalene	1.917	1.975	1.994	1.706	1.946
1,2,3-Trichlorobenzene	0.908	0.838	0.838	0.772	0.767
Dichlorodifluoromethane	1.160	0.738	0.816	0.977	0.768
Methyl tert butyl ether	4.247	3.740	3.548	3.585	3.277

WS21 : 0006052

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF1: 0010611 RF2: 0020611 RF5: 0050611
RF10: 0100611 RF50: 0500611

COMPOUND	RF1	RF2	RF5	RF10	RF50
d4-1,2-Dichloroethane	1.332	1.362	1.342	1.345	1.350
d8-Toluene	1.469	1.473	1.474	1.473	1.468
4-Bromofluorobenzene	0.543	0.544	0.548	0.544	0.545
d4-1,2-Dichlorobenzene	1.033	1.031	1.018	1.035	1.009
Dibromofluoromethane	1.421	1.434	1.430	1.440	1.441

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF100: 1000611 RF150: 1500611 RF200: 2000611

COMPOUND	RF100	RF150	RF200
Chloromethane	1.794	1.696	1.727
Vinyl Chloride	1.824	1.705	1.578
Bromomethane	0.797	0.734	0.693
Chloroethane	1.059	0.903	0.842
Trichlorofluoromethane	1.905	1.733	1.761
Acrolein	0.271	0.219	0.200
112Trichloro122Trifluoroetha	1.191	1.041	1.066
Acetone	0.209		
1,1-Dichloroethene	1.313	1.179	1.181
Bromoethane	0.807	0.683	0.674
Iodomethane	1.235	1.022	1.044
Methylene Chloride	1.075		
Acrylonitrile	0.344		
Carbon Disulfide	4.264	3.743	3.608
Trans-1,2-Dichloroethene	1.122	0.968	0.968
Vinyl Acetate	3.550	3.335	
1,1-Dichloroethane	1.733		
2-Butanone	0.184	0.178	0.166
2,2-Dichloropropane	2.213	2.056	2.079
Cis-1,2-Dichloroethene	1.538	1.453	1.462
Chloroform	2.324	2.332	2.337
Bromochloromethane	0.654	0.693	0.706
1,1,1-Trichloroethane	2.276	2.122	2.133
1,1-Dichloropropene	0.599	0.555	0.563
Carbon Tetrachloride	0.520	0.483	0.492
1,2-Dichloroethane	0.516	0.481	0.483
Benzene	1.652	1.449	1.361
Trichloroethene	0.415	0.387	0.398
1,2-Dichloropropane	0.476	0.448	0.453
Bromodichloromethane	0.513	0.484	0.489
Dibromomethane	0.220	0.209	0.213
2-Chloroethyl Vinyl Ether	0.269	0.258	0.258
4-Methyl-2-Pentanone	0.189	0.176	0.169
Cis 1,3-dichloropropene	0.675	0.626	0.623
Toluene	1.046	0.928	0.888
Trans 1,3-Dichloropropene	0.600	0.560	0.556
2-Hexanone	0.261	0.261	0.255

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF100: 1000611 RF150: 1500611 RF200: 2000611

COMPOUND	RF100	RF150	RF200
1,1,2-Trichloroethane	0.335	0.317	0.320
1,3-Dichloropropane	0.523	0.496	0.494
Tetrachloroethene	0.375	0.346	0.359
Chlorodibromomethane	0.319	0.306	0.312
1,2-Dibromoethane	0.326	0.310	0.309
Chlorobenzene	0.883	0.791	0.767
Ethyl Benzene	1.497	1.252	1.156
1,1,1,2-Tetrachloroethane	0.321	0.301	0.305
m,p-xylene	0.580	0.498	0.467
o-Xylene	0.604	0.558	0.553
Styrene	0.973	0.857	0.805
Bromoform	0.420	0.400	0.407
1,1,2,2-Tetrachloroethane	0.699	0.681	0.699
1,2,3-Trichloropropane	0.210	0.202	0.207
Trans-1,4-Dichloro 2-Butene	0.259	0.252	0.268
N-Propyl Benzene	3.050	2.455	2.301
Bromobenzene	0.699	0.646	0.672
Isopropyl Benzene	2.662	2.204	2.059
2-Chloro Toluene	2.007	1.733	1.676
4-Chloro Toluene	2.074	1.809	1.776
T-Butyl Benzene	2.058	1.766	1.706
1,3,5-Trimethyl Benzene	2.299	1.938	1.853
1,2,4-Trimethylbenzene	2.251	1.898	1.810
S-Butyl Benzene	2.847	2.322	2.148
4-Isopropyl Toluene	2.398	1.982	1.863
1,3-Dichlorobenzene	1.279	1.122	1.114
1,4-Dichlorobenzene	1.305	1.166	1.183
N-Butyl Benzene	2.339	1.930	1.858
1,2-Dichlorobenzene	1.212	1.105	1.137
1,2-Dibromo 3-Chloropropane	0.131	0.132	0.135
1,2,4-Trichlorobenzene	0.921	0.856	0.908
Hexachloro 1,3-Butadiene	0.560	0.506	0.529
Naphthalene	1.985	1.833	1.756
1,2,3-Trichlorobenzene	0.849	0.820	0.862
Dichlorodifluoromethane	0.938	0.790	0.903
Methyl tert butyl ether	3.099	2.581	2.491

WS21 : 00805

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF100: 1000611 RF150: 1500611 RF200: 2000611

COMPOUND	RF100	RF150	RF200
d4-1,2-Dichloroethane	1.370	1.314	1.306
d8-Toluene	1.465	1.447	1.452
4-Bromofluorobenzene	0.547	0.550	0.543
d4-1,2-Dichlorobenzene	1.013	0.996	1.012
Dibromofluoromethane	1.457	1.427	1.423

WS21 : 0606

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/11/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
Chloromethane	AVRG	1.765	9.8
Vinyl Chloride	AVRG	1.708	8.7
Bromomethane	AVRG	0.856	15.5
Chloroethane	AVRG	1.017	12.2
Trichlorofluoromethane	AVRG	1.774	8.8
Acrolein	AVRG	0.253	13.2
112Trichloro122Trifluoroetha	AVRG	1.055	8.0
Acetone	2ORDR		0.9944
1,1-Dichloroethene	AVRG	1.198	9.8
Bromoethane	AVRG	0.736	10.0
Iodomethane	LINR		0.9902
Methylene Chloride	LINR		0.9980
Acrylonitrile	AVRG	0.537	19.3
Carbon Disulfide	AVRG	3.893	8.8
Trans-1,2-Dichloroethene	AVRG	1.148	16.3
Vinyl Acetate	AVRG	3.404	4.5
1,1-Dichloroethane	AVRG	2.491	18.8
2-Butanone	AVRG	0.169	7.6
2,2-Dichloropropane	AVRG	2.072	9.4
Cis-1,2-Dichloroethene	AVRG	1.454	5.7
Chloroform	AVRG	2.332	6.7
Bromochloromethane	AVRG	0.651	7.7
1,1,1-Trichloroethane	AVRG	2.096	6.6
1,1-Dichloropropene	AVRG	0.563	8.0
Carbon Tetrachloride	AVRG	0.480	7.6
1,2-Dichloroethane	AVRG	0.499	6.9
Benzene	AVRG	1.581	9.5
Trichloroethene	AVRG	0.386	6.4
1,2-Dichloropropane	AVRG	0.448	6.2
Bromodichloromethane	AVRG	0.485	5.9
Dibromomethane	AVRG	0.208	5.4
2-Chloroethyl Vinyl Ether	AVRG	0.236	11.9
4-Methyl-2-Pentanone	AVRG	0.177	5.8
Cis 1,3-dichloropropene	AVRG	0.630	5.7
Toluene	AVRG	1.006	10.0
Trans 1,3-Dichloropropene	AVRG	0.560	5.1
2-Hexanone	AVRG	0.254	5.4

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

WS21 : 20057

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/11/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
1,1,2-Trichloroethane	AVRG	0.315	4.6
1,3-Dichloropropane	AVRG	0.493	5.0
Tetrachloroethene	AVRG	0.346	7.9
Chlorodibromomethane	AVRG	0.299	6.5
1,2-Dibromoethane	AVRG	0.308	6.0
Chlorobenzene	AVRG	0.851	8.2
Ethyl Benzene	AVRG	1.460	12.9
1,1,1,2-Tetrachloroethane	AVRG	0.303	6.8
m,p-xylene	AVRG	0.556	10.4
o-Xylene	AVRG	0.553	5.9
Styrene	AVRG	0.895	6.6
Bromoform	AVRG	0.392	6.4
1,1,2,2-Tetrachloroethane	AVRG	0.654	6.6
1,2,3-Trichloropropane	AVRG	0.198	5.0
Trans-1,4-Dichloro 2-Butene	AVRG	0.243	7.7
N-Propyl Benzene	AVRG	2.973	14.6
Bromobenzene	AVRG	0.662	6.3
Isopropyl Benzene	AVRG	2.508	10.7
2-Chloro Toluene	AVRG	1.884	8.7
4-Chloro Toluene	AVRG	1.951	7.1
T-Butyl Benzene	AVRG	1.877	7.1
1,3,5-Trimethyl Benzene	AVRG	2.134	8.9
1,2,4-Trimethylbenzene	AVRG	2.098	9.1
S-Butyl Benzene	AVRG	2.730	12.9
4-Isopropyl Toluene	AVRG	2.240	10.4
1,3-Dichlorobenzene	AVRG	1.227	10.1
1,4-Dichlorobenzene	AVRG	1.265	9.5
N-Butyl Benzene	AVRG	2.156	9.8
1,2-Dichlorobenzene	AVRG	1.194	8.8
1,2-Dibromo 3-Chloropropane	AVRG	0.127	5.8
1,2,4-Trichlorobenzene	AVRG	0.861	7.0
Hexachloro 1,3-Butadiene	AVRG	0.530	9.3
Naphthalene	AVRG	1.889	5.9
1,2,3-Trichlorobenzene	AVRG	0.832	5.5
Dichlorodifluoromethane	AVRG	0.886	15.7
Methyl tert butyl ether	AVRG	3.321	17.8

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/11/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
d4-1,2-Dichloroethane	AVRG	1.340	1.6
d8-Toluene	AVRG	1.465	0.7
4-Bromofluorobenzene	AVRG	0.546	0.4
d4-1,2-Dichlorobenzene	AVRG	1.018	1.3
Dibromofluoromethane	AVRG	1.434	0.8

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

WS21 : 0005

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/04/13

Init. Calib. Date: 05/24/13 Cont. Calib. Time: 1235

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Chloromethane	1.468	1.4151	0.100	AVRG	-3.6	
Vinyl Chloride	1.365	1.6181	0.010	AVRG	18.5	
Bromomethane	0.712	0.8057	0.010	AVRG	13.2	
Chloroethane	0.732	0.9345	0.010	AVRG	27.7	<-
Trichlorofluoromethane	1.415	1.6396	0.010	AVRG	15.9	
Acrolein	0.134	0.2357	0.010	AVRG	75.9	<-
112Trichloro122Trifluoroetha	0.718	0.7432	0.010	AVRG	3.5	
Acetone	0.361	0.3782	0.010	AVRG	4.8	
1,1-Dichloroethene	0.799	0.8203	0.010	AVRG	2.7	
Bromoethane	0.498	0.5332	0.010	AVRG	7.1	
Iodomethane	0.594	0.7506	0.010	AVRG	26.4	<-
Methylene Chloride	0.700	1.1360	0.010	AVRG	62.3	<-
Acrylonitrile	0.498	0.5128	0.010	AVRG	3.0	
Carbon Disulfide	2.581	2.6847	0.010	AVRG	4.0	
Trans-1,2-Dichloroethene	0.900	1.2030	0.010	AVRG	33.7	<-
Vinyl Acetate	2.691	2.9154	0.010	AVRG	8.3	
1,1-Dichloroethane	2.121	2.3979	0.100	AVRG	13.0	
2-Butanone	0.134	0.1422	0.010	AVRG	6.1	
2,2-Dichloropropane	1.598	1.8255	0.010	AVRG	14.2	
Cis-1,2-Dichloroethene	1.109	1.2452	0.010	AVRG	12.3	
Chloroform	1.794	2.0160	0.010	AVRG	12.4	
Bromochloromethane	0.479	0.5246	0.010	AVRG	9.5	
1,1,1-Trichloroethane	1.627	1.8595	0.010	AVRG	14.3	
1,1-Dichloropropene	0.509	0.5276	0.010	AVRG	3.6	
Carbon Tetrachloride	0.451	0.4691	0.010	AVRG	4.0	
1,2-Dichloroethane	0.468	0.4532	0.010	AVRG	-3.2	
Benzene	1.470	1.5260	0.010	AVRG	3.8	
Trichloroethene	0.360	0.3741	0.010	AVRG	3.9	
1,2-Dichloropropane	0.414	0.4180	0.010	AVRG	1.0	
Bromodichloromethane	0.451	0.4514	0.010	AVRG	0.1	
Dibromomethane	0.199	0.1926	0.010	AVRG	-3.2	
2-Chloroethyl Vinyl Ether	0.223	0.2308	0.010	AVRG	3.5	
4-Methyl-2-Pentanone	0.169	0.1687	0.010	AVRG	-0.2	
Cis 1,3-dichloropropene	0.577	0.5975	0.010	AVRG	3.6	
Toluene	0.932	0.9638	0.010	AVRG	3.4	
Trans 1,3-Dichloropropene	0.524	0.5304	0.010	AVRG	1.2	
2-Hexanone	0.256	0.2484	0.010	AVRG	-3.0	

<- Exceeds QC limit of 20% D
* RF less than minimum RF

WS21 : 02872

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/04/13

Init. Calib. Date: 05/24/13 Cont. Calib. Time: 1235

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.296	0.2892	0.010	AVRG	-2.3
1,3-Dichloropropane	0.487	0.4682	0.010	AVRG	-3.9
Tetrachloroethene	0.339	0.3480	0.010	AVRG	2.6
Chlorodibromomethane	0.294	0.2880	0.010	AVRG	-2.0
1,2-Dibromoethane	0.286	0.2815	0.010	AVRG	-1.6
Chlorobenzene	0.846	0.8442	0.300	AVRG	-0.2
Ethyl Benzene	1.448	1.5300	0.010	AVRG	5.7
1,1,1,2-Tetrachloroethane	0.298	0.2928	0.010	AVRG	-1.7
m,p-xylene	0.545	0.5818	0.010	AVRG	6.8
o-Xylene	0.523	0.5569	0.010	AVRG	6.5
Styrene	0.885	0.9310	0.010	AVRG	5.2
Bromoform	0.395	0.3754	0.100	AVRG	-5.0
1,1,2,2-Tetrachloroethane	0.659	0.5975	0.300	AVRG	-9.3
1,2,3-Trichloropropane	0.202	0.1863	0.010	AVRG	-7.8
Trans-1,4-Dichloro 2-Butene	0.252	0.2305	0.010	AVRG	-8.5
N-Propyl Benzene	3.022	3.1713	0.010	AVRG	4.9
Bromobenzene	0.667	0.6396	0.010	AVRG	-4.1
Isopropyl Benzene	2.494	2.6735	0.010	AVRG	7.2
2-Chloro Toluene	1.868	1.8940	0.010	AVRG	1.4
4-Chloro Toluene	1.958	1.9856	0.010	AVRG	1.4
T-Butyl Benzene	1.868	1.9672	0.010	AVRG	5.3
1,3,5-Trimethyl Benzene	2.119	2.2388	0.010	AVRG	5.6
1,2,4-Trimethylbenzene	2.082	2.1946	0.010	AVRG	5.4
S-Butyl Benzene	2.746	2.9352	0.010	AVRG	6.9
4-Isopropyl Toluene	2.225	2.4416	0.010	AVRG	9.7
1,3-Dichlorobenzene	1.235	1.2229	0.010	AVRG	-1.0
1,4-Dichlorobenzene	1.289	1.2456	0.010	AVRG	-3.4
N-Butyl Benzene	2.113	2.3256	0.010	AVRG	10.1
1,2-Dichlorobenzene	1.196	1.1454	0.010	AVRG	-4.2
1,2-Dibromo 3-Chloropropane	0.128	0.1159	0.010	AVRG	-9.4
1,2,4-Trichlorobenzene	0.850	0.8740	0.010	AVRG	2.8
Hexachloro 1,3-Butadiene	0.527	0.5441	0.010	AVRG	3.2
Naphthalene	1.890	1.8330	0.010	AVRG	-3.0
1,2,3-Trichlorobenzene	0.810	0.8001	0.010	AVRG	-1.2
Dichlorodifluoromethane	0.756	0.8089	0.010	AVRG	7.0
Methyl tert butyl ether	2.883	3.3374	0.010	AVRG	15.8

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII VOA

WS21 : 26071

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/04/13

Init. Calib. Date: 05/24/13 Cont. Calib. Time: 1235

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	1.124	1.2351	0.010	AVRG	9.9
d8-Toluene	1.414	1.4344	0.010	AVRG	1.4
4-Bromofluorobenzene	0.531	0.5365	0.010	AVRG	1.0
d4-1,2-Dichlorobenzene	0.987	1.0115	0.010	AVRG	2.5
Dibromofluoromethane	1.126	1.2912	0.010	AVRG	14.7

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/11/13

Init. Calib. Date: 06/11/13 Cont. Calib. Time: 1009

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Chloromethane	1.765	1.6636	0.100	AVRG	-5.7
Vinyl Chloride	1.708	1.6555	0.010	AVRG	-3.1
Bromomethane	0.856	0.7970	0.010	AVRG	-6.9
Chloroethane	1.017	0.9712	0.010	AVRG	-4.5
Trichlorofluoromethane	1.774	1.5860	0.010	AVRG	-10.6
Acrolein	0.253	0.2772	0.010	AVRG	9.6
112Trichloro122Trifluoroetha	1.055	0.9776	0.010	AVRG	-7.3
Acetone	250.00	231.74	0.010	2ORDR	-7.3
1,1-Dichloroethene	1.198	1.1202	0.010	AVRG	-6.5
Bromoethane	0.736	0.7400	0.010	AVRG	0.5
Iodomethane	50.000	40.750	0.010	LINR	-18.5
Methylene Chloride	50.000	51.286	0.010	LINR	2.6
Acrylonitrile	0.537	0.5210	0.010	AVRG	-3.0
Carbon Disulfide	3.893	3.7055	0.010	AVRG	-4.8
Trans-1,2-Dichloroethene	1.148	1.0482	0.010	AVRG	-8.7
Vinyl Acetate	3.404	3.3748	0.010	AVRG	-0.8
1,1-Dichloroethane	2.491	2.1613	0.100	AVRG	-13.2
2-Butanone	0.169	0.1769	0.010	AVRG	4.7
2,2-Dichloropropane	2.072	1.8683	0.010	AVRG	-9.8
Cis-1,2-Dichloroethene	1.454	1.3490	0.010	AVRG	-7.2
Chloroform	2.332	2.1955	0.010	AVRG	-5.8
Bromochloromethane	0.651	0.5924	0.010	AVRG	-9.0
1,1,1-Trichloroethane	2.096	1.9267	0.010	AVRG	-8.1
1,1-Dichloropropene	0.563	0.5128	0.010	AVRG	-8.9
Carbon Tetrachloride	0.480	0.4380	0.010	AVRG	-8.8
1,2-Dichloroethane	0.499	0.4784	0.010	AVRG	-4.1
Benzene	1.581	1.5231	0.010	AVRG	-3.7
Trichloroethene	0.386	0.3539	0.010	AVRG	-8.3
1,2-Dichloropropane	0.448	0.4309	0.010	AVRG	-3.8
Bromodichloromethane	0.484	0.4682	0.010	AVRG	-3.3
Dibromomethane	0.208	0.2035	0.010	AVRG	-2.2
2-Chloroethyl Vinyl Ether	0.235	0.2513	0.010	AVRG	6.9
4-Methyl-2-Pentanone	0.177	0.1886	0.010	AVRG	6.6
Cis 1,3-dichloropropene	0.630	0.6176	0.010	AVRG	-2.0
Toluene	1.006	0.9412	0.010	AVRG	-6.4
Trans 1,3-Dichloropropene	0.560	0.5588	0.010	AVRG	-0.2
2-Hexanone	0.254	0.2684	0.010	AVRG	5.7

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII VOA

WS21:0073

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/11/13

Init. Calib. Date: 06/11/13 Cont. Calib. Time: 1009

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.315	0.3128	0.010	AVRG	-0.7
1,3-Dichloropropane	0.493	0.4920	0.010	AVRG	-0.2
Tetrachloroethene	0.346	0.3119	0.010	AVRG	-9.8
Chlorodibromomethane	0.298	0.2953	0.010	AVRG	-0.9
1,2-Dibromoethane	0.308	0.3047	0.010	AVRG	-1.1
Chlorobenzene	0.851	0.8089	0.300	AVRG	-4.9
Ethyl Benzene	1.460	1.4355	0.010	AVRG	-1.7
1,1,1,2-Tetrachloroethane	0.303	0.2869	0.010	AVRG	-5.3
m,p-xylene	0.556	0.5405	0.010	AVRG	-2.8
o-Xylene	0.553	0.5347	0.010	AVRG	-3.3
Styrene	0.896	0.9091	0.010	AVRG	1.5
Bromoform	0.391	0.3920	0.100	AVRG	0.2
1,1,2,2-Tetrachloroethane	0.654	0.6576	0.300	AVRG	0.6
1,2,3-Trichloropropane	0.198	0.1976	0.010	AVRG	-0.2
Trans-1,4-Dichloro 2-Butene	0.243	0.2505	0.010	AVRG	3.1
N-Propyl Benzene	2.973	2.8764	0.010	AVRG	-3.2
Bromobenzene	0.662	0.6211	0.010	AVRG	-6.2
Isopropyl Benzene	2.508	2.4698	0.010	AVRG	-1.5
2-Chloro Toluene	1.884	1.7964	0.010	AVRG	-4.6
4-Chloro Toluene	1.951	1.8522	0.010	AVRG	-5.1
T-Butyl Benzene	1.877	1.8132	0.010	AVRG	-3.4
1,3,5-Trimethyl Benzene	2.134	2.0674	0.010	AVRG	-3.1
1,2,4-Trimethylbenzene	2.098	2.0482	0.010	AVRG	-2.4
S-Butyl Benzene	2.730	2.6387	0.010	AVRG	-3.3
4-Isopropyl Toluene	2.240	2.1722	0.010	AVRG	-3.0
1,3-Dichlorobenzene	1.227	1.1351	0.010	AVRG	-7.5
1,4-Dichlorobenzene	1.265	1.1533	0.010	AVRG	-8.8
N-Butyl Benzene	2.156	2.0496	0.010	AVRG	-4.9
1,2-Dichlorobenzene	1.193	1.1005	0.010	AVRG	-7.8
1,2-Dibromo 3-Chloropropane	0.127	0.1256	0.010	AVRG	-1.1
1,2,4-Trichlorobenzene	0.861	0.7906	0.010	AVRG	-8.2
Hexachloro 1,3-Butadiene	0.530	0.4658	0.010	AVRG	-12.1
Naphthalene	1.889	1.9457	0.010	AVRG	3.0
1,2,3-Trichlorobenzene	0.832	0.7672	0.010	AVRG	-7.8
Dichlorodifluoromethane	0.886	0.7682	0.010	AVRG	-13.3
Methyl tert butyl ether	3.321	3.2773	0.010	AVRG	-1.3

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII VOA

WS21 : 06071

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/11/13

Init. Calib. Date: 06/11/13 Cont. Calib. Time: 1009

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	1.340	1.3498	0.010	AVRG	0.7
d8-Toluene	1.465	1.4679	0.010	AVRG	0.2
4-Bromofluorobenzene	0.546	0.5454	0.010	AVRG	-0.1
d4-1,2-Dichlorobenzene	1.018	1.0095	0.010	AVRG	-0.8
Dibromofluoromethane	1.434	1.4408	0.010	AVRG	0.5

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WS21 : 09075

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Ical Midpoint ID: 0100524 Ical Date: 05/24/13

Instrument ID: NT5 Project Run Date: 05/24/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	462910	4.66	1417886	5.11	1584356	7.60
	UPPER LIMIT	925820	5.16	2835772	5.61	3168712	8.10
	LOWER LIMIT	231455	4.16	708943	4.61	792178	7.10
	Sample ID						
01	ICV0524	436823	4.66	1350934	5.11	1490058	7.61
02							
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IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CLB) = d5-Chlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

WS21:0076

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Ical Midpoint ID: 0100524 Ical Date: 05/24/13

Instrument ID: NT5 Project Run Date: 05/24/13

		IS4(DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	826523	9.68				
	UPPER LIMIT	1653046	10.18				
	LOWER LIMIT	413262	9.18				
	Sample ID						
01	ICV0524	805888	9.68				
02							
03							
04							
05							
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IS4 (DCB) = d4-1,4-Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Ical Midpoint ID: 0100524 Ical Date: 05/24/13

Instrument ID: NT5 Project Run Date: 06/04/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	462910	4.66	1417886	5.11	1584356	7.60
	UPPER LIMIT	925820	5.16	2835772	5.61	3168712	8.10
	LOWER LIMIT	231455	4.16	708943	4.61	792178	7.10
	Sample ID						
01	LCS0604	484756	4.66	1633573	5.11	1880392	7.61
02	LCS0604	474930	4.67	1610669	5.12	1862966	7.61
03	MB0604	455081	4.67	1552765	5.12	1796929	7.61
04	KC-TB-02	492568	4.67	1683921	5.12	1998320	7.60
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IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CLB) = d5-Chlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Ical Midpoint ID: 0100524 Ical Date: 05/24/13

Instrument ID: NT5 Project Run Date: 06/04/13

		IS4(DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	826523	9.68				
	UPPER LIMIT	1653046	10.18				
	LOWER LIMIT	413262	9.18				
	Sample ID						
01	LCS0604	1029875	9.68				
02	LCS0604	1019587	9.68				
03	MB0604	963412	9.68				
04	KC-TB-02	1110285	9.68				
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IS4 (DCB) = d4-1,4-Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

WS21:2013

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS21 | Project: NPDES SAMPLING

Ical Midpoint ID: 0100611 | Ical Date: 06/11/13

Instrument ID: NT5 | Project Run Date: 06/11/13

		IS1(PFB) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CLB) AREA	#	RT	#
	ICAL MIDPT	441694		4.66		1634225		5.11		1921755		7.59	
	UPPER LIMIT	883388		5.16		3268450		5.61		3843510		8.09	
	LOWER LIMIT	220847		4.16		817112		4.61		960878		7.09	
	Sample ID												
01	ICV0611	434681		4.66		1638920		5.11		1920237		7.59	
02													
03													
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22													

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CLB) = d5-Chlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Ical Midpoint ID: 0100611 Ical Date: 06/11/13

Instrument ID: NT5 Project Run Date: 06/11/13

		IS4(DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1018367	9.67				
	UPPER LIMIT	2036734	10.17				
	LOWER LIMIT	509184	9.17				
	Sample ID						
01	ICV0611	1043748	9.67				
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IS4 (DCB) = d4-1,4-Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

WS21 : 000851

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING

Ical Midpoint ID: 0100611 Ical Date: 06/11/13

Instrument ID: NT5 Project Run Date: 06/11/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	441694	4.66	1634225	5.11	1921755	7.59
	UPPER LIMIT	883388	5.16	3268450	5.61	3843510	8.09
	LOWER LIMIT	220847	4.16	817112	4.61	960878	7.09
	Sample ID						
01	LCS0611	433934	4.67	1630086	5.12	1939078	7.60
02	LCS0611	429246	4.65	1612586	5.11	1907182	7.59
03	MB0611	346875	4.67	1318767	5.12	1589823	7.59
04	KC-IV-SPS-20	398372	4.67	1525075	5.12	1849586	7.60
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IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CLB) = d5-Chlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS21 | Project: NPDES SAMPLING

Ical Midpoint ID: 0100611 | Ical Date: 06/11/13

Instrument ID: NT5 | Project Run Date: 06/11/13

		IS4(DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1018367	9.67				
	UPPER LIMIT	2036734	10.17				
	LOWER LIMIT	509184	9.17				
	Sample ID						
01	LCS0611	1068382	9.67				
02	LCS0611	1017840	9.67				
03	MB0611	856046	9.67				
04	KC-IV-SPS-20	1021987	9.67				
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IS4 (DCB) = d4-1,4-Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WS21

WS21 : 0006AH

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
Page 1 of 2

Sample ID: KC-IV-SPS-20130531-S
SAMPLE

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 21:07
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 19.0%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.2	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	3.2	19	< 19 U
95-57-8	2-Chlorophenol	2.3	19	< 19 U
541-73-1	1,3-Dichlorobenzene	2.5	19	< 19 U
106-46-7	1,4-Dichlorobenzene	2.7	19	< 19 U
100-51-6	Benzyl Alcohol	5.8	19	< 19 U
95-50-1	1,2-Dichlorobenzene	2.4	19	< 19 U
95-48-7	2-Methylphenol	5.0	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.6	19	< 19 U
106-44-5	4-Methylphenol	6.3	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	3.2	19	< 19 U
67-72-1	Hexachloroethane	2.8	19	< 19 U
98-95-3	Nitrobenzene	3.8	19	< 19 U
78-59-1	Isophorone	2.7	19	< 19 U
88-75-5	2-Nitrophenol	37	95	< 95 U
105-67-9	2,4-Dimethylphenol	3.3	38	< 38 U
65-85-0	Benzoic Acid	96	380	< 380 U
111-91-1	bis(2-Chloroethoxy) Methane	1.9	19	< 19 U
120-83-2	2,4-Dichlorophenol	20	190	< 190 U
120-82-1	1,2,4-Trichlorobenzene	3.3	19	< 19 U
91-20-3	Naphthalene	2.6	19	< 19 U
106-47-8	4-Chloroaniline	21	260	< 260 U
87-68-3	Hexachlorobutadiene	4.3	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	14	95	< 95 U
91-57-6	2-Methylnaphthalene	2.9	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	63	380	< 380 U
88-06-2	2,4,6-Trichlorophenol	21	95	< 95 U
95-95-4	2,4,5-Trichlorophenol	20	95	< 95 U
91-58-7	2-Chloronaphthalene	2.5	19	< 19 U
88-74-4	2-Nitroaniline	17	95	< 95 U
131-11-3	Dimethylphthalate	2.7	19	< 19 U
208-96-8	Acenaphthylene	5.4	19	< 19 U
99-09-2	3-Nitroaniline	21	95	< 95 U
83-32-9	Acenaphthene	3.1	19	< 19 U
51-28-5	2,4-Dinitrophenol	110	800	< 800 U
100-02-7	4-Nitrophenol	33	95	< 95 U
132-64-9	Dibenzofuran	3.9	19	< 19 U
606-20-2	2,6-Dinitrotoluene	29	95	< 95 U
121-14-2	2,4-Dinitrotoluene	18	95	< 95 U
84-66-2	Diethylphthalate	35	47	< 47 U
7005-72-3	4-Chlorophenyl-phenylether	5.0	19	< 19 U
86-73-7	Fluorene	4.1	19	< 19 U
100-01-6	4-Nitroaniline	36	95	< 95 U

WS21 : 209265

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: KC-IV-SPS-20130531-S
SAMPLE

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Date Analyzed: 06/13/13 21:07

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	20	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	5.1	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	4.8	19	< 19 U
118-74-1	Hexachlorobenzene	4.1	19	< 19 U
87-86-5	Pentachlorophenol	46	190	< 190 U
85-01-8	**Phenanthrene**	**3.4**	**19**	**10 J**
86-74-8	Carbazole	2.5	19	< 19 U
120-12-7	Anthracene	4.3	19	< 19 U
84-74-2	Di-n-Butylphthalate	7.7	19	< 19 U
206-44-0	**Fluoranthene**	**2.8**	**19**	**30**
129-00-0	**Pyrene**	**1.8**	**19**	**32**
85-68-7	Butylbenzylphthalate	5.8	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	17	140	< 140 U
56-55-3	**Benzo(a)anthracene**	**3.1**	**19**	**10 J**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**14**	**24**	**34**
218-01-9	**Chrysene**	**3.6**	**19**	**20**
117-84-0	Di-n-Octyl phthalate	5.5	19	< 19 U
50-32-8	**Benzo(a)pyrene**	**5.2**	**19**	**16 J**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**4.4**	**19**	**12 J**
53-70-3	Dibenz(a,h)anthracene	4.1	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**4.2**	**19**	**12 J**
62-53-3	Aniline	38	510	< 510 U
62-75-9	N-Nitrosodimethylamine	13	95	< 95 U
90-12-0	1-Methylnaphthalene	2.5	19	< 19 U
TOTBFA	**Total Benzofluoranthenes**	**2.6**	**38**	**39**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	68.2%
d14-p-Terphenyl	79.2%	d4-1,2-Dichlorobenzene	59.8%
d5-Phenol	61.6%	2-Fluorophenol	60.4%
2,4,6-Tribromophenol	84.7%	d4-2-Chlorophenol	62.8%

WS21 : 000026

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-060813	65.2%	65.0%	83.8%	63.6%	69.2%	63.7%	71.6%	67.2%	0
LCS-060813	70.6%	70.0%	85.0%	67.2%	74.3%	70.9%	80.7%	70.4%	0
LCSD-060813	68.8%	67.6%	85.8%	63.4%	70.7%	67.6%	78.8%	66.8%	0
KC-IV-SPS-20130531	62.4%	68.2%	79.2%	59.8%	61.6%	60.4%	84.7%	62.8%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(33-120)	(30-120)
(FBP) = 2-Fluorobiphenyl	(35-120)	(35-120)
(TPH) = d14-p-Terphenyl	(42-124)	(37-120)
(DCB) = d4-1,2-Dichlorobenzene	(37-120)	(32-120)
(PHL) = d5-Phenol	(32-120)	(29-120)
(2FP) = 2-Fluorophenol	(32-120)	(27-120)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(36-120)	(31-120)

Prep Method: SW3546
Log Number Range: 13-11678 to 13-11678

WS21 : 060813

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-060813
LCS/LCSD

Lab Sample ID: LCS-060813
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Date Extracted LCS/LCSD: 06/08/13

Date Analyzed LCS: 06/13/13 14:21
LCSD: 06/13/13 14:58
Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount LCS: 10.00 g
LCSD: 10.00 g
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Percent Moisture: NA

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Phenol	382		500	76.4%	375		500	75.0%	1.8%
Bis-(2-Chloroethyl) Ether	370		500	74.0%	355		500	71.0%	4.1%
2-Chlorophenol	315		500	63.0%	306		500	61.2%	2.9%
1,3-Dichlorobenzene	326		500	65.2%	320		500	64.0%	1.9%
1,4-Dichlorobenzene	332		500	66.4%	329		500	65.8%	0.9%
Benzyl Alcohol	243		500	48.6%	183		500	36.6%	28.2%
1,2-Dichlorobenzene	338		500	67.6%	333		500	66.6%	1.5%
2-Methylphenol	295		500	59.0%	291		500	58.2%	1.4%
2,2'-Oxybis(1-Chloropropane)	359		500	71.8%	358		500	71.6%	0.3%
4-Methylphenol	615		1000	61.5%	613		1000	61.3%	0.3%
N-Nitroso-Di-N-Propylamine	378		500	75.6%	366		500	73.2%	3.2%
Hexachloroethane	336		500	67.2%	329		500	65.8%	2.1%
Nitrobenzene	370		500	74.0%	374		500	74.8%	1.1%
Isophorone	348		500	69.6%	348		500	69.6%	0.0%
2-Nitrophenol	408		500	81.6%	405		500	81.0%	0.7%
2,4-Dimethylphenol	531		1500	35.4%	628		1500	41.9%	16.7%
Benzoic Acid	1550		2750	56.4%	1650		2750	60.0%	6.2%
bis(2-Chloroethoxy) Methane	394		500	78.8%	389		500	77.8%	1.3%
2,4-Dichlorophenol	1030		1500	68.7%	1010		1500	67.3%	2.0%
1,2,4-Trichlorobenzene	343		500	68.6%	347		500	69.4%	1.2%
Naphthalene	318		500	63.6%	323		500	64.6%	1.6%
4-Chloroaniline	537		1500	35.8%	536		1500	35.7%	0.2%
Hexachlorobutadiene	345		500	69.0%	346		500	69.2%	0.3%
4-Chloro-3-methylphenol	1140		1500	76.0%	1170		1500	78.0%	2.6%
2-Methylnaphthalene	343		500	68.6%	350		500	70.0%	2.0%
Hexachlorocyclopentadiene	842	Q	1500	56.1%	838	Q	1500	55.9%	0.5%
2,4,6-Trichlorophenol	1080		1500	72.0%	1110		1500	74.0%	2.7%
2,4,5-Trichlorophenol	1140		1500	76.0%	1170		1500	78.0%	2.6%
2-Chloronaphthalene	377		500	75.4%	380		500	76.0%	0.8%
2-Nitroaniline	1410		1500	94.0%	1390		1500	92.7%	1.4%
Dimethylphthalate	423		500	84.6%	435		500	87.0%	2.8%
Acenaphthylene	333		500	66.6%	329		500	65.8%	1.2%
3-Nitroaniline	1020		1500	68.0%	1070		1500	71.3%	4.8%
Acenaphthene	353		500	70.6%	347		500	69.4%	1.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCSD-060813
LCS/LCSD

Lab Sample ID: LCS-060813
LIMS ID: 13-11678
Matrix: Sediment
Date Analyzed LCS: 06/13/13 14:21
LCSD: 06/13/13 14:58

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4-Dinitrophenol	1400 Q	2750	50.9%	1530 Q	2750	55.6%	8.9%
4-Nitrophenol	1030	1500	68.7%	1050	1500	70.0%	1.9%
Dibenzofuran	376	500	75.2%	374	500	74.8%	0.5%
2,6-Dinitrotoluene	1280	1500	85.3%	1300	1500	86.7%	1.6%
2,4-Dinitrotoluene	1340	1500	89.3%	1370	1500	91.3%	2.2%
Diethylphthalate	431	500	86.2%	436	500	87.2%	1.2%
4-Chlorophenyl-phenylether	437	500	87.4%	430	500	86.0%	1.6%
Fluorene	352	500	70.4%	355	500	71.0%	0.8%
4-Nitroaniline	1260	1500	84.0%	1300	1500	86.7%	3.1%
4,6-Dinitro-2-Methylphenol	1900	2750	69.1%	2010	2750	73.1%	5.6%
N-Nitrosodiphenylamine	431	500	86.2%	439	500	87.8%	1.8%
4-Bromophenyl-phenylether	412	500	82.4%	422	500	84.4%	2.4%
Hexachlorobenzene	375	500	75.0%	374	500	74.8%	0.3%
Pentachlorophenol	1140	1500	76.0%	1160	1500	77.3%	1.7%
Phenanthrene	392	500	78.4%	403	500	80.6%	2.8%
Carbazole	558	500	112%	578	500	116%	3.5%
Anthracene	357	500	71.4%	364	500	72.8%	1.9%
Di-n-Butylphthalate	474	500	94.8%	493	500	98.6%	3.9%
Fluoranthene	405	500	81.0%	430	500	86.0%	6.0%
Pyrene	404	500	80.8%	426	500	85.2%	5.3%
Butylbenzylphthalate	521	500	104%	541	500	108%	3.8%
3,3'-Dichlorobenzidine	372	1500	24.8%	446	1500	29.7%	18.1%
Benzo(a)anthracene	396	500	79.2%	421	500	84.2%	6.1%
bis(2-Ethylhexyl)phthalate	418	500	83.6%	403	500	80.6%	3.7%
Chrysene	385	500	77.0%	402	500	80.4%	4.3%
Di-n-Octyl phthalate	391	500	78.2%	362	500	72.4%	7.7%
Benzo(a)pyrene	392	500	78.4%	407	500	81.4%	3.8%
Indeno(1,2,3-cd)pyrene	422	500	84.4%	435	500	87.0%	3.0%
Dibenz(a,h)anthracene	385	500	77.0%	400	500	80.0%	3.8%
Benzo(g,h,i)perylene	407	500	81.4%	427	500	85.4%	4.8%
Aniline	238 J	1500	15.9%	273 J	1500	18.2%	13.7%
N-Nitrosodimethylamine	1010	1500	67.3%	978	1500	65.2%	3.2%
1-Methylnaphthalene	365	500	73.0%	363	500	72.6%	0.5%
Total Benzofluoranthenes	812	1000	81.2%	839	1000	83.9%	3.3%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	70.6%	68.8%
2-Fluorobiphenyl	70.0%	67.6%
d14-p-Terphenyl	85.0%	85.8%
d4-1,2-Dichlorobenzene	67.2%	63.4%
d5-Phenol	74.3%	70.7%
2-Fluorophenol	70.9%	67.6%
2,4,6-Tribromophenol	80.7%	78.8%
d4-2-Chlorophenol	70.4%	66.8%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

WS21:000269

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WS49MBS1

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Lab File ID: WS49MB Date Extracted: 06/08/13

Instrument ID: NT10 Date Analyzed: 06/13/13

Matrix: SOLID Time Analyzed: 1345

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WS49LCSS1	WS49LCSS1	WS49SB	06/13/13
02	WS49LCSDS1	WS49LCSDS1	WS49SBD	06/13/13
03	KC-VT-1593-2013	WR99DMS	WR99DMS	06/13/13
04	KC-VT-1593-2013	WR99DMSD	WR99DMSD	06/13/13
05	KC-CB-01-2013053	WR99E	WR99E	06/13/13
06	KC-DD-2009-20130	WR99F	WR99F	06/13/13
07	KC-IV-SPS-201305	WS21A	WS21A	06/13/13
08	KC-VT-1593-20130	WR99D	WR99D	06/14/13
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: MB-060813
METHOD BLANK

Lab Sample ID: MB-060813
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 13:45
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.0 g
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.6	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	3.4	20	< 20 U
95-57-8	2-Chlorophenol	2.4	20	< 20 U
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.9	20	< 20 U
100-51-6	Benzyl Alcohol	6.1	20	< 20 U
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
95-48-7	2-Methylphenol	5.2	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.8	20	< 20 U
106-44-5	4-Methylphenol	6.6	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	3.4	20	< 20 U
67-72-1	Hexachloroethane	2.9	20	< 20 U
98-95-3	Nitrobenzene	4.1	20	< 20 U
78-59-1	Isophorone	2.9	20	< 20 U
88-75-5	2-Nitrophenol	39	100	< 100 U
105-67-9	2,4-Dimethylphenol	3.5	40	< 40 U
65-85-0	Benzoic Acid	100	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	2.0	20	< 20 U
120-83-2	2,4-Dichlorophenol	22	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	3.5	20	< 20 U
91-20-3	Naphthalene	2.8	20	< 20 U
106-47-8	4-Chloroaniline	22	270	< 270 U
87-68-3	Hexachlorobutadiene	4.6	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	15	100	< 100 U
91-57-6	2-Methylnaphthalene	3.1	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	66	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	22	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	21	100	< 100 U
91-58-7	2-Chloronaphthalene	2.6	20	< 20 U
88-74-4	2-Nitroaniline	18	100	< 100 U
131-11-3	Dimethylphthalate	2.9	20	< 20 U
208-96-8	Acenaphthylene	5.7	20	< 20 U
99-09-2	3-Nitroaniline	22	100	< 100 U
83-32-9	Acenaphthene	3.3	20	< 20 U
51-28-5	2,4-Dinitrophenol	110	850	< 850 U
100-02-7	4-Nitrophenol	35	100	< 100 U
132-64-9	Dibenzofuran	4.1	20	< 20 U
606-20-2	2,6-Dinitrotoluene	31	100	< 100 U
121-14-2	2,4-Dinitrotoluene	20	100	< 100 U
84-66-2	Diethylphthalate	37	50	< 50 U
7005-72-3	4-Chlorophenyl-phenylether	5.3	20	< 20 U
86-73-7	Fluorene	4.4	20	< 20 U
100-01-6	4-Nitroaniline	38	100	< 100 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: MB-060813
METHOD BLANK

Lab Sample ID: MB-060813
LIMS ID: 13-11678
Matrix: Sediment
Date Analyzed: 06/13/13 13:45

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	21	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	5.4	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	5.0	20	< 20 U
118-74-1	Hexachlorobenzene	4.3	20	< 20 U
87-86-5	Pentachlorophenol	48	200	< 200 U
85-01-8	Phenanthrene	3.6	20	< 20 U
86-74-8	Carbazole	2.7	20	< 20 U
120-12-7	Anthracene	4.5	20	< 20 U
84-74-2	Di-n-Butylphthalate	8.2	20	< 20 U
206-44-0	Fluoranthene	2.9	20	< 20 U
129-00-0	Pyrene	1.9	20	< 20 U
85-68-7	Butylbenzylphthalate	6.1	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	18	150	< 150 U
56-55-3	Benzo(a)anthracene	3.3	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	15	25	< 25 U
218-01-9	Chrysene	3.8	20	< 20 U
117-84-0	Di-n-Octyl phthalate	5.8	20	< 20 U
50-32-8	Benzo(a)pyrene	5.4	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	4.3	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	4.4	20	< 20 U
62-53-3	Aniline	40	540	< 540 U
62-75-9	N-Nitrosodimethylamine	14	100	< 100 U
90-12-0	1-Methylnaphthalene	2.7	20	< 20 U
TOTBFA	Total Benzofluoranthenes	2.8	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%	2-Fluorobiphenyl	65.0%
d14-p-Terphenyl	83.8%	d4-1,2-Dichlorobenzene	63.6%
d5-Phenol	69.2%	2-Fluorophenol	63.7%
2,4,6-Tribromophenol	71.6%	d4-2-Chlorophenol	67.2%

WS21 : 209977

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 04/29/13 DFTPP Injection Time: 1637

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	16.7
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Mass 69 relative abundance	32.0
70	Less than 2.0% of mass 69	0.1 (0.5)1
127	10.0 - 80.0% of mass 198	44.8
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	27.4
365	Greater than 1.0% of mass 198	4.00
441	0.0 - 24.0% of mass 442	16.8 (15.6)2
442	50.0 - 200.0% of mass 198	108.0
443	15.0 - 24.0% of mass 442	20.8 (19.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0429A	IC0429A	04/29/13	1653
02		IC0429B	IC0429B	04/29/13	1730
03		IC0429C	IC0429C	04/29/13	1807
04		IC0429D	IC0429D	04/29/13	1844
05		IC0429E	IC0429E	04/29/13	1921
06		IC0429G	IC0429G	04/29/13	2034
07		IC0429I	IC0429I	04/29/13	2147
08					
09					
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20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/13/13 DFTPP Injection Time: 1216

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.1
68	Less than 2.0% of mass 69	0.7 (1.8)1
69	Mass 69 relative abundance	40.0
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	10.0 - 80.0% of mass 198	49.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	25.1
365	Greater than 1.0% of mass 198	3.19
441	0.0 - 24.0% of mass 442	11.6 (14.7)2
442	50.0 - 200.0% of mass 198	79.0
443	15.0 - 24.0% of mass 442	14.6 (18.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0613	CC0613	06/13/13	1230
02	WS49MBS1	WS49MBS1	WS49MB	06/13/13	1345
03	WS49LCSS1	WS49LCSS1	WS49SB	06/13/13	1421
04	WS49LCSDS1	WS49LCSDS1	WS49SBD	06/13/13	1458
05	KC-VT-1593-2013	WR99DMS	WR99DMS	06/13/13	1840
06	KC-VT-1593-2013	WR99DMSD	WR99DMSD	06/13/13	1916
07	KC-CB-01-2013053	WR99E	WR99E	06/13/13	1953
08	KC-DD-2009-20130	WR99F	WR99F	06/13/13	2030
09	KC-IV-SPS-201305	WS21A	WS21A	06/13/13	2107
10					
11					
12					
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14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/14/13 DFTPP Injection Time: 1238

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.6
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Mass 69 relative abundance	36.4
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	46.4
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	26.8
365	Greater than 1.0% of mass 198	3.75
441	0.0 - 24.0% of mass 442	15.7 (15.3)2
442	50.0 - 200.0% of mass 198	102.2
443	15.0 - 24.0% of mass 442	19.6 (19.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0614	CC0614	06/14/13	1253
02	KC-VT-1593-20130	WR99D	WR99D	06/14/13	1937
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 04/29/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0429C RRF0.5=IC0429I RRF1 =IC0429D
RRF2.5=IC0429G RRF5 =IC0429A RRF10 =IC0429E
RRF20 =IC0429B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	RRF	%RSD /R^2
Phenol	2.077	2.017	1.990	2.151	2.006	2.200	2.034	2.068	3.9
Bis(2-Chloroethyl)ether	1.569	1.539	1.470	1.553	1.377	1.500	1.401	1.487	5.1
2-Chlorophenol	1.550	1.467	1.471	1.542	1.510	1.815	1.808	1.595	9.5
1,3-Dichlorobenzene	1.693	1.545	1.590	1.600	1.552	1.628	1.594	1.600	3.1
1,4-Dichlorobenzene	1.714	1.526	1.513	1.625	1.533	1.581	1.549	1.577	4.5
1,2-Dichlorobenzene	1.625	1.492	1.506	1.516	1.456	1.497	1.480	1.510	3.6
Benzyl alcohol	0.851	0.735	0.830	0.901	0.883	0.969	0.920	0.870	8.6
2,2'-oxybis(1-Chloropropane)	0.426	0.440	0.464	0.485	0.458	0.477	0.463	0.459	4.4
2-Methylphenol	1.490	1.406	1.450	1.544	1.458	1.560	1.508	1.488	3.7
Hexachloroethane	0.689	0.659	0.654	0.684	0.620	0.669	0.644	0.660	3.6
N-Nitroso-di-n-propylamine	0.952	0.894	0.878	0.986	0.887	0.977	0.928	0.929	4.7
4-Methylphenol	1.437	1.355	1.490	1.593	1.527	1.677	1.541	1.517	6.9
Nitrobenzene	0.395	0.393	0.386	0.400	0.366	0.404	0.385	0.390	3.2
Isophorone	0.712	0.664	0.673	0.711	0.681	0.862	0.828	0.733	10.8
2-Nitrophenol	0.208	0.186	0.201	0.221	0.229	0.242	0.243	0.218	9.7
2,4-Dimethylphenol	0.412	0.372	0.393	0.415	0.402	0.422	0.394	0.401	4.2
Bis(2-Chloroethoxy)methane	0.443	0.434	0.433	0.442	0.414	0.440	0.418	0.432	2.7
2,4-Dichlorophenol	0.318	0.288	0.385	0.393	0.395	0.418	0.391	0.370	12.8
1,2,4-Trichlorobenzene	0.412	0.350	0.364	0.354	0.345	0.353	0.351	0.361	6.4
Naphthalene	1.205	1.006	1.040	1.064	1.020	1.073	1.046	1.065	6.2
Benzoic acid		0.160	0.251	0.309	0.338	0.374	0.383	0.302	0.999
4-Chloroaniline	0.424	0.364	0.406	0.423	0.425	0.489	0.381	0.416	9.6
Hexachlorobutadiene	0.233	0.200	0.214	0.209	0.207	0.221	0.218	0.214	5.1
4-Chloro-3-methylphenol	0.263	0.272	0.312	0.344	0.343	0.377	0.365	0.325	13.7
2-Methylnaphthalene	0.740	0.674	0.682	0.702	0.687	0.739	0.727	0.707	4.0
Hexachlorocyclopentadiene	0.448	0.393	0.415	0.425	0.443	0.466	0.490	0.440	7.4
2,4,6-Trichlorophenol	0.389	0.368	0.407	0.426	0.433	0.453	0.470	0.421	8.4
2,4,5-Trichlorophenol	0.355	0.372	0.419	0.443	0.454	0.493	0.502	0.434	12.9
2-Chloronaphthalene	1.258	1.048	1.069	1.098	1.071	1.125	1.112	1.112	6.3
2-Nitroaniline	0.205	0.222	0.260	0.290	0.289	0.311	0.301	0.268	15.2
Acenaphthylene	2.087	1.803	1.831	1.816	1.772	2.129	1.756	1.885	8.2
Dimethylphthalate	1.365	1.135	1.172	1.190	1.160	1.208	1.175	1.201	6.3
2,6-Dinitrotoluene	0.261	0.257	0.275	0.296	0.284	0.305	0.290	0.281	6.4
Acenaphthene	1.307	1.096	1.084	1.134	1.066	1.135	1.130	1.136	7.0
3-Nitroaniline	0.208	0.214	0.254	0.251	0.240	0.251	0.208	0.232	9.2
2,4-Dinitrophenol		0.092	0.145	0.196	0.239	0.272	0.282	0.204	0.998
Dibenzofuran	1.673	1.498	1.520	1.552	1.472	1.584	1.575	1.553	4.3

<- Outside QC limits: %RSD <20% or R^2 > 0.990

WS21 : 29855

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 04/29/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0429C RRF0.5=IC0429I RRF1 =IC0429D
RRF2.5=IC0429G RRF5 =IC0429A RRF10 =IC0429E
RRF20 =IC0429B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	RRF	%RSD /R^2
4-Nitrophenol		0.079	0.115	0.152	0.164	0.185	0.183	0.146	0.999
2,4-Dinitrotoluene	0.305	0.311	0.361	0.383	0.378	0.406	0.396	0.363	11.1
Fluorene	1.464	1.260	1.300	1.336	1.271	1.344	1.302	1.325	5.2
4-Chlorophenyl-phenylether	0.738	0.602	0.614	0.616	0.592	0.726	0.674	0.652	9.3
Diethylphthalate	1.354	1.141	1.157	1.206	1.170	1.229	1.188	1.206	5.9
4-Nitroaniline	0.210	0.198	0.271	0.240	0.244	0.272	0.254	0.241	11.8
4,6-Dinitro-2-methylphenol	0.107	0.123	0.161	0.175	0.189	0.198	0.199	0.164	0.999
N-Nitrosodiphenylamine (1)	0.496	0.429	0.473	0.473	0.458	0.461	0.451	0.463	4.5
4-Bromophenyl-phenylether	0.228	0.217	0.230	0.222	0.223	0.230	0.234	0.226	2.6
Hexachlorobenzene	0.323	0.258	0.266	0.258	0.256	0.263	0.266	0.270	8.8
Pentachlorophenol	0.155	0.140	0.173	0.199	0.211	0.221	0.227	0.189	17.8
Phenanthrene	1.229	1.013	1.086	1.066	1.046	1.099	1.099	1.091	6.3
Anthracene	1.196	1.068	1.098	1.103	1.079	1.137	1.142	1.118	4.0
Carbazole		0.800	0.834	0.643	0.476	0.605	0.715	0.679	19.5
Di-n-butylphthalate	1.235	1.000	1.095	1.115	1.141	1.237	1.254	1.154	8.1
Fluoranthene	1.358	1.180	1.246	1.248	1.273	1.334	1.350	1.284	5.1
Pyrene	1.372	1.136	1.192	1.197	1.222	1.259	1.285	1.238	6.2
Butylbenzylphthalate	0.426	0.342	0.412	0.416	0.439	0.457	0.465	0.422	9.6
Benzo(a)anthracene	1.256	1.035	1.094	1.074	1.095	1.140	1.147	1.120	6.3
3,3'-Dichlorobenzidine	0.512	0.365	0.406	0.358	0.385	0.470	0.489	0.426	14.8
Chrysene	1.178	0.953	0.950	0.973	0.977	1.022	1.041	1.013	7.9
bis(2-Ethylhexyl)phthalate	0.632	0.494	0.524	0.534	0.505	0.523	0.510	0.532	8.7
Di-n-octylphthalate	1.055	0.944	0.871	0.906	0.871	0.905	0.894	0.921	6.9
Benzo(b)fluoranthene	1.350	1.055	1.094	1.126	1.215	1.242	1.233	1.188	8.6
Benzo(k)fluoranthene	1.429	1.149	1.245	1.226	1.139	1.225	1.345	1.251	8.3
Benzo(a)pyrene	1.151	0.872	0.973	0.973	1.002	1.055	1.076	1.014	8.8
Indeno(1,2,3-cd)pyrene	1.182	1.014	1.103	1.121	1.204	1.272	1.288	1.169	8.3
Dibenzo(a,h)anthracene	0.924	0.733	0.855	0.886	0.920	0.970	0.990	0.897	9.6
Benzo(g,h,i)perylene	1.046	0.902	0.989	0.991	1.001	1.071	1.081	1.012	6.1
N-Nitrosodimethylamine	0.881	0.875	0.883	0.963	0.856	0.996	0.924	0.911	5.7
Aniline	4.002	3.883	3.894	4.215	3.954	4.212	3.925	4.012	3.6
Benzidine		0.200	0.258	0.144	0.124	0.129	0.158	0.169	0.996
Retene	0.527	0.415	0.449	0.450	0.464	0.479	0.495	0.468	7.7
Perylene	1.360	1.098	1.116	1.099	1.101	1.161	1.185	1.160	8.2
Pyridine	0.727	0.806	0.788	0.868	0.780	0.846	0.791	0.801	5.8
1-methylnaphthalene	0.704	0.597	0.625	0.640	0.633	0.668	0.673	0.648	5.5
Azobenzene (1,2-DP-Hydrazine	1.323	1.268	1.241	1.274	1.124	1.247	1.184	1.237	5.2

(1) Cannot be seperated from Diphenylamine
<- Outside QC limits: %RSD <20% or R^2 > 0.990

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 04/29/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0429C RRF0.5=IC0429I RRF1 =IC0429D
RRF2.5=IC0429G RRF5 =IC0429A RRF10 =IC0429E
RRF20 =IC0429B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	$\overline{RRF}$	%RSD /R^2
2,3,4,6-Tetrachlorophenol	0.263	0.256	0.308	0.323	0.352	0.376	0.381	0.323	15.7
Total Benzofluoranthenes	1.309	1.054	1.127	1.118	1.118	1.170	1.178	1.153	6.9
2-Fluorophenol	1.341	1.365	1.373	1.457	1.432	1.532	1.493	1.428	5.0
Phenol-d5	1.744	1.701	1.730	1.881	1.858	2.054	1.962	1.847	7.1
2-Chlorophenol-d4	1.482	1.318	1.345	1.412	1.390	1.440	1.430	1.402	4.0
1,2-Dichlorobenzene-d4	0.989	1.001	0.997	1.022	0.981	1.044	1.027	1.009	2.2
Nitrobenzene-d5	0.429	0.417	0.418	0.430	0.401	0.441	0.419	0.422	3.0
2-Fluorobiphenyl	1.566	1.339	1.343	1.374	1.337	1.414	1.400	1.396	5.8
2,4,6-Tribromophenol	0.200	0.170	0.195	0.214	0.219	0.242	0.241	0.212	12.1
Terphenyl-d14	0.892	0.700	0.754	0.760	0.763	0.794	0.787	0.778	7.5

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-3

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/13/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1230

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.068	2.440	0.800	AVRG	18.0	
Bis(2-Chloroethyl)ether	1.487	1.478	0.700	AVRG	-0.6	
2-Chlorophenol	1.595	1.564	0.800	AVRG	-1.9	
1,3-Dichlorobenzene	1.600	1.537	0.010	AVRG	-3.9	
1,4-Dichlorobenzene	1.577	1.529	0.010	AVRG	-3.0	
1,2-Dichlorobenzene	1.510	1.446	0.010	AVRG	-4.2	
Benzyl alcohol	0.870	0.708	0.010	AVRG	-18.6	
2,2'-oxybis(1-Chloropropane)	0.459	0.464	0.010	AVRG	1.1	
2-Methylphenol	1.488	1.509	0.700	AVRG	1.4	
Hexachloroethane	0.660	0.638	0.300	AVRG	-3.3	
N-Nitroso-di-n-propylamine	0.929	0.962	0.500	AVRG	3.6	
4-Methylphenol	1.517	1.589	0.600	AVRG	4.7	
Nitrobenzene	0.390	0.391	0.200	AVRG	0.2	
Isophorone	0.733	0.735	0.400	AVRG	0.3	
2-Nitrophenol	0.218	0.238	0.100	AVRG	9.2	
2,4-Dimethylphenol	0.401	0.393	0.200	AVRG	-2.0	
Bis(2-Chloroethoxy)methane	0.432	0.439	0.300	AVRG	1.6	
2,4-Dichlorophenol	0.370	0.377	0.200	AVRG	1.9	
1,2,4-Trichlorobenzene	0.361	0.343	0.010	AVRG	-5.0	
Naphthalene	1.065	1.008	0.700	AVRG	-5.4	
Benzoic acid	20.00	16.20	0.010	2ORDR	-19.0	
4-Chloroaniline	0.416	0.423	0.010	AVRG	1.7	
Hexachlorobutadiene	0.214	0.208	0.010	AVRG	-2.8	
4-Chloro-3-methylphenol	0.325	0.362	0.200	AVRG	11.4	
2-Methylnaphthalene	0.707	0.683	0.400	AVRG	-3.4	
Hexachlorocyclopentadiene	0.440	0.350	0.050	AVRG	-20.4	<-
2,4,6-Trichlorophenol	0.421	0.430	0.200	AVRG	2.1	
2,4,5-Trichlorophenol	0.434	0.477	0.200	AVRG	9.9	
2-Chloronaphthalene	1.112	1.068	0.800	AVRG	-4.0	
2-Nitroaniline	0.268	0.308	0.010	AVRG	14.9	
Acenaphthylene	1.885	1.734	0.900	AVRG	-8.0	
Dimethylphthalate	1.201	1.192	0.010	AVRG	-0.7	
2,6-Dinitrotoluene	0.281	0.290	0.200	AVRG	3.2	
Acenaphthene	1.136	1.072	0.900	AVRG	-5.6	
3-Nitroaniline	0.232	0.277	0.010	AVRG	19.4	
2,4-Dinitrophenol	20.00	13.56	0.010	2ORDR	-32.2	<-
Dibenzofuran	1.553	1.472	0.800	AVRG	-5.2	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

WS21 : 00033

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/13/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1230

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	10.00	10.04	0.010	2ORDR	0.4	
2,4-Dinitrotoluene	0.363	0.384	0.200	AVRG	5.8	
Fluorene	1.325	1.246	0.900	AVRG	-6.0	
4-Chlorophenyl-phenylether	0.652	0.578	0.400	AVRG	-11.3	
Diethylphthalate	1.206	1.193	0.010	AVRG	-1.1	
4-Nitroaniline	0.241	0.278	0.010	AVRG	15.4	
4,6-Dinitro-2-methylphenol	20.00	17.75	0.010	2ORDR	-11.2	
N-Nitrosodiphenylamine(1)	0.463	0.460	0.010	AVRG	-0.6	
4-Bromophenyl-phenylether	0.226	0.227	0.100	AVRG	0.4	
Hexachlorobenzene	0.270	0.258	0.100	AVRG	-4.4	
Pentachlorophenol	0.189	0.191	0.050	AVRG	1.0	
Phenanthrene	1.091	1.038	0.700	AVRG	-4.8	
Anthracene	1.118	1.080	0.700	AVRG	-3.4	
Carbazole	0.679	0.686	0.010	AVRG	1.0	
Di-n-butylphthalate	1.154	1.176	0.010	AVRG	1.9	
Fluoranthene	1.284	1.289	0.600	AVRG	0.4	
Pyrene	1.238	1.267	0.600	AVRG	2.3	
Butylbenzylphthalate	0.422	0.471	0.010	AVRG	11.6	
Benzo(a)anthracene	1.120	1.108	0.800	AVRG	-1.1	
3,3'-Dichlorobenzidine	0.426	0.342	0.010	AVRG	-19.7	
Chrysene	1.013	0.973	0.700	AVRG	-3.9	
bis(2-Ethylhexyl)phthalate	0.532	0.520	0.010	AVRG	-2.2	
Di-n-octylphthalate	0.921	0.871	0.010	AVRG	-5.4	
Benzo(b)fluoranthene	1.188	1.285	0.700	AVRG	8.2	
Benzo(k)fluoranthene	1.251	1.182	0.700	AVRG	-5.5	
Benzo(a)pyrene	1.014	1.033	0.700	AVRG	1.9	
Indeno(1,2,3-cd)pyrene	1.169	1.245	0.500	AVRG	6.5	
Dibenzo(a,h)anthracene	0.897	0.944	0.400	AVRG	5.2	
Benzo(g,h,i)perylene	1.012	1.077	0.500	AVRG	6.4	
N-Nitrosodimethylamine	0.911	0.903	0.010	AVRG	-0.9	
Aniline	4.012	4.222	0.010	AVRG	5.2	
Benzidine	10.00	4.771	0.010	2ORDR	-52.3	<-
Retene	0.468	0.473	0.010	AVRG	1.1	
Perylene	1.160	1.086	0.010	AVRG	-6.4	
Pyridine	0.801	0.753	0.010	AVRG	-6.0	
1-methylnaphthalene	0.648	0.621	0.010	AVRG	-4.2	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WS21 : 061302

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/13/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1230

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.237	1.189	0.010	AVRG	-3.9
2,3,4,6-Tetrachlorophenol	0.323	0.342	0.010	AVRG	5.9
Total Benzofluoranthenes	1.153	1.153	0.010	AVRG	0.0
2-Fluorophenol	1.428	1.479	0.010	AVRG	3.6
Phenol-d5	1.847	1.964	0.010	AVRG	6.3
2-Chlorophenol-d4	1.402	1.412	0.010	AVRG	0.7
1,2-Dichlorobenzene-d4	1.009	0.986	0.010	AVRG	-2.3
Nitrobenzene-d5	0.422	0.430	0.010	AVRG	1.9
2-Fluorobiphenyl	1.396	1.327	0.010	AVRG	-4.9
2,4,6-Tribromophenol	0.212	0.217	0.010	AVRG	2.4
Terphenyl-d14	0.778	0.761	0.010	AVRG	-2.2

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-3

WS21 : 061121

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/13/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	45250	8.99	166754	11.64	106910	15.54
	UPPER LIMIT	90500		333508		213820	
	LOWER LIMIT	22625		83377		53455	
	CCAL	42831	8.05	158742	10.63	99508	14.43
	UPPER LIMIT		8.55		11.13		14.93
	LOWER LIMIT		7.55		10.13		13.93
01	WS49MBS1	48215	8.06	191089	10.63	113052	14.43
02	WS49LCSS1	49398	8.06	184077	10.64	110624	14.44
03	WS49LCSDS1	48747	8.06	177018	10.64	106844	14.44
04	KC-VT-1593-2	44567	8.07	165654	10.65	98201	14.45
05	KC-VT-1593-2	48362	8.07	175201	10.65	105767	14.45
06	KC-CB-01-201	48623	8.07	186419	10.65	110252	14.45
07	KC-DD-2009-2	46964	8.07	178324	10.65	106965	14.45
08	KC-IV-SPS-20	49157	8.07	186626	10.65	103730	14.45
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

WS21 : 20192

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/13/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	179783	18.82	192841	23.90	184310	26.35
	UPPER LIMIT	359566		385682		368620	
	LOWER LIMIT	89892		96420		92155	
	CCAL	166294	17.63	171121	22.80	154519	25.07
	UPPER LIMIT		18.13		23.30		25.57
	LOWER LIMIT		17.13		22.30		24.57
01	WS49MBS1	194526	17.63	194694	22.80	173223	25.08
02	WS49LCSS1	183746	17.64	192330	22.81	173982	25.08
03	WS49LCSDS1	176399	17.64	184289	22.81	169418	25.08
04	KC-VT-1593-2	147103	17.65	158721	22.83	150546	25.11
05	KC-VT-1593-2	159897	17.65	172440	22.83	164290	25.11
06	KC-CB-01-201	177509	17.65	174547	22.82	160617	25.10
07	KC-DD-2009-2	163111	17.65	169850	22.82	157436	25.12
08	KC-IV-SPS-20	167446	17.65	167618	22.82	158417	25.09
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25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

WS21 : 062123

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/13/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	229567	24.99				
	UPPER LIMIT	459134					
	LOWER LIMIT	114784					
	CCAL	215324	23.98				
	UPPER LIMIT		24.48				
	LOWER LIMIT		23.48				
01	WS49MBS1	236085	23.98				
02	WS49LCSS1	240893	23.98				
03	WS49LCSDS1	231019	23.99				
04	KC-VT-1593-2	207090	24.00				
05	KC-VT-1593-2	222724	24.00				
06	KC-CB-01-201	221209	23.99				
07	KC-DD-2009-2	216475	24.00				
08	KC-IV-SPS-20	214830	23.99				
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IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-3

WS21 : 20130611

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/14/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	45250	8.99	166754	11.64	106910	15.54
	UPPER LIMIT	90500		333508		213820	
	LOWER LIMIT	22625		83377		53455	
	CCAL	38921	7.95	147394	10.56	93424	14.39
	UPPER LIMIT		8.45		11.06		14.89
	LOWER LIMIT		7.45		10.06		13.89
01	KC-VT-1593-2	51803	7.96	200423	10.57	119167	14.41
02							
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25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

WS21 : 0021 0C5

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS21 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A | Ical Date: 04/29/13

Instrument ID: NT10 | Cont. Cal Date: 06/14/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	179783	18.82	192841	23.90	184310	26.35
	UPPER LIMIT	359566		385682		368620	
	LOWER LIMIT	89892		96420		92155	
	CCAL	157890	17.62	168131	22.86	148837	25.16
	UPPER LIMIT		18.12		23.36		25.66
	LOWER LIMIT		17.12		22.36		24.66
01	KC-VT-1593-2	190945	17.66	177051	22.92	171951	25.23
02							
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25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

WS21 : 0015

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS21 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A | Ical Date: 04/29/13

Instrument ID: NT10 | Cont. Cal Date: 06/14/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	229567	24.99				
	UPPER LIMIT	459134					
	LOWER LIMIT	114784					
	CCAL	210456	24.07				
	UPPER LIMIT		24.57				
	LOWER LIMIT		23.57				
01	KC-VT-1593-2	235826	24.14				
02							
03							
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IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-3

WS21 : 20107

SIM Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WS21

WS21 : 99126

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: KC-IV-SPS-20130531-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 21:07
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 19.0 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**1.9**	**4.7**	**4.7**
106-46-7	**1,4-Dichlorobenzene**	**1.1**	**4.7**	**2.6 J**
120-82-1	1,2,4-Trichlorobenzene	1.8	4.7	< 4.7 U
118-74-1	Hexachlorobenzene	1.2	4.7	< 4.7 U
87-68-3	Hexachlorobutadiene	0.91	4.7	< 4.7 U
131-11-3	Dimethylphthalate	1.3	4.7	< 4.7 U
84-66-2	**Diethylphthalate**	**3.1**	**4.7**	**11 B**
85-68-7	Butylbenzylphthalate	2.7	4.7	< 4.7 U
95-48-7	2-Methylphenol	1.7	4.7	< 4.7 U
105-67-9	2,4-Dimethylphenol	2.7	19	< 19 U
86-30-6	N-Nitrosodiphenylamine	1.3	19	< 19 U
100-51-6	Benzyl Alcohol	6.7	19	< 19 U
87-86-5	Pentachlorophenol	14	47	< 47 U
95-50-1	**1,2-Dichlorobenzene**	**1.0**	**4.7**	**3.8 J**
541-73-1	1,3-Dichlorobenzene	1.2	4.7	< 4.7 U
621-64-7	N-Nitroso-Di-N-Propylamine	9.0	11	< 11 U
62-75-9	N-Nitrosodimethylamine	3.0	24	< 24 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	60.5%
d14-p-Terphenyl	80.4%

WS21 : 061323

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

Client ID	FPH	TER	TOT OUT
MB-060813	62.4%	82.4%	0
LCS-060813	69.7%	84.4%	0
LCSD-060813	68.0%	85.6%	0
KC-IV-SPS-20130531-S	60.5%	80.4%	0

	LCS/MB LIMITS	QC LIMITS
(FPH) = 2-Fluorophenol	(32-100)	(27-100)
(TER) = d14-p-Terphenyl	(42-124)	(37-111)

Prep Method: SW3546
Log Number Range: 13-11678 to 13-11678

WS21 : 209119

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-060813**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-060813
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/08/13

Sample Amount LCS: 10.00 g-dry-wt
LCSD: 10.00 g-dry-wt
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Date Analyzed LCS: 06/13/13 14:21
LCSD: 06/13/13 14:58
Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Dibenz(a,h)anthracene	385	500	77.0%	404	500	80.8%	4.8%
1,4-Dichlorobenzene	312	500	62.4%	311	500	62.2%	0.3%
1,2,4-Trichlorobenzene	334	500	66.8%	329	500	65.8%	1.5%
Hexachlorobenzene	350	500	70.0%	351	500	70.2%	0.3%
Hexachlorobutadiene	321	500	64.2%	320	500	64.0%	0.3%
Dimethylphthalate	428	500	85.6%	428	500	85.6%	0.0%
Diethylphthalate	437 B	500	87.4%	439 B	500	87.8%	0.5%
Butylbenzylphthalate	576 EQ	500	115%	597 EQ	500	119%	3.6%
2-Methylphenol	310	500	62.0%	326	500	65.2%	5.0%
2,4-Dimethylphenol	547	1500	36.5%	631	1500	42.1%	14.3%
N-Nitrosodiphenylamine	448	500	89.6%	458	500	91.6%	2.2%
Benzyl Alcohol	318	500	63.6%	276	500	55.2%	14.1%
Pentachlorophenol	1280 E	1500	85.3%	1310 E	1500	87.3%	2.3%
1,2-Dichlorobenzene	320	500	64.0%	318	500	63.6%	0.6%
1,3-Dichlorobenzene	312	500	62.4%	311	500	62.2%	0.3%
N-Nitroso-Di-N-Propylamine	371	500	74.2%	374	500	74.8%	0.8%
N-Nitrosodimethylamine	992	1500	66.1%	977	1500	65.1%	1.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
2-Fluorophenol	69.7%	68.0%
d14-p-Terphenyl	84.4%	85.6%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WS49MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WS21

Project: FOX AVENUE S SOURCE

Lab File ID: WS49MB

Date Extracted: 06/08/13

Instrument ID: NT10

Date Analyzed: 06/13/13

Matrix: SOLID

Time Analyzed: 1345

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WS49LCSS1	WS49LCSS1	WS49SB	06/13/13
02	WS49LCSDS1	WS49LCSDS1	WS49SBD	06/13/13
03	FA-1-S	WS49A	WS49A	06/13/13
04	FA-2-4	WS49B	WS49B	06/13/13
05	FA-3-2	WS49C	WS49C	06/13/13
06	FA-4-3	WS49D	WS49D	06/13/13
07	KC-VT-1593-20130	WR99D	WR99D	06/13/13
08	KC-VT-1593-2013	WR99DMS	WR99DMS	06/13/13
09	KC-VT-1593-2013	WR99DMSD	WR99DMSD	06/13/13
10	KC-CB-01-2013053	WR99E	WR99E	06/13/13
11	KC-DD-2009-20130	WR99F	WR99F	06/13/13
12	KC-IV-SPS-201305	WS21A	WS21A	06/13/13
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: MB-060813**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-060813
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/08/13
Date Analyzed: 06/13/13 13:45
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	2.0	5.0	< 5.0 U
106-46-7	1,4-Dichlorobenzene	1.2	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.9	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.96	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.3	5.0	< 5.0 U
84-66-2	**Diethylphthalate**	**3.3**	**5.0**	**8.5**
85-68-7	Butylbenzylphthalate	2.9	5.0	< 5.0 U
95-48-7	2-Methylphenol	1.8	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	2.9	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	1.4	20	< 20 U
100-51-6	Benzyl Alcohol	7.0	20	< 20 U
87-86-5	Pentachlorophenol	14	50	< 50 U
95-50-1	1,2-Dichlorobenzene	1.1	5.0	< 5.0 U
541-73-1	1,3-Dichlorobenzene	1.3	5.0	< 5.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	9.5	12	< 12 U
62-75-9	N-Nitrosodimethylamine	3.2	25	< 25 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	62.4%
d14-p-Terphenyl	82.4%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES

DFTPP Injection Date: 04/29/13 DFTPP Injection Time: 1637

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	16.7
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Mass 69 relative abundance	32.0
70	Less than 2.0% of mass 69	0.1 (0.5)1
127	10.0 - 80.0% of mass 198	44.8
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	27.4
365	Greater than 1.0% of mass 198	4.00
441	0.0 - 24.0% of mass 442	16.8 (15.6)2
442	50.0 - 200.0% of mass 198	108.0
443	15.0 - 24.0% of mass 442	20.8 (19.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0429A	IC0429A	04/29/13	1653
02		IC0429C	IC0429C	04/29/13	1807
03		IC0429D	IC0429D	04/29/13	1844
04		IC0429F	IC0429F	04/29/13	1957
05		IC0429G	IC0429G	04/29/13	2034
06		IC0429H	IC0429H	04/29/13	2111
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FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES

DFTPP Injection Date: 06/13/13 DFTPP Injection Time: 1216

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.1
68	Less than 2.0% of mass 69	0.7 (1.8)1
69	Mass 69 relative abundance	40.0
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	10.0 - 80.0% of mass 198	49.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	25.1
365	Greater than 1.0% of mass 198	3.19
441	0.0 - 24.0% of mass 442	11.6 (14.7)2
442	50.0 - 200.0% of mass 198	79.0
443	15.0 - 24.0% of mass 442	14.6 (18.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0613A	CC0613A	06/13/13	1307
02	WS49MBS1	WS49MBS1	WS49MB	06/13/13	1345
03	WS49LCSS1	WS49LCSS1	WS49SB	06/13/13	1421
04	WS49LCSDS1	WS49LCSDS1	WS49SBD	06/13/13	1458
05	FA-1-S	WS49A	WS49A	06/13/13	1535
06	FA-2-4	WS49B	WS49B	06/13/13	1612
07	FA-3-2	WS49C	WS49C	06/13/13	1649
08	FA-4-3	WS49D	WS49D	06/13/13	1726
09	KC-VT-1593-20130	WR99D	WR99D	06/13/13	1803
10	KC-VT-1593-2013	WR99DMS	WR99DMS	06/13/13	1840
11	KC-VT-1593-2013	WR99DMSD	WR99DMSD	06/13/13	1916
12	KC-CB-01-2013053	WR99E	WR99E	06/13/13	1953
13	KC-DD-2009-20130	WR99F	WR99F	06/13/13	2030
14	KC-IV-SPS-201305	WS21A	WS21A	06/13/13	2107
15					
16					
17					
18					
19					
20					
21					
22					

FORM V SV

WS21:09115

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES

Instrument ID: NT10 Calibration Date: 04/29/13

Method = SIM.b/SIMABN2.m
Cal levels = 7

LAB FILE ID: RRF0.05=IC0429F RRF0.1=IC0429H RRF0.2=IC0429C
RRF0.5=IC0429I RRF1 =IC0429D RRF2.5=IC0429G
RRF5 =IC0429A

COMPOUND	RRF 0.05	RRF 0.1	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	$\overline{RRF}$	%RSD /R^2
Phenol	2.193	1.937	2.061	1.929	1.947	2.088	1.982	2.020	4.9
1,3-Dichlorobenzene	1.876	1.752	1.728	1.588	1.573	1.595	1.539	1.664	7.4
1,4-Dichlorobenzene	1.919	1.703	1.739	1.578	1.552	1.578	1.529	1.657	8.5
1,2-Dichlorobenzene	1.801	1.618	1.674	1.494	1.476	1.511	1.447	1.574	8.2
Benzyl alcohol	1.014	0.924	0.960	0.916	0.949	1.024	0.993	0.968	4.4
2-Methylphenol	1.595	1.392	1.487	1.364	1.397	1.471	1.401	1.444	5.6
N-Nitroso-di-n-propylamine	0.914	0.806	0.850	0.799	0.801	0.850	0.783	0.829	5.5
4-Methylphenol	1.588	1.377	1.517	1.385	1.444	1.521	1.461	1.470	5.2
2,4-Dimethylphenol	0.406	0.356	0.404	0.372	0.385	0.404	0.385	0.387	4.8
1,2,4-Trichlorobenzene	0.443	0.394	0.409	0.363	0.361	0.366	0.347	0.383	8.8
Hexachlorobutadiene	0.272	0.237	0.244	0.221	0.219	0.226	0.215	0.233	8.5
Dimethylphthalate	1.295	1.185	1.226	1.063	1.108	1.111	1.090	1.154	7.3
Diethylphthalate	1.489	1.226	1.394	1.181	1.282	1.302	1.275	1.307	8.0
N-Nitrosodiphenylamine (1)	0.394	0.383	0.485	0.433	0.463	0.459	0.453	0.438	8.5
Hexachlorobenzene	0.376	0.301	0.330	0.268	0.276	0.273	0.274	0.300	13.4
Pentachlorophenol	0.145	0.138	0.182	0.166	0.190	0.205	0.220	0.178	17.1
Butylbenzylphthalate	0.361	0.291	0.415	0.320	0.389	0.402	0.419	0.371	13.3
Dibenzo(a,h)anthracene	0.974	0.783	0.989	0.789	0.879	0.896	0.932	0.892	9.2
N-Nitrosodimethylamine	0.902	0.860	0.851	0.863	0.840	0.902	0.815	0.862	3.7
2-Fluorophenol	1.520	1.352	1.446	1.312	1.367	1.434	1.396	1.404	4.9
Terphenyl-d14	0.565	0.465	0.538	0.444	0.480	0.471	0.478	0.492	8.8

(1) Cannot be seperated from Diphenylamine
<- Outside QC limits: %RSD <20% or R^2 > 0.990

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES

Instrument ID: NT10 Cont. Calib. Date: 06/13/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1307

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.020	2.385	0.800	AVRG	18.1	
1,3-Dichlorobenzene	1.664	1.562	0.010	AVRG	-6.1	
1,4-Dichlorobenzene	1.657	1.547	0.010	AVRG	-6.6	
1,2-Dichlorobenzene	1.574	1.500	0.010	AVRG	-4.7	
Benzyl alcohol	0.968	0.831	0.010	AVRG	-14.2	
2-Methylphenol	1.444	1.623	0.700	AVRG	12.4	
N-Nitroso-di-n-propylamine	0.829	0.860	0.500	AVRG	3.7	
4-Methylphenol	1.470	1.570	0.600	AVRG	6.8	
2,4-Dimethylphenol	0.387	0.380	0.200	AVRG	-1.8	
1,2,4-Trichlorobenzene	0.383	0.366	0.010	AVRG	-4.4	
Hexachlorobutadiene	0.233	0.217	0.010	AVRG	-6.9	
Dimethylphthalate	1.154	1.182	0.010	AVRG	2.4	
Diethylphthalate	1.307	1.368	0.010	AVRG	4.7	
N-Nitrosodiphenylamine(1)	0.438	0.479	0.010	AVRG	9.4	
Hexachlorobenzene	0.300	0.286	0.100	AVRG	-4.7	
Pentachlorophenol	0.178	0.166	0.050	AVRG	-6.7	
Butylbenzylphthalate	0.371	0.453	0.010	AVRG	22.1	<-
Dibenzo(a,h)anthracene	0.892	0.944	0.400	AVRG	5.8	
N-Nitrosodimethylamine	0.862	0.846	0.010	AVRG	-1.8	
2-Fluorophenol	1.405	1.429	0.010	AVRG	1.7	
Terphenyl-d14	0.492	0.508	0.010	AVRG	3.2	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WS21 : 20117

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS21 Project: NPDES

Ical Midpoint ID: IC0429D Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/13/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	52658	8.98	192325	11.65	109274	15.54
	UPPER LIMIT	105316		384650		218548	
	LOWER LIMIT	26329		96162		54637	
	CCAL	58483	8.06	213145	10.64	116288	14.43
	UPPER LIMIT		8.56		11.14		14.93
	LOWER LIMIT		7.56		10.14		13.93
01	WS49MBS1	56989	8.07	218544	10.64	119177	14.44
02	WS49LCSS1	57812	8.07	210144	10.64	114587	14.44
03	WS49LCSDS1	55629	8.07	203083	10.64	112054	14.44
04	FA-1-S	51149	8.07	192718	10.64	102356	14.44
05	FA-2-4	51777	8.07	197537	10.65	104929	14.45
06	FA-3-2	55896	8.07	213575	10.65	114040	14.45
07	FA-4-3	48857	8.07	186953	10.65	97684	14.45
08	KC-VT-1593-2	55422	8.07	212390	10.65	113058	14.45
09	KC-VT-1593-2	51687	8.07	189590	10.65	102081	14.45
10	KC-VT-1593-2	55494	8.07	202065	10.65	109663	14.45
11	KC-CB-01-201	56517	8.07	213384	10.65	114345	14.45
12	KC-DD-2009-2	54904	8.07	207233	10.65	112128	14.45
13	KC-IV-SPS-20	56710	8.07	214283	10.65	108036	14.45
14							
15							
16							
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22							
23							
24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS21 | Project: NPDES

Ical Midpoint ID: IC0429D | Ical Date: 04/29/13

Instrument ID: NT10 | Cont. Cal Date: 06/13/13

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	ICAL MIDPT	203933		18.82		223647		23.90		211919		26.35	
	UPPER LIMIT	407866				447294				423838			
	LOWER LIMIT	101966				111824				105960			
	CCAL	220667		17.63		232122		22.81		213159		25.07	
	UPPER LIMIT			18.13				23.31				25.57	
	LOWER LIMIT			17.13				22.31				24.57	
01	WS49MBS1	223736		17.64		232122		22.81		210573		25.07	
02	WS49LCSS1	211440		17.64		228571		22.81		213817		25.08	
03	WS49LCSDS1	206704		17.64		218716		22.81		207476		25.08	
04	FA-1-S	182203		17.64		184530		22.82		175902		25.10	
05	FA-2-4	187131		17.64		183259		22.82		180421		25.10	
06	FA-3-2	199383		17.64		198447		22.82		188502		25.11	
07	FA-4-3	174407		17.64		174319		22.82		171345		25.11	
08	KC-VT-1593-2	203862		17.65		197388		22.84		188689		25.12	
09	KC-VT-1593-2	174416		17.65		187437		22.83		181554		25.11	
10	KC-VT-1593-2	185441		17.65		204036		22.83		198486		25.11	
11	KC-CB-01-201	207913		17.64		204651		22.82		194068		25.11	
12	KC-DD-2009-2	188798		17.65		199317		22.83		185586		25.11	
13	KC-IV-SPS-20	198678		17.65		201377		22.82		192571		25.10	
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

WS21:00119

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: WS21

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: KC-IV-SPS-20130531-S

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 19:22
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.52	0.65-0.89		0.988	0.206	JEMPC
2,3,7,8-TCDD	0.72	0.65-0.89		0.988	1.54	B
1,2,3,7,8-PeCDF	1.27	1.32-1.78		0.988	0.245	BJEMPC
2,3,4,7,8-PeCDF	2.30	1.32-1.78		0.988	0.235	BJEMPC
1,2,3,7,8-PeCDD	1.32	1.32-1.78		0.988	0.277	J
1,2,3,4,7,8-HxCDF	1.12	1.05-1.43		0.988	0.518	BJ
1,2,3,6,7,8-HxCDF	1.14	1.05-1.43		0.988	0.324	BJ
2,3,4,6,7,8-HxCDF	1.41	1.05-1.43		0.988	0.237	BJ
1,2,3,7,8,9-HxCDF	1.64	1.05-1.43		0.988	0.233	JEMPC
1,2,3,4,7,8-HxCDD	1.54	1.05-1.43		0.988	0.101	JEMPC
1,2,3,6,7,8-HxCDD	1.10	1.05-1.43		0.988	0.510	J
1,2,3,7,8,9-HxCDD	1.16	1.05-1.43		0.988	0.366	J
1,2,3,4,6,7,8-HpCDF	0.94	0.88-1.20		0.988	1.37	B
1,2,3,4,7,8,9-HpCDF	0.72	0.88-1.20		0.988	0.227	JEMPC
1,2,3,4,6,7,8-HpCDD	0.98	0.88-1.20		0.988	4.64	B
OCDF	0.77	0.76-1.02		1.98	2.95	
OCDD	0.89	0.76-1.02		1.98	37.9	

Homologue Group	EDL	RL	Result	
Total TCDF		0.988	2.32	EMPC
Total TCDD		0.988	3.43	EMPC
Total PeCDF		1.98	5.37	EMPC
Total PeCDD		0.988	2.73	EMPC
Total HxCDF		1.98	4.03	EMPC
Total HxCDD		1.98	5.32	EMPC
Total HpCDF		1.98	4.25	EMPC
Total HpCDD		1.98	10.6	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 2.22

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 2.22

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: KC-IV-SPS-20130531-S

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 19:22
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	66.4	24-169	
13C-2,3,7,8-TCDD	0.76	0.65-0.89	73.5	25-164	
13C-1,2,3,7,8-PeCDF	1.53	1.32-1.78	73.8	24-185	
13C-2,3,4,7,8-PeCDF	1.54	1.32-1.78	71.6	21-178	
13C-1,2,3,7,8-PeCDD	1.53	1.32-1.78	78.4	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	81.9	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	82.1	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	79.2	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	76.1	29-147	
13C-1,2,3,4,7,8-HxCDD	1.24	1.05-1.43	87.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	86.4	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	68.7	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.43	0.37-0.51	69.0	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	78.8	23-140	
13C-OCDD	0.87	0.76-1.02	66.6	17-157	
37Cl4-2,3,7,8-TCDD			77.3	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-060513**
Page 1 of 1

Lab Sample ID: OPR-060513
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 17:38
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.78	0.65-0.89	1.00	19.7
2,3,7,8-TCDD	0.74	0.65-0.89	1.00	20.6
1,2,3,7,8-PeCDF	1.55	1.32-1.78	1.00	99.0
2,3,4,7,8-PeCDF	1.51	1.32-1.78	1.00	94.6
1,2,3,7,8-PeCDD	1.50	1.32-1.78	1.00	95.2
1,2,3,4,7,8-HxCDF	1.20	1.05-1.43	1.00	98.6
1,2,3,6,7,8-HxCDF	1.19	1.05-1.43	1.00	101
2,3,4,6,7,8-HxCDF	1.24	1.05-1.43	1.00	96.0
1,2,3,7,8,9-HxCDF	1.21	1.05-1.43	1.00	98.9
1,2,3,4,7,8-HxCDD	1.24	1.05-1.43	1.00	93.1
1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	1.00	97.4
1,2,3,7,8,9-HxCDD	1.32	1.05-1.43	1.00	88.9
1,2,3,4,6,7,8-HpCDF	1.01	0.88-1.20	1.00	110
1,2,3,4,7,8,9-HpCDF	0.99	0.88-1.20	1.00	94.8
1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	1.00	95.4
OCDF	0.85	0.76-1.02	2.00	182
OCDD	0.86	0.76-1.02	2.00	197

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	20.5	
Total TCDD		1.00	21.3	EMPC
Total PeCDF		2.00	200	EMPC
Total PeCDD		1.00	95.8	EMPC
Total HxCDF		2.00	398	EMPC
Total HxCDD		2.00	282	EMPC
Total HpCDF		2.00	208	EMPC
Total HpCDD		2.00	99.5	

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: OPR-060513

Lab Sample ID: OPR-060513
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 17:38
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.75	0.65-0.89	71.6	22-152	
13C-2,3,7,8-TCDD	0.76	0.65-0.89	82.8	20-175	
13C-1,2,3,7,8-PeCDF	1.53	1.32-1.78	78.9	21-192	
13C-2,3,4,7,8-PeCDF	1.53	1.32-1.78	75.2	13-328	
13C-1,2,3,7,8-PeCDD	1.55	1.32-1.78	83.3	21-227	
13C-1,2,3,4,7,8-HxCDF	0.50	0.43-0.59	88.0	19-202	
13C-1,2,3,6,7,8-HxCDF	0.49	0.43-0.59	95.2	21-159	
13C-2,3,4,6,7,8-HxCDF	0.50	0.43-0.59	86.4	22-176	
13C-1,2,3,7,8,9-HxCDF	0.50	0.43-0.59	75.2	17-205	
13C-1,2,3,4,7,8-HxCDD	1.24	1.05-1.43	93.6	21-193	
13C-1,2,3,6,7,8-HxCDD	1.23	1.05-1.43	99.9	25-163	
13C-1,2,3,4,6,7,8-HpCDF	0.43	0.37-0.51	71.8	21-158	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	69.6	20-186	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	80.8	26-166	
13C-OCDD	0.91	0.76-1.02	66.8	13-198	
37Cl4-2,3,7,8-TCDD			88.5	31-191	

Reported in Percent Recovery

WS21:09124

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: OPR-060513

Lab Sample ID: OPR-060513
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized:
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 17:38
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	OPR	Spiked	Recovery	Limits
2,3,7,8-TCDF	19.7	20.0	98.5	75-158
2,3,7,8-TCDD	20.6	20.0	103	67-158
1,2,3,7,8-PeCDF	99.0	100	99.0	80-134
2,3,4,7,8-PeCDF	94.6	100	94.6	68-160
1,2,3,7,8-PeCDD	95.2	100	95.2	70-142
1,2,3,4,7,8-HxCDF	98.6	100	98.6	72-134
1,2,3,6,7,8-HxCDF	101	100	101	84-130
2,3,4,6,7,8-HxCDF	96.0	100	96.0	70-156
1,2,3,7,8,9-HxCDF	98.9	100	98.9	78-130
1,2,3,4,7,8-HxCDD	93.1	100	93.1	70-164
1,2,3,6,7,8-HxCDD	97.4	100	97.4	76-134
1,2,3,7,8,9-HxCDD	88.9	100	88.9	64-162
1,2,3,4,6,7,8-HpCDF	110	100	110	82-132
1,2,3,4,7,8,9-HpCDF	94.8	100	94.8	78-138
1,2,3,4,6,7,8-HpCDD	95.4	100	95.4	70-140
OCDF	182	200	91.0	63-170
OCDD	197	200	98.5	78-144

Reported in pg/g

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

Blank No.
WR99MB

Lab Name: ANALYTICAL RESOURCES, INC.
Contract: SAIC
Lab Code: WR99
Project: NPDES SAMPLING
Matrix: (Soil/Water/Ash/Tissue/Oil) SOIL
Lab Sample ID: WR99MBS
Sample wt/vol: 10 (g/ml) g
Lab File ID: 13061704
Water Sample Prep: (sep/spe)
Date Received: 31-MAY-13
GC Column: RTX-DIOXIN2 ID: 0.25 mm
Date Extracted: 05-JUN-13
Instrument ID: AUTOSPEC1
Date Analyzed: 17-JUN-13

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
WR99OPR	WS30OPR	13061705	06/17/13
KC-IV-SPS-20130531-S	WS21A	13061707	06/17/13
KC-VT-1593-20130530-S	WR99D	13061709	06/17/13

WS21 : 091125

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: MB-060513

Lab Sample ID: MB-060513
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 16:45
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF		0.65-0.89	0.160	1.00	< 0.160	U
2,3,7,8-TCDD	0.67	0.65-0.89		1.00	0.212	J
1,2,3,7,8-PeCDF	1.02	1.32-1.78		1.00	0.296	JEMPC
2,3,4,7,8-PeCDF	1.29	1.32-1.78		1.00	0.326	JEMPC
1,2,3,7,8-PeCDD		1.32-1.78	0.190	1.00	< 0.190	U
1,2,3,4,7,8-HxCDF	1.30	1.05-1.43		1.00	0.182	J
1,2,3,6,7,8-HxCDF	0.66	1.05-1.43		1.00	0.202	JEMPC
2,3,4,6,7,8-HxCDF	1.96	1.05-1.43		1.00	0.206	JEMPC
1,2,3,7,8,9-HxCDF		1.05-1.43	0.124	1.00	< 0.124	U
1,2,3,4,7,8-HxCDD		1.05-1.43	0.156	1.00	< 0.156	U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.158	1.00	< 0.158	U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.158	1.00	< 0.158	U
1,2,3,4,6,7,8-HpCDF	1.88	0.88-1.20		1.00	0.162	JEMPC
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.188	1.00	< 0.188	U
1,2,3,4,6,7,8-HpCDD	0.72	0.88-1.20		1.00	0.502	JEMPC
OCDF		0.76-1.02	0.340	2.00	< 0.340	U
OCDD	1.16	0.76-1.02		2.00	3.18	EMPC

Homologue Group	EDL	RL	Result	
Total TCDF	0.160	1.00	< 0.160	U
Total TCDD		1.00	1.23	EMPC
Total PeCDF		2.00	0.773	EMPC
Total PeCDD	0.190	1.00	0.513	EMPC
Total HxCDF		2.00	0.591	EMPC
Total HxCDD	0.158	2.00	1.83	EMPC
Total HpCDF		2.00	0.322	EMPC
Total HpCDD		2.00	1.59	EMPC

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.39

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.52

Reported in pg/g

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

Sample ID: MB-060513

Lab Sample ID: MB-060513
LIMS ID: 13-11544
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/19/13

QC Report No: WR99-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/05/13
Date Analyzed: 06/17/13 16:45
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.76	0.65-0.89	69.8	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	76.4	25-164	
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	75.6	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	71.2	21-178	
13C-1,2,3,7,8-PeCDD	1.53	1.32-1.78	77.6	25-181	
13C-1,2,3,4,7,8-HxCDF	0.50	0.43-0.59	97.1	26-152	
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	104	26-123	
13C-2,3,4,6,7,8-HxCDF	0.50	0.43-0.59	94.2	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	79.8	29-147	
13C-1,2,3,4,7,8-HxCDD	1.20	1.05-1.43	99.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.21	1.05-1.43	110	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.43	0.37-0.51	82.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	74.0	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.01	0.88-1.20	89.8	23-140	
13C-OCDD	0.85	0.76-1.02	76.8	17-157	
37C14-2,3,7,8-TCDD			84.3	35-197	

Reported in Percent Recovery

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

Standard No.: CS3

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WR99 Project: NPDES SAMPLING

GC Column: RTX-DIOXIN2 ID: 0.25 mm Lab File ID: 13061702

Instrument ID: AUTOSPEC1 Date Analyzed: 17-JUN-13

Time Analyzed: 1449

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	24.36	27.84
TCDF	23.09	28.11
PeCDD	29.62	32.76
PeCDF	27.95	33.15
HxCDD	34.86	37.56
HxCDF	34.06	37.99
HpCDD	40.66	41.97
HpCDF	40.10	42.90

WR21:201129

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

Standard No.

TETRA ISC

Lab Name: ANALYTICAL RESOURCES, INC.
Lab Code: WR99
GC Column: RTX-DIOXIN2 ID: .25 mm
Instrument: AUTOSPEC1

Contract: SAIC
Project: NPDES SAMPLING
Lab File ID: 13061703
Date Analyzed: 17-JUN-13
Time Analyzed: 1554

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

1278-TCDD/2378-TCDD: 11.2

Quality Control (QC) Limits:
Percent Valley between the TCDD isomers must be less than or equal to 25%

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

3467-TCDF/2378-TCDF: 8.9

QC Limits:
Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WR99 Project: NPDES SAMPLING

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 06-JUN-13

Init: Calib. Times: 14:34 to 19:01

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
CS3	CS3	13061702	06/17/13	1449
ISC01	ISC	13061703	06/17/13	1554
WR99MB	WS30MBS	13061704	06/17/13	1645
WR99OPR	WS30OPR	13061705	06/17/13	1738
KC-IV-SPS-20130531-S	WS21A	13061707	06/17/13	1922
KC-VT-1593-20130530-S	WR99D	13061709	06/17/13	2107
CS3	CS3	13061713	06/18/13	0036

WS21 : 20131

6DFA - Form VI-HR CDD-1

CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY

HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WR99	Case No.:	NPDES SAMPLING
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	06-Jun-13	Init.Calib.Time CSL:	14:34:26
Init.Calib.Date CS1:	06-Jun-13	Init.Calib.Time CS1:	15:31:00
Init.Calib.Date CS2:	06-Jun-13	Init.Calib.Time CS2:	16:22:19
Init.Calib.Date CS3:	06-Jun-13	Init.Calib.Time CS3:	17:15:21
Init.Calib.Date CS4:	06-Jun-13	Init.Calib.Time CS4:	18:08:22
Init.Calib.Date CS5:	06-Jun-13	Init.Calib.Time CS5:	19:01:24

Target Analytes	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	0.00	0.88	0.91	0.94	0.97	0.99	0.94	4.5	20.0
2378-TCDF	0.00	0.82	0.83	0.83	0.83	0.85	0.83	1.6	20.0
12378-PeCDF	0.84	0.84	0.85	0.86	0.87	0.87	0.85	1.5	20.0
12378-PeCDD	0.91	0.93	0.93	0.93	0.94	0.95	0.93	1.2	20.0
23478-PeCDF	0.90	0.89	0.87	0.87	0.88	0.90	0.88	1.6	20.0
123478-HxCDF	1.04	1.01	1.01	0.99	1.02	1.03	1.02	1.7	20.0
123678-HxCDF	0.99	1.00	0.99	1.00	1.00	1.01	1.00	0.9	20.0
123478-HxCDD	0.95	0.92	0.91	0.91	0.93	0.95	0.93	2.0	20.0
123678-HxCDD	0.91	0.82	0.84	0.85	0.84	0.86	0.85	3.3	20.0
123789-HxCDD[2]	0.90	0.89	0.87	0.88	0.88	0.89	0.89	0.9	20.0
234678-HxCDF	1.01	1.07	1.09	1.06	1.07	1.11	1.07	3.1	20.0
123789-HxCDF	0.96	0.95	0.92	0.94	0.95	0.96	0.95	1.6	20.0
1234678-HpCDF	1.11	1.15	1.14	1.13	1.18	1.19	1.15	2.6	20.0
1234678-HpCDD	1.07	0.97	0.93	0.93	0.94	0.96	0.97	5.5	20.0
1234789-HpCDF	1.14	1.16	1.17	1.17	1.18	1.18	1.17	1.1	20.0
OCDD	0.92	0.93	0.91	0.92	0.92	0.94	0.92	1.2	20.0
OCDF[1]	1.06	0.95	0.97	0.98	1.00	1.04	1.00	3.9	20.0
37CL-2378-TCDD	0.93	0.94	1.00	0.96	1.01	1.09	0.99	5.9	20.0

(1) The Relative Response (RR) is calculated based on the labeled analogs of the other two HxCDDs.
(2) The RR is calculated based on the labeled analog of OCDD.

Labeled Compounds	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.90	0.89	0.93	0.91	0.93	0.99	0.93	3.7	35.0
13C-12378-PeCDD	0.68	0.70	0.70	0.72	0.77	0.83	0.73	7.3	35.0
13C-123478-HxCDD	0.97	0.98	0.98	0.99	0.98	1.00	0.98	1.0	35.0
13C-123678-HxCDD	1.00	1.04	1.02	1.06	1.06	1.08	1.04	2.7	35.0
13C-1234678-HpCDD	0.84	0.90	0.90	0.91	0.92	0.88	0.89	3.1	35.0
13C-OCDD	0.80	0.83	0.89	0.84	0.88	0.85	0.85	3.7	35.0
13C-2378-TCDF	1.29	1.25	1.28	1.26	1.29	1.33	1.28	2.1	35.0
13C-12378-PeCDF	0.99	1.01	1.02	1.02	1.07	1.20	1.05	7.6	35.0
13C-23478-PeCDF	0.95	0.99	0.99	1.02	1.07	1.16	1.03	7.4	35.0
13C-123478-HxCDF	1.05	1.06	1.07	1.08	1.06	1.09	1.07	1.4	35.0
13C-123678-HxCDF	1.11	1.11	1.13	1.12	1.12	1.15	1.12	1.4	35.0
13C-234678-HxCDF	1.08	1.03	1.03	1.03	1.04	1.04	1.04	1.8	35.0
13C-123789-HxCDF	1.00	1.04	1.05	1.04	1.05	1.05	1.04	2.0	35.0
13C-1234678-HpCDF	0.91	0.96	0.98	1.00	0.98	0.96	0.96	3.0	35.0
13C-1234789-HpCDF	0.73	0.75	0.78	0.76	0.78	0.75	0.76	2.7	35.0

6DFB - Form VI-HR CDD-2

CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WR99	Case No.:	NPDES SAMPLING
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	06-Jun-13	Init.Calib.Time CSL:	14:34:26
Init.Calib.Date CS1:	06-Jun-13	Init.Calib.Time CS1:	15:31:00
Init.Calib.Date CS2:	06-Jun-13	Init.Calib.Time CS2:	16:22:19
Init.Calib.Date CS3:	06-Jun-13	Init.Calib.Time CS3:	17:15:21
Init.Calib.Date CS4:	06-Jun-13	Init.Calib.Time CS4:	18:08:22
Init.Calib.Date CS5:	06-Jun-13	Init.Calib.Time CS5:	19:01:24

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.00	0.69	0.75	0.75	0.76	0.76		0.65 - 0.89
2378-TCDF	304/306	0.00	0.88	0.71	0.77	0.74	0.75		0.65 - 0.89
12378-PeCDF	340/342	1.44	1.50	1.55	1.55	1.53	1.52		1.32 - 1.78
12378-PeCDD	356/358	1.57	1.41	1.50	1.57	1.51	1.52		1.32 - 1.78
23478-PeCDF	340/342	1.54	1.60	1.54	1.51	1.53	1.52		1.32 - 1.78
123478-HxCDF	374/376	1.14	1.16	1.18	1.24	1.21	1.22		1.05 - 1.43
123678-HxCDF	374/376	1.20	1.19	1.24	1.23	1.22	1.21		1.05 - 1.43
123478-HxCDD	390/392	1.19	1.33	1.23	1.25	1.24	1.23		1.05 - 1.43
123678-HxCDD	390/392	1.21	1.12	1.20	1.19	1.23	1.22		1.05 - 1.43
123789-HxCDD	390/392	1.12	1.14	1.21	1.22	1.23	1.22		1.05 - 1.43
234678-HxCDF	374/376	1.22	1.27	1.24	1.20	1.23	1.21		1.05 - 1.43
123789-HxCDF	374/376	1.32	1.22	1.20	1.19	1.21	1.22		1.05 - 1.43
1234678-HpCDF	408/410	0.90	0.90	1.03	1.01	0.99	1.01		0.89 - 1.21
1234678-HpCDD	424/426	1.17	0.94	1.05	1.02	1.03	1.03		0.89 - 1.21
1234789-HpCDF	408/410	1.02	1.03	1.05	1.02	1.02	1.01		0.89 - 1.21
OCDD	458/460	0.76	0.89	0.84	0.86	0.89	0.88		0.76 - 1.02
OCDF	442/444	0.88	0.85	0.87	0.89	0.88	0.88		0.76 - 1.02

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0.77	0.78	0.76	0.77	0.78	0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	1.53	1.56	1.53	1.57	1.57	1.55		1.32 - 1.78
13C-123478-HxCDD	402/404	1.24	1.25	1.26	1.26	1.25	1.25		1.05 - 1.43
13C-123678-HxCDD	402/404	1.23	1.19	1.24	1.23	1.21	1.23		1.05 - 1.43
13C-1234678-HpCDD	436/438	1.03	1.05	1.03	1.03	1.02	1.05		0.89 - 1.21
13C-OCDD	470/472	0.89	0.88	0.89	0.88	0.89	0.89		0.76 - 1.02
13C-2378-TCDF	316/318	0.77	0.76	0.77	0.77	0.77	0.76		0.65 - 0.89
13C-12378-PeCDF	352/354	1.55	1.57	1.56	1.55	1.55	1.56		1.32 - 1.78
13C-23478-PeCDF	352/354	1.57	1.55	1.55	1.55	1.56	1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	0.51	0.52	0.52	0.52	0.51	0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	0.52	0.51	0.51	0.52	0.51	0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	0.51	0.53	0.51	0.52	0.51	0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	0.52	0.51	0.51	0.51	0.52	0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.45	0.44	0.45	0.44	0.44	0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.45	0.44	0.43	0.44	0.45	0.45		0.37 - 0.51

Internal Standards	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ion Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-1234-TCDD	332/334	0.78	0.78	0.79	0.78	0.79	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	1.25	1.24	1.21	1.21	1.22	1.24		1.05 - 1.43

(#) Quality Control (QC) limits represent ±15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

WS21 : 201133

7DFA - Form VII-HR CDD-1

CDD/CDF CONTINUING CALIBRATION SUMMARY

HIGH RESOLUTION

Lab Name:	ARI	Contract:	SAIC
Lab Code:	WR99	Case No.:	NPDES SAMPLING
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13061702
Date Analysed	17-Jun-13	Time Analysed	14:49:09
Init.Calib.Date:	06-JUN-13	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	0.96	0.94	2.3		0.76		0.65 - 0.89
2378-TCDF	304/306	0.83	0.83	-0.6		0.75		0.65 - 0.89
12378-PeCDF	340/342	0.84	0.85	-1.6		1.52		1.32 - 1.78
12378-PeCDD	356/358	0.88	0.93	-5.1		1.55		1.32 - 1.78
23478-PeCDF	340/342	0.84	0.88	-4.8		1.49		1.32 - 1.78
123478-HxCDF	374/376	0.99	1.02	-3.0		1.18		1.05 - 1.43
123678-HxCDF	374/376	0.99	1.00	-1.4		1.17		1.05 - 1.43
123478-HxCDD	390/392	0.89	0.93	-4.2		1.23		1.05 - 1.43
123678-HxCDD	390/392	0.81	0.85	-5.5		1.21		1.05 - 1.43
123789-HxCDD	390/392	0.80	0.89	-9.2		1.26		1.05 - 1.43
234678-HxCDF	374/376	1.03	1.07	-3.1		1.24		1.05 - 1.43
123789-HxCDF	374/376	0.92	0.95	-2.8		1.23		1.05 - 1.43
1234678-HpCDF	408/410	1.11	1.15	-3.6		1.02		0.89 - 1.21
1234678-HpCDD	424/426	0.88	0.97	-9.2		1.02		0.89 - 1.21
1234789-HpCDF	408/410	1.12	1.17	-4.1		1.03		0.89 - 1.21
OCDD	458/460	0.87	0.92	-5.2		0.88		0.76 - 1.02
OCDF	442/444	0.90	1.00	-10.0		0.90		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.82	0.93	-11.6		0.76		0.65 - 0.89
13C-12378-PeCDD	368/370	0.65	0.73	-11.5		1.52		1.32 - 1.78
13C-123478-HxCDD	402/404	1.05	0.98	6.7		1.24		1.05 - 1.43
13C-123678-HxCDD	402/404	1.12	1.04	7.7		1.24		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.91	0.89	2.6		1.03		0.89 - 1.21
13C-OCDD	470/472	0.89	0.85	4.7		0.87		0.76 - 1.02
13C-2378-TCDF	316/318	1.05	1.28	-18.4		0.74		0.65 - 0.89
13C-12378-PeCDF	352/354	0.88	1.05	-16.4		1.53		1.32 - 1.78
13C-23478-PeCDF	352/354	0.86	1.03	-16.5		1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	1.12	1.07	5.2		0.50		0.43 - 0.59
13C-123678-HxCDF	384/386	1.17	1.12	4.5		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	1.04	1.04	0.2		0.50		0.43 - 0.59
13C-123789-HxCDF	384/386	0.94	1.04	-9.5		0.51		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.93	0.96	-3.2		0.43		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.69	0.76	-9.5		0.44		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	0.87	0.99	-11.9		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.21		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	SAIC
Lab Code:	WR99	Case No.:	NPDES SAMPLING
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13061702
Date Analysed	17-Jun-13	Time Analysed	14:49:09
Init.Calib.Date:	06-JUN-13	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	27.24
2378-TCDF	1.00	26.60
12378-PeCDF	1.00	30.76
12378-PeCDD	1.00	32.36
23478-PeCDF	1.00	32.11
123478-HxCDF	1.00	35.79
123678-HxCDF	1.00	35.95
123478-HxCDD	1.00	37.02
123678-HxCDD	1.00	37.14
123789-HxCDD	1.01	37.56
234678-HxCDF	1.00	36.89
123789-HxCDF	1.00	37.99
1234678-HpCDF	1.00	40.10
1234678-HpCDD	1.00	41.98
1234789-HpCDF	1.00	42.90
OCDD	1.00	48.10
OCDF	1.01	48.39

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.23
13C-12378-PeCDD	1.22	32.34
13C-123478-HxCDD	0.99	37.00
13C-123678-HxCDD	0.99	37.13
13C-1234678-HpCDD	1.12	41.95
13C-OCDD	1.28	48.08
13C-2378-TCDF	1.01	26.59
13C-12378-PeCDF	1.16	30.74
13C-23478-PeCDF	1.22	32.09
13C-123478-HxCDF	0.95	35.77
13C-123678-HxCDF	0.96	35.93
13C-234678-HxCDF	0.98	36.87
13C-123789-HxCDF	1.01	37.98
13C-1234678-HpCDF	1.07	40.08
13C-1234789-HpCDF	1.14	42.88

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	27.24

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.41
13C-123789-HxCDD	0.00	37.55

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	SAIC
Lab Code:	WR99	Case No.:	NPDES SAMPLING
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13061713
Date Analysed	18-Jun-13	Time Analysed	00:36:31
Init.Calib.Date:	06-JUN-13	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	0.92	0.94	-1.9		0.76		0.65 - 0.89
2378-TCDF	304/306	0.76	0.83	-8.3		0.74		0.65 - 0.89
12378-PeCDF	340/342	0.81	0.85	-5.6		1.45		1.32 - 1.78
12378-PeCDD	356/358	0.86	0.93	-7.4		1.50		1.32 - 1.78
23478-PeCDF	340/342	0.81	0.88	-8.3		1.50		1.32 - 1.78
123478-HxCDF	374/376	0.95	1.02	-6.2		1.22		1.05 - 1.43
123678-HxCDF	374/376	0.95	1.00	-4.5		1.17		1.05 - 1.43
123478-HxCDD	390/392	0.84	0.93	-9.2		1.24		1.05 - 1.43
123678-HxCDD	390/392	0.83	0.85	-3.2		1.22		1.05 - 1.43
123789-HxCDD	390/392	0.79	0.89	-10.8		1.19		1.05 - 1.43
234678-HxCDF	374/376	1.03	1.07	-3.6		1.21		1.05 - 1.43
123789-HxCDF	374/376	0.88	0.95	-7.0		1.16		1.05 - 1.43
1234678-HpCDF	408/410	1.11	1.15	-3.9		0.97		0.89 - 1.21
1234678-HpCDD	424/426	0.88	0.97	-9.3		1.01		0.89 - 1.21
1234789-HpCDF	408/410	1.12	1.17	-4.2		0.99		0.89 - 1.21
OCDD	458/460	0.88	0.92	-4.8		0.88		0.76 - 1.02
OCDF	442/444	0.87	1.00	-13.1		0.87		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.92	0.93	-0.3		0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	0.71	0.73	-3.8		1.56		1.32 - 1.78
13C-123478-HxCDD	402/404	1.04	0.98	5.6		1.23		1.05 - 1.43
13C-123678-HxCDD	402/404	1.08	1.04	3.9		1.21		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.84	0.89	-5.3		1.03		0.89 - 1.21
13C-OCDD	470/472	0.81	0.85	-4.7		0.87		0.76 - 1.02
13C-2378-TCDF	316/318	1.16	1.28	-9.3		0.76		0.65 - 0.89
13C-12378-PeCDF	352/354	0.93	1.05	-11.6		1.52		1.32 - 1.78
13C-23478-PeCDF	352/354	0.91	1.03	-11.4		1.51		1.32 - 1.78
13C-123478-HxCDF	384/386	1.06	1.07	-0.7		0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	1.11	1.12	-1.2		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	0.98	1.04	-5.4		0.50		0.43 - 0.59
13C-123789-HxCDF	384/386	0.94	1.04	-9.4		0.51		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.84	0.96	-13.2		0.43		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.64	0.76	-15.3		0.43		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	0.98	0.99	-1.1		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.22		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	SAIC
Lab Code:	WR99	Case No.:	NPDES SAMPLING
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13061713
Date Analysed	18-Jun-13	Time Analysed	00:36:31
Init.Calib.Date:	06-JUN-13	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	27.20
2378-TCDF	1.00	26.56
12378-PeCDF	1.00	30.72
12378-PeCDD	1.00	32.33
23478-PeCDF	1.00	32.07
123478-HxCDF	1.00	35.75
123678-HxCDF	1.00	35.90
123478-HxCDD	1.00	36.98
123678-HxCDD	1.00	37.11
123789-HxCDD	1.01	37.53
234678-HxCDF	1.00	36.85
123789-HxCDF	1.00	37.97
1234678-HpCDF	1.00	40.07
1234678-HpCDD	1.00	41.93
1234789-HpCDF	1.00	42.85
OCDD	1.00	48.06
OCDF	1.01	48.35

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.18
13C-12378-PeCDD	1.23	32.31
13C-123478-HxCDD	0.99	36.97
13C-123678-HxCDD	0.99	37.10
13C-1234678-HpCDD	1.12	41.91
13C-OCDD	1.28	48.03
13C-2378-TCDF	1.01	26.54
13C-12378-PeCDF	1.16	30.71
13C-23478-PeCDF	1.22	32.06
13C-123478-HxCDF	0.95	35.74
13C-123678-HxCDF	0.96	35.88
13C-234678-HxCDF	0.98	36.84
13C-123789-HxCDF	1.01	37.94
13C-1234678-HpCDF	1.07	40.05
13C-1234789-HpCDF	1.14	42.84

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	27.20

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.36
13C-123789-HxCDD	0.00	37.52

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WS21

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: KC-IV-SPS-20130531-S
SAMPLE

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/14/13 14:55
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.0 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 19.0%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.39	2.4	< 2.4 U
319-85-7	beta-BHC	0.67	2.4	< 2.4 U
319-86-8	delta-BHC	0.39	2.4	< 2.4 U
58-89-9	gamma-BHC (Lindane)	0.23	2.4	< 2.4 U
76-44-8	Heptachlor	0.64	2.4	< 2.4 U
309-00-2	Aldrin	0.26	2.4	< 2.4 U
1024-57-3	Heptachlor Epoxide	0.41	4.8	< 4.8 U
959-98-8	Endosulfan I	0.35	2.4	< 2.4 U
60-57-1	Dieldrin	0.48	4.8	< 4.8 U
72-55-9	4,4'-DDE	0.60	4.8	< 4.8 U
72-20-8	Endrin	1.0	4.8	< 4.8 U
33213-65-9	Endosulfan II	0.56	4.8	< 4.8 U
72-54-8	4,4'-DDD	0.65	4.8	< 4.8 U
1031-07-8	Endosulfan Sulfate	0.92	4.8	< 4.8 U
50-29-3	4,4'-DDT	0.92	4.8	< 4.8 U
72-43-5	Methoxychlor	3.4	24	< 24 U
53494-70-5	Endrin Ketone	0.57	4.8	< 4.8 U
7421-93-4	Endrin Aldehyde	1.0	4.8	< 4.8 U
5103-74-2	trans-Chlordane	0.37	2.4	< 2.4 U
5103-71-9	cis-Chlordane	0.25	2.4	< 2.4 U
8001-35-2	Toxaphene	170	480	< 480 U
118-74-1	Hexachlorobenzene	0.45	4.8	< 4.8 U
87-68-3	Hexachlorobutadiene	0.66	4.8	< 4.8 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	73.4%
Tetrachlorometaxylene	76.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-061013	88.8%	79.8%	0
LCS-061013	81.5%	74.0%	0
KC-IV-SPS-20130531-S	73.4%	76.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(60-149)	(36-182)
(TCMX) = Tetrachlorometaxylene	(47-124)	(34-169)

Prep Method: SW3546
Log Number Range: 13-11678 to 13-11678

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-061013
LAB CONTROL

Lab Sample ID: LCS-061013
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/14/13 12:49
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
alpha-BHC	3.70	4.00	92.5%
beta-BHC	3.78	4.00	94.5%
delta-BHC	4.10	4.00	102%
gamma-BHC (Lindane)	3.92	4.00	98.0%
Heptachlor	3.88	4.00	97.0%
Aldrin	3.82	4.00	95.5%
Heptachlor Epoxide	4.24	4.00	106%
Endosulfan I	4.12	4.00	103%
Dieldrin	8.22	8.00	103%
4,4'-DDE	9.60	8.00	120%
Endrin	7.98	8.00	99.8%
Endosulfan II	7.34	8.00	91.8%
4,4'-DDD	6.86	8.00	85.8%
Endosulfan Sulfate	7.18	8.00	89.8%
4,4'-DDT	7.18	8.00	89.8%
Methoxychlor	35.0	40.0	87.5%
Endrin Ketone	6.90	8.00	86.2%
Endrin Aldehyde	3.24	8.00	40.5%
trans-Chlordane	4.12	4.00	103%
cis-Chlordane	4.12	4.00	103%
Hexachlorobenzene	3.64	4.00	91.0%
Hexachlorobutadiene	3.12	4.00	78.0%

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	81.5%
Tetrachlorometaxylene	74.0%

Reported in µg/kg (ppb)

FORM III

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WR99MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WR99
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WR99MBS1
Lab File ID: 0614A020

Date Extracted: 06/10/13
Matrix: SOLID

Date Analyzed: 06/14/13
Instrument ID: ECD6

Time Analyzed: 1231
GC Columns: STX-CLP1/STX-CLP2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WR99LCSS1	WR99LCSS1	06/14/13
02	KC-VT-1593-20130530	WR99D	06/14/13
03	KC-VT-1593-2013 MS	WR99DMS	06/14/13
04	KC-VT-1593-2013 MSD	WR99DMSD	06/14/13
05	KC-CB-01-20130530-S	WR99E	06/14/13
06	KC-DD-2009-20130530	WR99F	06/14/13
07	KC-IV-SPS-20130531-	WS21A	06/14/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: MB-061013
METHOD BLANK

Lab Sample ID: MB-061013
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/10/13
Date Analyzed: 06/14/13 12:31
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.081	0.50	< 0.50 U
319-85-7	beta-BHC	0.14	0.50	< 0.50 U
319-86-8	delta-BHC	0.082	0.50	< 0.50 U
58-89-9	gamma-BHC (Lindane)	0.048	0.50	< 0.50 U
76-44-8	Heptachlor	0.13	0.50	< 0.50 U
309-00-2	Aldrin	0.055	0.50	< 0.50 U
1024-57-3	Heptachlor Epoxide	0.085	1.0	< 1.0 U
959-98-8	Endosulfan I	0.072	0.50	< 0.50 U
60-57-1	Dieldrin	0.10	1.0	< 1.0 U
72-55-9	4,4'-DDE	0.12	1.0	< 1.0 U
72-20-8	Endrin	0.22	1.0	< 1.0 U
33213-65-9	Endosulfan II	0.12	1.0	< 1.0 U
72-54-8	4,4'-DDD	0.14	1.0	< 1.0 U
1031-07-8	Endosulfan Sulfate	0.19	1.0	< 1.0 U
50-29-3	4,4'-DDT	0.19	1.0	< 1.0 U
72-43-5	Methoxychlor	0.70	5.0	< 5.0 U
53494-70-5	Endrin Ketone	0.12	1.0	< 1.0 U
7421-93-4	Endrin Aldehyde	0.22	1.0	< 1.0 U
5103-74-2	trans-Chlordane	0.077	0.50	< 0.50 U
5103-71-9	cis-Chlordane	0.051	0.50	< 0.50 U
8001-35-2	Toxaphene	35	100	< 100 U
118-74-1	Hexachlorobenzene	0.094	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.14	1.0	< 1.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	88.8%
Tetrachlorometaxylene	79.8%

FORM I

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

	RT OF STANDARDS							MEAN	RT WINDOW	
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.33	4.33	4.33	4.33	4.28	4.33	4.33	4.32	4.23	4.33
beta-BHC	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.59	4.69
delta-BHC	4.86	4.86	4.86	4.86	4.81	4.86	4.86	4.85	4.76	4.86
gamma-BHC (Lindane)	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.52	4.62
Heptachlor	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	4.96	5.06
Aldrin	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.25	5.35
Heptachlor epoxide b	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.83	5.93
Endosulfan I	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.21	6.31
Dieldrin	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.43	6.53
4,4'-DDE	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.13	6.23
Endrin	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.65	6.75
Endosulfan II	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.85	6.95
4,4'-DDD	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Endosulfan sulfate	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.62	7.72
4,4'-DDT	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.94	7.04
Methoxychlor	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.37	7.47
Endrin ketone	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.92	7.88	7.98
Endrin aldehyde	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.23	7.33
gamma-Chlordane	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.95	6.05
alpha-Chlordane	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.07	6.17
Hexachlorobutadiene	2.34	2.34	2.34	2.34	2.31	2.34	2.34	2.34	2.26	2.36
Hexachlorobenzene	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.09	4.19
Tetrachloro-m-xylene	3.84	3.84	3.84	3.84	3.80	3.84	3.83	3.83	3.75	3.85
Decachlorobiphenyl	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.72	8.82

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

	RT OF STANDARDS							MEAN	RT WINDOW	
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.76	4.76	4.76	4.75	4.71	4.75	4.75	4.75	4.66	4.76
beta-BHC	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.09	5.19
delta-BHC	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.40	5.50
gamma-BHC (Lindane)	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.01	5.11
Heptachlor	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.48	5.58
Aldrin	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.82	5.92
Heptachlor epoxide b	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.37	6.47
Endosulfan I	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.76	6.86
Dieldrin	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.02	7.12
4,4'-DDE	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.82	6.92
Endrin	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.31	7.41
Endosulfan II	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.49	7.59
4,4'-DDD	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.36	7.46
Endosulfan sulfate	8.14	8.14	8.14	8.14	8.09	8.14	8.13	8.13	8.04	8.14
4,4'-DDT	7.75	7.75	7.75	7.75	7.69	7.74	7.74	7.74	7.64	7.74
Methoxychlor	8.33	8.33	8.33	8.33	8.28	8.33	8.33	8.32	8.23	8.33
Endrin ketone	8.63	8.63	8.63	8.63	8.58	8.63	8.63	8.62	8.53	8.63
Endrin aldehyde	7.90	7.90	7.89	7.89	7.84	7.89	7.89	7.89	7.79	7.89
gamma-Chlordane	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.55	6.65
alpha-Chlordane	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Hexachlorobutadiene	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.42	2.52
Hexachlorobenzene	4.64	4.64	4.64	4.63	4.58	4.63	4.63	4.63	4.53	4.63
Tetrachloro-m-xylene	4.17	4.17	4.17	4.17	4.13	4.17	4.17	4.16	4.08	4.18
Decachlorobiphenyl	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.67	9.77

6E

8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.5968	1.5392	1.5872	1.6901	1.7297	1.7443	2.0426	1.7043	9.9
beta-BHC	0.7301	0.6823	0.6738	0.6482	0.6413	0.6319	0.7220	0.6756	5.7
delta-BHC	1.2786	1.2619	1.3188	1.4477	1.4389	1.4775	1.7328	1.4223	11.4
gamma-BHC (Lindane)	1.3776	1.3221	1.3739	1.4737	1.5045	1.5173	1.7699	1.4770	10.1
Heptachlor	1.4402	1.3545	1.3699	1.4447	1.4364	1.4095	1.5937	1.4356	5.4
Aldrin	1.3391	1.3219	1.3589	1.4306	1.4442	1.4284	1.6236	1.4210	7.2
Heptachlor epoxide b	1.3188	1.2294	1.2355	1.2904	1.2630	1.2402	1.3930	1.2815	4.6
Endosulfan I	1.3372	1.2241	1.1948	1.2064	1.1670	1.1231	1.2589	1.2159	5.6
Dieldrin	1.2814	1.2331	1.2629	1.3180	1.2916	1.2529	1.4056	1.2922	4.4
4,4'-DDE	1.0790	0.9920	0.9834	1.0026	1.0023	1.0038	1.1801	1.0347	6.9
Endrin	1.0004	0.9514	0.9880	1.0588	1.0584	1.0706	1.2004	1.0468	7.7
Endosulfan II	1.1252	1.0889	1.0545	1.1510	1.1162	1.1303	1.2764	1.1346	6.2
4,4'-DDD	1.2252	1.1470	1.1595	1.2032	1.1608	1.1774	1.3268	1.2000	5.2
Endosulfan sulfate	1.0443	0.9656	0.9745	1.0088	0.9846	1.0061	1.1424	1.0180	6.0
4,4'-DDT	1.0032	0.9598	0.9927	1.0672	1.0551	1.1004	1.2648	1.0633	9.5
Methoxychlor	0.5427	0.5024	0.4926	0.4960	0.4752	0.4831	0.5639	0.5080	6.4
Endrin ketone	1.4418	1.2742	1.2510	1.2600	1.2054	1.2244	1.3916	1.2926	6.9
Endrin aldehyde	1.0145	0.9294	0.9220	0.9490	0.9087	0.9217	1.0364	0.9545	5.3
gamma-Chlordane	1.3433	1.2904	1.3019	1.3866	1.3786	1.3702	1.5490	1.3743	6.2
alpha-Chlordane	1.2651	1.1864	1.2049	1.2783	1.2847	1.2776	1.4501	1.2782	6.7
Hexachlorobutadiene	1.7932	1.6939	1.7496	1.7815	1.7512	1.7130	1.9878	1.7814	5.5
Hexachlorobenzene	1.4975	1.3905	1.3345	1.3248	1.2691	1.2270	1.3907	1.3477	6.6
Tetrachloro-m-xylene	1.0573	1.0250	1.0491	1.0957	1.1043	1.0784	1.2256	1.0908	6.0
Decachlorobiphenyl	1.3691	1.1703	1.1864	1.0954	1.0150	0.9957	1.1297	1.1374	11.0

6E

8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 05/14/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.5964	1.6078	1.7179	1.8556	1.8716	1.8406	2.0861	1.7966	9.6
beta-BHC	0.6754	0.6491	0.6617	0.6966	0.7003	0.6895	0.7649	0.6911	5.4
delta-BHC	1.2504	1.2562	1.3640	1.5177	1.5783	1.5735	1.7885	1.4755	13.3
gamma-BHC (Lindane)	1.4128	1.3982	1.4757	1.5963	1.6109	1.5910	1.8271	1.5588	9.5
Heptachlor	1.5214	1.4662	1.5073	1.5651	1.5171	1.4171	1.4920	1.4980	3.1
Aldrin	1.3673	1.3404	1.3839	1.4765	1.4663	1.3818	1.4814	1.4139	4.2
Heptachlor epoxide b	1.3111	1.1809	1.2247	1.2731	1.2517	1.1802	1.2468	1.2384	3.8
Endosulfan I	1.1289	1.0916	1.1276	1.1988	1.1753	1.1147	1.1712	1.1440	3.4
Dieldrin	1.2194	1.2005	1.1957	1.2291	1.1560	1.0591	1.1010	1.1658	5.5
4,4'-DDE	1.2420	1.2138	1.2482	1.2889	1.2055	1.1204	1.1599	1.2112	4.7
Endrin	1.5490	1.4864	1.5394	1.5891	1.5221	1.4268	1.4967	1.5156	3.4
Endosulfan II	1.8235	1.7385	1.7960	1.8865	1.7723	1.6578	1.7732	1.7782	4.0
4,4'-DDD	1.8815	1.7757	1.8133	1.8367	1.7370	1.6484	1.7986	1.7844	4.2
Endosulfan sulfate	1.4746	1.3972	1.4421	1.4952	1.4478	1.4024	1.5233	1.4546	3.2
4,4'-DDT	1.4079	1.3584	1.4277	1.5130	1.4495	1.4659	1.6656	1.4697	6.7
Methoxychlor	0.6750	0.6230	0.6058	0.5795	0.5179	0.4760	0.4876	0.5664	13.2
Endrin ketone	1.7032	1.5827	1.5941	1.6097	1.5259	1.4661	1.6076	1.5842	4.7
Endrin aldehyde	1.5133	1.4032	1.4138	1.4303	1.3655	1.3052	1.4070	1.4055	4.5
gamma-Chlordane	1.2795	1.2138	1.2586	1.3396	1.3316	1.2796	1.3829	1.2979	4.4
alpha-Chlordane	1.1495	1.1150	1.1611	1.2432	1.2285	1.1863	1.2871	1.1958	5.0
Hexachlorobutadiene	1.6005	1.4941	1.4733	1.5378	1.4342	1.4100	1.5669	1.5024	4.6
Hexachlorobenzene	1.9113	1.8141	1.8472	1.9384	1.8917	1.8032	1.9964	1.8860	3.7
Tetrachloro-m-xylene	1.3675	1.3120	1.3324	1.3607	1.2884	1.2131	1.2297	1.3005	4.7
Decachlorobiphenyl	1.8027	1.6202	1.5938	1.5991	1.5250	1.4884	1.6834	1.6161	6.4

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 14-JUN-2013 15:13 Init. Calib. Date: 14-MAY-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.181	183977
Endrin	6.697	8101516
4,4'-DDD	6.737	496821
4,4'-DDT	6.994	7481873
Endrin ketone	7.924	416725
Endrin aldehyde	7.279	210281

DDT Percent Breakdown = 8.3 %
((183977+496821) * 100)/(183977+496821+7481873)

Endrin Percent Breakdown = 7.2 %
((210281+416725) * 100)/(210281+416725+8101516)

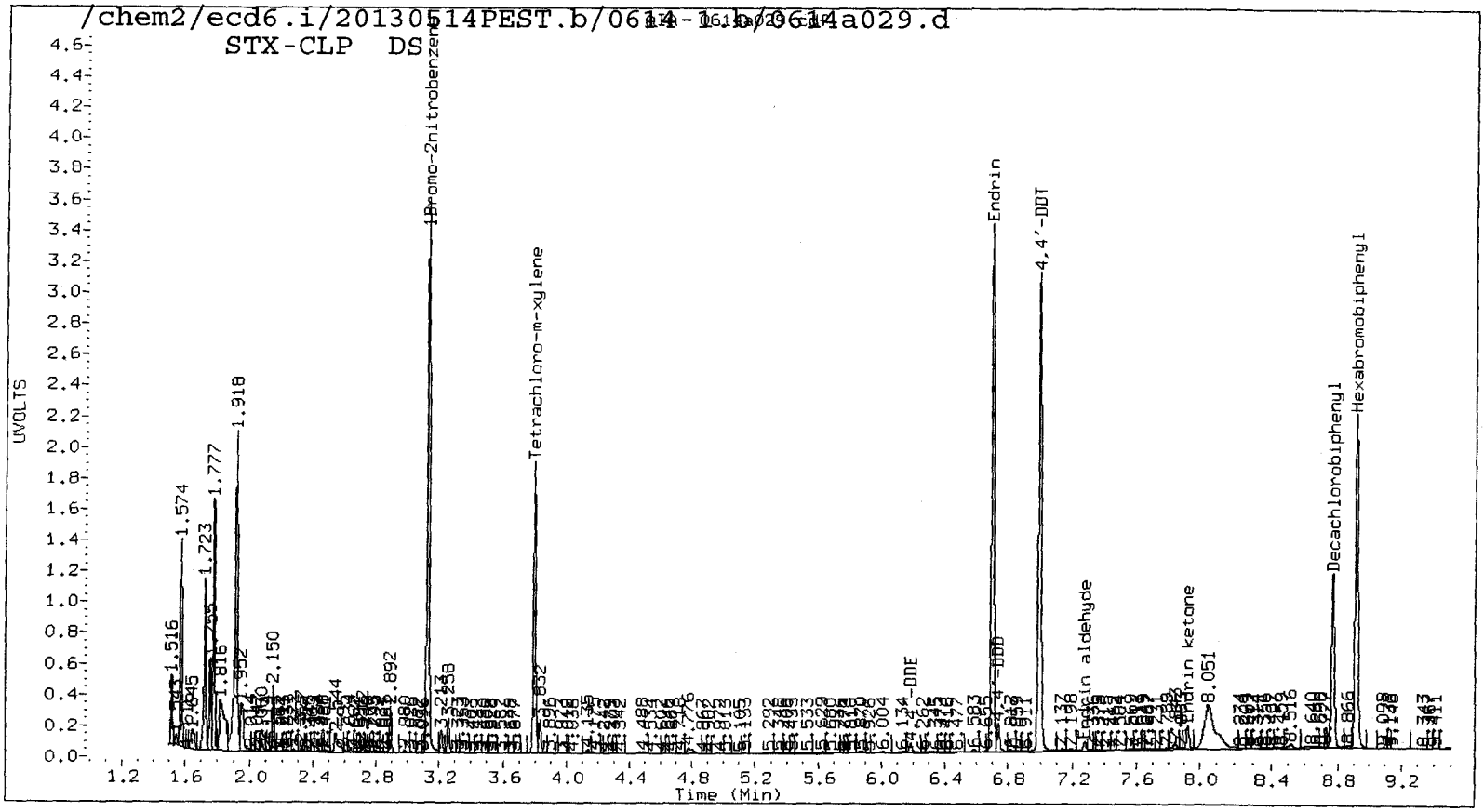
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.868	511711
Endrin	7.355	21695125
4,4'-DDD	7.406	1451061
4,4'-DDT	7.693	18509152
Endrin ketone	8.576	956578
Endrin aldehyde	7.841	455549

DDT Percent Breakdown = 9.6 %
((511711+1451061) * 100)/(511711+1451061+18509152)

Endrin Percent Breakdown = 6.1 %
((455549+956578) * 100)/(455549+956578+21695125)

Form VII Pest-1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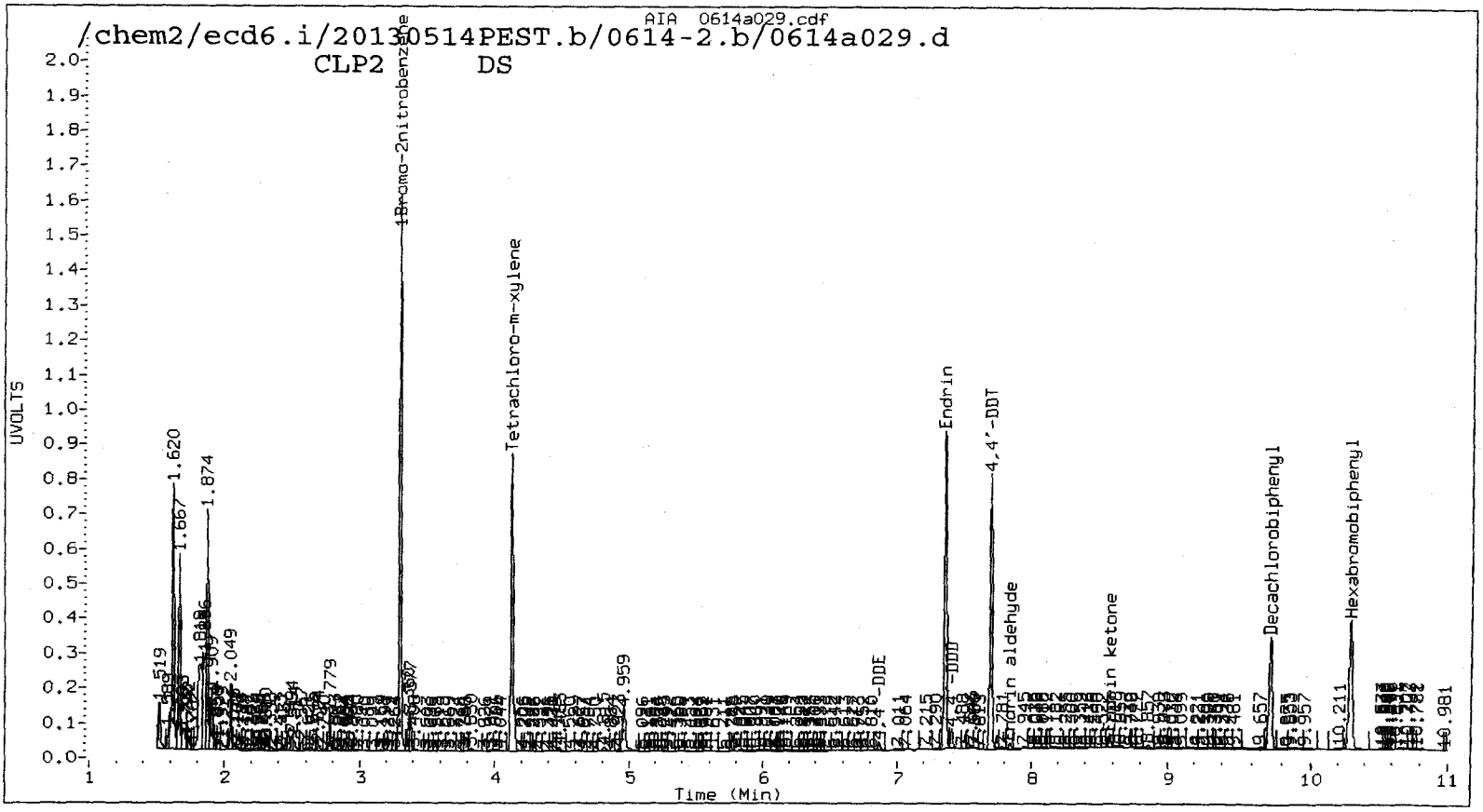
STX-CLP DS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
4,4'-DDE
Endrin aldehyde
Endrin ketone
1.516
1.574
1.723
1.777
1.816
1.918
1.952
2.150
1.892
2.238
2.832
6.134
6.004
8.051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CLP2 DS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
4,4'-DDE
Endrin aldehyde
Endrin ketone
1.620
1.667
1.874
2.049
2.779
4.959
6.014
7.250
9.657
10.211
10.981

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAB Date/Time Analyzed: 05/14/13,1517

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.33	4.23	4.33	2.3	2.5	-9.7
beta-BHC	4.72	4.59	4.69	2.5	2.5	1.0
delta-BHC	4.89	4.76	4.86	2.2	2.5	-11.3
gamma-BHC (Lindane)	4.62	4.52	4.62	2.2	2.5	-10.5
Heptachlor	5.07	4.96	5.06	2.4	2.5	-5.6
Aldrin	5.36	5.25	5.35	2.3	2.5	-7.0
Heptachlor epoxide b	5.94	5.83	5.93	2.4	2.5	-4.1
Endosulfan I	6.31	6.21	6.31	2.5	2.5	0.7
Dieldrin	6.54	6.43	6.53	4.8	5.0	-4.6
4,4'-DDE	6.24	6.13	6.23	4.8	5.0	-4.1
Endrin	6.76	6.65	6.75	4.5	5.0	-9.1
Endosulfan II	6.96	6.85	6.95	4.8	5.0	-4.0
4,4'-DDD	6.81	6.69	6.79	4.8	5.0	-4.4
Endosulfan sulfate	7.73	7.62	7.72	4.7	5.0	-5.2
4,4'-DDT	7.06	6.94	7.04	4.5	5.0	-9.7
Methoxychlor	7.49	7.37	7.47	24.7	25.0	-1.1
Endrin ketone	7.99	7.88	7.98	4.9	5.0	-1.4
Endrin aldehyde	7.34	7.23	7.33	4.9	5.0	-2.6
gamma-Chlordane	6.06	5.95	6.05	2.3	2.5	-6.1
alpha-Chlordane	6.18	6.07	6.17	2.3	2.5	-7.2
Hexachlorobutadiene	2.34	2.26	2.36	2.4	2.5	-4.9
Hexachlorobenzene	4.19	4.09	4.19	2.6	2.5	3.2
Tetrachloro-m-xylene	3.84	3.75	3.85	4.7	5.0	-6.0
Decachlorobiphenyl	8.83	8.72	8.82	5.1	5.0	2.9

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAB Date/Time Analyzed: 05/14/13,1517

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.76	4.66	4.76	2.2	2.5	-10.5
beta-BHC	5.20	5.09	5.19	2.3	2.5	-6.1
delta-BHC	5.51	5.40	5.50	2.1	2.5	-14.9
gamma-BHC (Lindane)	5.12	5.01	5.11	2.2	2.5	-10.3
Heptachlor	5.58	5.48	5.58	2.4	2.5	-2.1
Aldrin	5.92	5.82	5.92	2.4	2.5	-5.2
Heptachlor epoxide b	6.47	6.37	6.47	2.4	2.5	-4.6
Endosulfan I	6.86	6.76	6.86	2.4	2.5	-4.6
Dieldrin	7.12	7.02	7.12	5.1	5.0	3.0
4,4'-DDE	6.92	6.82	6.92	5.0	5.0	0.2
Endrin	7.41	7.31	7.41	4.9	5.0	-1.9
Endosulfan II	7.60	7.49	7.59	4.9	5.0	-2.2
4,4'-DDD	7.47	7.36	7.46	5.0	5.0	-0.5
Endosulfan sulfate	8.14	8.04	8.14	4.8	5.0	-3.9
4,4'-DDT	7.75	7.64	7.74	4.6	5.0	-7.6
Methoxychlor	8.33	8.23	8.33	27.5	25.0	10.0
Endrin ketone	8.63	8.53	8.63	5.0	5.0	-0.1
Endrin aldehyde	7.90	7.79	7.89	5.0	5.0	-0.2
gamma-Chlordane	6.66	6.55	6.65	2.3	2.5	-6.5
alpha-Chlordane	6.79	6.69	6.79	2.3	2.5	-6.8
Hexachlorobutadiene	2.49	2.42	2.52	2.5	2.5	-0.6
Hexachlorobenzene	4.64	4.53	4.63	2.4	2.5	-3.8
Tetrachloro-m-xylene	4.17	4.08	4.18	5.0	5.0	0.9
Decachlorobiphenyl	9.79	9.67	9.77	5.0	5.0	0.2

WR24 : 0015

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 14-JUN-2013 11:38 Init. Calib. Date: 14-MAY-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.194	174782
Endrin	6.709	8077221
4,4'-DDD	6.749	466782
4,4'-DDT	7.006	7638795
Endrin ketone	7.935	367582
Endrin aldehyde	7.291	182963

DDT Percent Breakdown = 7.7 %
((174782+466782) * 100)/(174782+466782+7638795)

Endrin Percent Breakdown = 6.4 %
((182963+367582) * 100)/(182963+367582+8077221)

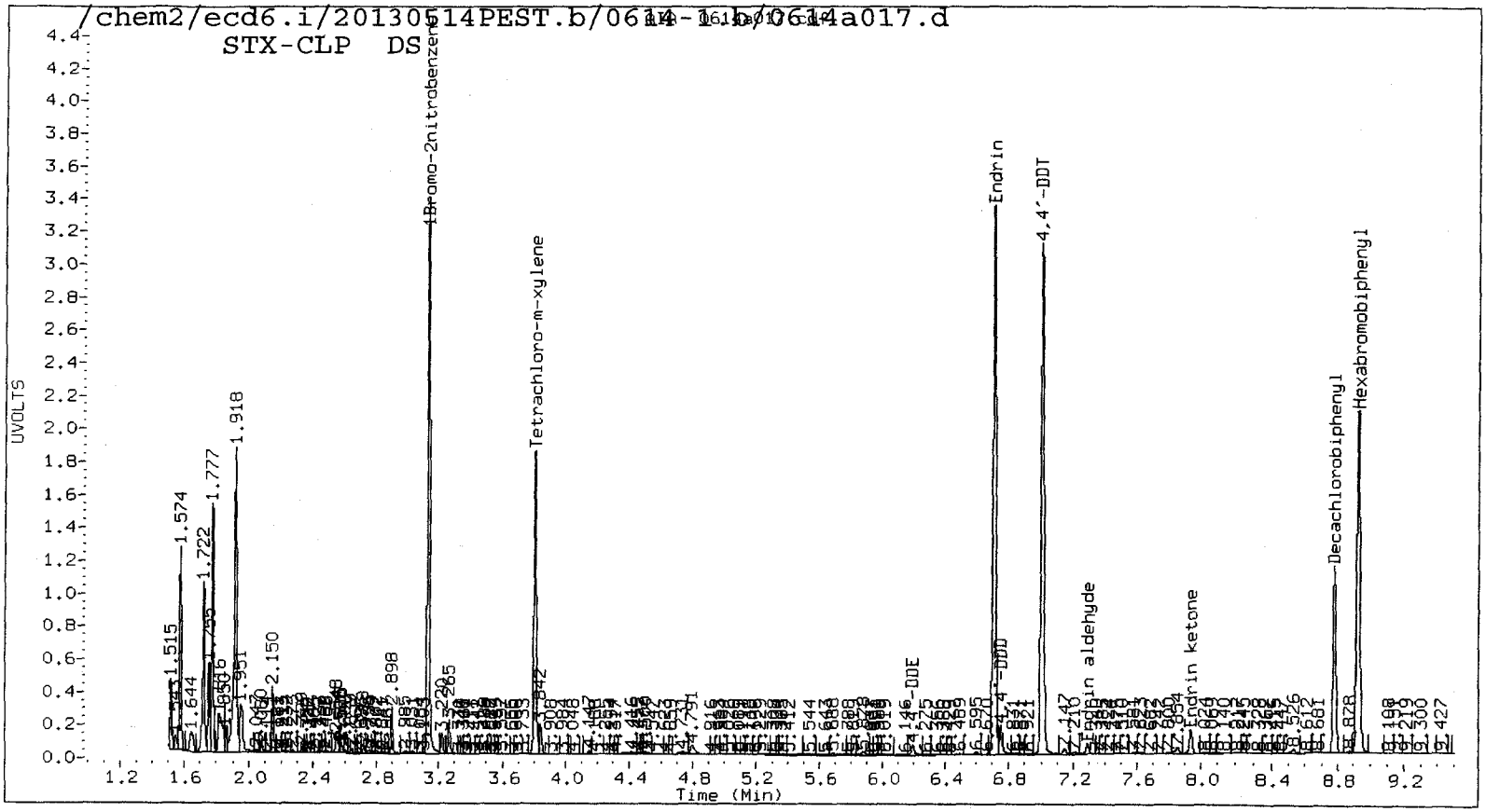
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.876	749506
Endrin	7.362	31386216
4,4'-DDD	7.412	1968497
4,4'-DDT	7.700	26890700
Endrin ketone	8.582	1212326
Endrin aldehyde	7.848	588424

DDT Percent Breakdown = 9.2 %
((749506+1968497) * 100)/(749506+1968497+26890700)

Endrin Percent Breakdown = 5.4 %
((588424+1212326) * 100)/(588424+1212326+31386216)

W321:09152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Time (Min)
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1.777
1.918
2.150
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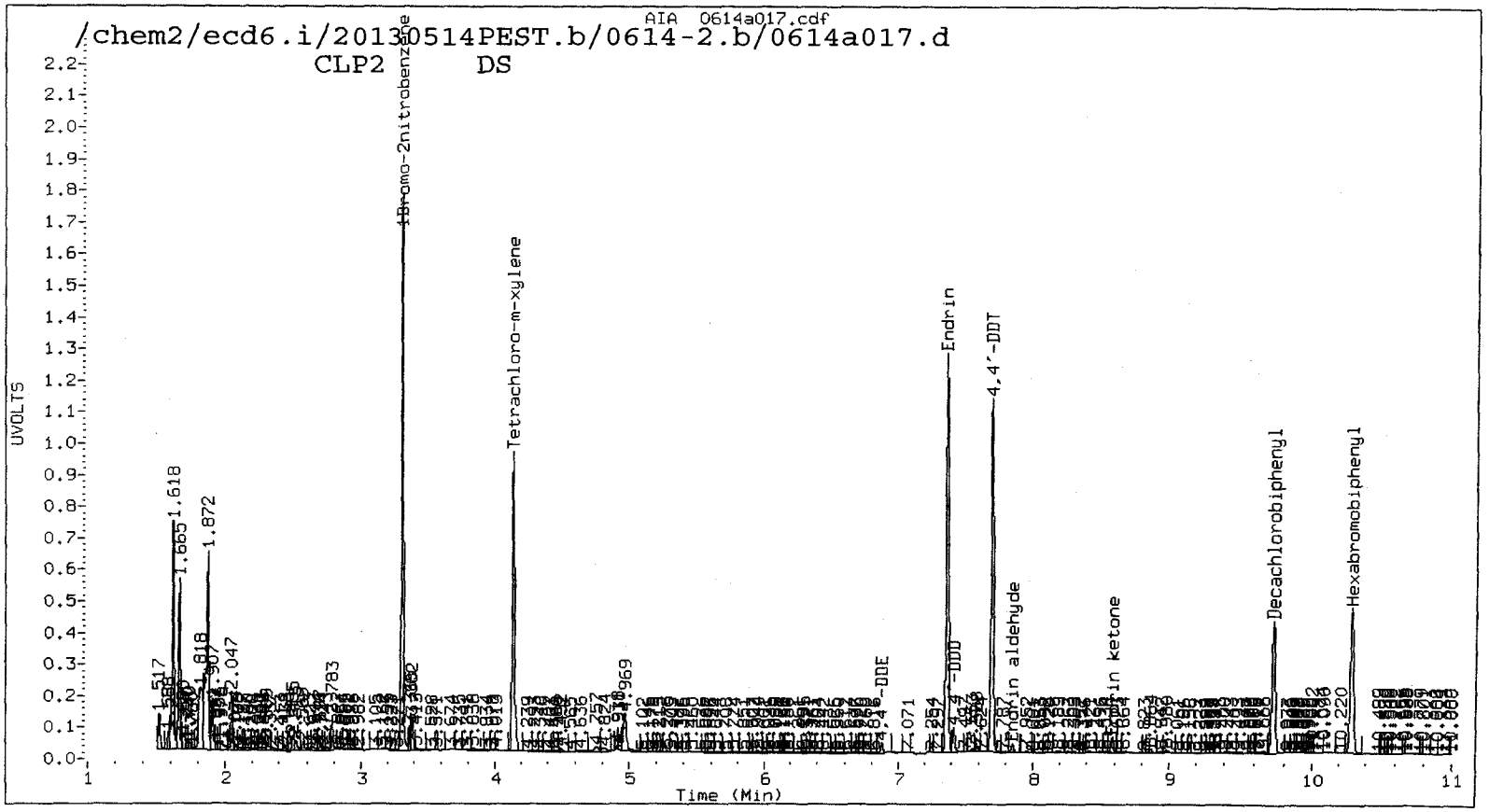
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
Endrin aldehyde
Endrin ketone
4,4'-DDE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CLP2 DS
UVOLTS
Time (Min)
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1.872
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
Endrin aldehyde
Endrin ketone
4,4'-DDE

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/14/13,1155

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.28	4.23	4.33	22.9	20.0	14.7
beta-BHC	4.64	4.59	4.69	21.2	20.0	6.0
delta-BHC	4.81	4.76	4.86	22.5	20.0	12.7
gamma-BHC (Lindane)	4.57	4.52	4.62	23.7	20.0	18.4
Heptachlor	5.01	4.96	5.06	22.8	20.0	14.1
Aldrin	5.31	5.25	5.35	23.3	20.0	16.5
Heptachlor epoxide b	5.88	5.83	5.93	23.3	20.0	16.4
Endosulfan I	6.26	6.21	6.31	22.5	20.0	12.6
Dieldrin	6.48	6.43	6.53	45.7	40.0	14.1
4,4'-DDE	6.18	6.13	6.23	42.5	40.0	6.2
Endrin	6.70	6.65	6.75	46.7	40.0	16.8
Endosulfan II	6.90	6.85	6.95	42.5	40.0	6.2
4,4'-DDD	6.74	6.69	6.79	40.4	40.0	1.0
Endosulfan sulfate	7.67	7.62	7.72	41.1	40.0	2.7
4,4'-DDT	7.00	6.94	7.04	42.5	40.0	6.3
Methoxychlor	7.42	7.37	7.47	200.0	200.0	-0.0
Endrin ketone	7.93	7.88	7.98	39.9	40.0	-0.3
Endrin aldehyde	7.28	7.23	7.33	40.2	40.0	0.5
gamma-Chlordane	6.00	5.95	6.05	22.6	20.0	13.2
alpha-Chlordane	6.12	6.07	6.17	23.3	20.0	16.3
Hexachlorobutadiene	2.31	2.26	2.36	22.6	20.0	13.0
Hexachlorobenzene	4.14	4.09	4.19	21.2	20.0	6.0
Tetrachloro-m-xylene	3.80	3.75	3.85	46.3	40.0	15.7
Decachlorobiphenyl	8.77	8.72	8.82	36.8	40.0	-8.0

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/14/13,1155

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.71	4.66	4.76	23.1	20.0	15.3
beta-BHC	5.14	5.09	5.19	22.1	20.0	10.4
delta-BHC	5.45	5.40	5.50	23.8	20.0	19.1
gamma-BHC (Lindane)	5.07	5.01	5.11	22.8	20.0	13.9
Heptachlor	5.53	5.48	5.58	22.9	20.0	14.4
Aldrin	5.87	5.82	5.92	23.5	20.0	17.6
Heptachlor epoxide b	6.42	6.37	6.47	23.0	20.0	15.1
Endosulfan I	6.81	6.76	6.86	22.3	20.0	11.5
Dieldrin	7.07	7.02	7.12	43.1	40.0	7.8
4,4'-DDE	6.87	6.82	6.92	42.1	40.0	5.3
Endrin	7.36	7.31	7.41	44.0	40.0	10.0
Endosulfan II	7.54	7.49	7.59	40.0	40.0	-0.1
4,4'-DDD	7.41	7.36	7.46	39.5	40.0	-1.2
Endosulfan sulfate	8.09	8.04	8.14	38.8	40.0	-2.9
4,4'-DDT	7.69	7.64	7.74	40.1	40.0	0.3
Methoxychlor	8.28	8.23	8.33	191.6	200.0	-4.2
Endrin ketone	8.58	8.53	8.63	37.2	40.0	-6.9
Endrin aldehyde	7.84	7.79	7.89	37.1	40.0	-7.1
gamma-Chlordane	6.60	6.55	6.65	22.3	20.0	11.3
alpha-Chlordane	6.74	6.69	6.79	22.3	20.0	11.5
Hexachlorobutadiene	2.47	2.42	2.52	21.1	20.0	5.7
Hexachlorobenzene	4.59	4.53	4.63	22.9	20.0	14.7
Tetrachloro-m-xylene	4.13	4.08	4.18	44.8	40.0	12.0
Decachlorobiphenyl	9.73	9.67	9.77	39.2	40.0	-2.0

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/14/13,1531

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.28	4.23	4.33	22.9	20.0	14.5
beta-BHC	4.64	4.59	4.69	20.9	20.0	4.5
delta-BHC	4.81	4.76	4.86	22.1	20.0	10.4
gamma-BHC (Lindane)	4.57	4.52	4.62	23.3	20.0	16.7
Heptachlor	5.01	4.96	5.06	22.6	20.0	12.9
Aldrin	5.30	5.25	5.35	23.2	20.0	16.1
Heptachlor epoxide b	5.88	5.83	5.93	22.8	20.0	14.1
Endosulfan I	6.26	6.21	6.31	21.8	20.0	9.2
Dieldrin	6.48	6.43	6.53	43.8	40.0	9.4
4,4'-DDE	6.18	6.13	6.23	42.4	40.0	6.1
Endrin	6.70	6.65	6.75	47.5	40.0	18.8
Endosulfan II	6.90	6.85	6.95	43.1	40.0	7.8
4,4'-DDD	6.74	6.69	6.79	41.4	40.0	3.5
Endosulfan sulfate	7.67	7.62	7.72	39.6	40.0	-1.0
4,4'-DDT	6.99	6.94	7.04	41.0	40.0	2.5
Methoxychlor	7.42	7.37	7.47	202.2	200.0	1.1
Endrin ketone	7.92	7.88	7.98	39.6	40.0	-1.0
Endrin aldehyde	7.28	7.23	7.33	41.1	40.0	2.7
gamma-Chlordane	6.00	5.95	6.05	21.8	20.0	9.1
alpha-Chlordane	6.12	6.07	6.17	22.4	20.0	11.9
Hexachlorobutadiene	2.31	2.26	2.36	22.5	20.0	12.7
Hexachlorobenzene	4.14	4.09	4.19	21.2	20.0	6.1
Tetrachloro-m-xylene	3.80	3.75	3.85	46.1	40.0	15.1
Decachlorobiphenyl	8.77	8.72	8.82	36.8	40.0	-8.1

WR21:0015

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/14/13,1531

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.71	4.66	4.76	22.0	20.0	10.2
beta-BHC	5.14	5.09	5.19	20.9	20.0	4.6
delta-BHC	5.45	5.40	5.50	21.7	20.0	8.7
gamma-BHC (Lindane)	5.06	5.01	5.11	21.6	20.0	7.9
Heptachlor	5.53	5.48	5.58	20.9	20.0	4.3
Aldrin	5.87	5.82	5.92	20.9	20.0	4.3
Heptachlor epoxide b	6.42	6.37	6.47	19.9	20.0	-0.3
Endosulfan I	6.81	6.76	6.86	17.8	20.0	-11.0
Dieldrin	7.06	7.02	7.12	32.4	40.0	-19.0
4,4'-DDE	6.87	6.82	6.92	34.2	40.0	-14.5
Endrin	7.35	7.31	7.41	43.5	40.0	8.7
Endosulfan II	7.54	7.49	7.59	39.8	40.0	-0.5
4,4'-DDD	7.41	7.36	7.46	39.5	40.0	-1.2
Endosulfan sulfate	8.09	8.04	8.14	36.7	40.0	-8.1
4,4'-DDT	7.69	7.64	7.74	38.3	40.0	-4.2
Methoxychlor	8.28	8.23	8.33	206.8	200.0	3.4
Endrin ketone	8.58	8.53	8.63	36.7	40.0	-8.3
Endrin aldehyde	7.84	7.79	7.89	38.9	40.0	-2.7
gamma-Chlordane	6.60	6.55	6.65	18.8	20.0	-5.9
alpha-Chlordane	6.74	6.69	6.79	18.0	20.0	-9.8
Hexachlorobutadiene	2.47	2.42	2.52	21.2	20.0	5.8
Hexachlorobenzene	4.58	4.53	4.63	22.0	20.0	10.0
Tetrachloro-m-xylene	4.13	4.08	4.18	43.2	40.0	8.1
Decachlorobiphenyl	9.72	9.67	9.77	40.8	40.0	2.0

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP1 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 05/14/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5500669	3.162	5319006	8.997
	UPPER LIMIT	11001338	3.212	10638012	9.047
	LOWER LIMIT	2750334	3.112	2659503	8.947

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		DS	05/14/13	1417	5564401	3.162	5015229	8.993
02		INDAE	05/14/13	1437	5500669	3.162	5319006	8.997
03		INDAA	05/14/13	1457	5276720	3.162	5051117	8.998
04		INDAB	05/14/13	1517	5534770	3.162	5379091	8.998
05		INDAC	05/14/13	1537	5478422	3.161	5322227	8.999
06		INDAD	05/14/13	1556	5395940	3.160	5185525	8.998
07		INDAF	05/14/13	1616	5385380	3.161	5022010	8.999
08		INDAG	05/14/13	1634	4447256	3.160	4183112	8.999
09	ZZZZZ	ZZZZZ	05/14/13	1654	5229139	3.162	5072678	9.001
10		TOXAPH	05/14/13	1712	5170972	3.160	5171544	8.999
11		DS	06/14/13	1138	6106233	3.134	5560865	8.930*
12		INDAE	06/14/13	1155	5062298	3.129	5017151	8.921*
13		TOXAPH	06/14/13	1213	6490816	3.128	6578881	8.919*
14	WR99MBS1	WR99MBS1	06/14/13	1231	5992911	3.128	6008642	8.919*
15	WR99LCSS1	WR99LCSS1	06/14/13	1249	6382179	3.128	6736535	8.918*
16	ZZZZZ	ZZZZZ	06/14/13	1307	6568482	3.128	6629665	8.918*
17	KC-VT-1593-2	WR99D	06/14/13	1324	5500369	3.128	5981100	8.920*
18	KC-VT-1593-2	WR99DMS	06/14/13	1342	6300117	3.128	6450091	8.922*
19	KC-VT-1593-2	WR99DMSD	06/14/13	1400	6064480	3.127	6551955	8.920*
20	KC-CB-01-201	WR99E	06/14/13	1420	5874255	3.128	5428326	8.921*
21	KC-DD-2009-2	WR99F	06/14/13	1438	6089419	3.127	5747943	8.919*
22	KC-IV-SPS-20	WS21A	06/14/13	1455	6366167	3.127	6434119	8.919*
23		DS	06/14/13	1513	6461724	3.128	5679255	8.918*
24		INDAE	06/14/13	1531	5519699	3.128	5198503	8.919*
25		TOXAPH	06/14/13	1551	7094744	3.129	6789314	8.922*

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: STX-CLP2 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 05/14/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

			IS1 AREA	RT	IS2 AREA	RT
		ICAL MIDPT	29060499	3.331	16515704	10.370
		UPPER LIMIT	58120998	3.381	33031408	10.421
		LOWER LIMIT	14530250	3.281	8257852	10.320

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		DS	05/14/13	1417	27868012	3.331	15069896	10.368
02		INDAE	05/14/13	1437	29060499	3.331	16515704	10.370
03		INDAA	05/14/13	1457	28661245	3.331	16075431	10.370
04		INDAB	05/14/13	1517	30201103	3.331	17146317	10.371
05		INDAC	05/14/13	1537	29972511	3.330	16795593	10.372
06		INDAD	05/14/13	1556	29160968	3.329	16527116	10.370
07		INDAF	05/14/13	1616	29405183	3.330	16433920	10.372
08		INDAG	05/14/13	1634	24971444	3.329	13819406	10.371
09	ZZZZZ	ZZZZZ	05/14/13	1654	29203550	3.331	16453002	10.372
10		TOXAPH	05/14/13	1712	29085221	3.329	16639283	10.371
11		DS	06/14/13	1138	32477989	3.303	15682951	10.296*
12		INDAE	06/14/13	1155	27642194	3.299	15706475	10.289*
13		TOXAPH	06/14/13	1213	34809892	3.299	18801167	10.287*
14	WR99MBS1	WR99MBS1	06/14/13	1231	28970198	3.298	17759464	10.288*
15	WR99LCSS1	WR99LCSS1	06/14/13	1249	29378191	3.298	18546379	10.286*
16	ZZZZZ	ZZZZZ	06/14/13	1307	30360464	3.298	18785317	10.287*
17	KC-VT-1593-2	WR99D	06/14/13	1324	24088740	3.298	10593945	10.288*
18	KC-VT-1593-2	WR99DMS	06/14/13	1342	24443149	3.298	12437423	10.288*
19	KC-VT-1593-2	WR99DMSD	06/14/13	1400	23634673	3.297	12662774	10.287*
20	KC-CB-01-201	WR99E	06/14/13	1420	25325930	3.298	11472749	10.289*
21	KC-DD-2009-2	WR99F	06/14/13	1438	28352002	3.298	12056814	10.288*
22	KC-IV-SPS-20	WS21A	06/14/13	1455	26604719	3.297	11934849	10.287*
23		DS	06/14/13	1513	29740778	3.298	12791116	10.286*
24		INDAE	06/14/13	1531	27028833	3.298	12296519	10.287*
25		TOXAPH	06/14/13	1551	34759697	3.299	16322638	10.289*

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

PCB Analysis
Report and Summary QC Forms

ARI Job ID: WS21

WS21 : 00160

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: KC-IV-SPS-20130531-S
SAMPLE

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Date Extracted: 06/10/13
Date Analyzed: 06/12/13 21:18
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 13.0 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 19.0%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	0.98	3.9	< 3.9 U
53469-21-9	Aroclor 1242	1.3	3.9	< 3.9 U
12672-29-6	Aroclor 1248	1.3	3.9	< 3.9 U
11097-69-1	**Aroclor 1254**	**1.3**	**3.9**	**17**
11096-82-5	**Aroclor 1260**	**1.3**	**3.9**	**15**
11104-28-2	Aroclor 1221	1.3	3.9	< 3.9 U
11141-16-5	Aroclor 1232	1.3	3.9	< 3.9 U
37324-23-5	Aroclor 1262	1.3	3.9	< 3.9 U
11100-14-4	Aroclor 1268	1.3	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	88.0%
Tetrachlorometaxylene	67.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-061013	80.2%	64-105	79.5%	54-100	0
LCS-061013	79.5%	64-105	71.8%	54-100	0
LCSD-061013	87.2%	64-105	76.5%	54-100	0
KC-IV-SPS-20130531-S	88.0%	37-128	67.8%	45-102	0

Microwave (MARS) Control Limits PCBSMM
Prep Method: SW3546
Log Number Range: 13-11678 to 13-11678

WS21 : 20192

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-061013
LCS/LCSD

Lab Sample ID: LCS-061013
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 06/10/13

Date Analyzed LCS: 06/12/13 16:54
LCSD: 06/12/13 17:15
Instrument/Analyst LCS: ECD5/JGR
LCSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 12.5 g-dry-wt
LCSD: 12.5 g-dry-wt
Final Extract Volume LCS: 2.50 mL
LCSD: 2.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	78.2	101	77.4%	83.7	101	82.9%	6.8%
Aroclor 1260	79.5	101	78.7%	85.5	101	84.7%	7.3%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	79.5%	87.2%
Tetrachlorometaxylene	71.8%	76.5%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

WS21 : 209165

PCB METHOD BLANK SUMMARY

BLANK NO.

WR99MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WR99

Project: NPDES SAMPLING SUPPO

Lab Sample ID: WR99MBS1

Lab File ID: 0612B006

Date Extracted: 06/10/13

Matrix: SOLID

Date Analyzed: 06/12/13

Instrument ID: ECD5

Time Analyzed: 1634

GC Columns: ZB5/ZB5

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WR99LCSS1	WR99LCSS1	06/12/13
02	WR99LCSDS1	WR99LCSDS1	06/12/13
03	KC-VT-1593-20130530	WR99D	06/12/13
04	KC-VT-1593-2013 MS	WR99DMS	06/12/13
05	KC-VT-1593-2013 MSD	WR99DMSD	06/12/13
06	KC-CB-01-20130530-S	WR99E	06/12/13
07	KC-DD-2009-20130530	WR99F	06/12/13
08	KC-IV-SPS-20130531-	WS21A	06/12/13

ALL RUNS ARE DUAL COLUMN

FORM IV PCB

WS21 : 20131

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD **Sample ID: MB-061013**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-061013
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/13/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/10/13
Date Analyzed: 06/12/13 16:34
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	< 4.0 U
53469-21-9	Aroclor 1242	1.4	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.4	4.0	< 4.0 U
11097-69-1	Aroclor 1254	1.4	4.0	< 4.0 U
11096-82-5	Aroclor 1260	1.4	4.0	< 4.0 U
11104-28-2	Aroclor 1221	1.4	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.4	4.0	< 4.0 U
37324-23-5	Aroclor 1262	1.4	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.4	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	80.2%
Tetrachlorometaxylene	79.5%

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 4.31- 4.51	1.2778	1.2769	1.3021	1.2444	1.1977	1.1434	1.2404	4.8
DCB 12.73-12.93	1.4525	1.2874	1.2269	1.1209	1.0641	1.0185	1.1950	13.5

Aroclor-1016 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 5.96- 6.16	0.0419	0.0392	0.0380	0.0346	0.0323	0.0304	0.0361	12.1
2 6.37- 6.57	0.1293	0.1202	0.1174	0.1063	0.0998	0.0934	0.1111	12.2
3 6.51- 6.71	0.0588	0.0546	0.0526	0.0473	0.0442	0.0411	0.0498	13.5
4 6.63- 6.83	0.0432	0.0407	0.0393	0.0352	0.0334	0.0312	0.0372	12.4

AROCLOR AVERAGE %RSD = 12.6

Aroclor-1260 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 9.86-10.06	0.0809	0.0714	0.0687	0.0624	0.0572	0.0524	0.0655	15.7
2 10.18-10.38	0.0749	0.0676	0.0659	0.0605	0.0560	0.0517	0.0628	11.1
3 10.56-10.76	0.1738	0.1618	0.1583	0.1468	0.1383	0.1296	0.1514	8.8
4 10.96-11.16	0.0842	0.0787	0.0766	0.0716	0.0683	0.0640	0.0739	8.2
5 11.14-11.34	0.0430	0.0421	0.0415	0.0388	0.0375	0.0354	0.0397	5.7

AROCLOR AVERAGE %RSD = 9.9

US21 : 00166

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 4.31- 4.51	1.1379	1.1032	1.0970	1.0870	1.0583	1.0077	1.0818	4.1
DCB 13.10-13.30	1.4388	1.2455	1.1622	1.0676	1.0239	0.9694	1.1512	14.9

Aroclor-1016 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 6.06- 6.26	0.0514	0.0510	0.0486	0.0445	0.0410	0.0373	0.0456	12.5
2 6.70- 6.90	0.1117	0.1063	0.1043	0.0972	0.0916	0.0843	0.0992	10.2
3 7.08- 7.28	0.0278	0.0270	0.0274	0.0257	0.0247	0.0232	0.0259	6.9
4 7.25- 7.45	0.0276	0.0258	0.0256	0.0233	0.0223	0.0204	0.0242	10.9

AROCLOR AVERAGE %RSD = 10.1

Aroclor-1260 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 10.16-10.36	0.0846	0.0784	0.0760	0.0710	0.0656	0.0598	0.0726	12.4
2 10.61-10.81	0.0966	0.0905	0.0885	0.0844	0.0782	0.0718	0.0850	10.5
3 10.88-11.08	0.1687	0.1671	0.1641	0.1571	0.1479	0.1368	0.1569	7.9
4 11.40-11.60	0.0485	0.0457	0.0437	0.0415	0.0392	0.0366	0.0425	10.2

AROCLOR AVERAGE %RSD = 10.3

WR21:00197

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	5.064	4.96- 5.16	0.03259
2	6.468	6.37- 6.57	0.00997
3	7.878	7.78- 7.98	0.01408

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.060	5.96- 6.16	0.01482
2	6.469	6.37- 6.57	0.04536
3	7.442	7.34- 7.54	0.02357
4	7.874	7.77- 7.97	0.02708

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.058	5.96- 6.16	0.02881
2	6.467	6.37- 6.57	0.08837
3	6.615	6.52- 6.72	0.03943
4	7.870	7.77- 7.97	0.04869

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.463	6.36- 6.56	0.05630
2	7.440	7.34- 7.54	0.06332
3	7.872	7.77- 7.97	0.08051
4	8.107	8.01- 8.21	0.05614

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.190	8.09- 8.29	0.07461
2	8.561	8.46- 8.66	0.04925
3	8.698	8.60- 8.80	0.10267
4	9.051	8.95- 9.15	0.10574
5	9.359	9.26- 9.46	0.03999

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.283	10.18-10.38	0.07490
2	10.659	10.56-10.76	0.17600
3	11.059	10.96-11.16	0.05574
4	11.247	11.15-11.35	0.07824
5	11.918	11.82-12.02	0.06005

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.175	11.08-11.28	0.16835
2	11.246	11.15-11.35	0.18617
3	11.632	11.53-11.73	0.13825
4	12.422	12.32-12.52	0.38949

WR21 : 201155

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	3.694	3.59- 3.79	0.00820
2	5.095	4.99- 5.19	0.01373
3	5.345	5.25- 5.45	0.00748
4	5.460	5.36- 5.56	0.02352

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.165	6.07- 6.27	0.02053
2	6.801	6.70- 6.90	0.04099
3	7.011	6.91- 7.11	0.01709
4	8.239	8.14- 8.34	0.01434

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.162	6.06- 6.26	0.03645
2	6.800	6.70- 6.90	0.08006
3	7.007	6.91- 7.11	0.03345
4	8.235	8.14- 8.34	0.02802

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.795	6.70- 6.90	0.05013
2	7.703	7.60- 7.80	0.04157
3	8.235	8.13- 8.33	0.04304
4	8.580	8.48- 8.68	0.05593

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.298	8.20- 8.40	0.03879
2	8.474	8.37- 8.57	0.04792
3	8.996	8.90- 9.10	0.03671
4	9.147	9.05- 9.25	0.07862
5	9.932	9.83-10.03	0.04427

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.260	10.16-10.36	0.11065
2	10.710	10.61-10.81	0.10118
3	10.985	10.89-11.09	0.18978
4	11.567	11.47-11.67	0.12335
5	12.306	12.21-12.41	0.05956

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.507	11.41-11.61	0.19311
2	11.573	11.47-11.67	0.18203
3	11.969	11.87-12.07	0.14408
4	12.792	12.69-12.89	0.37318

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1254 Time Analyzed :1554

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.19	8.09	8.29	246.3	250.0	-1.5
Aroclor-1254-2	8.56	8.46	8.66	223.9	250.0	-10.4
Aroclor-1254-3	8.70	8.60	8.80	233.6	250.0	-6.6
Aroclor-1254-4	9.05	8.95	9.15	241.2	250.0	-3.5
Aroclor-1254-5	9.36	9.26	9.46	247.4	250.0	-1.0

AVERAGE %D = 4.6

USA1:20172

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1254 Time Analyzed :1554

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.30	8.20	8.40	236.4	250.0	-5.4
Aroclor-1254-2	8.47	8.37	8.57	236.1	250.0	-5.5
Aroclor-1254-3	9.00	8.90	9.10	239.7	250.0	-4.1
Aroclor-1254-4	9.15	9.05	9.25	232.9	250.0	-6.8
Aroclor-1254-5	9.93	9.83	10.03	240.5	250.0	-3.8

AVERAGE %D = 5.1

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1614

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	248.5	250.0	-0.6
Aroclor-1016-2	6.47	6.37	6.57	251.3	250.0	0.5
Aroclor-1016-3	6.61	6.51	6.71	245.9	250.0	-1.6
Aroclor-1016-4	6.73	6.63	6.83	247.9	250.0	-0.8

AVERAGE %D = 0.9

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1614

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.86	10.06	218.9	250.0	-12.4
Aroclor-1260-2	10.28	10.18	10.38	219.2	250.0	-12.3
Aroclor-1260-3	10.66	10.56	10.76	225.9	250.0	-9.6
Aroclor-1260-4	11.06	10.96	11.16	235.0	250.0	-6.0
Aroclor-1260-5	11.25	11.14	11.34	231.3	250.0	-7.5

AVERAGE %D = 9.6

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1614

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	235.7	250.0	-5.7
Aroclor-1016-2	6.80	6.70	6.90	239.0	250.0	-4.4
Aroclor-1016-3	7.19	7.08	7.28	241.7	250.0	-3.3
Aroclor-1016-4	7.36	7.25	7.45	231.4	250.0	-7.4

AVERAGE %D = 5.2

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1614

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	217.5	250.0	-13.0
Aroclor-1260-2	10.71	10.61	10.81	217.6	250.0	-13.0
Aroclor-1260-3	10.98	10.88	11.08	230.6	250.0	-7.8
Aroclor-1260-4	11.51	11.40	11.60	244.5	250.0	-2.2

AVERAGE %D = 9.0

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1248 Time Analyzed :1856

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.46	6.36	6.56	244.8	250.0	-2.1
Aroclor-1248-2	7.44	7.34	7.54	233.4	250.0	-6.6
Aroclor-1248-3	7.87	7.77	7.97	233.3	250.0	-6.7
Aroclor-1248-4	8.11	8.01	8.21	246.2	250.0	-1.5

AVERAGE %D = 4.2

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1248 Time Analyzed :1856

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.80	6.70	6.90	235.6	250.0	-5.8
Aroclor-1248-2	7.70	7.60	7.80	229.2	250.0	-8.3
Aroclor-1248-3	8.23	8.13	8.33	227.3	250.0	-9.1
Aroclor-1248-4	8.58	8.48	8.68	221.9	250.0	-11.2

AVERAGE %D = 8.6

US21 : 00177

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1916

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	237.5	250.0	-5.0
Aroclor-1016-2	6.47	6.37	6.57	238.3	250.0	-4.7
Aroclor-1016-3	6.62	6.51	6.71	229.7	250.0	-8.1
Aroclor-1016-4	6.73	6.63	6.83	230.8	250.0	-7.7

AVERAGE %D = 6.4

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1916

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.97	9.86	10.06	224.5	250.0	-10.2
Aroclor-1260-2	10.28	10.18	10.38	222.6	250.0	-11.0
Aroclor-1260-3	10.66	10.56	10.76	225.5	250.0	-9.8
Aroclor-1260-4	11.06	10.96	11.16	236.2	250.0	-5.5
Aroclor-1260-5	11.25	11.14	11.34	237.6	250.0	-4.9

AVERAGE %D = 8.3

WR21 : 091 78

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1916

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	230.8	250.0	-7.7
Aroclor-1016-2	6.80	6.70	6.90	229.8	250.0	-8.1
Aroclor-1016-3	7.18	7.08	7.28	227.1	250.0	-9.1
Aroclor-1016-4	7.36	7.25	7.45	221.5	250.0	-11.4

AVERAGE %D = 9.1

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :1916

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	214.9	250.0	-14.0
Aroclor-1260-2	10.71	10.61	10.81	220.8	250.0	-11.7
Aroclor-1260-3	10.98	10.88	11.08	231.8	250.0	-7.3
Aroclor-1260-4	11.50	11.40	11.60	237.0	250.0	-5.2

AVERAGE %D = 9.6

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1242 Time Analyzed :2159

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.06	5.96	6.16	248.9	250.0	-0.4
Aroclor-1242-2	6.47	6.37	6.57	250.3	250.0	0.1
Aroclor-1242-3	6.62	6.52	6.72	248.7	250.0	-0.5
Aroclor-1242-4	7.87	7.77	7.97	241.2	250.0	-3.5

AVERAGE %D = 1.1

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1242 Time Analyzed :2159

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.16	6.06	6.26	240.1	250.0	-4.0
Aroclor-1242-2	6.80	6.70	6.90	228.8	250.0	-8.5
Aroclor-1242-3	7.01	6.91	7.11	238.1	250.0	-4.7
Aroclor-1242-4	8.24	8.14	8.34	236.2	250.0	-5.5

AVERAGE %D = 5.7

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :2219

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	242.5	250.0	-3.0
Aroclor-1016-2	6.47	6.37	6.57	243.9	250.0	-2.4
Aroclor-1016-3	6.61	6.51	6.71	238.0	250.0	-4.8
Aroclor-1016-4	6.73	6.63	6.83	240.7	250.0	-3.7

AVERAGE %D = 3.5

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :2219

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.86	10.06	222.5	250.0	-11.0
Aroclor-1260-2	10.28	10.18	10.38	221.0	250.0	-11.6
Aroclor-1260-3	10.66	10.56	10.76	228.8	250.0	-8.5
Aroclor-1260-4	11.06	10.96	11.16	236.4	250.0	-5.4
Aroclor-1260-5	11.24	11.14	11.34	241.3	250.0	-3.5

AVERAGE %D = 8.0

US21 : 00182

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :2219

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	234.4	250.0	-6.2
Aroclor-1016-2	6.80	6.70	6.90	236.3	250.0	-5.5
Aroclor-1016-3	7.18	7.08	7.28	235.3	250.0	-5.9
Aroclor-1016-4	7.35	7.25	7.45	228.5	250.0	-8.6

AVERAGE %D = 6.6

Date Analyzed :06/12/13

Lab Standard ID: AR1660 Time Analyzed :2219

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	215.8	250.0	-13.7
Aroclor-1260-2	10.71	10.61	10.81	218.6	250.0	-12.6
Aroclor-1260-3	10.98	10.88	11.08	230.4	250.0	-7.8
Aroclor-1260-4	11.50	11.40	11.60	239.0	250.0	-4.4

AVERAGE %D = 9.6

US21 : 20183

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	48977254	2.250	50004151	13.191
	UPPER LIMIT	97954508	2.350	100008302	13.291
	LOWER LIMIT	24488627	2.150	25002076	13.091

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	48807947	2.249	51001521	13.191
02		0.25PPMAR166	05/07/13	1639	48977254	2.250	50004151	13.191
03		0.02PPMAR166	05/07/13	1659	49978735	2.250	50389911	13.191
04		0.05PPMAR166	05/07/13	1719	50752482	2.250	53170067	13.191
05		1PPMAR1660	05/07/13	1739	49361946	2.249	53269354	13.189
06		0.1PPMAR1660	05/07/13	1759	51692067	2.249	53692342	13.191
07		0.5PPMAR1660	05/07/13	1819	50537542	2.249	53291913	13.190
08		AR1242	05/07/13	1839	51594521	2.248	55145987	13.190
09		AR1248	05/07/13	1859	52790343	2.249	57162764	13.190
10		AR1254	05/07/13	1920	52930034	2.249	57859101	13.190
11		AR2162	05/07/13	1940	53739671	2.248	58323154	13.191
12		AR3268	05/07/13	2000	53262724	2.248	57460185	13.191
13	ZZZZZ	ZZZZZ	05/07/13	2021	54248541	2.248	60099807	13.190
14	ZZZZZ	ZZZZZ	05/07/13	2041	53651835	2.248	60660565	13.190
15	ZZZZZ	ZZZZZ	05/07/13	2101	53642771	2.248	58188446	13.191
16	ZZZZZ	ZZZZZ	05/07/13	2121	54355833	2.249	58930522	13.190
17	ZZZZZ	ZZZZZ	05/07/13	2142	54884040	2.249	58566252	13.190
18	ZZZZZ	ZZZZZ	05/07/13	2202	54747539	2.248	60316622	13.190
19		AR1254	06/12/13	1554	55717451	2.247	63128266	13.189
20		AR1660	06/12/13	1614	57257025	2.247	66302804	13.189
21	WR99MBS1	WR99MBS1	06/12/13	1634	54564860	2.246	64458811	13.188
22	WR99LCSS1	WR99LCSS1	06/12/13	1654	55808676	2.246	65552837	13.187
23	WR99LCSDS1	WR99LCSDS1	06/12/13	1715	55233395	2.245	65166408	13.188
24		AR1248	06/12/13	1856	58322257	2.246	61167163	13.189
25		AR1660	06/12/13	1916	59009209	2.247	62782280	13.189
26	KC-VT-1593-2	WR99D	06/12/13	1937	53753844	2.246	58860876	13.185
27	KC-VT-1593-2	WR99DMS	06/12/13	1957	49373113	2.246	59100434	13.184
28	KC-VT-1593-2	WR99DMSD	06/12/13	2017	53275204	2.246	57512484	13.185
29	KC-CB-01-201	WR99E	06/12/13	2038	55185958	2.247	59159399	13.186
30	KC-DD-2009-2	WR99F	06/12/13	2058	54703262	2.246	68012891	13.186
31	KC-IV-SPS-20	WS21A	06/12/13	2118	54526230	2.247	68547695	13.186
32		AR1242	06/12/13	2159	62530670	2.245	68675704	13.187

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

WS21 : 06/18/13

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	48977254	2.250	50004151	13.191
				UPPER LIMIT	97954508	2.350	100008302	13.291
				LOWER LIMIT	24488627	2.150	25002076	13.091
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
33		AR1660	06/12/13	2219	61395809	2.246	69432904	13.187

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	14839715	2.727	9345340	14.074
	UPPER LIMIT	29679430	2.827	18690680	14.174
	LOWER LIMIT	7419858	2.627	4672670	13.974

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	15184482	2.727	9588268	14.075
02		0.25PPMAR166	05/07/13	1639	14839715	2.727	9345340	14.074
03		0.02PPMAR166	05/07/13	1659	14776833	2.727	9354827	14.073
04		0.05PPMAR166	05/07/13	1719	15017003	2.726	9808139	14.073
05		1PPMAR1660	05/07/13	1739	14864205	2.727	9909484	14.072
06		0.1PPMAR1660	05/07/13	1759	15354151	2.725	9856374	14.073
07		0.5PPMAR1660	05/07/13	1819	14890872	2.725	9751846	14.073
08		AR1242	05/07/13	1839	15094795	2.728	10120992	14.073
09		AR1248	05/07/13	1859	15297537	2.725	10392760	14.073
10		AR1254	05/07/13	1920	15196733	2.725	10477901	14.072
11		AR2162	05/07/13	1940	15340978	2.724	10583916	14.072
12		AR3268	05/07/13	2000	15239954	2.725	10518547	14.073
13	ZZZZZ	ZZZZZ	05/07/13	2021	15658755	2.725	10888882	14.072
14	ZZZZZ	ZZZZZ	05/07/13	2041	15441440	2.724	10952020	14.072
15	ZZZZZ	ZZZZZ	05/07/13	2101	15360402	2.725	10510294	14.073
16	ZZZZZ	ZZZZZ	05/07/13	2121	15522820	2.725	10608758	14.073
17	ZZZZZ	ZZZZZ	05/07/13	2142	15378234	2.725	10470042	14.073
18	ZZZZZ	ZZZZZ	05/07/13	2202	15307215	2.724	10773388	14.074
19		AR1254	06/12/13	1554	15886848	2.726	10370835	14.073
20		AR1660	06/12/13	1614	16325735	2.725	11278282	14.071
21	WR99MBS1	WR99MBS1	06/12/13	1634	15704773	2.724	11398988	14.073
22	WR99LCSS1	WR99LCSS1	06/12/13	1654	15833995	2.725	11676897	14.072
23	WR99LCSDS1	WR99LCSDS1	06/12/13	1715	15392655	2.724	11634249	14.072
24		AR1248	06/12/13	1856	16259753	2.722	11097948	14.071
25		AR1660	06/12/13	1916	16480424	2.722	11097077	14.072
26	KC-VT-1593-2	WR99D	06/12/13	1937	15363874	2.721	10848507	14.067
27	KC-VT-1593-2	WR99DMS	06/12/13	1957	14604387	2.721	10725601	14.069
28	KC-VT-1593-2	WR99DMSD	06/12/13	2017	14741776	2.722	10513140	14.068
29	KC-CB-01-201	WR99E	06/12/13	2038	15175126	2.722	10431045	14.068
30	KC-DD-2009-2	WR99F	06/12/13	2058	15119264	2.720	11168998	14.067
31	KC-IV-SPS-20	WS21A	06/12/13	2118	15111850	2.721	11176503	14.069
32		AR1242	06/12/13	2159	17045224	2.721	11790726	14.071

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WR99 Project: NPDES

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	14839715	2.727	9345340	14.074
				UPPER LIMIT	29679430	2.827	18690680	14.174
				LOWER LIMIT	7419858	2.627	4672670	13.974
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
33		AR1660	06/12/13	2219	16838472	2.721	11875626	14.070

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: WS21

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID
Extraction Method: SW3546
Page 1 of 1

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

Matrix: Sediment

Date Received: 05/31/13

Data Release Authorized: MW
Reported: 06/12/13

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-060413	Method Blank	06/04/13	1.0	Diesel	< 5.0 U	5.0	1.4
13-11678		FID3B		Motor Oil	< 10 U	10	2.5
				HC ID	---		
				o-Terphenyl	90.2%		
WS21A	KC-IV-SPS-20130531-S	06/04/13	1.0	**Diesel**	**53**	6.2	1.7
13-11678		FID3B		**Motor Oil**	**110**	12	3.1
				HC ID	DIESEL/MOTOR OIL		
				o-Terphenyl	69.8%		

Reported in mg/kg (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

WS21 : 209977

ANALYTICAL RESOURCES INCORPORATED

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977

Client ID	OTER	TOT OUT
060413MBS	90.2%	0
060413LCS	85.3%	0
KC-IV-SPS-20130531-S	69.8%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-11678 to 13-11678

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1

Sample ID: LCS-060413
LAB CONTROL

Lab Sample ID: LCS-060413
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/12/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/04/13
Date Analyzed: 06/04/13 17:27
Instrument/Analyst: FID3B/JLW

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	128	150	85.3%

TPHD Surrogate Recovery

o-Terphenyl	85.3%

Results reported in mg/kg

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: WS21
Matrix: Sediment Project: NPDES Sampling Support
Date Received: 05/31/13 209977

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11678-060413MB1	Method Blank	10.0 g	1.00 mL	-	06/04/13
13-11678-060413LCS1	Lab Control	10.0 g	1.00 mL	-	06/04/13
13-11678-WS21A	KC-IV-SPS-20130531-	8.13 g	1.00 mL	D	06/04/13

Basis: D=Dry Weight W=As Received

WS21 : 209177

4

TPH METHOD BLANK SUMMARY

BLANK NO.

WR99MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

SDG No.: WR99

Project No.: NPDES SAMPLING SUPPORT

Date Extracted: 06/04/13

Matrix: SOLID

Date Analyzed : 06/04/13

Instrument ID : FID3B

Time Analyzed : 1708

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WR99LCSS1	WR99LCSS1	06/04/13
02	KC-VT-1593-2	WR99D	06/04/13
03	KC-VT-1593-2	WR99DMS	06/04/13
04	KC-VT-1593-2	WR99DMSD	06/04/13
05	KC-IV-SPS-20	WS21A	06/04/13
06			
07			
08			
09			
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11			
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FORM IV TPH

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument: FID3B.I Project: NPDES Sampling Support

Calibration Date: 10-MAY-2013 SDG No.: WR99/WS61

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	10856	10816	10366	10222	10078	9806	10358	4.0
AK Diesel	12969	12897	12393	12178	12035	11673	12357	4.1
OR Diesel	13048	12968	12457	12240	12092	11727	12422	4.1
Cal Diesel	12938	12873	12366	12154	12013	11647	12332	4.1
o-Terph	13177	13696	13787	13594	13504	12941	13450	2.4

<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges : WA Diesel C12-C24 (3.049-5.760)
AK Diesel C10-C25 (2.254-5.938)
OR Diesel C10-C28 (2.254-6.427)
Cal Diesel C10-C24 (2.254-5.760)

Calibration Files	Analysis Time
0510b004.d	10-MAY-2013 08:41
0510b005.d	10-MAY-2013 09:01
0510b006.d	10-MAY-2013 09:20
0510b007.d	10-MAY-2013 09:40
0510b008.d	10-MAY-2013 10:00
0510b009.d	10-MAY-2013 10:20

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

Instrument: FID3B.I

Project: NPDES Sampling Support

Calibration Date: 09-MAY-2013

SDG No.: WR99/WS61

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	9838	9724	9749	9868	9957	10101	9873	1.4
Triac Surr	12017	12392	13110	13138	13711	13920	13048	5.6

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0509b019.d	09-MAY-2013 17:30
0509b020.d	09-MAY-2013 17:50
0509b021.d	09-MAY-2013 18:09
0509b022.d	09-MAY-2013 18:29
0509b023.d	09-MAY-2013 18:49
0509b024.d	09-MAY-2013 19:08

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

ICal Date: 10-MAY-2013

Project: NPDES Sampling Supp

CCal Date: 04-JUN-2013

SDG No.: WR99

Analysis Time: 15:08

Lab ID: DIESEL#2

Instrument: FID3B.I

Lab File Name: 0604b019.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	2357377	227.6	250	-9.0	
AK102 (C10-C25)	2821698	228.4	250	-8.7	
ITDIES (C10-C24)	2814108	204.1	250	-18.4	<-
Terphenyl	574278	42.7	45	-5.1	

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges :

WA Diesel	C12-C24
AK Diesel	C10-C25
IT Diesel	C10-C24

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 09-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 04-JUN-2013
SDG No.: WR99

Analysis Time: 15:32
Lab ID: MOIL#2

Instrument: FID3B.I
Lab File Name: 0604b020.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D	
WAMoil(C24-C38)	5178434	524.5	500	4.9	
AK103 (C25-C36)	4461837	627.7	500	25.5	<-
n-Triacontane	637155	48.8	45	8.5	

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

ICal Date: 10-MAY-2013

Project: NPDES Sampling Supp

CCal Date: 04-JUN-2013

SDG No.: WR99

Analysis Time: 19:35

Lab ID: DIESEL#3

Instrument: FID3B.I

Lab File Name: 0604b032.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	2468390	238.3	250	-4.7	
AK102 (C10-C25)	2908437	235.4	250	-5.9	
ITDIES (C10-C24)	2901727	210.4	250	-15.8	<-
Terphenyl	609223	45.3	45	0.7	

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges :

WA Diesel	C12-C24
AK Diesel	C10-C25
IT Diesel	C10-C24

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

ICal Date: 09-MAY-2013

Project: NPDES Sampling Supp

CCal Date: 04-JUN-2013

SDG No.: WR99

Analysis Time: 19:54

Lab ID: MOIL#3

Instrument: FID3B.I

Lab File Name: 0604b033.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D	
WAMoil(C24-C38)	5126802	519.3	500	3.9	
AK103 (C25-C36)	4436491	624.1	500	24.8	
n-Triacontane	675513	51.8	45	15.0	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

WS21 : 00199

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.67 TRIAC: 6.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	06/04/13	0813	4.66	6.70
02		RT0604	06/04/13	0832	4.67	6.70
03	ZZZZZ	ZZZZZ	06/04/13	0851	4.67	6.70
04	ZZZZZ	ZZZZZ	06/04/13	0911	4.67	6.70
05	ZZZZZ	ZZZZZ	06/04/13	0930	4.66	6.70
06	ZZZZZ	ZZZZZ	06/04/13	0951	4.67	6.70
07	ZZZZZ	ZZZZZ	06/04/13	1010	4.66	6.70
08	ZZZZZ	ZZZZZ	06/04/13	1030	4.67	6.70
09	ZZZZZ	ZZZZZ	06/04/13	1101	4.67	6.70
10	ZZZZZ	ZZZZZ	06/04/13	1120	4.66	6.70
11	ZZZZZ	ZZZZZ	06/04/13	1154	4.67	6.70
12	ZZZZZ	ZZZZZ	06/04/13	1222	4.66	
13	ZZZZZ	ZZZZZ	06/04/13	1253	4.66	
14	ZZZZZ	ZZZZZ	06/04/13	1324	4.66	
15	ZZZZZ	ZZZZZ	06/04/13	1348	4.66	6.70
16	ZZZZZ	ZZZZZ	06/04/13	1407	4.67	6.70
17	ZZZZZ	ZZZZZ	06/04/13	1426	4.67	6.70
18	ZZZZZ	ZZZZZ	06/04/13	1449	4.67	6.69
19	NPDES SAMPLI	DIESEL#2	06/04/13	1508	4.67	6.70
20	NPDES SAMPLI	MOIL#2	06/04/13	1532	4.66	6.70
21	ZZZZZ	ZZZZZ	06/04/13	1551	4.67	6.71
22	ZZZZZ	ZZZZZ	06/04/13	1610	4.67	6.72
23	ZZZZZ	ZZZZZ	06/04/13	1629	4.67	6.72
24	ZZZZZ	ZZZZZ	06/04/13	1648	4.67	6.72
25	WR99MBS1	WR99MBS1	06/04/13	1708	4.67	6.72
26	WR99LCSS1	WR99LCSS1	06/04/13	1727	4.67	6.72
27	KC-VT-1593-2	WR99D	06/04/13	1755	4.66	6.72
28	KC-VT-1593-2	WR99DMS	06/04/13	1819	4.67	6.73
29	KC-VT-1593-2	WR99DMSD	06/04/13	1837	4.67	6.74
30	KC-IV-SPS-20	WS21A	06/04/13	1856	4.68	6.75
31	ZZZZZ	ZZZZZ	06/04/13	1915	4.67	6.73
32	NPDES SAMPLI	DIESEL#3	06/04/13	1935	4.68	6.70

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

WS21 : 06/06/13

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99 Project: NPDES SAMPLING SUPPORT

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.67 TRIAC: 6.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	NPDES SAMPLI	MOIL#3	06/04/13	1954	4.67	6.76*

TERPH = o-terph QC LIMITS (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

WR21 : 093291

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99/WS61 Project: NPDES Sampling Support

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	05/10/13	0743	4.69	6.78
02		RT0510	05/10/13	0802	4.68	6.72
03		IB0510	05/10/13	0821	4.68	6.72
04		DIESEL 50	05/10/13	0841	4.67	6.72
05		DIESEL 100	05/10/13	0901	4.67	6.72
06		DIESEL 250	05/10/13	0920	4.68	6.72
07		DIESEL 500	05/10/13	0940	4.69	6.73
08		DIESEL 1000	05/10/13	1000	4.69	6.72
09		DIESEL 2500	05/10/13	1020	4.71	6.72
10		DIESEL ICV 2	05/10/13	1040	4.68	6.72
11		DIESEL#1	05/10/13	1331	4.67	6.78
12		JETA#1	05/10/13	1350	4.68	6.78
13		DIESEL#2	05/10/13	1410	4.68	6.76
14	ZZZZZ	ZZZZZ	05/10/13	1438	4.67	6.72
15	ZZZZZ	ZZZZZ	05/10/13	1457	4.68	6.72
16	ZZZZZ	ZZZZZ	05/10/13	1517	4.68	6.72
17	ZZZZZ	ZZZZZ	05/10/13	1537	4.67	6.72*
18	ZZZZZ	ZZZZZ	05/10/13	1556	4.67	6.71*
19	ZZZZZ	ZZZZZ	05/10/13	1616	4.67	6.72*
20	ZZZZZ	ZZZZZ	05/10/13	1635	4.68	6.72
21	ZZZZZ	ZZZZZ	05/10/13	1655	4.68	6.72
22	ZZZZZ	ZZZZZ	05/10/13	1714	4.68	6.72
23		DIESEL#3	05/10/13	1733	4.68	6.77
24		JETA#2	05/10/13	1753	4.68	6.77
25		MOIL#1	05/10/13	1812	4.68	6.76
26		WP23MBS1	05/10/13	1832	4.68	6.77
27		WP23LCSS1	05/10/13	1851	4.68	6.76
28		WP23A	05/10/13	1910	4.68	6.77
29		WP23A	05/10/13	1930	4.67	6.76
30		WP23B	05/10/13	1949	4.68	6.77
31		WP23B	05/10/13	2009	4.67	6.76
32		WP23C	05/10/13	2029	4.68	6.76

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

WS21 : 002203

8
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		WP23C	05/10/13	2048	4.67	6.77
02		DIESEL#4	05/10/13	2107	4.68	6.77
03		MOIL#2	05/10/13	2127	4.68	6.76
04		WP24MBS1	05/10/13	2151	4.68	6.76
05		WP24LCSS1	05/10/13	2209	4.68	6.77
06		WN70A	05/10/13	2229	4.68	6.77
07		WP24A	05/10/13	2306	4.69	6.77

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WR99/WS61 Project: NPDES Sampling Support

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	0822	4.67	6.72
02		RT0509	05/09/13	0840	4.68	6.72
03	ZZZZZ	ZZZZZ	05/09/13	0859	4.68	6.72
04	ZZZZZ	ZZZZZ	05/09/13	0919	4.68	6.73
05	ZZZZZ	ZZZZZ	05/09/13	0938	4.67	6.72
06	ZZZZZ	ZZZZZ	05/09/13	1021	4.67	6.72
07	ZZZZZ	ZZZZZ	05/09/13	1040	4.68	6.72
08		RT0509	05/09/13	1100	4.68	6.72
09	ZZZZZ	ZZZZZ	05/09/13	1120	4.68	6.72
10	ZZZZZ	ZZZZZ	05/09/13	1140	4.68	6.72
11	ZZZZZ	ZZZZZ	05/09/13	1200	4.67	6.72
12	ZZZZZ	ZZZZZ	05/09/13	1514	4.67	6.73
13	ZZZZZ	ZZZZZ	05/09/13	1533	4.67	6.72
14	ZZZZZ	ZZZZZ	05/09/13	1552	4.68	6.72
15	ZZZZZ	ZZZZZ	05/09/13	1612	4.68	6.72
16	ZZZZZ	ZZZZZ	05/09/13	1632	4.69	6.73
17	ZZZZZ	ZZZZZ	05/09/13	1651	4.70	6.73
18		DIESEL ICV 2	05/09/13	1711	4.68	6.72
19		MOIL 100	05/09/13	1730	4.67	6.72*
20		MOIL 250	05/09/13	1750	4.68	6.72
21		MOIL 500	05/09/13	1809	4.68	6.73
22		MOIL 1000	05/09/13	1829	4.67	6.74
23		MOIL 2500	05/09/13	1849	4.67	6.75
24		MOIL 5000	05/09/13	1908	4.68	6.77
25		MOIL ICV 500	05/09/13	1928	4.68	6.73
26	ZZZZZ	ZZZZZ	05/09/13	1947	4.67	6.73
27	ZZZZZ	ZZZZZ	05/09/13	2006	4.67	6.73
28	ZZZZZ	ZZZZZ	05/09/13	2026	4.68	6.73
29	ZZZZZ	ZZZZZ	05/09/13	2045	4.68	6.73
30	ZZZZZ	ZZZZZ	05/09/13	2104	4.69	6.72
31	ZZZZZ	ZZZZZ	05/09/13	2123	4.71	6.72
32	ZZZZZ	ZZZZZ	05/09/13	2143	4.68	6.72*

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	2202	4.67	6.72
02	ZZZZZ	ZZZZZ	05/09/13	2221	4.68	6.73
03	ZZZZZ	ZZZZZ	05/09/13	2241	4.68	6.74
04	ZZZZZ	ZZZZZ	05/09/13	2300	4.68	6.75
05	ZZZZZ	ZZZZZ	05/09/13	2319	4.68	6.77
06		AK103 ICV 50	05/09/13	2339	4.67	6.72

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

TPHG Analysis
Report and Summary QC Forms

ARI Job ID: WS21

WS21 : 00298

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Sediment

Data Release Authorized:
Reported: 06/12/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

ARI ID	Client ID	Analysis Date	Range	Result	LOQ	DL
MB-060313	Method Blank	06/03/13	Gasoline	< 5.0 U	5.0	1.7
13-11678		PID1	HC ID	---		
			Trifluorotoluene	98.1%		
			Bromobenzene	97.2%		
WS21A	KC-IV-SPS-20130506	06/03/13	**Gasoline**	**30**	**6.1**	**2.0**
13-11678		PID1	HC ID	GRO		
			Trifluorotoluene	89.6%		
			Bromobenzene	92.2%		

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

WS21 : 209977

ANALYTICAL RESOURCES INCORPORATED

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS21
Matrix: Sediment

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	BFB	TFT	BBZ	TOT OUT
MB-060313	NA	98.1%	97.2%	0
LCS-060313	NA	98.6%	94.0%	0
LCSD-060313	NA	103%	98.6%	0
KC-IV-SPS-20130531-S	NA	89.6%	92.2%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-11678 to 13-11678

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-060313
LAB CONTROL SAMPLE

Lab Sample ID: LCS-060313
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 06/03/13 12:28
LCSD: 06/03/13 12:56
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	47.7	50.0	95.4%	46.5	50.0	93.0%	2.5%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	98.6%	103%
Bromobenzene	94.0%	98.6%

4

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0603

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

SDG No.: WS21

Project No.: NPDES SAMPLING SUPPORT

Date Analyzed : 06/03/13

Matrix: SOIL

Time Analyzed : 1325

Instrument ID : PID1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0603	LCS0603	06/03/13
02	LCSD0603	LCSD0603	06/03/13
03	KC-IV-SPS-20	WS21A	06/03/13
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
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21			
22			
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24			
25			
26			
27			
28			
29			
30			

WS21 : 00212

6a

GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument/Det: PID1.I/RTX 502-2 FID Project: NPDES SAMPLING SUPPORT

Calibration Date: 23-OCT-2012 SDG No.: WS21

Surr Calibration Date: 22-MAY-2013

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4

Surrogates Rel. Rec.	RF1	RF2	RF3	RF4	RF5	RF6	Ave RF	%RSD
$ TFT(Surr)	+++++	30.63636	30.95455	30.54545	29.88060	29.37000		
	28.75188	28.18539	28.40000				29.59053	3.634
$ BB(Surr)	+++++	20.63636	20.13636	20.50000	19.88060	19.80000		
	19.51128	19.17978	19.32000				19.87055	2.668

<- Indicates %RSD outside limits
Surrogate areas are not included in RF calculation.

Quant Ranges : WA Gas Toluene - nC12
AK Gas nC6 - nC10
NW Gas Toluene - Naphthalene
Cal Gas nC6 - nC12
8015 Gas 2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files	Analysis Time
1023a013.d	23-OCT-2012 22:13
1023a014.d	23-OCT-2012 22:42
1023a015.d	23-OCT-2012 23:11
1023a016.d	23-OCT-2012 23:40
1023a017.d	24-OCT-2012 00:10
1023a018.d	24-OCT-2012 00:39

Surr Calibration Files	Analysis Time
0522a002.d	22-MAY-2013 09:02
0522a003.d	22-MAY-2013 09:30
0522a004.d	22-MAY-2013 09:58
0522a005.d	22-MAY-2013 10:27
0522a006.d	22-MAY-2013 10:56
0522a007.d	22-MAY-2013 11:25
0522a008.d	22-MAY-2013 11:55
0522a009.d	22-MAY-2013 12:24

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

ICal Date: 23-OCT-2012 Project: NPDES SAMPLING

CCal Date: 03-JUN-2013 SDG No.: WS21

Lab File Name: 0603a003.d Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	865918	2.42	2.50	-3.3
AKGas (C6-C10)	1385971	2.38	2.50	-4.9
NWGas (Tol-Nap)	909697	2.43	2.50	-3.0
8015C (2MP-TMB)	1715077	2.37	2.50	-5.2

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 03-JUN-2013
SDG No.: WS21

Lab File Name: 0603a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	47445	109.3	100.0	9.3
Bromobenzene	17983	102.6	100.0	2.6

WS21 : 0603a003

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

ICal Date: 23-OCT-2012 Project: NPDES SAMPLING

CCal Date: 03-JUN-2013 SDG No.: WS21

Lab File Name: 0603a014.d Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	820784	2.29	2.50	-8.3
AKGas (C6-C10)	1340748	2.30	2.50	-8.0
NWGas (Tol-Nap)	857708	2.29	2.50	-8.5
8015C (2MP-TMB)	1656460	2.29	2.50	-8.4

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

WS21 : 00216

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

ICal Date: 23-OCT-2012 Project: NPDES SAMPLING

CCal Date: 03-JUN-2013 SDG No.: WS21

Lab File Name: 0603a014.d Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	46628	108.1	100.0	8.1
Bromobenzene	18317	100.3	100.0	0.3

WS21 : 0603a014

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

ICal Date: 23-OCT-2012 Project: NPDES SAMPLING

CCal Date: 03-JUN-2013 SDG No.: WS21

Lab File Name: 0603a024.d Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	826590	2.31	2.50	-7.7
AKGas (C6-C10)	1306794	2.24	2.50	-10.3
NWGas (Tol-Nap)	867230	2.31	2.50	-7.5
8015C (2MP-TMB)	1620600	2.24	2.50	-10.4

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

WS21 : 2013

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 03-JUN-2013
SDG No.: WS21

Lab File Name: 0603a024.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	44117	102.3	100.0	2.3
Bromobenzene	16977	95.6	100.0	-4.4

FORM VII-Surr

WS21 : 00219

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 10/23/12

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

METHOD SURROGATE RT
S1 : 7.89 S2 : 15.39

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01		RINSE	10/23/12	0941				
02		RT1023+BCAL1	10/23/12	1010	7.88		15.39	
03		GCAL1	10/23/12	1039	7.88		15.39	
04		B 200	10/23/12	1750	7.89		15.39	
05		B 100	10/23/12	1820	7.88		15.39	
06		B 50	10/23/12	1849	7.88		15.39	
07		B 25	10/23/12	1918	7.89		15.39	
08		B 5	10/23/12	1947	7.88		15.39	
09		B 1	10/23/12	2016	7.88		15.39	
10		B 0.5	10/23/12	2045	7.88		15.39	
11		B 0.25	10/23/12	2115	7.89		15.39	
12		BICV	10/23/12	2144	7.88		15.39	
13		G 0.10	10/23/12	2213	7.89		15.39	
14		G 0.25	10/23/12	2242	7.89		15.39	
15		G 1.0	10/23/12	2311	7.89		15.39	
16		G 2.5	10/23/12	2340	7.88		15.39	
17		G 5.0	10/24/12	0010	7.88		15.39	
18		G 10	10/24/12	0039	7.88		15.39	
19		GICV	10/24/12	0108	7.88		15.39	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)

S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Column: RTX 502-2 FID

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
S1 : 7.85 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01	BCAL0.25	BCAL0.25	05/22/13	0902	7.85		15.38	
02	BCAL0.5	BCAL0.5	05/22/13	0930	7.85		15.38	
03	BCAL1	BCAL1	05/22/13	0958	7.85		15.38	
04	BCAL5	BCAL5	05/22/13	1027	7.85		15.38	
05	BCAL25	BCAL25	05/22/13	1056	7.85		15.38	
06	BCAL50	BCAL50	05/22/13	1125	7.85		15.38	
07	BCAL100	BCAL100	05/22/13	1155	7.85		15.38	
08	BCAL200	BCAL200	05/22/13	1224	7.85		15.38	
09	ICV25	ICV25	05/22/13	1253	7.85		15.38	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WS21 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 06/03/13

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

METHOD SURROGATE RT
S1 : 7.85 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01	RT0603+BCAL	RT0603+BCAL	06/03/13	1114	7.85		15.38	
02	NPDES SAMPLI	GCAL 1	06/03/13	1143	7.85		15.38	
03	LCS0603	LCS0603	06/03/13	1228	7.85		15.38	
04	LCSD0603	LCSD0603	06/03/13	1256	7.85		15.38	
05	MB0603	MB0603	06/03/13	1325	7.85		15.38	
06	NPDES SAMPLI	GCAL 2	06/03/13	1721	7.85		15.38	
07	KC-IV-SPS-20	WS21A	06/03/13	2039	7.85		15.38	
08	NPDES SAMPLI	GCAL 3	06/03/13	2204	7.85		15.38	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

WS21 : 06222

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WS21

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS21

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
KC-IV-SPS-20130531	WS21A	13-11678	
KC-IV-SPS-20130531D	WS21ADUP	13-11678	
KC-IV-SPS-20130531S	WS21ASPK	13-11678	
PBS	WS21MB1	13-11678	
LCSS	WS21MB1SPK	13-11678	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Eric Larson for Name: Jay Kuhn

Date: 6-12-13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-IV-SPS-20130531-S
SAMPLE

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Percent Total Solids: 72.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/06/13	200.8	06/10/13	7440-36-0	Antimony	0.017	0.3	0.3	U
3050B	06/06/13	200.8	06/10/13	**7440-38-2**	**Arsenic**	0.12	0.3	**2.4**	
3050B	06/06/13	6010C	06/11/13	7440-41-7	Beryllium	0.013	0.1	0.1	U
3050B	06/06/13	200.8	06/10/13	**7440-43-9**	**Cadmium**	0.016	0.1	**0.2**	
3050B	06/06/13	200.8	06/10/13	**7440-47-3**	**Chromium**	0.050	0.7	**9.3**	
3050B	06/06/13	6010C	06/11/13	**7440-50-8**	**Copper**	0.065	0.3	**13.5**	
3050B	06/06/13	200.8	06/10/13	**7439-92-1**	**Lead**	0.062	0.1	**8.4**	
CLP	06/06/13	7471A	06/10/13	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	06/06/13	200.8	06/10/13	**7440-02-0**	**Nickel**	0.065	0.7	**8.6**	
3050B	06/06/13	200.8	06/10/13	7782-49-2	Selenium	0.13	0.7	0.7	U
3050B	06/06/13	200.8	06/10/13	7440-22-4	Silver	0.011	0.3	0.3	U
3050B	06/06/13	200.8	06/10/13	7440-28-0	Thallium	0.0040	0.3	0.3	U
3050B	06/06/13	6010C	06/11/13	**7440-66-6**	**Zinc**	0.16	1	**32**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

WS21 : 000025

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: KC-IV-SPS-20130531-S
MATRIX SPIKE

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.3 U	8.1	33.3	24.3%	N
Arsenic	200.8	2.4	37.3	33.3	105%	
Beryllium	6010C	0.1 U	63.0	65.5	96.2%	
Cadmium	200.8	0.2	32.7	33.3	97.6%	
Chromium	200.8	9.3	40.8	33.3	94.6%	
Copper	6010C	13.5	78.1	65.5	98.6%	
Lead	200.8	8.4	39.6	33.3	93.7%	
Mercury	7471A	0.02 U	0.28	0.251	112%	
Nickel	200.8	8.6	44.1	33.3	107%	
Selenium	200.8	0.7 U	109	107	102%	
Silver	200.8	0.3 U	31.0	33.3	93.1%	
Thallium	200.8	0.3 U	31.2	33.3	93.7%	
Zinc	6010C	32	94	65.5	94.7%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: KC-IV-SPS-20130531-S DUPLICATE

Lab Sample ID: WS21A
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Arsenic	200.8	2.4	2.3	4.3%	+/- 20%	
Beryllium	6010C	0.1 U	0.1 U	0.0%	+/- 0.1	L
Cadmium	200.8	0.2	0.2	0.0%	+/- 0.1	L
Chromium	200.8	9.3	9.9	6.2%	+/- 20%	
Copper	6010C	13.5	11.1	19.5%	+/- 20%	
Lead	200.8	8.4	7.5	11.3%	+/- 20%	
Mercury	7471A	0.02 U	0.03 U	0.0%	+/- 0.02	L
Nickel	200.8	8.6	9.4	8.9%	+/- 20%	
Selenium	200.8	0.7 U	0.7 U	0.0%	+/- 0.7	L
Silver	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Zinc	6010C	32	31	3.2%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

WS21 : 209977

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WS21LCS
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.4	25.0	97.6%	
Arsenic	200.8	25.8	25.0	103%	
Beryllium	6010C	49.1	50.0	98.2%	
Cadmium	200.8	24.3	25.0	97.2%	
Chromium	200.8	24.9	25.0	99.6%	
Copper	6010C	51.3	50.0	103%	
Lead	200.8	24.4	25.0	97.6%	
Mercury	7471A	0.52	0.50	104%	
Nickel	200.8	25.9	25.0	104%	
Selenium	200.8	80.3	80.0	100%	
Silver	200.8	23.9	25.0	95.6%	
Thallium	200.8	24.0	25.0	96.0%	
Zinc	6010C	51	50	102%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

WS21 : 209977

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WS21MB
LIMS ID: 13-11678
Matrix: Sediment
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS21-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/06/13	200.8	06/10/13	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	06/06/13	200.8	06/10/13	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	06/06/13	6010C	06/11/13	7440-41-7	Beryllium	0.010	0.1	0.1	U
3050B	06/06/13	200.8	06/10/13	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	06/06/13	200.8	06/10/13	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	06/06/13	6010C	06/11/13	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	06/06/13	200.8	06/10/13	7439-92-1	Lead	0.047	0.1	0.1	U
CLP	06/06/13	7471A	06/10/13	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	06/06/13	200.8	06/10/13	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	06/06/13	200.8	06/10/13	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	06/06/13	200.8	06/10/13	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	06/06/13	200.8	06/10/13	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	06/06/13	6010C	06/11/13	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

WS21 : 209209

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WS21

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS061011	50.0	50.63	**101.3**	50.0	49.73	**99.5**	49.33	**98.7**	49.41	**98.8**				
Arsenic	AS	PMS	MS061011	50.0	50.88	**101.8**	50.0	49.73	**99.5**	50.93	**101.9**	49.83	**99.7**				
Beryllium	BE	ICP	IP061172	1000.0	1021.53	**102.2**	1000.0	1021.00	**102.1**	1014.36	**101.4**	1017.97	**101.8**	1020.40	**102.0**	1007.33	**100.7**
Cadmium	CD	PMS	MS061011	50.0	49.02	**98.0**	50.0	50.09	**100.2**	50.36	**100.7**	49.74	**99.5**				
Chromium	CR	PMS	MS061011	50.0	49.33	**98.7**	50.0	49.17	**98.3**	48.71	**97.4**	48.43	**96.9**				
Copper	CU	ICP	IP061172	1000.0	1043.76	**104.4**	1000.0	1034.54	**103.5**	1004.09	**100.4**	1040.92	**104.1**	1008.94	**100.9**	1036.39	**103.6**
Lead	PB	PMS	MS061011	50.0	50.14	**100.3**	50.0	49.21	**98.4**	47.96	**95.9**	47.58	**95.2**				
Mercury	HG	CVA	HG061001	8.0	8.00	**100.0**	4.0	4.04	**101.0**	4.05	**101.3**	4.08	**102.0**	4.12	**103.0**	4.14	**103.5**
Nickel	NI	PMS	MS061011	50.0	52.41	**104.8**	50.0	50.59	**101.2**	51.33	**102.7**	50.44	**100.9**				
Selenium	SE	PMS	MS061011	80.0	78.79	**98.5**	50.0	50.60	**101.2**	52.19	**104.4**	51.84	**103.7**				
Silver	AG	PMS	MS061011	50.0	50.46	**100.9**	50.0	49.42	**98.8**	48.95	**97.9**	47.84	**95.7**				
Thallium	TL	PMS	MS061011	50.0	49.17	**98.3**	50.0	49.17	**98.3**	48.17	**96.3**	47.11	**94.2**				
Zinc	ZN	ICP	IP061172	1000.0	1009.04	**100.9**	1000.0	1016.64	**101.7**	1008.46	**100.8**	1013.99	**101.4**	1027.63	**102.8**	1005.99	**100.6**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WS21

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS061011	50.0												
Arsenic	AS	PMS	MS061011	50.0												
Beryllium	BE	ICP	IP061172	1000.0	1000.17	**100.0**	1020.59	**102.1**	1032.05	**103.2**						
Cadmium	CD	PMS	MS061011	50.0												
Chromium	CR	PMS	MS061011	50.0												
Copper	CU	ICP	IP061172	1000.0	1031.72	**103.2**	1018.20	**101.8**	1058.82	**105.9**						
Lead	PB	PMS	MS061011	50.0												
Mercury	HG	CVA	HG061001	4.0	4.13	**103.3**										
Nickel	NI	PMS	MS061011	50.0												
Selenium	SE	PMS	MS061011	50.0												
Silver	AG	PMS	MS061011	50.0												
Thallium	TL	PMS	MS061011	50.0												
Zinc	ZN	ICP	IP061172	1000.0	1006.71	**100.7**	1033.09	**103.3**	1037.26	**103.7**						

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WS21

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Antimony	SB	PMS	MS061011	0.2	0.22	**110.0**										
Arsenic	AS	PMS	MS061011	0.2	0.21	**105.0**										
Beryllium	BE	ICP	IP061172	1.0	0.98	**98.0**	0.96	**96.0**								
Cadmium	CD	PMS	MS061011	0.1	0.10	**100.0**										
Chromium	CR	PMS	MS061011	0.5	0.51	**102.0**										
Copper	CU	ICP	IP061172	2.0	2.21	**110.5**	2.48	**124.0**								
Lead	PB	PMS	MS061011	0.1	0.10	**100.0**										
Mercury	HG	CVA	HG061001	0.1	0.11	**110.0**										
Nickel	NI	PMS	MS061011	0.5	0.51	**102.0**										
Selenium	SE	PMS	MS061011	0.5	0.48	**96.0**										
Silver	AG	PMS	MS061011	0.2	0.20	**100.0**										
Thallium	TL	PMS	MS061011	0.2	0.21	**105.0**										
Zinc	ZN	ICP	IP061172	10.0	12.59	**125.9**	11.46	**114.6**								

Control Limits: *no control limits have been established by the EPA at this time.*

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS21

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS061011	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Arsenic	AS	PMS	MS061011	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Beryllium	BE	ICP	IP061172	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	CD	PMS	MS061011	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U				
Chromium	CR	PMS	MS061011	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				
Copper	CU	ICP	IP061172	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Lead	PB	PMS	MS061011	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U				
Mercury	HG	CVA	HG061001	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS061011	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				
Selenium	SE	PMS	MS061011	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				
Silver	AG	PMS	MS061011	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Thallium	TL	PMS	MS061011	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Zinc	ZN	ICP	IP061172	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TCSSSA - TCCSIA

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WS21

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS061011	60.0	0.2												
Arsenic	AS	PMS	MS061011	10.0	0.2												
Beryllium	BE	ICP	IP061172	5.0	1.0	1.0	U	1.0	U	1.0	U						
Cadmium	CD	PMS	MS061011	5.0	0.1												
Chromium	CR	PMS	MS061011	10.0	0.5												
Copper	CU	ICP	IP061172	25.0	2.0	2.0	U	2.0	U	2.0	U						
Lead	PB	PMS	MS061011	3.0	0.1												
Mercury	HG	CVA	HG061001	0.2	0.1	0.1	U										
Nickel	NI	PMS	MS061011	40.0	0.5												
Selenium	SE	PMS	MS061011	5.0	0.5												
Silver	AG	PMS	MS061011	10.0	0.2												
Thallium	TL	PMS	MS061011	10.0	0.2												
Zinc	ZN	ICP	IP061172	20.0	10.0	10.0	U	10.0	U	10.0	U						

SCANNED

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: IP061172

SDG: WS21

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	201847.7	201807.9	**100.9**	201712.0	202171.1	**101.1**			
Antimony		1000	9.7	1026.8	**102.7**	9.7	1023.6	**102.4**			
Arsenic		1000	18.0	1027.2	**102.7**	17.9	1024.3	**102.4**			
Barium		1000	-2.3	1006.4	**100.6**	-0.9	1020.2	**102.0**			
Beryllium		1000	0.1	996.9	**99.7**	0.1	994.6	**99.5**			
Boron			-5.6	-7.5		-7.2	-8.8				
Cadmium		1000	0.5	1022.8	**102.3**	0.5	1017.8	**101.8**			
Calcium	100000	100000	100011.6	99715.8	**99.7**	100150.8	100014.0	**100.0**			
Chromium		1000	1.0	1020.4	**102.0**	-0.5	1017.1	**101.7**			
Cobalt		1000	0.2	953.2	**95.3**	0.1	951.4	**95.1**			
Copper		1000	0.3	1052.6	**105.3**	0.6	1050.5	**105.1**			
Iron	200000	200000	200903.4	198931.9	**99.5**	199219.0	198859.0	**99.4**			
Lead		1000	-1.4	993.5	**99.4**	-3.8	988.4	**98.8**			
Magnesium	100000	100000	105087.7	99664.7	**99.7**	104605.2	99996.3	**100.0**			
Manganese		1000	0.3	964.7	**96.5**	0.2	963.8	**96.4**			
Molybdenum			0.6	0.5		0.5	0.5				
Nickel		1000	1.4	963.9	**96.4**	1.5	968.4	**96.8**			
Potassium			6.8	-27.2		3.3	-22.9				
Selenium		1000	13.0	1027.1	**102.7**	16.4	1014.5	**101.5**			
Silicon			-6.2	-2.5		-4.7	-5.6				
Silver		1000	-1.0	1063.9	**106.4**	-1.1	1069.5	**107.0**			
Sodium			4.8	-3.0		1.1	-7.7				
Strontium			5.5	5.4		5.4	5.4				
Thallium		1000	1.7	937.9	**93.8**	1.5	934.3	**93.4**			
Tin			-11.0	-11.0		-12.9	-12.2				
Titanium			2.4	1.9		2.5	2.3				
Vanadium		1000	-0.7	994.1	**99.4**	-1.2	995.6	**99.6**			
Zinc		1000	3.6	962.0	**96.2**	3.8	960.1	**96.0**			

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS061011

SDG: WS21

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.1	19.6	**98.0**						
Barium			-0.1	-0.1							
Cadmium		20	0.2	19.6	**98.0**						
Chromium		20	0.6	19.1	**95.5**						
Cobalt		20	0.0	18.7	**93.5**						
Copper		20	0.9	21.0	**105.0**						
Manganese		20	0.0	18.8	**94.0**						
Molybdenum	400	400	404.3	411.9	**103.0**						
Nickel		20	0.3	21.1	**105.5**						
Selenium			-0.1	-0.1							
Silver		20	0.0	19.1	**95.5**						
Zinc		20	0.5	20.1	**100.5**						

SCSAS : 15678

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

ANALYSIS METHOD: PMS

SDG: WS21

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	KC-IV-SPS-20130531	WS21APOST	MS061011	476.08	B	1000.00	U	500	Sediment	**95.2**

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS21

UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Beryllium	BE	ICP	OPTIMA ICP 2	313.04		5	1.0	4/1/2012	5000.0	1/22/2013
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2012	40000.0	1/22/2013
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2012	100000.0	1/22/2013

WS21 : 220236

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 6/10/2013

SDG: WS21

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	13.5116900	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0733590	0.0000000	-1.1562270	1.6205640	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1808730	0.0000000	0.0000000	0.1684250
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.67	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	2.1037380	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	5.4930220	0.0000000	0.0000000	0.0000000	0.0000000	0.1385480	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0970800	0.0000000	0.0000000	0.0000000	0.0000000	-0.0418440
Cobalt	228.62	0.0000000	0.0000000	0.0906750	0.0000000	0.0000000	0.0000000	0.0000000	-0.0404570	0.0000000	0.0120010
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1617900	0.0000000	0.0000000	-0.0440960
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.0775070	0.0000000	0.0000000
Lead	220.35	-0.2330880	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1375770	-1.7455340	1.4164220	0.0510640
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.1238020	0.0000000	-1.6776030	-1.2063230	0.0000000	0.6021300
Manganese	257.61	0.0056830	0.0000000	0.0000000	0.0000000	0.0040290	0.0000000	0.0000000	0.0000000	0.0000000	-0.0043570
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0127170	0.0000000	0.0000000	0.0494370	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.1095620	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5156780	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.7783440	0.0000000	-0.6443870	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	4.3373140	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.9719930	0.4226130	0.0000000	-0.1373360
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1284010	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0622130	0.0000000	0.0000000	0.1906300	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.9208100	0.0000000	0.0530020
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0123920	0.0000000	0.0000000	-0.0659320	0.0000000	0.0000000

SDG: WS21

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 6/10/2013

SDG: WS21

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	16.0812590	0.0000000	0.0000000	0.0000000	1.9531650	0.0000000	15.6704600	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.8263670	0.0000000	-3.8485090	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.4165090	0.0000000	0.0000000	0.0000000	-32.1596340	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1266550	0.0000000	0.0000000	0.0000000	0.0000000	0.2235440	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0102770	0.0000000	0.2401990	0.0000000
Boron	249.67	0.0000000	0.0000000	-1.0759410	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9387840	0.0000000	0.0000000	0.0000000	0.0000000	0.0597550	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0860990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3212800	0.0000000
Cobalt	228.62	0.0000000	0.0000000	-0.1256200	0.1682020	0.0000000	0.0000000	1.7253070	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0058198	0.0000000	0.3004190	0.0000000	0.0000000	0.0000000	0.1851800	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	7.2530080	0.0000000
Lead	220.35	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.2138260	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.1832430	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5439300	0.0000000	0.4201630	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5911140	0.0000000
Silicon	288.16	-0.1130470	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.2887870	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	287.1603720	0.0000000	0.0000000	306.9999840
Thallium	190.80	0.0000000	0.0000000	-1.5891790	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.6439390	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0384380	-0.4873020	-0.2074990	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.9474070	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1525200	-0.5409400	0.0000000	0.0000000	0.0000000	0.5527510	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2376970	0.0000000	-0.0608720	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

ARI-QAS-1.2.2.1

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS21

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 6/6/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
KC-IV-SPS-20130531	WS21A	1.057	0.0	50.0
KC-IV-SPS-20130531D	WS21ADUP	1.059	0.0	50.0
KC-IV-SPS-20130531S	WS21ASPK	1.052	0.0	50.0
PBS	WS21MB1	1.000	0.0	50.0
LCSS	WS21MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS21

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 6/6/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
KC-IV-SPS-20130531	WS21A	1.039	0.0	50.0
KC-IV-SPS-20130531D	WS21ADUP	1.042	0.0	50.0
KC-IV-SPS-20130531S	WS21ASPK	1.035	0.0	50.0
PBS	WS21MB1	1.000	0.0	50.0
LCSS	WS21MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS21

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 6/6/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
KC-IV-SPS-20130531	WS21A	0.280	0.0	50.0
KC-IV-SPS-20130531D	WS21ADUP	0.275	0.0	50.0
KC-IV-SPS-20130531S	WS21ASPK	0.275	0.0	50.0
PBS	WS21MB1	0.200	0.0	50.0
LCSW	WS21MB1SPK	0.200	0.0	50.0

WS21 : 060213

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 6/11/2013

SDG: WS21 | RUNID: IP061172 | METHOD: ICP | END DATE: 6/11/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09270							X					X																		X
S2	S2	1.00	09312												X																		
S3	S3	1.00	09331							X																							X
S4	S4	1.00	09354																														
S5	S5	1.00	09380																														
ICV	ICV	1.00	09412							X					X																		X
ICB	ICB	1.00	09452							X					X																		X
CRI	CRII	1.00	09494							X					X																		X
ICSA	ICSAI	1.00	09535							X					X																		X
ICSAB	ICSABI	1.00	09581							X					X																		X
CCV	CCV1	1.00	10021							X					X																		X
CCB	CCB1	1.00	10062							X					X																		X
ZZZZZZ	DICHECK	1.00	10103																														
ZZZZZZ	WS27MB1	2.00	10145																														
ZZZZZZ	WS27A-L	10.00	10190																														
ZZZZZZ	WS27A	2.00	10230																														
ZZZZZZ	WS27ADUP	2.00	10271																														
ZZZZZZ	WS27ASPK	2.00	10311																														
ZZZZZZ	ZZZZZZ	2.00	10351																														
ZZZZZZ	WS27REF1	2.00	10391																														
ZZZZZZ	WS27MB1SPK	2.00	10423																														
CCV	CCV2	1.00	10463							X					X																		X
CCB	CCB2	1.00	10504							X					X																		X
CRI	CRIF	1.00	10545							X					X																		X
ICSA	ICSAF	1.00	10591							X					X																		X
ICSAB	ICSABF	1.00	11032							X					X																		X
CCV	CCV3	1.00	11073							X					X																		X
CCB	CCB3	1.00	11113							X					X																		X
ZZZZZZ	WT10MB	1.00	11155																														
ZZZZZZ	WT10ADUP	5.00	11200																														
ZZZZZZ	WT10A	5.00	11242																														
ZZZZZZ	WT10ASPK	5.00	11283																														
ZZZZZZ	WT10MBSPK	1.00	11340																														
CCV	CCV4	1.00	11380							X					X																		X
CCB	CCB4	1.00	11420							X					X																		X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 6/11/2013

SDG: WS21 | RUNID: IP061172 | METHOD: ICP | END DATE: 6/11/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WT10ADUP	10.00	11462																													
ZZZZZZ	WT10A	10.00	11503																													
ZZZZZZ	WT10ASPK	10.00	11545																													
CCV	CCV5	1.00	12001							X					X																	X
CCB	CCB5	1.00	12042							X					X																	X
ZZZZZZ	WT03MB1	2.00	12083																													
ZZZZZZ	WT03ADUP	2.00	12125																													
ZZZZZZ	WT03A	2.00	12165																													
ZZZZZZ	WT03ASPK	2.00	12205																													
ZZZZZZ	WT03B	2.00	12241																													
ZZZZZZ	WT03C	2.00	12281																													
ZZZZZZ	WT03D	2.00	12321																													
ZZZZZZ	WT03E	2.00	12362																													
ZZZZZZ	WT03MB1SPK	2.00	12402																													
CCV	CCV6	1.00	12442							X					X																	X
CCB	CCB6	1.00	12482							X					X																	X
ZZZZZZ	WR99MB3	2.00	12524																													
ZZZZZZ	WR99DDUP	2.00	12570																													
ZZZZZZ	WR99D	2.00	13010																													
ZZZZZZ	WR99DSPK	2.00	13050																													
ZZZZZZ	ZZZZZZ	2.00	13082																													
ZZZZZZ	WR99E	2.00	13113																													
ZZZZZZ	WR99F	2.00	13154																													
ZZZZZZ	WR99MB3SPK	2.00	13194																													
CCV	CCV7	1.00	13234							X					X																	X
CCB	CCB7	1.00	13274							X					X																	X
PBS	WS21MB1	2.00	13320							X					X																	X
KC-IV-SPS-20130531D	WS21ADUP	2.00	13361							X					X																	X
KC-IV-SPS-20130531	WS21A	2.00	13401							X					X																	X
KC-IV-SPS-20130531S	WS21ASPK	2.00	13441							X					X																	X
ZZZZZZ	ZZZZZZ	2.00	13482																													
LCSS	WS21MB1SPK	2.00	13522							X					X																	X
CCV	CCV8	1.00	13562							X					X																	X
CCB	CCB8	1.00	14003							X					X																	X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 6/10/2013

SDG: WS21 | RUNID: MS061011 | METHOD: PMS | END DATE: 6/10/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09530		X		X					X		X									X	X	X	X				X			
S1	S1	1.00	09570		X		X					X		X									X	X	X	X				X			
S2	S2	1.00	10010		X		X					X		X									X	X	X	X				X			
S3	S3	1.00	10060		X		X					X		X									X	X	X	X				X			
S4	S4	1.00	10100		X		X					X		X									X	X	X	X				X			
S5	S5	1.00	10150																														
ZZZZZZ	Rinse sampl	1.00	10210																														
ICV	MICV	1.00	10280		X		X					X		X									X	X	X	X				X			
ICB	ICB	1.00	10350		X		X					X		X									X	X	X	X				X			
CCV	MCCV1	1.00	10390		X		X					X		X									X	X	X	X				X			
CCB	CCB1	1.00	10450		X		X					X		X									X	X	X	X				X			
CRI	MCRI	1.00	10490		X		X					X		X									X	X	X	X				X			
ICSA	ICSAI	1.00	10540		X		X					X		X									X	X	X	X				X			
ICSAB	ICSABI	1.00	11000		X		X					X		X									X	X	X	X				X			
ZZZZZZ	LR200	1.00	11070																														
ZZZZZZ	LR300	1.00	11140																														
ZZZZZZ	B1	1.00	11210																														
CCV	MCCV2	1.00	11270		X		X					X		X									X	X	X	X				X			
CCB	CCB2	1.00	11340		X		X					X		X									X	X	X	X				X			
PBS	WS21MB1	20.00	11400		X		X					X		X									X	X	X	X				X			
ZZZZZZ	DI CHECK	1.00	11440																														
ZZZZZZ	ERAP197	10.00	11480																														
KC-IV-SPS-20130531D	WS21ADUP	20.00	11520		X		X					X		X									X	X	X	X				X			
KC-IV-SPS-20130531	WS21A	20.00	11560		X		X					X		X									X	X	X	X				X			
KC-IV-SPS-20130531S	WS21ASPK	20.00	12010		X		X					X		X									X	X	X	X				X			
KC-IV-SPS-20130531A	WS21APOST	20.00	12050																						X								
LCSS	WS21MB1SPK	20.00	12090		X		X					X		X									X	X	X	X				X			
CCV	MCCV3	1.00	12130		X		X					X		X									X	X	X	X				X			
CCB	CCB3	1.00	12200		X		X					X		X									X	X	X	X				X			

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/10/2013

SDG: WS21 | RUNID: HG061001 METHOD: CVA | END DATE: 6/10/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	13155														X																
S0.1	S0.1	1.00	13173														X																
S0.5	S0.5	1.00	13190														X																
S1	S1	1.00	13204														X																
S2	S2	1.00	13222														X																
S5	S5	1.00	13240														X																
S10	S10	1.00	13254														X																
ICV	AICV	1.00	13274														X																
ICB	ICB	1.00	13292														X																
CCV	ACCV1	1.00	13310														X																
CCB	CCB1	1.00	13324														X																
CRA	CRA	1.00	13342														X																
ZZZZZZ	WR57MB1	1.00	13355																														
ZZZZZZ	WR57MB1SPK	1.00	13373																														
ZZZZZZ	WR57MB1SPD	1.00	13390																														
ZZZZZZ	WR57A	1.00	13404																														
ZZZZZZ	WR57B	1.00	13422																														
ZZZZZZ	WR57C	1.00	13435																														
ZZZZZZ	WR57D	1.00	13453																														
ZZZZZZ	WS49MB1	1.00	13471																														
ZZZZZZ	WS49MB1SPK	1.00	13485																														
CCV	ACCV2	1.00	13502														X																
CCB	CCB2	1.00	13521														X																
ZZZZZZ	WS49A	1.00	13534																														
ZZZZZZ	WS49ADUP	1.00	13552																														
ZZZZZZ	WS49ASPK	1.00	13565																														
ZZZZZZ	WS49B	1.00	13583																														
ZZZZZZ	WS49C	1.00	14000																														
ZZZZZZ	WS49D	1.00	14014																														
ZZZZZZ	WS34MB1	1.00	14032																														
ZZZZZZ	WS34MB1SPK	1.00	14045																														
ZZZZZZ	WS34MB1SPD	1.00	14063																														
ZZZZZZ	WS34A	1.00	14081																														
CCV	ACCV3	1.00	14095														X																
CCB	CCB3	1.00	14113														X																

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/10/2013

SDG: WS21 | RUNID: HG061001 METHOD: CVA | END DATE: 6/10/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WS35MB1	1.00	14131																														
ZZZZZZ	WS35MB1SPK	1.00	14145																														
ZZZZZZ	WS35MB1SPD	1.00	14163																														
ZZZZZZ	WS35A	1.00	14180																														
ZZZZZZ	WS20MB1	1.00	14194																														
ZZZZZZ	WS20MB1SPK	1.00	14211																														
ZZZZZZ	WS20A	1.00	14225																														
ZZZZZZ	WS20ADUP	1.00	14243																														
ZZZZZZ	WS20ASPK	1.00	14260																														
ZZZZZZ	WS20B	1.00	14274																														
CCV	ACCV4	1.00	14292														X																
CCB	CCB4	1.00	14310														X																
ZZZZZZ	WS20C	1.00	14324																														
ZZZZZZ	WS20D	1.00	14342																														
ZZZZZZ	WS20E	1.00	14360																														
ZZZZZZ	WS27MB1	1.00	14373																														
ZZZZZZ	WS27MB1SPK	1.00	14391																														
ZZZZZZ	WS27REF1	1.00	14405																														
ZZZZZZ	WS27A	1.00	14422																														
ZZZZZZ	WS27ADUP	1.00	14440																														
ZZZZZZ	WS27ASPK	1.00	14454																														
PBW	WS21MB1	1.00	14471														X																
CCV	ACCV5	1.00	14485														X																
CCB	CCB5	1.00	14503														X																
LCSW	WS21MB1SPK	1.00	14521														X																
KC-IV-SPS-20130531	WS21A	1.00	14535														X																
KC-IV-SPS-20130531D	WS21ADUP	1.00	14553														X																
KC-IV-SPS-20130531S	WS21ASPK	1.00	14571														X																
ZZZZZZ	WR99MB3	1.00	14585																														
ZZZZZZ	WR99MB3SPK	1.00	15002																														
ZZZZZZ	WR99D	1.00	15020																														
ZZZZZZ	WR99DDUP	1.00	15034																														
ZZZZZZ	WR99DSPK	1.00	15051																														
ZZZZZZ	WR99E	1.00	15065																														
CCV	ACCV6	1.00	15083														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/10/2013

SDG: WS21 | RUNID: HG061001 | METHOD: CVA | END DATE: 6/10/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB6	1.00	15101														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WS21

WS21 : 00259

SAMPLE RESULTS-CONVENTIONALS
WS21-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 06/17/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Client ID: KC-IV-SPS-20130531-S
ARI ID: 13-11678 WS21A

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/03/13 060313#1	SM2540B	Percent	0.01	72.33
Total Organic Carbon	06/13/13 061313#1	Plumb,1981	Percent	0.020	0.495

RL Analytical reporting limit
U Undetected at reported detection limit

WS21 : 00251

MS/MSD RESULTS-CONVENTIONALS
WS21-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: NB
Reported: 06/17/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WS21A Client ID: KC-IV-SPS-20130531-S						
Total Organic Carbon	06/13/13	Percent	0.495	1.59	1.09	100.6%

WS21 : 09252

REPLICATE RESULTS-CONVENTIONALS
WS21-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 06/17/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 05/31/13
Date Received: 05/31/13

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WS21A Client ID: KC-IV-SPS-20130531-S					
Total Solids	06/03/13	Percent	72.33	72.10 72.73	0.4%
Total Organic Carbon	06/13/13	Percent	0.495	0.415 0.516	11.2%

WS21 : 00259

LAB CONTROL RESULTS-CONVENTIONALS
WS21-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MR
Reported: 06/17/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon Plumb,1981	ICVL	06/13/13	Percent	0.090	0.100	90.0%

WS21 : 209977

METHOD BLANK RESULTS-CONVENTIONALS
WS21-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MR
Reported: 06/17/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank	QC ID
Total Solids	06/03/13	Percent	< 0.01 U	ICB
Total Organic Carbon	06/13/13	Percent	< 0.020 U	ICB

STANDARD REFERENCE RESULTS-CONVENTIONALS
WS21-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/17/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	06/13/13	Percent	2.51	2.99	83.9%

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: WS21

SAIC
NPDES Sampling Support
209977

Modified PSEP - Sieve/Sedigraph Method
Apparent Grain Size Distribution Summary
Percent Finer Than Indicated Size

Sample No.	Gravel			Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt				Clay	
Phi Size	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Sieve Size (microns)	3/8"	#4 (4750)	#10 (2000)	#18 (1000)	#35 (500)	#60 (250)	#120 (125)	#230 (63)	31.00	15.60	7.80	3.90	2.00	1.00
CL-MH-SPS-20130605-S	100.0	100.0	98.9	95.2	85.5	67.5	54.7	43.8	42.2	9.1	5.9	4.1	3.3	2.6
	100.0	100.0	98.7	95.8	86.8	70.7	57.8	47.3	45.8	13.2	6.4	5.1	4.4	1.7
	100.0	100.0	99.3	96.7	87.9	72.2	60.0	49.6	48.3	14.2	7.3	5.3	4.6	3.7
KC-IV-SPS-20130531-S	100.0	100.0	99.1	92.8	61.8	12.5	2.5	1.7	1.5	1.3	1.1	0.7	0.5	0.4

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WS21

SCAN 2013

SAIC
NPDES Sampling Support
209977

Modified PSEP - Sieve/Sedigraph Method
Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	< -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	> 10	> 4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
CL-MH-SPS-20130605-S	1.1	3.7	9.7	18.0	12.8	10.9	1.6	33.1	3.2	1.8	0.8	0.7	2.6	43.8
	1.3	2.9	8.9	16.1	12.9	10.5	1.5	32.6	6.8	1.3	0.7	2.7	1.7	47.3
	0.7	2.6	8.7	15.7	12.2	10.4	1.3	34.1	6.9	2.0	0.7	0.9	3.7	49.6
KC-IV-SPS-20130531-S	0.9	6.3	31.0	49.3	10.0	0.8	0.2	0.2	0.2	0.4	0.2	0.1	0.4	1.7

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WS21

EC2365

QA SUMMARY

Client:	SAIC	Client Project:	NPDES Sampling Support
ARI Trip. Sample ID:	WS91A	Client Project No.:	209977
Client Trip. Sample ID:	CL-MH-SPS-20130605-S	Batch No.:	WS21-1

Relative Standard Deviation, By Phi Size

Sample ID	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
CL-MH-SPS-20130605-S	100.0	100.0	98.9	95.2	85.5	67.5	54.7	43.8	42.2	9.1	5.9	4.1	3.3	2.6
	100.0	100.0	98.7	95.8	86.8	70.7	57.8	47.3	45.8	13.2	6.4	5.1	4.4	1.7
	100.0	100.0	99.3	96.7	87.9	72.2	60.0	49.6	48.3	14.2	7.3	5.3	4.6	3.7
AVE	NA	100.00	98.95	95.87	86.74	70.14	57.52	46.91	45.43	12.17	6.53	4.83	4.10	2.67
STDEV	NA	0.00	0.29	0.75	1.23	2.41	2.66	2.90	3.07	2.70	0.71	0.64	0.70	1.00
%RSD	NA	0.00	0.29	0.78	1.42	3.44	4.62	6.17	6.75	22.21	10.86	13.30	17.07	37.56

The Triplicate Applies To The Following Samples

Client ID	Date Sampled	Date Extracted	Date Complete	Data Qualifier	Sedigraph Fine Portion Dry Mass (g)
CL-MH-SPS-20130605-S	6/5/2013	6/10/2013	6/18/2013		4.4
	6/5/2013	6/10/2013	6/18/2013		4.8
	6/5/2013	6/10/2013	6/18/2013		5.0
KC-IV-SPS-20130531-S	5/31/2013	6/10/2013	6/18/2013		2.0

* ARI Internal QA limits = 95-105%

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

Total Solids

ARI Job ID: WS21

WS21:00261

Volatiles Total Solids-voats
Data By: Pat Basilio
Created: 6/10/13

Worklist: 9860
Analyst: PAB
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
1. WS21A 13-11678	_____	_____		$ 81.00

Worklist ID: 9860 Page: 1
* - VOA TS Copied From BETX TS
% - VOA TS Copied From Metals TS
$ - VOA TS Copied From Extraction TS

Total Solids Targets-Extractions
Data By: Steve Potter
Created: 6/ 3/13

Worklist: 8462
Analyst: SDP
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	WS21A	10.00	81.0	12.35

WS21 : 08263

Extractions Total Solids-extts
Data By: Yen Luu
Created: 5/31/13

Worklist: 8097
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WS21A 13-11678 KC-IV-SPS-20130531-S	1.16	13.30	10.99	81.0	NR

Extractions Total Solids-extts
Data By: Yen Luu
Created: 5/31/13

Worklist: 8097
Analyst: YL
Comments:

Oven ID: Φ15

Balance ID: B14642614

Samples In: Date: 5/31/13 Time: 17:15 Temp: 100 Analyst: YL

Samples Out: Date: 6/1/13 Time: 07:50 Temp: 100° Analyst: RR

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WS21A 13-11678 KC-IV-SPS-20130531-S	1.16	13.34	10.99		NR

WS21 : 00265

BETX/TPHG Total Solids-betxts
Data By: Paul K. Campbell
Created: 6/12/13

Worklist: 684
Analyst: PKC
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
1. WS21A 13-11678	_____	_____	*	81.00

Worklist ID: 684 Page: 1
* - BETX TS Copied From VOA TS
% - BETX TS Copied From Metals TS
$ - BETX TS Copied From Extraction TS

Solids Data Entry Report Checked by: CB Date: 6/10/13
Date: 06/10/13 Data Analyst: DM

Solids Determination performed on 06/06/13 by CB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
WS21	A	KC-IV-SPS-20130531-	0.989	10.419	7.829	72.53

WS21 : 00007

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 67 **Balance ID:** CB 6/6/13 0684 0687 55

Samples in Oven: Date: 06-06-13 Time: 0845 Temp: 104°C Analyst: CB

Removed from Oven: Date: 06-10-13 Time: 1015 Temp: 100°C Analyst: CB

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
WS27 A	1.000	10.247	9.277	—	√
WS21 A	0.989	10.419	7.829	—	√
WA99 D	1.012	10.508	7.813	—	√
" E	0.981	10.537	7.795	—	√
" F	0.959	10.027	6.622	—	√
		CB 6-06-13			

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

WS21 : 06360

Volatile Raw Data
Preparation Log

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.	Client ID	Prep/Extraction Date	MeOH Lot No.	Analyst
WS21		6/4/13		LP

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Spilt Volume (µL)	
1	WS21A	1	–		W795-1	42.84	34.76	8.10			
2	B	1						5ml			
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:						

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.	Client ID	Prep/Extraction Date	MeOH Lot No.	Analyst
WJ21		6/11/09		

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Spilt Volume (µL)	
1	WJ21A	2	–		WTTF-7	41.39	34.82	6.57			
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:						

Volatile Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S(Gas) 410S(BTEX) 430S(VPH) 700S(8260C) 703S(SIM) 706S(524.3) 710S(RSK-175)**

Instrument: NT-2 NT-3 **NT-5** NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Curve Date(s): 6/11/13 Internal Standard ID B000643/B000644 Expiration 12/11/13

BFB Tune Meets Criteria?	YES / NO	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated?	YES / NO	Calibration Points Dropped?	YES / NO
Minimum Response Factors Met	YES / NO	Purge Volume (mL)	5

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
~~Bor~~ ultra	B000348	10/10/13	accustd	MW744-4	10/10/13
ultra	B000196	6/27/13	SPEX	MW797-3	6/30/13
restek	B000612	12/5/13			
4/1/13 ~~B000464~~ restek	B000164	6/30/13	ultra	I8301	7/9/13

Detail problems, corrective actions and/or other pertinent information below:

linear - iodomethane, DCM quadratic - acetone (39% RSD before changing to quadratic)
ICV - DCDFM 128%R, acrolein 68%R, IODE 78%R, bromoethane 78%R, iodoethane 69%R, carbon disulfide 75%R, VA 48%R, trans 1,4 dichlorobutene 77%R

Analyst: [signature] Date: 6/12/13

Reviewer: [signature] Date: 6/12/13

WS21 : 00273

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 6/11/13 Analysis: SMC Analyst: JB

GC Program: LVOA01 Column No: 92852 Column Type: RTX-624

Instrument Tune (.U or .CT.): PFTBA.U EM Voltage: 1412

Inj. Vol: 5 Calibration File: bfb0611a Curve Date: 6/11/13

IS/SS	Ical/Ccal	LCS/ICV
B000643	B000648	W797-4
B000644	B000649	W797-5
		ERA01

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/11JUN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF							
1	0702	bfb0611.d	BFB0611	BFB0611			1							
2	0810	bfb0611a.d	BFB0611	BFB0611			1							
3	0833	0010611.d	IC0611	VSTD1			1	4.67	463596	5.12	1698223	7.59	2010959	9.67 1071536
4	0857	2000611.d	IC0611	VSTD200			1	4.65	507140	5.10	1861384	7.60	2123406	9.68 1103824
5	0921	1500611.d	IC0611	VSTD150			1	4.66	496348	5.11	1843399	7.60	2125124	9.68 1137532
6	1009	0500611.d	IC0611	VSTD50			1	4.66	459631	5.11	1692431	7.59	1987215	9.67 1075398
7	1057	0050611.d	IC0611	VSTD5			1	4.65	459587	5.11	1687157	7.59	2006212	9.67 1096782
8	1120	0020611.d	IC0611	VSTD2			1	4.67	444324	5.12	1641355	7.60	1959754	9.67 1061365
9	1221	0100611.d	IC0611	VSTD10			1	4.66	441694	5.11	1634225	7.59	1921755	9.67 1018367
10	1245	1000611.d	IC0611	VSTD100			1	4.67	457306	5.11	1695367	7.60	1980001	9.67 1049557
11	1404	icv0611.d	ICV0611	ICV0611			1	4.66	434681	5.11	1638920	7.59	1920237	9.67 1043748

Maintenance / Comments

6/12/13

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Data File: /chem1/nt5.i/11JUN13.b/bfb0611a.d

Date : 11-JUN-2013 08:10

Client ID: BFB0611

Instrument: nt5.i

Sample Info: BFB0611,BFB0611,,1,11JUN13,,

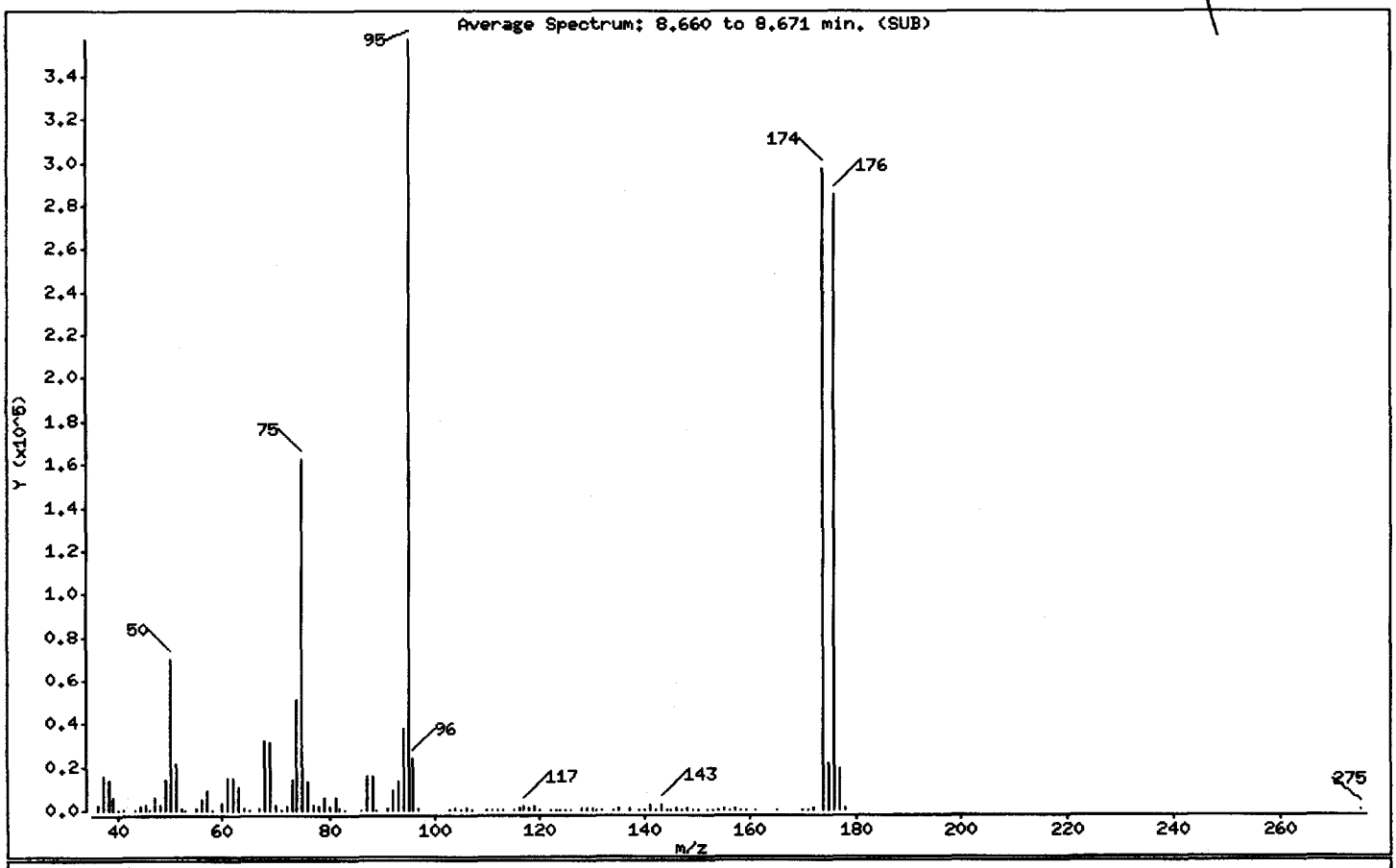
Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene

jw 6/12/13



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	19.44
75	30.00 - 66.00% of mass 95	45.50
96	5.00 - 9.00% of mass 95	6.62
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	83.24
175	4.00 - 9.00% of mass 174	5.93 (7.13)
176	95.00 - 101.00% of mass 174	79.81 (95.87)
177	5.00 - 9.00% of mass 176	5.28 (6.62)

WSA-09275

Data File: /chem1/nt5.i/11JUN13.b/bfb0611a.d

Date : 11-JUN-2013 08:10

Client ID: BFB0611

Instrument: nt5.i

Sample Info: BFB0611,BFB0611,,1,11JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0611a.d

Spectrum: Average Spectrum: 8.660 to 8.671 min. (SUB)

Location of Maximum: 95.00

Number of points: 114

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2585	69.00	31560	106.00	1039	143.00	2774
37.00	15758	70.00	2162	107.00	406	144.00	87
38.00	14282	71.00	152	110.00	127	145.00	279
39.00	5446	72.00	1664	111.00	233	146.00	442
40.00	199	73.00	13686	112.00	52	147.00	204
41.00	33	74.00	50982	113.00	147	148.00	835
43.00	68	75.00	162496	115.00	313	149.00	204
44.00	1313	76.00	13541	116.00	963	150.00	290
45.00	2849	77.00	2132	117.00	1613	152.00	191
46.00	224	78.00	1365	118.00	982	153.00	257
47.00	5973	79.00	5772	119.00	1358	154.00	151
48.00	2167	80.00	1621	120.00	33	155.00	696
49.00	13976	81.00	5425	122.00	33	156.00	35
50.00	69456	82.00	1135	123.00	34	157.00	555
51.00	21576	83.00	160	124.00	137	158.00	35
52.00	926	86.00	393	125.00	37	159.00	370
53.00	46	87.00	15463	126.00	146	161.00	308
55.00	773	88.00	15414	128.00	958	165.00	42
56.00	4753	89.00	39	129.00	526	170.00	38
57.00	8891	91.00	1008	130.00	975	171.00	121
58.00	400	92.00	8689	131.00	312	172.00	690
60.00	3017	93.00	13378	132.00	33	174.00	297408
61.00	14478	94.00	37584	134.00	78	175.00	21192
62.00	14832	95.00	357248	135.00	442	176.00	285120
63.00	11037	96.00	23664	137.00	439	177.00	18864
64.00	1085	97.00	720	139.00	129	178.00	544
65.00	410	103.00	98	140.00	309	275.00	36
67.00	916	104.00	1121	141.00	2541		
68.00	31776	105.00	409	142.00	336		

Data File: /chem1/nt5.i/11JUN13.b/bfb0611a.d

Page 1

Date : 11-JUN-2013 08:10

Client ID: BFB0611

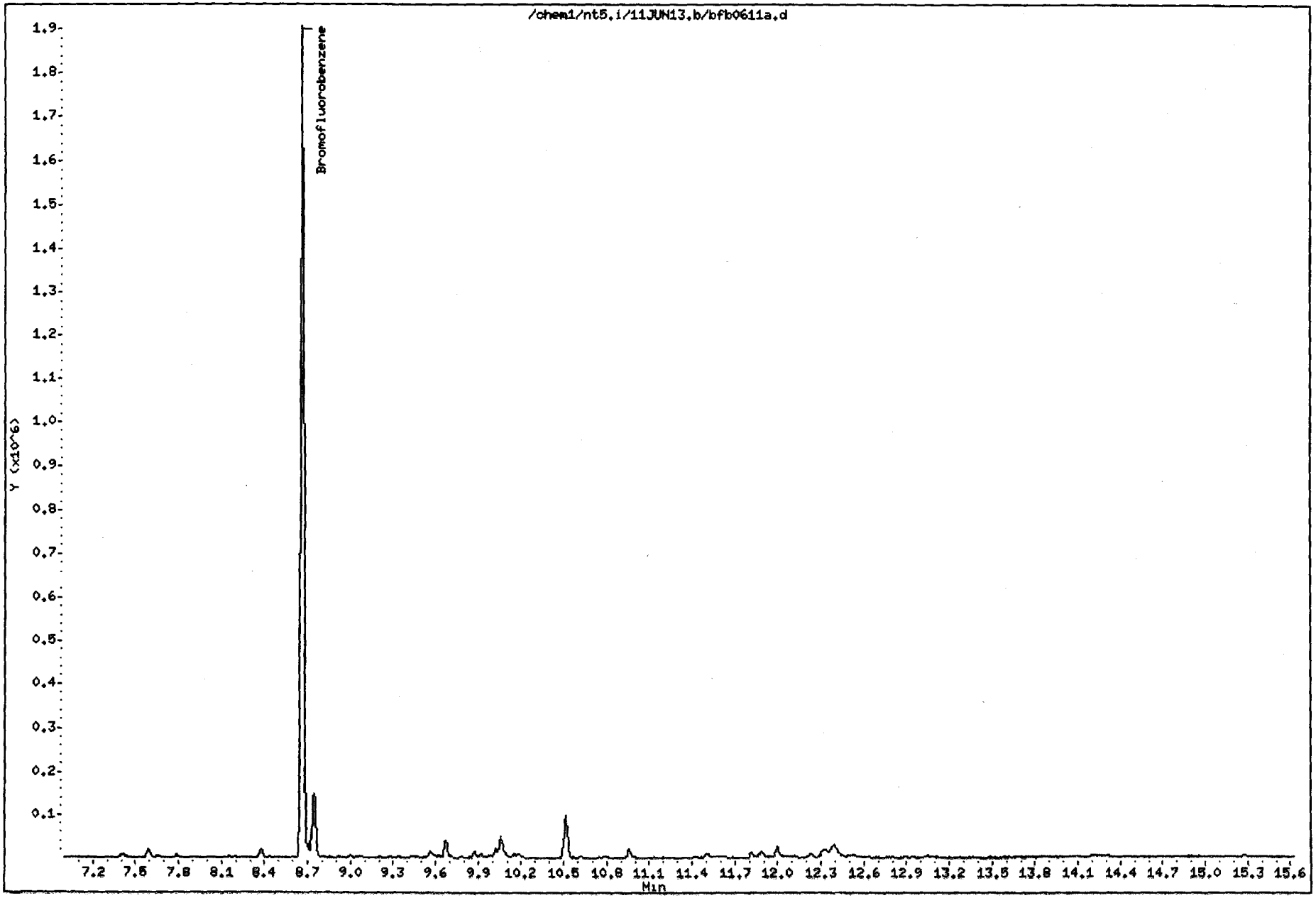
Instrument: nt5.i

Sample Info: BFB0611,BFB0611,,1,11JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Calibration File Names:
Level 1: /chem1/nt5.i/11JUN13.b/0010611.d
Level 2: /chem1/nt5.i/11JUN13.b/0020611.d
Level 3: /chem1/nt5.i/11JUN13.b/0050611.d
Level 4: /chem1/nt5.i/11JUN13.b/0100611.d
Level 5: /chem1/nt5.i/11JUN13.b/0500611.d
Level 6: /chem1/nt5.i/11JUN13.b/1000611.d
Level 7: /chem1/nt5.i/11JUN13.b/1500611.d
Level 8: /chem1/nt5.i/11JUN13.b/2000611.d

6/12/13

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
1 Dichlorodifluoromethane	1.15985	0.73837	0.81617	0.97672	0.76826	0.93849					
	0.79058	0.90335					AVRG		0.88647		15.71883
2 Chloromethane	2.15349	1.61138	1.83391	1.64416	1.66363	1.79429					
	1.69561	1.72662					AVRG		1.76539		9.84141
3 Vinyl Chloride	1.99937	1.53098	1.63129	1.73824	1.65547	1.82428					
	1.70517	1.57850					AVRG		1.70791		8.74330

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
4 Bromomethane	1.11455	0.86975	0.91088	0.92848	0.79696	0.79674					
	0.73429	0.69266					AVRG		0.85554		15.54370
5 Chloroethane	1.25605	1.02043	1.01004	1.07308	0.97124	1.05913					
	0.90276	0.84183					AVRG		1.01682		12.21323
6 Trichlorofluoromethane	2.07228	1.60710	1.76839	1.76278	1.58603	1.90520					
	1.73276	1.76116					AVRG		1.77446		8.81816
7 1,1-Dichloroethene	1.43304	1.08901	1.15351	1.11525	1.12017	1.31347					
	1.17918	1.18071					AVRG		1.19804		9.77444
8 Carbon Disulfide	4.58125	3.66022	3.85094	3.73277	3.70547	4.26429					
	3.74349	3.60790					AVRG		3.89329		8.85505
9 112Trichloro122Trifluoroethan	1.17268	0.97547	1.01328	0.99965	0.97764	1.19118					
	1.04090	1.06600					AVRG		1.05460		8.00004
10 Iodomethane	8399	11499	29970	63217	397931	1129814					
	1522399	2117934					LINR	0.000e+00	1.06229		0.99016

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	150 Level 7	200 Level 8									
11 Bromoethane	0.88018	0.67676	0.68947	0.73889	0.74005	0.80712					
	0.68285	0.67451					AVRG		0.73623		10.02755
12 Acrolein	0.29925	0.25834	0.22950	0.26818	0.27716	0.27081					
	0.21873	0.20006					AVRG		0.25275		13.23048
13 Methylene Chloride	+++++	34934	57838	123231	512608	983128					
	+++++	+++++					LINR	0.000e+00	1.08730		0.99799
14 Acetone	24600	37068	61461	226490	559829	955765					
	+++++	+++++					QUAD	0.000e+00	2.37497	1.17429	0.99443
15 Trans-1,2-Dichloroethene	1.51522	1.19316	1.06078	1.31084	1.04822	1.12151					
	0.96776	0.96821					AVRG		1.14821		16.34263
16 Methyl tert butyl ether	4.24680	3.73973	3.54808	3.58528	3.27729	3.09939					
	2.58140	2.49074					AVRG		3.32109		17.78170
17 1,1-Dichloroethane	3.04856	2.60834	2.75933	2.63793	2.16132	1.73335					
	+++++	+++++					AVRG		2.49147		18.83399

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2	
	150 Level 7	200 Level 8										
18 Acrylonitrile	0.61584	0.62139	0.59097	0.53014	0.52102	0.34450						
	+++++	+++++					AVRG		0.53731		19.27076	
19 Vinyl Acetate	3.53314	3.34998	3.55413	3.13082	3.37481	3.55041						
	3.33473	+++++					AVRG		3.40400		4.54869	
20 Cis-1,2-Dichloroethene	1.59805	1.42149	1.44697	1.36104	1.34895	1.53835						
	1.45307	1.46221					AVRG		1.45377		5.73839	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
22 2,2-Dichloropropane	2.46497	1.87144	2.03550	1.98910	1.86828	2.21329						
	2.05659	2.07875					AVRG		2.07224		9.38223	
23 Bromochloromethane	0.70956	0.58099	0.65002	0.62160	0.59245	0.65405						
	0.69301	0.70634					AVRG		0.65100		7.67163	
24 Chloroform	2.68014	2.25106	2.35681	2.18244	2.19549	2.32442						
	2.33200	2.33735					AVRG		2.33246		6.67056	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	150 Level 7	200 Level 8									
25 Carbon Tetrachloride	0.54062	0.44127	0.46563	0.46093	0.43796	0.51967					
	0.48308	0.49219					AVRG		0.48017		7.56835
26 1,1,1-Trichloroethane	2.29327	1.93243	2.07658	2.01220	1.92671	2.27638					
	2.12220	2.13273					AVRG		2.09656		6.65569
28 1,1-Dichloropropene	0.61617	0.51281	0.62068	0.52279	0.51285	0.59928					
	0.55464	0.56286					AVRG		0.56276		8.00087
29 2-Butanone	0.16918	0.16292	0.17142	0.14178	0.17691	0.18360					
	0.17778	0.16657					AVRG		0.16877		7.56852
30 Benzene	1.84805	1.57317	1.68981	1.55349	1.52315	1.65205					
	1.44938	1.36132					AVRG		1.58130		9.49939
33 1,2-Dichloroethane	0.56768	0.49799	0.51314	0.45349	0.47844	0.51592					
	0.48130	0.48272					AVRG		0.49883		6.89316
34 Trichloroethene	0.41564	0.35835	0.39703	0.36359	0.35392	0.41477					
	0.38705	0.39806					AVRG		0.38605		6.39811

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2	
	150 Level 7	200 Level 8										
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
37 Dibromomethane	0.21952	0.20067	0.21029	0.18599	0.20354	0.22052						
	0.20927	0.21293					AVRG		0.20784		5.38954	
38 1,2-Dichloropropane	0.49328	0.43420	0.45002	0.40134	0.43087	0.47577						
	0.44757	0.45305					AVRG		0.44826		6.25964	
39 Bromodichloromethane	0.53594	0.46219	0.47886	0.44534	0.46824	0.51323						
	0.48458	0.48876					AVRG		0.48464		5.94815	
40 2-Chloroethyl Vinyl Ether	0.19841	0.20293	0.23640	0.21033	0.25128	0.26928						
	0.25825	0.25764					AVRG		0.23557		11.86506	
41 Cis 1,3-dichloropropene	0.68339	0.58155	0.64340	0.59087	0.61761	0.67548						
	0.62593	0.62342					AVRG		0.63020		5.74963	
43 Toluene	1.20770	1.01293	1.05832	0.96938	0.94116	1.04609						
	0.92801	0.88834					AVRG		1.00649		9.97422	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
44 Tetrachloroethene	0.38514	0.30744	0.34495	0.33928	0.31189	0.37507					
	0.34615	0.35904					AVRG		0.34612		7.90789
45 4-Methyl-2-Pentanone	0.16974	0.17439	0.18576	0.16064	0.18860	0.18866					
	0.17642	0.16877					AVRG		0.17662		5.82728
46 Trans 1,3-Dichloropropene	0.59371	0.52769	0.56928	0.51709	0.55879	0.60001					
	0.56007	0.55576					AVRG		0.56030		5.10521
47 1,1,2-Trichloroethane	0.32190	0.30102	0.32285	0.28762	0.31280	0.33494					
	0.31710	0.31966					AVRG		0.31474		4.62368
48 Chlorodibromomethane	0.32012	0.27454	0.29228	0.26907	0.29532	0.31946					
	0.30635	0.31197					AVRG		0.29864		6.50136
49 1,3-Dichloropropane	0.51901	0.48065	0.49420	0.44312	0.49204	0.52308					
	0.49561	0.49396					AVRG		0.49271		4.99011
50 1,2-Dibromoethane	0.33129	0.30434	0.31142	0.26902	0.30469	0.32610					
	0.30969	0.30930					AVRG		0.30823		6.04409

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
51 2-Hexanone	0.23741	0.24952	0.26845	0.23093	0.26845	0.26099					
	0.26101	0.25525					AVRG		0.25400		5.45667
53 Chlorobenzene	0.98446	0.84665	0.89684	0.83060	0.80886	0.88306					
	0.79100	0.76670					AVRG		0.85102		8.17223
54 Ethyl Benzene	1.75282	1.45312	1.60347	1.52622	1.43555	1.49669					
	1.25237	1.15591					AVRG		1.45952		12.90379
55 1,1,1,2-Tetrachloroethane	0.34130	0.28699	0.30483	0.27783	0.28695	0.32118					
	0.30101	0.30468					AVRG		0.30310		6.77955
56 m,p-xylene	0.65059	0.54198	0.60109	0.56908	0.54048	0.58022					
	0.49785	0.46745					AVRG		0.55609		10.39652
57 o-Xylene	0.58457	0.49718	0.55974	0.53285	0.53472	0.60443					
	0.55789	0.55339					AVRG		0.55310		5.94465
58 Styrene	0.92416	0.83961	0.96468	0.89093	0.90908	0.97311					
	0.85725	0.80503					AVRG		0.89548		6.62106

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2	
	150 Level 7	200 Level 8										
59 Bromoform	0.41650	0.36241	0.38509	0.34950	0.39203	0.42028						
	0.39971	0.40734					AVRG		0.39161		6.41933	
60 Isopropyl Benzene	2.84941	2.44527	2.70996	2.66892	2.46984	2.66240						
	2.20389	2.05866					AVRG		2.50854		10.72697	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
63 Bromobenzene	0.74323	0.63970	0.65245	0.62106	0.62112	0.69938						
	0.64590	0.67219					AVRG		0.66188		6.33190	
64 N-Propyl Benzene	3.61873	2.96868	3.27739	3.23866	2.87644	3.04990						
	2.45529	2.30083					AVRG		2.97324		14.57911	
65 1,1,2,2-Tetrachloroethane	0.67581	0.60472	0.63261	0.58405	0.65760	0.69915						
	0.68101	0.69890					AVRG		0.65423		6.60000	
66 2-Chloro Toluene	2.18467	1.81707	1.94914	1.90504	1.79643	2.00730						
	1.73282	1.67643					AVRG		1.88361		8.70915	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	150 Level 7	200 Level 8									
67 1,3,5-Trimethyl Benzene	2.40295	2.04232	2.25252	2.21593	2.06740	2.29880					
	1.93785	1.85296					AVRG		2.13384		8.86618
68 1,2,3-Trichloropropane	0.20102	0.19256	0.19669	0.17755	0.19756	0.21011					
	0.20198	0.20682					AVRG		0.19804		5.04604
69 Trans-1,4-Dichloro 2-Butene	0.24824	0.21873	0.22791	0.21876	0.25053	0.25905					
	0.25225	0.26816					AVRG		0.24295		7.72356
70 4-Chloro Toluene	2.17384	1.90575	2.03097	1.98777	1.85226	2.07365					
	1.80914	1.77610					AVRG		1.95119		7.11624
71 T-Butyl Benzene	2.03180	1.75870	1.96374	1.91864	1.81318	2.05766					
	1.76631	1.70579					AVRG		1.87698		7.13354
72 1,2,4-Trimethylbenzene	2.36987	1.99922	2.23465	2.17477	2.04821	2.25121					
	1.89821	1.81013					AVRG		2.09828		9.13128
73 S-Butyl Benzene	3.21468	2.74086	2.98397	2.94687	2.63870	2.84729					
	2.32191	2.14813					AVRG		2.73030		12.94020

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	150 Level 7	200 Level 8									
74 4-Isopropyl Toluene	2.52535	2.17046	2.41045	2.40177	2.17215	2.39750					
	1.98160	1.86263					AVRG		2.24024		10.40128
75 1,3-Dichlorobenzene	1.49701	1.21723	1.23863	1.21345	1.13507	1.27949					
	1.12168	1.11455					AVRG		1.22714		10.13445
77 1,4-Dichlorobenzene	1.52552	1.25478	1.29725	1.23323	1.15327	1.30543					
	1.16569	1.18318					AVRG		1.26479		9.48297
78 N-Butyl Benzene	2.43566	2.05045	2.26049	2.32535	2.04956	2.33910					
	1.93032	1.85789					AVRG		2.15610		9.81684
80 1,2-Dichlorobenzene	1.42557	1.20884	1.22026	1.13860	1.10054	1.21217					
	1.10537	1.13701					AVRG		1.19355		8.83118
81 1,2-Dibromo 3-Chloropropane	0.12813	0.12901	0.11891	0.11326	0.12558	0.13123					
	0.13185	0.13547					AVRG		0.12668		5.76839
82 Hexachloro 1,3-Butadiene	0.62919	0.49029	0.53115	0.52593	0.46575	0.55951					
	0.50651	0.52885					AVRG		0.52965		9.30001

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
83 1,2,4-Trichlorobenzene	0.95414	0.79730	0.82711	0.83075	0.79062	0.92135					
	0.85622	0.90765					AVRG		0.86064		7.02538
84 Naphthalene	1.91743	1.97489	1.99429	1.70589	1.94573	1.98514					
	1.83301	1.75554					AVRG		1.88899		5.87484
85 1,2,3-Trichlorobenzene	0.90772	0.83779	0.83846	0.77253	0.76725	0.84919					
	0.81976	0.86234					AVRG		0.83188		5.54667
$ 27 Dibromofluoromethane	1.42080	1.43437	1.43045	1.43975	1.44083	1.45670					
	1.42720	1.42333					AVRG		1.43418		0.80866
$ 32 d4-1,2-Dichloroethane	1.33180	1.36151	1.34153	1.34491	1.34985	1.37034					
	1.31374	1.30630					AVRG		1.34000		1.64461
$ 42 d8-Toluene	1.46932	1.47340	1.47407	1.47279	1.46793	1.46461					
	1.44670	1.45242					AVRG		1.46515		0.69876
$ 62 4-Bromofluorobenzene	0.54277	0.54434	0.54763	0.54387	0.54537	0.54739					
	0.54962	0.54333					AVRG		0.54554		0.44515

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

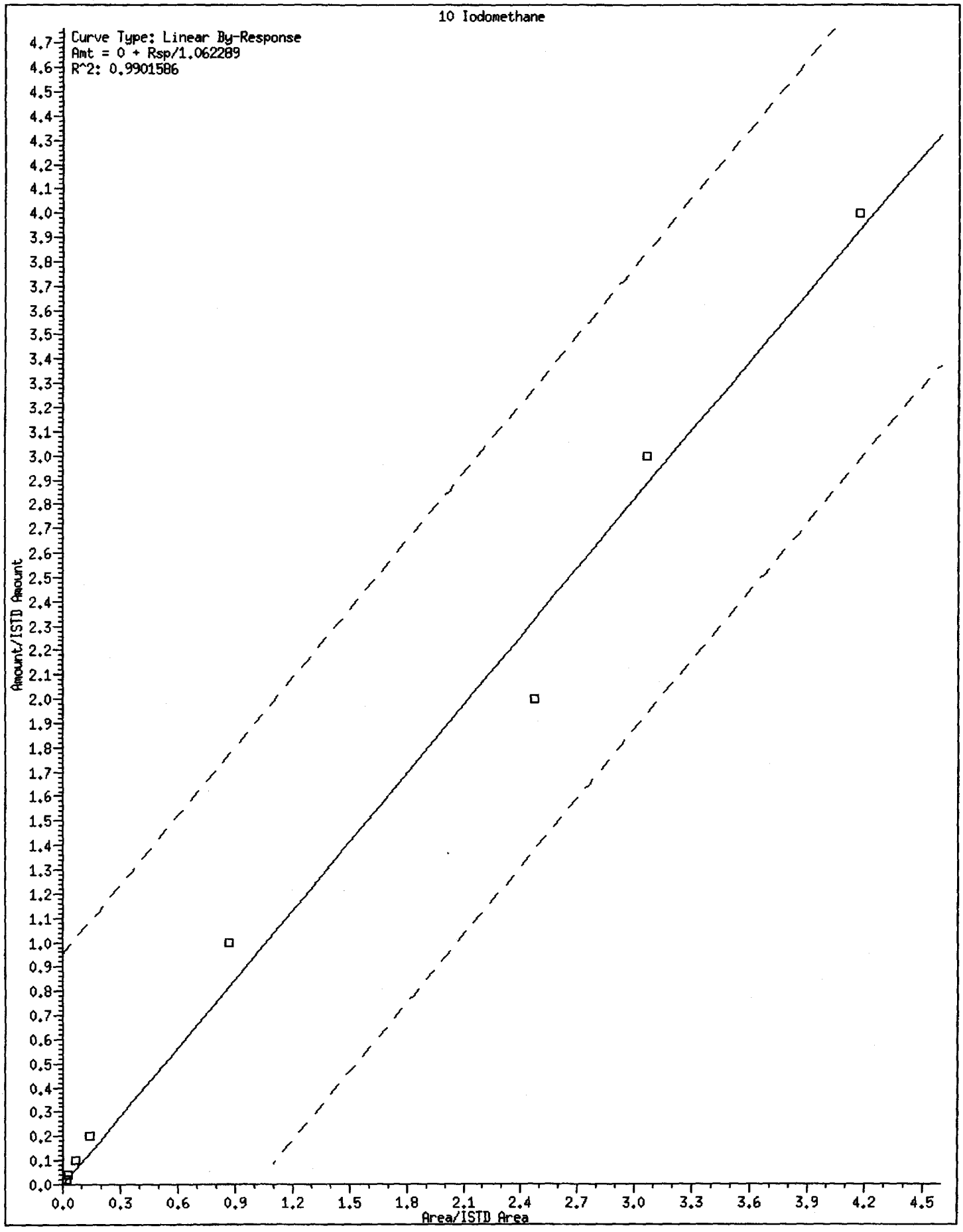
Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
$ 79 d4-1,2-Dichlorobenzene	1.03331	1.03074	1.01817	1.03518	1.00949	1.01335					
	0.99631	1.01225					AVRG		1.01860		1.33111

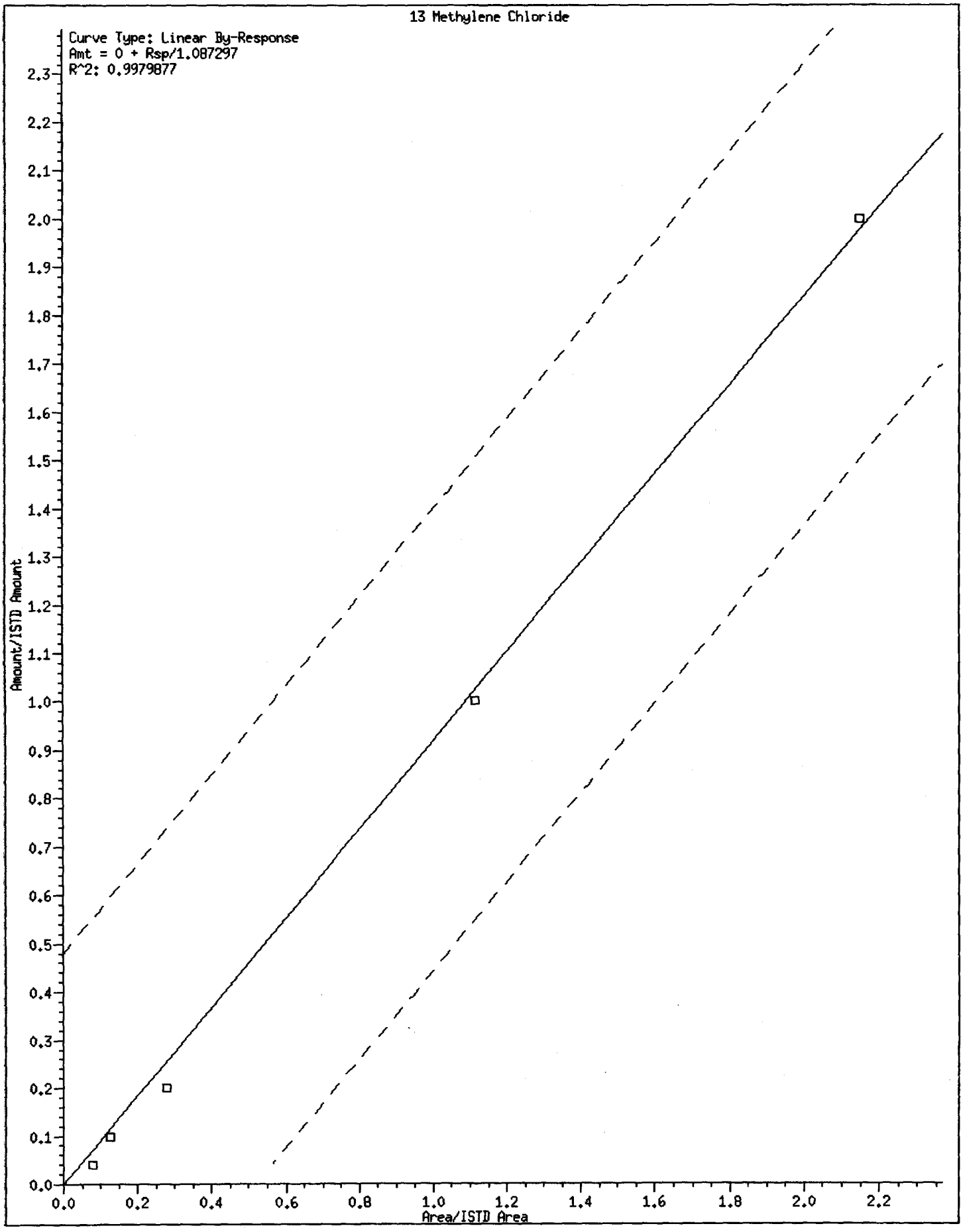
Analytical Resources, Inc.

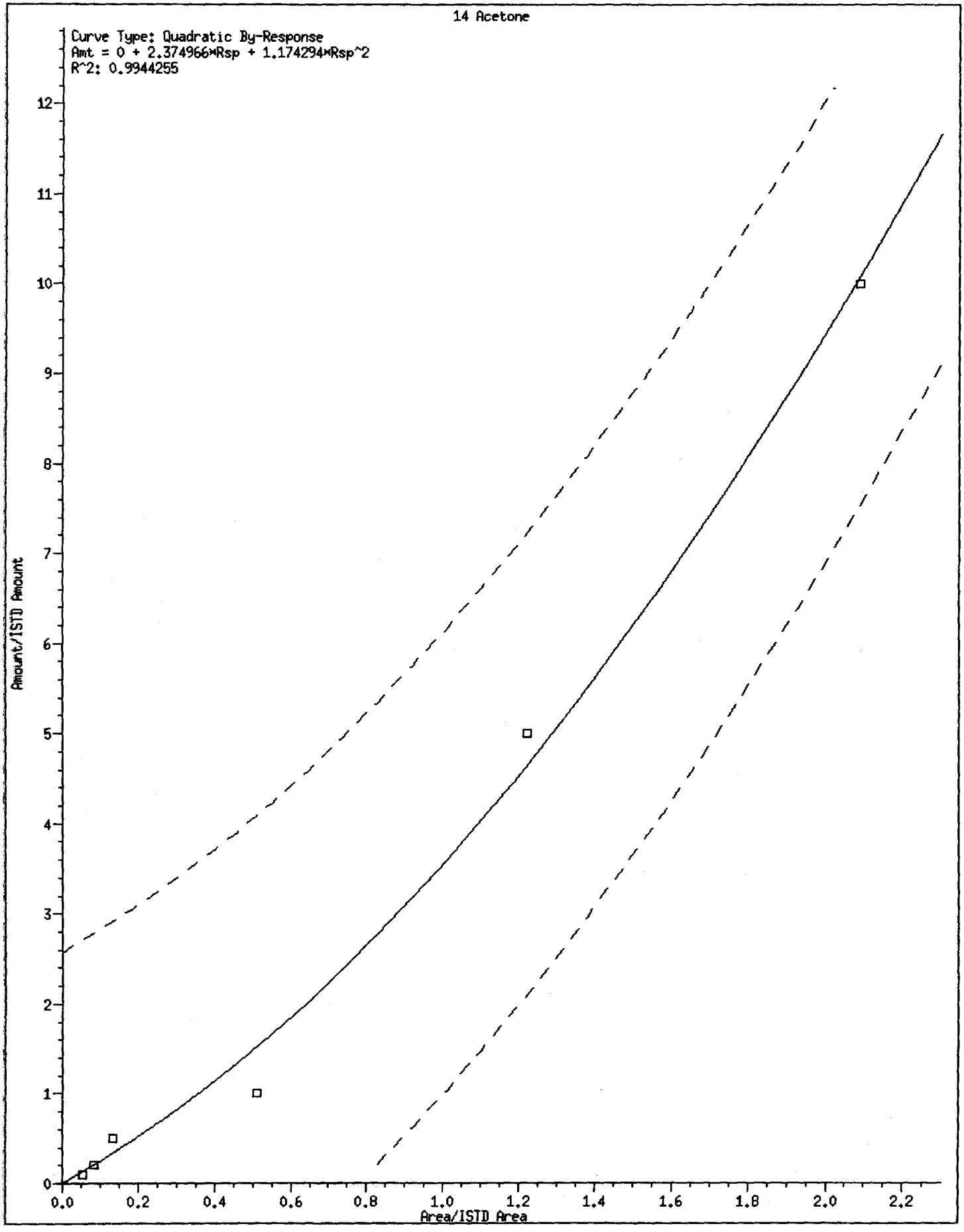
INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response


10 Iodomethane
Curve Type: Linear By-Response
Amt = 0 + Rsp/1.062289
R^2: 0.9901586
Amount/ISTD Amount
Area/ISTD Area
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5


13 Methylene Chloride
Curve Type: Linear By-Response
Amt = 0 + Rsp/1.087297
R^2: 0.9979877
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3


14 Acetone
Curve Type: Quadratic By-Response
Amt = 0 + 2.374966*Rsp + 1.174294*Rsp^2
R^2: 0.9944255
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt5.i/11JUN13.b/0010611.d
Level 2: /chem1/nt5.i/11JUN13.b/0020611.d
Level 3: /chem1/nt5.i/11JUN13.b/0050611.d
Level 4: /chem1/nt5.i/11JUN13.b/0100611.d
Level 5: /chem1/nt5.i/11JUN13.b/0500611.d
Level 6: /chem1/nt5.i/11JUN13.b/1000611.d
Level 7: /chem1/nt5.i/11JUN13.b/1500611.d
Level 8: /chem1/nt5.i/11JUN13.b/2000611.d

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
1 Dichlorodifluoromethane	1.15985	0.73837	0.81617	0.97672	0.76826	0.93849		
	0.79058	0.90335					0.88647	15.719
2 Chloromethane	2.15349	1.61138	1.83391	1.64416	1.66363	1.79429		
	1.69561	1.72662					1.76539	9.841
3 Vinyl Chloride	1.99937	1.53098	1.63129	1.73824	1.65547	1.82428		
	1.70517	1.57850					1.70791	8.743
4 Bromomethane	1.11455	0.86975	0.91088	0.92848	0.79696	0.79674		
	0.73429	0.69266					0.85554	15.544
5 Chloroethane	1.25605	1.02043	1.01004	1.07308	0.97124	1.05913		
	0.90276	0.84183					1.01682	12.213
6 Trichlorofluoromethane	2.07228	1.60710	1.76839	1.76278	1.58603	1.90520		
	1.73276	1.76116					1.77446	8.818

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
7 1,1-Dichloroethene	1.43304	1.08901	1.15351	1.11525	1.12017	1.31347			
	1.17918	1.18071					1.19804	9.774	
8 Carbon Disulfide	4.58125	3.66022	3.85094	3.73277	3.70547	4.26429			
	3.74349	3.60790					3.89329	8.855	
9 112Trichloro122Trifluoroethan	1.17268	0.97547	1.01328	0.99965	0.97764	1.19118			
	1.04090	1.06600					1.05460	8.000	
10 Iodomethane	0.90585	0.64699	0.65211	0.71562	0.86576	1.23529			
	1.02240	1.04406					0.88601	23.646	<-
11 Bromoethane	0.88018	0.67676	0.68947	0.73889	0.74005	0.80712			
	0.68285	0.67451					0.73623	10.028	
12 Acrolein	0.29925	0.25834	0.22950	0.26818	0.27716	0.27081			
	0.21873	0.20006					0.25275	13.230	
13 Methylene Chloride	+++++	1.96557	1.25848	1.39498	1.11526	1.07491			
	+++++	+++++					1.36184	26.460	<-
14 Acetone	0.53063	0.41713	0.26746	0.51278	0.24360	0.20900			
	+++++	+++++					0.36343	39.022	<-
15 Trans-1,2-Dichloroethene	1.51522	1.19316	1.06078	1.31084	1.04822	1.12151			
	0.96776	0.96821					1.14821	16.343	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
16 Methyl tert butyl ether	4.24680	3.73973	3.54808	3.58528	3.27729	3.09939			
	2.58140	2.49074					3.32109	17.782	
17 1,1-Dichloroethane	3.04856	2.60834	2.75933	2.63793	2.16132	1.73335			
	+++++	+++++					2.49147	18.834	
18 Acrylonitrile	0.61584	0.62139	0.59097	0.53014	0.52102	0.34450			
	+++++	+++++					0.53731	19.271	
19 Vinyl Acetate	3.53314	3.34998	3.55413	3.13082	3.37481	3.55041			
	3.33473	+++++					3.40400	4.549	
20 Cis-1,2-Dichloroethene	1.59805	1.42149	1.44697	1.36104	1.34895	1.53835			
	1.45307	1.46221					1.45377	5.738	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
22 2,2-Dichloropropane	2.46497	1.87144	2.03550	1.98910	1.86828	2.21329			
	2.05659	2.07875					2.07224	9.382	
23 Bromochloromethane	0.70956	0.58099	0.65002	0.62160	0.59245	0.65405			
	0.69301	0.70634					0.65100	7.672	
24 Chloroform	2.68014	2.25106	2.35681	2.18244	2.19549	2.32442			
	2.33200	2.33735					2.33246	6.671	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
25 Carbon Tetrachloride	0.54062	0.44127	0.46563	0.46093	0.43796	0.51967			
	0.48308	0.49219					0.48017	7.568	
26 1,1,1-Trichloroethane	2.29327	1.93243	2.07658	2.01220	1.92671	2.27638			
	2.12220	2.13273					2.09656	6.656	
28 1,1-Dichloropropene	0.61617	0.51281	0.62068	0.52279	0.51285	0.59928			
	0.55464	0.56286					0.56276	8.001	
29 2-Butanone	0.16918	0.16292	0.17142	0.14178	0.17691	0.18360			
	0.17778	0.16657					0.16877	7.569	
30 Benzene	1.84805	1.57317	1.68981	1.55349	1.52315	1.65205			
	1.44938	1.36132					1.58130	9.499	
33 1,2-Dichloroethane	0.56768	0.49799	0.51314	0.45349	0.47844	0.51592			
	0.48130	0.48272					0.49883	6.893	
34 Trichloroethene	0.41564	0.35835	0.39703	0.36359	0.35392	0.41477			
	0.38705	0.39806					0.38605	6.398	
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
37 Dibromomethane	0.21952	0.20067	0.21029	0.18599	0.20354	0.22052			
	0.20927	0.21293					0.20784	5.390	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
38 1,2-Dichloropropane	0.49328	0.43420	0.45002	0.40134	0.43087	0.47577		
	0.44757	0.45305					0.44826	6.260
39 Bromodichloromethane	0.53594	0.46219	0.47886	0.44534	0.46824	0.51323		
	0.48458	0.48876					0.48464	5.948
40 2-Chloroethyl Vinyl Ether	0.19841	0.20293	0.23640	0.21033	0.25128	0.26928		
	0.25825	0.25764					0.23557	11.865
41 Cis 1,3-dichloropropene	0.68339	0.58155	0.64340	0.59087	0.61761	0.67548		
	0.62593	0.62342					0.63020	5.750
43 Toluene	1.20770	1.01293	1.05832	0.96938	0.94116	1.04609		
	0.92801	0.88834					1.00649	9.974
44 Tetrachloroethene	0.38514	0.30744	0.34495	0.33928	0.31189	0.37507		
	0.34615	0.35904					0.34612	7.908
45 4-Methyl-2-Pentanone	0.16974	0.17439	0.18576	0.16064	0.18860	0.18866		
	0.17642	0.16877					0.17662	5.827
46 Trans 1,3-Dichloropropene	0.59371	0.52769	0.56928	0.51709	0.55879	0.60001		
	0.56007	0.55576					0.56030	5.105
47 1,1,2-Trichloroethane	0.32190	0.30102	0.32285	0.28762	0.31280	0.33494		
	0.31710	0.31966					0.31474	4.624

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
48 Chlorodibromomethane	0.32012	0.27454	0.29228	0.26907	0.29532	0.31946		
	0.30635	0.31197					0.29864	6.501
49 1,3-Dichloropropane	0.51901	0.48065	0.49420	0.44312	0.49204	0.52308		
	0.49561	0.49396					0.49271	4.990
50 1,2-Dibromoethane	0.33129	0.30434	0.31142	0.26902	0.30469	0.32610		
	0.30969	0.30930					0.30823	6.044
51 2-Hexanone	0.23741	0.24952	0.26845	0.23093	0.26845	0.26099		
	0.26101	0.25525					0.25400	5.457
53 Chlorobenzene	0.98446	0.84665	0.89684	0.83060	0.80886	0.88306		
	0.79100	0.76670					0.85102	8.172
54 Ethyl Benzene	1.75282	1.45312	1.60347	1.52622	1.43555	1.49669		
	1.25237	1.15591					1.45952	12.904
55 1,1,1,2-Tetrachloroethane	0.34130	0.28699	0.30483	0.27783	0.28695	0.32118		
	0.30101	0.30468					0.30310	6.780
56 m,p-xylene	0.65059	0.54198	0.60109	0.56908	0.54048	0.58022		
	0.49785	0.46745					0.55609	10.397
57 o-Xylene	0.58457	0.49718	0.55974	0.53285	0.53472	0.60443		
	0.55789	0.55339					0.55310	5.945

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
58 Styrene	0.92416	0.83961	0.96468	0.89093	0.90908	0.97311			
	0.85725	0.80503					0.89548	6.621	
59 Bromoform	0.41650	0.36241	0.38509	0.34950	0.39203	0.42028			
	0.39971	0.40734					0.39161	6.419	
60 Isopropyl Benzene	2.84941	2.44527	2.70996	2.66892	2.46984	2.66240			
	2.20389	2.05866					2.50854	10.727	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
63 Bromobenzene	0.74323	0.63970	0.65245	0.62106	0.62112	0.69938			
	0.64590	0.67219					0.66188	6.332	
64 N-Propyl Benzene	3.61873	2.96868	3.27739	3.23866	2.87644	3.04990			
	2.45529	2.30083					2.97324	14.579	
65 1,1,2,2-Tetrachloroethane	0.67581	0.60472	0.63261	0.58405	0.65760	0.69915			
	0.68101	0.69890					0.65423	6.600	
66 2-Chloro Toluene	2.18467	1.81707	1.94914	1.90504	1.79643	2.00730			
	1.73282	1.67643					1.88361	8.709	
67 1,3,5-Trimethyl Benzene	2.40295	2.04232	2.25252	2.21593	2.06740	2.29880			
	1.93785	1.85296					2.13384	8.866	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
68 1,2,3-Trichloropropane	0.20102	0.19256	0.19669	0.17755	0.19756	0.21011		
	0.20198	0.20682					0.19804	5.046
69 Trans-1,4-Dichloro 2-Butene	0.24824	0.21873	0.22791	0.21876	0.25053	0.25905		
	0.25225	0.26816					0.24295	7.724
70 4-Chloro Toluene	2.17384	1.90575	2.03097	1.98777	1.85226	2.07365		
	1.80914	1.77610					1.95119	7.116
71 T-Butyl Benzene	2.03180	1.75870	1.96374	1.91864	1.81318	2.05766		
	1.76631	1.70579					1.87698	7.134
72 1,2,4-Trimethylbenzene	2.36987	1.99922	2.23465	2.17477	2.04821	2.25121		
	1.89821	1.81013					2.09828	9.131
73 S-Butyl Benzene	3.21468	2.74086	2.98397	2.94687	2.63870	2.84729		
	2.32191	2.14813					2.73030	12.940
74 4-Isopropyl Toluene	2.52535	2.17046	2.41045	2.40177	2.17215	2.39750		
	1.98160	1.86263					2.24024	10.401
75 1,3-Dichlorobenzene	1.49701	1.21723	1.23863	1.21345	1.13507	1.27949		
	1.12168	1.11455					1.22714	10.134
77 1,4-Dichlorobenzene	1.52552	1.25478	1.29725	1.23323	1.15327	1.30543		
	1.16569	1.18318					1.26479	9.483

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
78 N-Butyl Benzene	2.43566	2.05045	2.26049	2.32535	2.04956	2.33910		
	1.93032	1.85789					2.15610	9.817
80 1,2-Dichlorobenzene	1.42557	1.20884	1.22026	1.13860	1.10054	1.21217		
	1.10537	1.13701					1.19355	8.831
81 1,2-Dibromo 3-Chloropropane	0.12813	0.12901	0.11891	0.11326	0.12558	0.13123		
	0.13185	0.13547					0.12668	5.768
82 Hexachloro 1,3-Butadiene	0.62919	0.49029	0.53115	0.52593	0.46575	0.55951		
	0.50651	0.52885					0.52965	9.300
83 1,2,4-Trichlorobenzene	0.95414	0.79730	0.82711	0.83075	0.79062	0.92135		
	0.85622	0.90765					0.86064	7.025
84 Naphthalene	1.91743	1.97489	1.99429	1.70589	1.94573	1.98514		
	1.83301	1.75554					1.88899	5.875
85 1,2,3-Trichlorobenzene	0.90772	0.83779	0.83846	0.77253	0.76725	0.84919		
	0.81976	0.86234					0.83188	5.547
$ 27 Dibromofluoromethane	1.42080	1.43437	1.43045	1.43975	1.44083	1.45670		
	1.42720	1.42333					1.43418	0.809
$ 32 d4-1,2-Dichloroethane	1.33180	1.36151	1.34153	1.34491	1.34985	1.37034		
	1.31374	1.30630					1.34000	1.645

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
$ 42 d8-Toluene	1.46932	1.47340	1.47407	1.47279	1.46793	1.46461		
	1.44670	1.45242					1.46515	0.699
$ 62 4-Bromofluorobenzene	0.54277	0.54434	0.54763	0.54387	0.54537	0.54739		
	0.54962	0.54333					0.54554	0.445
$ 79 d4-1,2-Dichlorobenzene	1.03331	1.03074	1.01817	1.03518	1.00949	1.01335		
	0.99631	1.01225					1.01860	1.331

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/11JUN13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 11-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0810	bfb0611a.d	BFB0611	BFB0611	1	NO MANUAL INTEGRATION
0833	0010611.d	IC0611	VSTD1	1	Chloromethane, Acrolein, Acetone, Acrylonitrile, 1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene,
0857	2000611.d	IC0611	VSTD200	1	Chloromethane, Vinyl Acetate, 2-Butanone,
0921	1500611.d	IC0611	VSTD150	1	Chloromethane,
1009	0500611.d	IC0611	VSTD50	1	Chloromethane, Acetone,
1057	0050611.d	IC0611	VSTD5	1	Chloromethane, Acetone,
1120	0020611.d	IC0611	VSTD2	1	Chloromethane, Acetone, 1,2,3-Trichloropropane,
1221	0100611.d	IC0611	VSTD10	1	Chloromethane,
1245	1000611.d	IC0611	VSTD100	1	Chloromethane, Acetone,
1404	icv0611.d	ICV0611	ICV0611	1	Chloromethane, Acetone,

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/11JUN13.b/V0121012S.m
Batch File: /chem1/nt5.i/11JUN13.b
Inst ID: nt5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	0010611	2000611	1500611	0500611	0050611	0020611	0100611	1000611
INJ.DATE:	11-JUN-2013	11-JUN-2013	11-JUN-2013	11-JUN-2013	11-JUN-2013	11-JUN-2013	11-JUN-2013	11-JUN-2013
INJ.TIME:	08:33	08:57	09:21	10:09	10:57	11:20	12:21	12:45

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Dichlorodifluoromethan	1.057	1.029	1.051	1.029	1.028	1.057	1.040	1.051	1.029	0.935-1.122	1.043	0.013
2 Chloromethane	1.176	1.317	1.345	1.153	1.334	1.334	1.153	1.357	1.153	1.060-1.246	1.271	0.092
3 Vinyl Chloride	1.227	1.198	1.227	1.198	1.204	1.226	1.204	1.221	1.198	1.105-1.291	1.213	0.013
4 Bromomethane	1.430	1.402	1.430	1.408	1.407	1.436	1.413	1.430	1.408	1.314-1.501	1.420	0.013
5 Chloroethane	1.526	1.492	1.515	1.492	1.492	1.526	1.498	1.515	1.492	1.399-1.586	1.507	0.015
6 Trichlorofluoromethane	1.611	1.577	1.611	1.589	1.588	1.611	1.594	1.606	1.589	1.495-1.682	1.598	0.013
7 1,1-Dichloroethene	1.968	1.939	1.968	1.951	1.950	1.973	1.951	1.968	1.951	1.857-2.044	1.958	0.012
8 Carbon Disulfide	1.973	1.939	1.968	1.951	1.950	1.979	1.956	1.973	1.951	1.857-2.044	1.961	0.014
9 112Trichloro122Trifluo	2.019	1.985	2.013	1.990	1.990	2.018	1.996	2.013	1.990	1.897-2.083	2.003	0.014
10 Iodomethane	2.075	2.041	2.069	2.053	2.047	2.075	2.052	2.069	2.053	1.959-2.146	2.060	0.013
11 Bromoethane	2.177	2.137	2.166	2.149	2.143	2.171	2.149	2.166	2.149	2.055-2.242	2.157	0.015
12 Acrolein	2.279	2.245	2.279	2.267	2.256	2.284	2.256	2.290	2.267	2.174-2.361	2.269	0.016
13 Methylene Chloride	2.443	2.409	2.437	2.426	2.420	2.448	2.426	2.443	2.426	2.333-2.519	2.431	0.014
14 Acetone	2.630	2.601	2.635	2.697	2.590	2.641	2.578	2.663	2.697	2.604-2.791	2.629	0.039
15 Trans-1,2-Dichloroethe	2.590	2.545	2.573	2.562	2.556	2.584	2.567	2.579	2.562	2.468-2.655	2.569	0.015
16 Methyl tert butyl ethe	2.754	2.720	2.748	2.726	2.737	2.759	2.737	2.748	2.726	2.632-2.819	2.741	0.014
17 1,1-Dichloroethane	3.207	3.144	3.173	3.173	3.172	3.206	3.184	3.184	3.173	3.079-3.266	3.180	0.020

Reviewer 1 _____ Date: 6/12/13
Reviewer 2 _____ Date: 6/12/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/11JUN13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 Acrylonitrile	3.303	3.286	3.320	3.308	3.297	3.314	3.286	3.320	3.308	3.215-3.401	3.304	0.014
	19 Vinyl Acetate	3.535	3.518	3.529	3.518	3.517	3.534	3.518	3.529	3.518	3.424-3.611	3.525	0.008
	20 Cis-1,2-Dichloroethene	3.744	3.699	3.727	3.721	3.721	3.744	3.727	3.733	3.721	3.628-3.814	3.727	0.014
	21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.560	4.467-4.653	+++++	+++++
	22 2,2-Dichloropropane	3.834	3.795	3.817	3.817	3.817	3.840	3.823	3.829	3.817	3.724-3.911	3.822	0.014
	23 Bromochloromethane	3.925	3.891	3.914	3.908	3.908	3.925	3.914	3.919	3.908	3.815-4.001	3.913	0.011
	24 Chloroform	4.027	3.998	4.021	4.010	4.010	4.027	4.015	4.021	4.010	3.917-4.103	4.016	0.010
	25 Carbon Tetrachloride	4.117	4.072	4.095	4.095	4.094	4.117	4.106	4.100	4.095	3.992-4.197	4.099	0.015
	26 1,1,1-Trichloroethane	4.185	4.146	4.168	4.168	4.168	4.185	4.174	4.174	4.168	4.075-4.261	4.171	0.012
$	27 Dibromofluoromethane	4.196	4.174	4.191	4.180	4.179	4.196	4.179	4.191	4.180	4.086-4.273	4.186	0.009
	28 1,1-Dichloropropene	4.304	4.270	4.287	4.287	4.287	4.304	4.293	4.293	4.287	4.185-4.389	4.290	0.011
	29 2-Butanone	4.389	4.423	4.428	4.406	4.389	4.389	4.366	4.423	4.406	4.313-4.499	4.401	0.022
	30 Benzene	4.530	4.508	4.519	4.519	4.513	4.530	4.519	4.524	4.519	4.417-4.621	4.520	0.008
*	31 Pentafluorobenzene	4.672	4.649	4.660	4.660	4.654	4.671	4.660	4.666	4.660	4.567-4.754	4.662	0.008
$	32 d4-1,2-Dichloroethane	4.660	4.643	4.655	4.649	4.649	4.660	4.649	4.660	4.649	4.556-4.742	4.653	0.007
	33 1,2-Dichloroethane	4.723	4.706	4.723	4.711	4.711	4.722	4.711	4.722	4.711	4.609-4.813	4.716	0.007
	34 Trichloroethene	5.062	5.045	5.056	5.056	5.056	5.067	5.056	5.062	5.056	4.954-5.158	5.058	0.007
*	35 1,4-Difluorobenzene	5.119	5.102	5.113	5.107	5.107	5.118	5.113	5.113	5.107	5.005-5.209	5.111	0.006
	36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.693	5.591-5.795	+++++	+++++
	37 Dibromomethane	5.418	5.407	5.418	5.413	5.407	5.418	5.407	5.418	5.413	5.311-5.515	5.413	0.006
	38 1,2-Dichloropropane	5.515	5.503	5.514	5.503	5.503	5.514	5.503	5.514	5.503	5.401-5.605	5.509	0.006
	39 Bromodichloromethane	5.588	5.582	5.588	5.582	5.582	5.588	5.582	5.588	5.582	5.480-5.685	5.585	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/11JUN13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	40 2-Chloroethyl Vinyl Et	6.120	6.120	6.125	6.120	6.114	6.120	6.114	6.125	6.120	6.018-6.222	6.120	0.004
	41 Cis 1,3-dichloropropen	6.137	6.131	6.137	6.131	6.125	6.137	6.131	6.137	6.131	6.029-6.233	6.133	0.004
$	42 d8-Toluene	6.290	6.284	6.289	6.284	6.284	6.289	6.289	6.289	6.284	6.182-6.386	6.287	0.003
	43 Toluene	6.335	6.329	6.335	6.329	6.329	6.335	6.329	6.335	6.329	6.227-6.431	6.332	0.003
	44 Tetrachloroethene	6.640	6.640	6.646	6.640	6.640	6.646	6.640	6.646	6.640	6.488-6.792	6.642	0.003
	45 4-Methyl-2-Pentanone	6.697	6.719	6.719	6.702	6.697	6.697	6.691	6.708	6.702	6.600-6.805	6.704	0.011
	46 Trans 1,3-Dichloroprop	6.697	6.697	6.702	6.697	6.691	6.697	6.691	6.697	6.697	6.595-6.799	6.696	0.004
	47 1,1,2-Trichloroethane	6.821	6.833	6.833	6.821	6.821	6.827	6.821	6.832	6.821	6.719-6.923	6.826	0.006
	48 Chlorodibromomethane	6.963	6.963	6.968	6.957	6.957	6.962	6.957	6.963	6.957	6.805-7.109	6.961	0.004
	49 1,3-Dichloropropane	7.042	7.048	7.053	7.042	7.042	7.042	7.042	7.047	7.042	6.890-7.194	7.045	0.004
	50 1,2-Dibromoethane	7.138	7.144	7.144	7.138	7.132	7.138	7.138	7.144	7.138	7.036-7.240	7.139	0.004
	51 2-Hexanone	7.410	7.427	7.427	7.415	7.409	7.409	7.404	7.421	7.415	7.263-7.567	7.415	0.009
*	52 d5-Chlorobenzene	7.591	7.596	7.596	7.591	7.590	7.596	7.590	7.596	7.591	7.439-7.742	7.593	0.003
	53 Chlorobenzene	7.608	7.613	7.613	7.608	7.602	7.607	7.607	7.613	7.608	7.456-7.759	7.609	0.004
	54 Ethyl Benzene	7.658	7.670	7.670	7.659	7.653	7.658	7.653	7.664	7.659	7.507-7.810	7.661	0.007
	55 1,1,1,2-Tetrachloroeth	7.670	7.687	7.687	7.675	7.670	7.675	7.670	7.681	7.675	7.524-7.827	7.677	0.007
	56 m,p-xylene	7.789	7.806	7.800	7.789	7.788	7.788	7.788	7.800	7.789	7.637-7.940	7.793	0.007
	57 o-Xylene	8.151	8.162	8.162	8.151	8.150	8.150	8.151	8.156	8.151	7.999-8.302	8.154	0.005
	58 Styrene	8.202	8.213	8.207	8.202	8.196	8.201	8.201	8.207	8.202	8.050-8.353	8.204	0.005
	59 Bromoform	8.196	8.202	8.201	8.196	8.190	8.190	8.190	8.201	8.196	8.002-8.389	8.196	0.005
	60 Isopropyl Benzene	8.439	8.450	8.445	8.439	8.439	8.439	8.439	8.445	8.439	8.246-8.632	8.442	0.004
	61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.568	8.416-8.720	+++++	+++++
$	62 4-Bromofluorobenzene	8.660	8.665	8.665	8.660	8.660	8.660	8.665	8.665	8.660	8.508-8.812	8.662	0.003
	63 Bromobenzene	8.739	8.745	8.745	8.739	8.739	8.739	8.739	8.745	8.739	8.546-8.932	8.741	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/11JUN13.b/V0121012S.m
Batch File: /chem1/nt5.i/11JUN13.b
Inst ID: nt5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
64 N-Propyl Benzene	8.807	8.818	8.818	8.807	8.807	8.807	8.807	8.812	8.807	8.614-9.000	8.810	0.005
65 1,1,2,2-Tetrachloroeth	8.869	8.897	8.886	8.869	8.869	8.869	8.869	8.875	8.869	8.676-9.062	8.875	0.011
66 2-Chloro Toluene	8.920	8.931	8.926	8.920	8.914	8.920	8.920	8.926	8.920	8.727-9.113	8.922	0.005
67 1,3,5-Trimethyl Benzen	8.999	9.016	9.010	8.999	8.993	8.993	8.999	9.005	8.999	8.806-9.192	9.002	0.008
68 1,2,3-Trichloropropane	8.965	8.982	8.976	8.971	8.965	8.971	8.965	8.971	8.971	8.778-9.164	8.971	0.006
69 Trans-1,4-Dichloro 2-B	9.022	9.039	9.039	9.027	9.022	9.022	9.022	9.033	9.027	8.834-9.221	9.028	0.008
70 4-Chloro Toluene	9.067	9.084	9.078	9.073	9.067	9.067	9.073	9.078	9.073	8.879-9.266	9.073	0.006
71 T-Butyl Benzene	9.271	9.282	9.282	9.271	9.270	9.270	9.271	9.276	9.271	9.077-9.464	9.274	0.005
72 1,2,4-Trimethylbenzene	9.339	9.350	9.350	9.339	9.338	9.338	9.338	9.344	9.339	9.145-9.532	9.342	0.005
73 S-Butyl Benzene	9.435	9.452	9.446	9.435	9.435	9.435	9.435	9.440	9.435	9.241-9.628	9.439	0.007
74 4-Isopropyl Toluene	9.582	9.599	9.593	9.582	9.582	9.582	9.582	9.587	9.582	9.388-9.775	9.586	0.007
75 1,3-Dichlorobenzene	9.593	9.610	9.604	9.593	9.593	9.593	9.593	9.604	9.593	9.400-9.786	9.598	0.007
* 76 d4-1,4-Dichlorobenzene	9.667	9.678	9.678	9.667	9.666	9.666	9.672	9.672	9.667	9.473-9.860	9.671	0.005
77 1,4-Dichlorobenzene	9.678	9.695	9.695	9.684	9.678	9.678	9.684	9.689	9.684	9.490-9.877	9.685	0.007
78 N-Butyl Benzene	9.966	9.983	9.978	9.967	9.966	9.966	9.972	9.972	9.967	9.773-10.160	9.971	0.006
$ 79 d4-1,2-Dichlorobenzene	10.051	10.063	10.063	10.051	10.051	10.051	10.057	10.057	10.051	9.858-10.245	10.056	0.005
80 1,2-Dichlorobenzene	10.063	10.074	10.068	10.063	10.057	10.057	10.063	10.068	10.063	9.869-10.256	10.064	0.006
81 1,2-Dibromo 3-Chloropr	10.815	10.826	10.821	10.809	10.809	10.809	10.815	10.815	10.809	10.616-11.003	10.815	0.006
82 Hexachloro 1,3-Butadie	11.494	11.505	11.499	11.488	11.488	11.488	11.505	11.494	11.488	11.295-11.682	11.495	0.007
83 1,2,4-Trichlorobenzene	11.483	11.494	11.488	11.477	11.477	11.477	11.488	11.482	11.477	11.283-11.670	11.483	0.006
84 Naphthalene	11.799	11.805	11.799	11.794	11.788	11.788	11.805	11.794	11.794	11.600-11.987	11.796	0.007
85 1,2,3-Trichlorobenzene	11.980	11.992	11.986	11.975	11.969	11.969	11.986	11.980	11.975	11.781-12.168	11.980	0.008

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/0010611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD1
Inj Date : 11-JUN-2013 08:33
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:33 Cal File: 0010611.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.057	1.029	(0.226)	10754	1.00000	1.308
2 Chloromethane	50	1.176	1.153	(0.252)	19967	1.00000	1.220(M)
3 Vinyl Chloride	62	1.227	1.198	(0.263)	18538	1.00000	1.171
4 Bromomethane	94	1.430	1.408	(0.306)	10334	1.00000	1.303
5 Chloroethane	64	1.526	1.492	(0.327)	11646	1.00000	1.235
6 Trichlorofluoromethane	101	1.611	1.589	(0.345)	19214	1.00000	1.168
7 1,1-Dichloroethene	96	1.968	1.951	(0.421)	13287	1.00000	1.196
8 Carbon Disulfide	76	1.973	1.951	(0.422)	42477	1.00000	1.177(T)
9 112Trichloro122Trifluoroethane	101	2.019	1.990	(0.432)	10873	1.00000	1.112
10 Iodomethane	142	2.075	2.053	(0.444)	8399	1.00000	0.8527
11 Bromoethane	108	2.177	2.149	(0.466)	8161	1.00000	1.196
12 Acrolein	56	2.279	2.267	(0.488)	13873	5.00000	5.920(M)
13 Methylene Chloride	84	2.443	2.426	(0.523)	32771	1.00000	3.251
14 Acetone	43	2.630	2.697	(0.563)	24600	5.00000	6.467(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.590	2.562	(0.554)	14049	1.00000	1.320
	16 Methyl tert butyl ether	73	2.754	2.726	(0.590)	39376	1.00000	1.279
	17 1,1-Dichloroethane	63	3.207	3.173	(0.686)	28266	1.00000	1.224
	18 Acrylonitrile	53	3.303	3.308	(0.707)	5710	1.00000	1.146(M)
	19 Vinyl Acetate	43	3.535	3.518	(0.757)	32759	1.00000	1.038
	20 Cis-1,2-Dichloroethene	96	3.744	3.721	(0.801)	14817	1.00000	1.099
	22 2,2-Dichloropropane	77	3.834	3.817	(0.821)	22855	1.00000	1.190
	23 Bromochloromethane	128	3.925	3.908	(0.840)	6579	1.00000	1.090
	24 Chloroform	83	4.027	4.010	(0.862)	24850	1.00000	1.149
	25 Carbon Tetrachloride	117	4.117	4.095	(0.804)	18362	1.00000	1.126
$	27 Dibromofluoromethane	111	4.196	4.180	(0.898)	658677	50.0000	49.534
	26 1,1,1-Trichloroethane	97	4.185	4.168	(0.896)	21263	1.00000	1.094
	28 1,1-Dichloropropene	75	4.304	4.287	(0.841)	20928	1.00000	1.095
	29 2-Butanone	72	4.389	4.406	(0.939)	7843	5.00000	5.012
	30 Benzene	78	4.530	4.519	(0.885)	62768	1.00000	1.169
*	31 Pentafluorobenzene	168	4.672	4.660	(1.000)	463596	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.998)	617416	50.0000	49.694
	33 1,2-Dichloroethane	62	4.723	4.711	(0.923)	19281	1.00000	1.138
	34 Trichloroethene	95	5.062	5.056	(0.989)	14117	1.00000	1.077
*	35 1,4-Difluorobenzene	114	5.119	5.107	(1.000)	1698223	50.0000	
	37 Dibromomethane	93	5.418	5.413	(1.059)	7456	1.00000	1.056
	38 1,2-Dichloropropane	63	5.515	5.503	(1.077)	16754	1.00000	1.100
	39 Bromodichloromethane	83	5.588	5.582	(1.092)	18203	1.00000	1.106
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.196)	6739	1.00000	0.8423
	41 Cis 1,3-dichloropropene	75	6.137	6.131	(1.199)	23211	1.00000	1.084
$	42 d8-Toluene	98	6.290	6.284	(1.229)	2495230	50.0000	50.142
	43 Toluene	92	6.335	6.329	(1.238)	41019	1.00000	1.200
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	15490	1.00000	1.113
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.308)	28825	5.00000	4.805
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	20165	1.00000	1.060
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.333)	10933	1.00000	1.023
	48 Chlorodibromomethane	129	6.963	6.957	(0.917)	12875	1.00000	1.072
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	20874	1.00000	1.053
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	11252	1.00000	1.075
	51 2-Hexanone	43	7.410	7.415	(0.976)	47742	5.00000	4.673
*	52 d5-Chlorobenzene	117	7.591	7.591	(1.000)	2010959	50.0000	
	53 Chlorobenzene	112	7.608	7.608	(1.002)	39594	1.00000	1.157
	54 Ethyl Benzene	91	7.658	7.659	(1.009)	70497	1.00000	1.201
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	13727	1.00000	1.126
	56 m,p-xylene	106	7.789	7.789	(1.026)	52332	2.00000	2.340
	57 o-Xylene	106	8.151	8.151	(1.074)	23511	1.00000	1.057
	58 Styrene	104	8.202	8.202	(1.080)	37169	1.00000	1.032
	59 Bromoform	173	8.196	8.196	(0.848)	8926	1.00000	1.064
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	61065	1.00000	1.136
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1091488	50.0000	49.746
	63 Bromobenzene	156	8.739	8.739	(0.904)	15928	1.00000	1.123
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	77552	1.00000	1.217

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	14483	1.00000	1.033
66	2-Chloro Toluene	91	8.920	8.920	(0.923)	46819	1.00000	1.160
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	51497	1.00000	1.126
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	4308	1.00000	1.015(TM)
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	5320	1.00000	1.022(M)
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	46587	1.00000	1.114
71	T-Butyl Benzene	119	9.271	9.271	(0.959)	43543	1.00000	1.082
72	1,2,4-Trimethylbenzene	105	9.339	9.339	(0.966)	50788	1.00000	1.129
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	68893	1.00000	1.177
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	54120	1.00000	1.127
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	32082	1.00000	1.220
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	1071536	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	32693	1.00000	1.206
78	N-Butyl Benzene	91	9.966	9.967	(1.031)	52198	1.00000	1.130
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1107225	50.0000	50.722
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.041)	30551	1.00000	1.194
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.119)	2746	1.00000	1.011
82	Hexachloro 1,3-Butadiene	225	11.494	11.488	(1.189)	13484	1.00000	1.188
83	1,2,4-Trichlorobenzene	180	11.483	11.477	(1.188)	20448	1.00000	1.109
84	Naphthalene	128	11.799	11.794	(1.221)	41092	1.00000	1.015
85	1,2,3-Trichlorobenzene	180	11.980	11.975	(1.239)	19453	1.00000	1.091

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0010611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: VSTD1
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	463596	0.86
35 1,4-Difluorobenze	1692431	846216	3384862	1698223	0.34
52 d5-Chlorobenzene	1987215	993608	3974430	2010959	1.19
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1071536	-0.36

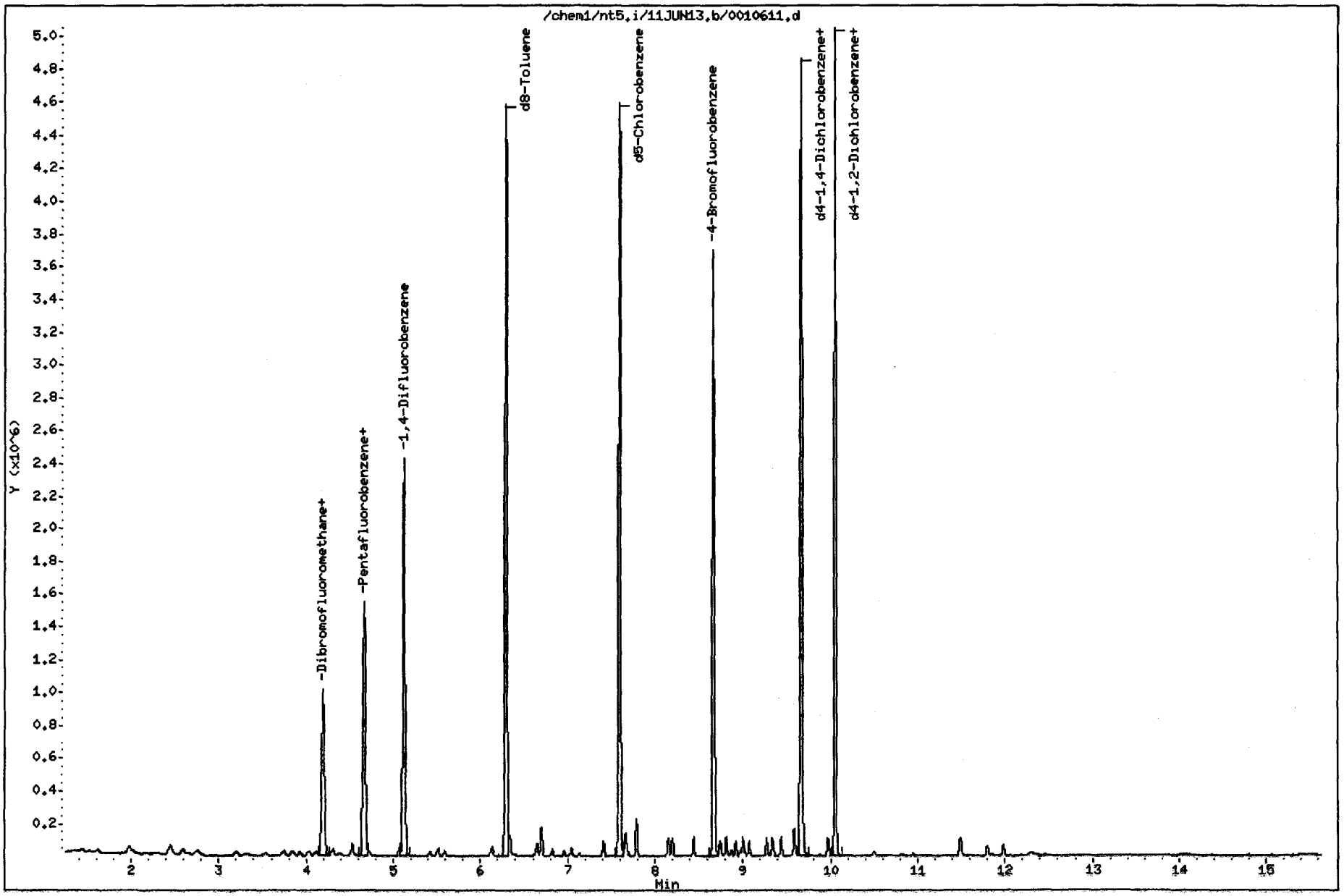
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Date : 11-JUN-2013 08:33
Client ID: VSTD1
Sample Info: IC0611,5,5,0

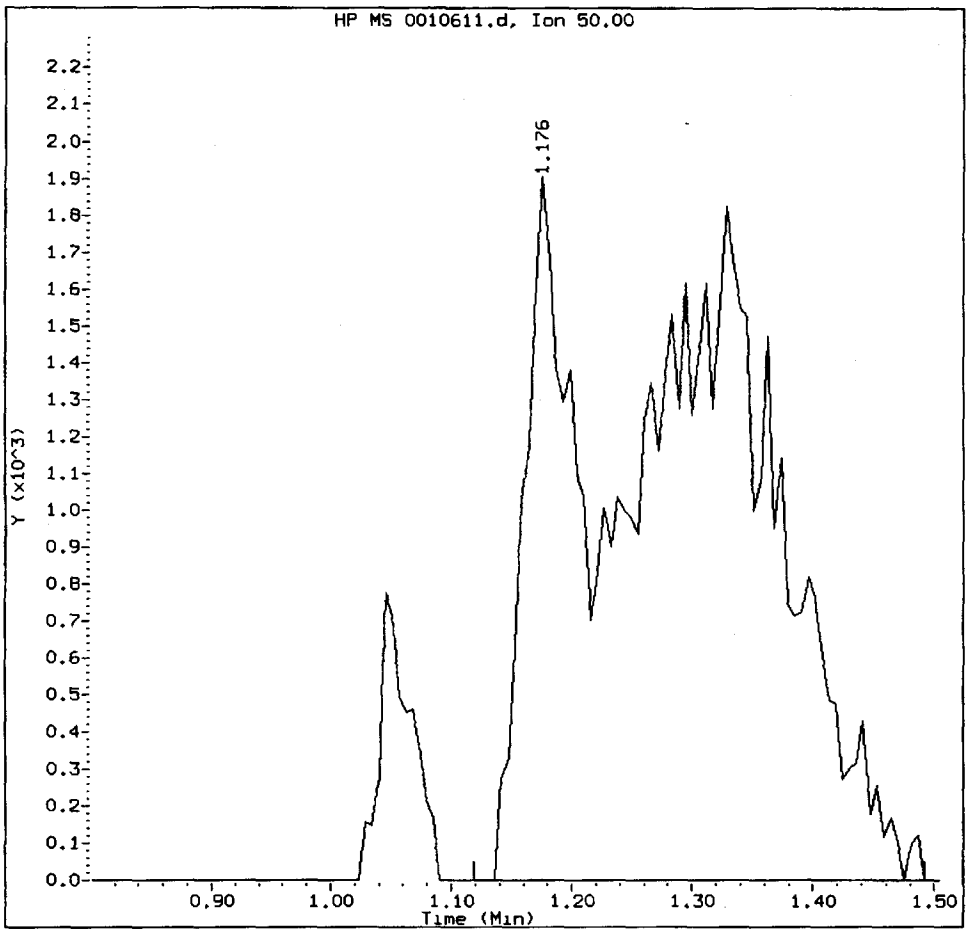
Instrument: nt5.i
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

Chloromethane Amount: 1.22 Area: 19967



MANUAL INTEGRATION for Chloromethane

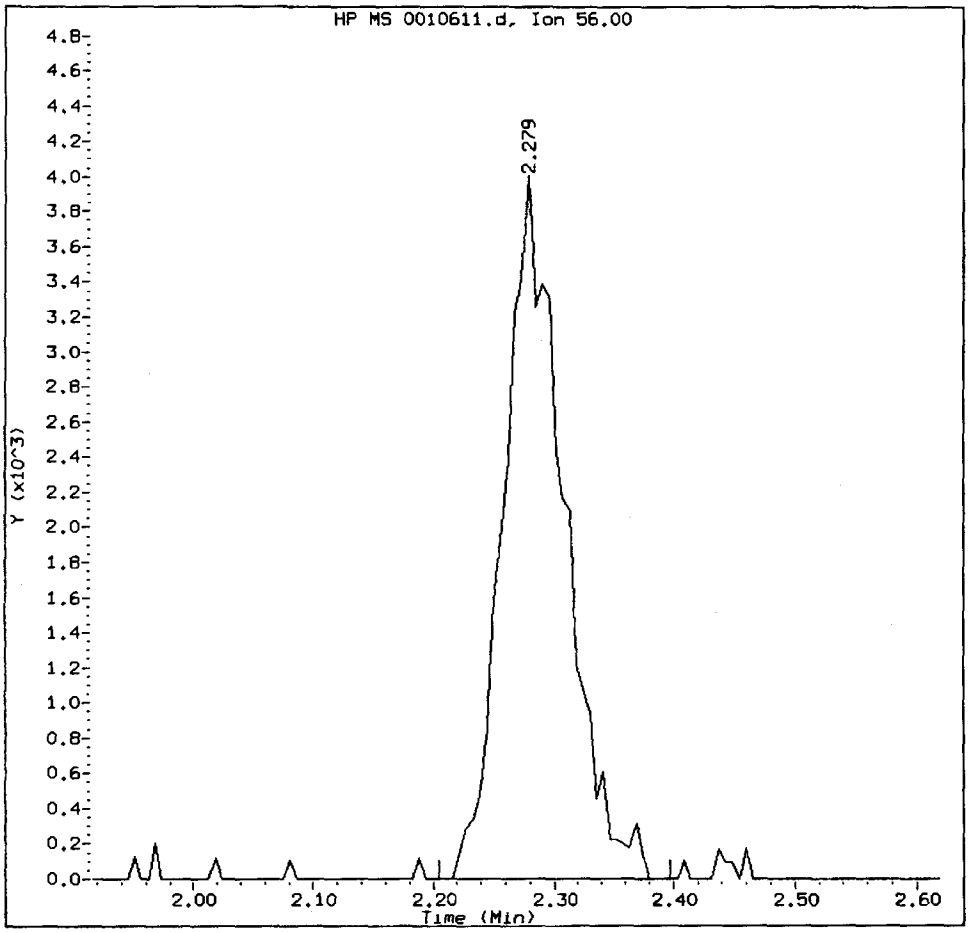
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

Acrolein Amount: 5.92 Area: 13873



MANUAL INTEGRATION for Acrolein

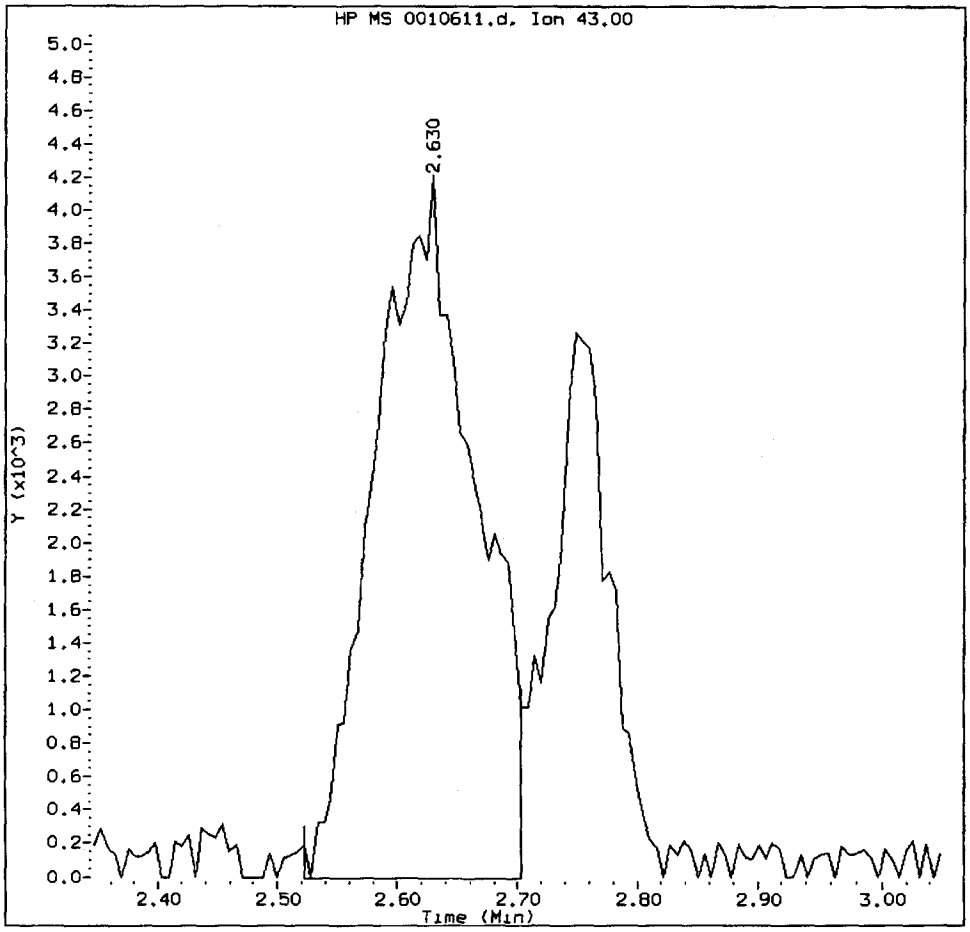
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/12/13

IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

Acetone Amount: 6.47 Area: 24600



MANUAL INTEGRATION for Acetone

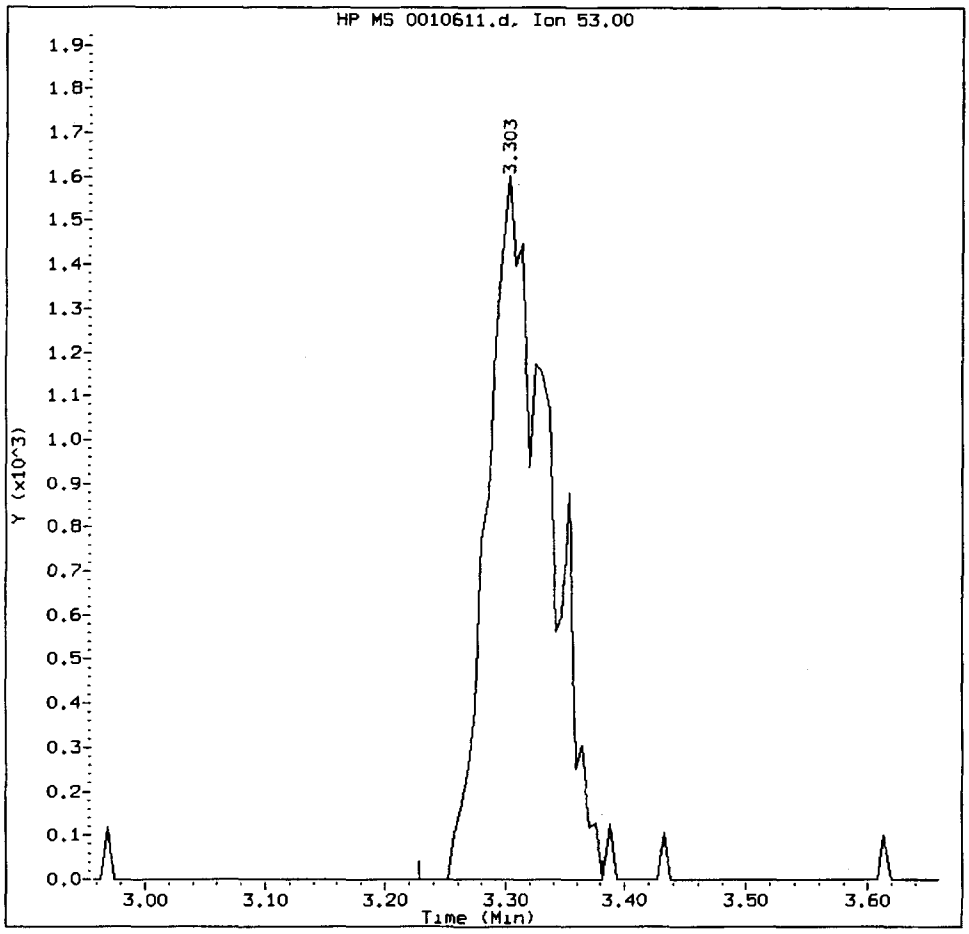
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/12/13

IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

Acrylonitrile Amount: 1.15 Area: 5710



MANUAL INTEGRATION for Acrylonitrile

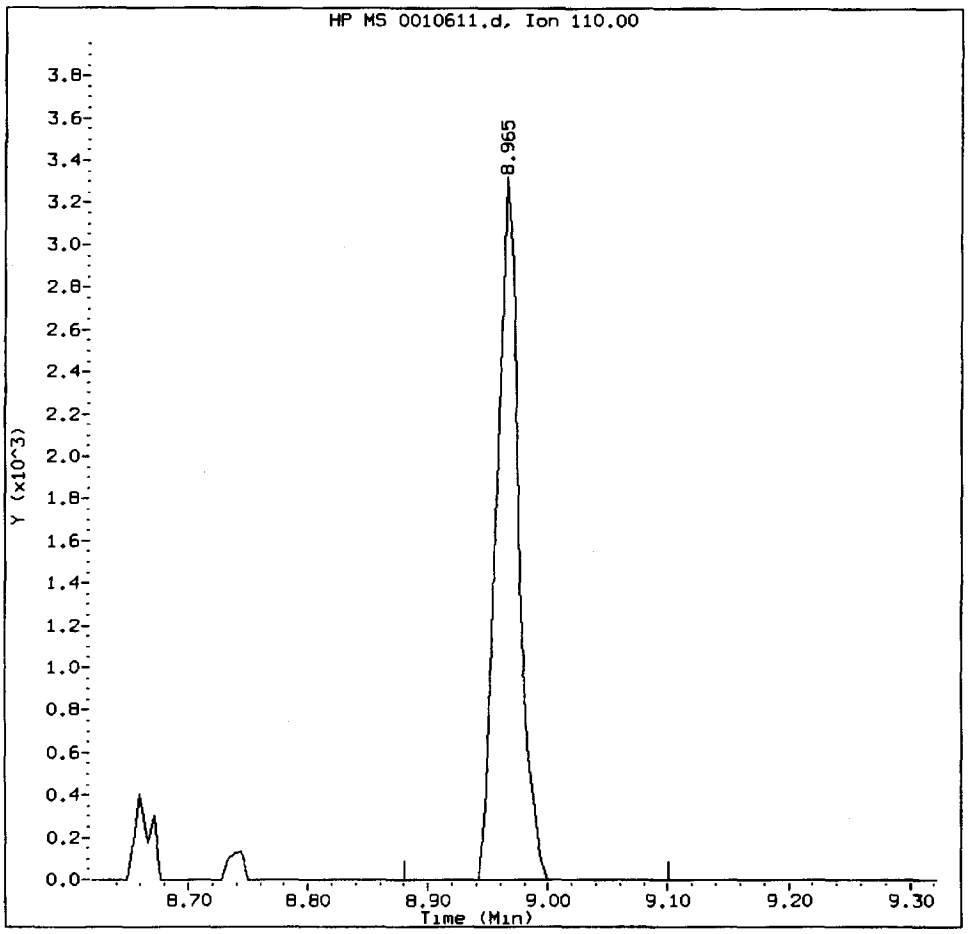
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

1,2,3-Trichloropropane Amount: 1.02 Area: 4308



MANUAL INTEGRATION for 1,2,3-Trichloropropane

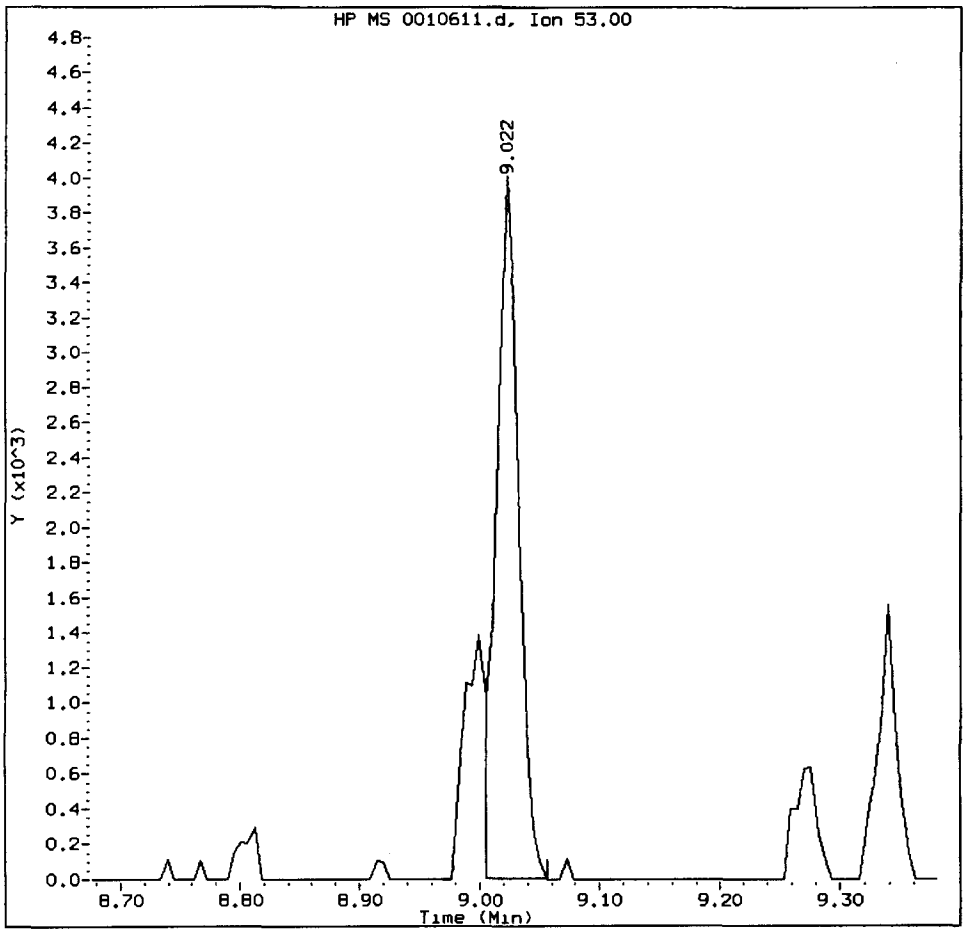
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

Trans-1,4-Dichloro 2-Butene Amount: 1.02 Area: 5320



MANUAL INTEGRATION for Trans-1,4-Dichloro 2-Butene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/12/13

CO-ELUTION SUMMARY FOR FILE - 0010611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/0020611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD2
Inj Date : 11-JUN-2013 11:20
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 11:20 Cal File: 0020611.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.057	1.029	(0.226)	13123	2.00000	1.666
2 Chloromethane	50	1.334	1.153	(0.286)	28639	2.00000	1.826(TM)
3 Vinyl Chloride	62	1.226	1.198	(0.263)	27210	2.00000	1.793
4 Bromomethane	94	1.436	1.408	(0.307)	15458	2.00000	2.033
5 Chloroethane	64	1.526	1.492	(0.327)	18136	2.00000	2.007
6 Trichlorofluoromethane	101	1.611	1.589	(0.345)	28563	2.00000	1.811
7 1,1-Dichloroethene	96	1.973	1.951	(0.422)	19355	2.00000	1.818
8 Carbon Disulfide	76	1.979	1.951	(0.424)	65053	2.00000	1.880(T)
9 112Trichloro122Trifluoroethane	101	2.018	1.990	(0.432)	17337	2.00000	1.850
10 Iodomethane	142	2.075	2.053	(0.444)	11499	2.00000	1.218
11 Bromoethane	108	2.171	2.149	(0.465)	12028	2.00000	1.838
12 Acrolein	56	2.284	2.267	(0.489)	22957	10.0000	10.221
13 Methylene Chloride	84	2.448	2.426	(0.524)	34934	2.00000	3.616
14 Acetone	43	2.641	2.697	(0.565)	37068	10.0000	10.315(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.584	2.562	(0.553)	21206	2.00000	2.078
	16 Methyl tert butyl ether	73	2.759	2.726	(0.591)	66466	2.00000	2.252
	17 1,1-Dichloroethane	63	3.206	3.173	(0.686)	46358	2.00000	2.094
	18 Acrylonitrile	53	3.314	3.308	(0.709)	11044	2.00000	2.313
	19 Vinyl Acetate	43	3.534	3.518	(0.757)	59539	2.00000	1.968
	20 Cis-1,2-Dichloroethene	96	3.744	3.721	(0.801)	25264	2.00000	1.956
	22 2,2-Dichloropropane	77	3.840	3.817	(0.822)	33261	2.00000	1.806
	23 Bromochloromethane	128	3.925	3.908	(0.840)	10326	2.00000	1.785
	24 Chloroform	83	4.027	4.010	(0.862)	40008	2.00000	1.930
	25 Carbon Tetrachloride	117	4.117	4.095	(0.804)	28971	2.00000	1.838
$	27 Dibromofluoromethane	111	4.196	4.180	(0.898)	637324	50.0000	50.007
	26 1,1,1-Trichloroethane	97	4.185	4.168	(0.896)	34345	2.00000	1.843
	28 1,1-Dichloropropene	75	4.304	4.287	(0.841)	33668	2.00000	1.822
	29 2-Butanone	72	4.389	4.406	(0.939)	14478	10.0000	9.653
	30 Benzene	78	4.530	4.519	(0.885)	103285	2.00000	1.990
*	31 Pentafluorobenzene	168	4.671	4.660	(1.000)	444324	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.998)	604952	50.0000	50.803
	33 1,2-Dichloroethane	62	4.722	4.711	(0.923)	32695	2.00000	1.997
	34 Trichloroethene	95	5.067	5.056	(0.990)	23527	2.00000	1.856
*	35 1,4-Difluorobenzene	114	5.118	5.107	(1.000)	1641355	50.0000	
	37 Dibromomethane	93	5.418	5.413	(1.059)	13175	2.00000	1.931
	38 1,2-Dichloropropane	63	5.514	5.503	(1.077)	28507	2.00000	1.937
	39 Bromodichloromethane	83	5.588	5.582	(1.092)	30345	2.00000	1.907
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.196)	13323	2.00000	1.723
	41 Cis 1,3-dichloropropene	75	6.137	6.131	(1.199)	38181	2.00000	1.846
$	42 d8-Toluene	98	6.289	6.284	(1.229)	2418375	50.0000	50.281
	43 Toluene	92	6.335	6.329	(1.238)	66503	2.00000	2.013
	44 Tetrachloroethene	166	6.646	6.640	(0.875)	24100	2.00000	1.776
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.308)	57247	10.0000	9.874
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	34645	2.00000	1.884
	47 1,1,2-Trichloroethane	97	6.827	6.821	(1.334)	19763	2.00000	1.913
	48 Chlorodibromomethane	129	6.962	6.957	(0.917)	21521	2.00000	1.839
	49 1,3-Dichloropropane	76	7.042	7.042	(0.927)	37678	2.00000	1.951
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	19981	2.00000	1.975
	51 2-Hexanone	43	7.409	7.415	(0.975)	97799	10.0000	9.823
*	52 d5-Chlorobenzene	117	7.596	7.591	(1.000)	1959754	50.0000	
	53 Chlorobenzene	112	7.607	7.608	(1.001)	66369	2.00000	1.990
	54 Ethyl Benzene	91	7.658	7.659	(1.008)	113910	2.00000	1.991
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	22497	2.00000	1.894
	56 m,p-xylene	106	7.788	7.789	(1.025)	84972	4.00000	3.898
	57 o-Xylene	106	8.150	8.151	(1.073)	38974	2.00000	1.798
	58 Styrene	104	8.201	8.202	(1.080)	65817	2.00000	1.875
	59 Bromoform	173	8.190	8.196	(0.847)	15386	2.00000	1.851
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	103813	2.00000	1.950
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.140)	1066765	50.0000	49.890
	63 Bromobenzene	156	8.739	8.739	(0.904)	27158	2.00000	1.933
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	126034	2.00000	1.997

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	25673	2.00000	1.849
66	2-Chloro Toluene	91	8.920	8.920	(0.923)	77143	2.00000	1.929
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	86706	2.00000	1.914
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.928)	8175	2.00000	1.945(TM)
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	9286	2.00000	1.801
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	80908	2.00000	1.953
71	T-Butyl Benzene	119	9.270	9.271	(0.959)	74665	2.00000	1.874
72	1,2,4-Trimethylbenzene	105	9.338	9.339	(0.966)	84876	2.00000	1.906
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	116362	2.00000	2.008
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	92146	2.00000	1.938
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	51677	2.00000	1.984
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.667	(1.000)	1061365	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	53271	2.00000	1.984
78	N-Butyl Benzene	91	9.966	9.967	(1.031)	87051	2.00000	1.902
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1093995	50.0000	50.596
80	1,2-Dichlorobenzene	146	10.057	10.063	(1.040)	51321	2.00000	2.026
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	5477	2.00000	2.037
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	20815	2.00000	1.851
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	33849	2.00000	1.853
84	Naphthalene	128	11.788	11.794	(1.219)	83843	2.00000	2.091
85	1,2,3-Trichlorobenzene	180	11.969	11.975	(1.238)	35568	2.00000	2.014

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0020611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: VSTD2
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	444324	-3.33
35 1,4-Difluorobenze	1692431	846216	3384862	1641355	-3.02
52 d5-Chlorobenzene	1987215	993608	3974430	1959754	-1.38
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1061365	-1.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

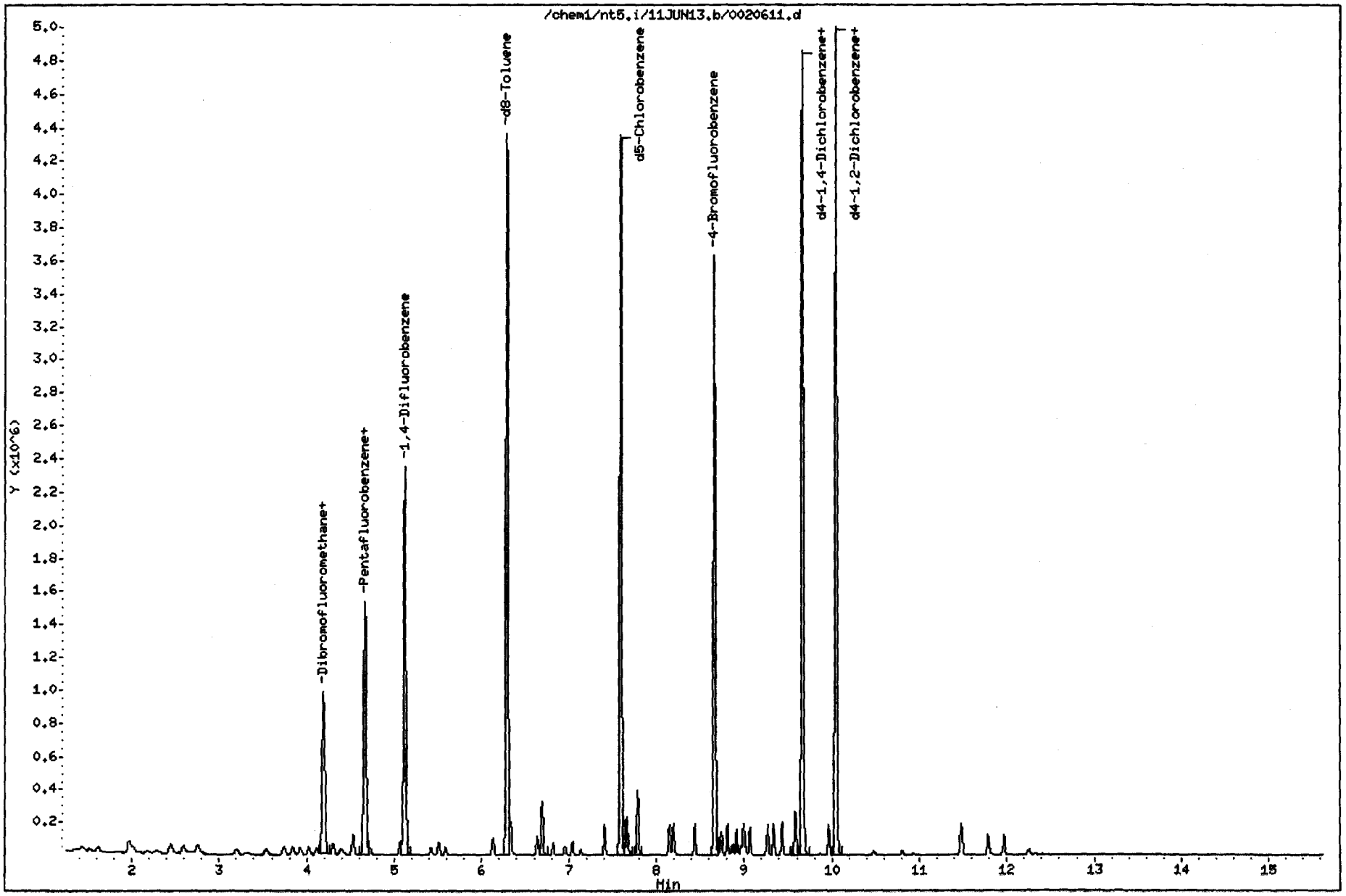
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/0020611.d
Date : 11-JUN-2013 11:20
Client ID: VSTD2
Sample Info: IC0611,5,5,0

Instrument: nt5.i

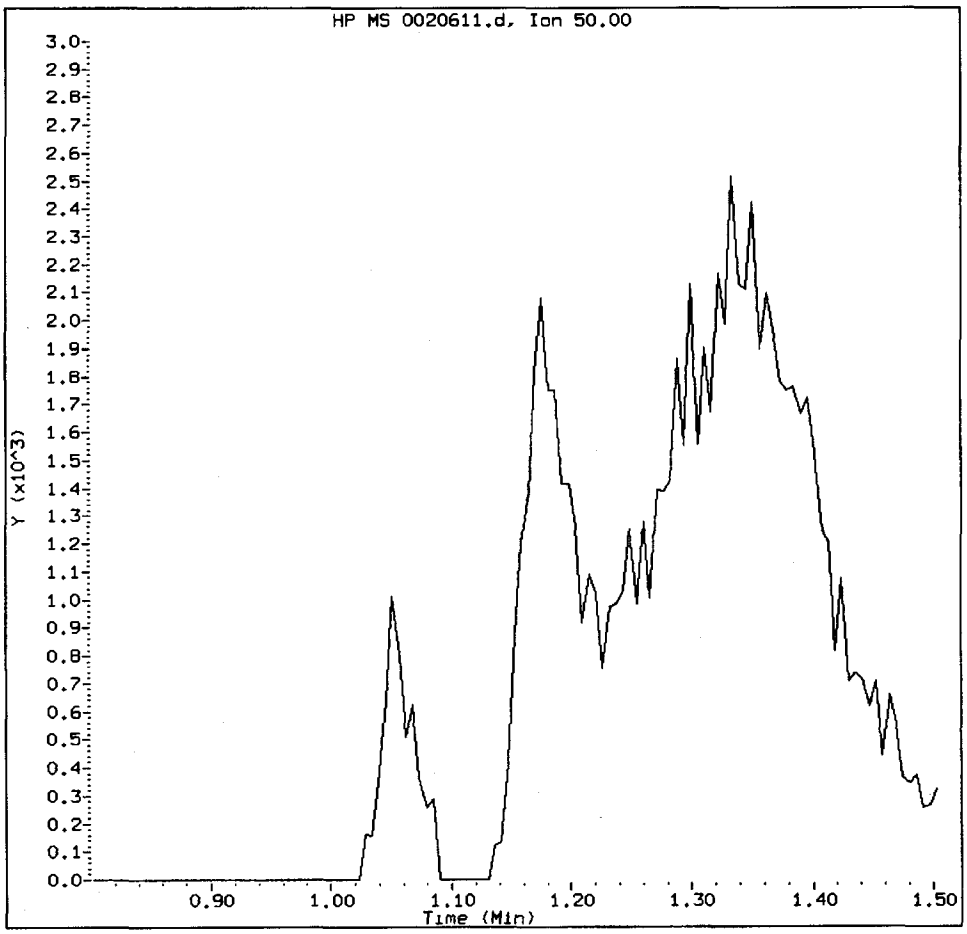
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/0020611.d

Chloromethane Amount: 1.83 Area: 28639



MANUAL INTEGRATION for Chloromethane

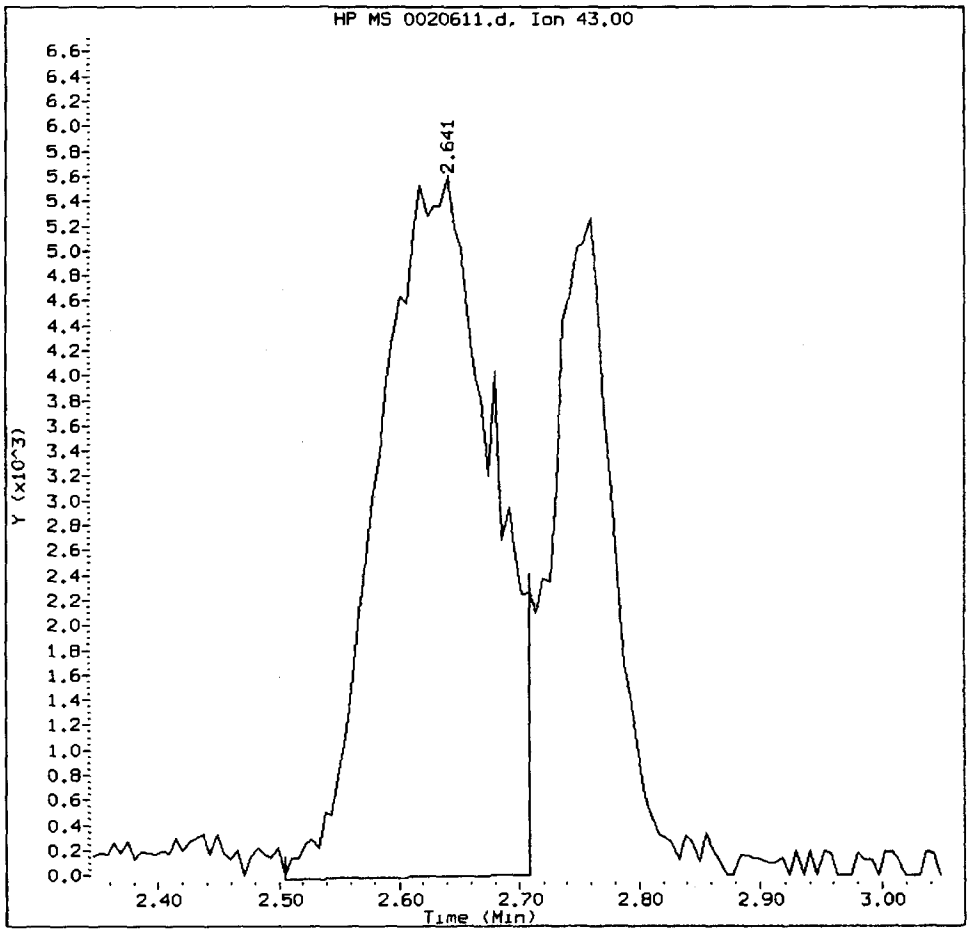
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

IC0611, /chem1/nt5.i/11JUN13.b/0020611.d

Acetone Amount: 10.32 Area: 37068



MANUAL INTEGRATION for Acetone

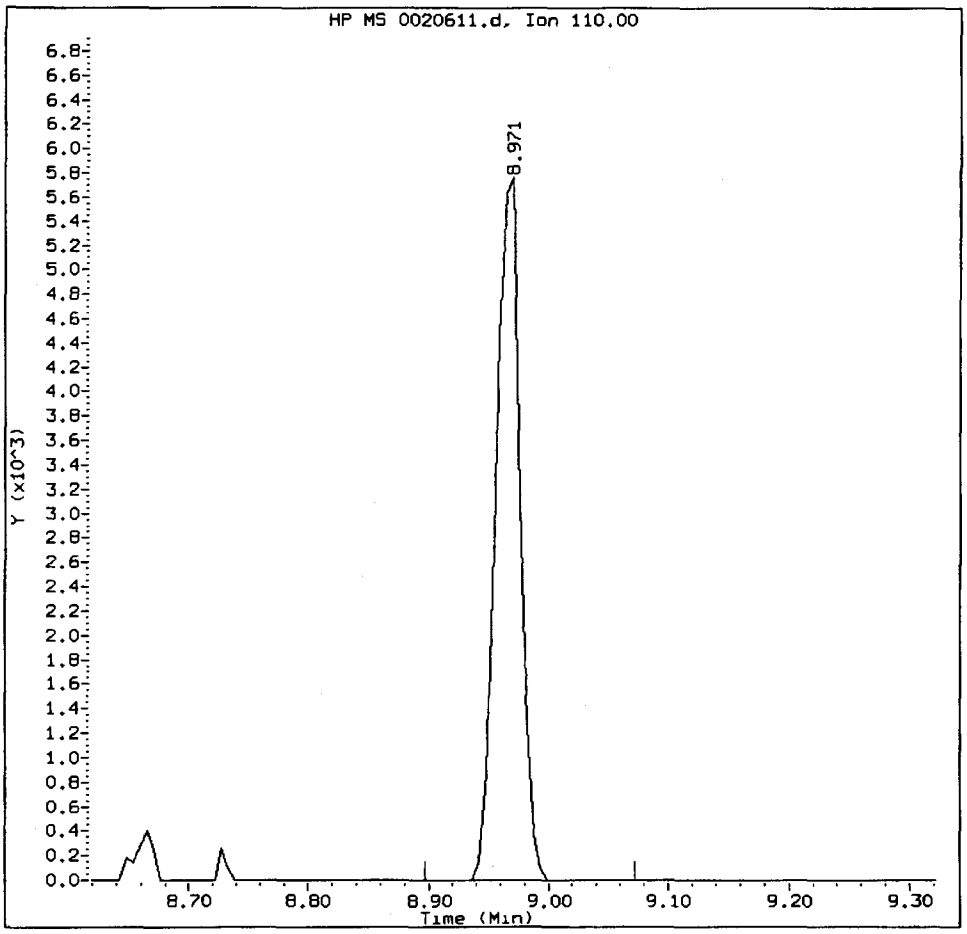
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

IC0611, /chem1/nt5.i/11JUN13.b/0020611.d

1,2,3-Trichloropropane Amount: 1.94 Area: 8175



MANUAL INTEGRATION for 1,2,3-Trichloropropane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

CO-ELUTION SUMMARY FOR FILE - 0020611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/0050611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD5
Inj Date : 11-JUN-2013 10:57
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 10:57 Cal File: 0050611.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.028	1.029	(0.221)	37510	5.00000	4.603
2 Chloromethane	50	1.334	1.153	(0.287)	84284	5.00000	5.194(TM)
3 Vinyl Chloride	62	1.204	1.198	(0.259)	74972	5.00000	4.776
4 Bromomethane	94	1.407	1.408	(0.302)	41863	5.00000	5.323
5 Chloroethane	64	1.492	1.492	(0.321)	46420	5.00000	4.967
6 Trichlorofluoromethane	101	1.588	1.589	(0.341)	81273	5.00000	4.983
7 1,1-Dichloroethene	96	1.950	1.951	(0.419)	53014	5.00000	4.814
8 Carbon Disulfide	76	1.950	1.951	(0.419)	176984	5.00000	4.946
9 112Trichloro122Trifluoroethane	101	1.990	1.990	(0.428)	46569	5.00000	4.804
10 Iodomethane	142	2.047	2.053	(0.440)	29970	5.00000	3.069
11 Bromoethane	108	2.143	2.149	(0.460)	31687	5.00000	4.682
12 Acrolein	56	2.256	2.267	(0.485)	52737	25.0000	22.700
13 Methylene Chloride	84	2.420	2.426	(0.520)	57838	5.00000	5.787
14 Acetone	43	2.590	2.697	(0.556)	61461	25.0000	16.930(TM)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.556	2.562	(0.549)	48752	5.00000	4.619
	16 Methyl tert butyl ether	73	2.737	2.726	(0.588)	163065	5.00000	5.342
	17 1,1-Dichloroethane	63	3.172	3.173	(0.682)	126815	5.00000	5.538
	18 Acrylonitrile	53	3.297	3.308	(0.708)	27160	5.00000	5.499
	19 Vinyl Acetate	43	3.517	3.518	(0.756)	163343	5.00000	5.221
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.799)	66501	5.00000	4.977
	22 2,2-Dichloropropane	77	3.817	3.817	(0.820)	93549	5.00000	4.911
	23 Bromochloromethane	128	3.908	3.908	(0.840)	29874	5.00000	4.992
	24 Chloroform	83	4.010	4.010	(0.861)	108316	5.00000	5.052
	25 Carbon Tetrachloride	117	4.094	4.095	(0.802)	78559	5.00000	4.849
$	27 Dibromofluoromethane	111	4.179	4.180	(0.898)	657418	50.0000	49.870
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.895)	95437	5.00000	4.952
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	104718	5.00000	5.515
	29 2-Butanone	72	4.389	4.406	(0.943)	39392	25.0000	25.393
	30 Benzene	78	4.513	4.519	(0.884)	285098	5.00000	5.343
*	31 Pentafluorobenzene	168	4.654	4.660	(1.000)	459587	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.999)	616549	50.0000	50.057
	33 1,2-Dichloroethane	62	4.711	4.711	(0.922)	86574	5.00000	5.143
	34 Trichloroethene	95	5.056	5.056	(0.990)	66986	5.00000	5.142
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	1687157	50.0000	
	37 Dibromomethane	93	5.407	5.413	(1.059)	35480	5.00000	5.059
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	75926	5.00000	5.020
	39 Bromodichloromethane	83	5.582	5.582	(1.093)	80792	5.00000	4.940
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.120	(1.197)	39884	5.00000	5.018
	41 Cis 1,3-dichloropropene	75	6.125	6.131	(1.199)	108551	5.00000	5.105
$	42 d8-Toluene	98	6.284	6.284	(1.230)	2486982	50.0000	50.304
	43 Toluene	92	6.329	6.329	(1.239)	178556	5.00000	5.257
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	69205	5.00000	4.983
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.311)	156706	25.0000	26.294
	46 Trans 1,3-Dichloropropene	75	6.691	6.697	(1.310)	96046	5.00000	5.080
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.336)	54470	5.00000	5.129
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	58638	5.00000	4.894
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	99146	5.00000	5.015
	50 1,2-Dibromoethane	107	7.132	7.138	(1.397)	52541	5.00000	5.052
	51 2-Hexanone	43	7.409	7.415	(0.976)	269287	25.0000	26.422
*	52 d5-Chlorobenzene	117	7.590	7.591	(1.000)	2006212	50.0000	
	53 Chlorobenzene	112	7.602	7.608	(1.001)	179925	5.00000	5.269
	54 Ethyl Benzene	91	7.653	7.659	(1.008)	321690	5.00000	5.493
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	61155	5.00000	5.029
	56 m,p-xylene	106	7.788	7.789	(1.026)	241184	10.0000	10.809
	57 o-Xylene	106	8.150	8.151	(1.074)	112295	5.00000	5.060
	58 Styrene	104	8.196	8.202	(1.080)	193535	5.00000	5.386
	59 Bromoform	173	8.190	8.196	(0.847)	42236	5.00000	4.917
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	297224	5.00000	5.401
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1098671	50.0000	50.192
	63 Bromobenzene	156	8.739	8.739	(0.904)	71559	5.00000	4.929
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	359458	5.00000	5.511

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	69384	5.00000	4.835
66	2-Chloro Toluene	91	8.914	8.920	(0.922)	213778	5.00000	5.174
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	247052	5.00000	5.278
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	21573	5.00000	4.966
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	24997	5.00000	4.690
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	222753	5.00000	5.204
71	T-Butyl Benzene	119	9.270	9.271	(0.959)	215379	5.00000	5.231
72	1,2,4-Trimethylbenzene	105	9.338	9.339	(0.966)	245092	5.00000	5.325
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	327277	5.00000	5.465
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	264374	5.00000	5.380
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	135851	5.00000	5.047
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.667	(1.000)	1096782	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	142280	5.00000	5.128
78	N-Butyl Benzene	91	9.966	9.967	(1.031)	247927	5.00000	5.242
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1116716	50.0000	49.979
80	1,2-Dichlorobenzene	146	10.057	10.063	(1.040)	133836	5.00000	5.112
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	13042	5.00000	4.693
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	58256	5.00000	5.014
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	90716	5.00000	4.805
84	Naphthalene	128	11.788	11.794	(1.219)	218730	5.00000	5.279
85	1,2,3-Trichlorobenzene	180	11.969	11.975	(1.238)	91961	5.00000	5.040

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0050611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: VSTD5
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	459587	-0.01
35 1,4-Difluorobenze	1692431	846216	3384862	1687157	-0.31
52 d5-Chlorobenzene	1987215	993608	3974430	2006212	0.96
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1096782	1.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.65	-0.13
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

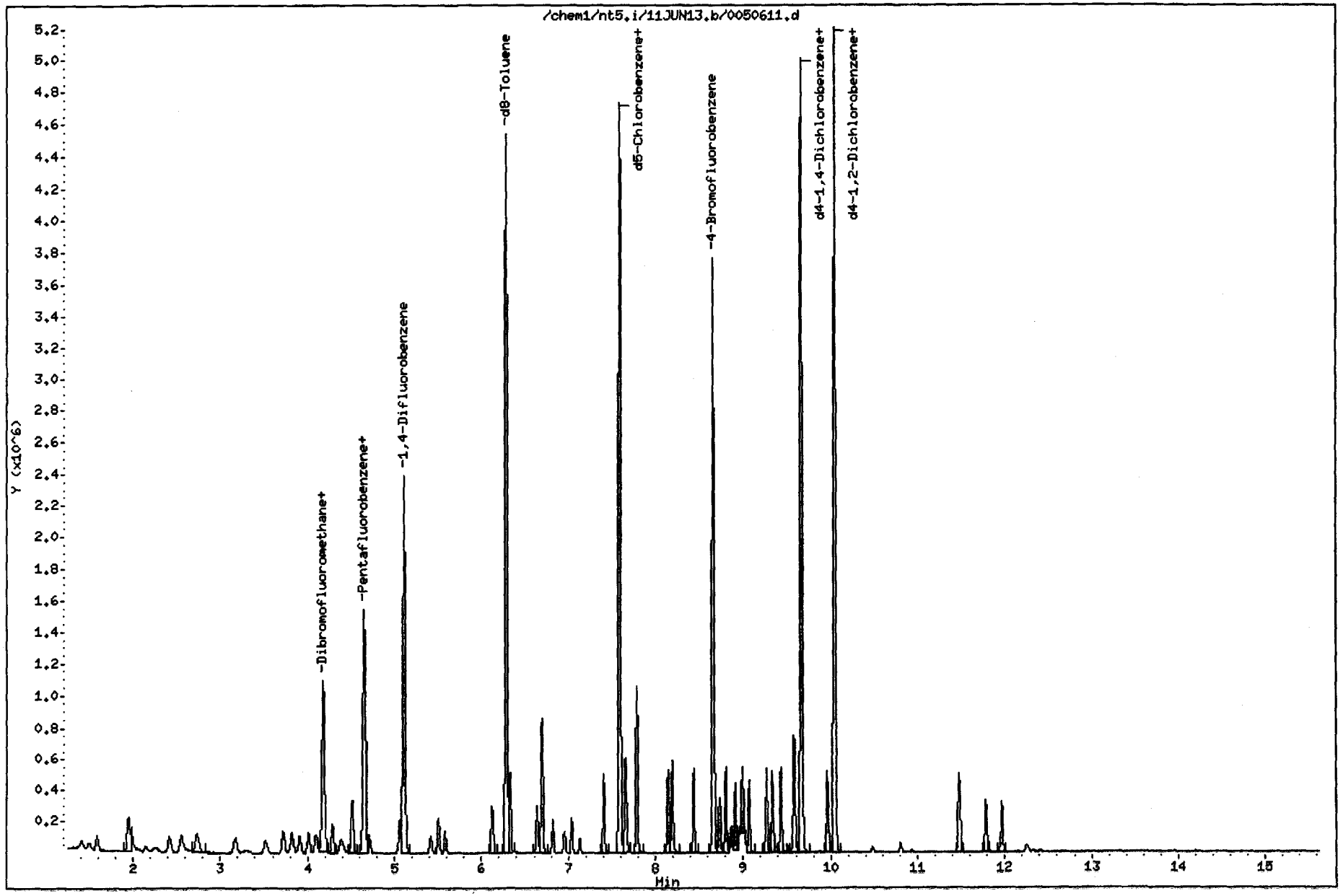
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/0050611.d
Date : 11-JUN-2013 10:57
Client ID: VSTD5
Sample Info: IC0611,5,5,0

Instrument: nt5.i

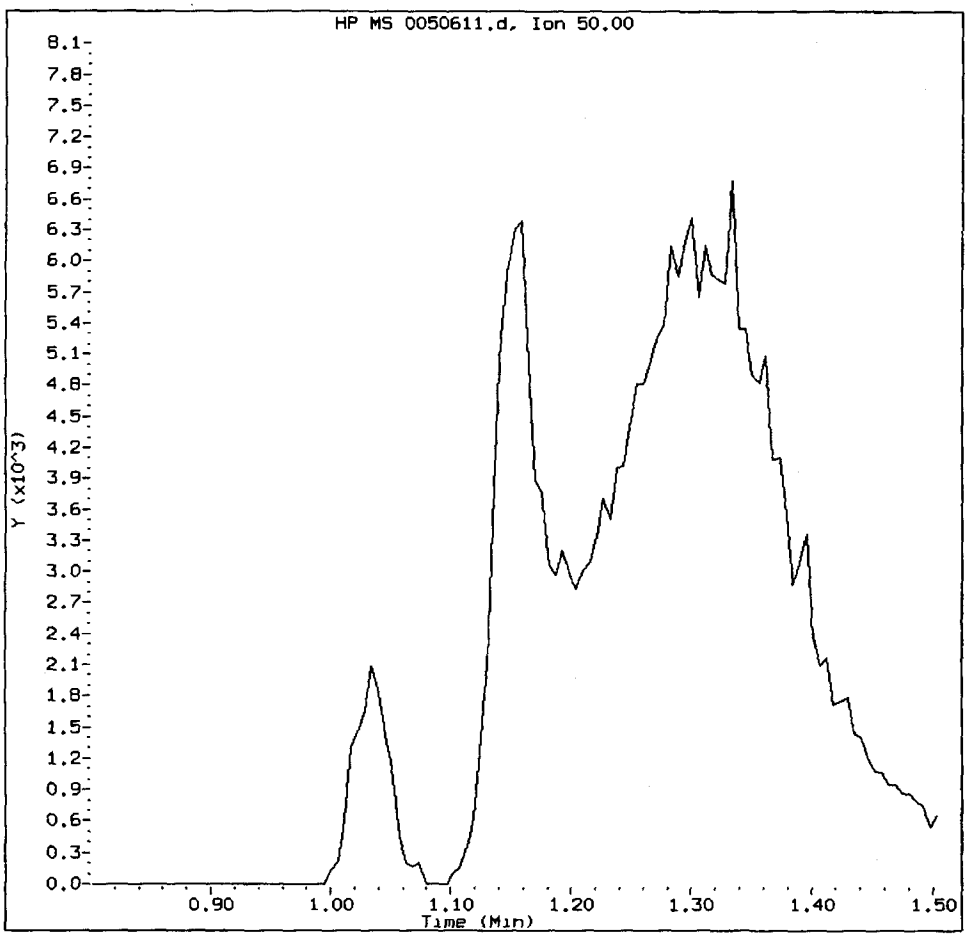
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/0050611.d

Chloromethane Amount: 5.19 Area: 84284



MANUAL INTEGRATION for Chloromethane

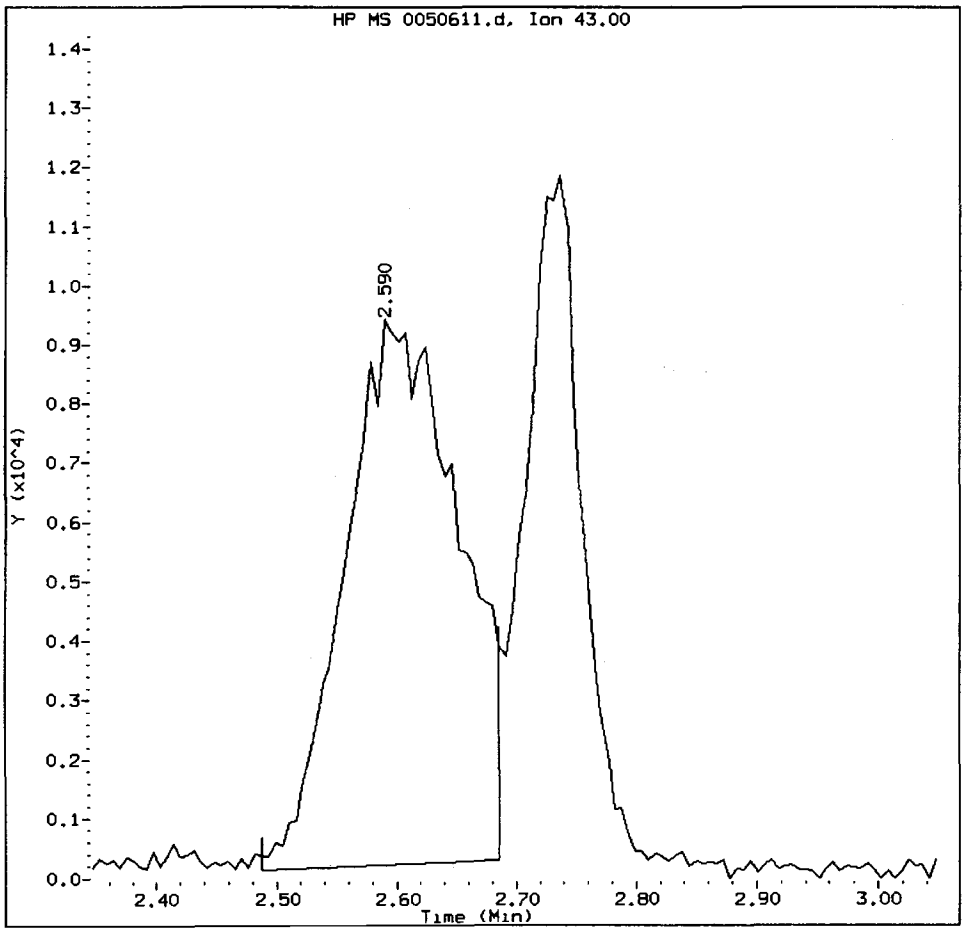
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0611, /chem1/nt5.i/11JUN13.b/0050611.d

Acetone Amount: 16.93 Area: 61461



MANUAL INTEGRATION for Acetone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/13/13

CO-ELUTION SUMMARY FOR FILE - 0050611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/0100611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD10
Inj Date : 11-JUN-2013 12:21
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 12:21 Cal File: 0100611.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.040	1.029	(0.223)	86282	10.0000	11.018
2 Chloromethane	50	1.153	1.153	(0.247)	145243	10.0000	9.313(TM)
3 Vinyl Chloride	62	1.204	1.198	(0.258)	153554	10.0000	10.178
4 Bromomethane	94	1.413	1.408	(0.303)	82021	10.0000	10.853
5 Chloroethane	64	1.498	1.492	(0.321)	94795	10.0000	10.553
6 Trichlorofluoromethane	101	1.594	1.589	(0.342)	155722	10.0000	9.934
7 1,1-Dichloroethene	96	1.951	1.951	(0.419)	98520	10.0000	9.309
8 Carbon Disulfide	76	1.956	1.951	(0.420)	329748	10.0000	9.588
9 112Trichloro122Trifluoroethane	101	1.996	1.990	(0.428)	88308	10.0000	9.479
10 Iodomethane	142	2.052	2.053	(0.440)	63217	10.0000	6.737
11 Bromoethane	108	2.149	2.149	(0.461)	65273	10.0000	10.036
12 Acrolein	56	2.256	2.267	(0.484)	118454	50.0000	53.052
13 Methylene Chloride	84	2.426	2.426	(0.521)	123231	10.0000	12.830
14 Acetone	43	2.578	2.697	(0.553)	226490	50.0000	76.330(T)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.562	(0.551)	115798	10.0000	11.416
	16 Methyl tert butyl ether	73	2.737	2.726	(0.587)	316719	10.0000	10.795
	17 1,1-Dichloroethane	63	3.184	3.173	(0.683)	233032	10.0000	10.588
	18 Acrylonitrile	53	3.286	3.308	(0.705)	46832	10.0000	9.867
	19 Vinyl Acetate	43	3.518	3.518	(0.755)	276573	10.0000	9.197
	20 Cis-1,2-Dichloroethene	96	3.727	3.721	(0.800)	120233	10.0000	9.362
	22 2,2-Dichloropropane	77	3.823	3.817	(0.820)	175715	10.0000	9.599
	23 Bromochloromethane	128	3.914	3.908	(0.840)	54911	10.0000	9.548
	24 Chloroform	83	4.015	4.010	(0.862)	192794	10.0000	9.357
	25 Carbon Tetrachloride	117	4.106	4.095	(0.803)	150653	10.0000	9.599
$	27 Dibromofluoromethane	111	4.179	4.180	(0.897)	635929	50.0000	50.194
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.896)	177755	10.0000	9.598
	28 1,1-Dichloropropene	75	4.293	4.287	(0.840)	170871	10.0000	9.290
	29 2-Butanone	72	4.366	4.406	(0.937)	62622	50.0000	42.003
	30 Benzene	78	4.519	4.519	(0.884)	507751	10.0000	9.824
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	441694	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.998)	594039	50.0000	50.183
	33 1,2-Dichloroethane	62	4.711	4.711	(0.921)	148221	10.0000	9.091
	34 Trichloroethene	95	5.056	5.056	(0.989)	118837	10.0000	9.418
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	1634225	50.0000	
	37 Dibromomethane	93	5.407	5.413	(1.058)	60791	10.0000	8.949
	38 1,2-Dichloropropane	63	5.503	5.503	(1.076)	131177	10.0000	8.953
	39 Bromodichloromethane	83	5.582	5.582	(1.092)	145557	10.0000	9.189
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.120	(1.196)	68746	10.0000	8.929
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.199)	193122	10.0000	9.376
$	42 d8-Toluene	98	6.289	6.284	(1.230)	2406864	50.0000	50.260
	43 Toluene	92	6.329	6.329	(1.238)	316837	10.0000	9.631
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	130402	10.0000	9.802
	45 4-Methyl-2-Pentanone	58	6.691	6.702	(1.309)	262514	50.0000	45.474
	46 Trans 1,3-Dichloropropene	75	6.691	6.697	(1.309)	169008	10.0000	9.229
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.334)	94008	10.0000	9.139
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	103418	10.0000	9.010
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	170313	10.0000	8.994
	50 1,2-Dibromoethane	107	7.138	7.138	(1.396)	87928	10.0000	8.728
	51 2-Hexanone	43	7.404	7.415	(0.975)	443800	50.0000	45.459
*	52 d5-Chlorobenzene	117	7.590	7.591	(1.000)	1921755	50.0000	
	53 Chlorobenzene	112	7.607	7.608	(1.002)	319243	10.0000	9.760
	54 Ethyl Benzene	91	7.653	7.659	(1.008)	586606	10.0000	10.457
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	106783	10.0000	9.166
	56 m,p-xylene	106	7.788	7.789	(1.026)	437454	20.0000	20.467
	57 o-Xylene	106	8.151	8.151	(1.074)	204800	10.0000	9.634
	58 Styrene	104	8.201	8.202	(1.080)	342431	10.0000	9.949
	59 Bromoform	173	8.190	8.196	(0.847)	71183	10.0000	8.925
	60 Isopropyl Benzene	105	8.439	8.439	(0.872)	543587	10.0000	10.639
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.142)	1045193	50.0000	49.847
	63 Bromobenzene	156	8.739	8.739	(0.903)	126493	10.0000	9.383
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	659629	10.0000	10.893

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	118956	10.0000	8.927
	66 2-Chloro Toluene	91	8.920	8.920	(0.922)	388006	10.0000	10.114
	67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	451327	10.0000	10.385
	68 1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	36163	10.0000	8.966
	69 Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	44555	10.0000	9.004
	70 4-Chloro Toluene	91	9.073	9.073	(0.938)	404855	10.0000	10.187
	71 T-Butyl Benzene	119	9.271	9.271	(0.958)	390776	10.0000	10.222
	72 1,2,4-Trimethylbenzene	105	9.338	9.339	(0.965)	442943	10.0000	10.365
	73 S-Butyl Benzene	105	9.435	9.435	(0.975)	600199	10.0000	10.793
	74 4-Isopropyl Toluene	119	9.582	9.582	(0.991)	489177	10.0000	10.721
	75 1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	247147	10.0000	9.888
*	76 d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1018367	50.0000	
	77 1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	251176	10.0000	9.750
	78 N-Butyl Benzene	91	9.972	9.967	(1.031)	473611	10.0000	10.785
$	79 d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1054197	50.0000	50.814
	80 1,2-Dichlorobenzene	146	10.063	10.063	(1.040)	231902	10.0000	9.540
	81 1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.118)	23069	10.0000	8.941
	82 Hexachloro 1,3-Butadiene	225	11.505	11.488	(1.189)	107118	10.0000	9.930
	83 1,2,4-Trichlorobenzene	180	11.488	11.477	(1.188)	169201	10.0000	9.653
	84 Naphthalene	128	11.805	11.794	(1.220)	347444	10.0000	9.031
	85 1,2,3-Trichlorobenzene	180	11.986	11.975	(1.239)	157344	10.0000	9.287

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0100611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: VSTD10
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	441694	-3.90
35 1,4-Difluorobenze	1692431	846216	3384862	1634225	-3.44
52 d5-Chlorobenzene	1987215	993608	3974430	1921755	-3.29
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1018367	-5.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/0100611.d

Date : 11-JUN-2013 12:21

Client ID: VSTD10

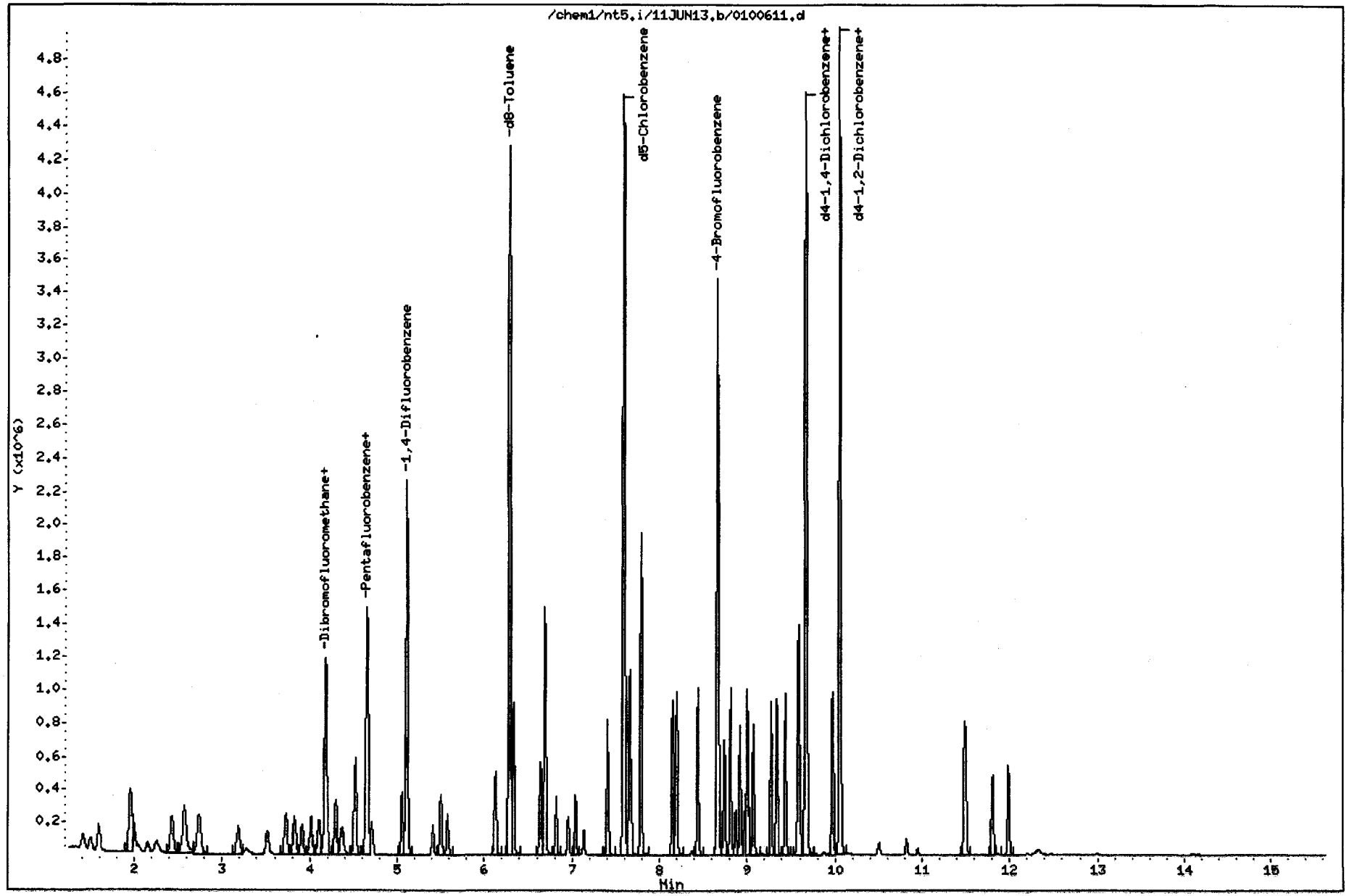
Sample Info: IC0611,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

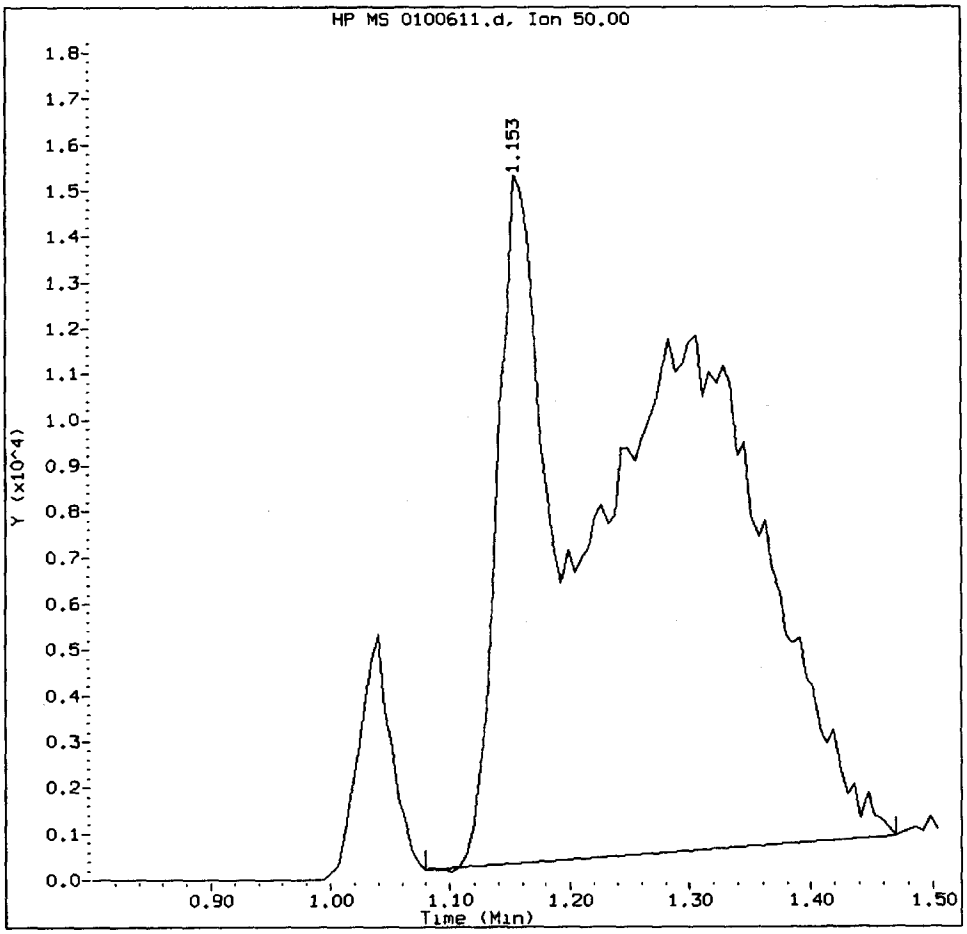
Operator: PB

Column diameter: 0.18



IC0611, /chem1/nt5.i/11JUN13.b/0100611.d

Chloromethane Amount: 9.31 Area: 145243



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - 0100611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/0500611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD50
Inj Date : 11-JUN-2013 10:09
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 10:09 Cal File: 0500611.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.029	1.029	(0.221)	353115	50.0000	43.332
2 Chloromethane	50	1.153	1.153	(0.247)	764654	50.0000	47.118(M)
3 Vinyl Chloride	62	1.198	1.198	(0.257)	760907	50.0000	48.465
4 Bromomethane	94	1.408	1.408	(0.302)	366307	50.0000	46.576
5 Chloroethane	64	1.492	1.492	(0.320)	446413	50.0000	47.759
6 Trichlorofluoromethane	101	1.589	1.589	(0.341)	728990	50.0000	44.690
7 1,1-Dichloroethene	96	1.951	1.951	(0.419)	514867	50.0000	46.750
8 Carbon Disulfide	76	1.951	1.951	(0.419)	1703150	50.0000	47.588
9 112Trichloro122Trifluoroethane	101	1.990	1.990	(0.427)	449354	50.0000	46.351
10 Iodomethane	142	2.053	2.053	(0.440)	397931	50.0000	40.750
11 Bromoethane	108	2.149	2.149	(0.461)	340152	50.0000	50.260
12 Acrolein	56	2.267	2.267	(0.487)	636947	250.000	274.14
13 Methylene Chloride	84	2.426	2.426	(0.521)	512608	50.0000	51.286
14 Acetone	43	2.697	2.697	(0.579)	559829	250.000	231.74(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.562	2.562	(0.550)	481795	50.0000	45.646
	16 Methyl tert butyl ether	73	2.726	2.726	(0.585)	1506342	50.0000	49.341
	17 1,1-Dichloroethane	63	3.173	3.173	(0.681)	993409	50.0000	43.374
	18 Acrylonitrile	53	3.308	3.308	(0.710)	239476	50.0000	48.484
	19 Vinyl Acetate	43	3.518	3.518	(0.755)	1551168	50.0000	49.571
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.798)	620020	50.0000	46.395
	22 2,2-Dichloropropane	77	3.817	3.817	(0.819)	858721	50.0000	45.079
	23 Bromochloromethane	128	3.908	3.908	(0.839)	272310	50.0000	45.503
	24 Chloroform	83	4.010	4.010	(0.860)	1009113	50.0000	47.064
	25 Carbon Tetrachloride	117	4.095	4.095	(0.802)	741213	50.0000	45.605
$	27 Dibromofluoromethane	111	4.180	4.180	(0.897)	662250	50.0000	50.232
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.894)	885575	50.0000	45.949
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	867958	50.0000	45.565
	29 2-Butanone	72	4.406	4.406	(0.945)	406574	250.000	262.06
	30 Benzene	78	4.519	4.519	(0.885)	2577823	50.0000	48.161
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	459631	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.998)	620434	50.0000	50.368
	33 1,2-Dichloroethane	62	4.711	4.711	(0.922)	809721	50.0000	47.955
	34 Trichloroethene	95	5.056	5.056	(0.990)	598982	50.0000	45.838
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	1692431	50.0000	
	37 Dibromomethane	93	5.413	5.413	(1.060)	344470	50.0000	48.964
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	729210	50.0000	48.060
	39 Bromodichloromethane	83	5.582	5.582	(1.093)	792459	50.0000	48.307
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.198)	425279	50.0000	53.336
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.200)	1045254	50.0000	49.000
$	42 d8-Toluene	98	6.284	6.284	(1.230)	2484368	50.0000	50.095
	43 Toluene	92	6.329	6.329	(1.239)	1592845	50.0000	46.754
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	619783	50.0000	45.055
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.312)	1595980	250.000	266.96
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.311)	945718	50.0000	49.865
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.336)	529384	50.0000	49.692
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	586870	50.0000	49.445
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	977791	50.0000	49.932
	50 1,2-Dibromoethane	107	7.138	7.138	(1.398)	515660	50.0000	49.425
	51 2-Hexanone	43	7.415	7.415	(0.977)	2667348	250.000	264.22
*	52 d5-Chlorobenzene	117	7.591	7.591	(1.000)	1987215	50.0000	
	53 Chlorobenzene	112	7.608	7.608	(1.002)	1607382	50.0000	47.523
	54 Ethyl Benzene	91	7.659	7.659	(1.009)	2852744	50.0000	49.179
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	570228	50.0000	47.336
	56 m,p-xylene	106	7.789	7.789	(1.026)	2148101	100.000	97.192
	57 o-Xylene	106	8.151	8.151	(1.074)	1062604	50.0000	48.339
	58 Styrene	104	8.202	8.202	(1.080)	1806538	50.0000	50.759
	59 Bromoform	173	8.196	8.196	(0.848)	421583	50.0000	50.053
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	2656060	50.0000	49.229
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1083761	50.0000	49.984
	63 Bromobenzene	156	8.739	8.739	(0.904)	667951	50.0000	46.921
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	3093314	50.0000	48.372

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	707186	50.0000	50.258
66	2-Chloro Toluene	91	8.920	8.920	(0.923)	1931882	50.0000	47.686
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	2223273	50.0000	48.443
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.928)	212455	50.0000	49.879
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.934)	269415	50.0000	51.558
70	4-Chloro Toluene	91	9.073	9.073	(0.939)	1991916	50.0000	47.465
71	T-Butyl Benzene	119	9.271	9.271	(0.959)	1949891	50.0000	48.301
72	1,2,4-Trimethylbenzene	105	9.339	9.339	(0.966)	2202640	50.0000	48.807
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	2837658	50.0000	48.323
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	2335926	50.0000	48.480
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	1220647	50.0000	46.248
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	1075398	50.0000	
77	1,4-Dichlorobenzene	146	9.684	9.684	(1.002)	1240225	50.0000	45.591
78	N-Butyl Benzene	91	9.967	9.967	(1.031)	2204096	50.0000	47.529
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1085602	50.0000	49.553
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.041)	1183518	50.0000	46.104
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	135046	50.0000	49.565
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	500871	50.0000	43.968
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	850233	50.0000	45.932
84	Naphthalene	128	11.794	11.794	(1.220)	2092430	50.0000	51.502
85	1,2,3-Trichlorobenzene	180	11.975	11.975	(1.239)	825099	50.0000	46.115

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0500611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	459631	0.00
35 1,4-Difluorobenze	1692431	846216	3384862	1692431	0.00
52 d5-Chlorobenzene	1987215	993608	3974430	1987215	0.00
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1075398	0.00

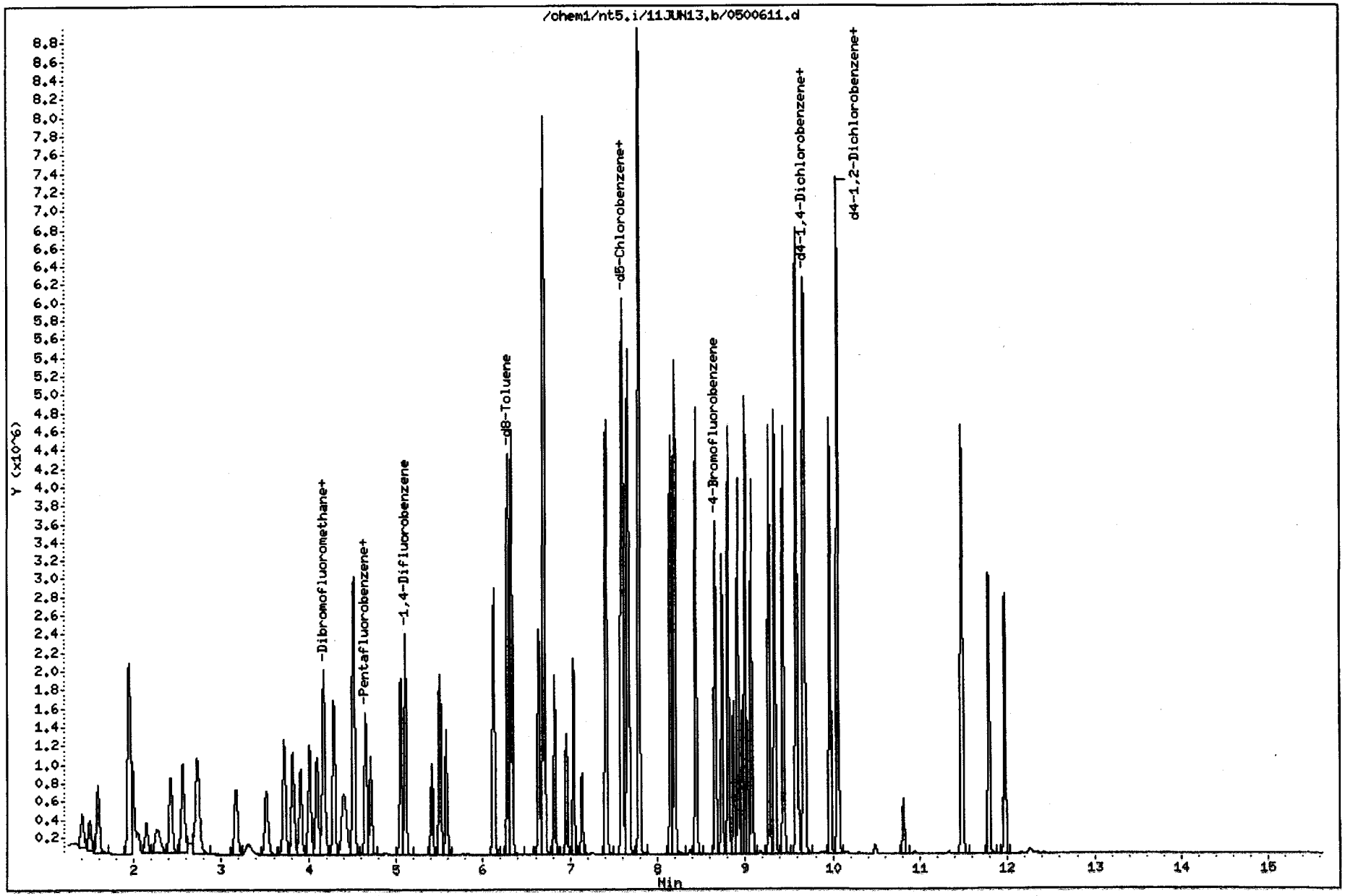
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/0500611.d
Date : 11-JUN-2013 10:09
Client ID: VSTD50
Sample Info: IC0611,5,5,0

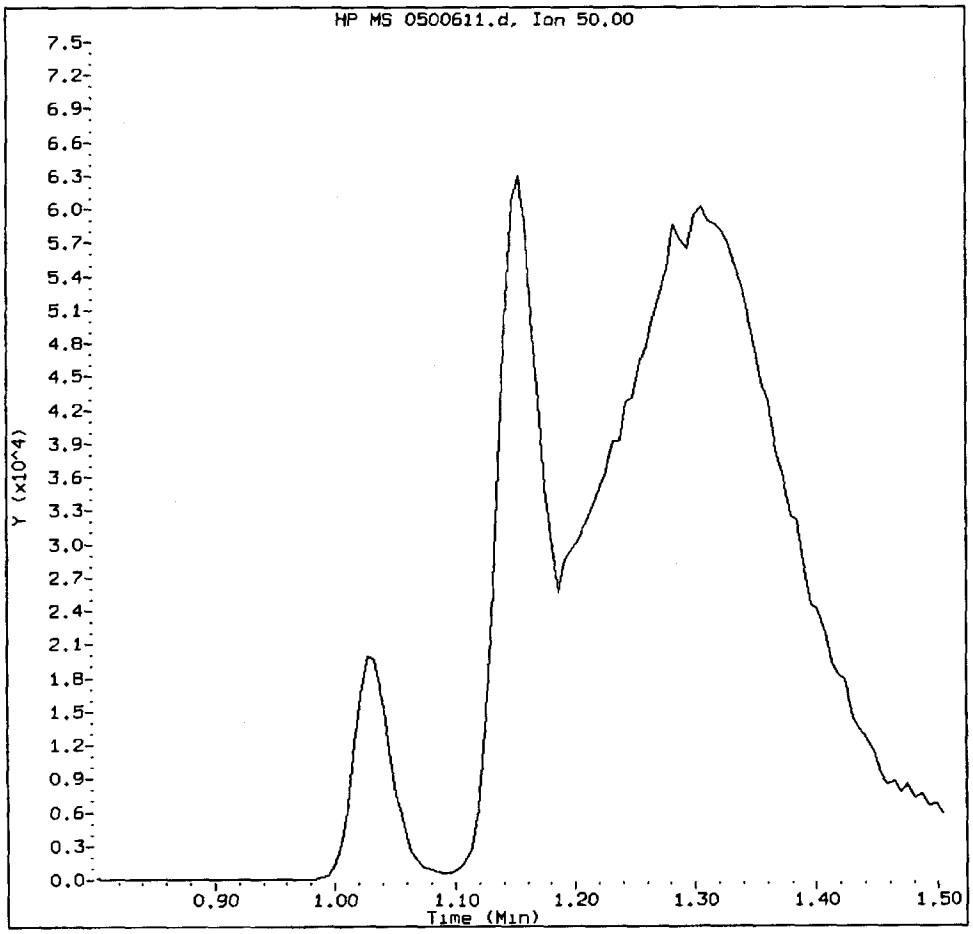
Instrument: nt5.i
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/0500611.d

Chloromethane Amount: 47.12 Area: 764654



MANUAL INTEGRATION for Chloromethane

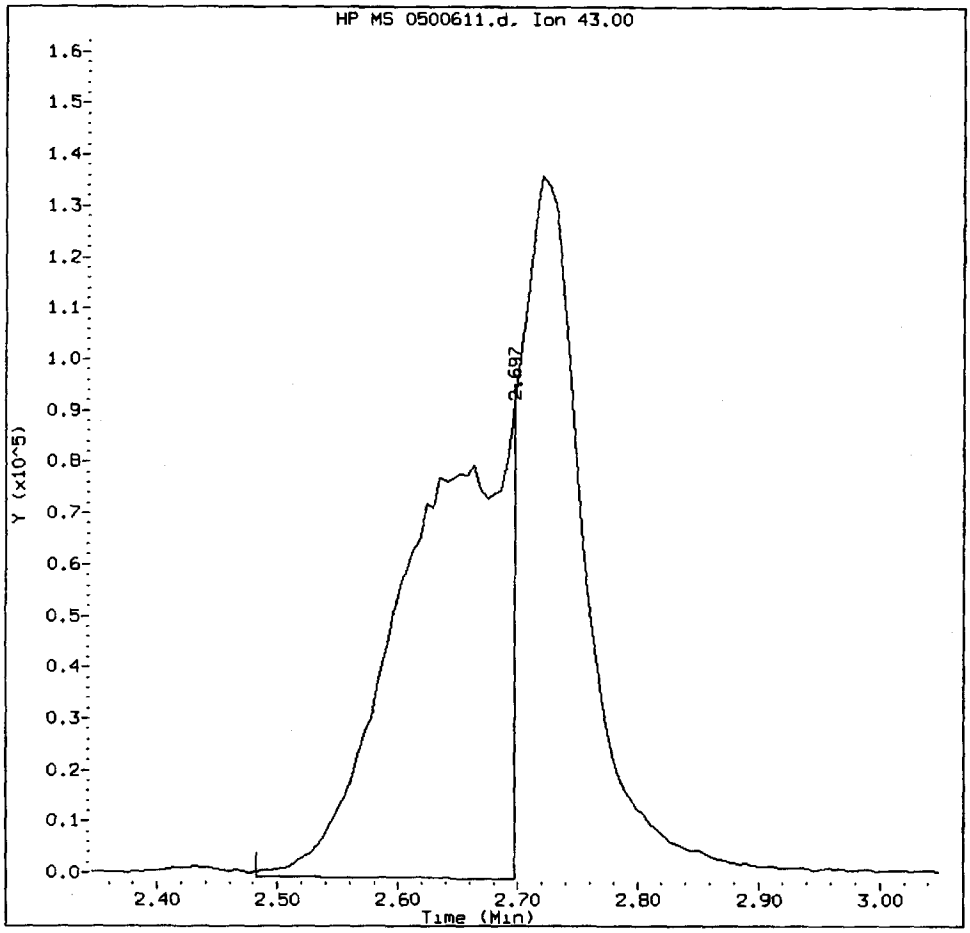
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14

IC0611, /chem1/nt5.i/11JUN13.b/0500611.d

Acetone Amount: 231.74 Area: 559829



MANUAL INTEGRATION for Acetone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - 0500611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/1000611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD100
Inj Date : 11-JUN-2013 12:45
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 12:45 Cal File: 1000611.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

6/(VI)

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.051	1.029	(0.225)	858354	100.000	105.87
2 Chloromethane	50	1.357	1.153	(0.291)	1641082	100.000	101.64(TM)
3 Vinyl Chloride	62	1.221	1.198	(0.262)	1668516	100.000	106.81
4 Bromomethane	94	1.430	1.408	(0.306)	728711	100.000	93.127
5 Chloroethane	64	1.515	1.492	(0.325)	968696	100.000	104.16
6 Trichlorofluoromethane	101	1.606	1.589	(0.344)	1742529	100.000	107.37
7 1,1-Dichloroethene	96	1.968	1.951	(0.422)	1201323	100.000	109.63
8 Carbon Disulfide	76	1.973	1.951	(0.423)	3900192	100.000	109.53
9 112Trichloro122Trifluoroethane	101	2.013	1.990	(0.431)	1089474	100.000	112.95
10 Iodomethane	142	2.069	2.053	(0.444)	1129814	100.000	116.29
11 Bromoethane	108	2.166	2.149	(0.464)	738208	100.000	109.63
12 Acrolein	56	2.290	2.267	(0.491)	1238440	500.000	535.72
13 Methylene Chloride	84	2.443	2.426	(0.524)	983128	100.000	98.861
14 Acetone	43	2.663	2.697	(0.571)	955765	500.000	504.65(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.579	2.562	(0.553)	1025747	100.000	97.674
	16 Methyl tert butyl ether	73	2.748	2.726	(0.589)	2834755	100.000	93.325
	17 1,1-Dichloroethane	63	3.184	3.173	(0.682)	1585352	100.000	69.571
	18 Acrylonitrile	53	3.320	3.308	(0.711)	315089	100.000	64.116
	19 Vinyl Acetate	43	3.529	3.518	(0.756)	3247264	100.000	104.30
	20 Cis-1,2-Dichloroethene	96	3.733	3.721	(0.800)	1406997	100.000	105.82
	22 2,2-Dichloropropane	77	3.829	3.817	(0.821)	2024312	100.000	106.81
	23 Bromochloromethane	128	3.919	3.908	(0.840)	598201	100.000	100.47
	24 Chloroform	83	4.021	4.010	(0.862)	2125955	100.000	99.655
	25 Carbon Tetrachloride	117	4.100	4.095	(0.802)	1762054	100.000	108.23
$	27 Dibromofluoromethane	111	4.191	4.180	(0.898)	666159	50.0000	50.785
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.895)	2082018	100.000	108.58
	28 1,1-Dichloropropene	75	4.293	4.287	(0.840)	2031996	100.000	106.49
	29 2-Butanone	72	4.423	4.406	(0.948)	839604	500.000	543.93
	30 Benzene	78	4.524	4.519	(0.885)	5601653	100.000	104.47
*	31 Pentafluorobenzene	168	4.666	4.660	(1.000)	457308	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.999)	626668	50.0000	51.132
	33 1,2-Dichloroethane	62	4.722	4.711	(0.924)	1749356	100.000	103.43
	34 Trichloroethene	95	5.062	5.056	(0.990)	1406371	100.000	107.44
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	1695367	50.0000	
	37 Dibromomethane	93	5.418	5.413	(1.060)	747716	100.000	106.10
	38 1,2-Dichloropropane	63	5.514	5.503	(1.079)	1613193	100.000	106.14
	39 Bromodichloromethane	83	5.588	5.582	(1.093)	1740227	100.000	105.90
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.120	(1.198)	913048	100.000	114.31
	41 Cis 1,3-dichloropropene	75	6.137	6.131	(1.200)	2290367	100.000	107.18
$	42 d8-Toluene	98	6.289	6.284	(1.230)	2483045	50.0000	49.981
	43 Toluene	92	6.335	6.329	(1.239)	3547029	100.000	103.93
	44 Tetrachloroethene	166	6.646	6.640	(0.875)	1485267	100.000	108.36
	45 4-Methyl-2-Pentanone	58	6.708	6.702	(1.312)	3198403	500.000	534.07
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.310)	2034490	100.000	107.09
	47 1,1,2-Trichloroethane	97	6.832	6.821	(1.336)	1135703	100.000	106.42
	48 Chlorodibromomethane	129	6.963	6.957	(0.917)	1265081	100.000	106.97
	49 1,3-Dichloropropane	76	7.047	7.042	(0.928)	2071413	100.000	106.17
	50 1,2-Dibromoethane	107	7.144	7.138	(1.397)	1105711	100.000	105.80
	51 2-Hexanone	43	7.421	7.415	(0.977)	5167635	500.000	513.76
*	52 d5-Chlorobenzene	117	7.596	7.591	(1.000)	1980001	50.0000	
	53 Chlorobenzene	112	7.613	7.608	(1.002)	3496929	100.000	103.77
	54 Ethyl Benzene	91	7.664	7.659	(1.009)	5926895	100.000	102.55
	55 1,1,1,2-Tetrachloroethane	131	7.681	7.675	(1.011)	1271886	100.000	105.97
	56 m,p-xylene	106	7.800	7.789	(1.027)	4595366	200.000	208.68
	57 o-Xylene	106	8.156	8.151	(1.074)	2393545	100.000	109.28
	58 Styrene	104	8.207	8.202	(1.080)	3853532	100.000	108.67
	59 Bromoform	173	8.201	8.196	(0.848)	882215	100.000	107.32
	60 Isopropyl Benzene	105	8.445	8.439	(0.873)	5588691	100.000	106.13
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.141)	1083831	50.0000	50.169
	63 Bromobenzene	156	8.745	8.739	(0.904)	1468069	100.000	105.67
	64 N-Propyl Benzene	91	8.812	8.807	(0.911)	6402093	100.000	102.58

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.875	8.869	(0.918)	1467600	100.000	106.87
	66 2-Chloro Toluene	91	8.926	8.920	(0.923)	4213559	100.000	106.57
	67 1,3,5-Trimethyl Benzene	105	9.005	8.999	(0.931)	4825433	100.000	107.73
	68 1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	441055	100.000	106.10
	69 Trans-1,4-Dichloro 2-Butene	53	9.033	9.027	(0.934)	543778	100.000	106.63
	70 4-Chloro Toluene	91	9.078	9.073	(0.939)	4352826	100.000	106.28
	71 T-Butyl Benzene	119	9.276	9.271	(0.959)	4319272	100.000	109.63
	72 1,2,4-Trimethylbenzene	105	9.344	9.339	(0.966)	4725539	100.000	107.29
	73 S-Butyl Benzene	105	9.440	9.435	(0.976)	5976793	100.000	104.28
	74 4-Isopropyl Toluene	119	9.587	9.582	(0.991)	5032632	100.000	107.02
	75 1,3-Dichlorobenzene	146	9.604	9.593	(0.993)	2685794	100.000	104.27
*	76 d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1049557	50.0000	
	77 1,4-Dichlorobenzene	146	9.689	9.684	(1.002)	2740251	100.000	103.21
	78 N-Butyl Benzene	91	9.972	9.967	(1.031)	4910044	100.000	108.49
$	79 d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1063567	50.0000	49.742
	80 1,2-Dichlorobenzene	146	10.068	10.063	(1.041)	2544475	100.000	101.56
	81 1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.118)	275463	100.000	103.59
	82 Hexachloro 1,3-Butadiene	225	11.494	11.488	(1.188)	1174471	100.000	105.64
	83 1,2,4-Trichlorobenzene	180	11.482	11.477	(1.187)	1934013	100.000	107.05
	84 Naphthalene	128	11.794	11.794	(1.219)	4167045	100.000	105.09
	85 1,2,3-Trichlorobenzene	180	11.980	11.975	(1.239)	1782554	100.000	102.08

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1000611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: VSTD100
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	457308	-0.51
35 1,4-Difluorobenze	1692431	846216	3384862	1695367	0.17
52 d5-Chlorobenzene	1987215	993608	3974430	1980001	-0.36
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1049557	-2.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/1000611.d

Date : 11-JUN-2013 12:45

Client ID: VSTD100

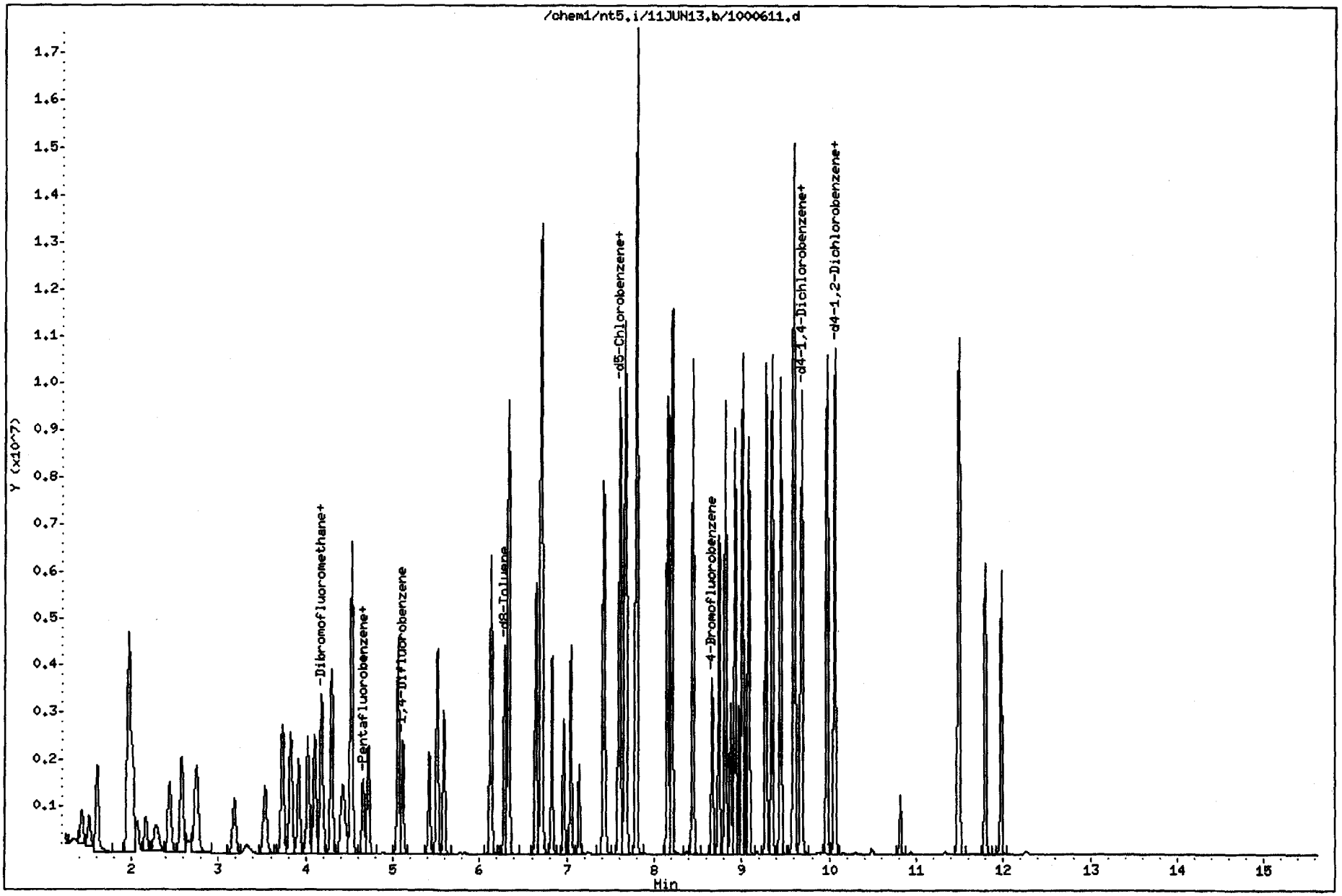
Sample Info: IC0611,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

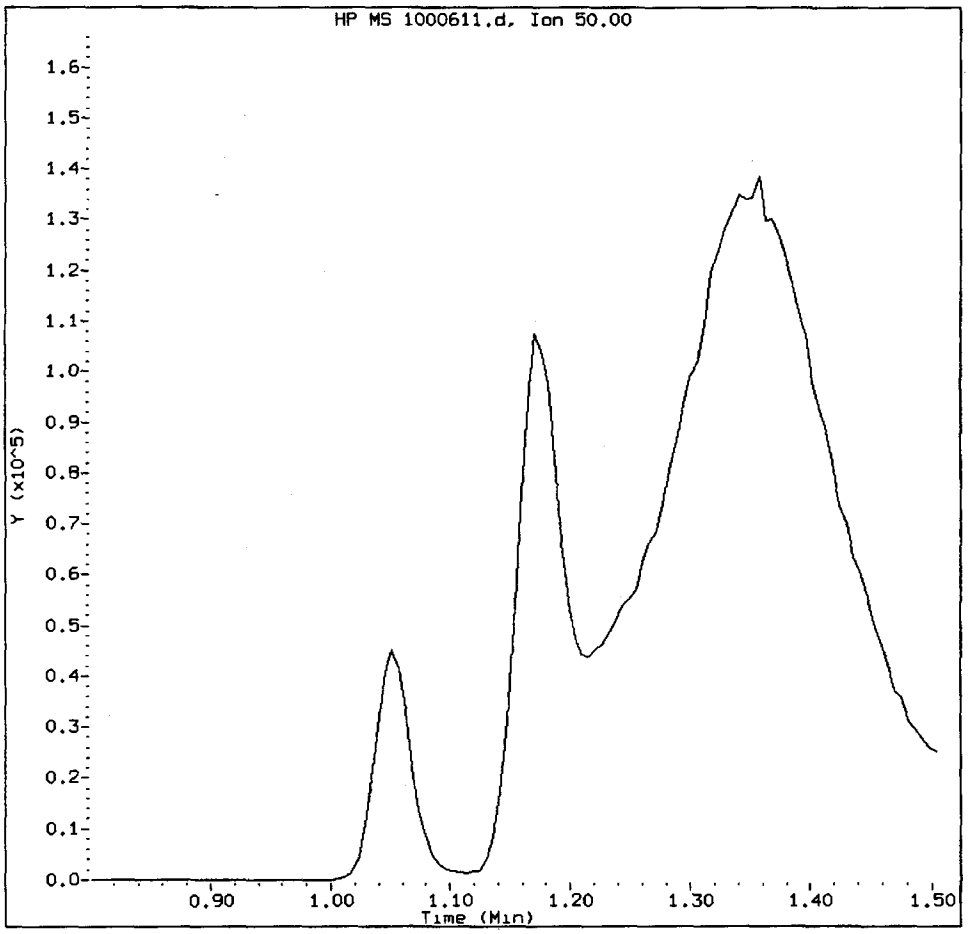
Operator: PB

Column diameter: 0.18



IC0611, /chem1/nt5.i/11JUN13.b/1000611.d

Chloromethane Amount: 101.64 Area: 1641082



MANUAL INTEGRATION for Chloromethane

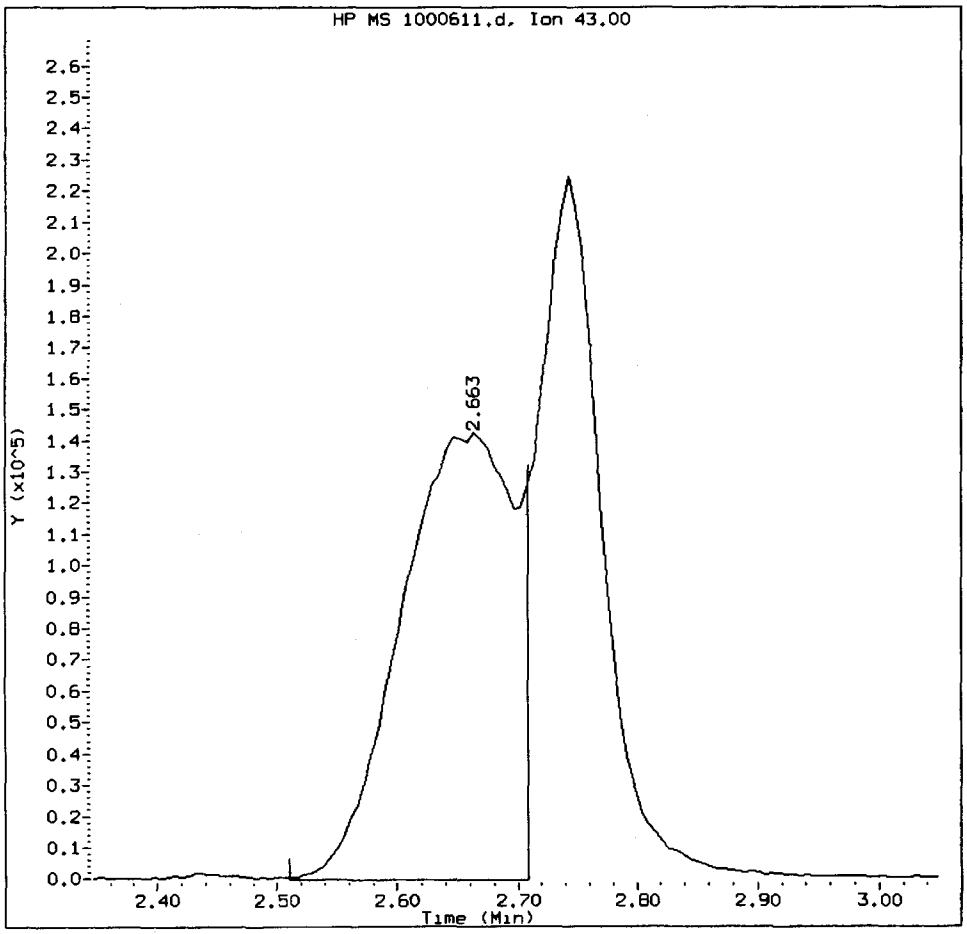
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

IC0611, /chem1/nt5.i/11JUN13.b/1000611.d

Acetone Amount: 504.65 Area: 955765



MANUAL INTEGRATION for Acetone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14

CO-ELUTION SUMMARY FOR FILE - 1000611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/1500611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD150
Inj Date : 11-JUN-2013 09:21
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 09:21 Cal File: 1500611.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.051	1.029	(0.226)	1177207	150.000	133.77
2 Chloromethane	50	1.345	1.153	(0.289)	2524840	150.000	144.07(TM)
3 Vinyl Chloride	62	1.227	1.198	(0.263)	2539067	150.000	149.76
4 Bromomethane	94	1.430	1.408	(0.307)	1093390	150.000	128.74
5 Chloroethane	64	1.515	1.492	(0.325)	1344249	150.000	133.17
6 Trichlorofluoromethane	101	1.611	1.589	(0.346)	2580153	150.000	146.47
7 1,1-Dichloroethene	96	1.968	1.951	(0.422)	1755844	150.000	147.64
8 Carbon Disulfide	76	1.968	1.951	(0.422)	5574219	150.000	144.23
9 112Trichloro122Trifluoroethane	101	2.013	1.990	(0.432)	1549942	150.000	148.05
10 Iodomethane	142	2.069	2.053	(0.444)	1522399	150.000	144.37
11 Bromoethane	108	2.166	2.149	(0.465)	1016801	150.000	139.13
12 Acrolein	56	2.279	2.267	(0.489)	1628498	750.000	649.05
13 Methylene Chloride	84	2.437	2.426	(0.523)	1349683	150.000	125.05
14 Acetone	43	2.635	2.697	(0.565)	1361385	750.000	767.41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.573	2.562	(0.552)	1441035	150.000	126.43
	16 Methyl tert butyl ether	73	2.748	2.726	(0.590)	3843816	150.000	116.59
	17 1,1-Dichloroethane	63	3.173	3.173	(0.681)	1906938	150.000	77.102
	18 Acrylonitrile	53	3.320	3.308	(0.712)	303574	150.000	56.915
	19 Vinyl Acetate	43	3.529	3.518	(0.757)	4965553	150.000	146.95
	20 Cis-1,2-Dichloroethene	96	3.727	3.721	(0.800)	2163689	150.000	149.93
	22 2,2-Dichloropropane	77	3.817	3.817	(0.819)	3062350	150.000	148.87
	23 Bromochloromethane	128	3.914	3.908	(0.840)	1031917	150.000	159.68
	24 Chloroform	83	4.021	4.010	(0.863)	3472449	150.000	149.97
	25 Carbon Tetrachloride	117	4.095	4.095	(0.801)	2671548	150.000	150.91
$	27 Dibromofluoromethane	111	4.191	4.180	(0.899)	708388	50.0000	49.757
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.894)	3160053	150.000	151.83
	28 1,1-Dichloropropene	75	4.287	4.287	(0.838)	3067277	150.000	147.84
	29 2-Butanone	72	4.428	4.406	(0.950)	1323574	750.000	790.02
	30 Benzene	78	4.519	4.519	(0.884)	8015334	150.000	137.49
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	496348	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.649	(0.999)	652070	50.0000	49.020
	33 1,2-Dichloroethane	62	4.723	4.711	(0.924)	2661667	150.000	144.73
	34 Trichloroethene	95	5.056	5.056	(0.989)	2140477	150.000	150.39
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	1843399	50.0000	
	37 Dibromomethane	93	5.418	5.413	(1.060)	1157284	150.000	151.03
	38 1,2-Dichloropropane	63	5.514	5.503	(1.079)	2475132	150.000	149.77
	39 Bromodichloromethane	83	5.588	5.582	(1.093)	2679823	150.000	149.98
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.120	(1.198)	1428189	150.000	164.45
	41 Cis 1,3-dichloropropene	75	6.137	6.131	(1.200)	3461526	150.000	148.98
$	42 d8-Toluene	98	6.289	6.284	(1.230)	2666842	50.0000	49.370
	43 Toluene	92	6.335	6.329	(1.239)	5132074	150.000	138.30
	44 Tetrachloroethene	166	6.646	6.640	(0.875)	2206818	150.000	150.01
	45 4-Methyl-2-Pentanone	58	6.719	6.702	(1.314)	4878059	750.000	749.13
	46 Trans 1,3-Dichloropropene	75	6.702	6.697	(1.311)	3097314	150.000	149.94
	47 1,1,2-Trichloroethane	97	6.833	6.821	(1.336)	1753638	150.000	151.13
	48 Chlorodibromomethane	129	6.968	6.957	(0.917)	1953066	150.000	153.87
	49 1,3-Dichloropropane	76	7.053	7.042	(0.928)	3159698	150.000	150.88
	50 1,2-Dibromoethane	107	7.144	7.138	(1.397)	1712671	150.000	150.71
	51 2-Hexanone	43	7.427	7.415	(0.978)	8320314	750.000	770.70
*	52 d5-Chlorobenzene	117	7.596	7.591	(1.000)	2125124	50.0000	
	53 Chlorobenzene	112	7.613	7.608	(1.002)	5042901	150.000	139.42
	54 Ethyl Benzene	91	7.670	7.659	(1.010)	7984332	150.000	128.71
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.675	(1.012)	1919032	150.000	148.97
	56 m,p-xylene	106	7.800	7.789	(1.027)	6347918	300.000	268.58
	57 o-Xylene	106	8.162	8.151	(1.074)	3556782	150.000	151.30
	58 Styrene	104	8.207	8.202	(1.080)	5465289	150.000	143.60
	59 Bromoform	173	8.201	8.196	(0.847)	1364047	150.000	153.10
	60 Isopropyl Benzene	105	8.445	8.439	(0.873)	7520976	150.000	131.78
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.141)	1168014	50.0000	50.374
	63 Bromobenzene	156	8.745	8.739	(0.904)	2204193	150.000	146.38
	64 N-Propyl Benzene	91	8.818	8.807	(0.911)	8378925	150.000	123.87

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.886	8.869	(0.918)	2323997	150.000	156.14
66	2-Chloro Toluene	91	8.926	8.920	(0.922)	5913413	150.000	137.99
67	1,3,5-Trimethyl Benzene	105	9.010	8.999	(0.931)	6613088	150.000	136.22
68	1,2,3-Trichloropropane	110	8.976	8.971	(0.928)	689267	150.000	152.98
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.027	(0.934)	860831	150.000	155.74
70	4-Chloro Toluene	91	9.078	9.073	(0.938)	6173868	150.000	139.08
71	T-Butyl Benzene	119	9.282	9.271	(0.959)	6027688	150.000	141.16
72	1,2,4-Trimethylbenzene	105	9.350	9.339	(0.966)	6477811	150.000	135.70
73	S-Butyl Benzene	105	9.446	9.435	(0.976)	7923737	150.000	127.56
74	4-Isopropyl Toluene	119	9.593	9.582	(0.991)	6762407	150.000	132.68
75	1,3-Dichlorobenzene	146	9.604	9.593	(0.992)	3827854	150.000	137.11
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.667	(1.000)	1137532	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.684	(1.002)	3978024	150.000	138.25
78	N-Butyl Benzene	91	9.978	9.967	(1.031)	6587416	150.000	134.29
$ 79	d4-1,2-Dichlorobenzene	152	10.063	10.051	(1.040)	1133332	50.0000	48.906
80	1,2-Dichlorobenzene	146	10.068	10.063	(1.040)	3772192	150.000	138.92
81	1,2-Dibromo 3-Chloropropane	75	10.821	10.809	(1.118)	449965	150.000	156.13
82	Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.188)	1728512	150.000	143.45
83	1,2,4-Trichlorobenzene	180	11.488	11.477	(1.187)	2921940	150.000	149.23
84	Naphthalene	128	11.799	11.794	(1.219)	6255334	150.000	145.56
85	1,2,3-Trichlorobenzene	180	11.986	11.975	(1.238)	2797505	150.000	147.81

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1500611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: VSTD150
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	496348	7.99
35 1,4-Difluorobenze	1692431	846216	3384862	1843399	8.92
52 d5-Chlorobenzene	1987215	993608	3974430	2125124	6.94
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1137532	5.78

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.68	0.12

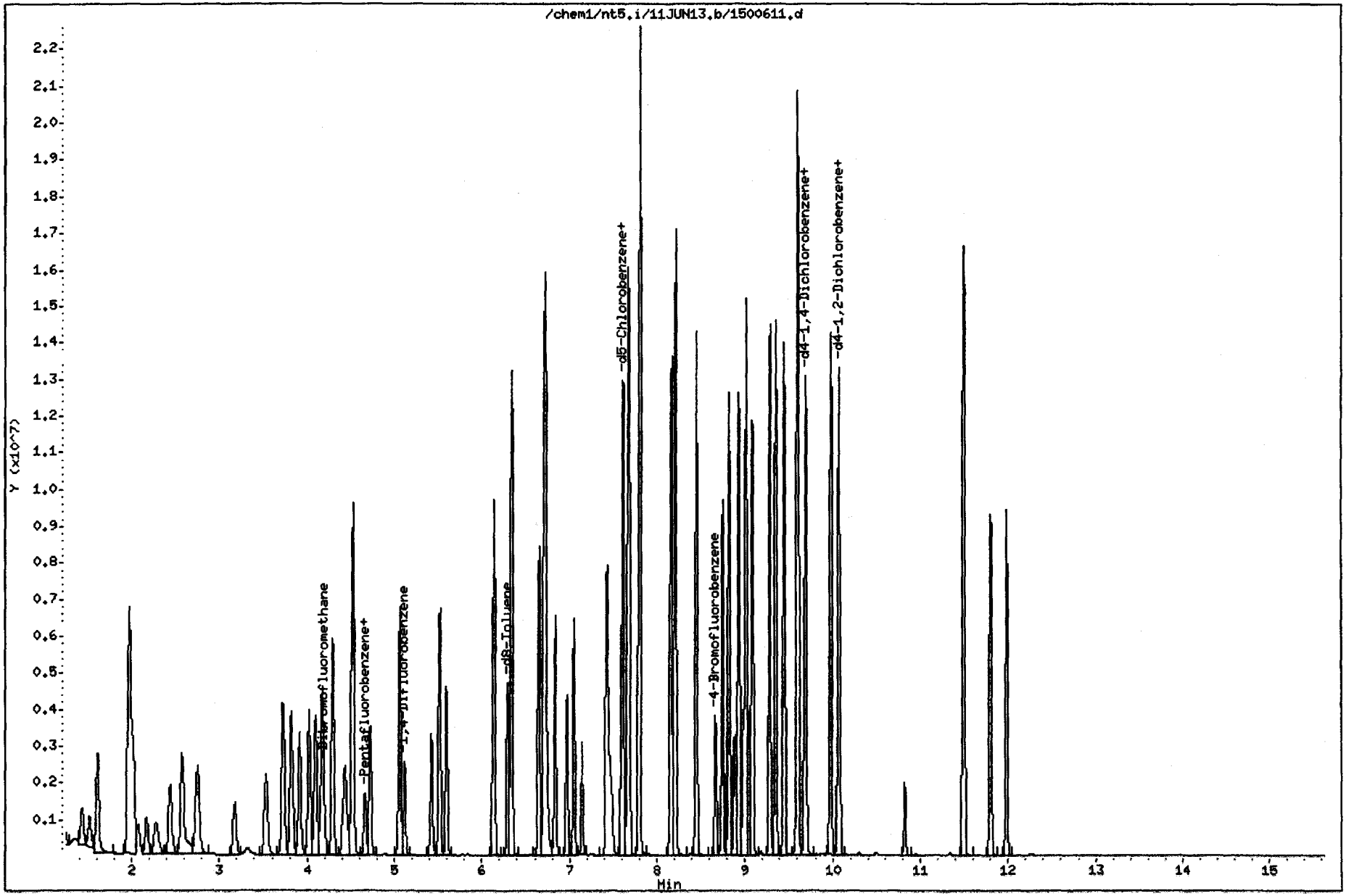
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/1500611.d
Date : 11-JUN-2013 09:21
Client ID: VSTD150
Sample Info: IC0611,5,5,0

Instrument: nt5.i

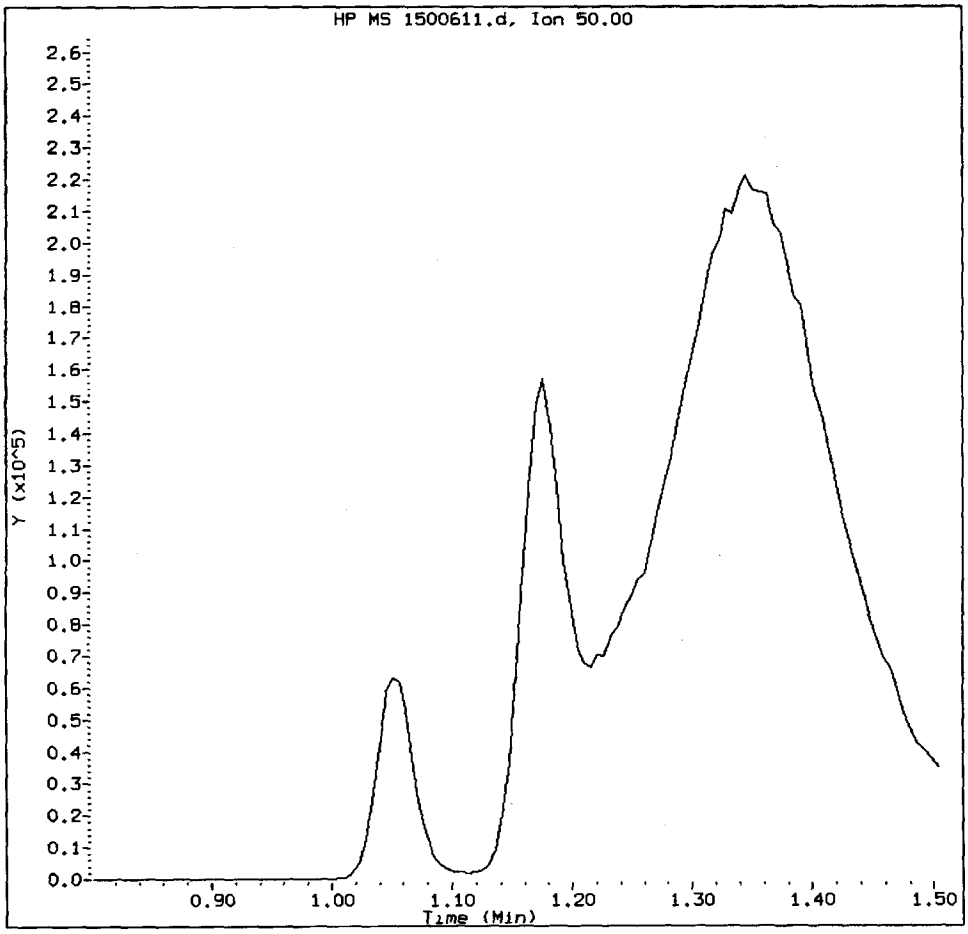
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/1500611.d

Chloromethane Amount: 144.07 Area: 2524840



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

CO-ELUTION SUMMARY FOR FILE - 1500611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/2000611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD200
Inj Date : 11-JUN-2013 08:57
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

ng/ml
1

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.029	1.029	(0.221)	1832491	200.000	203.81
2 Chloromethane	50	1.317	1.153	(0.283)	3502553	200.000	195.61(TM)
3 Vinyl Chloride	62	1.198	1.198	(0.258)	3202075	200.000	184.85
4 Bromomethane	94	1.402	1.408	(0.302)	1405108	200.000	161.92
5 Chloroethane	64	1.492	1.492	(0.321)	1707694	200.000	165.58
6 Trichlorofluoromethane	101	1.577	1.589	(0.339)	3572620	200.000	198.50
7 1,1-Dichloroethene	96	1.939	1.951	(0.417)	2395149	200.000	197.11
8 Carbon Disulfide	76	1.939	1.951	(0.417)	7318840	200.000	185.34
9 112Trichloro122Trifluoroethane	101	1.985	1.990	(0.427)	2162442	200.000	202.16
10 Iodomethane	142	2.041	2.053	(0.439)	2117934	200.000	196.57
11 Bromoethane	108	2.137	2.149	(0.460)	1368292	200.000	183.23
12 Acrolein	56	2.245	2.267	(0.483)	2029135	1000.00	791.51
13 Methylene Chloride	84	2.409	2.426	(0.518)	1800973	200.000	163.31
14 Acetone	43	2.601	2.697	(0.560)	1611160	1000.00	969.87(T)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.545	2.562	(0.547)	1964076	200.000	168.65
	16 Methyl tert butyl ether	73	2.720	2.726	(0.585)	5052611	200.000	150.00
	17 1,1-Dichloroethane	63	3.144	3.173	(0.676)	2493501	200.000	98.672
	18 Acrylonitrile	53	3.286	3.308	(0.707)	367407	200.000	67.416
	19 Vinyl Acetate	43	3.518	3.518	(0.757)	3129354	200.000	90.637(M)
	20 Cis-1,2-Dichloroethene	96	3.699	3.721	(0.796)	2966190	200.000	201.16
	22 2,2-Dichloropropane	77	3.795	3.817	(0.816)	4216860	200.000	200.63
	23 Bromochloromethane	128	3.891	3.908	(0.837)	1432852	200.000	217.00
	24 Chloroform	83	3.998	4.010	(0.860)	4741458	200.000	200.42
	25 Carbon Tetrachloride	117	4.072	4.095	(0.798)	3664608	200.000	205.01
$	27 Dibromofluoromethane	111	4.174	4.180	(0.898)	721830	50.0000	49.622
	26 1,1,1-Trichloroethane	97	4.146	4.168	(0.892)	4326365	200.000	203.45
	28 1,1-Dichloropropene	75	4.270	4.287	(0.837)	4190804	200.000	200.04
	29 2-Butanone	72	4.423	4.406	(0.951)	1689512	1000.00	986.98(M)
	30 Benzene	78	4.508	4.519	(0.884)	10135792	200.000	172.18
*	31 Pentafluorobenzene	168	4.649	4.660	(1.000)	507140	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.643	4.649	(0.999)	662477	50.0000	48.743
	33 1,2-Dichloroethane	62	4.706	4.711	(0.922)	3594128	200.000	193.54
	34 Trichloroethene	95	5.045	5.056	(0.989)	2963740	200.000	206.22
*	35 1,4-Difluorobenzene	114	5.102	5.107	(1.000)	1861384	50.0000	
	37 Dibromomethane	93	5.407	5.413	(1.060)	1585364	200.000	204.89
	38 1,2-Dichloropropane	63	5.503	5.503	(1.079)	3373215	200.000	202.14
	39 Bromodichloromethane	83	5.582	5.582	(1.094)	3639115	200.000	201.70
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.200)	1918248	200.000	218.74
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.202)	4641692	200.000	197.85
$	42 d8-Toluene	98	6.284	6.284	(1.232)	2703520	50.0000	49.566
	43 Toluene	92	6.329	6.329	(1.241)	6614200	200.000	176.52
	44 Tetrachloroethene	166	6.640	6.640	(0.874)	3049582	200.000	207.47
	45 4-Methyl-2-Pentanone	58	6.719	6.702	(1.317)	6283051	1000.00	955.57
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.313)	4137962	200.000	198.38
	47 1,1,2-Trichloroethane	97	6.833	6.821	(1.339)	2380036	200.000	203.13
	48 Chlorodibromomethane	129	6.963	6.957	(0.917)	2649737	200.000	208.93
	49 1,3-Dichloropropane	76	7.048	7.042	(0.928)	4195526	200.000	200.51
	50 1,2-Dibromoethane	107	7.144	7.138	(1.400)	2302924	200.000	200.70
	51 2-Hexanone	43	7.427	7.415	(0.978)	10840128	1000.00	1004.9
*	52 d5-Chlorobenzene	117	7.596	7.591	(1.000)	2123406	50.0000	
	53 Chlorobenzene	112	7.613	7.608	(1.002)	6512026	200.000	180.18
	54 Ethyl Benzene	91	7.670	7.659	(1.010)	9817829	200.000	158.40
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.675	(1.012)	2587823	200.000	201.04
	56 m,p-xylene	106	7.806	7.789	(1.028)	7940722	400.000	336.24
	57 o-Xylene	106	8.162	8.151	(1.074)	4700253	200.000	200.11
	58 Styrene	104	8.213	8.202	(1.081)	6837651	200.000	179.80
	59 Bromoform	173	8.202	8.196	(0.847)	1798527	200.000	208.04
	60 Isopropyl Benzene	105	8.450	8.439	(0.873)	9089588	200.000	164.13
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.141)	1153708	50.0000	49.797
	63 Bromobenzene	156	8.745	8.739	(0.904)	2967911	200.000	203.12
	64 N-Propyl Benzene	91	8.818	8.807	(0.911)	10158841	200.000	154.77

US21 : 00370

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.897	8.869	(0.919)	3085864	200.000	213.66
	66 2-Chloro Toluene	91	8.931	8.920	(0.923)	7401915	200.000	178.00
	67 1,3,5-Trimethyl Benzene	105	9.016	8.999	(0.932)	8181385	200.000	173.67
	68 1,2,3-Trichloropropane	110	8.982	8.971	(0.928)	913167	200.000	208.87
	69 Trans-1,4-Dichloro 2-Butene	53	9.039	9.027	(0.934)	1184000	200.000	220.75
	70 4-Chloro Toluene	91	9.084	9.073	(0.939)	7842027	200.000	182.05
	71 T-Butyl Benzene	119	9.282	9.271	(0.959)	7531552	200.000	181.76
	72 1,2,4-Trimethylbenzene	105	9.350	9.339	(0.966)	7992260	200.000	172.53
	73 S-Butyl Benzene	105	9.452	9.435	(0.977)	9484616	200.000	157.35
	74 4-Isopropyl Toluene	119	9.599	9.582	(0.992)	8224080	200.000	166.29
	75 1,3-Dichlorobenzene	146	9.610	9.593	(0.993)	4921047	200.000	181.65
*	76 d4-1,4-Dichlorobenzene	152	9.678	9.667	(1.000)	1103824	50.0000	
	77 1,4-Dichlorobenzene	146	9.695	9.684	(1.002)	5224108	200.000	187.10
	78 N-Butyl Benzene	91	9.983	9.967	(1.032)	8203136	200.000	172.34
$	79 d4-1,2-Dichlorobenzene	152	10.063	10.051	(1.040)	1117341	50.0000	49.688
	80 1,2-Dichlorobenzene	146	10.074	10.063	(1.041)	5020231	200.000	190.53
	81 1,2-Dibromo 3-Chloropropane	75	10.826	10.809	(1.119)	598140	200.000	213.88
	82 Hexachloro 1,3-Butadiene	225	11.505	11.488	(1.189)	2335036	200.000	199.70
	83 1,2,4-Trichlorobenzene	180	11.494	11.477	(1.188)	4007563	200.000	210.92
	84 Naphthalene	128	11.805	11.794	(1.220)	7751229	200.000	185.87
	85 1,2,3-Trichlorobenzene	180	11.992	11.975	(1.239)	3807501	200.000	207.32

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 2000611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: VSTD200
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	507140	10.34
35 1,4-Difluorobenze	1692431	846216	3384862	1861384	9.98
52 d5-Chlorobenzene	1987215	993608	3974430	2123406	6.85
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1103824	2.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.65	-0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.10	-0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.68	0.12

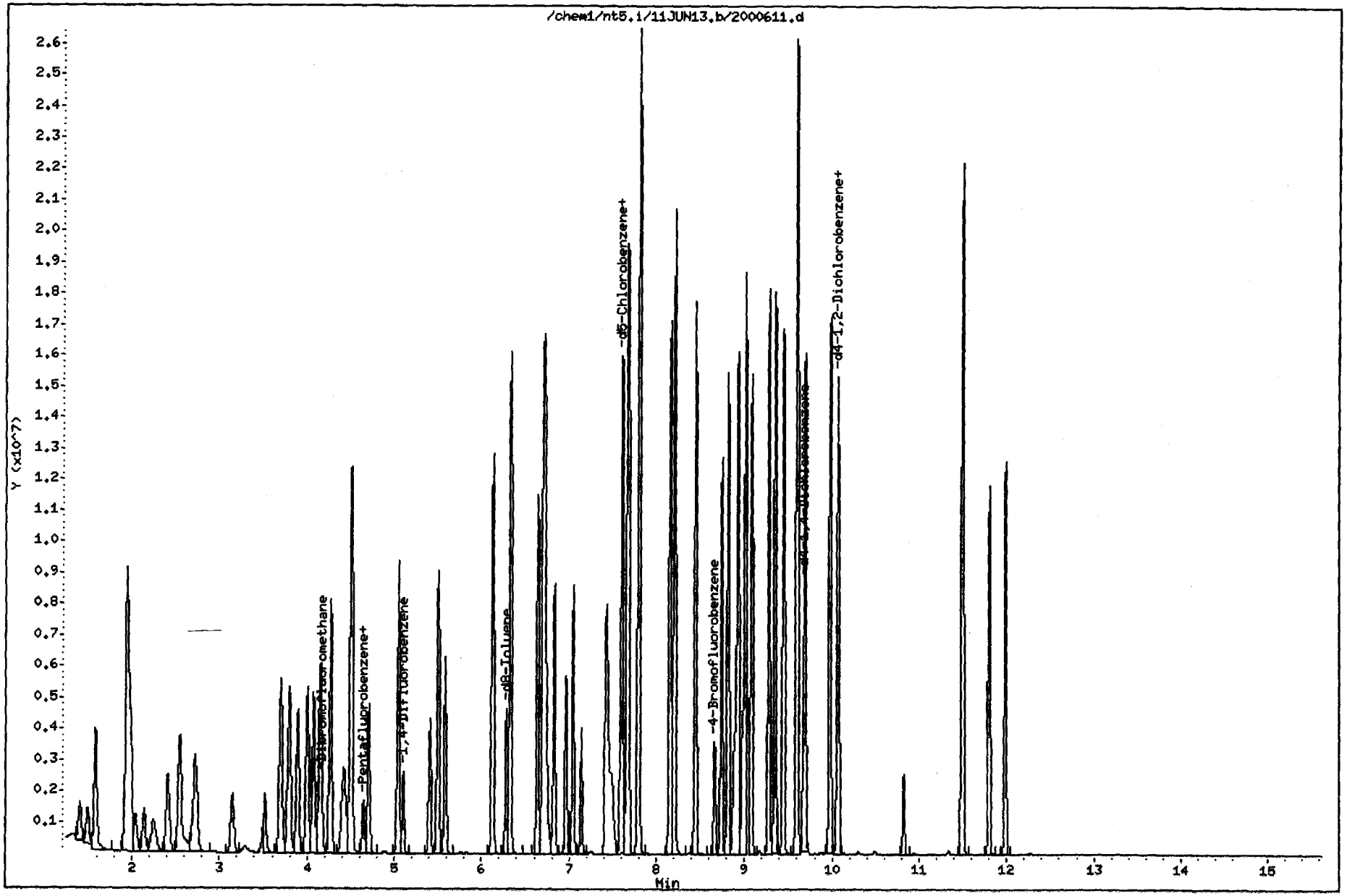
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/2000611.d
Date : 11-JUN-2013 08:57
Client ID: VSTD200
Sample Info: IC0611,5,5,0

Column phase: RTXVMS

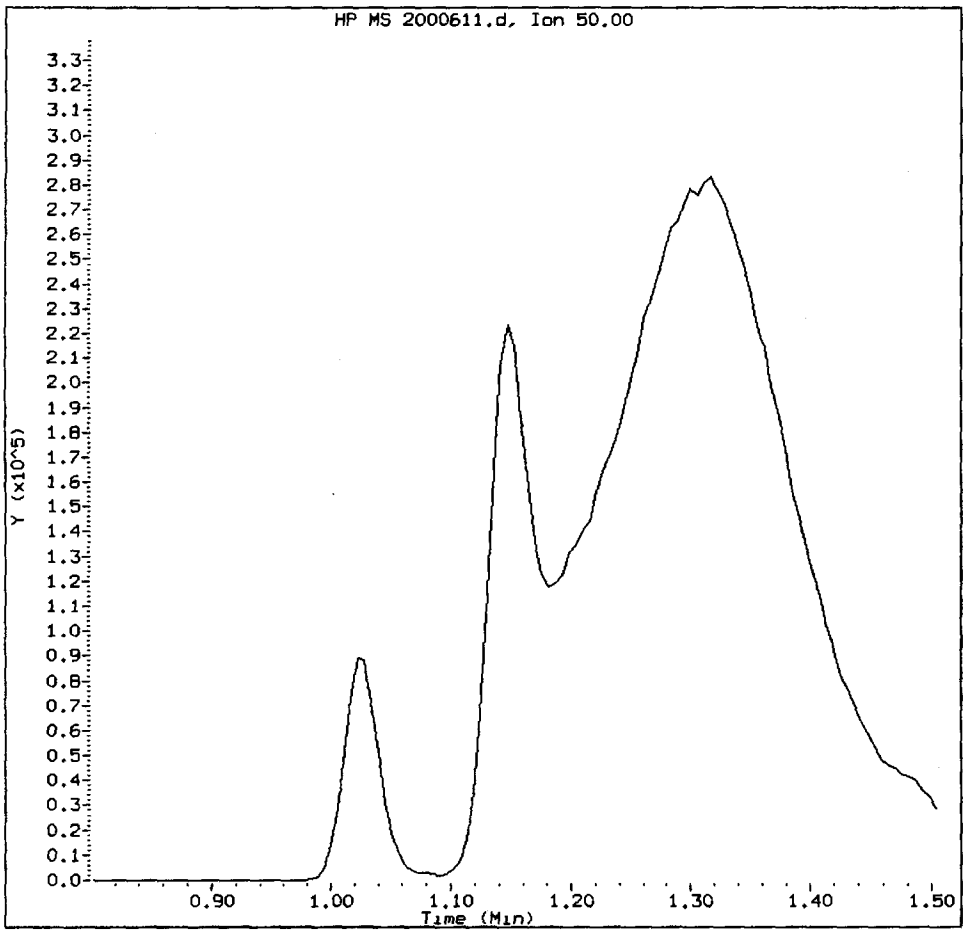
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0611, /chem1/nt5.i/11JUN13.b/2000611.d

Chloromethane Amount: 195.61 Area: 3502553



MANUAL INTEGRATION for Chloromethane

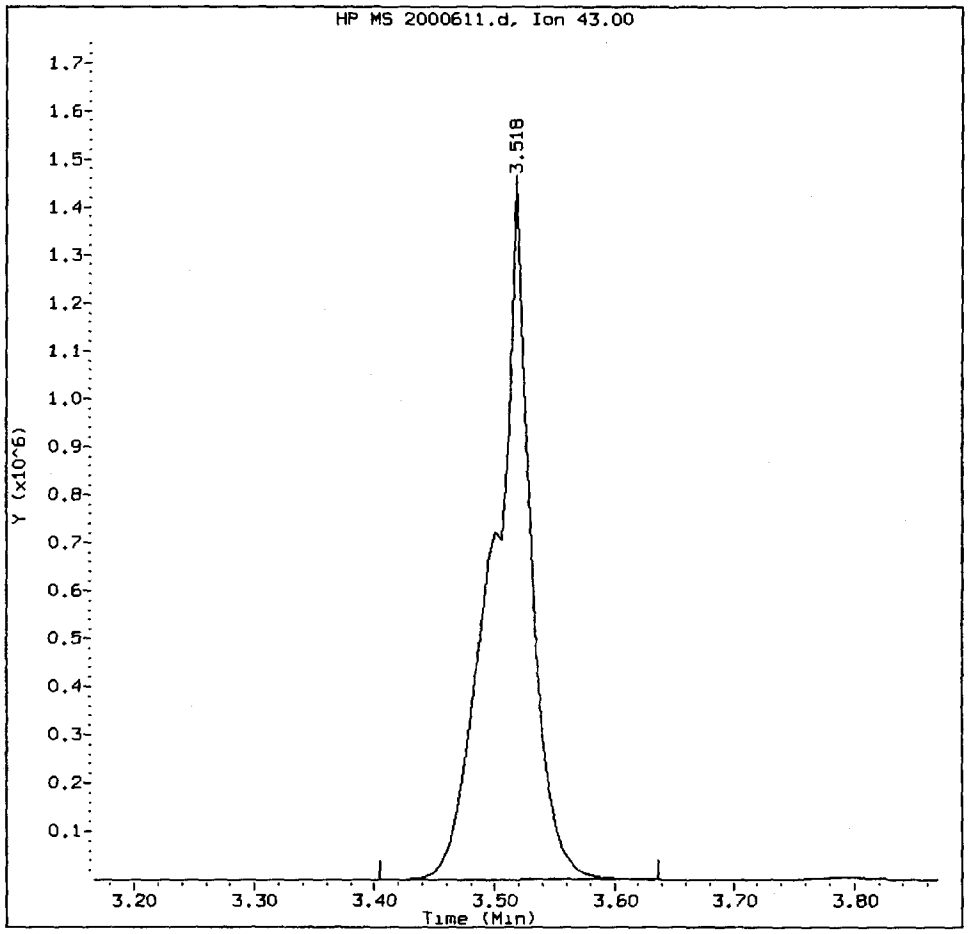
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: [illegible] Date: 6/14/13

IC0611, /chem1/nt5.i/11JUN13.b/2000611.d

Vinyl Acetate Amount: 90.64 Area: 3129354



MANUAL INTEGRATION for Vinyl Acetate

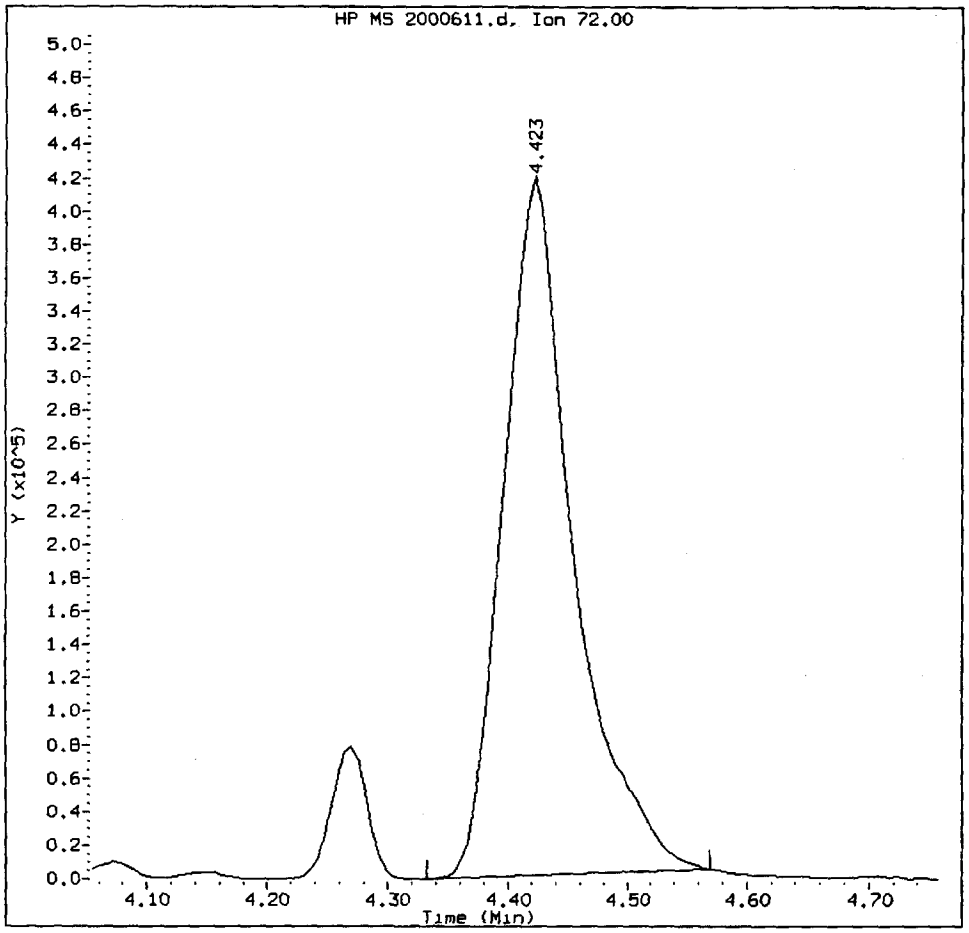
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0611, /chem1/nt5.i/11JUN13.b/2000611.d

2-Butanone Amount: 986.98 Area: 1689512



MANUAL INTEGRATION for 2-Butanone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - 2000611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/icv0611.d
Lab Smp Id: ICV0611 Client Smp ID: ICV0611
Inj Date : 11-JUN-2013 14:04
Operator : PB Inst ID: nt5.i
Smp Info : ICV0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.040	1.029	(0.223)	493549	64.0420	64.042(R)
2 Chloromethane	50	1.159	1.153	(0.249)	768277	50.0585	50.058(QM)
3 Vinyl Chloride	62	1.210	1.198	(0.260)	885763	59.6556	59.656
4 Bromomethane	94	1.413	1.408	(0.303)	380162	51.1126	51.113
5 Chloroethane	64	1.504	1.492	(0.323)	500064	56.5693	56.569
6 Trichlorofluoromethane	101	1.594	1.589	(0.342)	799955	51.8558	51.856
7 1,1-Dichloroethene	96	1.945	1.951	(0.417)	408726	39.2427	39.243(R)
8 Carbon Disulfide	76	1.951	1.951	(0.419)	1264912	37.3717	37.372(R)
9 112Trichloro122Trifluoroethane	101	1.990	1.990	(0.427)	369310	40.2812	40.281
10 Iodomethane	142	2.047	2.053	(0.439)	317182	34.3451	34.345(R)
11 Bromoethane	108	2.143	2.149	(0.460)	249264	38.9444	38.944(R)
12 Acrolein	56	2.245	2.267	(0.482)	74644	33.9703	33.970(R)
13 Methylene Chloride	84	2.420	2.426	(0.519)	556945	58.9201	58.920(Q)
14 Acetone	43	2.562	2.697	(0.550)	156410	50.3310	50.331(MH)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.556	2.562	(0.548)	589365	59.0421	59.042(Q)
	16 Methyl tert butyl ether	73	2.748	2.726	(0.590)	1632146	56.5299	56.530
	17 1,1-Dichloroethane	63	3.178	3.173	(0.682)	1126387	52.0033	52.003
	18 Acrylonitrile	53	3.286	3.308	(0.705)	267261	57.2150	57.215
	19 Vinyl Acetate	43	3.518	3.518	(0.755)	706196	23.8635	23.864(R)
	20 Cis-1,2-Dichloroethene	96	3.727	3.721	(0.800)	625354	49.4801	49.480
	22 2,2-Dichloropropane	77	3.823	3.817	(0.820)	858129	47.6334	47.633
	23 Bromochloromethane	128	3.914	3.908	(0.840)	548144	96.8527	96.853
	24 Chloroform	83	4.015	4.010	(0.862)	949845	46.8422	46.842
	25 Carbon Tetrachloride	117	4.100	4.095	(0.802)	745262	47.3508	47.351
$	27 Dibromofluoromethane	111	4.179	4.180	(0.897)	640382	51.3612	51.361
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.896)	869724	47.7170	47.717
	28 1,1-Dichloropropene	75	4.293	4.287	(0.840)	841048	45.5943	45.594
	29 2-Butanone	72	4.372	4.406	(0.938)	72917	49.6974	49.697(Q)
	30 Benzene	78	4.519	4.519	(0.884)	2431388	46.9085	46.909
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	434681	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.649	(0.999)	598124	51.3436	51.344
	33 1,2-Dichloroethane	62	4.711	4.711	(0.921)	714578	43.7024	43.702
	34 Trichloroethene	95	5.056	5.056	(0.989)	593270	46.8835	46.884
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	1638920	50.0000	
	37 Dibromomethane	93	5.413	5.413	(1.059)	302114	44.3456	44.346
	38 1,2-Dichloropropane	63	5.509	5.503	(1.077)	662162	45.0655	45.066
	39 Bromodichloromethane	83	5.582	5.582	(1.092)	783407	49.3147	49.315
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.120	(1.196)	388185	50.2736	50.274
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.199)	1001679	48.4908	48.491
$	42 d8-Toluene	98	6.289	6.284	(1.230)	2396980	49.9107	49.911
	43 Toluene	92	6.329	6.329	(1.238)	1530262	46.3839	46.384(Q)
	44 Tetrachloroethene	166	6.646	6.640	(0.876)	621701	46.7704	46.770
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.310)	286206	49.4365	49.437(Q)
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.310)	834858	45.4573	45.457(Q)
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.334)	467185	45.2851	45.285
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	564563	49.2245	49.224
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	859003	45.3963	45.396
	50 1,2-Dibromoethane	107	7.138	7.138	(1.396)	441322	43.6810	43.681
	51 2-Hexanone	43	7.410	7.415	(0.976)	489133	50.1422	50.142
*	52 d5-Chlorobenzene	117	7.591	7.591	(1.000)	1920237	50.0000	
	53 Chlorobenzene	112	7.608	7.608	(1.002)	1429487	43.7376	43.738
	54 Ethyl Benzene	91	7.658	7.659	(1.009)	2773715	49.4843	49.484
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	518388	44.5339	44.534
	56 m,p-xylene	106	7.789	7.789	(1.026)	2034740	95.2745	95.275(Q)
	57 o-Xylene	106	8.156	8.151	(1.075)	955038	44.9610	44.961(Q)
	58 Styrene	104	8.202	8.202	(1.080)	1697449	49.3577	49.358
	59 Bromoform	173	8.196	8.196	(0.847)	378004	46.2403	46.240
	60 Isopropyl Benzene	105	8.439	8.439	(0.872)	2438615	46.5689	46.569
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.142)	1055437	50.3757	50.376
	63 Bromobenzene	156	8.739	8.739	(0.903)	613972	44.4371	44.437
	64 N-Propyl Benzene	91	8.812	8.807	(0.911)	2942883	47.4152	47.415

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	601538	44.0459	44.046
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	1776879	45.1898	45.190
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	2249984	50.5117	50.512
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	180764	43.7260	43.726
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	193985	38.2490	38.249(R)
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	1812738	44.5052	44.505
71	T-Butyl Benzene	119	9.276	9.271	(0.959)	1806996	46.1182	46.118
72	1,2,4-Trimethylbenzene	105	9.344	9.339	(0.966)	2206118	50.3662	50.366
73	S-Butyl Benzene	105	9.440	9.435	(0.976)	2681888	47.0548	47.055
74	4-Isopropyl Toluene	119	9.587	9.582	(0.991)	2279316	48.7399	48.740
75	1,3-Dichlorobenzene	146	9.599	9.593	(0.992)	1115595	43.5499	43.550
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1043748	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	1215341	46.0312	46.031
78	N-Butyl Benzene	91	9.972	9.967	(1.031)	2338675	51.9606	51.961
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1058515	49.7815	49.781(Q)
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.040)	1050231	42.1522	42.152
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.118)	113488	42.9153	42.915
82	Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.189)	505889	45.7554	45.755
83	1,2,4-Trichlorobenzene	180	11.488	11.477	(1.188)	855763	47.6326	47.633
84	Naphthalene	128	11.799	11.794	(1.220)	1852216	46.9717	46.972
85	1,2,3-Trichlorobenzene	180	11.986	11.975	(1.239)	785661	45.2427	45.243

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: icv0611.d
Lab Smp Id: ICV0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: ICV0611
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	434681	-5.43
35 1,4-Difluorobenze	1692431	846216	3384862	1638920	-3.16
52 d5-Chlorobenzene	1987215	993608	3974430	1920237	-3.37
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1043748	-2.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 11JUN13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: ICV0611 Client Smp ID: ICV0611
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCS
SpikeList File: icv.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

SPIKE	COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	64.042	128.08*	80-120
2	Chloromethane	50.000	50.058	100.12	80-120
3	Vinyl Chloride	50.000	59.656	119.31	80-120
4	Bromomethane	50.000	51.113	102.23	80-120
5	Chloroethane	50.000	56.569	113.14	80-120
6	Trichlorofluoromet	50.000	51.856	103.71	80-120
12	Acrolein	50.000	33.970	67.94*	80-120
9	112Trichloro122Tri	50.000	40.281	80.56	80-120
14	Acetone	50.000	50.331	100.66	80-120
7	1,1-Dichloroethene	50.000	39.243	78.49*	80-120
11	Bromoethane	50.000	38.944	77.89*	80-120
10	Iodomethane	50.000	34.345	68.69*	80-120
13	Methylene Chloride	50.000	58.920	117.84	80-120
8	Carbon Disulfide	50.000	37.372	74.74*	80-120
18	Acrylonitrile	50.000	57.215	114.43	80-120
15	Trans-1,2-Dichloro	50.000	59.042	118.08	80-120
16	Methyl tert butyl	50.000	56.530	113.06	80-120
19	Vinyl Acetate	50.000	23.864	47.73*	80-120
17	1,1-Dichloroethane	50.000	52.003	104.01	80-120
29	2-Butanone	50.000	49.697	99.39	80-120
22	2,2-Dichloropropan	50.000	47.633	95.27	80-120
20	Cis-1,2-Dichloroet	50.000	49.480	98.96	80-120
24	Chloroform	50.000	46.842	93.68	80-120
23	Bromochloromethane	100.00	96.853	96.85	80-120
26	1,1,1-Trichloroeth	50.000	47.717	95.43	80-120
28	1,1-Dichloropropen	50.000	45.594	91.19	80-120
25	Carbon Tetrachlori	50.000	47.351	94.70	80-120
33	1,2-Dichloroethane	50.000	43.702	87.40	80-120
30	Benzene	50.000	46.909	93.82	80-120
34	Trichloroethene	50.000	46.884	93.77	80-120
38	1,2-Dichloropropan	50.000	45.066	90.13	80-120
39	Bromodichlorometha	50.000	49.315	98.63	80-120
37	Dibromomethane	50.000	44.346	88.69	80-120

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
40 2-Chloroethyl Viny	50.000	50.274	100.55	80-120
45 4-Methyl-2-Pentano	50.000	49.437	98.87	80-120
41 Cis 1,3-dichloropr	50.000	48.491	96.98	80-120
43 Toluene	50.000	46.384	92.77	80-120
46 Trans 1,3-Dichloro	50.000	45.457	90.91	80-120
51 2-Hexanone	50.000	50.142	100.28	80-120
47 1,1,2-Trichloroeth	50.000	45.285	90.57	80-120
49 1,3-Dichloropropan	50.000	45.396	90.79	80-120
44 Tetrachloroethene	50.000	46.770	93.54	80-120
48 Chlorodibromometha	50.000	49.224	98.45	80-120
50 1,2-Dibromoethane	50.000	43.681	87.36	80-120
53 Chlorobenzene	50.000	43.738	87.48	80-120
55 1,1,1,2-Tetrachlor	50.000	44.534	89.07	80-120
54 Ethyl Benzene	50.000	49.484	98.97	80-120
56 m,p-xylene	100.00	95.275	95.27	80-120
57 o-Xylene	50.000	44.961	89.92	80-120
58 Styrene	50.000	49.358	98.72	80-120
60 Isopropyl Benzene	50.000	46.569	93.14	80-120
59 Bromoform	50.000	46.240	92.48	80-120
65 1,1,2,2-Tetrachlor	50.000	44.046	88.09	80-120
68 1,2,3-Trichloropro	50.000	43.726	87.45	80-120
69 Trans-1,4-Dichloro	50.000	38.249	76.50*	80-120
64 N-Propyl Benzene	50.000	47.415	94.83	80-120
63 Bromobenzene	50.000	44.437	88.87	80-120
67 1,3,5-Trimethyl Be	50.000	50.512	101.02	80-120
66 2-Chloro Toluene	50.000	45.190	90.38	80-120
70 4-Chloro Toluene	50.000	44.505	89.01	80-120
71 T-Butyl Benzene	50.000	46.118	92.24	80-120
72 1,2,4-Trimethylben	50.000	50.366	100.73	80-120
73 S-Butyl Benzene	50.000	47.055	94.11	80-120
74 4-Isopropyl Toluen	50.000	48.740	97.48	80-120
75 1,3-Dichlorobenzen	50.000	43.550	87.10	80-120
77 1,4-Dichlorobenzen	50.000	46.031	92.06	80-120
78 N-Butyl Benzene	50.000	51.961	103.92	80-120
80 1,2-Dichlorobenzen	50.000	42.152	84.30	80-120
81 1,2-Dibromo 3-Chlo	50.000	42.915	85.83	80-120
83 1,2,4-Trichloroben	50.000	47.633	95.27	80-120
82 Hexachloro 1,3-But	50.000	45.755	91.51	80-120
84 Naphthalene	50.000	46.972	93.94	80-120
85 1,2,3-Trichloroben	50.000	45.243	90.49	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.361	102.72	70-130

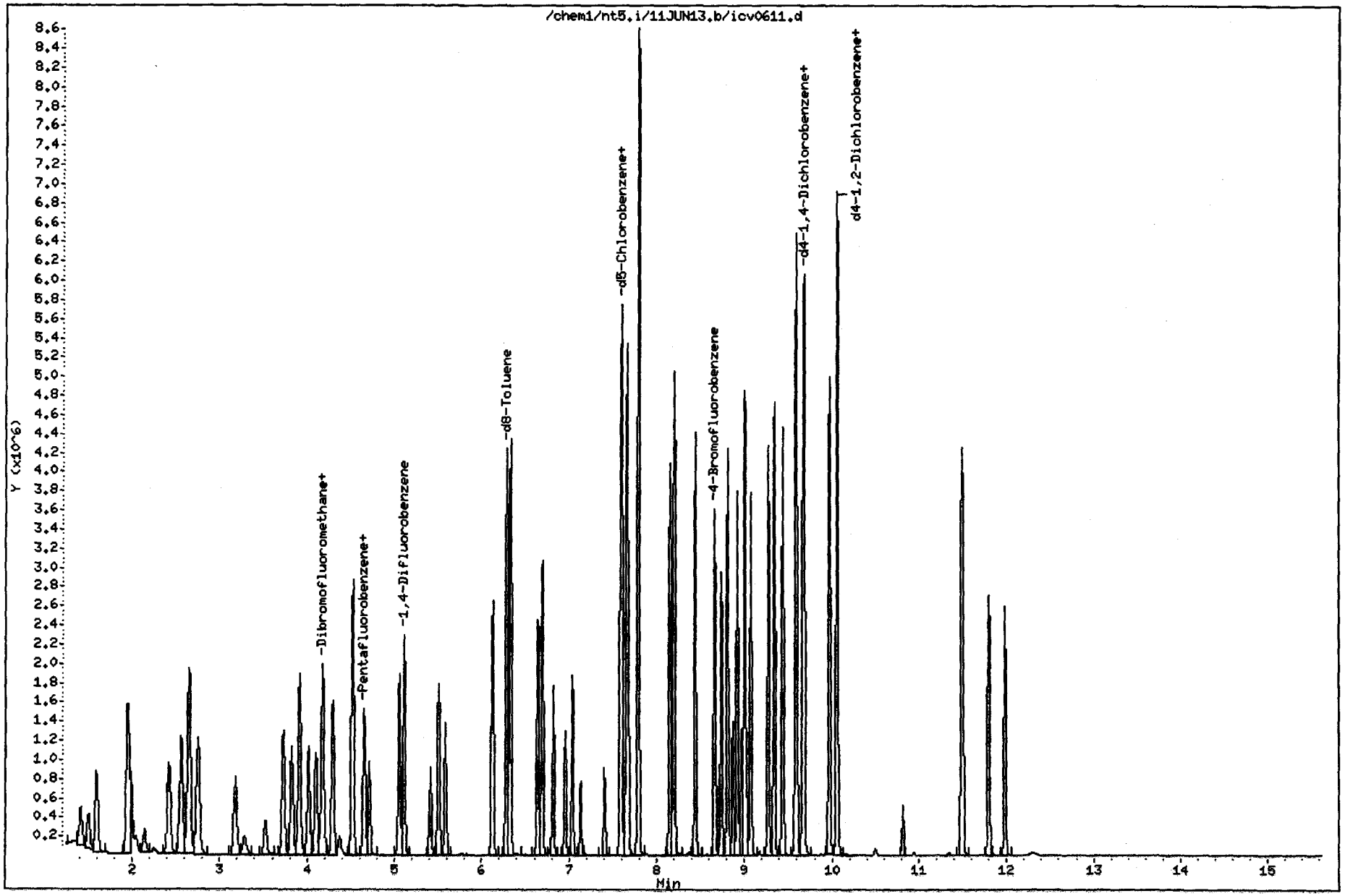
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	51.344	102.69	80-149
$ 42 d8-Toluene	50.000	49.911	99.82	77-120
$ 62 4-Bromofluorobenze	50.000	50.376	100.75	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.781	99.56	80-120

Data File: /chem1/nt5.i/11JUN13.b/icv0611.d
Date : 11-JUN-2013 14:04
Client ID: ICV0611
Sample Info: ICV0611,5,5,0

Instrument: nt5.i

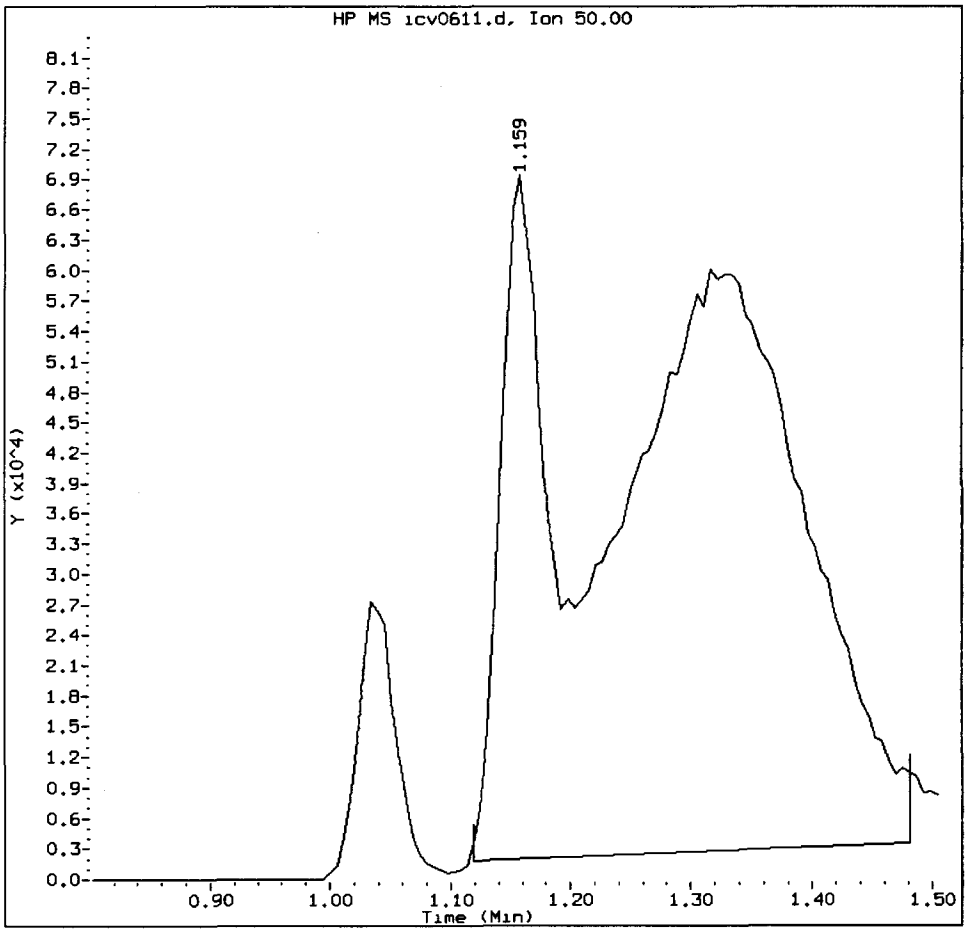
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



ICV0611, /chem1/nt5.i/11JUN13.b/icv0611.d

Chloromethane Amount: 50.06 Area: 768277



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/1

CO-ELUTION SUMMARY FOR FILE - icv0611.d

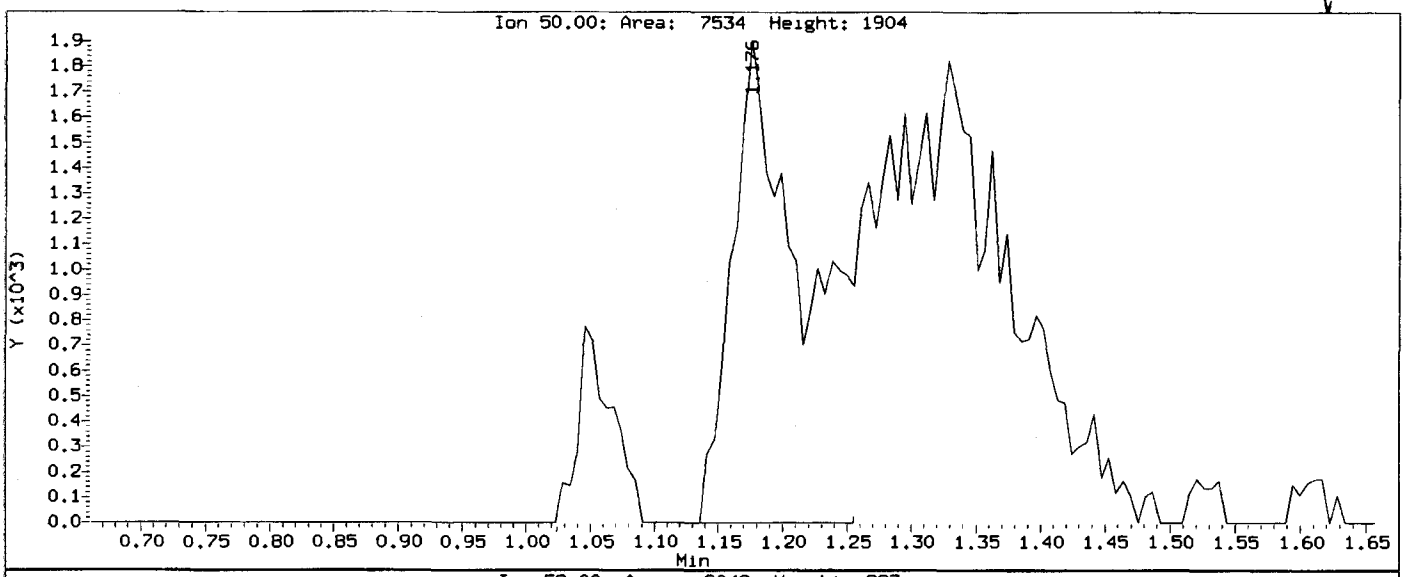
Lab ID: ICV0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

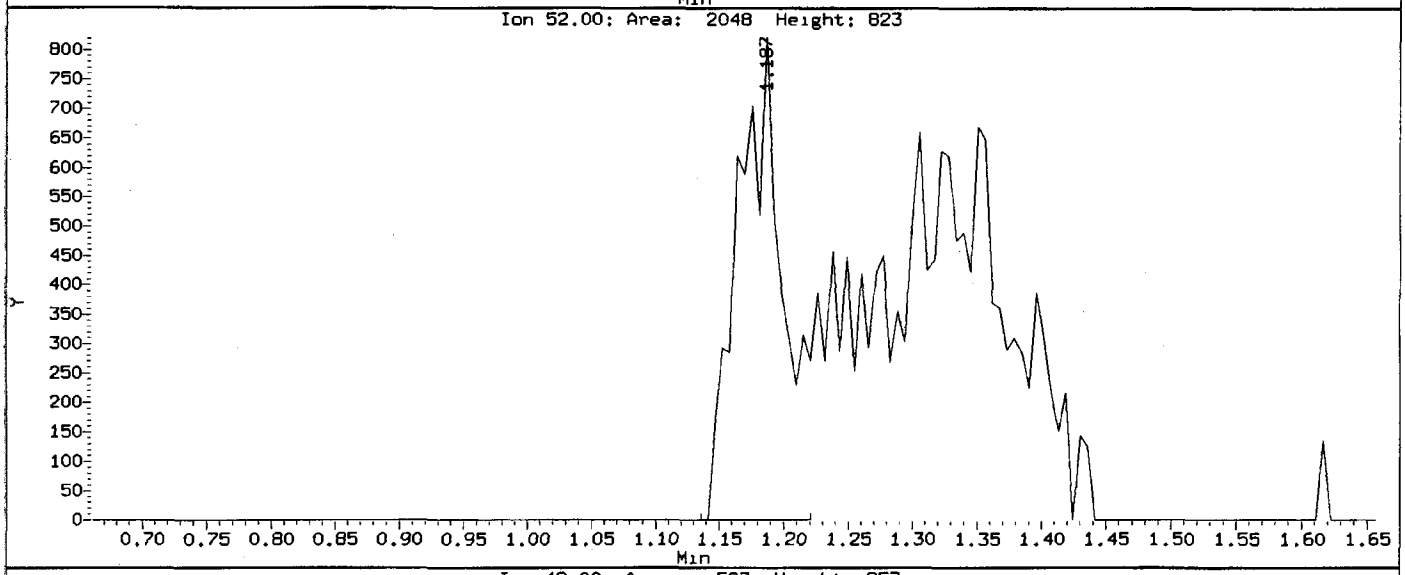
RT	CO-ELUTION COMPOUNDS

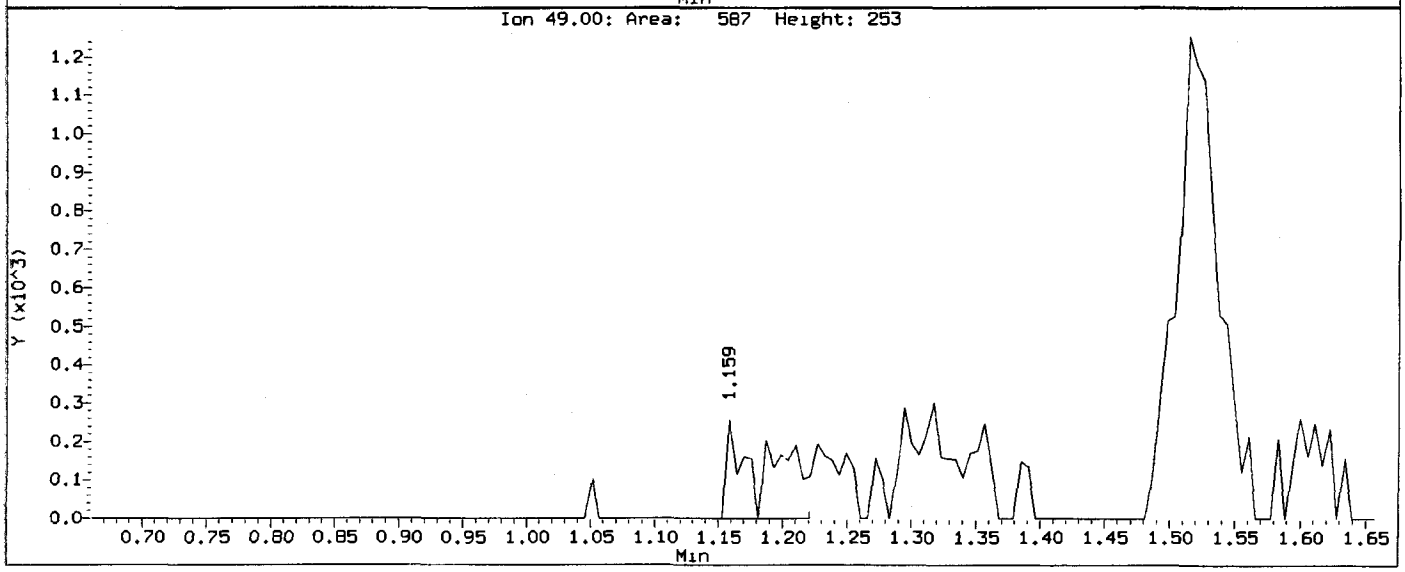
NO CO-ELUTIONS

Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Chloromethane
CAS Number:

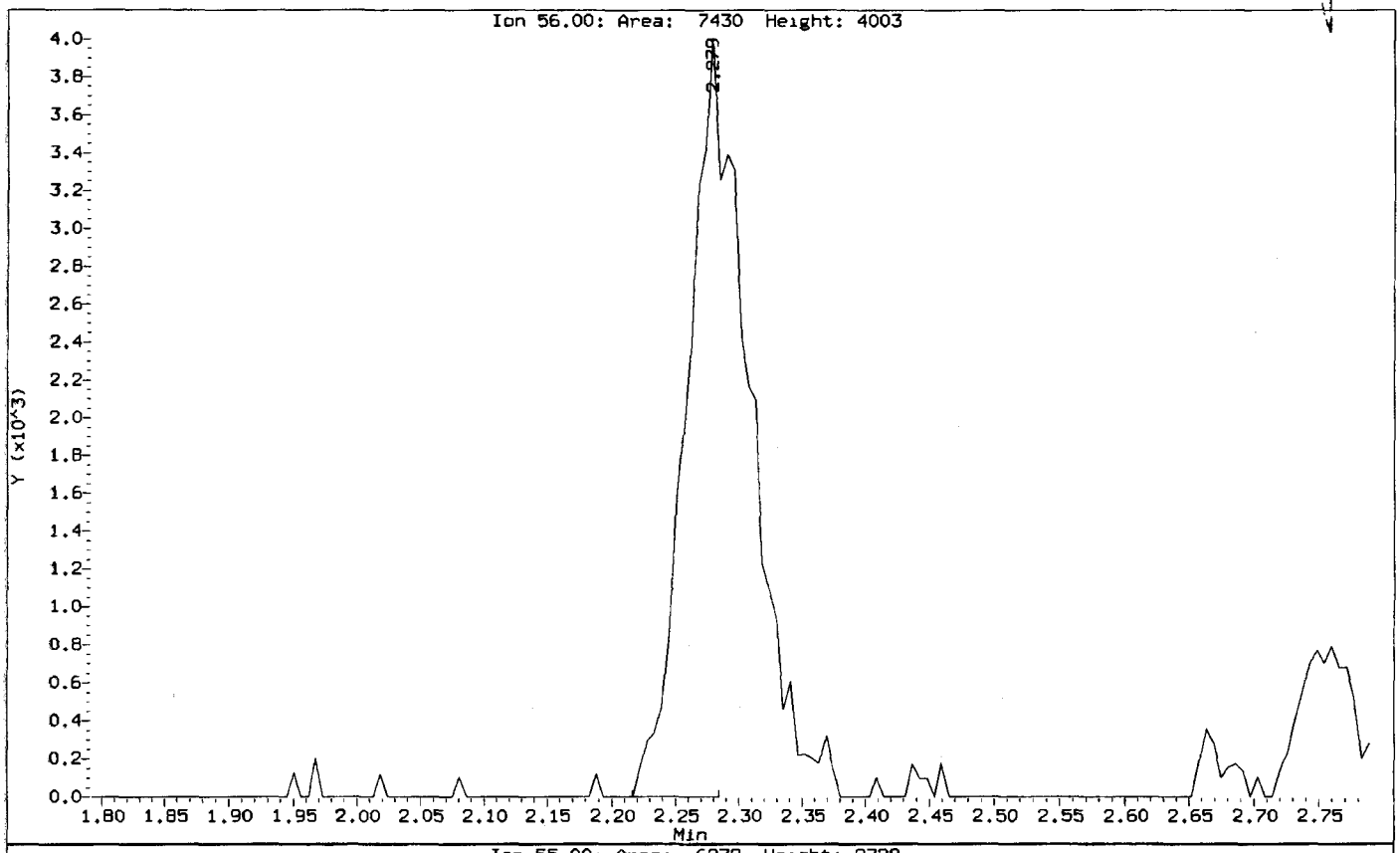


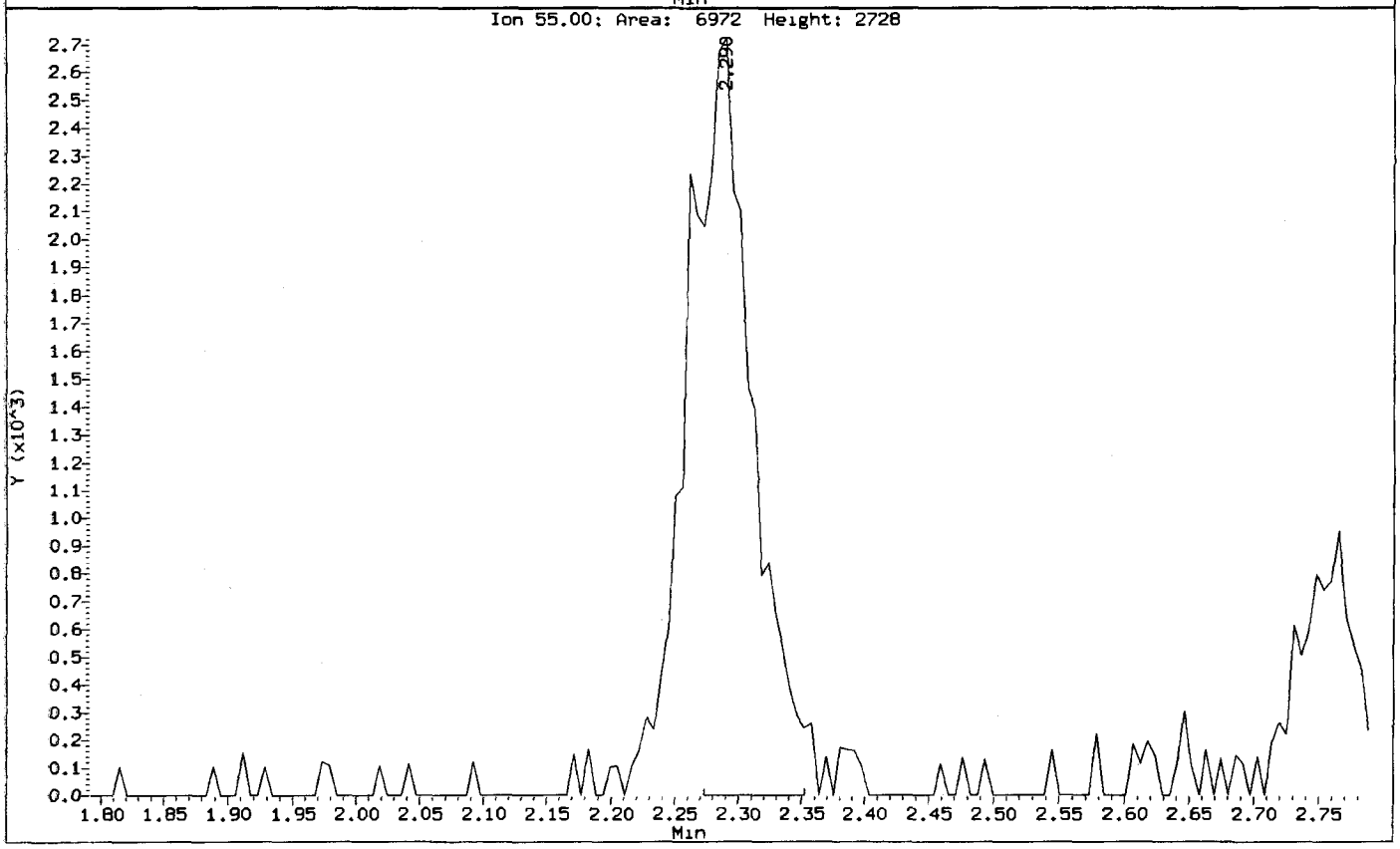




Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

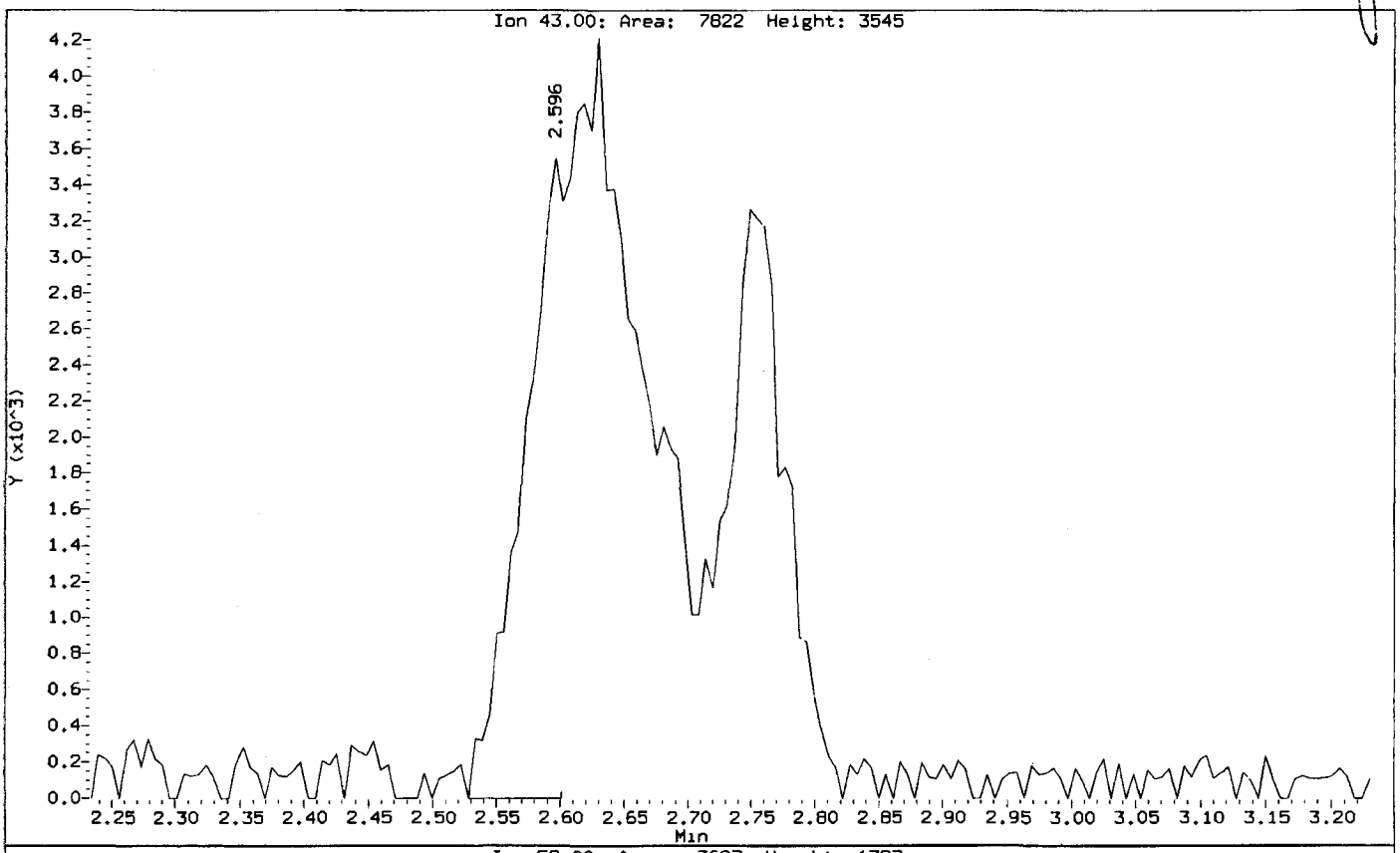
Compound: Acrolein
CAS Number:

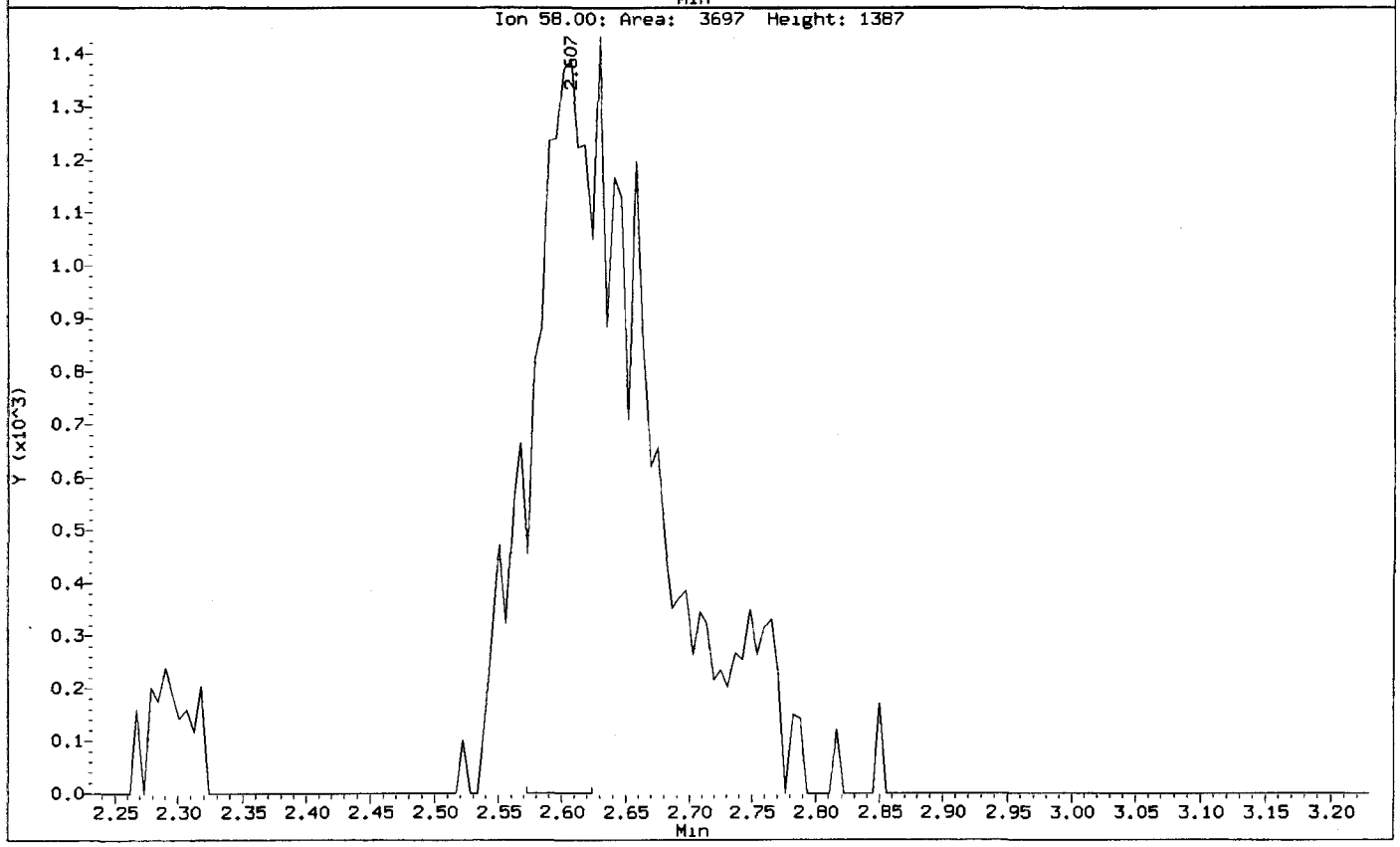




Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

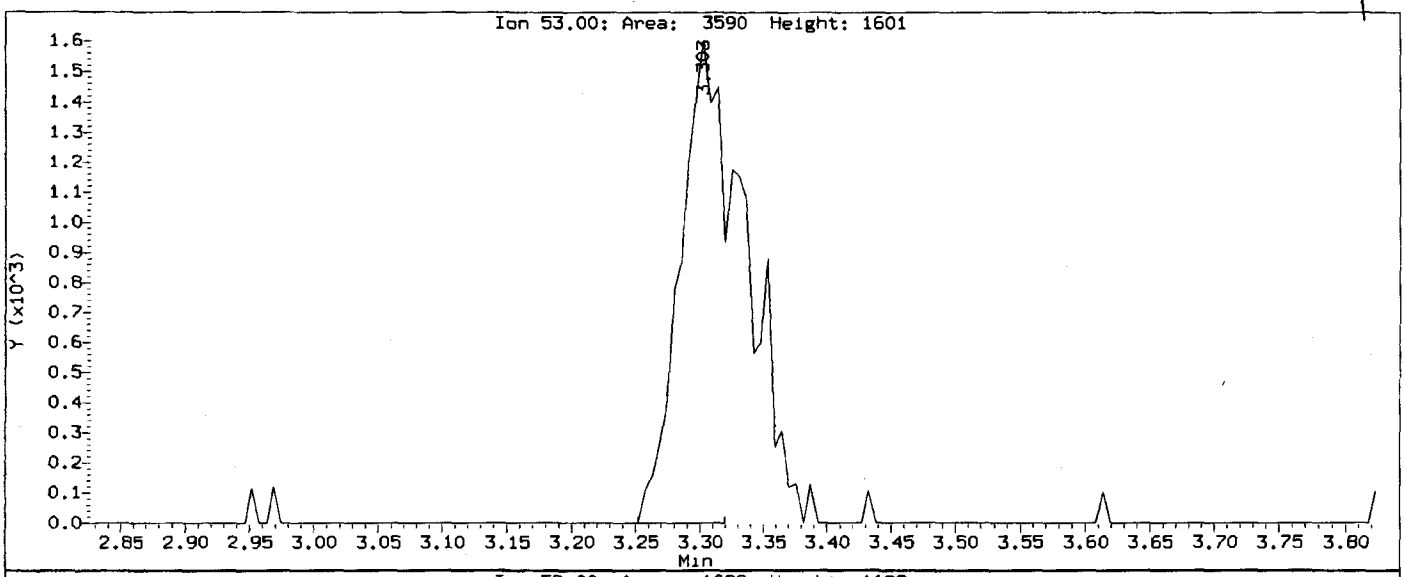
Compound: Acetone
CAS Number:

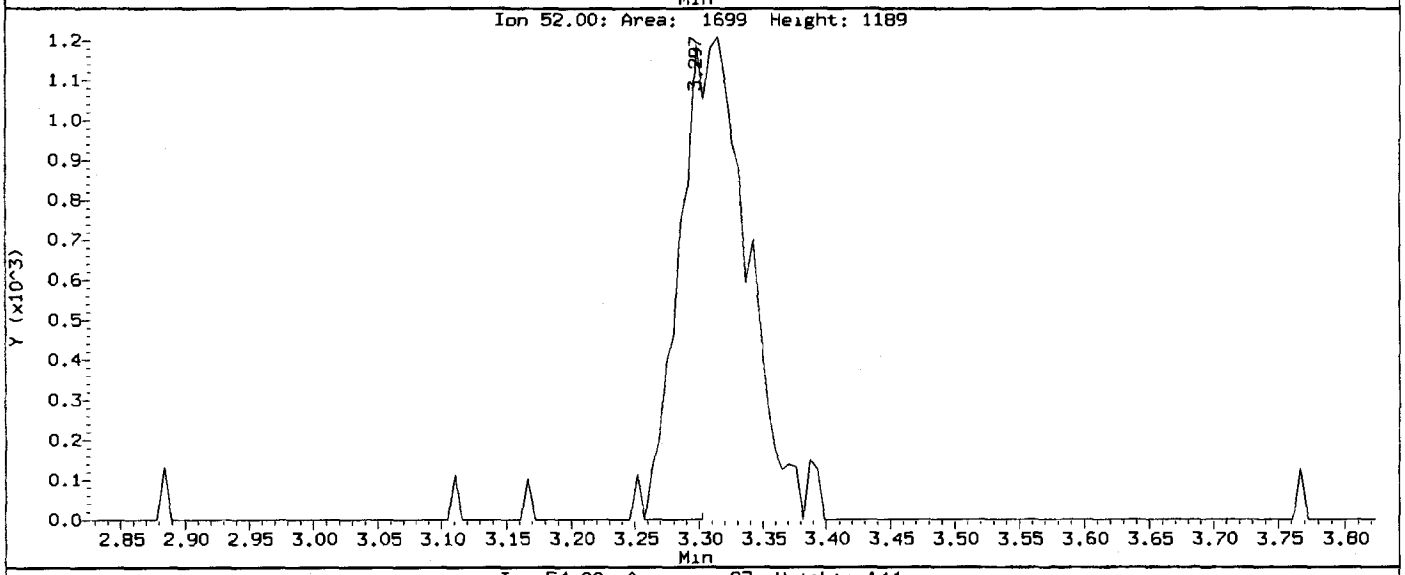


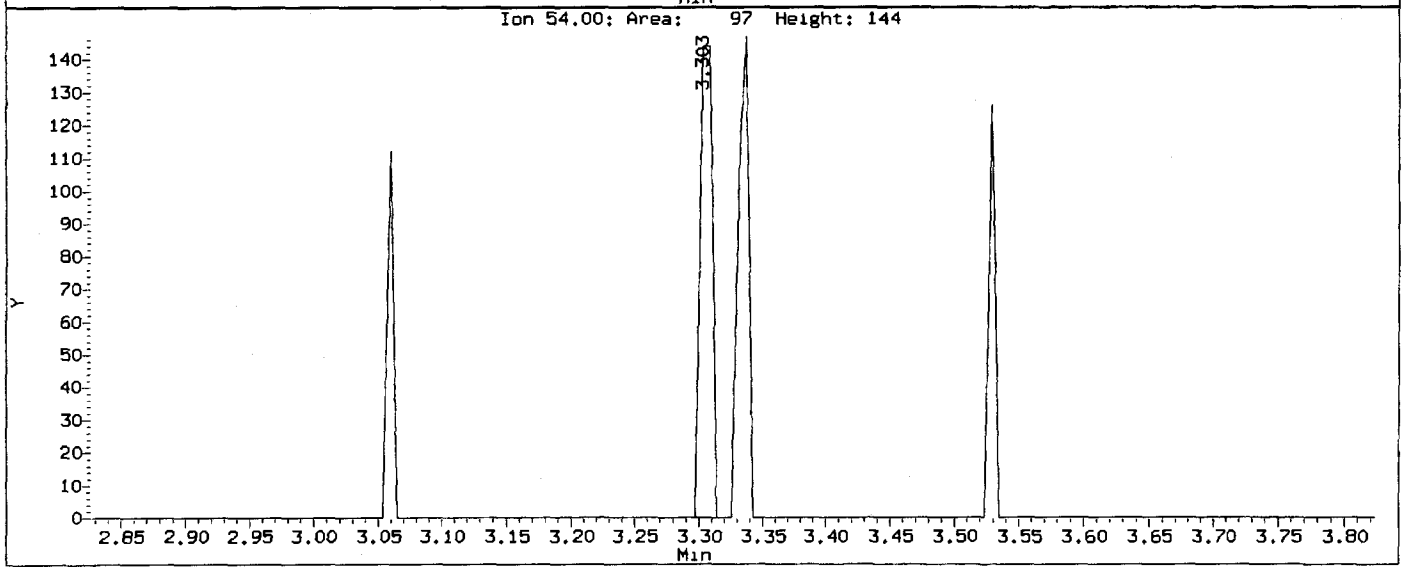


Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Acrylonitrile
CAS Number:

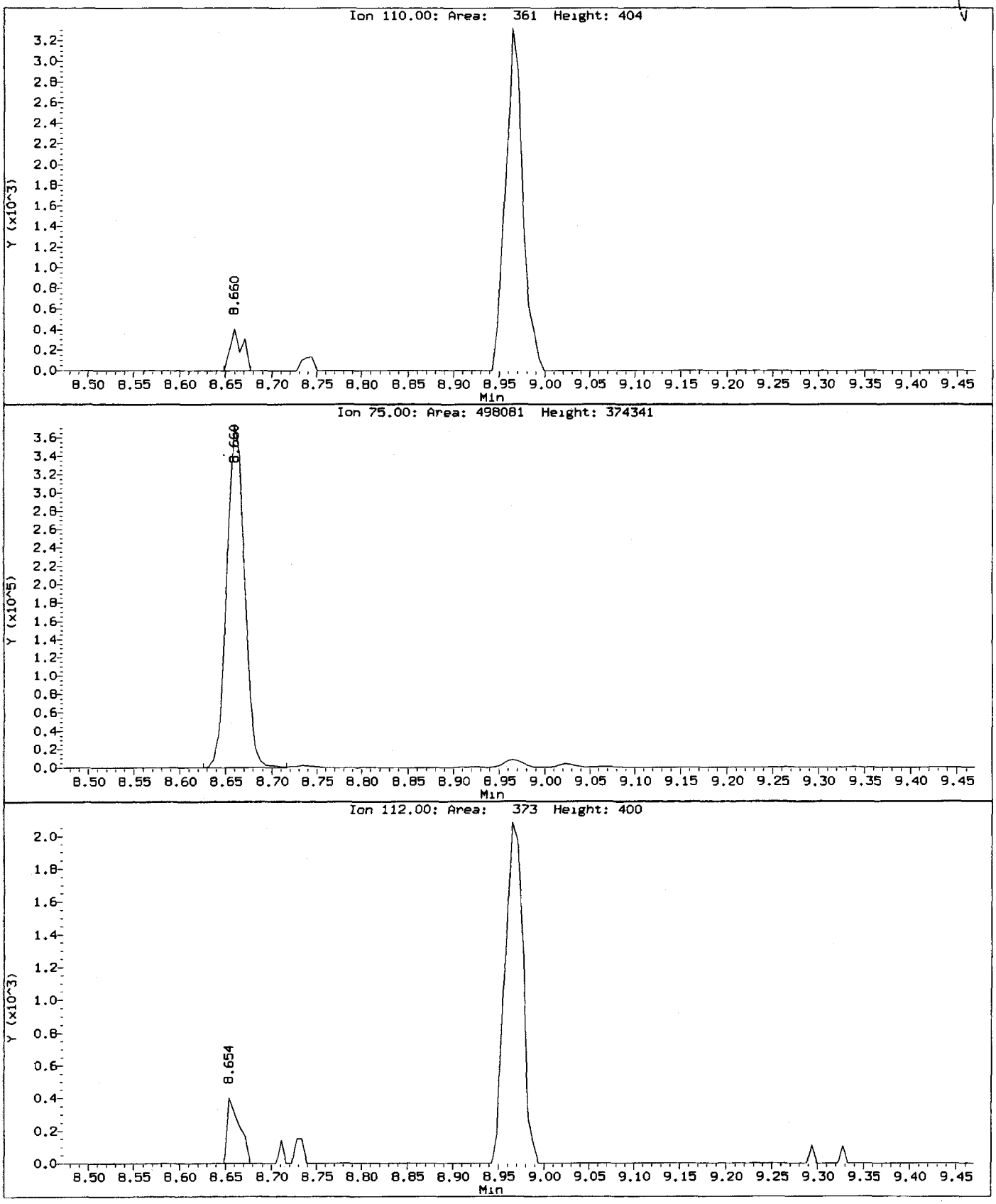






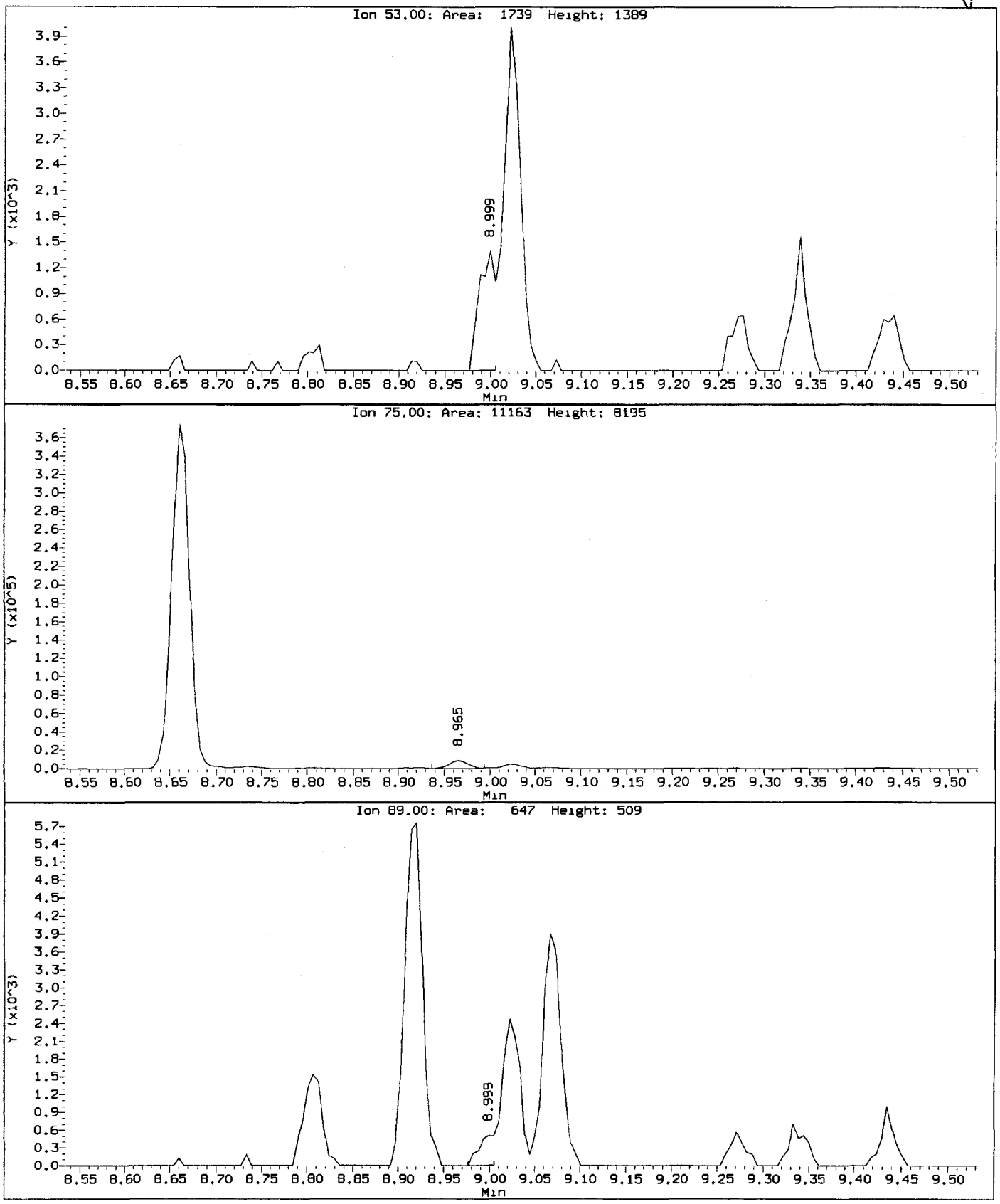
Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: 1,2,3-Trichloropropane
CAS Number:



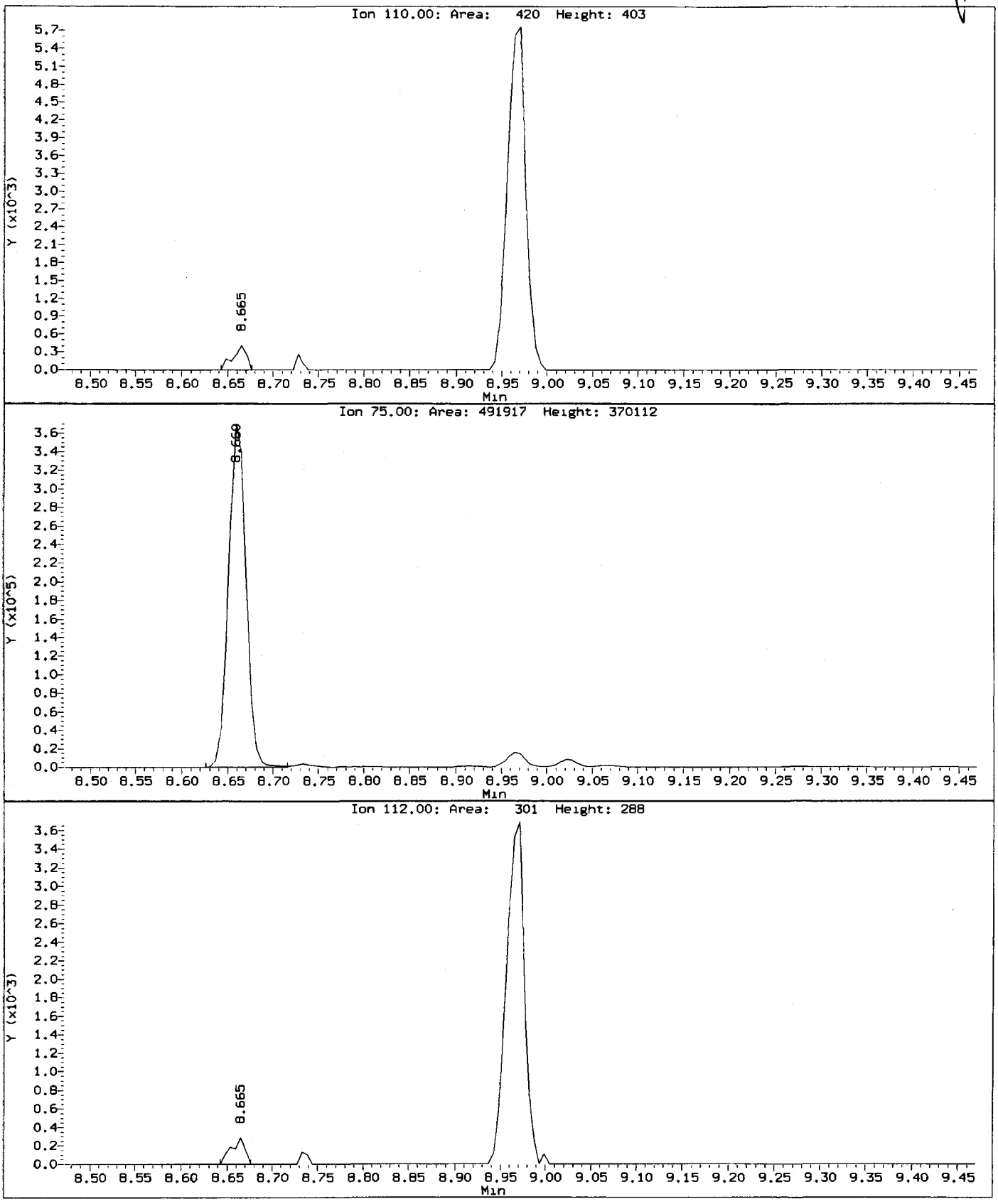
Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:



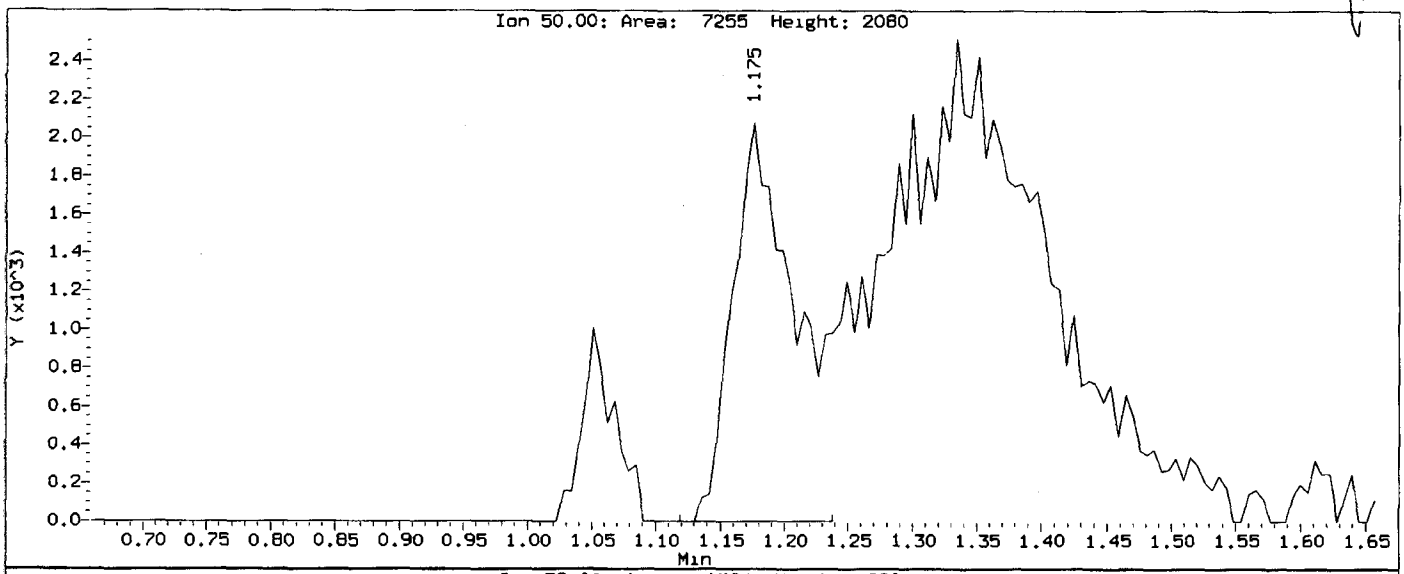
Data File: /chem1/nt5.1/11JUN13.b/0020611.d
Injection Date: 11-JUN-2013 11:20
Instrument: nt5.1
Client Sample ID: VSTD2

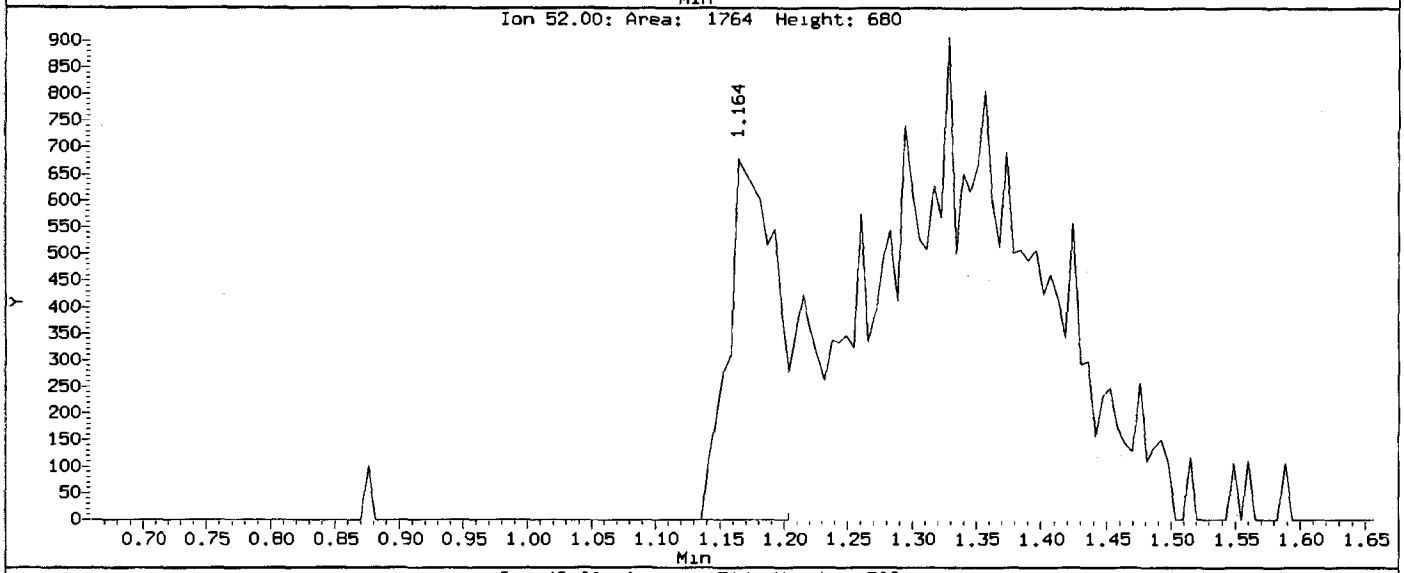
Compound: 1,2,3-Trichloropropane
CAS Number:

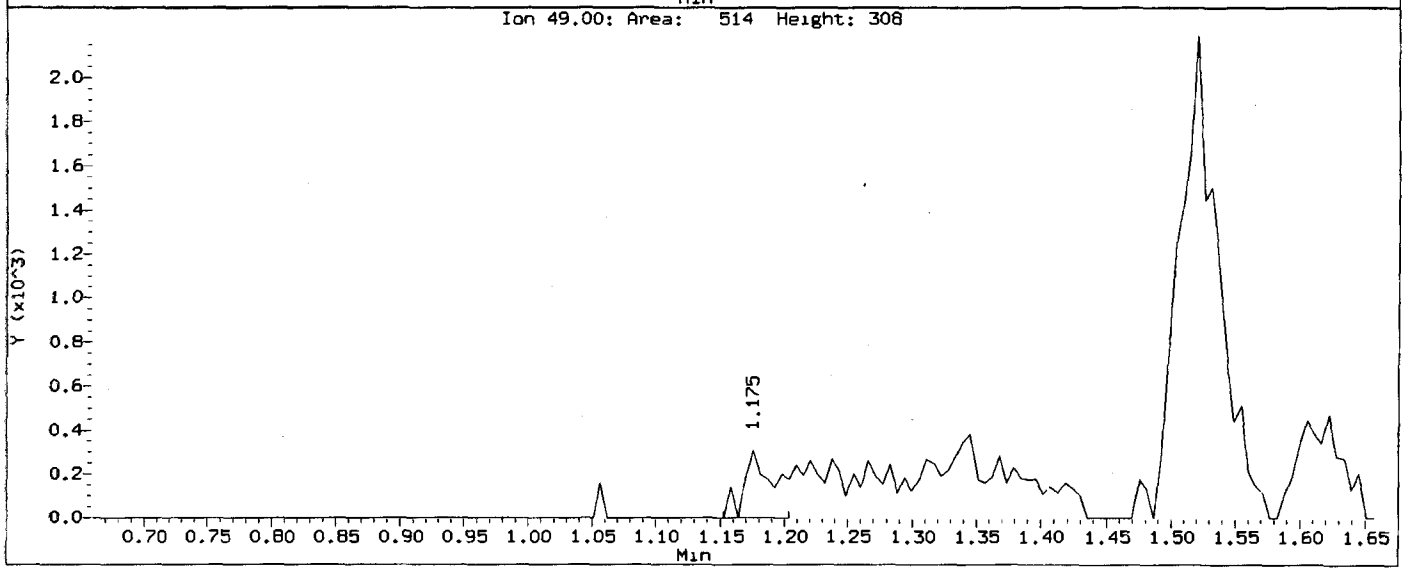


Data File: /chem1/nt5.i/11JUN13.b/0020611.d
Injection Date: 11-JUN-2013 11:20
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: Chloromethane
CAS Number:

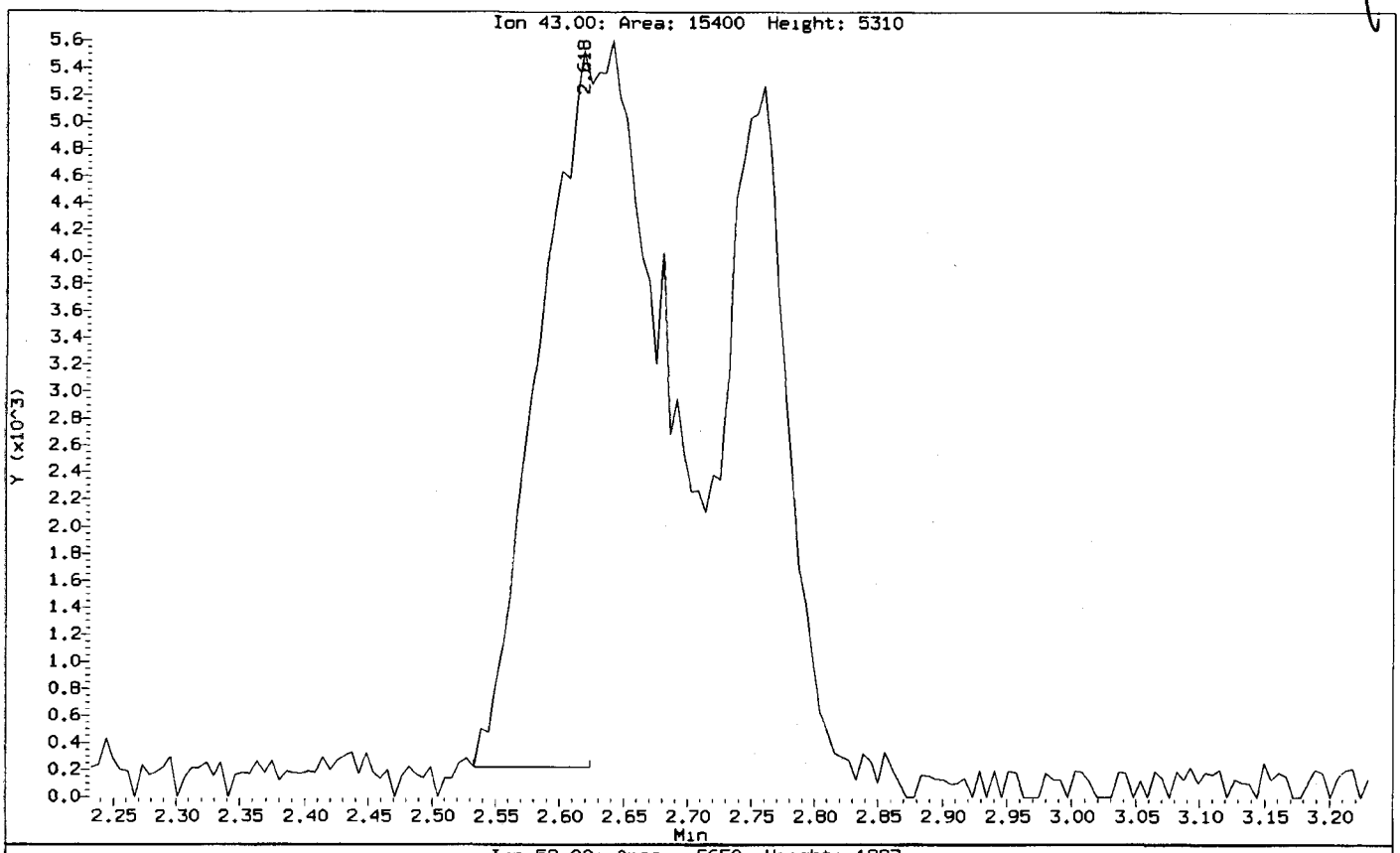


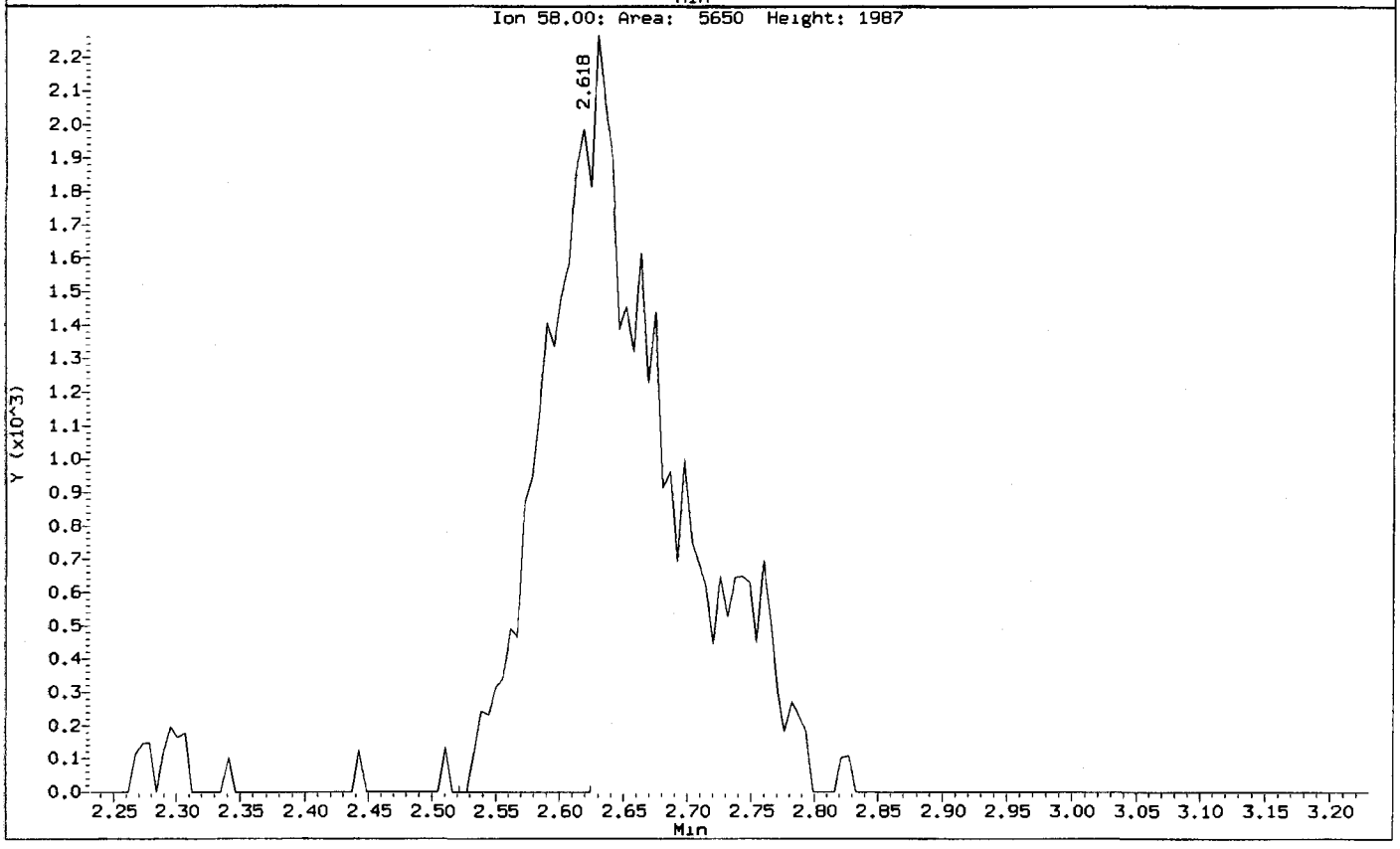




Data File: /chem1/nt5.i/11JUN13.b/0020611.d
Injection Date: 11-JUN-2013 11:20
Instrument: nt5.i
Client Sample ID: VSTD2

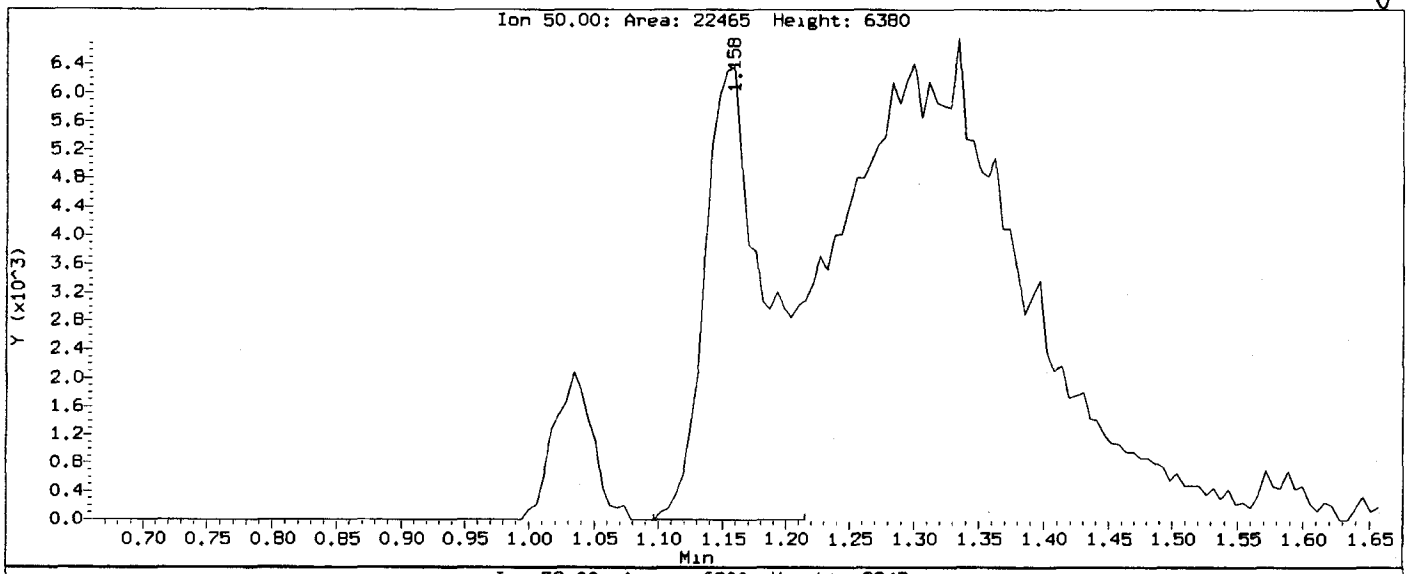
Compound: Acetone
CAS Number:

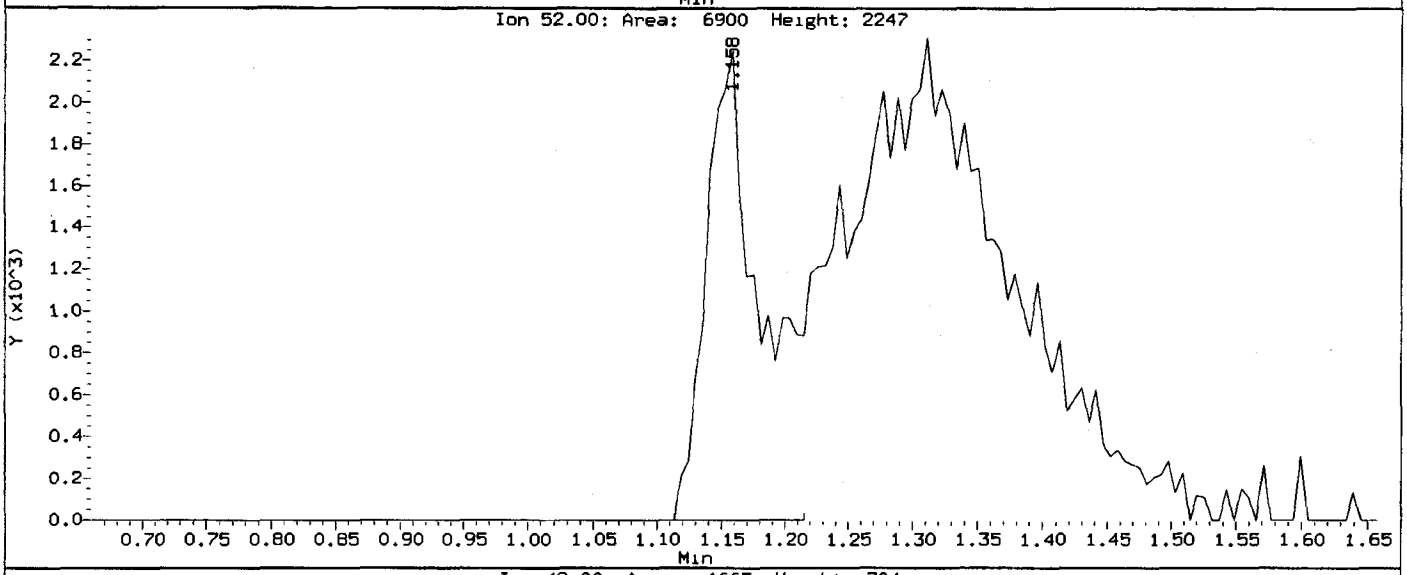


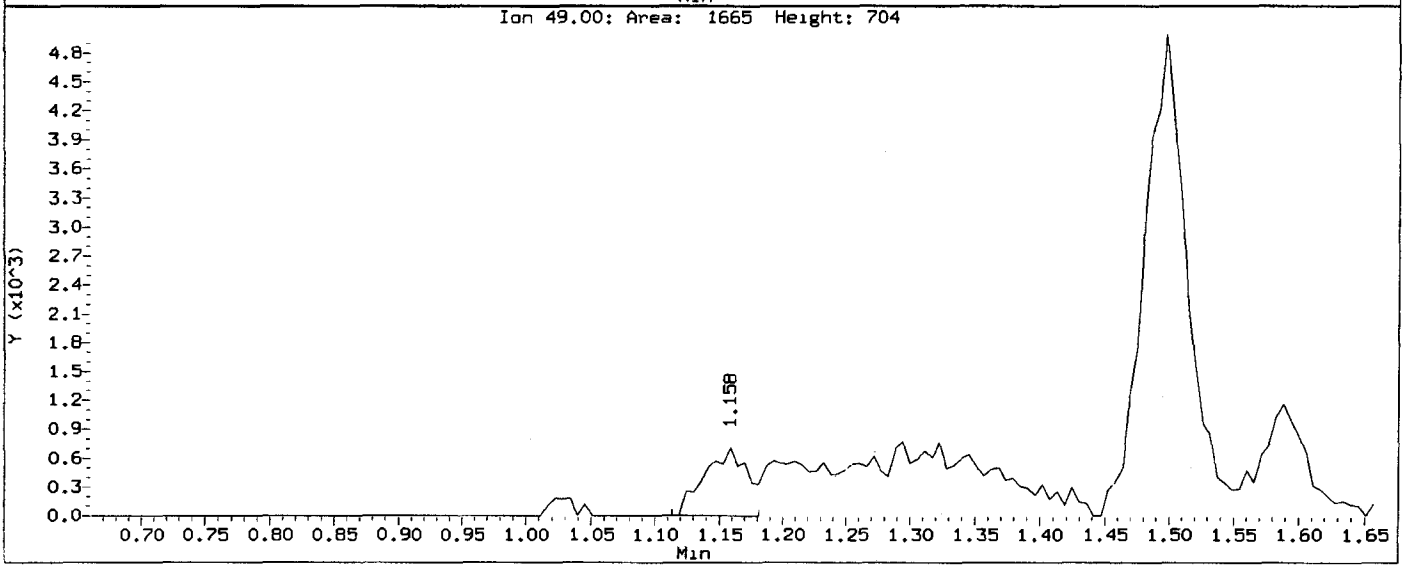


Data File: /chem1/nt5.i/11JUN13.b/0050611.d
Injection Date: 11-JUN-2013 10:57
Instrument: nt5.i
Client Sample ID: VSTD5

Compound: Chloromethane
CAS Number:

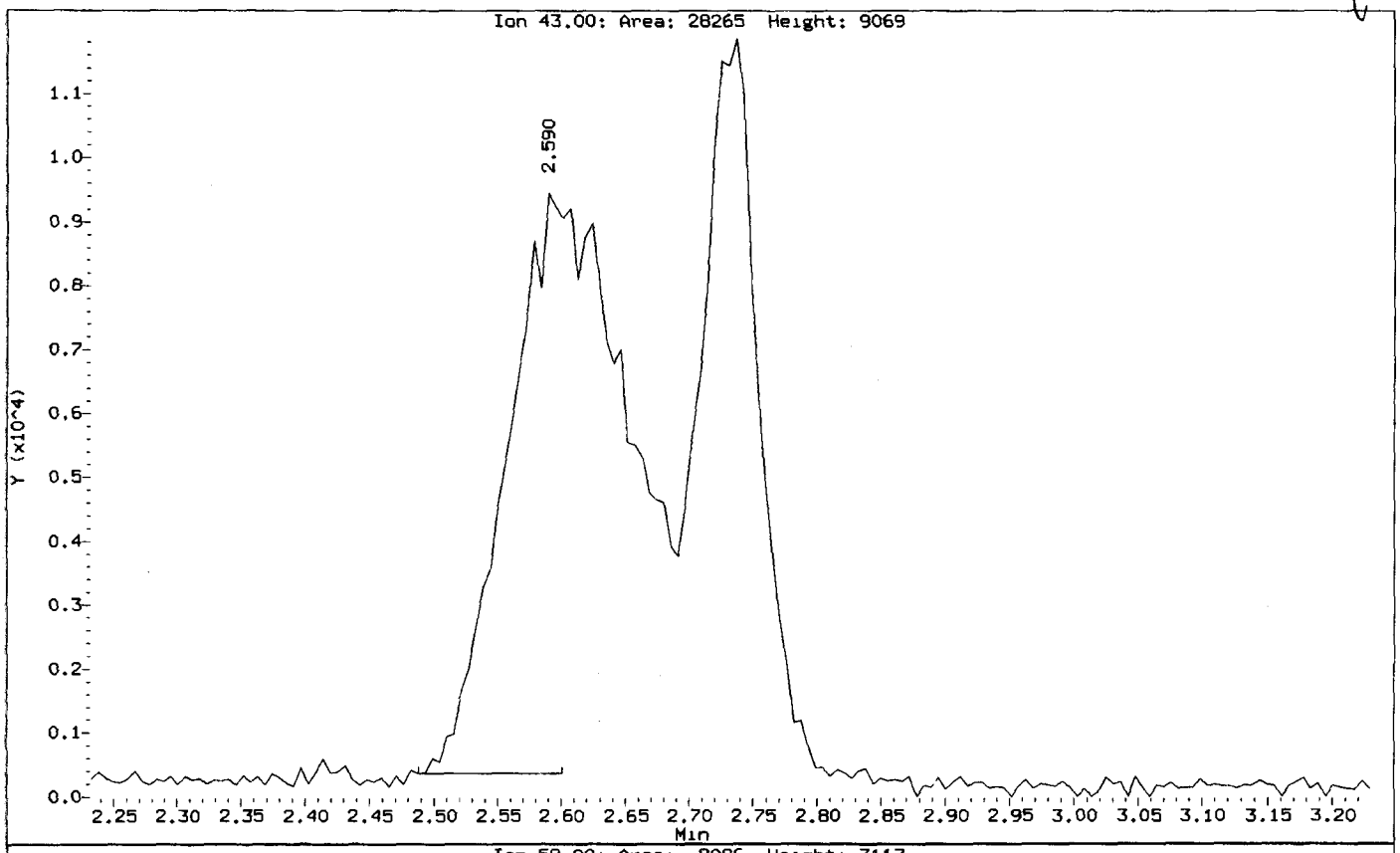


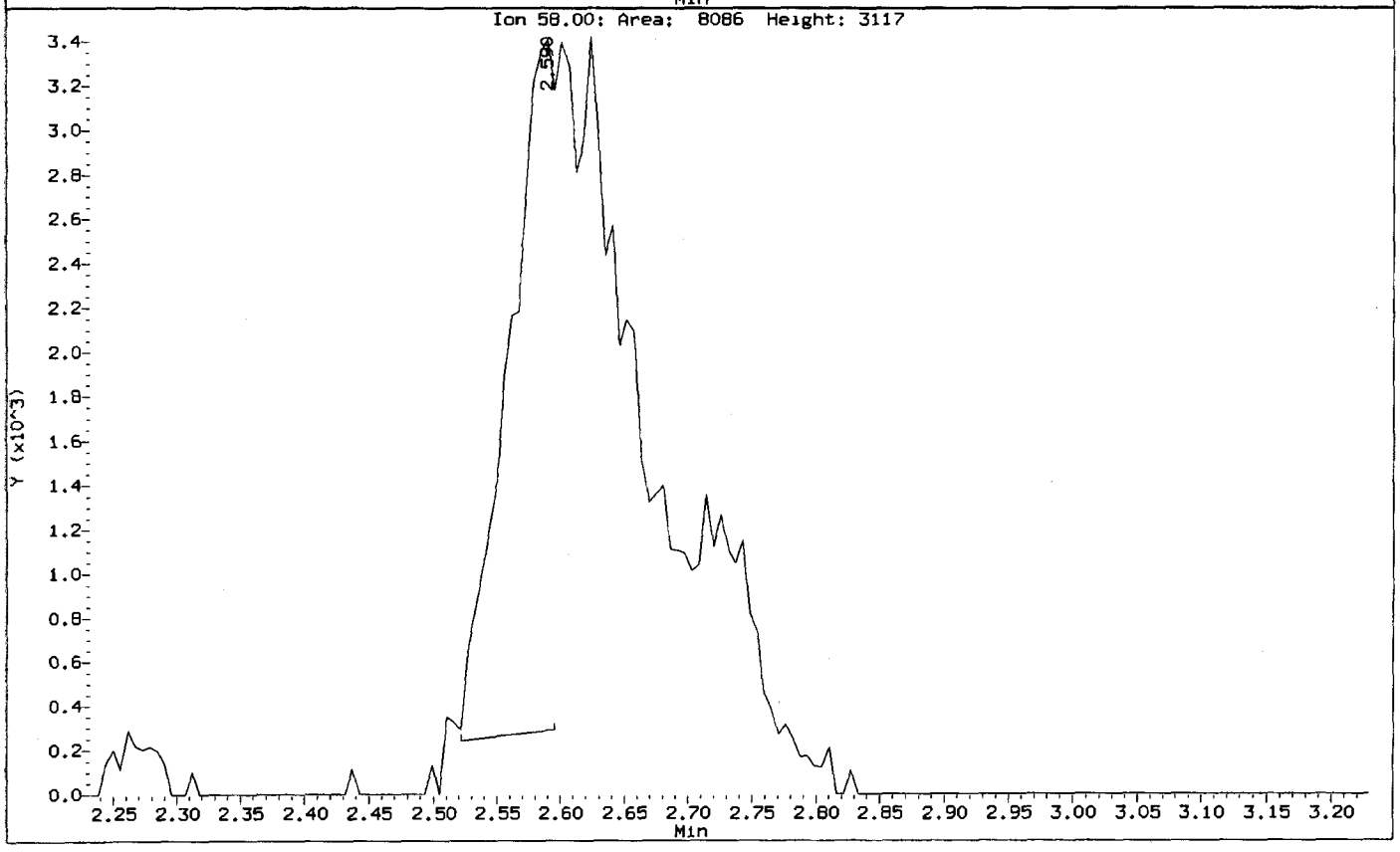




Data File: /chem1/nt5.i/11JUN13.b/0050611.d
Injection Date: 11-JUN-2013 10:57
Instrument: nt5.i
Client Sample ID: VSTD5

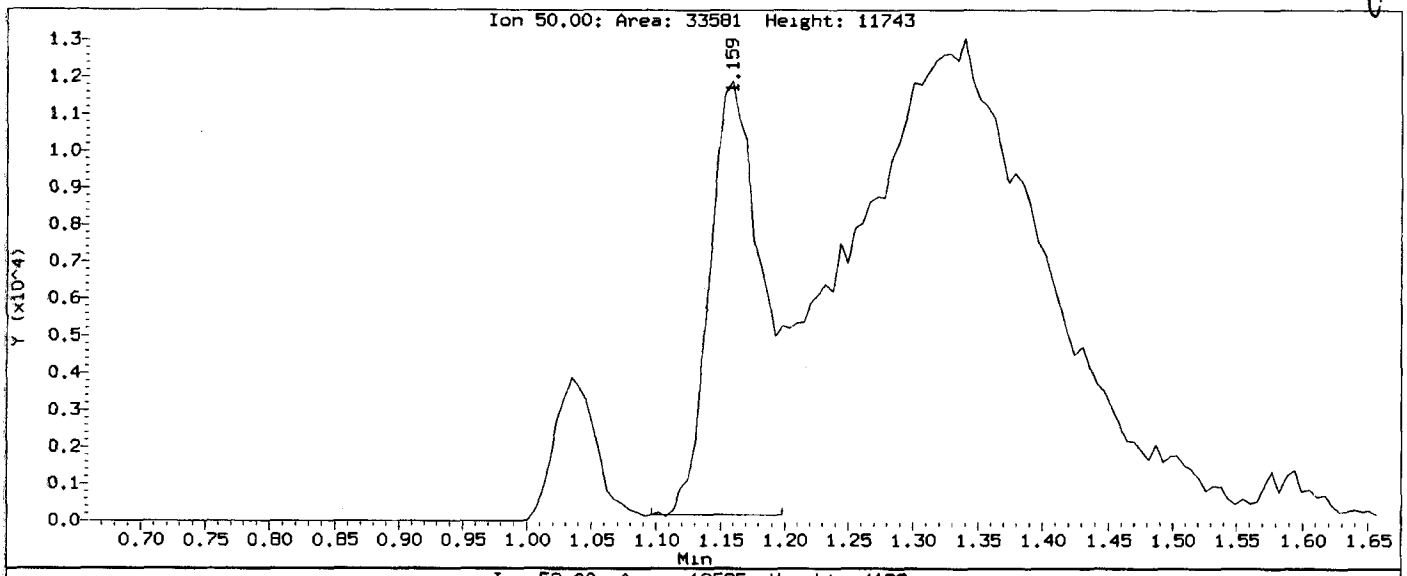
Compound: Acetone
CAS Number:

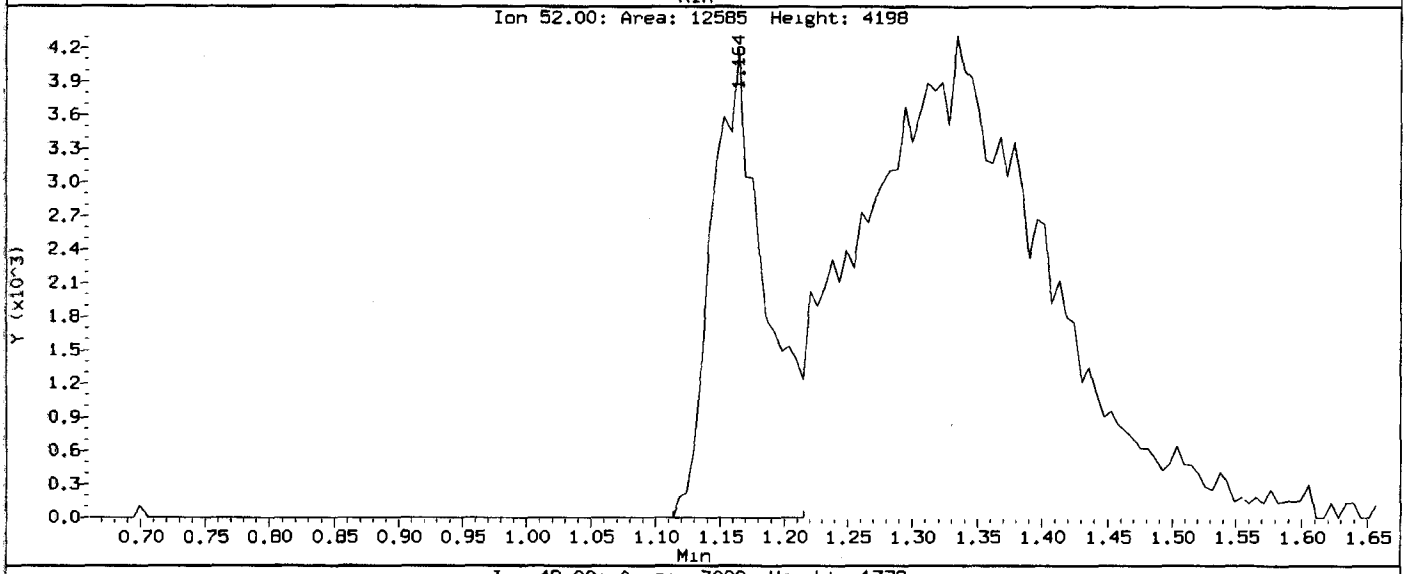


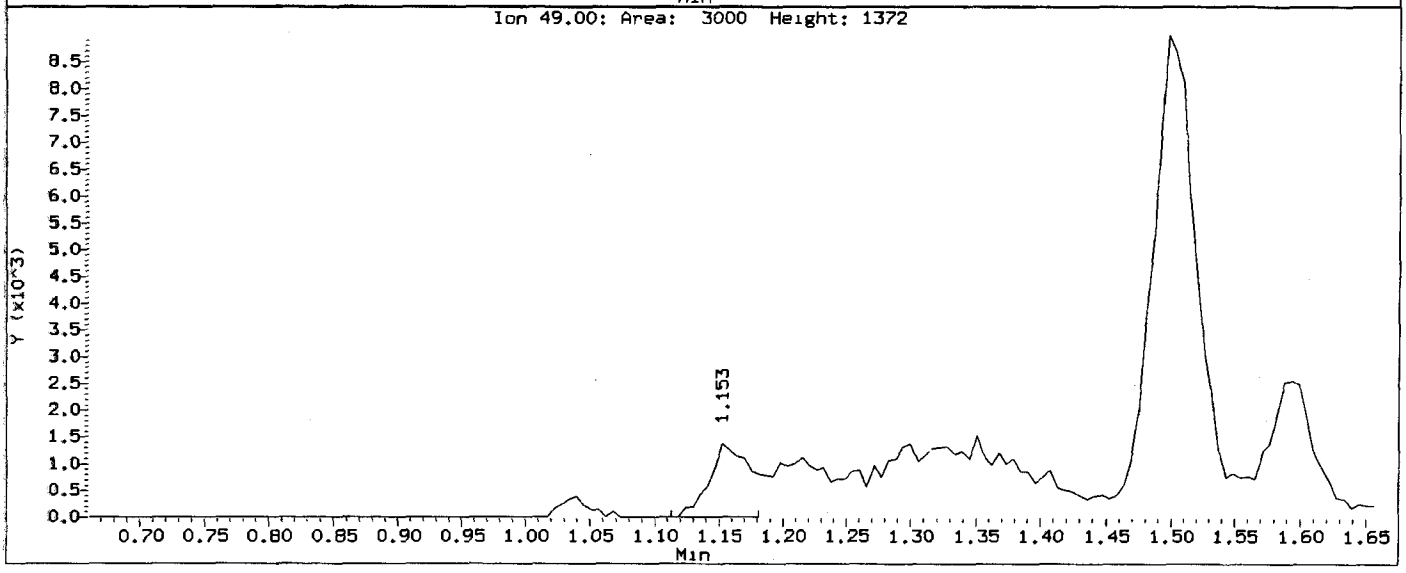


Data File: /chem1/nt5.i/11JUN13.b/0100611.d
Injection Date: 11-JUN-2013 10:33
Instrument: nt5.i
Client Sample ID: VSTD10

Compound: Chloromethane
CAS Number:



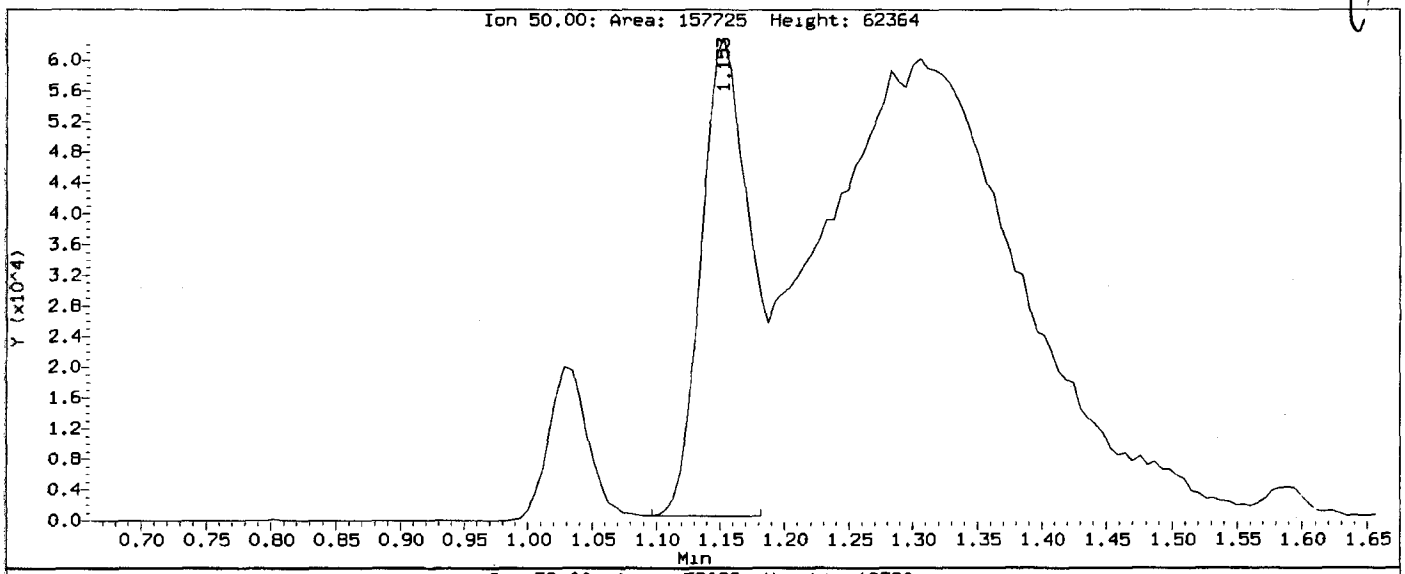


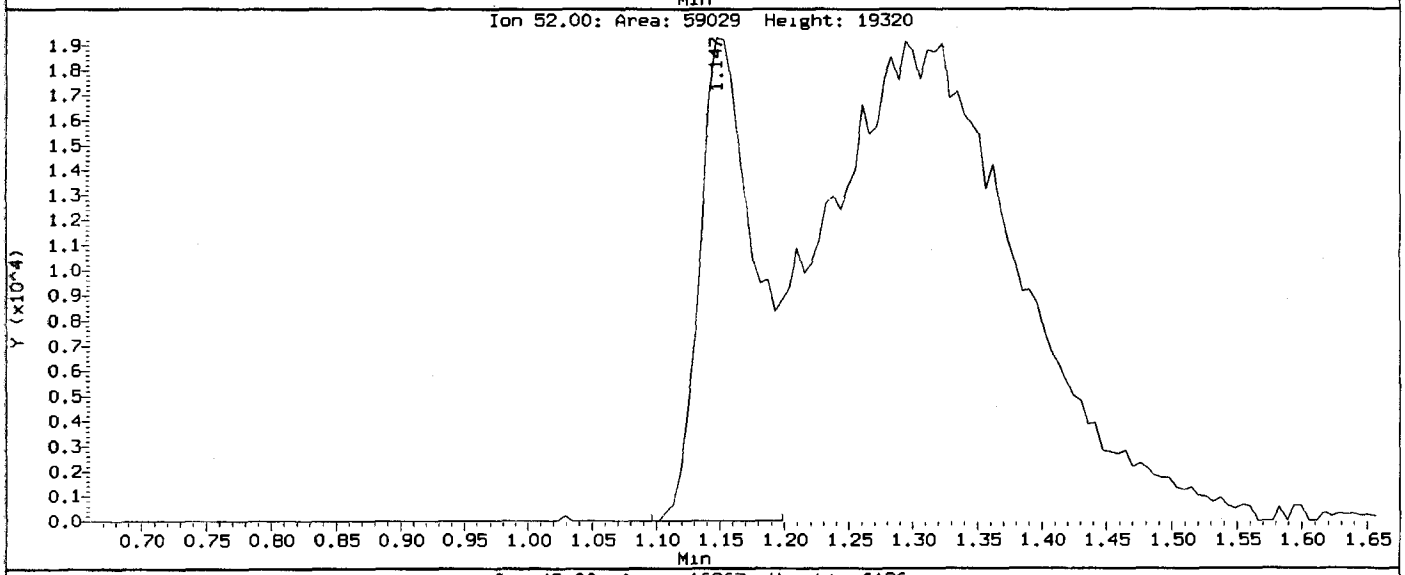


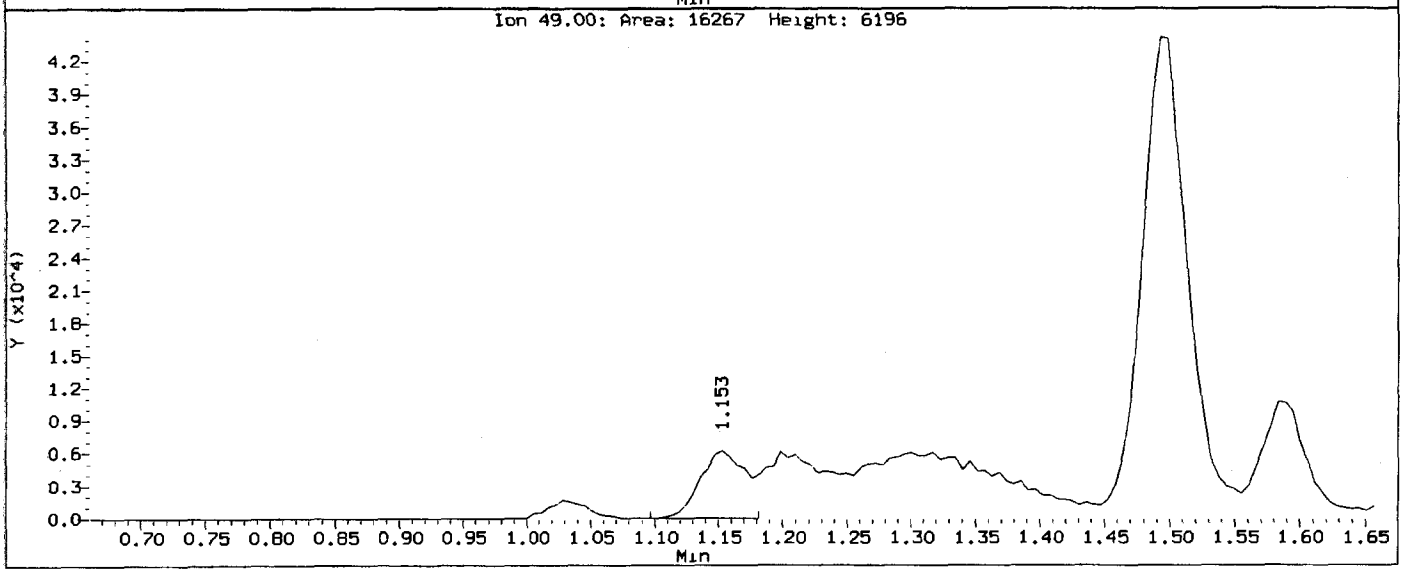
Data File: /chem1/nt5.i/11JUN13.b/0500611.d
Injection Date: 11-JUN-2013 10:09
Instrument: nt5.i
Client Sample ID: VSTD50

Compound: Chloromethane
CAS Number:

6/16/14

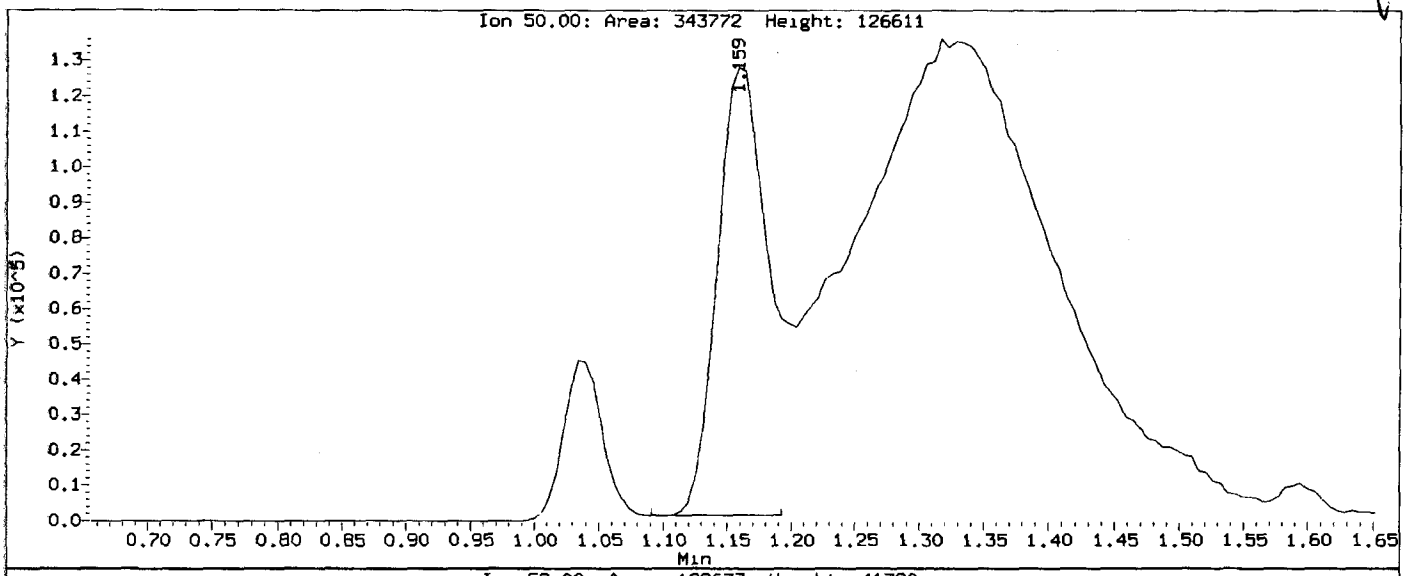


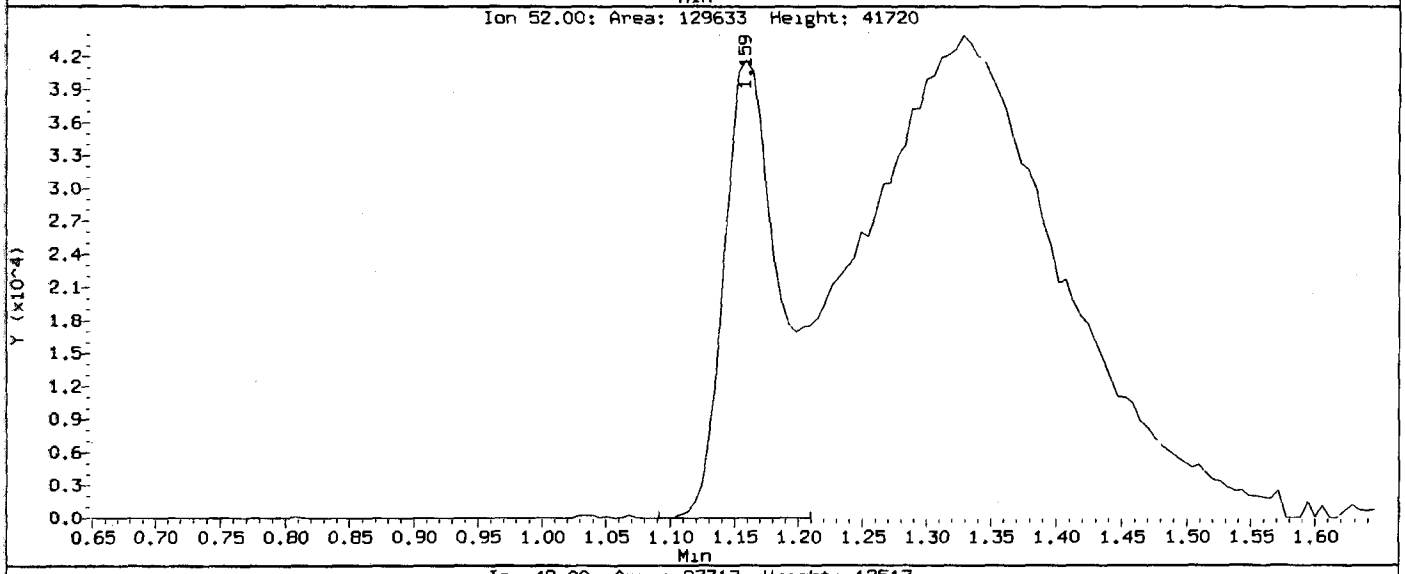


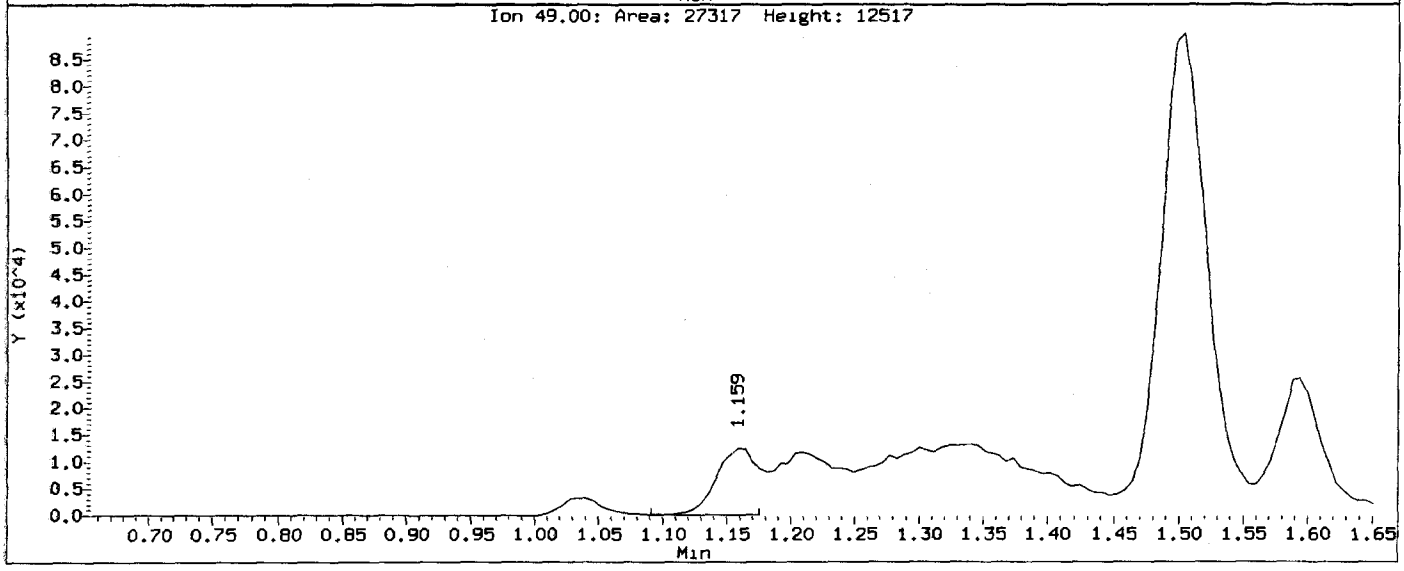


Data File: /chem1/nt5.i/11JUN13.b/1000611.d
Injection Date: 11-JUN-2013 09:45
Instrument: nt5.i
Client Sample ID: VSTD100

Compound: Chloromethane
CAS Number:

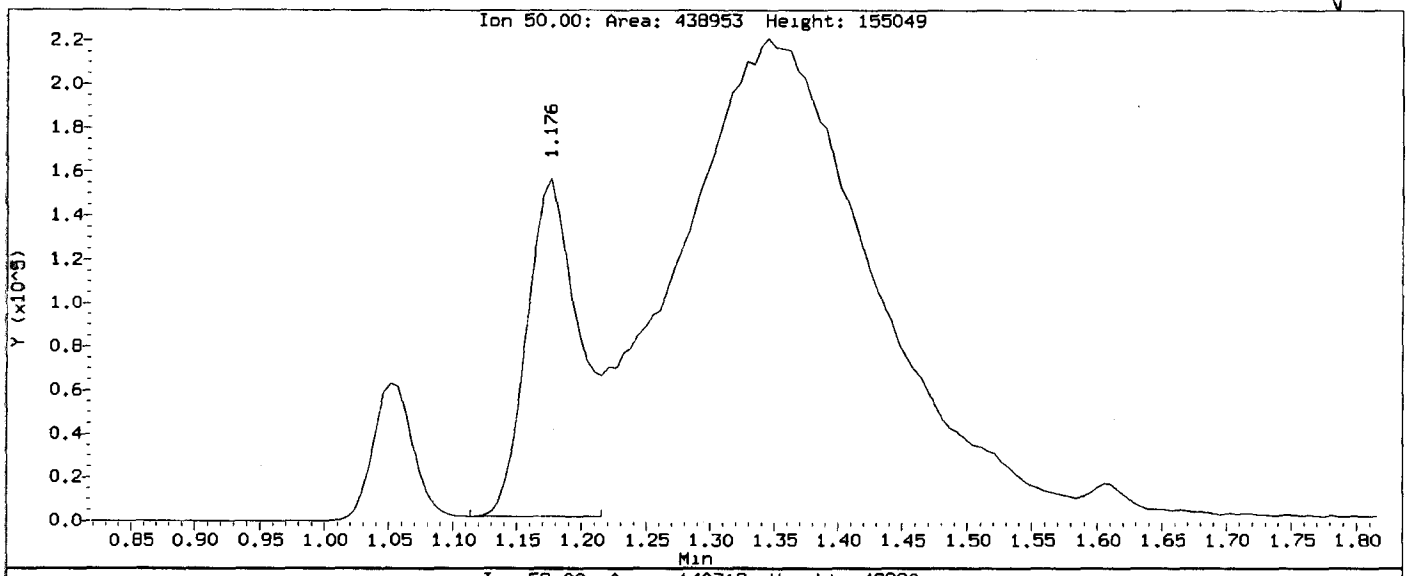


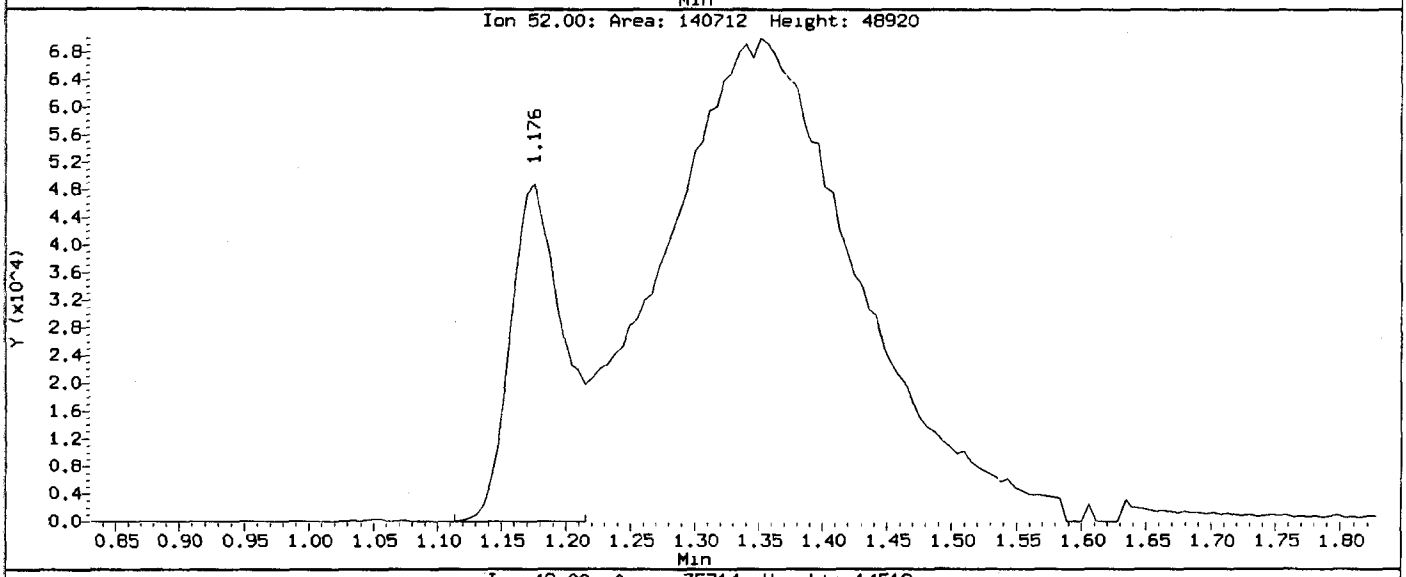


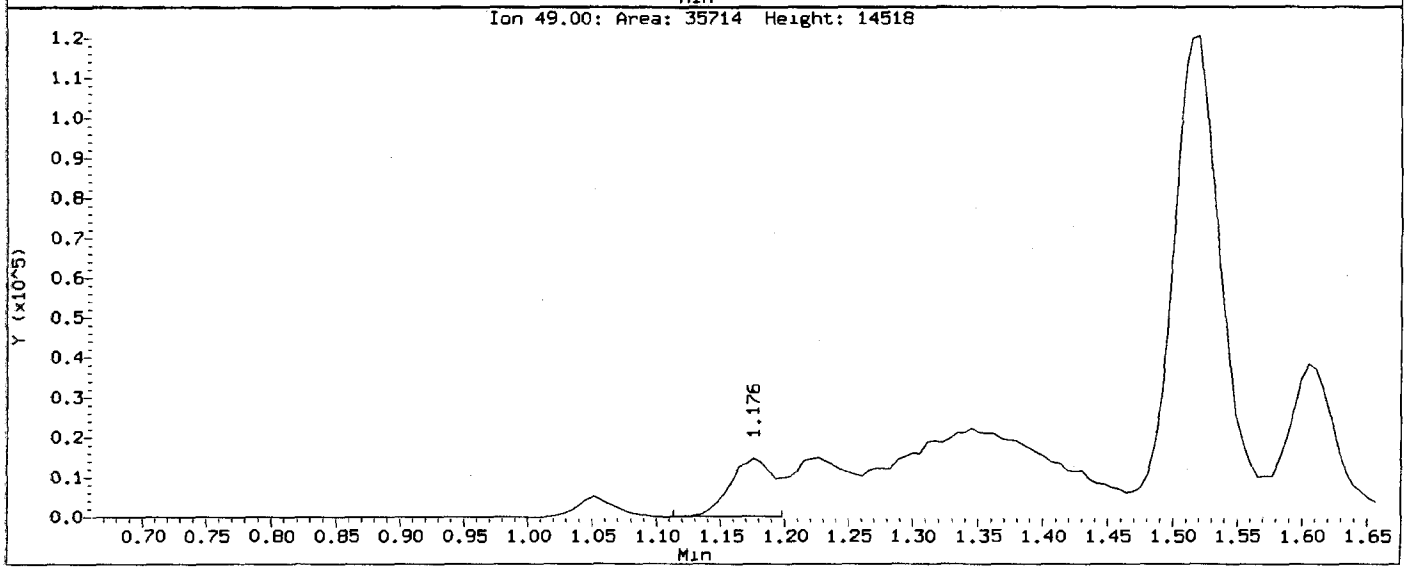


Data File: /chem1/nt5.i/11JUN13.b/1500611.d
Injection Date: 11-JUN-2013 09:21
Instrument: nt5.i
Client Sample ID: VSTD150

Compound: Chloromethane
CAS Number:

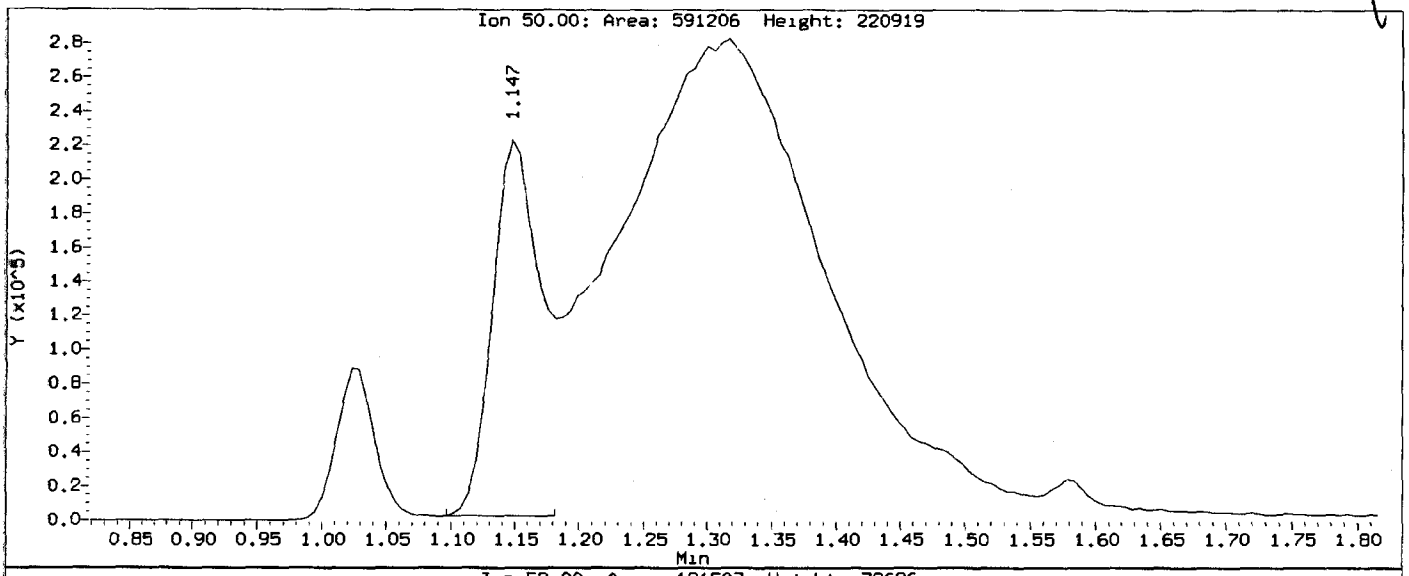


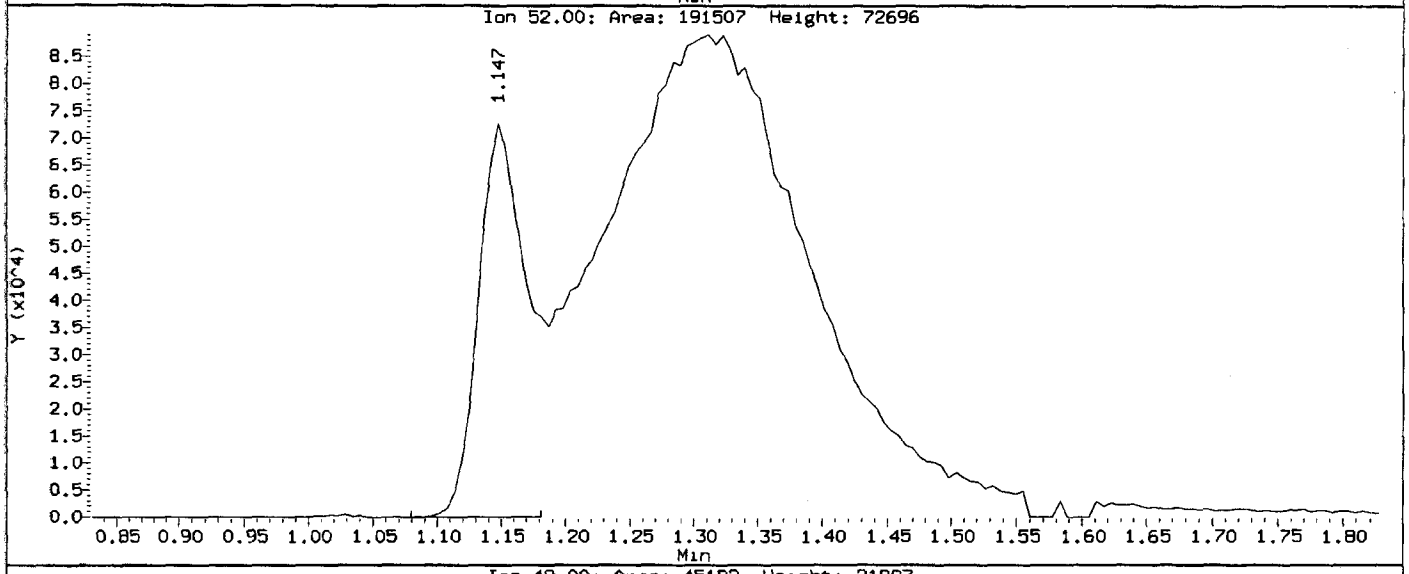


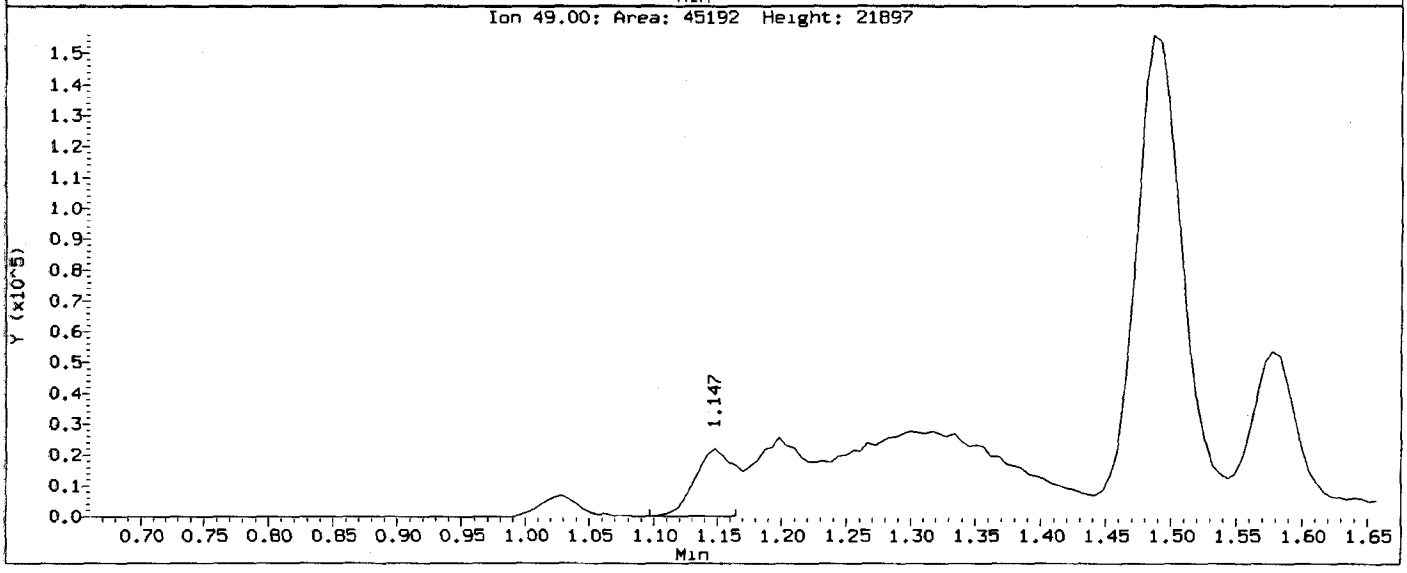


Data File: /chem1/nt5.i/11JUN13.b/2000611.d
Injection Date: 11-JUN-2013 08:57
Instrument: nt5.i
Client Sample ID: VSTD200

Compound: Chloromethane
CAS Number:



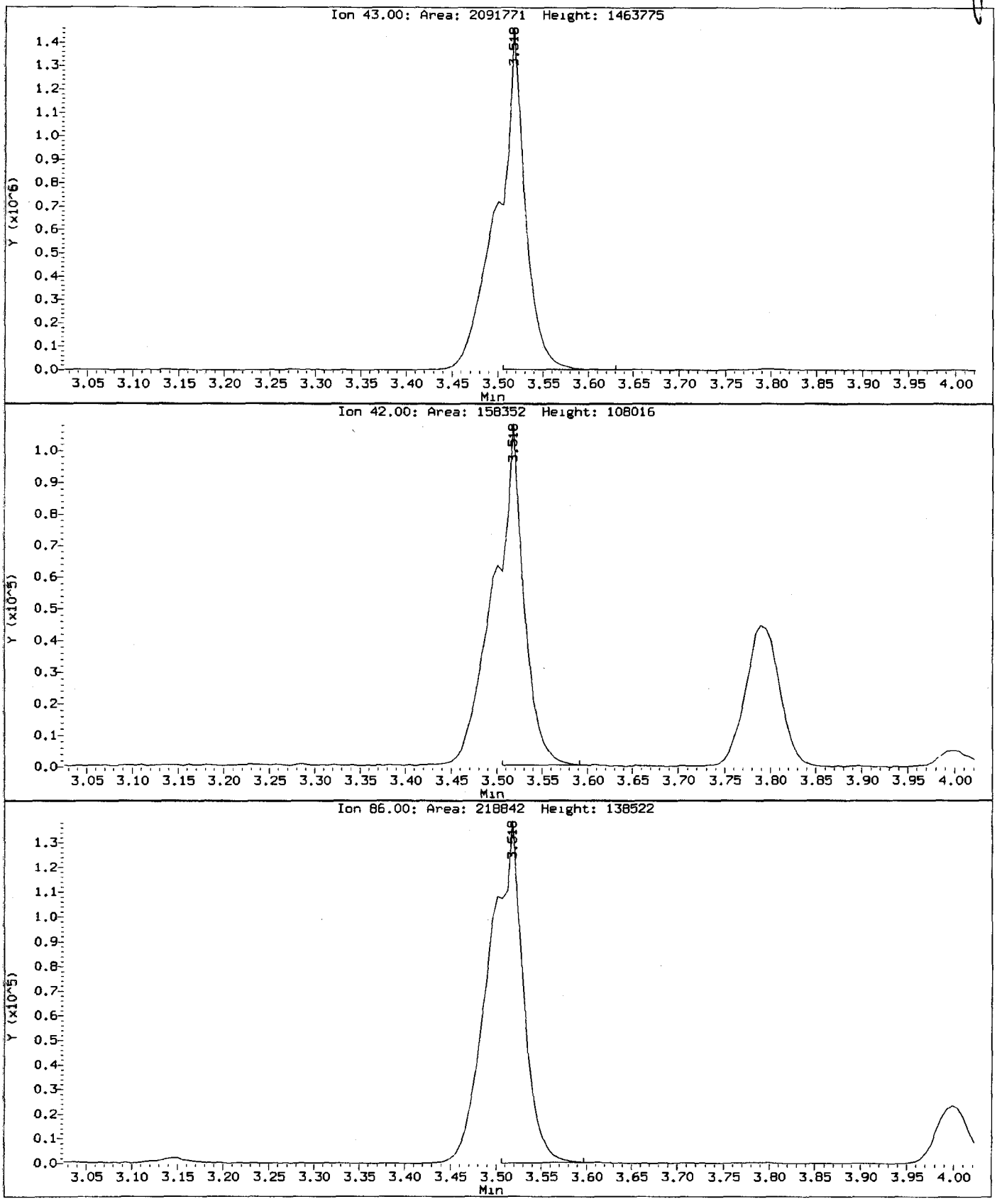




Data File: /chem1/nt5.i/11JUN13.b/2000611.d
Injection Date: 11-JUN-2013 08:57
Instrument: nt5.i
Client Sample ID: VSTD200

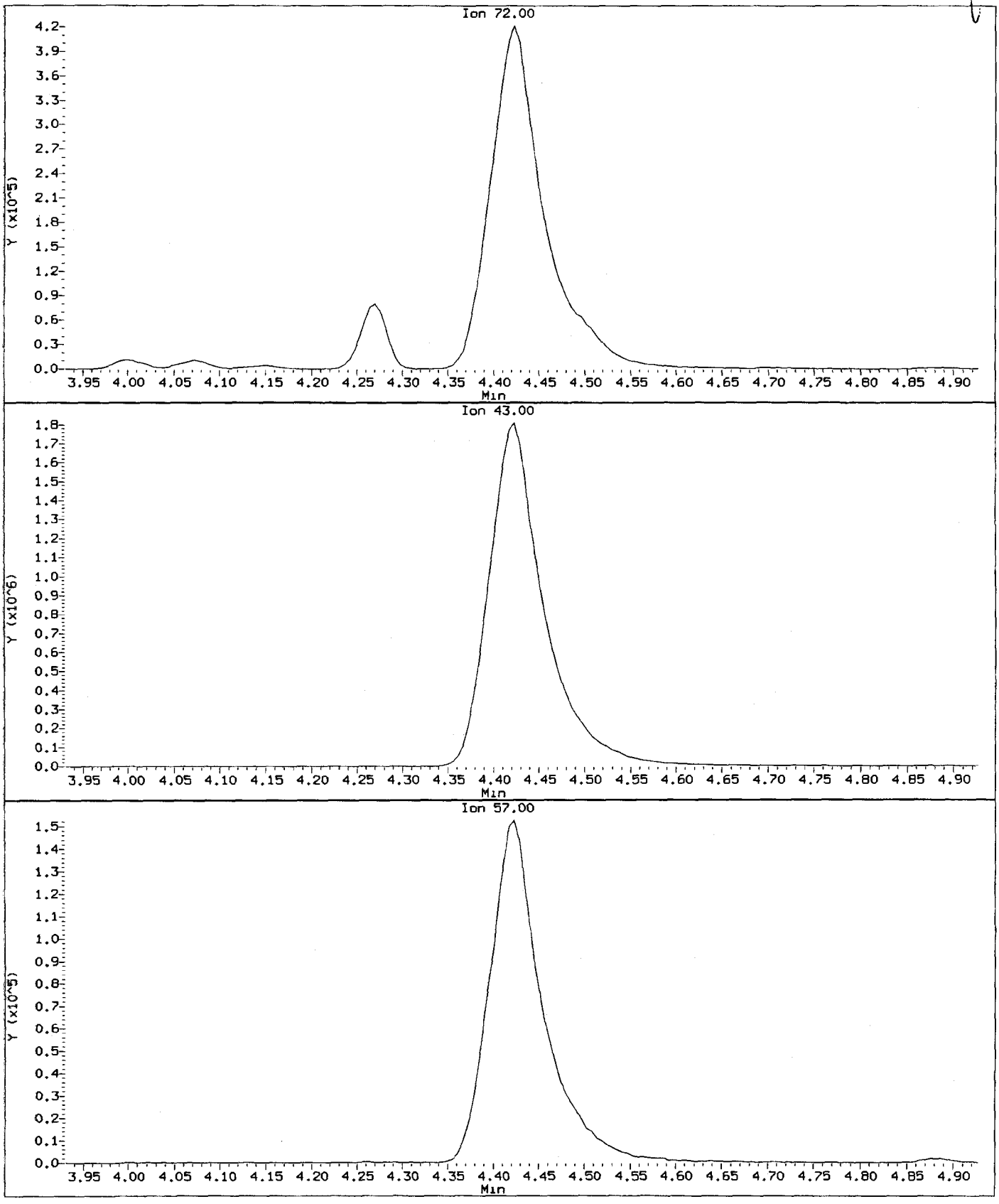
Compound: Vinyl Acetate
CAS Number:

fig 6/1 v/4



Data File: /chem1/nt5.1/11JUN13.b/2000611.d
Injection Date: 11-JUN-2013 08:57
Instrument: nt5.1
Client Sample ID: VSTD200

Compound: 2-Butanone
CAS Number:



Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: 404S(Gas) 410S(BTEX) 430S(VPH) 700S(8260C) 703S(SIM) 706S(524.3) 710S(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Curve Date(s): 5/24/16 Internal Standard ID ws724-2 Expiration 5/27/16

BFB Tune Meets Criteria?	YES / NO	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated?	YES / NO	Calibration Points Dropped?	YES / NO
Minimum Response Factors Met	YES / NO	Purge Volume (mL)	5

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
ultra	B000166	6/30/16	accustd	ws744-4	12/2016
ultra	ws794-3	10/2016	SPEX	ws797-1	6/30/16
absolute	ws793-4	10/4/16	ultra	IS201	7/2016
restek	B000164	6/30/16			

Detail problems, corrective actions and/or other pertinent information below:

ICV - DCDFM 133%R, VC 121%R, acetone 69%R, DCM 135%R
trans 1,2 DCE 124%R, VA 45%R, trans 1,4 dichloro 2 butene 75%R

Analyst: [signature] Date: 6/1/16

Reviewer: _____ Date: _____

WS21 : 89106

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 5/24/13 Analysis: 8260 Analyst: LP

GC Program: VOA01 Column No: 93857 Column Type: MXY

Instrument Tune (.U or .CT.): PAT(100) EM Voltage: 1494

Inj. Vol: 5 Calibration File: b130524 Curve Date: 5/24/13

IS/SS	Ical/Ccal	LCS/ICV
IS774-4	B000157	B000157 IS794-4 IS797-1 ISR1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/24MAY13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF							
1	0656	bfb0524.d	BFB0524	BFB0524			1							
2	1106	0010524.d	IC0524	VSTD1			1	4.67	446017	5.12	1371645	7.61	1554099	9.68 827039
3	0818	2000524.d	IC0524	VSTD200			1	4.66	471363	5.11	1455341	7.61	1604074	9.69 844016
4	0842	1500524.d	IC0524	VSTD150			1	4.66	473697	5.11	1449823	7.61	1585589	9.69 808326
5	0906	1000524.d	IC0524	VSTD100			1	4.67	456837	5.12	1403019	7.61	1562110	9.68 823874
6	0930	0500524.d	IC0524	VSTD50			1	4.67	470814	5.12	1445861	7.61	1620542	9.68 872028
7	0954	0100524.d	IC0524	VSTD10			1	4.66	462910	5.11	1417886	7.60	1584356	9.68 826523
8	1018	0050524.d	IC0524	VSTD5			1	4.66	450337	5.11	1381380	7.60	1550980	9.68 819317
9	1042	0020524.d	IC0524	VSTD2			1	4.67	426041	5.12	1321945	7.61	1495855	9.68 803637
10	1146	icv0524.d	ICV0524	ICV0524			1	4.66	436823	5.11	1350934	7.61	1490058	9.68 805888

LP 5/25/13

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Data File: /chem1/nt5.i/24MAY13.b/bfb0524.d

Date : 24-MAY-2013 06:56

Client ID: BFB0524

Instrument: nt5.i

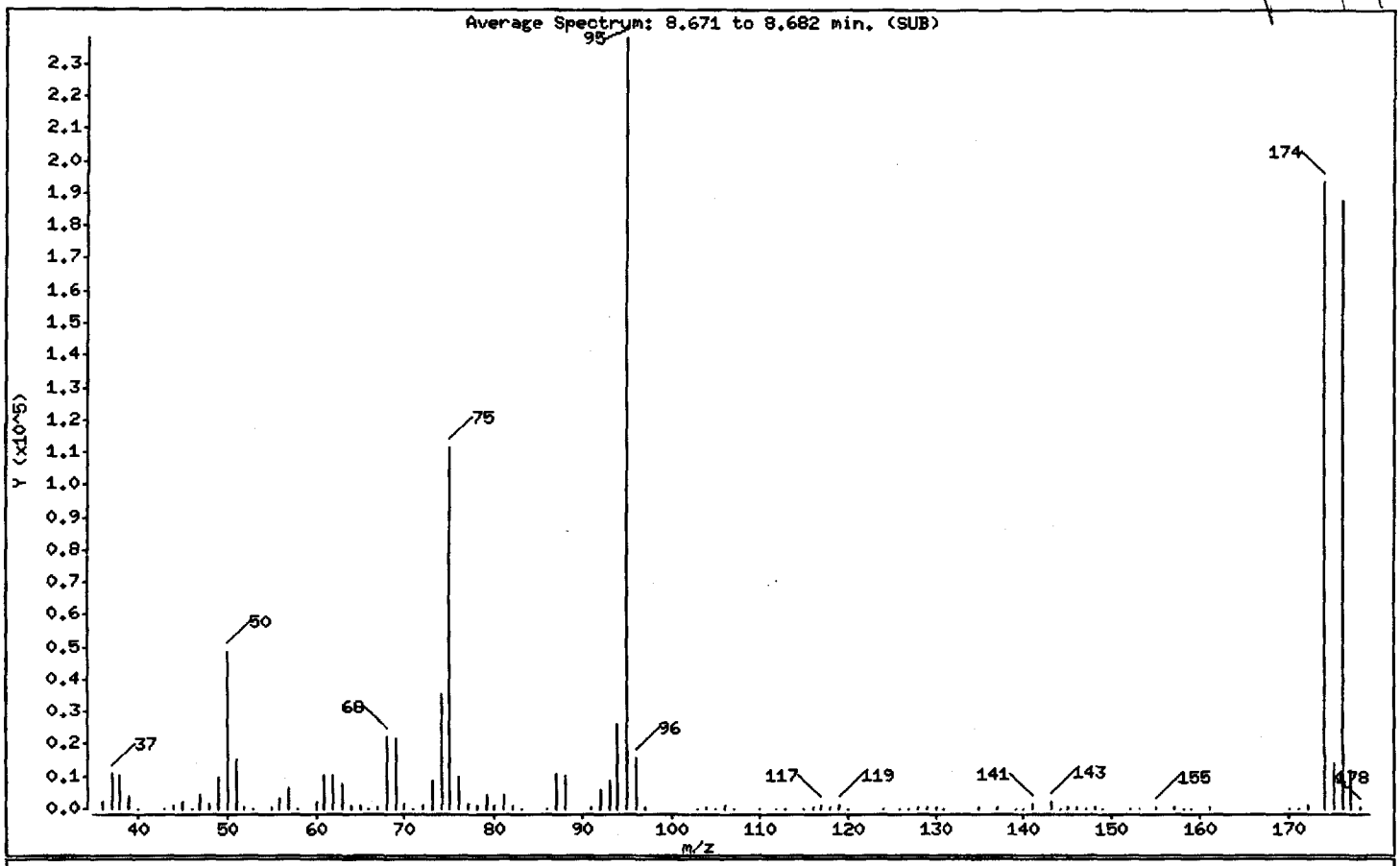
Sample Info: BFB0524,BFB0524,,1,24MAY13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	20.37
75	30.00 - 66.00% of mass 95	46.87
96	5.00 - 9.00% of mass 95	6.69
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	81.49
175	4.00 - 9.00% of mass 174	6.06 (7.44)
176	95.00 - 101.00% of mass 174	78.83 (96.74)
177	5.00 - 9.00% of mass 176	5.08 (6.45)

Data File: /chem1/nt5.i/24MAY13.b/bfb0524.d

Date : 24-MAY-2013 06:56

Client ID: BFB0524

Instrument: nt5.i

Sample Info: BFB0524,BFB0524,,1,24MAY13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0524.d

Spectrum: Average Spectrum: 8.671 to 8.682 min. (SUB)

Location of Maximum: 95.00

Number of points: 106

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2053	67.00	332	103.00	47	142.00	251
37.00	11080	68.00	22336	104.00	801	143.00	2202
38.00	10313	69.00	21808	105.00	251	144.00	116
39.00	4069	70.00	1643	106.00	850	145.00	354
40.00	76	71.00	40	107.00	253	146.00	362
43.00	123	72.00	948	110.00	44	147.00	146
44.00	1133	73.00	8984	111.00	189	148.00	595
45.00	2094	74.00	35688	112.00	103	149.00	213
46.00	228	75.00	111648	113.00	166	150.00	188
47.00	4364	76.00	9754	115.00	131	152.00	49
48.00	1431	77.00	1453	116.00	543	153.00	182
49.00	9707	78.00	952	117.00	1146	154.00	101
50.00	48512	79.00	4131	118.00	680	155.00	644
51.00	15114	80.00	1104	119.00	831	157.00	381
52.00	727	81.00	4388	120.00	36	158.00	40
53.00	55	82.00	932	124.00	116	159.00	242
55.00	805	83.00	142	126.00	95	161.00	290
56.00	3197	86.00	247	127.00	47	170.00	161
57.00	6305	87.00	10830	128.00	744	171.00	132
58.00	260	88.00	10136	129.00	318	172.00	1240
60.00	2031	91.00	656	130.00	718	174.00	194048
61.00	10582	92.00	6138	131.00	248	175.00	14434
62.00	10305	93.00	8999	135.00	316	176.00	187712
63.00	7723	94.00	26272	137.00	325	177.00	12104
64.00	931	95.00	238144	139.00	39	178.00	328
65.00	841	96.00	15945	140.00	157		
66.00	131	97.00	545	141.00	1822		

Data File: /chem1/nt5.i/24MAY13.b/bfb0524.d

Date : 24-MAY-2013 06:56

Client ID: BFB0524

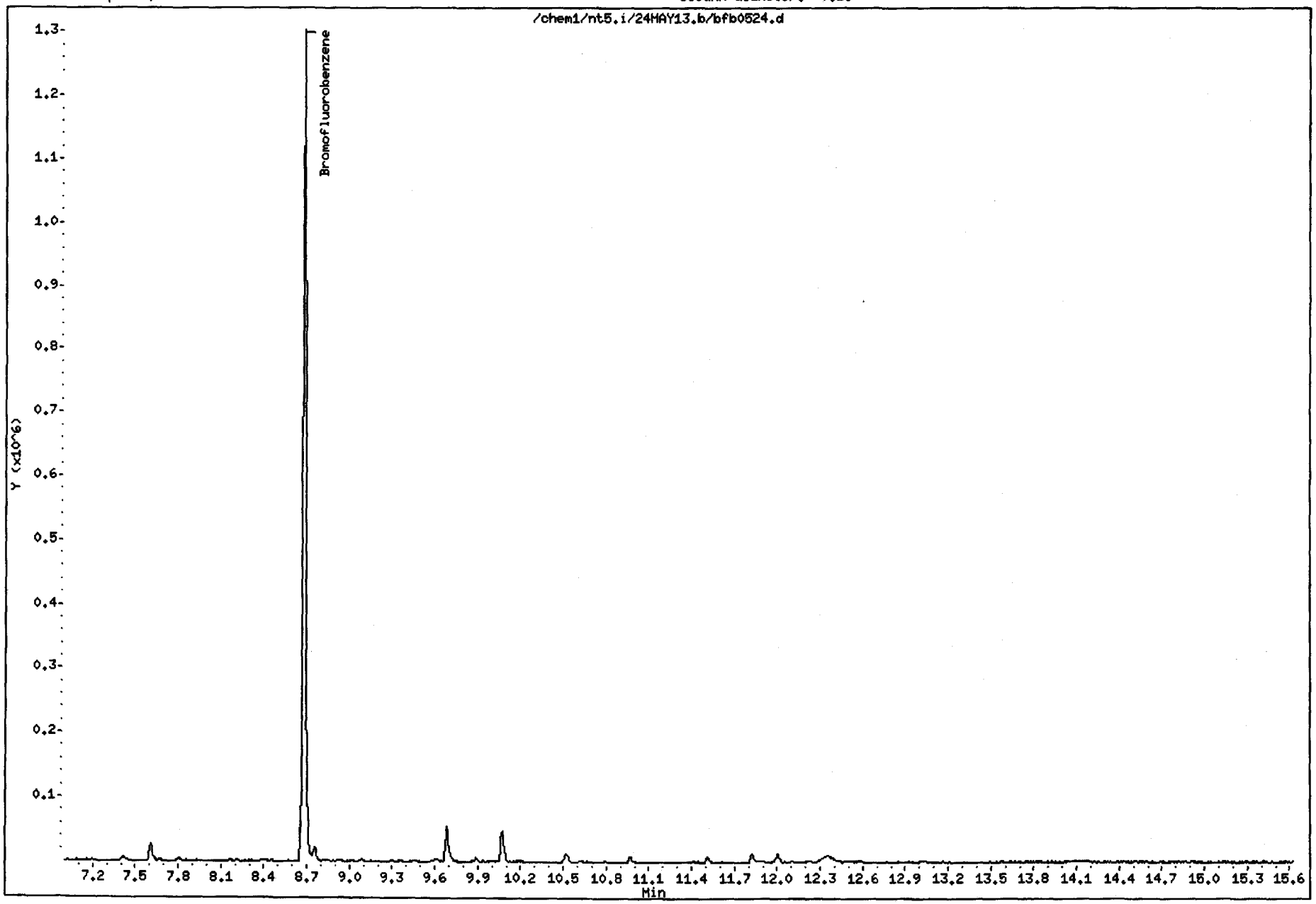
Sample Info: BFB0524,BFB0524,,1,24MAY13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/VO121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt5.i/24MAY13.b/0010524.d
Level 2: /chem1/nt5.i/24MAY13.b/0020524.d
Level 3: /chem1/nt5.i/24MAY13.b/0050524.d
Level 4: /chem1/nt5.i/24MAY13.b/0100524.d
Level 5: /chem1/nt5.i/24MAY13.b/0500524.d
Level 6: /chem1/nt5.i/24MAY13.b/1000524.d
Level 7: /chem1/nt5.i/24MAY13.b/1500524.d
Level 8: /chem1/nt5.i/24MAY13.b/2000524.d

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
1 Dichlorodifluoromethane	0.76398	0.71413	0.72865	0.73455	0.65246	0.74271		
	0.95124	0.76484					0.75657	11.405
2 Chloromethane	1.28571	1.46864	1.49981	1.59217	1.27963	1.54865		
	1.53068	1.53962					1.46811	8.170
3 Vinyl Chloride	1.21217	1.31566	1.28093	1.30978	1.14889	1.51521		
	1.58830	1.55157					1.36531	12.062
4 Bromomethane	0.74975	0.81559	0.74602	0.74561	0.63700	0.69436		
	0.66659	0.64371					0.71233	8.735
5 Chloroethane	0.74302	0.79147	0.77835	0.79616	0.69412	0.75470		
	0.68300	0.61267					0.73169	8.723
6 Trichlorofluoromethane	1.28437	1.41923	1.45535	1.54959	1.20315	1.46219		
	1.46573	1.47849					1.41476	8.039

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
7 1,1-Dichloroethene	0.77632	0.81019	0.85205	0.74994	0.63762	0.77144		
	0.81578	0.97972					0.79913	12.115
8 Carbon Disulfide	2.53118	2.59107	2.82109	2.42649	2.11165	2.50521		
	2.62019	3.04177					2.58108	10.600
9 112Trichloro122Trifluoroethan	0.69896	0.75732	0.75119	0.66743	0.55260	0.67019		
	0.73043	0.92035					0.71856	14.531
10 Iodomethane	0.54875	0.61361	0.53400	0.49534	0.49409	0.71341		
	0.75978	+++++					0.59414	17.851
11 Bromoethane	0.55458	0.63891	0.48495	0.45420	0.38896	0.45000		
	0.45460	0.56133					0.49844	16.127
12 Acrolein	+++++	+++++	0.16525	0.11075	0.15257	0.11855		
	0.12449	+++++					0.13432	17.423
13 Methylene Chloride	+++++	+++++	0.86795	0.59504	0.87002	0.58646		
	0.58800	0.69294					0.70007	19.546
14 Acetone	0.38860	0.40393	0.35089	0.41276	0.33671	0.27411		
	+++++	+++++					0.36116	14.401
15 Trans-1,2-Dichloroethene	0.95635	1.04849	1.00907	1.15178	0.89489	0.69869		
	0.66831	0.77701					0.90058	19.227

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/VO121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1 / 150.000 Level 7	2.000 Level 2 / 200.000 Level 8	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
16 Methyl tert butyl ether	2.71806	3.06936	3.16701	3.33712	2.91593	3.22318			
	1.75105	+++++					2.88310	18.716	
17 1,1-Dichloroethane	1.83793	2.17379	2.18803	2.37603	1.87755	2.21543			
	2.17790	+++++					2.12095	9.107	
18 Acrylonitrile	0.44606	0.51844	0.51433	0.52800	0.47755	0.51143			
	0.49047	+++++					0.49804	5.760	
19 Vinyl Acetate	2.41370	2.70385	2.76857	2.95239	2.60303	2.82427			
	2.69184	2.57261					2.69128	6.136	
20 Cis-1,2-Dichloroethene	1.01072	1.12419	1.13486	1.20010	0.97178	1.14647			
	1.13515	1.14601					1.10866	6.915	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
22 2,2-Dichloropropane	1.38638	1.64773	1.64925	1.76220	1.35544	1.64759			
	1.66034	1.67486					1.59797	9.097	
23 Bromochloromethane	0.43081	0.48493	0.49696	0.50415	0.43239	0.49635			
	0.49340	0.49700					0.47950	6.264	
24 Chloroform	1.62191	1.82095	1.78968	1.93696	1.60112	1.87237			
	1.85286	1.85943					1.79441	6.723	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
25 Carbon Tetrachloride	0.40266	0.44105	0.45847	0.48793	0.38564	0.47145			
	0.47887	0.48231					0.45105	8.506	
26 1,1,1-Trichloroethane	1.45196	1.58641	1.65980	1.78843	1.39670	1.70511			
	1.70739	1.72080					1.62707	8.498	
28 1,1-Dichloropropene	0.42941	0.49299	0.51897	0.59215	0.43309	0.52790			
	0.53696	0.53985					0.50891	10.879	
29 2-Butanone	0.11914	0.13421	0.13442	0.13936	0.13358	0.14161			
	0.13537	0.13167					0.13367	5.011	
30 Benzene	1.30322	1.48607	1.55925	1.73784	1.31333	1.52521			
	1.45694	1.37848					1.47004	9.754	
33 1,2-Dichloroethane	0.42001	0.47757	0.49081	0.50320	0.42990	0.48254			
	0.47062	0.46503					0.46746	6.174	
34 Trichloroethene	0.32038	0.36151	0.37164	0.39365	0.30879	0.37020			
	0.37690	0.37975					0.36035	8.286	
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
37 Dibromomethane	0.18930	0.19492	0.20367	0.21143	0.18117	0.20595			
	0.20244	0.20142					0.19879	4.924	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
38 1,2-Dichloropropane	0.36310	0.40968	0.42670	0.44696	0.36809	0.43635		
	0.43052	0.42828					0.41371	7.611
39 Bromodichloromethane	0.40798	0.44436	0.46135	0.48098	0.40785	0.47425		
	0.46642	0.46617					0.45117	6.364
40 2-Chloroethyl Vinyl Ether	0.17162	0.18853	0.20988	0.23947	0.22589	0.25557		
	0.25049	0.24473					0.22327	13.719
41 Cis 1,3-dichloropropene	0.47261	0.54779	0.58845	0.63707	0.54033	0.62112		
	0.61024	0.59999					0.57720	9.356
43 Toluene	0.89655	0.93761	0.96779	1.04052	0.82282	0.95863		
	0.93390	0.90176					0.93245	6.770
44 Tetrachloroethene	0.28988	0.33879	0.34349	0.38340	0.28664	0.34742		
	0.36034	0.36348					0.33918	10.135
45 4-Methyl-2-Pentanone	0.13727	0.16396	0.17473	0.18473	0.17527	0.18304		
	0.17224	0.16343					0.16933	8.899
46 Trans 1,3-Dichloropropene	0.43685	0.50116	0.54476	0.57229	0.49509	0.55958		
	0.54740	0.53783					0.52437	8.443
47 1,1,2-Trichloroethane	0.25593	0.30296	0.30221	0.31872	0.27659	0.30994		
	0.30448	0.30110					0.29649	6.836

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/VO121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
48 Chlorodibromomethane	0.26215	0.27371	0.29487	0.31539	0.27282	0.31176		
	0.31178	0.30807					0.29382	7.234
49 1,3-Dichloropropane	0.43440	0.46774	0.49430	0.52845	0.45378	0.51214		
	0.50858	0.49477					0.48677	6.575
50 1,2-Dibromoethane	0.25185	0.27325	0.29201	0.30787	0.27078	0.30350		
	0.29677	0.29286					0.28611	6.663
51 2-Hexanone	0.20716	0.24441	0.26484	0.28257	0.26477	0.26982		
	0.26148	0.25098					0.25575	8.900
53 Chlorobenzene	0.77054	0.86700	0.90595	0.94988	0.75124	0.85850		
	0.84962	0.81658					0.84616	7.805
54 Ethyl Benzene	1.28065	1.46055	1.56457	1.70845	1.33777	1.50403		
	1.42314	1.31035					1.44869	9.916
55 1,1,1,2-Tetrachloroethane	0.26835	0.29486	0.30157	0.31850	0.26672	0.31216		
	0.31370	0.30984					0.29822	6.810
56 m,p-xylene	0.44873	0.53475	0.58804	0.63413	0.50526	0.57357		
	0.55282	0.51902					0.54454	10.365
57 o-Xylene	0.38614	0.47119	0.52007	0.60178	0.48655	0.57555		
	0.57688	0.56674					0.52311	13.811

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
58 Styrene	0.68075	0.81816	0.92850	1.02427	0.83931	0.96495			
	0.93500	0.89059					0.88519	11.962	
59 Bromoform	0.33904	0.37763	0.40140	0.41932	0.37316	0.42172			
	0.42696	0.40277					0.39525	7.613	
60 Isopropyl Benzene	1.95982	2.32823	2.67640	3.01624	2.30547	2.68740			
	2.63603	2.34284					2.49405	12.991	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
63 Bromobenzene	0.60209	0.65073	0.70034	0.74302	0.58255	0.68126			
	0.70297	0.67500					0.66724	8.023	
64 N-Propyl Benzene	2.65761	3.02058	3.32402	3.67860	2.72779	3.11017			
	3.00610	2.65452					3.02242	11.763	
65 1,1,2,2-Tetrachloroethane	0.57440	0.64641	0.68044	0.70611	0.62403	0.68775			
	0.69823	0.65707					0.65930	6.682	
66 2-Chloro Toluene	1.61316	1.77045	1.96715	2.14869	1.67611	1.95896			
	1.98433	1.82746					1.86829	9.561	
67 1,3,5-Trimethyl Benzene	1.61988	2.00395	2.24467	2.52421	1.94475	2.26995			
	2.27384	2.06693					2.11852	12.892	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
68 1,2,3-Trichloropropane	0.18216	0.19577	0.20552	0.21709	0.19219	0.20994		
	0.21114	0.19813					0.20149	5.716
69 Trans-1,4-Dichloro 2-Butene	0.24322	0.25070	0.25458	0.27356	0.23266	0.25834		
	0.27027	0.23715					0.25256	5.827
70 4-Chloro Toluene	1.64895	1.88316	2.06730	2.28381	1.75143	2.04081		
	2.05779	1.93402					1.95841	10.199
71 T-Butyl Benzene	1.39619	1.74653	1.98144	2.19935	1.70420	2.01809		
	2.03665	1.86665					1.86864	13.384
72 1,2,4-Trimethylbenzene	1.58541	1.94177	2.21328	2.49141	1.93028	2.24160		
	2.22499	2.02578					2.08182	13.133
73 S-Butyl Benzene	2.22493	2.71637	3.01538	3.32610	2.51112	2.88551		
	2.80065	2.48726					2.74591	12.510
74 4-Isopropyl Toluene	1.67471	2.06399	2.38090	2.69963	2.06786	2.40405		
	2.36566	2.14227					2.22488	13.819
75 1,3-Dichlorobenzene	1.12220	1.24201	1.30533	1.40596	1.08778	1.25640		
	1.26897	1.19366					1.23529	8.207
77 1,4-Dichlorobenzene	1.23948	1.31291	1.35941	1.45935	1.11036	1.28317		
	1.30209	1.24906					1.28948	7.794

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/V0121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
78 N-Butyl Benzene	1.55815	1.97266	2.20834	2.53701	1.93532	2.29057		
	2.28954	2.11135					2.11287	13.980
80 1,2-Dichlorobenzene	1.12298	1.22089	1.26610	1.34393	1.05281	1.19319		
	1.20338	1.16289					1.19577	7.373
81 1,2-Dibromo 3-Chloropropane	0.10798	0.13501	0.12923	0.13506	0.12602	0.13045		
	0.13474	0.12757					0.12826	6.951
82 Hexachloro 1,3-Butadiene	0.45621	0.51656	0.55461	0.59272	0.45206	0.52881		
	0.55582	0.56050					0.52716	9.559
83 1,2,4-Trichlorobenzene	0.70214	0.78633	0.84024	0.93944	0.76231	0.88555		
	0.93456	0.94674					0.84966	10.848
84 Naphthalene	1.66546	1.72733	1.83747	2.06478	1.88728	2.03329		
	2.02626	1.88234					1.89053	7.726
85 1,2,3-Trichlorobenzene	0.70172	0.77373	0.82236	0.87547	0.74078	0.82967		
	0.86892	0.87126					0.81049	8.061
$ 27 Dibromofluoromethane	1.12920	1.14235	1.13168	1.11695	1.12299	1.12479		
	1.12091	1.12186					1.12634	0.707
$ 32 d4-1,2-Dichloroethane	1.13811	1.15969	1.14200	1.12238	1.11455	1.11202		
	1.11226	1.09402					1.12438	1.862

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-2013 08:18
End Cal Date : 24-MAY-2013 11:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/24MAY13.b/VO121012S.m
Cal Date : 11-Jun-2013 15:27 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
$ 42 d8-Toluene	1.42382	1.43839	1.41990	1.40966	1.40990	1.40804		
	1.40692	1.39537					1.41400	0.924
$ 62 4-Bromofluorobenzene	0.53107	0.53545	0.53537	0.53088	0.53155	0.53183		
	0.52648	0.52290					0.53069	0.797
$ 79 d4-1,2-Dichlorobenzene	0.99295	0.99353	0.99460	0.99693	0.98358	0.97423		
	0.97921	0.97779					0.98660	0.901

Data File: /chem3/pid3.i/20130604-2.b/0604a025.d

Page 1

Date : 04-JUN-2013 21:10

Client ID: INF-060313

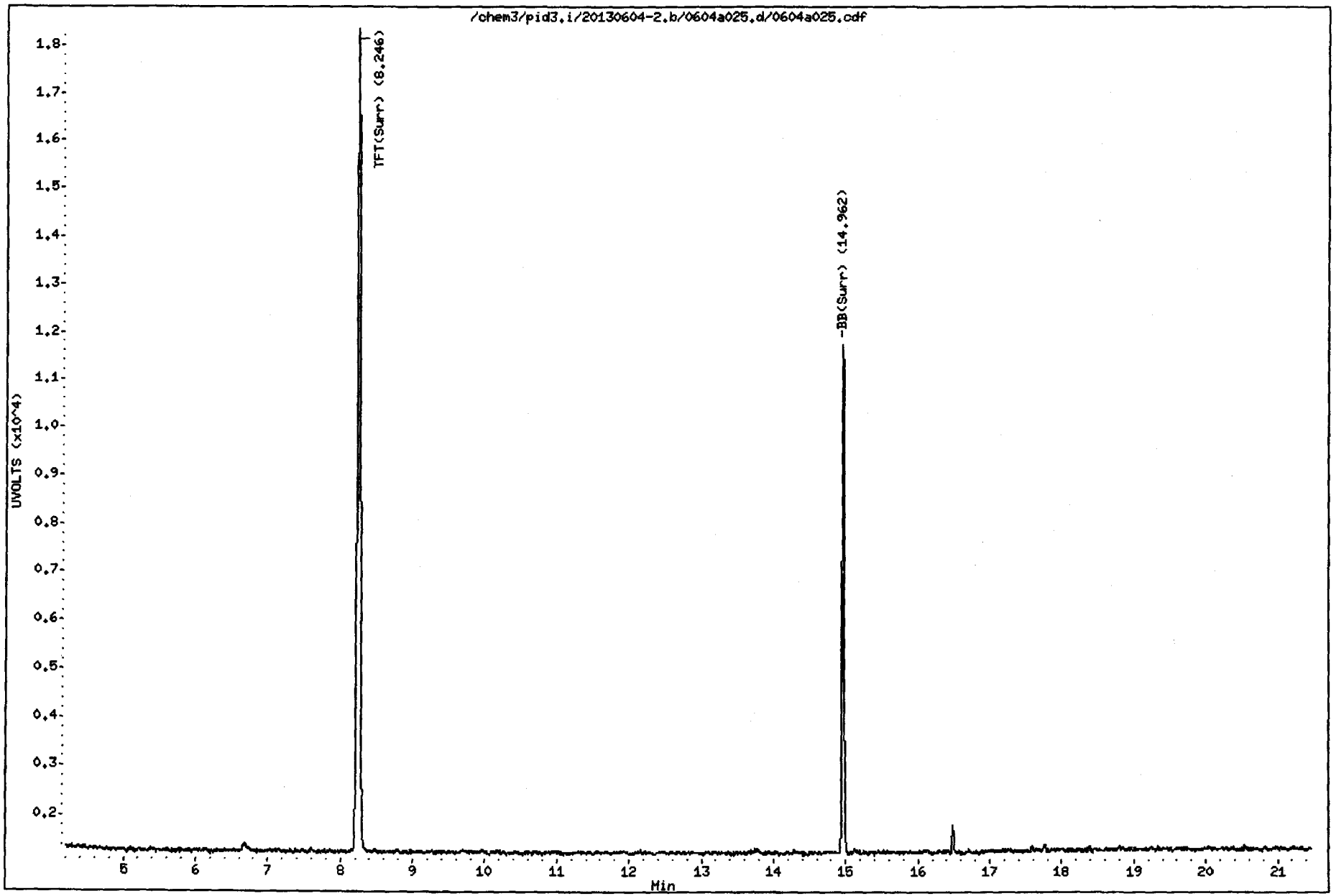
Instrument: pid3.i

Sample Info: WS43A

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18



MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/24MAY13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 24-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0656	bfb0524.d	BFB0524	BFB0524	1	NO MANUAL INTEGRATION
1106	0010524.d	IC0524	VSTD1	1	Chloromethane, Acetone, Acrylonitrile, 1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene,
0818	2000524.d	IC0524	VSTD200	1	Chloromethane, 2-Butanone,
0842	1500524.d	IC0524	VSTD150	1	Chloromethane,
0906	1000524.d	IC0524	VSTD100	1	Chloromethane,
0930	0500524.d	IC0524	VSTD50	1	Chloromethane,
0954	0100524.d	IC0524	VSTD10	1	Chloromethane,
1018	0050524.d	IC0524	VSTD5	1	Chloromethane,
1042	0020524.d	IC0524	VSTD2	1	Chloromethane, 1,2,3-Trichloropropane,
1146	icv0524.d	ICV0524	ICV0524	1	Chloromethane, Chloroethane,

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/24MAY13.b/V0121012S.m
Batch File: /chem1/nt5.i/24MAY13.b
Inst ID: nt5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	2000524	1500524	1000524	0500524	0100524	0050524	0020524	0010524
INJ.DATE:	24-MAY-2013	24-MAY-2013	24-MAY-2013	24-MAY-2013	24-MAY-2013	24-MAY-2013	24-MAY-2013	24-MAY-2013
INJ.TIME:	08:18	08:42	09:06	09:30	09:54	10:18	10:42	11:06

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Dichlorodifluoromethan	1.023	1.012	1.023	1.017	1.006	1.000	1.023	1.017	1.017	0.924-1.110	1.015	0.009
2 Chloromethane	1.272	1.272	1.283	1.277	1.249	1.266	1.283	1.255	1.277	1.184-1.371	1.270	0.012
3 Vinyl Chloride	1.193	1.187	1.193	1.187	1.175	1.170	1.192	1.187	1.187	1.094-1.280	1.185	0.008
4 Bromomethane	1.402	1.396	1.402	1.396	1.385	1.385	1.402	1.396	1.396	1.303-1.490	1.395	0.007
5 Chloroethane	1.492	1.481	1.487	1.487	1.475	1.475	1.492	1.492	1.487	1.393-1.580	1.485	0.007
6 Trichlorofluoromethane	1.583	1.577	1.583	1.583	1.566	1.566	1.588	1.583	1.583	1.490-1.676	1.579	0.008
7 1,1-Dichloroethene	1.951	1.939	1.945	1.945	1.928	1.928	1.950	1.939	1.945	1.852-2.038	1.941	0.009
8 Carbon Disulfide	1.951	1.939	1.945	1.945	1.928	1.933	1.950	1.951	1.945	1.852-2.038	1.943	0.009
9 112Trichloro122Trifluo	1.996	1.985	1.990	1.985	1.967	1.973	1.990	1.990	1.985	1.891-2.078	1.984	0.010
10 Iodomethane	2.052	2.041	2.047	2.041	2.024	2.030	2.047	2.047	2.041	1.948-2.134	2.041	0.010
11 Bromoethane	2.149	2.137	2.143	2.137	2.120	2.131	2.154	2.149	2.137	2.044-2.231	2.140	0.011
12 Acrolein	2.262	2.245	2.245	2.245	2.228	2.233	2.250	2.245	2.245	2.151-2.338	2.244	0.010
13 Methylene Chloride	2.426	2.409	2.414	2.420	2.397	2.409	2.431	2.426	2.420	2.327-2.513	2.417	0.011
14 Acetone	2.629	2.578	2.590	2.567	2.561	2.567	2.544	2.550	2.567	2.474-2.660	2.573	0.027
15 Trans-1,2-Dichloroethe	2.562	2.545	2.550	2.562	2.533	2.544	2.573	2.567	2.562	2.468-2.655	2.554	0.013
16 Methyl tert butyl ethe	2.731	2.737	2.754	2.743	2.748	2.725	2.742	2.737	2.743	2.649-2.836	2.740	0.009
17 1,1-Dichloroethane	3.167	3.161	3.178	3.184	3.161	3.167	3.195	3.184	3.184	3.090-3.277	3.175	0.012

Reviewer 1 _____ Date: 6/11/13
Reviewer 2 _____ Date: _____

Scanned

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Batch File: /chem1/nt5.i/24MAY13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 Acrylonitrile	3.303	3.297	3.303	3.286	3.280	3.285	3.280	3.286	3.286	3.192-3.379	3.290	0.009
	19 Vinyl Acetate	3.523	3.523	3.529	3.523	3.517	3.512	3.523	3.523	3.523	3.430-3.616	3.522	0.005
	20 Cis-1,2-Dichloroethene	3.721	3.721	3.732	3.732	3.721	3.721	3.738	3.727	3.732	3.639-3.826	3.727	0.007
	21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.560	4.467-4.653	+++++	+++++
	22 2,2-Dichloropropane	3.812	3.817	3.829	3.829	3.817	3.817	3.840	3.829	3.829	3.735-3.922	3.824	0.009
	23 Bromochloromethane	3.908	3.908	3.919	3.919	3.902	3.908	3.919	3.919	3.919	3.826-4.012	3.913	0.007
	24 Chloroform	4.015	4.015	4.021	4.021	4.010	4.010	4.021	4.021	4.021	3.928-4.114	4.017	0.005
	25 Carbon Tetrachloride	4.095	4.095	4.100	4.106	4.094	4.094	4.111	4.106	4.106	4.003-4.208	4.100	0.007
	26 1,1,1-Trichloroethane	4.168	4.168	4.174	4.179	4.162	4.168	4.185	4.179	4.179	4.086-4.273	4.173	0.008
$	27 Dibromofluoromethane	4.185	4.185	4.191	4.185	4.179	4.179	4.191	4.185	4.185	4.092-4.278	4.185	0.004
	28 1,1-Dichloropropene	4.287	4.287	4.298	4.298	4.287	4.292	4.304	4.304	4.298	4.196-4.401	4.295	0.007
	29 2-Butanone	4.428	4.406	4.394	4.377	4.383	4.383	4.372	4.372	4.377	4.284-4.471	4.389	0.020
	30 Benzene	4.524	4.519	4.530	4.530	4.519	4.519	4.530	4.530	4.530	4.428-4.632	4.525	0.006
*	31 Pentafluorobenzene	4.660	4.660	4.666	4.666	4.660	4.660	4.671	4.672	4.666	4.573-4.759	4.664	0.005
$	32 d4-1,2-Dichloroethane	4.655	4.655	4.660	4.660	4.654	4.654	4.660	4.660	4.660	4.567-4.754	4.657	0.003
	33 1,2-Dichloroethane	4.722	4.717	4.722	4.722	4.711	4.711	4.722	4.722	4.722	4.620-4.825	4.719	0.005
	34 Trichloroethene	5.062	5.062	5.068	5.068	5.056	5.062	5.067	5.068	5.068	4.965-5.170	5.064	0.004
*	35 1,4-Difluorobenzene	5.113	5.113	5.118	5.118	5.113	5.113	5.124	5.124	5.118	5.016-5.221	5.117	0.005
	36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.693	5.591-5.795	+++++	+++++
	37 Dibromomethane	5.424	5.418	5.424	5.424	5.418	5.418	5.424	5.424	5.424	5.321-5.526	5.422	0.003
	38 1,2-Dichloropropane	5.520	5.514	5.520	5.514	5.509	5.514	5.520	5.514	5.514	5.412-5.617	5.516	0.004
	39 Bromodichloromethane	5.594	5.594	5.594	5.594	5.588	5.588	5.593	5.594	5.594	5.491-5.696	5.592	0.003

ACCUTEST - TCSA

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Batch File: /chem1/nt5.i/24MAY13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	40 2-Chloroethyl Vinyl Et	6.137	6.131	6.131	6.125	6.125	6.125	6.125	6.125	6.125	6.023-6.228	6.128	0.004
	41 Cis 1,3-dichloropropen	6.142	6.142	6.142	6.142	6.137	6.137	6.142	6.142	6.142	6.040-6.245	6.141	0.003
$	42 d8-Toluene	6.301	6.295	6.301	6.301	6.295	6.295	6.301	6.301	6.301	6.198-6.403	6.299	0.003
	43 Toluene	6.346	6.340	6.340	6.340	6.335	6.335	6.340	6.340	6.340	6.238-6.443	6.340	0.004
	44 Tetrachloroethene	6.657	6.657	6.657	6.657	6.651	6.651	6.657	6.657	6.657	6.505-6.809	6.656	0.003
	45 4-Methyl-2-Pentanone	6.725	6.719	6.714	6.708	6.708	6.708	6.708	6.708	6.708	6.606-6.810	6.712	0.007
	46 Trans 1,3-Dichloroprop	6.708	6.708	6.708	6.708	6.702	6.702	6.708	6.708	6.708	6.606-6.810	6.707	0.003
	47 1,1,2-Trichloroethane	6.844	6.844	6.838	6.838	6.832	6.832	6.832	6.832	6.838	6.736-6.940	6.837	0.005
	48 Chlorodibromomethane	6.980	6.974	6.974	6.974	6.968	6.968	6.974	6.974	6.974	6.822-7.126	6.973	0.004
	49 1,3-Dichloropropane	7.064	7.059	7.059	7.053	7.053	7.053	7.059	7.059	7.053	6.901-7.205	7.057	0.004
	50 1,2-Dibromoethane	7.155	7.155	7.155	7.149	7.149	7.143	7.149	7.149	7.149	7.047-7.252	7.151	0.004
	51 2-Hexanone	7.438	7.432	7.426	7.421	7.421	7.421	7.421	7.421	7.421	7.269-7.573	7.425	0.007
*	52 d5-Chlorobenzene	7.607	7.607	7.607	7.607	7.602	7.602	7.607	7.607	7.607	7.455-7.760	7.606	0.003
	53 Chlorobenzene	7.624	7.624	7.624	7.619	7.619	7.619	7.619	7.619	7.619	7.467-7.771	7.621	0.003
	54 Ethyl Benzene	7.681	7.675	7.675	7.670	7.670	7.670	7.670	7.670	7.670	7.517-7.822	7.672	0.004
	55 1,1,1,2-Tetrachloroeth	7.698	7.692	7.692	7.687	7.687	7.681	7.686	7.687	7.687	7.534-7.839	7.689	0.005
	56 m,p-xylene	7.817	7.811	7.811	7.805	7.800	7.800	7.800	7.800	7.805	7.653-7.958	7.805	0.007
	57 o-Xylene	8.173	8.173	8.168	8.168	8.162	8.162	8.167	8.168	8.168	8.015-8.320	8.167	0.004
	58 Styrene	8.224	8.218	8.218	8.213	8.213	8.213	8.213	8.213	8.213	8.060-8.365	8.216	0.004
	59 Bromoform	8.218	8.213	8.213	8.207	8.207	8.201	8.207	8.207	8.207	8.013-8.401	8.209	0.005
	60 Isopropyl Benzene	8.462	8.462	8.456	8.456	8.450	8.450	8.450	8.456	8.456	8.262-8.650	8.455	0.005
	61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.568	8.416-8.720	+++++	+++++
$	62 4-Bromofluorobenzene	8.682	8.677	8.677	8.677	8.677	8.677	8.676	8.677	8.677	8.524-8.829	8.677	0.002
	63 Bromobenzene	8.761	8.756	8.756	8.756	8.750	8.750	8.750	8.756	8.756	8.562-8.949	8.754	0.004

6/11/13

ESS 1 CCAL

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Batch File: /chem1/nt5.i/24MAY13.b
Inst ID: nt5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
64 N-Propyl Benzene	8.835	8.829	8.824	8.824	8.818	8.818	8.818	8.818	8.824	8.630-9.017	8.823	0.006
65 1,1,2,2-Tetrachloroeth	8.909	8.892	8.886	8.886	8.880	8.880	8.880	8.880	8.886	8.692-9.079	8.887	0.010
66 2-Chloro Toluene	8.943	8.937	8.937	8.931	8.931	8.931	8.931	8.931	8.931	8.737-9.125	8.934	0.004
67 1,3,5-Trimethyl Benzen	9.027	9.022	9.016	9.010	9.010	9.010	9.010	9.010	9.010	8.817-9.204	9.015	0.007
68 1,2,3-Trichloropropane	8.999	8.988	8.988	8.982	8.982	8.982	8.982	8.976	8.982	8.788-9.176	8.985	0.007
69 Trans-1,4-Dichloro 2-B	9.056	9.050	9.044	9.039	9.039	9.039	9.038	9.033	9.039	8.845-9.232	9.042	0.007
70 4-Chloro Toluene	9.101	9.095	9.090	9.084	9.084	9.084	9.084	9.084	9.084	8.890-9.277	9.088	0.007
71 T-Butyl Benzene	9.299	9.293	9.293	9.288	9.287	9.287	9.287	9.288	9.288	9.094-9.481	9.290	0.004
72 1,2,4-Trimethylbenzene	9.367	9.361	9.355	9.355	9.350	9.350	9.355	9.355	9.355	9.162-9.549	9.356	0.006
73 S-Butyl Benzene	9.463	9.457	9.457	9.452	9.451	9.446	9.451	9.452	9.452	9.258-9.645	9.454	0.005
74 4-Isopropyl Toluene	9.616	9.604	9.599	9.599	9.593	9.593	9.593	9.593	9.599	9.405-9.792	9.599	0.008
75 1,3-Dichlorobenzene	9.627	9.616	9.616	9.610	9.610	9.610	9.610	9.610	9.610	9.416-9.804	9.614	0.006
* 76 d4-1,4-Dichlorobenzene	9.695	9.689	9.684	9.684	9.683	9.683	9.683	9.684	9.684	9.490-9.877	9.686	0.004
77 1,4-Dichlorobenzene	9.712	9.706	9.701	9.695	9.695	9.695	9.695	9.695	9.695	9.501-9.889	9.699	0.007
78 N-Butyl Benzene	10.000	9.989	9.983	9.983	9.983	9.983	9.978	9.978	9.983	9.790-10.177	9.985	0.007
$ 79 d4-1,2-Dichlorobenzene	10.085	10.074	10.068	10.068	10.068	10.062	10.062	10.063	10.068	9.874-10.262	10.069	0.008
80 1,2-Dichlorobenzene	10.091	10.085	10.080	10.074	10.074	10.074	10.074	10.074	10.074	9.880-10.267	10.078	0.007
81 1,2-Dibromo 3-Chloropr	10.843	10.838	10.832	10.826	10.826	10.826	10.826	10.826	10.826	10.633-11.020	10.830	0.007
82 Hexachloro 1,3-Butadie	11.533	11.516	11.505	11.505	11.505	11.499	11.499	11.499	11.505	11.311-11.699	11.508	0.012
83 1,2,4-Trichlorobenzene	11.522	11.505	11.499	11.494	11.494	11.488	11.488	11.494	11.494	11.300-11.687	11.498	0.011
84 Naphthalene	11.833	11.816	11.811	11.805	11.805	11.805	11.805	11.805	11.805	11.611-11.998	11.810	0.010
85 1,2,3-Trichlorobenzene	12.020	11.997	11.992	11.986	11.986	11.986	11.980	11.980	11.986	11.792-12.180	11.991	0.013

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/0010524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD1
Inj Date : 24-MAY-2013 11:06
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 11:06 Cal File: 0010524.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.017	1.017	(0.218)	6815	1.00000	1.010
2 Chloromethane	50	1.255	1.277	(0.269)	11469	1.00000	0.8758(M)
3 Vinyl Chloride	62	1.187	1.187	(0.254)	10813	1.00000	0.8878
4 Bromomethane	94	1.396	1.396	(0.299)	6688	1.00000	1.053
5 Chloroethane	64	1.492	1.487	(0.319)	6628	1.00000	1.015
6 Trichlorofluoromethane	101	1.583	1.583	(0.339)	11457	1.00000	0.9078
7 1,1-Dichloroethene	96	1.939	1.945	(0.415)	6925	1.00000	0.9714
8 Carbon Disulfide	76	1.951	1.945	(0.418)	22579	1.00000	0.9807
9 112Trichloro122Trifluoroethane	101	1.990	1.985	(0.426)	6235	1.00000	0.9727
10 Iodomethane	142	2.047	2.041	(0.438)	4895	1.00000	0.9236
11 Bromoethane	108	2.149	2.137	(0.460)	4947	1.00000	1.113
12 Acrolein	56	2.245	2.245	(0.480)	10434	5.00000	8.708
13 Methylene Chloride	84	2.426	2.420	(0.519)	12172	1.00000	1.949
14 Acetone	43	2.550	2.567	(0.546)	17332	5.00000	5.380(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.562	(0.550)	8531	1.00000	1.062
	16 Methyl tert butyl ether	73	2.737	2.743	(0.586)	24246	1.00000	0.9428
	17 1,1-Dichloroethane	63	3.184	3.184	(0.682)	16395	1.00000	0.8666
	18 Acrylonitrile	53	3.286	3.286	(0.703)	3979	1.00000	0.8956 (M)
	19 Vinyl Acetate	43	3.523	3.523	(0.754)	21531	1.00000	0.8969
	20 Cis-1,2-Dichloroethene	96	3.727	3.732	(0.798)	9016	1.00000	0.9117
	22 2,2-Dichloropropane	77	3.829	3.829	(0.820)	12367	1.00000	0.8676
	23 Bromochloromethane	128	3.919	3.919	(0.839)	3843	1.00000	0.8985
	24 Chloroform	83	4.021	4.021	(0.861)	14468	1.00000	0.9039
	25 Carbon Tetrachloride	117	4.106	4.106	(0.801)	11046	1.00000	0.8927
$	27 Dibromofluoromethane	111	4.185	4.185	(0.896)	503642	50.0000	50.127
	26 1,1,1-Trichloroethane	97	4.179	4.179	(0.895)	12952	1.00000	0.8924
	28 1,1-Dichloropropene	75	4.304	4.298	(0.840)	11780	1.00000	0.8438
	29 2-Butanone	72	4.372	4.377	(0.936)	5314	5.00000	4.457
	30 Benzene	78	4.530	4.530	(0.884)	35751	1.00000	0.8865
*	31 Pentafluorobenzene	168	4.672	4.666	(1.000)	446017	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.998)	507616	50.0000	50.611
	33 1,2-Dichloroethane	62	4.722	4.722	(0.922)	11522	1.00000	0.8985
	34 Trichloroethene	95	5.068	5.068	(0.989)	8789	1.00000	0.8891
*	35 1,4-Difluorobenzene	114	5.124	5.118	(1.000)	1371645	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.058)	5193	1.00000	0.9523
	38 1,2-Dichloropropane	63	5.514	5.514	(1.076)	9961	1.00000	0.8777
	39 Bromodichloromethane	83	5.594	5.594	(1.092)	11192	1.00000	0.9043
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.195)	4708	1.00000	0.7686
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.199)	12965	1.00000	0.8188
$	42 d8-Toluene	98	6.301	6.301	(1.230)	1952980	50.0000	50.347
	43 Toluene	92	6.340	6.340	(1.237)	24595	1.00000	0.9615
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	9010	1.00000	0.8547
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.309)	18828	5.00000	4.053
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.309)	11984	1.00000	0.8331
	47 1,1,2-Trichloroethane	97	6.832	6.838	(1.333)	7021	1.00000	0.8632
	48 Chlorodibromomethane	129	6.974	6.974	(0.917)	8148	1.00000	0.8922
	49 1,3-Dichloropropane	76	7.059	7.053	(0.928)	13502	1.00000	0.8924
	50 1,2-Dibromoethane	107	7.149	7.149	(1.395)	6909	1.00000	0.8803
	51 2-Hexanone	43	7.421	7.421	(0.975)	32195	5.00000	4.050
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1554099	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	23950	1.00000	0.9106
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	39805	1.00000	0.8840
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	8341	1.00000	0.8999
	56 m,p-xylene	106	7.800	7.805	(1.025)	27895	2.00000	1.648
	57 o-Xylene	106	8.168	8.168	(1.074)	12002	1.00000	0.7382
	58 Styrene	104	8.213	8.213	(1.080)	21159	1.00000	0.7690
	59 Bromoform	173	8.207	8.207	(0.848)	5608	1.00000	0.8578
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	32417	1.00000	0.7858
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	825335	50.0000	50.036
	63 Bromobenzene	156	8.756	8.756	(0.904)	9959	1.00000	0.9023
	64 N-Propyl Benzene	91	8.818	8.824	(0.911)	43959	1.00000	0.8793

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.880	8.886	(0.917)	9501	1.00000	0.8712
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	26683	1.00000	0.8634
67	1,3,5-Trimethyl Benzene	105	9.010	9.010	(0.930)	26794	1.00000	0.7646
68	1,2,3-Trichloropropane	110	8.976	8.982	(0.927)	3013	1.00000	0.9040(TM)
69	Trans-1,4-Dichloro 2-Butene	53	9.033	9.039	(0.933)	4023	1.00000	0.9630(M)
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	27275	1.00000	0.8420
71	T-Butyl Benzene	119	9.288	9.288	(0.959)	23094	1.00000	0.7472
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	26224	1.00000	0.7616
73	S-Butyl Benzene	105	9.452	9.452	(0.976)	36802	1.00000	0.8103
74	4-Isopropyl Toluene	119	9.593	9.599	(0.991)	27701	1.00000	0.7527
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	18562	1.00000	0.9084
* 76	d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	827039	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	20502	1.00000	0.9612
78	N-Butyl Benzene	91	9.978	9.983	(1.030)	25773	1.00000	0.7375
$ 79	d4-1,2-Dichlorobenzene	152	10.063	10.068	(1.039)	821210	50.0000	50.322
80	1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	18575	1.00000	0.9391
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	1786	1.00000	0.8419
82	Hexachloro 1,3-Butadiene	225	11.499	11.505	(1.188)	7546	1.00000	0.8654
83	1,2,4-Trichlorobenzene	180	11.494	11.494	(1.187)	11614	1.00000	0.8264
84	Naphthalene	128	11.805	11.805	(1.219)	27548	1.00000	0.8810
85	1,2,3-Trichlorobenzene	180	11.980	11.986	(1.237)	11607	1.00000	0.8658

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0010524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD1
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	446017	-5.27
35 1,4-Difluorobenze	1445861	722930	2891722	1371645	-5.13
52 d5-Chlorobenzene	1620542	810271	3241084	1554099	-4.10
76 d4-1,4-Dichlorobe	872028	436014	1744056	827039	-5.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

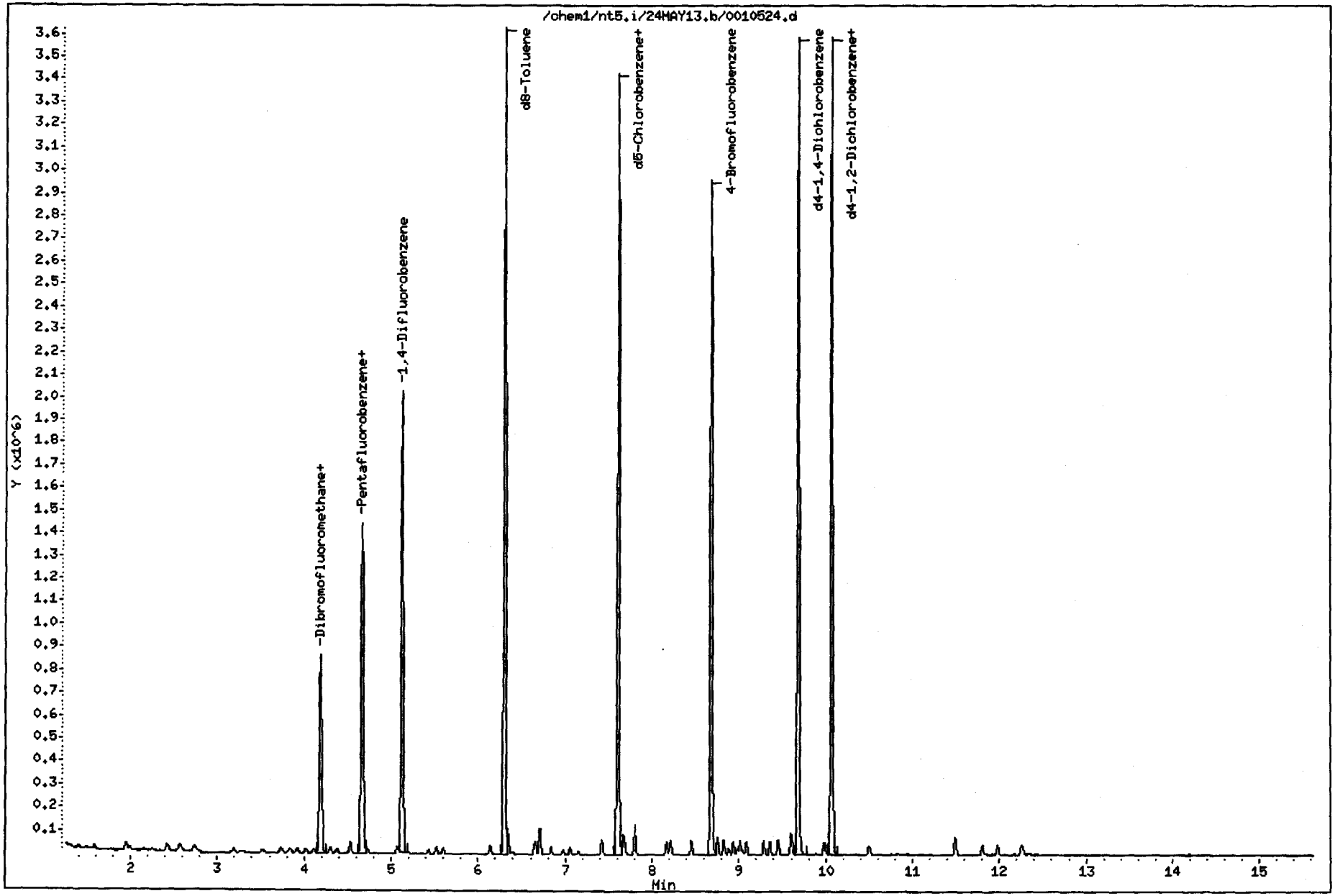
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/0010524.d
Date : 24-MAY-2013 11:06
Client ID: VSTD1
Sample Info: IC0524,5,5,0

Instrument: nt5.i

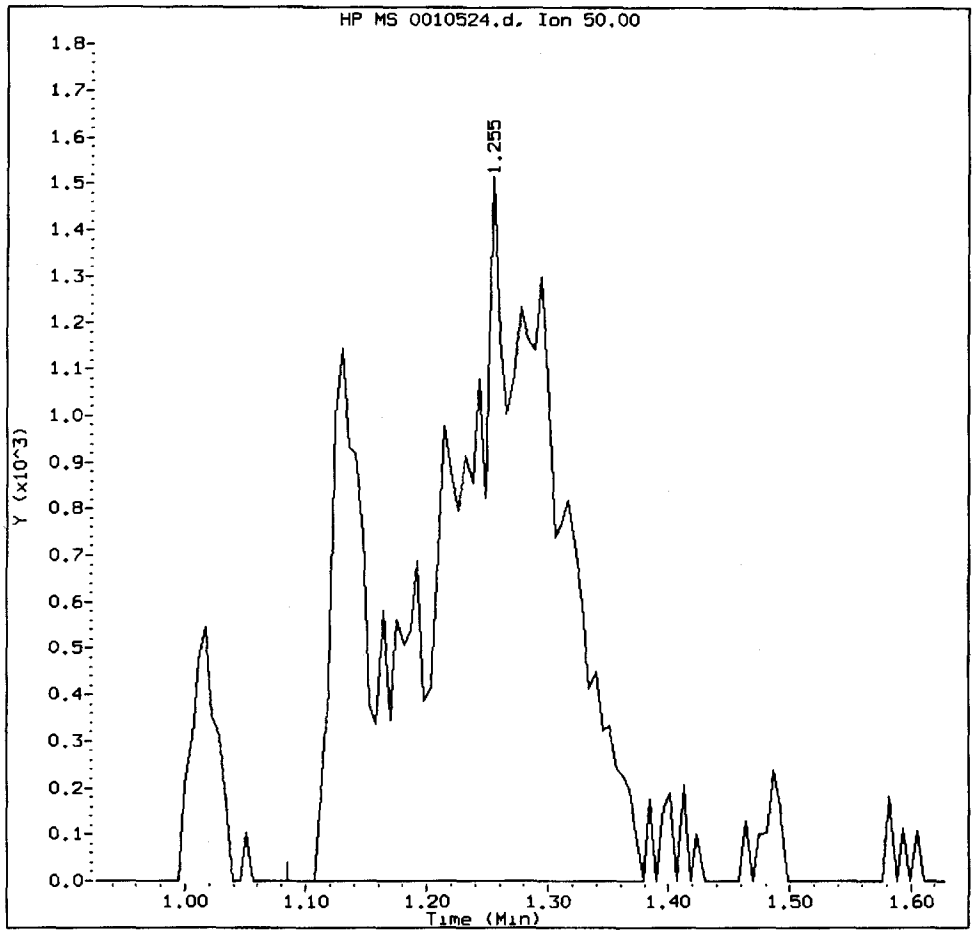
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0524, /chem1/nt5.i/24MAY13.b/0010524.d

Chloromethane Amount: 0.88 Area: 11469



MANUAL INTEGRATION for Chloromethane

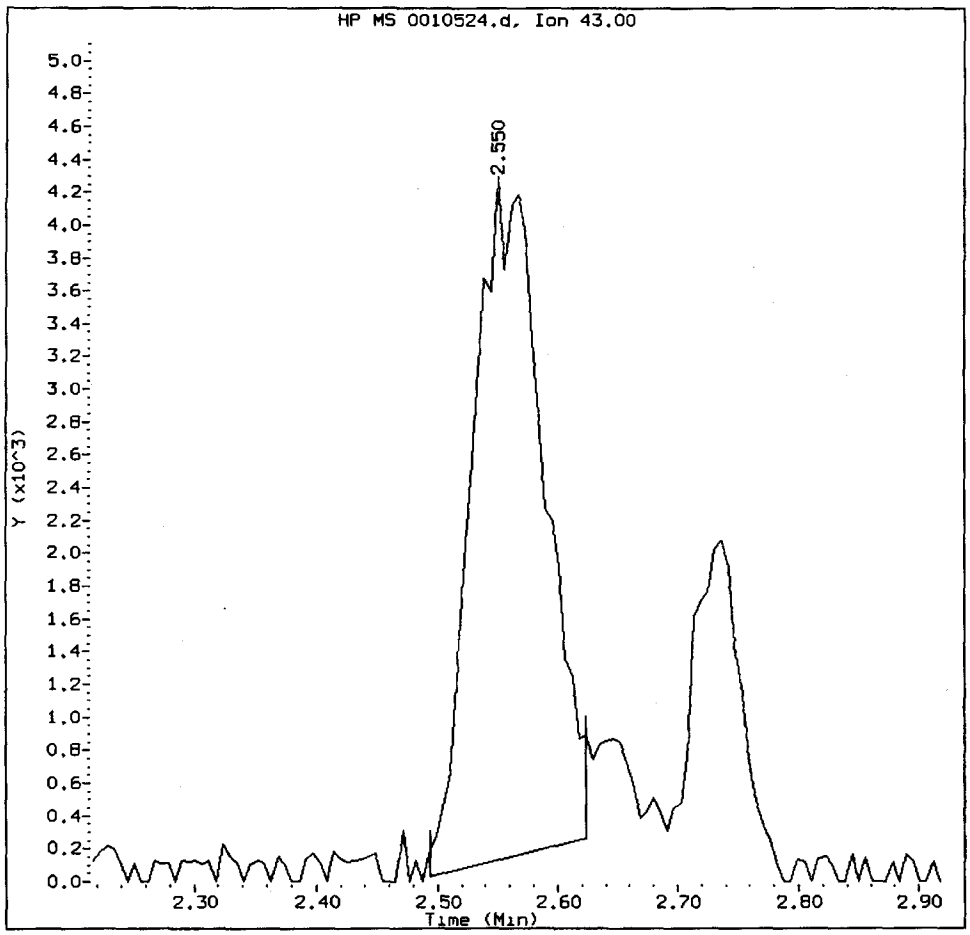
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

IC0524, /chem1/nt5.i/24MAY13.b/0010524.d

Acetone Amount: 5.38 Area: 17332



MANUAL INTEGRATION for Acetone

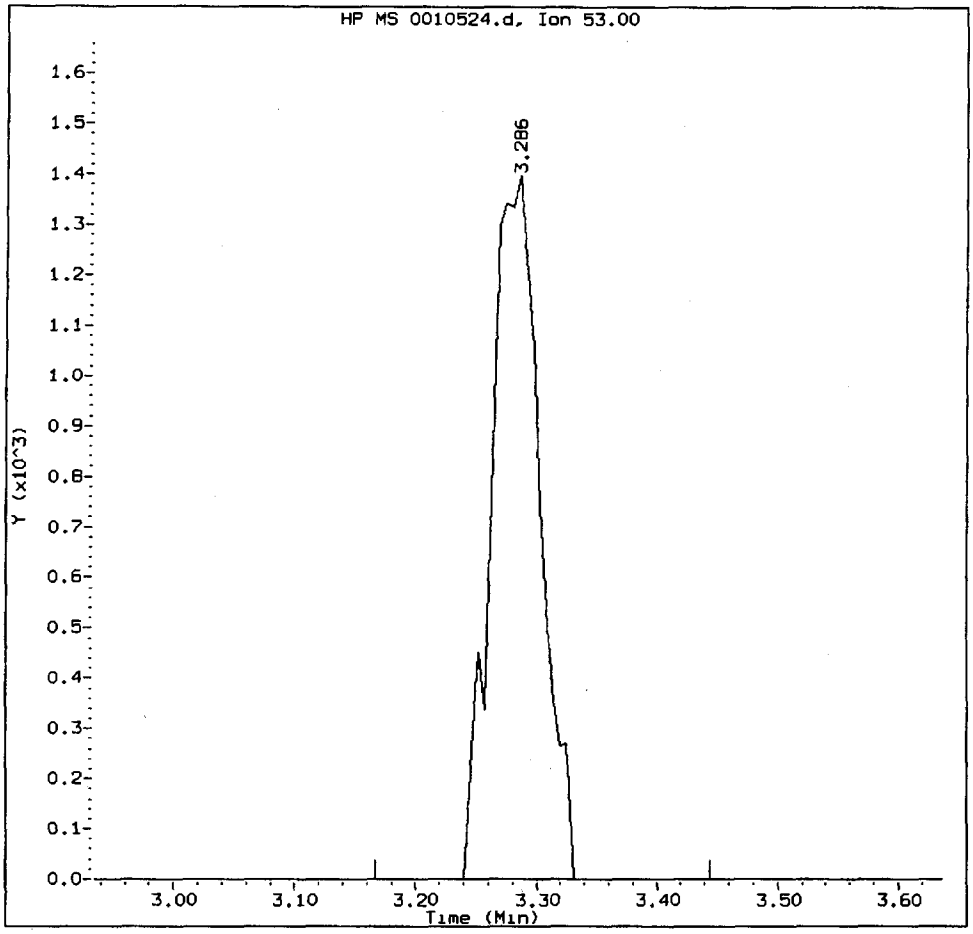
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

IC0524, /chem1/nt5.i/24MAY13.b/0010524.d

Acrylonitrile Amount: 0.90 Area: 3979



MANUAL INTEGRATION for Acrylonitrile

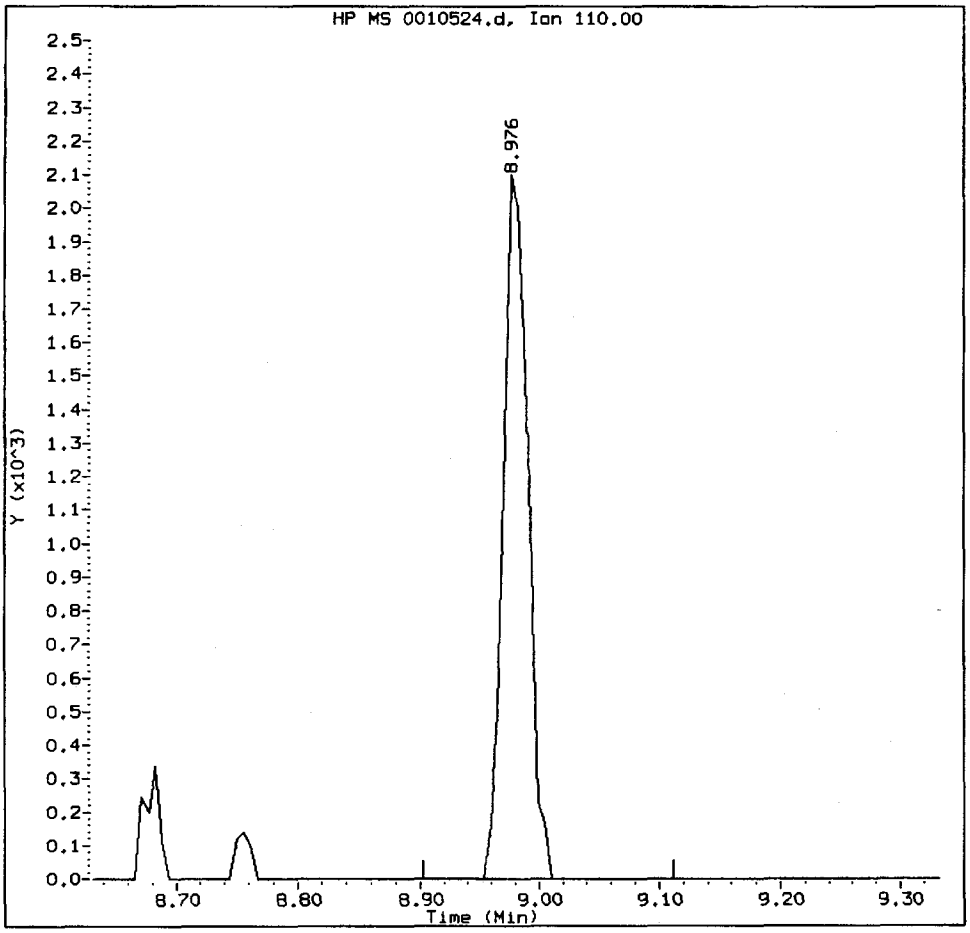
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0524, /chem1/nt5.i/24MAY13.b/0010524.d

1,2,3-Trichloropropane Amount: 0.90 Area: 3013



MANUAL INTEGRATION for 1,2,3-Trichloropropane

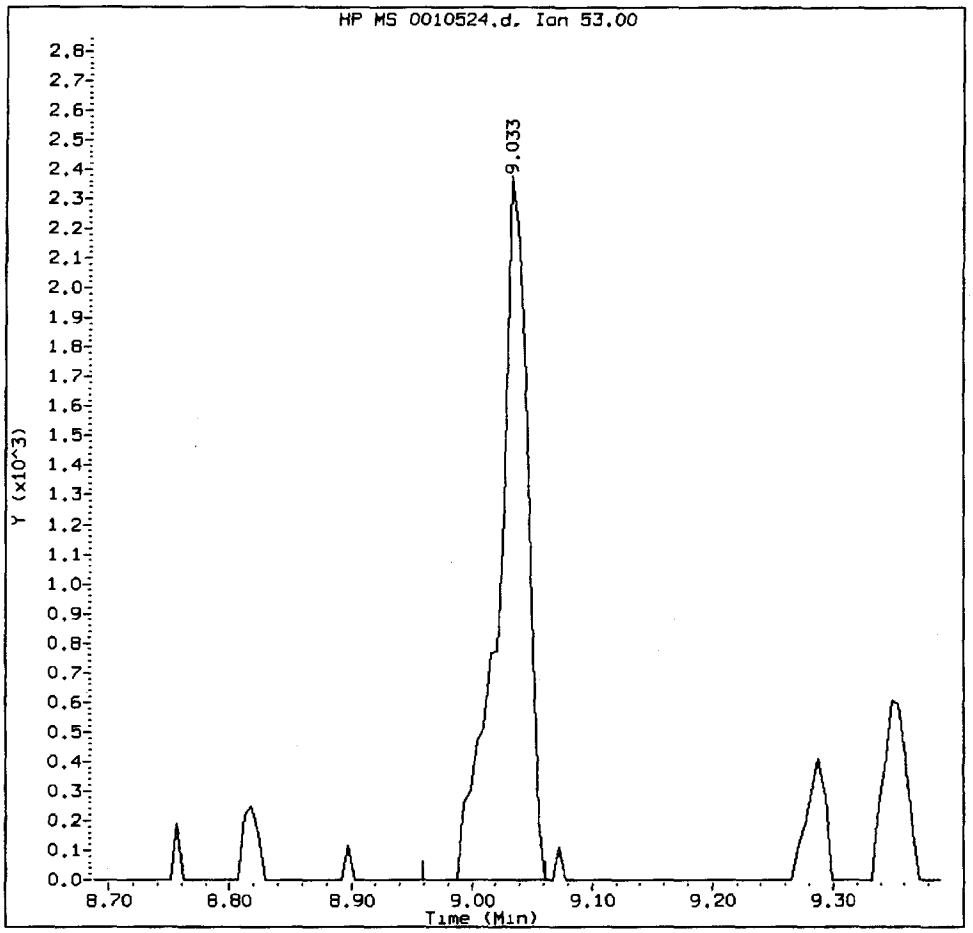
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

IC0524, /chem1/nt5.i/24MAY13.b/0010524.d

Trans-1,4-Dichloro 2-Butene Amount: 0.96 Area: 4023



MANUAL INTEGRATION for Trans-1,4-Dichloro 2-Butene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/14

CO-ELUTION SUMMARY FOR FILE - 0010524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/0020524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD2
Inj Date : 24-MAY-2013 10:42
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 10:42 Cal File: 0020524.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.023	1.017	(0.219)	12170	2.00000	1.888
2 Chloromethane	50	1.283	1.277	(0.275)	25028	2.00000	2.001(M)
3 Vinyl Chloride	62	1.192	1.187	(0.255)	22421	2.00000	1.927
4 Bromomethane	94	1.402	1.396	(0.300)	13899	2.00000	2.290
5 Chloroethane	64	1.492	1.487	(0.319)	13488	2.00000	2.163
6 Trichlorofluoromethane	101	1.588	1.583	(0.340)	24186	2.00000	2.006
7 1,1-Dichloroethene	96	1.950	1.945	(0.418)	13807	2.00000	2.028
8 Carbon Disulfide	76	1.950	1.945	(0.418)	44156	2.00000	2.008
9 112Trichloro122Trifluoroethane	101	1.990	1.985	(0.426)	12906	2.00000	2.108
10 Iodomethane	142	2.047	2.041	(0.438)	10457	2.00000	2.066
11 Bromoethane	108	2.154	2.137	(0.461)	10888	2.00000	2.564
12 Acrolein	56	2.250	2.245	(0.482)	22338	10.0000	19.517
13 Methylene Chloride	84	2.431	2.420	(0.520)	21512	2.00000	3.606
14 Acetone	43	2.544	2.567	(0.545)	34418	10.0000	11.184

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.573	2.562	(0.551)	17868	2.00000	2.328
	16 Methyl tert butyl ether	73	2.742	2.743	(0.587)	52307	2.00000	2.129
	17 1,1-Dichloroethane	63	3.195	3.184	(0.684)	37045	2.00000	2.050
	18 Acrylonitrile	53	3.280	3.286	(0.702)	8835	2.00000	2.082
	19 Vinyl Acetate	43	3.523	3.523	(0.754)	46078	2.00000	2.009
	20 Cis-1,2-Dichloroethene	96	3.738	3.732	(0.800)	19158	2.00000	2.028
	22 2,2-Dichloropropane	77	3.840	3.829	(0.822)	28080	2.00000	2.062
	23 Bromochloromethane	128	3.919	3.919	(0.839)	8264	2.00000	2.023
	24 Chloroform	83	4.021	4.021	(0.861)	31032	2.00000	2.030
	25 Carbon Tetrachloride	117	4.111	4.106	(0.802)	23322	2.00000	1.956
$	27 Dibromofluoromethane	111	4.191	4.185	(0.897)	486686	50.0000	50.710
	26 1,1,1-Trichloroethane	97	4.185	4.179	(0.896)	27035	2.00000	1.950
	28 1,1-Dichloropropene	75	4.304	4.298	(0.840)	26068	2.00000	1.937
	29 2-Butanone	72	4.372	4.377	(0.936)	11436	10.0000	10.041
	30 Benzene	78	4.530	4.530	(0.884)	78580	2.00000	2.022
*	31 Pentafluorobenzene	168	4.671	4.666	(1.000)	426041	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.998)	494077	50.0000	51.570
	33 1,2-Dichloroethane	62	4.722	4.722	(0.922)	25253	2.00000	2.043
	34 Trichloroethene	95	5.067	5.068	(0.989)	19116	2.00000	2.006
*	35 1,4-Difluorobenzene	114	5.124	5.118	(1.000)	1321945	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.058)	10307	2.00000	1.961
	38 1,2-Dichloropropane	63	5.520	5.514	(1.077)	21663	2.00000	1.981
	39 Bromodichloromethane	83	5.593	5.594	(1.092)	23497	2.00000	1.970
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.195)	9969	2.00000	1.689
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.199)	28966	2.00000	1.898
$	42 d8-Toluene	98	6.301	6.301	(1.230)	1901471	50.0000	50.862
	43 Toluene	92	6.340	6.340	(1.237)	49579	2.00000	2.011
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	20271	2.00000	1.998
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.309)	43348	10.0000	9.682
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.309)	26500	2.00000	1.911
	47 1,1,2-Trichloroethane	97	6.832	6.838	(1.333)	16020	2.00000	2.044
	48 Chlorodibromomethane	129	6.974	6.974	(0.917)	16377	2.00000	1.863
	49 1,3-Dichloropropane	76	7.059	7.053	(0.928)	27987	2.00000	1.922
	50 1,2-Dibromoethane	107	7.149	7.149	(1.395)	14449	2.00000	1.910
	51 2-Hexanone	43	7.421	7.421	(0.975)	73119	10.0000	9.556
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1495855	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	51876	2.00000	2.049
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	87391	2.00000	2.016
	55 1,1,1,2-Tetrachloroethane	131	7.686	7.687	(1.010)	17643	2.00000	1.978
	56 m,p-xylene	106	7.800	7.805	(1.025)	63993	4.00000	3.928
	57 o-Xylene	106	8.167	8.168	(1.074)	28193	2.00000	1.801
	58 Styrene	104	8.213	8.213	(1.080)	48954	2.00000	1.849
	59 Bromoform	173	8.207	8.207	(0.848)	12139	2.00000	1.911
	60 Isopropyl Benzene	105	8.450	8.456	(0.873)	74842	2.00000	1.867
$	62 4-Bromofluorobenzene	95	8.676	8.677	(1.141)	800963	50.0000	50.449
	63 Bromobenzene	156	8.750	8.756	(0.904)	20918	2.00000	1.950
	64 N-Propyl Benzene	91	8.818	8.824	(0.911)	97098	2.00000	1.999

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.880	8.886	(0.917)	20779	2.00000	1.961
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	56912	2.00000	1.895
67	1,3,5-Trimethyl Benzene	105	9.010	9.010	(0.930)	64418	2.00000	1.892
68	1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	6293	2.00000	1.943 (M)
69	Trans-1,4-Dichloro 2-Butene	53	9.038	9.039	(0.933)	8059	2.00000	1.985
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	60535	2.00000	1.923
71	T-Butyl Benzene	119	9.287	9.288	(0.959)	56143	2.00000	1.869
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	62419	2.00000	1.865
73	S-Butyl Benzene	105	9.451	9.452	(0.976)	87319	2.00000	1.978
74	4-Isopropyl Toluene	119	9.593	9.599	(0.991)	66348	2.00000	1.855
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	39925	2.00000	2.011
* 76	d4-1,4-Dichlorobenzene	152	9.683	9.684	(1.000)	803637	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	42204	2.00000	2.036
78	N-Butyl Benzene	91	9.978	9.983	(1.030)	63412	2.00000	1.867
$ 79	d4-1,2-Dichlorobenzene	152	10.062	10.068	(1.039)	798435	50.0000	50.351
80	1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	39246	2.00000	2.042
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	4340	2.00000	2.105
82	Hexachloro 1,3-Butadiene	225	11.499	11.505	(1.188)	16605	2.00000	1.960
83	1,2,4-Trichlorobenzene	180	11.488	11.494	(1.186)	25277	2.00000	1.851
84	Naphthalene	128	11.805	11.805	(1.219)	55526	2.00000	1.827
85	1,2,3-Trichlorobenzene	180	11.980	11.986	(1.237)	24872	2.00000	1.909

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0020524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD2
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	426041	-9.51
35 1,4-Difluorobenze	1445861	722930	2891722	1321945	-8.57
52 d5-Chlorobenzene	1620542	810271	3241084	1495855	-7.69
76 d4-1,4-Dichlorobe	872028	436014	1744056	803637	-7.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

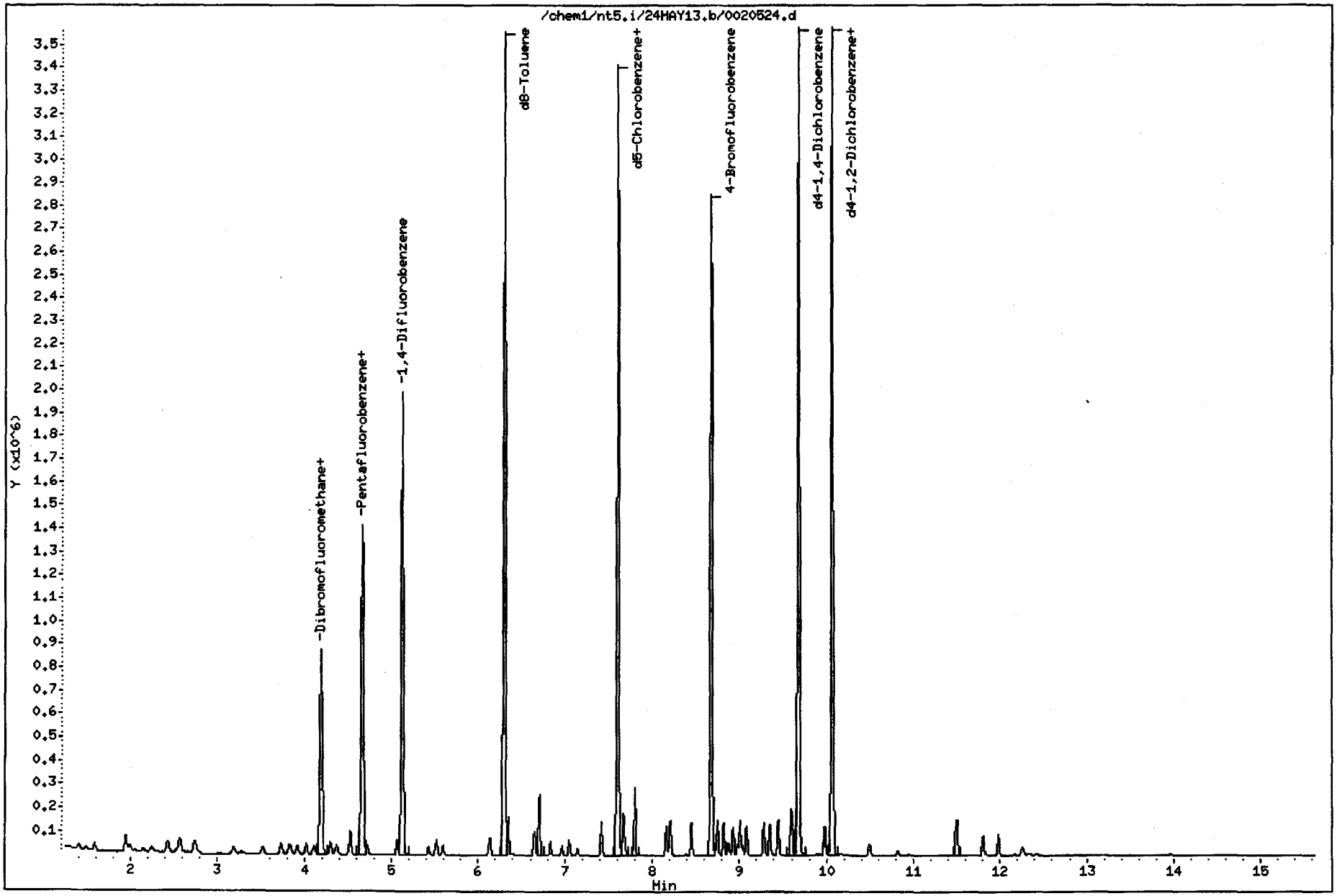
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/0020524.d
Date : 24-MAY-2013 10:42
Client ID: VSTD2
Sample Info: IC0524,5,5,0

Instrument: nt5.i

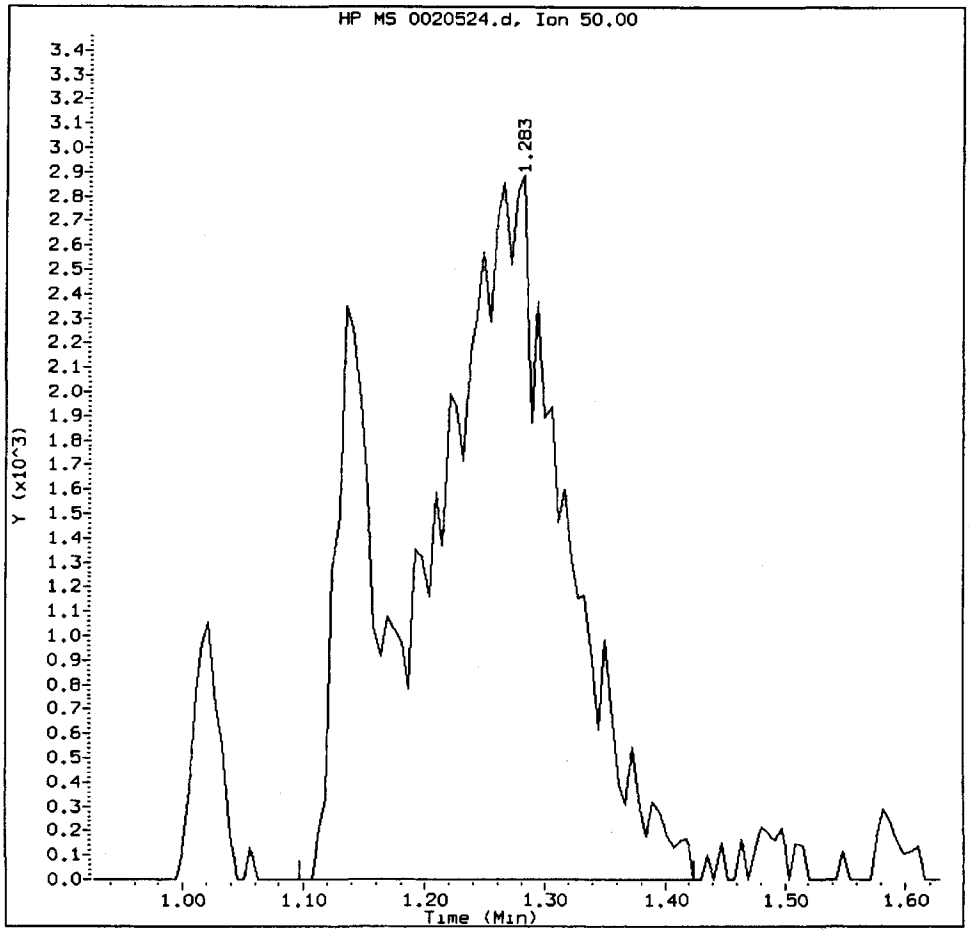
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0524, /chem1/nt5.i/24MAY13.b/0020524.d

Chloromethane Amount: 2.00 Area: 25028



MANUAL INTEGRATION for Chloromethane

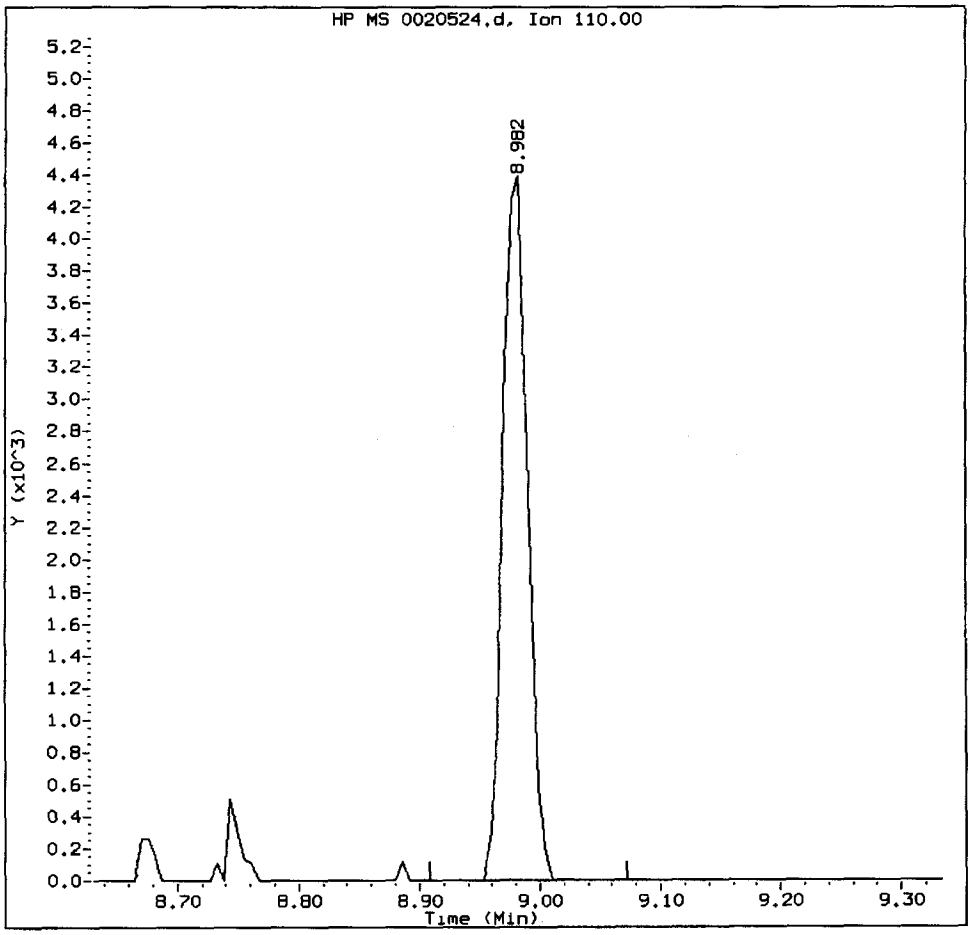
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0524, /chem1/nt5.i/24MAY13.b/0020524.d

1,2,3-Trichloropropane Amount: 1.94 Area: 6293



MANUAL INTEGRATION for 1,2,3-Trichloropropane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - 0020524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/0050524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD5
Inj Date : 24-MAY-2013 10:18
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 10:18 Cal File: 0050524.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.000	1.017	(0.215)	32814	5.00000	4.815
2 Chloromethane	50	1.266	1.277	(0.272)	67542	5.00000	5.108(M)
3 Vinyl Chloride	62	1.170	1.187	(0.251)	57685	5.00000	4.691
4 Bromomethane	94	1.385	1.396	(0.297)	33596	5.00000	5.236
5 Chloroethane	64	1.475	1.487	(0.317)	35052	5.00000	5.319
6 Trichlorofluoromethane	101	1.566	1.583	(0.336)	65540	5.00000	5.143
7 1,1-Dichloroethene	96	1.928	1.945	(0.414)	38371	5.00000	5.331
8 Carbon Disulfide	76	1.933	1.945	(0.415)	127044	5.00000	5.465
9 112Trichloro122Trifluoroethane	101	1.973	1.985	(0.423)	33829	5.00000	5.227
10 Iodomethane	142	2.030	2.041	(0.436)	24048	5.00000	4.494
11 Bromoethane	108	2.131	2.137	(0.457)	21839	5.00000	4.865
12 Acrolein	56	2.233	2.245	(0.479)	37210	25.0000	30.757
13 Methylene Chloride	84	2.409	2.420	(0.517)	39087	5.00000	6.199
14 Acetone	43	2.567	2.567	(0.551)	79009	25.0000	24.289

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.544	2.562	(0.546)	45442	5.00000	5.602
	16 Methyl tert butyl ether	73	2.725	2.743	(0.585)	142622	5.00000	5.492
	17 1,1-Dichloroethane	63	3.167	3.184	(0.680)	98535	5.00000	5.158
	18 Acrylonitrile	53	3.285	3.286	(0.705)	23162	5.00000	5.164
	19 Vinyl Acetate	43	3.512	3.523	(0.754)	124679	5.00000	5.144
	20 Cis-1,2-Dichloroethene	96	3.721	3.732	(0.798)	51107	5.00000	5.118
	22 2,2-Dichloropropane	77	3.817	3.829	(0.819)	74272	5.00000	5.160
	23 Bromochloromethane	128	3.908	3.919	(0.839)	22380	5.00000	5.182
	24 Chloroform	83	4.010	4.021	(0.860)	80596	5.00000	4.987
	25 Carbon Tetrachloride	117	4.094	4.106	(0.801)	63332	5.00000	5.082
$	27 Dibromofluoromethane	111	4.179	4.185	(0.897)	509638	50.0000	50.237
	26 1,1,1-Trichloroethane	97	4.168	4.179	(0.894)	74747	5.00000	5.101
	28 1,1-Dichloropropene	75	4.292	4.298	(0.840)	71689	5.00000	5.099
	29 2-Butanone	72	4.383	4.377	(0.940)	30268	25.0000	25.141
	30 Benzene	78	4.519	4.530	(0.884)	215392	5.00000	5.303
*	31 Pentafluorobenzene	168	4.660	4.666	(1.000)	450337	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.654	4.660	(0.999)	514287	50.0000	50.784
	33 1,2-Dichloroethane	62	4.711	4.722	(0.921)	67800	5.00000	5.250
	34 Trichloroethene	95	5.062	5.068	(0.990)	51337	5.00000	5.157
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	1381380	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	28135	5.00000	5.123
	38 1,2-Dichloropropane	63	5.514	5.514	(1.079)	58944	5.00000	5.157
	39 Bromodichloromethane	83	5.588	5.594	(1.093)	63730	5.00000	5.113
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	28993	5.00000	4.700
	41 Cis 1,3-dichloropropene	75	6.137	6.142	(1.200)	81287	5.00000	5.097
$	42 d8-Toluene	98	6.295	6.301	(1.231)	1961424	50.0000	50.209
	43 Toluene	92	6.335	6.340	(1.239)	133689	5.00000	5.190
	44 Tetrachloroethene	166	6.651	6.657	(0.875)	53274	5.00000	5.064
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.312)	120684	25.0000	25.797
	46 Trans 1,3-Dichloropropene	75	6.702	6.708	(1.311)	75252	5.00000	5.194
	47 1,1,2-Trichloroethane	97	6.832	6.838	(1.336)	41747	5.00000	5.096
	48 Chlorodibromomethane	129	6.968	6.974	(0.917)	45733	5.00000	5.018
	49 1,3-Dichloropropane	76	7.053	7.053	(0.928)	76665	5.00000	5.077
	50 1,2-Dibromoethane	107	7.143	7.149	(1.397)	40337	5.00000	5.103
	51 2-Hexanone	43	7.421	7.421	(0.976)	205377	25.0000	25.888
*	52 d5-Chlorobenzene	117	7.602	7.607	(1.000)	1550980	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.002)	140511	5.00000	5.353
	54 Ethyl Benzene	91	7.670	7.670	(1.009)	242661	5.00000	5.400
	55 1,1,1,2-Tetrachloroethane	131	7.681	7.687	(1.010)	46773	5.00000	5.056
	56 m,p-xylene	106	7.800	7.805	(1.026)	182409	10.0000	10.799
	57 o-Xylene	106	8.162	8.168	(1.074)	80662	5.00000	4.971
	58 Styrene	104	8.213	8.213	(1.080)	144009	5.00000	5.245
	59 Bromoform	173	8.201	8.207	(0.847)	32887	5.00000	5.078
	60 Isopropyl Benzene	105	8.450	8.456	(0.873)	219282	5.00000	5.366
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	830349	50.0000	50.441
	63 Bromobenzene	156	8.750	8.756	(0.904)	57380	5.00000	5.248
	64 N-Propyl Benzene	91	8.818	8.824	(0.911)	272343	5.00000	5.499

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.880	8.886	(0.917)	55750	5.00000	5.160
	66 2-Chloro Toluene	91	8.931	8.931	(0.922)	161172	5.00000	5.265
	67 1,3,5-Trimethyl Benzene	105	9.010	9.010	(0.930)	183910	5.00000	5.298
	68 1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	16839	5.00000	5.100
	69 Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	20858	5.00000	5.040
	70 4-Chloro Toluene	91	9.084	9.084	(0.938)	169377	5.00000	5.278
	71 T-Butyl Benzene	119	9.287	9.288	(0.959)	162343	5.00000	5.302
	72 1,2,4-Trimethylbenzene	105	9.350	9.355	(0.966)	181338	5.00000	5.316
	73 S-Butyl Benzene	105	9.446	9.452	(0.975)	247055	5.00000	5.491
	74 4-Isopropyl Toluene	119	9.593	9.599	(0.991)	195071	5.00000	5.351
	75 1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	106948	5.00000	5.284
*	76 d4-1,4-Dichlorobenzene	152	9.683	9.684	(1.000)	819317	50.0000	
	77 1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	111379	5.00000	5.271
	78 N-Butyl Benzene	91	9.983	9.983	(1.031)	180933	5.00000	5.226
$	79 d4-1,2-Dichlorobenzene	152	10.062	10.068	(1.039)	814894	50.0000	50.405
	80 1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	103734	5.00000	5.294
	81 1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	10588	5.00000	5.038
	82 Hexachloro 1,3-Butadiene	225	11.499	11.505	(1.188)	45440	5.00000	5.260
	83 1,2,4-Trichlorobenzene	180	11.488	11.494	(1.186)	68842	5.00000	4.945
	84 Naphthalene	128	11.805	11.805	(1.219)	150547	5.00000	4.860
	85 1,2,3-Trichlorobenzene	180	11.986	11.986	(1.238)	67377	5.00000	5.073

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0050524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD5
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	450337	-4.35
35 1,4-Difluorobenze	1445861	722930	2891722	1381380	-4.46
52 d5-Chlorobenzene	1620542	810271	3241084	1550980	-4.29
76 d4-1,4-Dichlorobe	872028	436014	1744056	819317	-6.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.60	-0.08
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

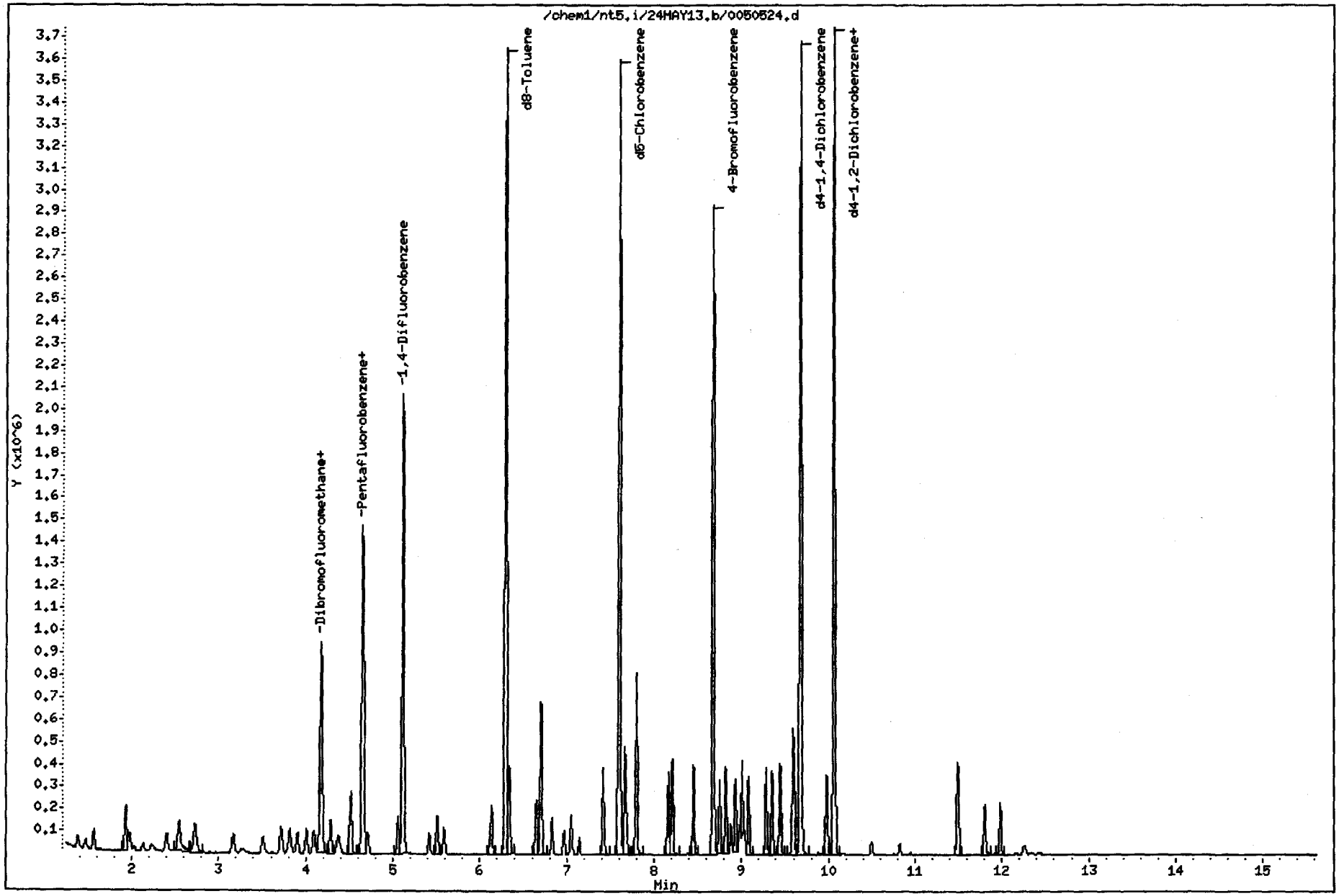
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/0050524.d
Date : 24-MAY-2013 10:18
Client ID: VSTD5
Sample Info: IC0524,5,5,0

Instrument: nt5.i

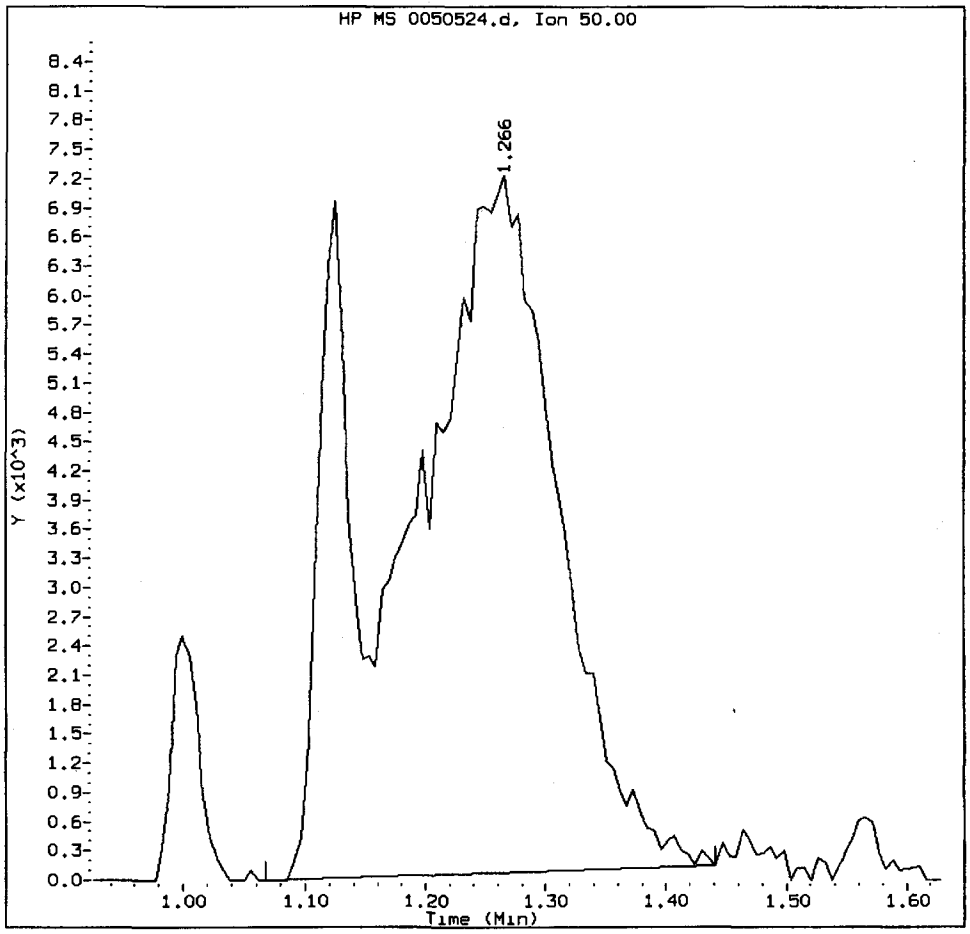
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0524, /chem1/nt5.i/24MAY13.b/0050524.d

Chloromethane Amount: 5.11 Area: 67542



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/6/13

CO-ELUTION SUMMARY FOR FILE - 0050524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/0100524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD10
Inj Date : 24-MAY-2013 09:54
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 09:54 Cal File: 0100524.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.006	1.017	(0.216)	68006	10.0000	9.709
2 Chloromethane	50	1.249	1.277	(0.268)	147406	10.0000	10.845(M)
3 Vinyl Chloride	62	1.175	1.187	(0.252)	121262	10.0000	9.593
4 Bromomethane	94	1.385	1.396	(0.297)	69030	10.0000	10.467
5 Chloroethane	64	1.475	1.487	(0.317)	73710	10.0000	10.881
6 Trichlorofluoromethane	101	1.566	1.583	(0.336)	143464	10.0000	10.953
7 1,1-Dichloroethene	96	1.928	1.945	(0.414)	69431	10.0000	9.384
8 Carbon Disulfide	76	1.928	1.945	(0.414)	224649	10.0000	9.401
9 112Trichloro122Trifluoroethane	101	1.967	1.985	(0.422)	61792	10.0000	9.288
10 Iodomethane	142	2.024	2.041	(0.434)	45860	10.0000	8.337
11 Bromoethane	108	2.120	2.137	(0.455)	42051	10.0000	9.112
12 Acrolein	56	2.228	2.245	(0.478)	51268	50.0000	41.226
13 Methylene Chloride	84	2.397	2.420	(0.514)	55090	10.0000	8.500
14 Acetone	43	2.561	2.567	(0.550)	191070	50.0000	57.143

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.533	2.562	(0.544)	106634	10.0000	12.789
	16 Methyl tert butyl ether	73	2.748	2.743	(0.590)	308957	10.0000	11.575
	17 1,1-Dichloroethane	63	3.161	3.184	(0.678)	219978	10.0000	11.203
	18 Acrylonitrile	53	3.280	3.286	(0.704)	48883	10.0000	10.602
	19 Vinyl Acetate	43	3.517	3.523	(0.755)	273338	10.0000	10.970
	20 Cis-1,2-Dichloroethene	96	3.721	3.732	(0.798)	111108	10.0000	10.825
	22 2,2-Dichloropropane	77	3.817	3.829	(0.819)	163148	10.0000	11.028
	23 Bromochloromethane	128	3.902	3.919	(0.837)	46675	10.0000	10.514
	24 Chloroform	83	4.010	4.021	(0.860)	179328	10.0000	10.794
	25 Carbon Tetrachloride	117	4.094	4.106	(0.801)	138365	10.0000	10.818
$	27 Dibromofluoromethane	111	4.179	4.185	(0.897)	517046	50.0000	49.583
	26 1,1,1-Trichloroethane	97	4.162	4.179	(0.893)	165576	10.0000	10.992
	28 1,1-Dichloropropene	75	4.287	4.298	(0.838)	167919	10.0000	11.635
	29 2-Butanone	72	4.383	4.377	(0.941)	64510	50.0000	52.127
	30 Benzene	78	4.519	4.530	(0.884)	492813	10.0000	11.822
*	31 Pentafluorobenzene	168	4.660	4.666	(1.000)	462910	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.654	4.660	(0.999)	519562	50.0000	49.911
	33 1,2-Dichloroethane	62	4.711	4.722	(0.921)	142696	10.0000	10.765
	34 Trichloroethene	95	5.056	5.068	(0.989)	111630	10.0000	10.924
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	1417886	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	59957	10.0000	10.636
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	126749	10.0000	10.804
	39 Bromodichloromethane	83	5.588	5.594	(1.093)	136394	10.0000	10.661
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	67907	10.0000	10.725
	41 Cis 1,3-dichloropropene	75	6.137	6.142	(1.200)	180658	10.0000	11.037
$	42 d8-Toluene	98	6.295	6.301	(1.231)	1998731	50.0000	49.846
	43 Toluene	92	6.335	6.340	(1.239)	295069	10.0000	11.159
	44 Tetrachloroethene	166	6.651	6.657	(0.875)	121487	10.0000	11.304
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.312)	261921	50.0000	54.545
	46 Trans 1,3-Dichloropropene	75	6.702	6.708	(1.311)	162287	10.0000	10.914
	47 1,1,2-Trichloroethane	97	6.832	6.838	(1.336)	90381	10.0000	10.750
	48 Chlorodibromomethane	129	6.968	6.974	(0.917)	99938	10.0000	10.734
	49 1,3-Dichloropropane	76	7.053	7.053	(0.928)	167452	10.0000	10.856
	50 1,2-Dibromoethane	107	7.149	7.149	(1.398)	87306	10.0000	10.761
	51 2-Hexanone	43	7.421	7.421	(0.976)	447697	50.0000	55.243
*	52 d5-Chlorobenzene	117	7.602	7.607	(1.000)	1584356	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.002)	300991	10.0000	11.226
	54 Ethyl Benzene	91	7.670	7.670	(1.009)	541359	10.0000	11.793
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.011)	100925	10.0000	10.680
	56 m,p-xylene	106	7.800	7.805	(1.026)	401877	20.0000	23.290
	57 o-Xylene	106	8.162	8.168	(1.074)	190688	10.0000	11.504
	58 Styrene	104	8.213	8.213	(1.080)	324562	10.0000	11.571
	59 Bromoform	173	8.207	8.207	(0.848)	69315	10.0000	10.609
	60 Isopropyl Benzene	105	8.450	8.456	(0.873)	498598	10.0000	12.094
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	841096	50.0000	50.017
	63 Bromobenzene	156	8.750	8.756	(0.904)	122824	10.0000	11.136
	64 N-Propyl Benzene	91	8.818	8.824	(0.911)	608089	10.0000	12.171

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.880	8.886	(0.917)	116723	10.0000	10.710
	66 2-Chloro Toluene	91	8.931	8.931	(0.922)	355188	10.0000	11.501
	67 1,3,5-Trimethyl Benzene	105	9.010	9.010	(0.930)	417264	10.0000	11.915
	68 1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	35886	10.0000	10.774
	69 Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	45220	10.0000	10.831
	70 4-Chloro Toluene	91	9.084	9.084	(0.938)	377524	10.0000	11.662
	71 T-Butyl Benzene	119	9.287	9.288	(0.959)	363563	10.0000	11.770
	72 1,2,4-Trimethylbenzene	105	9.350	9.355	(0.966)	411842	10.0000	11.967
	73 S-Butyl Benzene	105	9.451	9.452	(0.976)	549819	10.0000	12.113
	74 4-Isopropyl Toluene	119	9.593	9.599	(0.991)	446262	10.0000	12.134
	75 1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	232412	10.0000	11.382
*	76 d4-1,4-Dichlorobenzene	152	9.683	9.684	(1.000)	826523	50.0000	
	77 1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	241238	10.0000	11.317
	78 N-Butyl Benzene	91	9.983	9.983	(1.031)	419379	10.0000	12.007
$	79 d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	823987	50.0000	50.523
	80 1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	222158	10.0000	11.239
	81 1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	22326	10.0000	10.530
	82 Hexachloro 1,3-Butadiene	225	11.505	11.505	(1.188)	97980	10.0000	11.244
	83 1,2,4-Trichlorobenzene	180	11.494	11.494	(1.187)	155294	10.0000	11.057
	84 Naphthalene	128	11.805	11.805	(1.219)	341317	10.0000	10.922
	85 1,2,3-Trichlorobenzene	180	11.986	11.986	(1.238)	144719	10.0000	10.802

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0100524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD10
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	462910	-1.68
35 1,4-Difluorobenze	1445861	722930	2891722	1417886	-1.93
52 d5-Chlorobenzene	1620542	810271	3241084	1584356	-2.23
76 d4-1,4-Dichlorobe	872028	436014	1744056	826523	-5.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.60	-0.08
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/0100524.d

Date : 24-MAY-2013 09:54

Client ID: VSTD10

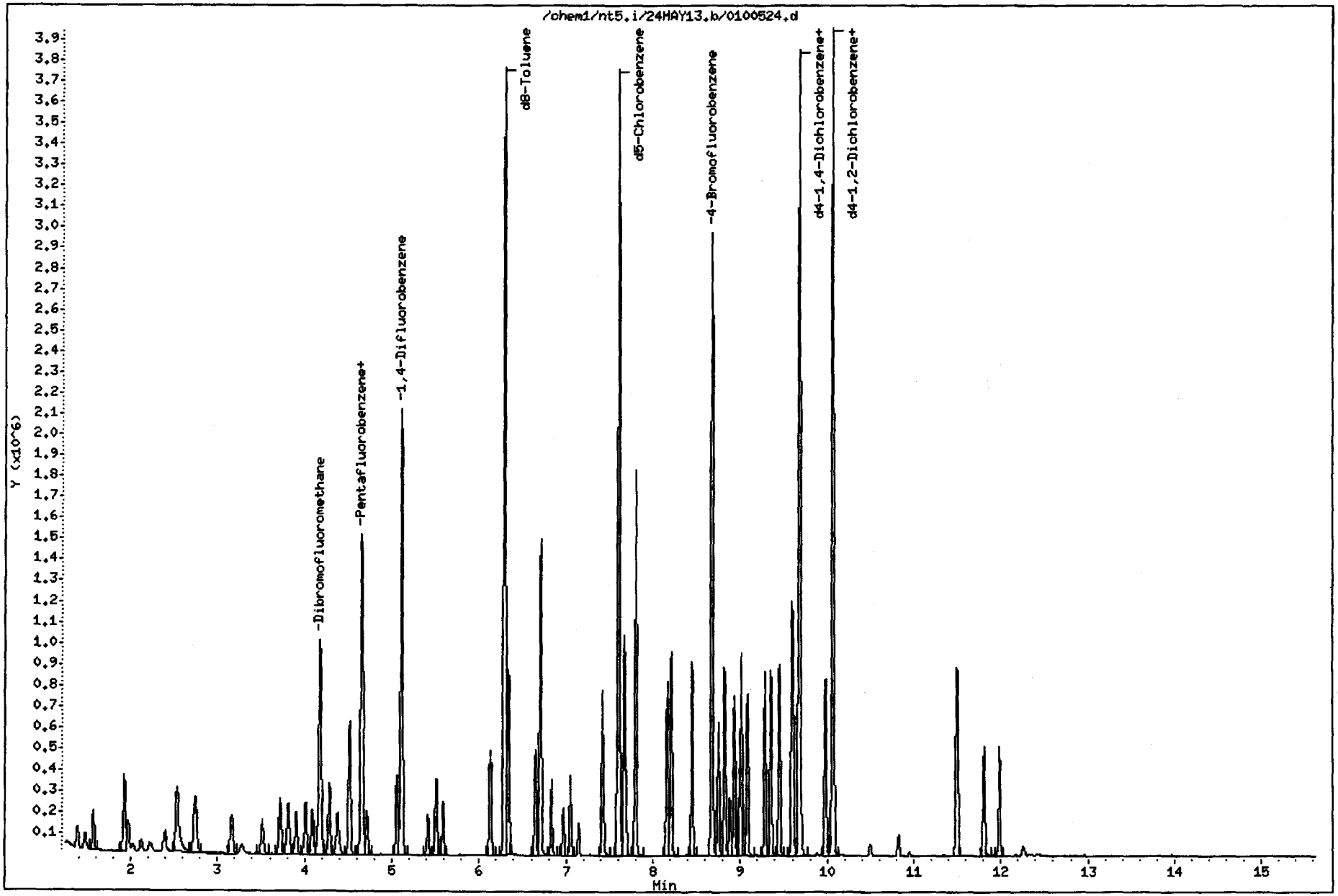
Sample Info: IC0524,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

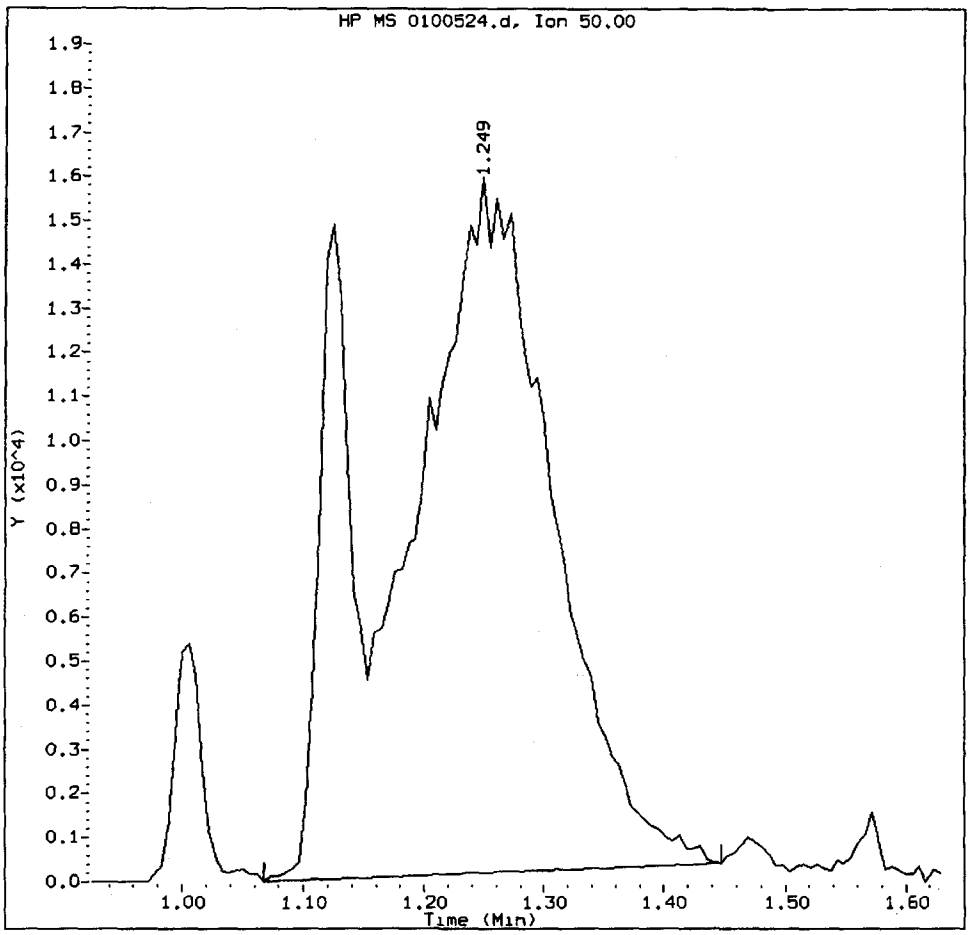
Operator: PB

Column diameter: 0.18



IC0524, /chem1/nt5.i/24MAY13.b/0100524.d

Chloromethane Amount: 10.84 Area: 147406



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/14

CO-ELUTION SUMMARY FOR FILE - 0100524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/0500524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD50
Inj Date : 24-MAY-2013 09:30
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 09:30 Cal File: 0500524.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.017	1.017	(0.218)	307188	50.0000	43.120
2 Chloromethane	50	1.277	1.277	(0.274)	602467	50.0000	43.581(M)
3 Vinyl Chloride	62	1.187	1.187	(0.254)	540913	50.0000	42.074
4 Bromomethane	94	1.396	1.396	(0.299)	299910	50.0000	44.713
5 Chloroethane	64	1.487	1.487	(0.319)	326801	50.0000	47.433
6 Trichlorofluoromethane	101	1.583	1.583	(0.339)	566461	50.0000	42.521
7 1,1-Dichloroethene	96	1.945	1.945	(0.417)	300199	50.0000	39.894
8 Carbon Disulfide	76	1.945	1.945	(0.417)	994196	50.0000	40.906
9 112Trichloro122Trifluoroethane	101	1.985	1.985	(0.425)	260170	50.0000	38.452
10 Iodomethane	142	2.041	2.041	(0.437)	232623	50.0000	41.580
11 Bromoethane	108	2.137	2.137	(0.458)	183126	50.0000	39.017
12 Acrolein	56	2.245	2.245	(0.481)	359165	250.000	283.96
13 Methylene Chloride	84	2.420	2.420	(0.519)	409617	50.0000	62.138
14 Acetone	43	2.567	2.567	(0.550)	792629	250.000	233.07

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15	Trans-1,2-Dichloroethene	96	2.562	2.562	(0.549)	421328	50.0000	49.685
	16	Methyl tert butyl ether	73	2.743	2.743	(0.588)	1372861	50.0000	50.569
	17	1,1-Dichloroethane	63	3.184	3.184	(0.682)	883976	50.0000	44.262
	18	Acrylonitrile	53	3.286	3.286	(0.704)	224835	50.0000	47.943
	19	Vinyl Acetate	43	3.523	3.523	(0.755)	1225544	50.0000	48.360
	20	Cis-1,2-Dichloroethene	96	3.732	3.732	(0.800)	457528	50.0000	43.827
	22	2,2-Dichloropropane	77	3.829	3.829	(0.821)	638161	50.0000	42.411
	23	Bromochloromethane	128	3.919	3.919	(0.840)	203576	50.0000	45.088
	24	Chloroform	83	4.021	4.021	(0.862)	753831	50.0000	44.614
	25	Carbon Tetrachloride	117	4.106	4.106	(0.802)	557585	50.0000	42.750
$	27	Dibromofluoromethane	111	4.185	4.185	(0.897)	528721	50.0000	49.851
	26	1,1,1-Trichloroethane	97	4.179	4.179	(0.896)	657586	50.0000	42.921
	28	1,1-Dichloropropene	75	4.298	4.298	(0.840)	626191	50.0000	42.551
	29	2-Butanone	72	4.377	4.377	(0.938)	314466	250.000	249.84
	30	Benzene	78	4.530	4.530	(0.885)	1898889	50.0000	44.670
*	31	Pentafluorobenzene	168	4.666	4.666	(1.000)	470814	50.0000	
$	32	d4-1,2-Dichloroethane	65	4.660	4.660	(0.999)	524745	50.0000	49.563
	33	1,2-Dichloroethane	62	4.722	4.722	(0.923)	621573	50.0000	45.982
	34	Trichloroethene	95	5.068	5.068	(0.990)	446465	50.0000	42.845
*	35	1,4-Difluorobenzene	114	5.118	5.118	(1.000)	1445861	50.0000	
	37	Dibromomethane	93	5.424	5.424	(1.060)	261943	50.0000	45.568
	38	1,2-Dichloropropane	63	5.514	5.514	(1.077)	532202	50.0000	44.486
	39	Bromodichloromethane	83	5.594	5.594	(1.093)	589691	50.0000	45.199
	40	2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.197)	326610	50.0000	50.587
	41	Cis 1,3-dichloropropene	75	6.142	6.142	(1.200)	781245	50.0000	46.806
$	42	d8-Toluene	98	6.301	6.301	(1.231)	2038524	50.0000	49.855
	43	Toluene	92	6.340	6.340	(1.239)	1189683	50.0000	44.121
	44	Tetrachloroethene	166	6.657	6.657	(0.875)	464505	50.0000	42.255
	45	4-Methyl-2-Pentanone	58	6.708	6.708	(1.311)	1267094	250.000	258.77
	46	Trans 1,3-Dichloropropene	75	6.708	6.708	(1.311)	715830	50.0000	47.208
	47	1,1,2-Trichloroethane	97	6.838	6.838	(1.336)	399905	50.0000	46.643
	48	Chlorodibromomethane	129	6.974	6.974	(0.917)	442120	50.0000	46.427
	49	1,3-Dichloropropane	76	7.053	7.053	(0.927)	735375	50.0000	46.612
	50	1,2-Dibromoethane	107	7.149	7.149	(1.397)	391509	50.0000	47.321
	51	2-Hexanone	43	7.421	7.421	(0.975)	2145359	250.000	258.81
*	52	d5-Chlorobenzene	117	7.607	7.607	(1.000)	1620542	50.0000	
	53	Chlorobenzene	112	7.619	7.619	(1.001)	1217410	50.0000	44.391
	54	Ethyl Benzene	91	7.670	7.670	(1.008)	2167908	50.0000	46.172
	55	1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	432236	50.0000	44.720
	56	m,p-xylene	106	7.805	7.805	(1.026)	1637588	100.000	92.786
	57	o-Xylene	106	8.168	8.168	(1.074)	788480	50.0000	46.506
	58	Styrene	104	8.213	8.213	(1.080)	1360134	50.0000	47.408
	59	Bromoform	173	8.207	8.207	(0.848)	325407	50.0000	47.206
	60	Isopropyl Benzene	105	8.456	8.456	(0.873)	2010437	50.0000	46.219
$	62	4-Bromofluorobenzene	95	8.677	8.677	(1.141)	861398	50.0000	50.081
	63	Bromobenzene	156	8.756	8.756	(0.904)	508001	50.0000	43.654
	64	N-Propyl Benzene	91	8.824	8.824	(0.911)	2378706	50.0000	45.126

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.886	8.886	(0.918)	544172	50.0000	47.325
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	1461612	50.0000	44.857
67	1,3,5-Trimethyl Benzene	105	9.010	9.010	(0.930)	1695879	50.0000	45.899
68	1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	167597	50.0000	47.692
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	202886	50.0000	46.060
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	1527297	50.0000	44.716
71	T-Butyl Benzene	119	9.288	9.288	(0.959)	1486109	50.0000	45.600
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	1683259	50.0000	46.360
73	S-Butyl Benzene	105	9.452	9.452	(0.976)	2189766	50.0000	45.725
74	4-Isopropyl Toluene	119	9.599	9.599	(0.991)	1803233	50.0000	46.471
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	948574	50.0000	44.029
* 76	d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	872028	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	968266	50.0000	43.055
78	N-Butyl Benzene	91	9.983	9.983	(1.031)	1687656	50.0000	45.799
$ 79	d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	857710	50.0000	49.847
80	1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	918082	50.0000	44.022
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	109895	50.0000	49.129
82	Hexachloro 1,3-Butadiene	225	11.505	11.505	(1.188)	394211	50.0000	42.877
83	1,2,4-Trichlorobenzene	180	11.494	11.494	(1.187)	664756	50.0000	44.860
84	Naphthalene	128	11.805	11.805	(1.219)	1645762	50.0000	49.914
85	1,2,3-Trichlorobenzene	180	11.986	11.986	(1.238)	645979	50.0000	45.700

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0500524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

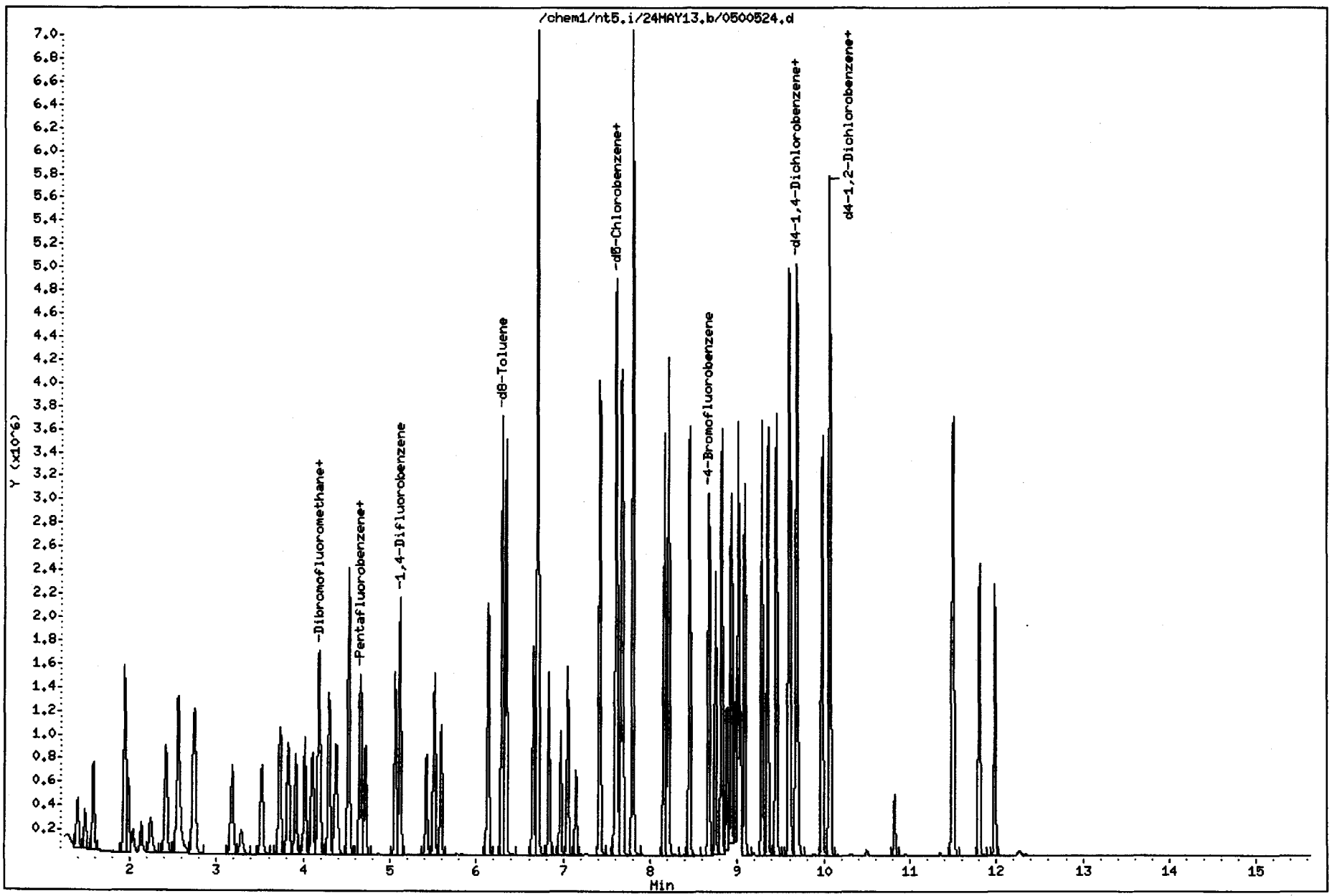
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	470814	0.00
35 1,4-Difluorobenze	1445861	722930	2891722	1445861	0.00
52 d5-Chlorobenzene	1620542	810271	3241084	1620542	0.00
76 d4-1,4-Dichlorobe	872028	436014	1744056	872028	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

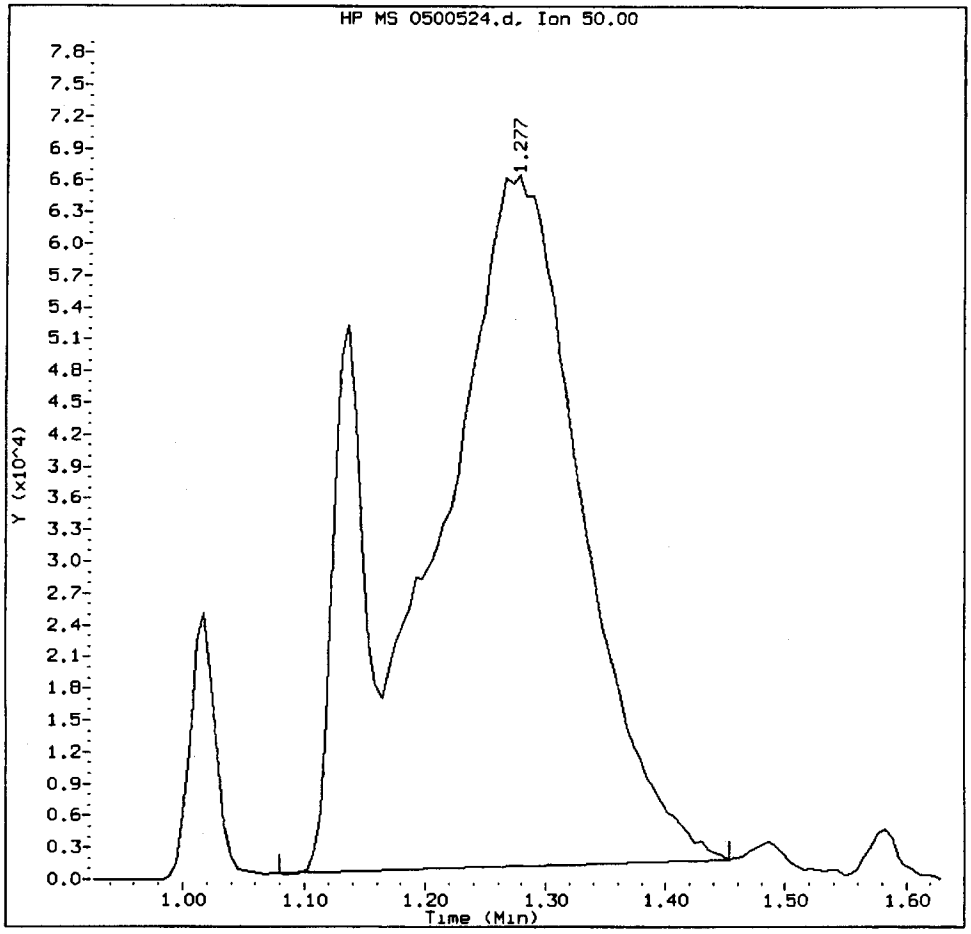
Data File: /chem1/nt5.i/24MAY13.b/0500524.d
Date : 24-MAY-2013 09:30
Client ID: VSTD50
Sample Info: IC0524,5,5,0

Instrument: nt5.i
Operator: PB
Column phase: RTXVMS
Column diameter: 0.18



IC0524, /chem1/nt5.i/24MAY13.b/0500524.d

Chloromethane Amount: 43.58 Area: 602467



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - 0500524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/1000524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD100
Inj Date : 24-MAY-2013 09:06
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 09:06 Cal File: 1000524.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.023	1.017	(0.219)	678597	100.000	98.168
2 Chloromethane	50	1.283	1.277	(0.275)	1414961	100.000	105.49(M)
3 Vinyl Chloride	62	1.193	1.187	(0.256)	1384408	100.000	110.98
4 Bromomethane	94	1.402	1.396	(0.300)	634419	100.000	97.477
5 Chloroethane	64	1.487	1.487	(0.319)	689546	100.000	103.14
6 Trichlorofluoromethane	101	1.583	1.583	(0.339)	1335961	100.000	103.35
7 1,1-Dichloroethene	96	1.945	1.945	(0.417)	704845	100.000	96.535
8 Carbon Disulfide	76	1.945	1.945	(0.417)	2288941	100.000	97.060
9 112Trichloro122Trifluoroethane	101	1.990	1.985	(0.427)	612335	100.000	93.268
10 Iodomethane	142	2.047	2.041	(0.439)	651820	100.000	120.07
11 Bromoethane	108	2.143	2.137	(0.459)	411157	100.000	90.282
12 Acrolein	56	2.245	2.245	(0.481)	541564	500.000	441.27
13 Methylene Chloride	84	2.414	2.420	(0.517)	535836	100.000	83.772
14 Acetone	43	2.590	2.567	(0.555)	1252245	500.000	379.48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.550	2.562	(0.547)	638379	100.000	77.583
	16 Methyl tert butyl ether	73	2.754	2.743	(0.590)	2944936	100.000	111.80
	17 1,1-Dichloroethane	63	3.178	3.184	(0.681)	2024183	100.000	104.45
	18 Acrylonitrile	53	3.303	3.286	(0.708)	467284	100.000	102.69
	19 Vinyl Acetate	43	3.529	3.523	(0.756)	2580465	100.000	104.94
	20 Cis-1,2-Dichloroethene	96	3.732	3.732	(0.800)	1047496	100.000	103.41
	22 2,2-Dichloropropane	77	3.829	3.829	(0.821)	1505362	100.000	103.11
	23 Bromochloromethane	128	3.919	3.919	(0.840)	453502	100.000	103.51
	24 Chloroform	83	4.021	4.021	(0.862)	1710740	100.000	104.34
	25 Carbon Tetrachloride	117	4.100	4.106	(0.801)	1322914	100.000	104.52
$	27 Dibromofluoromethane	111	4.191	4.185	(0.898)	513847	50.0000	49.931
	26 1,1,1-Trichloroethane	97	4.174	4.179	(0.895)	1557918	100.000	104.80
	28 1,1-Dichloropropene	75	4.298	4.298	(0.840)	1481310	100.000	103.73
	29 2-Butanone	72	4.394	4.377	(0.942)	646911	500.000	529.69
	30 Benzene	78	4.530	4.530	(0.885)	4279790	100.000	103.75
*	31 Pentafluorobenzene	168	4.666	4.666	(1.000)	456837	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.999)	508011	50.0000	49.450
	33 1,2-Dichloroethane	62	4.722	4.722	(0.923)	1354023	100.000	103.23
	34 Trichloroethene	95	5.068	5.068	(0.990)	1038807	100.000	102.73
*	35 1,4-Difluorobenzene	114	5.118	5.118	(1.000)	1403019	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.060)	577895	100.000	103.60
	38 1,2-Dichloropropane	63	5.520	5.514	(1.078)	1224410	100.000	105.47
	39 Bromodichloromethane	83	5.594	5.594	(1.093)	1330777	100.000	105.12
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.125	(1.198)	717149	100.000	114.47
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.200)	1742889	100.000	107.61
$	42 d8-Toluene	98	6.301	6.301	(1.231)	1975512	50.0000	49.789
	43 Toluene	92	6.340	6.340	(1.239)	2689949	100.000	102.81
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	1085403	100.000	102.43
	45 4-Methyl-2-Pentanone	58	6.714	6.708	(1.312)	2568058	500.000	540.47
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.311)	1570206	100.000	106.72
	47 1,1,2-Trichloroethane	97	6.838	6.838	(1.336)	869703	100.000	104.54
	48 Chlorodibromomethane	129	6.974	6.974	(0.917)	974010	100.000	106.11
	49 1,3-Dichloropropane	76	7.059	7.053	(0.928)	1600052	100.000	105.21
	50 1,2-Dibromoethane	107	7.155	7.149	(1.398)	851629	100.000	106.08
	51 2-Hexanone	43	7.426	7.421	(0.976)	4214951	500.000	527.51
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1562110	50.0000	
	53 Chlorobenzene	112	7.624	7.619	(1.002)	2682139	100.000	101.46
	54 Ethyl Benzene	91	7.675	7.670	(1.009)	4698919	100.000	103.82
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.687	(1.011)	975269	100.000	104.68
	56 m,p-xylene	106	7.811	7.805	(1.027)	3583927	200.000	210.66
	57 o-Xylene	106	8.168	8.168	(1.074)	1798142	100.000	110.02
	58 Styrene	104	8.218	8.213	(1.080)	3014720	100.000	109.01
	59 Bromoform	173	8.213	8.207	(0.848)	694892	100.000	106.70
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	4428152	100.000	107.75
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	830773	50.0000	50.107
	63 Bromobenzene	156	8.756	8.756	(0.904)	1122545	100.000	102.10
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	5124776	100.000	102.90

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
65 1,1,2,2-Tetrachloroethane	83	8.886	8.886	(0.918)	1133243	100.000	104.31
66 2-Chloro Toluene	91	8.937	8.931	(0.923)	3227877	100.000	104.85
67 1,3,5-Trimethyl Benzene	105	9.016	9.010	(0.931)	3740312	100.000	107.15
68 1,2,3-Trichloropropane	110	8.988	8.982	(0.928)	345930	100.000	104.19
69 Trans-1,4-Dichloro 2-Butene	53	9.044	9.039	(0.934)	425686	100.000	102.29
70 4-Chloro Toluene	91	9.090	9.084	(0.939)	3362746	100.000	104.21
71 T-Butyl Benzene	119	9.293	9.288	(0.960)	3325303	100.000	108.00
72 1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	3693597	100.000	107.68
73 S-Butyl Benzene	105	9.457	9.452	(0.977)	4754586	100.000	105.08
74 4-Isopropyl Toluene	119	9.599	9.599	(0.991)	3961268	100.000	108.05
75 1,3-Dichlorobenzene	146	9.616	9.610	(0.993)	2070230	100.000	101.71
* 76 d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	823874	50.0000	
77 1,4-Dichlorobenzene	146	9.701	9.695	(1.002)	2114347	100.000	99.511
78 N-Butyl Benzene	91	9.983	9.983	(1.031)	3774288	100.000	108.41
$ 79 d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	802639	50.0000	49.373
80 1,2-Dichlorobenzene	146	10.080	10.074	(1.041)	1966081	100.000	99.784
81 1,2-Dibromo 3-Chloropropane	75	10.832	10.826	(1.119)	214953	100.000	101.71
82 Hexachloro 1,3-Butadiene	225	11.505	11.505	(1.188)	871338	100.000	100.31
83 1,2,4-Trichlorobenzene	180	11.499	11.494	(1.188)	1459156	100.000	104.22
84 Naphthalene	128	11.811	11.805	(1.220)	3350352	100.000	107.55
85 1,2,3-Trichlorobenzene	180	11.992	11.986	(1.238)	1367079	100.000	102.37

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1000524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD100
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	456837	-2.97
35 1,4-Difluorobenze	1445861	722930	2891722	1403019	-2.96
52 d5-Chlorobenzene	1620542	810271	3241084	1562110	-3.61
76 d4-1,4-Dichlorobe	872028	436014	1744056	823874	-5.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

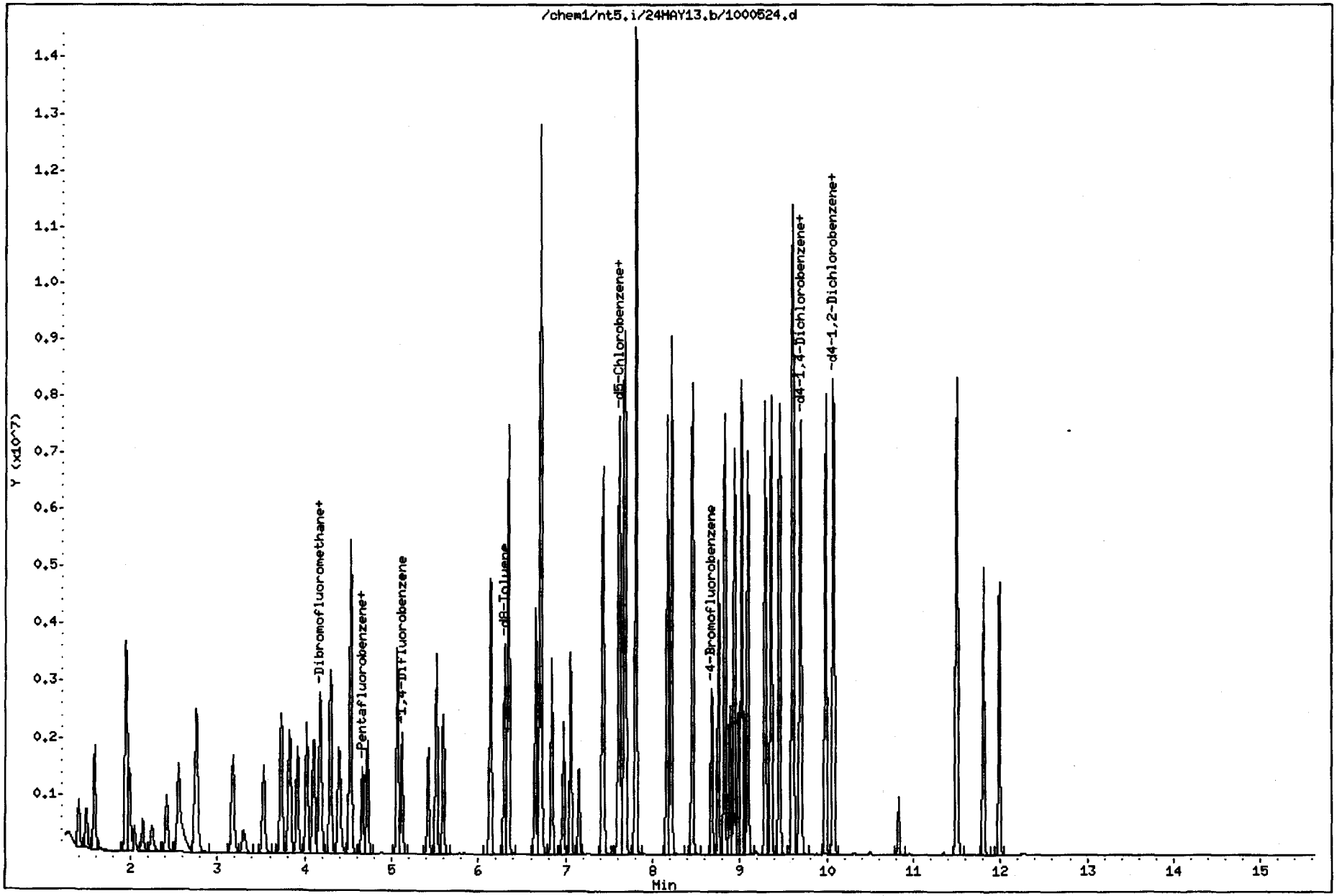
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/1000524.d
Date : 24-MAY-2013 09:06
Client ID: VSTD100
Sample Info: IC0524,5,5,0

Instrument: nt5.i

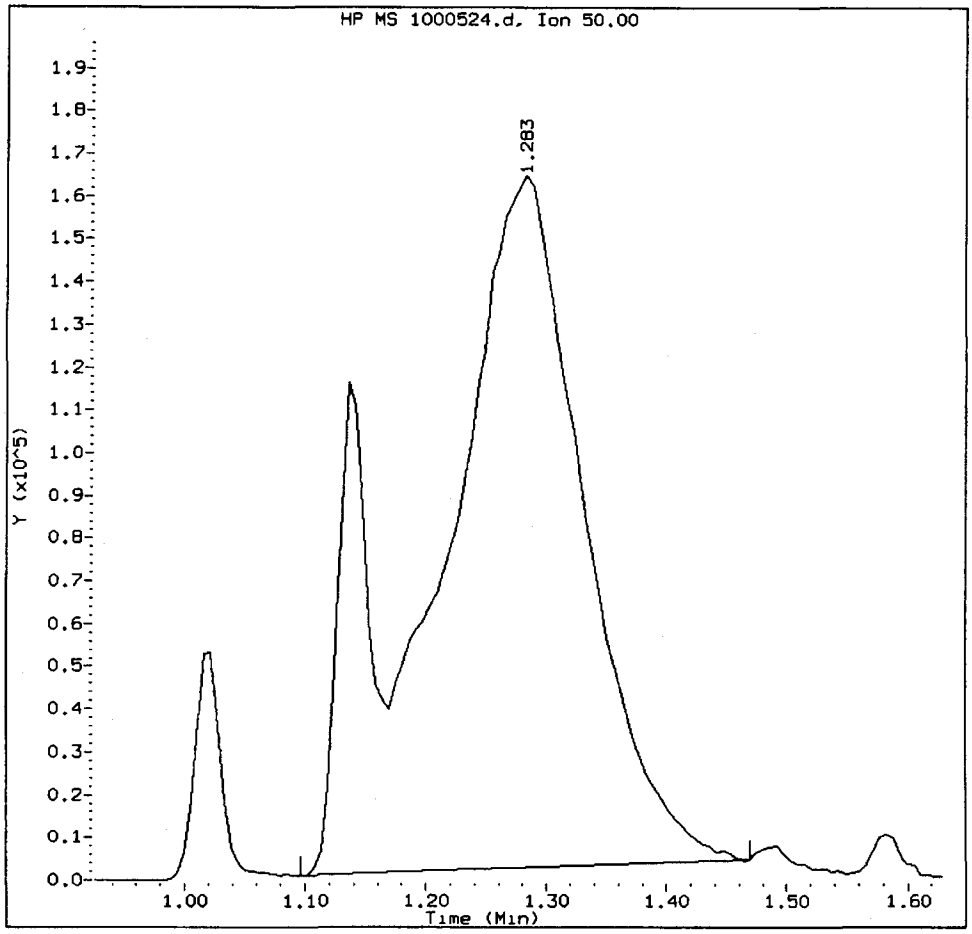
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0524, /chem1/nt5.i/24MAY13.b/1000524.d

Chloromethane Amount: 105.49 Area: 1414961



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JR Date: 6/11/14

CO-ELUTION SUMMARY FOR FILE - 1000524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/1500524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD150
Inj Date : 24-MAY-2013 08:42
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:42 Cal File: 1500524.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.012	1.017	(0.217)	1351805	150.000	188.60
2 Chloromethane	50	1.272	1.277	(0.273)	2175240	150.000	156.39(M)
3 Vinyl Chloride	62	1.187	1.187	(0.255)	2257124	150.000	174.50
4 Bromomethane	94	1.396	1.396	(0.300)	947290	150.000	140.37
5 Chloroethane	64	1.481	1.487	(0.318)	970610	150.000	140.02
6 Trichlorofluoromethane	101	1.577	1.583	(0.338)	2082935	150.000	155.40
7 1,1-Dichloroethene	96	1.939	1.945	(0.416)	1159292	150.000	153.12
8 Carbon Disulfide	76	1.939	1.945	(0.416)	3723522	150.000	152.27
9 112Trichloro122Trifluoroethane	101	1.985	1.985	(0.426)	1038014	150.000	152.48
10 Iodomethane	142	2.041	2.041	(0.438)	1079718	150.000	191.82
11 Bromoethane	108	2.137	2.137	(0.459)	646031	150.000	136.81
12 Acrolein	56	2.245	2.245	(0.482)	884571	750.000	695.11
13 Methylene Chloride	84	2.409	2.420	(0.517)	835601	150.000	125.99
14 Acetone	43	2.578	2.567	(0.553)	899360	750.000	262.84

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.545	2.562	(0.546)	949728	150.000	111.31
	16 Methyl tert butyl ether	73	2.737	2.743	(0.587)	2488408	150.000	91.103
	17 1,1-Dichloroethane	63	3.161	3.184	(0.678)	3094997	150.000	154.03
	18 Acrylonitrile	53	3.297	3.286	(0.707)	697002	150.000	147.72
	19 Vinyl Acetate	43	3.523	3.523	(0.756)	3825356	150.000	150.03
	20 Cis-1,2-Dichloroethene	96	3.721	3.732	(0.798)	1613155	150.000	153.58
	22 2,2-Dichloropropane	77	3.817	3.829	(0.819)	2359496	150.000	155.85
	23 Bromochloromethane	128	3.908	3.919	(0.839)	701172	150.000	154.35
	24 Chloroform	83	4.015	4.021	(0.862)	2633088	150.000	154.89
	25 Carbon Tetrachloride	117	4.095	4.106	(0.801)	2082866	150.000	159.25
$	27 Dibromofluoromethane	111	4.185	4.185	(0.898)	530971	50.0000	49.759
	26 1,1,1-Trichloroethane	97	4.168	4.179	(0.894)	2426358	150.000	157.40
	28 1,1-Dichloropropene	75	4.287	4.298	(0.838)	2335486	150.000	158.27
	29 2-Butanone	72	4.406	4.377	(0.945)	961842	750.000	759.52
	30 Benzene	78	4.519	4.530	(0.884)	6336970	150.000	148.66
*	31 Pentafluorobenzene	168	4.660	4.666	(1.000)	473697	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.660	(0.999)	526874	50.0000	49.461
	33 1,2-Dichloroethane	62	4.717	4.722	(0.923)	2046946	150.000	151.01
	34 Trichloroethene	95	5.062	5.068	(0.990)	1639339	150.000	156.89
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	1449833	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	880505	150.000	152.76
	38 1,2-Dichloropropane	63	5.514	5.514	(1.079)	1872532	150.000	156.09
	39 Bromodichloromethane	83	5.594	5.594	(1.094)	2028682	150.000	155.07
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.125	(1.199)	1089505	150.000	168.28
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.201)	2654246	150.000	158.59
$	42 d8-Toluene	98	6.295	6.301	(1.231)	2039796	50.0000	49.750
	43 Toluene	92	6.340	6.340	(1.240)	4061978	150.000	150.23
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	1714054	150.000	159.36
	45 4-Methyl-2-Pentanone	58	6.719	6.708	(1.314)	3745805	750.000	762.88
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.312)	2380933	150.000	156.59
	47 1,1,2-Trichloroethane	97	6.844	6.838	(1.339)	1324341	150.000	154.04
	48 Chlorodibromomethane	129	6.974	6.974	(0.917)	1483051	150.000	159.17
	49 1,3-Dichloropropane	76	7.059	7.053	(0.928)	2419173	150.000	156.72
	50 1,2-Dibromoethane	107	7.155	7.149	(1.399)	1290797	150.000	155.59
	51 2-Hexanone	43	7.432	7.421	(0.977)	6218954	750.000	766.79
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1585589	50.0000	
	53 Chlorobenzene	112	7.624	7.619	(1.002)	4041450	150.000	150.61
	54 Ethyl Benzene	91	7.675	7.670	(1.009)	6769542	150.000	147.35
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.687	(1.011)	1492217	150.000	157.79
	56 m,p-xylene	106	7.811	7.805	(1.027)	5259306	300.000	304.56
	57 o-Xylene	106	8.173	8.168	(1.074)	2744061	150.000	165.42
	58 Styrene	104	8.218	8.213	(1.080)	4447592	150.000	158.44
	59 Bromoform	173	8.213	8.207	(0.848)	1035379	150.000	162.04
	60 Isopropyl Benzene	105	8.462	8.456	(0.873)	6392318	150.000	158.54
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	834787	50.0000	49.604
	63 Bromobenzene	156	8.756	8.756	(0.904)	1704680	150.000	158.03
	64 N-Propyl Benzene	91	8.829	8.824	(0.911)	7289724	150.000	149.19

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.892	8.886	(0.918)	1693190	150.000	158.86
66	2-Chloro Toluene	91	8.937	8.931	(0.922)	4811966	150.000	159.32
67	1,3,5-Trimethyl Benzene	105	9.022	9.010	(0.931)	5514007	150.000	161.00
68	1,2,3-Trichloropropane	110	8.988	8.982	(0.928)	512009	150.000	157.18
69	Trans-1,4-Dichloro 2-Butene	53	9.050	9.039	(0.934)	655389	150.000	160.52
70	4-Chloro Toluene	91	9.095	9.084	(0.939)	4990089	150.000	157.61
71	T-Butyl Benzene	119	9.293	9.288	(0.959)	4938835	150.000	163.49
72	1,2,4-Trimethylbenzene	105	9.361	9.355	(0.966)	5395563	150.000	160.32
73	S-Butyl Benzene	105	9.457	9.452	(0.976)	6791507	150.000	152.99
74	4-Isopropyl Toluene	119	9.604	9.599	(0.991)	5736676	150.000	159.49
75	1,3-Dichlorobenzene	146	9.616	9.610	(0.992)	3077224	150.000	154.09
* 76	d4-1,4-Dichlorobenzene	152	9.689	9.684	(1.000)	808326	50.0000	
77	1,4-Dichlorobenzene	146	9.706	9.695	(1.002)	3157549	150.000	151.47
78	N-Butyl Benzene	91	9.989	9.983	(1.031)	5552075	150.000	162.54
$ 79	d4-1,2-Dichlorobenzene	152	10.074	10.068	(1.040)	791524	50.0000	49.626
80	1,2-Dichlorobenzene	146	10.085	10.074	(1.041)	2918169	150.000	150.95
81	1,2-Dibromo 3-Chloropropane	75	10.838	10.826	(1.119)	326731	150.000	157.58
82	Hexachloro 1,3-Butadiene	225	11.516	11.505	(1.189)	1347846	150.000	158.15
83	1,2,4-Trichlorobenzene	180	11.505	11.494	(1.187)	2266278	150.000	164.99
84	Naphthalene	128	11.816	11.805	(1.220)	4913636	150.000	160.77
85	1,2,3-Trichlorobenzene	180	11.997	11.986	(1.238)	2107123	150.000	160.82

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1500524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD150
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	473697	0.61
35 1,4-Difluorobenze	1445861	722930	2891722	1449833	0.27
52 d5-Chlorobenzene	1620542	810271	3241084	1585589	-2.16
76 d4-1,4-Dichlorobe	872028	436014	1744056	808326	-7.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.69	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/1500524.d

Date : 24-MAY-2013 08:42

Client ID: VSTD150

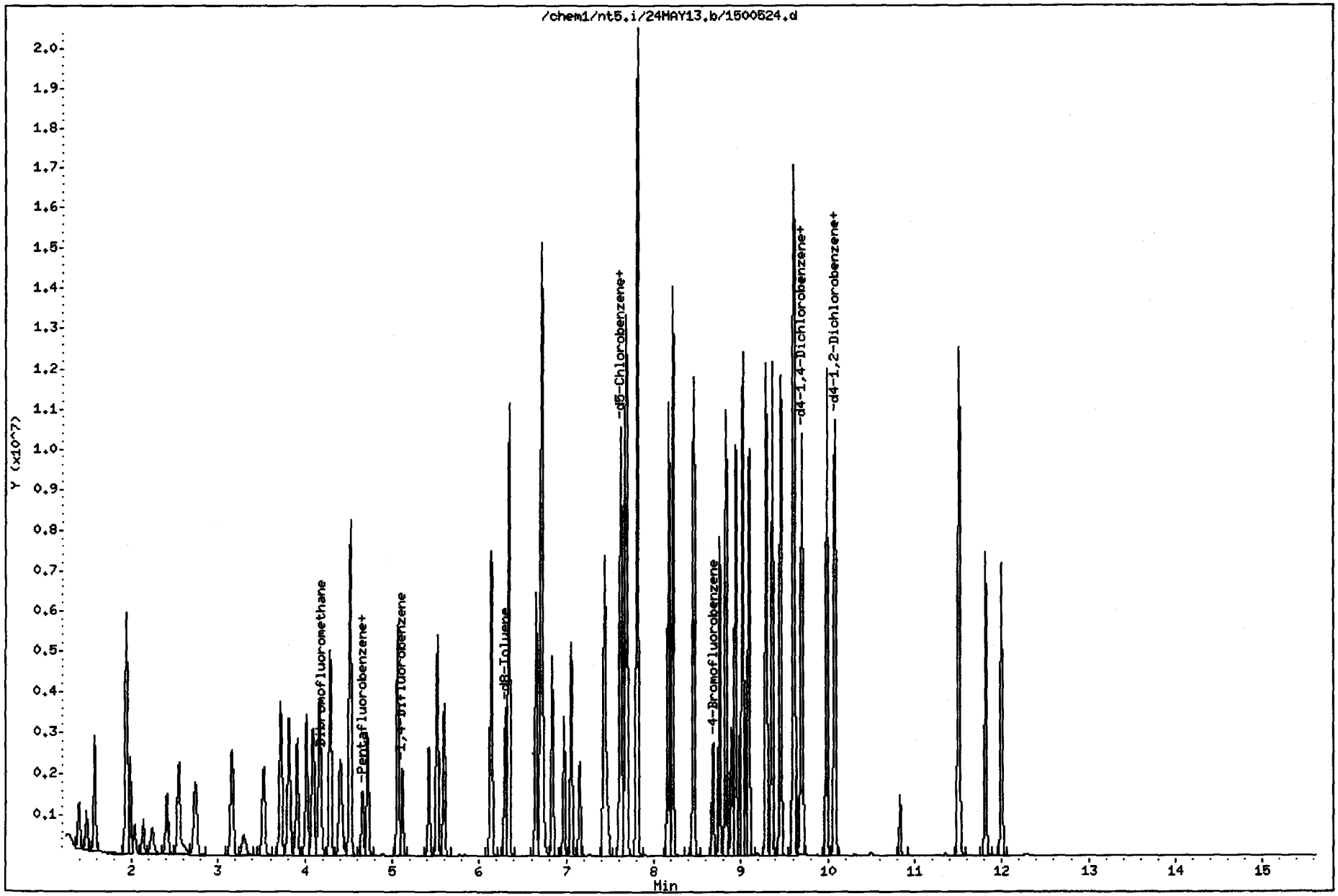
Sample Info: IC0524,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

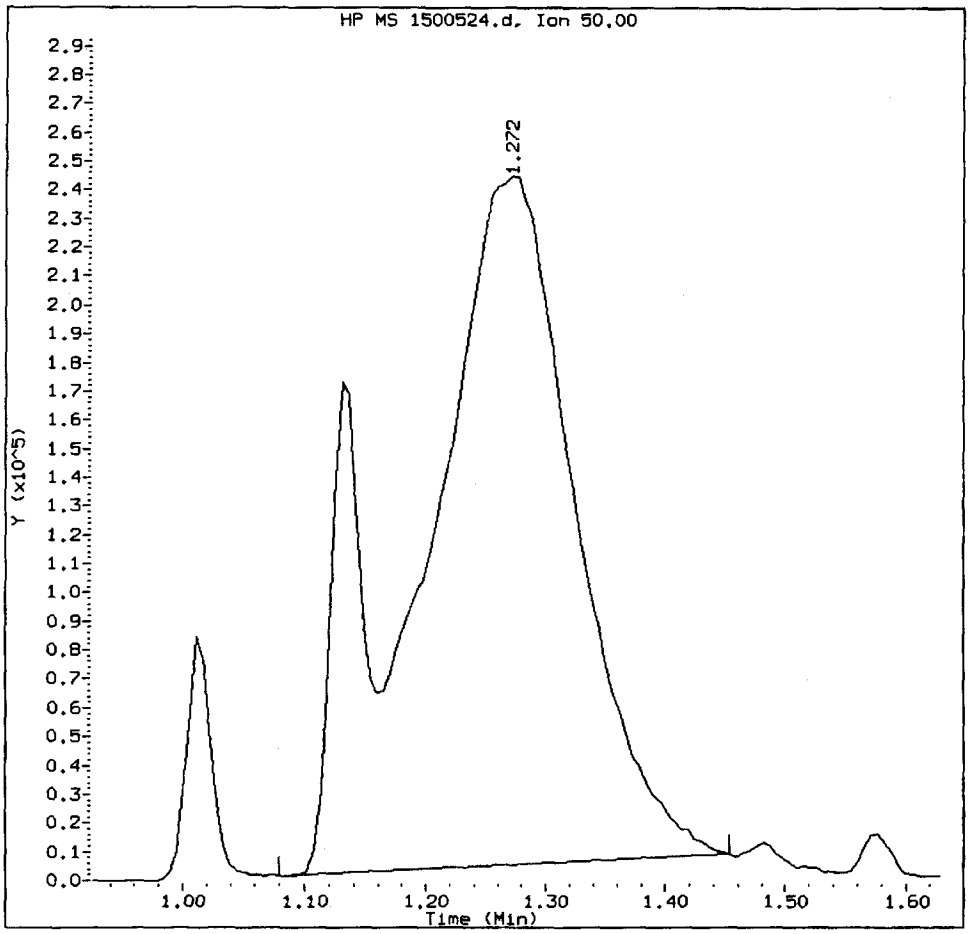
Operator: PB

Column diameter: 0.18



IC0524, /chem1/nt5.i/24MAY13.b/1500524.d

Chloromethane Amount: 156.39 Area: 2175240



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - 1500524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/2000524.d
Lab Smp Id: IC0524 Client Smp ID: VSTD200
Inj Date : 24-MAY-2013 08:18
Operator : PB Inst ID: nt5.i
Smp Info : IC0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/VO121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.023	1.017	(0.219)	1442072	200.000	202.19
2 Chloromethane	50	1.272	1.277	(0.273)	2902878	200.000	209.74(M)
3 Vinyl Chloride	62	1.193	1.187	(0.256)	2925418	200.000	227.28
4 Bromomethane	94	1.402	1.396	(0.301)	1213680	200.000	180.73
5 Chloroethane	64	1.492	1.487	(0.320)	1155160	200.000	167.47
6 Trichlorofluoromethane	101	1.583	1.583	(0.340)	2787629	200.000	209.01
7 1,1-Dichloroethene	96	1.951	1.945	(0.419)	1847222	200.000	245.20
8 Carbon Disulfide	76	1.951	1.945	(0.419)	5735114	200.000	235.70
9 112Trichloro122Trifluoroethane	101	1.996	1.985	(0.428)	1735285	200.000	256.17
10 Iodomethane	142	2.052	2.041	(0.440)	1874041	200.000	334.58
11 Bromoethane	108	2.149	2.137	(0.461)	1058357	200.000	225.23
12 Acrolein	56	2.262	2.245	(0.485)	1742874	1000.00	1376.4
13 Methylene Chloride	84	2.426	2.420	(0.521)	1306499	200.000	197.96
14 Acetone	43	2.629	2.567	(0.564)	1423585	1000.00	418.11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.562	2.562	(0.550)	1465023	200.000	172.56
	16 Methyl tert butyl ether	73	2.731	2.743	(0.586)	4009751	200.000	147.53
	17 1,1-Dichloroethane	63	3.167	3.184	(0.680)	2022608	200.000	101.16
	18 Acrylonitrile	53	3.303	3.286	(0.709)	309267	200.000	65.870
	19 Vinyl Acetate	43	3.523	3.523	(0.756)	4850533	200.000	191.18
	20 Cis-1,2-Dichloroethene	96	3.721	3.732	(0.798)	2160756	200.000	206.74
	22 2,2-Dichloropropane	77	3.812	3.829	(0.818)	3157861	200.000	209.62
	23 Bromochloromethane	128	3.908	3.919	(0.839)	937061	200.000	207.30
	24 Chloroform	83	4.015	4.021	(0.862)	3505860	200.000	207.25
	25 Carbon Tetrachloride	117	4.095	4.106	(0.801)	2807720	200.000	213.86
$	27 Dibromofluoromethane	111	4.185	4.185	(0.898)	528804	50.0000	49.801
	26 1,1,1-Trichloroethane	97	4.168	4.179	(0.894)	3244480	200.000	211.52
	28 1,1-Dichloropropene	75	4.287	4.298	(0.838)	3142662	200.000	212.16
	29 2-Butanone	72	4.428	4.377	(0.950)	1241258	1000.00	985.01 (M)
	30 Benzene	78	4.524	4.530	(0.885)	8024659	200.000	187.54
*	31 Pentafluorobenzene	168	4.660	4.666	(1.000)	471363	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.660	(0.999)	515680	50.0000	48.650
	33 1,2-Dichloroethane	62	4.722	4.722	(0.924)	2707101	200.000	198.96
	34 Trichloroethene	95	5.062	5.068	(0.990)	2210682	200.000	210.77
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	1455341	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.061)	1172536	200.000	202.65
	38 1,2-Dichloropropane	63	5.520	5.514	(1.080)	2493155	200.000	207.04
	39 Bromodichloromethane	83	5.594	5.594	(1.094)	2713730	200.000	206.65
	40 2-Chloroethyl Vinyl Ether	63	6.137	6.125	(1.200)	1424664	200.000	219.22
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.201)	3492775	200.000	207.90
$	42 d8-Toluene	98	6.301	6.301	(1.232)	2030733	50.0000	49.341
	43 Toluene	92	6.346	6.340	(1.241)	5249467	200.000	193.42
	44 Tetrachloroethene	166	6.657	6.657	(0.875)	2332183	200.000	214.33
	45 4-Methyl-2-Pentanone	58	6.725	6.708	(1.315)	4757020	1000.00	965.16
	46 Trans 1,3-Dichloropropene	75	6.708	6.708	(1.312)	3130895	200.000	205.13
	47 1,1,2-Trichloroethane	97	6.844	6.838	(1.339)	1752824	200.000	203.11
	48 Chlorodibromomethane	129	6.980	6.974	(0.917)	1976641	200.000	209.70
	49 1,3-Dichloropropane	76	7.064	7.053	(0.929)	3174565	200.000	203.29
	50 1,2-Dibromoethane	107	7.155	7.149	(1.399)	1704863	200.000	204.72
	51 2-Hexanone	43	7.438	7.421	(0.978)	8051737	1000.00	981.33
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1604074	50.0000	
	53 Chlorobenzene	112	7.624	7.619	(1.002)	5239441	200.000	193.01
	54 Ethyl Benzene	91	7.681	7.670	(1.010)	8407602	200.000	180.90
	55 1,1,1,2-Tetrachloroethane	131	7.698	7.687	(1.012)	1988007	200.000	207.79
	56 m,p-xylene	106	7.817	7.805	(1.028)	6660419	400.000	381.25
	57 o-Xylene	106	8.173	8.168	(1.074)	3636398	200.000	216.68
	58 Styrene	104	8.224	8.213	(1.081)	5714302	200.000	201.22
	59 Bromoform	173	8.218	8.207	(0.848)	1359769	200.000	203.80
	60 Isopropyl Benzene	105	8.462	8.456	(0.873)	7909563	200.000	187.87
$	62 4-Bromofluorobenzene	95	8.682	8.677	(1.141)	838767	50.0000	49.266
	63 Bromobenzene	156	8.761	8.756	(0.904)	2278857	200.000	202.33
	64 N-Propyl Benzene	91	8.835	8.824	(0.911)	8961825	200.000	175.65

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.909	8.886	(0.919)	2218297	200.000	199.32
66	2-Chloro Toluene	91	8.943	8.931	(0.922)	6169614	200.000	195.63
67	1,3,5-Trimethyl Benzene	105	9.027	9.010	(0.931)	6978087	200.000	195.13
68	1,2,3-Trichloropropane	110	8.999	8.982	(0.928)	668902	200.000	196.66
69	Trans-1,4-Dichloro 2-Butene	53	9.056	9.039	(0.934)	800644	200.000	187.80
70	4-Chloro Toluene	91	9.101	9.084	(0.939)	6529386	200.000	197.51
71	T-Butyl Benzene	119	9.299	9.288	(0.959)	6301936	200.000	199.79
72	1,2,4-Trimethylbenzene	105	9.367	9.355	(0.966)	6839171	200.000	194.62
73	S-Butyl Benzene	105	9.463	9.452	(0.976)	8397162	200.000	181.16
74	4-Isopropyl Toluene	119	9.616	9.599	(0.992)	7232429	200.000	192.57
75	1,3-Dichlorobenzene	146	9.627	9.610	(0.993)	4029882	200.000	193.26
* 76	d4-1,4-Dichlorobenzene	152	9.695	9.684	(1.000)	844016	50.0000	
77	1,4-Dichlorobenzene	146	9.712	9.695	(1.002)	4216912	200.000	193.73
78	N-Butyl Benzene	91	10.000	9.983	(1.032)	7128039	200.000	199.86
$ 79	d4-1,2-Dichlorobenzene	152	10.085	10.068	(1.040)	825273	50.0000	49.554
80	1,2-Dichlorobenzene	146	10.091	10.074	(1.041)	3925999	200.000	194.50
81	1,2-Dibromo 3-Chloropropane	75	10.843	10.826	(1.118)	430690	200.000	198.93
82	Hexachloro 1,3-Butadiene	225	11.533	11.505	(1.190)	1892281	200.000	212.65
83	1,2,4-Trichlorobenzene	180	11.522	11.494	(1.188)	3196239	200.000	222.85
84	Naphthalene	128	11.833	11.805	(1.221)	6354889	200.000	199.13
85	1,2,3-Trichlorobenzene	180	12.020	11.986	(1.240)	2941419	200.000	215.00

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 2000524.d
Lab Smp Id: IC0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: VSTD200
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	471363	0.12
35 1,4-Difluorobenze	1445861	722930	2891722	1455341	0.66
52 d5-Chlorobenzene	1620542	810271	3241084	1604074	-1.02
76 d4-1,4-Dichlorobe	872028	436014	1744056	844016	-3.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.69	0.12

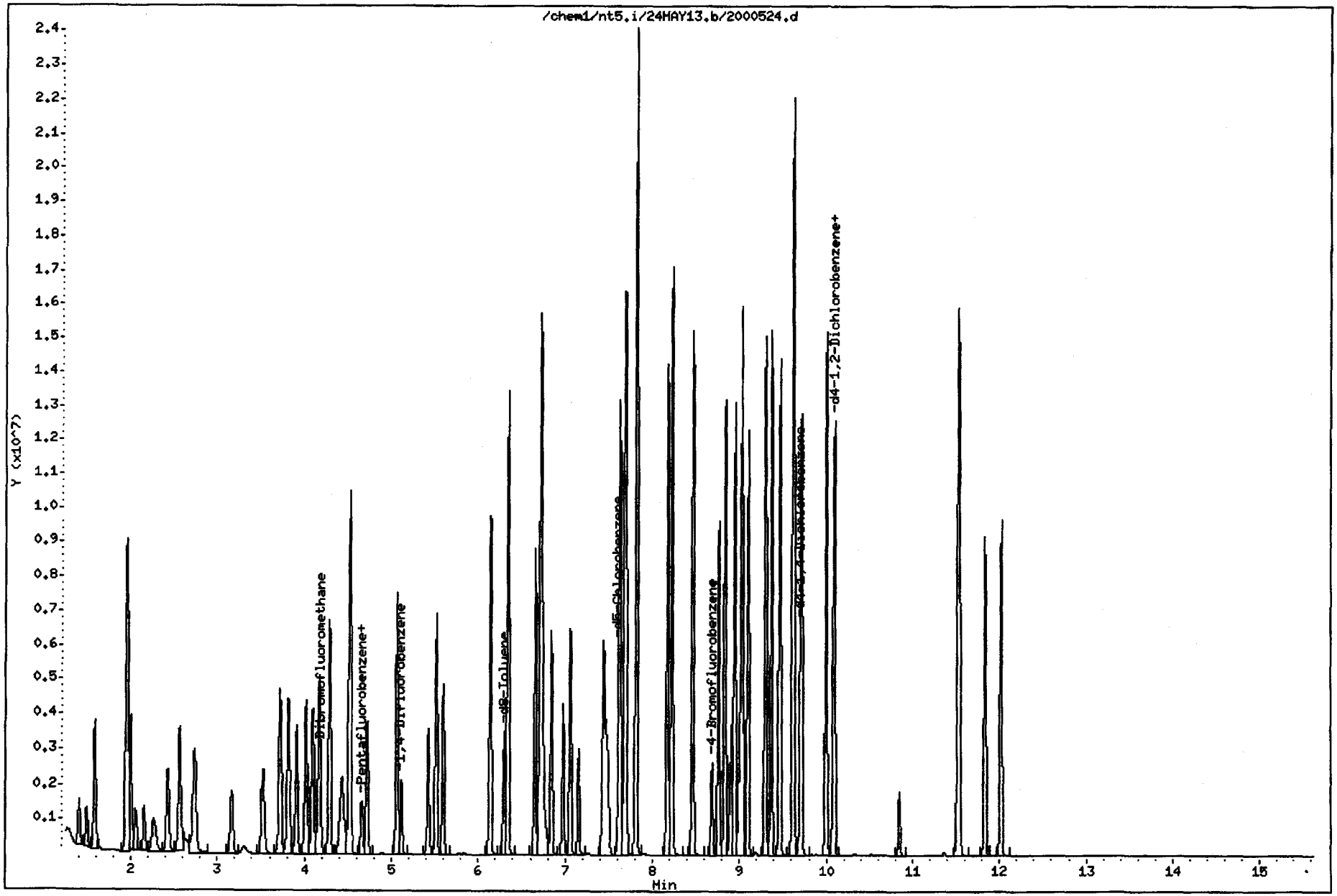
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/24MAY13.b/2000524.d
Date : 24-MAY-2013 08:18
Client ID: VSTD200
Sample Info: IC0524,5,5,0

Instrument: nt5.i

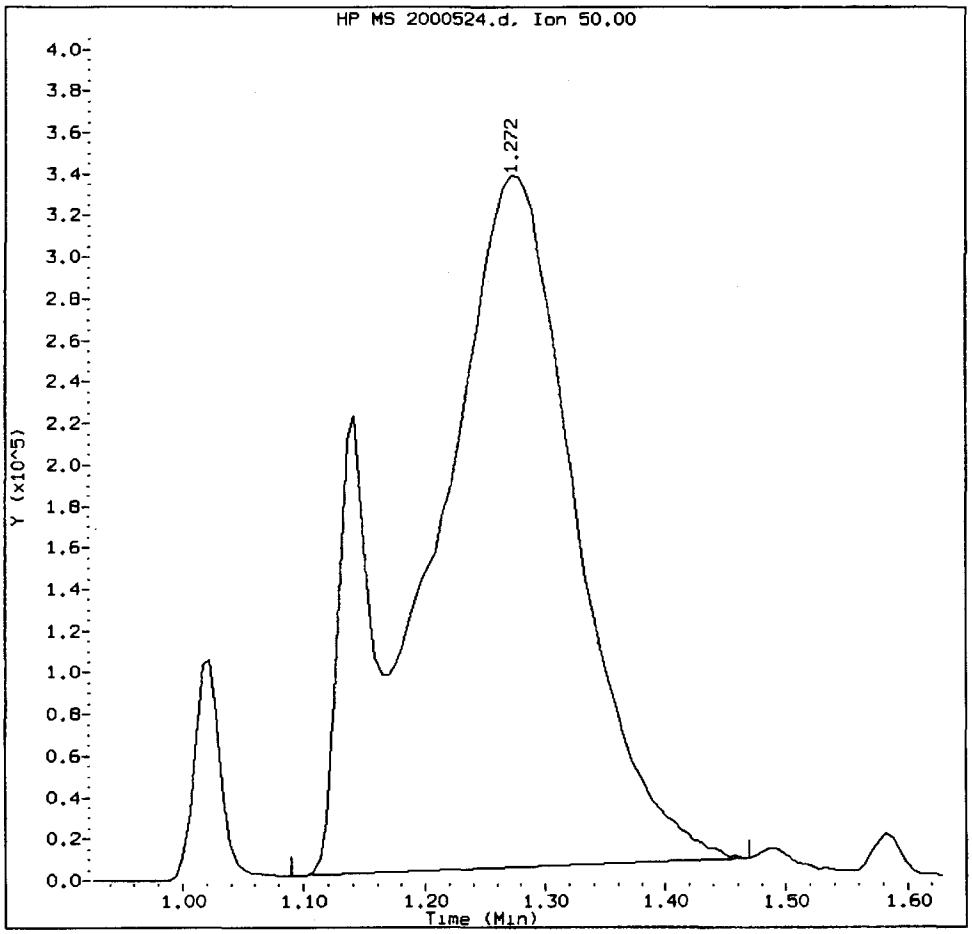
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0524, /chem1/nt5.i/24MAY13.b/2000524.d

Chloromethane Amount: 209.74 Area: 2902878



MANUAL INTEGRATION for Chloromethane

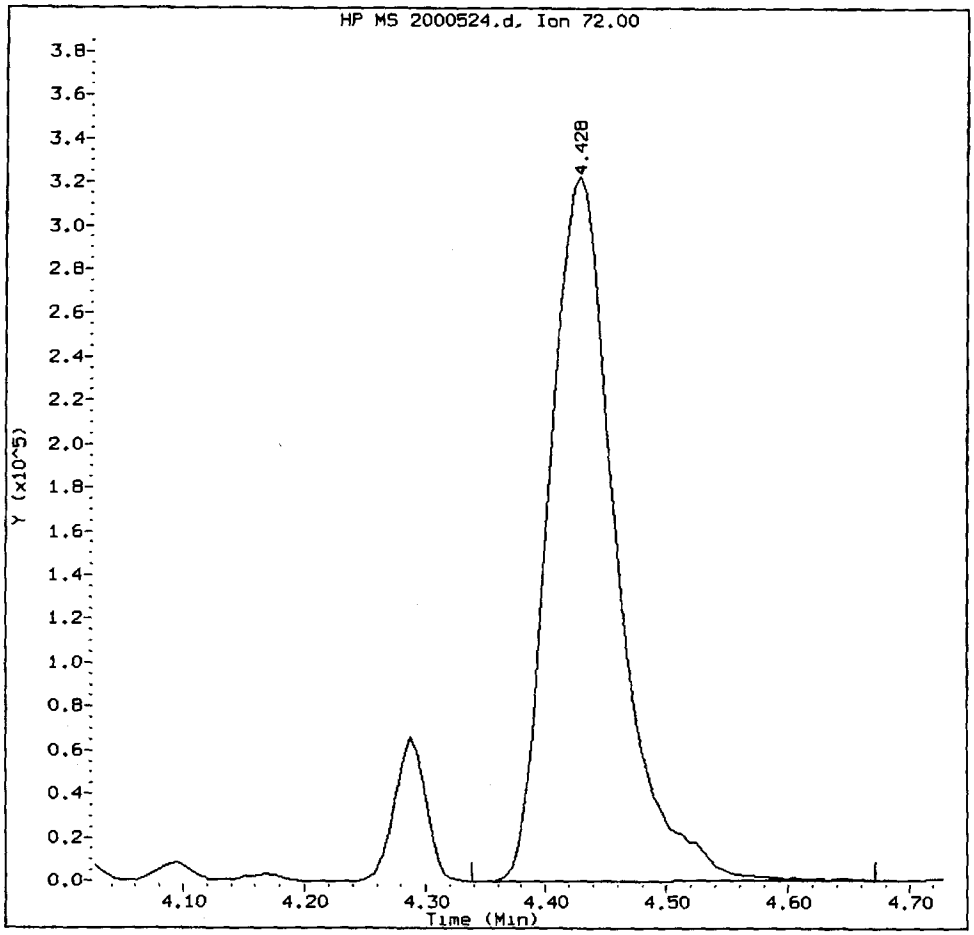
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0524, /chem1/nt5.i/24MAY13.b/2000524.d

2-Butanone Amount: 985.01 Area: 1241258



MANUAL INTEGRATION for 2-Butanone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - 2000524.d

Lab ID: IC0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/24MAY13.b/icv0524.d
Lab Smp Id: ICV0524 Client Smp ID: ICV0524
Inj Date : 24-MAY-2013 11:46
Operator : PB Inst ID: nt5.i
Smp Info : ICV0524,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/24MAY13.b/V0121012S.m
Meth Date : 11-Jun-2013 15:28 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.006	1.017	(0.216)	440688	66.6723	66.672(R)
2 Chloromethane	50	1.125	1.277	(0.241)	706900	55.1141	55.114(M)
3 Vinyl Chloride	62	1.176	1.187	(0.252)	721863	60.5183	60.518(R)
4 Bromomethane	94	1.385	1.396	(0.297)	339674	54.5816	54.582
5 Chloroethane	64	1.470	1.487	(0.315)	381992	59.7577	59.758(M)
6 Trichlorofluoromethane	101	1.566	1.583	(0.336)	689884	55.8158	55.816
7 1,1-Dichloroethene	96	1.928	1.945	(0.414)	378385	54.1976	54.198
8 Carbon Disulfide	76	1.934	1.945	(0.415)	1197176	53.0910	53.091
9 112Trichloro122Trifluoroethane	101	1.973	1.985	(0.423)	349262	55.6356	55.636
10 Iodomethane	142	2.030	2.041	(0.436)	301499	58.0847	58.085
11 Bromoethane	108	2.126	2.137	(0.456)	220097	50.5435	50.544
12 Acrolein	56	2.233	2.245	(0.479)	57395	48.9089	48.909
13 Methylene Chloride	84	2.403	2.420	(0.516)	412524	67.4487	67.449(QR)
14 Acetone	43	2.561	2.567	(0.550)	108170	34.2820	34.282(R)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.545	2.562	(0.546)	475234	60.4021	60.402(R)
	16 Methyl tert butyl ether	73	2.726	2.743	(0.585)	1248932	49.5842	49.584
	17 1,1-Dichloroethane	63	3.167	3.184	(0.680)	908568	49.0333	49.033
	18 Acrylonitrile	53	3.274	3.286	(0.703)	197879	45.4780	45.478
	19 Vinyl Acetate	43	3.512	3.523	(0.754)	531257	22.5949	22.595(R)
	20 Cis-1,2-Dichloroethene	96	3.721	3.732	(0.798)	504134	52.0489	52.049
	22 2,2-Dichloropropane	77	3.817	3.829	(0.819)	701071	50.2177	50.218
	23 Bromochloromethane	128	3.908	3.919	(0.839)	398939	95.2321	95.232
	24 Chloroform	83	4.010	4.021	(0.860)	771544	49.2156	49.216
	25 Carbon Tetrachloride	117	4.100	4.106	(0.802)	622484	51.0788	51.079
$	27 Dibromofluoromethane	111	4.179	4.185	(0.897)	491247	49.9223	49.922
	26 1,1,1-Trichloroethane	97	4.168	4.179	(0.894)	719478	50.6144	50.614
	28 1,1-Dichloropropene	75	4.292	4.298	(0.840)	675850	49.1521	49.152
	29 2-Butanone	72	4.372	4.377	(0.938)	52530	44.9819	44.982(Q)
	30 Benzene	78	4.519	4.530	(0.884)	1966392	49.5081	49.508
*	31 Pentafluorobenzene	168	4.660	4.666	(1.000)	436823	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.660	(0.999)	482304	49.0990	49.099
	33 1,2-Dichloroethane	62	4.711	4.722	(0.921)	568894	45.0426	45.043
	34 Trichloroethene	95	5.062	5.068	(0.990)	486261	49.9432	49.943
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	1350934	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	239445	44.5814	44.581
	38 1,2-Dichloropropane	63	5.514	5.514	(1.079)	525654	47.0262	47.026
	39 Bromodichloromethane	83	5.588	5.594	(1.093)	628156	51.5304	51.530
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	294619	48.8383	48.838
	41 Cis 1,3-dichloropropene	75	6.137	6.142	(1.200)	788349	50.5508	50.551
$	42 d8-Toluene	98	6.295	6.301	(1.231)	1899135	49.7098	49.710
	43 Toluene	92	6.340	6.340	(1.240)	1238442	49.1572	49.157
	44 Tetrachloroethene	166	6.651	6.657	(0.874)	509497	50.4060	50.406
	45 4-Methyl-2-Pentanone	58	6.702	6.708	(1.311)	211119	46.1448	46.145(Q)
	46 Trans 1,3-Dichloropropene	75	6.702	6.708	(1.311)	652800	46.0765	46.076(Q)
	47 1,1,2-Trichloroethane	97	6.832	6.838	(1.336)	365269	45.5970	45.597
	48 Chlorodibromomethane	129	6.968	6.974	(0.916)	445184	50.8429	50.843
	49 1,3-Dichloropropane	76	7.053	7.053	(0.927)	663782	45.7581	45.758
	50 1,2-Dibromoethane	107	7.149	7.149	(1.398)	341088	44.1232	44.123
	51 2-Hexanone	43	7.421	7.421	(0.975)	350170	45.9435	45.944
*	52 d5-Chlorobenzene	117	7.607	7.607	(1.000)	1490058	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	1166473	46.2580	46.258
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	2273106	52.6516	52.652
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	424899	47.8104	47.810
	56 m,p-xylene	106	7.805	7.805	(1.026)	1666660	102.703	102.70(Q)
	57 o-Xylene	106	8.167	8.168	(1.074)	751296	48.1928	48.193(Q)
	58 Styrene	104	8.213	8.213	(1.080)	1373384	52.0620	52.062
	59 Bromoform	173	8.207	8.207	(0.848)	295910	46.4498	46.450
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	1990743	49.5228	49.523
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	794910	50.2624	50.262
	63 Bromobenzene	156	8.756	8.756	(0.904)	498248	46.3293	46.329
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	2427740	49.8359	49.836

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.886	8.886	(0.918)	456108	42.9217	42.922
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	1438889	47.7836	47.784
67	1,3,5-Trimethyl Benzene	105	9.016	9.010	(0.931)	1847591	54.1088	54.109
68	1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	138057	42.5103	42.510
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	152769	37.5290	37.529(R)
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	1466121	46.4474	46.447
71	T-Butyl Benzene	119	9.288	9.288	(0.959)	1477278	49.0493	49.049
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	1792782	53.4294	53.429
73	S-Butyl Benzene	105	9.452	9.452	(0.976)	2205790	49.8394	49.839
74	4-Isopropyl Toluene	119	9.599	9.599	(0.991)	1872909	52.2281	52.228
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	912758	45.8440	45.844
* 76	d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	805888	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.700	9.695	(1.002)	998751	48.0549	48.055
78	N-Butyl Benzene	91	9.983	9.983	(1.031)	1897005	55.7047	55.705
$ 79	d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	790365	49.7028	49.703(Q)
80	1,2-Dichlorobenzene	146	10.079	10.074	(1.041)	847263	43.9607	43.961
81	1,2-Dibromo 3-Chloropropane	75	10.832	10.826	(1.119)	86093	41.6467	41.647
82	Hexachloro 1,3-Butadiene	225	11.516	11.505	(1.189)	421815	49.6449	49.645
83	1,2,4-Trichlorobenzene	180	11.499	11.494	(1.188)	676429	49.3936	49.394
84	Naphthalene	128	11.816	11.805	(1.220)	1368496	44.9114	44.911
85	1,2,3-Trichlorobenzene	180	11.997	11.986	(1.239)	608223	46.5599	46.560

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: icv0524.d
Lab Smp Id: ICV0524
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 24-MAY-2013
Calibration Time: 09:30
Client Smp ID: ICV0524
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	436823	-7.22
35 1,4-Difluorobenze	1445861	722930	2891722	1350934	-6.57
52 d5-Chlorobenzene	1620542	810271	3241084	1490058	-8.05
76 d4-1,4-Dichlorobe	872028	436014	1744056	805888	-7.58

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: ICV0524
Level: LOW
Data Type: MS DATA
SpikeList File: icv.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/24MAY13.b/VO121012S.m
Misc Info: 13-

Client SDG: 24MAY13
Fraction: VOA
Client Smp ID: ICV0524
Operator: PB
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	66.672	133.34*	80-120
2 Chloromethane	50.000	55.114	110.23	80-120
3 Vinyl Chloride	50.000	60.518	121.04*	80-120
4 Bromomethane	50.000	54.582	109.16	80-120
5 Chloroethane	50.000	59.758	119.52	80-120
6 Trichlorofluoromet	50.000	55.816	111.63	80-120
12 Acrolein	50.000	48.909	97.82	80-120
9 112Trichloro122Tri	50.000	55.636	111.27	80-120
14 Acetone	50.000	34.282	68.56*	80-120
7 1,1-Dichloroethene	50.000	54.198	108.40	80-120
11 Bromoethane	50.000	50.544	101.09	80-120
10 Iodomethane	50.000	58.085	116.17	80-120
13 Methylene Chloride	50.000	67.449	134.90*	80-120
8 Carbon Disulfide	50.000	53.091	106.18	80-120
18 Acrylonitrile	50.000	45.478	90.96	80-120
15 Trans-1,2-Dichloro	50.000	60.402	120.80*	80-120
16 Methyl tert butyl	50.000	49.584	99.17	80-120
19 Vinyl Acetate	50.000	22.595	45.19*	80-120
17 1,1-Dichloroethane	50.000	49.033	98.07	80-120
29 2-Butanone	50.000	44.982	89.96	80-120
22 2,2-Dichloropropan	50.000	50.218	100.44	80-120
20 Cis-1,2-Dichloroet	50.000	52.049	104.10	80-120
24 Chloroform	50.000	49.216	98.43	80-120
23 Bromochloromethane	100.00	95.232	95.23	80-120
26 1,1,1-Trichloroeth	50.000	50.614	101.23	80-120
28 1,1-Dichloropropen	50.000	49.152	98.30	80-120
25 Carbon Tetrachlori	50.000	51.079	102.16	80-120
33 1,2-Dichloroethane	50.000	45.043	90.09	80-120
30 Benzene	50.000	49.508	99.02	80-120
34 Trichloroethene	50.000	49.943	99.89	80-120
38 1,2-Dichloropropan	50.000	47.026	94.05	80-120
39 Bromodichlorometha	50.000	51.530	103.06	80-120
37 Dibromomethane	50.000	44.581	89.16	80-120

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
40 2-Chloroethyl Viny	50.000	48.838	97.68	80-120
45 4-Methyl-2-Pentano	50.000	46.145	92.29	80-120
41 Cis 1,3-dichloropr	50.000	50.551	101.10	80-120
43 Toluene	50.000	49.157	98.31	80-120
46 Trans 1,3-Dichloro	50.000	46.076	92.15	80-120
51 2-Hexanone	50.000	45.944	91.89	80-120
47 1,1,2-Trichloroeth	50.000	45.597	91.19	80-120
49 1,3-Dichloropropan	50.000	45.758	91.52	80-120
44 Tetrachloroethene	50.000	50.406	100.81	80-120
48 Chlorodibromometha	50.000	50.843	101.69	80-120
50 1,2-Dibromoethane	50.000	44.123	88.25	80-120
53 Chlorobenzene	50.000	46.258	92.52	80-120
55 1,1,1,2-Tetrachlor	50.000	47.810	95.62	80-120
54 Ethyl Benzene	50.000	52.652	105.30	80-120
56 m,p-xylene	100.00	102.70	102.70	80-120
57 o-Xylene	50.000	48.193	96.39	80-120
58 Styrene	50.000	52.062	104.12	80-120
60 Isopropyl Benzene	50.000	49.523	99.05	80-120
59 Bromoform	50.000	46.450	92.90	80-120
65 1,1,2,2-Tetrachlor	50.000	42.922	85.84	80-120
68 1,2,3-Trichloropro	50.000	42.510	85.02	80-120
69 Trans-1,4-Dichloro	50.000	37.529	75.06*	80-120
64 N-Propyl Benzene	50.000	49.836	99.67	80-120
63 Bromobenzene	50.000	46.329	92.66	80-120
67 1,3,5-Trimethyl Be	50.000	54.109	108.22	80-120
66 2-Chloro Toluene	50.000	47.784	95.57	80-120
70 4-Chloro Toluene	50.000	46.447	92.89	80-120
71 T-Butyl Benzene	50.000	49.049	98.10	80-120
72 1,2,4-Trimethylben	50.000	53.429	106.86	80-120
73 S-Butyl Benzene	50.000	49.839	99.68	80-120
74 4-Isopropyl Toluen	50.000	52.228	104.46	80-120
75 1,3-Dichlorobenzen	50.000	45.844	91.69	80-120
77 1,4-Dichlorobenzen	50.000	48.055	96.11	80-120
78 N-Butyl Benzene	50.000	55.705	111.41	80-120
80 1,2-Dichlorobenzen	50.000	43.961	87.92	80-120
81 1,2-Dibromo 3-Chlo	50.000	41.647	83.29	80-120
83 1,2,4-Trichloroben	50.000	49.394	98.79	80-120
82 Hexachloro 1,3-But	50.000	49.645	99.29	80-120
84 Naphthalene	50.000	44.911	89.82	80-120
85 1,2,3-Trichloroben	50.000	46.560	93.12	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	49.922	99.84	70-130

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	49.099	98.20	80-149
$ 42 d8-Toluene	50.000	49.710	99.42	77-120
$ 62 4-Bromofluorobenze	50.000	50.262	100.52	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.703	99.41	80-120

Data File: /chem1/nt5.i/24MAY13.b/icv0524.d

Date : 24-MAY-2013 11:46

Client ID: ICV0524

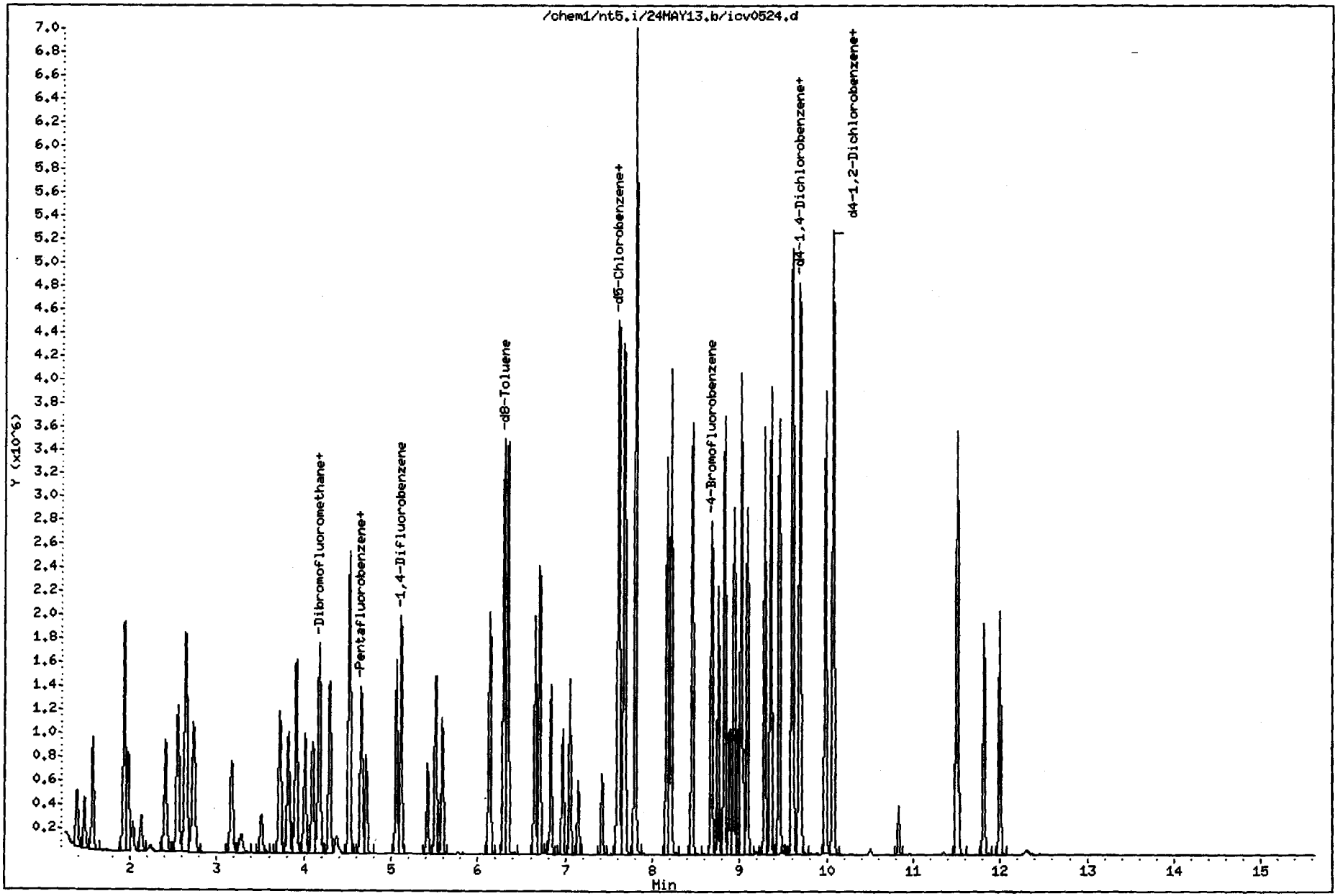
Sample Info: ICV0524,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

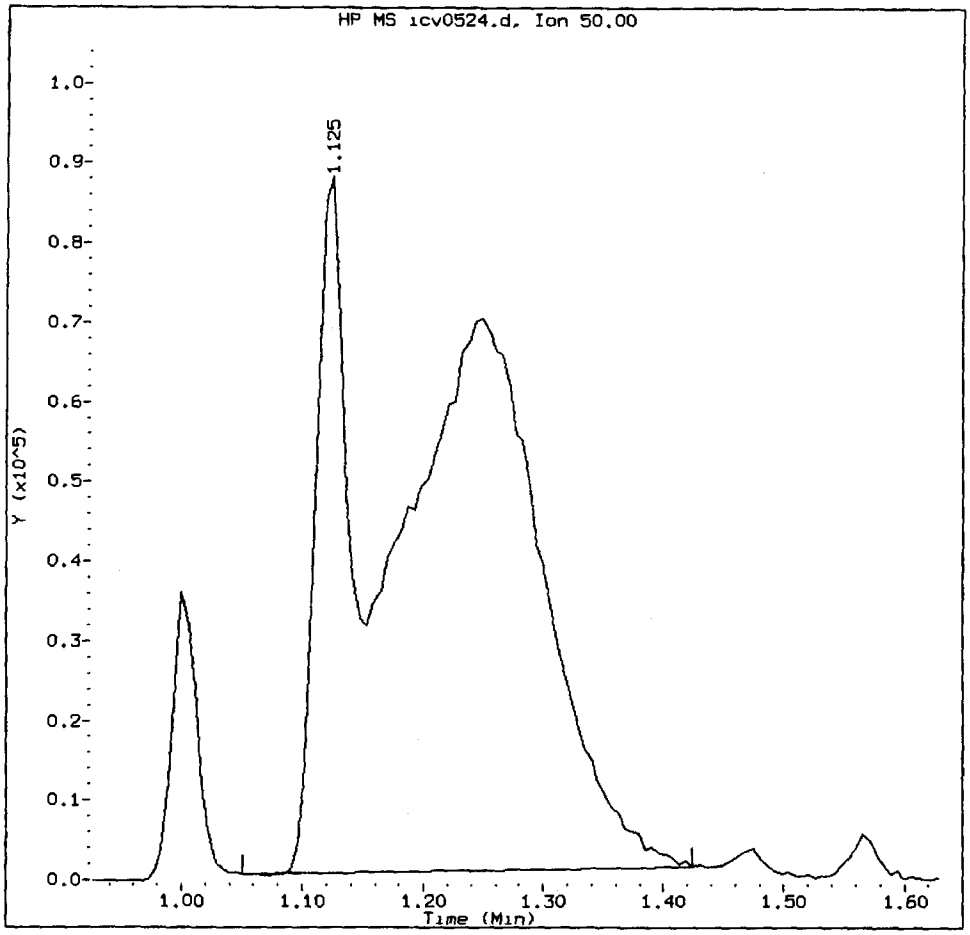
Operator: PB

Column diameter: 0.18



ICV0524, /chem1/nt5.i/24MAY13.b/icv0524.d

Chloromethane Amount: 55.11 Area: 706900



MANUAL INTEGRATION for Chloromethane

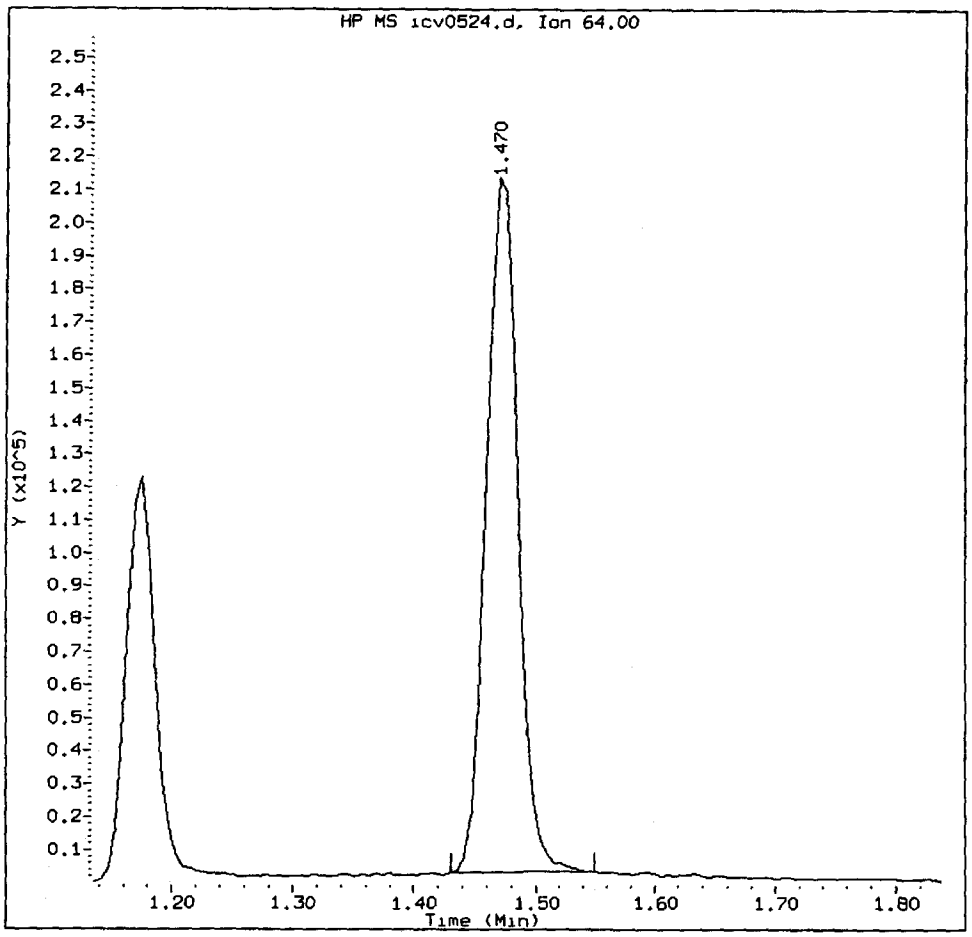
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/13/13

ICV0524, /chem1/nt5.i/24MAY13.b/icv0524.d

Chloroethane Amount: 59.76 Area: 381992



MANUAL INTEGRATION for Chloroethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - icv0524.d

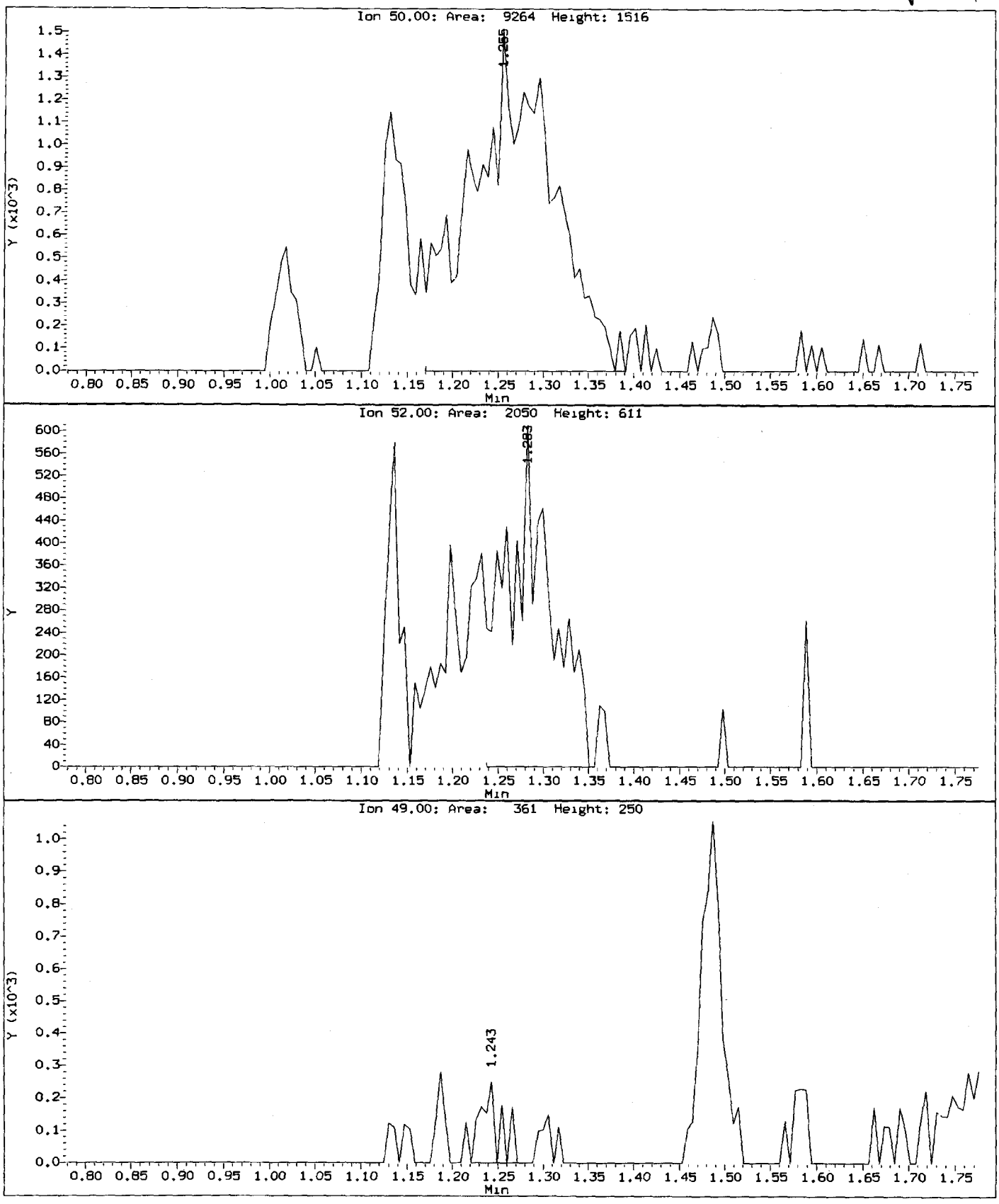
Lab ID: ICV0524, Method: VO121012S.m, Instrument: nt5.i, Date: 24-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

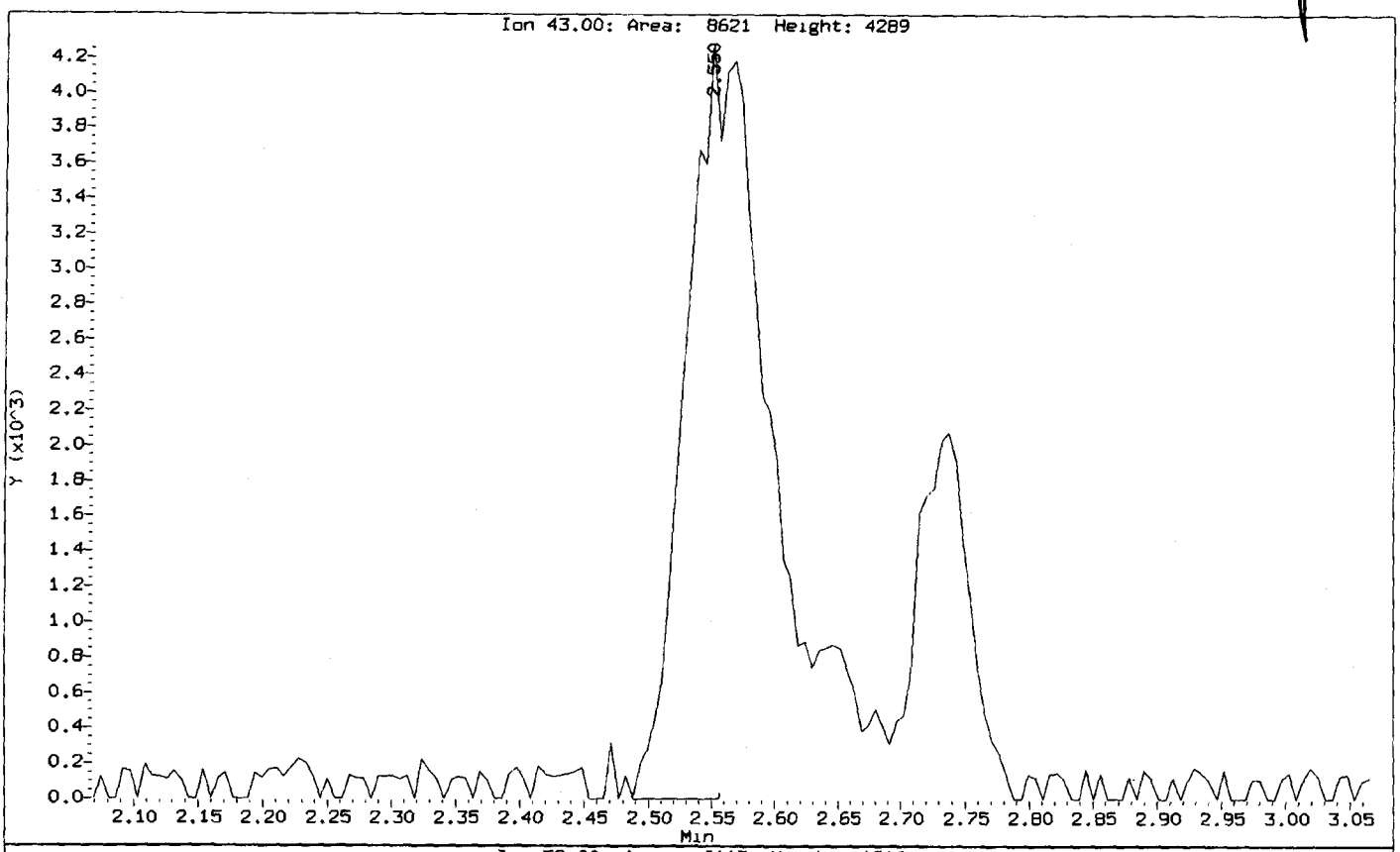
Data File: /chem1/nt5.i/24MAY13.b/0010524.d
Injection Date: 24-MAY-2013 11:06
Instrument: nt5.i
Client Sample ID: VSTD1

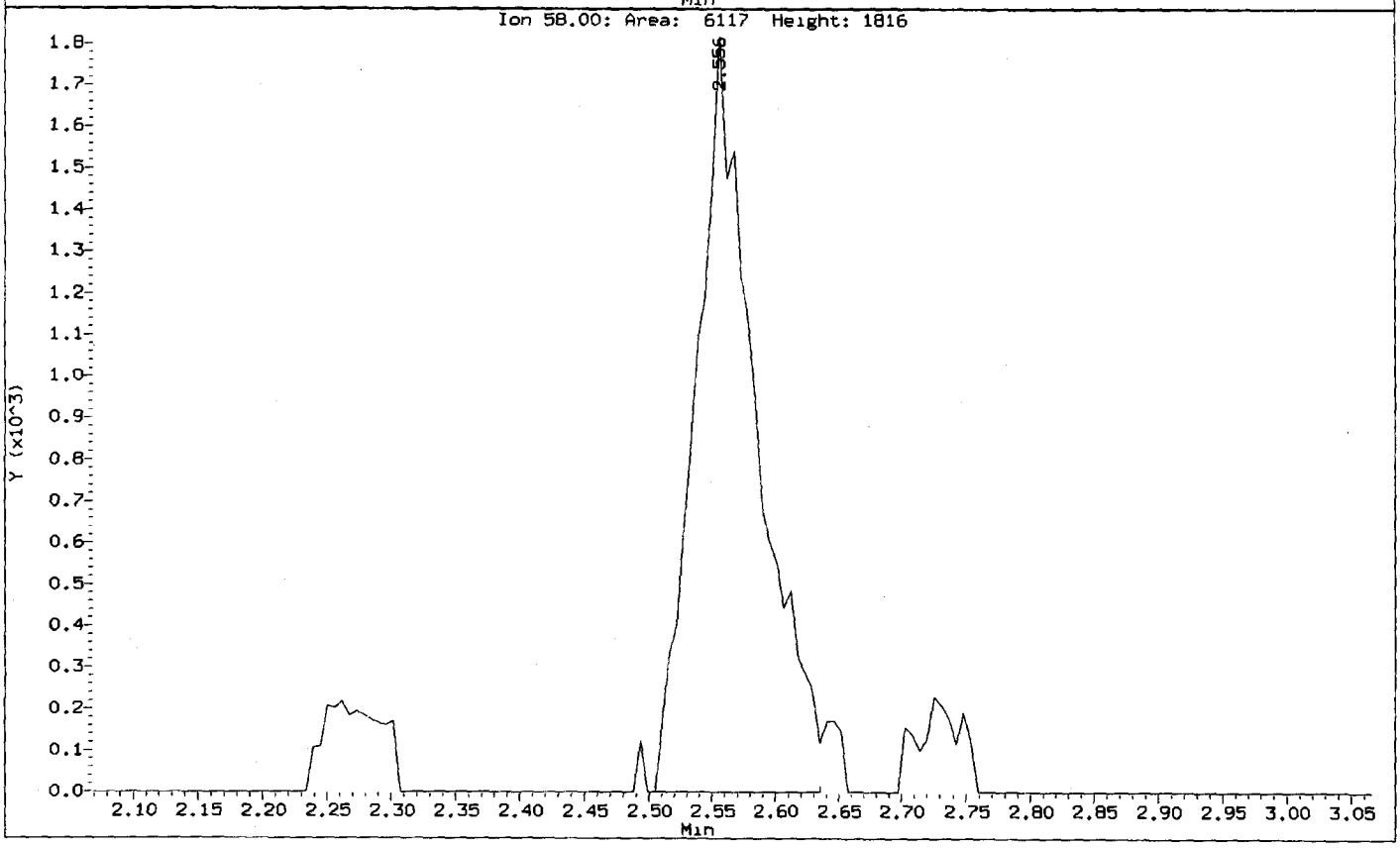
Compound: Chloromethane
CAS Number:



Data File: /chem1/nt5.i/24MAY13.b/0010524.d
Injection Date: 24-MAY-2013 11:06
Instrument: nt5.i
Client Sample ID: VSTD1

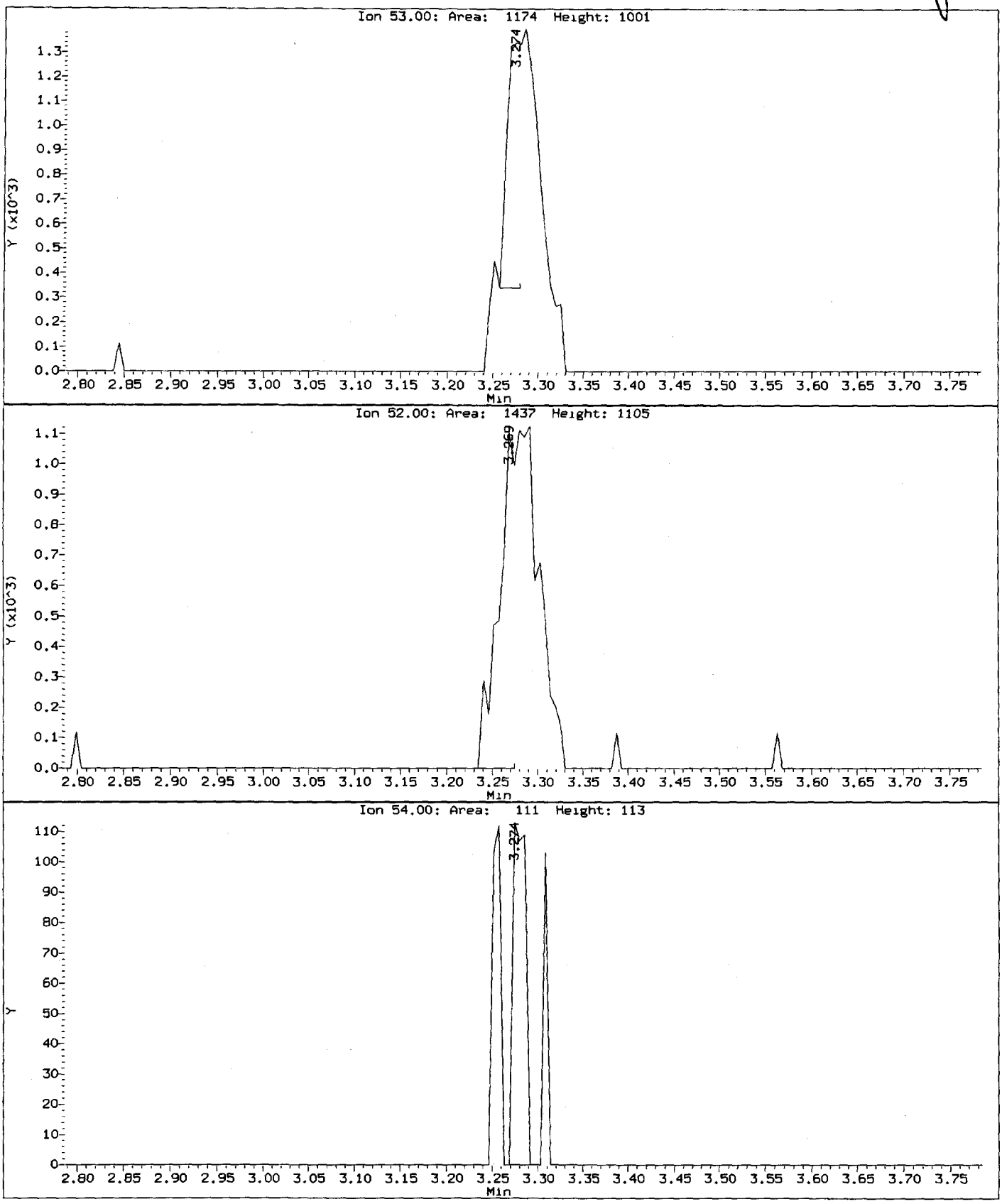
Compound: Acetone
CAS Number:





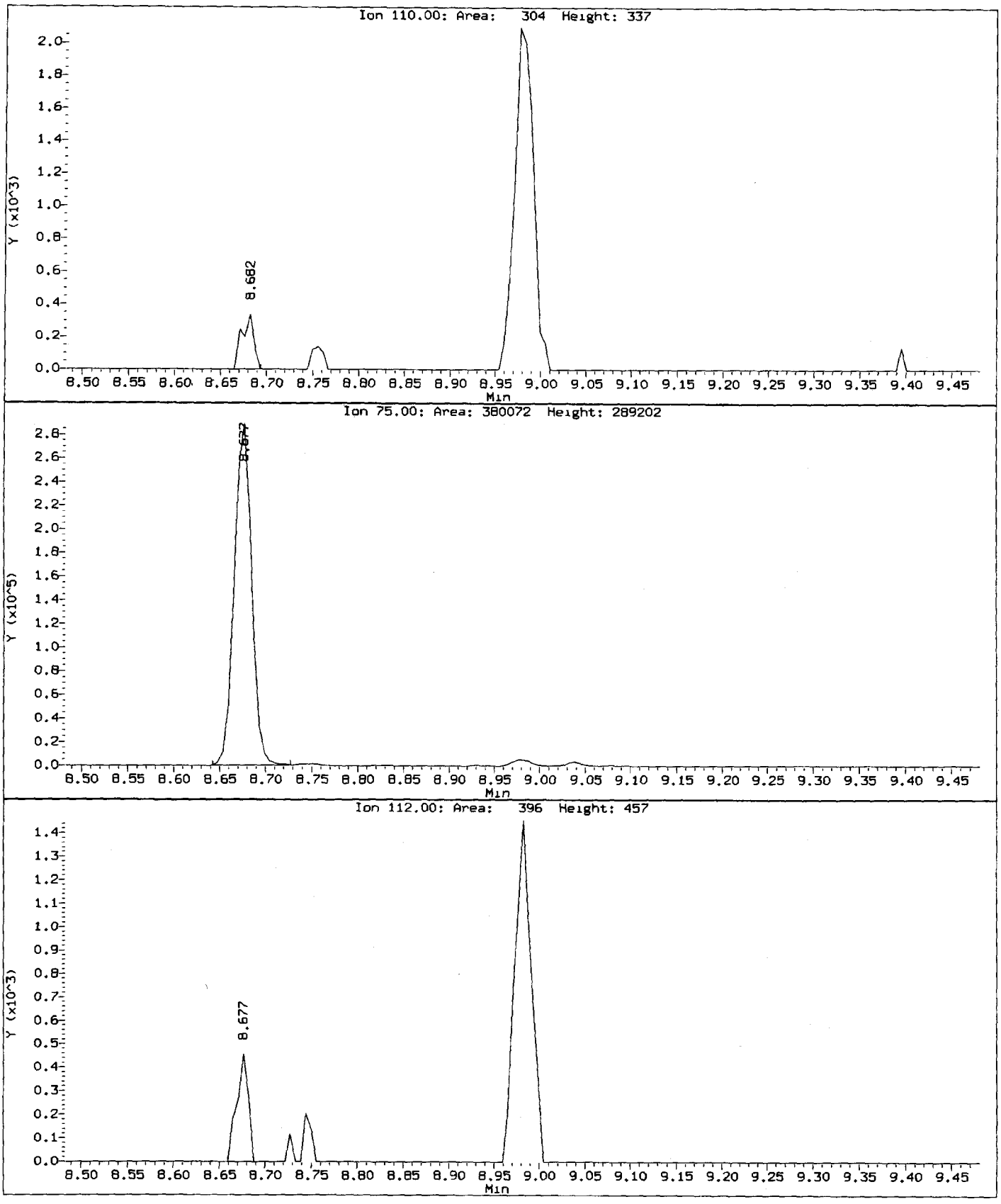
Data File: /chem1/nt5.1/24MAY13.b/0010524.d
Injection Date: 24-MAY-2013 11:06
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: Acrylonitrile
CAS Number:



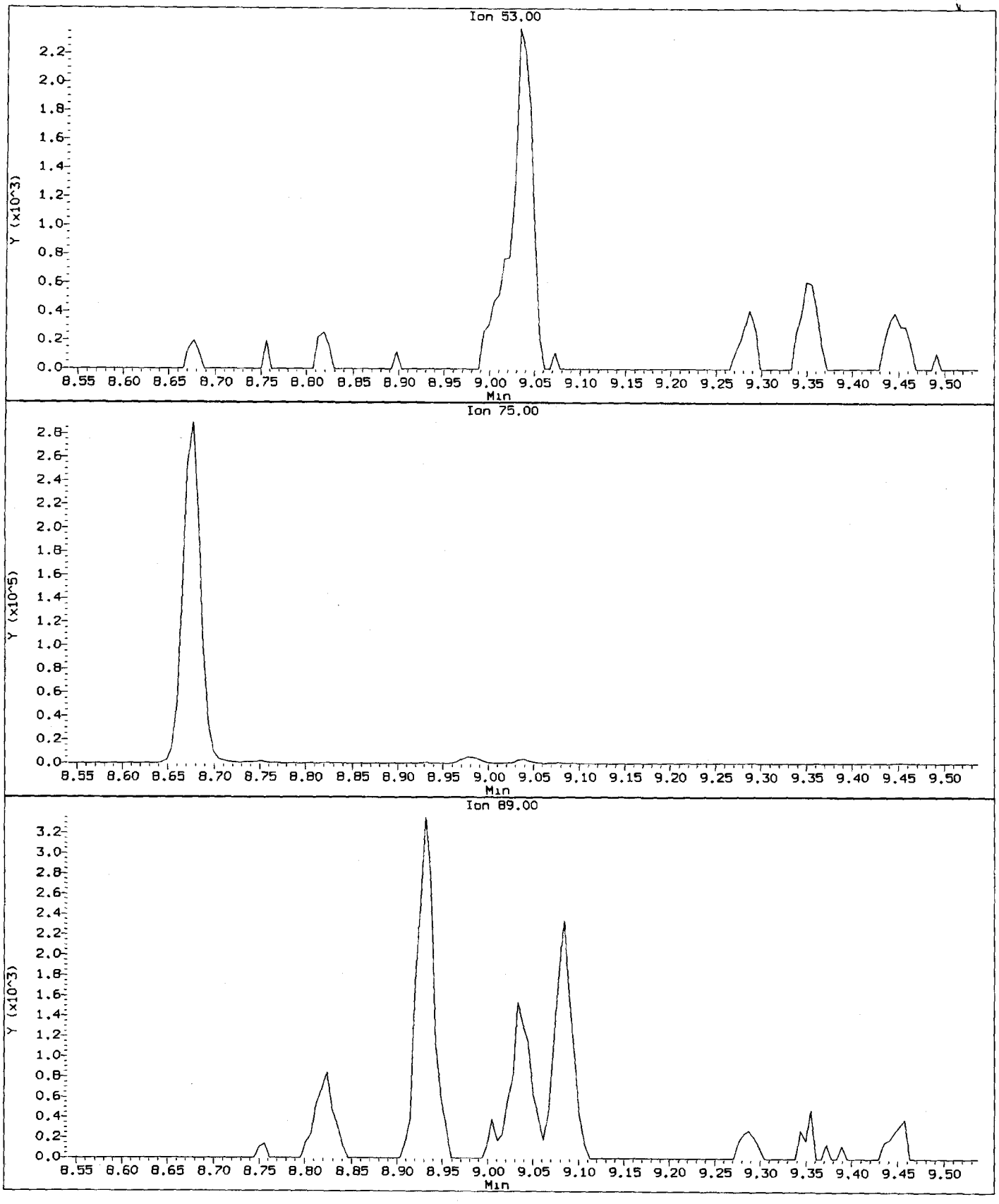
Data File: /chem1/nt5.1/24MAY13.b/0010524.d
Injection Date: 24-MAY-2013 11:06
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: 1,2,3-Trichloropropane
CAS Number:



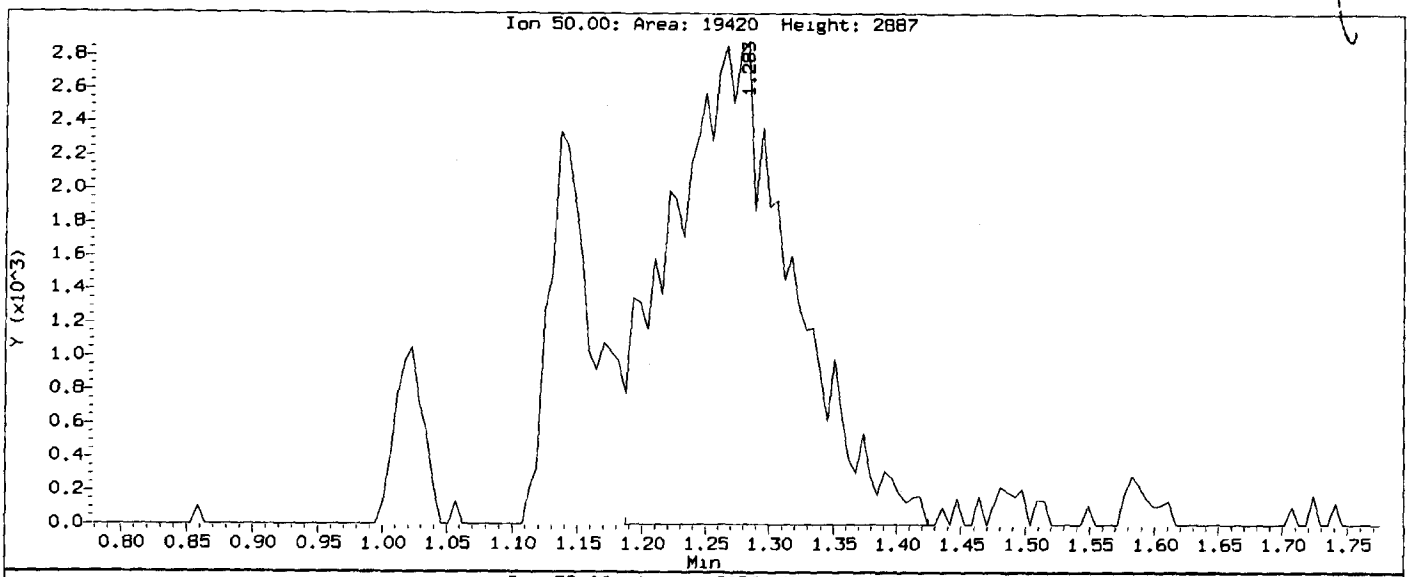
Data File: /chem1/nt5.1/24MAY13.b/0010524.d
Injection Date: 24-MAY-2013 11:06
Instrument: nt5.1
Client Sample ID: VSTD1

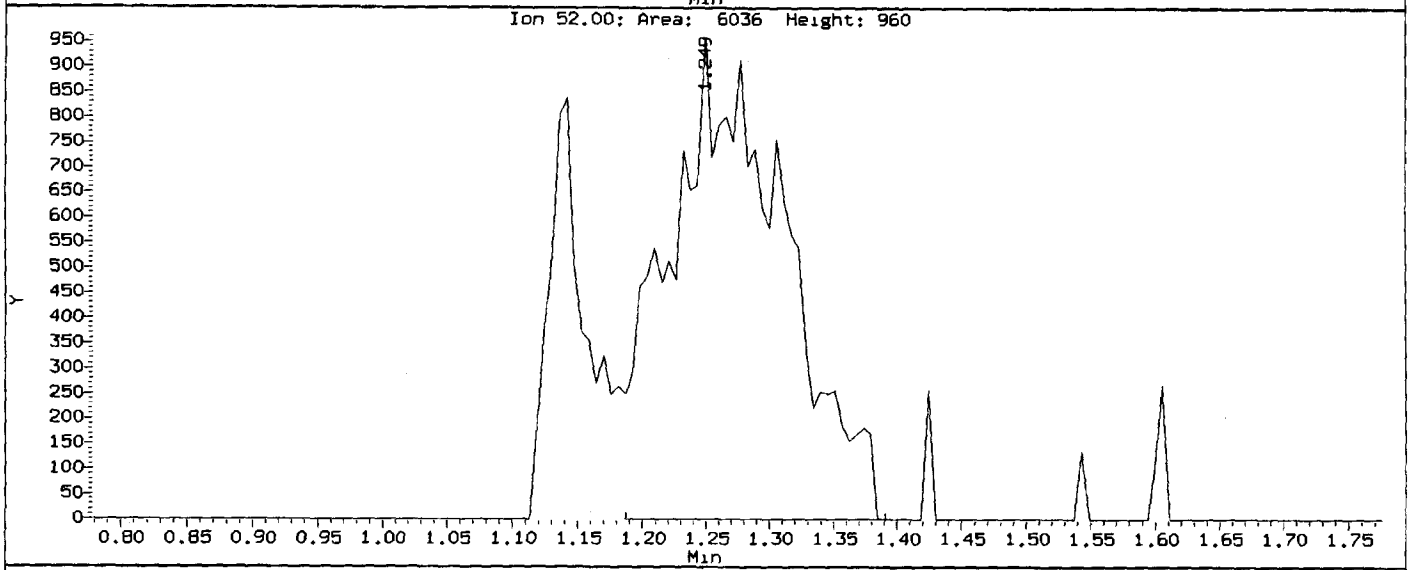
Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:

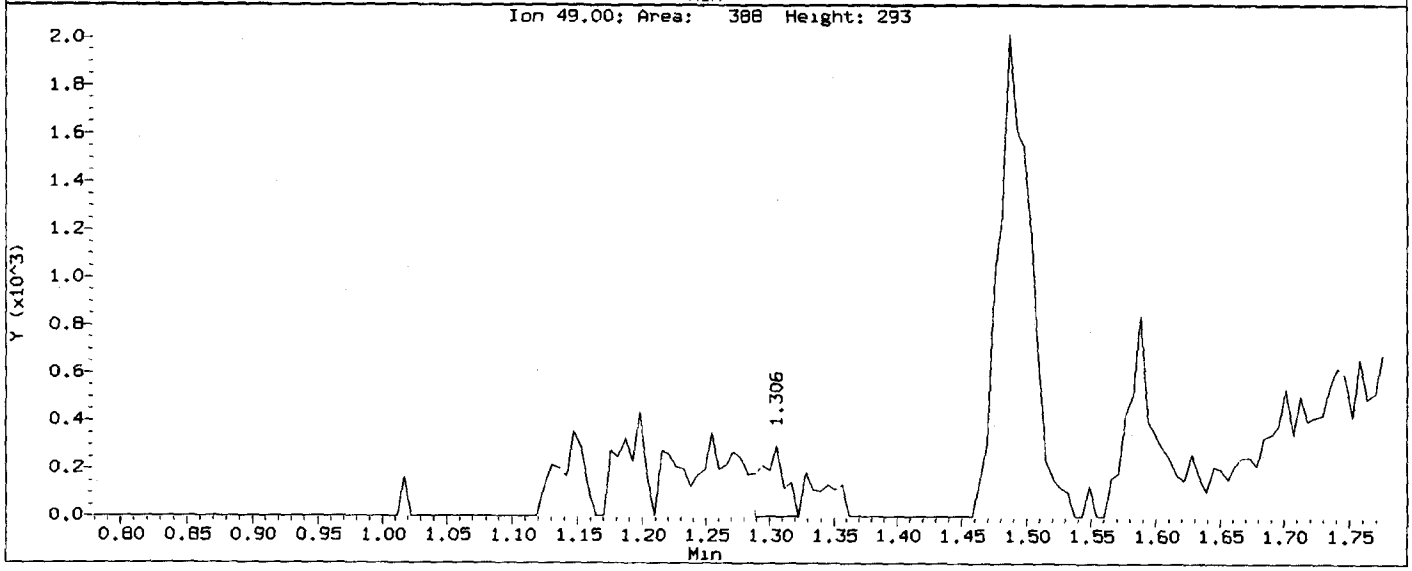


Data File: /chem1/nt5.i/24MAY13.b/0020524.d
Injection Date: 24-MAY-2013 10:42
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: Chloromethane
CAS Number:

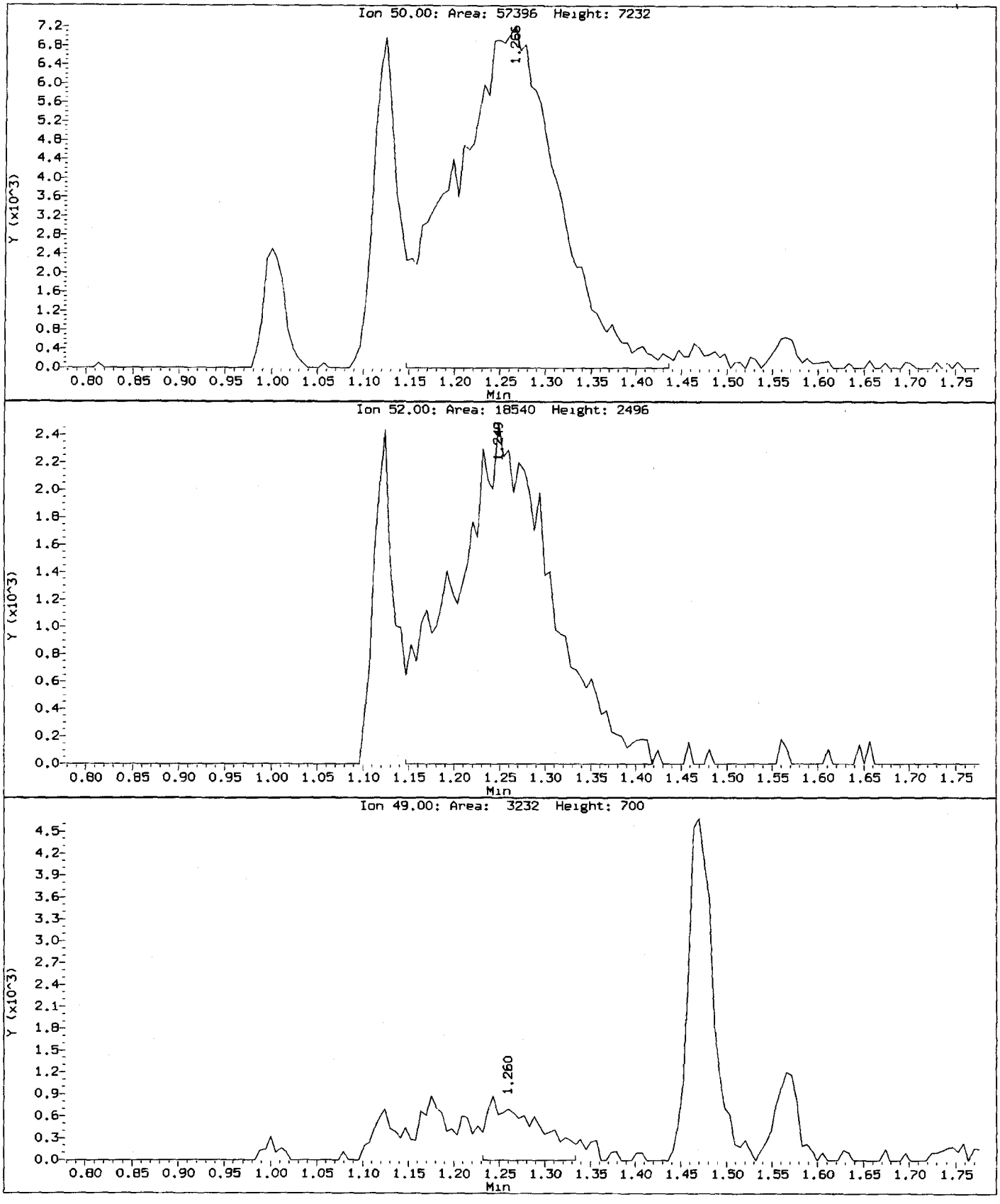






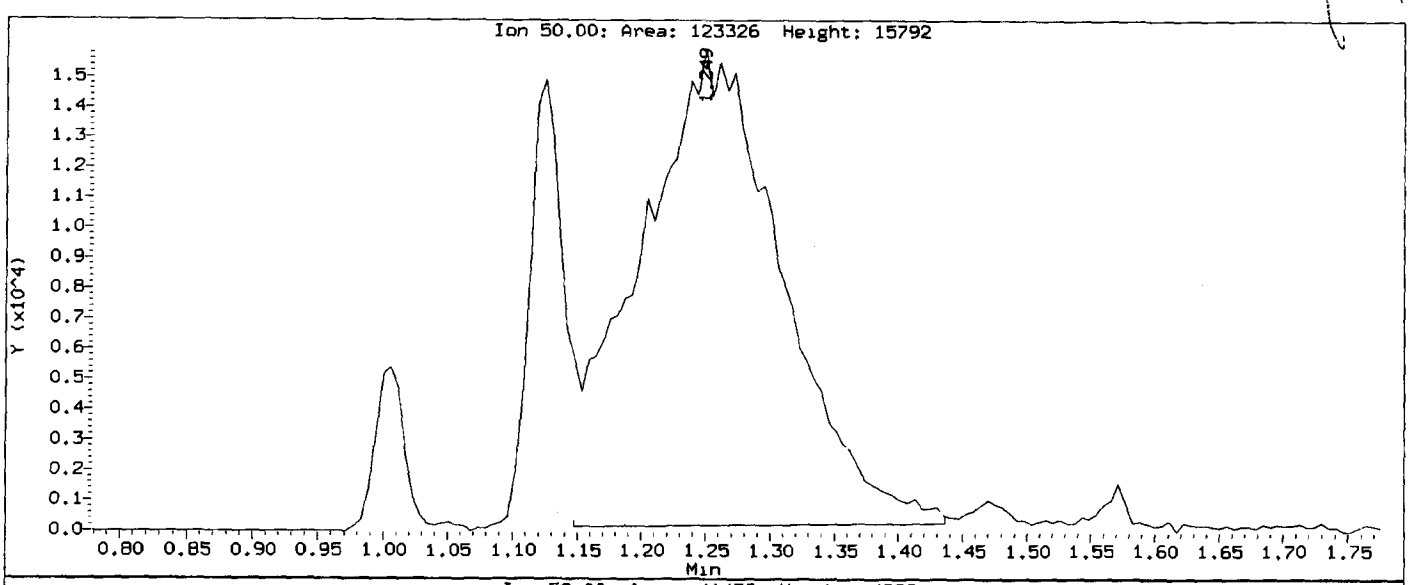
Data File: /chem1/nt5.1/24MAY13.b/0050524.d
Injection Date: 24-MAY-2013 10:18
Instrument: nt5.1
Client Sample ID: VSTD5

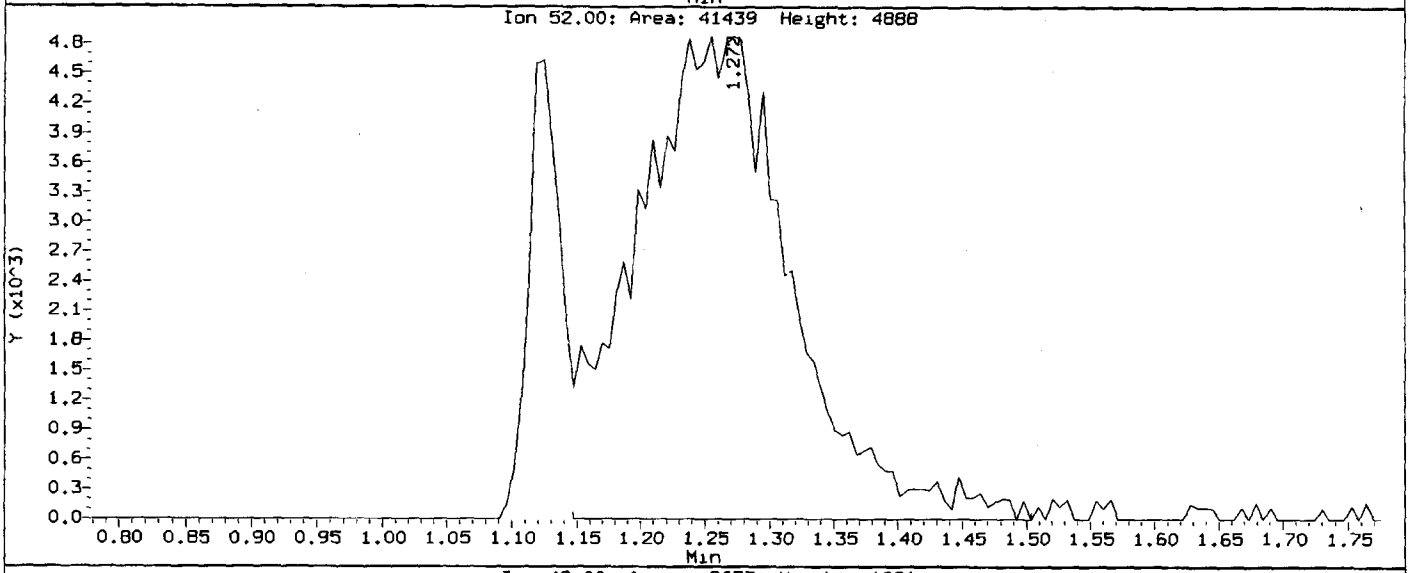
Compound: Chloromethane
CAS Number:

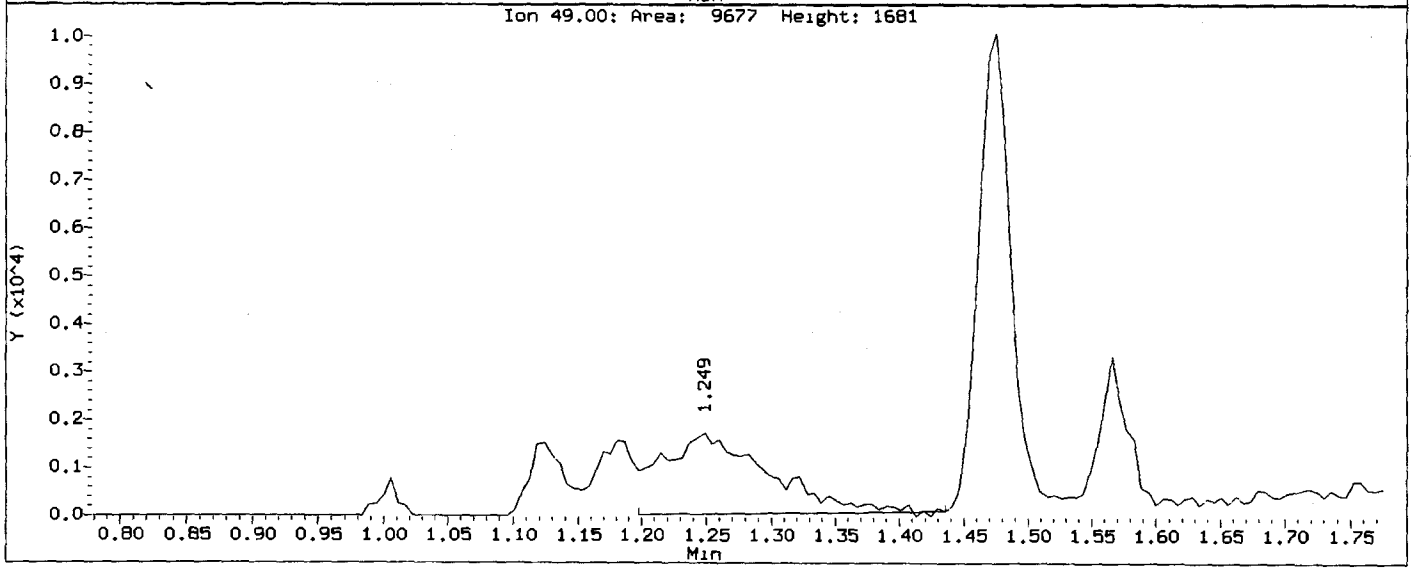


Data File: /chem1/nt5.i/24MAY13.b/0100524.d
Injection Date: 24-MAY-2013 09:54
Instrument: nt5.i
Client Sample ID: VSTD10

Compound: Chloromethane
CAS Number:

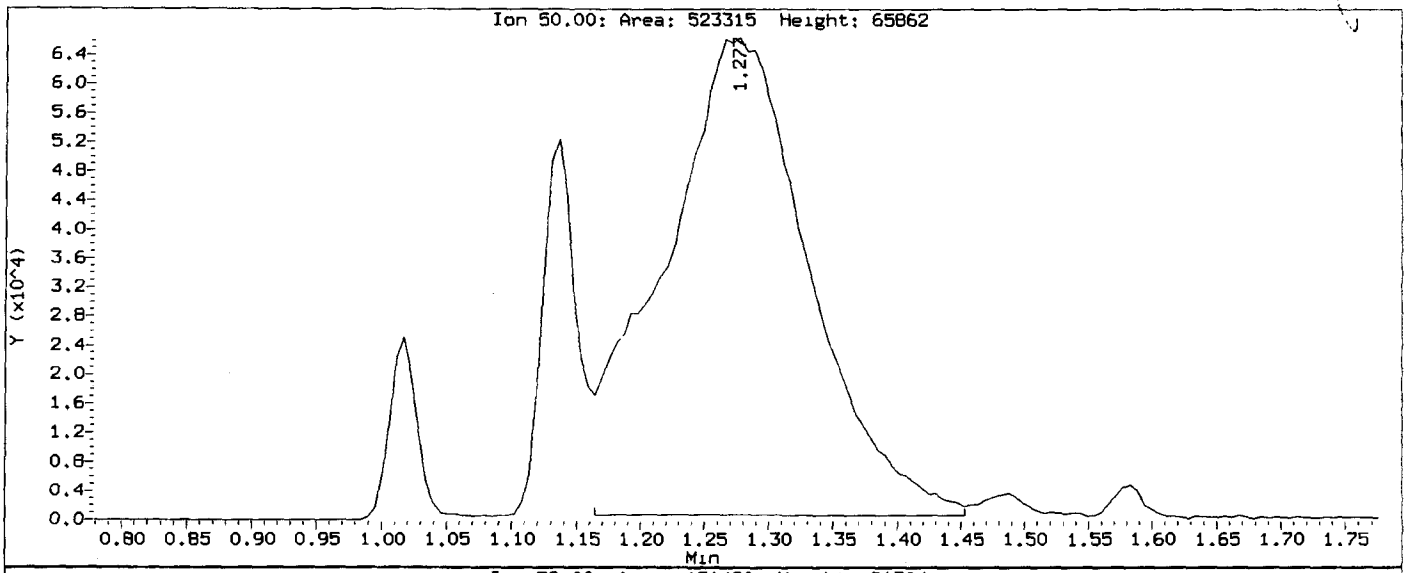


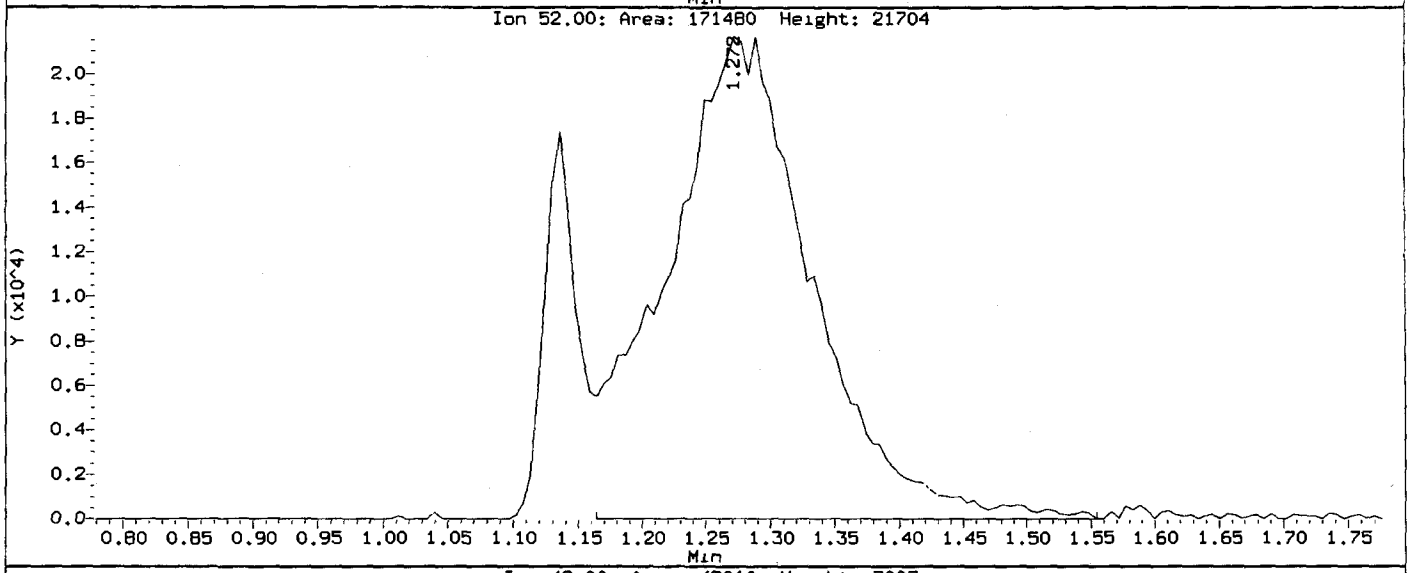


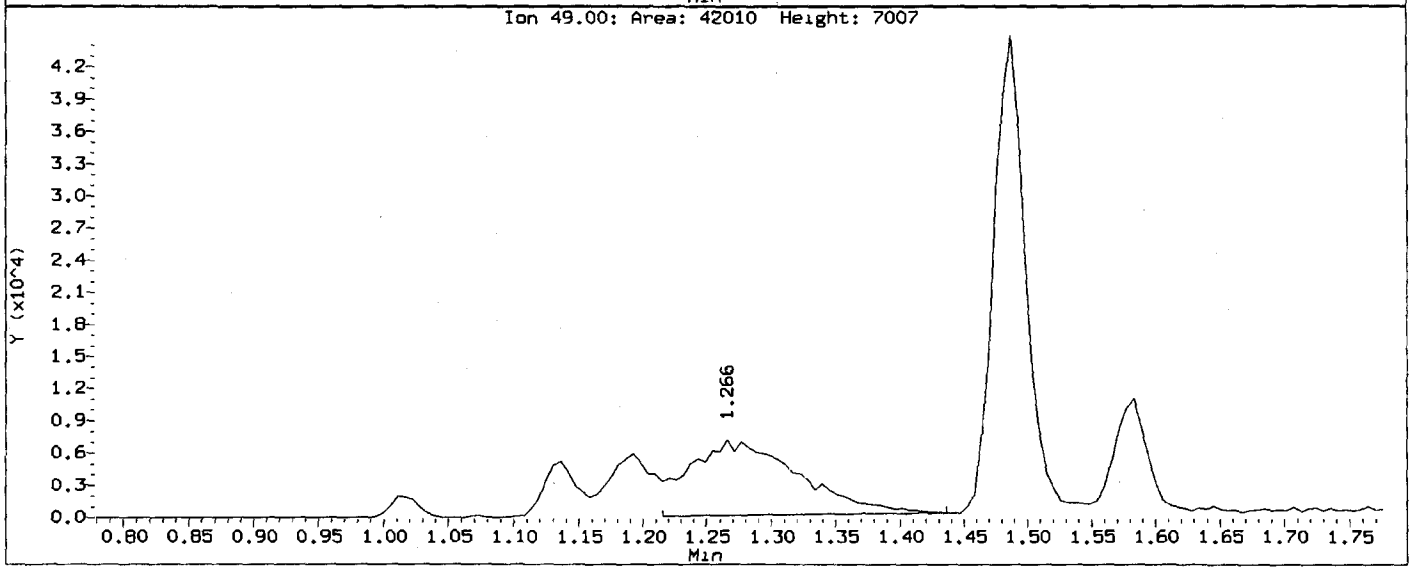


Data File: /chem1/nt5.i/24MAY13.b/0500524.d
Injection Date: 24-MAY-2013 09:30
Instrument: nt5.i
Client Sample ID: VSTD50

Compound: Chloromethane
CAS Number:

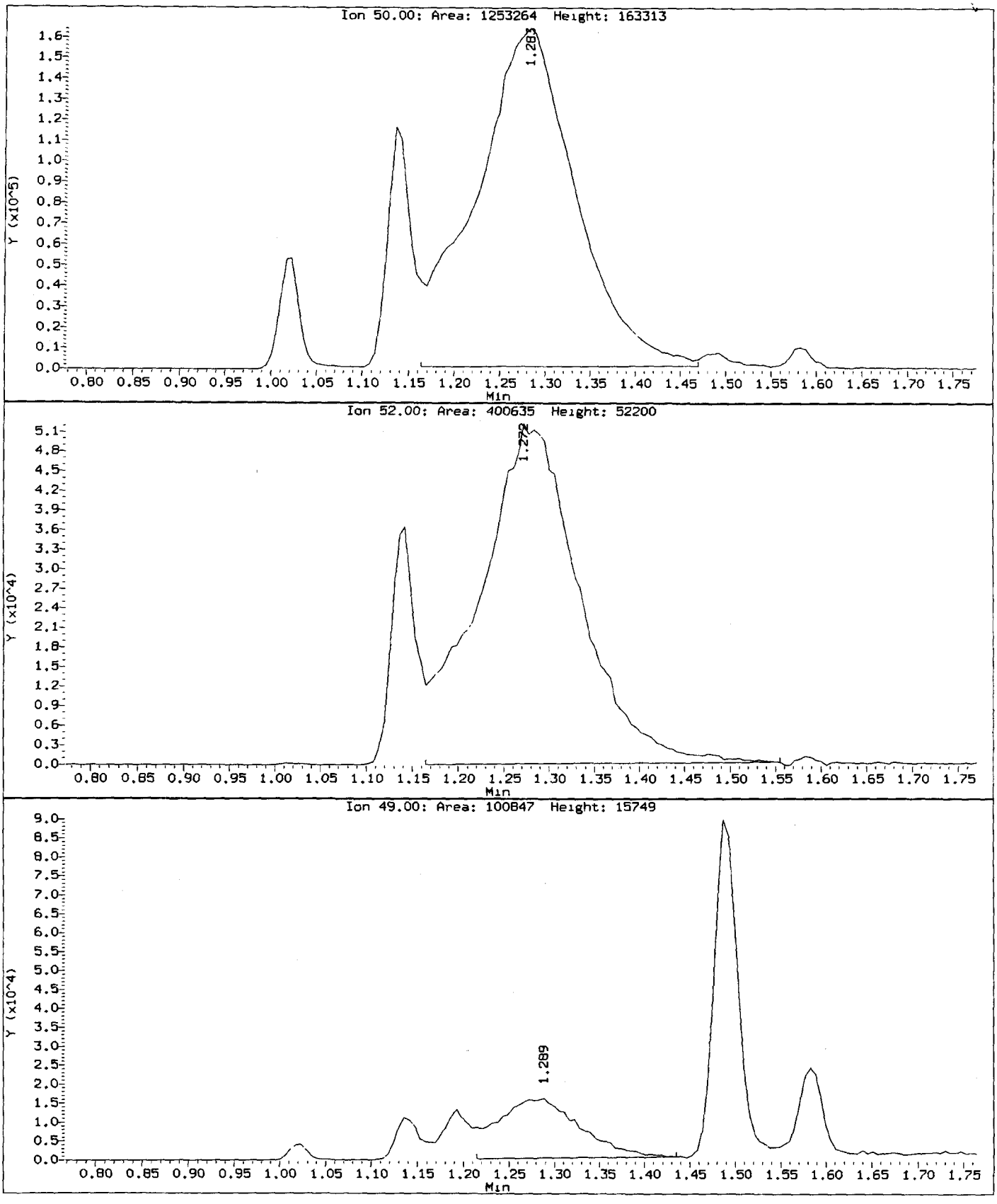






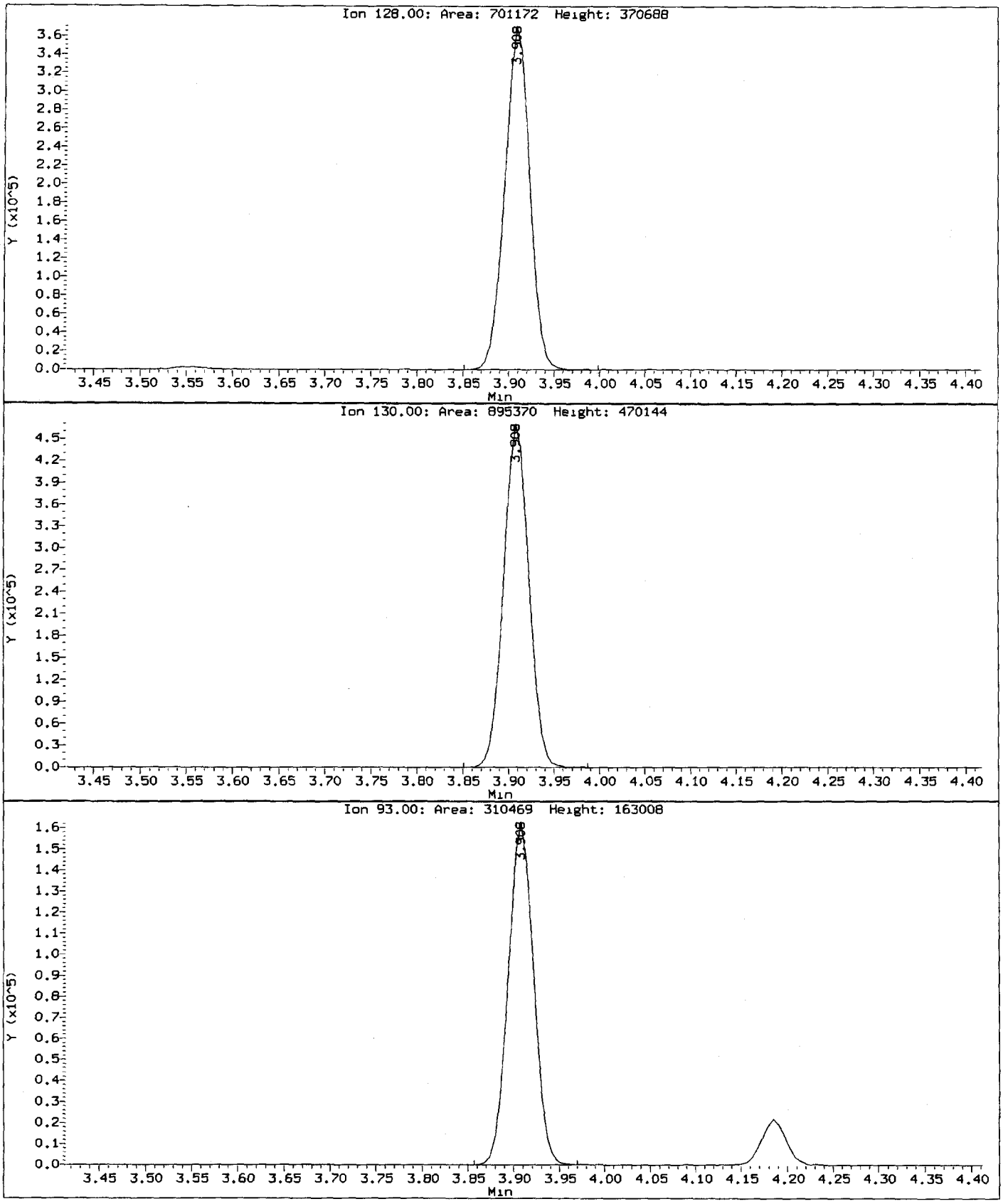
Data File: /chem1/nt5.i/24MAY13.b/1000524.d
Injection Date: 24-MAY-2013 09:06
Instrument: nt5.i
Client Sample ID: VSTD100

Compound: Chloromethane
CAS Number:



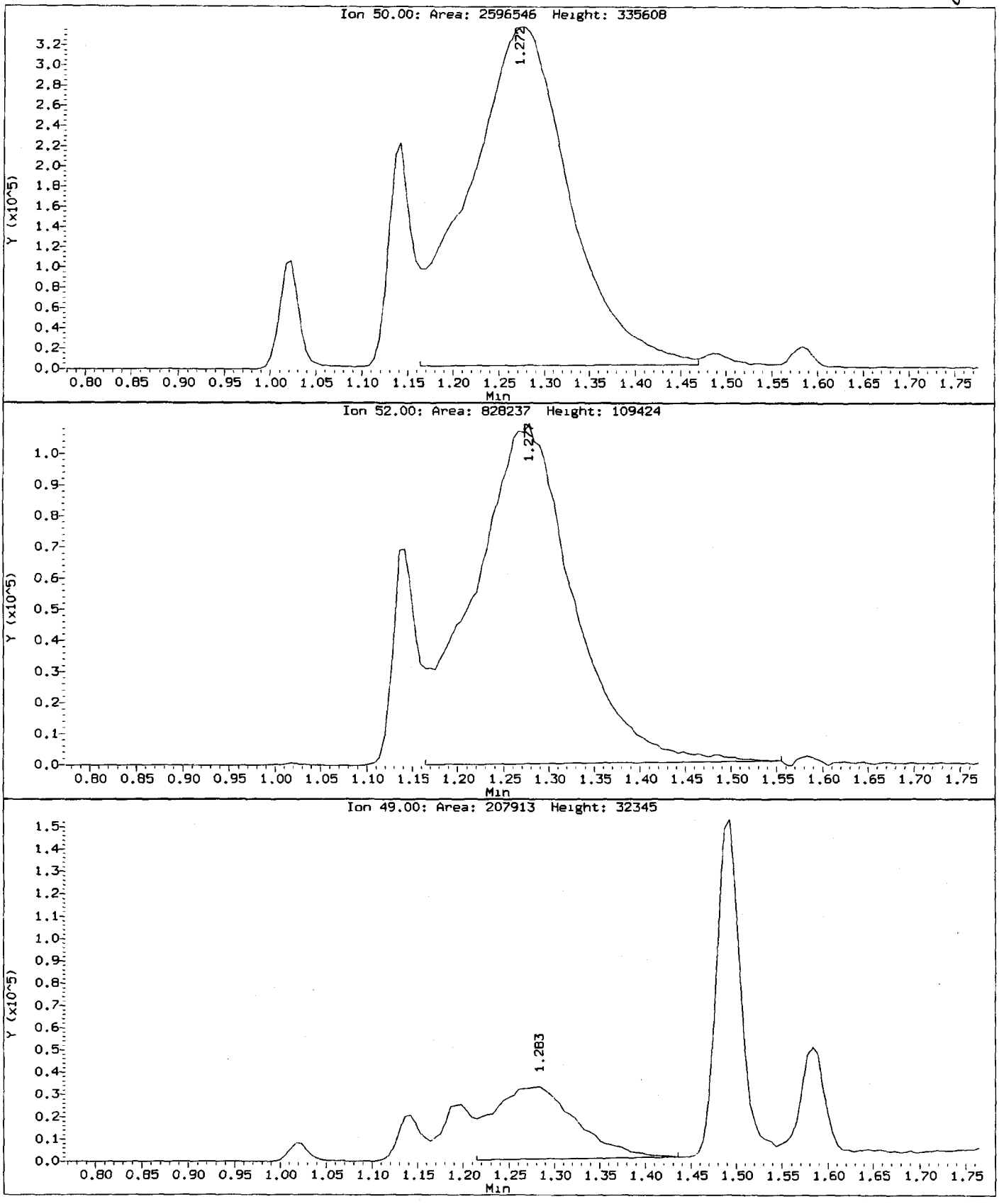
Data File: /chem1/nt5.1/24MAY13.b/1500524.d
Injection Date: 24-MAY-2013 08:42
Instrument: nt5.1
Client Sample ID: VSTD150

Compound: Bromochloromethane
CAS Number:



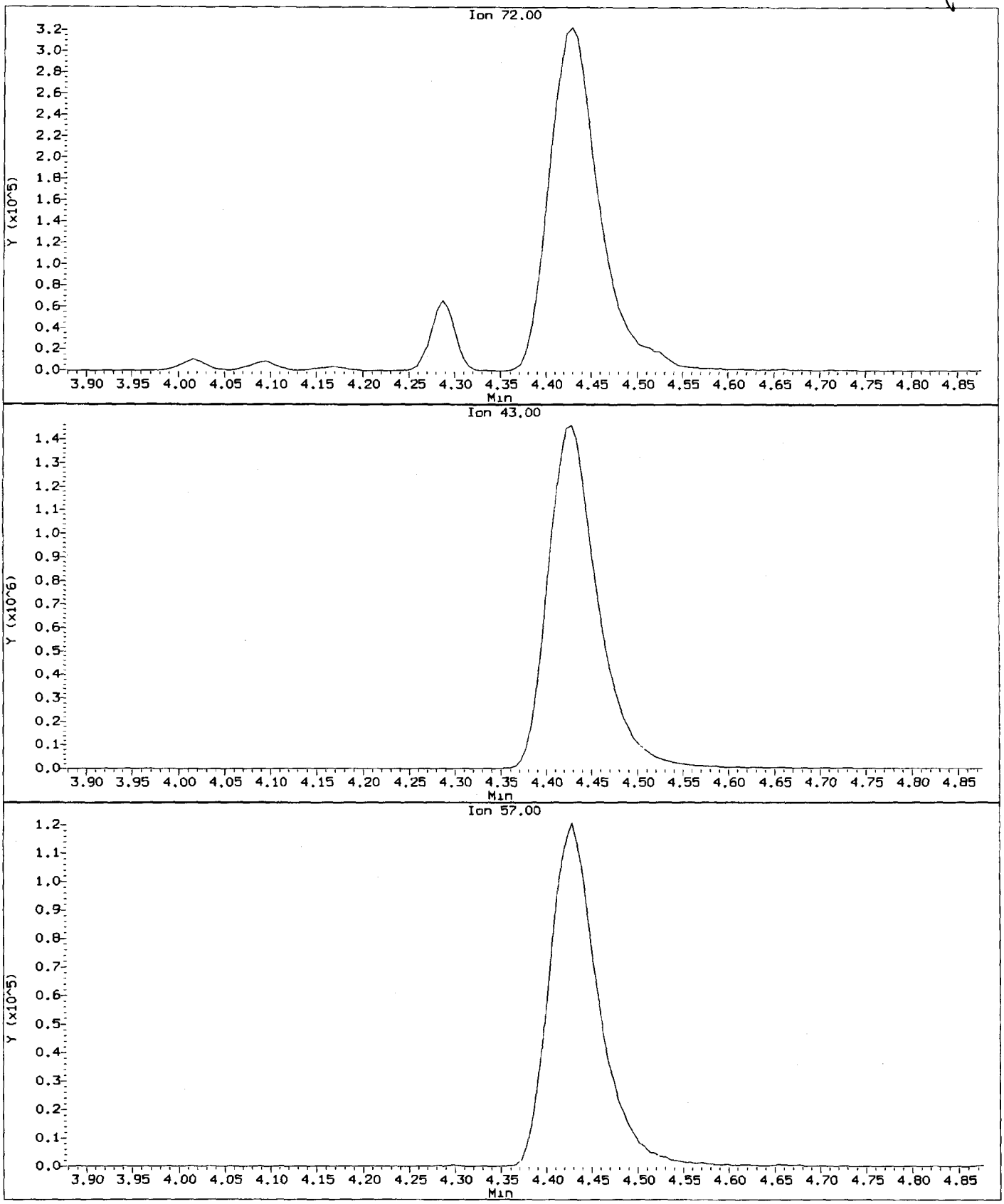
Data File: /chem1/nt5.i/24MAY13.b/2000524.d
Injection Date: 24-MAY-2013 08:18
Instrument: nt5.i
Client Sample ID: VSTD200

Compound: Chloromethane
CAS Number:



Data File: /chem1/nt5.1/24MAY13.b/2000524.d
Injection Date: 24-MAY-2013 08:18
Instrument: nt5.1
Client Sample ID: VSTD200

Compound: 2-Butanone
CAS Number:



Volatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WS24 Client ID: SAIC

METHOD: **NW-TPH**(Gas) **8021B**(BTEX) **NW-VPH**(VPH) **8260C**(VOA) **8260C**(SIM VOA) **524.3**(VOA) **RSK-175**(MEE)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Purge Volume (mL) 5 Curve Date: 5/24/13 | 6/11/13 Analysis Start Date: 6/4/13 | 6/11/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA / Y / N / ___	Method Blank In Control?	Y / N / ✓
BFB Tune Meets Criteria?	NA / Y / N / ✓	Surrogate Recovery in Control?	Y / N / ✓
Internal STD within 50-200%?	NA / Y / N / ✓	LCS / LCSD Recovery Met?	Y / N / ✓
CCAL Meets %D	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / ___
ICAL Q flag applied?	NA / Y / N / ___	MS / MSD Recovery Met?	NA / Y / N / ___
CCAL Q Flag applied	NA / Y / N / ___	MS / MSD RPD ≤30%?	NA / ___
Manual Integrations?	Y / N / ___	Samples Diluted?	Y / N / ___
Integration Summary?	Y / N / ___	Special Analysis Request?	Y / N / ___

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

6/4 - A-IS out - reran on 6/11/13

6/11 - MB - acetone @ 9.71 µg/kg - B flagged in LCS/LCSD/samples

(Review 1)Analyst: [signature] Date: 6/12/13

(Review 2)Reviewer: [signature] Date: 6/13

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 6/4/13 Analysis: 8260 Analyst: AP

GC Program: 624SA Column No: 93805V Column Type: 624

Instrument Tune (.U or .CT.): PA1003 EM Voltage: 1518

Inj. Vol: 5 Calibration File: 4FX0604 Curve Date: 5/24/13

IS/SS

IS774-L

Ical/Ccal

B000196
W794-3
W793-2
B000164
} B000357

LCS/ICV

W794-2
W797-3
ICV01

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/04JUN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF								
1	1045	bfb0604.d	BFB0604	BFB0604	1										
2	1159	cc0604.d	CC0604	VSTD50	1	4.67	472344	5.12	1576391	7.61	1796523	9.68	972787		
3	1235	cc0604a.d	CC0604	VSTD50	1	4.66	467495	5.11	1582080	7.61	1806573	9.68	978861		
4	1311	lcs0604.d	LCS0604	LCS0604	1	4.66	484756	5.11	1633573	7.61	1880392	9.68	1029875		
5	1335	lcs0604a.d	LCS0604	LCS0604	1	4.67	474930	5.12	1610669	7.61	1862966	9.68	1019587		
6	1359	mb0604.d	MB0604	MB0604	1	4.67	455081	5.12	1552765	7.61	1796929	9.68	963412		
7	1452	ws51a.d	WS51A	A2-W30-S-4	1	4.67	447582	5.12	1512660	7.61	1750126	9.68	824292		
8	1535	wr99c.d	WR99C	KC-TB-01-20130530-W	1	4.66	432099	5.11	1478463	7.60	1724829	9.68	908327		
9	1559	wr99d.d	WR99D	KC-VT-1593-20130530	1	4.67	455993	5.12	1550616	7.61	1833420	9.68	937143		
10	1623	ws04a.d	WS04A	PF-PA-15-0513	1	4.66	438012	5.12	1510769	7.60	1812643	9.68	998054		
11	1647	ws16a.d	WS16A	G-FA-101C(3-4)	1	4.67	433016	5.12	1457152	7.60	1666479	9.68	814208		
12	1711	ws16b.d	WS16B	G-FA-101C(6-7)	1	4.67	471970	5.12	1591253	7.60	1855470	9.68	1009548		
13	1735	ws16c.d	WS16C	G-FA-201C(3-4)	1	4.67	459321	5.12	1565899	7.60	1869856	9.68	1026781		
14	1759	ws16o.d	WS16O	Trip Blanks	1	4.67	495090	5.12	1686867	7.60	2014224	9.68	1123777		
15	1823	ws21a.d	WS21A	KC-IV-SPS-20130531-	1	4.67	232331	5.12	755609	7.60	836774	9.68	418092		
16	1847	ws21b.d	WS21B	KC-TB-02	1	4.67	492568	5.12	1683921	7.60	1998320	9.68	1110285		

Maintenance / Comments

AP 6/5/13

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/04JUN13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 04-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1045	bfb0604.d	BFB0604	BFB0604	1	NO MANUAL INTEGRATION
1235	cc0604a.d	CC0604	VSTD50	1	NO MANUAL INTEGRATION
1311	lcs0604.d	LCS0604	LCS0604	1	NO MANUAL INTEGRATION
1335	lcs0604a.d	LCS0604	LCS0604	1	NO MANUAL INTEGRATION
1359	mb0604.d	MB0604	MB0604	1	NO MANUAL INTEGRATION
1847	ws21b.d	WS21B	KC-TB-02	1	NO MANUAL INTEGRATION

SPECTRA

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt5.i/04JUN13.b

Instrument: nt5.i Date: 04-JUN-2013 Method: VO121012S.m

INITIAL CAL: 24-MAY-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 04-JUN-2013

Compound	%D
Chloroethane	27.7
Acrolein	75.5
Iodomethane	26.3
Methylene Chloride	62.3
Trans-1,2-Dichloroethene	33.6

Data File: /chem1/nt5.i/04JUN13.b/bfb0604.d

Date : 04-JUN-2013 10:45

Client ID: BFB0604

Instrument: nt5.i

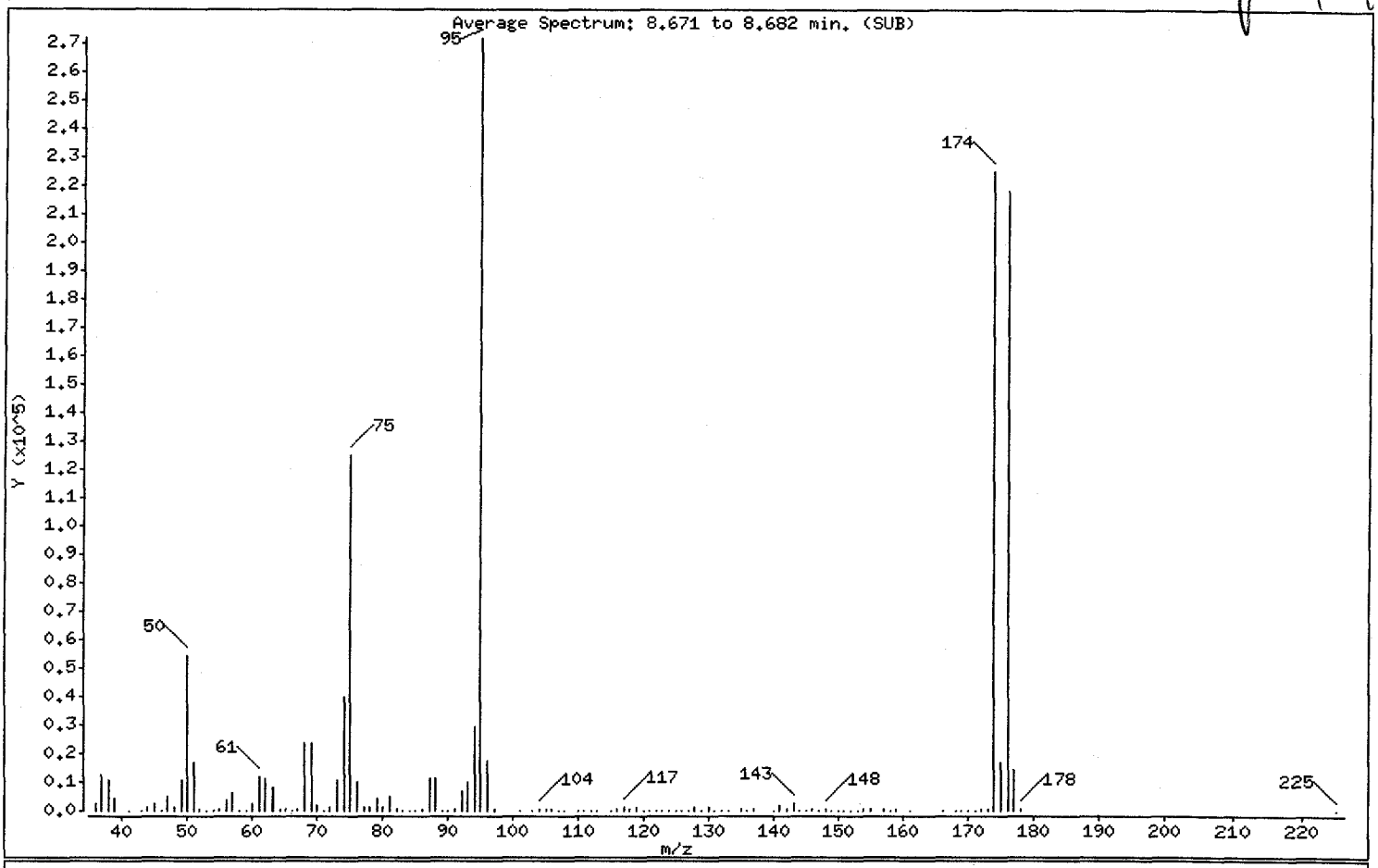
Sample Info: BFB0604,BFB0604,,1,04JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	19.99
75	30.00 - 66.00% of mass 95	45.95
96	5.00 - 9.00% of mass 95	6.50
173	Less than 2.00% of mass 174	0.21 (0.25)
174	50.00 - 101.00% of mass 95	82.72
175	4.00 - 9.00% of mass 174	6.20 (7.49)
176	95.00 - 101.00% of mass 174	80.33 (97.12)
177	5.00 - 9.00% of mass 176	5.30 (6.60)

Data File: /chem1/nt5.i/04JUN13.b/bfb0604.d

Date : 04-JUN-2013 10:45

Client ID: BFB0604

Instrument: nt5.i

Sample Info: BFB0604,BFB0604,,1,04JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0604.d

Spectrum: Average Spectrum: 8.671 to 8.682 min. (SUB)

Location of Maximum: 95.00

Number of points: 126

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2312	70.00	1788	106.00	779	143.00	2500
37.00	12444	71.00	182	107.00	273	144.00	181
38.00	10506	72.00	1188	108.00	36	145.00	243
39.00	4499	73.00	10557	110.00	175	146.00	508
41.00	36	74.00	39784	111.00	122	147.00	182
43.00	186	75.00	124912	112.00	47	148.00	666
44.00	1193	76.00	9966	113.00	201	149.00	144
45.00	2385	77.00	1321	115.00	311	150.00	273
46.00	130	78.00	1241	116.00	780	151.00	45
47.00	4756	79.00	4206	117.00	1179	152.00	70
48.00	1544	80.00	1490	118.00	794	153.00	206
49.00	10415	81.00	5014	119.00	1109	154.00	400
50.00	54344	82.00	879	120.00	137	155.00	612
51.00	16984	83.00	67	121.00	36	157.00	404
52.00	603	84.00	56	122.00	37	158.00	53
53.00	41	85.00	82	123.00	35	159.00	354
54.00	14	86.00	407	124.00	160	161.00	275
55.00	899	87.00	11393	125.00	41	166.00	37
56.00	3811	88.00	11042	126.00	122	168.00	36
57.00	6165	89.00	92	127.00	106	169.00	39
58.00	272	90.00	34	128.00	1056	170.00	43
59.00	53	91.00	661	129.00	83	171.00	128
60.00	2378	92.00	6629	130.00	956	172.00	532
61.00	11799	93.00	10028	131.00	223	173.00	564
62.00	11185	94.00	29224	132.00	84	174.00	224832
63.00	8402	95.00	271808	133.00	100	175.00	16848
64.00	905	96.00	17672	135.00	346	176.00	218368
65.00	411	97.00	533	136.00	33	177.00	14418
66.00	133	101.00	118	137.00	391	178.00	417
67.00	792	103.00	4	140.00	170	225.00	37
68.00	23888	104.00	821	141.00	2104		
69.00	23936	105.00	415	142.00	478		

Data File: /chem1/nt5.i/04JUN13.b/bfb0604.d

Date : 04-JUN-2013 10:45

Client ID: BFB0604

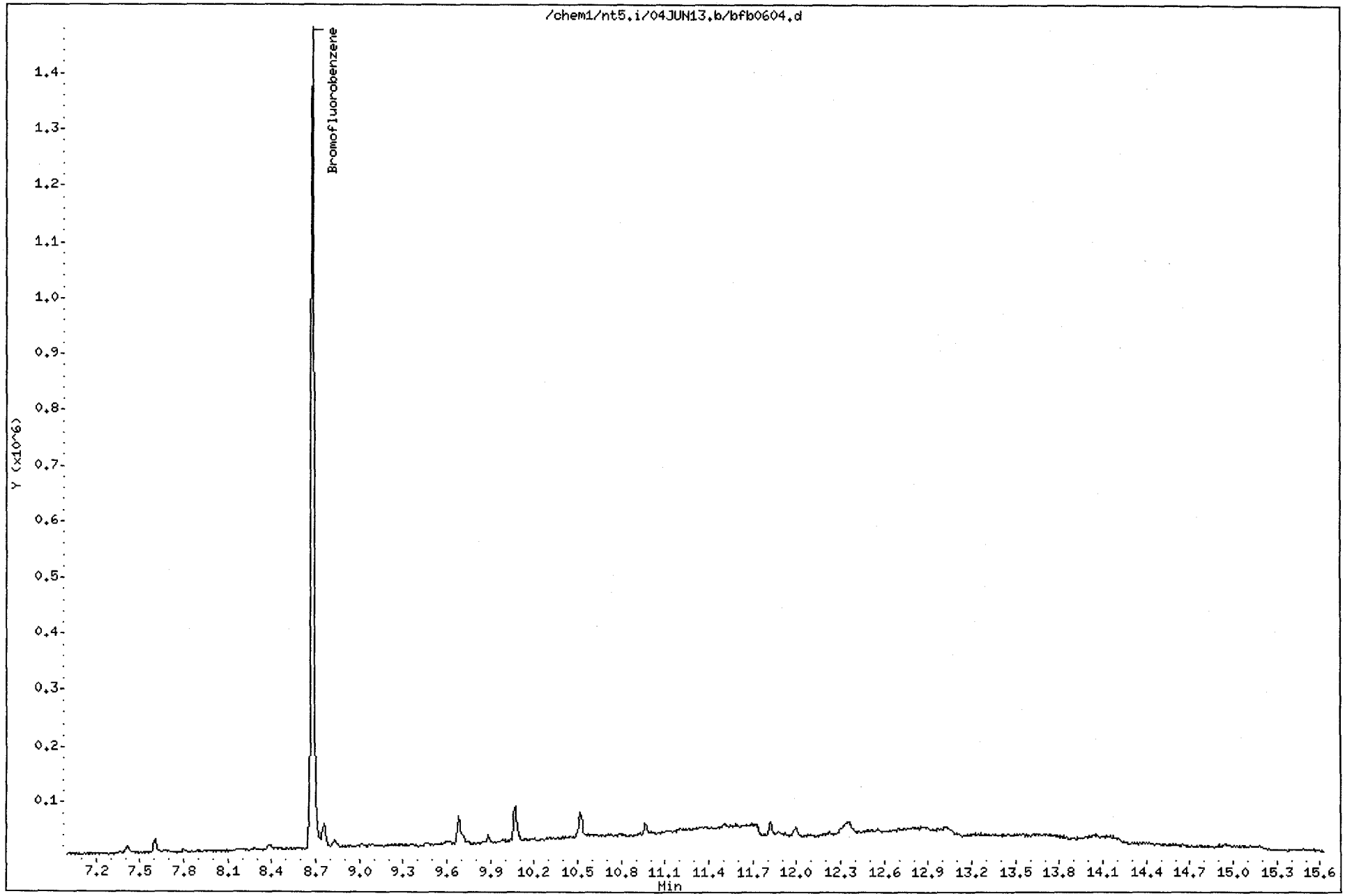
Sample Info: BFB0604,BFB0604,,1,04JUN13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/cc0604a.d
Lab Smp Id: CC0604 Client Smp ID: VSTD50
Inj Date : 04-JUN-2013 12:35
Operator : PB Inst ID: nt5.i
Smp Info : CC0604,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 04-Jun-2013 12:54 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.006	1.006	(0.216)	378151	50.0000	53.457
2 Chloromethane	50	1.306	1.306	(0.280)	661554	50.0000	48.195
3 Vinyl Chloride	62	1.181	1.181	(0.253)	756443	50.0000	59.257
4 Bromomethane	94	1.385	1.385	(0.297)	376644	50.0000	56.551
5 Chloroethane	64	1.475	1.475	(0.317)	436895	50.0000	63.862
6 Trichlorofluoromethane	101	1.572	1.572	(0.337)	766497	50.0000	57.945
7 1,1-Dichloroethene	96	1.934	1.934	(0.415)	383470	50.0000	51.322
8 Carbon Disulfide	76	1.934	1.934	(0.415)	1255099	50.0000	52.008
9 112Trichloro122Trifluoroethane	101	1.973	1.973	(0.423)	347463	50.0000	51.718
10 Iodomethane	142	2.030	2.030	(0.436)	350908	50.0000	63.168
11 Bromoethane	108	2.126	2.126	(0.456)	249255	50.0000	53.484
12 Acrolein	56	2.239	2.239	(0.480)	551005	250.000	438.73
13 Methylene Chloride	84	2.409	2.409	(0.517)	531099	50.0000	81.139
14 Acetone	43	2.550	2.550	(0.547)	883997	250.000	261.78

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.550	2.550	(0.547)	562394	50.0000	66.790
	16 Methyl tert butyl ether	73	2.731	2.731	(0.586)	1560209	50.0000	57.878
	17 1,1-Dichloroethane	63	3.172	3.172	(0.681)	1121028	50.0000	56.530
	18 Acrylonitrile	53	3.274	3.274	(0.703)	239744	50.0000	51.485
	19 Vinyl Acetate	43	3.512	3.512	(0.754)	1362920	50.0000	54.163
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.798)	582116	50.0000	56.157
	22 2,2-Dichloropropane	77	3.823	3.823	(0.820)	853422	50.0000	57.120
	23 Bromochloromethane	128	3.908	3.908	(0.839)	245257	50.0000	54.705
	24 Chloroform	83	4.010	4.010	(0.860)	942456	50.0000	56.174
	25 Carbon Tetrachloride	117	4.100	4.100	(0.802)	742211	50.0000	52.005
$	27 Dibromofluoromethane	111	4.179	4.179	(0.897)	603635	50.0000	57.319
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.894)	869305	50.0000	57.142
	28 1,1-Dichloropropene	75	4.293	4.293	(0.840)	834779	50.0000	51.840
	29 2-Butanone	72	4.372	4.372	(0.938)	332387	250.000	265.95(Q)
	30 Benzene	78	4.524	4.524	(0.885)	2414246	50.0000	51.903
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	467495	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.655	(0.999)	577393	50.0000	54.923
	33 1,2-Dichloroethane	62	4.717	4.717	(0.923)	716974	50.0000	48.473
	34 Trichloroethene	95	5.062	5.062	(0.990)	591849	50.0000	51.907
*	35 1,4-Difluorobenzene	114	5.113	5.113	(1.000)	1582080	50.0000	
	37 Dibromomethane	93	5.418	5.418	(1.060)	304647	50.0000	48.434
	38 1,2-Dichloropropane	63	5.514	5.514	(1.079)	661309	50.0000	50.518
	39 Bromodichloromethane	83	5.588	5.588	(1.093)	714159	50.0000	50.026
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	365191	50.0000	51.692
	41 Cis 1,3-dichloropropene	75	6.137	6.137	(1.200)	945245	50.0000	51.756
$	42 d8-Toluene	98	6.295	6.295	(1.231)	2269374	50.0000	50.722
	43 Toluene	92	6.340	6.340	(1.240)	1524890	50.0000	51.684
	44 Tetrachloroethene	166	6.652	6.652	(0.874)	628627	50.0000	51.296
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.312)	1334550	250.000	249.08
	46 Trans 1,3-Dichloropropene	75	6.702	6.702	(1.311)	839107	50.0000	50.573
	47 1,1,2-Trichloroethane	97	6.833	6.833	(1.336)	457491	50.0000	48.765
	48 Chlorodibromomethane	129	6.968	6.968	(0.916)	520369	50.0000	49.017
	49 1,3-Dichloropropane	76	7.053	7.053	(0.927)	845931	50.0000	48.098
	50 1,2-Dibromoethane	107	7.149	7.149	(1.398)	445423	50.0000	49.202
	51 2-Hexanone	43	7.421	7.421	(0.975)	2243713	250.000	242.81
*	52 d5-Chlorobenzene	117	7.608	7.608	(1.000)	1806573	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	1525190	50.0000	49.887
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	2763990	50.0000	52.805
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	529015	50.0000	49.097
	56 m,p-xylene	106	7.806	7.806	(1.026)	2101993	100.000	106.84
	57 o-Xylene	106	8.168	8.168	(1.074)	1006132	50.0000	53.232
	58 Styrene	104	8.213	8.213	(1.080)	1681845	50.0000	52.585
	59 Bromoform	173	8.207	8.207	(0.848)	367508	50.0000	47.495
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	2617001	50.0000	53.598
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	969205	50.0000	50.546
	63 Bromobenzene	156	8.750	8.750	(0.904)	626082	50.0000	47.929
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	3104259	50.0000	52.463

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.880	8.880	(0.917)	584884	50.0000	45.314
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	1853997	50.0000	50.689
67	1,3,5-Trimethyl Benzene	105	9.016	9.016	(0.931)	2191438	50.0000	52.838
68	1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	182329	50.0000	46.222
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	225672	50.0000	45.642
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	1943621	50.0000	50.694
71	T-Butyl Benzene	119	9.288	9.288	(0.959)	1925568	50.0000	52.636
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	2148184	50.0000	52.708
73	S-Butyl Benzene	105	9.452	9.452	(0.976)	2873113	50.0000	53.446
74	4-Isopropyl Toluene	119	9.599	9.599	(0.991)	2389950	50.0000	54.869
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	1197049	50.0000	49.499
* 76	d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	978861	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	1219323	50.0000	48.301
78	N-Butyl Benzene	91	9.983	9.983	(1.031)	2276497	50.0000	55.036
$ 79	d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	990100	50.0000	51.261
80	1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	1121184	50.0000	47.894
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	113460	50.0000	45.187
82	Hexachloro 1,3-Butadiene	225	11.511	11.511	(1.189)	532574	50.0000	51.604
83	1,2,4-Trichlorobenzene	180	11.499	11.499	(1.188)	855535	50.0000	51.433
84	Naphthalene	128	11.811	11.811	(1.220)	1794305	50.0000	48.480
85	1,2,3-Trichlorobenzene	180	11.992	11.992	(1.238)	783152	50.0000	49.357

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: cc0604a.d
Lab Smp Id: CC0604
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 04-JUN-2013
Calibration Time: 11:59
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	467495	-0.70
35 1,4-Difluorobenze	1445861	722930	2891722	1582080	9.42
52 d5-Chlorobenzene	1620542	810271	3241084	1806573	11.48
76 d4-1,4-Dichlorobe	872028	436014	1744056	978861	12.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0604a.d
Analysis Type: SOIL
Lab Sample ID: CC0604
Method: /chem1/nt5.i/04JUN13.b/VO121012S.m

Injection Date: 04-JUN-2013 12:35
Init. Cal. Date(s): 24-MAY-2013 24-MAY-2013
Init. Cal. Times: 08:18 11:06
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 Dichlorodifluoromethane	0.75657	0.80889	0.100	6.91478	20.00000	Averaged	
2 Chloromethane	1.46811	1.41510	0.100	-3.61072	20.00000	Averaged	
3 Vinyl Chloride	1.36531	1.61808	0.100	18.51306	20.00000	Averaged	
4 Bromomethane	0.71233	0.80566	0.100	13.10287	20.00000	Averaged	
5 Chloroethane	0.73169	0.93455	0.100	27.72480	20.00000	Averaged	<-
6 Trichlorofluoromethane	1.41476	1.63958	0.100	15.89098	20.00000	Averaged	
7 1,1-Dichloroethene	0.79913	0.82026	0.100	2.64444	20.00000	Averaged	
8 Carbon Disulfide	2.58108	2.68473	0.010	4.01577	20.00000	Averaged	
9 112Trichloro122Trifluoroeth	0.71856	0.74325	0.010	3.43527	20.00000	Averaged	
10 Iodomethane	0.59414	0.75061	0.010	26.33632	20.00000	Averaged	<-
11 Bromoethane	0.49844	0.53317	0.100	6.96787	20.00000	Averaged	
12 Acrolein	0.13432	0.23573	0.000	75.49214	20.00000	Averaged	<-
13 Methylene Chloride	0.70007	1.13605	0.010	62.27734	20.00000	Averaged	<-
14 Acetone	0.36116	0.37818	0.001	4.71241	20.00000	Averaged	
15 Trans-1,2-Dichloroethene	0.90058	1.20299	0.010	33.58056	20.00000	Averaged	<-
16 Methyl tert butyl ether	2.88310	3.33738	0.100	15.75649	20.00000	Averaged	
17 1,1-Dichloroethane	2.12095	2.39794	0.100	13.05970	20.00000	Averaged	
18 Acrylonitrile	0.49804	0.51283	0.001	2.96942	20.00000	Averaged	
19 Vinyl Acetate	2.69128	2.91537	0.010	8.32624	20.00000	Averaged	
20 Cis-1,2-Dichloroethene	1.10866	1.24518	0.010	12.31391	20.00000	Averaged	
22 2,2-Dichloropropane	1.59797	1.82552	0.010	14.23965	20.00000	Averaged	
23 Bromochloromethane	0.47950	0.52462	0.050	9.41010	20.00000	Averaged	
24 Chloroform	1.79441	2.01597	0.100	12.34706	20.00000	Averaged	
25 Carbon Tetrachloride	0.45105	0.46914	0.100	4.01015	20.00000	Averaged	
$ 27 Dibromofluoromethane	1.12634	1.29121	0.100	14.63773	20.00000	Averaged	
26 1,1,1-Trichloroethane	1.62707	1.85949	0.100	14.28445	20.00000	Averaged	
28 1,1-Dichloropropene	0.50891	0.52765	0.010	3.68100	20.00000	Averaged	
29 2-Butanone	0.13367	0.14220	0.001	6.38064	20.00000	Averaged	
30 Benzene	1.47004	1.52599	0.100	3.80615	20.00000	Averaged	
$ 32 d4-1,2-Dichloroethane	1.12438	1.23508	0.010	9.84521	20.00000	Averaged	
33 1,2-Dichloroethane	0.46746	0.45318	0.100	-3.05370	20.00000	Averaged	
34 Trichloroethene	0.36035	0.37410	0.100	3.81351	20.00000	Averaged	
37 Dibromomethane	0.19879	0.19256	0.010	-3.13186	20.00000	Averaged	
38 1,2-Dichloropropane	0.41371	0.41800	0.100	1.03689	20.00000	Averaged	
39 Bromodichloromethane	0.45117	0.45141	0.100	0.05231	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0604a.d
Analysis Type: SOIL
Lab Sample ID: CC0604
Method: /chem1/nt5.i/04JUN13.b/VO121012S.m

Injection Date: 04-JUN-2013 12:35
Init. Cal. Date(s): 24-MAY-2013 24-MAY-2013
Init. Cal. Times: 08:18 11:06
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
40 2-Chloroethyl Vinyl Ether	0.22327	0.23083	0.000	3.38458	20.00000	Averaged
41 Cis 1,3-dichloropropene	0.57720	0.59747	0.100	3.51174	20.00000	Averaged
$ 42 d8-Toluene	1.41400	1.43442	0.010	1.44443	20.00000	Averaged
43 Toluene	0.93245	0.96385	0.100	3.36780	20.00000	Averaged
44 Tetrachloroethene	0.33918	0.34797	0.100	2.59155	20.00000	Averaged
45 4-Methyl-2-Pentanone	0.16933	0.16871	0.000	-0.36868	20.00000	Averaged
46 Trans 1,3-Dichloropropene	0.52437	0.53038	0.010	1.14679	20.00000	Averaged
47 1,1,2-Trichloroethane	0.29649	0.28917	0.100	-2.46933	20.00000	Averaged
48 Chlorodibromomethane	0.29382	0.28804	0.100	-1.96525	20.00000	Averaged
49 1,3-Dichloropropane	0.48677	0.46825	0.100	-3.80443	20.00000	Averaged
50 1,2-Dibromoethane	0.28611	0.28154	0.010	-1.59672	20.00000	Averaged
51 2-Hexanone	0.25575	0.24839	0.010	-2.87735	20.00000	Averaged
53 Chlorobenzene	0.84616	0.84425	0.300	-0.22679	20.00000	Averaged
54 Ethyl Benzene	1.44869	1.52996	0.100	5.61026	20.00000	Averaged
55 1,1,1,2-Tetrachloroethane	0.29822	0.29283	0.010	-1.80649	20.00000	Averaged
56 m,p-xylene	0.54454	0.58176	0.100	6.83508	20.00000	Averaged
57 o-Xylene	0.52311	0.55693	0.100	6.46434	20.00000	Averaged
58 Styrene	0.88519	0.93096	0.100	5.17026	20.00000	Averaged
59 Bromoform	0.39525	0.37544	0.100	-5.01064	20.00000	Averaged
60 Isopropyl Benzene	2.49405	2.67352	0.010	7.19563	20.00000	Averaged
$ 62 4-Bromofluorobenzene	0.53069	0.53649	0.200	1.09240	20.00000	Averaged
63 Bromobenzene	0.66724	0.63960	0.010	-4.14261	20.00000	Averaged
64 N-Propyl Benzene	3.02242	3.17130	0.010	4.92560	20.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.65930	0.59752	0.300	-9.37181	20.00000	Averaged
66 2-Chloro Toluene	1.86829	1.89403	0.010	1.37801	20.00000	Averaged
67 1,3,5-Trimethyl Benzene	2.11852	2.23876	0.010	5.67561	20.00000	Averaged
68 1,2,3-Trichloropropane	0.20149	0.18627	0.010	-7.55626	20.00000	Averaged
69 Trans-1,4-Dichloro 2-Butene	0.25256	0.23055	0.001	-8.71609	20.00000	Averaged
70 4-Chloro Toluene	1.95841	1.98559	0.010	1.38815	20.00000	Averaged
71 T-Butyl Benzene	1.86864	1.96715	0.010	5.27197	20.00000	Averaged
72 1,2,4-Trimethylbenzene	2.08182	2.19457	0.010	5.41631	20.00000	Averaged
73 S-Butyl Benzene	2.74591	2.93516	0.010	6.89191	20.00000	Averaged
74 4-Isopropyl Toluene	2.22488	2.44156	0.010	9.73884	20.00000	Averaged
75 1,3-Dichlorobenzene	1.23529	1.22290	0.100	-1.00294	20.00000	Averaged
77 1,4-Dichlorobenzene	1.28948	1.24565	0.100	-3.39871	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 04-JUN-2013 12:35
Lab File ID: cc0604a.d Init. Cal. Date(s): 24-MAY-2013 24-MAY-2013
Analysis Type: SOIL Init. Cal. Times: 08:18 11:06
Lab Sample ID: CC0604 Quant Type: ISTD
Method: /chem1/nt5.i/04JUN13.b/VO121012S.m

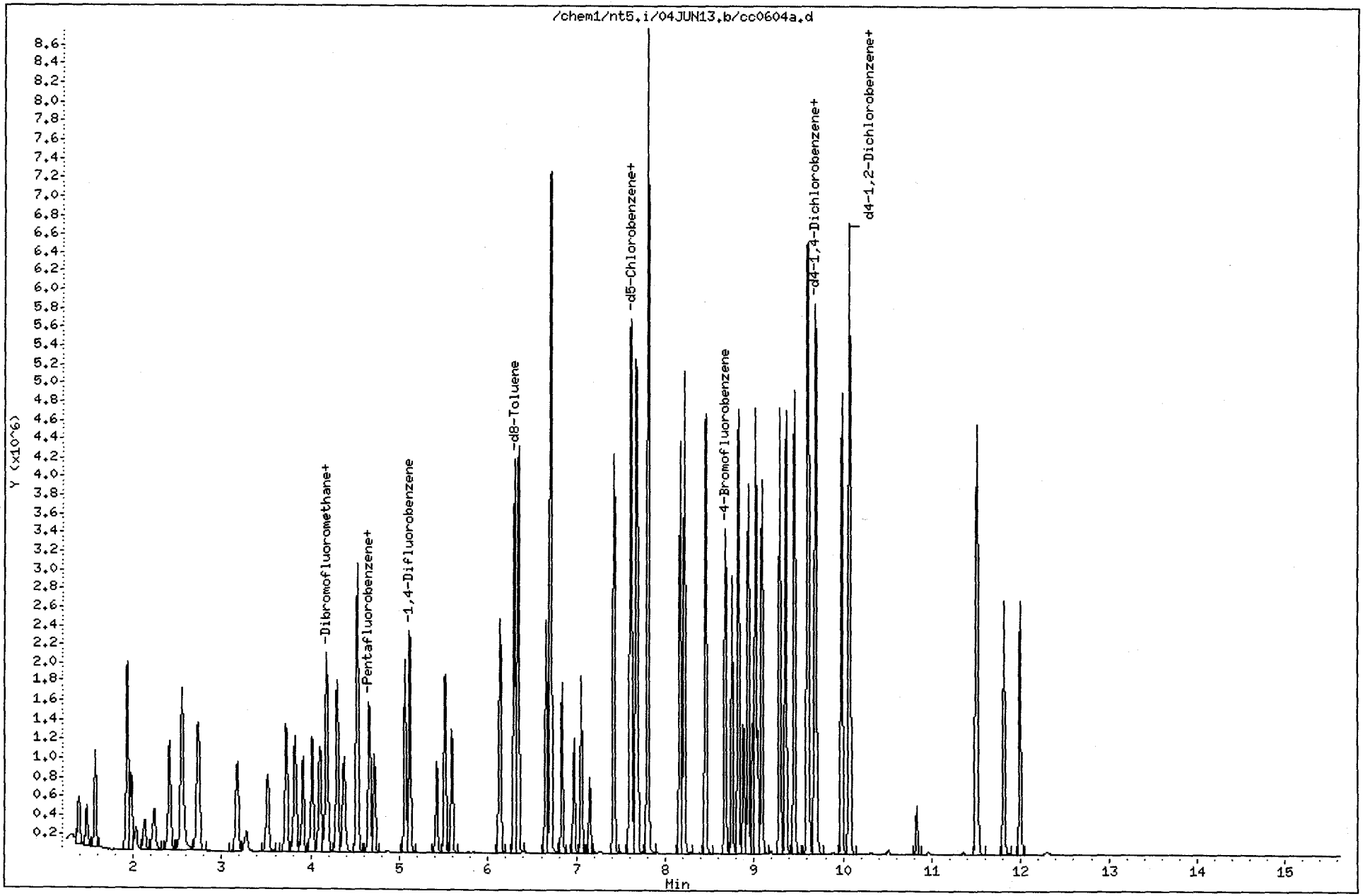
COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
78 N-Butyl Benzene	2.11287	2.32566	0.010	10.07127	20.00000	Averaged
$ 79 d4-1,2-Dichlorobenzene	0.98660	1.01148	0.010	2.52162	20.00000	Averaged
80 1,2-Dichlorobenzene	1.19577	1.14540	0.100	-4.21282	20.00000	Averaged
81 1,2-Dibromo 3-Chloropropane	0.12826	0.11591	0.010	-9.62674	20.00000	Averaged
82 Hexachloro 1,3-Butadiene	0.52716	0.54408	0.010	3.20885	20.00000	Averaged
83 1,2,4-Trichlorobenzene	0.84966	0.87401	0.010	2.86568	20.00000	Averaged
84 Naphthalene	1.89053	1.83305	0.010	-3.04004	20.00000	Averaged
85 1,2,3-Trichlorobenzene	0.81049	0.80006	0.010	-1.28607	20.00000	Averaged

Data File: /chem1/nt5.i/04JUN13.b/cc0604a.d
Date : 04-JUN-2013 12:35
Client ID: VSTD50
Sample Info: CC0604,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/lcs0604.d
Lab Smp Id: LCS0604 Client Smp ID: LCS0604
Inj Date : 04-JUN-2013 13:11
Operator : PB Inst ID: nt5.i
Smp Info : LCS0604,5,5,0
Misc Info : 13-11820
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 05-Jun-2013 07:53 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

6/5/13

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.006	1.006	(0.216)	349425	47.6376	47.638
2 Chloromethane	50	1.255	1.306	(0.269)	581808	40.8759	40.876
3 Vinyl Chloride	62	1.175	1.181	(0.252)	723752	54.6769	54.677
4 Bromomethane	94	1.385	1.385	(0.297)	345282	49.9966	49.997
5 Chloroethane	64	1.470	1.475	(0.315)	392575	55.3407	55.341
6 Trichlorofluoromethane	101	1.566	1.572	(0.336)	690438	50.3371	50.337
7 1,1-Dichloroethene	96	1.922	1.934	(0.412)	332608	42.9300	42.930
8 Carbon Disulfide	76	1.928	1.934	(0.414)	1086406	43.4148	43.415
9 112Trichloro122Trifluoroethane	101	1.967	1.973	(0.422)	304623	43.7266	43.727
10 Iodomethane	142	2.024	2.030	(0.434)	296353	51.4479	51.448
11 Bromoethane	108	2.120	2.126	(0.455)	276916	57.3036	57.304
12 Acrolein	56	2.228	2.239	(0.478)	605519	464.969	464.97(R)
13 Methylene Chloride	84	2.403	2.409	(0.516)	523439	77.1210	77.121(R)
14 Acetone	43	2.539	2.550	(0.545)	880552	251.476	251.48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.544	2.550	(0.546)	514292	58.9029	58.903
	16 Methyl tert butyl ether	73	2.725	2.731	(0.585)	1513250	54.1374	54.137
	17 1,1-Dichloroethane	63	3.167	3.172	(0.680)	1047691	50.9506	50.951
	18 Acrylonitrile	53	3.263	3.274	(0.700)	239683	49.6388	49.639
	19 Vinyl Acetate	43	3.506	3.512	(0.752)	1336439	51.2196	51.220
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.798)	538628	50.1114	50.111
	22 2,2-Dichloropropane	77	3.817	3.823	(0.819)	783973	50.6032	50.603
	23 Bromochloromethane	128	3.908	3.908	(0.839)	234044	50.3450	50.345
	24 Chloroform	83	4.010	4.010	(0.860)	885679	50.9098	50.910
	25 Carbon Tetrachloride	117	4.094	4.100	(0.801)	682681	46.3261	46.326
$	27 Dibromofluoromethane	111	4.179	4.179	(0.897)	625708	57.2992	57.299
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.894)	795317	50.4173	50.417
	28 1,1-Dichloropropene	75	4.292	4.293	(0.840)	763105	45.8957	45.896
	29 2-Butanone	72	4.360	4.372	(0.936)	339015	261.596	261.60(Q)
	30 Benzene	78	4.519	4.524	(0.884)	2240542	46.6503	46.650
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	484756	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.655	(0.998)	591246	54.2378	54.238
	33 1,2-Dichloroethane	62	4.711	4.717	(0.921)	692901	45.3690	45.369
	34 Trichloroethene	95	5.056	5.062	(0.989)	538456	45.7354	45.735
*	35 1,4-Difluorobenzene	114	5.113	5.113	(1.000)	1633573	50.0000	
	37 Dibromomethane	93	5.418	5.418	(1.060)	292485	45.0347	45.035
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	617729	45.7018	45.702
	39 Bromodichloromethane	83	5.588	5.588	(1.093)	672808	45.6439	45.644
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	357912	49.0650	49.065
	41 Cis 1,3-dichloropropene	75	6.137	6.137	(1.200)	892395	47.3219	47.322
$	42 d8-Toluene	98	6.295	6.295	(1.231)	2336875	50.5845	50.585
	43 Toluene	92	6.340	6.340	(1.240)	1414047	46.4163	46.416
	44 Tetrachloroethene	166	6.651	6.652	(0.874)	578905	45.3840	45.384
	45 4-Methyl-2-Pentanone	58	6.702	6.708	(1.311)	1322432	239.036	239.04
	46 Trans 1,3-Dichloropropene	75	6.702	6.702	(1.311)	802603	46.8485	46.848
	47 1,1,2-Trichloroethane	97	6.832	6.833	(1.336)	445332	45.9730	45.973
	48 Chlorodibromomethane	129	6.968	6.968	(0.916)	497194	44.9957	44.996
	49 1,3-Dichloropropane	76	7.053	7.053	(0.927)	812369	44.3762	44.376
	50 1,2-Dibromoethane	107	7.149	7.149	(1.398)	431939	46.2081	46.208
	51 2-Hexanone	43	7.421	7.421	(0.975)	2234720	232.340	232.34
*	52 d5-Chlorobenzene	117	7.607	7.608	(1.000)	1880392	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	1420200	44.6289	44.629
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	2559360	46.9762	46.976
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	496938	44.3092	44.309
	56 m,p-xylene	106	7.800	7.806	(1.025)	1928506	94.1696	94.170
	57 o-Xylene	106	8.167	8.168	(1.074)	931410	47.3442	47.344
	58 Styrene	104	8.213	8.213	(1.080)	1577864	47.3973	47.397
	59 Bromoform	173	8.207	8.207	(0.848)	356182	43.7508	43.751
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	2393437	46.5910	46.591
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	1014226	50.8176	50.818
	63 Bromobenzene	156	8.756	8.750	(0.904)	584831	42.5531	42.553
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	2868828	46.0824	46.082

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.880	8.880	(0.917)	579639	42.6832	42.683
	66 2-Chloro Toluene	91	8.931	8.931	(0.922)	1716492	44.6050	44.605
	67 1,3,5-Trimethyl Benzene	105	9.016	9.016	(0.931)	2018008	46.2461	46.246
	68 1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	177996	42.8881	42.888
	69 Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	222172	42.7081	42.708
	70 4-Chloro Toluene	91	9.084	9.084	(0.938)	1807852	44.8172	44.817
	71 T-Butyl Benzene	119	9.287	9.288	(0.959)	1753922	45.5691	45.569
	72 1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	1998751	46.6124	46.612
	73 S-Butyl Benzene	105	9.452	9.452	(0.976)	2632102	46.5373	46.537
	74 4-Isopropyl Toluene	119	9.599	9.599	(0.991)	2181197	47.5963	47.596
	75 1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	1116954	43.8988	43.899
*	76 d4-1,4-Dichlorobenzene	152	9.683	9.684	(1.000)	1029875	50.0000	
	77 1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	1138642	42.8704	42.870
	78 N-Butyl Benzene	91	9.983	9.983	(1.031)	2102699	48.3160	48.316
$	79 d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	1028548	50.6136	50.614
	80 1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	1054573	42.8167	42.817
	81 1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	113472	42.9529	42.953
	82 Hexachloro 1,3-Butadiene	225	11.511	11.511	(1.189)	475571	43.7984	43.798
	83 1,2,4-Trichlorobenzene	180	11.499	11.499	(1.188)	804108	45.9466	45.947
	84 Naphthalene	128	11.810	11.811	(1.220)	1758279	45.1534	45.153
	85 1,2,3-Trichlorobenzene	180	11.991	11.992	(1.238)	745330	44.6465	44.647

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0604.d
Lab Smp Id: LCS0604
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

Calibration Date: 04-JUN-2013
Calibration Time: 12:35
Client Smp ID: LCS0604
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	484756	2.96
35 1,4-Difluorobenze	1445861	722930	2891722	1633573	12.98
52 d5-Chlorobenzene	1620542	810271	3241084	1880392	16.03
76 d4-1,4-Dichlorobe	872028	436014	1744056	1029875	18.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 04JUN13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: LCS0604 Client Smp ID: LCS0604
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCS
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	47.638	95.28	53-148
2 Chloromethane	50.000	40.876	81.75	64-125
3 Vinyl Chloride	50.000	54.677	109.35	63-137
4 Bromomethane	50.000	49.997	99.99	57-136
5 Chloroethane	50.000	55.341	110.68	64-131
6 Trichlorofluoromet	50.000	50.337	100.67	69-132
12 Acrolein	250.00	464.97	185.99*	54-137
9 112Trichloro122Tri	50.000	43.727	87.45	74-130
14 Acetone	250.00	251.48	100.59	60-131
7 1,1-Dichloroethene	50.000	42.930	85.86	75-126
11 Bromoethane	50.000	57.304	114.61	76-126
10 Iodomethane	50.000	51.448	102.90	65-139
13 Methylene Chloride	50.000	77.121	154.24*	70-123
8 Carbon Disulfide	50.000	43.415	86.83	71-129
18 Acrylonitrile	50.000	49.639	99.28	67-125
15 Trans-1,2-Dichloro	50.000	58.903	117.81	80-120
19 Vinyl Acetate	50.000	51.220	102.44	60-136
17 1,1-Dichloroethane	50.000	50.951	101.90	80-120
29 2-Butanone	250.00	261.60	104.64	70-120
22 2,2-Dichloropropan	50.000	50.603	101.21	74-123
20 Cis-1,2-Dichloroet	50.000	50.111	100.22	80-120
24 Chloroform	50.000	50.910	101.82	80-120
23 Bromochloromethane	50.000	50.345	100.69	80-120
26 1,1,1-Trichloroeth	50.000	50.417	100.83	77-121
28 1,1-Dichloropropen	50.000	45.896	91.79	80-120
25 Carbon Tetrachlori	50.000	46.326	92.65	77-122
33 1,2-Dichloroethane	50.000	45.369	90.74	76-120
30 Benzene	50.000	46.650	93.30	80-120
34 Trichloroethene	50.000	45.735	91.47	80-120
38 1,2-Dichloropropan	50.000	45.702	91.40	80-120
39 Bromodichlorometha	50.000	45.644	91.29	77-121
37 Dibromomethane	50.000	45.035	90.07	80-120
40 2-Chloroethyl Viny	50.000	49.065	98.13	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	239.04	95.61	67-120
41 Cis 1,3-dichloropr	50.000	47.322	94.64	74-120
43 Toluene	50.000	46.416	92.83	80-120
46 Trans 1,3-Dichloro	50.000	46.848	93.70	65-120
51 2-Hexanone	250.00	232.34	92.94	65-130
47 1,1,2-Trichloroeth	50.000	45.973	91.95	80-120
49 1,3-Dichloropropan	50.000	44.376	88.75	80-120
44 Tetrachloroethene	50.000	45.384	90.77	80-121
48 Chlorodibromometha	50.000	44.996	89.99	64-120
50 1,2-Dibromoethane	50.000	46.208	92.42	75-120
53 Chlorobenzene	50.000	44.629	89.26	80-120
55 1,1,1,2-Tetrachlor	50.000	44.309	88.62	69-121
54 Ethyl Benzene	50.000	46.976	93.95	80-127
56 m,p-xylene	100.00	94.170	94.17	80-125
57 o-Xylene	50.000	47.344	94.69	78-120
58 Styrene	50.000	47.397	94.79	80-123
60 Isopropyl Benzene	50.000	46.591	93.18	80-127
59 Bromoform	50.000	43.751	87.50	60-120
65 1,1,2,2-Tetrachlor	50.000	42.683	85.37	74-120
68 1,2,3-Trichloropro	50.000	42.888	85.78	72-121
69 Trans-1,4-Dichloro	50.000	42.708	85.42	65-126
64 N-Propyl Benzene	50.000	46.082	92.16	80-132
63 Bromobenzene	50.000	42.553	85.11	80-120
67 1,3,5-Trimethyl Be	50.000	46.246	92.49	80-125
66 2-Chloro Toluene	50.000	44.605	89.21	80-125
70 4-Chloro Toluene	50.000	44.817	89.63	80-127
71 T-Butyl Benzene	50.000	45.569	91.14	87-122
72 1,2,4-Trimethylben	50.000	46.612	93.22	80-126
73 S-Butyl Benzene	50.000	46.537	93.07	80-134
74 4-Isopropyl Toluen	50.000	47.596	95.19	80-131
75 1,3-Dichlorobenzen	50.000	43.899	87.80	80-120
77 1,4-Dichlorobenzen	50.000	42.870	85.74	80-120
78 N-Butyl Benzene	50.000	48.316	96.63	80-138
80 1,2-Dichlorobenzen	50.000	42.817	85.63	80-120
81 1,2-Dibromo 3-Chlo	50.000	42.953	85.91	59-120
83 1,2,4-Trichloroben	50.000	45.947	91.89	78-130
82 Hexachloro 1,3-But	50.000	43.798	87.60	76-129
84 Naphthalene	50.000	45.153	90.31	66-120
85 1,2,3-Trichloroben	50.000	44.647	89.29	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.299	114.60	70-130

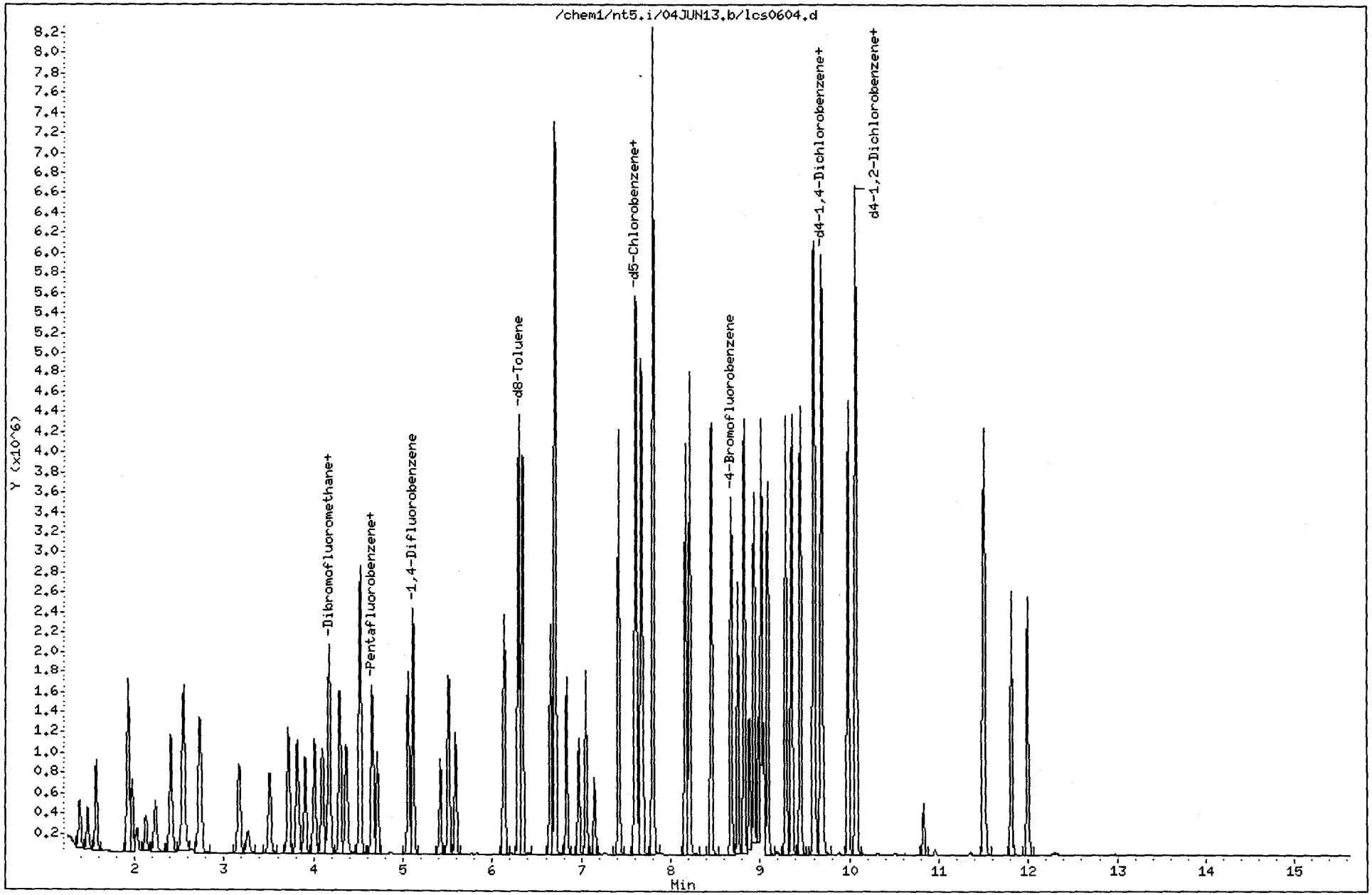
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	54.238	108.48	80-149
$ 42 d8-Toluene	50.000	50.585	101.17	77-120
$ 62 4-Bromofluorobenze	50.000	50.818	101.64	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.614	101.23	80-120

Data File: /chem1/nt5.i/04JUN13.b/lcs0604.d
Date : 04-JUN-2013 13:11
Client ID: LCS0604
Sample Info: LCS0604,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0604.d

Lab ID: LCS0604, Method: VO121012S.m, Instrument: nt5.i, Date: 04-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/lcs0604a.d
Lab Smp Id: LCS0604 Client Smp ID: LCS0604
Inj Date : 04-JUN-2013 13:35
Operator : PB Inst ID: nt5.i
Smp Info : LCS0604,5,5,0
Misc Info : 13-11820
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 05-Jun-2013 07:53 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

6/5/13

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.023	1.006	(0.219)	372221	51.7953	51.795
2 Chloromethane	50	1.283	1.306	(0.275)	616673	44.2217	44.222
3 Vinyl Chloride	62	1.193	1.181	(0.255)	684723	52.7986	52.799
4 Bromomethane	94	1.402	1.385	(0.300)	345503	51.0636	51.064
5 Chloroethane	64	1.492	1.475	(0.319)	419107	60.3032	60.303
6 Trichlorofluoromethane	101	1.589	1.572	(0.340)	714168	53.1444	53.144
7 1,1-Dichloroethene	96	1.945	1.934	(0.416)	344285	45.3565	45.357
8 Carbon Disulfide	76	1.945	1.934	(0.416)	1104997	45.0713	45.071
9 112Trichloro122Trifluoroethane	101	1.984	1.973	(0.425)	309469	45.3413	45.341
10 Iodomethane	142	2.041	2.030	(0.437)	345666	61.2503	61.250
11 Bromoethane	108	2.143	2.126	(0.459)	279747	59.0871	59.087
12 Acrolein	56	2.250	2.239	(0.482)	609218	477.488	477.49(R)
13 Methylene Chloride	84	2.426	2.409	(0.519)	527494	79.3264	79.326(R)
14 Acetone	43	2.562	2.550	(0.548)	867315	252.820	252.82

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.550	(0.550)	528216	61.7493	61.749(R)
	16 Methyl tert butyl ether	73	2.748	2.731	(0.588)	1534375	56.0289	56.029
	17 1,1-Dichloroethane	63	3.184	3.172	(0.682)	1078897	53.5537	53.554
	18 Acrylonitrile	53	3.286	3.274	(0.703)	241112	50.9679	50.968
	19 Vinyl Acetate	43	3.523	3.512	(0.754)	1365131	53.4017	53.402
	20 Cis-1,2-Dichloroethene	96	3.732	3.721	(0.799)	552182	52.4353	52.435
	22 2,2-Dichloropropane	77	3.834	3.823	(0.821)	806838	53.1566	53.157
	23 Bromochloromethane	128	3.919	3.908	(0.839)	241005	52.9150	52.915
	24 Chloroform	83	4.021	4.010	(0.861)	846450	49.6615	49.661
	25 Carbon Tetrachloride	117	4.112	4.100	(0.802)	708550	48.7653	48.765
$	27 Dibromofluoromethane	111	4.191	4.179	(0.897)	610752	57.0868	57.087
	26 1,1,1-Trichloroethane	97	4.179	4.168	(0.895)	829536	53.6745	53.675
	28 1,1-Dichloropropene	75	4.298	4.293	(0.839)	789546	48.1612	48.161
	29 2-Butanone	72	4.377	4.372	(0.937)	337489	265.806	265.81(Q)
	30 Benzene	78	4.530	4.524	(0.884)	2301753	48.6063	48.606
*	31 Pentafluorobenzene	168	4.672	4.660	(1.000)	474930	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.655	(0.998)	586664	54.9309	54.931
	33 1,2-Dichloroethane	62	4.722	4.717	(0.922)	700812	46.5395	46.539
	34 Trichloroethene	95	5.068	5.062	(0.989)	554135	47.7365	47.736
*	35 1,4-Difluorobenzene	114	5.124	5.113	(1.000)	1610669	50.0000	
	37 Dibromomethane	93	5.424	5.418	(1.058)	293156	45.7799	45.780
	38 1,2-Dichloropropane	63	5.514	5.514	(1.076)	636710	47.7759	47.776
	39 Bromodichloromethane	83	5.594	5.588	(1.092)	687068	47.2742	47.274
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.125	(1.196)	361130	50.2101	50.210
	41 Cis 1,3-dichloropropene	75	6.142	6.137	(1.199)	907432	48.8035	48.804
$	42 d8-Toluene	98	6.301	6.295	(1.230)	2309118	50.6945	50.694
	43 Toluene	92	6.340	6.340	(1.237)	1434562	47.7593	47.759
	44 Tetrachloroethene	166	6.657	6.652	(0.875)	588379	46.5582	46.558
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.309)	1365903	250.405	250.40
	46 Trans 1,3-Dichloropropene	75	6.708	6.702	(1.309)	820546	48.5769	48.577
	47 1,1,2-Trichloroethane	97	6.838	6.833	(1.334)	451553	47.2781	47.278
	48 Chlorodibromomethane	129	6.974	6.968	(0.917)	504421	46.0768	46.077
	49 1,3-Dichloropropane	76	7.059	7.053	(0.928)	834776	46.0268	46.027
	50 1,2-Dibromoethane	107	7.149	7.149	(1.395)	443217	48.0889	48.089
	51 2-Hexanone	43	7.421	7.421	(0.975)	2283661	239.649	239.65
*	52 d5-Chlorobenzene	117	7.607	7.608	(1.000)	1862966	50.0000	
	53 Chlorobenzene	112	7.619	7.619	(1.001)	1446361	45.8762	45.876
	54 Ethyl Benzene	91	7.670	7.670	(1.008)	2629378	48.7128	48.713
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.687	(1.010)	512655	46.1381	46.138
	56 m,p-xylene	106	7.805	7.806	(1.026)	1991169	98.1389	98.139
	57 o-Xylene	106	8.168	8.168	(1.074)	956044	49.0510	49.051
	58 Styrene	104	8.213	8.213	(1.080)	1617815	49.0520	49.052
	59 Bromoform	173	8.207	8.207	(0.848)	367279	45.5691	45.569
	60 Isopropyl Benzene	105	8.456	8.456	(0.873)	2478194	48.7276	48.728
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	1002877	50.7190	50.719
	63 Bromobenzene	156	8.750	8.750	(0.904)	603380	44.3457	44.346
	64 N-Propyl Benzene	91	8.824	8.824	(0.911)	2936920	47.6521	47.652

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.880	8.880	(0.917)	593640	44.1553	44.155
66	2-Chloro Toluene	91	8.931	8.931	(0.922)	1758873	46.1675	46.167
67	1,3,5-Trimethyl Benzene	105	9.010	9.016	(0.930)	2065914	47.8217	47.822
68	1,2,3-Trichloropropane	110	8.982	8.982	(0.928)	180292	43.8796	43.880
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.039	(0.933)	226399	43.9598	43.960
70	4-Chloro Toluene	91	9.084	9.084	(0.938)	1825855	45.7203	45.720
71	T-Butyl Benzene	119	9.288	9.288	(0.959)	1817498	47.6974	47.697
72	1,2,4-Trimethylbenzene	105	9.355	9.355	(0.966)	2036978	47.9832	47.983
73	S-Butyl Benzene	105	9.452	9.452	(0.976)	2701104	48.2392	48.239
74	4-Isopropyl Toluene	119	9.599	9.599	(0.991)	2233076	49.2200	49.220
75	1,3-Dichlorobenzene	146	9.610	9.610	(0.992)	1138391	45.1927	45.193
* 76	d4-1,4-Dichlorobenzene	152	9.684	9.684	(1.000)	1019587	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.695	(1.001)	1156483	43.9815	43.982
78	N-Butyl Benzene	91	9.983	9.983	(1.031)	2132183	49.4878	49.488
$ 79	d4-1,2-Dichlorobenzene	152	10.068	10.068	(1.040)	1021379	50.7680	50.768
80	1,2-Dichlorobenzene	146	10.074	10.074	(1.040)	1072690	43.9918	43.992
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.826	(1.118)	115675	44.2286	44.229
82	Hexachloro 1,3-Butadiene	225	11.505	11.511	(1.188)	492819	45.8449	45.845
83	1,2,4-Trichlorobenzene	180	11.494	11.499	(1.187)	798487	46.0858	46.086
84	Naphthalene	128	11.805	11.811	(1.219)	1763657	45.7485	45.749
85	1,2,3-Trichlorobenzene	180	11.986	11.992	(1.238)	745533	45.1093	45.109

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0604a.d
Lab Smp Id: LCS0604
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

Calibration Date: 04-JUN-2013
Calibration Time: 12:35
Client Smp ID: LCS0604
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	474930	0.87
35 1,4-Difluorobenze	1445861	722930	2891722	1610669	11.40
52 d5-Chlorobenzene	1620542	810271	3241084	1862966	14.96
76 d4-1,4-Dichlorobe	872028	436014	1744056	1019587	16.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 04JUN13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: LCS0604 Client Smp ID: LCS0604
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCSD
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	51.795	103.59	53-148
2 Chloromethane	50.000	44.222	88.44	64-125
3 Vinyl Chloride	50.000	52.799	105.60	63-137
4 Bromomethane	50.000	51.064	102.13	57-136
5 Chloroethane	50.000	60.303	120.61	64-131
6 Trichlorofluoromet	50.000	53.144	106.29	69-132
12 Acrolein	250.00	477.49	191.00*	54-137
9 112Trichloro122Tri	50.000	45.341	90.68	74-130
14 Acetone	250.00	252.82	101.13	60-131
7 1,1-Dichloroethene	50.000	45.357	90.71	75-126
11 Bromoethane	50.000	59.087	118.17	76-126
10 Iodomethane	50.000	61.250	122.50	65-139
13 Methylene Chloride	50.000	79.326	158.65*	70-123
8 Carbon Disulfide	50.000	45.071	90.14	71-129
18 Acrylonitrile	50.000	50.968	101.94	67-125
15 Trans-1,2-Dichloro	50.000	61.749	123.50*	80-120
19 Vinyl Acetate	50.000	53.402	106.80	60-136
17 1,1-Dichloroethane	50.000	53.554	107.11	80-120
29 2-Butanone	250.00	265.81	106.32	70-120
22 2,2-Dichloropropan	50.000	53.157	106.31	74-123
20 Cis-1,2-Dichloroet	50.000	52.435	104.87	80-120
24 Chloroform	50.000	49.661	99.32	80-120
23 Bromochloromethane	50.000	52.915	105.83	80-120
26 1,1,1-Trichloroeth	50.000	53.675	107.35	77-121
28 1,1-Dichloropropen	50.000	48.161	96.32	80-120
25 Carbon Tetrachlori	50.000	48.765	97.53	77-122
33 1,2-Dichloroethane	50.000	46.539	93.08	76-120
30 Benzene	50.000	48.606	97.21	80-120
34 Trichloroethene	50.000	47.736	95.47	80-120
38 1,2-Dichloropropan	50.000	47.776	95.55	80-120
39 Bromodichlorometha	50.000	47.274	94.55	77-121
37 Dibromomethane	50.000	45.780	91.56	80-120
40 2-Chloroethyl Viny	50.000	50.210	100.42	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	250.40	100.16	67-120
41 Cis 1,3-dichloropr	50.000	48.804	97.61	74-120
43 Toluene	50.000	47.759	95.52	80-120
46 Trans 1,3-Dichloro	50.000	48.577	97.15	65-120
51 2-Hexanone	250.00	239.65	95.86	65-130
47 1,1,2-Trichloroeth	50.000	47.278	94.56	80-120
49 1,3-Dichloropropan	50.000	46.027	92.05	80-120
44 Tetrachloroethene	50.000	46.558	93.12	80-121
48 Chlorodibromometha	50.000	46.077	92.15	64-120
50 1,2-Dibromoethane	50.000	48.089	96.18	75-120
53 Chlorobenzene	50.000	45.876	91.75	80-120
55 1,1,1,2-Tetrachlor	50.000	46.138	92.28	69-121
54 Ethyl Benzene	50.000	48.713	97.43	80-127
56 m,p-xylene	100.00	98.139	98.14	80-125
57 o-Xylene	50.000	49.051	98.10	78-120
58 Styrene	50.000	49.052	98.10	80-123
60 Isopropyl Benzene	50.000	48.728	97.46	80-127
59 Bromoform	50.000	45.569	91.14	60-120
65 1,1,2,2-Tetrachlor	50.000	44.155	88.31	74-120
68 1,2,3-Trichloropro	50.000	43.880	87.76	72-121
69 Trans-1,4-Dichloro	50.000	43.960	87.92	65-126
64 N-Propyl Benzene	50.000	47.652	95.30	80-132
63 Bromobenzene	50.000	44.346	88.69	80-120
67 1,3,5-Trimethyl Be	50.000	47.822	95.64	80-125
66 2-Chloro Toluene	50.000	46.167	92.33	80-125
70 4-Chloro Toluene	50.000	45.720	91.44	80-127
71 T-Butyl Benzene	50.000	47.697	95.39	87-122
72 1,2,4-Trimethylben	50.000	47.983	95.97	80-126
73 S-Butyl Benzene	50.000	48.239	96.48	80-134
74 4-Isopropyl Toluen	50.000	49.220	98.44	80-131
75 1,3-Dichlorobenzen	50.000	45.193	90.39	80-120
77 1,4-Dichlorobenzen	50.000	43.982	87.96	80-120
78 N-Butyl Benzene	50.000	49.488	98.98	80-138
80 1,2-Dichlorobenzen	50.000	43.992	87.98	80-120
81 1,2-Dibromo 3-Chlo	50.000	44.229	88.46	59-120
83 1,2,4-Trichloroben	50.000	46.086	92.17	78-130
82 Hexachloro 1,3-But	50.000	45.845	91.69	76-129
84 Naphthalene	50.000	45.749	91.50	66-120
85 1,2,3-Trichloroben	50.000	45.109	90.22	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.087	114.17	70-130

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	54.931	109.86	80-149
$ 42 d8-Toluene	50.000	50.694	101.39	77-120
$ 62 4-Bromofluorobenze	50.000	50.719	101.44	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.768	101.54	80-120

Data File: /chem1/nt5.i/04JUN13.b/lcs0604a.d

Date : 04-JUN-2013 13:35

Client ID: LCS0604

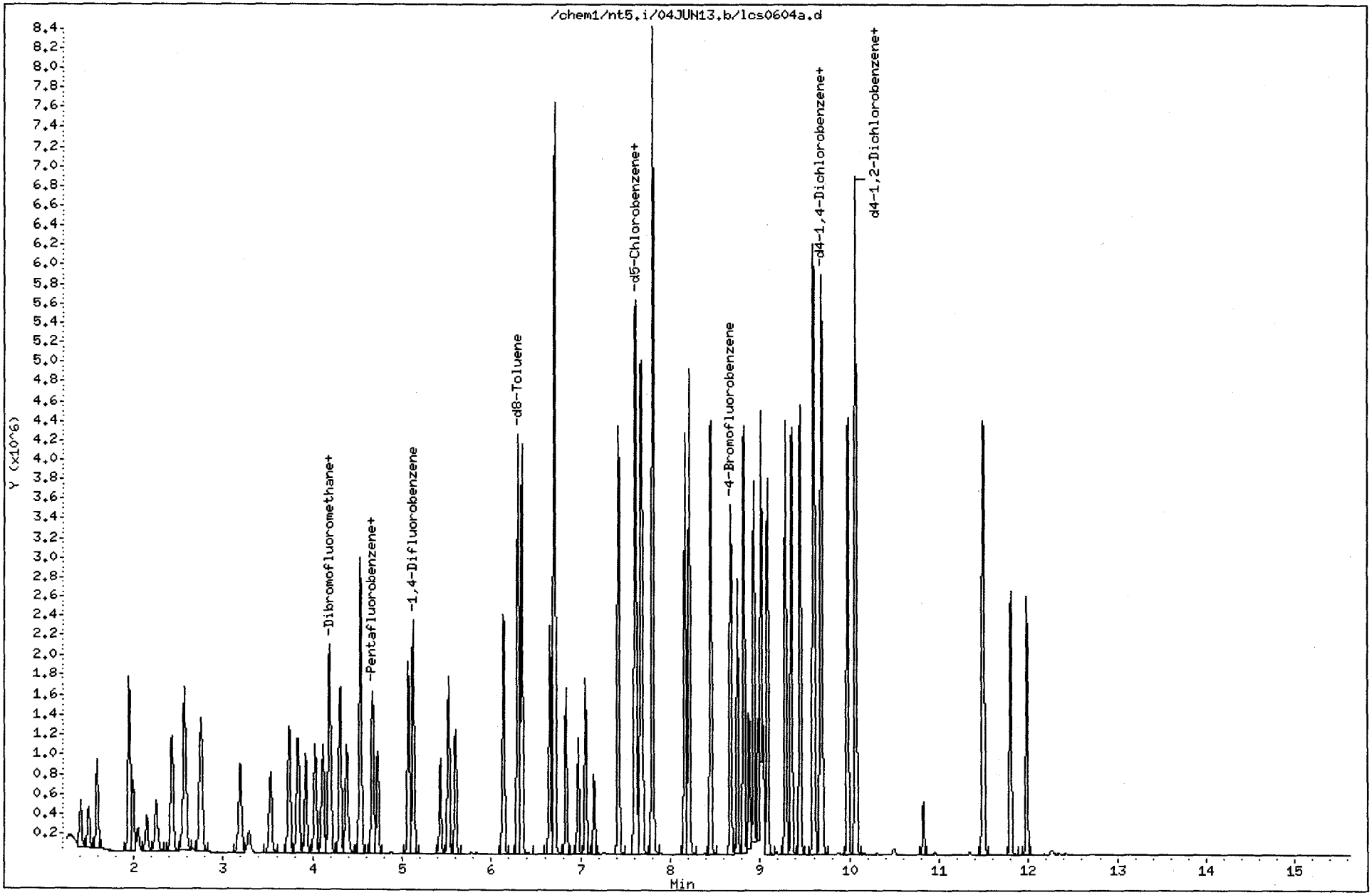
Sample Info: LCS0604,5,5,0

Instrument: nt5.i

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - lcs0604a.d

Lab ID: LCS0604, Method: VO121012S.m, Instrument: nt5.i, Date: 04-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/mb0604.d
Lab Smp Id: MB0604 Client Smp ID: MB0604
Inj Date : 04-JUN-2013 13:59
Operator : PB Inst ID: nt5.i
Smp Info : MB0604,5,5,0
Misc Info : 13-11820
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 05-Jun-2013 07:53 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

6/5/13

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.437	2.409	(0.522)	34368	5.39381	5.394
14 Acetone	43	2.539	2.550	(0.543)	8234	2.50488	2.505
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.191	4.179	(0.897)	590735	57.6241	57.624
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.672	4.660	(1.000)	455081	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.655	(0.999)	578207	56.5004	56.500
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.113	(1.000)	1552765	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.301	6.295	(1.230)	2228406	50.7469	50.747
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.608	7.608	(1.000)	1796929	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	Compound Not Detected.					
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.677	8.677	(1.141)	961347	50.4054	50.405
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.684	(1.000)	963412	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.063	10.068	(1.040)	981244	51.6170	51.617
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.805	11.811	(1.220)	30385	0.83413	0.8341
85	1,2,3-Trichlorobenzene	180	11.980	11.992	(1.238)	8367	0.53577	0.5358

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: mb0604.d
Lab Smp Id: MB0604
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

Calibration Date: 04-JUN-2013
Calibration Time: 12:35
Client Smp ID: MB0604
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	455081	-3.34
35 1,4-Difluorobenze	1445861	722930	2891722	1552765	7.39
52 d5-Chlorobenzene	1620542	810271	3241084	1796929	10.88
76 d4-1,4-Dichlorobe	872028	436014	1744056	963412	10.48

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	-0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 04JUN13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: MB0604 Client Smp ID: MB0604
Level: LOW Operator: PB
Data Type: MS DATA SampleType: BLANK
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11820

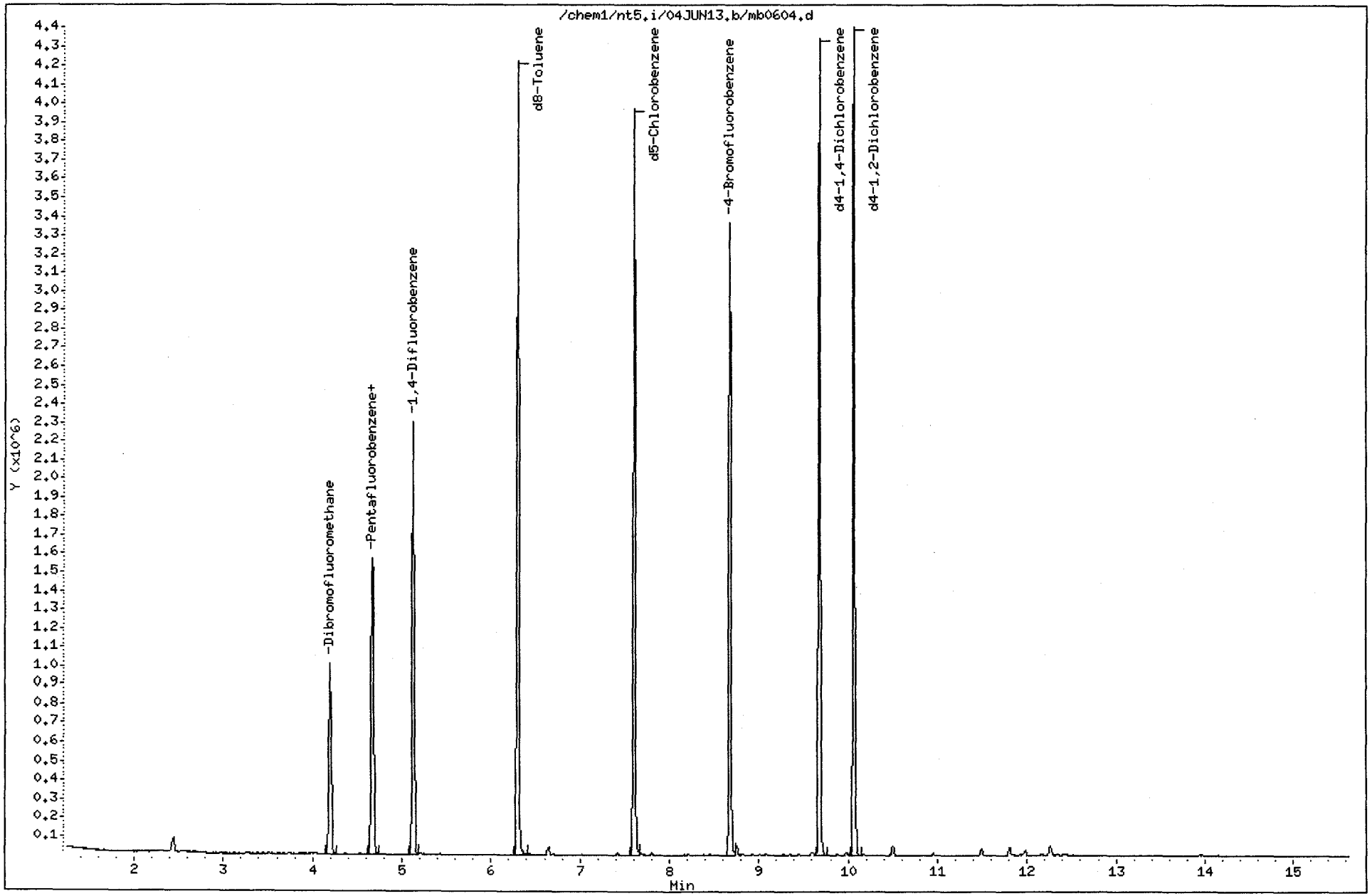
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.624	115.25	70-130
$ 32 d4-1,2-Dichloroeth	50.000	56.500	113.00	80-149
$ 42 d8-Toluene	50.000	50.747	101.49	77-120
$ 62 4-Bromofluorobenze	50.000	50.405	100.81	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.617	103.23	80-120

Data File: /chem1/nt5.i/04JUN13.b/mb0604.d
Date : 04-JUN-2013 13:59
Client ID: MB0604
Sample Info: MB0604,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - mb0604.d

Lab ID: MB0604, Method: VO121012S.m, Instrument: nt5.i, Date: 04-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.i/04JUN13.b/mb0604.d

Date : 04-JUN-2013 13:59

Client ID: MB0604

Instrument: nt5.i

Sample Info: MB0604,5,5,0

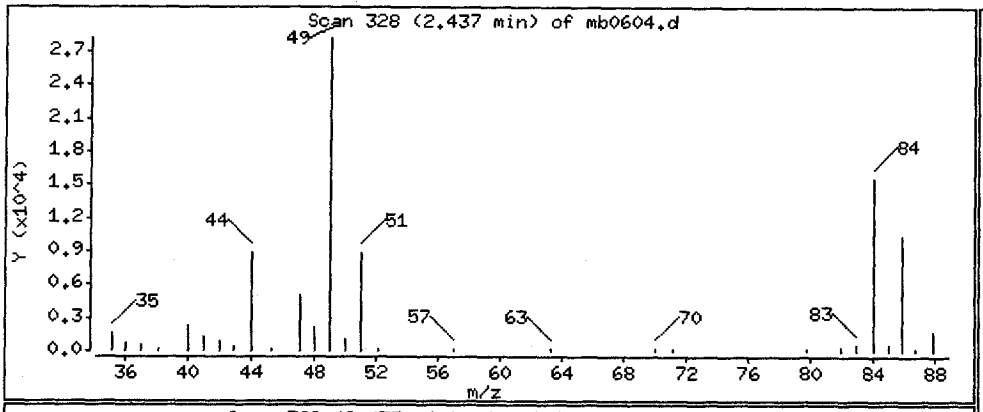
Operator: PB

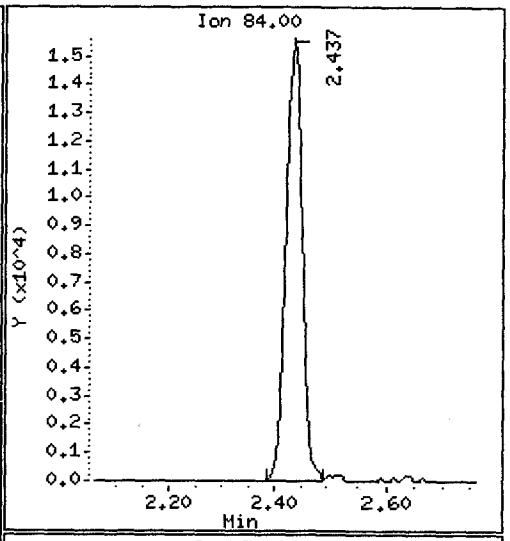
Column phase: RTXVMS

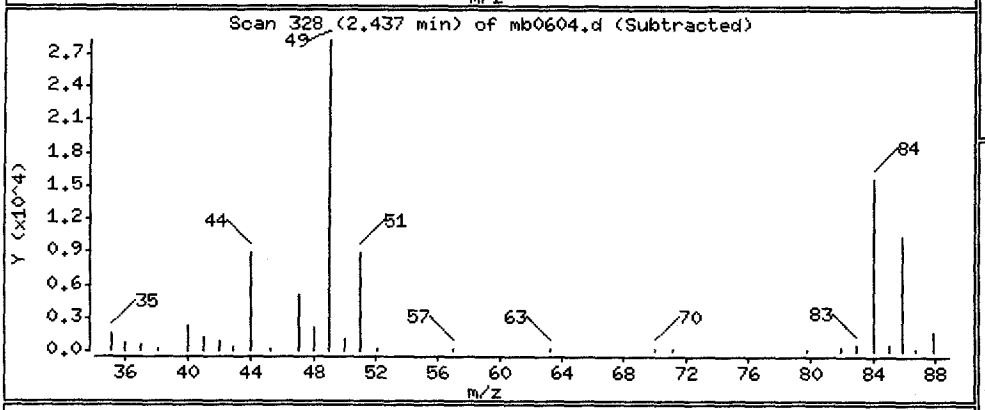
Column diameter: 0.18

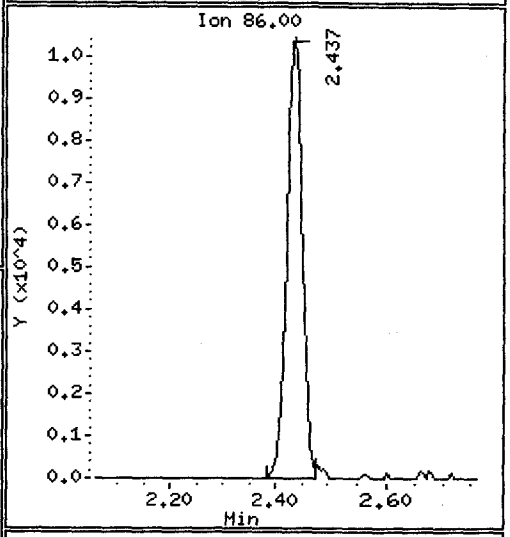
13 Methylene Chloride

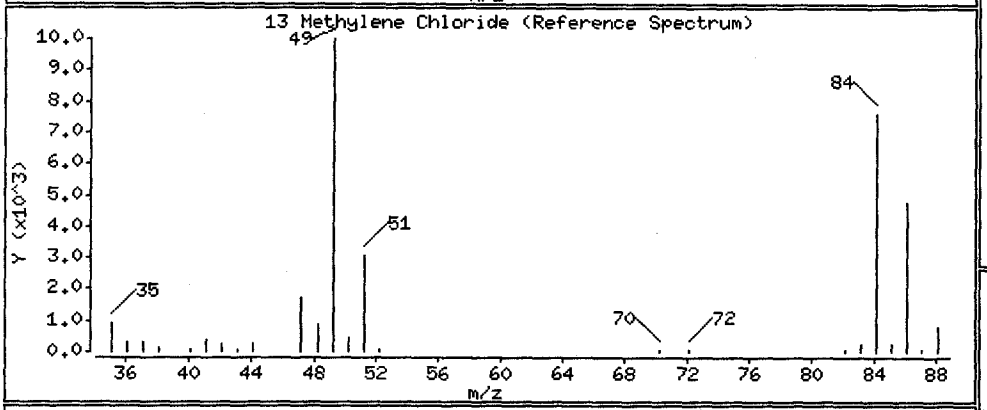
Concentration: 5.394 ug/Kg

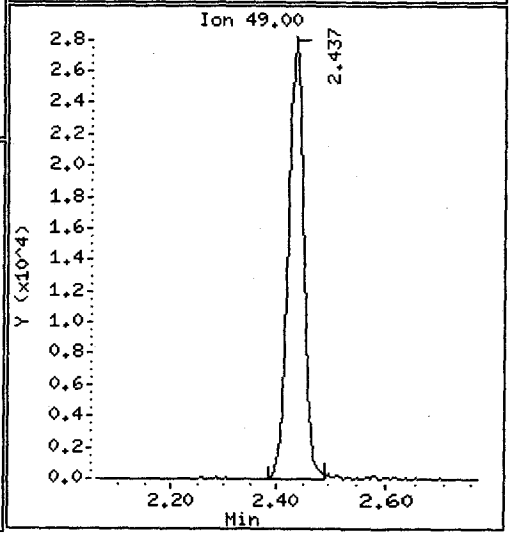


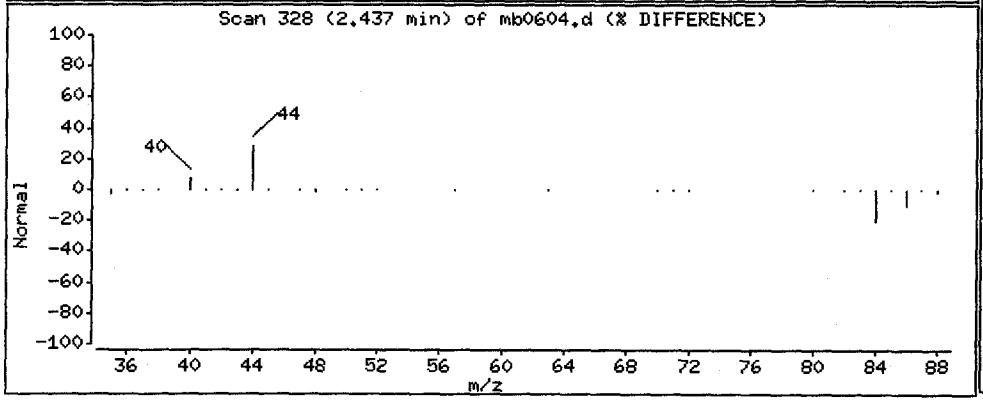












Data File: /chem1/nt5.i/04JUN13.b/mb0604.d

Date : 04-JUN-2013 13:59

Client ID: MB0604

Instrument: nt5.i

Sample Info: MB0604,5,5,0

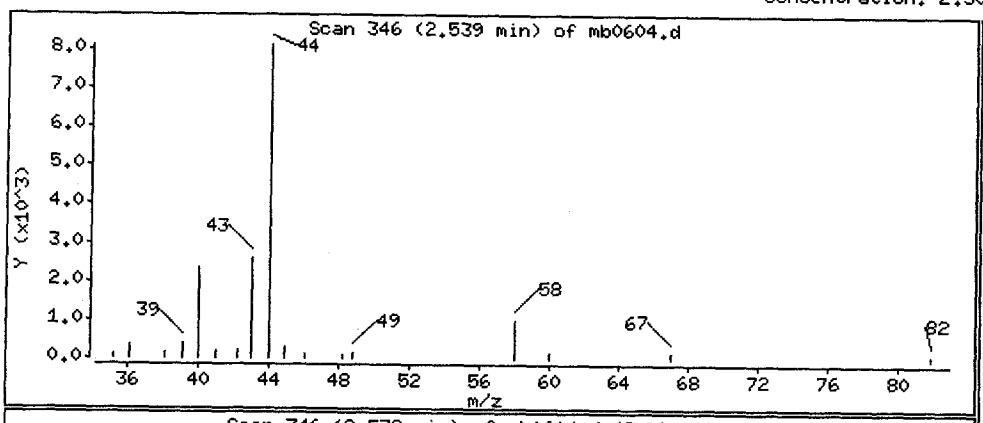
Operator: PB

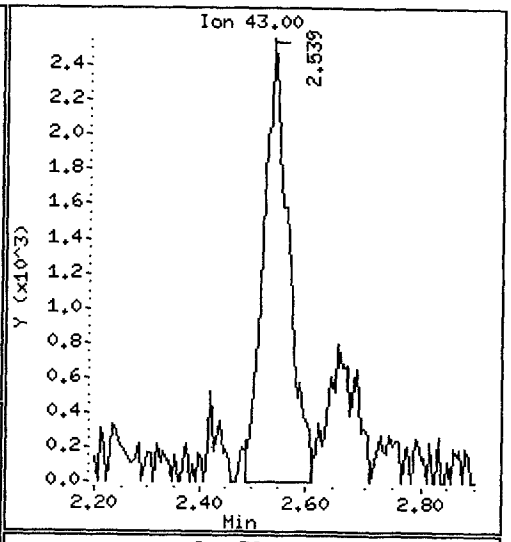
Column phase: RTXVMS

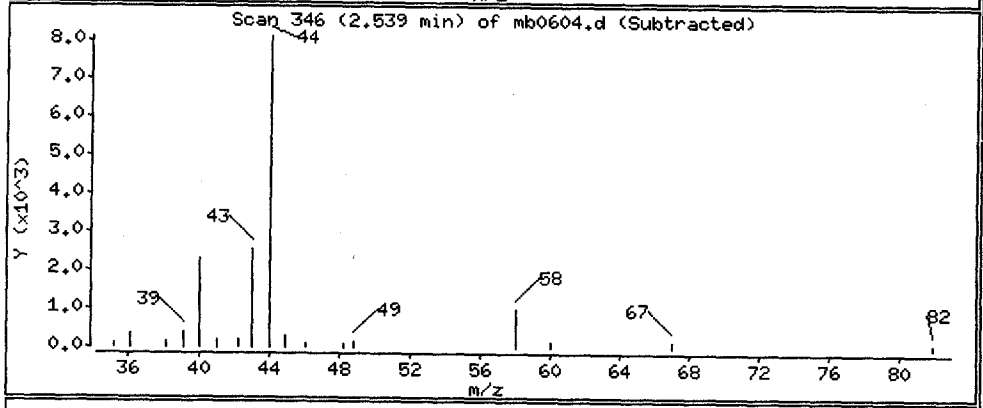
Column diameter: 0.18

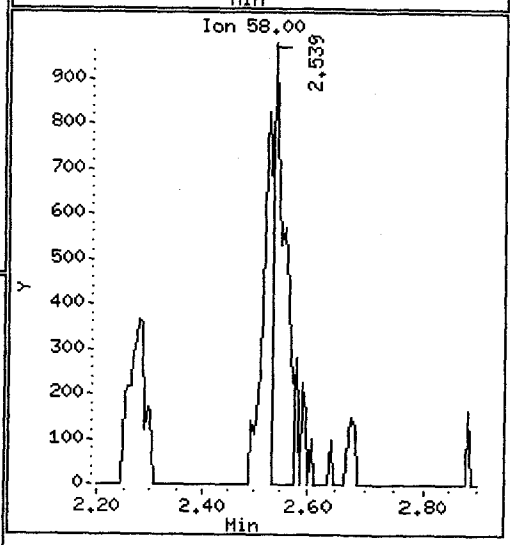
14 Acetone

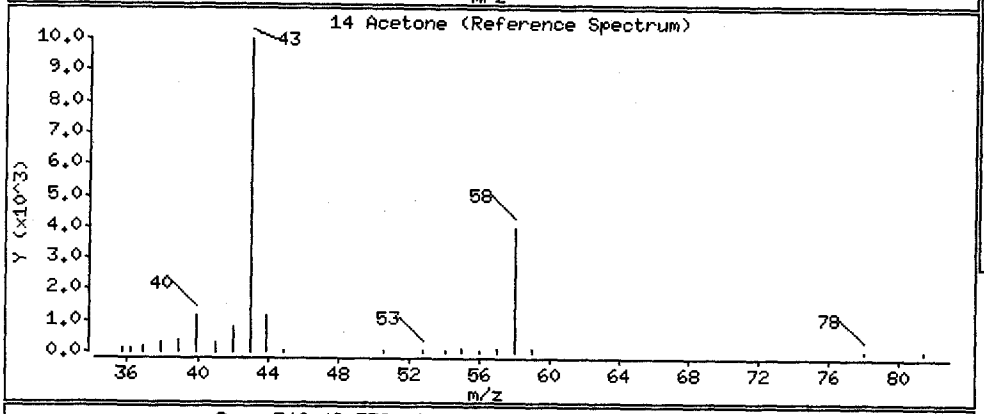
Concentration: 2.505 ug/Kg

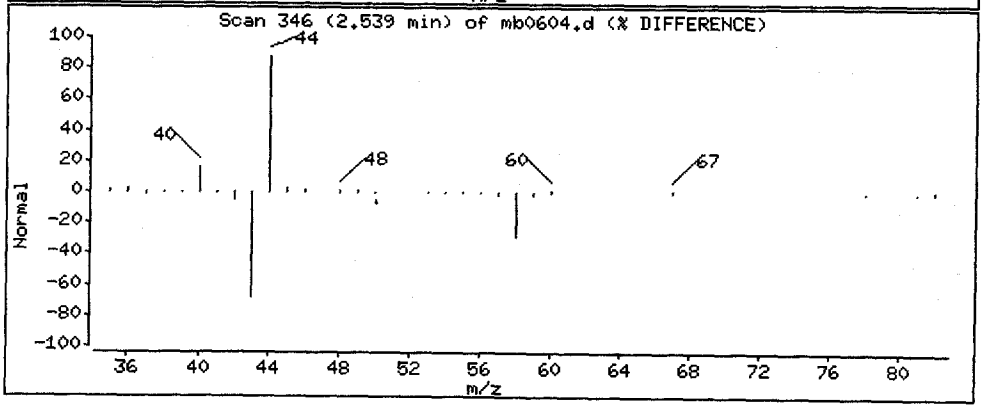












Data File: /chem1/nt5.i/04JUN13.b/mb0604.d

Date : 04-JUN-2013 13:59

Client ID: MB0604

Instrument: nt5.i

Sample Info: MB0604,5,5,0

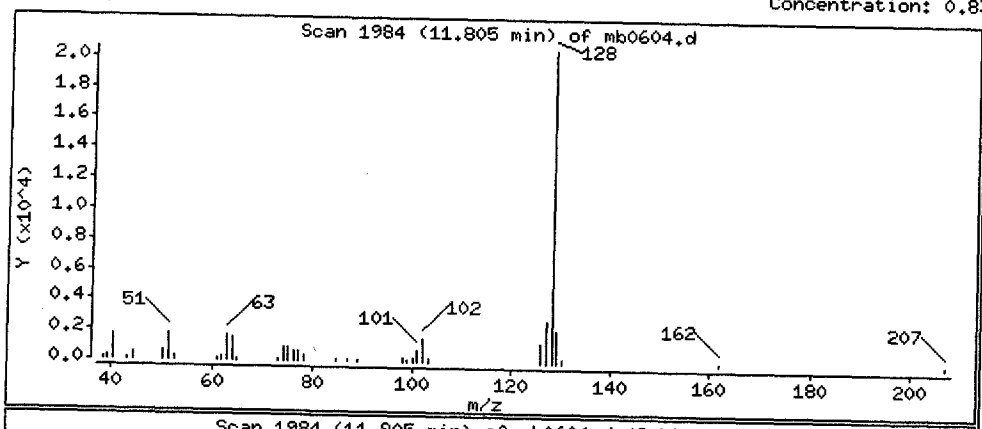
Operator: PB

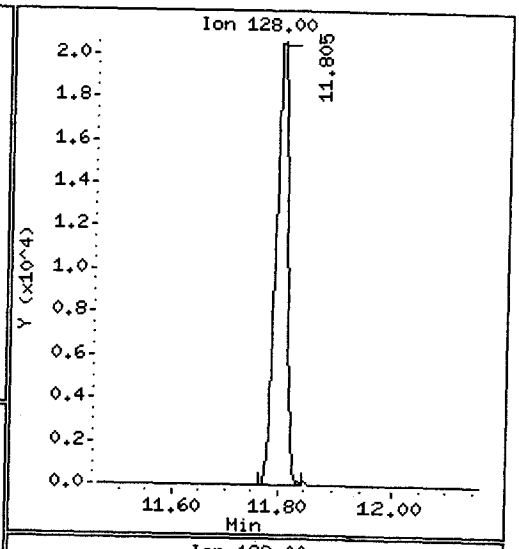
Column phase: RTXVMS

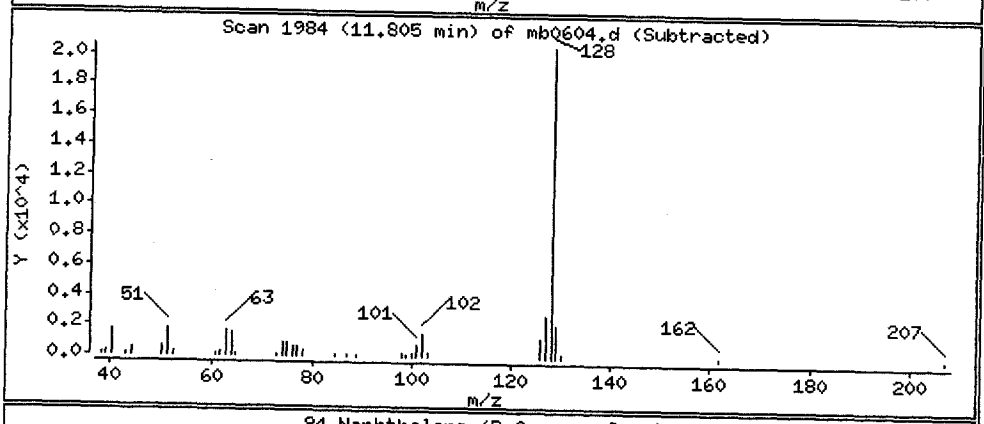
Column diameter: 0.18

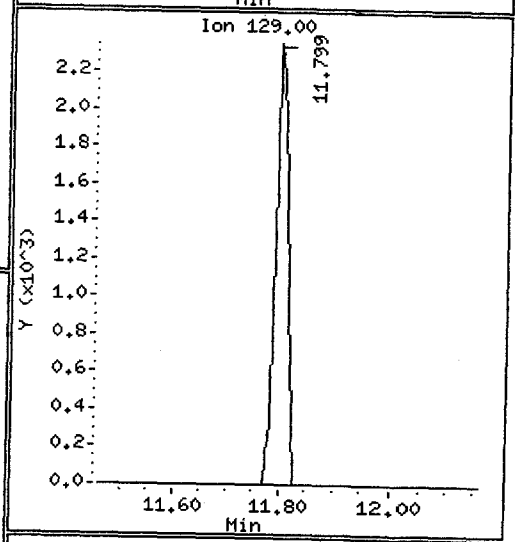
84 Naphthalene

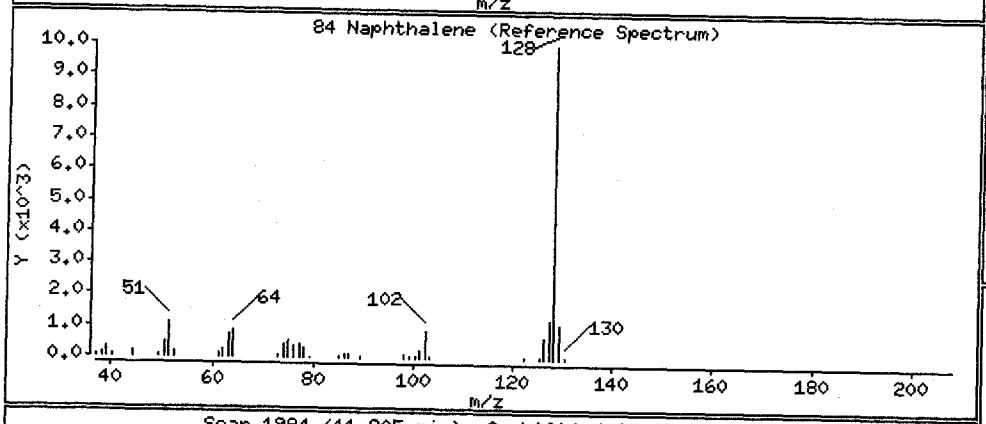
Concentration: 0.8341 ug/Kg

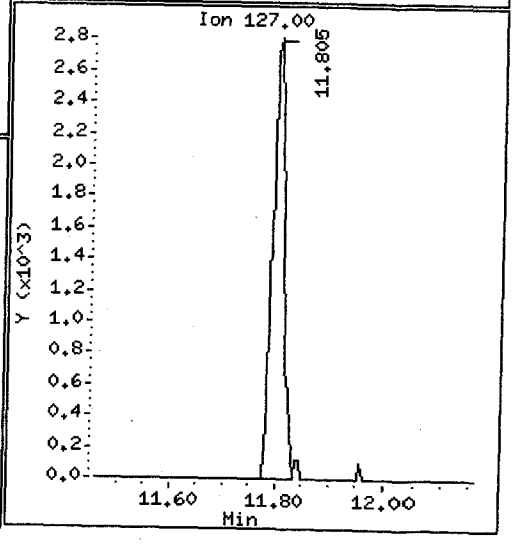


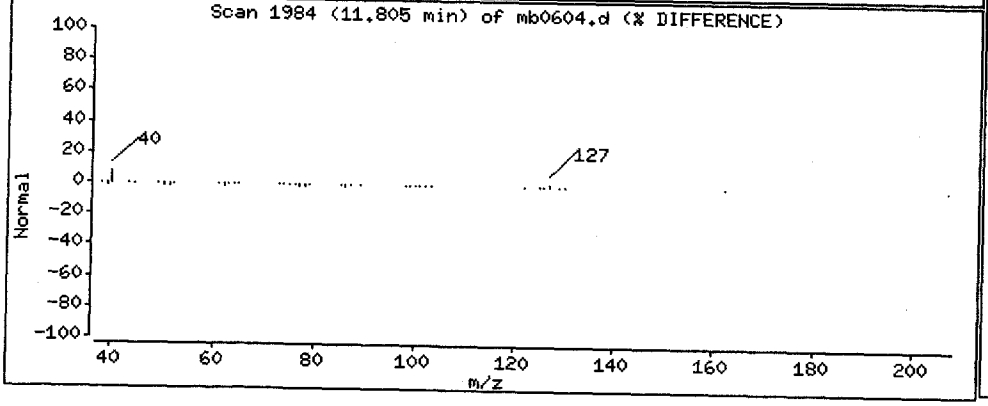












Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/04JUN13.b/ws21b.d
Lab Smp Id: WS21B Client Smp ID: KC-TB-02
Inj Date : 04-JUN-2013 18:47
Operator : PB Inst ID: nt5.i
Smp Info : WS21B,5,5,0
Misc Info : 13-11679
Comment :
Method : /chem1/nt5.i/04JUN13.b/VO121012S.m
Meth Date : 13-Jun-2013 07:32 patrickb Quant Type: ISTD
Cal Date : 24-MAY-2013 08:18 Cal File: 2000524.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	0.00000	Purge Volume (mL)
Sa	0.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.432	2.409	(0.520)	12062	1.74897	1.749
14 Acetone	43	2.539	2.550	(0.543)	12102	3.40138	3.401
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/L)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.191	4.179	(0.897)	641106	57.7782	57.778
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.672	4.660	(1.000)	492568	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.655	(0.998)	621519	56.1107	56.111
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.113	(1.000)	1683921	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.301	6.295	(1.230)	2438826	51.2129	51.213
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.602	7.608	(1.000)	1998320	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	Compound Not Detected.					
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.671	8.677	(1.141)	1092138	51.4921	51.492
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/L)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.684	(1.000)	1110285	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.063	10.068	(1.040)	1128874	51.5274	51.527
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	Compound Not Detected.					
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: ws21b.d
Lab Smp Id: WS21B
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11679

Calibration Date: 04-JUN-2013
Calibration Time: 12:35
Client Smp ID: KC-TB-02
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	470814	235407	941628	492568	4.62
35 1,4-Difluorobenze	1445861	722930	2891722	1683921	16.46
52 d5-Chlorobenzene	1620542	810271	3241084	1998320	23.31
76 d4-1,4-Dichlorobe	872028	436014	1744056	1110285	27.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.61	7.11	8.11	7.60	-0.07
76 d4-1,4-Dichlorobe	9.68	9.18	10.18	9.68	-0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WS21B
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/04JUN13.b/VO121012S.m
Misc Info: 13-11679

Client SDG: WS21
Fraction: VOA
Client Smp ID: KC-TB-02
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

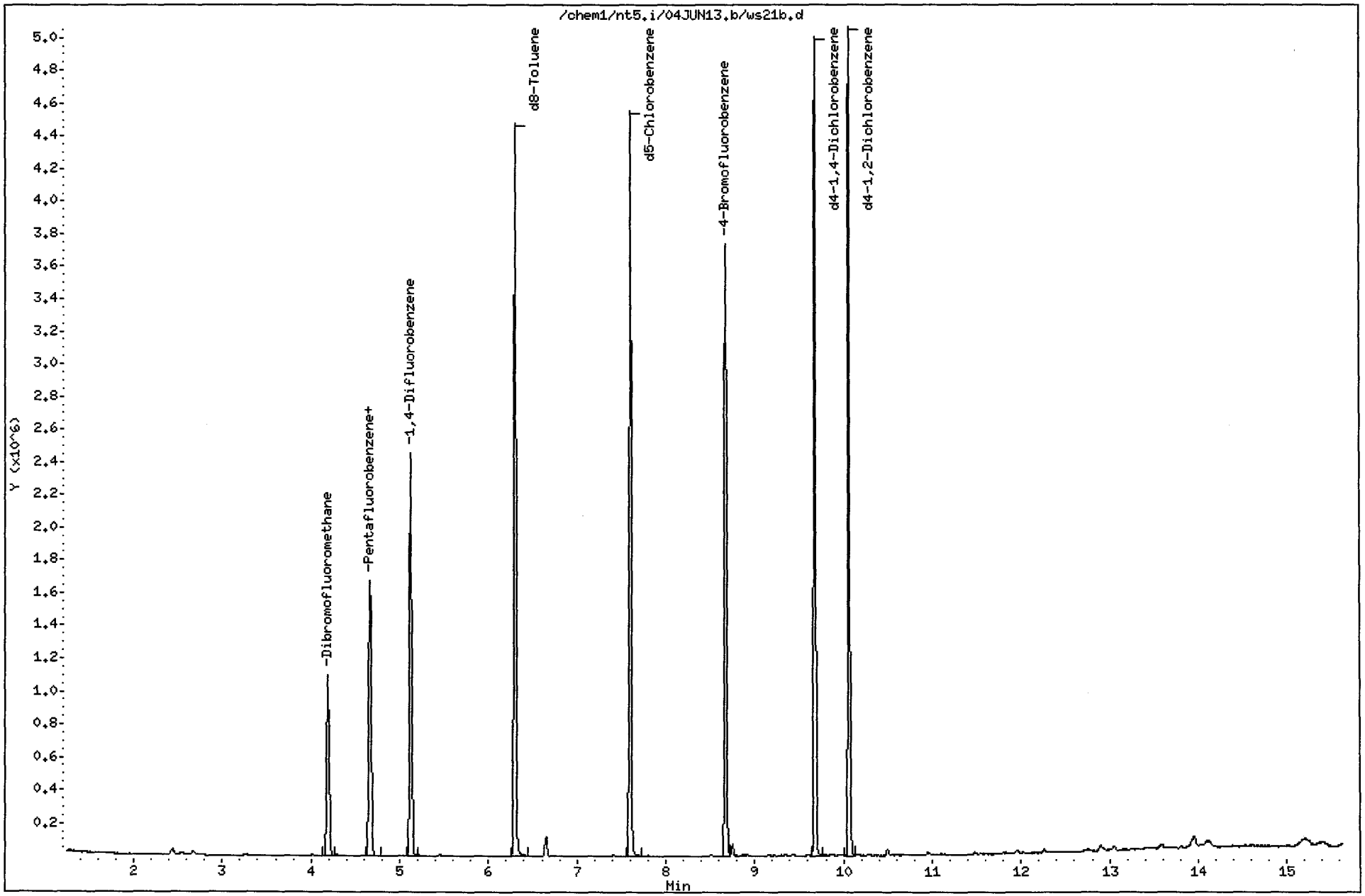
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.778	115.56	30-160
$ 32 d4-1,2-Dichloroeth	50.000	56.111	112.22	75-152
$ 42 d8-Toluene	50.000	51.213	102.43	82-115
$ 62 4-Bromofluorobenze	50.000	51.492	102.98	71-120
$ 79 d4-1,2-Dichloroben	50.000	51.527	103.05	80-121

Data File: /chem1/nt5.i/04JUN13.b/ws21b.d
Date : 04-JUN-2013 18:47
Client ID: KC-TB-02
Sample Info: WS21B,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/04JUN13.b/ws21b.d

Date : 04-JUN-2013 18:47

Client ID: KC-TB-02

Instrument: nt5.i

Sample Info: WS21B,5,5,0

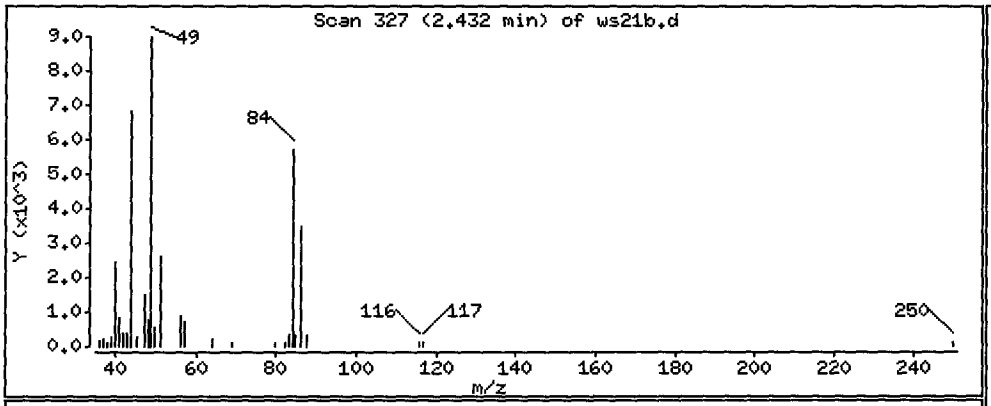
Operator: PB

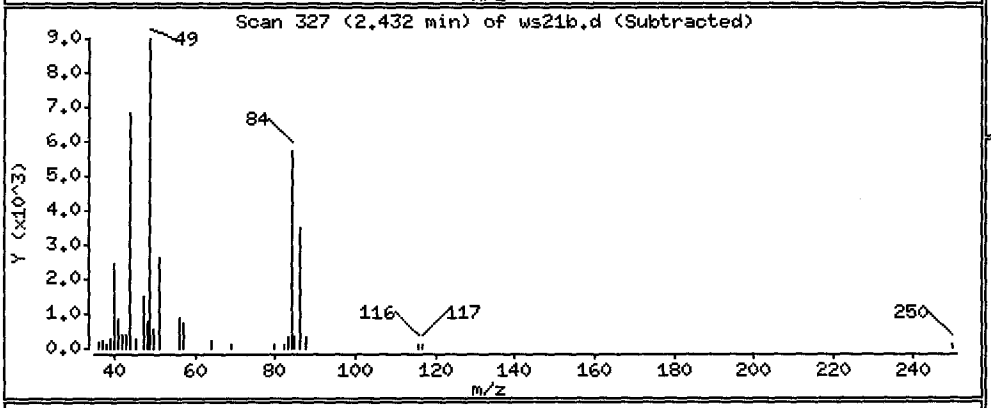
Column phase: RTXVMS

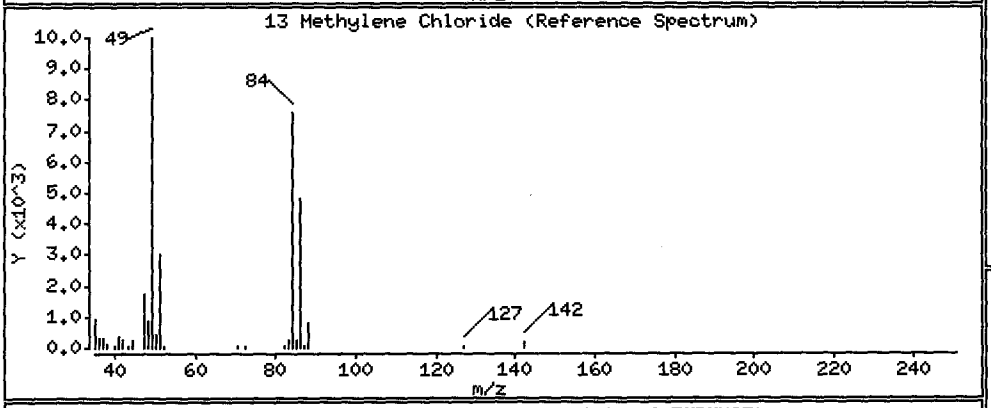
Column diameter: 0.18

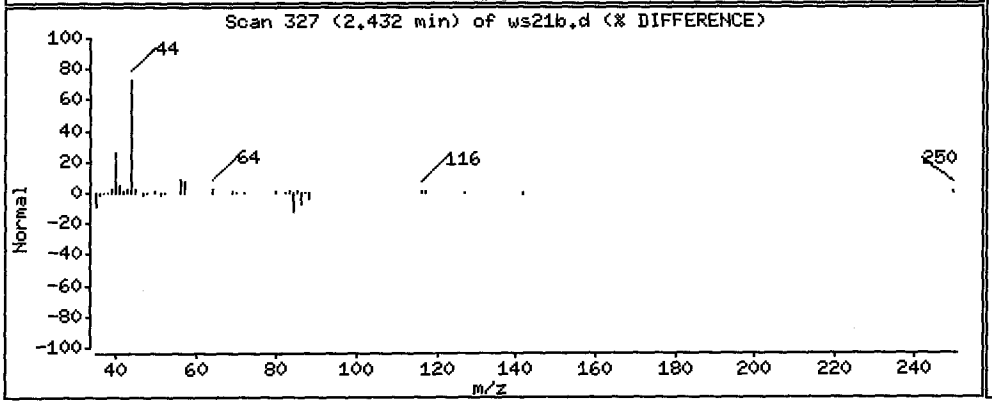
13 Methylene Chloride

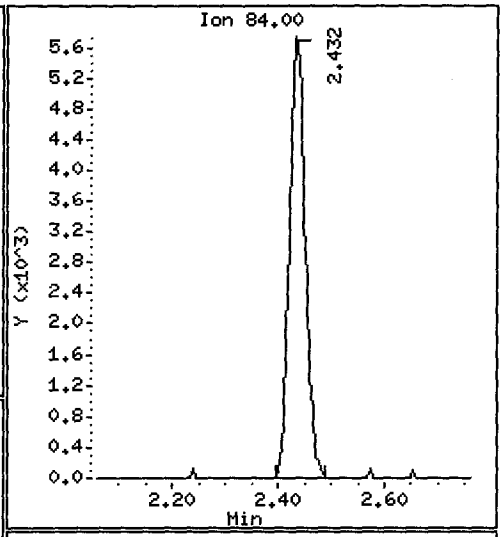
Concentration: 1.749 ug/L

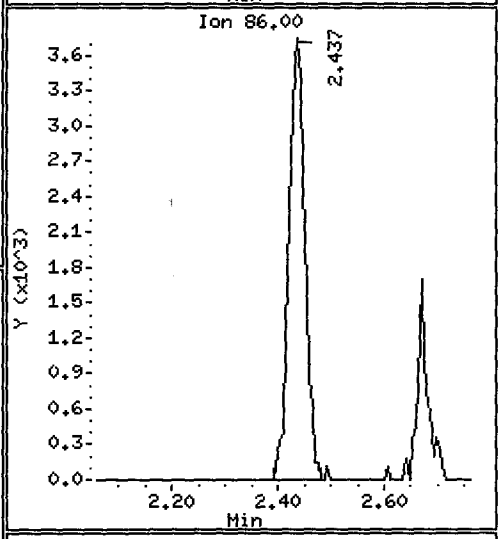


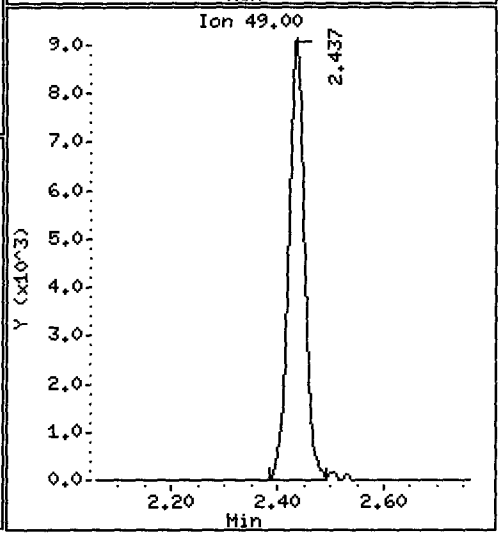












Data File: /chem1/nt5.i/04JUN13.b/ws21b.d

Date : 04-JUN-2013 18:47

Client ID: KC-TB-02

Instrument: nt5.i

Sample Info: WS21B,5,5,0

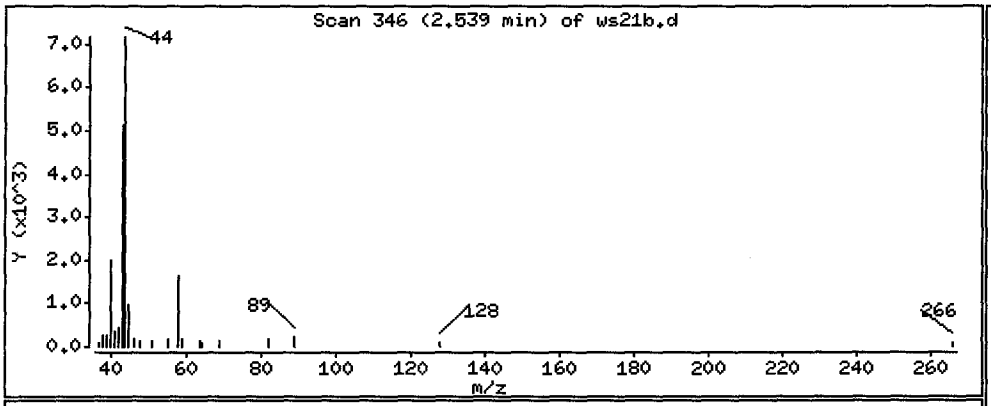
Operator: PB

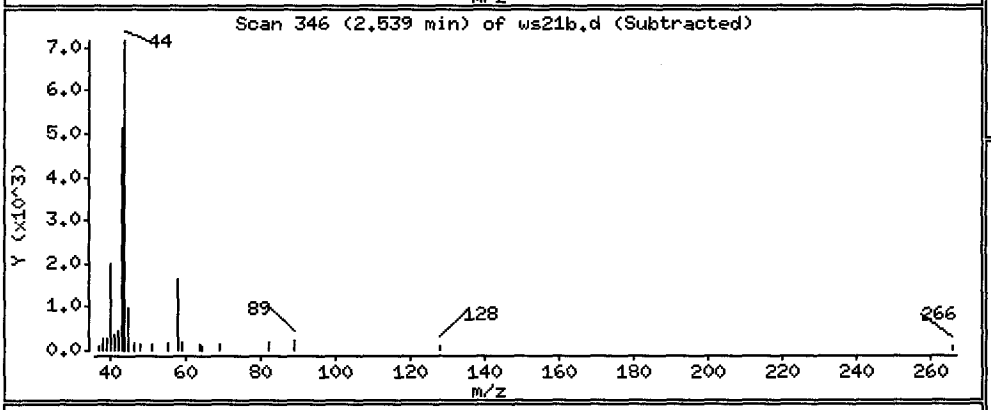
Column phase: RTXVMS

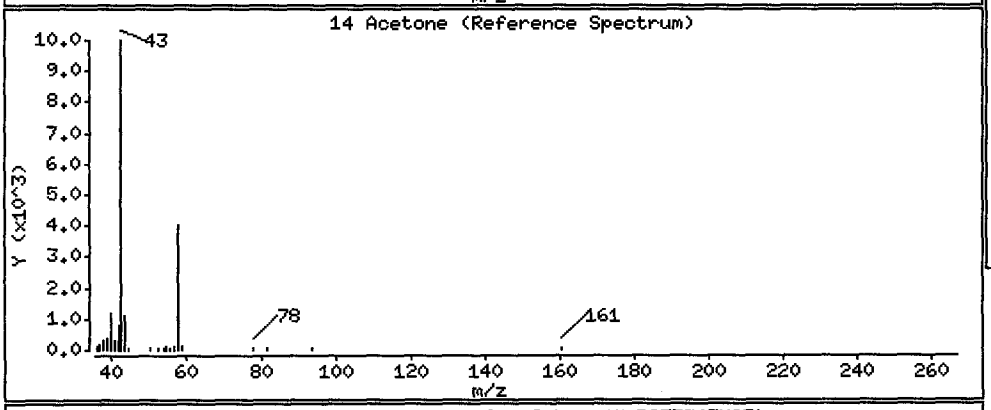
Column diameter: 0.18

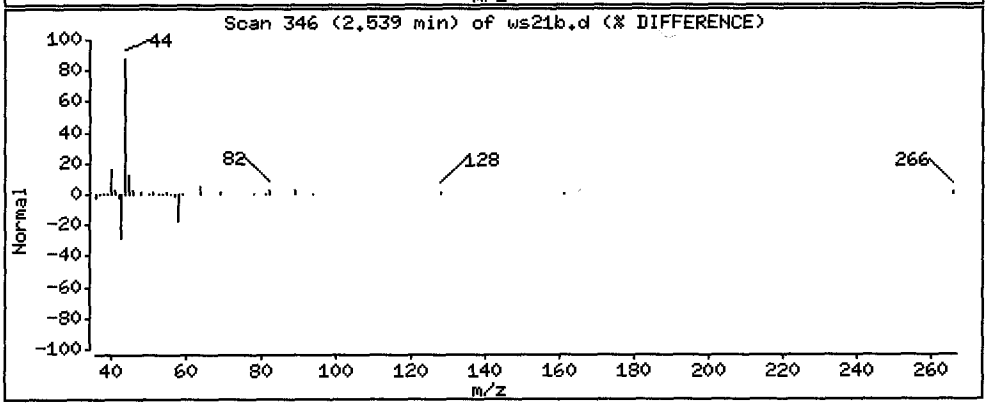
14 Acetone

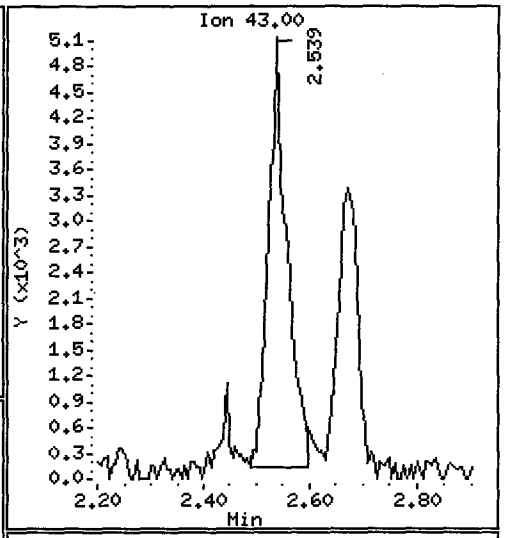
Concentration: 3.401 ug/L

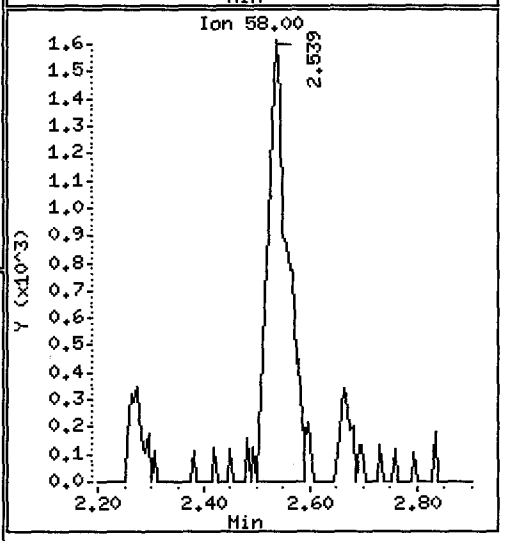












CO-ELUTION SUMMARY FOR FILE - ws21b.d

Lab ID: WS21B, Method: VO121012S.m, Instrument: nt5.i, Date: 04-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 6/11/13A Analysis: 8260C Analyst: JP

GC Program: VOA01 Column No: 927152 Column Type: MXY05

Instrument Tune (.U or .CT.): PFT(100) EM Voltage: 1412

Inj. Vol: 5 Calibration File: bfb0611 Curve Date: 6/13/14

IS/SS	Ical/Ccal	LCS/ICV
B000643	B000648	W794-4
B000644		W797-1
		FB01

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/11JUN13A.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF							
1	0810	bfb0611a.d	BFB0611	BFB0611			1							
2	1009	0500611.d	IC0611	VSTD50			1	4.66	459631	5.11	1692431	7.59	1987215	9.67	1075398
3	1440	lcs0611.d	LCS0611	LCS0611			1	4.67	433934	5.12	1630086	7.60	1939078	9.67	1068382
4	1513	lcs0611a.d	LCS0611	LCS0611			1	4.65	429246	5.11	1612586	7.59	1907182	9.67	1017840
5	1537	mb0611.d	MB0611	MB0611			1	4.67	346875	5.12	1318767	7.59	1589823	9.67	856046
6	1601	ws21a.d	WS21A	KC-IV-SPS-20130531-			1	4.67	398372	5.12	1525075	7.60	1849586	9.67	1021987
7	1628	ws34a.d	WS34A	201305311030			1	4.66	391695	5.11	1507152	7.59	1776316	9.67	855565
8	1652	ws84a.d	WS84A	A2-W37-S-4			1	4.67	391304	5.11	1531038	7.59	1580423	9.67	424943
9	1716	ws84b.d	WS84B	A2-W38-S-4			1	4.66	385338	5.11	1481749	7.59	1609066	9.67	578500
10	1740	wt05a.d	WT05A	PF-PA-16-0613			1	4.67	388179	5.11	1501051	7.59	1856033	9.67	1029522
11	1804	ws81q.d	WS81Q	1A			1	4.67	369970	5.12	1414723	7.59	1682158	9.67	855034
12	1828	ws81r.d	WS81R	1B			1	4.66	382447	5.11	1465342	7.59	1752164	9.67	944226
13	1852	ws81s.d	WS81S	4A			1	4.66	360089	5.11	1405235	7.59	1613869	9.67	773331
14	1916	ws81t.d	WS81T	4B			1	4.67	378601	5.11	1492840	7.59	1844586	9.67	986150
15	1940	ws34ams.d	WS34AMS	201305311030 MS			1	4.67	389960	5.12	1540104	7.60	1824471	9.67	940338
16	2004	ws34amsd.d	WS34AMSD	201305311030 MSD			1	4.67	391206	5.12	1552852	7.60	1841123	9.67	926734

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/11JUN13A.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 11-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0810	bfb0611a.d	BFB0611	BFB0611	1	NO MANUAL INTEGRATION
1009	0500611.d	IC0611	VSTD50	1	Chloromethane, Acetone,
1440	lcs0611.d	LCS0611	LCS0611	1	Chloromethane,
1513	lcs0611a.d	LCS0611	LCS0611	1	Chloromethane,
1537	mb0611.d	MB0611	MB0611	1	NO MANUAL INTEGRATION
1601	ws21a.d	WS21A	KC-IV-SPS-	1	NO MANUAL INTEGRATION
1628	ws34a.d	WS34A	2013053110	1	NO MANUAL INTEGRATION
1652	ws84a.d	WS84A	A2-W37-S-4	1	NO MANUAL INTEGRATION
1716	ws84b.d	WS84B	A2-W38-S-4	1	NO MANUAL INTEGRATION
1740	wt05a.d	WT05A	PF-PA-16-0	1	NO MANUAL INTEGRATION
1804	ws81q.d	WS81Q	1A	1	NO MANUAL INTEGRATION
1828	ws81r.d	WS81R	1B	1	NO MANUAL INTEGRATION
1852	ws81s.d	WS81S	4A	1	NO MANUAL INTEGRATION
1916	ws81t.d	WS81T	4B	1	NO MANUAL INTEGRATION
1940	ws34ams.d	WS34AMS	2013053110	1	Chloromethane, Acetone,
2004	ws34amsd.d	WS34AMSD	2013053110	1	Chloromethane, Acetone,

ACCEPTED

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt5.i/11JUN13A.b

Instrument: nt5.i Date: 11-JUN-2013 Method: VO121012S.m

INITIAL CAL: 11-JUN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 11-JUN-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem1/nt5.i/11JUN13A.b/bfb0611a.d

Date : 11-JUN-2013 08:10

Client ID: BFB0611

Instrument: nt5.i

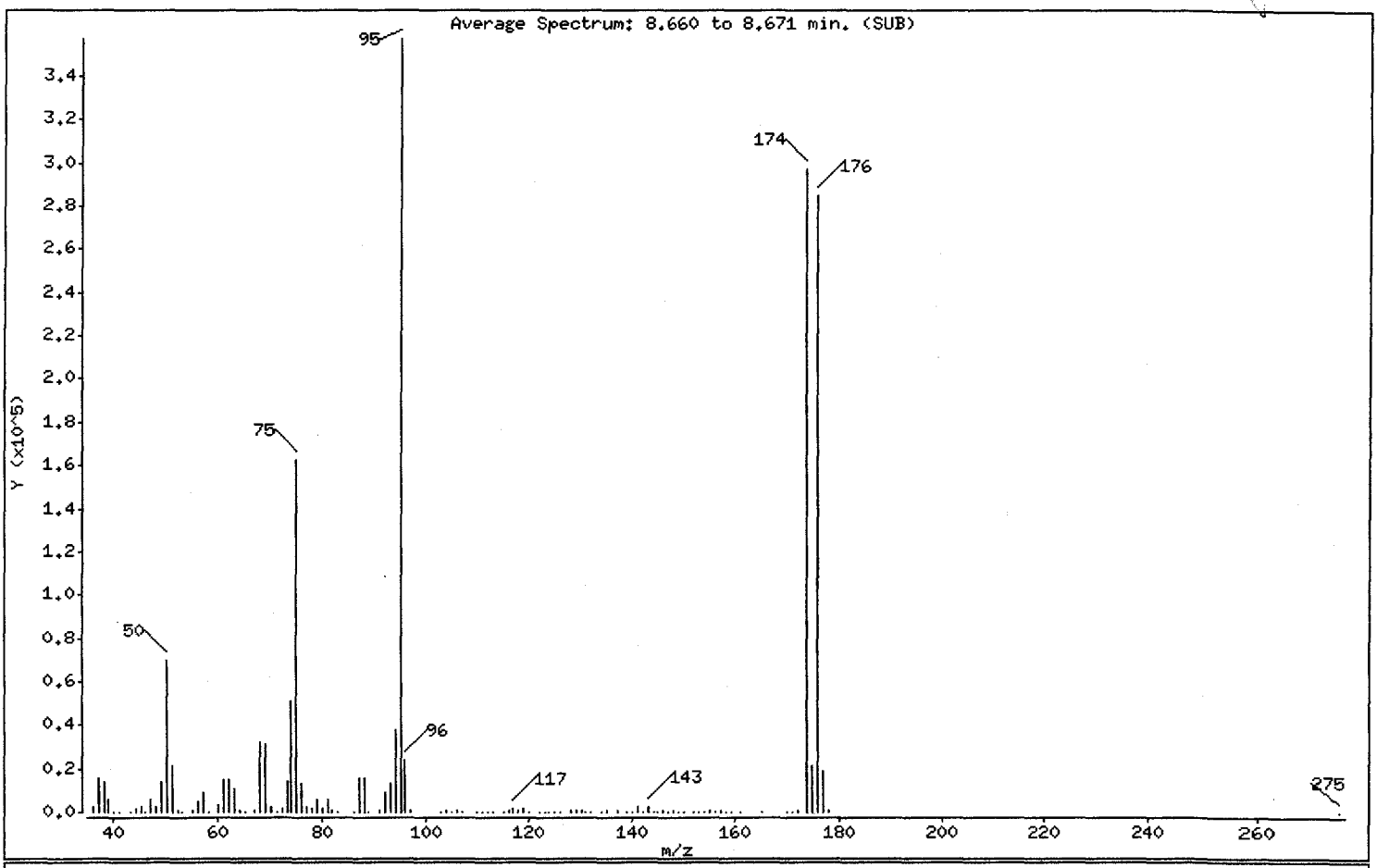
Sample Info: BFB0611,BFB0611,,1,11JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	19.44
75	30.00 - 66.00% of mass 95	45.50
96	5.00 - 9.00% of mass 95	6.62
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	83.24
175	4.00 - 9.00% of mass 174	5.93 (7.13)
176	95.00 - 101.00% of mass 174	79.81 (95.87)
177	5.00 - 9.00% of mass 176	5.28 (6.62)

Data File: /chem1/nt5.i/11JUN13A.b/bfb0611a.d

Date : 11-JUN-2013 08:10

Client ID: BFB0611 Instrument: nt5.i

Sample Info: BFB0611,BFB0611,,1,11JUN13,,

Operator: PB

Column phase: RTXVMS Column diameter: 0.18

Data File: bfb0611a.d

Spectrum: Average Spectrum: 8.660 to 8.671 min. (SUB)

Location of Maximum: 95.00

Number of points: 114

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2585	69.00	31560	106.00	1039	143.00	2774
37.00	15758	70.00	2162	107.00	406	144.00	87
38.00	14282	71.00	152	110.00	127	145.00	279
39.00	5446	72.00	1664	111.00	233	146.00	442
40.00	199	73.00	13686	112.00	52	147.00	204
41.00	33	74.00	50952	113.00	147	148.00	835
43.00	68	75.00	162496	115.00	313	149.00	204
44.00	1313	76.00	13541	116.00	963	150.00	290
45.00	2849	77.00	2132	117.00	1613	152.00	191
46.00	224	78.00	1365	118.00	982	153.00	257
47.00	5973	79.00	5772	119.00	1358	154.00	151
48.00	2167	80.00	1621	120.00	33	155.00	696
49.00	13976	81.00	5425	122.00	33	156.00	35
50.00	69456	82.00	1135	123.00	34	157.00	555
51.00	21576	83.00	160	124.00	137	158.00	35
52.00	926	86.00	393	125.00	37	159.00	370
53.00	46	87.00	15463	126.00	146	161.00	308
55.00	773	88.00	15414	128.00	958	165.00	42
56.00	4753	89.00	39	129.00	526	170.00	38
57.00	8891	91.00	1008	130.00	975	171.00	121
58.00	400	92.00	8689	131.00	312	172.00	690
60.00	3017	93.00	13378	132.00	33	174.00	297408
61.00	14478	94.00	37584	134.00	78	175.00	21192
62.00	14832	95.00	357248	135.00	442	176.00	285120
63.00	11037	96.00	23664	137.00	439	177.00	18864
64.00	1085	97.00	720	139.00	129	178.00	544
65.00	410	103.00	98	140.00	309	275.00	36
67.00	916	104.00	1121	141.00	2541		
68.00	31776	105.00	409	142.00	336		

Data File: /chem1/nt5.i/11JUN13A.b/bfb0611a.d

Date : 11-JUN-2013 08:10

Client ID: BFB0611

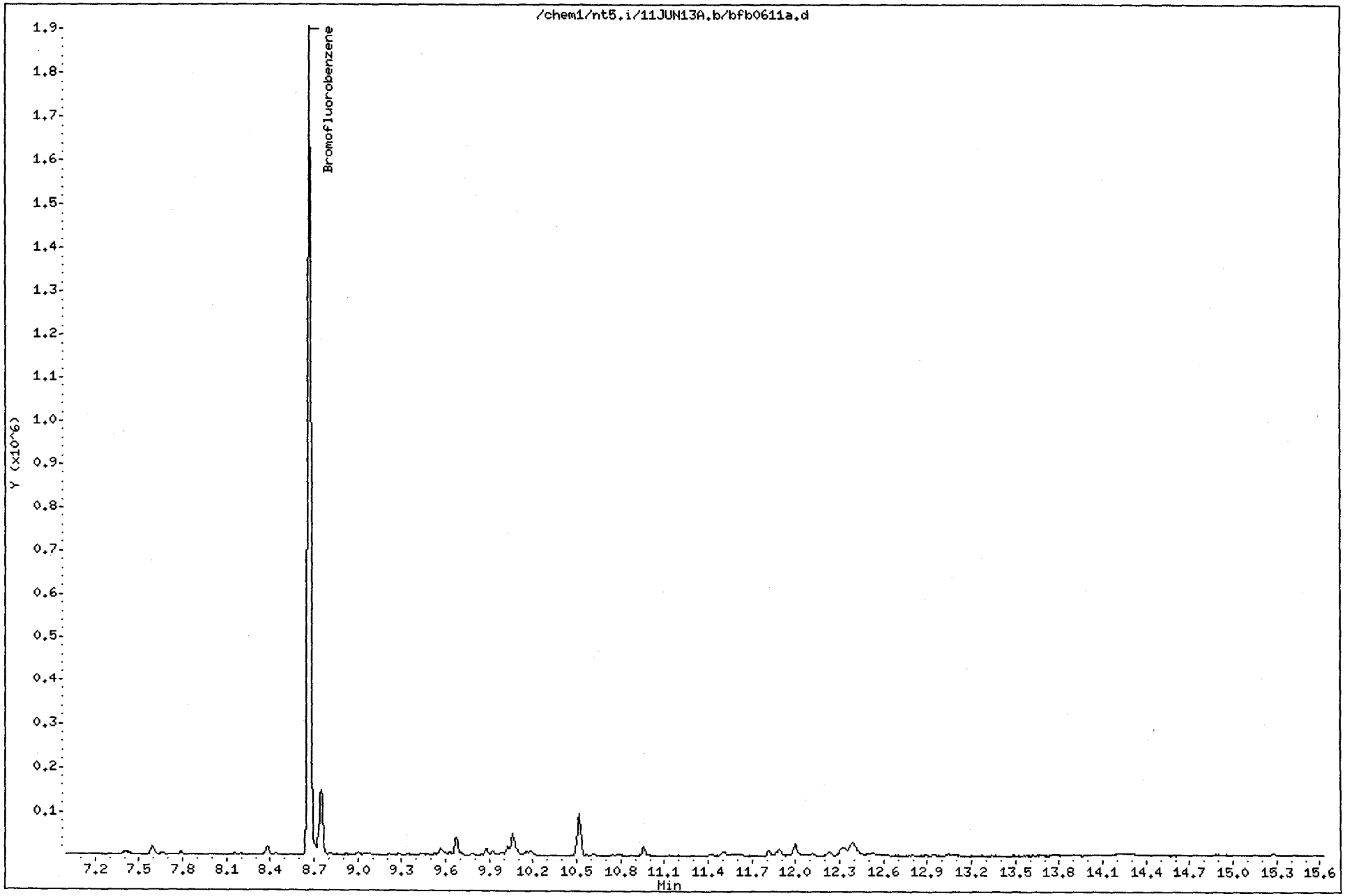
Sample Info: BFB0611,BFB0611,,1,11JUN13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13A.b/0500611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD50
Inj Date : 11-JUN-2013 10:09
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13A.b/V0121012S.m
Meth Date : 11-Jun-2013 14:28 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.029	1.029	(0.221)	353115	50.0000	43.332
2 Chloromethane	50	1.153	1.153	(0.247)	764654	50.0000	47.118(M)
3 Vinyl Chloride	62	1.198	1.198	(0.257)	760907	50.0000	48.465
4 Bromomethane	94	1.408	1.408	(0.302)	366307	50.0000	46.576
5 Chloroethane	64	1.492	1.492	(0.320)	446413	50.0000	47.759
6 Trichlorofluoromethane	101	1.589	1.589	(0.341)	728990	50.0000	44.690
7 1,1-Dichloroethene	96	1.951	1.951	(0.419)	514867	50.0000	46.750
8 Carbon Disulfide	76	1.951	1.951	(0.419)	1703150	50.0000	47.588
9 112Trichloro122Trifluoroethane	101	1.990	1.990	(0.427)	449354	50.0000	46.351
10 Iodomethane	142	2.053	2.053	(0.440)	397931	50.0000	40.750
11 Bromoethane	108	2.149	2.149	(0.461)	340152	50.0000	50.260
12 Acrolein	56	2.267	2.267	(0.487)	636947	250.000	274.14
13 Methylene Chloride	84	2.426	2.426	(0.521)	512608	50.0000	51.286
14 Acetone	43	2.697	2.697	(0.579)	559829	250.000	231.74(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.562	2.562	(0.550)	481795	50.0000	45.646
	16 Methyl tert butyl ether	73	2.726	2.726	(0.585)	1506342	50.0000	49.341
	17 1,1-Dichloroethane	63	3.173	3.173	(0.681)	993409	50.0000	43.374
	18 Acrylonitrile	53	3.308	3.308	(0.710)	239476	50.0000	48.484
	19 Vinyl Acetate	43	3.518	3.518	(0.755)	1551168	50.0000	49.571
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.798)	620020	50.0000	46.395
	22 2,2-Dichloropropane	77	3.817	3.817	(0.819)	858721	50.0000	45.079
	23 Bromochloromethane	128	3.908	3.908	(0.839)	272310	50.0000	45.503
	24 Chloroform	83	4.010	4.010	(0.860)	1009113	50.0000	47.064
	25 Carbon Tetrachloride	117	4.095	4.095	(0.802)	741213	50.0000	45.605
$	27 Dibromofluoromethane	111	4.180	4.180	(0.897)	662250	50.0000	50.232
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.894)	885575	50.0000	45.949
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	867958	50.0000	45.565
	29 2-Butanone	72	4.406	4.406	(0.945)	406574	250.000	262.06(Q)
	30 Benzene	78	4.519	4.519	(0.885)	2577823	50.0000	48.161
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	459631	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.998)	620434	50.0000	50.368
	33 1,2-Dichloroethane	62	4.711	4.711	(0.922)	809721	50.0000	47.955
	34 Trichloroethene	95	5.056	5.056	(0.990)	598982	50.0000	45.838
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	1692431	50.0000	
	37 Dibromomethane	93	5.413	5.413	(1.060)	344470	50.0000	48.964
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	729210	50.0000	48.060
	39 Bromodichloromethane	83	5.582	5.582	(1.093)	792459	50.0000	48.307
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.198)	425279	50.0000	53.336
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.200)	1045254	50.0000	49.000
$	42 d8-Toluene	98	6.284	6.284	(1.230)	2484368	50.0000	50.095
	43 Toluene	92	6.329	6.329	(1.239)	1592845	50.0000	46.754
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	619783	50.0000	45.055
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.312)	1595980	250.000	266.96
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.311)	945718	50.0000	49.865
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.336)	529384	50.0000	49.692
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	586870	50.0000	49.445
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	977791	50.0000	49.932
	50 1,2-Dibromoethane	107	7.138	7.138	(1.398)	515660	50.0000	49.425
	51 2-Hexanone	43	7.415	7.415	(0.977)	2667348	250.000	264.22
*	52 d5-Chlorobenzene	117	7.591	7.591	(1.000)	1987215	50.0000	
	53 Chlorobenzene	112	7.608	7.608	(1.002)	1607382	50.0000	47.523
	54 Ethyl Benzene	91	7.659	7.659	(1.009)	2852744	50.0000	49.179
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	570228	50.0000	47.336
	56 m,p-xylene	106	7.789	7.789	(1.026)	2148101	100.000	97.192
	57 o-Xylene	106	8.151	8.151	(1.074)	1062604	50.0000	48.339
	58 Styrene	104	8.202	8.202	(1.080)	1806538	50.0000	50.759
	59 Bromoform	173	8.196	8.196	(0.848)	421583	50.0000	50.053
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	2656060	50.0000	49.229
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1083761	50.0000	49.984
	63 Bromobenzene	156	8.739	8.739	(0.904)	667951	50.0000	46.921
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	3093314	50.0000	48.372

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	707186	50.0000	50.258
66	2-Chloro Toluene	91	8.920	8.920	(0.923)	1931882	50.0000	47.686
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	2223273	50.0000	48.443
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.928)	212455	50.0000	49.879
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.934)	269415	50.0000	51.558
70	4-Chloro Toluene	91	9.073	9.073	(0.939)	1991916	50.0000	47.465
71	T-Butyl Benzene	119	9.271	9.271	(0.959)	1949891	50.0000	48.301
72	1,2,4-Trimethylbenzene	105	9.339	9.339	(0.966)	2202640	50.0000	48.807
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	2837658	50.0000	48.323
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	2335926	50.0000	48.480
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	1220647	50.0000	46.248
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	1075398	50.0000	
77	1,4-Dichlorobenzene	146	9.684	9.684	(1.002)	1240225	50.0000	45.591
78	N-Butyl Benzene	91	9.967	9.967	(1.031)	2204096	50.0000	47.529
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1085602	50.0000	49.553
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.041)	1183518	50.0000	46.104
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	135046	50.0000	49.565
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	500871	50.0000	43.968
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	850233	50.0000	45.932
84	Naphthalene	128	11.794	11.794	(1.220)	2092430	50.0000	51.502
85	1,2,3-Trichlorobenzene	180	11.975	11.975	(1.239)	825099	50.0000	46.115

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0500611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13A.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	459631	0.00
35 1,4-Difluorobenze	1692431	846216	3384862	1692431	0.00
52 d5-Chlorobenzene	1987215	993608	3974430	1987215	0.00
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1075398	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: 0500611.d
Analysis Type: SOIL
Lab Sample ID: IC0611
Method: /chem1/nt5.i/11JUN13A.b/VO121012S.m

Injection Date: 11-JUN-2013 10:09
Init. Cal. Date(s): 11-JUN-2013 11-JUN-2013
Init. Cal. Times: 08:33 12:45
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
1 Dichlorodifluoromethane	0.88647	0.76826	0.76826	0.100	-13.33528	20.00000	Averaged
2 Chloromethane	1.76539	1.66363	1.66363	0.100	-5.76414	20.00000	Averaged
3 Vinyl Chloride	1.70791	1.65547	1.65547	0.100	-3.07031	20.00000	Averaged
4 Bromomethane	0.85554	0.79696	0.79696	0.100	-6.84717	20.00000	Averaged
5 Chloroethane	1.01682	0.97124	0.97124	0.100	-4.48233	20.00000	Averaged
6 Trichlorofluoromethane	1.77446	1.58603	1.58603	0.100	-10.61902	20.00000	Averaged
7 1,1-Dichloroethene	1.19804	1.12017	1.12017	0.100	-6.49971	20.00000	Averaged
8 Carbon Disulfide	3.89329	3.70547	3.70547	0.010	-4.82417	20.00000	Averaged
9 112Trichloro122Trifluoroeth	1.05460	0.97764	0.97764	0.010	-7.29749	20.00000	Averaged
10 Iodomethane	40.74984	50.00000	0.86576	0.010	-18.50033	20.00000	Linear
11 Bromoethane	0.73623	0.74005	0.74005	0.100	0.51930	20.00000	Averaged
12 Acrolein	0.25275	0.27716	0.27716	0.000	9.65521	20.00000	Averaged
13 Methylene Chloride	51.28587	50.00000	1.11526	0.010	2.57174	20.00000	Linear
14 Acetone	232	250	0.24360	0.001	-7.30433	20.00000	Quadratic
15 Trans-1,2-Dichloroethene	1.14821	1.04822	1.04822	0.010	-8.70839	20.00000	Averaged
16 Methyl tert butyl ether	3.32109	3.27729	3.27729	0.100	-1.31889	20.00000	Averaged
17 1,1-Dichloroethane	2.49147	2.16132	2.16132	0.100	-13.25136	20.00000	Averaged
18 Acrylonitrile	0.53731	0.52102	0.52102	0.001	-3.03214	20.00000	Averaged
19 Vinyl Acetate	3.40400	3.37481	3.37481	0.010	-0.85753	20.00000	Averaged
20 Cis-1,2-Dichloroethene	1.45377	1.34895	1.34895	0.010	-7.20994	20.00000	Averaged
22 2,2-Dichloropropane	2.07224	1.86828	1.86828	0.010	-9.84233	20.00000	Averaged
23 Bromochloromethane	0.65100	0.59245	0.59245	0.050	-8.99360	20.00000	Averaged
24 Chloroform	2.33246	2.19549	2.19549	0.100	-5.87268	20.00000	Averaged
25 Carbon Tetrachloride	0.48017	0.43796	0.43796	0.100	-8.79086	20.00000	Averaged
$ 27 Dibromofluoromethane	1.43418	1.44083	1.44083	0.100	0.46372	20.00000	Averaged
26 1,1,1-Trichloroethane	2.09656	1.92671	1.92671	0.100	-8.10154	20.00000	Averaged
28 1,1-Dichloropropene	0.56276	0.51285	0.51285	0.010	-8.86927	20.00000	Averaged
29 2-Butanone	0.16877	0.17691	0.17691	0.001	4.82525	20.00000	Averaged
30 Benzene	1.58130	1.52315	1.52315	0.100	-3.67760	20.00000	Averaged
$ 32 d4-1,2-Dichloroethane	1.34000	1.34985	1.34985	0.010	0.73547	20.00000	Averaged
33 1,2-Dichloroethane	0.49883	0.47844	0.47844	0.100	-4.08905	20.00000	Averaged
34 Trichloroethene	0.38605	0.35392	0.35392	0.100	-8.32343	20.00000	Averaged
37 Dibromomethane	0.20784	0.20354	0.20354	0.010	-2.07169	20.00000	Averaged
38 1,2-Dichloropropane	0.44826	0.43087	0.43087	0.100	-3.88087	20.00000	Averaged
39 Bromodichloromethane	0.48464	0.46824	0.46824	0.100	-3.38538	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 11-JUN-2013 10:09
Lab File ID: 0500611.d Init. Cal. Date(s): 11-JUN-2013 11-JUN-2013
Analysis Type: SOIL Init. Cal. Times: 08:33 12:45
Lab Sample ID: IC0611 Quant Type: ISTD
Method: /chem1/nt5.i/11JUN13A.b/VO121012S.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
40 2-Chloroethyl Vinyl Ether	0.23557	0.25128	0.25128	0.000	6.67241	20.00000	Averaged
41 Cis 1,3-dichloropropene	0.63020	0.61761	0.61761	0.100	-1.99925	20.00000	Averaged
$ 42 d8-Toluene	1.46515	1.46793	1.46793	0.010	0.18939	20.00000	Averaged
43 Toluene	1.00649	0.94116	0.94116	0.100	-6.49134	20.00000	Averaged
44 Tetrachloroethene	0.34612	0.31189	0.31189	0.100	-9.89074	20.00000	Averaged
45 4-Methyl-2-Pentanone	0.17662	0.18860	0.18860	0.000	6.78328	20.00000	Averaged
46 Trans 1,3-Dichloropropene	0.56030	0.55879	0.55879	0.010	-0.26922	20.00000	Averaged
47 1,1,2-Trichloroethane	0.31474	0.31280	0.31280	0.100	-0.61658	20.00000	Averaged
48 Chlorodibromomethane	0.29864	0.29532	0.29532	0.100	-1.11045	20.00000	Averaged
49 1,3-Dichloropropane	0.49271	0.49204	0.49204	0.100	-0.13538	20.00000	Averaged
50 1,2-Dibromoethane	0.30823	0.30469	0.30469	0.010	-1.14992	20.00000	Averaged
51 2-Hexanone	0.25400	0.26845	0.26845	0.010	5.68799	20.00000	Averaged
53 Chlorobenzene	0.85102	0.80886	0.80886	0.300	-4.95392	20.00000	Averaged
54 Ethyl Benzene	1.45952	1.43555	1.43555	0.100	-1.64229	20.00000	Averaged
55 1,1,1,2-Tetrachloroethane	0.30310	0.28695	0.28695	0.010	-5.32743	20.00000	Averaged
56 m,p-xylene	0.55609	0.54048	0.54048	0.100	-2.80754	20.00000	Averaged
57 o-Xylene	0.55310	0.53472	0.53472	0.100	-3.32228	20.00000	Averaged
58 Styrene	0.89548	0.90908	0.90908	0.100	1.51851	20.00000	Averaged
59 Bromoform	0.39161	0.39203	0.39203	0.100	0.10677	20.00000	Averaged
60 Isopropyl Benzene	2.50854	2.46984	2.46984	0.010	-1.54293	20.00000	Averaged
$ 62 4-Bromofluorobenzene	0.54554	0.54537	0.54537	0.200	-0.03179	20.00000	Averaged
63 Bromobenzene	0.66188	0.62112	0.62112	0.010	-6.15777	20.00000	Averaged
64 N-Propyl Benzene	2.97324	2.87644	2.87644	0.010	-3.25582	20.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.65423	0.65760	0.65760	0.300	0.51545	20.00000	Averaged
66 2-Chloro Toluene	1.88361	1.79643	1.79643	0.010	-4.62824	20.00000	Averaged
67 1,3,5-Trimethyl Benzene	2.13384	2.06740	2.06740	0.010	-3.11389	20.00000	Averaged
68 1,2,3-Trichloropropane	0.19804	0.19756	0.19756	0.010	-0.24119	20.00000	Averaged
69 Trans-1,4-Dichloro 2-Butene	0.24295	0.25053	0.25053	0.001	3.11692	20.00000	Averaged
70 4-Chloro Toluene	1.95119	1.85226	1.85226	0.010	-5.07005	20.00000	Averaged
71 T-Butyl Benzene	1.87698	1.81318	1.81318	0.010	-3.39890	20.00000	Averaged
72 1,2,4-Trimethylbenzene	2.09828	2.04821	2.04821	0.010	-2.38638	20.00000	Averaged
73 S-Butyl Benzene	2.73030	2.63870	2.63870	0.010	-3.35485	20.00000	Averaged
74 4-Isopropyl Toluene	2.24024	2.17215	2.17215	0.010	-3.03939	20.00000	Averaged
75 1,3-Dichlorobenzene	1.22714	1.13507	1.13507	0.100	-7.50304	20.00000	Averaged
77 1,4-Dichlorobenzene	1.26479	1.15327	1.15327	0.100	-8.81749	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 11-JUN-2013 10:09
Lab File ID: 0500611.d Init. Cal. Date(s): 11-JUN-2013 11-JUN-2013
Analysis Type: SOIL Init. Cal. Times: 08:33 12:45
Lab Sample ID: IC0611 Quant Type: ISTD
Method: /chem1/nt5.i/11JUN13A.b/VO121012S.m

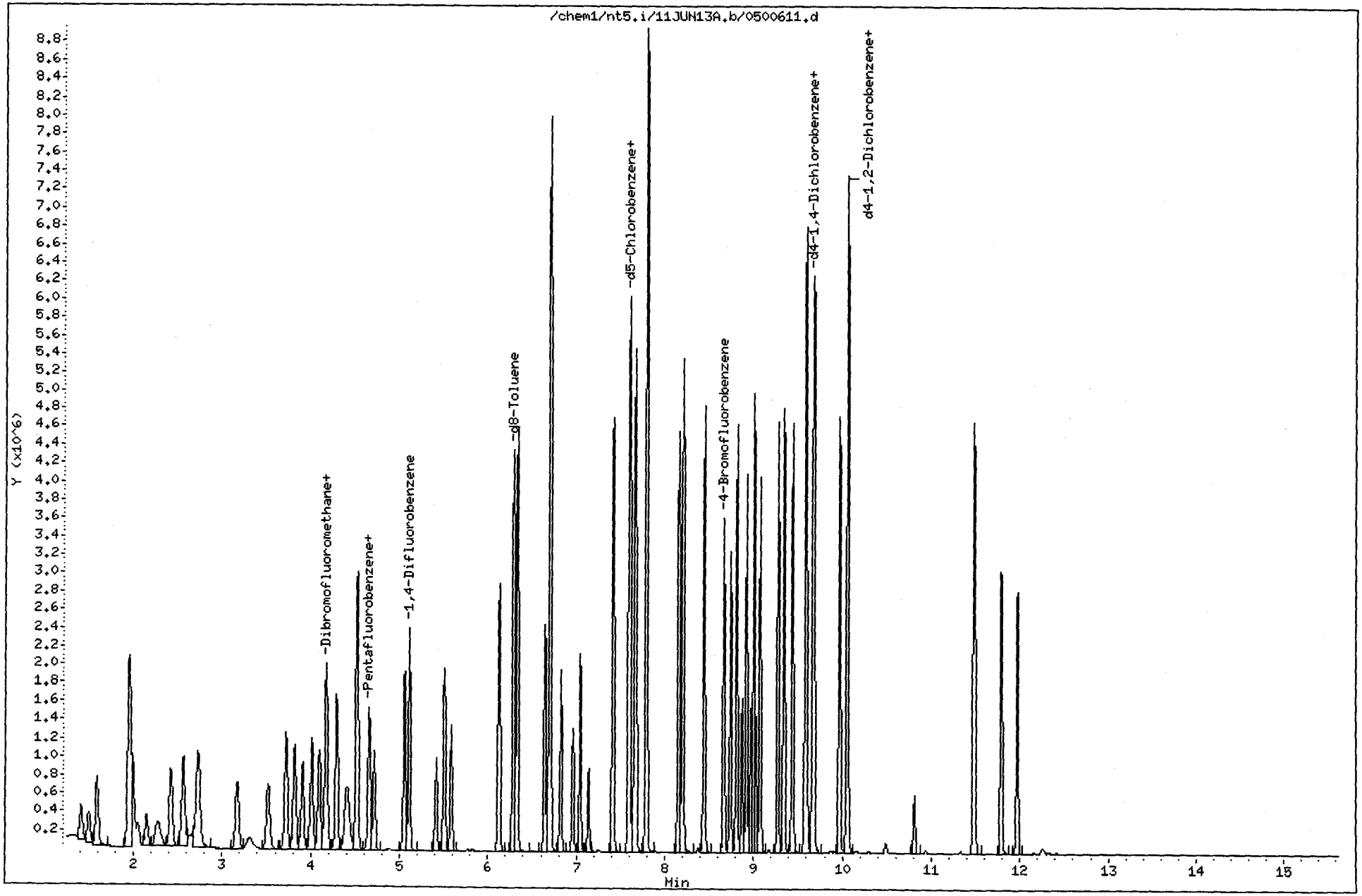
COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
78 N-Butyl Benzene	2.15610	2.04956	2.04956	0.010	-4.94137	20.00000	Averaged
$ 79 d4-1,2-Dichlorobenzene	1.01860	1.00949	1.00949	0.010	-0.89449	20.00000	Averaged
80 1,2-Dichlorobenzene	1.19355	1.10054	1.10054	0.100	-7.79238	20.00000	Averaged
81 1,2-Dibromo 3-Chloropropane	0.12668	0.12558	0.12558	0.010	-0.87098	20.00000	Averaged
82 Hexachloro 1,3-Butadiene	0.52965	0.46575	0.46575	0.010	-12.06351	20.00000	Averaged
83 1,2,4-Trichlorobenzene	0.86064	0.79062	0.79062	0.010	-8.13595	20.00000	Averaged
84 Naphthalene	1.88899	1.94573	1.94573	0.010	3.00351	20.00000	Averaged
85 1,2,3-Trichlorobenzene	0.83188	0.76725	0.76725	0.010	-7.76920	20.00000	Averaged

Data File: /chem1/nt5.i/11JUN13A.b/0500611.d
Date : 11-JUN-2013 10:09
Client ID: VSTD50
Sample Info: IC0611,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13A.b/lcs0611.d
Lab Smp Id: LCS0611 Client Smp ID: LCS0611
Inj Date : 11-JUN-2013 14:40
Operator : PB Inst ID: nt5.i
Smp Info : LCS0611,5,5,0
Misc Info : 13-12022
Comment :
Method : /chem1/nt5.i/11JUN13A.b/VO121012S.m
Meth Date : 12-Jun-2013 13:23 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.057	1.029	(0.226)	412613	53.6321	53.632
2 Chloromethane	50	1.345	1.153	(0.288)	831605	54.2780	54.278(M)
3 Vinyl Chloride	62	1.227	1.198	(0.263)	831325	56.0856	56.086
4 Bromomethane	94	1.430	1.408	(0.306)	385579	51.9302	51.930
5 Chloroethane	64	1.521	1.492	(0.326)	511199	57.9285	57.929
6 Trichlorofluoromethane	101	1.611	1.589	(0.345)	843899	54.7986	54.799
7 1,1-Dichloroethene	96	1.968	1.951	(0.422)	452841	43.5531	43.553
8 Carbon Disulfide	76	1.968	1.951	(0.422)	1481887	43.8576	43.858
9 112Trichloro122Trifluoroethane	101	2.007	1.990	(0.430)	401823	43.9029	43.903
10 Iodomethane	142	2.064	2.053	(0.442)	367866	39.9019	39.902
11 Bromoethane	108	2.160	2.149	(0.463)	270361	42.3132	42.313
12 Acrolein	56	2.267	2.267	(0.486)	386115	176.023	176.02
13 Methylene Chloride	84	2.437	2.426	(0.522)	552457	58.5459	58.546
14 Acetone	43	2.765	2.697	(0.593)	400919	159.834	159.83

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.579	2.562	(0.553)	622626	62.4815	62.482(R)
	16 Methyl tert butyl ether	73	2.760	2.726	(0.591)	1809432	62.7781	62.778
	17 1,1-Dichloroethane	63	3.195	3.173	(0.685)	1282480	59.3118	59.312
	18 Acrylonitrile	53	3.303	3.308	(0.708)	268055	57.4838	57.484
	19 Vinyl Acetate	43	3.535	3.518	(0.758)	1565176	52.9809	52.981
	20 Cis-1,2-Dichloroethene	96	3.738	3.721	(0.801)	669308	53.0490	53.049
	22 2,2-Dichloropropane	77	3.834	3.817	(0.822)	969199	53.8914	53.891
	23 Bromochloromethane	128	3.925	3.908	(0.841)	299774	53.0589	53.059
	24 Chloroform	83	4.027	4.010	(0.863)	1081060	53.4049	53.405
	25 Carbon Tetrachloride	117	4.112	4.095	(0.803)	841002	53.7233	53.723
$	27 Dibromofluoromethane	111	4.191	4.180	(0.898)	640111	51.4278	51.428
	26 1,1,1-Trichloroethane	97	4.179	4.168	(0.896)	984564	54.1106	54.111
	28 1,1-Dichloropropene	75	4.304	4.287	(0.841)	966774	52.6940	52.694
	29 2-Butanone	72	4.389	4.406	(0.941)	370015	252.622	252.62(Q)
	30 Benzene	78	4.530	4.519	(0.885)	2778318	53.8923	53.892
*	31 Pentafluorobenzene	168	4.666	4.660	(1.000)	433934	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.999)	590244	50.7544	50.754
	33 1,2-Dichloroethane	62	4.722	4.711	(0.923)	827442	50.8793	50.879
	34 Trichloroethene	95	5.062	5.056	(0.989)	672533	53.4354	53.435
*	35 1,4-Difluorobenzene	114	5.118	5.107	(1.000)	1630086	50.0000	
	37 Dibromomethane	93	5.418	5.413	(1.059)	345075	50.9261	50.926
	38 1,2-Dichloropropane	63	5.509	5.503	(1.076)	764316	52.2999	52.300
	39 Bromodichloromethane	83	5.588	5.582	(1.092)	826795	52.3280	52.328
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.196)	418426	54.4838	54.484
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.198)	1093736	53.2342	53.234
$	42 d8-Toluene	98	6.289	6.284	(1.229)	2406203	50.3742	50.374
	43 Toluene	92	6.335	6.329	(1.238)	1750059	53.3337	53.334
	44 Tetrachloroethene	166	6.646	6.640	(0.875)	716750	53.3970	53.397
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.308)	1493194	259.318	259.32
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	975423	53.3987	53.399
	47 1,1,2-Trichloroethane	97	6.827	6.821	(1.334)	931104	51.7599	51.760
	48 Chlorodibromomethane	129	6.963	6.957	(0.917)	592752	51.1801	51.180
	49 1,3-Dichloropropane	76	7.047	7.042	(0.928)	981073	51.3436	51.344
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	509174	50.6699	50.670
	51 2-Hexanone	43	7.410	7.415	(0.975)	2471556	250.903	250.90
*	52 d5-Chlorobenzene	117	7.596	7.591	(1.000)	1939078	50.0000	
	53 Chlorobenzene	112	7.608	7.608	(1.001)	1746348	52.9134	52.913
	54 Ethyl Benzene	91	7.658	7.659	(1.008)	3138572	55.4495	55.449
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	607504	51.6826	51.683
	56 m,p-xylene	106	7.794	7.789	(1.026)	2386608	110.665	110.66
	57 o-Xylene	106	8.156	8.151	(1.074)	1159822	54.0712	54.071
	58 Styrene	104	8.201	8.202	(1.080)	1948635	56.1110	56.111
	59 Bromoform	173	8.196	8.196	(0.847)	411235	49.1454	49.145
	60 Isopropyl Benzene	105	8.445	8.439	(0.873)	2953857	55.1076	55.108
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.141)	1066797	50.4231	50.423
	63 Bromobenzene	156	8.739	8.739	(0.903)	708706	50.1109	50.111
	64 N-Propyl Benzene	91	8.812	8.807	(0.911)	3510588	55.2578	55.258

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	681303	48.7363	48.736
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	2135033	53.0465	53.046
67	1,3,5-Trimethyl Benzene	105	9.005	8.999	(0.931)	2500087	54.8323	54.832
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	204206	48.2576	48.258
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	259070	49.9043	49.904
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	2236763	53.6494	53.649
71	T-Butyl Benzene	119	9.276	9.271	(0.959)	2193707	54.6969	54.697
72	1,2,4-Trimethylbenzene	105	9.344	9.339	(0.966)	2463573	54.9471	54.947
73	S-Butyl Benzene	105	9.440	9.435	(0.976)	3234248	55.4378	55.438
74	4-Isopropyl Toluene	119	9.587	9.582	(0.991)	2717221	56.7641	56.764
75	1,3-Dichlorobenzene	146	9.599	9.593	(0.992)	1368602	52.1948	52.195
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1068382	50.0000	
77	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	1395460	51.6346	51.635
78	N-Butyl Benzene	91	9.972	9.967	(1.031)	2628790	57.0597	57.060
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1081301	49.6806	49.681
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.040)	1283861	50.3411	50.341
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.118)	124775	46.0956	46.096
82	Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.189)	601717	53.1677	53.168
83	1,2,4-Trichlorobenzene	180	11.488	11.477	(1.188)	1000049	54.3803	54.380
84	Naphthalene	128	11.799	11.794	(1.220)	2090831	51.8003	51.800
85	1,2,3-Trichlorobenzene	180	11.986	11.975	(1.239)	912591	51.3403	51.340

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0611.d
Lab Smp Id: LCS0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13A.b/VO121012S.m
Misc Info: 13-12022

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: LCS0611
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	433934	-5.59
35 1,4-Difluorobenze	1692431	846216	3384862	1630086	-3.68
52 d5-Chlorobenzene	1987215	993608	3974430	1939078	-2.42
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1068382	-0.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 11JUN13A
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: LCS0611 Client Smp ID: LCS0611
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCS
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/11JUN13A.b/VO121012S.m
Misc Info: 13-12022

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	53.632	107.26	53-148
2 Chloromethane	50.000	54.278	108.56	64-125
3 Vinyl Chloride	50.000	56.086	112.17	63-137
4 Bromomethane	50.000	51.930	103.86	57-136
5 Chloroethane	50.000	57.929	115.86	64-131
6 Trichlorofluoromet	50.000	54.799	109.60	69-132
12 Acrolein	250.00	176.02	70.41	54-137
9 112Trichloro122Tri	50.000	43.903	87.81	74-130
14 Acetone	250.00	159.83	63.93	60-131
7 1,1-Dichloroethene	50.000	43.553	87.11	75-126
11 Bromoethane	50.000	42.313	84.63	76-126
10 Iodomethane	50.000	39.902	79.80	65-139
13 Methylene Chloride	50.000	58.546	117.09	70-123
8 Carbon Disulfide	50.000	43.858	87.72	71-129
18 Acrylonitrile	50.000	57.484	114.97	67-125
15 Trans-1,2-Dichloro	50.000	62.482	124.96*	80-120
19 Vinyl Acetate	50.000	52.981	105.96	60-136
17 1,1-Dichloroethane	50.000	59.312	118.62	80-120
29 2-Butanone	250.00	252.62	101.05	70-120
22 2,2-Dichloropropan	50.000	53.891	107.78	74-123
20 Cis-1,2-Dichloroet	50.000	53.049	106.10	80-120
24 Chloroform	50.000	53.405	106.81	80-120
23 Bromochloromethane	50.000	53.059	106.12	80-120
26 1,1,1-Trichloroeth	50.000	54.111	108.22	77-121
28 1,1-Dichloropropen	50.000	52.694	105.39	80-120
25 Carbon Tetrachlori	50.000	53.723	107.45	77-122
33 1,2-Dichloroethane	50.000	50.879	101.76	76-120
30 Benzene	50.000	53.892	107.78	80-120
34 Trichloroethene	50.000	53.435	106.87	80-120
38 1,2-Dichloropropan	50.000	52.300	104.60	80-120
39 Bromodichlorometha	50.000	52.328	104.66	77-121
37 Dibromomethane	50.000	50.926	101.85	80-120
40 2-Chloroethyl Viny	50.000	54.484	108.97	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	259.32	103.73	67-120
41 Cis 1,3-dichloropr	50.000	53.234	106.47	74-120
43 Toluene	50.000	53.334	106.67	80-120
46 Trans 1,3-Dichloro	50.000	53.399	106.80	65-120
51 2-Hexanone	250.00	250.90	100.36	65-130
47 1,1,2-Trichloroeth	50.000	51.760	103.52	80-120
49 1,3-Dichloropropan	50.000	51.344	102.69	80-120
44 Tetrachloroethene	50.000	53.397	106.79	80-121
48 Chlorodibromometha	50.000	51.180	102.36	64-120
50 1,2-Dibromoethane	50.000	50.670	101.34	75-120
53 Chlorobenzene	50.000	52.913	105.83	80-120
55 1,1,1,2-Tetrachlor	50.000	51.683	103.37	69-121
54 Ethyl Benzene	50.000	55.449	110.90	80-127
56 m,p-xylene	100.00	110.66	110.66	80-125
57 o-Xylene	50.000	54.071	108.14	78-120
58 Styrene	50.000	56.111	112.22	80-123
60 Isopropyl Benzene	50.000	55.108	110.22	80-127
59 Bromoform	50.000	49.145	98.29	60-120
65 1,1,2,2-Tetrachlor	50.000	48.736	97.47	74-120
68 1,2,3-Trichloropro	50.000	48.258	96.52	72-121
69 Trans-1,4-Dichloro	50.000	49.904	99.81	65-126
64 N-Propyl Benzene	50.000	55.258	110.52	80-132
63 Bromobenzene	50.000	50.111	100.22	80-120
67 1,3,5-Trimethyl Be	50.000	54.832	109.66	80-125
66 2-Chloro Toluene	50.000	53.046	106.09	80-125
70 4-Chloro Toluene	50.000	53.649	107.30	80-127
71 T-Butyl Benzene	50.000	54.697	109.39	87-122
72 1,2,4-Trimethylben	50.000	54.947	109.89	80-126
73 S-Butyl Benzene	50.000	55.438	110.88	80-134
74 4-Isopropyl Toluen	50.000	56.764	113.53	80-131
75 1,3-Dichlorobenzen	50.000	52.195	104.39	80-120
77 1,4-Dichlorobenzen	50.000	51.635	103.27	80-120
78 N-Butyl Benzene	50.000	57.060	114.12	80-138
80 1,2-Dichlorobenzen	50.000	50.341	100.68	80-120
81 1,2-Dibromo 3-Chlo	50.000	46.096	92.19	59-120
83 1,2,4-Trichloroben	50.000	54.380	108.76	78-130
82 Hexachloro 1,3-But	50.000	53.168	106.34	76-129
84 Naphthalene	50.000	51.800	103.60	66-120
85 1,2,3-Trichloroben	50.000	51.340	102.68	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.428	102.86	70-130

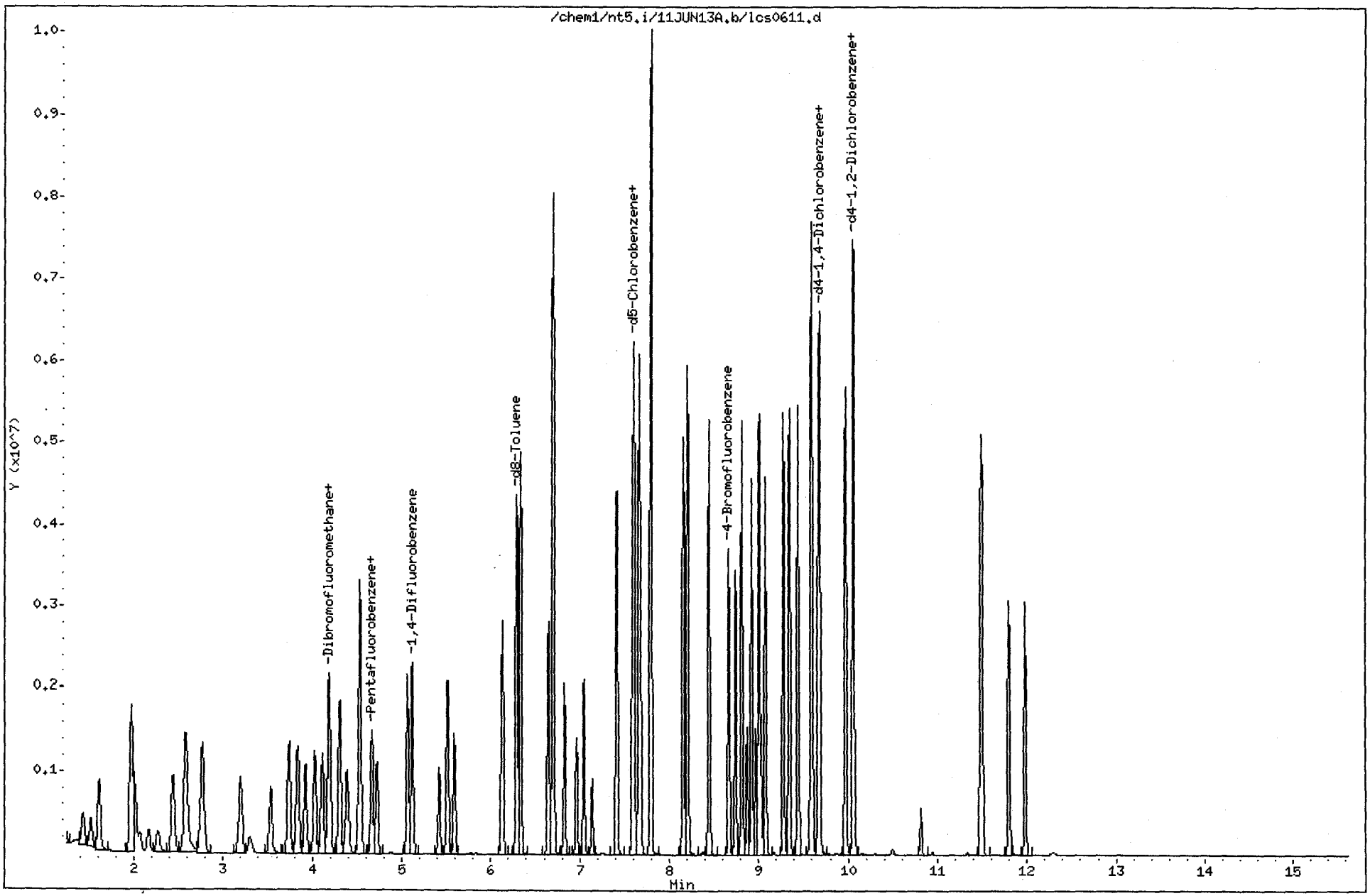
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	50.754	101.51	80-149
$ 42 d8-Toluene	50.000	50.374	100.75	77-120
$ 62 4-Bromofluorobenze	50.000	50.423	100.85	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.681	99.36	80-120

Data File: /chem1/nt5.i/11JUN13A.b/lcs0611.d
Date : 11-JUN-2013 14:40
Client ID: LCS0611
Sample Info: LCS0611,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13A.b/lcs0611a.d
Lab Smp Id: LCS0611 Client Smp ID: LCS0611
Inj Date : 11-JUN-2013 15:13
Operator : PB Inst ID: nt5.i
Smp Info : LCS0611,5,5,0
Misc Info : 13-12022
Comment :
Method : /chem1/nt5.i/11JUN13A.b/VO121012S.m
Meth Date : 12-Jun-2013 13:23 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.028	1.029	(0.221)	402614	52.9040	52.904
2 Chloromethane	50	1.147	1.153	(0.246)	785688	51.8411	51.841(M)
3 Vinyl Chloride	62	1.192	1.198	(0.256)	751715	51.2686	51.269
4 Bromomethane	94	1.402	1.408	(0.301)	367480	50.0331	50.033
5 Chloroethane	64	1.487	1.492	(0.319)	468868	53.7119	53.712
6 Trichlorofluoromethane	101	1.583	1.589	(0.340)	794766	52.1718	52.172
7 1,1-Dichloroethene	96	1.939	1.951	(0.417)	469360	45.6349	45.635
8 Carbon Disulfide	76	1.939	1.951	(0.417)	1543871	46.1911	46.191
9 112Trichloro122Trifluoroethane	101	1.984	1.990	(0.426)	412390	45.5495	45.550
10 Iodomethane	142	2.041	2.053	(0.438)	372967	40.8970	40.897
11 Bromoethane	108	2.132	2.149	(0.458)	273579	43.2845	43.284
12 Acrolein	56	2.239	2.267	(0.481)	376607	173.563	173.56
13 Methylene Chloride	84	2.409	2.426	(0.518)	411397	44.0734	44.073(Q)
14 Acetone	43	2.731	2.697	(0.587)	390981	156.876	156.88

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.545	2.562	(0.547)	494868	50.2032	50.203
	16 Methyl tert butyl ether	73	2.731	2.726	(0.587)	1704252	59.7747	59.775
	17 1,1-Dichloroethane	63	3.167	3.173	(0.680)	1229691	57.4915	57.492
	18 Acrylonitrile	53	3.286	3.308	(0.706)	267336	57.9557	57.956
	19 Vinyl Acetate	43	3.512	3.518	(0.754)	1521892	52.0784	52.078
	20 Cis-1,2-Dichloroethene	96	3.715	3.721	(0.798)	640410	51.3129	51.313
	22 2,2-Dichloropropane	77	3.812	3.817	(0.819)	922119	51.8335	51.834
	23 Bromochloromethane	128	3.902	3.908	(0.838)	274421	49.1020	49.102
	24 Chloroform	83	4.004	4.010	(0.860)	1037487	51.8122	51.812
	25 Carbon Tetrachloride	117	4.089	4.095	(0.801)	796050	51.4036	51.404
$	27 Dibromofluoromethane	111	4.174	4.180	(0.897)	636627	51.7065	51.707
	26 1,1,1-Trichloroethane	97	4.162	4.168	(0.894)	945065	52.5071	52.507
	28 1,1-Dichloropropene	75	4.281	4.287	(0.838)	931244	51.3083	51.308
	29 2-Butanone	72	4.377	4.406	(0.940)	371896	256.679	256.68(Q)
	30 Benzene	78	4.513	4.519	(0.884)	2682273	52.5939	52.594
*	31 Pentafluorobenzene	168	4.655	4.660	(1.000)	429246	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.643	4.649	(0.998)	597308	51.9228	51.923
	33 1,2-Dichloroethane	62	4.705	4.711	(0.921)	801109	49.7946	49.795
	34 Trichloroethene	95	5.051	5.056	(0.989)	638278	51.2640	51.264
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	1612586	50.0000	
	37 Dibromomethane	93	5.407	5.413	(1.059)	337382	50.3311	50.331
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	737472	51.0106	51.011
	39 Bromodichloromethane	83	5.577	5.582	(1.092)	797458	51.0190	51.019
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.120	(1.197)	410574	54.0415	54.042
	41 Cis 1,3-dichloropropene	75	6.125	6.131	(1.199)	1056818	51.9955	51.996
$	42 d8-Toluene	98	6.284	6.284	(1.230)	2384892	50.4699	50.470
	43 Toluene	92	6.329	6.329	(1.239)	1676531	51.6473	51.647
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	674290	51.0739	51.074
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.311)	1494102	262.291	262.29
	46 Trans 1,3-Dichloropropene	75	6.691	6.697	(1.310)	944946	52.2917	52.292
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.336)	516993	50.9314	50.931
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	577233	50.6737	50.674
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	955872	50.8614	50.861
	50 1,2-Dibromoethane	107	7.138	7.138	(1.398)	502429	50.5413	50.541
	51 2-Hexanone	43	7.409	7.415	(0.976)	2483062	256.287	256.29
*	52 d5-Chlorobenzene	117	7.590	7.591	(1.000)	1907182	50.0000	
	53 Chlorobenzene	112	7.607	7.608	(1.002)	1666010	51.3234	51.323
	54 Ethyl Benzene	91	7.658	7.659	(1.009)	3009841	54.0645	54.064
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	583518	50.4722	50.472
	56 m,p-xylene	106	7.788	7.789	(1.026)	2270476	107.040	107.04
	57 o-Xylene	106	8.156	8.151	(1.075)	1108802	52.5571	52.557
	58 Styrene	104	8.201	8.202	(1.080)	1865607	54.6187	54.619
	59 Bromoform	173	8.196	8.196	(0.847)	405245	50.8344	50.834
	60 Isopropyl Benzene	105	8.439	8.439	(0.872)	2838640	55.5877	55.588
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1042140	50.0815	50.081
	63 Bromobenzene	156	8.739	8.739	(0.903)	676822	50.2329	50.233
	64 N-Propyl Benzene	91	8.812	8.807	(0.911)	3324799	54.9321	54.932

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	673833	50.5954	50.595
	66 2-Chloro Toluene	91	8.920	8.920	(0.922)	2032974	53.0189	53.019
	67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	2372977	54.6288	54.629
	68 1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	200254	49.6736	49.674
	69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	248479	50.2409	50.241
	70 4-Chloro Toluene	91	9.073	9.073	(0.938)	2114107	53.2254	53.225
	71 T-Butyl Benzene	119	9.276	9.271	(0.959)	2097790	54.9027	54.903
	72 1,2,4-Trimethylbenzene	105	9.344	9.339	(0.966)	2338052	54.7370	54.737
	73 S-Butyl Benzene	105	9.440	9.435	(0.976)	3073446	55.2975	55.297
	74 4-Isopropyl Toluene	119	9.587	9.582	(0.991)	2559168	56.1170	56.117
	75 1,3-Dichlorobenzene	146	9.599	9.593	(0.992)	1288913	51.5966	51.597
*	76 d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1017840	50.0000	
	77 1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	1317048	51.1531	51.153
	78 N-Butyl Benzene	91	9.972	9.967	(1.031)	2467840	56.2261	56.226
$	79 d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1044785	50.3865	50.386
	80 1,2-Dichlorobenzene	146	10.063	10.063	(1.040)	1221953	50.2928	50.293
	81 1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.118)	129078	50.0531	50.053
	82 Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.189)	572700	53.1166	53.117
	83 1,2,4-Trichlorobenzene	180	11.482	11.477	(1.187)	939293	53.6128	53.613
	84 Naphthalene	128	11.799	11.794	(1.220)	2084568	54.2097	54.210
	85 1,2,3-Trichlorobenzene	180	11.980	11.975	(1.239)	877645	51.8261	51.826

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0611a.d
Lab Smp Id: LCS0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13A.b/VO121012S.m
Misc Info: 13-12022

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: LCS0611
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	429246	-6.61
35 1,4-Difluorobenze	1692431	846216	3384862	1612586	-4.72
52 d5-Chlorobenzene	1987215	993608	3974430	1907182	-4.03
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1017840	-5.35

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.65	-0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 11JUN13A
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: LCS0611 Client Smp ID: LCS0611
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCSD
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/11JUN13A.b/VO121012S.m
Misc Info: 13-12022

SPIKE	COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	52.904	105.81	53-148
2	Chloromethane	50.000	51.841	103.68	64-125
3	Vinyl Chloride	50.000	51.269	102.54	63-137
4	Bromomethane	50.000	50.033	100.07	57-136
5	Chloroethane	50.000	53.712	107.42	64-131
6	Trichlorofluoromet	50.000	52.172	104.34	69-132
12	Acrolein	250.00	173.56	69.43	54-137
9	112Trichloro122Tri	50.000	45.550	91.10	74-130
14	Acetone	250.00	156.88	62.75	60-131
7	1,1-Dichloroethene	50.000	45.635	91.27	75-126
11	Bromoethane	50.000	43.284	86.57	76-126
10	Iodomethane	50.000	40.897	81.79	65-139
13	Methylene Chloride	50.000	44.073	88.15	70-123
8	Carbon Disulfide	50.000	46.191	92.38	71-129
18	Acrylonitrile	50.000	57.956	115.91	67-125
15	Trans-1,2-Dichloro	50.000	50.203	100.41	80-120
19	Vinyl Acetate	50.000	52.078	104.16	60-136
17	1,1-Dichloroethane	50.000	57.492	114.98	80-120
29	2-Butanone	250.00	256.68	102.67	70-120
22	2,2-Dichloropropan	50.000	51.834	103.67	74-123
20	Cis-1,2-Dichloroet	50.000	51.313	102.63	80-120
24	Chloroform	50.000	51.812	103.62	80-120
23	Bromochloromethane	50.000	49.102	98.20	80-120
26	1,1,1-Trichloroeth	50.000	52.507	105.01	77-121
28	1,1-Dichloropropen	50.000	51.308	102.62	80-120
25	Carbon Tetrachlori	50.000	51.404	102.81	77-122
33	1,2-Dichloroethane	50.000	49.795	99.59	76-120
30	Benzene	50.000	52.594	105.19	80-120
34	Trichloroethene	50.000	51.264	102.53	80-120
38	1,2-Dichloropropan	50.000	51.011	102.02	80-120
39	Bromodichlorometha	50.000	51.019	102.04	77-121
37	Dibromomethane	50.000	50.331	100.66	80-120
40	2-Chloroethyl Viny	50.000	54.042	108.08	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	262.29	104.92	67-120
41 Cis 1,3-dichloropr	50.000	51.996	103.99	74-120
43 Toluene	50.000	51.647	103.29	80-120
46 Trans 1,3-Dichloro	50.000	52.292	104.58	65-120
51 2-Hexanone	250.00	256.29	102.51	65-130
47 1,1,2-Trichloroeth	50.000	50.931	101.86	80-120
49 1,3-Dichloropropan	50.000	50.861	101.72	80-120
44 Tetrachloroethene	50.000	51.074	102.15	80-121
48 Chlorodibromometha	50.000	50.674	101.35	64-120
50 1,2-Dibromoethane	50.000	50.541	101.08	75-120
53 Chlorobenzene	50.000	51.323	102.65	80-120
55 1,1,1,2-Tetrachlor	50.000	50.472	100.94	69-121
54 Ethyl Benzene	50.000	54.064	108.13	80-127
56 m,p-xylene	100.00	107.04	107.04	80-125
57 o-Xylene	50.000	52.557	105.11	78-120
58 Styrene	50.000	54.619	109.24	80-123
60 Isopropyl Benzene	50.000	55.588	111.18	80-127
59 Bromoform	50.000	50.834	101.67	60-120
65 1,1,2,2-Tetrachlor	50.000	50.595	101.19	74-120
68 1,2,3-Trichloropro	50.000	49.674	99.35	72-121
69 Trans-1,4-Dichloro	50.000	50.241	100.48	65-126
64 N-Propyl Benzene	50.000	54.932	109.86	80-132
63 Bromobenzene	50.000	50.233	100.47	80-120
67 1,3,5-Trimethyl Be	50.000	54.629	109.26	80-125
66 2-Chloro Toluene	50.000	53.019	106.04	80-125
70 4-Chloro Toluene	50.000	53.225	106.45	80-127
71 T-Butyl Benzene	50.000	54.903	109.81	87-122
72 1,2,4-Trimethylben	50.000	54.737	109.47	80-126
73 S-Butyl Benzene	50.000	55.297	110.59	80-134
74 4-Isopropyl Toluen	50.000	56.117	112.23	80-131
75 1,3-Dichlorobenzen	50.000	51.597	103.19	80-120
77 1,4-Dichlorobenzen	50.000	51.153	102.31	80-120
78 N-Butyl Benzene	50.000	56.226	112.45	80-138
80 1,2-Dichlorobenzen	50.000	50.293	100.59	80-120
81 1,2-Dibromo 3-Chlo	50.000	50.053	100.11	59-120
83 1,2,4-Trichloroben	50.000	53.613	107.23	78-130
82 Hexachloro 1,3-But	50.000	53.117	106.23	76-129
84 Naphthalene	50.000	54.210	108.42	66-120
85 1,2,3-Trichloroben	50.000	51.826	103.65	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.707	103.41	70-130

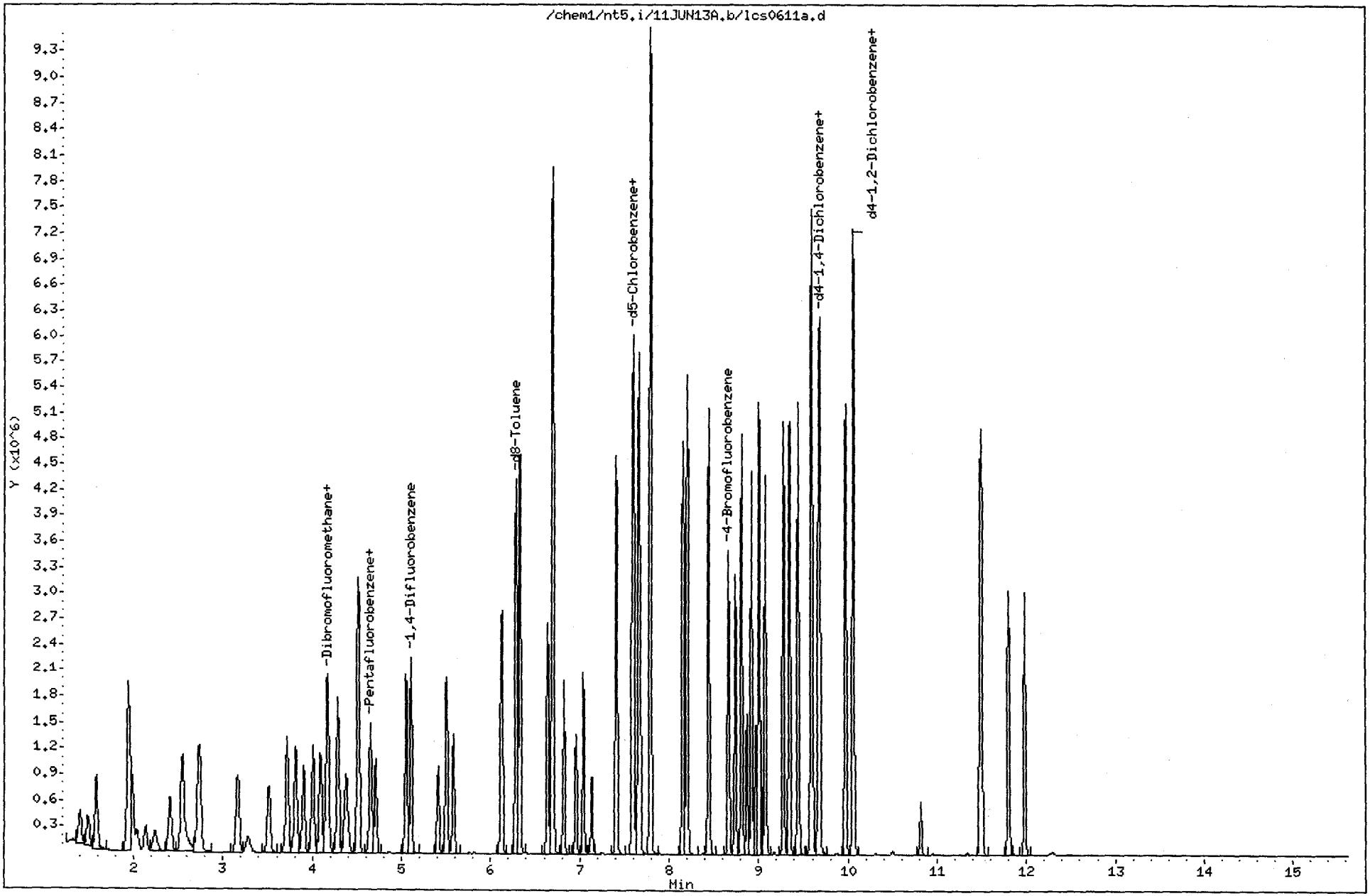
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	51.923	103.85	80-149
$ 42 d8-Toluene	50.000	50.470	100.94	77-120
$ 62 4-Bromofluorobenze	50.000	50.081	100.16	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.386	100.77	80-120

Data File: /chem1/nt5.i/11JUN13A.b/lcs0611a.d
Date : 11-JUN-2013 15:13
Client ID: LCS0611
Sample Info: LCS0611,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13A.b/mb0611.d
Lab Smp Id: MB0611 Client Smp ID: MB0611
Inj Date : 11-JUN-2013 15:37
Operator : PB Inst ID: nt5.i
Smp Info : MB0611,5,5,0
Misc Info : 13-12022
Comment :
Method : /chem1/nt5.i/11JUN13A.b/VO121012S.m
Meth Date : 12-Jun-2013 13:23 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.448	2.426	(0.524)	13876	1.83956	1.840
14 Acetone	43	2.533	2.697	(0.542)	27312	9.71393	9.714
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.196	4.180	(0.898)	520678	52.3315	52.331
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.672	4.660	(1.000)	346875	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.998)	496124	53.3683	53.368
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.118	5.107	(1.000)	1318767	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.289	6.284	(1.229)	1956275	50.6231	50.623
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.590	7.591	(1.000)	1589823	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	Compound Not Detected.					
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	870746	50.1980	50.198
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	66 2-Chloro Toluene	91	Compound Not Detected.					
	67 1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
	68 1,2,3-Trichloropropane	110	Compound Not Detected.					
	69 Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
	70 4-Chloro Toluene	91	Compound Not Detected.					
	71 T-Butyl Benzene	119	Compound Not Detected.					
	72 1,2,4-Trimethylbenzene	105	Compound Not Detected.					
	73 S-Butyl Benzene	105	Compound Not Detected.					
	74 4-Isopropyl Toluene	119	Compound Not Detected.					
	75 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	76 d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	856046	50.0000	
	77 1,4-Dichlorobenzene	146	Compound Not Detected.					
	78 N-Butyl Benzene	91	Compound Not Detected.					
$	79 d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	892067	51.1525	51.152
	80 1,2-Dichlorobenzene	146	Compound Not Detected.					
	81 1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
	82 Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
	83 1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	8507	0.57733	0.5773
	84 Naphthalene	128	11.788	11.794	(1.219)	33795	1.04495	1.045
	85 1,2,3-Trichlorobenzene	180	11.969	11.975	(1.238)	8727	0.61274	0.6127

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: mb0611.d
Lab Smp Id: MB0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13A.b/VO121012S.m
Misc Info: 13-12022

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: MB0611
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	346875	-24.53
35 1,4-Difluorobenze	1692431	846216	3384862	1318767	-22.08
52 d5-Chlorobenzene	1987215	993608	3974430	1589823	-20.00
76 d4-1,4-Dichlorobe	1075398	537699	2150796	856046	-20.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: MB0611
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/11JUN13A.b/VO121012S.m
Misc Info: 13-12022

Client SDG: 11JUN13A
Fraction: VOA
Client Smp ID: MB0611
Operator: PB
SampleType: BLANK
Quant Type: ISTD

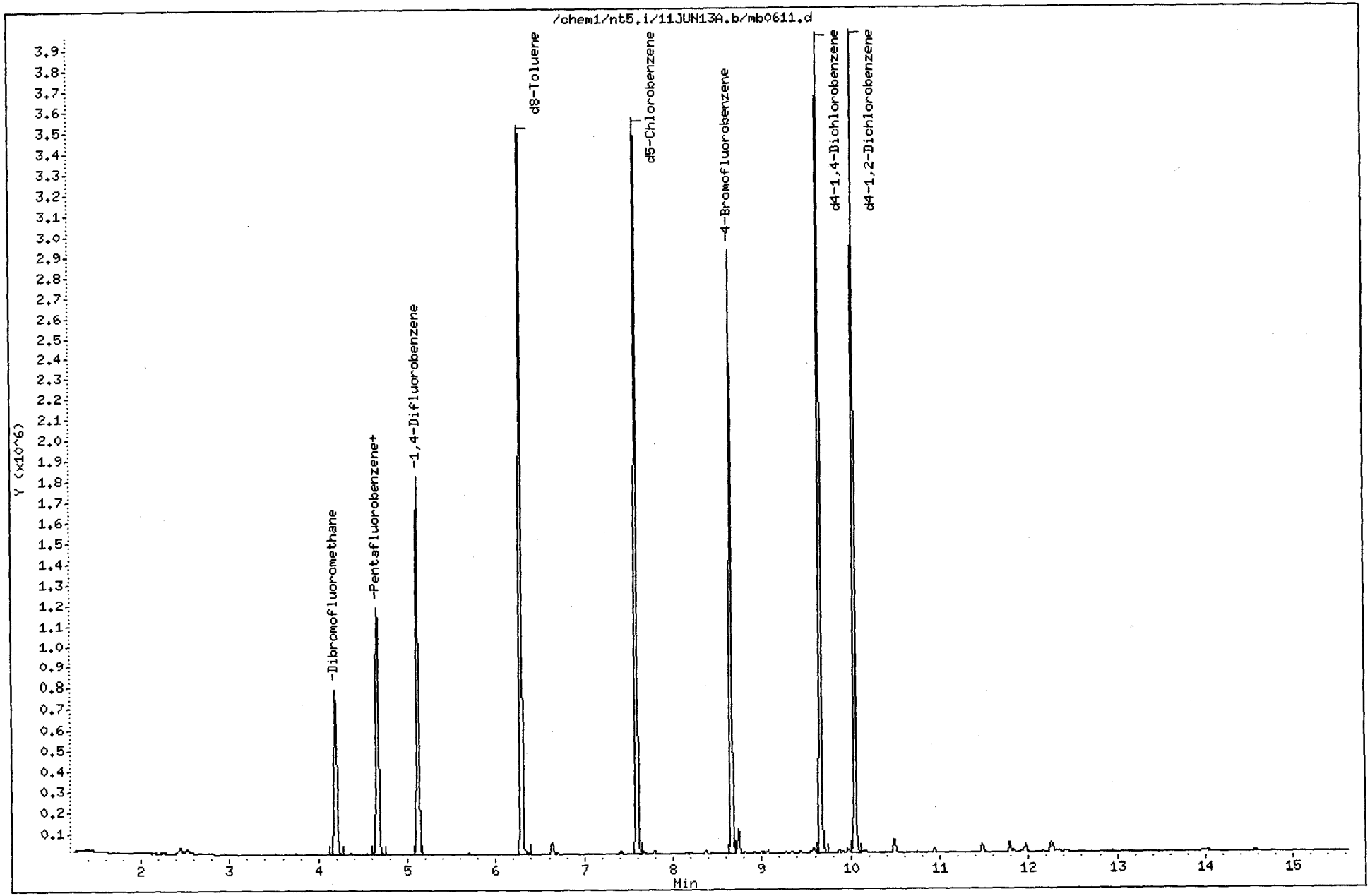
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	52.331	104.66	70-130
$ 32 d4-1,2-Dichloroeth	50.000	53.368	106.74	80-149
$ 42 d8-Toluene	50.000	50.623	101.25	77-120
$ 62 4-Bromofluorobenze	50.000	50.198	100.40	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.152	102.30	80-120

Data File: /chem1/nt5.i/11JUN13A.b/mb0611.d
Date : 11-JUN-2013 15:37
Client ID: MB0611
Sample Info: MB0611,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - mb0611.d

Lab ID: MB0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.i/11JUN13A.b/mb0611.d

Date : 11-JUN-2013 15:37

Client ID: MB0611

Instrument: nt5.i

Sample Info: MB0611,5,5,0

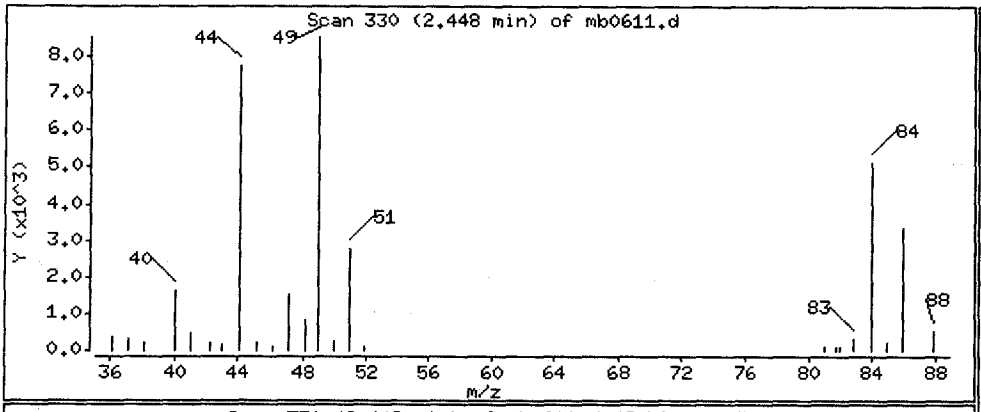
Operator: PB

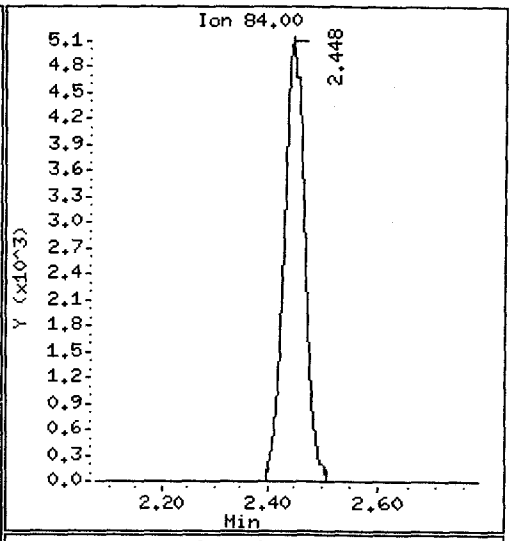
Column phase: RTXVMS

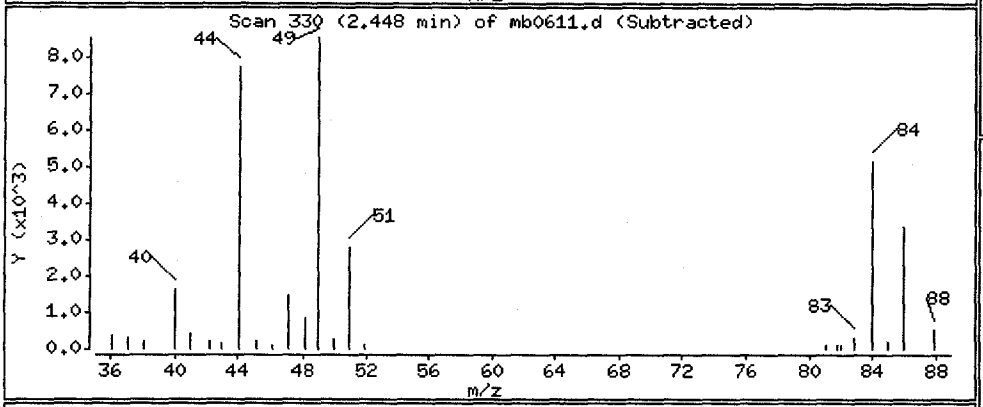
Column diameter: 0.18

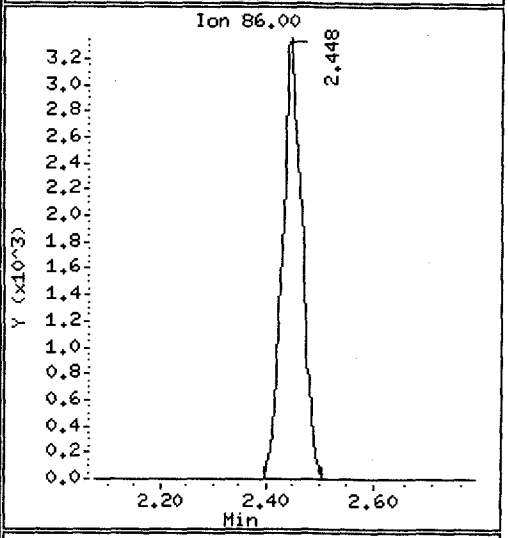
13 Methylene Chloride

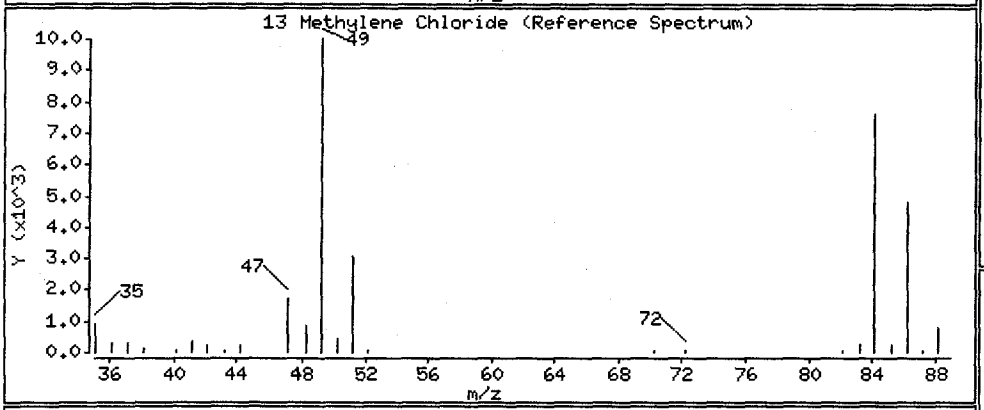
Concentration: 1.840 ug/Kg

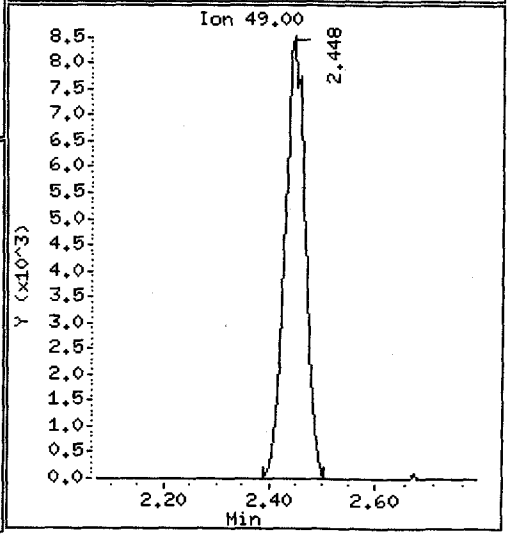


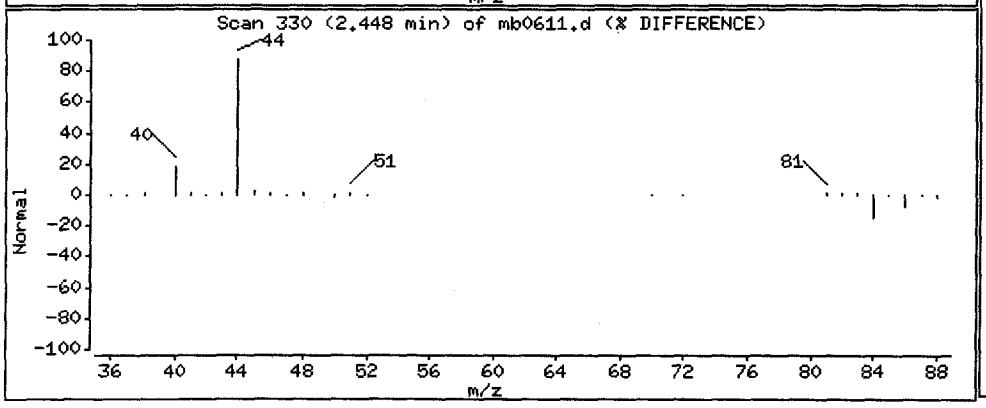












Data File: /chem1/nt5.i/11JUN13A.b/mb0611.d

Date : 11-JUN-2013 15:37

Client ID: MB0611

Instrument: nt5.i

Sample Info: MB0611,5,5,0

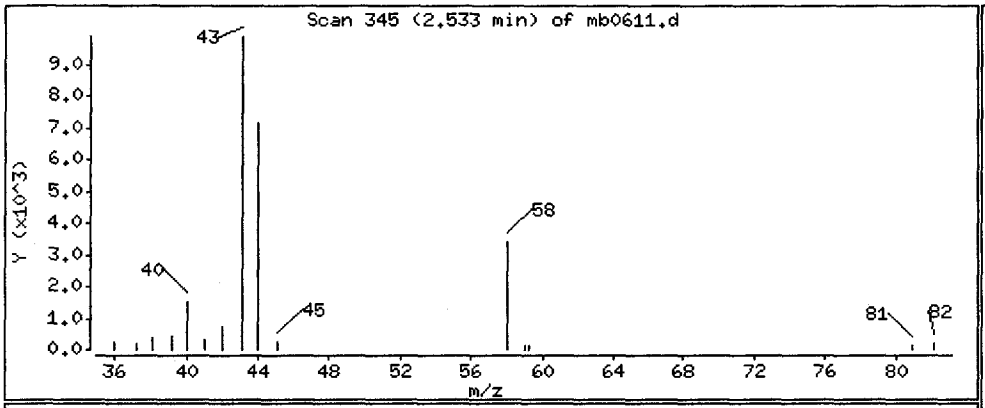
Operator: PB

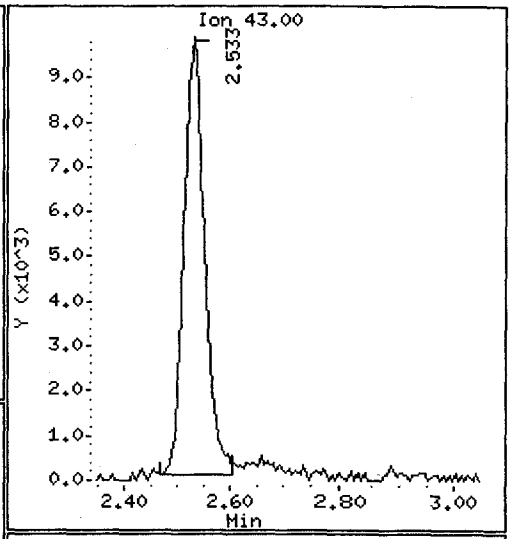
Column phase: RTXVMS

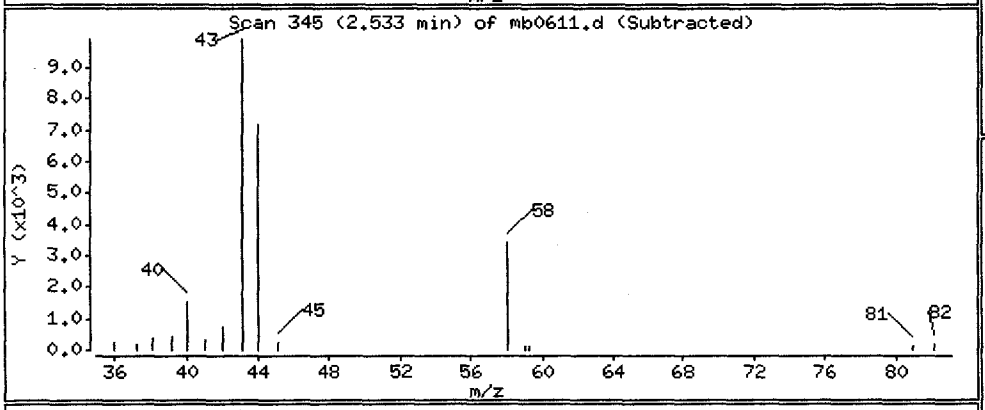
Column diameter: 0.18

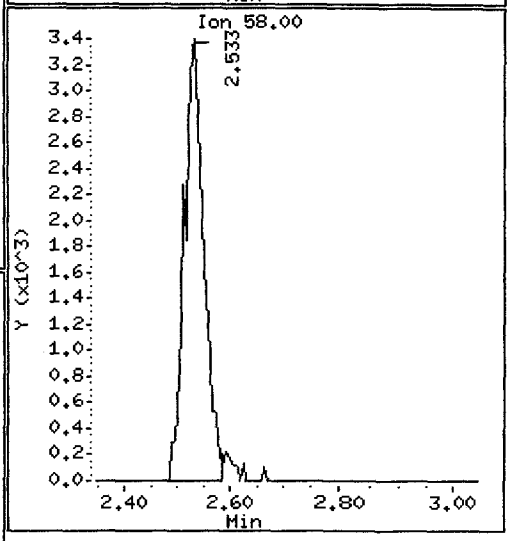
14 Acetone

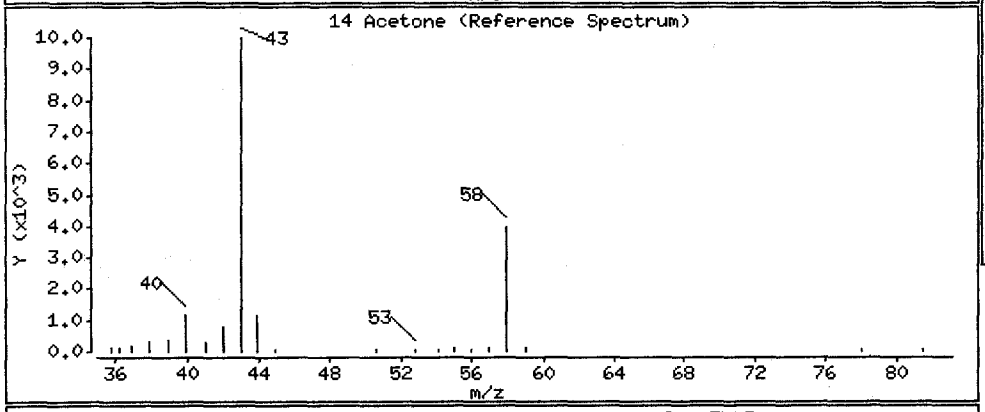
Concentration: 9.714 ug/Kg

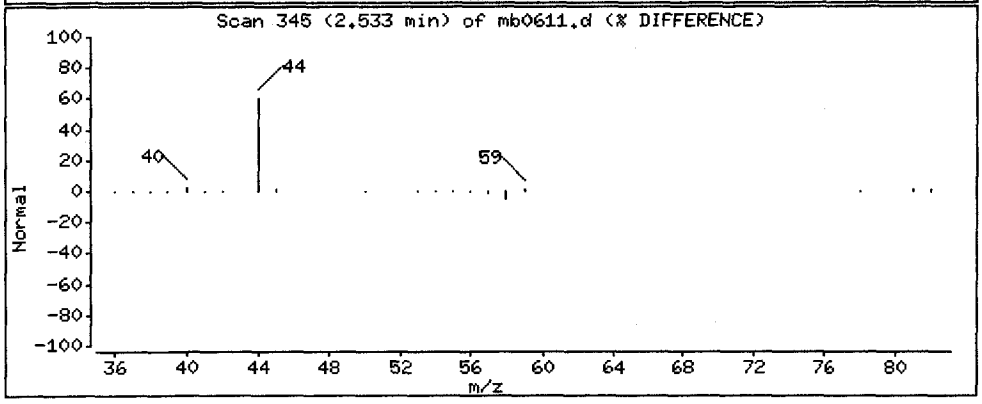












Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13A.b/ws21a.d
Lab Smp Id: WS21A Client Smp ID: KC-IV-SPS-20130531-
Inj Date : 11-JUN-2013 16:01
Operator : PB Inst ID: nt5.i
Smp Info : WS21A,5,6.57,0
Misc Info : 13-11678
Comment :
Method : /chem1/nt5.i/11JUN13A.b/VO121012S.m
Meth Date : 12-Jun-2013 13:25 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	6.57000	Sample Amount
M	19.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	1.979	1.951	(0.424)	242287	7.81078	7.339
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.448	2.426	(0.524)	17991	2.07677	1.951(Q)
14 Acetone	43	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.196	4.180	(0.898)	604412	52.8945	49.697
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.671	4.660	(1.000)	398372	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.649	(0.999)	592673	55.5127	52.157
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.118	5.107	(1.000)	1525075	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.295	6.284	(1.230)	2255499	50.4706	47.420
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.596	7.591	(1.000)	1849586	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	Compound Not Detected.					
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.141)	1060033	52.5277	49.352
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1021987	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1051453	50.5023	47.449
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	Compound Not Detected.					
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: ws21a.d
Lab Smp Id: WS21A
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13A.b/VO121012S.m
Misc Info: 13-11678

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: KC-IV-SPS-20130531-
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	459631	229816	919262	398372	-13.33
35 1,4-Difluorobenze	1692431	846216	3384862	1525075	-9.89
52 d5-Chlorobenzene	1987215	993608	3974430	1849586	-6.93
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1021987	-4.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS21A
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/11JUN13A.b/VO121012S.m
Misc Info: 13-11678

Client SDG: WS21
Fraction: VOA
Client Smp ID: KC-IV-SPS-20130531-
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

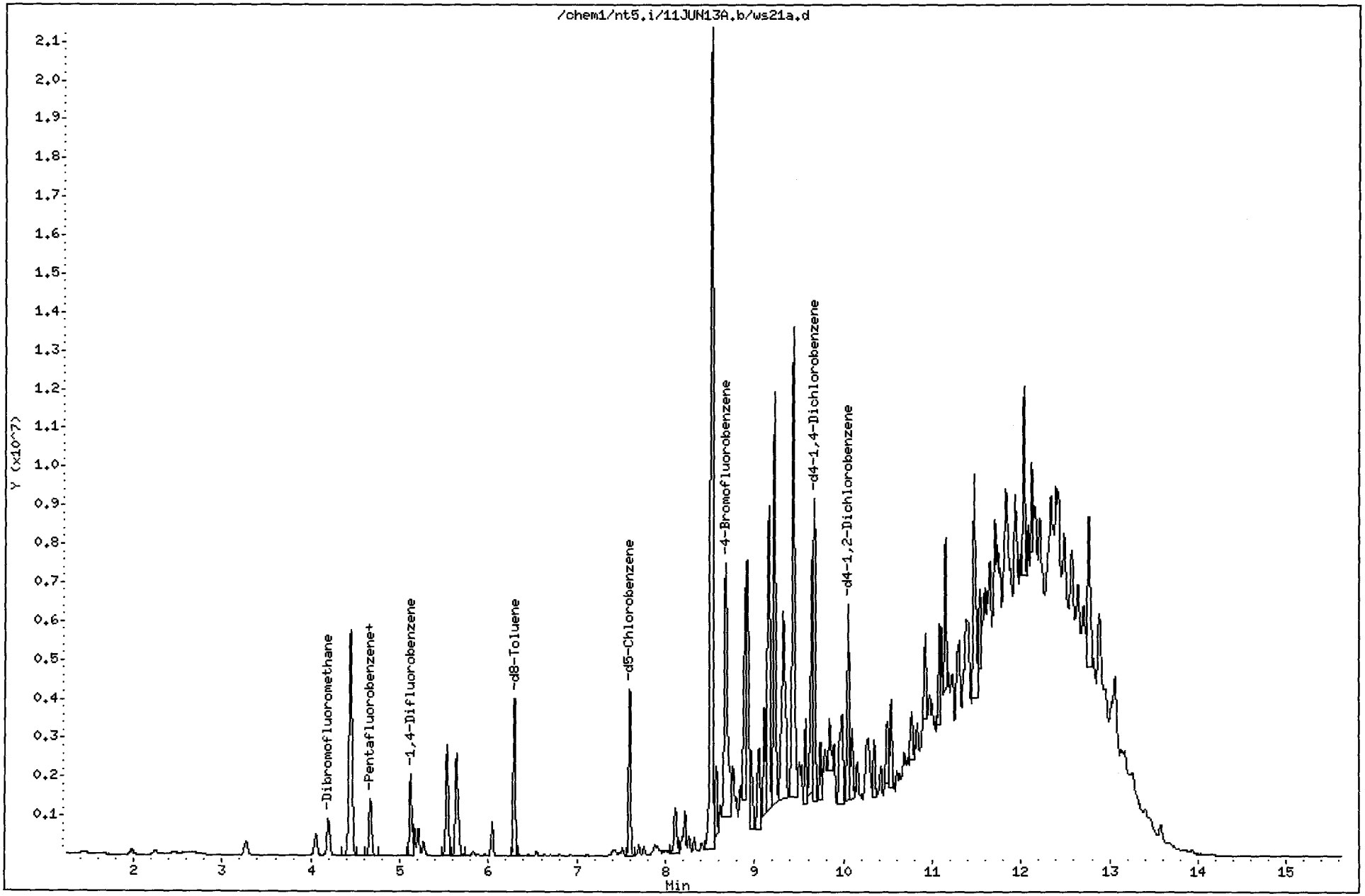
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	52.895	105.79	70-130
$ 32 d4-1,2-Dichloroeth	50.000	55.513	111.03	80-149
$ 42 d8-Toluene	50.000	50.471	100.94	77-120
$ 62 4-Bromofluorobenze	50.000	52.528	105.06	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.502	101.00	80-120

Data File: /chem1/nt5.i/11JUN13A.b/ws21a.d
Date : 11-JUN-2013 16:01
Client ID: KC-IV-SPS-20130531-
Sample Info: WS21A,5,6,57,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/11JUN13A.b/ws21a.d

Date : 11-JUN-2013 16:01

Client ID: KC-IV-SPS-20130531-

Instrument: nt5.i

Sample Info: WS21A,5,6.57,0

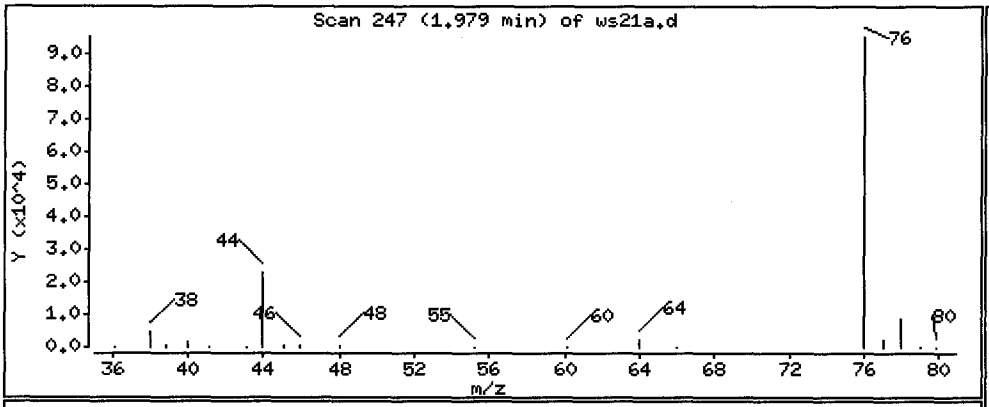
Operator: PB

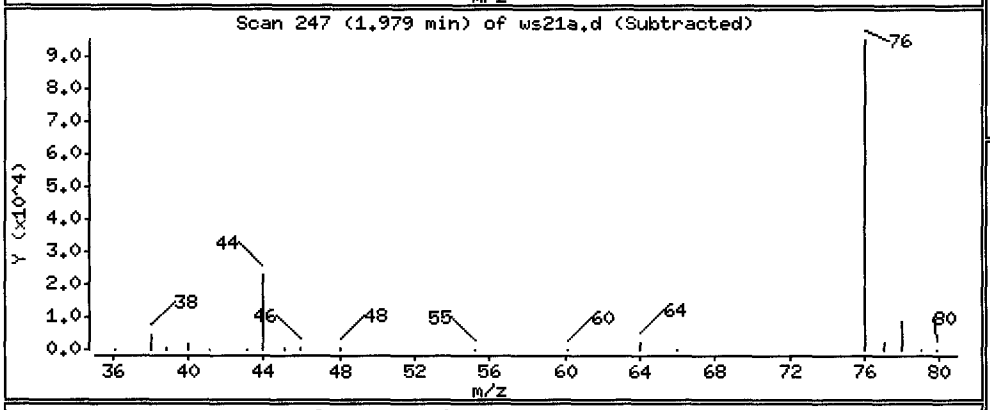
Column phase: RTXVMS

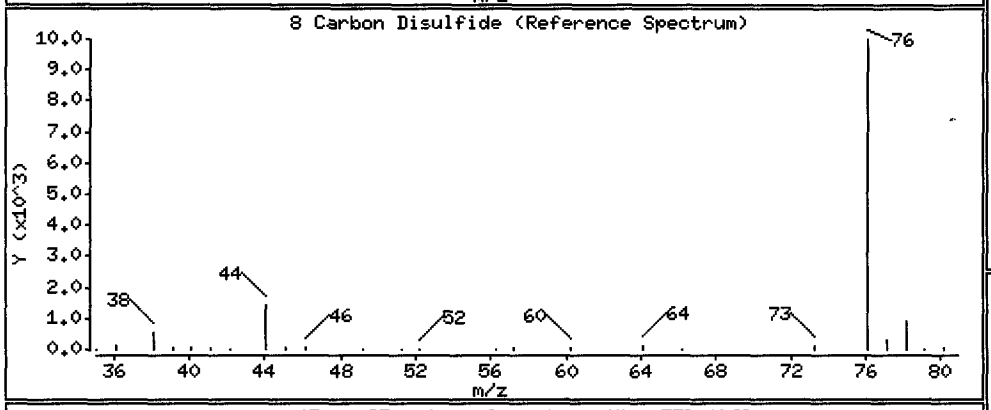
Column diameter: 0.18

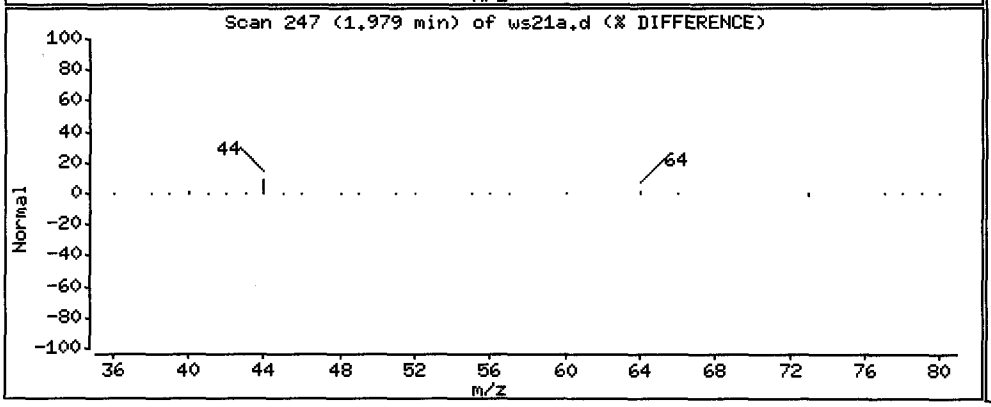
8 Carbon Disulfide

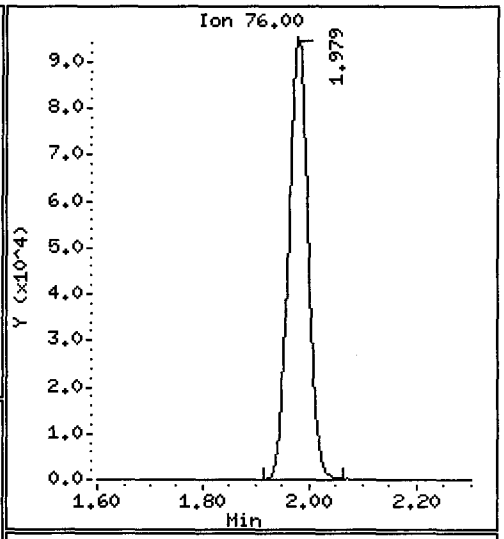
Concentration: 7.339 ug/Kg

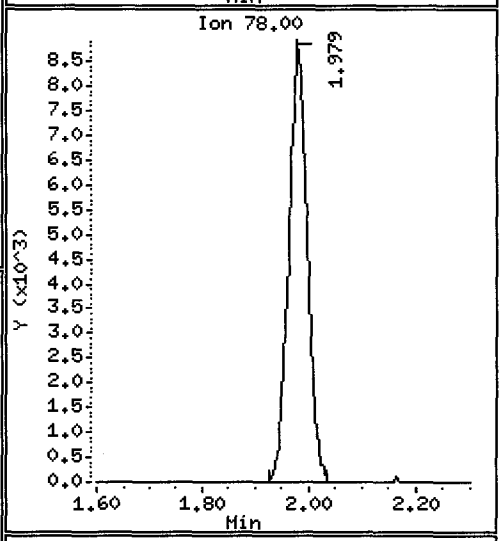


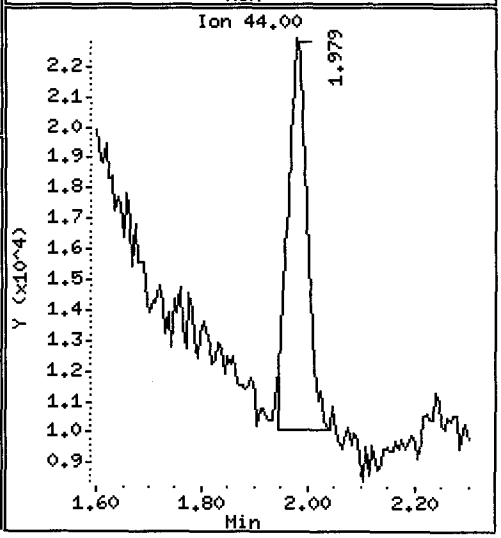












Data File: /chem1/nt5.i/11JUN13A.b/ws21a.d

Date : 11-JUN-2013 16:01

Client ID: KC-IV-SPS-20130531-

Instrument: nt5.i

Sample Info: WS21A,5,6.57,0

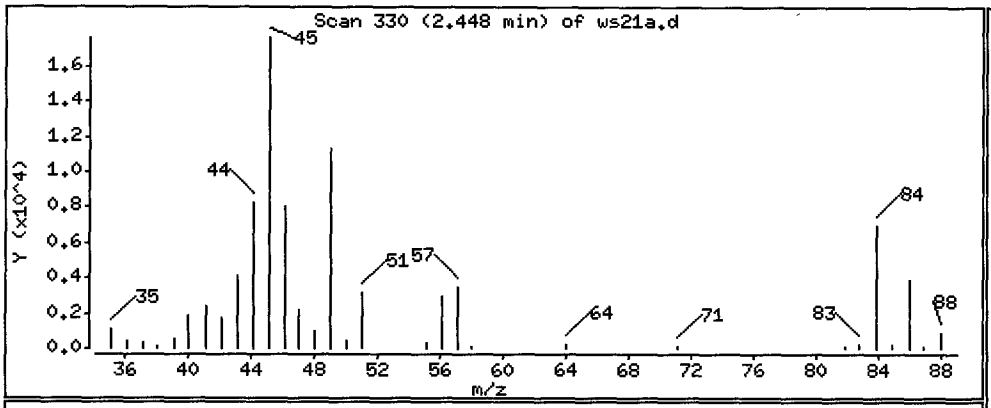
Operator: PB

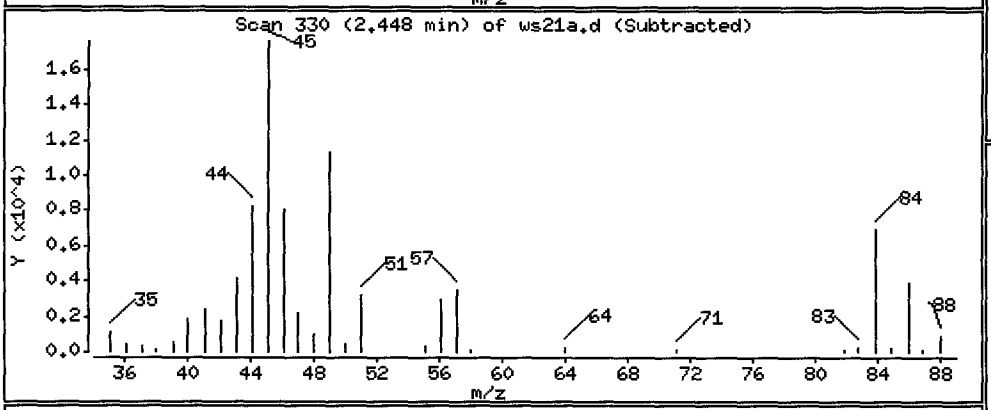
Column phase: RTXVMS

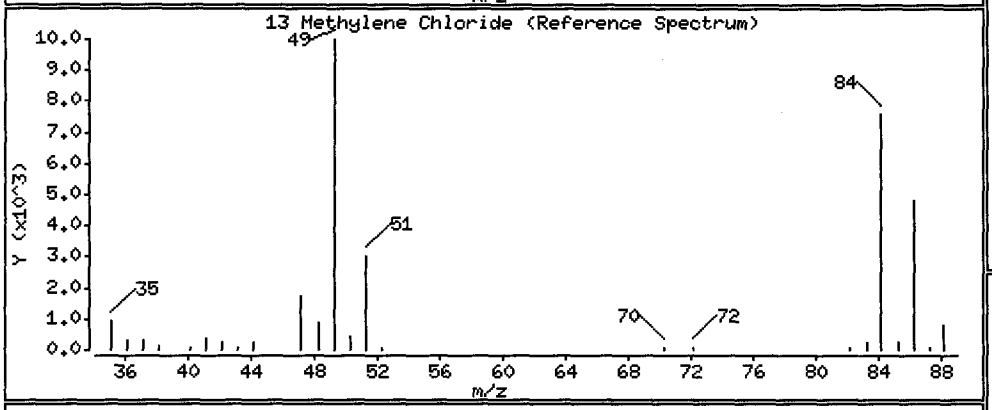
Column diameter: 0.18

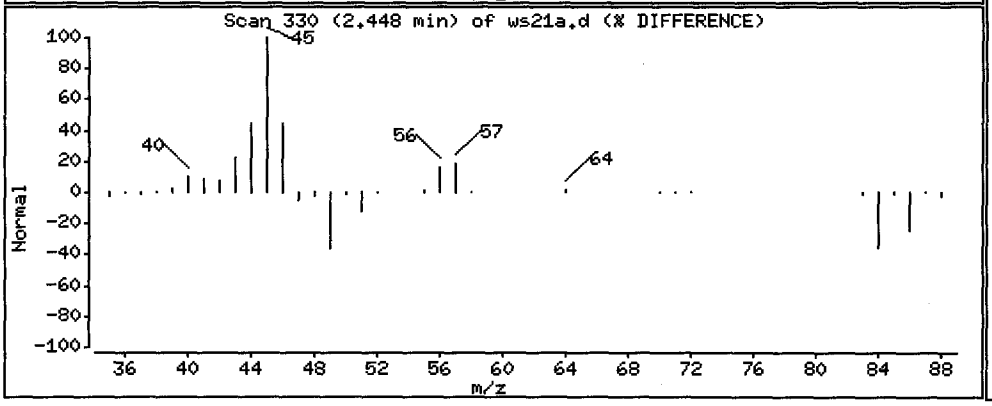
13 Methylene Chloride

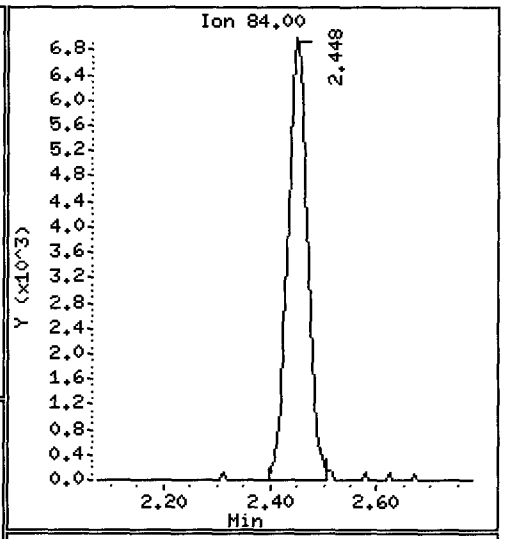
Concentration: 1.951 ug/Kg

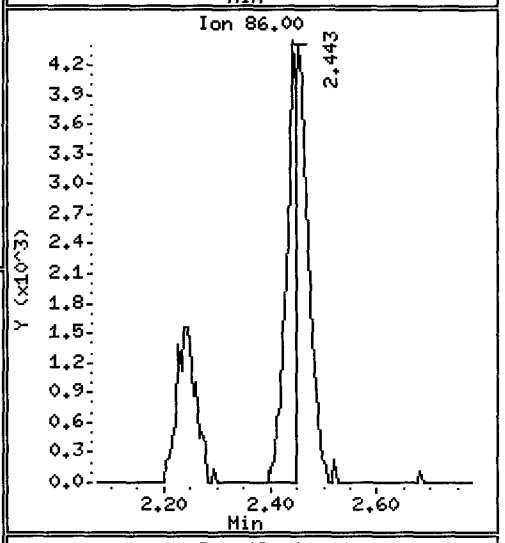


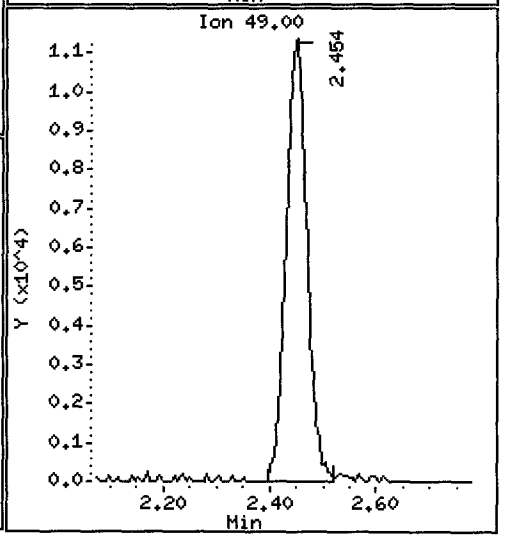












CO-ELUTION SUMMARY FOR FILE - ws21a.d

Lab ID: WS21A, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS21

Incorporated Analytical Chemists and Consultants

(8270D) BAN/SIM SVOA PSDDA-Soil/ Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (5-20ppb)

ARI Job No(s) W549, WR99, W521 Page 1 of 1 Batch set up by: ~~SP~~

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	W549 MBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 2 3 YL/CT 6/08/13 Analyst/Date
	SBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	SBS Dup.	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C 1 2 3 4 5 6 RR 6/10/13 Analyst/Date
2	~~QLS~~ A	~~10.00g~~ 11.03	(1:1) Y/N	1mL	1mL	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
2	~~QLS (SIM)~~ B	~~10.00g~~ 11.01	(1:1) Y/N	1mL	1mL	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 2 3 CJZ 6/10/13 Analyst/Date
2	C	11.04	(1:1) Y/N	1mL	1mL		
2	D	12.01	(1:1) Y/N	1mL	1mL		GPC Prep Filter (1:1) CJZ 6/10/13 Analyst/Date
8	WR99 D	13.04	(1:1) Y/N	1mL	1mL		
8	DMS	13.04	(1:1) Y/N	1mL	1mL		
8	DMSD	13.01	(1:1) Y/N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6 YL 6/11/13 Analyst/Date
3	E	13.01	(1:1) Y/N	1mL	1mL	See Analyst Notes	
3	F	6.01	(1:1) Y/N	1mL	1mL	↓	
8	W521 A	13.04	(1:1) Y/N	1mL	1mL	Reviewed by SP 6/11/13	TurboVap 1 2 3 SP 6/11/13 Analyst/Date
Analyst/Date	YL 06/08/13		CJZ 6/10/13	SP 6/11/13	SP 6/11/13		

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2093-4)	100/150µg/mL	50µL	7/02/13	YL	
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/29/14	YL	
Base Spike	56 (2065-2)	200µg/mL	50µL	7/31/13	YL	
Acid Spike	38 (2091-4)	100/150µg/mL	50µL	2/28/14	YL	
~~QLS Spike (14 in Freezer)~~	~~14 ( )~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25 ( )~~	~~1µg/mL~~	~~50µL~~			
Extraction Time: 12:45			Balance ID: 146426			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~or large~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y /(N) B. Archive/Freeze Y /(N)

W521 : 2065

(8270D) BAN/SIM SVOA PSDDA-Soil/ Sediment)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) W549, WR99, W521

(8270D) BAN/SIM SVOA PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Pre-Deactivated Sodium Sulfate: (H# 157 **)**	CT 6-8-13
Anhydrous Sodium Sulfate: (I# 8130+ **jar date** 5-20-13**)**	YC
1:1 Methylene Chloride/Acetone: (H# 195 **)**	
Methylene Chloride: (I# 8249 **)**	Pre-GPC KD
Pre-Deactivated Glasswool: (H# 180 **)**	RR 6/10/13
Pre-GPC KD Station:	
Pre-Deactivated Glasswool: (H# 180 **)**	GPC Filter Prep
Anhydrous Sodium Sulfate: (I# 8130+ **jar date** 5/24/13 **)**	CSZ 6/10/13
Methylene Chloride: (I# 8249 **)**	
GPC Filter Prep:	GPC
Methylene Chloride: (I# 8270 **)**	CSZ 6/10/13
GPC Station:	
Acetone: (I# 8218 **)**	Post GPC KD
Methylene Chloride: (I# 8270 **)**	YL 6/11/13
Post GPC KD Station:	
Methylene Chloride: (I# 8270 **)**	Vialing
Vialing Station:	SG 6/11/13
Methylene Chloride: (I# 8270 **)**	
Hexane; (I# N/A **)**	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WS21 Client ID: SAIC

Parameter: BAN / SIM SVOA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
[X] No Anomalies (standard soil/wet sediment/sand/gravel)= A	YL 05/31/13
[X] Standing Water Decanted (Not shared)= A	YL 05/31/13
[ ] Standing Water Homogenized (Shared samples)=	
[ ] Clay/Clumps (Difficult to homogenize)=	
[ ] Rocks (%+size)?	
[ ] Organics (Leaves/sticks/grass)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Other (Details)=	
Aqueous:	
[ ] No Anomalies	
[ ] Turbid/Color=	
[ ] Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
[ ] Emulsions (%)=	
[ ] Other (Details)=	
[ ] Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 (NT-10) NT11 NT12

Curve Date(s): 04/29/13 Internal Standard ID 1998-2 Expiration 07/03/13

DFTPP Tune Meets Criteria?	(YES) / NO	Minimum Response Factors Met/	(YES) / NO
DDT Breakdown <20%?	(YES) / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	(YES) / NO	ICV Exceeding ±30%?	(YES) / NO
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	Linear Fits Used?	Benzidine YES / (NO)
Q flag applied?	YES / (NO)	Quadratic Fits Used?	(YES) / NO
Manual Integrations for ICal?	(YES) / NO	Calibration Points Dropped?	(YES) / NO
Spectral Library Updated?	(YES) / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	2072-1	6/31/13	UCT	2055-1	12/05/13
	2073-1	6/31/13		2054-1	12/31/13
	2004-2	01/25/14		2053-2	08/13/13
	B000112	10/15/13			
	1998-4	7/02/13			

Detail problems, corrective actions and/or other pertinent information below:

Benzoic acid, 2,4 Dinitrophenol, 4 Nitrophenol, Benzidine
4,6 Dinitro-2-methylphenol - quadratic fit used.

- Low point of the curve dropped for Benzoic acid, 4 Nitrophenol, 2,4 Dinitrophenol, Carbazole Benzidine

Analyst: YZ **Date:** 5/3/13

Reviewer: VD **Date:** 5.4.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/29/13 Analysis: AOC/SIM/AOC Analyst: YZ

GC Program: AOC_2 Column No: 247358252945 Column Type: 30 5 mc

Instrument Tune (.U or .CT.): 13122804 EM Voltage: ~~1625~~ 1650

Calibration File: DF0429 Curve Date: 04/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal		LCS/ICV
1998-2	~~2036-2~~	~~2050-1,2~~	2055-1
	~~2064-2~~	~~1998-4~~	2054-1
	~~2068-2~~		2053-1
	2072-1	B000112	
	2073-1	1998-4	
	2064-2		

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130429.b

	Time	Filename	LabID	ClientId	DF											
1	1537	df0429.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1653	ic0429a.d	IC0429A		1	8.99	45250	11.64	166754	15.54	106910	18.82	179783	23.90	192841	26.35	184310	24.99	229567
3	1730	ic0429b.d	IC0429B		1	8.99	36696	11.65	136283	15.55	88131	18.83	152272	23.90	162543	26.36	160177	25.00	211292
4	1807	ic0429c.d	IC0429C		1	8.99	50456	11.64	186081	15.54	109826	18.81	164210	23.90	198580	26.34	176934	24.99	212453
5	1844	ic0429d.d	IC0429D		1	8.98	44580	11.64	164171	15.54	101406	18.81	169929	23.90	185129	26.35	168300	25.00	198625
6	1921	ic0429e.d	IC0429E		1	8.99	38285	11.65	142908	15.54	92187	18.82	160272	23.90	172225	26.36	166300	25.00	210890
7	2034	ic0429g.d	IC0429G		1	8.99	36591	11.64	137898	15.54	87308	18.82	150153	23.90	164553	26.36	152859	25.00	178975
8	2147	ic0429i.d	IC0429I		1	8.98	41602	11.64	157250	15.53	94337	18.81	159582	23.90	170666	26.35	157899	24.99	174102
9	2224	ic0429icv.d	IC0429ICV		1	8.98	41390	11.64	152009	15.53	95722	18.81	161863	23.90	175186	26.35	166766	24.99	197383

YZ 5/03/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.349	26.357	26.342	26.349	26.357	26.357	26.350	26.349	23.349-29.349	26.352	0.006
	78 Indeno(1,2,3-cd)pyrene	28.690	28.713	28.674	28.682	28.705	28.697	28.690	28.690	25.690-31.690	28.693	0.013
	79 Dibenzo(a,h)anthracene	28.713	28.737	28.698	28.705	28.729	28.721	28.698	28.713	25.713-31.713	28.714	0.015
	80 Benzo(g,h,i)perylene	29.373	29.405	29.358	29.358	29.389	29.381	29.350	29.373	26.373-32.373	29.373	0.020
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.366	4.389	4.382	4.366	4.374	4.351	4.366	4.366	1.366-7.366	4.371	0.013
	91 Aniline	8.414	8.421	8.406	8.406	8.414	8.406	8.406	8.414	5.414-11.414	8.410	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.542	21.549	21.542	21.542	21.549	21.541	21.542	21.542	18.542-24.542	21.544	0.004
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	22.316	22.316	22.308	22.316	22.323	22.315	22.316	22.316	19.316-25.316	22.316	0.004
	99 Perylene	26.396	26.411	26.388	26.396	26.411	26.403	26.388	26.396	23.396-29.396	26.399	0.010
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.382	4.389	4.420	4.397	4.374	4.374	4.397	4.382	1.382-7.382	4.390	0.016
	188 2,6-Dichlorophenol	11.874	11.890	11.866	11.866	11.882	11.866	11.867	11.874	8.874-14.874	11.873	0.009
	189 N-Nitrosomethylethylam	5.818	5.825	5.833	5.818	5.825	5.817	5.818	5.818	2.818-8.818	5.822	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0429a	ic0429b	ic0429c	ic0429d	ic0429e	ic0429g	ic0429i
INJ.DATE:	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013
INJ.TIME:	16:53	17:30	18:07	18:44	19:21	20:34	21:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.629	6.636	6.636	6.628	6.628	6.628	6.629	6.629	3.629-9.629	6.631	0.004
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.645	5.645-11.645	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.455	14.455-20.455	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.696	17.696-23.696	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.219	16.219-22.219	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.949	19.949-25.949	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.195	16.195-22.195	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.503	17.503-23.503	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.827	4.827-10.827	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date: 5/3/13
Reviewer 2 _____ Date: 5-4-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	24.994	25.002	24.994	25.002	25.002	25.002	24.995	24.994	21.994-27.994	24.999	0.004
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
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Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	16.346	16.354	16.338	16.338	16.346	16.346	16.338	16.346	13.346-19.346	16.344	0.006
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	17.103	17.118	17.095	17.095	17.111	17.103	17.095	17.103	14.103-20.103	17.103	0.009
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.324	14.324-20.324	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.115	12.115-18.115	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.270	12.270-18.270	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.519	13.519-19.519	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.019	10.019-16.019	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.095	11.095-17.095	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.118	11.118-17.118	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.572	8.572-14.572	+++++	+++++

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	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106	Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
105	1-methylnaphthalene	13.437	13.437	13.429	13.429	13.437	13.429	13.430	13.437	10.437-16.437	13.433	0.004
151	1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
152	Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153	Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
154	Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
155	Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
156	Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
157	Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
158	Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
159	4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
160	Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
161	1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162	1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163	1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164	1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165	1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166	Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167	2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2	Phenol-d5	8.344	8.352	8.336	8.336	8.344	8.336	8.337	8.344	5.344-11.344	8.341	0.006
3	Phenol	8.367	8.375	8.360	8.360	8.367	8.359	8.360	8.367	5.367-11.367	8.364	0.006
4	Bis(2-Chloroethyl)ethe	8.522	8.530	8.522	8.522	8.529	8.522	8.522	8.522	5.522-11.522	8.524	0.004
$ 5	2-Chlorophenol-d4	8.599	8.607	8.599	8.591	8.599	8.599	8.599	8.599	5.599-11.599	8.599	0.004

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	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.630	8.638	8.630	8.622	8.630	8.622	8.622	8.630	5.630-11.630	8.628	0.006
	7 1,3-Dichlorobenzene	8.917	8.917	8.917	8.909	8.917	8.916	8.909	8.917	5.917-11.917	8.914	0.004
*	8 1,4-Dichlorobenzene-d4	8.986	8.986	8.986	8.979	8.986	8.986	8.979	8.986	5.986-11.986	8.984	0.004
	9 1,4-Dichlorobenzene	9.017	9.017	9.017	9.010	9.017	9.017	9.018	9.017	6.017-12.017	9.016	0.003
$	10 1,2-Dichlorobenzene-d4	9.367	9.375	9.367	9.367	9.367	9.367	9.367	9.367	6.367-12.367	9.368	0.003
	11 Benzyl alcohol	9.289	9.305	9.289	9.289	9.297	9.289	9.289	9.289	6.289-12.289	9.292	0.006
	12 1,2-Dichlorobenzene	9.398	9.398	9.398	9.390	9.398	9.390	9.390	9.398	6.398-12.398	9.394	0.004
	13 2-Methylphenol	9.553	9.561	9.553	9.545	9.553	9.553	9.553	9.553	6.553-12.553	9.553	0.005
	14 2,2'-oxybis(1-Chloropr	9.623	9.623	9.623	9.623	9.623	9.623	9.623	9.623	6.623-12.623	9.623	0.000
	15 4-Methylphenol	9.848	9.856	9.840	9.840	9.848	9.840	9.840	9.848	6.848-12.848	9.845	0.006
	16 N-Nitroso-di-n-propyla	9.902	9.910	9.902	9.895	9.902	9.894	9.895	9.902	6.902-12.902	9.900	0.006
	17 Hexachloroethane	10.027	10.027	10.027	10.019	10.026	10.026	10.027	10.027	7.027-13.027	10.025	0.003
$	18 Nitrobenzene-d5	10.159	10.166	10.158	10.158	10.158	10.158	10.159	10.159	7.159-13.159	10.160	0.003
	19 Nitrobenzene	10.197	10.205	10.197	10.197	10.197	10.197	10.190	10.197	7.197-13.197	10.197	0.004
	20 Isophorone	10.686	10.709	10.686	10.686	10.694	10.686	10.686	10.686	7.686-13.686	10.691	0.009
	21 2-Nitrophenol	10.872	10.879	10.872	10.872	10.879	10.871	10.872	10.872	7.872-13.872	10.874	0.004
	22 2,4-Dimethylphenol	10.964	10.980	10.964	10.964	10.972	10.964	10.964	10.964	7.964-13.964	10.967	0.006
	23 Bis(2-Chloroethoxy)met	11.180	11.188	11.172	11.172	11.180	11.172	11.172	11.180	8.180-14.180	11.176	0.006
	24 Benzoic acid	11.226	11.280	11.064	11.110	11.303	11.164	11.080	11.226	8.226-14.226	11.175	0.096
	25 2,4-Dichlorophenol	11.365	11.380	11.365	11.365	11.372	11.365	11.365	11.365	8.365-14.365	11.368	0.006
	26 1,2,4-Trichlorobenzene	11.565	11.565	11.558	11.558	11.565	11.557	11.558	11.565	8.565-14.565	11.561	0.004
*	27 Naphthalene-d8	11.643	11.650	11.643	11.643	11.650	11.642	11.643	11.643	8.643-14.643	11.645	0.004
	28 Naphthalene	11.689	11.697	11.689	11.689	11.689	11.689	11.681	11.689	8.689-14.689	11.689	0.004
	29 4-Chloroaniline	11.859	11.874	11.851	11.851	11.859	11.851	11.843	11.859	8.859-14.859	11.855	0.010

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	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	12.098	12.106	12.106	12.098	12.106	12.098	12.099	12.098	9.098-15.098	12.102	0.004
	31 4-Chloro-3-methylpheno	12.919	12.927	12.911	12.911	12.919	12.911	12.911	12.919	9.919-15.919	12.915	0.006
	32 2-Methylnaphthalene	13.197	13.205	13.197	13.197	13.197	13.197	13.197	13.197	10.197-16.197	13.198	0.003
	33 Hexachlorocyclopentadi	13.716	13.716	13.708	13.708	13.716	13.716	13.708	13.716	10.716-16.716	13.712	0.004
	34 2,4,6-Trichlorophenol	13.878	13.894	13.878	13.878	13.886	13.878	13.879	13.878	10.878-16.878	13.882	0.006
	35 2,4,5-Trichlorophenol	13.956	13.964	13.956	13.956	13.956	13.956	13.948	13.956	10.956-16.956	13.956	0.004
$	36 2-Fluorobiphenyl	14.064	14.064	14.056	14.056	14.064	14.056	14.057	14.064	11.064-17.064	14.060	0.004
	37 2-Chloronaphthalene	14.265	14.273	14.258	14.257	14.265	14.265	14.258	14.265	11.265-17.265	14.263	0.006
	38 2-Nitroaniline	14.559	14.575	14.559	14.552	14.567	14.559	14.552	14.559	11.559-17.559	14.560	0.008
	39 Dimethylphthalate	15.055	15.070	15.047	15.055	15.062	15.055	15.047	15.055	12.055-18.055	15.056	0.008
	40 Acenaphthylene	15.202	15.202	15.194	15.194	15.194	15.194	15.194	15.202	12.202-18.202	15.196	0.004
	41 2,6-Dinitrotoluene	15.194	15.202	15.186	15.186	15.194	15.186	15.179	15.194	12.194-18.194	15.190	0.008
*	42 Acenaphthene-d10	15.542	15.550	15.542	15.542	15.542	15.542	15.535	15.542	12.542-18.542	15.542	0.004
	43 3-Nitroaniline	15.488	15.511	15.480	15.480	15.496	15.480	15.473	15.488	12.488-18.488	15.487	0.013
	44 Acenaphthene	15.612	15.619	15.612	15.612	15.612	15.611	15.604	15.612	12.612-18.612	15.612	0.004
	45 2,4-Dinitrophenol	15.712	15.743	15.712	15.704	15.727	15.712	15.705	15.712	12.712-18.712	15.717	0.014
	46 Dibenzofuran	15.967	15.983	15.959	15.967	15.975	15.967	15.960	15.967	12.967-18.967	15.968	0.008
	47 4-Nitrophenol	15.867	15.890	15.867	15.859	15.874	15.859	15.867	15.867	12.867-18.867	15.869	0.011
	48 2,4-Dinitrotoluene	16.060	16.075	16.052	16.052	16.068	16.052	16.052	16.060	13.060-19.060	16.059	0.009
	49 Fluorene	16.740	16.748	16.733	16.733	16.740	16.732	16.733	16.740	13.740-19.740	16.737	0.006
	50 Diethylphthalate	16.640	16.663	16.632	16.632	16.647	16.640	16.632	16.640	13.640-19.640	16.641	0.011
	51 4-Chlorophenyl-phenyle	16.756	16.756	16.748	16.756	16.756	16.756	16.748	16.756	13.756-19.756	16.754	0.004
	52 4-Nitroaniline	16.856	16.895	16.856	16.848	16.872	16.856	16.841	16.856	13.856-19.856	16.861	0.018
	53 4,6-Dinitro-2-methylph	16.964	16.995	16.949	16.949	16.972	16.956	16.949	16.964	13.964-19.964	16.962	0.017

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	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	17.026	17.041	17.026	17.026	17.034	17.026	17.026	17.026	14.026-20.026	17.029	0.006
$	55 2,4,6-Tribromophenol	17.319	17.327	17.311	17.311	17.319	17.311	17.311	17.319	14.319-20.319	17.316	0.006
	56 4-Bromophenyl-phenylet	17.836	17.843	17.835	17.835	17.835	17.835	17.836	17.836	14.836-20.836	17.837	0.003
	57 Hexachlorobenzene	18.160	18.160	18.153	18.153	18.160	18.152	18.153	18.160	15.160-21.160	18.156	0.004
	58 Pentachlorophenol	18.555	18.563	18.547	18.547	18.555	18.547	18.548	18.555	15.555-21.555	18.552	0.006
*	59 Phenanthrene-d10	18.818	18.826	18.810	18.810	18.818	18.818	18.811	18.818	15.818-21.818	18.816	0.006
	60 Phenanthrene	18.865	18.872	18.857	18.857	18.865	18.864	18.857	18.865	15.865-21.865	18.862	0.006
	61 Anthracene	18.965	18.973	18.957	18.957	18.965	18.957	18.958	18.965	15.965-21.965	18.962	0.006
	62 Carbazole	19.313	19.321	19.313	19.313	19.321	19.313	19.314	19.313	16.313-22.313	19.316	0.004
	63 Di-n-butylphthalate	20.188	20.188	20.188	20.188	20.188	20.187	20.188	20.188	17.188-23.188	20.188	0.000
	64 Fluoranthene	21.286	21.286	21.279	21.278	21.286	21.286	21.279	21.286	18.286-24.286	21.283	0.004
	65 Pyrene	21.704	21.704	21.696	21.696	21.704	21.704	21.697	21.704	18.704-24.704	21.701	0.004
$	66 Terphenyl-d14	22.021	22.029	22.021	22.021	22.029	22.029	22.022	22.021	19.021-25.021	22.025	0.004
	67 Butylbenzylphthalate	22.974	22.974	22.966	22.974	22.974	22.974	22.974	22.974	19.974-25.974	22.973	0.003
	68 Benzo(a)anthracene	23.872	23.880	23.864	23.864	23.872	23.872	23.864	23.872	20.872-26.872	23.870	0.006
*	69 Chrysene-d12	23.895	23.903	23.895	23.895	23.903	23.903	23.895	23.895	20.895-26.895	23.898	0.004
	70 3,3'-Dichlorobenzidine	23.849	23.857	23.841	23.849	23.856	23.849	23.841	23.849	20.849-26.849	23.849	0.006
	71 Chrysene	23.942	23.949	23.934	23.942	23.949	23.941	23.934	23.942	20.942-26.942	23.942	0.006
	72 bis(2-Ethylhexyl)phtha	24.019	24.019	24.019	24.019	24.027	24.027	24.019	24.019	21.019-27.019	24.021	0.004
	73 Di-n-octylphthalate	25.010	25.010	25.002	25.010	25.018	25.017	25.002	25.010	22.010-28.010	25.010	0.006
	74 Benzo(b)fluoranthene	25.668	25.676	25.660	25.668	25.676	25.668	25.660	25.668	22.668-28.668	25.668	0.006
	75 Benzo(k)fluoranthene	25.707	25.722	25.699	25.707	25.714	25.714	25.699	25.707	22.707-28.707	25.709	0.009
	187 Total Benzofluoranthen	25.707	25.722	25.660	25.668	25.714	25.668	25.699	25.707	22.707-28.707	25.691	0.025
	76 Benzo(a)pyrene	26.249	26.257	26.241	26.241	26.256	26.249	26.241	26.249	23.249-29.249	26.248	0.007

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Average

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/ic0429c.d
Level 2: /chem1/nt10.i/20130429.b/ic0429i.d
Level 3: /chem1/nt10.i/20130429.b/ic0429d.d
Level 4: /chem1/nt10.i/20130429.b/ic0429g.d
Level 5: /chem1/nt10.i/20130429.b/ic0429a.d
Level 6: /chem1/nt10.i/20130429.b/ic0429e.d
Level 7: /chem1/nt10.i/20130429.b/ic0429b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.32264	1.26754	1.24075	1.27398	1.12394	1.24670						
	1.18447						AVRG		1.23715		5.24731	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

Analytical Resources, Inc.

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

Analytical Resources, Inc.

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.70389	0.59747	0.62527	0.63990	0.63292	0.66830	0.67337	AVRG		0.64873		5.46363	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
162 1,2,3,4-Tetrachloronapthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	2.07745	2.01663	1.99013	2.15135	2.00628	2.20020					
	2.03355						AVRG		2.06794		3.85914
4 Bis(2-Chloroethyl)ether	1.56929	1.53896	1.46972	1.55326	1.37664	1.50058					
	1.40120						AVRG		1.48709		5.05358

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.55026	1.46704	1.47133	1.54154	1.50983	1.81549					
	1.80786						AVRG		1.59477		9.49947
7 1,3-Dichlorobenzene	1.69336	1.54473	1.58950	1.59956	1.55227	1.62846					
	1.59424						AVRG		1.60030		3.12454
9 1,4-Dichlorobenzene	1.71397	1.52647	1.51341	1.62532	1.53264	1.58116					
	1.54877						AVRG		1.57739		4.51793
11 Benzyl alcohol	0.85064	0.73516	0.83060	0.90072	0.88286	0.96932					
	0.91989						AVRG		0.86989		8.59920
12 1,2-Dichlorobenzene	1.62518	1.49204	1.50624	1.51578	1.45554	1.49728					
	1.47965						AVRG		1.51024		3.59480
13 2-Methylphenol	1.49001	1.40570	1.44998	1.54407	1.45837	1.56041					
	1.50801						AVRG		1.48808		3.66935
14 2,2'-oxybis(1-Chloropropane)	0.42611	0.44017	0.46397	0.48471	0.45795	0.47727					
	0.46264						AVRG		0.45898		4.42060

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
15 4-Methylphenol	1.43729	1.35493	1.48973	1.59318	1.52748	1.67713					
	1.54128						AVRG		1.51729		6.88641
16 N-Nitroso-di-n-propylamine	0.95251	0.89419	0.87815	0.98621	0.88743	0.97695					
	0.92792						AVRG		0.92905		4.74330
17 Hexachloroethane	0.68931	0.65881	0.65446	0.68375	0.62023	0.66920					
	0.64417						AVRG		0.65999		3.59193
19 Nitrobenzene	0.39510	0.39280	0.38552	0.39982	0.36572	0.40371					
	0.38522						AVRG		0.38970		3.22892
20 Isophorone	0.71195	0.66432	0.67279	0.71065	0.68101	0.86242					
	0.82790						AVRG		0.73300		10.82033
21 2-Nitrophenol	0.20754	0.18635	0.20138	0.22080	0.22866	0.24164					
	0.24290						AVRG		0.21847		9.68506
22 2,4-Dimethylphenol	0.41192	0.37230	0.39344	0.41516	0.40245	0.42253					
	0.39424						AVRG		0.40172		4.20008

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
23 Bis(2-Chloroethoxy)methane	0.44346	0.43452	0.43284	0.44204	0.41435	0.44041						
	0.41838						AVRG		0.43229		2.68164	
24 Benzoic acid	+++++	0.16051	0.25143	0.30891	0.33851	0.37356						
	0.37918						AVRG		0.30202		27.71646	<-
25 2,4-Dichlorophenol	0.31803	0.28833	0.38510	0.39343	0.39479	0.41768						
	0.39114						AVRG		0.36979		12.81889	
26 1,2,4-Trichlorobenzene	0.41240	0.34976	0.36404	0.35417	0.34495	0.35336						
	0.35130						AVRG		0.36143		6.42232	
28 Naphthalene	1.20528	1.00604	1.04043	1.06395	1.02045	1.07273						
	1.04570						AVRG		1.06494		6.20233	
29 4-Chloroaniline	0.42433	0.36449	0.40631	0.42348	0.42526	0.48932						
	0.38118						AVRG		0.41634		9.58081	
30 Hexachlorobutadiene	0.23345	0.19983	0.21390	0.20892	0.20729	0.22093						
	0.21857						AVRG		0.21470		5.08490	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.26343	0.27218	0.31153	0.34377	0.34343	0.37735					
	0.36548						AVRG		0.32531		13.65102
32 2-Methylnaphthalene	0.74054	0.67388	0.68178	0.70154	0.68736	0.73921					
	0.72726						AVRG		0.70737		3.96516
33 Hexachlorocyclopentadiene	0.44835	0.39323	0.41506	0.42533	0.44262	0.46660					
	0.48996						AVRG		0.44016		7.36429
34 2,4,6-Trichlorophenol	0.38934	0.36825	0.40727	0.42611	0.43278	0.45335					
	0.46998						AVRG		0.42101		8.44390
35 2,4,5-Trichlorophenol	0.35538	0.37249	0.41863	0.44267	0.45433	0.49279					
	0.50176						AVRG		0.43401		12.87553
37 2-Chloronaphthalene	1.25763	1.04782	1.06917	1.09796	1.07105	1.12488					
	1.11166						AVRG		1.11145		6.27651
38 2-Nitroaniline	0.20469	0.22227	0.26060	0.28971	0.28861	0.31072					
	0.30122						AVRG		0.26826		15.20234

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
39 Dimethylphthalate	1.36489	1.13508	1.17192	1.19054	1.15985	1.20823						
	1.17494						AVRG		1.20078		6.32260	
40 Acenaphthylene	2.08676	1.80273	1.83141	1.81650	1.77233	2.12941						
	1.75642						AVRG		1.88508		8.21819	
41 2,6-Dinitrotoluene	0.26069	0.25725	0.27537	0.29601	0.28450	0.30512						
	0.29050						AVRG		0.28135		6.35382	
43 3-Nitroaniline	0.20751	0.21366	0.25373	0.25128	0.24013	0.25105						
	0.20850						AVRG		0.23227		9.23578	
44 Acenaphthene	1.30679	1.09641	1.08357	1.13351	1.06627	1.13513						
	1.13044						AVRG		1.13602		7.04098	
45 2,4-Dinitrophenol	+++++	0.09212	0.14513	0.19634	0.23880	0.27206						
	0.28220						AVRG		0.20444		36.60389	<-
46 Dibenzofuran	1.67283	1.49829	1.51991	1.55200	1.47200	1.58360						
	1.57471						AVRG		1.55334		4.27158	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
47 4-Nitrophenol	+++++	0.07895	0.11479	0.15259	0.16439	0.18465						
	0.18270						AVRG		0.14635		28.48976	<-
48 2,4-Dinitrotoluene	0.30512	0.31097	0.36079	0.38342	0.37756	0.40613						
	0.39616						AVRG		0.36288		11.05203	
49 Fluorene	1.46413	1.26025	1.30008	1.33638	1.27146	1.34389						
	1.30199						AVRG		1.32546		5.15880	
50 Diethylphthalate	1.35396	1.14110	1.15749	1.20605	1.17048	1.22908						
	1.18817						AVRG		1.20662		5.91539	
51 4-Chlorophenyl-phenylether	0.73753	0.60252	0.61409	0.61582	0.59152	0.72584						
	0.67359						AVRG		0.65156		9.31141	
52 4-Nitroaniline	0.21006	0.19776	0.27062	0.24001	0.24443	0.27164						
	0.25433						AVRG		0.24126		11.76360	
53 4,6-Dinitro-2-methylphenol	0.10675	0.12341	0.16076	0.17466	0.18882	0.19809						
	0.19914						AVRG		0.16452		22.27885	<-

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
54 N-Nitrosodiphenylamine	0.49563	0.42947	0.47333	0.47261	0.45791	0.46123					
	0.45114						AVRG		0.46304		4.45876
56 4-Bromophenyl-phenylether	0.22767	0.21687	0.23028	0.22247	0.22312	0.22955					
	0.23436						AVRG		0.22633		2.59516
57 Hexachlorobenzene	0.32278	0.25772	0.26649	0.25845	0.25551	0.26286					
	0.26660						AVRG		0.27006		8.75648
58 Pentachlorophenol	0.15515	0.14017	0.17294	0.19921	0.21130	0.22141					
	0.22676						AVRG		0.18956		17.84287
60 Phenanthrene	1.22947	1.01265	1.08610	1.06561	1.04600	1.09893					
	1.09863						AVRG		1.09106		6.27534
61 Anthracene	1.19624	1.06794	1.09848	1.10290	1.07915	1.13739					
	1.14221						AVRG		1.11776		3.95191
62 Carbazole	+++++	0.79964	0.83444	0.64299	0.47569	0.60549					
	0.71548						AVRG		0.67896		19.54874

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
63 Di-n-butylphthalate	1.23468	1.00016	1.09465	1.11547	1.14103	1.23687					
	1.25417						AVRG		1.15386		8.08770
64 Fluoranthene	1.35769	1.17978	1.24657	1.24812	1.27294	1.33427					
	1.34952						AVRG		1.28413		5.11850
65 Pyrene	1.37184	1.13560	1.19244	1.19696	1.22185	1.25931					
	1.28506						AVRG		1.23758		6.17908
67 Butylbenzylphthalate	0.42623	0.34242	0.41245	0.41654	0.43945	0.45663					
	0.46466						AVRG		0.42263		9.55905
68 Benzo(a)anthracene	1.25572	1.03482	1.09368	1.07381	1.09465	1.13986					
	1.14667						AVRG		1.11989		6.34024
70 3,3'-Dichlorobenzidine	0.51204	0.36539	0.40605	0.35790	0.38490	0.47001					
	0.48944						AVRG		0.42653		14.75318
71 Chrysene	1.17786	0.95330	0.94998	0.97296	0.97716	1.02164					
	1.04126						AVRG		1.01345		7.90157

Analytical Resources, Inc.

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	1.04908	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92019		6.73684
73 Di-n-octylphthalate	1.05463	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92098		6.94061
74 Benzo(b)fluoranthene	1.35044	1.05465	1.09386	1.12584	1.21507	1.24210					
	1.23295						AVRG		1.18784		8.59752
75 Benzo(k)fluoranthene	1.42924	1.14868	1.24463	1.22609	1.13947	1.22473					
	1.34515						AVRG		1.25114		8.31220
187 Total Benzofluoranthenes	1.30881	1.05407	1.12671	1.11857	1.11816	1.16984					
	1.17534						AVRG		1.15307		6.89595
76 Benzo(a)pyrene	1.15104	0.87256	0.97331	0.97345	1.00238	1.05501					
	1.07592						AVRG		1.01481		8.78911
78 Indeno(1,2,3-cd)pyrene	1.18245	1.01361	1.10322	1.12112	1.20413	1.27168					
	1.28789						AVRG		1.16916		8.32633

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
79 Dibenzo(a,h)anthracene	0.92380	0.73303	0.85483	0.88584	0.92025	0.96990					
	0.99039						AVRG		0.89686		9.55761
80 Benzo(g,h,i)perylene	1.04564	0.90225	0.98911	0.99122	1.00081	1.07106					
	1.08082						AVRG		1.01156		6.05123
90 N-Nitrosodimethylamine	0.88097	0.87544	0.88313	0.96297	0.85634	0.99623					
	0.92370						AVRG		0.91125		5.67695
91 Aniline	4.00230	3.88308	3.89376	4.21542	3.95352	4.21183					
	3.92480						AVRG		4.01210		3.56908
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	8518	23877	29714	60043	110746					
	257371						QUAD	0.000e+00	8.17939	-1.16399	0.99615
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	5229	8851	20776	46252	111862	206286						
	402573						QUAD	0.000e+00	2.17724	-0.06444	0.99996	
99 Perylene	1.36017	1.09787	1.11603	1.09868	1.10144	1.16094						
	1.18529						AVRG		1.16006		8.15448	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.72677	0.80583	0.78852	0.86813	0.78009	0.84643						
	0.79117						AVRG		0.80099		5.76462	

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	0.60097	0.54247	0.59080	0.60713	0.60866	0.63218						
	0.61259						AVRG		0.59926		4.67591	
189 N-Nitrosomethylethylamine	1.30866	1.29196	1.30579	1.43515	1.30380	1.45857						
	1.41072						AVRG		1.35923		5.31332	
$ 1 2-Fluorophenol	1.34097	1.36474	1.37344	1.45728	1.43245	1.53225						
	1.49284						AVRG		1.42771		4.99388	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.74449	1.70146	1.73037	1.88081	1.85833	2.05451						
	1.96238						AVRG		1.84748		7.08965	
$ 5 2-Chlorophenol-d4	1.48208	1.31763	1.34482	1.41250	1.38956	1.44002						
	1.43020						AVRG		1.40240		4.04486	
$ 10 1,2-Dichlorobenzene-d4	0.98938	1.00149	0.99695	1.02158	0.98109	1.04380						
	1.02722						AVRG		1.00879		2.24119	

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.42885	0.41732	0.41764	0.42993	0.40061	0.44115					
	0.41922						AVRG		0.42210		3.03179
$ 36 2-Fluorobiphenyl	1.56575	1.33869	1.34323	1.37457	1.33669	1.41362					
	1.40005						AVRG		1.39609		5.78874
$ 55 2,4,6-Tribromophenol	0.19995	0.17003	0.19549	0.21364	0.21873	0.24192					
	0.24098						AVRG		0.21154		12.14622
$ 66 Terphenyl-d14	0.89183	0.70027	0.75407	0.75999	0.76286	0.79419					
	0.78729						AVRG		0.77864		7.50175
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

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Cal Date : 30-Apr-2013 11:53 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/ic0429c.d
Level 2: /chem1/nt10.i/20130429.b/ic0429i.d
Level 3: /chem1/nt10.i/20130429.b/ic0429d.d
Level 4: /chem1/nt10.i/20130429.b/ic0429g.d
Level 5: /chem1/nt10.i/20130429.b/ic0429a.d
Level 6: /chem1/nt10.i/20130429.b/ic0429e.d
Level 7: /chem1/nt10.i/20130429.b/ic0429b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
120 2,3,4,6-Tetrachlorophenol	0.26333	0.25576	0.30846	0.32296	0.35171	0.37615	0.38141	AVRG		0.32283		15.66985	
178 2-Benzyl-4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.32264	1.26754	1.24075	1.27398	1.12394	1.24670						
	1.18447						AVRG		1.23715		5.24731	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

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	20 Level 7											
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.70389	0.59747	0.62527	0.63990	0.63292	0.66830						
	0.67337						AVRG		0.64873		5.46363	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
162 1,2,3,4-Tetrachloronapthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	2.07745	2.01663	1.99013	2.15135	2.00628	2.20020					
	2.03355						AVRG		2.06794		3.85914
4 Bis(2-Chloroethyl)ether	1.56929	1.53896	1.46972	1.55326	1.37664	1.50058					
	1.40120						AVRG		1.48709		5.05358

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.55026	1.46704	1.47133	1.54154	1.50983	1.81549					
	1.80786						AVRG		1.59477		9.49947
7 1,3-Dichlorobenzene	1.69336	1.54473	1.58950	1.59956	1.55227	1.62846					
	1.59424						AVRG		1.60030		3.12454
9 1,4-Dichlorobenzene	1.71397	1.52647	1.51341	1.62532	1.53264	1.58116					
	1.54877						AVRG		1.57739		4.51793
11 Benzyl alcohol	0.85064	0.73516	0.83060	0.90072	0.88286	0.96932					
	0.91989						AVRG		0.86989		8.59920
12 1,2-Dichlorobenzene	1.62518	1.49204	1.50624	1.51578	1.45554	1.49728					
	1.47965						AVRG		1.51024		3.59480
13 2-Methylphenol	1.49001	1.40570	1.44998	1.54407	1.45837	1.56041					
	1.50801						AVRG		1.48808		3.66935
14 2,2'-oxybis(1-Chloropropane)	0.42611	0.44017	0.46397	0.48471	0.45795	0.47727					
	0.46264						AVRG		0.45898		4.42060

Analytical Resources, Inc.

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
15 4-Methylphenol	1.43729	1.35493	1.48973	1.59318	1.52748	1.67713					
	1.54128						AVRG		1.51729		6.88641
16 N-Nitroso-di-n-propylamine	0.95251	0.89419	0.87815	0.98621	0.88743	0.97695					
	0.92792						AVRG		0.92905		4.74330
17 Hexachloroethane	0.68931	0.65881	0.65446	0.68375	0.62023	0.66920					
	0.64417						AVRG		0.65999		3.59193
19 Nitrobenzene	0.39510	0.39280	0.38552	0.39982	0.36572	0.40371					
	0.38522						AVRG		0.38970		3.22892
20 Isophorone	0.71195	0.66432	0.67279	0.71065	0.68101	0.86242					
	0.82790						AVRG		0.73300		10.82033
21 2-Nitrophenol	0.20754	0.18635	0.20138	0.22080	0.22866	0.24164					
	0.24290						AVRG		0.21847		9.68506
22 2,4-Dimethylphenol	0.41192	0.37230	0.39344	0.41516	0.40245	0.42253					
	0.39424						AVRG		0.40172		4.20008

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
23 Bis(2-Chloroethoxy)methane	0.44346	0.43452	0.43284	0.44204	0.41435	0.44041					
	0.41838						AVRG		0.43229		2.68164
24 Benzoic acid	+++++	12620	41278	106496	282242	533852					
	1033515						QUAD	0.000e+00	2.88330	-0.03348	0.99937
25 2,4-Dichlorophenol	0.31803	0.28833	0.38510	0.39343	0.39479	0.41768					
	0.39114						AVRG		0.36979		12.81889
26 1,2,4-Trichlorobenzene	0.41240	0.34976	0.36404	0.35417	0.34495	0.35336					
	0.35130						AVRG		0.36143		6.42232
28 Naphthalene	1.20528	1.00604	1.04043	1.06395	1.02045	1.07273					
	1.04570						AVRG		1.06494		6.20233
29 4-Chloroaniline	0.42433	0.36449	0.40631	0.42348	0.42526	0.48932					
	0.38118						AVRG		0.41634		9.58081
30 Hexachlorobutadiene	0.23345	0.19983	0.21390	0.20892	0.20729	0.22093					
	0.21857						AVRG		0.21470		5.08490

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.26343	0.27218	0.31153	0.34377	0.34343	0.37735					
	0.36548						AVRG		0.32531		13.65102
32 2-Methylnaphthalene	0.74054	0.67388	0.68178	0.70154	0.68736	0.73921					
	0.72726						AVRG		0.70737		3.96516
33 Hexachlorocyclopentadiene	0.44835	0.39323	0.41506	0.42533	0.44262	0.46660					
	0.48996						AVRG		0.44016		7.36429
34 2,4,6-Trichlorophenol	0.38934	0.36825	0.40727	0.42611	0.43278	0.45335					
	0.46998						AVRG		0.42101		8.44390
35 2,4,5-Trichlorophenol	0.35538	0.37249	0.41863	0.44267	0.45433	0.49279					
	0.50176						AVRG		0.43401		12.87553
37 2-Chloronaphthalene	1.25763	1.04782	1.06917	1.09796	1.07105	1.12488					
	1.11166						AVRG		1.11145		6.27651
38 2-Nitroaniline	0.20469	0.22227	0.26060	0.28971	0.28861	0.31072					
	0.30122						AVRG		0.26826		15.20234

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
39 Dimethylphthalate	1.36489	1.13508	1.17192	1.19054	1.15985	1.20823	1.17494	AVRG		1.20078		6.32260
40 Acenaphthylene	2.08676	1.80273	1.83141	1.81650	1.77233	2.12941	1.75642	AVRG		1.88508		8.21819
41 2,6-Dinitrotoluene	0.26069	0.25725	0.27537	0.29601	0.28450	0.30512	0.29050	AVRG		0.28135		6.35382
43 3-Nitroaniline	0.20751	0.21366	0.25373	0.25128	0.24013	0.25105	0.20850	AVRG		0.23227		9.23578
44 Acenaphthene	1.30679	1.09641	1.08357	1.13351	1.06627	1.13513	1.13044	AVRG		1.13602		7.04098
45 2,4-Dinitrophenol	+++++	4345	14717	42855	127651	250805	497418	QUAD	0.000e+00	4.08739	-0.09870	0.99880
46 Dibenzofuran	1.67283	1.49829	1.51991	1.55200	1.47200	1.58360	1.57471	AVRG		1.55334		4.27158

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
47 4-Nitrophenol	+++++	1862	5820	16653	43938	85112					
	161016						QUAD	0.000e+00	5.79130	-0.18557	0.99905
48 2,4-Dinitrotoluene	0.30512	0.31097	0.36079	0.38342	0.37756	0.40613					
	0.39616						AVRG		0.36288		11.05203
49 Fluorene	1.46413	1.26025	1.30008	1.33638	1.27146	1.34389					
	1.30199						AVRG		1.32546		5.15880
50 Diethylphthalate	1.35396	1.14110	1.15749	1.20605	1.17048	1.22908					
	1.18817						AVRG		1.20662		5.91539
51 4-Chlorophenyl-phenylether	0.73753	0.60252	0.61409	0.61582	0.59152	0.72584					
	0.67359						AVRG		0.65156		9.31141
52 4-Nitroaniline	0.21006	0.19776	0.27062	0.24001	0.24443	0.27164					
	0.25433						AVRG		0.24126		11.76360
53 4,6-Dinitro-2-methylphenol	3933	9847	27317	65565	169735	317489					
	606483						QUAD	0.000e+00	5.26585	-0.06370	0.99977

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
54 N-Nitrosodiphenylamine	0.49563	0.42947	0.47333	0.47261	0.45791	0.46123					
	0.45114						AVRG		0.46304		4.45876
56 4-Bromophenyl-phenylether	0.22767	0.21687	0.23028	0.22247	0.22312	0.22955					
	0.23436						AVRG		0.22633		2.59516
57 Hexachlorobenzene	0.32278	0.25772	0.26649	0.25845	0.25551	0.26286					
	0.26660						AVRG		0.27006		8.75648
58 Pentachlorophenol	0.15515	0.14017	0.17294	0.19921	0.21130	0.22141					
	0.22676						AVRG		0.18956		17.84287
60 Phenanthrene	1.22947	1.01265	1.08610	1.06561	1.04600	1.09893					
	1.09863						AVRG		1.09106		6.27534
61 Anthracene	1.19624	1.06794	1.09848	1.10290	1.07915	1.13739					
	1.14221						AVRG		1.11776		3.95191
62 Carbazole	+++++	0.79964	0.83444	0.64299	0.47569	0.60549					
	0.71548						AVRG		0.67896		19.54874

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Integrator : HP RTE
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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
63 Di-n-butylphthalate	1.23468	1.00016	1.09465	1.11547	1.14103	1.23687					
	1.25417						AVRG		1.15386		8.08770
64 Fluoranthene	1.35769	1.17978	1.24657	1.24812	1.27294	1.33427					
	1.34952						AVRG		1.28413		5.11850
65 Pyrene	1.37184	1.13560	1.19244	1.19696	1.22185	1.25931					
	1.28506						AVRG		1.23758		6.17908
67 Butylbenzylphthalate	0.42623	0.34242	0.41245	0.41654	0.43945	0.45663					
	0.46466						AVRG		0.42263		9.55905
68 Benzo(a)anthracene	1.25572	1.03482	1.09368	1.07381	1.09465	1.13986					
	1.14667						AVRG		1.11989		6.34024
70 3,3'-Dichlorobenzidine	0.51204	0.36539	0.40605	0.35790	0.38490	0.47001					
	0.48944						AVRG		0.42653		14.75318
71 Chrysene	1.17786	0.95330	0.94998	0.97296	0.97716	1.02164					
	1.04126						AVRG		1.01345		7.90157

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	1.04908	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92019		6.73684
73 Di-n-octylphthalate	1.05463	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92098		6.94061
74 Benzo(b)fluoranthene	1.35044	1.05465	1.09386	1.12584	1.21507	1.24210					
	1.23295						AVRG		1.18784		8.59752
75 Benzo(k)fluoranthene	1.42924	1.14868	1.24463	1.22609	1.13947	1.22473					
	1.34515						AVRG		1.25114		8.31220
187 Total Benzofluoranthenes	1.30881	1.05407	1.12671	1.11857	1.11816	1.16984					
	1.17534						AVRG		1.15307		6.89595
76 Benzo(a)pyrene	1.15104	0.87256	0.97331	0.97345	1.00238	1.05501					
	1.07592						AVRG		1.01481		8.78911
78 Indeno(1,2,3-cd)pyrene	1.18245	1.01361	1.10322	1.12112	1.20413	1.27168					
	1.28789						AVRG		1.16916		8.32633

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
79 Dibenzo(a,h)anthracene	0.92380	0.73303	0.85483	0.88584	0.92025	0.96990					
	0.99039						AVRG		0.89686		9.55761
80 Benzo(g,h,i)perylene	1.04564	0.90225	0.98911	0.99122	1.00081	1.07106					
	1.08082						AVRG		1.01156		6.05123
90 N-Nitrosodimethylamine	0.88097	0.87544	0.88313	0.96297	0.85634	0.99623					
	0.92370						AVRG		0.91125		5.67695
91 Aniline	4.00230	3.88308	3.89376	4.21542	3.95352	4.21183					
	3.92480						AVRG		4.01210		3.56908
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	8518	23877	29714	60043	110746					
	257371						QUAD	0.000e+00	8.17939	-1.16399	0.99615
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	0.52664	0.41489	0.44890	0.44972	0.46406	0.47911						
	0.49534						AVRG		0.46838		7.71935	
99 Perylene	1.36017	1.09787	1.11603	1.09868	1.10144	1.16094						
	1.18529						AVRG		1.16006		8.15448	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.72677	0.80583	0.78852	0.86813	0.78009	0.84643						
	0.79117						AVRG		0.80099		5.76462	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	0.60097	0.54247	0.59080	0.60713	0.60866	0.63218						
	0.61259						AVRG		0.59926		4.67591	
189 N-Nitrosomethylethylamine	1.30866	1.29196	1.30579	1.43515	1.30380	1.45857						
	1.41072						AVRG		1.35923		5.31332	
$ 1 2-Fluorophenol	1.34097	1.36474	1.37344	1.45728	1.43245	1.53225						
	1.49284						AVRG		1.42771		4.99388	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.74449	1.70146	1.73037	1.88081	1.85833	2.05451						
	1.96238						AVRG		1.84748		7.08965	
$ 5 2-Chlorophenol-d4	1.48208	1.31763	1.34482	1.41250	1.38956	1.44002						
	1.43020						AVRG		1.40240		4.04486	
$ 10 1,2-Dichlorobenzene-d4	0.98938	1.00149	0.99695	1.02158	0.98109	1.04380						
	1.02722						AVRG		1.00879		2.24119	

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	20 Level 7										
$ 18 Nitrobenzene-d5	0.42885	0.41732	0.41764	0.42993	0.40061	0.44115					
	0.41922						AVRG		0.42210		3.03179
$ 36 2-Fluorobiphenyl	1.56575	1.33869	1.34323	1.37457	1.33669	1.41362					
	1.40005						AVRG		1.39609		5.78874
$ 55 2,4,6-Tribromophenol	0.19995	0.17003	0.19549	0.21364	0.21873	0.24192					
	0.24098						AVRG		0.21154		12.14622
$ 66 Terphenyl-d14	0.89183	0.70027	0.75407	0.75999	0.76286	0.79419					
	0.78729						AVRG		0.77864		7.50175
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429a.d
Lab Smp Id: IC0429A
Inj Date : 29-APR-2013 16:53
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429A
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 16:53 Cal File: ic0429a.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.629	6.629	(0.738)	81023	5.00000	5.017
$	2 Phenol-d5	99	8.344	8.337	(0.929)	105112	5.00000	5.029
	3 Phenol	94	8.367	8.360	(0.931)	113480	5.00000	4.851
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	78597	5.00000	4.954
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	77866	5.00000	4.629
	6 2-Chlorophenol	128	8.630	8.622	(0.960)	85400	5.00000	4.734
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	87800	5.00000	4.850
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	45250	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	86690	5.00000	4.858
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	55493	5.00000	4.863
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	82329	5.00000	4.819
	11 Benzyl alcohol	108	9.289	9.289	(1.034)	49937	5.00000	5.075
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	25903	5.00000	4.989
	13 2-Methylphenol	108	9.553	9.553	(1.063)	82489	5.00000	4.900
	17 Hexachloroethane	117	10.027	10.027	(1.116)	35082	5.00000	4.699
	16 N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	50195	5.00000	4.776
	15 4-Methylphenol	108	9.848	9.840	(1.096)	86398	5.00000	5.034
$	18 Nitrobenzene-d5	82	10.159	10.159	(0.873)	83504	5.00000	4.745
	19 Nitrobenzene	77	10.197	10.190	(0.876)	76232	5.00000	4.692
	20 Isophorone	82	10.686	10.686	(0.918)	141952	5.00000	4.645
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	47662	5.00000	5.233
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	167774	10.0000	10.02
	23 Bis(2-Chloroethoxy)methane	93	11.180	11.172	(0.960)	86369	5.00000	4.793
	24 Benzoic acid	105	11.226	11.080	(0.964)	282242	20.0000	19.18
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	164580	10.0000	10.68
	26 1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	71903	5.00000	4.772
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	166754	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	212706	5.00000	4.791
	29 4-Chloroaniline	127	11.859	11.843	(1.019)	177286	10.0000	10.21
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	43209	5.00000	4.828
	31 4-Chloro-3-methylphenol	107	12.919	12.911	(1.110)	143169	10.0000	10.56
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	143274	5.00000	4.859
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	118300	10.0000	10.06
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	115672	10.0000	10.28
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	121431	10.0000	10.47
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.905)	178632	5.00000	4.787
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	143132	5.00000	4.818
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	77138	10.0000	10.76
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	154999	5.00000	4.830
	40 Acenaphthylene	152	15.202	15.194	(0.978)	236850	5.00000	4.701
	41 2,6-Dinitrotoluene	165	15.194	15.179	(0.978)	76040	10.0000	10.11
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	106910	4.00000	
	43 3-Nitroaniline	138	15.488	15.473	(0.997)	64182	10.0000	10.34
	44 Acenaphthene	153	15.612	15.604	(1.004)	142494	5.00000	4.693
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	127651	20.0000	18.96
	46 Dibenzofuran	168	15.967	15.960	(1.027)	196715	5.00000	4.738
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	43938	10.0000	9.395
	48 2,4-Dinitrotoluene	165	16.060	16.052	(1.033)	100913	10.0000	10.40
	50 Diethylphthalate	149	16.640	16.632	(1.071)	156420	5.00000	4.850
	49 Fluorene	166	16.740	16.733	(1.077)	169915	5.00000	4.796
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	79049	5.00000	4.539
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	65331	10.0000	10.13
	53 4,6-Dinitro-2-methylphenol	198	16.964	16.949	(0.901)	169735	20.0000	19.66
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	102905	5.00000	4.945
$	55 2,4,6-Tribromophenol	330	17.319	17.311	(1.114)	29230	5.00000	5.170
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	50141	5.00000	4.929
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	57420	5.00000	4.731
	58 Pentachlorophenol	266	18.555	18.548	(0.986)	94970	10.0000	11.15
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	179783	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.002)	235067	5.00000	4.794
	61 Anthracene	178	18.965	18.958	(1.008)	242517	5.00000	4.827
	62 Carbazole	167	19.313	19.314	(1.026)	106901	5.00000	3.503
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	256423	5.00000	4.944
	64 Fluoranthene	202	21.286	21.279	(1.131)	286067	5.00000	4.956
	65 Pyrene	202	21.704	21.697	(0.908)	294528	5.00000	4.936
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	183888	5.00000	4.899
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	105931	5.00000	5.199
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	263867	5.00000	4.887
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	192841	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	185563	10.0000	9.024
	71 Chrysene	228	23.942	23.934	(1.002)	235545	5.00000	4.821
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	144972	5.00000	4.750(M)
*	134 Di-n-octylphthalate-d4	153	24.994	24.995	(1.000)	229567	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.001)	250054	5.00000	4.731

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	279937	5.00000	5.115
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	262519	5.00000	4.554
76	Benzo(a)pyrene	252	26.249	26.241	(0.996)	230935	5.00000	4.939
* 77	Perylene-d12	264	26.349	26.350	(1.000)	184310	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	277417	5.00000	5.150
79	Dibenzo(a,h)anthracene	278	28.713	28.698	(1.090)	212015	5.00000	5.130
80	Benzo(g,h,i)perylene	276	29.373	29.350	(1.115)	230573	5.00000	4.947
90	N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	96874	10.0000	9.397
91	Aniline	93	8.414	8.406	(0.936)	223621	5.00000	4.927
93	Benzidine	184	21.542	21.542	(0.902)	60043	10.0000	9.736
103	Pyridine	79	4.382	4.397	(0.488)	88248	10.0000	9.739
105	1-methylnaphthalene	142	13.437	13.430	(1.154)	131928	5.00000	4.878
111	Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.100)	150200	5.00000	4.542
187	Total Benzofluoranthenes	252	25.707	25.699	(0.976)	515221	10.0000	9.694
99	Perylene	252	26.396	26.388	(1.002)	253757	5.00000	4.747
98	Retene	219	22.316	22.316	(0.934)	111862	5.00000	4.954
120	2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	47002	5.00000	5.447
188	2,6-Dichlorophenol	162	11.874	11.867	(1.020)	253741	10.0000	10.16
189	N-Nitrosomethylethylamine	88	5.818	5.818	(0.647)	147492	10.0000	9.592

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429a.d
Lab Smp Id: IC0429A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	45250	0.00
27 Naphthalene-d8	166754	83377	333508	166754	0.00
42 Acenaphthene-d10	106910	53455	213820	106910	0.00
59 Phenanthrene-d10	179783	89892	359566	179783	0.00
69 Chrysene-d12	192841	96420	385682	192841	0.00
134 Di-n-octylphthala	229567	114784	459134	229567	0.00
77 Perylene-d12	184310	92155	368620	184310	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

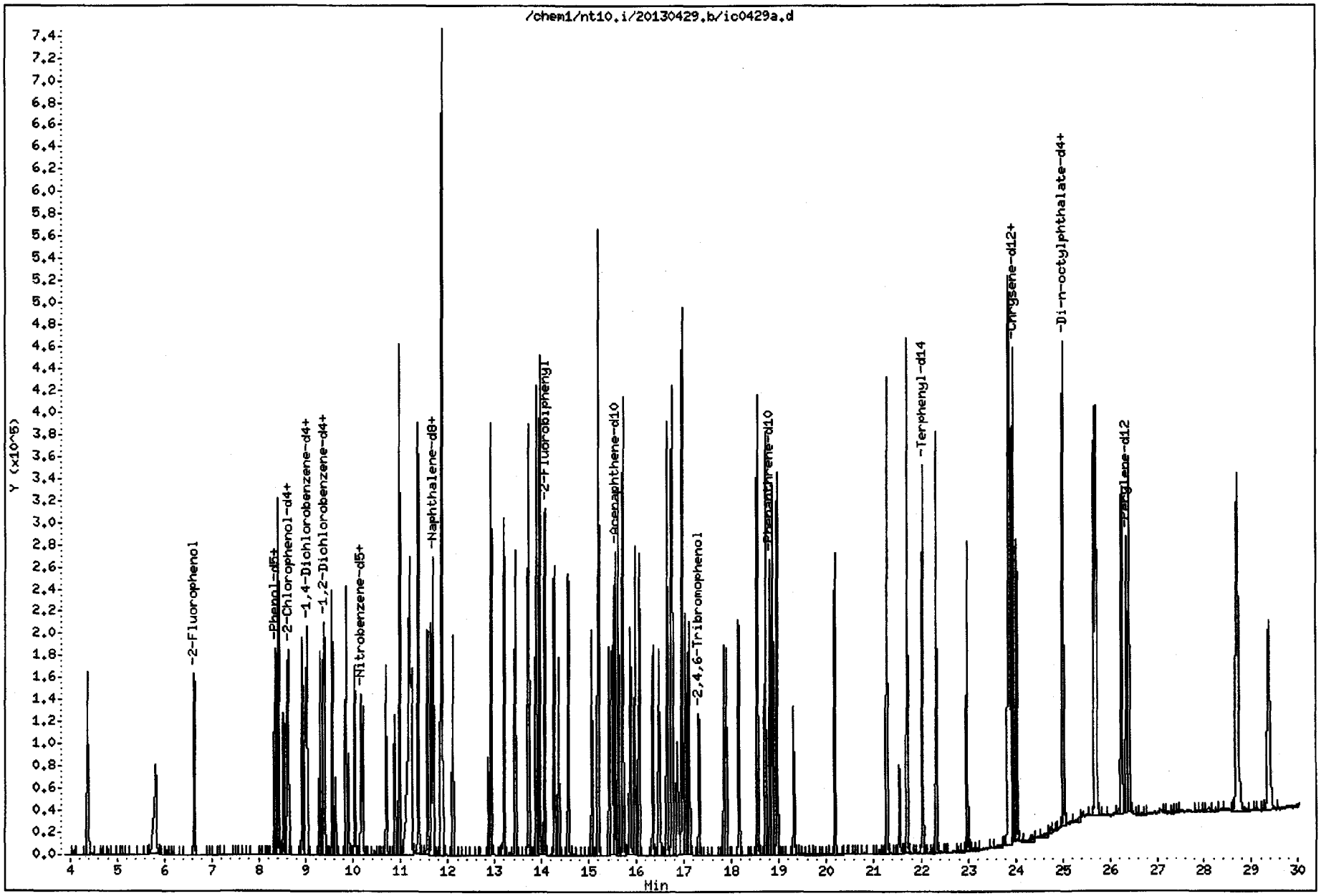
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429a.d
Date : 29-APR-2013 16:53
Client ID:
Sample Info: IC0429A

Instrument: nt10.i

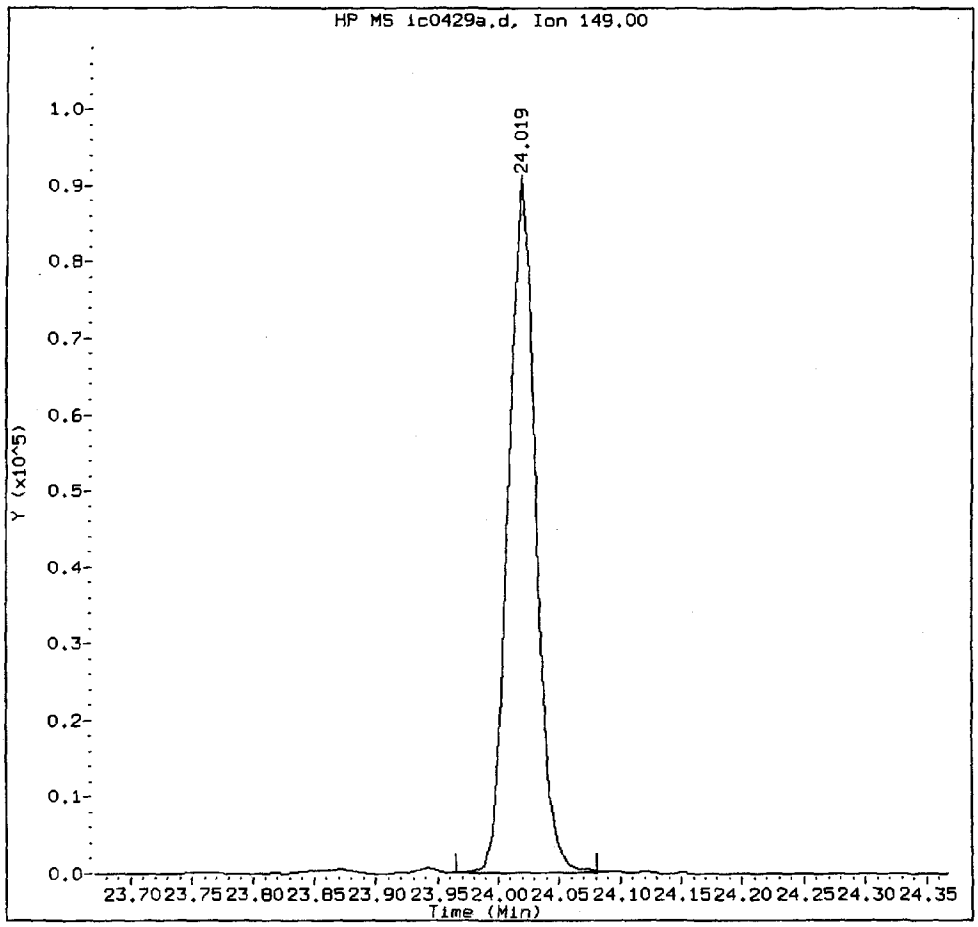
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429A, /chem1/nt10.i/20130429.b/ic0429a.d

bis(2-Ethylhexyl)phthalate Amount: 4.75 Area: 144972



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429a.d

Lab ID: IC0429A, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429b.d
Lab Smp Id: IC0429B
Inj Date : 29-APR-2013 17:30
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429B
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 17:30 Cal File: ic0429b.d
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.636	6.629	(0.738)	273907	20.0000	20.91
$ 2	Phenol-d5	99	8.352	8.337	(0.929)	360057	20.0000	21.24
3	Phenol	94	8.375	8.360	(0.932)	373116	20.0000	19.67
$ 5	2-Chlorophenol-d4	132	8.607	8.599	(0.958)	262414	20.0000	20.40
4	Bis(2-Chloroethyl)ether	93	8.530	8.522	(0.949)	257095	20.0000	18.85
6	2-Chlorophenol	128	8.638	8.622	(0.961)	331706	20.0000	22.67
7	1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	292512	20.0000	19.92
* 8	1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	36696	4.00000	
9	1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	284169	20.0000	19.64
$ 10	1,2-Dichlorobenzene-d4	152	9.375	9.367	(1.043)	188475	20.0000	20.37
12	1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	271486	20.0000	19.59
11	Benzyl alcohol	108	9.305	9.289	(1.035)	168782	20.0000	21.15
14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	84885	20.0000	20.16
13	2-Methylphenol	108	9.561	9.553	(1.064)	276689	20.0000	20.27
17	Hexachloroethane	117	10.027	10.027	(1.116)	118193	20.0000	19.52
16	N-Nitroso-di-n-propylamine	70	9.910	9.895	(1.103)	170255	20.0000	19.98
15	4-Methylphenol	108	9.856	9.840	(1.097)	282794	20.0000	20.32
$ 18	Nitrobenzene-d5	82	10.166	10.159	(0.873)	285663	20.0000	19.86
19	Nitrobenzene	77	10.205	10.190	(0.876)	262495	20.0000	19.77
20	Isophorone	82	10.709	10.686	(0.919)	564145	20.0000	22.59
21	2-Nitrophenol	139	10.879	10.872	(0.934)	165519	20.0000	22.24
22	2,4-Dimethylphenol	107	10.980	10.964	(0.942)	537286	40.0000	39.26
23	Bis(2-Chloroethoxy)methane	93	11.188	11.172	(0.960)	285091	20.0000	19.36
24	Benzoic acid	105	11.388	11.080	(0.977)	1043882	80.0000	79.78(M)
25	2,4-Dichlorophenol	162	11.380	11.365	(0.977)	533058	40.0000	42.31
26	1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	239383	20.0000	19.44
* 27	Naphthalene-d8	136	11.650	11.643	(1.000)	136283	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28	Naphthalene	128	11.697	11.681	(1.004)	712555	20.0000	19.64
29	4-Chloroaniline	127	11.874	11.843	(1.019)	519478	40.0000	36.62
30	Hexachlorobutadiene	225	12.106	12.099	(1.039)	148934	20.0000	20.36
31	4-Chloro-3-methylphenol	107	12.927	12.911	(1.110)	498092	40.0000	44.94
32	2-Methylnaphthalene	142	13.205	13.197	(1.133)	495565	20.0000	20.56
33	Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	431807	40.0000	44.53
34	2,4,6-Trichlorophenol	196	13.894	13.879	(0.894)	414194	40.0000	44.65
35	2,4,5-Trichlorophenol	196	13.964	13.948	(0.898)	442203	40.0000	46.24
$ 36	2-Fluorobiphenyl	172	14.064	14.057	(0.904)	616937	20.0000	20.06
37	2-Chloronaphthalene	162	14.273	14.258	(0.918)	489858	20.0000	20.00
38	2-Nitroaniline	65	14.575	14.552	(0.937)	265470	40.0000	44.92
39	Dimethylphthalate	163	15.070	15.047	(0.969)	517745	20.0000	19.57
40	Acenaphthylene	152	15.202	15.194	(0.978)	773977	20.0000	18.64
41	2,6-Dinitrotoluene	165	15.202	15.179	(0.978)	256022	40.0000	41.30
* 42	Acenaphthene-d10	164	15.550	15.535	(1.000)	88131	4.00000	
43	3-Nitroaniline	138	15.511	15.473	(0.998)	183750	40.0000	35.91
44	Acenaphthene	153	15.619	15.604	(1.004)	498134	20.0000	19.90
45	2,4-Dinitrophenol	184	15.743	15.705	(1.012)	497418	80.0000	79.70
46	Dibenzofuran	168	15.983	15.960	(1.028)	693905	20.0000	20.28
47	4-Nitrophenol	109	15.890	15.867	(1.022)	161016	40.0000	39.85
48	2,4-Dinitrotoluene	165	16.075	16.052	(1.034)	349138	40.0000	43.67
50	Diethylphthalate	149	16.663	16.632	(1.072)	523573	20.0000	19.69
49	Fluorene	166	16.748	16.733	(1.077)	573728	20.0000	19.65
51	4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	296820	20.0000	20.68
52	4-Nitroaniline	138	16.895	16.841	(1.086)	224140	40.0000	42.17
53	4,6-Dinitro-2-methylphenol	198	16.995	16.949	(0.903)	606483	80.0000	79.85
54	N-Nitrosodiphenylamine	169	17.041	17.026	(0.905)	343477	20.0000	19.49
$ 55	2,4,6-Tribromophenol	330	17.327	17.311	(1.114)	106190	20.0000	22.78
56	4-Bromophenyl-phenylether	248	17.843	17.836	(0.948)	178429	20.0000	20.71
57	Hexachlorobenzene	284	18.160	18.153	(0.965)	202975	20.0000	19.74
58	Pentachlorophenol	266	18.563	18.548	(0.986)	345299	40.0000	47.85
* 59	Phenanthrene-d10	188	18.826	18.811	(1.000)	152272	4.00000	
60	Phenanthrene	178	18.872	18.857	(1.002)	836454	20.0000	20.14
61	Anthracene	178	18.973	18.958	(1.008)	869630	20.0000	20.44
62	Carbazole	167	19.321	19.314	(1.026)	544741	20.0000	21.08
63	Di-n-butylphthalate	149	20.188	20.188	(1.072)	954876	20.0000	21.74
64	Fluoranthene	202	21.286	21.279	(1.131)	1027468	20.0000	21.02
65	Pyrene	202	21.704	21.697	(0.908)	1044384	20.0000	20.77
$ 66	Terphenyl-d14	244	22.029	22.022	(0.922)	639846	20.0000	20.22
67	Butylbenzylphthalate	149	22.974	22.974	(0.961)	377639	20.0000	21.99
68	Benzo(a)anthracene	228	23.880	23.864	(0.999)	931914	20.0000	20.48
* 69	Chrysene-d12	240	23.903	23.895	(1.000)	162543	4.00000	
70	3,3'-Dichlorobenzidine	252	23.857	23.841	(0.998)	795550	40.0000	45.90
71	Chrysene	228	23.949	23.934	(1.002)	846249	20.0000	20.55
72	bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	538822	20.0000	19.18(M)
* 134	Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	211292	4.00000	
73	Di-n-octylphthalate	149	25.010	25.002	(1.000)	944988	20.0000	19.42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.676	25.660	(0.974)	987454	20.0000	20.76
75	Benzo(k)fluoranthene	252	25.722	25.699	(0.976)	1077307	20.0000	21.50
76	Benzo(a)pyrene	252	26.257	26.241	(0.996)	861687	20.0000	21.20
* 77	Perylene-d12	264	26.357	26.350	(1.000)	160177	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.713	28.690	(1.089)	1031455	20.0000	22.03
79	Dibenzo(a,h)anthracene	278	28.737	28.698	(1.090)	793192	20.0000	22.09
80	Benzo(g,h,i)perylene	276	29.405	29.350	(1.116)	865612	20.0000	21.37
90	N-Nitrosodimethylamine	74	4.389	4.366	(0.488)	338961	40.0000	40.55
91	Aniline	93	8.421	8.406	(0.937)	720123	20.0000	19.56
93	Benzidine	184	21.549	21.542	(0.902)	257371	40.0000	40.13
103	Pyridine	79	4.389	4.397	(0.488)	290326	40.0000	39.51
105	1-methylnaphthalene	142	13.437	13.430	(1.153)	458844	20.0000	20.76
111	Azobenzene (1,2-DP-Hydrazine)	77	17.118	17.095	(1.101)	521942	20.0000	19.15
187	Total Benzofluoranthenes	252	25.722	25.699	(0.976)	1886688	40.0000	40.85
99	Perylene	252	26.411	26.388	(1.002)	949277	20.0000	20.43
98	Retene	219	22.316	22.316	(0.934)	402573	20.0000	21.15
120	2,3,4,6-Tetrachlorophenol	232	16.354	16.338	(1.052)	168064	20.0000	23.63
188	2,6-Dichlorophenol	162	11.890	11.867	(1.021)	834861	40.0000	40.89
189	N-Nitrosomethylethylamine	88	5.825	5.818	(0.648)	517676	40.0000	41.51

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429b.d
Lab Smp Id: IC0429B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36696	-18.90
27 Naphthalene-d8	166754	83377	333508	136283	-18.27
42 Acenaphthene-d10	106910	53455	213820	88131	-17.57
59 Phenanthrene-d10	179783	89892	359566	152272	-15.30
69 Chrysene-d12	192841	96420	385682	162543	-15.71
134 Di-n-octylphthala	229567	114784	459134	211292	-7.96
77 Perylene-d12	184310	92155	368620	160177	-13.09

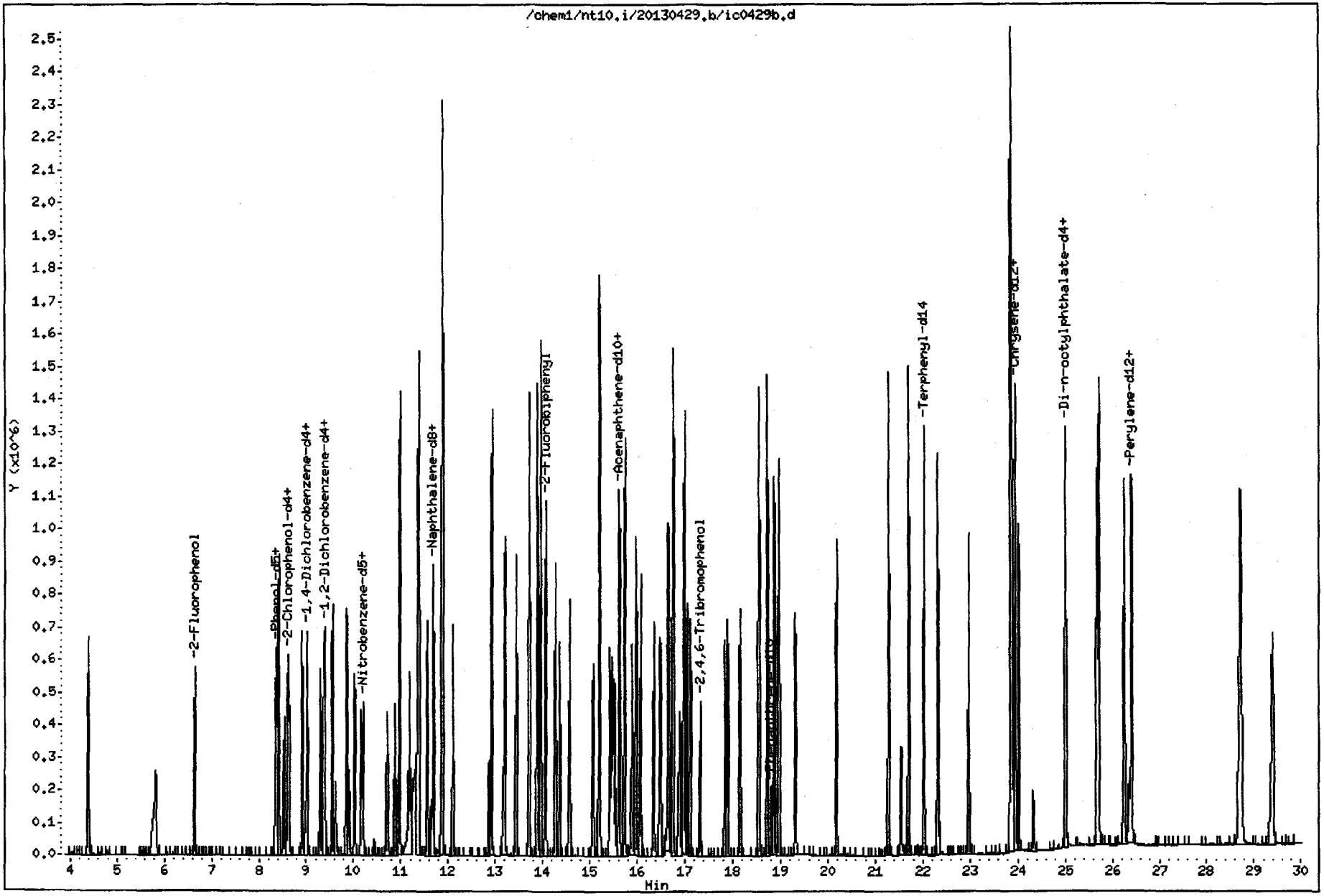
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.65	0.07
42 Acenaphthene-d10	15.54	15.04	16.04	15.55	0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.83	0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429b.d
Date : 29-APR-2013 17:30
Client ID:
Sample Info: IC0429B

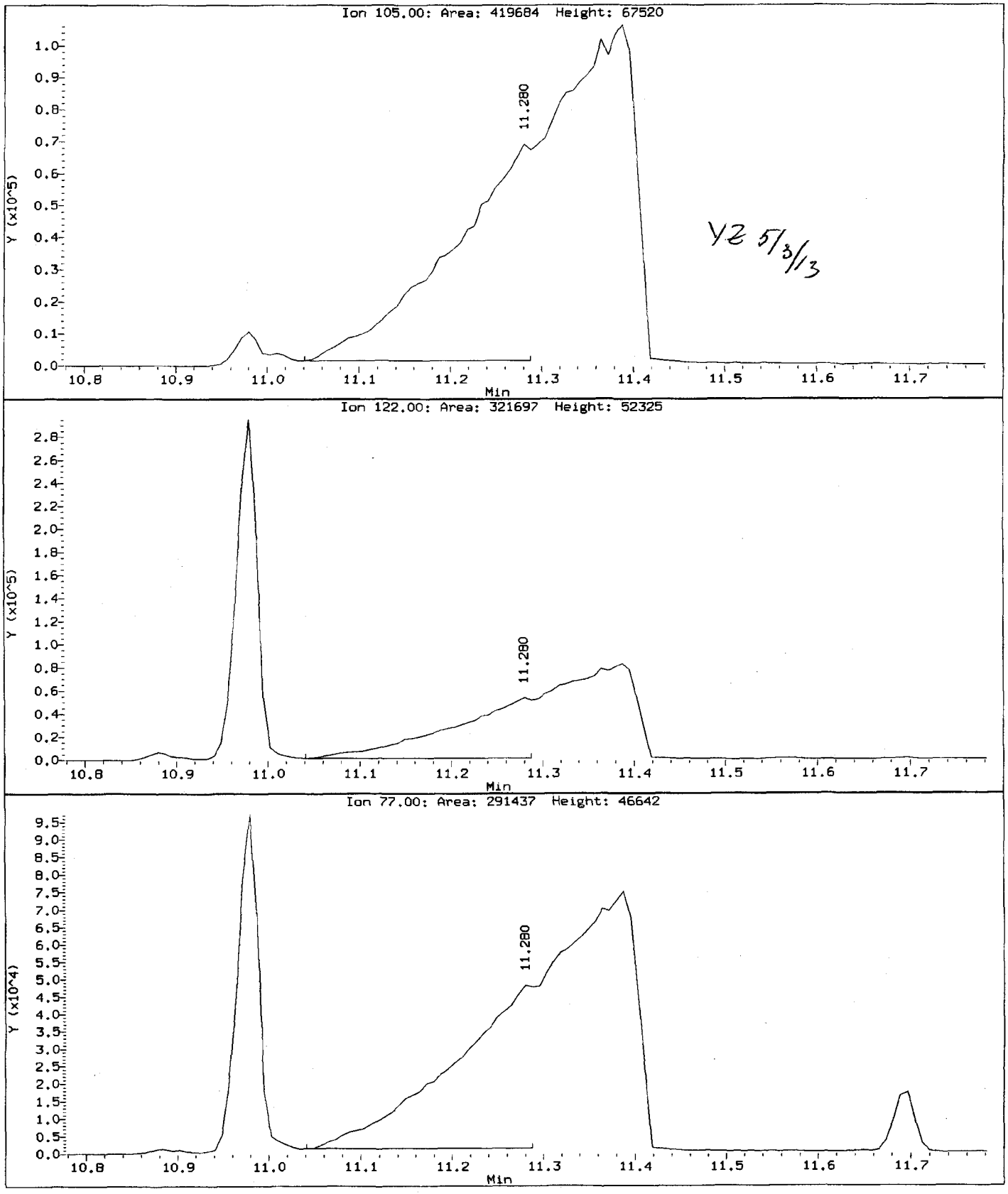
Instrument: nt10.i

Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



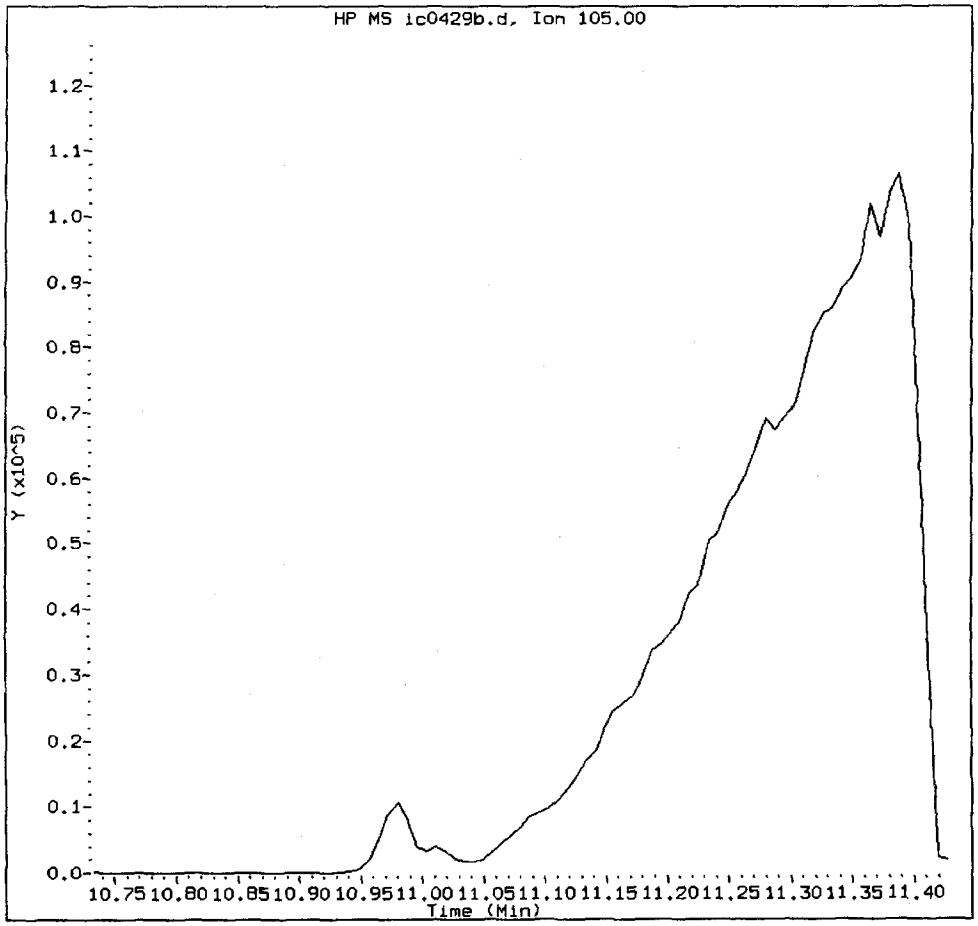
Data File: /chem1/nt10.i/20130429.b/ic0429b.d
Injection Date: 29-APR-2013 17:30
Instrument: nt10.i
Client Sample ID:

Compound: Benzoic acid
CAS Number: 65-85-0



IC0429B, /chem1/nt10.i/20130429.b/ic0429b.d

Benzoic acid Amount: 79.78 Area: 1043882



MANUAL INTEGRATION for Benzoic acid

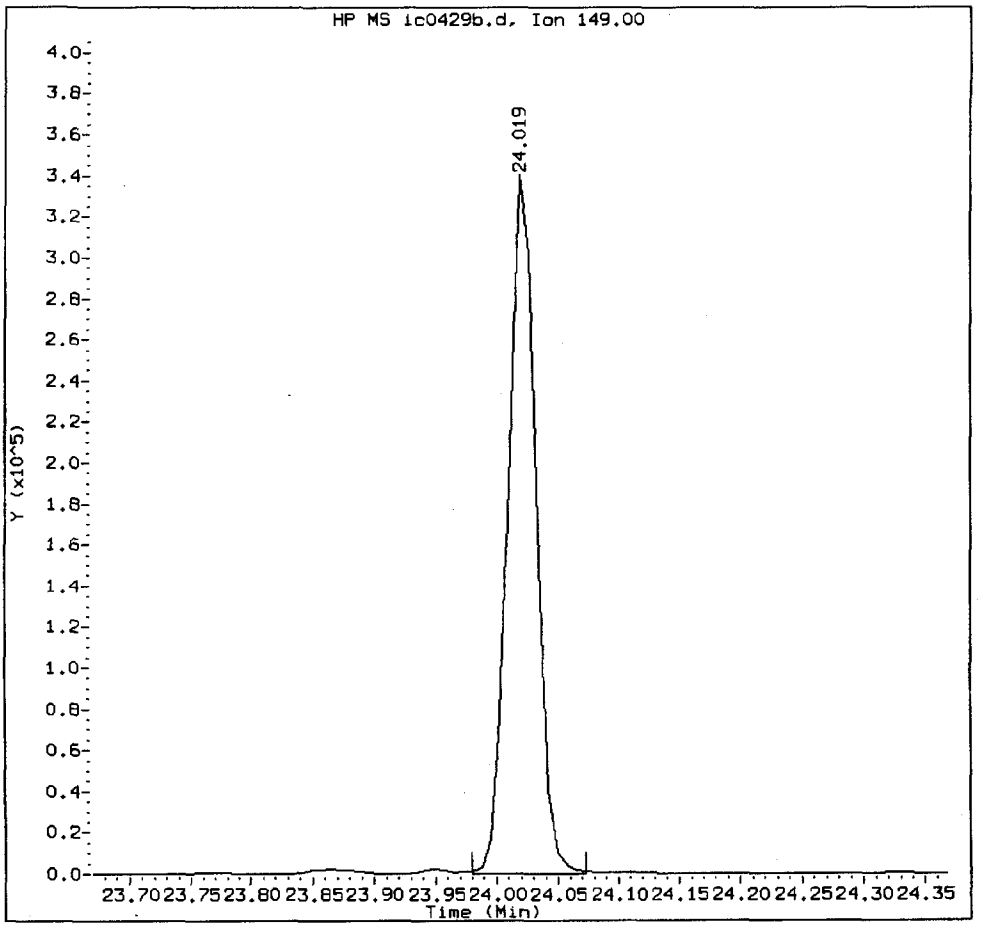
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/9/13

IC0429B, /chem1/nt10.i/20130429.b/ic0429b.d

bis(2-Ethylhexyl)phthalate Amount: 19.18 Area: 538822



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429b.d

Lab ID: IC0429B, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
15.202	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429c.d
Lab Smp Id: IC0429C
Inj Date : 29-APR-2013 18:07
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429C
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:07 Cal File: ic0429c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.636	6.629	(0.738)	3383	0.20000	0.1878
$	2	Phenol-d5	99	8.336	8.337	(0.928)	4401	0.20000	0.1889
	3	Phenol	94	8.360	8.360	(0.930)	5241	0.20000	0.2009
$	5	2-Chlorophenol-d4	132	8.599	8.599	(0.957)	3739	0.20000	0.2114
	4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	3959	0.20000	0.2111
	6	2-Chlorophenol	128	8.630	8.622	(0.960)	3911	0.20000	0.1944
	7	1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	4272	0.20000	0.2116
*	8	1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	50456	4.00000	
	9	1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	4324	0.20000	0.2173
$	10	1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	2496	0.20000	0.1962
	12	1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	4100	0.20000	0.2152
	11	Benzyl alcohol	108	9.289	9.289	(1.034)	2146	0.20000	0.1956
	14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	1075	0.20000	0.1857
	13	2-Methylphenol	108	9.553	9.553	(1.063)	3759	0.20000	0.2003
	17	Hexachloroethane	117	10.027	10.027	(1.116)	1739	0.20000	0.2089
	16	N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	2403	0.20000	0.2051
	15	4-Methylphenol	108	9.840	9.840	(1.095)	3626	0.20000	0.1895
$	18	Nitrobenzene-d5	82	10.158	10.159	(0.873)	3990	0.20000	0.2032
	19	Nitrobenzene	77	10.197	10.190	(0.876)	3676	0.20000	0.2028
	20	Isophorone	82	10.686	10.686	(0.918)	6624	0.20000	0.1943
	21	2-Nitrophenol	139	10.872	10.872	(0.934)	1931	0.20000	0.1900
	22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	7665	0.40000	0.4102
	23	Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	4126	0.20000	0.2052
	24	Benzoic acid	105	11.064	11.080	(0.950)	4976	0.80000	0.3099
	25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	5918	0.40000	0.3440
	26	1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	3837	0.20000	0.2282
*	27	Naphthalene-d8	136	11.643	11.643	(1.000)	186081	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	11214	0.20000	0.2264
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	7896	0.40000	0.4077
	30 Hexachlorobutadiene	225	12.106	12.099	(1.040)	2172	0.20000	0.2175
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	4902	0.40000	0.3239
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	6890	0.20000	0.2094
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	4924	0.40000	0.4074
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	4276	0.40000	0.3699
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	3903	0.40000	0.3275
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	8598	0.20000	0.2243
	37 2-Chloronaphthalene	162	14.258	14.258	(0.917)	6906	0.20000	0.2263
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	2248	0.40000	0.3052
	39 Dimethylphthalate	163	15.047	15.047	(0.968)	7495	0.20000	0.2273
	40 Acenaphthylene	152	15.194	15.194	(0.978)	11459	0.20000	0.2214
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	2863	0.40000	0.3706
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	109826	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	2279	0.40000	0.3574(M)
	44 Acenaphthene	153	15.612	15.604	(1.004)	7176	0.20000	0.2301
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	1264	0.80000	0.1881
	46 Dibenzofuran	168	15.959	15.960	(1.027)	9186	0.20000	0.2154
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	600	0.40000	0.1265
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	3351	0.40000	0.3363
	50 Diethylphthalate	149	16.632	16.632	(1.070)	7435	0.20000	0.2244
	49 Fluorene	166	16.733	16.733	(1.077)	8040	0.20000	0.2209
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	4050	0.20000	0.2264
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	2307	0.40000	0.3483
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	3933	0.80000	0.4496
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	4565	0.20000	0.2141
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	1098	0.20000	0.1890
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	2097	0.20000	0.2012
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	2973	0.20000	0.2390
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	2858	0.40000	0.3274
*	59 Phenanthrene-d10	188	18.810	18.811	(1.000)	184210	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	11324	0.20000	0.2254
	61 Anthracene	178	18.957	18.958	(1.008)	11018	0.20000	0.2140
	62 Carbazole	167	19.313	19.314	(1.027)	8831	0.20000	0.2824
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	11372	0.20000	0.2140
	64 Fluoranthene	202	21.279	21.279	(1.131)	12505	0.20000	0.2115
	65 Pyrene	202	21.696	21.697	(0.908)	13621	0.20000	0.2217
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	8855	0.20000	0.2291
	67 Butylbenzylphthalate	149	22.966	22.974	(0.961)	4232	0.20000	0.2017
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	12468	0.20000	0.2243
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	198580	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	10168	0.40000	0.4802
	71 Chrysene	228	23.934	23.934	(1.002)	11695	0.20000	0.2324
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	6713	0.20000	0.2377(M)
*	134 Di-n-octylphthalate-d4	153	24.994	24.995	(1.000)	212453	4.00000	
	73 Di-n-octylphthalate	149	25.002	25.002	(1.000)	11203	0.20000	0.2290

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.660	25.660	(0.974)	12082	0.20000	0.2274
75	Benzo(k)fluoranthene	252	25.699	25.699	(0.976)	12787	0.20000	0.2285
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	10298	0.20000	0.2268
* 77	Perylene-d12	264	26.342	26.350	(1.000)	178934	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.674	28.690	(1.089)	10579	0.20000	0.2023
79	Dibenzo(a,h)anthracene	278	28.698	28.698	(1.089)	8265	0.20000	0.2060
80	Benzo(g,h,i)perylene	276	29.358	29.350	(1.115)	9355	0.20000	0.2067
90	N-Nitrosodimethylamine	74	4.382	4.366	(0.488)	4445	0.40000	0.3867
91	Aniline	93	8.406	8.406	(0.935)	10097	0.20000	0.1995
93	Benzidine	184	21.542	21.542	(0.902)	6811	0.40000	1.117
103	Pyridine	79	4.420	4.397	(0.492)	3667	0.40000	0.3629
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	6549	0.20000	0.2170
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	7263	0.20000	0.2138
187	Total Benzofluoranthenes	252	25.660	25.699	(0.974)	23419	0.40000	0.4539
99	Perylene	252	26.388	26.388	(1.002)	12169	0.20000	0.2345
98	Retene	219	22.308	22.316	(0.934)	5229	0.20000	0.2249
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.051)	1446	0.20000	0.1631
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	11183	0.40000	0.4011
189	N-Nitrosomethylethylamine	88	5.833	5.818	(0.649)	6603	0.40000	0.3851

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429c.d
Lab Smp Id: IC0429C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	50456	11.50
27 Naphthalene-d8	166754	83377	333508	186081	11.59
42 Acenaphthene-d10	106910	53455	213820	109826	2.73
59 Phenanthrene-d10	179783	89892	359566	184210	2.46
69 Chrysene-d12	192841	96420	385682	198580	2.98
134 Di-n-octylphthala	229567	114784	459134	212453	-7.45
77 Perylene-d12	184310	92155	368620	178934	-2.92

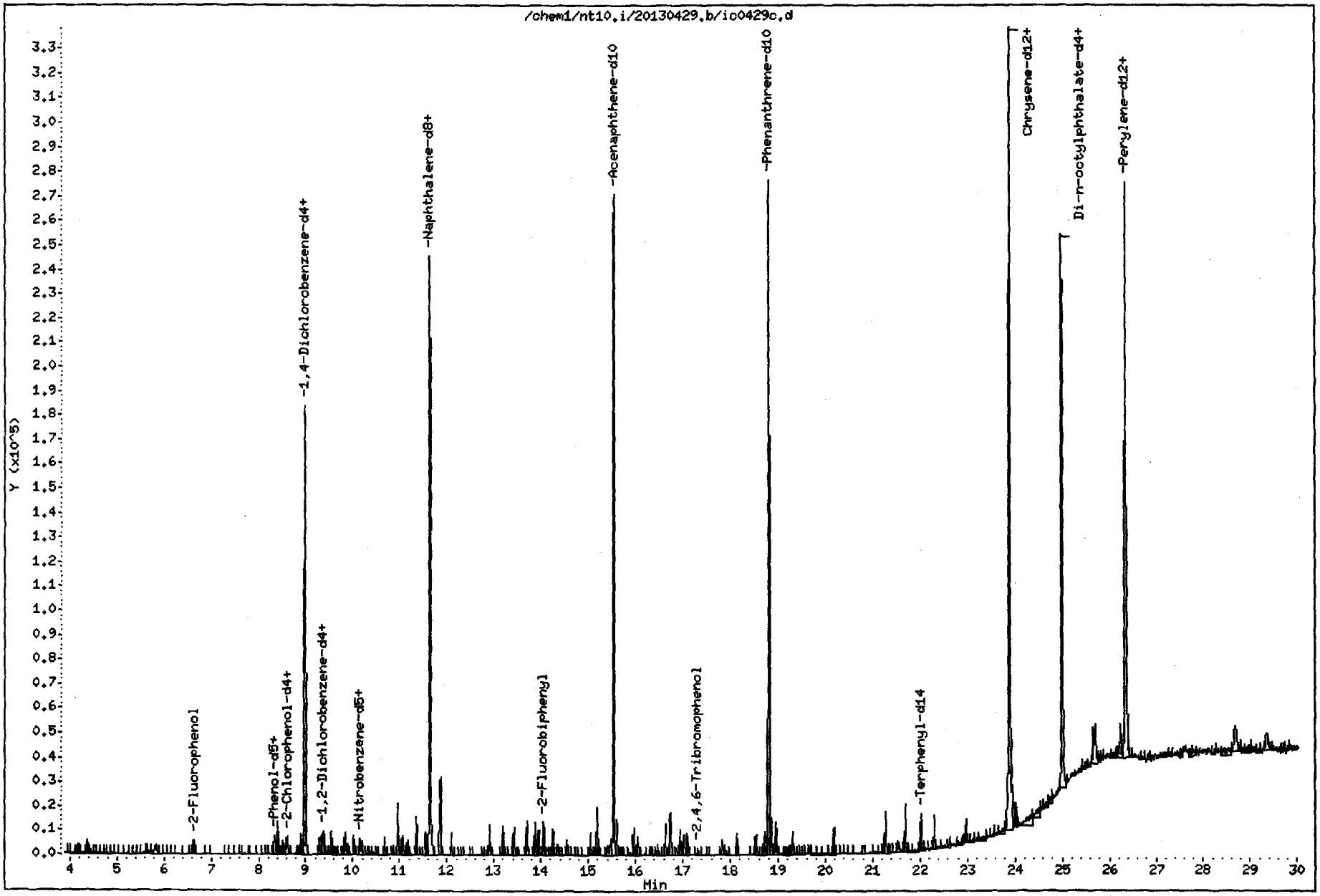
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.34	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429c.d
Date : 29-APR-2013 18:07
Client ID:
Sample Info: IC0429C

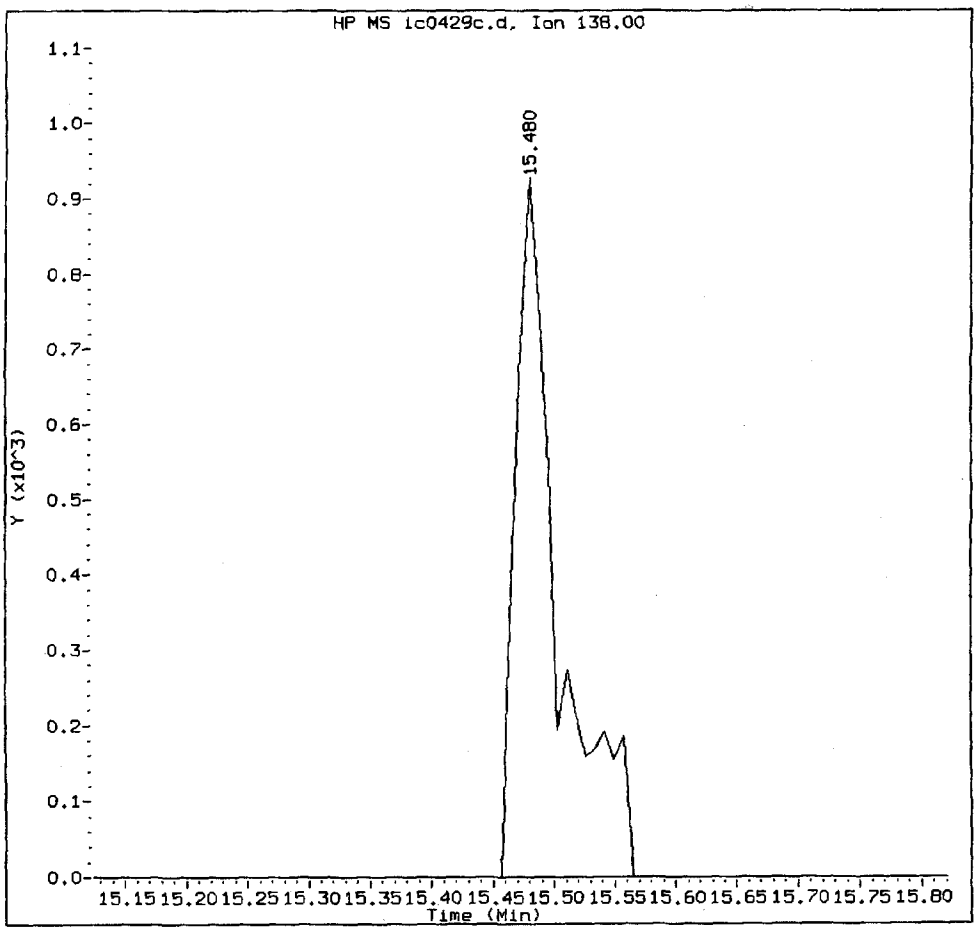
Instrument: nt10.i

Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0429C, /chem1/nt10.i/20130429.b/ic0429c.d

3-Nitroaniline Amount: 0.36 Area: 2279



MANUAL INTEGRATION for 3-Nitroaniline

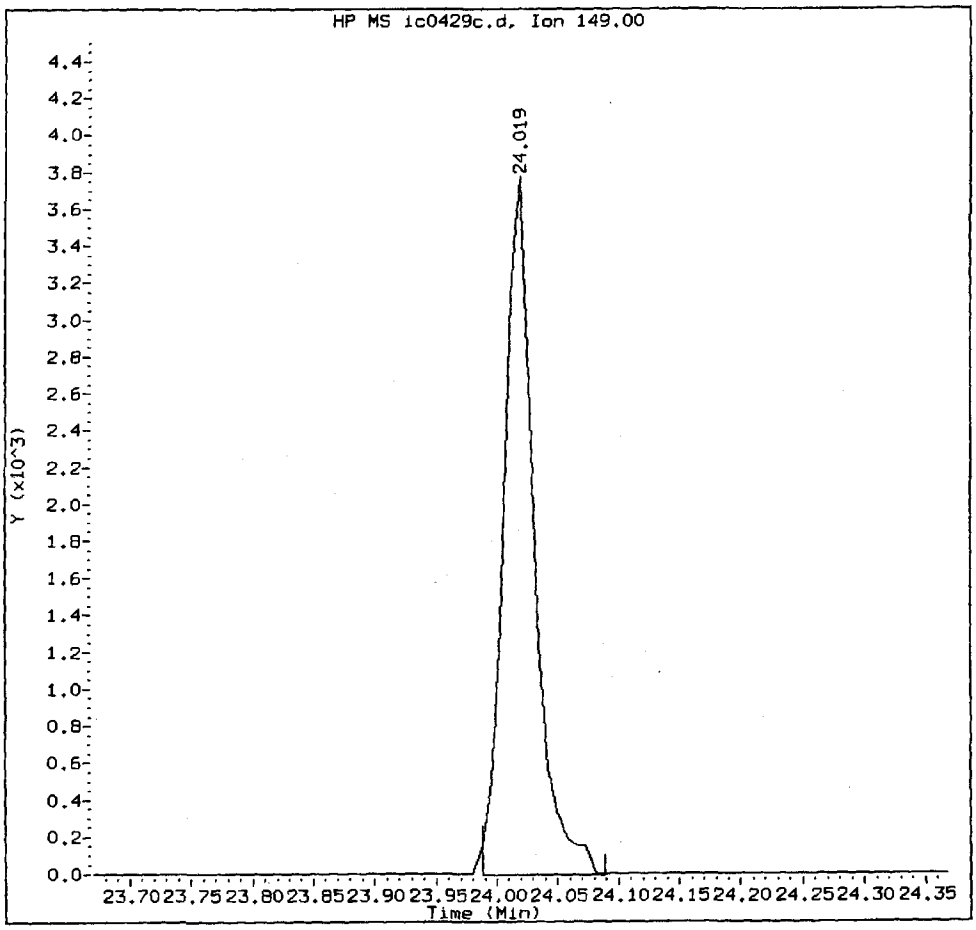
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 5/3/13

IC0429C, /chem1/nt10.i/20130429.b/ic0429c.d

bis(2-Ethylhexyl)phthalate Amount: 0.24 Area: 6713



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/2/13

CO-ELUTION SUMMARY FOR FILE - ic0429c.d

Lab ID: IC0429C, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/8/13

Data file : /chem1/nt10.i/20130429.b/ic0429d.d
Lab Smp Id: IC0429D
Inj Date : 29-APR-2013 18:44
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429D
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:44 Cal File: ic0429d.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	15307	1.00000	0.9620
$	2 Phenol-d5	99	8.336	8.337	(0.928)	19285	1.00000	0.9366
	3 Phenol	94	8.360	8.360	(0.931)	22180	1.00000	0.9624
$	5 2-Chlorophenol-d4	132	8.591	8.599	(0.957)	14988	1.00000	0.9589
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	16380	1.00000	0.9883
	6 2-Chlorophenol	128	8.622	8.622	(0.960)	16398	1.00000	0.9226
	7 1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	17715	1.00000	0.9933
*	8 1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	44580	4.00000	
	9 1,4-Dichlorobenzene	146	9.010	9.018	(1.003)	16867	1.00000	0.9594
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.043)	11111	1.00000	0.9883
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	16787	1.00000	0.9973
	11 Benzyl alcohol	108	9.289	9.289	(1.035)	9257	1.00000	0.9548
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	5171	1.00000	1.011
	13 2-Methylphenol	108	9.545	9.553	(1.063)	16160	1.00000	0.9744
	17 Hexachloroethane	117	10.019	10.027	(1.116)	7294	1.00000	0.9916
	16 N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	9787	1.00000	0.9452
	15 4-Methylphenol	108	9.840	9.840	(1.096)	16603	1.00000	0.9818
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	17141	1.00000	0.9894
	19 Nitrobenzene	77	10.197	10.190	(0.876)	15823	1.00000	0.9893
	20 Isophorone	82	10.686	10.686	(0.918)	27613	1.00000	0.9178
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	8265	1.00000	0.9218
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	32296	2.00000	1.959
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	17765	1.00000	1.001
	24 Benzoic acid	105	11.110	11.080	(0.954)	41278	4.00000	2.905
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	31611	2.00000	2.083
	26 1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	14941	1.00000	1.007
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	164171	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	42702	1.00000	0.9770
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	33352	2.00000	1.952
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	8779	1.00000	0.9963
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	25572	2.00000	1.915
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	27982	1.00000	0.9638
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	21045	2.00000	1.886
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	20650	2.00000	1.935
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	21226	2.00000	1.929
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	34053	1.00000	0.9621
	37 2-Chloronaphthalene	162	14.257	14.258	(0.917)	27105	1.00000	0.9620
	38 2-Nitroaniline	65	14.552	14.552	(0.936)	13213	2.00000	1.943
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	29710	1.00000	0.9760
	40 Acenaphthylene	152	15.194	15.194	(0.978)	46429	1.00000	0.9715
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	13962	2.00000	1.957
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	101406	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	12865	2.00000	2.185
	44 Acenaphthene	153	15.612	15.604	(1.004)	27470	1.00000	0.9538
	45 2,4-Dinitrophenol	184	15.704	15.705	(1.010)	14717	4.00000	2.364
	46 Dibenzofuran	168	15.967	15.960	(1.027)	38532	1.00000	0.9785
	47 4-Nitrophenol	109	15.859	15.867	(1.020)	5820	2.00000	1.327
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	18293	2.00000	1.988
	50 Diethylphthalate	149	16.632	16.632	(1.070)	29344	1.00000	0.9593
	49 Fluorene	166	16.733	16.733	(1.077)	32959	1.00000	0.9809
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	15568	1.00000	0.9425
	52 4-Nitroaniline	138	16.848	16.841	(1.084)	13721	2.00000	2.243
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	27317	4.00000	3.379
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	20108	1.00000	1.022
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	4956	1.00000	0.9242
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	9783	1.00000	1.017
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	11321	1.00000	0.9868
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	14694	2.00000	1.825
*	59 Phenanthrene-d10	188	18.810	18.811	(1.000)	169929	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	46140	1.00000	0.9955
	61 Anthracene	178	18.957	18.958	(1.008)	46666	1.00000	0.9828
	62 Carbazole	167	19.313	19.314	(1.027)	35449	1.00000	1.229
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	46503	1.00000	0.9487
	64 Fluoranthene	202	21.278	21.279	(1.131)	52957	1.00000	0.9708
	65 Pyrene	202	21.696	21.697	(0.908)	55189	1.00000	0.9635
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	34900	1.00000	0.9684
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	19089	1.00000	0.9759
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	50618	1.00000	0.9766
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	185129	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	37586	2.00000	1.904
	71 Chrysene	228	23.942	23.934	(1.002)	43967	1.00000	0.9374
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	26029	1.00000	0.9857(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	198625	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.000)	43269	1.00000	0.9461

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	46024	1.00000	0.9209
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	52368	1.00000	0.9948
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	40952	1.00000	0.9591
* 77	Perylene-d12	264	26.349	26.350	(1.000)	168300	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.682	28.690	(1.089)	46418	1.00000	0.9436
79	Dibenzo(a,h)anthracene	278	28.705	28.698	(1.089)	35967	1.00000	0.9531
80	Benzo(g,h,i)perylene	276	29.358	29.350	(1.114)	41617	1.00000	0.9778
90	N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	19685	2.00000	1.938
91	Aniline	93	8.406	8.406	(0.936)	43396	1.00000	0.9705
93	Benzidine	184	21.542	21.542	(0.902)	23877	2.00000	4.142
103	Pyridine	79	4.397	4.397	(0.490)	17576	2.00000	1.969
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	25663	1.00000	0.9638
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	31455	1.00000	1.003
187	Total Benzofluoranthenes	252	25.668	25.699	(0.974)	94813	2.00000	1.954
99	Perylene	252	26.396	26.388	(1.002)	46957	1.00000	0.9620
98	Retene	219	22.316	22.316	(0.934)	20776	1.00000	0.9584
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.051)	7820	1.00000	0.9555
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	48496	2.00000	1.972
189	N-Nitrosomethylethylamine	88	5.818	5.818	(0.648)	29106	2.00000	1.921

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429d.d
Lab Smp Id: IC0429D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	44580	-1.48
27 Naphthalene-d8	166754	83377	333508	164171	-1.55
42 Acenaphthene-d10	106910	53455	213820	101406	-5.15
59 Phenanthrene-d10	179783	89892	359566	169929	-5.48
69 Chrysene-d12	192841	96420	385682	185129	-4.00
134 Di-n-octylphthala	229567	114784	459134	198625	-13.48
77 Perylene-d12	184310	92155	368620	168300	-8.69

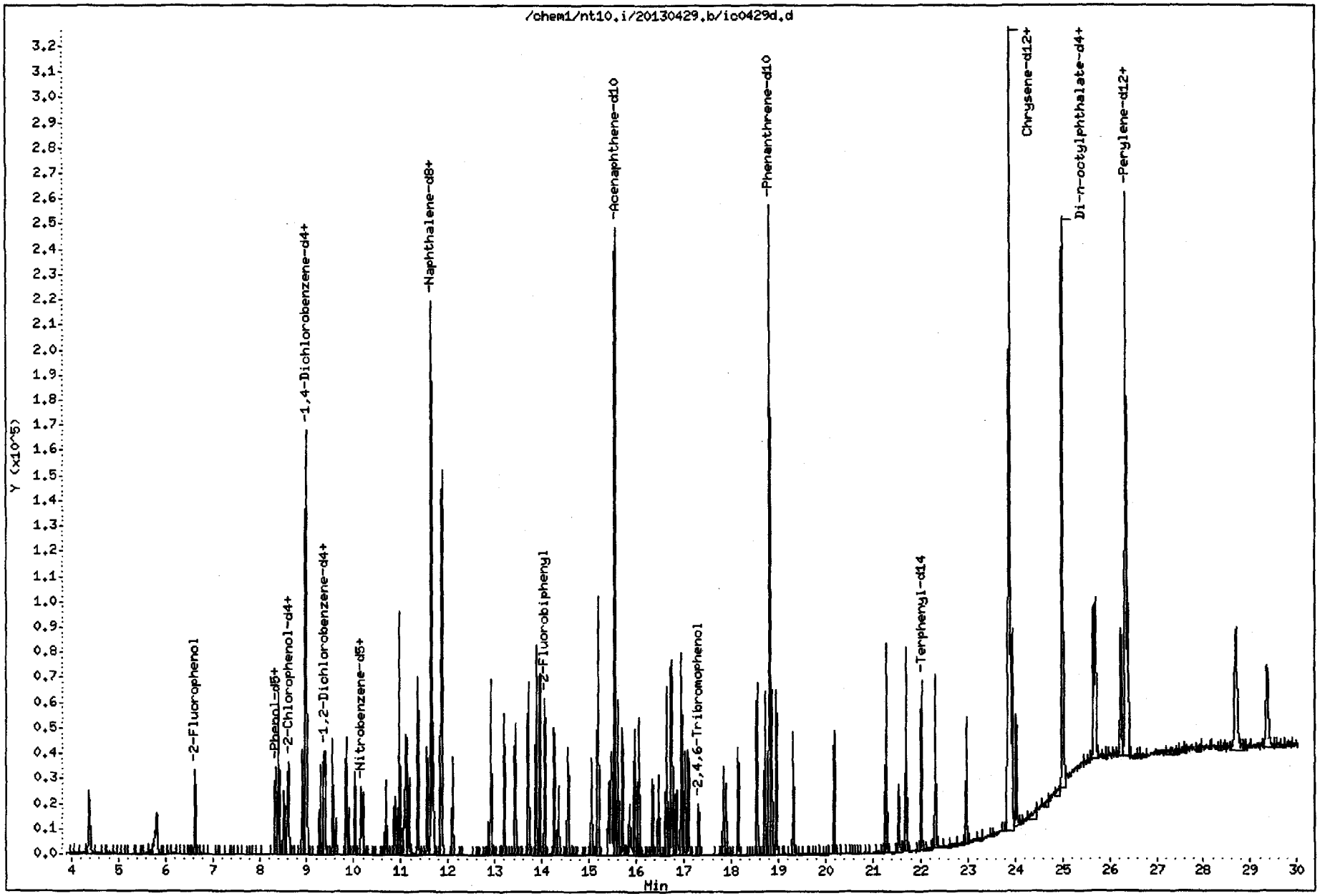
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.09
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429d.d
Date : 29-APR-2013 18:44
Client ID:
Sample Info: IC0429D

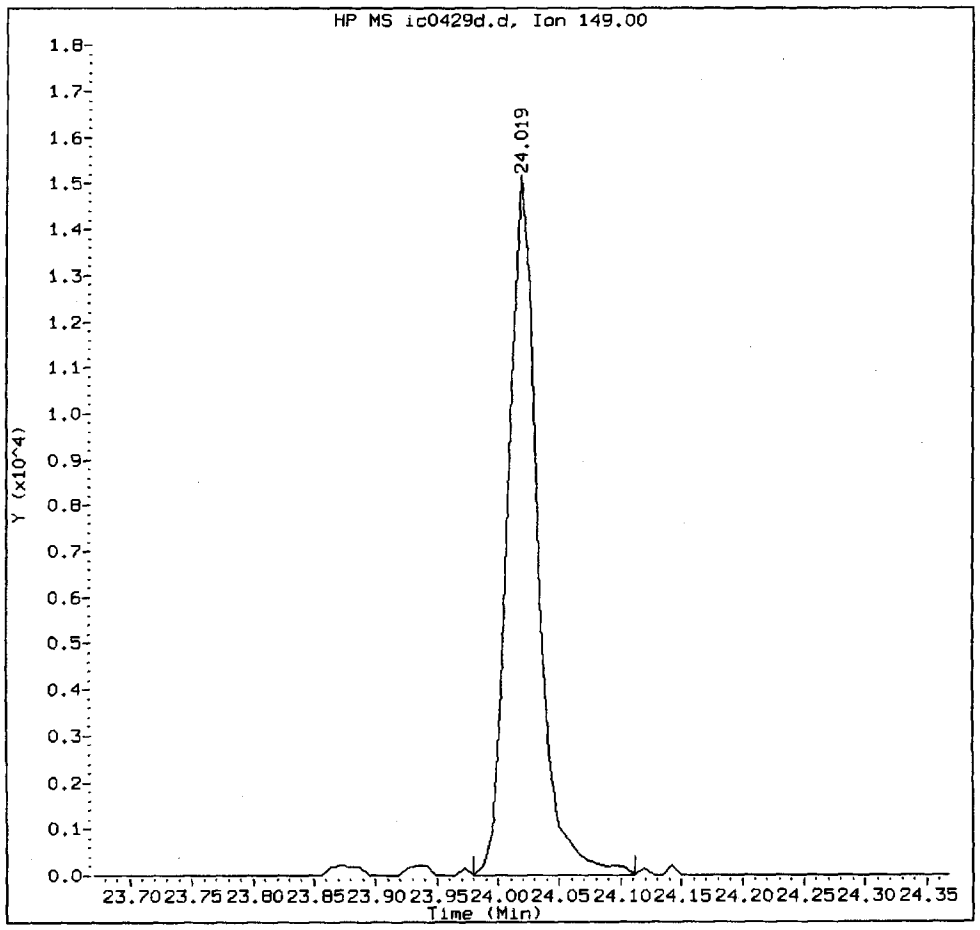
Instrument: nt10.i

Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0429D, /chem1/nt10.i/20130429.b/ic0429d.d

bis(2-Ethylhexyl)phthalate Amount: 0.99 Area: 26029



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429d.d

Lab ID: IC0429D, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429e.d
Lab Smp Id: IC0429E
Inj Date : 29-APR-2013 19:21
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429E
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 19:21 Cal File: ic0429e.d
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.628	6.629	(0.738)	146655	10.0000	10.73
$ 2	Phenol-d5	99	8.344	8.337	(0.929)	196642	10.0000	11.12
3	Phenol	94	8.367	8.360	(0.931)	210587	10.0000	10.64
$ 5	2-Chlorophenol-d4	132	8.599	8.599	(0.957)	137828	10.0000	10.27
4	Bis(2-Chloroethyl)ether	93	8.529	8.522	(0.949)	143624	10.0000	10.09
6	2-Chlorophenol	128	8.630	8.622	(0.960)	173765	10.0000	11.38
7	1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	155864	10.0000	10.18
* 8	1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	38285	4.00000	
9	1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	151337	10.0000	10.02
$ 10	1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	99905	10.0000	10.35
12	1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	143308	10.0000	9.914
11	Benzyl alcohol	108	9.297	9.289	(1.035)	92776	10.0000	11.14
14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	45681	10.0000	10.40
13	2-Methylphenol	108	9.553	9.553	(1.063)	149351	10.0000	10.49
17	Hexachloroethane	117	10.026	10.027	(1.116)	64051	10.0000	10.14
16	N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	93506	10.0000	10.52
15	4-Methylphenol	108	9.848	9.840	(1.096)	160522	10.0000	11.05
$ 18	Nitrobenzene-d5	82	10.158	10.159	(0.872)	157610	10.0000	10.45
19	Nitrobenzene	77	10.197	10.190	(0.875)	144235	10.0000	10.36
20	Isophorone	82	10.694	10.686	(0.918)	308116	10.0000	11.77
21	2-Nitrophenol	139	10.879	10.872	(0.934)	86330	10.0000	11.06
22	2,4-Dimethylphenol	107	10.972	10.964	(0.942)	301913	20.0000	21.04
23	Bis(2-Chloroethoxy)methane	93	11.180	11.172	(0.960)	157345	10.0000	10.19
24	Benzoic acid	105	11.303	11.080	(0.970)	533852	40.0000	41.16
25	2,4-Dichlorophenol	162	11.372	11.365	(0.976)	298452	20.0000	22.59
26	1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	126245	10.0000	9.777
* 27	Naphthalene-d8	136	11.650	11.643	(1.000)	142908	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.003)	383254	10.0000	10.07
	29 4-Chloroaniline	127	11.859	11.843	(1.018)	349641	20.0000	23.51
	30 Hexachlorobutadiene	225	12.106	12.099	(1.039)	78933	10.0000	10.29
	31 4-Chloro-3-methylphenol	107	12.919	12.911	(1.109)	269630	20.0000	23.20
	32 2-Methylnaphthalene	142	13.197	13.197	(1.133)	264096	10.0000	10.45
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	215070	20.0000	21.20
	34 2,4,6-Trichlorophenol	196	13.886	13.879	(0.893)	208965	20.0000	21.54
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	227145	20.0000	22.71
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.905)	325794	10.0000	10.13
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	259249	10.0000	10.12
	38 2-Nitroaniline	65	14.567	14.552	(0.937)	143221	20.0000	23.17
	39 Dimethylphthalate	163	15.062	15.047	(0.969)	278457	10.0000	10.06
	40 Acenaphthylene	152	15.194	15.194	(0.978)	490760	10.0000	11.30
	41 2,6-Dinitrotoluene	165	15.194	15.179	(0.978)	140641	20.0000	21.69
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	92187	4.00000	
	43 3-Nitroaniline	138	15.496	15.473	(0.997)	115718	20.0000	21.62
	44 Acenaphthene	153	15.612	15.604	(1.004)	261611	10.0000	9.992
	45 2,4-Dinitrophenol	184	15.727	15.705	(1.012)	250805	40.0000	41.56
	46 Dibenzofuran	168	15.975	15.960	(1.028)	364969	10.0000	10.19
	47 4-Nitrophenol	109	15.874	15.867	(1.021)	85112	20.0000	20.75
	48 2,4-Dinitrotoluene	165	16.068	16.052	(1.034)	187198	20.0000	22.38
	50 Diethylphthalate	149	16.647	16.632	(1.071)	283263	10.0000	10.19
	49 Fluorene	166	16.740	16.733	(1.077)	309724	10.0000	10.14
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	167282	10.0000	11.14
	52 4-Nitroaniline	138	16.872	16.841	(1.086)	125210	20.0000	22.52
	53 4,6-Dinitro-2-methylphenol	198	16.972	16.949	(0.902)	317489	40.0000	40.73
	54 N-Nitrosodiphenylamine	169	17.034	17.026	(0.905)	184807	10.0000	9.961
$	55 2,4,6-Tribromophenol	330	17.319	17.311	(1.114)	55755	10.0000	11.44
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	91977	10.0000	10.14
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	105323	10.0000	9.733
	58 Pentachlorophenol	266	18.555	18.548	(0.986)	177427	20.0000	23.36
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	160272	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.002)	440318	10.0000	10.07
	61 Anthracene	178	18.965	18.958	(1.008)	455728	10.0000	10.18
	62 Carbazole	167	19.321	19.314	(1.027)	242608	10.0000	8.918
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	495591	10.0000	10.72
	64 Fluoranthene	202	21.286	21.279	(1.131)	534614	10.0000	10.39
	65 Pyrene	202	21.704	21.697	(0.908)	542210	10.0000	10.18
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	341948	10.0000	10.20
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	196606	10.0000	10.80
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	490781	10.0000	10.18
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	172225	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.856	23.841	(0.998)	404734	20.0000	22.04
	71 Chrysene	228	23.949	23.934	(1.002)	439878	10.0000	10.08
	72 bis(2-Ethylhexyl)phthalate	149	24.027	24.019	(0.961)	275645	10.0000	9.831(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	210890	4.00000	
	73 Di-n-octylphthalate	149	25.018	25.002	(1.001)	477130	10.0000	9.826

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.676	25.660	(0.974)	516402	10.0000	10.46
75	Benzo(k)fluoranthene	252	25.714	25.699	(0.976)	509181	10.0000	9.789
76	Benzo(a)pyrene	252	26.256	26.241	(0.996)	438619	10.0000	10.40
* 77	Perylene-d12	264	26.357	26.350	(1.000)	166300	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.705	28.690	(1.089)	528701	10.0000	10.88
79	Dibenzo(a,h)anthracene	278	28.729	28.698	(1.090)	403235	10.0000	10.81
80	Benzo(g,h,i)perylene	276	29.389	29.350	(1.115)	445295	10.0000	10.59
90	N-Nitrosodimethylamine	74	4.374	4.366	(0.487)	190704	20.0000	21.87
91	Aniline	93	8.414	8.406	(0.936)	403125	10.0000	10.50
93	Benzidine	184	21.549	21.542	(0.902)	110746	20.0000	19.11
103	Pyridine	79	4.374	4.397	(0.487)	162027	20.0000	21.13
105	1-methylnaphthalene	142	13.437	13.430	(1.153)	238762	10.0000	10.30
111	Azobenzene (1,2-DP-Hydrazine)	77	17.111	17.095	(1.101)	287323	10.0000	10.08
187	Total Benzofluoranthenes	252	25.714	25.699	(0.976)	972720	20.0000	20.28
99	Perylene	252	26.411	26.388	(1.002)	482660	10.0000	10.01
98	Retene	219	22.323	22.316	(0.934)	206286	10.0000	10.23
120	2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	86691	10.0000	11.65
188	2,6-Dichlorophenol	162	11.882	11.867	(1.020)	451718	20.0000	21.10
189	N-Nitrosomethylethylamine	88	5.825	5.818	(0.648)	279207	20.0000	21.46

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429e.d
Lab Smp Id: IC0429E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	38285	-15.39
27 Naphthalene-d8	166754	83377	333508	142908	-14.30
42 Acenaphthene-d10	106910	53455	213820	92187	-13.77
59 Phenanthrene-d10	179783	89892	359566	160272	-10.85
69 Chrysene-d12	192841	96420	385682	172225	-10.69
134 Di-n-octylphthala	229567	114784	459134	210890	-8.14
77 Perylene-d12	184310	92155	368620	166300	-9.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.65	0.07
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

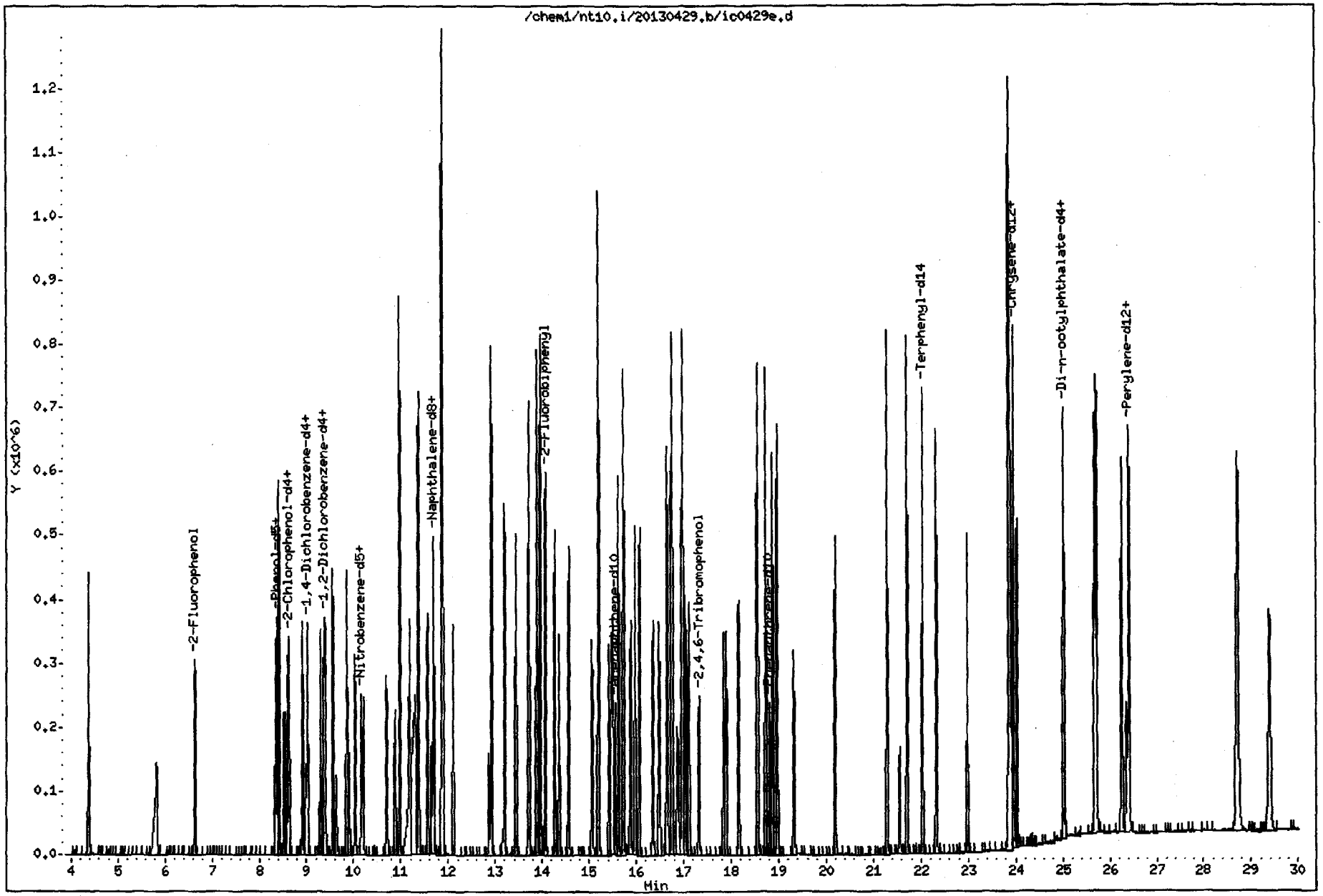
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429e.d
Date : 29-APR-2013 19:21
Client ID:
Sample Info: IC0429E

Instrument: nt10.i

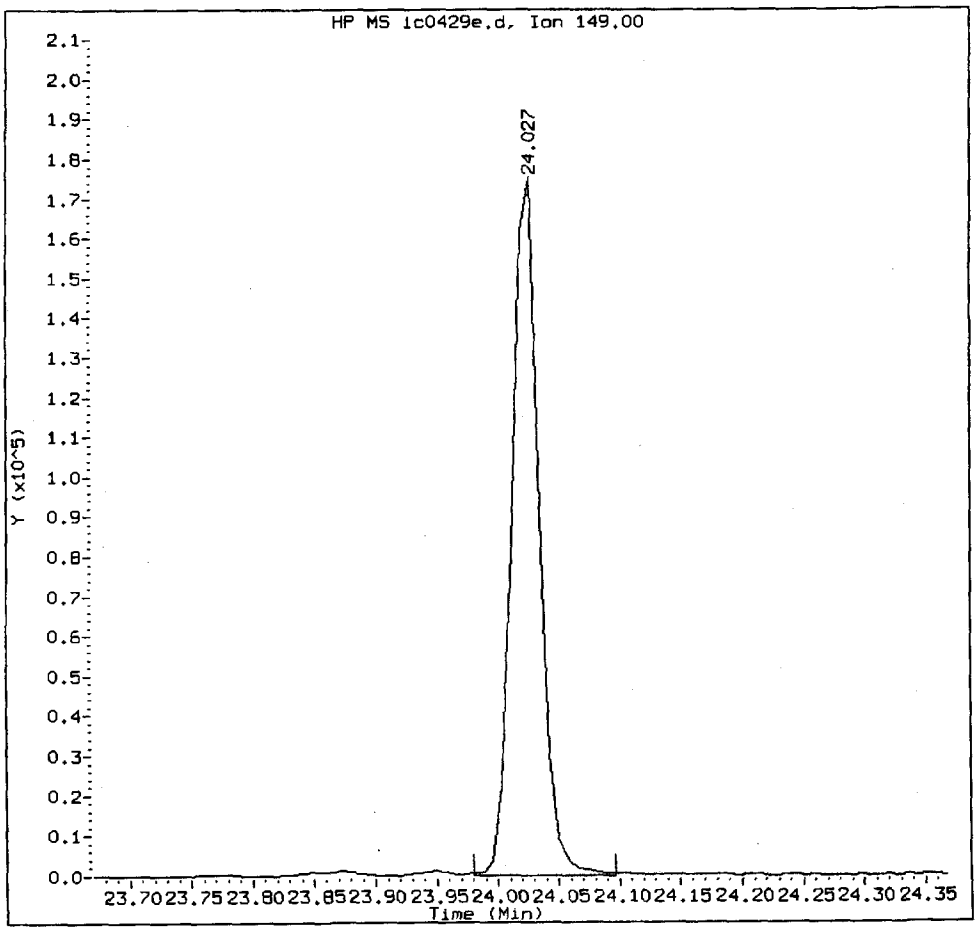
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429E, /chem1/nt10.i/20130429.b/ic0429e.d

bis(2-Ethylhexyl)phthalate Amount: 9.83 Area: 275645



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/8/13

CO-ELUTION SUMMARY FOR FILE - ic0429e.d

Lab ID: IC0429E, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
15.194	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429g.d
Lab Smp Id: IC0429G
Inj Date : 29-APR-2013 20:34
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429G
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 20:34 Cal File: ic0429g.d
Als bottle: 8 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

YZ 5/3/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	33327	2.50000	2.552
$	2 Phenol-d5	99	8.336	8.337	(0.928)	43013	2.50000	2.545
	3 Phenol	94	8.359	8.360	(0.930)	49200	2.50000	2.601
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	32303	2.50000	2.518
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	35522	2.50000	2.611
	6 2-Chlorophenol	128	8.622	8.622	(0.959)	35254	2.50000	2.417
	7 1,3-Dichlorobenzene	146	8.916	8.909	(0.992)	36581	2.50000	2.499
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	36591	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	37170	2.50000	2.576
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	23363	2.50000	2.532
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.045)	34665	2.50000	2.509
	11 Benzyl alcohol	108	9.289	9.289	(1.034)	20599	2.50000	2.589
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	11085	2.50000	2.640
	13 2-Methylphenol	108	9.553	9.553	(1.063)	35312	2.50000	2.594
	17 Hexachloroethane	117	10.026	10.027	(1.116)	15637	2.50000	2.590
	16 N-Nitroso-di-n-propylamine	70	9.894	9.895	(1.101)	22554	2.50000	2.654
	15 4-Methylphenol	108	9.840	9.840	(1.095)	36435	2.50000	2.625
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	37054	2.50000	2.546
	19 Nitrobenzene	77	10.197	10.190	(0.876)	34459	2.50000	2.565
	20 Isophorone	82	10.686	10.686	(0.918)	61248	2.50000	2.424
	21 2-Nitrophenol	139	10.871	10.872	(0.934)	19030	2.50000	2.527
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	71562	5.00000	5.167
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	38098	2.50000	2.556
	24 Benzoic acid	105	11.164	11.080	(0.959)	106496	10.0000	8.861
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	67816	5.00000	5.320
	26 1,2,4-Trichlorobenzene	180	11.557	11.558	(0.993)	30525	2.50000	2.450
*	27 Naphthalene-d8	136	11.642	11.643	(1.000)	137898	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	91698	2.50000	2.498
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	72996	5.00000	5.086
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	18006	2.50000	2.433
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	59257	5.00000	5.284
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	60463	2.50000	2.479
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	46418	5.00000	4.831
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	46504	5.00000	5.061
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	48311	5.00000	5.100
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	75007	2.50000	2.461
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	59913	2.50000	2.470
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	31617	5.00000	5.400
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	64965	2.50000	2.479
	40 Acenaphthylene	152	15.194	15.194	(0.978)	99122	2.50000	2.409
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	32305	5.00000	5.261
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	87308	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	27423	5.00000	5.409
	44 Acenaphthene	153	15.611	15.604	(1.004)	61853	2.50000	2.494
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	42855	10.0000	7.930
	46 Dibenzofuran	168	15.967	15.960	(1.027)	84689	2.50000	2.498
	47 4-Nitrophenol	109	15.859	15.867	(1.020)	16653	5.00000	4.391
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	41845	5.00000	5.283
	50 Diethylphthalate	149	16.640	16.632	(1.071)	65811	2.50000	2.499
	49 Fluorene	166	16.732	16.733	(1.077)	72923	2.50000	2.521
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	33604	2.50000	2.363
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	26194	5.00000	4.974
	53 4,6-Dinitro-2-methylphenol	198	16.956	16.949	(0.901)	65565	10.0000	9.149
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	44352	2.50000	2.552
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	11658	2.50000	2.525
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	20878	2.50000	2.457
	57 Hexachlorobenzene	284	18.152	18.153	(0.965)	24254	2.50000	2.393
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	37390	5.00000	5.254
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	150153	4.00000	
	60 Phenanthrene	178	18.864	18.857	(1.002)	100003	2.50000	2.442
	61 Anthracene	178	18.957	18.958	(1.007)	103502	2.50000	2.467
	62 Carbazole	167	19.313	19.314	(1.026)	60342	2.50000	2.368
	63 Di-n-butylphthalate	149	20.187	20.188	(1.073)	104682	2.50000	2.417
	64 Fluoranthene	202	21.286	21.279	(1.131)	117131	2.50000	2.430
	65 Pyrene	202	21.704	21.697	(0.908)	123102	2.50000	2.418
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	78162	2.50000	2.440
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	42839	2.50000	2.464
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	110437	2.50000	2.397
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	164553	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	73617	5.00000	4.195
	71 Chrysene	228	23.941	23.934	(1.002)	100065	2.50000	2.400
	72 bis(2-Ethylhexyl)phthalate	149	24.027	24.019	(0.961)	59748	2.50000	2.511(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	178975	4.00000	
	73 Di-n-octylphthalate	149	25.017	25.002	(1.001)	101315	2.50000	2.459

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	107559	2.50000	2.369
75	Benzo(k)fluoranthene	252	25.714	25.699	(0.976)	117137	2.50000	2.450
76	Benzo(a)pyrene	252	26.249	26.241	(0.996)	93000	2.50000	2.398
* 77	Perylene-d12	264	26.357	26.350	(1.000)	152859	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.697	28.690	(1.089)	107108	2.50000	2.397
79	Dibenzo(a,h)anthracene	278	28.721	28.698	(1.090)	84630	2.50000	2.469
80	Benzo(g,h,i)perylene	276	29.381	29.350	(1.115)	94698	2.50000	2.450
90	N-Nitrosodimethylamine	74	4.351	4.366	(0.484)	44045	5.00000	5.284
91	Aniline	93	8.406	8.406	(0.935)	96404	2.50000	2.627
93	Benzidine	184	21.541	21.542	(0.901)	29714	5.00000	5.756
103	Pyridine	79	4.374	4.397	(0.487)	39707	5.00000	5.419
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	55151	2.50000	2.466
111	Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.100)	69518	2.50000	2.574
187	Total Benzofluoranthenes	252	25.668	25.699	(0.974)	213730	5.00000	4.849
99	Perylene	252	26.403	26.388	(1.002)	104964	2.50000	2.368
98	Retene	219	22.315	22.316	(0.934)	46252	2.50000	2.400
120	2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	17623	2.50000	2.501
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	104652	5.00000	5.066
189	N-Nitrosomethylethylamine	88	5.817	5.818	(0.647)	65642	5.00000	5.279

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429g.d
Lab Smp Id: IC0429G
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36591	-19.14
27 Naphthalene-d8	166754	83377	333508	137898	-17.30
42 Acenaphthene-d10	106910	53455	213820	87308	-18.34
59 Phenanthrene-d10	179783	89892	359566	150153	-16.48
69 Chrysene-d12	192841	96420	385682	164553	-14.67
134 Di-n-octylphthala	229567	114784	459134	178975	-22.04
77 Perylene-d12	184310	92155	368620	152859	-17.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

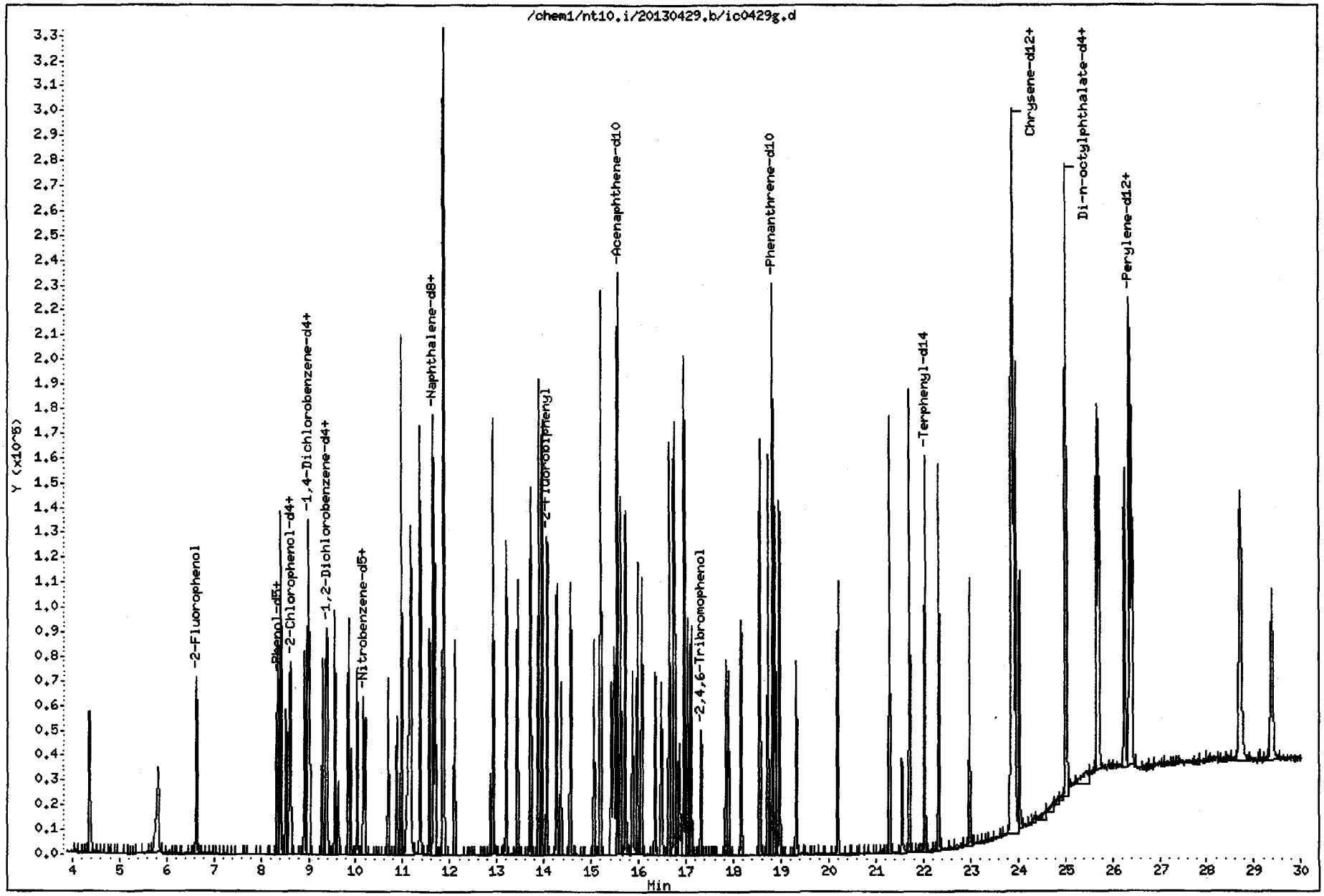
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429g.d
Date : 29-APR-2013 20:34
Client ID:
Sample Info: IC0429G

Instrument: nt10.i

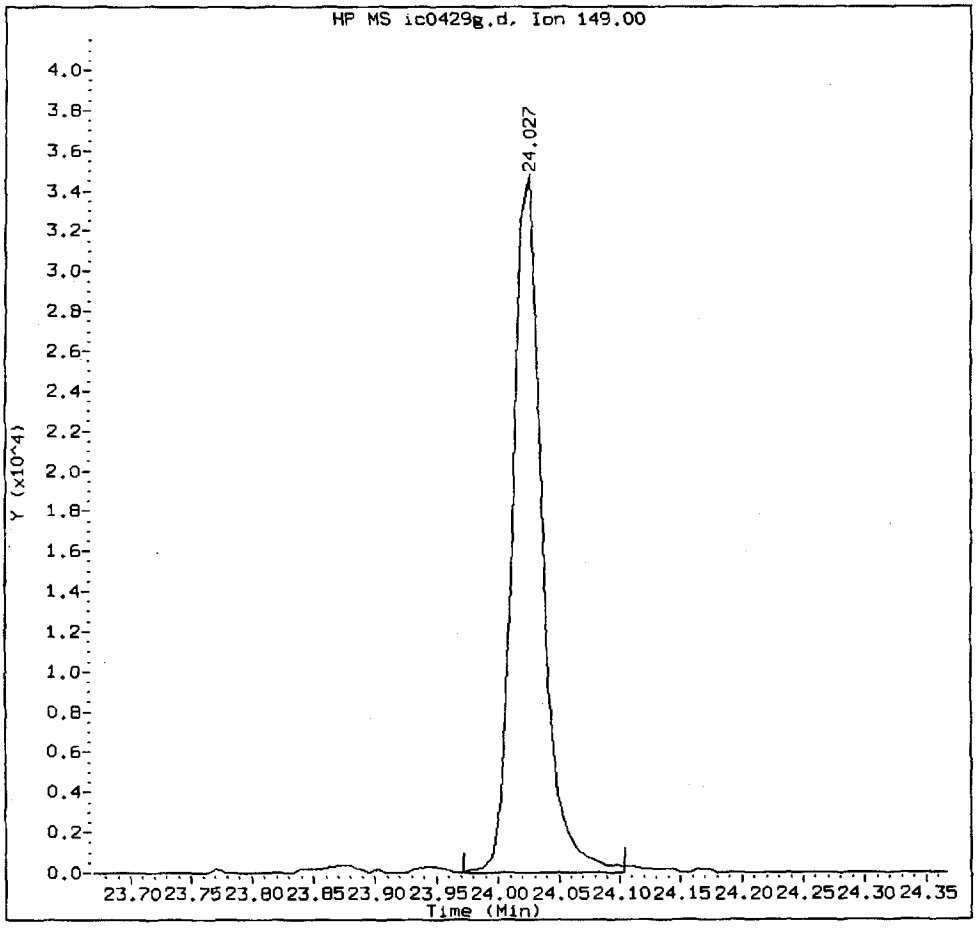
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429G, /chem1/nt10.i/20130429.b/ic0429g.d

bis(2-Ethylhexyl)phthalate Amount: 2.51 Area: 59748



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429g.d

Lab ID: IC0429G, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429i.d
Lab Smp Id: IC0429I
Inj Date : 29-APR-2013 21:47
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429I
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.629	6.629	(0.738)	7097	0.50000	0.4779
$	2 Phenol-d5	99	8.337	8.337	(0.928)	8848	0.50000	0.4605
	3 Phenol	94	8.360	8.360	(0.931)	10487	0.50000	0.4876
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.958)	6852	0.50000	0.4698
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	8003	0.50000	0.5174
	6 2-Chlorophenol	128	8.622	8.622	(0.960)	7629	0.50000	0.4600
	7 1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	8033	0.50000	0.4826
*	8 1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	41602	4.00000	
	9 1,4-Dichlorobenzene	146	9.018	9.018	(1.004)	7938	0.50000	0.4839
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.043)	5208	0.50000	0.4964
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	7759	0.50000	0.4940
	11 Benzyl alcohol	108	9.289	9.289	(1.035)	3823	0.50000	0.4226
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	2289	0.50000	0.4795
	13 2-Methylphenol	108	9.553	9.553	(1.064)	7310	0.50000	0.4723
	17 Hexachloroethane	117	10.027	10.027	(1.117)	3426	0.50000	0.4991
	16 N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	4650	0.50000	0.4812
	15 4-Methylphenol	108	9.840	9.840	(1.096)	7046	0.50000	0.4465
$	18 Nitrobenzene-d5	82	10.159	10.159	(0.873)	8203	0.50000	0.4943
	19 Nitrobenzene	77	10.190	10.190	(0.875)	7721	0.50000	0.5040
	20 Isophorone	82	10.686	10.686	(0.918)	13058	0.50000	0.4531
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	3663	0.50000	0.4265
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	14636	1.00000	0.9268
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	8541	0.50000	0.5026
	24 Benzoic acid	105	11.080	11.080	(0.952)	12620	2.00000	0.9294
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	11335	1.00000	0.7797
	26 1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	6875	0.50000	0.4839
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	157250	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.681	11.681	(1.003)	19775	0.50000	0.4723
	29 4-Chloroaniline	127	11.843	11.843	(1.017)	14329	1.00000	0.8755
	30 Hexachlorobutadiene	225	12.099	12.099	(1.039)	3928	0.50000	0.4654
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	10700	1.00000	0.8367
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	13246	0.50000	0.4763
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	9274	1.00000	0.8934
	34 2,4,6-Trichlorophenol	196	13.879	13.879	(0.893)	8685	1.00000	0.8747
	35 2,4,5-Trichlorophenol	196	13.948	13.948	(0.898)	8785	1.00000	0.8583
$	36 2-Fluorobiphenyl	172	14.057	14.057	(0.905)	15786	0.50000	0.4794
	37 2-Chloronaphthalene	162	14.258	14.258	(0.918)	12356	0.50000	0.4714
	38 2-Nitroaniline	65	14.552	14.552	(0.937)	5242	1.00000	0.8286
	39 Dimethylphthalate	163	15.047	15.047	(0.969)	13385	0.50000	0.4726
	40 Acenaphthylene	152	15.194	15.194	(0.978)	21258	0.50000	0.4782
	41 2,6-Dinitrotoluene	165	15.179	15.179	(0.977)	6067	1.00000	0.9143
*	42 Acenaphthene-d10	164	15.535	15.535	(1.000)	94337	4.00000	
	43 3-Nitroaniline	138	15.473	15.473	(0.996)	5039	1.00000	0.9199
	44 Acenaphthene	153	15.604	15.604	(1.004)	12929	0.50000	0.4826
	45 2,4-Dinitrophenol	184	15.705	15.705	(1.011)	4345	2.00000	0.7522
	46 Dibenzofuran	168	15.960	15.960	(1.027)	17668	0.50000	0.4823
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	1862	1.00000	0.4569
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	7334	1.00000	0.8570
	50 Diethylphthalate	149	16.632	16.632	(1.071)	13456	0.50000	0.4729
	49 Fluorene	166	16.733	16.733	(1.077)	14861	0.50000	0.4754
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	7105	0.50000	0.4624
	52 4-Nitroaniline	138	16.841	16.841	(1.084)	4664	1.00000	0.8197
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	9847	2.00000	1.299
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	8567	0.50000	0.4637
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	2005	0.50000	0.4019
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	4326	0.50000	0.4791
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	5141	0.50000	0.4772
	58 Pentachlorophenol	266	18.548	18.548	(0.986)	5592	1.00000	0.7394
*	59 Phenanthrene-d10	188	18.811	18.811	(1.000)	159582	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	20200	0.50000	0.4641
	61 Anthracene	178	18.958	18.958	(1.008)	21303	0.50000	0.4777
	62 Carbazole	167	19.314	19.314	(1.027)	15951	0.50000	0.5889
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	19951	0.50000	0.4334
	64 Fluoranthene	202	21.279	21.279	(1.131)	23534	0.50000	0.4594
	65 Pyrene	202	21.697	21.697	(0.908)	24226	0.50000	0.4588
$	66 Terphenyl-d14	244	22.022	22.022	(0.922)	14939	0.50000	0.4497
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	7305	0.50000	0.4051
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	22076	0.50000	0.4620
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	170666	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	15590	1.00000	0.8567
	71 Chrysene	228	23.934	23.934	(1.002)	20337	0.50000	0.4703
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	10757	0.50000	0.4647(M)
*	134 Di-n-octylphthalate-d4	153	24.995	24.995	(1.000)	174102	4.00000	
	73 Di-n-octylphthalate	149	25.002	25.002	(1.000)	20550	0.50000	0.5126

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.660	25.660	(0.974)	20816	0.50000	0.4439
	75 Benzo(k)fluoranthene	252	25.699	25.699	(0.975)	22672	0.50000	0.4591
	76 Benzo(a)pyrene	252	26.241	26.241	(0.996)	17222	0.50000	0.4299
*	77 Perylene-d12	264	26.350	26.350	(1.000)	157899	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	20006	0.50000	0.4335
	79 Dibenzo(a,h)anthracene	278	28.698	28.698	(1.089)	14468	0.50000	0.4087
	80 Benzo(g,h,i)perylene	276	29.350	29.350	(1.114)	17808	0.50000	0.4460
	90 N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	9105	1.00000	0.9607
	91 Aniline	93	8.406	8.406	(0.936)	20193	0.50000	0.4839
	93 Benzidine	184	21.542	21.542	(0.902)	8518	1.00000	1.621
	103 Pyridine	79	4.397	4.397	(0.490)	8381	1.00000	1.006
	105 1-methylnaphthalene	142	13.430	13.430	(1.153)	11744	0.50000	0.4605
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	14947	0.50000	0.5123
	187 Total Benzofluoranthenes	252	25.699	25.699	(0.975)	41609	1.00000	0.9139
	99 Perylene	252	26.388	26.388	(1.001)	21669	0.50000	0.4732
	98 Retene	219	22.316	22.316	(0.934)	8851	0.50000	0.4429
	120 2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.052)	3016	0.50000	0.3961
	188 2,6-Dichlorophenol	162	11.867	11.867	(1.019)	21326	1.00000	0.9052
	189 N-Nitrosomethylethylamine	88	5.818	5.818	(0.648)	13437	1.00000	0.9505

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429i.d
Lab Smp Id: IC0429I
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41602	-8.06
27 Naphthalene-d8	166754	83377	333508	157250	-5.70
42 Acenaphthene-d10	106910	53455	213820	94337	-11.76
59 Phenanthrene-d10	179783	89892	359566	159582	-11.24
69 Chrysene-d12	192841	96420	385682	170666	-11.50
134 Di-n-octylphthala	229567	114784	459134	174102	-24.16
77 Perylene-d12	184310	92155	368620	157899	-14.33

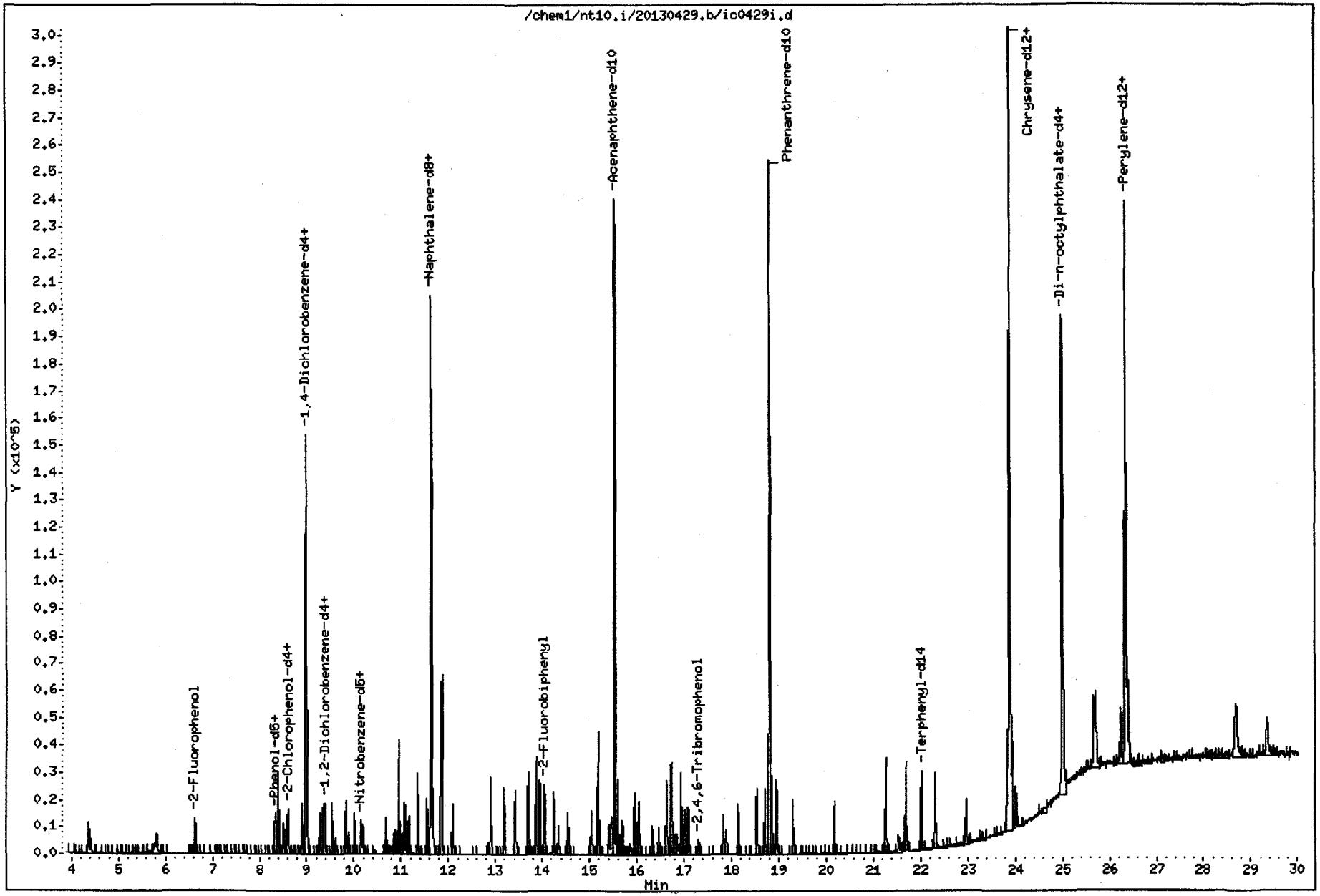
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.08
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.53	-0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429i.d
Date : 29-APR-2013 21:47
Client ID:
Sample Info: IC0429I

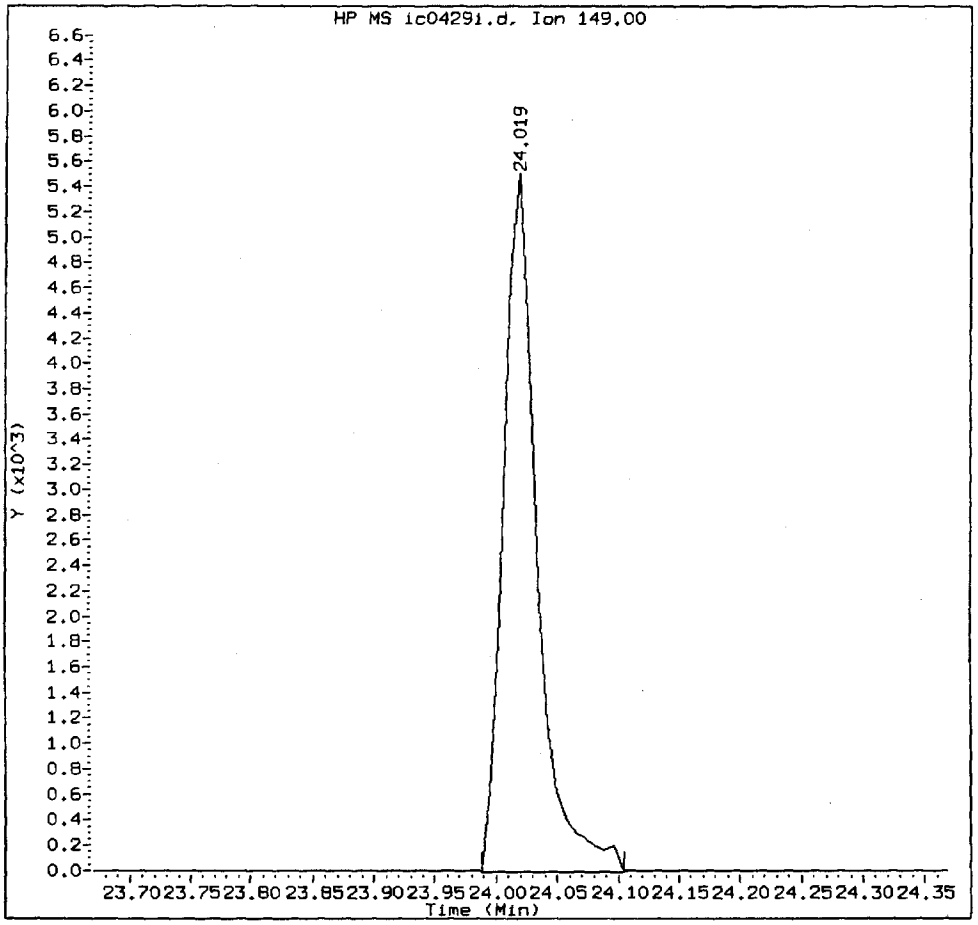
Instrument: nt10.i

Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0429I, /chem1/nt10.i/20130429.b/ic0429i.d

bis(2-Ethylhexyl)phthalate Amount: 0.46 Area: 10757



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/4/13

CO-ELUTION SUMMARY FOR FILE - ic0429i.d

Lab ID: IC0429I, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429icv.d
Lab Smp Id: IC0429ICV
Inj Date : 29-APR-2013 22:24
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429ICV
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

YZ 5/3/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
$ 2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	8.360	8.360	(0.931)	111426	5.21984	5.220
$ 5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	81953	5.33870	5.339
6	2-Chlorophenol	128	8.622	8.622	(0.960)	80570	4.89423	4.894
7	1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	84507	5.11566	5.116
* 8	1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	41290	4.00000	
9	1,4-Dichlorobenzene	146	9.017	9.018	(1.004)	84755	5.20517	5.205
$ 10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	79538	5.10200	5.102
11	Benzyl alcohol	108	9.289	9.289	(1.035)	44014	4.90168	4.902
14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	24983	5.27307	5.273
13	2-Methylphenol	108	9.545	9.553	(1.063)	84376	5.49292	5.493
17	Hexachloroethane	117	10.019	10.027	(1.116)	35524	5.21434	5.214
16	N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	51945	5.41648	5.416
15	4-Methylphenol	108	9.840	9.840	(1.096)	87603	5.59319	5.593
$ 18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	10.190	10.190	(0.875)	79523	5.36973	5.370
20	Isophorone	82	10.686	10.686	(0.918)	173340	6.22278	6.223
21	2-Nitrophenol	139	10.872	10.872	(0.934)	42978	5.17676	5.177
22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	164268	10.7602	10.76
23	Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	90256	5.49412	5.494
24	Benzoic acid	105	11.234	11.080	(0.965)	282915	21.0014	21.00
25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	155797	11.0867	11.09
26	1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	70353	5.12215	5.122
* 27	Naphthalene-d8	136	11.643	11.643	(1.000)	152009	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
28	Naphthalene	128	11.689	11.681	(1.004)	191530	4.73263	4.733
29	4-Chloroaniline	127	11.851	11.843	(1.018)	173412	10.9603	10.96
30	Hexachlorobutadiene	225	12.098	12.099	(1.039)	42367	5.19271	5.193
31	4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	147122	11.9007	11.90
32	2-Methylnaphthalene	142	13.197	13.197	(1.134)	129228	4.80733	4.807
33	Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	107971	10.2504	10.25
34	2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	112509	11.1670	11.17
35	2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	125520	12.0854	12.09
$ 36	2-Fluorobiphenyl	172	Compound Not Detected.					
37	2-Chloronaphthalene	162	14.258	14.258	(0.918)	142918	5.37333	5.373
38	2-Nitroaniline	65	14.559	14.552	(0.937)	73989	11.5256	11.53
39	Dimethylphthalate	163	15.055	15.047	(0.969)	152060	5.29173	5.292
40	Acenaphthylene	152	15.194	15.194	(0.978)	207472	4.59913	4.599
41	2,6-Dinitrotoluene	165	15.186	15.179	(0.978)	75138	11.1601	11.16
* 42	Acenaphthene-d10	164	15.534	15.535	(1.000)	95722	4.00000	
43	3-Nitroaniline	138	15.488	15.473	(0.997)	71502	12.8642	12.86
44	Acenaphthene	153	15.612	15.604	(1.005)	131114	4.82292	4.823
45	2,4-Dinitrophenol	184	15.712	15.705	(1.011)	126391	20.8995	20.90
46	Dibenzofuran	168	15.967	15.960	(1.028)	179601	4.83159	4.832
47	4-Nitrophenol	109	15.867	15.867	(1.021)	43830	10.4514	10.45
48	2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	100486	11.5716	11.57
50	Diethylphthalate	149	16.640	16.632	(1.071)	148426	5.14027	5.140
49	Fluorene	166	16.733	16.733	(1.077)	152283	4.80101	4.801
51	4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	77730	4.98522	4.985
52	4-Nitroaniline	138	16.856	16.841	(1.085)	68038	11.7844	11.78
53	4,6-Dinitro-2-methylphenol	198	16.964	16.949	(0.902)	169347	21.7583	21.76
54	N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	102490	5.46980	5.470
$ 55	2,4,6-Tribromophenol	330	Compound Not Detected.					
56	4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	49463	5.40070	5.401
57	Hexachlorobenzene	284	18.153	18.153	(0.965)	56636	5.18261	5.183
58	Pentachlorophenol	266	18.547	18.548	(0.986)	90998	11.8629	11.86
* 59	Phenanthrene-d10	188	18.811	18.811	(1.000)	161863	4.00000	
60	Phenanthrene	178	18.865	18.857	(1.003)	216640	4.90686	4.907
61	Anthracene	178	18.958	18.958	(1.008)	219969	4.86323	4.863
62	Carbazole	167	19.313	19.314	(1.027)	146715	5.34003	5.340
63	Di-n-butylphthalate	149	20.188	20.188	(1.073)	259155	5.55031	5.550
64	Fluoranthene	202	21.279	21.279	(1.131)	257141	4.94850	4.949
65	Pyrene	202	21.696	21.697	(0.908)	264541	4.88069	4.881
$ 66	Terphenyl-d14	244	Compound Not Detected.					
67	Butylbenzylphthalate	149	22.974	22.974	(0.961)	106153	5.73506	5.735
68	Benzo(a)anthracene	228	23.872	23.864	(0.999)	240855	4.91069	4.911
* 69	Chrysene-d12	240	23.895	23.895	(1.000)	175186	4.00000	
70	3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	155141	8.30491	8.305
71	Chrysene	228	23.942	23.934	(1.002)	214847	4.84048	4.840
72	bis(2-Ethylhexyl)phthalate	149	25.010	24.019	(1.001)	242465	5.33975	5.340
* 134	Di-n-octylphthalate-d4	153	24.995	24.995	(1.000)	197383	4.00000	
73	Di-n-octylphthalate	149	25.010	25.002	(1.001)	242465	5.33515	5.335

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
74	Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	227705	4.59796	4.598
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	268725	5.15172	5.152
76	Benzo(a)pyrene	252	26.249	26.241	(0.996)	203839	4.81788	4.818
* 77	Perylene-d12	264	26.349	26.350	(1.000)	166766	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	251131	5.15203	5.152
79	Dibenzo(a,h)anthracene	278	28.713	28.698	(1.090)	191446	5.12002	5.120
80	Benzo(g,h,i)perylene	276	29.373	29.350	(1.115)	209597	4.96989	4.970
90	N-Nitrosodimethylamine	74	4.358	4.366	(0.485)	105643	11.2307	11.23
91	Aniline	93	8.406	8.406	(0.936)	203803	4.92093	4.921
93	Benzidine	184	21.542	21.542	(0.902)	86479	15.0162	15.02(R)
103	Pyridine	79	4.374	4.397	(0.487)	90444	10.9387	10.94
105	1-methylnaphthalene	142	13.430	13.430	(1.153)	118938	4.82444	4.824
111	Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.101)	163298	5.51577	5.516
187	Total Benzofluoranthenes	252	25.707	25.699	(0.976)	469919	9.77502	9.775
99	Perylene	252	26.404	26.388	(1.002)	212820	4.40032	4.400
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
188	2,6-Dichlorophenol	162	Compound Not Detected.					
189	N-Nitrosomethylethylamine	88	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429icv.d
Lab Smp Id: IC0429ICV
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41290	-8.75
27 Naphthalene-d8	166754	83377	333508	152009	-8.84
42 Acenaphthene-d10	106910	53455	213820	95722	-10.46
59 Phenanthrene-d10	179783	89892	359566	161863	-9.97
69 Chrysene-d12	192841	96420	385682	175186	-9.16
134 Di-n-octylphthala	229567	114784	459134	197383	-14.02
77 Perylene-d12	184310	92155	368620	166766	-9.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.09
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.53	-0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130429
Sample Matrix: NONE Fraction: SV
Lab Smp Id: IC0429ICV
Level: Operator: VTS/YZ
Data Type: MS DATA SampleType: LCS
SpikeList File: ICVS.spk Quant Type: ISTD
Sublist File: PSDDAHDR.sub
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
3	Phenol	5.000	5.220	104.40	
4	Bis(2-Chloroethyl)	5.000	5.339	106.77	
6	2-Chlorophenol	5.000	4.894	97.88	
7	1,3-Dichlorobenzen	5.000	5.116	102.31	
9	1,4-Dichlorobenzen	5.000	5.205	104.10	
11	Benzyl alcohol	5.000	4.902	98.03	
12	1,2-Dichlorobenzen	5.000	5.102	102.04	
13	2-Methylphenol	5.000	5.493	109.86	
14	2,2'-oxybis(1-Chlo	5.000	5.273	105.46	
15	4-Methylphenol	5.000	5.593	111.86	
16	N-Nitroso-di-n-pro	5.000	5.416	108.33	
17	Hexachloroethane	5.000	5.214	104.29	
19	Nitrobenzene	5.000	5.370	107.39	
20	Isophorone	5.000	6.223	124.46	
21	2-Nitrophenol	5.000	5.177	103.54	
22	2,4-Dimethylphenol	10.00	10.76	107.60	
23	Bis(2-Chloroethoxy	5.000	5.494	109.88	
24	Benzoic acid	20.00	21.00	105.01	
25	2,4-Dichlorophenol	10.00	11.09	110.87	
26	1,2,4-Trichloroben	5.000	5.122	102.44	
28	Naphthalene	5.000	4.733	94.65	
29	4-Chloroaniline	10.00	10.96	109.60	
30	Hexachlorobutadien	5.000	5.193	103.85	
31	4-Chloro-3-methylp	10.00	11.90	119.01	
32	2-Methylnaphthalen	5.000	4.807	96.15	
33	Hexachlorocyclopen	10.00	10.25	102.50	
34	2,4,6-Trichlorophe	10.00	11.17	111.67	
35	2,4,5-Trichlorophe	10.00	12.09	120.85	
37	2-Chloronaphthalen	5.000	5.373	107.47	
38	2-Nitroaniline	10.00	11.53	115.26	
39	Dimethylphthalate	5.000	5.292	105.83	
40	Acenaphthylene	5.000	4.599	91.98	
41	2,6-Dinitrotoluene	10.00	11.16	111.60	

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43	3-Nitroaniline	10.00	12.86	128.64	
44	Acenaphthene	5.000	4.823	96.46	
45	2,4-Dinitrophenol	20.00	20.90	104.50	
46	Dibenzofuran	5.000	4.832	96.63	
47	4-Nitrophenol	10.00	10.45	104.51	
48	2,4-Dinitrotoluene	10.00	11.57	115.72	
49	Fluorene	5.000	4.801	96.02	
50	Diethylphthalate	5.000	5.140	102.81	
51	4-Chlorophenyl-phe	5.000	4.985	99.70	
52	4-Nitroaniline	10.00	11.78	117.84	
53	4,6-Dinitro-2-meth	20.00	21.76	108.79	
54	N-Nitrosodiphenyla	5.000	5.470	109.40	
56	4-Bromophenyl-phen	5.000	5.401	108.01	
57	Hexachlorobenzene	5.000	5.183	103.65	
58	Pentachlorophenol	10.00	11.86	118.63	
60	Phenanthrene	5.000	4.907	98.14	
61	Anthracene	5.000	4.863	97.26	
63	Di-n-butylphthalat	5.000	5.550	111.01	
64	Fluoranthene	5.000	4.949	98.97	
65	Pyrene	5.000	4.881	97.61	
67	Butylbenzylphthala	5.000	5.735	114.70	
68	Benzo(a)anthracene	5.000	4.911	98.21	
70	3,3'-Dichlorobenzi	10.00	8.305	83.05	
71	Chrysene	5.000	4.840	96.81	
72	bis(2-Ethylhexyl)p	5.000	5.340	106.80	
73	Di-n-octylphthalat	5.000	5.335	106.70	
74	Benzo(b)fluoranthe	5.000	4.598	91.96	
75	Benzo(k)fluoranthe	5.000	5.152	103.03	
76	Benzo(a)pyrene	5.000	4.818	96.36	
78	Indeno(1,2,3-cd)py	5.000	5.152	103.04	
79	Dibenzo(a,h)anthra	5.000	5.120	102.40	
80	Benzo(g,h,i)peryle	5.000	4.970	99.40	
90	N-Nitrosodimethyla	10.00	11.23	112.31	
91	Aniline	5.000	4.921	98.42	
93	Benzidine	10.00	15.02	150.16*	
105	1-methylnaphthalen	5.000	4.824	96.49	
120	2,3,4,6-Tetrachlo	5.000	0.000	*	
151	1,2,4,5-Tetrachlo	5.000	0.000	*	
110	Tetrachloroguaiac	10.00	0.000	*	
109	3,4,5-Trichlorogu	5.000	0.000	*	
181	3,4,6-Trichlorogu	5.000	0.000	*	
108	4,5,6-Trichlorogu	5.000	0.000	*	
184	3,4-Dichloroguaia	5.000	0.000	*	
107	4,5-Dichloroguaia	10.00	0.000	*	
182	4,6-Dichloroguaia	10.00	0.000	*	
185	4-Chloroguaiacol	2.500	0.000	*	
106	Guaiacol	5.000	0.000	*	

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130429
Sample Matrix: NONE Fraction: SV
Lab Smp Id: IC0429ICV
Level: Operator: VTS/YZ
Data Type: MS DATA SampleType: LCS
SpikeList File: ICVS.spk Quant Type: ISTD
Sublist File: PSDDAHDR.sub
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

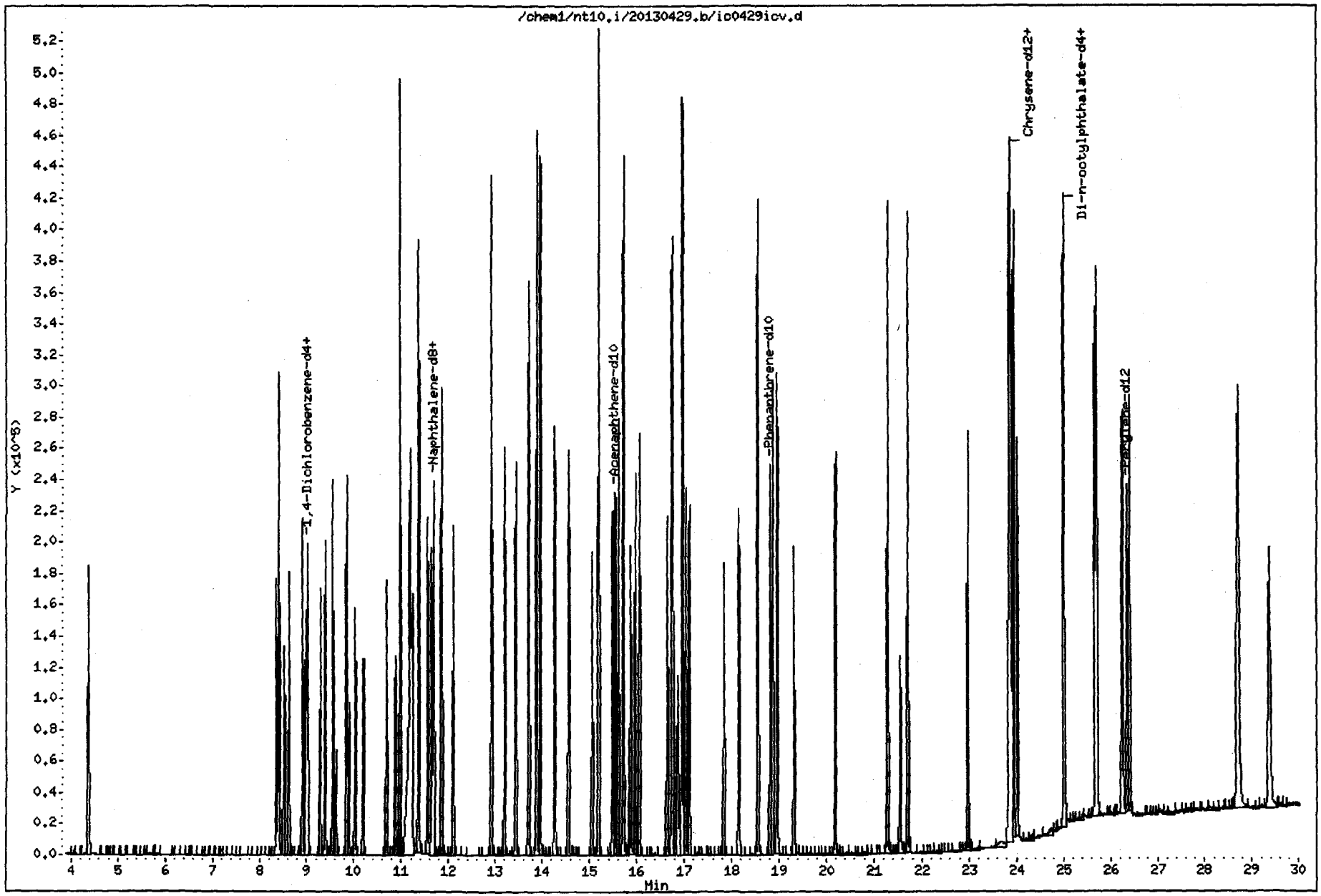
SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	7.500	0.000	*	
$ 2 Phenol-d5	7.500	0.000	*	
$ 5 2-Chlorophenol-d4	7.500	0.000	*	
$ 10 1,2-Dichlorobenze	5.000	0.000	*	
$ 18 Nitrobenzene-d5	5.000	0.000	*	
$ 36 2-Fluorobiphenyl	5.000	0.000	*	
$ 55 2,4,6-Tribromophe	7.500	0.000	*	
$ 66 Terphenyl-d14	5.000	0.000	*	

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Date : 29-APR-2013 22:24
Client ID:
Sample Info: IC0429ICV

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

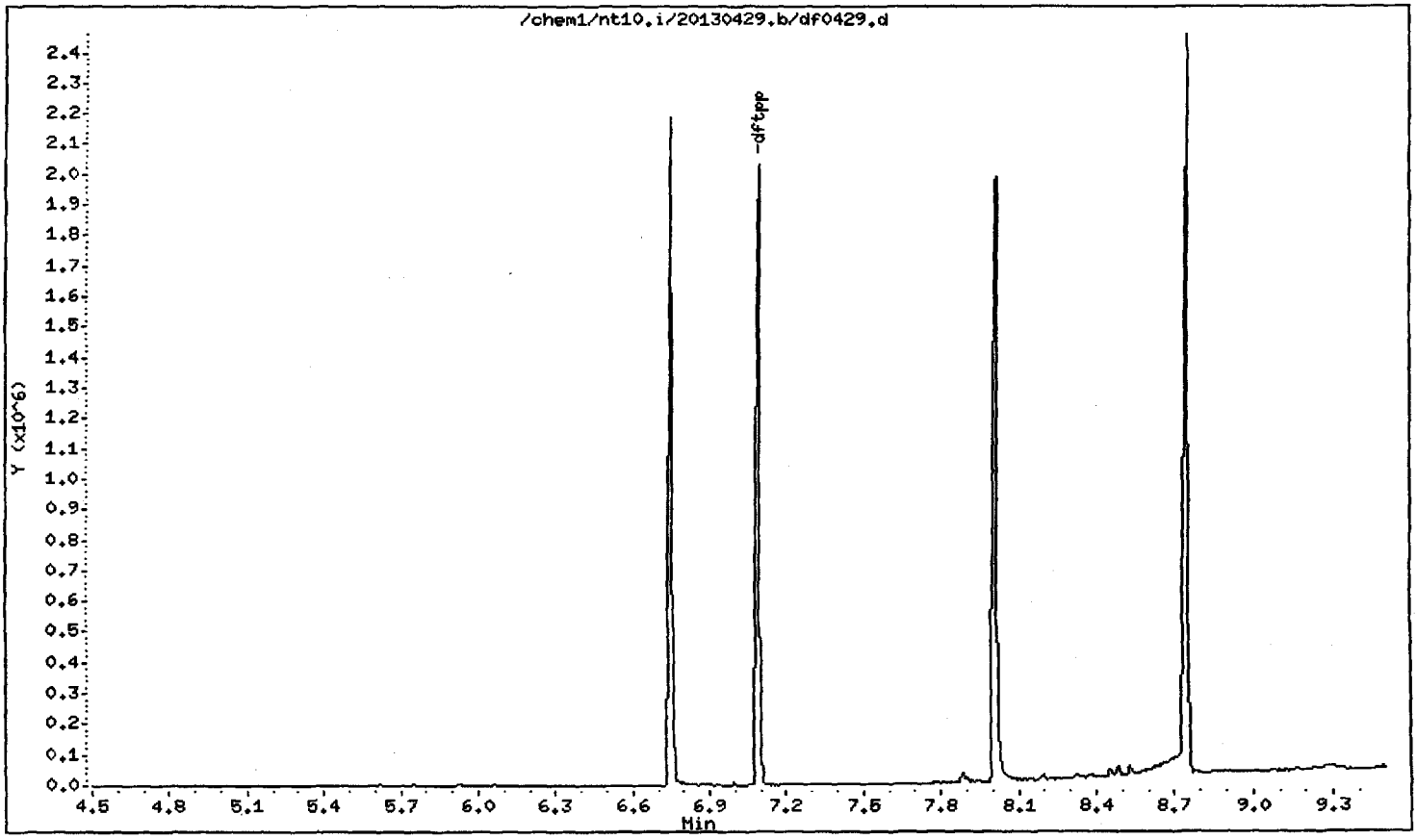
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

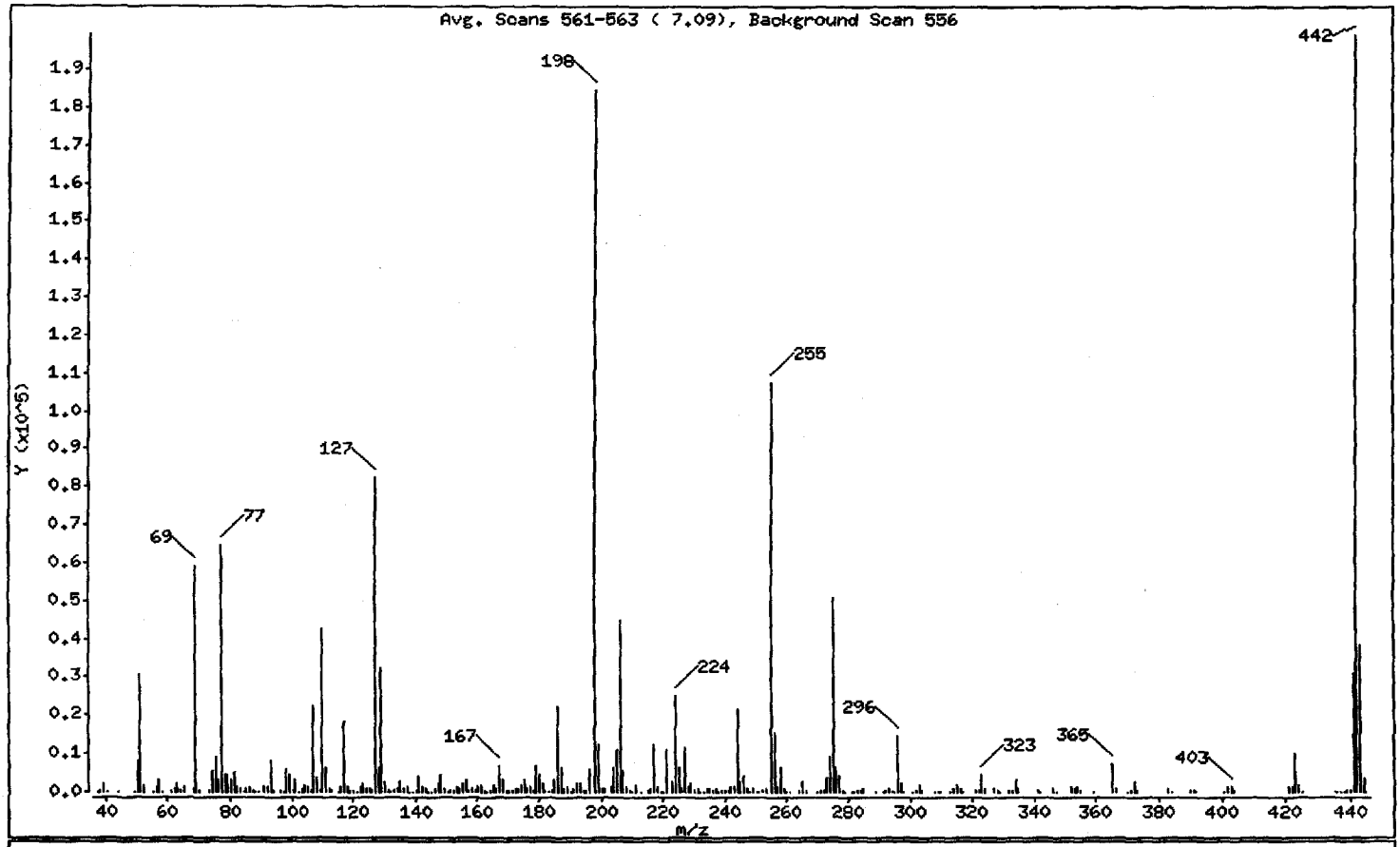
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	16.70
68	Less than 2.00% of mass 69	0.51 (1.60)
69	Mass 69 relative abundance	31.97
70	Less than 2.00% of mass 69	0.15 (0.46)
127	10.00 - 80.00% of mass 198	44.78
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	27.44
365	Greater than 1.00% of mass 198	4.00
441	0.01 - 24.00% of mass 442	16.80 (15.56)
442	50.00 - 200.00% of mass 198	107.98
443	15.00 - 24.00% of mass 442	20.84 (19.30)

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	119	128.00	6232	203.00	1259	289.00	149
38.00	415	129.00	32664	204.00	6492	291.00	55
39.00	2393	130.00	2738	205.00	11023	292.00	248
40.00	132	131.00	547	206.00	44808	293.00	944
44.00	78	132.00	207	207.00	5716	294.00	225
49.00	203	133.00	272	208.00	1602	295.00	86
50.00	8343	134.00	858	209.00	559	296.00	14604
51.00	30808	135.00	2801	210.00	130	297.00	2070
52.00	1637	136.00	916	211.00	1868	298.00	119
55.00	158	137.00	1248	213.00	64	301.00	172
56.00	1274	138.00	214	215.00	464	302.00	318
57.00	3130	139.00	128	216.00	999	303.00	1693
58.00	121	140.00	298	217.00	12350	304.00	431
61.00	576	141.00	4004	218.00	1562	308.00	140
62.00	758	142.00	1332	219.00	107	309.00	66
63.00	2110	143.00	918	220.00	86	310.00	122
64.00	365	144.00	184	221.00	10806	313.00	127
65.00	1151	145.00	229	223.00	2947	314.00	769
68.00	946	146.00	756	224.00	25312	315.00	1728
69.00	58984	147.00	2094	225.00	6355	316.00	922
70.00	271	148.00	4544	226.00	766	317.00	88
73.00	494	149.00	885	227.00	11288	321.00	436
74.00	5693	150.00	191	228.00	1533	322.00	230
75.00	9303	151.00	532	229.00	2272	323.00	4678
76.00	3182	152.00	251	230.00	340	324.00	920
77.00	64696	153.00	1367	231.00	1037	327.00	968
78.00	4399	154.00	1025	232.00	136	328.00	465
79.00	4595	155.00	2332	233.00	163	329.00	50
80.00	3355	156.00	3268	234.00	787	332.00	367
81.00	4879	157.00	652	235.00	849	333.00	490
82.00	1244	158.00	750	236.00	522	334.00	3152
83.00	1132	159.00	624	237.00	861	335.00	753
84.00	59	160.00	1324	238.00	117	341.00	568
85.00	783	161.00	1910	239.00	422	342.00	139
86.00	1346	162.00	596	240.00	404	346.00	1068

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	634	163.00	120	241.00	673	347.00	165
88.00	209	164.00	312	242.00	1491	352.00	1522
89.00	58	165.00	1684	243.00	1585	353.00	1048
91.00	1173	166.00	900	244.00	21560	354.00	1434
92.00	1265	167.00	7028	245.00	2828	355.00	307
93.00	8038	168.00	3167	246.00	4226	359.00	51
94.00	544	169.00	640	247.00	836	365.00	7383
96.00	486	170.00	289	248.00	173	366.00	950
97.00	173	171.00	367	249.00	766	370.00	83
98.00	5992	172.00	736	250.00	145	371.00	406
99.00	4376	173.00	984	251.00	198	372.00	2676
100.00	452	174.00	1650	252.00	278	373.00	680
101.00	3021	175.00	3419	253.00	722	383.00	692
102.00	131	176.00	1090	255.00	107624	384.00	117
103.00	907	177.00	1541	256.00	15761	390.00	337
104.00	1840	178.00	570	257.00	1160	391.00	291
105.00	1589	179.00	6738	258.00	6194	392.00	71
106.00	548	180.00	4416	259.00	1028	401.00	221
107.00	22656	181.00	2092	260.00	162	402.00	1163
108.00	3534	182.00	309	261.00	213	403.00	1545
109.00	609	183.00	166	264.00	253	404.00	599
110.00	42496	184.00	593	265.00	2547	421.00	1426
111.00	6272	185.00	3035	266.00	526	422.00	1250
112.00	744	186.00	22616	270.00	181	423.00	9992
113.00	246	187.00	6353	271.00	299	424.00	1966
115.00	56	188.00	695	272.00	416	425.00	183
116.00	1316	189.00	1391	273.00	3826	435.00	62
117.00	18496	190.00	224	274.00	8949	436.00	62
118.00	1424	191.00	864	275.00	50632	437.00	225
119.00	236	192.00	2063	276.00	6580	438.00	213
120.00	238	193.00	2223	277.00	4111	439.00	328
121.00	63	194.00	423	278.00	606	440.00	329
122.00	1437	195.00	416	279.00	122	441.00	31000
123.00	2280	196.00	5832	281.00	202	442.00	199232
124.00	999	198.00	184512	282.00	126	443.00	38448

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

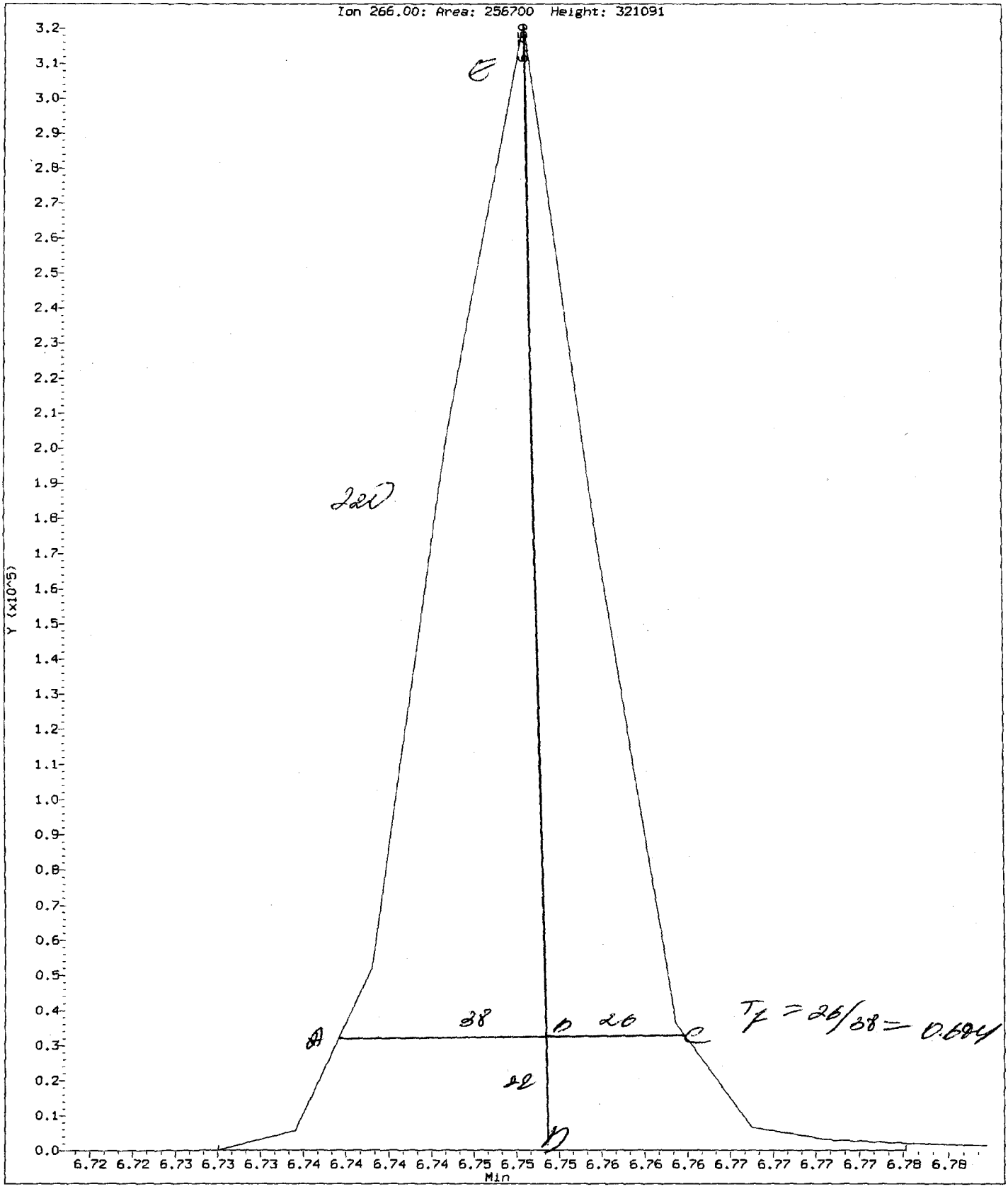
Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	975	199.00	12407	283.00	532	444.00	3455
126.00	347	200.00	963	284.00	335	445.00	131
127.00	82624	201.00	1058	285.00	774		

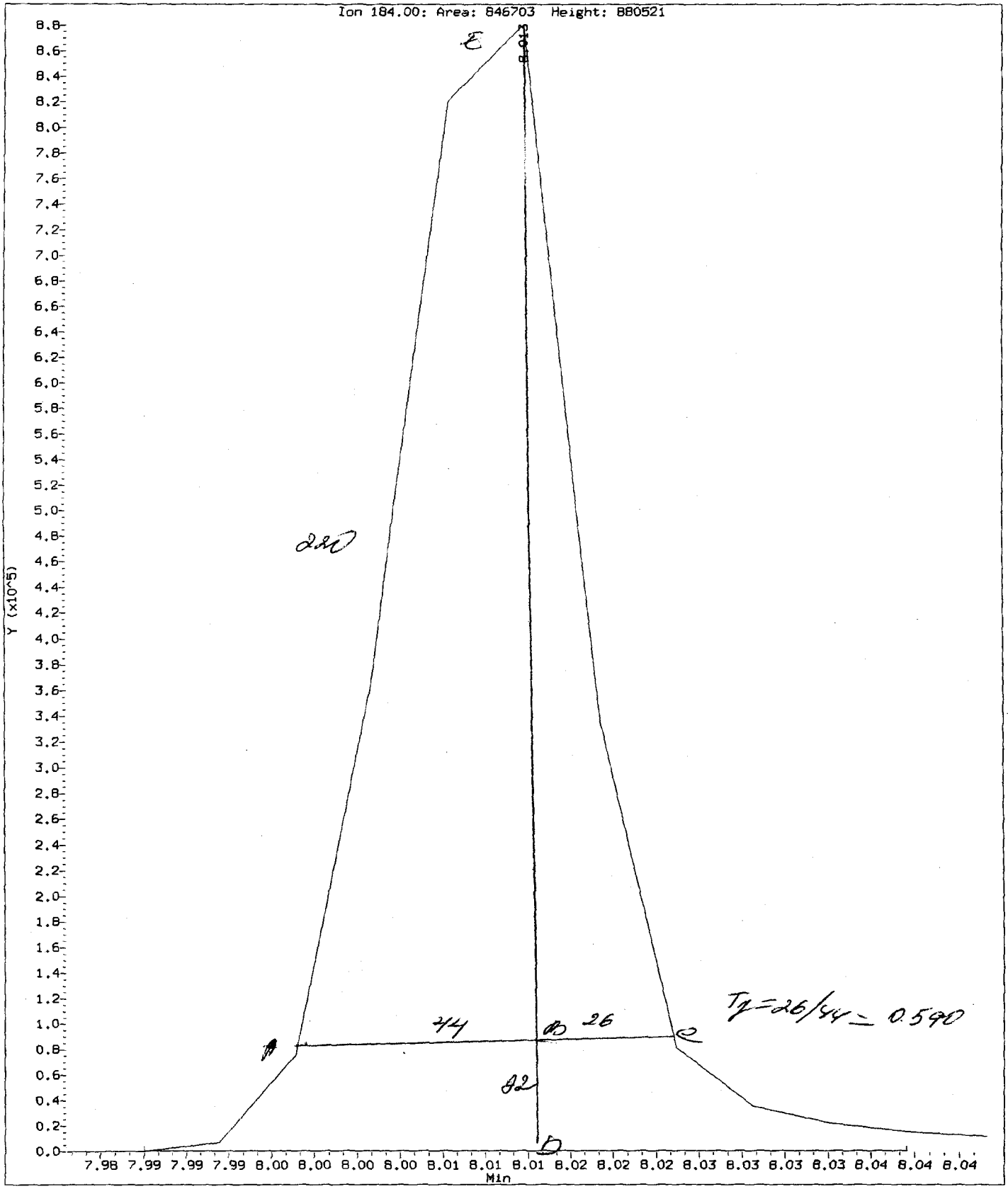
Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130429.b/ddt.b/df0429.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130429.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 29-APR-2013 16:37 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.750	256700
Benzidine	8.013	846703
4,4'-DDE	8.195	1804
4,4'-DDD	8.483	6740
4,4'-DDT	8.745	445165

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 1804 + 6740) * 100}{(\ 1804 + 6740 + 445165)}$$

DDT Percent Breakdown = 1.9 %

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WS21 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 04/29/13 Analysis Start Date: 06/13/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N / ✓	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
ICAL Q Flag applied?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / ✓
CCAL Q flag applied?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / NA
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA / NA
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below.

(Review 1) Analyst: YZ **Date:** 6/17/13

(Review 2) Reviewer: _____ **Date:** _____

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130613.b

ARI Job No.: WS49 Method: ABN.m Instrument: nt10.i Date: 13-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1345	ws49mb.d	WS49MBS1	WS49MBS1	1	NO MANUAL INTEGRATION
1421	ws49sb.d	WS49LCSS1	WS49LCSS1	1	3-Nitroaniline,
1458	ws49sbd.d	WS49LCSDS1	WS49LCSDS1	1	3-Nitroaniline,
1840	wr99dms.d	WR99DMS	KC-VT-1593	1	3-Nitroaniline,
1916	wr99dmsd.d	WR99DMSD	KC-VT-1593	1	3-Nitroaniline,
1953	wr99e.d	WR99E	KC-CB-01-2	1	Benzo(k)fluoranthene,
2030	wr99f.d	WR99F	KC-DD-2009	1	Di-n-octylphthalate, Benzo(k)fluoranthene,
2107	ws21a.d	WS21A	KC-IV-SPS-	1	Phenanthrene, Benzo(k)fluoranthene,
1535	ws49a.d	WS49A	FA-1-S	1	Benzo(k)fluoranthene,
1612	ws49b.d	WS49B	FA-2-4	1	Benzo(k)fluoranthene,
1649	ws49c.d	WS49C	FA-3-2	1	NO MANUAL INTEGRATION
1726	ws49d.d	WS49D	FA-4-3	1	NO MANUAL INTEGRATION
1937	wr99d.d	WR99D	KC-VT-1593	2	Benzo(k)fluoranthene,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130614.b

Instrument: nt10.i Date: 14-JUN-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 14-JUN-2013

Compound	%D
Phenol	21.3
Benzyl alcohol	-22.9
Hexachlorocyclopentadiene	-21.0
3-Nitroaniline	-28.3
2,4-Dinitrophenol	-29.2
Carbazole	-35.2
3,3'-Dichlorobenzidine	-22.9
~~Benzidine~~	~~61.8~~

Data File: /chem1/nt10.i/20130614.b/df0614.d

Date : 14-JUN-2013 12:38

Client ID: DFTPP

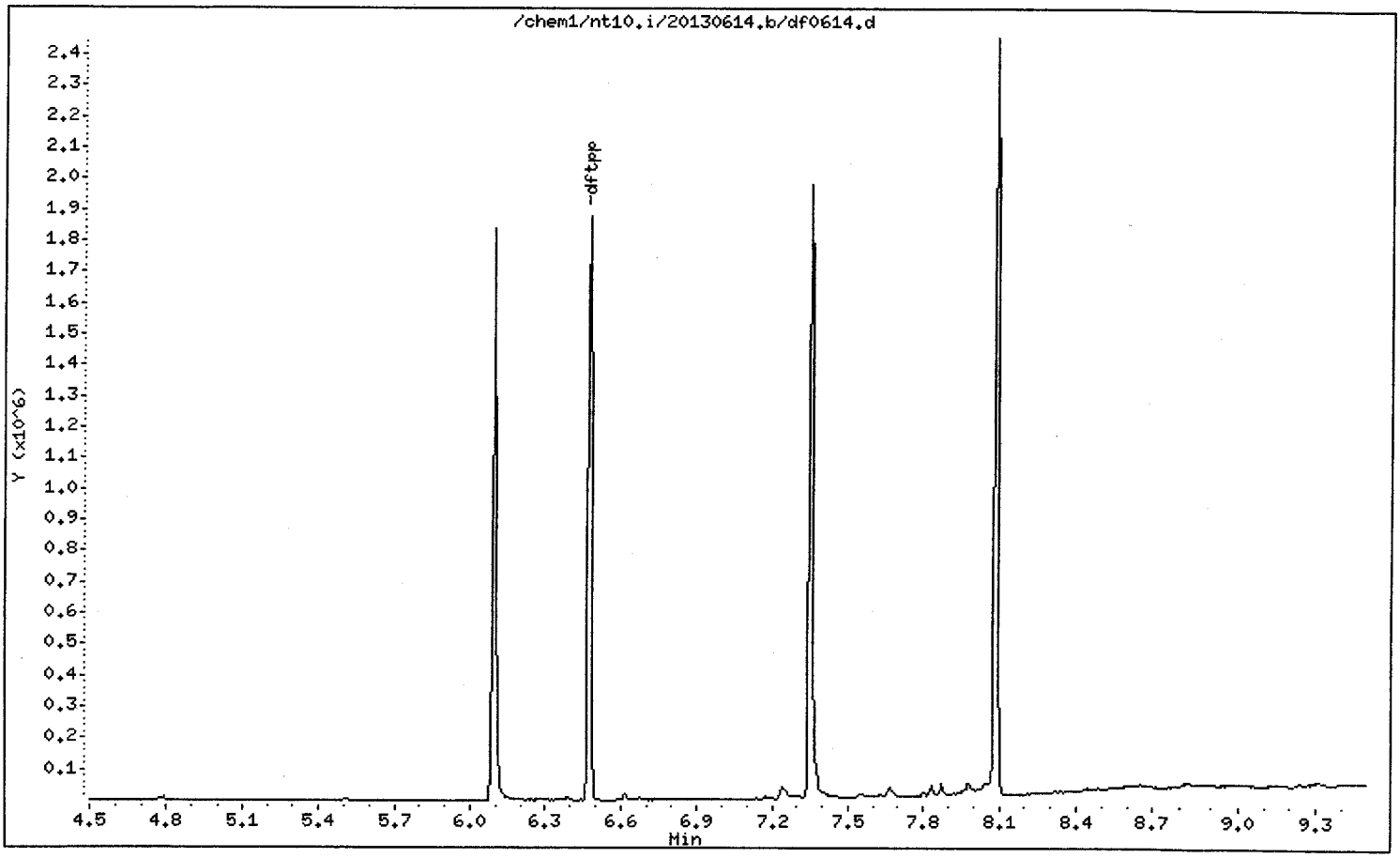
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130614.b/df0614.d

Date : 14-JUN-2013 12:38

Client ID: DFTPP

Instrument: nt10.i

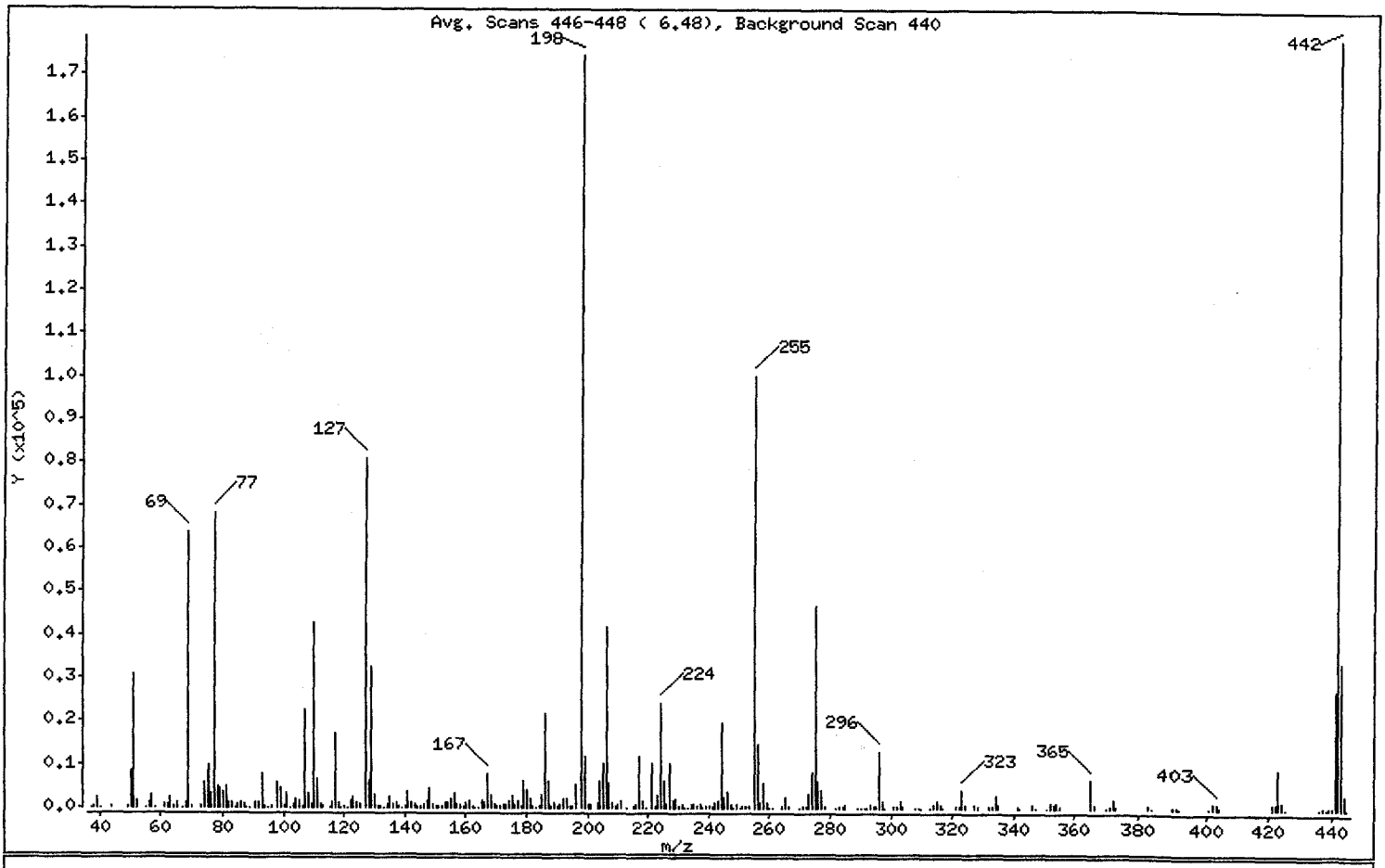
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.55
68	Less than 2.00% of mass 69	0.61 (1.68)
69	Mass 69 relative abundance	36.38
70	Less than 2.00% of mass 69	0.17 (0.48)
127	10.00 - 80.00% of mass 198	46.36
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 60.00% of mass 198	26.77
365	Greater than 1.00% of mass 198	3.75
441	0.01 - 24.00% of mass 442	15.67 (15.32)
442	50.00 - 200.00% of mass 198	102.23
443	15.00 - 24.00% of mass 442	19.58 (19.16)

Data File: /chem1/nt10.i/20130614.b/df0614.d

Date : 14-JUN-2013 12:38

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0614.d
Spectrum: Avg. Scans 446-448 (6.48), Background Scan 440
Location of Maximum: 442.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	122	128.00	6292	203.00	1213	291.00	133
38.00	397	129.00	32296	204.00	6291	292.00	205
39.00	2289	130.00	2708	205.00	10346	293.00	787
40.00	139	131.00	485	206.00	42096	294.00	264
44.00	221	132.00	261	207.00	5706	295.00	256
49.00	231	133.00	189	208.00	1432	296.00	13011
50.00	8426	134.00	895	209.00	470	297.00	1824
51.00	30688	135.00	2554	210.00	874	298.00	51
52.00	1500	136.00	925	211.00	1702	301.00	219
55.00	77	137.00	1206	213.00	51	302.00	292
56.00	1362	138.00	287	215.00	512	303.00	1515
57.00	2927	139.00	75	216.00	963	304.00	403
58.00	122	140.00	383	217.00	11888	308.00	81
61.00	648	141.00	3789	218.00	1473	309.00	62
62.00	807	142.00	1333	219.00	120	310.00	87
63.00	2310	143.00	906	221.00	10276	313.00	56
64.00	284	144.00	233	222.00	418	314.00	711
65.00	1252	145.00	231	223.00	2770	315.00	1630
67.00	182	146.00	648	224.00	24352	316.00	817
68.00	1067	147.00	1739	225.00	6074	317.00	110
69.00	63616	148.00	4380	226.00	647	321.00	404
70.00	305	149.00	861	227.00	10253	322.00	224
73.00	494	150.00	294	228.00	1544	323.00	4215
74.00	5822	151.00	546	229.00	2143	324.00	721
75.00	9831	152.00	373	230.00	326	327.00	802
76.00	3217	153.00	1237	231.00	935	328.00	431
77.00	68216	154.00	1028	232.00	172	332.00	342
78.00	4749	155.00	2207	233.00	133	333.00	429
79.00	4469	156.00	3115	234.00	667	334.00	2672
80.00	3586	157.00	622	235.00	707	335.00	737
81.00	4864	158.00	699	236.00	509	341.00	510
82.00	1243	159.00	541	237.00	751	342.00	101
83.00	1062	160.00	1217	238.00	53	346.00	929
84.00	134	161.00	1710	239.00	457	347.00	149
85.00	898	162.00	553	240.00	299	351.00	55

Data File: /chem1/nt10.i/20130614.b/df0614.d

Date : 14-JUN-2013 12:38

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0614.d
Spectrum: Avg. Scans 446-448 (6.48), Background Scan 440
Location of Maximum: 442.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1381	163.00	165	241.00	601	352.00	1406
87.00	675	164.00	193	242.00	1345	353.00	907
88.00	189	165.00	1518	243.00	1541	354.00	1289
89.00	70	166.00	1151	244.00	19856	355.00	285
91.00	1266	167.00	7619	245.00	2597	365.00	6553
92.00	1303	168.00	3077	246.00	3784	366.00	814
93.00	7989	169.00	651	247.00	747	370.00	56
94.00	611	170.00	214	248.00	190	371.00	371
95.00	144	171.00	302	249.00	766	372.00	2240
96.00	264	172.00	704	250.00	154	373.00	566
98.00	5835	173.00	961	251.00	232	383.00	708
99.00	4661	174.00	1680	252.00	248	384.00	187
100.00	431	175.00	3048	253.00	549	390.00	319
101.00	3089	176.00	1011	255.00	100392	391.00	253
102.00	149	177.00	1450	256.00	14795	392.00	119
103.00	949	178.00	517	257.00	1192	401.00	135
104.00	1897	179.00	6033	258.00	5788	402.00	1030
105.00	1800	180.00	4085	259.00	1051	403.00	1389
106.00	575	181.00	2045	260.00	112	404.00	432
107.00	22440	182.00	321	261.00	136	421.00	1287
108.00	3295	183.00	170	264.00	235	422.00	1168
109.00	733	184.00	446	265.00	2378	423.00	9052
110.00	42696	185.00	3064	266.00	408	424.00	1733
111.00	6622	186.00	21776	270.00	58	425.00	81
112.00	766	187.00	6349	271.00	467	436.00	55
113.00	230	188.00	589	272.00	354	437.00	218
115.00	52	189.00	1380	273.00	3473	438.00	164
116.00	1272	190.00	216	274.00	8105	439.00	309
117.00	17176	191.00	722	275.00	46800	440.00	222
118.00	1178	192.00	1959	276.00	6127	441.00	27392
119.00	169	193.00	2181	277.00	3912	442.00	178752
120.00	295	194.00	423	278.00	607	443.00	34240
121.00	113	195.00	430	282.00	50	444.00	3304
122.00	1466	196.00	5451	283.00	441	445.00	131
123.00	2387	198.00	174848	284.00	336		

Data File: /chem1/nt10.i/20130614.b/df0614.d

Date : 14-JUN-2013 12:38

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0614.d

Spectrum: Avg. Scans 446-448 (6.48), Background Scan 440

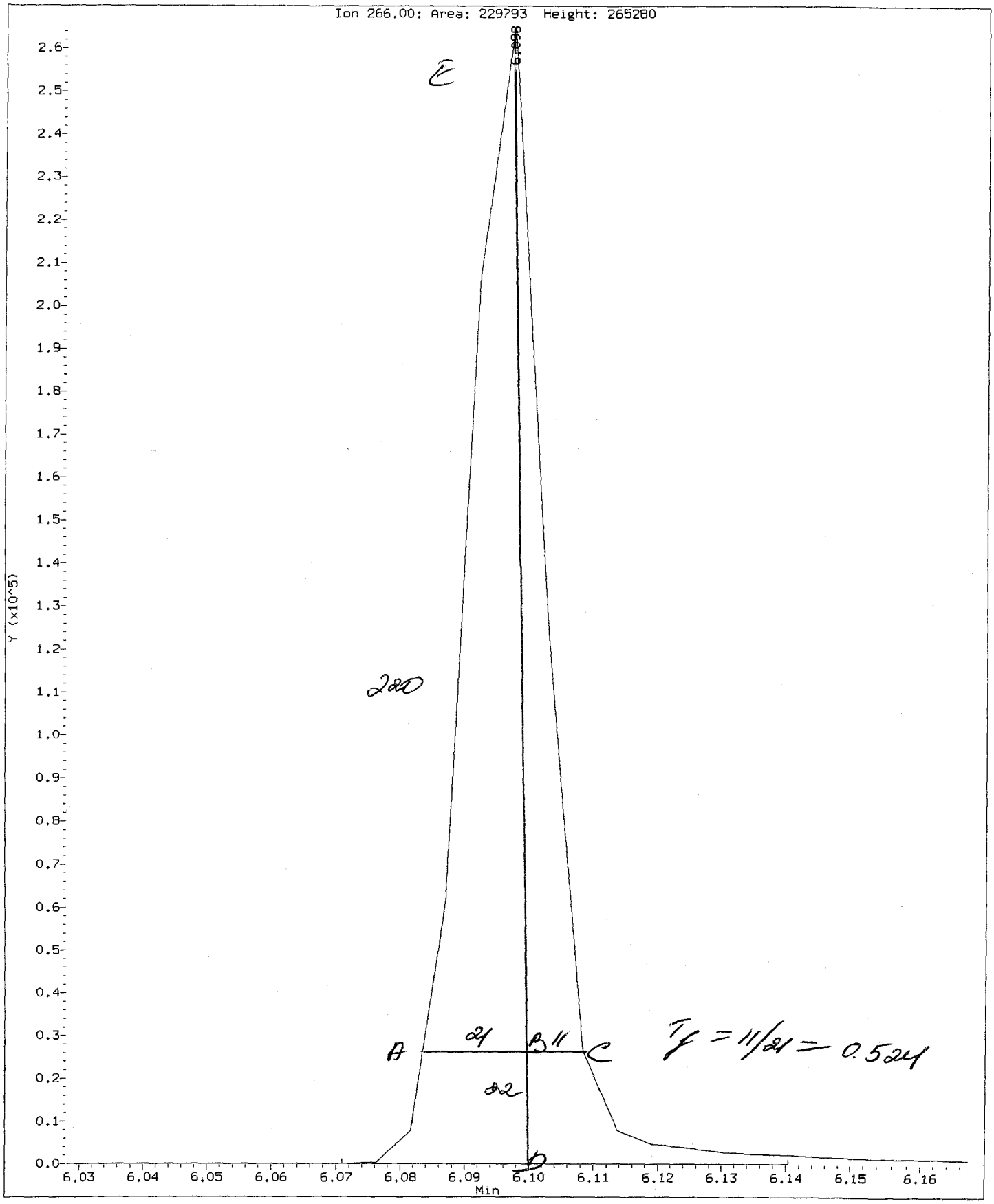
Location of Maximum: 442.00

Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1039	199.00	11810	285.00	711		
125.00	932	200.00	936	289.00	69		
127.00	81064	201.00	964	290.00	58		

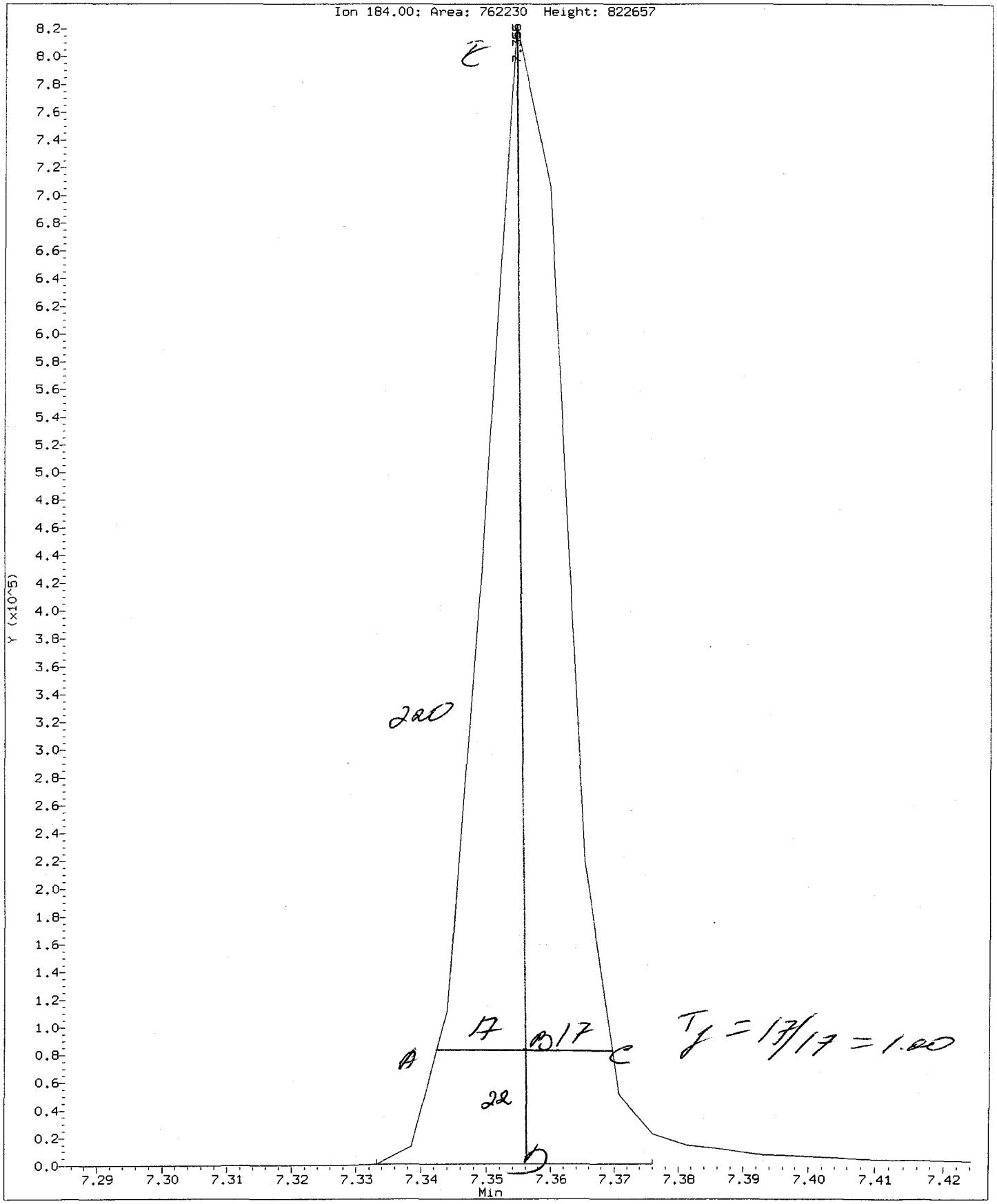
Data File: /chem1/nt10.i/20130614.b/ddt.b/df0614.d
Injection Date: 14-JUN-2013 12:38
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130614.b/ddt.b/df0614.d
Injection Date: 14-JUN-2013 12:38
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130614.b/ddt.b/df0614.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130614.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 14-JUN-2013 12:38 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.098	229793
Benzidine	7.355	762230
4,4'-DDE	7.547	1097
4,4'-DDD	7.831	6625
4,4'-DDT	8.087	450485

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(1097 + 6625) * 100}{(1097 + 6625 + 450485)}$$

DDT Percent Breakdown = 1.7 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0614.d
Analysis Type:
Lab Sample ID: CC0614
Method: /chem1/nt10.i/20130614.b/ABN.m

Injection Date: 14-JUN-2013 12:53
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.42771	1.52750	1.52750	0.010	6.98983	20.00000	Averaged	
$ 2 Phenol-d5	1.84748	1.99906	1.99906	0.010	8.20504	20.00000	Averaged	
3 Phenol	2.06794	2.50779	2.50779	0.100	21.26969	20.00000	Averaged	<-
$ 5 2-Chlorophenol-d4	1.40240	1.45651	1.45651	0.010	3.85816	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.48709	1.47881	1.47881	0.700	-0.55697	20.00000	Averaged	
6 2-Chlorophenol	1.59477	1.59840	1.59840	0.800	0.22769	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.60030	1.57182	1.57182	0.010	-1.77989	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.57739	1.55383	1.55383	0.010	-1.49342	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	1.00879	1.02813	1.02813	0.010	1.91769	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.51024	1.50833	1.50833	0.010	-0.12690	20.00000	Averaged	
11 Benzyl alcohol	0.86989	0.67045	0.67045	0.010	-22.92716	20.00000	Averaged	<-
14 2,2'-oxybis(1-Chloropropane	0.45898	0.46796	0.46796	0.010	1.95803	20.00000	Averaged	
13 2-Methylphenol	1.48808	1.56413	1.56413	0.700	5.11086	20.00000	Averaged	
17 Hexachloroethane	0.65999	0.64407	0.64407	0.300	-2.41209	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.92905	0.99806	0.99806	0.500	7.42822	20.00000	Averaged	
15 4-Methylphenol	1.51729	1.62210	1.62210	0.600	6.90758	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.42210	0.42935	0.42935	0.010	1.71639	20.00000	Averaged	
19 Nitrobenzene	0.38970	0.39312	0.39312	0.200	0.87843	20.00000	Averaged	
20 Isophorone	0.73300	0.73807	0.73807	0.300	0.69041	20.00000	Averaged	
21 2-Nitrophenol	0.21847	0.23990	0.23990	0.100	9.81084	20.00000	Averaged	
22 2,4-Dimethylphenol	0.40172	0.39235	0.39235	0.200	-2.33172	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.43229	0.44662	0.44662	0.050	3.31638	20.00000	Averaged	
24 Benzoic acid	17.29771	20.00000	0.30457	0.010	-13.51146	20.00000	Quadratic	
25 2,4-Dichlorophenol	0.36979	0.34239	0.34239	0.100	-7.40894	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.36143	0.34902	0.34902	0.010	-3.43176	20.00000	Averaged	
28 Naphthalene	1.06494	1.00905	1.00905	0.100	-5.24869	20.00000	Averaged	
29 4-Chloroaniline	0.41634	0.39917	0.39917	0.010	-4.12381	20.00000	Averaged	
30 Hexachlorobutadiene	0.21470	0.20960	0.20960	0.010	-2.37560	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.32531	0.37130	0.37130	0.200	14.13603	20.00000	Averaged	
32 2-Methylnaphthalene	0.70737	0.68994	0.68994	0.300	-2.46358	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.44016	0.34761	0.34761	0.001	-21.02664	20.00000	Averaged	<-
34 2,4,6-Trichlorophenol	0.42101	0.43272	0.43272	0.200	2.77947	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.43401	0.47991	0.47991	0.200	10.57642	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.39609	1.32883	1.32883	0.010	-4.81735	20.00000	Averaged	
37 2-Chloronaphthalene	1.11145	1.07002	1.07002	0.700	-3.72765	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0614.d
Analysis Type:
Lab Sample ID: CC0614
Method: /chem1/nt10.i/20130614.b/ABN.m

Injection Date: 14-JUN-2013 12:53
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.26826	0.31081	0.31081	0.010	15.86113	20.00000	Averaged	
39 Dimethylphthalate	1.20078	1.18483	1.18483	0.010	-1.32779	20.00000	Averaged	
40 Acenaphthylene	1.88508	1.72980	1.72980	0.900	-8.23736	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.28135	0.29223	0.29223	0.100	3.86752	20.00000	Averaged	
43 3-Nitroaniline	0.23227	0.16652	0.16652	0.010	-28.30516	20.00000	Averaged	<-
44 Acenaphthene	1.13602	1.08216	1.08216	0.100	-4.74069	20.00000	Averaged	
45 2,4-Dinitrophenol	14.15374	20.00000	0.17692	0.030	-29.23128	20.00000	Quadratic	<-
46 Dibenzofuran	1.55334	1.49603	1.49603	0.800	-3.68942	20.00000	Averaged	
47 4-Nitrophenol	10.28202	10.00000	0.18014	0.010	2.82025	20.00000	Quadratic	
48 2,4-Dinitrotoluene	0.36288	0.39889	0.39889	0.200	9.92303	20.00000	Averaged	
50 Diethylphthalate	1.20662	1.19425	1.19425	0.010	-1.02464	20.00000	Averaged	
49 Fluorene	1.32546	1.23648	1.23648	0.100	-6.71293	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.65156	0.57644	0.57644	0.100	-11.52853	20.00000	Averaged	
52 4-Nitroaniline	0.24126	0.20249	0.20249	0.010	-16.07060	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	18.00935	20.00000	0.17281	0.001	-9.95326	20.00000	Quadratic	
54 N-Nitrosodiphenylamine	0.46304	0.45105	0.45105	0.010	-2.59076	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.21154	0.21532	0.21532	0.010	1.78896	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22633	0.22547	0.22547	0.100	-0.37930	20.00000	Averaged	
57 Hexachlorobenzene	0.27006	0.25932	0.25932	0.100	-3.97431	20.00000	Averaged	
58 Pentachlorophenol	0.18956	0.19358	0.19358	0.010	2.11806	20.00000	Averaged	
60 Phenanthrene	1.09106	1.05955	1.05955	0.700	-2.88778	20.00000	Averaged	
61 Anthracene	1.11776	1.07817	1.07817	0.700	-3.54192	20.00000	Averaged	
62 Carbazole	0.67896	0.44020	0.44020	0.010	-35.16592	20.00000	Averaged	<-
63 Di-n-butylphthalate	1.15386	1.19179	1.19179	0.010	3.28717	20.00000	Averaged	
64 Fluoranthene	1.28413	1.27666	1.27666	0.600	-0.58182	20.00000	Averaged	
65 Pyrene	1.23758	1.23871	1.23871	0.600	0.09105	20.00000	Averaged	
$ 66 Terphenyl-d14	0.77864	0.75203	0.75203	0.010	-3.41820	20.00000	Averaged	
67 Butylbenzylphthalate	0.42263	0.46635	0.46635	0.010	10.34498	20.00000	Averaged	
68 Benzo(a)anthracene	1.11989	1.10821	1.10821	0.700	-1.04288	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.42653	0.32894	0.32894	0.010	-22.87967	20.00000	Averaged	<-
71 Chrysene	1.01345	0.96043	0.96043	0.700	-5.23199	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.53180	0.52251	0.52251	0.010	-1.74610	20.00000	Averaged	
73 Di-n-octylphthalate	0.92098	0.86092	0.86092	0.010	-6.52205	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.18784	1.20019	1.20019	0.700	1.03900	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25114	1.23249	1.23249	0.700	-1.49043	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0614.d
Analysis Type:
Lab Sample ID: CC0614
Method: /chem1/nt10.i/20130614.b/ABN.m

Injection Date: 14-JUN-2013 12:53
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
76 Benzo(a)pyrene	1.01481	1.02191	1.02191	0.700	0.70012	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.16916	1.19934	1.19934	0.500	2.58172	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.89686	0.92570	0.92570	0.400	3.21528	20.00000	Averaged	
80 Benzo(g,h,i)perylene	1.01156	1.02606	1.02606	0.500	1.43381	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.91125	0.90527	0.90527	0.010	-0.65680	20.00000	Averaged	
91 Aniline	4.01210	4.25950	4.25950	0.010	6.16627	20.00000	Averaged	
93 Benzidine	3.81945	10.00000	0.04750	0.010	-61.80550	20.00000	Quadratic	<-
103 Pyridine	0.80099	0.78983	0.78983	0.010	-1.39371	20.00000	Averaged	
105 1-methylnaphthalene	0.64873	0.63257	0.63257	0.010	-2.49071	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.23715	1.21256	1.21256	0.010	-1.98708	20.00000	Averaged	
187 Total Benzofluoranthenes	1.15343	1.13988	1.13988	0.010	-1.17480	20.00000	Averaged	
99 Perylene	1.16006	1.07200	1.07200	0.010	-7.59054	20.00000	Averaged	
98 Retene	0.46838	0.46406	0.46406	0.010	-0.92198	20.00000	Averaged	
120 2,3,4,6-Tetrachlorophenol	0.32282	0.34278	0.34278	0.010	6.18192	20.00000	Averaged	

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130614.b/cc0614.d
Lab Smp Id: CC0614
Inj Date : 14-JUN-2013 12:53
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0614
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130614.b/ABN.m
Meth Date : 17-Jun-2013 13:35 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	5.698	5.698	(0.716)	74315	5.00000	5.349
$ 2	Phenol-d5	99	7.405	7.405	(0.931)	97257	5.00000	5.410
3	Phenol	94	7.421	7.421	(0.933)	122007	5.00000	6.063
$ 5	2-Chlorophenol-d4	132	7.583	7.583	(0.953)	70861	5.00000	5.193
4	Bis(2-Chloroethyl)ether	93	7.537	7.537	(0.947)	71946	5.00000	4.972
6	2-Chlorophenol	128	7.614	7.614	(0.957)	77764	5.00000	5.011
7	1,3-Dichlorobenzene	146	7.877	7.877	(0.990)	76471	5.00000	4.911
* 8	1,4-Dichlorobenzene-d4	152	7.954	7.954	(1.000)	38921	4.00000	
9	1,4-Dichlorobenzene	146	7.986	7.986	(1.004)	75596	5.00000	4.925
$ 10	1,2-Dichlorobenzene-d4	152	8.319	8.319	(1.046)	50020	5.00000	5.096
12	1,2-Dichlorobenzene	146	8.350	8.350	(1.050)	73382	5.00000	4.994
11	Benzyl alcohol	108	8.296	8.296	(1.043)	32618	5.00000	3.854 (M)
14	2,2'-oxybis(1-Chloropropane)	121	8.614	8.614	(1.083)	22767	5.00000	5.098
13	2-Methylphenol	108	8.575	8.575	(1.078)	76097	5.00000	5.256
17	Hexachloroethane	117	8.964	8.964	(1.127)	31335	5.00000	4.879
16	N-Nitroso-di-n-propylamine	70	8.886	8.886	(1.117)	48557	5.00000	5.371
15	4-Methylphenol	108	8.878	8.878	(1.116)	78917	5.00000	5.345
$ 18	Nitrobenzene-d5	82	9.111	9.111	(0.863)	79104	5.00000	5.086
19	Nitrobenzene	77	9.150	9.150	(0.867)	72430	5.00000	5.044
20	Isophorone	82	9.639	9.639	(0.913)	135983	5.00000	5.035
21	2-Nitrophenol	139	9.809	9.809	(0.929)	44200	5.00000	5.491
22	2,4-Dimethylphenol	107	9.964	9.964	(0.944)	144576	10.0000	9.767
23	Bis(2-Chloroethoxy)methane	93	10.149	10.149	(0.961)	82287	5.00000	5.166
24	Benzoic acid	105	10.249	10.249	(0.971)	224461	20.0000	17.30
25	2,4-Dichlorophenol	162	10.311	10.311	(0.977)	126165	10.0000	9.259
26	1,2,4-Trichlorobenzene	180	10.481	10.481	(0.993)	64305	5.00000	4.828

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	27 Naphthalene-d8	136	10.558	10.558	(1.000)	147394	4.00000	
	28 Naphthalene	128	10.596	10.596	(1.004)	185909	5.00000	4.738
	29 4-Chloroaniline	127	10.797	10.797	(1.023)	147088	10.0000	9.588
	30 Hexachlorobutadiene	225	11.021	11.021	(1.044)	38617	5.00000	4.881
	31 4-Chloro-3-methylphenol	107	11.888	11.888	(1.126)	136817	10.0000	11.41
	32 2-Methylnaphthalene	142	12.089	12.089	(1.145)	127116	5.00000	4.877
	33 Hexachlorocyclopentadiene	237	12.600	12.600	(0.876)	81188	10.0000	7.897
	34 2,4,6-Trichlorophenol	196	12.786	12.786	(0.889)	101065	10.0000	10.28
	35 2,4,5-Trichlorophenol	196	12.863	12.863	(0.894)	112088	10.0000	11.06
$	36 2-Fluorobiphenyl	172	12.956	12.956	(0.900)	155181	5.00000	4.759
	37 2-Chloronaphthalene	162	13.126	13.126	(0.912)	124957	5.00000	4.814
	38 2-Nitroaniline	65	13.451	13.451	(0.935)	72592	10.0000	11.59
	39 Dimethylphthalate	163	13.970	13.970	(0.971)	138365	5.00000	4.934
	40 Acenaphthylene	152	14.039	14.039	(0.976)	202006	5.00000	4.588
	41 2,6-Dinitrotoluene	165	14.086	14.086	(0.979)	68253	10.0000	10.39
*	42 Acenaphthene-d10	164	14.388	14.388	(1.000)	93424	4.00000	
	43 3-Nitroaniline	138	14.372	14.372	(0.999)	38893	10.0000	7.169 (M)
	44 Acenaphthene	153	14.457	14.457	(1.005)	126375	5.00000	4.763
	45 2,4-Dinitrophenol	184	14.596	14.596	(1.014)	82642	20.0000	14.15
	46 Dibenzofuran	168	14.813	14.813	(1.030)	174706	5.00000	4.816
	47 4-Nitrophenol	109	14.820	14.820	(1.030)	42074	10.0000	10.28
	48 2,4-Dinitrotoluene	165	14.936	14.936	(1.038)	93164	10.0000	10.99
	50 Diethylphthalate	149	15.547	15.547	(1.081)	139465	5.00000	4.949
	49 Fluorene	166	15.570	15.570	(1.082)	144396	5.00000	4.664
	51 4-Chlorophenyl-phenylether	204	15.617	15.617	(1.085)	67317	5.00000	4.424
	52 4-Nitroaniline	138	15.733	15.733	(1.093)	47294	10.0000	8.393
	53 4,6-Dinitro-2-methylphenol	198	15.825	15.825	(0.898)	136423	20.0000	18.01
	54 N-Nitrosodiphenylamine	169	15.895	15.895	(0.902)	89020	5.00000	4.870
$	55 2,4,6-Tribromophenol	330	16.149	16.149	(1.122)	25145	5.00000	5.089
	56 4-Bromophenyl-phenylether	248	16.681	16.681	(0.947)	44500	5.00000	4.981
	57 Hexachlorobenzene	284	16.967	16.967	(0.963)	51181	5.00000	4.801
	58 Pentachlorophenol	266	17.385	17.385	(0.987)	76410	10.0000	10.21
*	59 Phenanthrene-d10	188	17.617	17.617	(1.000)	157890	4.00000	
	60 Phenanthrene	178	17.671	17.671	(1.003)	209115	5.00000	4.856
	61 Anthracene	178	17.772	17.772	(1.009)	212790	5.00000	4.823
	62 Carbazole	167	18.166	18.166	(1.031)	86878	5.00000	3.242
	63 Di-n-butylphthalate	149	19.157	19.157	(1.087)	235215	5.00000	5.164
	64 Fluoranthene	202	20.194	20.194	(1.146)	251964	5.00000	4.971
	65 Pyrene	202	20.619	20.619	(0.902)	260331	5.00000	5.005
$	66 Terphenyl-d14	244	20.998	20.998	(0.919)	158049	5.00000	4.829
	67 Butylbenzylphthalate	149	21.997	21.997	(0.962)	98009	5.00000	5.517
	68 Benzo(a)anthracene	228	22.826	22.826	(0.999)	232905	5.00000	4.948
*	69 Chrysene-d12	240	22.856	22.856	(1.000)	168131	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.841	22.841	(0.999)	138264	10.0000	7.712
	71 Chrysene	228	22.903	22.903	(1.002)	201847	5.00000	4.738
	72 bis(2-Ethylhexyl)phthalate	149	23.089	23.089	(0.959)	137458	5.00000	4.913
*	134 Di-n-octylphthalate-d4	153	24.072	24.072	(1.000)	210456	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	73 Di-n-octylphthalate	149	24.080	24.080	(1.000)	226481	5.00000	4.674
	74 Benzo(b)fluoranthene	252	24.598	24.598	(0.978)	223290	5.00000	5.052
	75 Benzo(k)fluoranthene	252	24.629	24.629	(0.979)	229301	5.00000	4.925
	76 Benzo(a)pyrene	252	25.071	25.071	(0.997)	190123	5.00000	5.035
*	77 Perylene-d12	264	25.156	25.156	(1.000)	148837	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	26.924	26.924	(1.070)	223133	5.00000	5.129
	79 Dibenzo(a,h)anthracene	278	26.956	26.956	(1.072)	172223	5.00000	5.161
	80 Benzo(g,h,i)perylene	276	27.429	27.429	(1.090)	190895	5.00000	5.072
	90 N-Nitrosodimethylamine	74	3.450	3.450	(0.434)	88085	10.0000	9.934
	91 Aniline	93	7.405	7.405	(0.931)	207230	5.00000	5.308
	93 Benzidine	184	20.511	20.511	(0.897)	19965	10.0000	3.819
	103 Pyridine	79	3.466	3.466	(0.436)	76852	10.0000	9.861
	105 1-methylnaphthalene	142	12.314	12.314	(1.166)	116547	5.00000	4.875
	111 Azobenzene (1,2-DP-Hydrazine)	77	15.956	15.956	(1.109)	141603	5.00000	4.901
	187 Total Benzofluoranthenes	252	24.629	24.629	(0.979)	424142	10.0000	9.883
	99 Perylene	252	25.187	25.187	(1.001)	199442	5.00000	4.620
	98 Retene	219	21.285	21.285	(0.931)	97529	5.00000	4.954
	120 2,3,4,6-Tetrachlorophenol	232	15.207	15.207	(1.057)	40030	5.00000	5.309

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0614.d
Lab Smp Id: CC0614
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130614.b/ABN.m
Misc Info:

Calibration Date: 14-JUN-2013
Calibration Time: 11:45

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	38921	-13.99
27 Naphthalene-d8	166754	83377	333508	147394	-11.61
42 Acenaphthene-d10	106910	53455	213820	93424	-12.61
59 Phenanthrene-d10	179783	89892	359566	157890	-12.18
69 Chrysene-d12	192841	96420	385682	168131	-12.81
134 Di-n-octylphthala	229567	114784	459134	210456	-8.32
77 Perylene-d12	184310	92155	368620	148837	-19.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.95	7.45	8.45	7.95	0.00
27 Naphthalene-d8	10.56	10.06	11.06	10.56	0.00
42 Acenaphthene-d10	14.39	13.89	14.89	14.39	0.00
59 Phenanthrene-d10	17.62	17.12	18.12	17.62	0.00
69 Chrysene-d12	22.86	22.36	23.36	22.86	0.00
134 Di-n-octylphthala	24.07	23.57	24.57	24.07	0.00
77 Perylene-d12	25.16	24.66	25.66	25.16	0.00

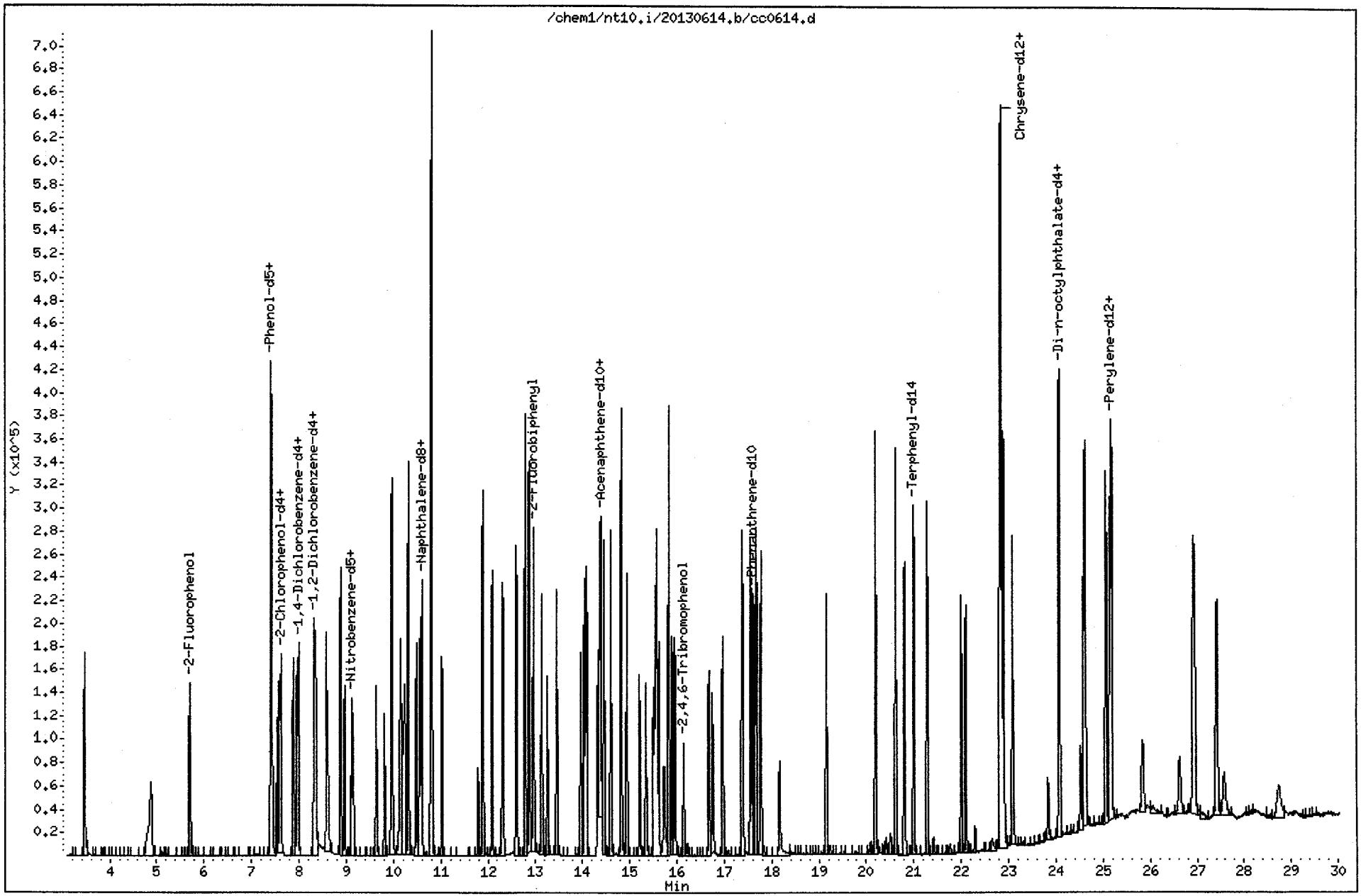
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130614.b/cc0614.d
Date : 14-JUN-2013 12:53
Client ID:
Sample Info: CC0614

Instrument: nt10.i

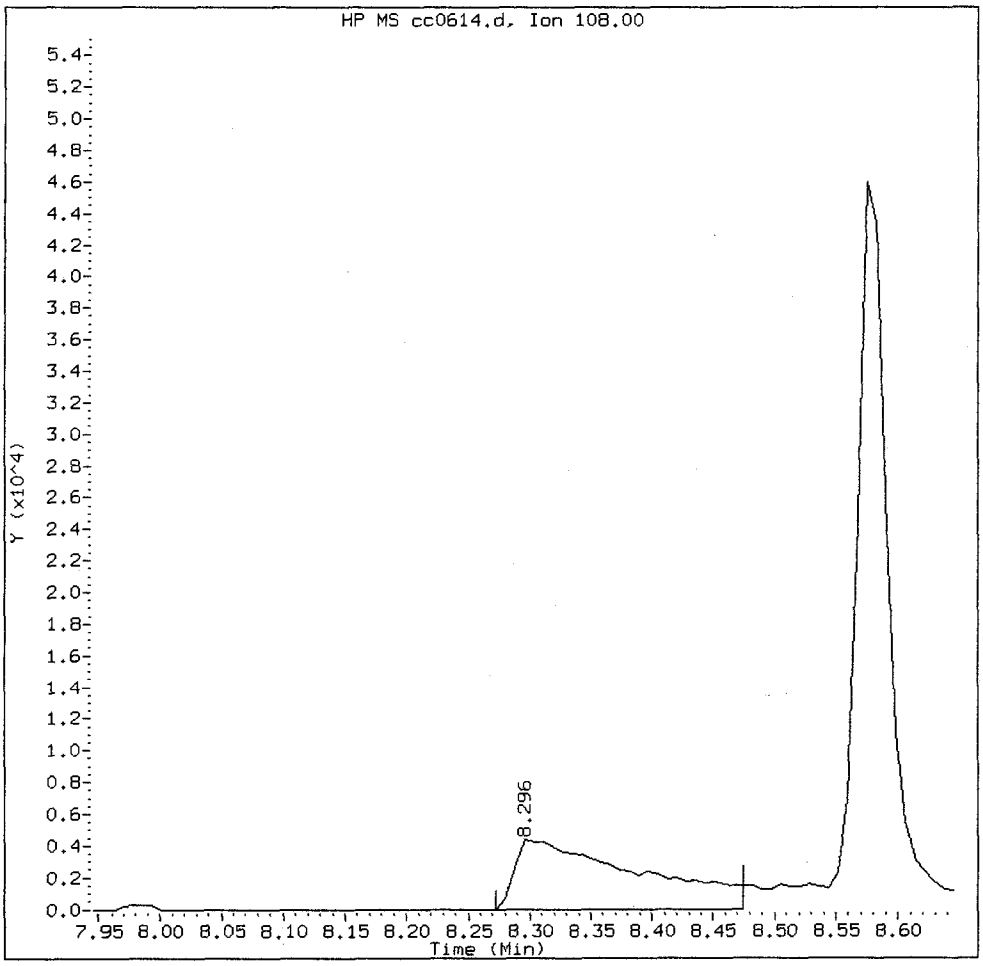
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CC0614, /chem1/nt10.i/20130614.b/cc0614.d

Benzyl alcohol Amount: 3.85 Area: 32618



MANUAL INTEGRATION for Benzyl alcohol

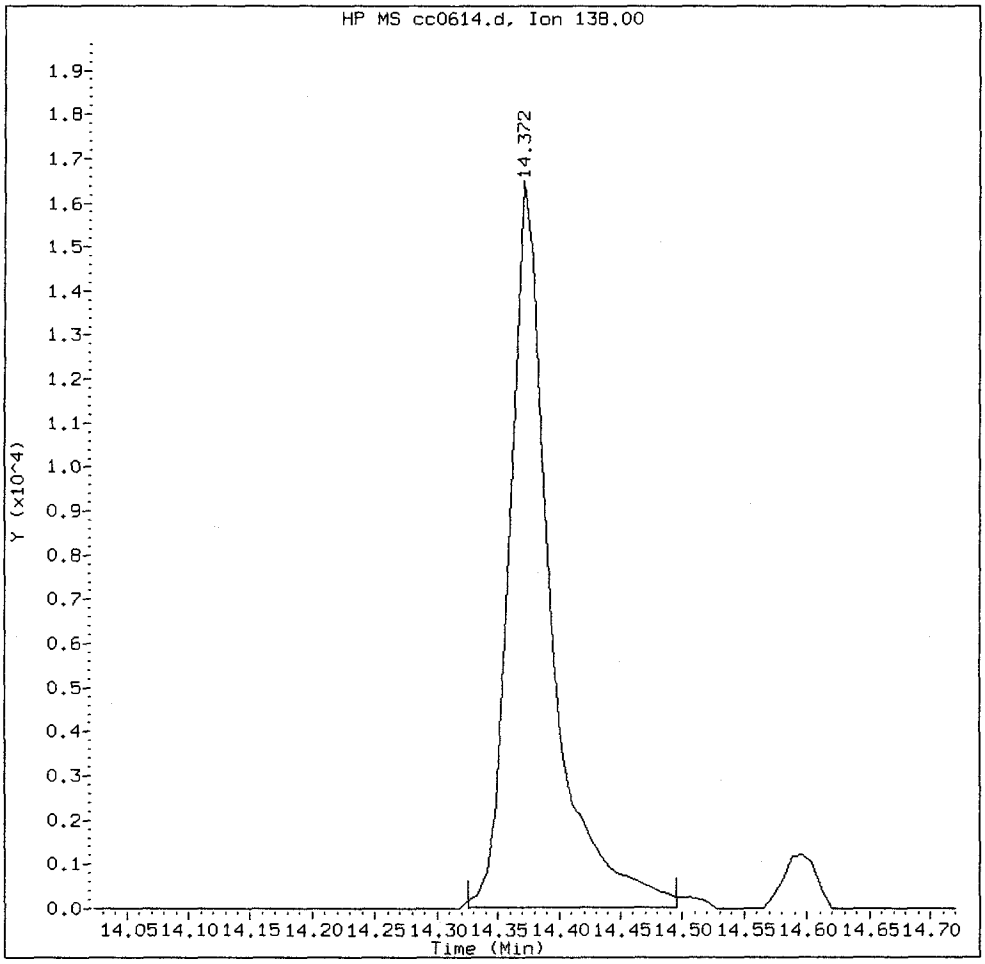
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 6/17/13

CC0614, /chem1/nt10.i/20130614.b/cc0614.d

3-Nitroaniline Amount: 7.17 Area: 38893



MANUAL INTEGRATION for 3-Nitroaniline

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/17/13

CO-ELUTION SUMMARY FOR FILE - cc0614.d

Lab ID: CC0614, Method: ABN.m, Instrument: nt10.i, Date: 14-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

US21 : 00761

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

TZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/ws49mb.d
Lab Smp Id: WS49MBS1 Client Smp ID: WS49MBS1
Inj Date : 13-JUN-2013 13:45
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS49MBS1
Misc Info : 13-11813
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 13-Jun-2013 13:32 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.836	5.820	(0.724)	82183	4.77551	477.6
$	2 Phenol-d5	99	7.497	7.497	(0.930)	115537	5.18823	518.8
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.698	7.690	(0.955)	85225	5.04164	504.2
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.062	8.054	(1.000)	48215	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.426	8.426	(1.045)	38728	3.18495	318.5
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.203	9.203	(0.865)	65813	3.26376	326.4
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.634	10.634	(1.000)	191089	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.009	13.009	(0.901)	128235	3.24995	325.0
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.433	14.433	(1.000)	113052	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.171	16.171	(1.120)	32128	5.37382	537.4
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.631	17.631	(1.000)	194526	4.00000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	Compound Not Detected.					
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	Compound Not Detected.					
65	Pyrene	202	Compound Not Detected.					
$ 66	Terphenyl-d14	244	20.958	20.958	(0.919)	158673	4.18670	418.7
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	22.801	22.801	(1.000)	194694	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	Compound Not Detected.					
72	bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
* 134	Di-n-octylphthalate-d4	153	23.978	23.977	(1.000)	236085	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	Compound Not Detected.					
75	Benzo(k)fluoranthene	252	Compound Not Detected.					
76	Benzo(a)pyrene	252	Compound Not Detected.					
* 77	Perylene-d12	264	25.077	25.069	(1.000)	173223	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	Compound Not Detected.					
99	Perylene	252	Compound Not Detected.					
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49mb.d
Lab Smp Id: WS49MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: WS49MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	48215	6.55
27 Naphthalene-d8	166754	83377	333508	191089	14.59
42 Acenaphthene-d10	106910	53455	213820	113052	5.75
59 Phenanthrene-d10	179783	89892	359566	194526	8.20
69 Chrysene-d12	192841	96420	385682	194694	0.96
134 Di-n-octylphthala	229567	114784	459134	236085	2.84
77 Perylene-d12	184310	92155	368620	173223	-6.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.06	0.10
27 Naphthalene-d8	10.63	10.13	11.13	10.63	0.00
42 Acenaphthene-d10	14.43	13.93	14.93	14.43	0.00
59 Phenanthrene-d10	17.63	17.13	18.13	17.63	0.00
69 Chrysene-d12	22.80	22.30	23.30	22.80	0.00
134 Di-n-octylphthala	23.98	23.48	24.48	23.98	0.00
77 Perylene-d12	25.07	24.57	25.57	25.08	0.03

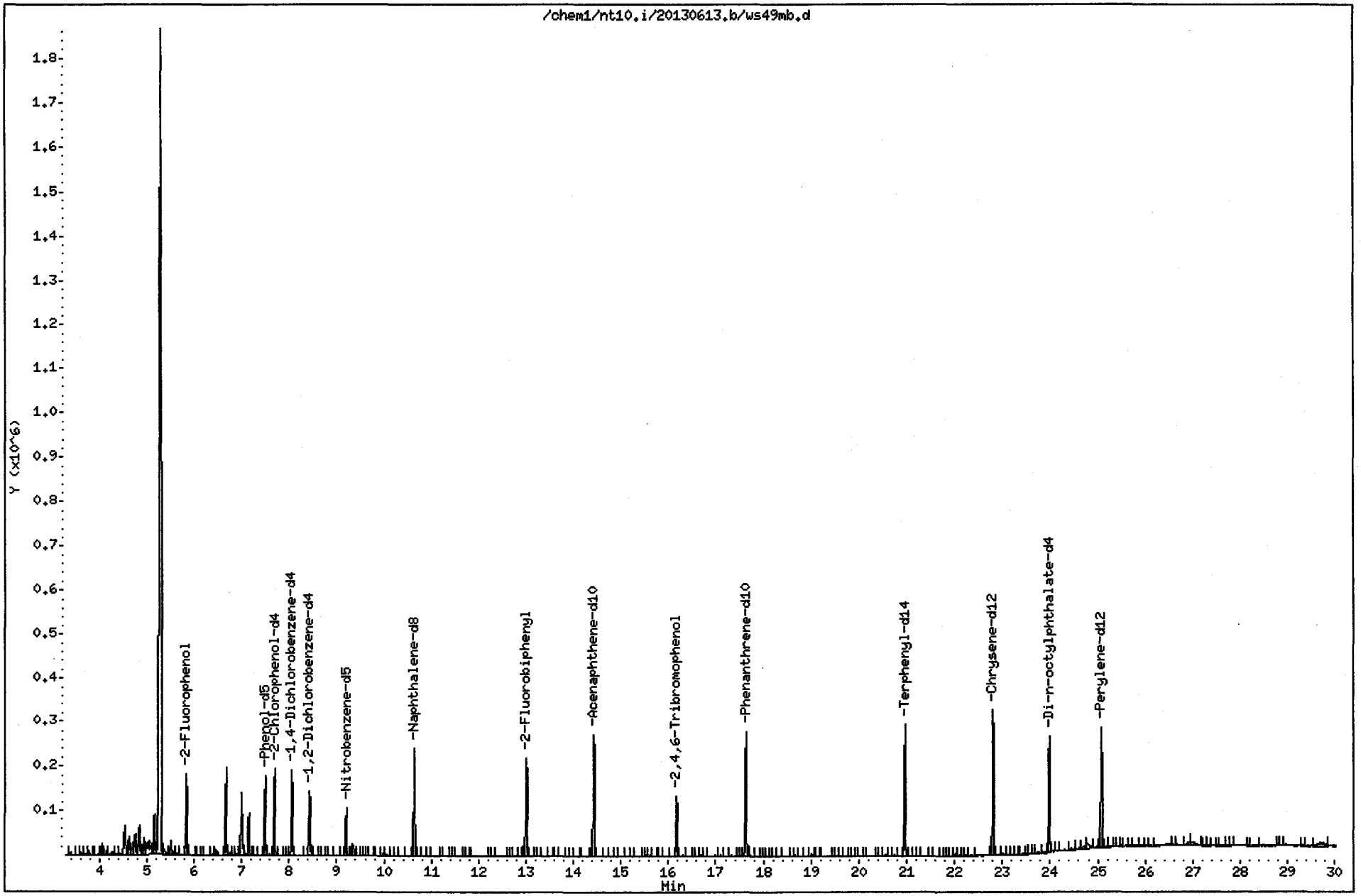
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	0.000	*	42-113
78 Indeno(1,2,3-cd)p	500.0	0.000	*	42-123
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-133
80 Benzo(g,h,i)peryl	500.0	0.000	*	38-126
105 1-methylnaphthale	500.0	0.000	*	42-100
187 Total Benzofluora	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	477.6	63.67	27-120
$ 2 Phenol-d5	750.0	518.8	69.18	29-120
$ 5 2-Chlorophenol-d4	750.0	504.2	67.22	31-120
$ 10 1,2-Dichlorobenzen	500.0	318.5	63.70	32-120
$ 18 Nitrobenzene-d5	500.0	326.4	65.28	30-120
$ 36 2-Fluorobiphenyl	500.0	325.0	65.00	35-120
$ 55 2,4,6-Tribromophen	750.0	537.4	71.65	24-134
$ 66 Terphenyl-d14	500.0	418.7	83.73	37-120

Data File: /chem1/nt10.i/20130613.b/ws49mb.d
Date : 13-JUN-2013 13:45
Client ID: WS49MBS1
Sample Info: WS49MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ws49mb.d

Lab ID: WS49MBS1, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/ws49sb.d
Lab Smp Id: WS49LCSS1 Client Smp ID: WS49LCSS1
Inj Date : 13-JUN-2013 14:21
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS49LCSS1
Misc Info : 13-11813
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 17-Jun-2013 13:58 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.836	5.820	(0.724)	93716	5.31526	531.5
$	2 Phenol-d5	99	7.497	7.497	(0.930)	127116	5.57149	557.1
	3 Phenol	94	7.520	7.512	(0.933)	97542	3.81948	381.9
$	5 2-Chlorophenol-d4	132	7.698	7.690	(0.955)	91411	5.27809	527.8
	4 Bis(2-Chloroethyl)ether	93	7.636	7.636	(0.947)	67962	3.70065	370.1
	6 2-Chlorophenol	128	7.729	7.721	(0.959)	61964	3.14625	314.6
	7 1,3-Dichlorobenzene	146	7.992	7.984	(0.991)	64520	3.26470	326.5
*	8 1,4-Dichlorobenzene-d4	152	8.062	8.054	(1.000)	49398	4.00000	
	9 1,4-Dichlorobenzene	146	8.093	8.085	(1.004)	64677	3.32017	332.0
$	10 1,2-Dichlorobenzene-d4	152	8.427	8.426	(1.045)	41917	3.36466	336.5
	12 1,2-Dichlorobenzene	146	8.458	8.450	(1.049)	63006	3.37820	337.8
	11 Benzyl alcohol	108	8.395	8.387	(1.041)	26088	2.42845	242.8
	14 2,2'-oxybis(1-Chloropropane)	121	8.706	8.698	(1.080)	20372	3.59413	359.4
	13 2-Methylphenol	108	8.667	8.659	(1.075)	54182	2.94835	294.8

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	9.063	9.063	(1.124)	27385	3.35988	336.0
	16 N-Nitroso-di-n-propylamine	70	8.970	8.970	(1.113)	43410	3.78356	378.4
	15 4-Methylphenol	108	8.962	8.947	(1.112)	115281	6.15234	615.2
$	18 Nitrobenzene-d5	82	9.203	9.203	(0.865)	68576	3.53033	353.0
	19 Nitrobenzene	77	9.242	9.234	(0.868)	66298	3.69684	369.7
	20 Isophorone	82	9.723	9.723	(0.914)	117368	3.47939	347.9
	21 2-Nitrophenol	139	9.901	9.893	(0.930)	41064	4.08446	408.4
	22 2,4-Dimethylphenol	107	10.033	10.025	(0.943)	98107	5.30686	530.7
	23 Bis(2-Chloroethoxy)methane	93	10.225	10.217	(0.961)	78416	3.94179	394.2
	24 Benzoic acid	105	10.310	10.294	(0.969)	250809	15.5100	1551
	25 2,4-Dichlorophenol	162	10.395	10.387	(0.977)	175793	10.3303	1033
	26 1,2,4-Trichlorobenzene	180	10.564	10.557	(0.993)	56984	3.42604	342.6
*	27 Naphthalene-d8	136	10.642	10.634	(1.000)	184077	4.00000	
	28 Naphthalene	128	10.680	10.672	(1.004)	155972	3.18260	318.3
	29 4-Chloroaniline	127	10.866	10.858	(1.021)	102971	5.37438	537.4
	30 Hexachlorobutadiene	225	11.097	11.089	(1.043)	34072	3.44848	344.8
	31 4-Chloro-3-methylphenol	107	11.941	11.933	(1.122)	171273	11.4407	1144
	32 2-Methylnaphthalene	142	12.158	12.150	(1.142)	111599	3.42829	342.8
	33 Hexachlorocyclopentadiene	237	12.668	12.660	(0.877)	102526	8.42232	842.2
	34 2,4,6-Trichlorophenol	196	12.846	12.838	(0.890)	126274	10.8450	1084
	35 2,4,5-Trichlorophenol	196	12.916	12.916	(0.894)	136375	11.3618	1136
$	36 2-Fluorobiphenyl	172	13.009	13.009	(0.901)	135146	3.50027	350.0
	37 2-Chloronaphthalene	162	13.195	13.187	(0.914)	115907	3.77077	377.1
	38 2-Nitroaniline	65	13.504	13.496	(0.935)	104656	14.1066	1411
	39 Dimethylphthalate	163	14.007	13.999	(0.970)	140570	4.23292	423.3
	40 Acenaphthylene	152	14.100	14.092	(0.976)	173359	3.32527	332.5
	41 2,6-Dinitrotoluene	165	14.131	14.123	(0.979)	99191	12.7479	1275
*	42 Acenaphthene-d10	164	14.440	14.433	(1.000)	110624	4.00000	
	43 3-Nitroaniline	138	14.410	14.409	(0.998)	65397	10.1808	1018(M)
	44 Acenaphthene	153	14.502	14.502	(1.004)	110917	3.53040	353.0
	45 2,4-Dinitrophenol	184	14.634	14.626	(1.013)	96614	13.9778	1398
	46 Dibenzofuran	168	14.858	14.850	(1.029)	161633	3.76249	376.2
	47 4-Nitrophenol	109	14.842	14.835	(1.028)	49778	10.2735	1027
	48 2,4-Dinitrotoluene	165	14.974	14.966	(1.037)	134643	13.4163	1342
	50 Diethylphthalate	149	15.569	15.561	(1.078)	143705	4.30638	430.6
	49 Fluorene	166	15.608	15.600	(1.081)	128904	3.51651	351.7
	51 4-Chlorophenyl-phenylether	204	15.646	15.639	(1.083)	78752	4.37038	437.0
	52 4-Nitroaniline	138	15.755	15.747	(1.091)	84021	12.5923	1259
	53 4,6-Dinitro-2-methylphenol	198	15.855	15.847	(0.899)	167791	19.0219	1902
	54 N-Nitrosodiphenylamine	169	15.916	15.916	(0.902)	91580	4.30546	430.5
$	55 2,4,6-Tribromophenol	330	16.179	16.171	(1.120)	35391	6.04952	605.0
	56 4-Bromophenyl-phenylether	248	16.695	16.695	(0.946)	42831	4.11959	412.0
	57 Hexachlorobenzene	284	16.989	16.989	(0.963)	46519	3.74987	375.0
	58 Pentachlorophenol	266	17.391	17.391	(0.986)	99553	11.4326	1143
*	59 Phenanthrene-d10	188	17.639	17.631	(1.000)	183746	4.00000	
	60 Phenanthrene	178	17.685	17.685	(1.003)	196250	3.91566	391.6
	61 Anthracene	178	17.786	17.778	(1.008)	183476	3.57333	357.3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	18.173	18.165	(1.030)	174046	5.58039	558.0
63	Di-n-butylphthalate	149	19.132	19.124	(1.085)	251480	4.74451	474.5
64	Fluoranthene	202	20.177	20.177	(1.144)	239146	4.05413	405.4
65	Pyrene	202	20.594	20.594	(0.903)	240317	4.03854	403.9
$ 66	Terphenyl-d14	244	20.958	20.958	(0.919)	158957	4.24575	424.6
67	Butylbenzylphthalate	149	21.942	21.941	(0.962)	105838	5.20834	520.8
68	Benzo(a)anthracene	228	22.778	22.778	(0.999)	213438	3.96379	396.4
* 69	Chrysene-d12	240	22.809	22.801	(1.000)	192330	4.00000	
70	3,3'-Dichlorobenzidine	252	22.785	22.778	(0.999)	76271	3.71895	371.9
71	Chrysene	228	22.847	22.847	(1.002)	187783	3.85360	385.4
72	bis(2-Ethylhexyl)phthalate	149	23.010	23.002	(0.960)	133783	4.17722	417.7
* 134	Di-n-octylphthalate-d4	153	23.978	23.977	(1.000)	240893	4.00000	
73	Di-n-octylphthalate	149	23.985	23.985	(1.000)	216697	3.90695	390.7
74	Benzo(b)fluoranthene	252	24.527	24.519	(0.978)	205488	3.97725	397.7
75	Benzo(k)fluoranthene	252	24.566	24.558	(0.980)	228832	4.20500	420.5
76	Benzo(a)pyrene	252	25.000	24.992	(0.997)	173168	3.92319	392.3
* 77	Perylene-d12	264	25.077	25.069	(1.000)	173982	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.814	26.814	(1.069)	214526	4.21854	421.9
79	Dibenzo(a,h)anthracene	278	26.838	26.830	(1.070)	150079	3.84724	384.7
80	Benzo(g,h,i)perylene	276	27.319	27.304	(1.089)	179079	4.07014	407.0
90	N-Nitrosodimethylamine	74	3.650	3.635	(0.453)	113180	10.0573	1006
91	Aniline	93	7.520	7.512	(0.933)	118133	2.38424	238.4
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.658	3.643	(0.454)	117107	11.8388	1184
105	1-methylnaphthalene	142	12.382	12.382	(1.164)	109095	3.65426	365.4
111	Azobenzene (1,2-DP-Hydrazine)	77	15.986	15.978	(1.107)	130923	3.82654	382.7
187	Total Benzofluoranthenes	252	24.527	24.558	(0.978)	407217	8.11688	811.7
99	Perylene	252	25.116	25.108	(1.002)	90837	1.80028	180.0
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	15.244	15.236	(1.056)	37164	4.16262	416.3

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49sb.d
Lab Smp Id: WS49LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: WS49LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	49398	9.17
27 Naphthalene-d8	166754	83377	333508	184077	10.39
42 Acenaphthene-d10	106910	53455	213820	110624	3.47
59 Phenanthrene-d10	179783	89892	359566	183746	2.20
69 Chrysene-d12	192841	96420	385682	192330	-0.26
134 Di-n-octylphthala	229567	114784	459134	240893	4.93
77 Perylene-d12	184310	92155	368620	173982	-5.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.06	0.10
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.07
42 Acenaphthene-d10	14.43	13.93	14.93	14.44	0.05
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.05
69 Chrysene-d12	22.80	22.30	23.30	22.81	0.03
134 Di-n-octylphthala	23.98	23.48	24.48	23.98	0.00
77 Perylene-d12	25.07	24.57	25.57	25.08	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS49LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11813

Client SDG: WS49
Fraction: SV
Client Smp ID: WS49LCSS1
Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	381.9	76.39	34-105
7	1,3-Dichlorobenzen	500.0	326.5	65.29	40-100
9	1,4-Dichlorobenzen	500.0	332.0	66.40	39-100
11	Benzyl alcohol	500.0	242.8	48.57	19-117
12	1,2-Dichlorobenzen	500.0	337.8	67.56	40-100
13	2-Methylphenol	500.0	294.8	58.97	28-100
15	4-Methylphenol	1000	615.2	61.52	29-100
17	Hexachloroethane	500.0	336.0	67.20	38-100
22	2,4-Dimethylphenol	1500	530.7	35.38	10-100
24	Benzoic acid	2750	1551	56.40	10-107
26	1,2,4-Trichloroben	500.0	342.6	68.52	35-103
28	Naphthalene	500.0	318.3	63.65	43-100
30	Hexachlorobutadien	500.0	344.8	68.97	37-100
32	2-Methylnaphthalen	500.0	342.8	68.57	43-100
39	Dimethylphthalate	500.0	423.3	84.66	43-114
40	Acenaphthylene	500.0	332.5	66.51	42-102
44	Acenaphthene	500.0	353.0	70.61	45-100
46	Dibenzofuran	500.0	376.2	75.25	43-103
49	Fluorene	500.0	351.7	70.33	45-107
50	Diethylphthalate	500.0	430.6	86.13	50-120
54	N-Nitrosodiphenyla	500.0	430.5	86.11	36-111
57	Hexachlorobenzene	500.0	375.0	75.00	33-113
58	Pentachlorophenol	1500	1143	76.22	16-120
60	Phenanthrene	500.0	391.6	78.31	49-112
61	Anthracene	500.0	357.3	71.47	45-106
63	Di-n-butylphthalat	500.0	474.5	94.89	48-126
64	Fluoranthene	500.0	405.4	81.08	53-118
65	Pyrene	500.0	403.9	80.77	48-121
67	Butylbenzylphthala	500.0	520.8	104.17	45-132
68	Benzo(a)anthracene	500.0	396.4	79.28	49-115
71	Chrysene	500.0	385.4	77.07	47-115
72	bis(2-Ethylhexyl)p	500.0	417.7	83.54	34-130
73	Di-n-octylphthalat	500.0	390.7	78.14	28-124

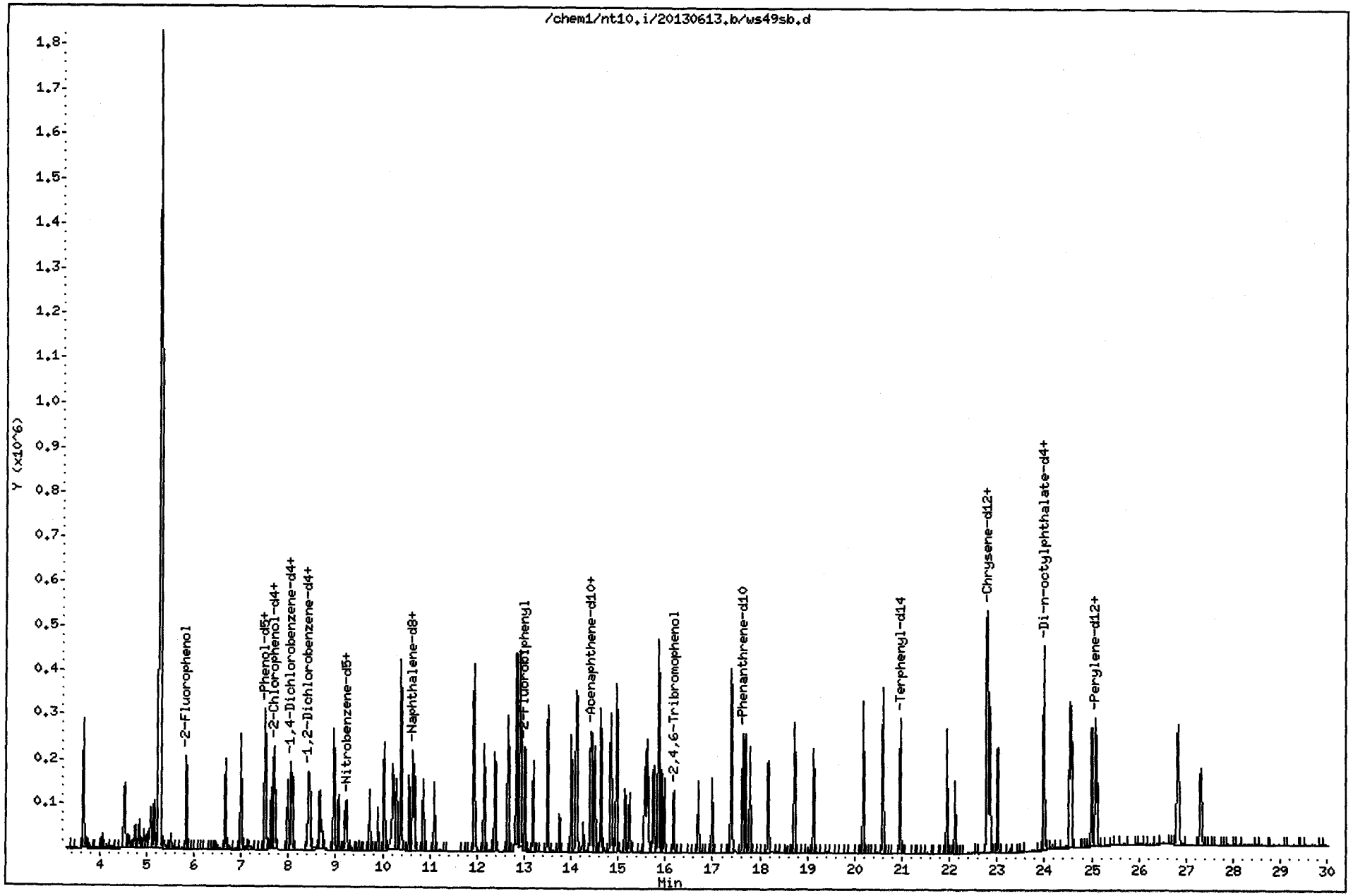
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	392.3	78.46	42-113
78 Indeno(1,2,3-cd)py	500.0	421.9	84.37	42-123
79 Dibenzo(a,h)anthra	500.0	384.7	76.94	30-133
80 Benzo(g,h,i)peryle	500.0	407.0	81.40	38-126
105 1-methylnaphthalen	500.0	365.4	73.09	42-100
187 Total Benzofluoran	1000	811.7	81.17	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	531.5	70.87	27-120
$ 2 Phenol-d5	750.0	557.1	74.29	29-120
$ 5 2-Chlorophenol-d4	750.0	527.8	70.37	31-120
$ 10 1,2-Dichlorobenzen	500.0	336.5	67.29	32-120
$ 18 Nitrobenzene-d5	500.0	353.0	70.61	30-120
$ 36 2-Fluorobiphenyl	500.0	350.0	70.01	35-120
$ 55 2,4,6-Tribromophen	750.0	605.0	80.66	24-134
$ 66 Terphenyl-d14	500.0	424.6	84.91	37-120

Data File: /chem1/nt10.i/20130613.b/ws49sb.d
Date : 13-JUN-2013 14:21
Client ID: WS49LCSS1
Sample Info: WS49LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

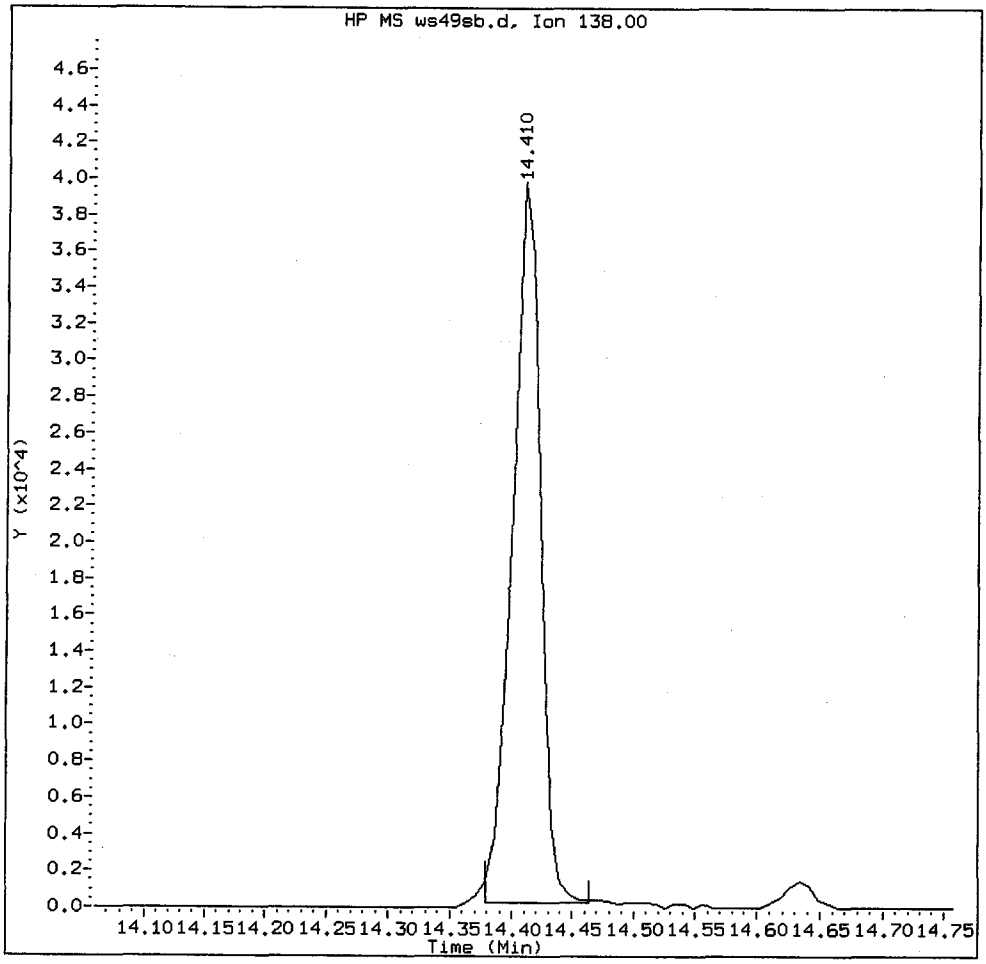
Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



WS49LCSS1, /chem1/nt10.i/20130613.b/ws49sb.d

3-Nitroaniline Amount: 10.18 Area: 65397



MANUAL INTEGRATION for 3-Nitroaniline

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 1/2 Date: 6/17/13

WS21 : 08776

CO-ELUTION SUMMARY FOR FILE - ws49sb.d

Lab ID: WS49LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

WS21 : 09777

YZ 6/17/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130613.b/ws49sbd.d
Lab Smp Id: WS49LCSDS1 Client Smp ID: WS49LCSDS1
Inj Date : 13-JUN-2013 14:58
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS49LCSDS1
Misc Info : 13-11813
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 17-Jun-2013 13:58 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.835	5.820	(0.724)	88269	5.07318	507.3
$	2 Phenol-d5	99	7.505	7.497	(0.931)	119216	5.29502	529.5
	3 Phenol	94	7.520	7.512	(0.933)	94554	3.75192	375.2
$	5 2-Chlorophenol-d4	132	7.698	7.690	(0.955)	85702	5.01453	501.5
	4 Bis(2-Chloroethyl)ether	93	7.644	7.636	(0.948)	64315	3.54884	354.9
	6 2-Chlorophenol	128	7.729	7.721	(0.959)	59527	3.06287	306.3
	7 1,3-Dichlorobenzene	146	7.992	7.984	(0.991)	62371	3.19810	319.8
*	8 1,4-Dichlorobenzene-d4	152	8.061	8.054	(1.000)	48747	4.00000	
	9 1,4-Dichlorobenzene	146	8.092	8.085	(1.004)	63175	3.28638	328.6
$	10 1,2-Dichlorobenzene-d4	152	8.426	8.426	(1.045)	38935	3.16703	316.7
	12 1,2-Dichlorobenzene	146	8.457	8.450	(1.049)	61323	3.33187	333.2
	11 Benzyl alcohol	108	8.403	8.387	(1.042)	19399	1.82991	183.0
	14 2,2'-oxybis(1-Chloropropane)	121	8.706	8.698	(1.080)	20033	3.58152	358.2
	13 2-Methylphenol	108	8.667	8.659	(1.075)	52784	2.91064	291.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	9.063	9.063	(1.124)	26447	3.28813	328.8
	16 N-Nitroso-di-n-propylamine	70	8.977	8.970	(1.114)	41422	3.65851	365.9
	15 4-Methylphenol	108	8.962	8.947	(1.112)	113301	6.12742	612.7
$	18 Nitrobenzene-d5	82	9.202	9.203	(0.865)	64264	3.44027	344.0
	19 Nitrobenzene	77	9.241	9.234	(0.868)	64521	3.74122	374.1
	20 Isophorone	82	9.722	9.723	(0.914)	112896	3.48028	348.0
	21 2-Nitrophenol	139	9.901	9.893	(0.930)	39169	4.05133	405.1
	22 2,4-Dimethylphenol	107	10.032	10.025	(0.943)	111724	6.28443	628.4
	23 Bis(2-Chloroethoxy)methane	93	10.225	10.217	(0.961)	74455	3.89192	389.2
	24 Benzoic acid	105	10.310	10.294	(0.969)	257295	16.5253	1653
	25 2,4-Dichlorophenol	162	10.394	10.387	(0.977)	165862	10.1354	1014
	26 1,2,4-Trichlorobenzene	180	10.564	10.557	(0.993)	55515	3.47082	347.1
*	27 Naphthalene-d8	136	10.641	10.634	(1.000)	177018	4.00000	
	28 Naphthalene	128	10.680	10.672	(1.004)	152418	3.23410	323.4
	29 4-Chloroaniline	127	10.865	10.858	(1.021)	98745	5.35934	535.9
	30 Hexachlorobutadiene	225	11.097	11.089	(1.043)	32877	3.46023	346.0
	31 4-Chloro-3-methylphenol	107	11.941	11.933	(1.122)	168519	11.7056	1171
	32 2-Methylnaphthalene	142	12.157	12.150	(1.142)	109658	3.50299	350.3
	33 Hexachlorocyclopentadiene	237	12.668	12.660	(0.877)	98568	8.38365	838.4
	34 2,4,6-Trichlorophenol	196	12.846	12.838	(0.890)	124508	11.0716	1107
	35 2,4,5-Trichlorophenol	196	12.916	12.916	(0.894)	136092	11.7394	1174
$	36 2-Fluorobiphenyl	172	13.016	13.009	(0.901)	126163	3.38321	338.3
	37 2-Chloronaphthalene	162	13.194	13.187	(0.914)	112774	3.79864	379.9
	38 2-Nitroaniline	65	13.504	13.496	(0.935)	99865	13.9370	1394
	39 Dimethylphthalate	163	14.007	13.999	(0.970)	139569	4.35147	435.1
	40 Acenaphthylene	152	14.100	14.092	(0.976)	165435	3.28554	328.6
	41 2,6-Dinitrotoluene	165	14.131	14.123	(0.979)	98090	13.0524	1305
*	42 Acenaphthene-d10	164	14.440	14.433	(1.000)	106844	4.00000	
	43 3-Nitroaniline	138	14.409	14.409	(0.998)	66280	10.6833	1068 (M)
	44 Acenaphthene	153	14.510	14.502	(1.005)	105364	3.47230	347.2
	45 2,4-Dinitrophenol	184	14.633	14.626	(1.013)	102376	15.3034	1530
	46 Dibenzofuran	168	14.858	14.850	(1.029)	155298	3.74292	374.3
	47 4-Nitrophenol	109	14.842	14.835	(1.028)	48966	10.4606	1046
	48 2,4-Dinitrotoluene	165	14.974	14.966	(1.037)	132504	13.6703	1367
	50 Diethylphthalate	149	15.569	15.561	(1.078)	140515	4.35976	436.0
	49 Fluorene	166	15.607	15.600	(1.081)	125825	3.55395	355.4
	51 4-Chlorophenyl-phenylether	204	15.646	15.639	(1.084)	74904	4.30390	430.4
	52 4-Nitroaniline	138	15.754	15.747	(1.091)	83799	13.0034	1300
	53 4,6-Dinitro-2-methylphenol	198	15.854	15.847	(0.899)	170290	20.0965	2010
	54 N-Nitrosodiphenylamine	169	15.924	15.916	(0.903)	89701	4.39277	439.3
$	55 2,4,6-Tribromophenol	330	16.178	16.171	(1.120)	33408	5.91259	591.3
	56 4-Bromophenyl-phenylether	248	16.695	16.695	(0.946)	42120	4.21994	422.0
	57 Hexachlorobenzene	284	16.996	16.989	(0.964)	44543	3.74013	374.0
	58 Pentachlorophenol	266	17.399	17.391	(0.986)	97326	11.6423	1164
*	59 Phenanthrene-d10	188	17.639	17.631	(1.000)	176399	4.00000	
	60 Phenanthrene	178	17.685	17.685	(1.003)	193817	4.02818	402.8
	61 Anthracene	178	17.786	17.778	(1.008)	179627	3.64408	364.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	18.172	18.165	(1.030)	173135	5.78238	578.2
63	Di-n-butylphthalate	149	19.132	19.124	(1.085)	250861	4.92996	493.0
64	Fluoranthene	202	20.176	20.177	(1.144)	243413	4.29833	429.8
65	Pyrene	202	20.594	20.594	(0.903)	242740	4.25725	425.7
$ 66	Terphenyl-d14	244	20.966	20.958	(0.919)	153981	4.29229	429.2
67	Butylbenzylphthalate	149	21.941	21.941	(0.962)	105287	5.40729	540.7
68	Benzo(a)anthracene	228	22.777	22.778	(0.999)	217002	4.20582	420.6
* 69	Chrysene-d12	240	22.808	22.801	(1.000)	184289	4.00000	
70	3,3'-Dichlorobenzidine	252	22.785	22.778	(0.999)	87676	4.46158	446.2
71	Chrysene	228	22.847	22.847	(1.002)	187922	4.02472	402.5
72	bis(2-Ethylhexyl)phthalate	149	23.010	23.002	(0.959)	123734	4.02858	402.9
* 134	Di-n-octylphthalate-d4	153	23.985	23.977	(1.000)	231019	4.00000	
73	Di-n-octylphthalate	149	23.993	23.985	(1.000)	192587	3.62066	362.1
74	Benzo(b)fluoranthene	252	24.527	24.519	(0.978)	202408	4.02317	402.3
75	Benzo(k)fluoranthene	252	24.566	24.558	(0.980)	237048	4.47332	447.3
76	Benzo(a)pyrene	252	24.999	24.992	(0.997)	174979	4.07101	407.1
* 77	Perylene-d12	264	25.077	25.069	(1.000)	169418	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.822	26.814	(1.070)	215356	4.34895	434.9
79	Dibenzo(a,h)anthracene	278	26.837	26.830	(1.070)	151880	3.99829	399.8
80	Benzo(g,h,i)perylene	276	27.311	27.304	(1.089)	182885	4.26862	426.9
90	N-Nitrosodimethylamine	74	3.650	3.635	(0.453)	108637	9.78250	978.3
91	Aniline	93	7.520	7.512	(0.933)	133283	2.72593	272.6
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.658	3.643	(0.454)	113448	11.6220	1162
105	1-methylnaphthalene	142	12.382	12.382	(1.164)	104313	3.63342	363.3
111	Azobenzene (1,2-DP-Hydrazine)	77	15.986	15.978	(1.107)	129391	3.91555	391.6
187	Total Benzofluoranthenes	252	24.566	24.558	(0.980)	409959	8.39167	839.2
99	Perylene	252	25.116	25.108	(1.002)	91978	1.87200	187.2
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	15.244	15.236	(1.056)	36304	4.21015	421.0

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49sbd.d
Lab Smp Id: WS49LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: WS49LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	48747	7.73
27 Naphthalene-d8	166754	83377	333508	177018	6.16
42 Acenaphthene-d10	106910	53455	213820	106844	-0.06
59 Phenanthrene-d10	179783	89892	359566	176399	-1.88
69 Chrysene-d12	192841	96420	385682	184289	-4.43
134 Di-n-octylphthala	229567	114784	459134	231019	0.63
77 Perylene-d12	184310	92155	368620	169418	-8.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.06	0.09
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.07
42 Acenaphthene-d10	14.43	13.93	14.93	14.44	0.05
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.04
69 Chrysene-d12	22.80	22.30	23.30	22.81	0.03
134 Di-n-octylphthala	23.98	23.48	24.48	23.99	0.03
77 Perylene-d12	25.07	24.57	25.57	25.08	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS49LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11813

Client SDG: WS49
Fraction: SV
Client Smp ID: WS49LCSDS1
Operator: VTS/YZ
SampleType: LCSD
Quant Type: ISTD

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	375.2	75.04	34-105
7	1,3-Dichlorobenzen	500.0	319.8	63.96	40-100
9	1,4-Dichlorobenzen	500.0	328.6	65.73	39-100
11	Benzyl alcohol	500.0	183.0	36.60	19-117
12	1,2-Dichlorobenzen	500.0	333.2	66.64	40-100
13	2-Methylphenol	500.0	291.1	58.21	28-100
15	4-Methylphenol	1000	612.7	61.27	29-100
17	Hexachloroethane	500.0	328.8	65.76	38-100
22	2,4-Dimethylphenol	1500	628.4	41.90	10-100
24	Benzoic acid	2750	1653	60.09	10-107
26	1,2,4-Trichloroben	500.0	347.1	69.42	35-103
28	Naphthalene	500.0	323.4	64.68	43-100
30	Hexachlorobutadien	500.0	346.0	69.20	37-100
32	2-Methylnaphthalen	500.0	350.3	70.06	43-100
39	Dimethylphthalate	500.0	435.1	87.03	43-114
40	Acenaphthylene	500.0	328.6	65.71	42-102
44	Acenaphthene	500.0	347.2	69.45	45-100
46	Dibenzofuran	500.0	374.3	74.86	43-103
49	Fluorene	500.0	355.4	71.08	45-107
50	Diethylphthalate	500.0	436.0	87.20	50-120
54	N-Nitrosodiphenyla	500.0	439.3	87.86	36-111
57	Hexachlorobenzene	500.0	374.0	74.80	33-113
58	Pentachlorophenol	1500	1164	77.62	16-120
60	Phenanthrene	500.0	402.8	80.56	49-112
61	Anthracene	500.0	364.4	72.88	45-106
63	Di-n-butylphthalat	500.0	493.0	98.60	48-126
64	Fluoranthene	500.0	429.8	85.97	53-118
65	Pyrene	500.0	425.7	85.14	48-121
67	Butylbenzylphthala	500.0	540.7	108.15	45-132
68	Benzo(a)anthracene	500.0	420.6	84.12	49-115
71	Chrysene	500.0	402.5	80.49	47-115
72	bis(2-Ethylhexyl)p	500.0	402.9	80.57	34-130
73	Di-n-octylphthalat	500.0	362.1	72.41	28-124

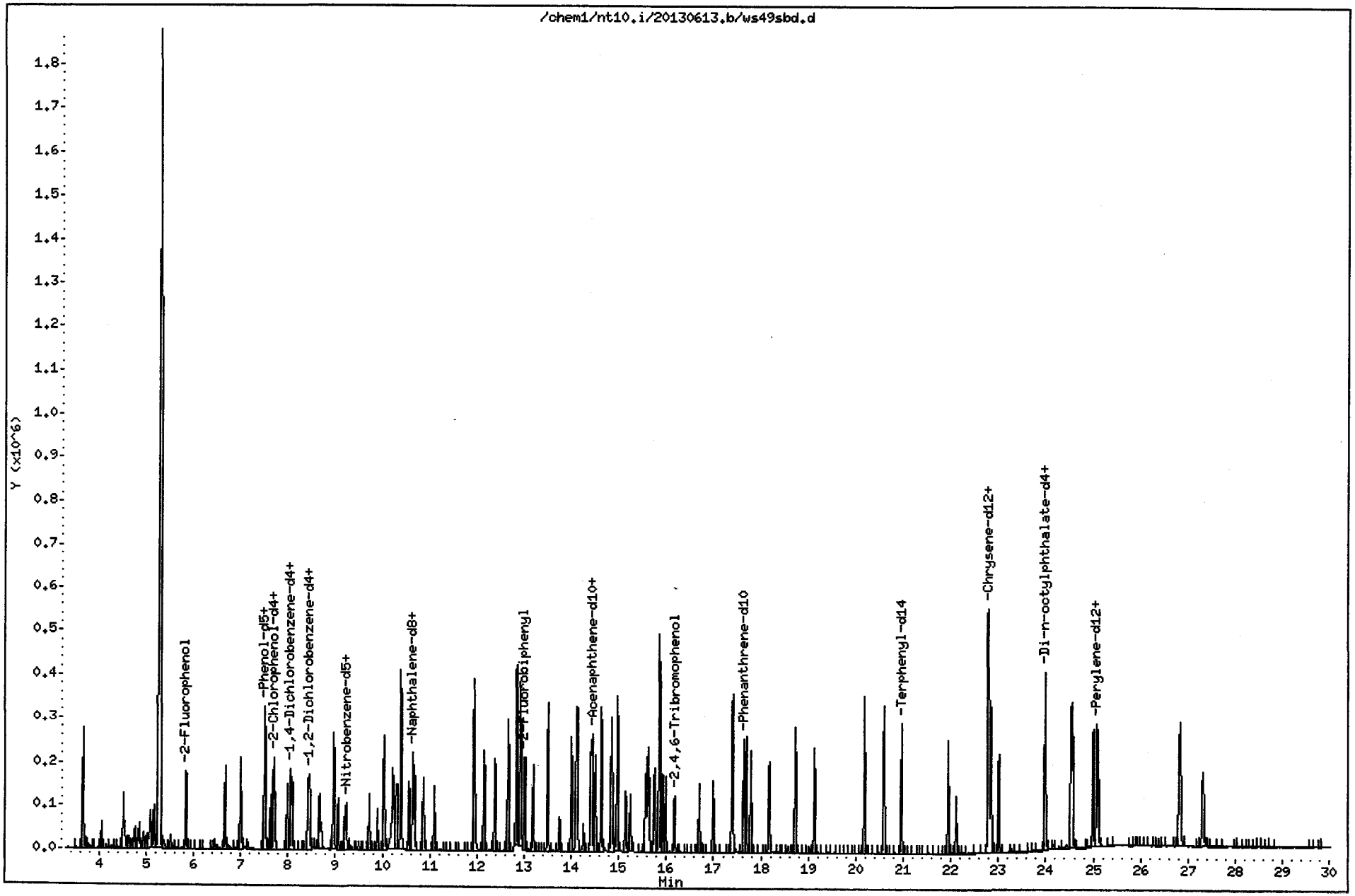
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	407.1	81.42	42-113
78 Indeno(1,2,3-cd)py	500.0	434.9	86.98	42-123
79 Dibenzo(a,h)anthra	500.0	399.8	79.97	30-133
80 Benzo(g,h,i)peryle	500.0	426.9	85.37	38-126
105 1-methylnaphthalen	500.0	363.3	72.67	42-100
187 Total Benzofluoran	1000	839.2	83.92	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	507.3	67.64	27-120
$ 2 Phenol-d5	750.0	529.5	70.60	29-120
$ 5 2-Chlorophenol-d4	750.0	501.5	66.86	31-120
$ 10 1,2-Dichlorobenzen	500.0	316.7	63.34	32-120
$ 18 Nitrobenzene-d5	500.0	344.0	68.81	30-120
$ 36 2-Fluorobiphenyl	500.0	338.3	67.66	35-120
$ 55 2,4,6-Tribromophen	750.0	591.3	78.83	24-134
$ 66 Terphenyl-d14	500.0	429.2	85.85	37-120

Data File: /chem1/nt10.i/20130613.b/ws49sbd.d
Date : 13-JUN-2013 14:58
Client ID: WS49LCSDS1
Sample Info: WS49LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

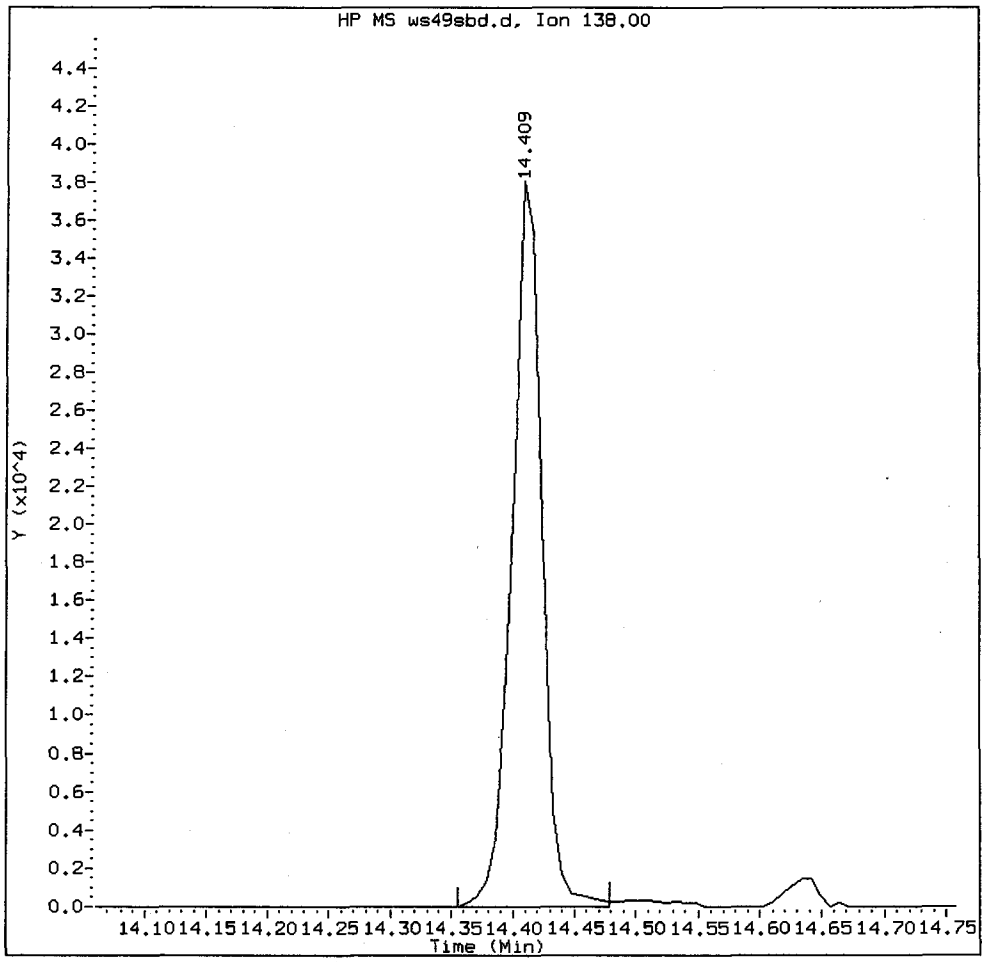
Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



WS49LCSDS1, /chem1/nt10.i/20130613.b/ws49sbd.d

3-Nitroaniline Amount: 10.68 Area: 66280



MANUAL INTEGRATION for 3-Nitroaniline

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/17/13

WS21 : 98785

CO-ELUTION SUMMARY FOR FILE - ws49sbd.d

Lab ID: WS49LCSDS1, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/ws21a.d
Lab Smp Id: WS21A Client Smp ID: KC-IV-SPS-20130531-
Inj Date : 13-JUN-2013 21:07
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS21A
Misc Info : 13-11678
Comment : 1ul Injection
Method : /chem1/nt10.i/20130613.b/ABN.m
Meth Date : 17-Jun-2013 14:01 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	19.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1	2-Fluorophenol	112	5.851	5.820	(0.725)	79531	4.53285	430.5
$ 2	Phenol-d5	99	7.520	7.497	(0.932)	104890	4.61987	438.7
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	7.706	7.690	(0.955)	81196	4.71125	447.4
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.070	8.054	(1.000)	49157	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	8.434	8.426	(1.045)	37100	2.99260	284.2
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.211	9.203	(0.865)	61477	3.12164	296.5
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.649	10.634	(1.000)	186626	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.024	13.009	(0.901)	123293	3.40551	323.4
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.448	14.433	(1.000)	103730	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	15.569	15.561	(1.078)	3567	0.11400	10.83
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.194	16.171	(1.121)	34822	6.34785	602.8
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.647	17.631	(1.000)	167446	4.00000	
	60 Phenanthrene	178	17.701	17.685	(1.003)	5012	0.10974	10.42(M)
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	Compound Not Detected.					
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	20.192	20.177	(1.144)	17119	0.31846	30.24
65	Pyrene	202	20.610	20.594	(0.903)	17790	0.34304	32.58
$ 66	Terphenyl-d14	244	20.974	20.958	(0.919)	129338	3.96394	376.4
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	22.793	22.778	(0.999)	5191	0.11062	10.50
* 69	Chrysene-d12	240	22.816	22.801	(1.000)	167618	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	22.863	22.847	(1.002)	8750	0.20604	19.57
72	bis(2-Ethylhexyl)phthalate	149	23.018	23.002	(0.959)	10420	0.36482	34.65
* 134	Di-n-octylphthalate-d4	153	23.993	23.977	(1.000)	214830	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	24.543	24.519	(0.978)	10994	0.23370	22.19
75	Benzo(k)fluoranthene	252	24.551	24.558	(0.978)	11824	0.23863	22.66 (M)
76	Benzo(a)pyrene	252	25.015	24.992	(0.997)	6770	0.16845	16.00
* 77	Perylene-d12	264	25.093	25.069	(1.000)	158417	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.845	26.814	(1.070)	6040	0.13044	12.39
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	27.350	27.304	(1.090)	5385	0.13442	12.77
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	24.543	24.558	(0.978)	18722	0.40984	38.92
99	Perylene	252	25.131	25.108	(1.002)	5980	0.13016	12.36
98	Retene	219	21.260	21.237	(0.932)	3003	0.15300	14.53
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws21a.d
Lab Smp Id: WS21A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11678

Calibration Date: 13-JUN-2013
Calibration Time: 12:30
Client Smp ID: KC-IV-SPS-201305
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	49157	8.63
27 Naphthalene-d8	166754	83377	333508	186626	11.92
42 Acenaphthene-d10	106910	53455	213820	103730	-2.97
59 Phenanthrene-d10	179783	89892	359566	167446	-6.86
69 Chrysene-d12	192841	96420	385682	167618	-13.08
134 Di-n-octylphthala	229567	114784	459134	214830	-6.42
77 Perylene-d12	184310	92155	368620	158417	-14.05

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.05	7.55	8.55	8.07	0.20
27 Naphthalene-d8	10.63	10.13	11.13	10.65	0.15
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.11
59 Phenanthrene-d10	17.63	17.13	18.13	17.65	0.09
69 Chrysene-d12	22.80	22.30	23.30	22.82	0.07
134 Di-n-octylphthala	23.98	23.48	24.48	23.99	0.07
77 Perylene-d12	25.07	24.57	25.57	25.09	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

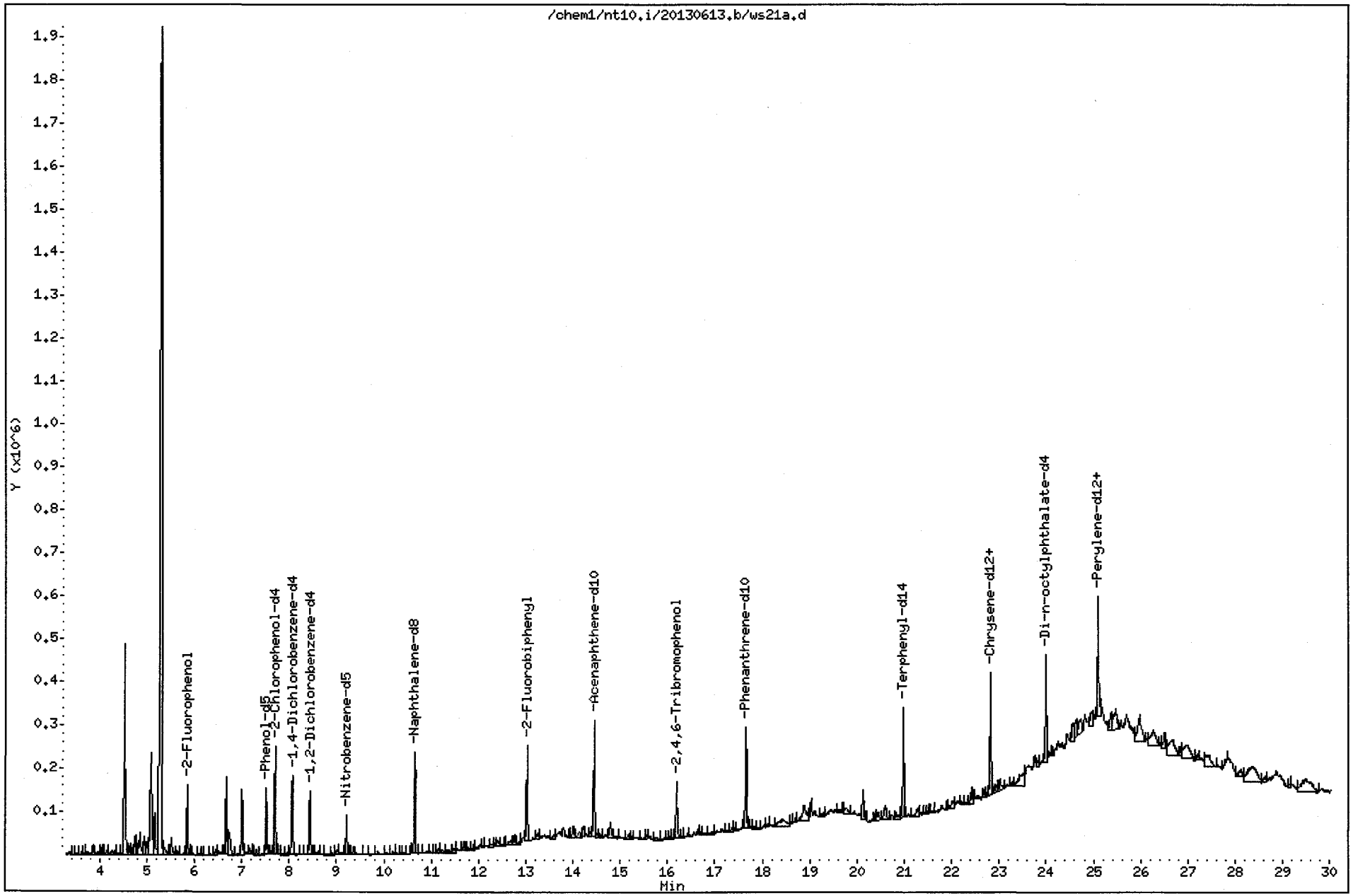
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS21A
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130613.b/ABN.m
Misc Info: 13-11678

Client SDG: WS21
Fraction: SV
Client Smp ID: KC-IV-SPS-20130531-
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	712.3	430.5	60.44	27-120
$ 2 Phenol-d5	712.3	438.7	61.60	29-120
$ 5 2-Chlorophenol-d4	712.3	447.4	62.82	31-120
$ 10 1,2-Dichlorobenzen	474.8	284.2	59.85	32-120
$ 18 Nitrobenzene-d5	474.8	296.5	62.43	30-120
$ 36 2-Fluorobiphenyl	474.8	323.4	68.11	35-120
$ 55 2,4,6-Tribromophen	712.3	602.8	84.64	24-134
$ 66 Terphenyl-d14	474.8	376.4	79.28	37-120

Data File: /chem1/nt10.i/20130613.b/ws21a.d
Date : 13-JUN-2013 21:07
Client ID: KC-IV-SPS-20130531-
Sample Info: WS21A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

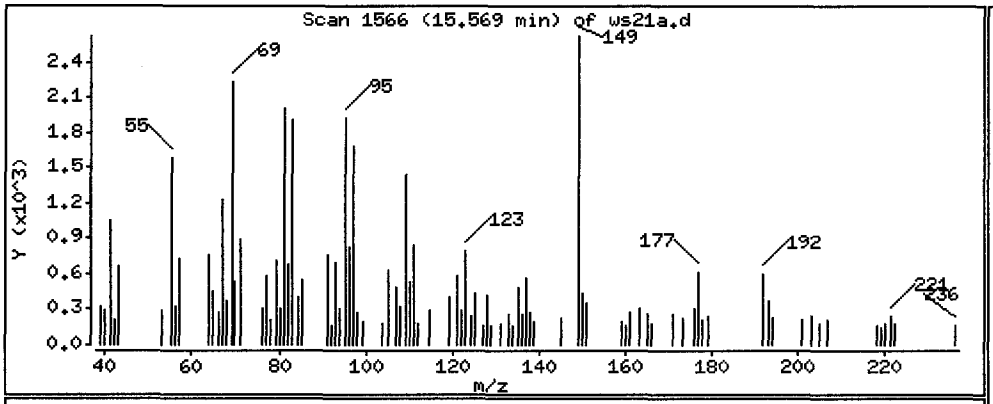
Operator: VTS/YZ

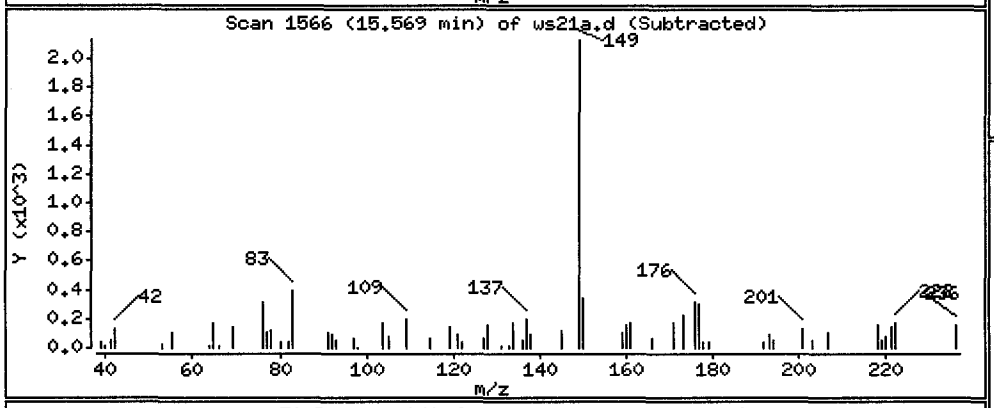
Column phase: ZB-5msi

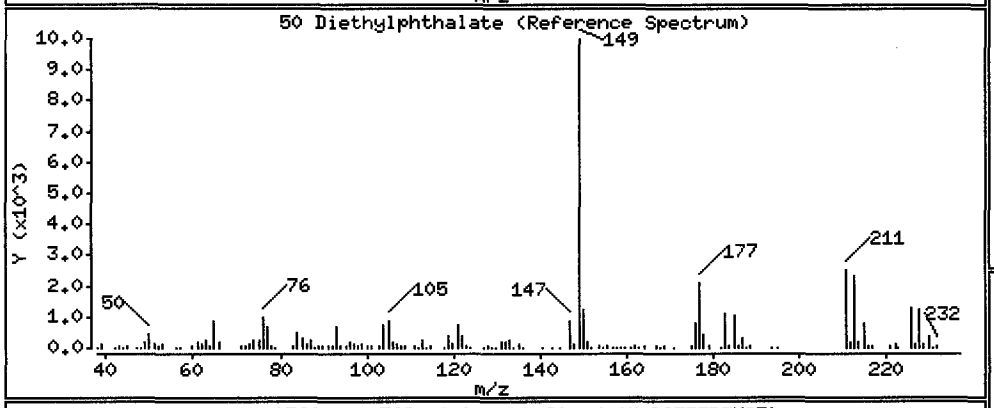
Column diameter: 0.25

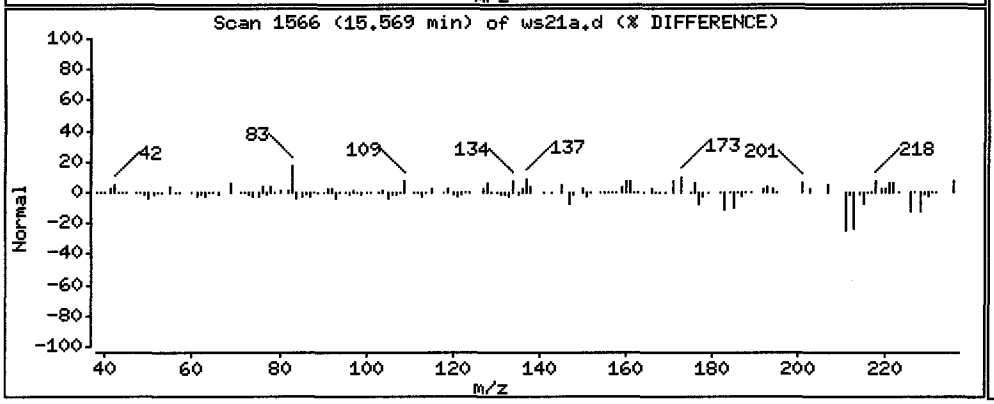
50 Diethylphthalate

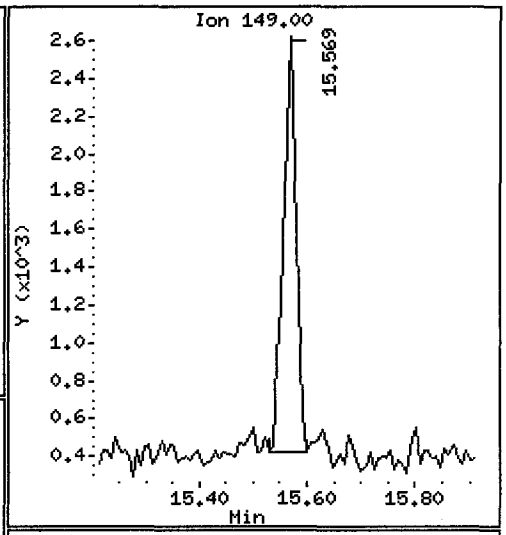
Concentration: 10.83 ug/kg

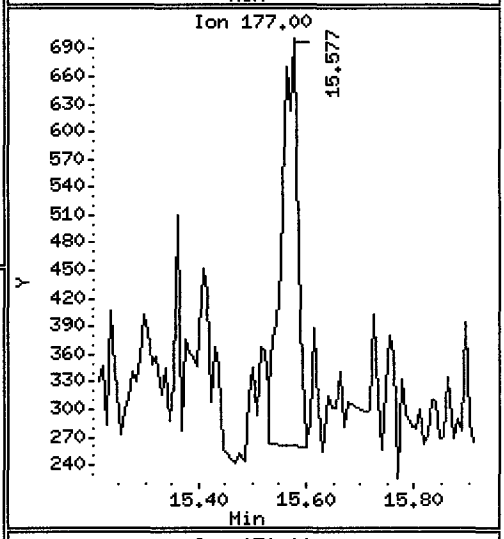


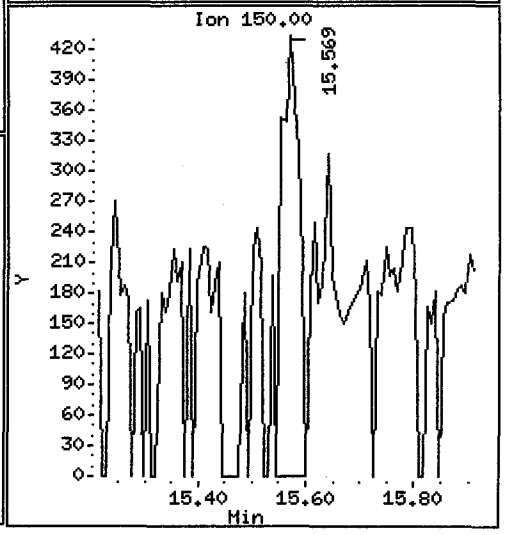












Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

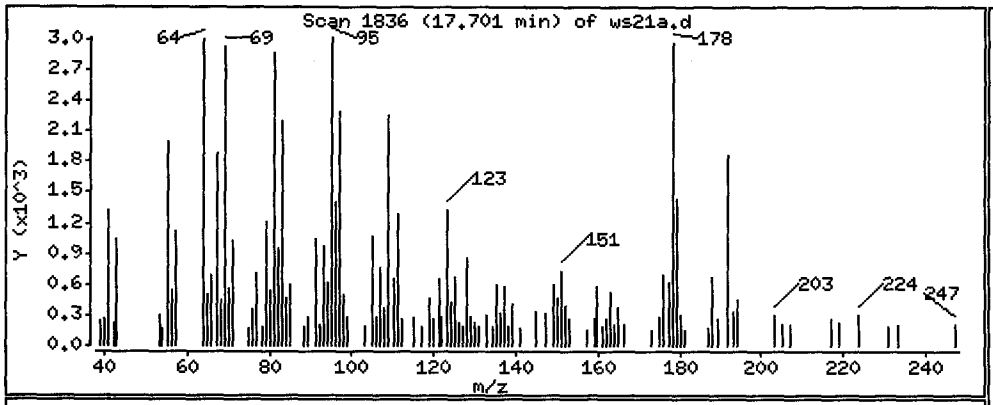
Operator: VTS/YZ

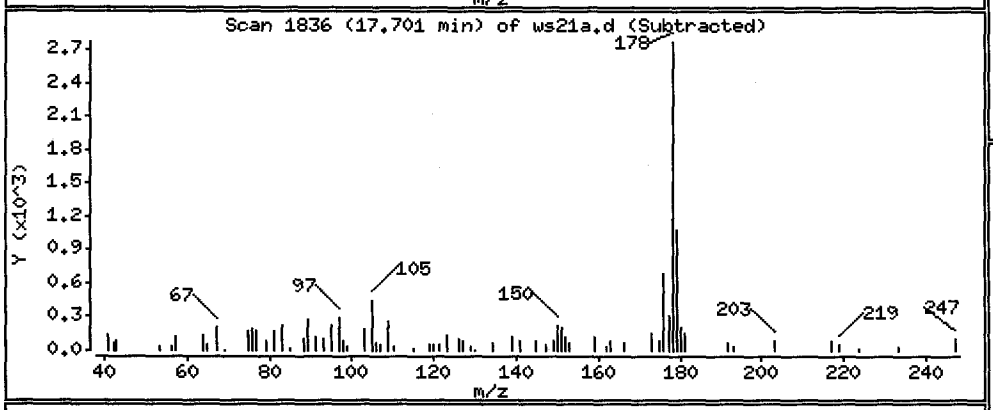
Column phase: ZB-5msi

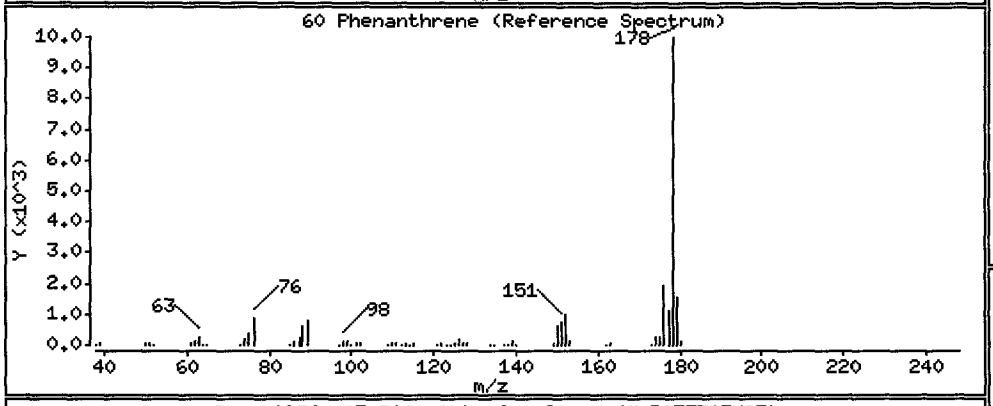
Column diameter: 0.25

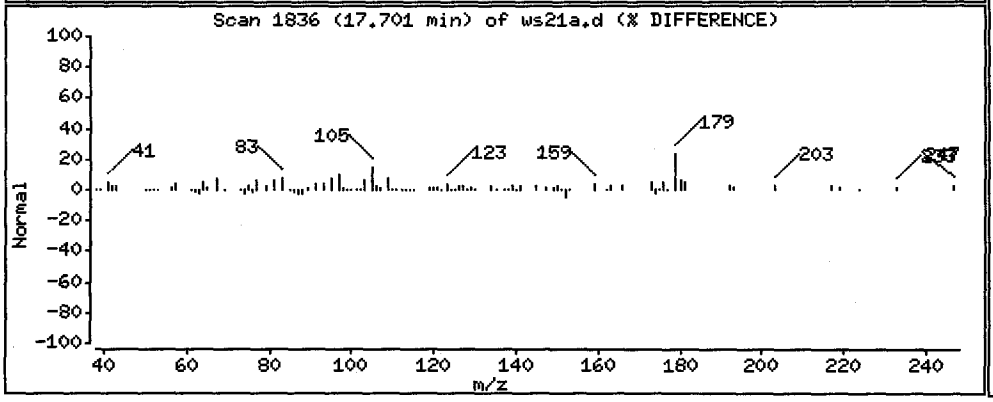
60 Phenanthrene

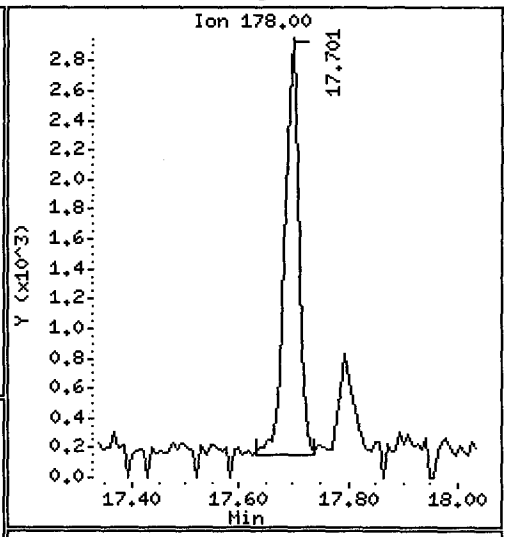
Concentration: 10.42 ug/kg

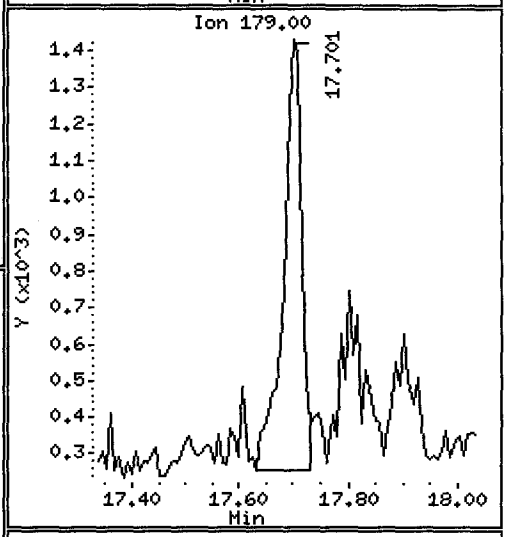


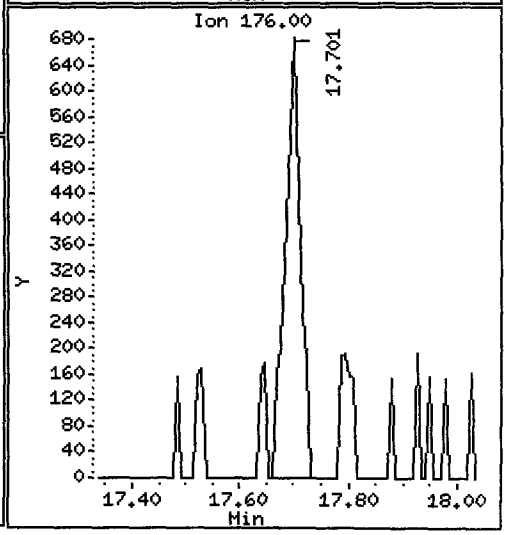












Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

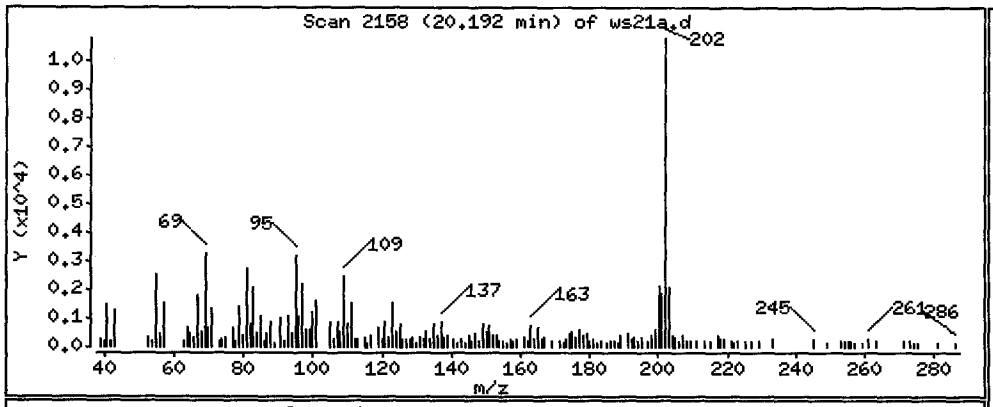
Operator: VTS/YZ

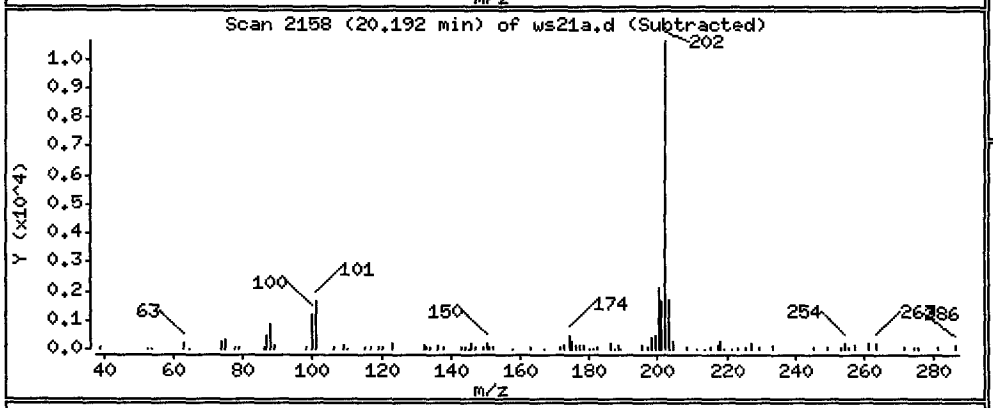
Column phase: ZB-5msi

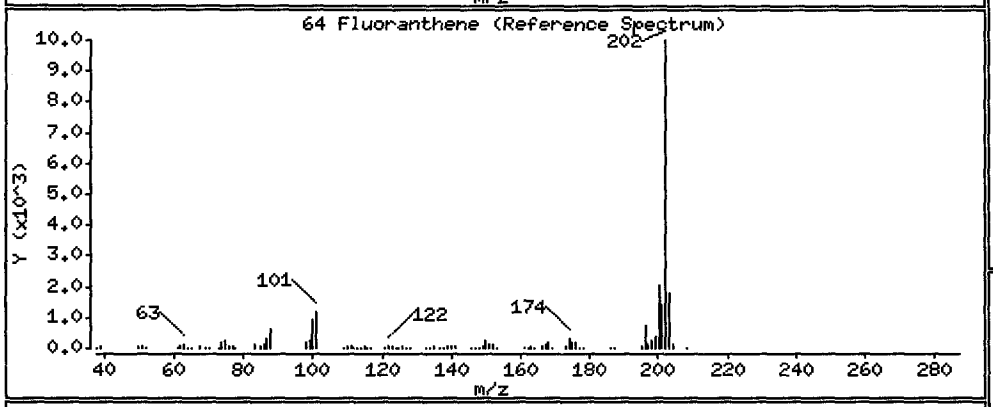
Column diameter: 0.25

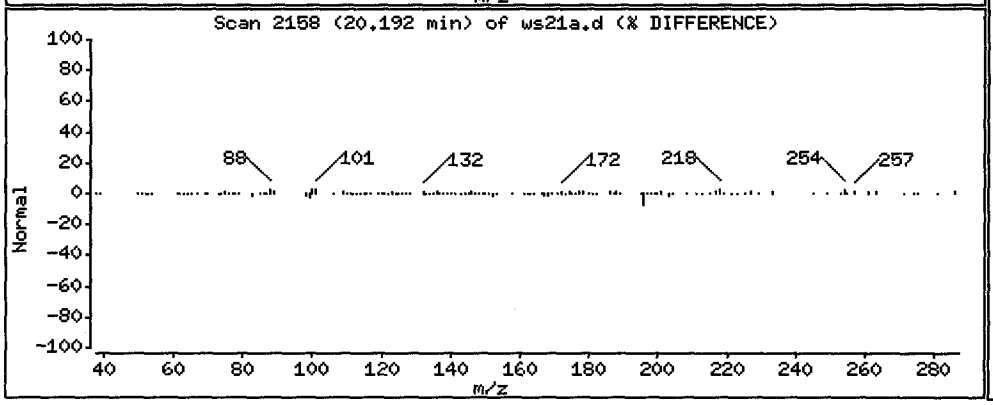
64 Fluoranthene

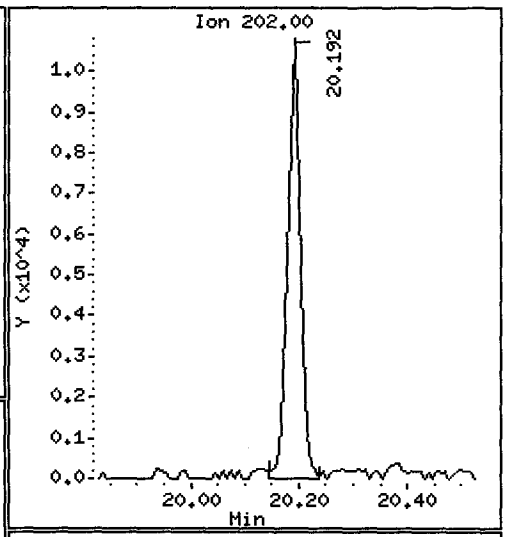
Concentration: 30.24 ug/kg

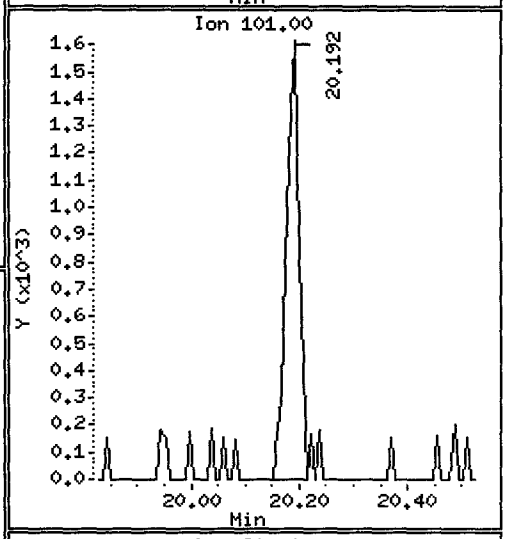


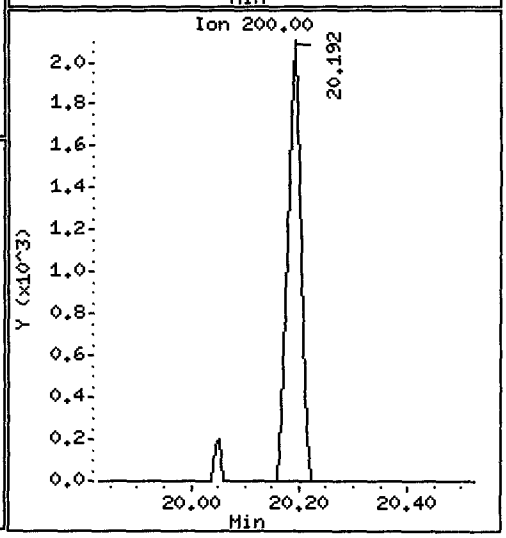












Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

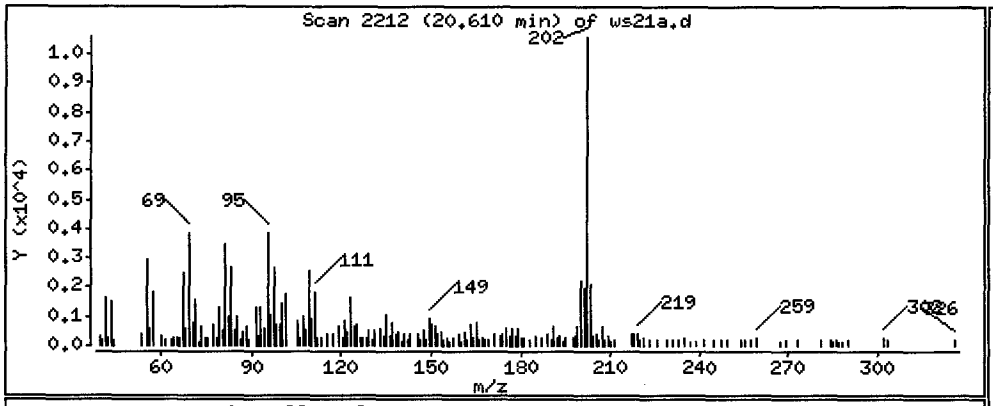
Operator: VTS/YZ

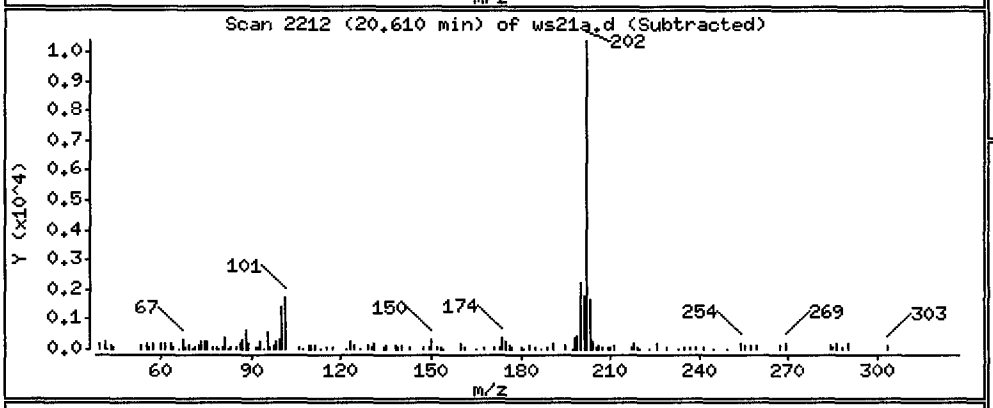
Column phase: ZB-5msi

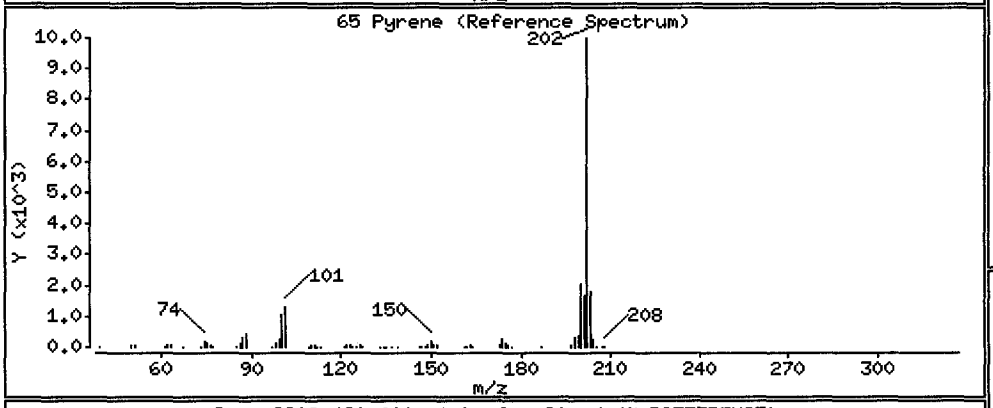
Column diameter: 0.25

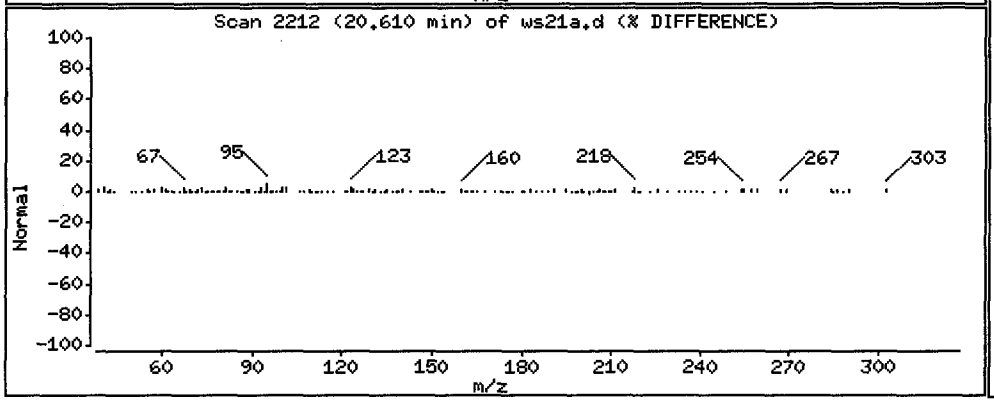
65 Pyrene

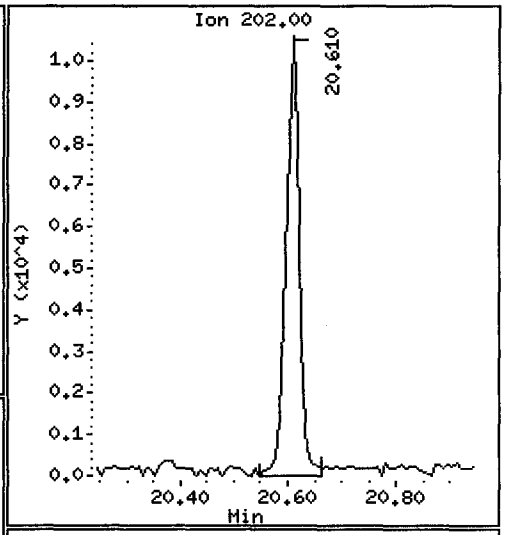
Concentration: 32.58 ug/kg

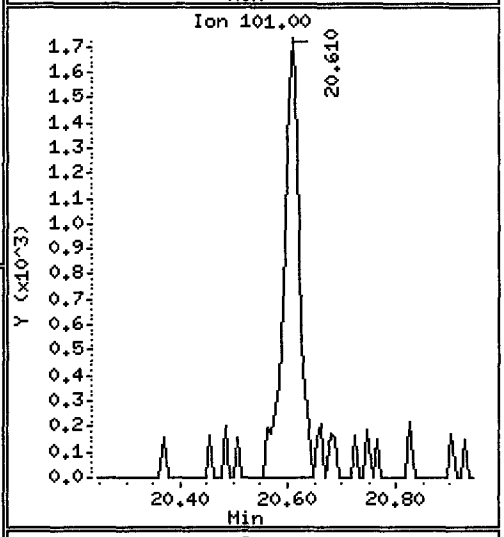


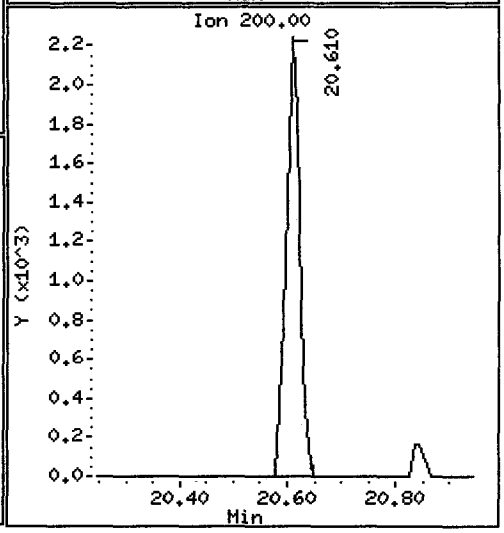












Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

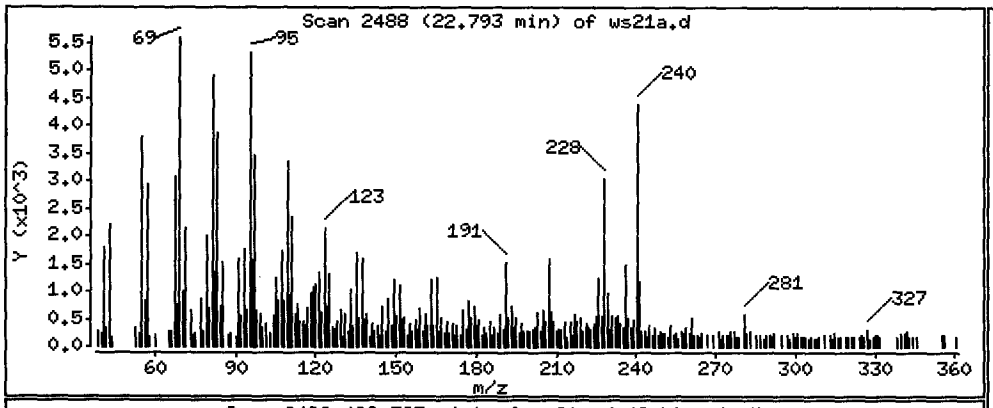
Operator: VTS/YZ

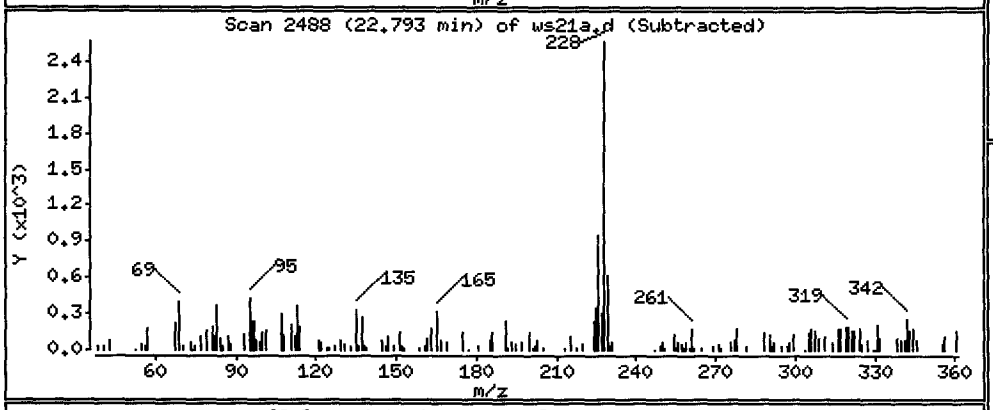
Column phase: ZB-5msi

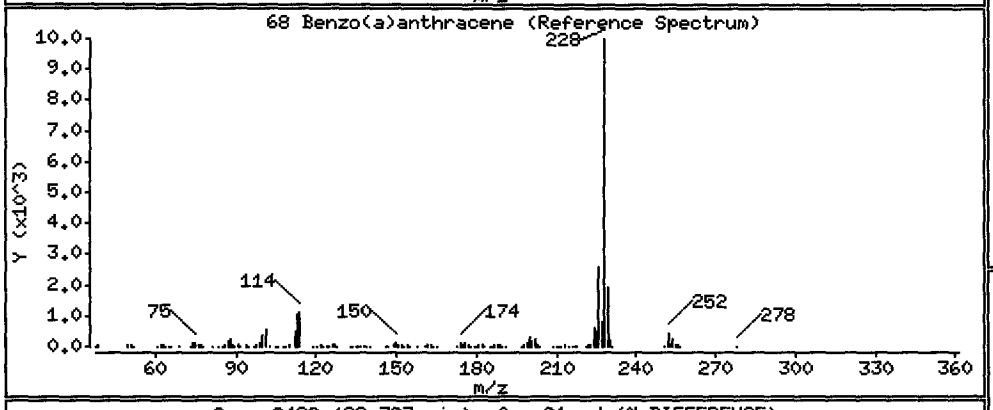
Column diameter: 0.25

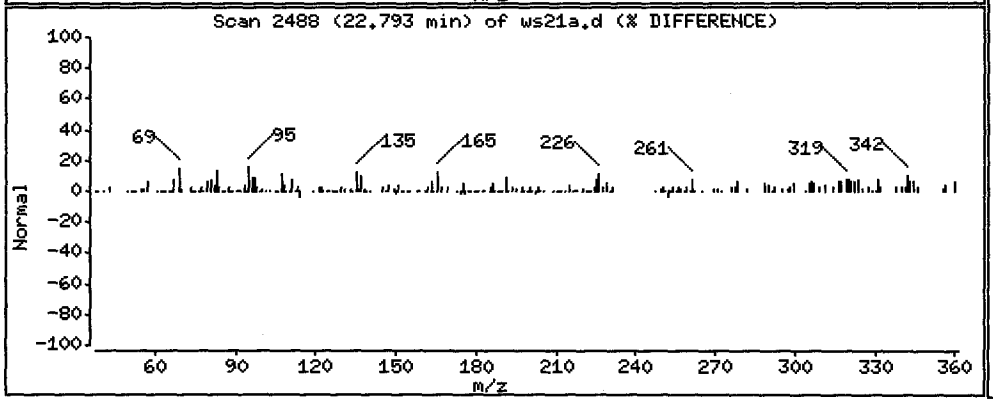
68 Benzo(a)anthracene

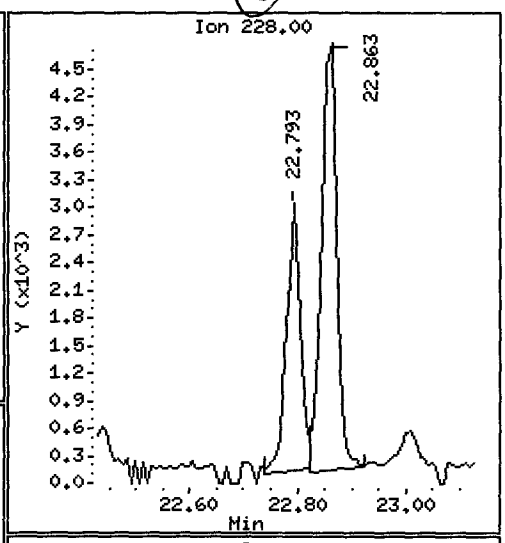
Concentration: 10.50 ug/kg

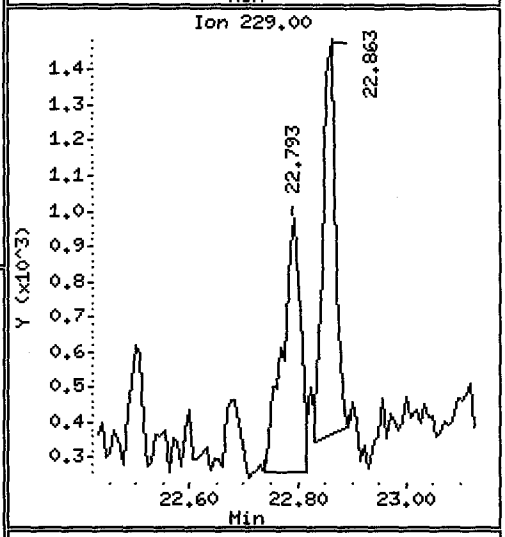


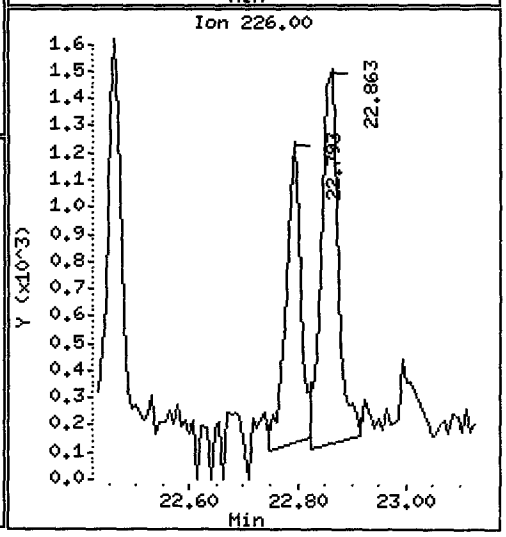












Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

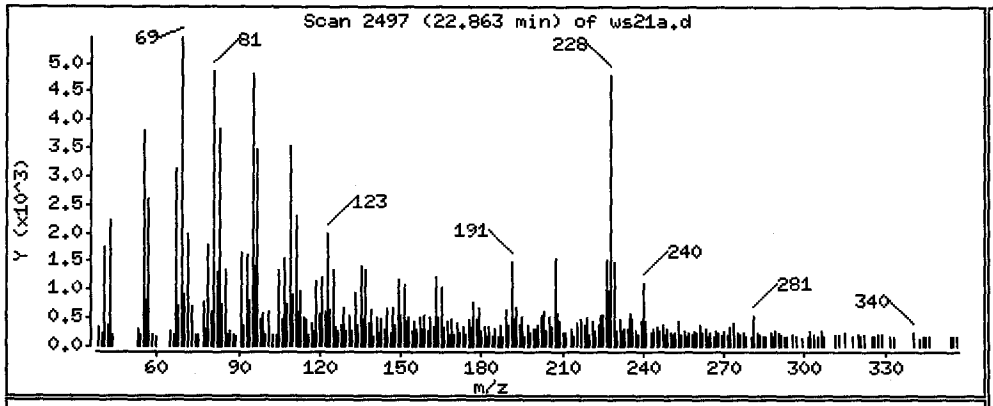
Operator: VTS/YZ

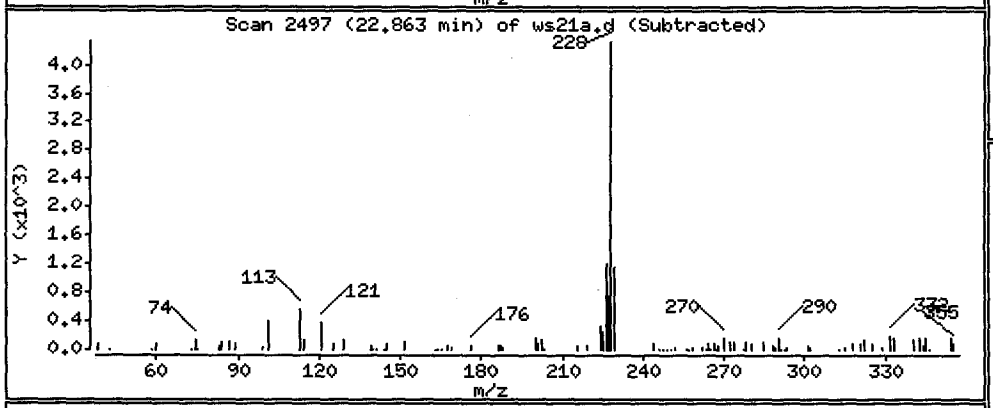
Column phase: ZB-5msi

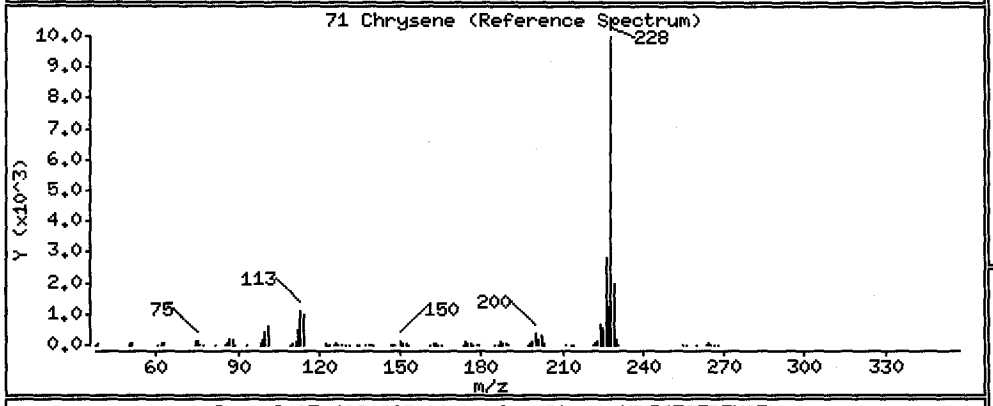
Column diameter: 0.25

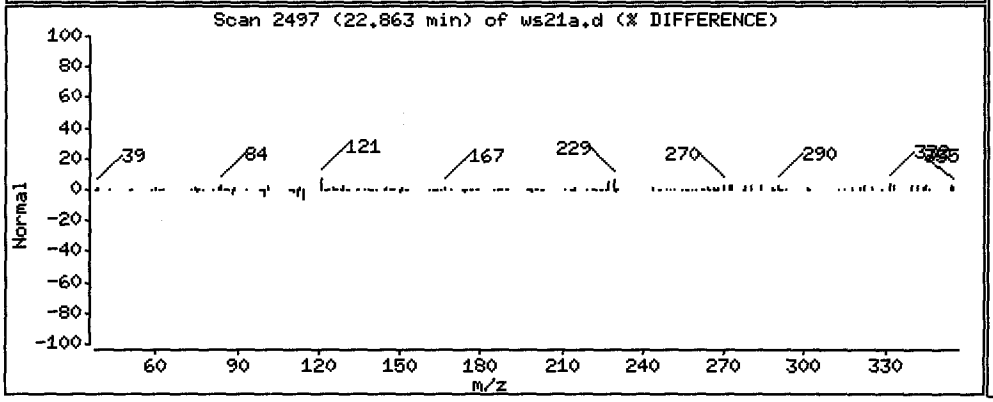
71 Chrysene

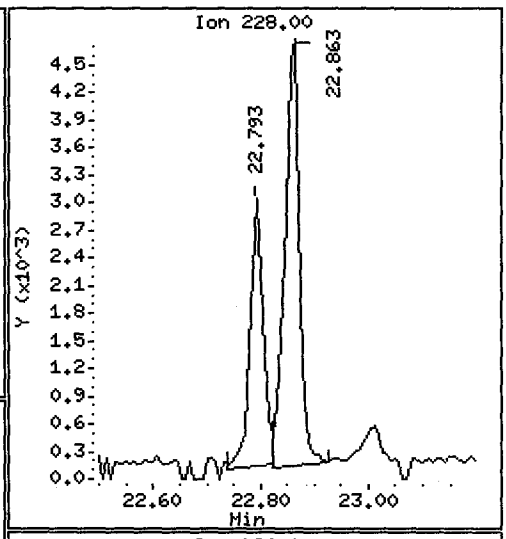
Concentration: 19.57 ug/kg

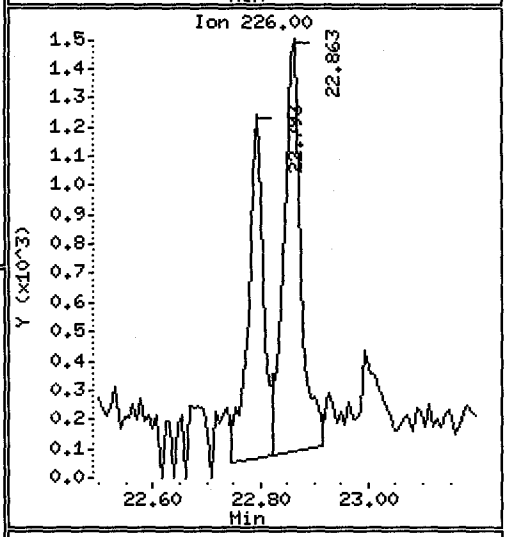


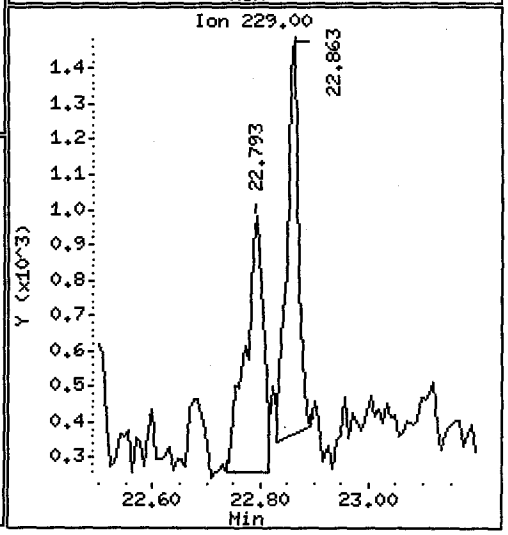












Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

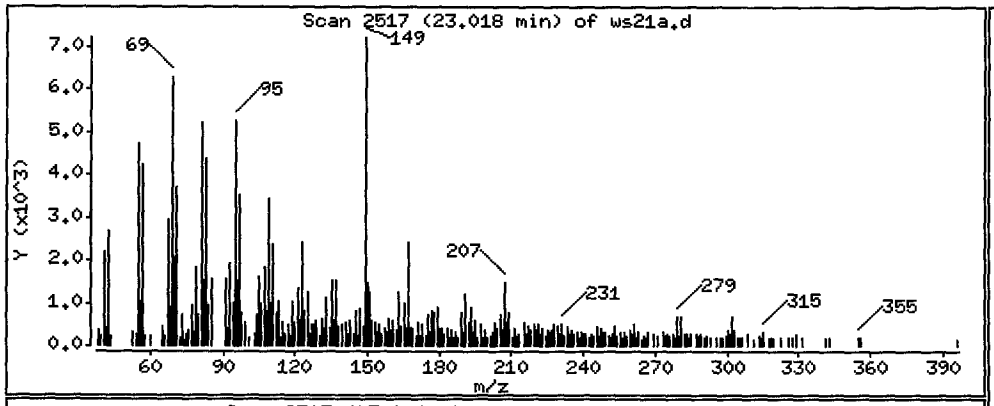
Operator: VTS/YZ

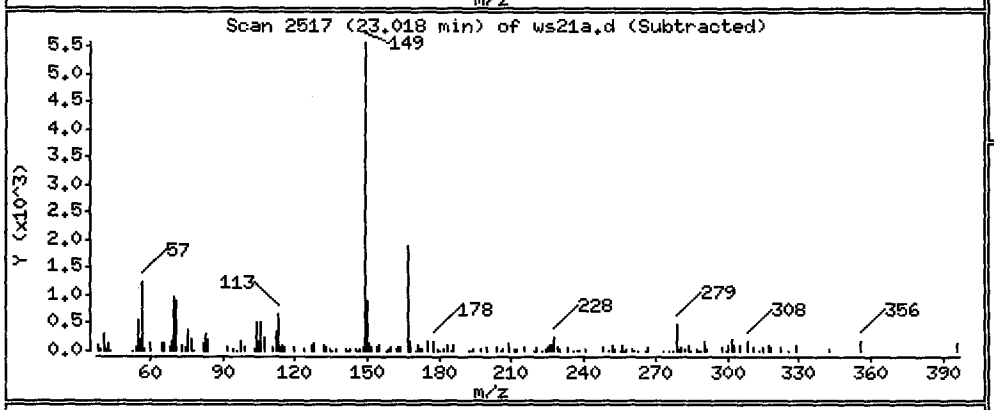
Column phase: ZB-5msi

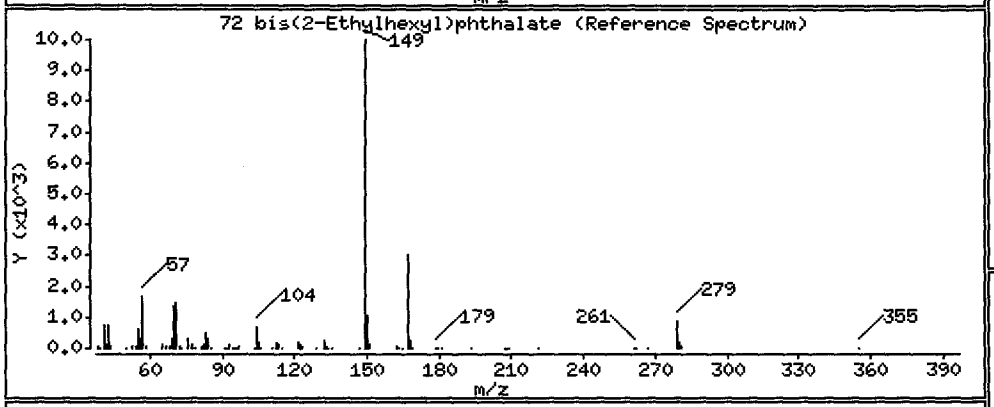
Column diameter: 0.25

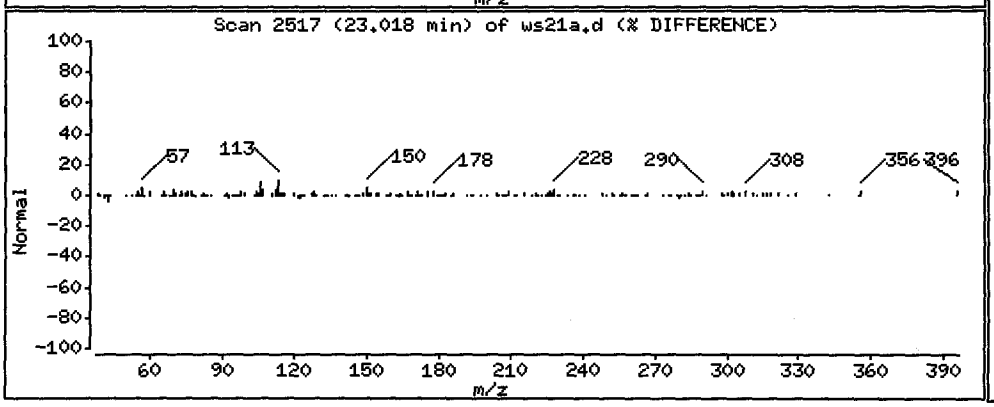
72 bis(2-Ethylhexyl)phthalate

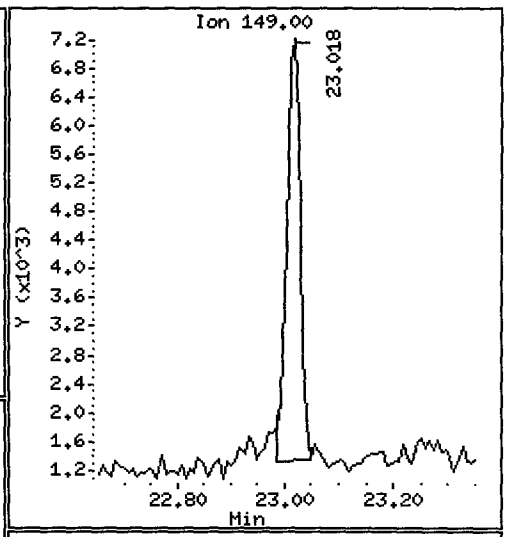
Concentration: 34.65 ug/kg

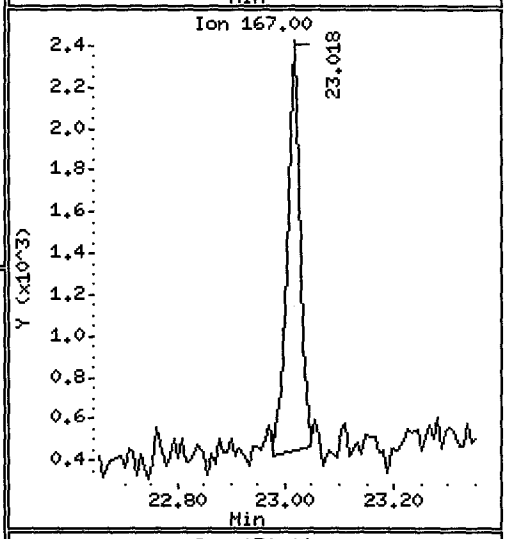


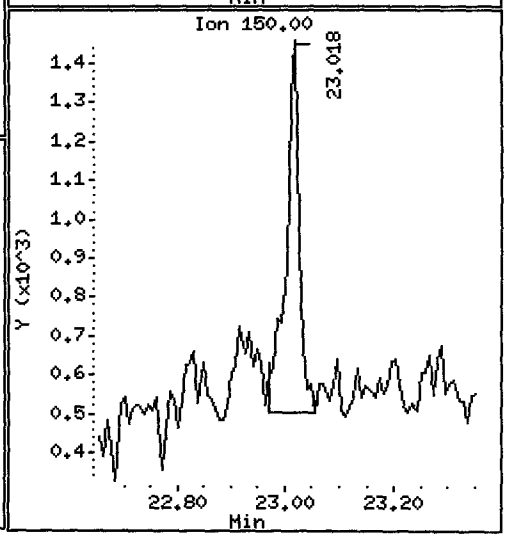












Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

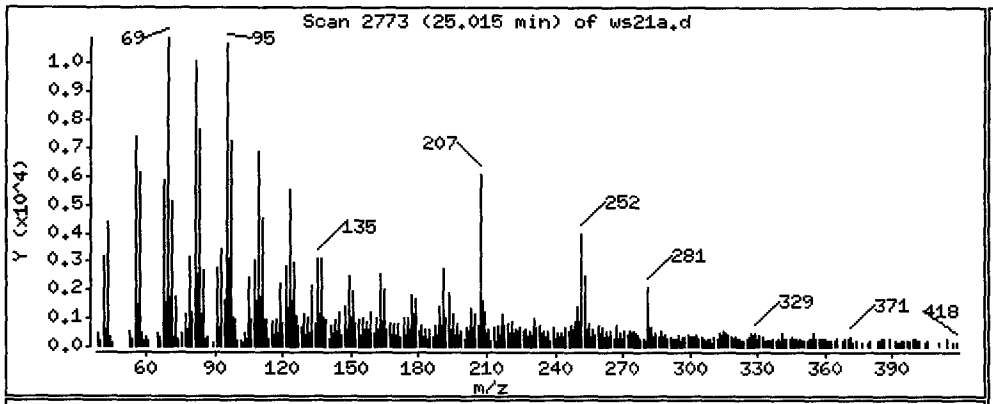
Operator: VTS/YZ

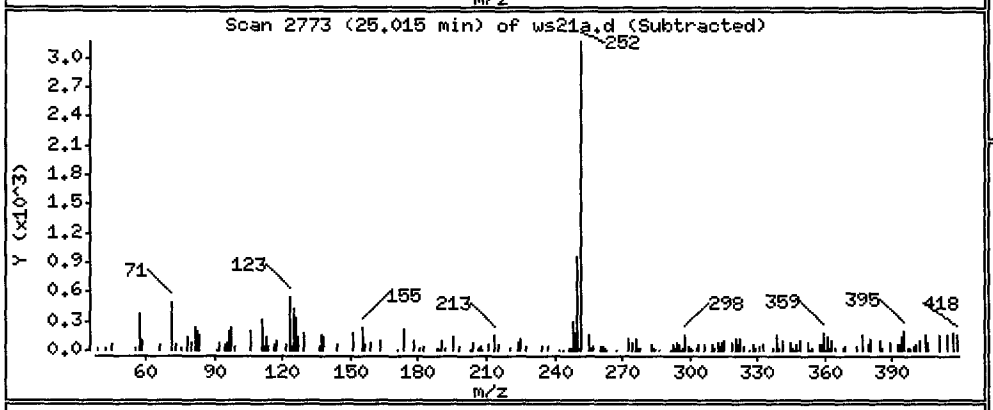
Column phase: ZB-5msi

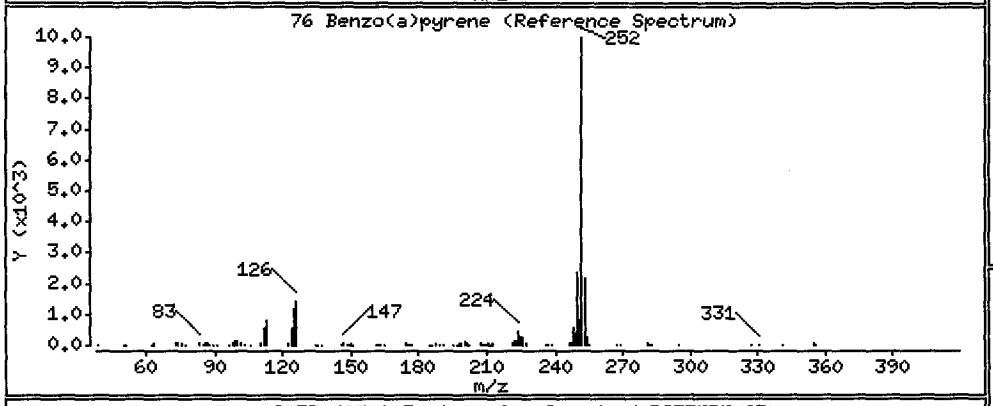
Column diameter: 0.25

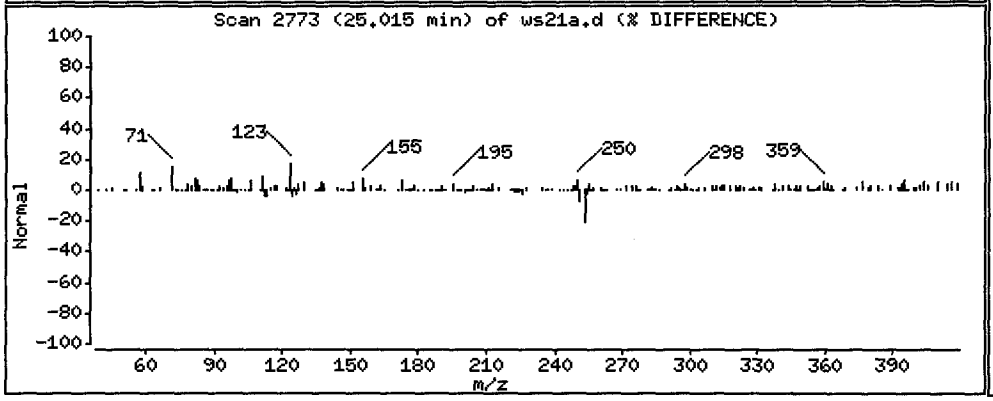
76 Benzo(a)pyrene

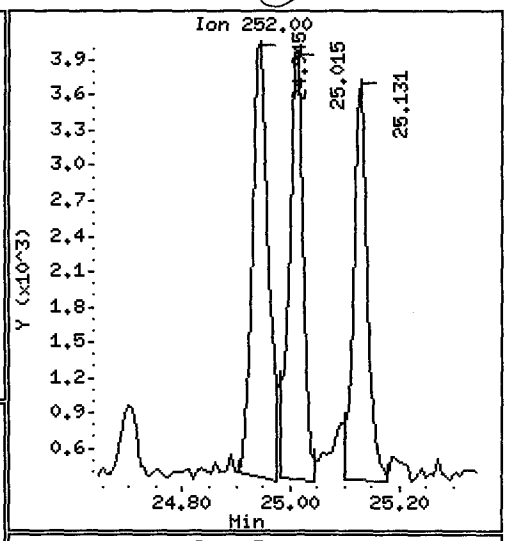
Concentration: 16.00 ug/kg

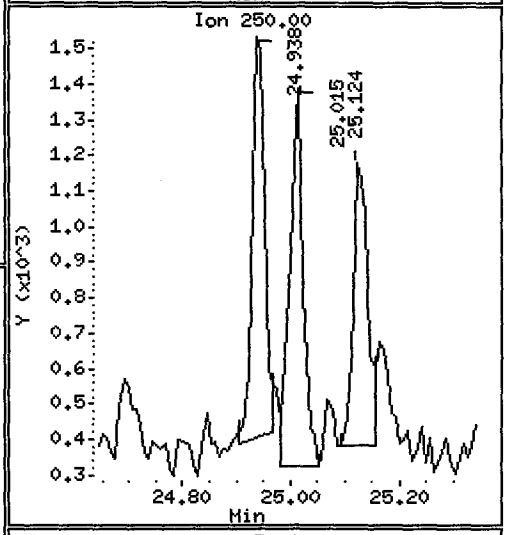


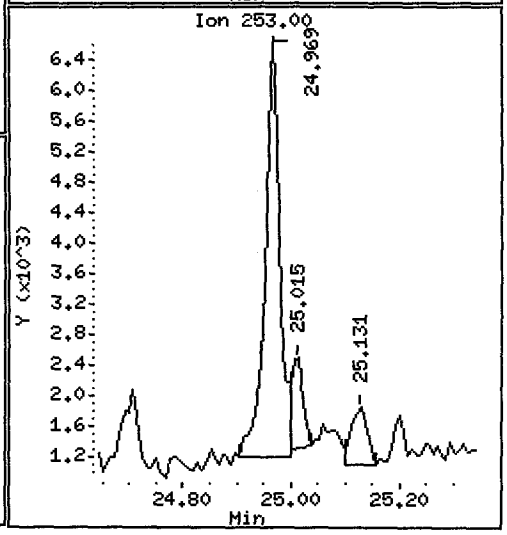












WS21 : 020020

Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

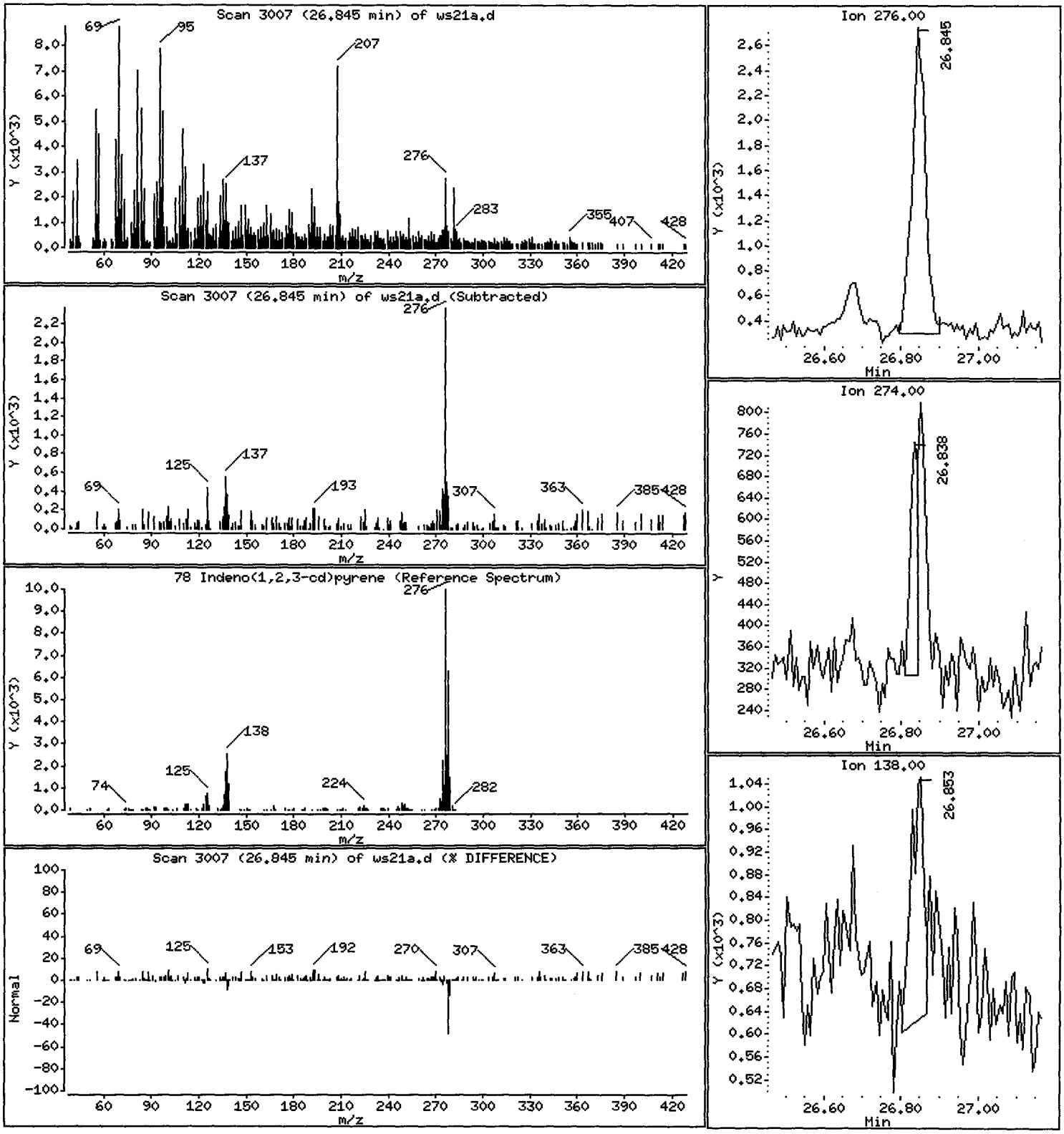
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

78 Indeno(1,2,3-cd)pyrene

Concentration: 12.39 ug/kg



Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

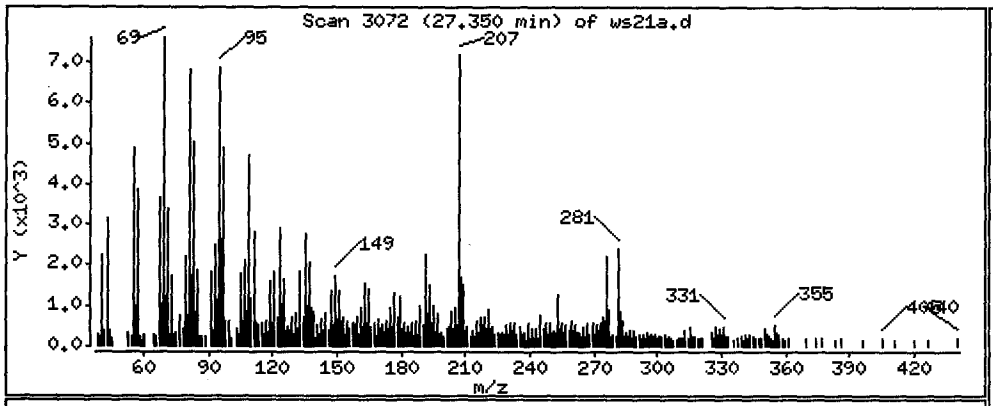
Operator: VTS/YZ

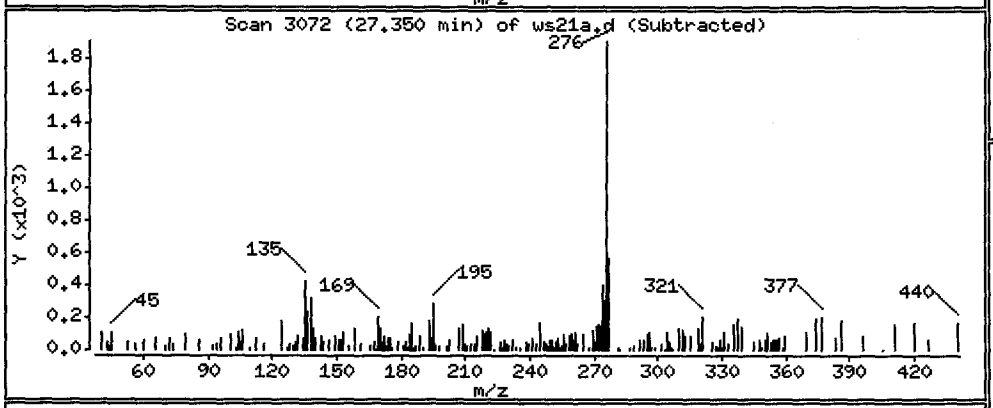
Column phase: ZB-5msi

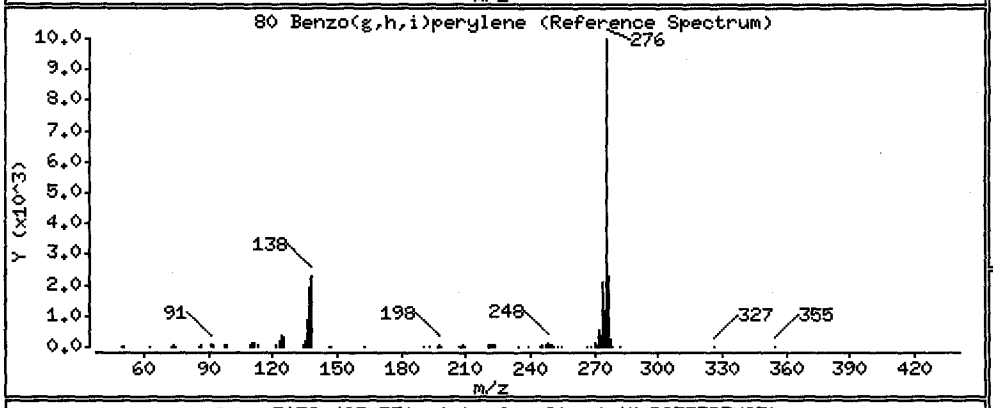
Column diameter: 0.25

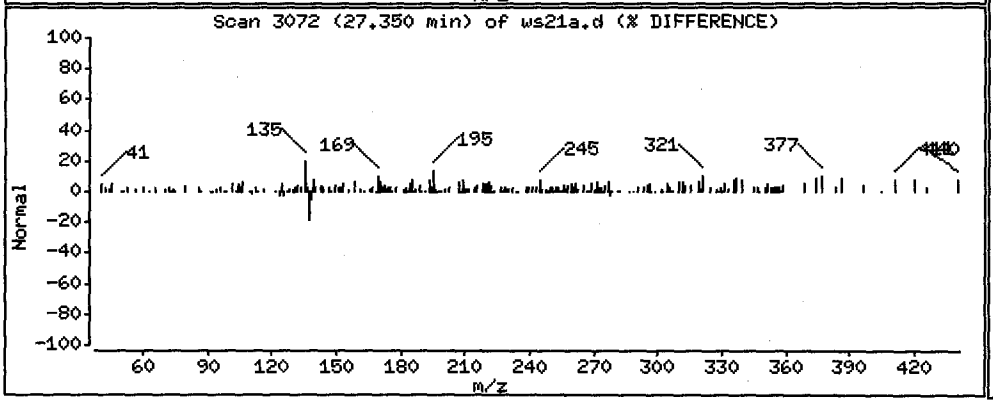
80 Benzo(g,h,i)perylene

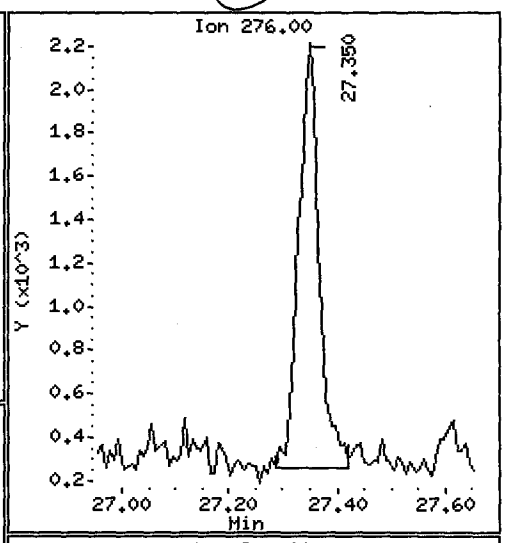
Concentration: 12.77 ug/kg

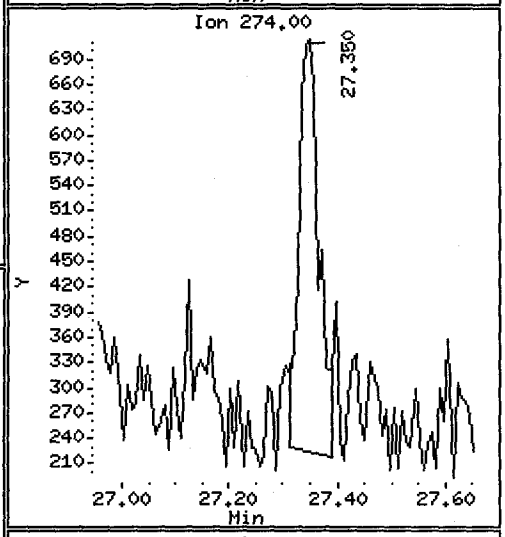


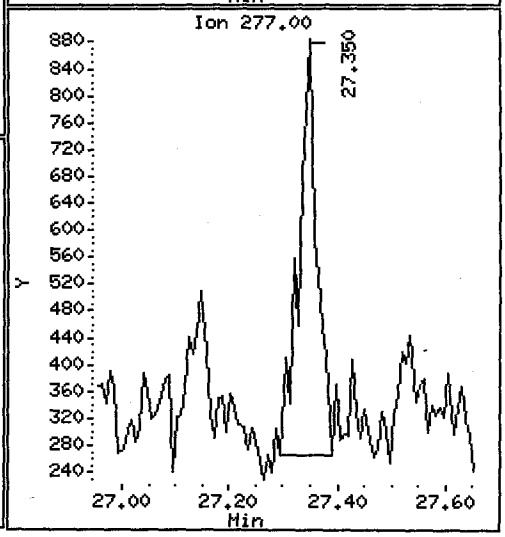












Data File: /chem1/nt10.i/20130613.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

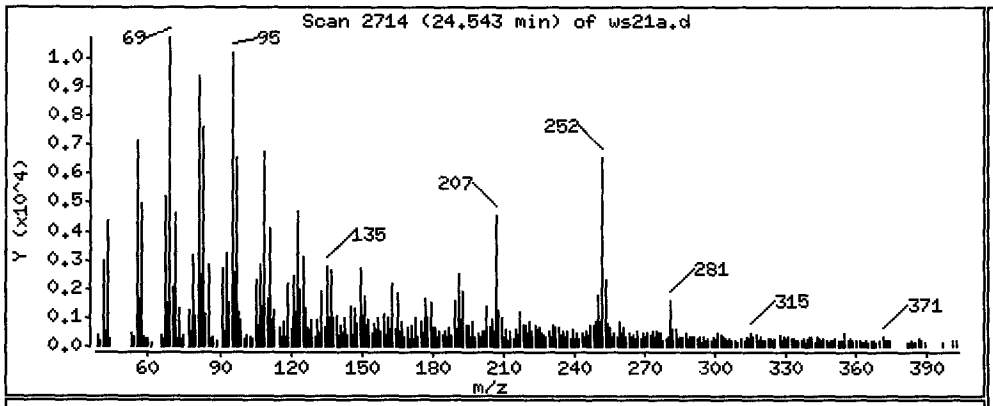
Operator: VTS/YZ

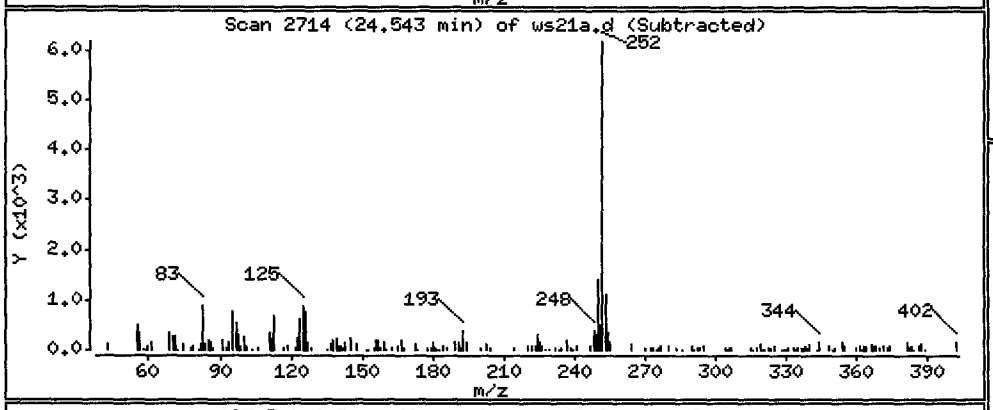
Column phase: ZB-5msi

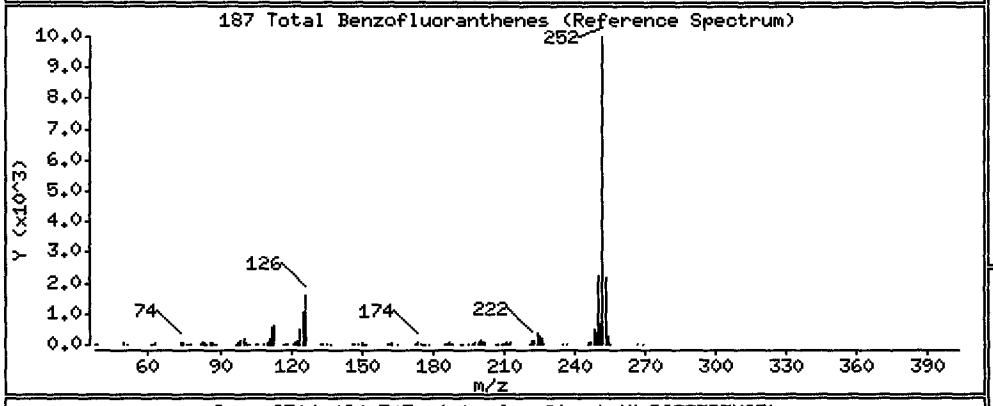
Column diameter: 0.25

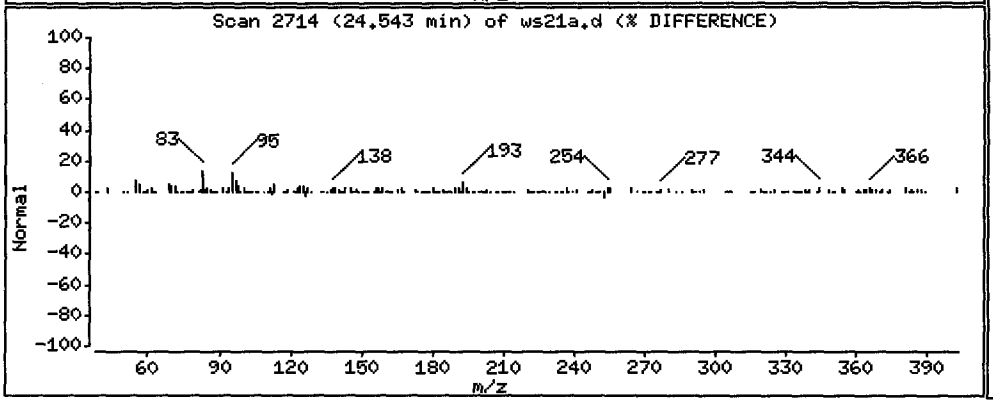
187 Total Benzofluoranthenes

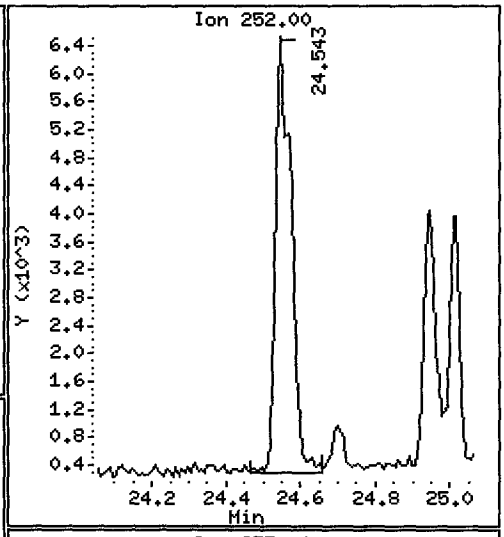
Concentration: 38.92 ug/kg

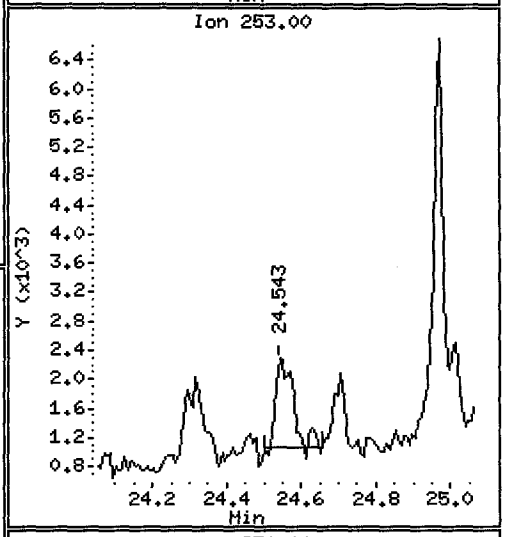


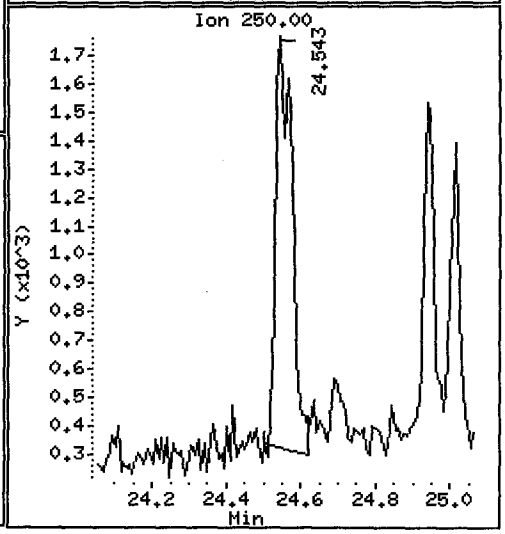






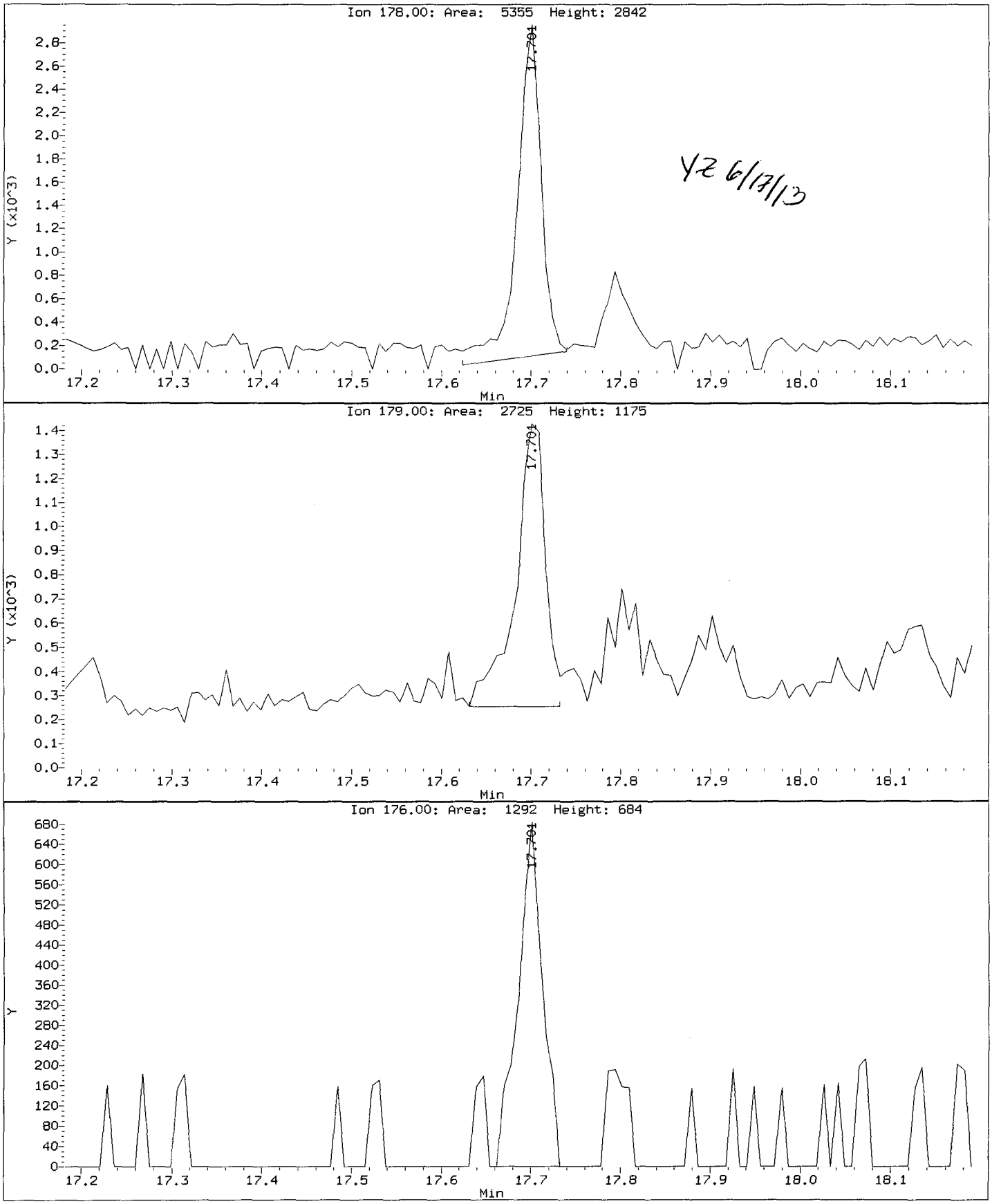






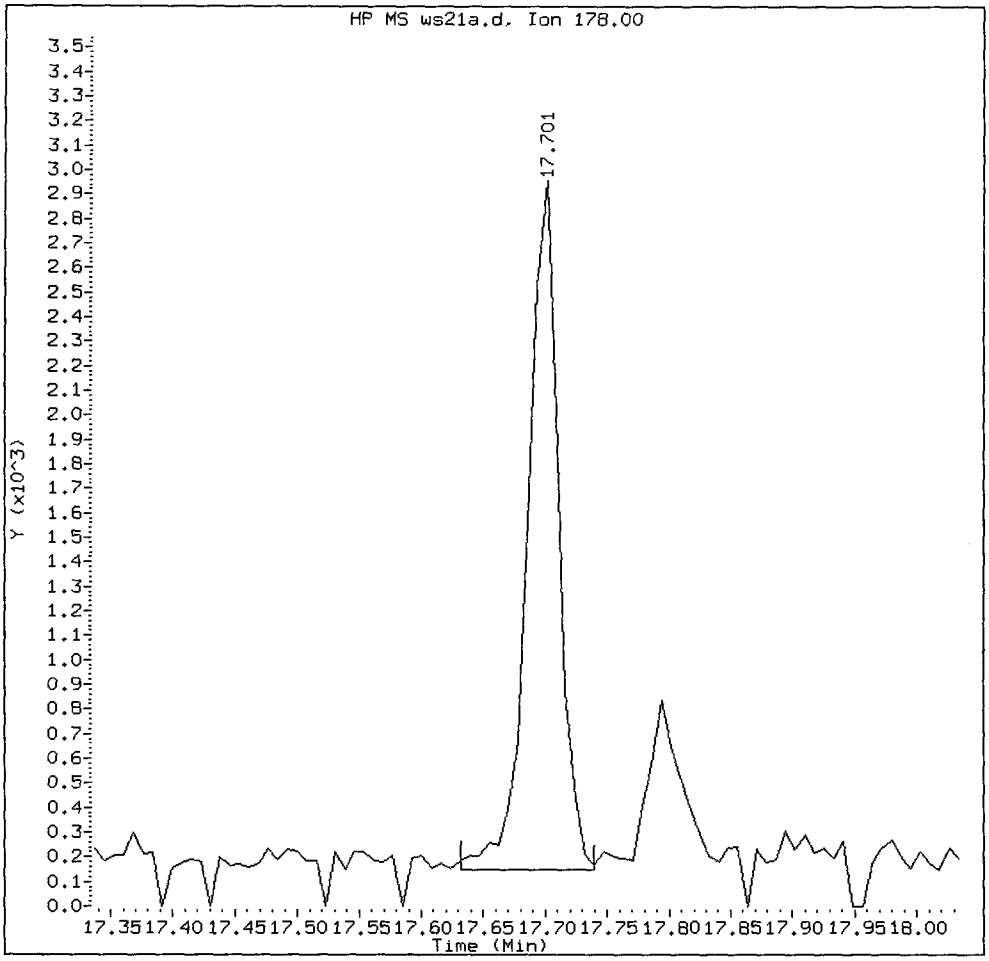
Data File: /chem1/nt10.i/20130613.b/ws21a.d
Injection Date: 13-JUN-2013 21:07
Instrument: nt10.i
Client Sample ID:

Compound: Phenanthrene
CAS Number: 85-01-8



WS21A, /chem1/nt10.i/20130613.b/ws21a.d

Phenanthrene Amount: 0.11 Area: 5012



MANUAL INTEGRATION for Phenanthrene

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/17/13

CO-ELUTION SUMMARY FOR FILE - ws21a.d

Lab ID: WS21A, Method: ABN.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS21

Incorporated Analytical Chemists and Consultants

(8270D) BAN/SIM SVOA PSDDA-Soil/ Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (5-20ppb)

ARI Job No(s) W549, WR99, W521 Page 1 of 1 Batch set up by: ~~SP~~

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	W549 MBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 2 3 YL/KT 6/6/13 Analyst/Date
	SBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	SBS Dup.	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C 1 2 3 4 5 6 RR 6/10/13 Analyst/Date
2	~~QLS~~ A	~~10.00g~~ 11.07	(1:1) Y/N	1mL	1mL	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
2	~~QLS (SIM)~~ B	~~10.00g~~ 11.01	(1:1) Y/N	1mL	1mL	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 2 3 CSZ 6/10/13 Analyst/Date
2	C	11.04	(1:1) Y/N	1mL	1mL		
2	D	12.01	(1:1) Y/N	1mL	1mL		GPC Prep Filter (1:1) CSZ 6/10/13 Analyst/Date
8	WR99 D	13.04	(1:1) Y/N	1mL	1mL		
8	Dms	13.04	(1:1) Y/N	1mL	1mL		
8	Dmsd	13.01	(1:1) Y/N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6 YL 6/11/13 Analyst/Date
3	E	13.01	(1:1) Y/N	1mL	1mL	See Analyst Notes	
3	F	6.01	(1:1) Y/N	1mL	1mL	↓	
8	W521 A	13.04	(1:1) Y/N	1mL	1mL	Reviewed by SP 6/11/13	TurboVap 1 2 3 SP 6/11/13 Analyst/Date
Analyst/Date YL 06/08/13			CSZ 6/10/13	SP 6/11/13	SP 6/11/13		

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2093-4)	100/150µg/mL	50µL	7/22/13	YL	ww
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/29/14	YL	ww
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	YL	ww
Acid Spike	38(2091-4)	100/150µg/mL	50µL	2/28/14	YL	ww
~~QLS Spike (14 in Freezer)~~	~~14( )~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25( )~~	~~1µg/mL~~	~~50µL~~			
Extraction Time: 12:45			Balance ID: B146426			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~or large~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y /(N) B. Archive/Freeze Y /(N)

W521 : 060813

Reagent and Solutions Identification

(8270D) BAN/SIM SVOA PSDDA-Soil/ Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) W549, WR99, W521

(8270D) BAN/SIM SVOA PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Pre-Deactivated Sodium Sulfate: (H# 157) Anhydrous Sodium Sulfate: (I# 8130+ jar date 5-20-13) 1:1 Methylene Chloride/Acetone: (H# 195) Methylene Chloride: (I# 8249) Pre-Deactivated Glasswool: (H# 180)	Microwave CT 6-8-13 YC
Pre-GPC KD Station: Pre-Deactivated Glasswool: (H# 180) Anhydrous Sodium Sulfate: (I# 8130+ jar date 5/24/13) Methylene Chloride: (I# 8249)	Pre-GPC KD RR 06/10/13
GPC Filter Prep: Methylene Chloride: (I# 8270)	GPC Filter Prep CSR 6/10/13
GPC Station: Acetone: (I# 8218) Methylene Chloride: (I# 8270)	GPC CSR 6/10/13
Post GPC KD Station: Methylene Chloride: (I# 8270)	Post GPC KD YC 06/11/13
Vialing Station: Methylene Chloride: (I# 8270) Hexane: (I# N/A)	Vialing SG 6/11/13

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: 801S(SIM-PNA) 802S(Butyl Tins) 804S(SVOA-8270D) SIM 805S(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 04/29/13 Internal Standard ID 1998-2 Expiration 07/03/13

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%? see full scan	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	2072-1	6/3/13	4599	2055-1	12/05/13
	2073-1	6/3/13	Full	2054-1	8/3/13
	2064-1	01/25/14	scan.	2053-2	08/13/13
	B000112	10/15/13			
	1998-4	7/02/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YB Date: 5/3/13

Reviewer: VD Date: 5.4.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/29/13 Analysis: ABN/SIMABN Analyst: YZ

GC Program: ABN_2 Column No: 252945 Column Type: ZB5-MSI

Instrument Tune (.U or .CT.): 130284 EM Voltage: 1652

Calibration File: DF 0429 Curve Date: 04/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2032-1 8000112	
	2073-1 1998-4	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130429.b

	Time	Filename	LabID	ClientId	DF											
1	1637	df0429.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1653	ic0429a.d	IC0429A		1	8.99	53090	11.65	194964	15.55	113450	18.82	212689	23.90	235045	26.35	227736
3	1807	ic0429c.d	IC0429C		1	8.98	58845	11.65	217161	15.54	121711	18.82	222131	23.89	244600	26.35	221779
4	1844	ic0429d.d	IC0429D		1	8.98	52658	11.65	192325	15.54	109274	18.82	203933	23.90	223647	26.35	211919
5	1957	ic0429f.d	IC0429F		1	8.98	52849	11.65	195311	15.54	106586	18.82	192185	23.90	215273	26.35	195376
6	2014	ic0429g.d	IC0429G		1	8.98	43709	11.65	160165	15.54	95179	18.82	178699	23.90	199199	26.36	191024
7	2111	ic0429h.d	IC0429H		1	8.98	51614	11.65	192559	15.54	107939	18.82	194268	23.89	211275	26.35	198007
8	2147	ic0429i.d	IC0429I		1	8.98	49468	11.64	182546	15.54	105486	18.82	191121	23.90	208500	26.35	197777

YZ 5/03/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0429a	ic0429c	ic0429d	ic0429f	ic0429g	ic0429h	ic0429i
INJ.DATE:	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013
INJ.TIME:	16:53	18:07	18:44	19:57	20:34	21:11	21:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	+++++	6.641	6.634	6.634	6.633	6.633	6.634	6.634	6.134-7.134	6.635	0.003
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.828	7.328-8.328	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.900	16.400-17.400	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.954	29.454-30.454	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.752	23.252-24.252	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.717	27.217-28.217	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.796	19.296-20.296	+++++	+++++

Reviewer 1 JB Date: 5/3/13
Reviewer 2 VD Date: 5.4.13

SW8270C

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
	107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
	105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
$	2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.886	6.386-7.386	+++++	+++++
	3 Phenol	8.365	8.365	8.357	8.365	8.364	8.365	8.365	8.365	7.865-8.865	8.364	0.003
	4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.268	7.768-8.768	+++++	+++++
$	5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.087	6.587-7.587	+++++	+++++
	6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.592	8.092-9.092	+++++	+++++
	7 1,3-Dichlorobenzene	8.914	8.914	8.914	8.914	8.914	8.914	8.914	8.914	8.414-9.414	8.914	0.000
*	8 1,4-Dichlorobenzene-d4	8.991	8.984	8.984	8.984	8.983	8.984	8.984	8.991	8.491-9.491	8.985	0.003
	9 1,4-Dichlorobenzene	9.015	9.015	9.015	9.015	9.015	9.015	9.015	9.015	8.515-9.515	9.015	0.000
$	10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
	11 Benzyl alcohol	9.294	9.294	9.286	9.294	9.294	9.294	9.294	9.294	8.794-9.794	9.293	0.003
	12 1,2-Dichlorobenzene	9.395	9.395	9.395	9.395	9.395	9.395	9.395	9.395	8.895-9.895	9.395	0.000
	13 2-Methylphenol	9.558	9.550	9.550	9.550	9.550	9.550	9.551	9.558	9.058-10.058	9.551	0.003
	14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.998	8.498-9.498	+++++	+++++
	15 4-Methylphenol	9.853	9.845	9.845	9.845	9.845	9.845	9.846	9.853	9.353-10.353	9.846	0.003
	16 N-Nitroso-di-n-propyla	9.900	9.900	9.900	9.900	9.899	9.899	9.900	9.900	9.400-10.400	9.900	0.000
	17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.363	8.863-9.863	+++++	+++++
$	18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.237	7.737-8.737	+++++	+++++
	19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.696	8.196-9.196	+++++	+++++
	20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.987	8.487-9.487	+++++	+++++
	21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	10.969	10.969	10.961	10.962	10.969	10.961	10.962	10.969	10.469-11.469	10.965	0.004
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.557	9.057-10.057	+++++	+++++
	24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.500	9.000-10.000	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.563	11.563	11.563	11.563	11.563	11.563	11.563	11.563	11.063-12.063	11.563	0.000
*	27 Naphthalene-d8	11.648	11.648	11.648	11.648	11.647	11.647	11.640	11.648	11.148-12.148	11.647	0.003
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.518	9.018-10.018	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
	30 Hexachlorobutadiene	12.103	12.103	12.103	12.104	12.103	12.103	12.104	12.103	11.603-12.603	12.103	0.000
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.194	10.694-11.694	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.019	10.519-11.519	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.386	10.886-11.886	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.091	10.591-11.591	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.600	11.100-12.100	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.805	11.305-12.305	+++++	+++++
	39 Dimethylphthalate	15.060	15.052	15.052	15.052	15.060	15.052	15.052	15.060	14.560-15.560	15.054	0.004
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
*	42 Acenaphthene-d10	15.547	15.539	15.539	15.540	15.539	15.539	15.540	15.547	15.047-16.047	15.540	0.003
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.508	12.008-13.008	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.578	12.078-13.078	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.660	12.160-13.160	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.756	12.256-13.256	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.867	12.367-13.367	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.031	12.531-13.531	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.248	12.748-13.748	+++++	+++++
	50 Diethylphthalate	16.645	16.637	16.637	16.637	16.645	16.637	16.637	16.645	16.145-17.145	16.639	0.004
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	13.868-14.868	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.510	13.010-14.010	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.340	12.840-13.840	+++++	+++++
	54 N-Nitrosodiphenylamine	17.031	17.023	17.031	17.031	17.031	17.023	17.023	17.031	16.531-17.531	17.028	0.004
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.476	12.976-13.976	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.191	13.691-14.691	+++++	+++++
	57 Hexachlorobenzene	18.158	18.150	18.158	18.150	18.157	18.157	18.158	18.158	17.658-18.658	18.155	0.004
	58 Pentachlorophenol	18.552	18.545	18.552	18.553	18.552	18.552	18.553	18.552	18.052-19.052	18.551	0.003
*	59 Phenanthrene-d10	18.816	18.816	18.815	18.816	18.815	18.815	18.816	18.816	18.316-19.316	18.816	0.000
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.290	14.790-15.790	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.986	15.486-16.486	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.867	16.367-17.367	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.445	16.945-17.945	+++++	+++++
$	66 Terphenyl-d14	22.026	22.026	22.026	22.027	22.026	22.026	22.027	22.026	21.526-22.526	22.026	0.000
	67 Butylbenzylphthalate	22.979	22.971	22.979	22.979	22.979	22.971	22.971	22.979	22.479-23.479	22.975	0.004
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	23.900	23.892	23.900	23.900	23.900	23.892	23.900	23.900	23.400-24.400	23.898	0.004
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.276	19.776-20.776	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.339	19.839-20.839	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.411	18.911-19.911	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.324	19.824-20.824	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.373	21.873-22.873	+++++	+++++
*	77 Perylene-d12	26.355	26.347	26.354	26.355	26.362	26.347	26.347	26.355	25.855-26.855	26.352	0.006
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
	79 Dibenzo(a,h)anthracene	28.718	28.703	28.710	28.726	28.718	28.710	28.703	28.718	28.218-29.218	28.713	0.009
	80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.408	24.908-25.908	+++++	+++++
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.597	16.097-17.097	+++++	+++++
	90 N-Nitrosodimethylamine	4.371	4.387	4.371	4.387	4.356	4.386	4.371	4.371	3.871-4.871	4.376	0.012
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.413-8.413	+++++	+++++
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.089	14.589-15.589	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Level 2: /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Level 3: /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Level 4: /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Level 5: /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Level 6: /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Level 7: /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
142 1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
3 Phenol	2.19342	1.93668	2.06101	1.92949	1.94728	2.08759		
	1.98249						2.01971	4.874
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
7 1,3-Dichlorobenzene	1.87553	1.75224	1.72793	1.58761	1.57264	1.59509		
	1.53900						1.66429	7.407
9 1,4-Dichlorobenzene	1.91943	1.70341	1.73949	1.57791	1.55213	1.57844		
	1.52865						1.65707	8.453
11 Benzyl alcohol	1.01421	0.92378	0.95981	0.91615	0.94937	1.02397		
	0.99327						0.96865	4.413
12 1,2-Dichlorobenzene	1.80136	1.61817	1.67423	1.49430	1.47632	1.51145		
	1.44728						1.57473	8.180
13 2-Methylphenol	1.59549	1.39187	1.48696	1.36428	1.39709	1.47085		
	1.40118						1.44396	5.556
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
15 4-Methylphenol	1.58792	1.37715	1.51721	1.38530	1.44358	1.52071		
	1.46089						1.47039	5.215
16 N-Nitroso-di-n-propylamine	0.91430	0.80598	0.85037	0.79906	0.80117	0.85017		
	0.78320						0.82918	5.500

Analytical Resources, Inc.

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
22 2,4-Dimethylphenol	0.40571	0.35657	0.40416	0.37154	0.38512	0.40380		
	0.38544						0.38748	4.824
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
26 1,2,4-Trichlorobenzene	0.44278	0.39385	0.40914	0.36326	0.36118	0.36604		
	0.34742						0.38338	8.776

Analytical Resources, Inc.

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Hexachlorobutadiene	0.27157	0.23723	0.24399	0.22079	0.21930	0.22590	0.21485	0.23337	8.466
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

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Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
38 2-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Dimethylphthalate	1.29548 / 1.09034	1.18474	1.22635	1.06304	1.10760	1.11120	1.15411	7.293
40 Acenaphthylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 2,6-Dinitrotoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 3-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Acenaphthene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 2,4-Dinitrophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 Dibenzofuran	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 4-Nitrophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
50 Diethylphthalate	1.48913	1.22551	1.39412	1.18097	1.28213	1.30160		
	1.27512						1.30694	7.961
51 4-Chlorophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
54 N-Nitrosodiphenylamine	0.39424	0.38298	0.48476	0.43332	0.46296	0.45890		
	0.45294						0.43858	8.547
56 4-Bromophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
57 Hexachlorobenzene	0.37593	0.30103	0.32963	0.26764	0.27658	0.27272		
	0.27374						0.29961	13.400

Analytical Resources, Inc.

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Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
58 Pentachlorophenol	0.14488	0.13785	0.18228	0.16591	0.19052	0.20510		
	0.22038						0.17813	17.090
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
67 Butylbenzylphthalate	0.36122	0.29118	0.41472	0.31985	0.38893	0.40240		
	0.41936						0.37109	13.311
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

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Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
79 Dibenzo(a,h)anthracene	0.97359	0.78303	0.98900	0.78861	0.87907	0.89559	0.93233	0.89160	9.207

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
90 N-Nitrosodimethylamine	0.90219	0.86023	0.85122	0.86270	0.83980	0.90195		
	0.81542						0.86193	3.667
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 1 2-Fluorophenol	1.51980	1.35157	1.44617	1.31204	1.36686	1.43403		
	1.39600						1.40378	4.930
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
$ 18 Nitrobenzene-d5	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 36 2-Fluorobiphenyl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 55 2,4,6-Tribromophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 66 Terphenyl-d14	0.56524 / 0.47799	0.46461	0.53843	0.44428	0.47993	0.47146	0.49170	8.830
$ 85 p-Cresol-d4	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 86 Anthracene-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 87 Fluoranthene-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 89 Diphenyl-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d
Lab Smp Id: IC0429A
Inj Date : 29-APR-2013 16:53
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:18 yev Quant Type: ISTD
Cal Date : 29-APR-2013 16:53 Cal File: ic0429a.d
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	92642	5.00000	4.972 (M)
	3 Phenol	94	8.365	8.365	(0.930)	131563	5.00000	4.908
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.991)	102132	5.00000	4.624
*	8 1,4-Dichlorobenzene-d4	152	8.991	8.984	(1.000)	53090	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	101445	5.00000	4.613
	11 Benzyl alcohol	79	9.294	9.294	(1.034)	65916	5.00000	5.127
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.045)	96045	5.00000	4.595
	13 2-Methylphenol	108	9.558	9.551	(1.063)	92986	5.00000	4.852
	15 4-Methylphenol	108	9.853	9.846	(1.096)	96948	5.00000	4.968
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.101)	51975	5.00000	4.723
	22 2,4-Dimethylphenol	107	10.969	10.962	(0.942)	187850	10.0000	9.948
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	84659	5.00000	4.531
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	194944	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	52354	5.00000	4.603
	39 Dimethylphthalate	163	15.060	15.052	(0.969)	154624	5.00000	4.724
*	42 Acenaphthene-d10	162	15.547	15.540	(1.000)	113450	4.00000	
	50 Diethylphthalate	149	16.645	16.637	(1.071)	180828	5.00000	4.878
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	120418	5.00000	5.164
	57 Hexachlorobenzene	284	18.158	18.158	(0.965)	72778	5.00000	4.568
	58 Pentachlorophenol	266	18.552	18.553	(0.986)	117179	10.0000	12.37
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	212689	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	140436	5.00000	4.861
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	123210	5.00000	5.650
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	235045	4.00000	
*	77 Perylene-d12	264	26.355	26.347	(1.000)	227736	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.718	28.703	(1.090)	265405	5.00000	5.228
	90 N-Nitrosodimethylamine	74	4.371	4.371	(0.486)	108227	10.0000	9.460

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429a.d
Lab Smp Id: IC0429A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	53090	0.82
27 Naphthalene-d8	192325	96162	384650	194944	1.36
42 Acenaphthene-d10	109274	54637	218548	113450	3.82
59 Phenanthrene-d10	203933	101966	407866	212689	4.29
69 Chrysene-d12	223647	111824	447294	235045	5.10
77 Perylene-d12	211919	105960	423838	227736	7.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.99	0.09
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.55	0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

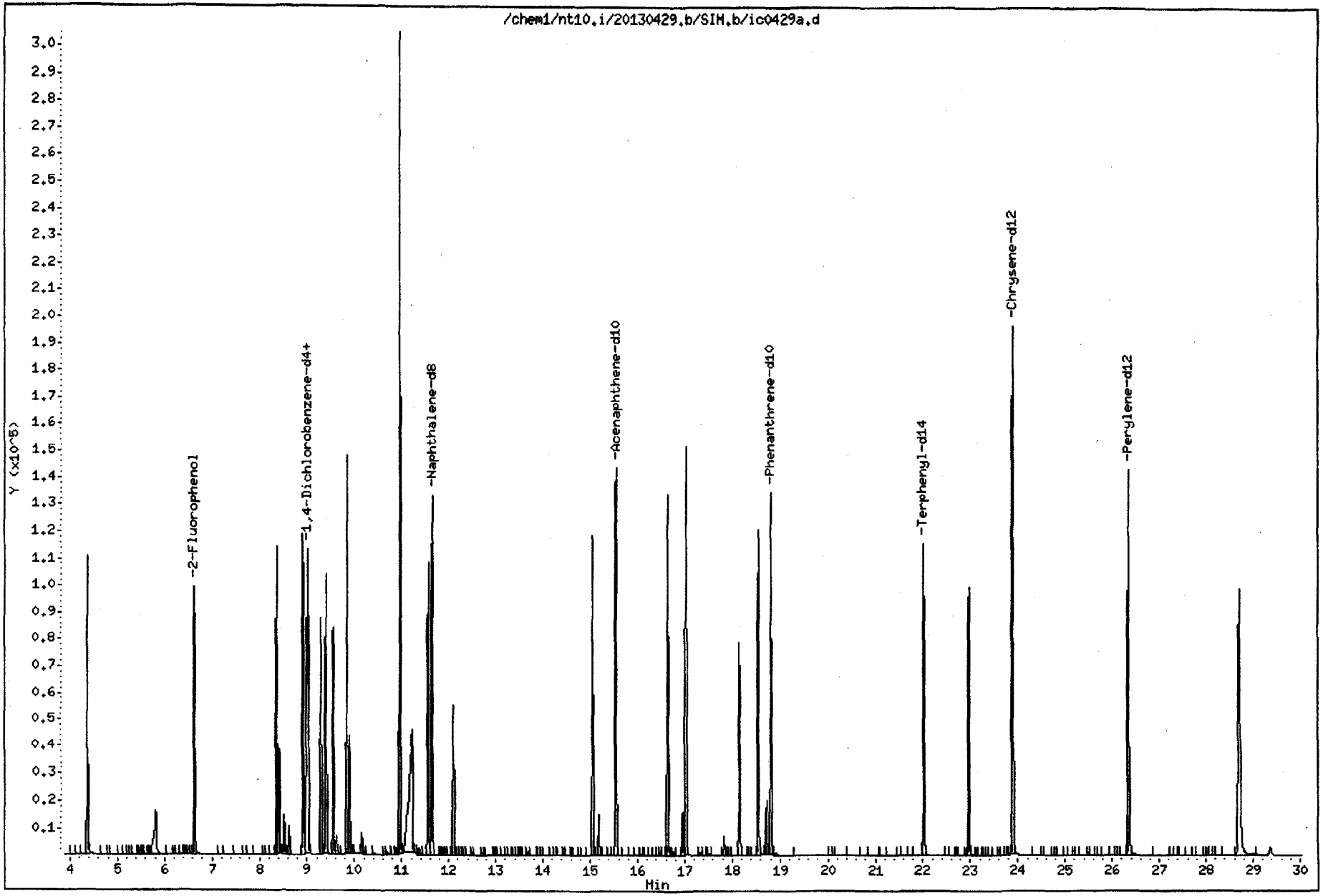
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d
Date : 29-APR-2013 16:53
Client ID:
Sample Info: IC0429A

Instrument: nt10.i

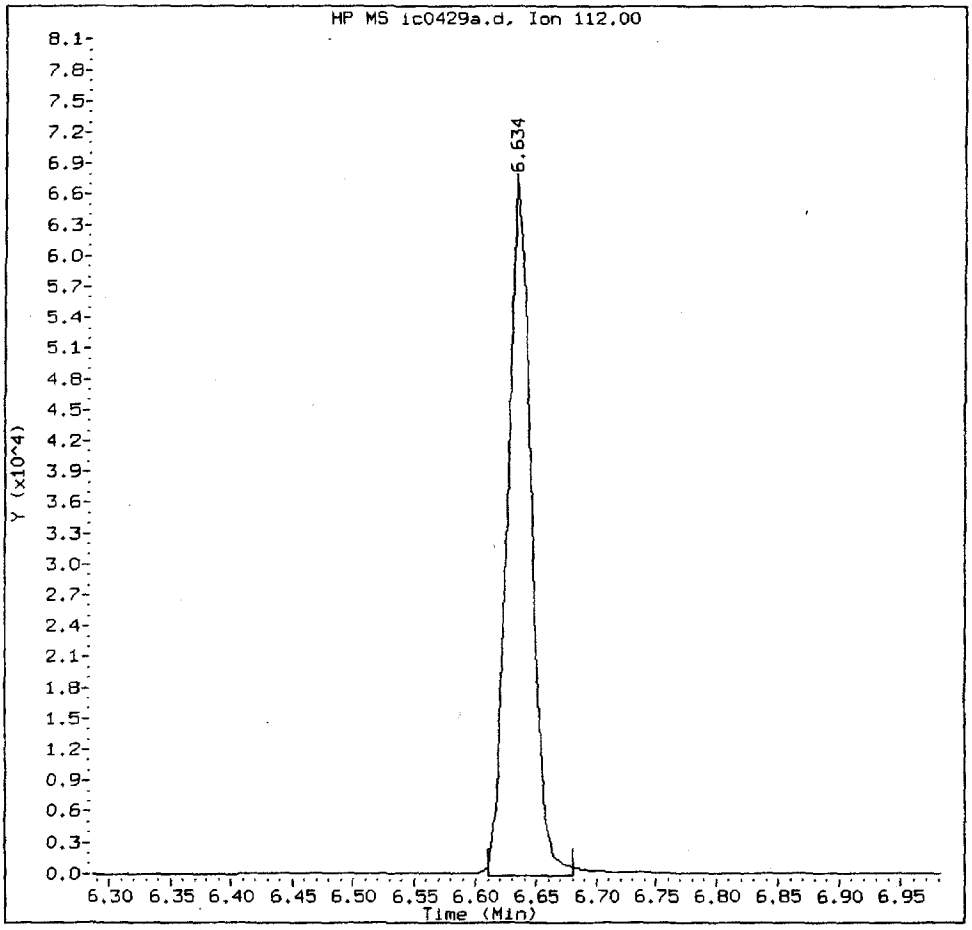
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429A, /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d

2-Fluorophenol Amount: 4.97 Area: 92642



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: JZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429a.d

Lab ID: IC0429A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Lab Smp Id: IC0429C
Inj Date : 29-APR-2013 18:07
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429C
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:07 Cal File: ic0429c.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.641	6.634	(0.739)	4255	0.20000	0.2058(M)
	3	Phenol	94	8.365	8.365	(0.931)	6064	0.20000	0.2041
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	5084	0.20000	0.2076
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	58845	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	5118	0.20000	0.2099
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	2824	0.20000	0.1982
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	4926	0.20000	0.2126
	13	2-Methylphenol	108	9.550	9.551	(1.063)	4375	0.20000	0.2060
	15	4-Methylphenol	108	9.845	9.846	(1.096)	4464	0.20000	0.2064
	16	N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	2502	0.20000	0.2051
	22	2,4-Dimethylphenol	107	10.969	10.962	(0.942)	8776	0.40000	0.4172
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	4442	0.20000	0.2134
*	27	Naphthalene-d8	136	11.648	11.640	(1.000)	217141	4.00000	
	30	Hexachlorobutadiene	225	12.103	12.104	(1.039)	2649	0.20000	0.2091
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	7463	0.20000	0.2125
*	42	Acenaphthene-d10	162	15.539	15.540	(1.000)	121711	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	8484	0.20000	0.2133
	54	N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	5384	0.20000	0.2211
	57	Hexachlorobenzene	284	18.150	18.158	(0.965)	3661	0.20000	0.2200
	58	Pentachlorophenol	266	18.545	18.553	(0.986)	4049	0.40000	0.3970
*	59	Phenanthrene-d10	188	18.816	18.816	(1.000)	222131	4.00000	
$	66	Terphenyl-d14	244	22.026	22.027	(0.922)	6585	0.20000	0.2190
	67	Butylbenzylphthalate	149	22.971	22.971	(0.961)	5072	0.20000	0.2235
*	69	Chrysene-d12	240	23.892	23.900	(1.000)	244600	4.00000	
*	77	Perylene-d12	264	26.347	26.347	(1.000)	221779	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.703	28.703	(1.089)	10967	0.20000	0.2218
	90	N-Nitrosodimethylamine	74	4.387	4.371	(0.488)	5009	0.40000	0.3950

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429c.d
Lab Smp Id: IC0429C
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	58845	11.75
27 Naphthalene-d8	192325	96162	384650	217141	12.90
42 Acenaphthene-d10	109274	54637	218548	121711	11.38
59 Phenanthrene-d10	203933	101966	407866	222131	8.92
69 Chrysene-d12	223647	111824	447294	244600	9.37
77 Perylene-d12	211919	105960	423838	221779	4.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.89	-0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

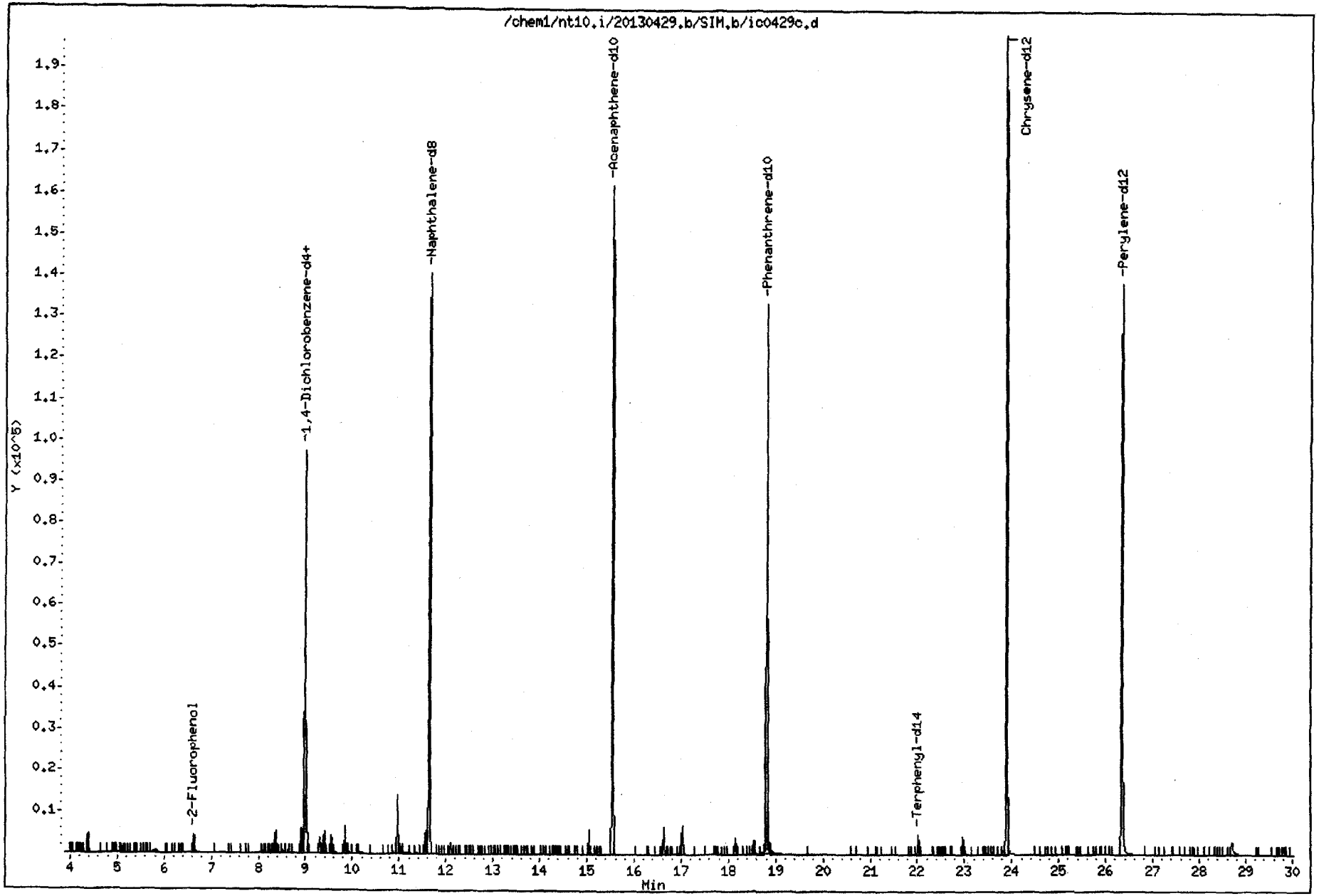
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Date : 29-APR-2013 18:07
Client ID:
Sample Info: IC0429C

Instrument: nt10.i

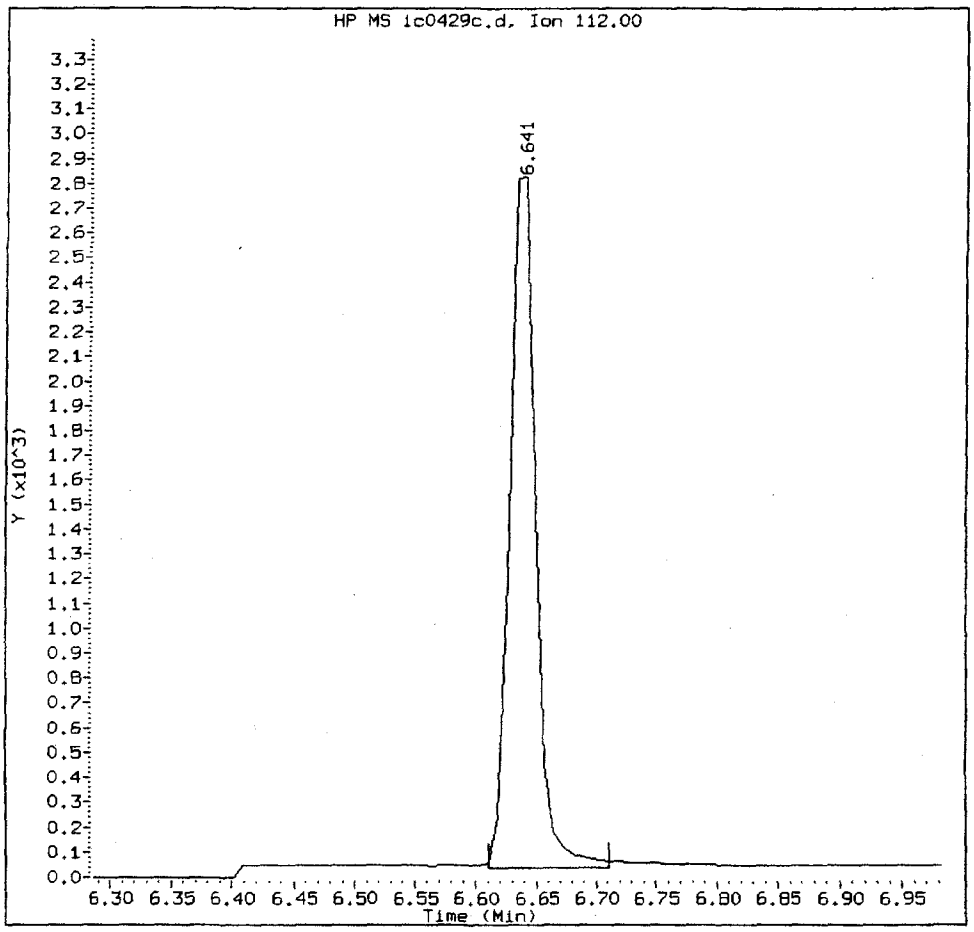
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429C, /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d

2-Fluorophenol Amount: 0.21 Area: 4255



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 1/2 Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429c.d

Lab ID: IC0429C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/3/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Lab Smp Id: IC0429D
Inj Date : 29-APR-2013 18:44
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429D
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:44 Cal File: ic0429d.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.634	6.634	(0.738)	17994	1.00000	0.9728 (M)
	3	Phenol	94	8.357	8.365	(0.930)	25635	1.00000	0.9641
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	20703	1.00000	0.9449
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	52658	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	20433	1.00000	0.9367
	11	Benzyl alcohol	79	9.286	9.294	(1.034)	12498	1.00000	0.9801
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	19435	1.00000	0.9375
	13	2-Methylphenol	108	9.550	9.551	(1.063)	18392	1.00000	0.9675
	15	4-Methylphenol	108	9.845	9.846	(1.096)	19004	1.00000	0.9818
	16	N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	10547	1.00000	0.9662
	22	2,4-Dimethylphenol	107	10.961	10.962	(0.941)	37034	2.00000	1.988
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	17366	1.00000	0.9421
*	27	Naphthalene-d8	136	11.648	11.640	(1.000)	192325	4.00000	
	30	Hexachlorobutadiene	225	12.103	12.104	(1.039)	10544	1.00000	0.9397
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	30258	1.00000	0.9597
*	42	Acenaphthene-d10	162	15.539	15.540	(1.000)	109274	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	35026	1.00000	0.9810
	54	N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	23603	1.00000	1.056
	57	Hexachlorobenzene	284	18.158	18.158	(0.965)	14101	1.00000	0.9231
	58	Pentachlorophenol	266	18.552	18.553	(0.986)	19427	2.00000	2.075
*	59	Phenanthrene-d10	188	18.815	18.816	(1.000)	203933	4.00000	
$	66	Terphenyl-d14	244	22.026	22.027	(0.922)	26834	1.00000	0.9761
	67	Butylbenzylphthalate	149	22.979	22.971	(0.961)	21746	1.00000	1.048
*	69	Chrysene-d12	240	23.900	23.900	(1.000)	223647	4.00000	
*	77	Perylene-d12	264	26.354	26.347	(1.000)	211919	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.710	28.703	(1.089)	46573	1.00000	0.9859
	90	N-Nitrosodimethylamine	74	4.371	4.371	(0.487)	22111	2.00000	1.949

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429d.d
Lab Smp Id: IC0429D
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	52658	0.00
27 Naphthalene-d8	192325	96162	384650	192325	0.00
42 Acenaphthene-d10	109274	54637	218548	109274	0.00
59 Phenanthrene-d10	203933	101966	407866	203933	0.00
69 Chrysene-d12	223647	111824	447294	223647	0.00
77 Perylene-d12	211919	105960	423838	211919	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

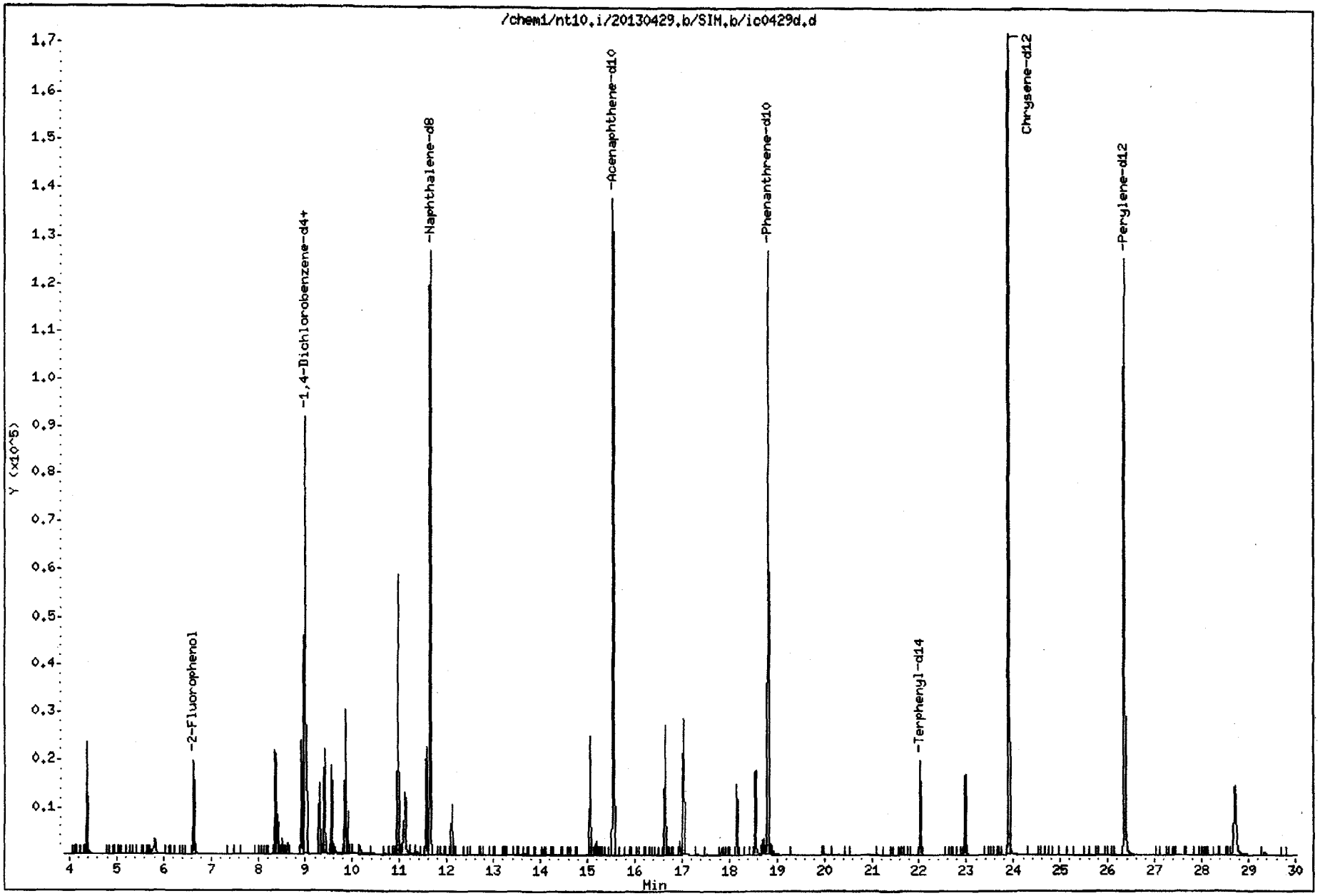
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Date : 29-APR-2013 18:44
Client ID:
Sample Info: IC0429D

Instrument: nt10.i

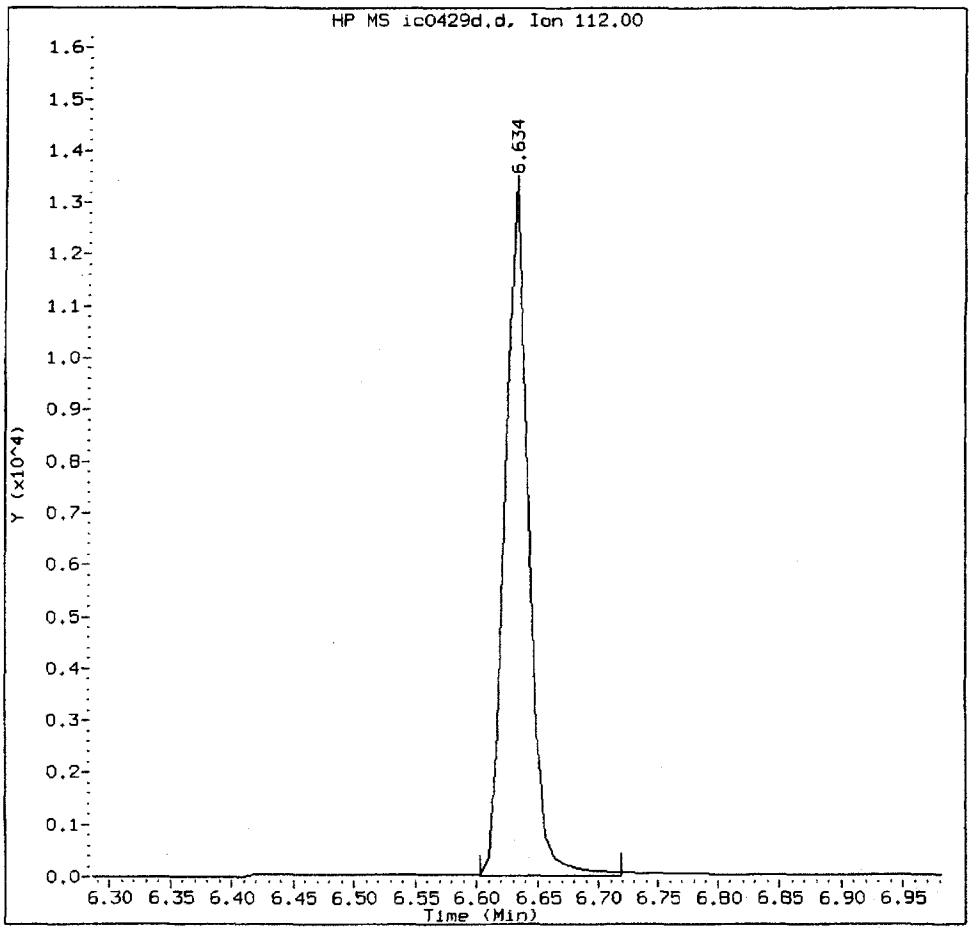
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429D, /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d

2-Fluorophenol Amount: 0.97 Area: 17994



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KD Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429d.d

Lab ID: IC0429D, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2(

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/2/13

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Lab Smp Id: IC0429F
Inj Date : 29-APR-2013 19:57
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429F
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 19:57 Cal File: ic0429f.d
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		QUANT SIG					AMOUNTS	
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	1004	0.05000	0.05408 (M)
	3 Phenol	94	8.365	8.365	(0.931)	1449	0.05000	0.05430
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	1239	0.05000	0.05635 (M)
*	8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	52849	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	1268	0.05000	0.05792 (M)
	11 Benzyl alcohol	79	9.294	9.294	(1.035)	670	0.05000	0.05235 (M)
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	1190	0.05000	0.05720
	13 2-Methylphenol	108	9.550	9.551	(1.063)	1054	0.05000	0.05525
	15 4-Methylphenol	108	9.845	9.846	(1.096)	1049	0.05000	0.05400
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	604	0.05000	0.05513 (M)
	22 2,4-Dimethylphenol	107	10.962	10.962	(0.941)	1981	0.10000	0.1047
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	1081	0.05000	0.05775
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	195311	4.00000	
	30 Hexachlorobutadiene	225	12.104	12.104	(1.039)	663	0.05000	0.05818 (M)
	39 Dimethylphthalate	163	15.052	15.052	(0.969)	1726	0.05000	0.05612
*	42 Acenaphthene-d10	162	15.540	15.540	(1.000)	106586	4.00000	
	50 Diethylphthalate	149	16.637	16.637	(1.071)	1984	0.05000	0.05697
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	947	0.05000	0.04495 (M)
	57 Hexachlorobenzene	284	18.150	18.158	(0.965)	903	0.05000	0.06274 (M)
	58 Pentachlorophenol	266	18.553	18.553	(0.986)	696	0.10000	0.07888
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	192165	4.00000	
$	66 Terphenyl-d14	244	22.027	22.027	(0.922)	1521	0.05000	0.05748
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	972	0.05000	0.04867
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	215273	4.00000	
*	77 Perylene-d12	264	26.355	26.347	(1.000)	195976	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.726	28.703	(1.090)	2385	0.05000	0.05460
	90 N-Nitrosodimethylamine	74	4.387	4.371	(0.488)	1192	0.10000	0.1047

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429f.d
Lab Smp Id: IC0429F
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	52849	0.36
27 Naphthalene-d8	192325	96162	384650	195311	1.55
42 Acenaphthene-d10	109274	54637	218548	106586	-2.46
59 Phenanthrene-d10	203933	101966	407866	192165	-5.77
69 Chrysene-d12	223647	111824	447294	215273	-3.74
77 Perylene-d12	211919	105960	423838	195976	-7.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

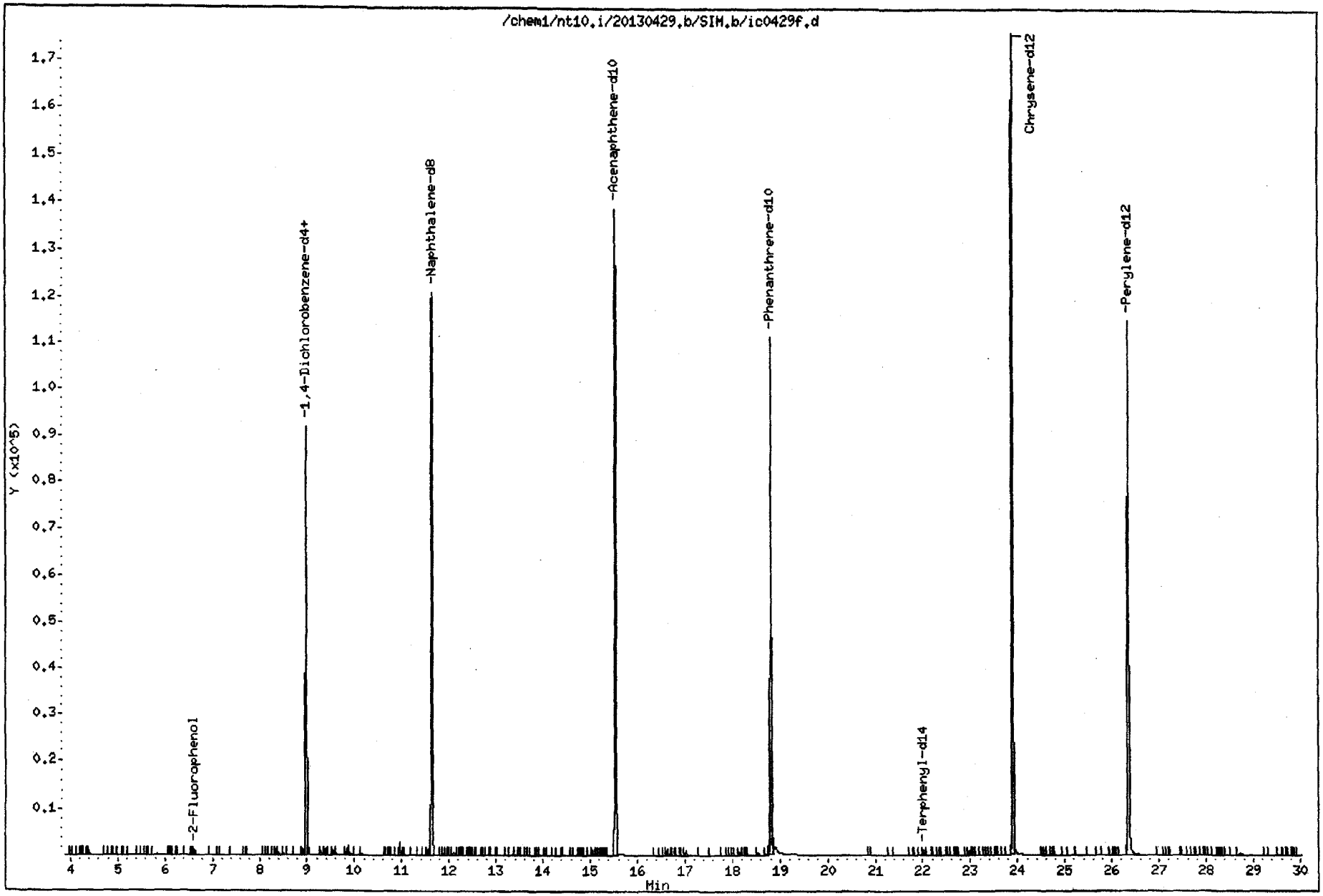
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Date : 29-APR-2013 19:57
Client ID:
Sample Info: IC0429F

Instrument: nt10.i

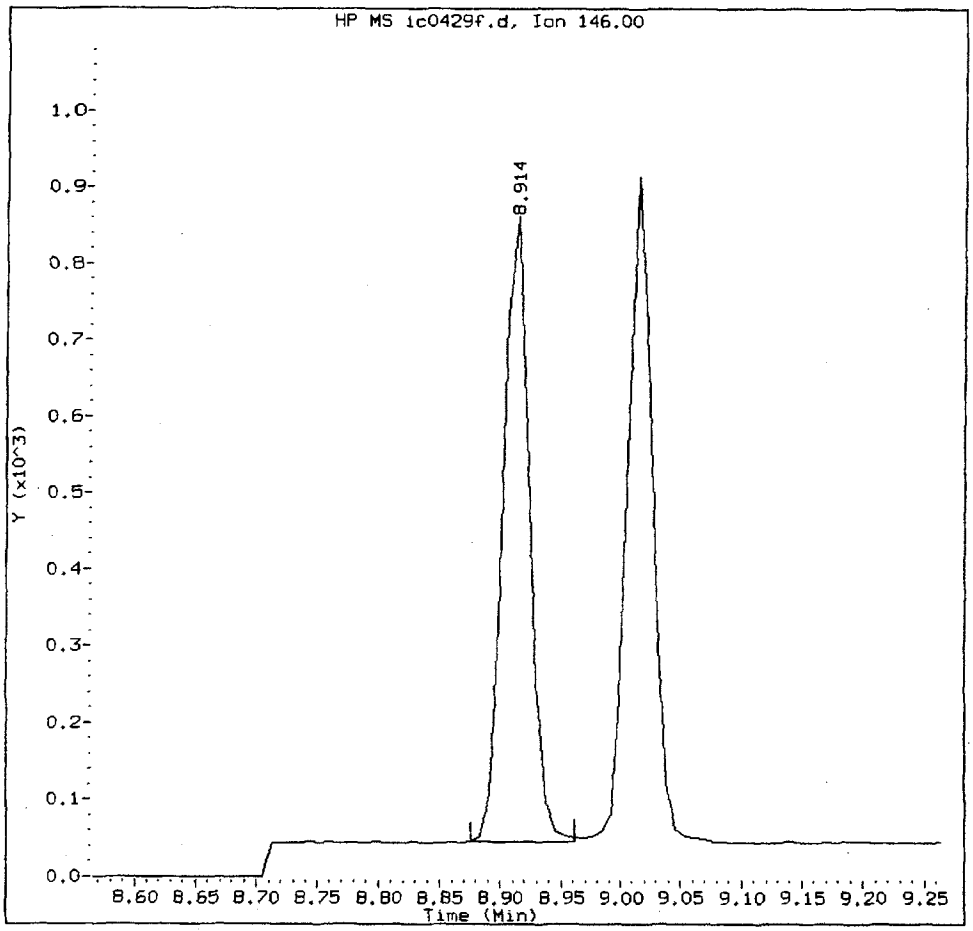
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

1,3-Dichlorobenzene Amount: 0.06 Area: 1239



MANUAL INTEGRATION for 1,3-Dichlorobenzene

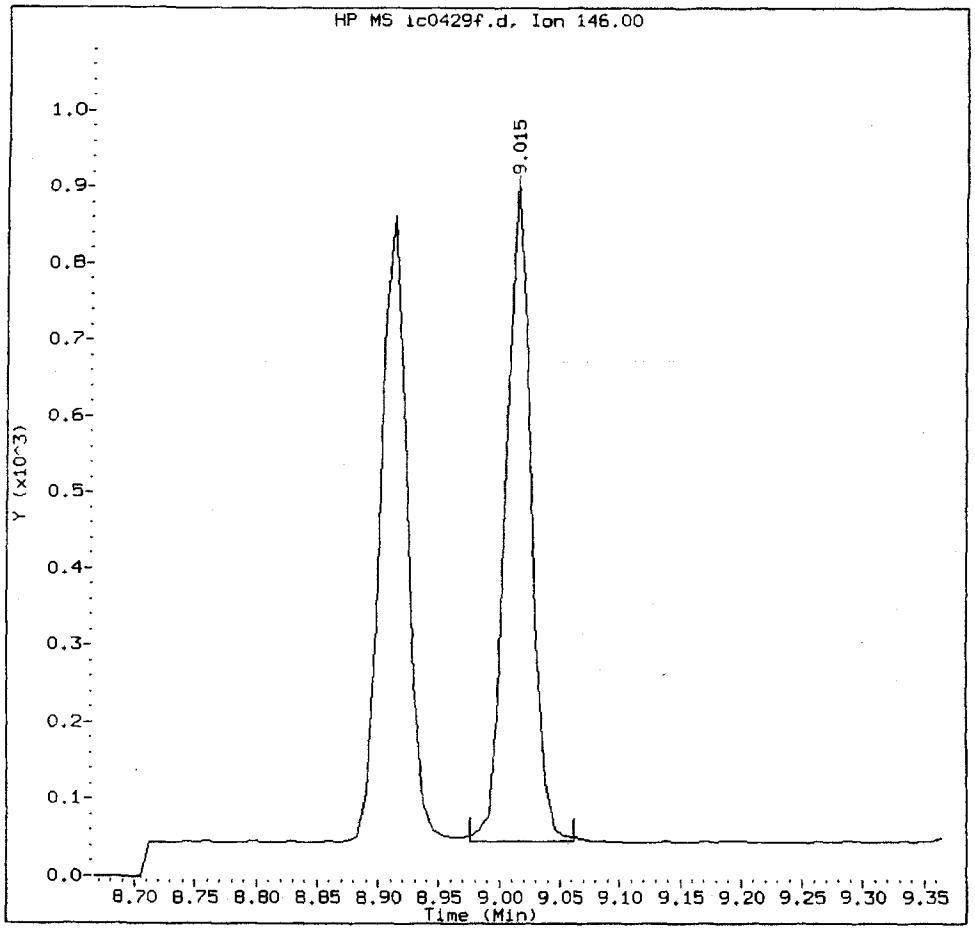
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VJ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

1,4-Dichlorobenzene Amount: 0.06 Area: 1268



MANUAL INTEGRATION for 1,4-Dichlorobenzene

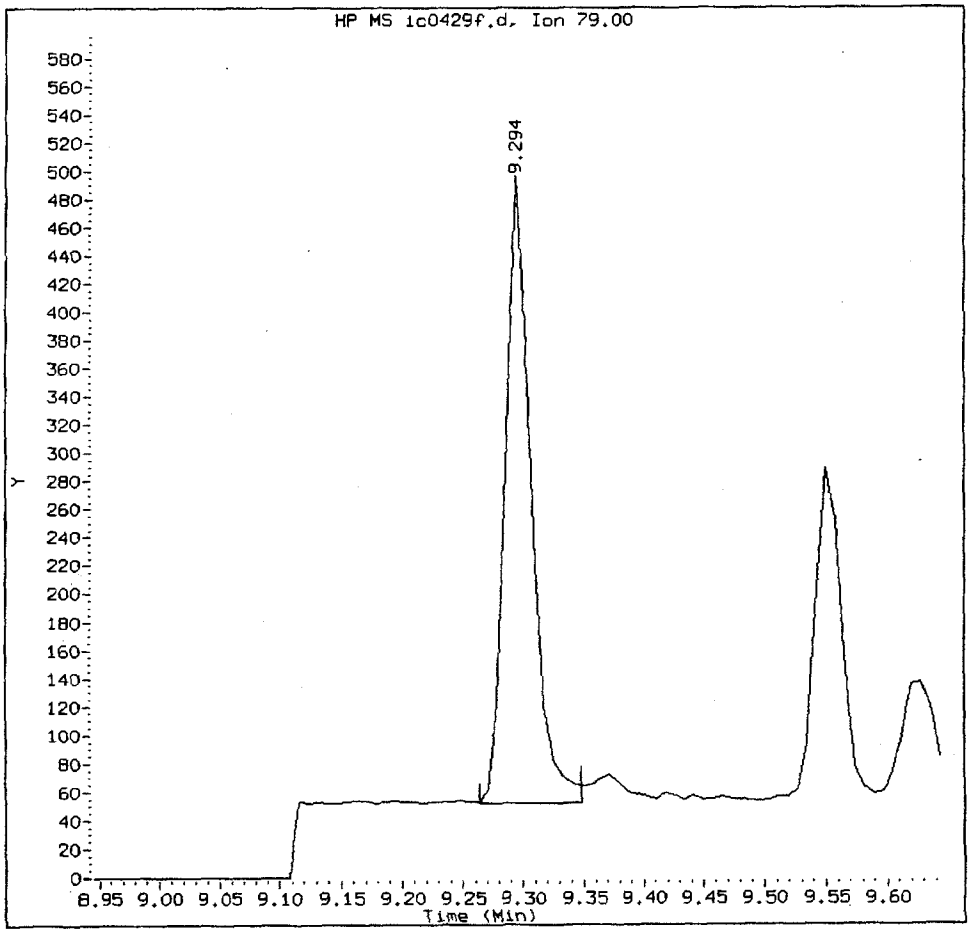
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/9/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Benzyl alcohol Amount: 0.05 Area: 670



MANUAL INTEGRATION for Benzyl alcohol

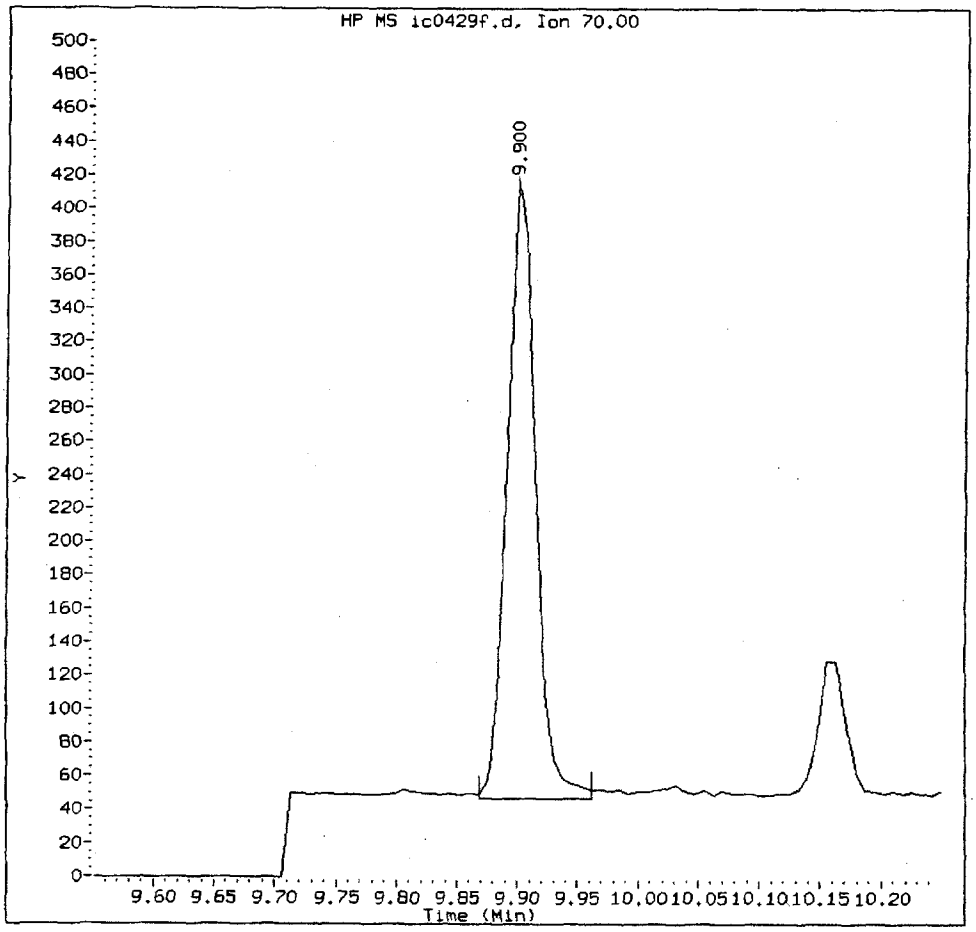
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

N-Nitroso-di-n-propylamine Amount: 0.06 Area: 604



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

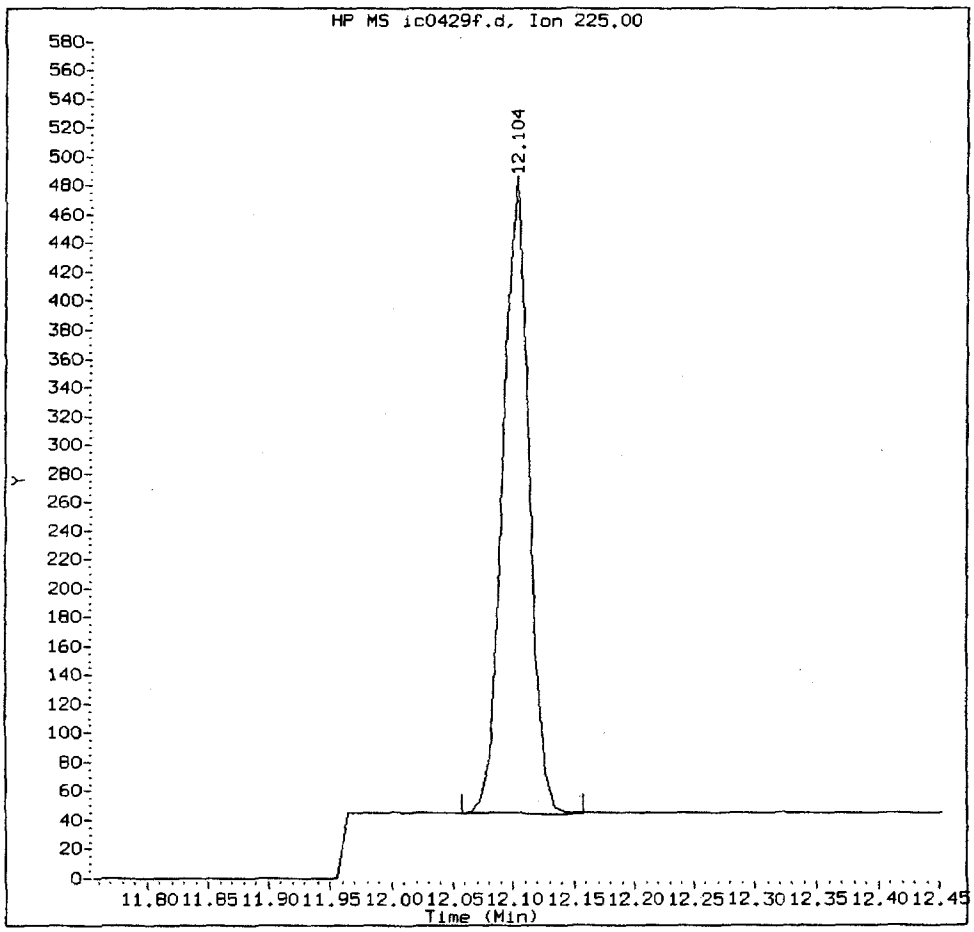
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Hexachlorobutadiene Amount: 0.06 Area: 663



MANUAL INTEGRATION for Hexachlorobutadiene

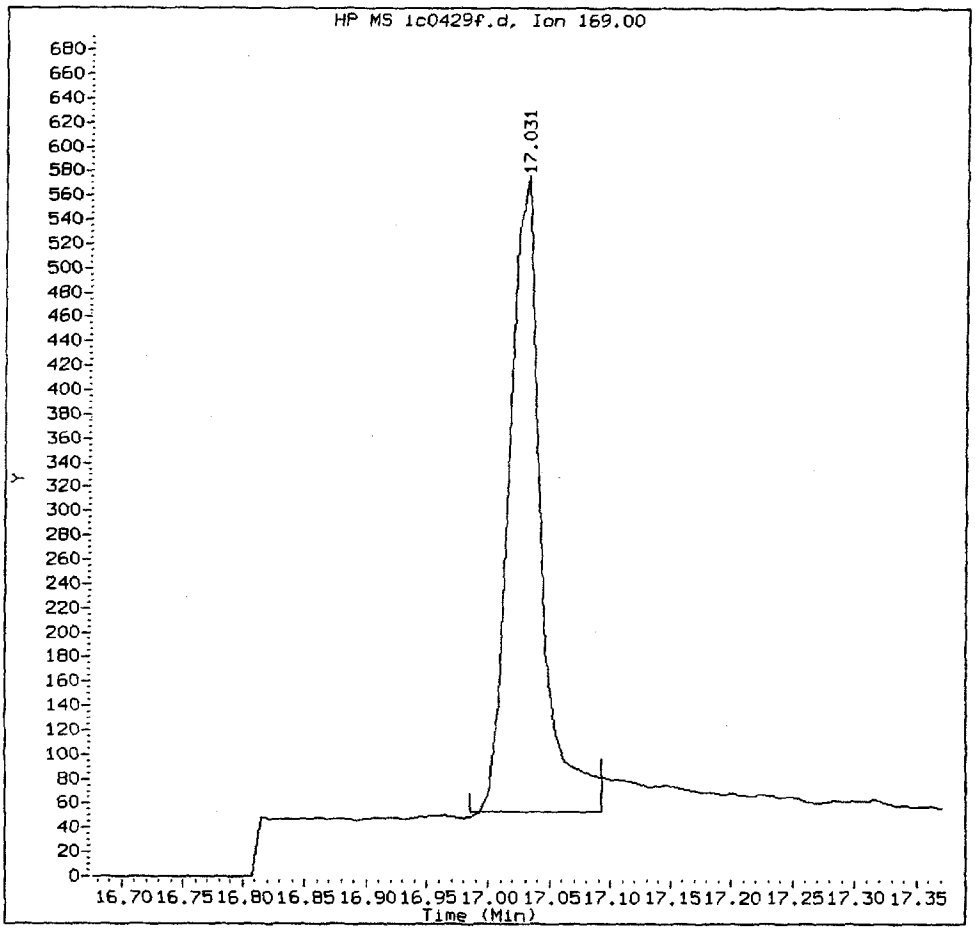
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

N-Nitrosodiphenylamine Amount: 0.04 Area: 947



MANUAL INTEGRATION for N-Nitrosodiphenylamine

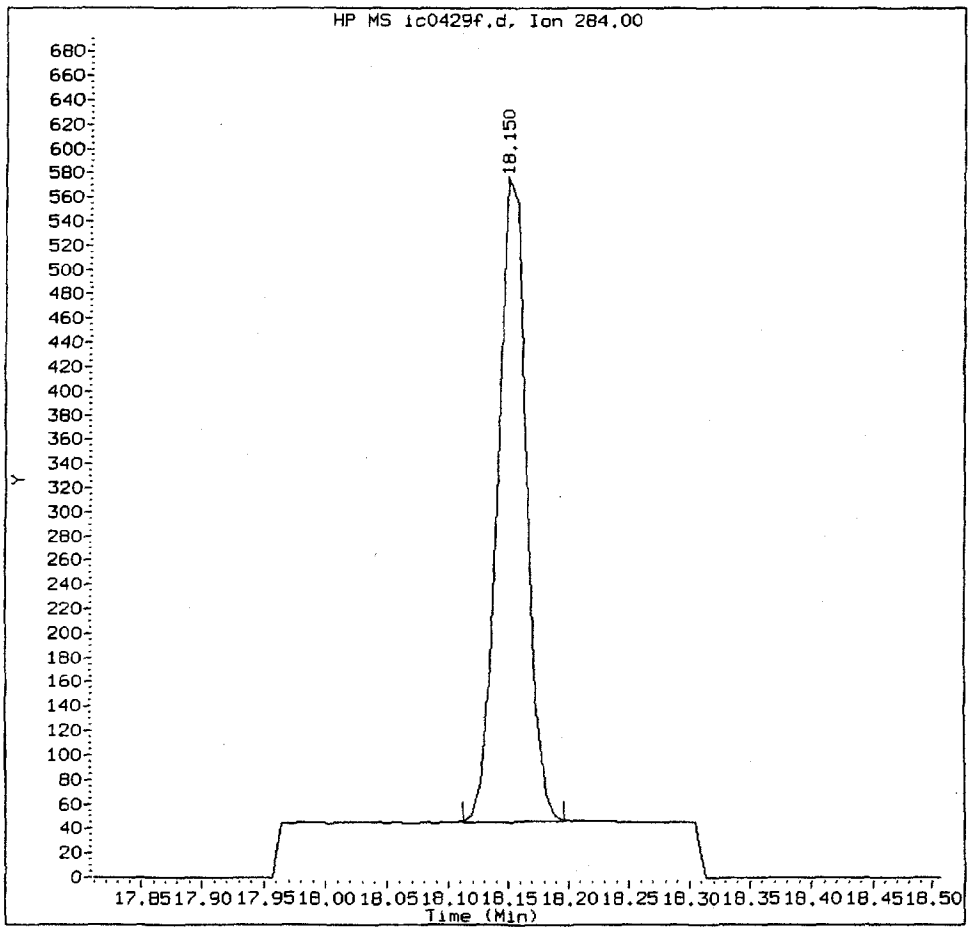
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Hexachlorobenzene Amount: 0.06 Area: 903



MANUAL INTEGRATION for Hexachlorobenzene

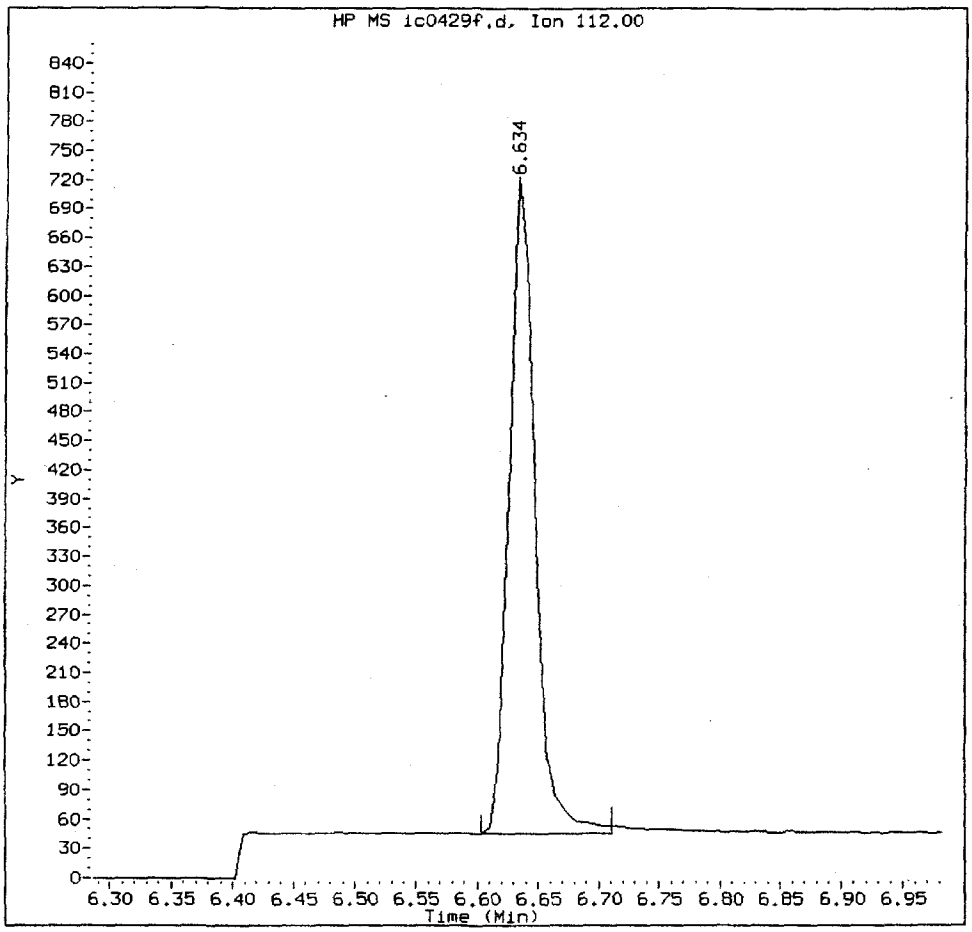
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

2-Fluorophenol Amount: 0.05 Area: 1004



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

CO-ELUTION SUMMARY FOR FILE - ic0429f.d

Lab ID: IC0429F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d YZ 5/3/13
Lab Smp Id: IC0429G
Inj Date : 29-APR-2013 20:34
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429G
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 20:34 Cal File: ic0429g.d
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.633	6.634	(0.738)	39175	2.50000	2.552 (M)
	3	Phenol	94	8.364	8.365	(0.931)	57029	2.50000	2.584
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	43575	2.50000	2.396
*	8	1,4-Dichlorobenzene-d4	152	8.983	8.984	(1.000)	43709	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	43120	2.50000	2.381
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	27973	2.50000	2.643
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	41290	2.50000	2.400
	13	2-Methylphenol	108	9.550	9.551	(1.063)	40181	2.50000	2.547
	15	4-Methylphenol	108	9.845	9.846	(1.096)	41543	2.50000	2.586
	16	N-Nitroso-di-n-propylamine	70	9.899	9.900	(1.102)	23225	2.50000	2.563
	22	2,4-Dimethylphenol	107	10.969	10.962	(0.942)	80843	5.00000	5.211
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	36642	2.50000	2.387
*	27	Naphthalene-d8	136	11.647	11.640	(1.000)	160165	4.00000	
	30	Hexachlorobutadiene	225	12.103	12.104	(1.039)	22613	2.50000	2.420
	39	Dimethylphthalate	163	15.060	15.052	(0.969)	66102	2.50000	2.407
*	42	Acenaphthene-d10	162	15.539	15.540	(1.000)	95179	4.00000	
	50	Diethylphthalate	149	16.645	16.637	(1.071)	77428	2.50000	2.490
	54	N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	51253	2.50000	2.616
	57	Hexachlorobenzene	284	18.157	18.158	(0.965)	30459	2.50000	2.276
	58	Pentachlorophenol	266	18.552	18.553	(0.986)	45814	5.00000	5.583
*	59	Phenanthrene-d10	188	18.815	18.816	(1.000)	178699	4.00000	
$	66	Terphenyl-d14	244	22.026	22.027	(0.922)	58696	2.50000	2.397
	67	Butylbenzylphthalate	149	22.979	22.971	(0.961)	50099	2.50000	2.711
*	69	Chrysene-d12	240	23.900	23.900	(1.000)	199199	4.00000	
*	77	Perylene-d12	264	26.362	26.347	(1.000)	191024	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.718	28.703	(1.089)	106924	2.50000	2.511
	90	N-Nitrosodimethylamine	74	4.356	4.371	(0.485)	49279	5.00000	5.232

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429g.d
Lab Smp Id: IC0429G
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	43709	-16.99
27 Naphthalene-d8	192325	96162	384650	160165	-16.72
42 Acenaphthene-d10	109274	54637	218548	95179	-12.90
59 Phenanthrene-d10	203933	101966	407866	178699	-12.37
69 Chrysene-d12	223647	111824	447294	199199	-10.93
77 Perylene-d12	211919	105960	423838	191024	-9.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

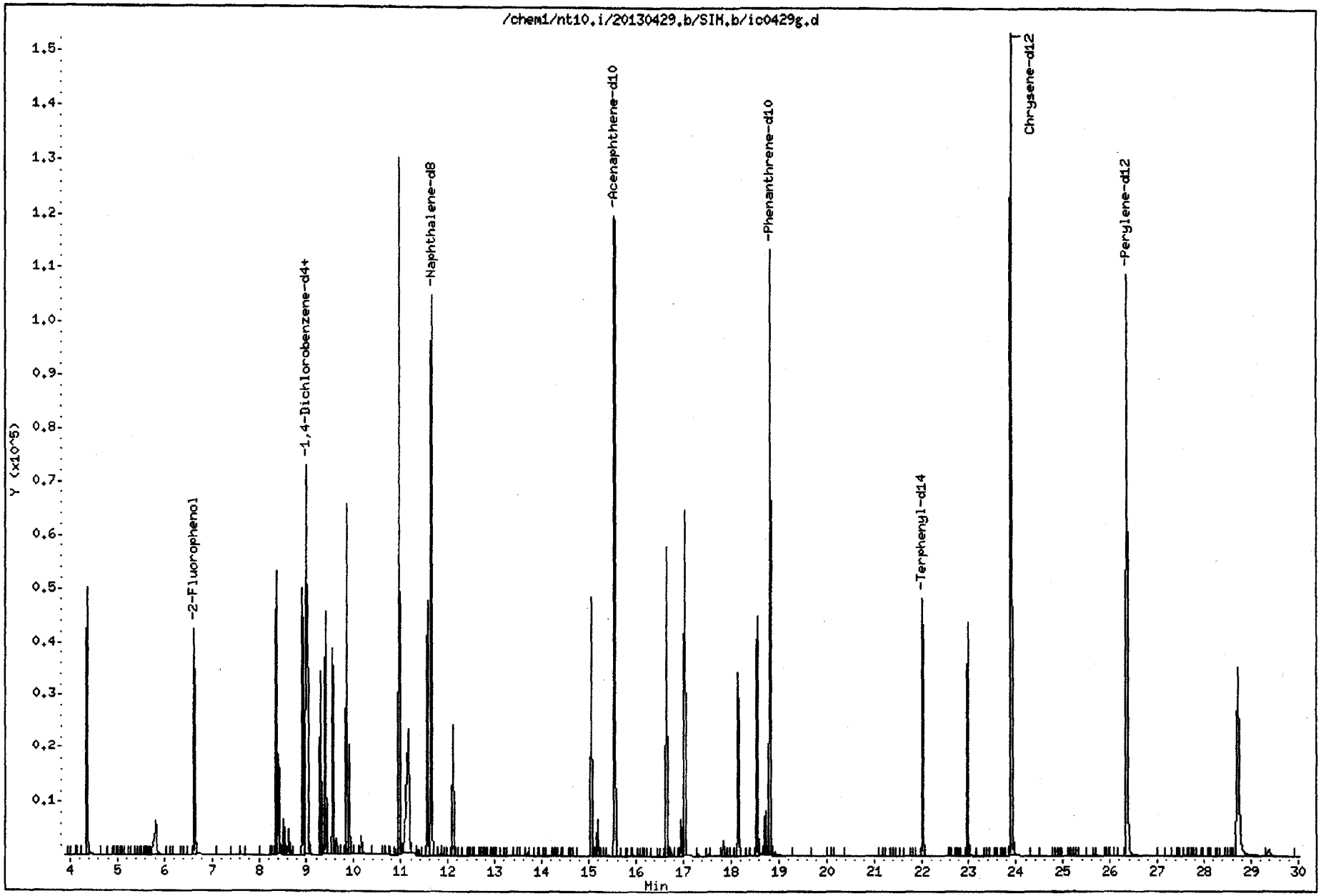
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Date : 29-APR-2013 20:34
Client ID:
Sample Info: IC0429G

Instrument: nt10.i

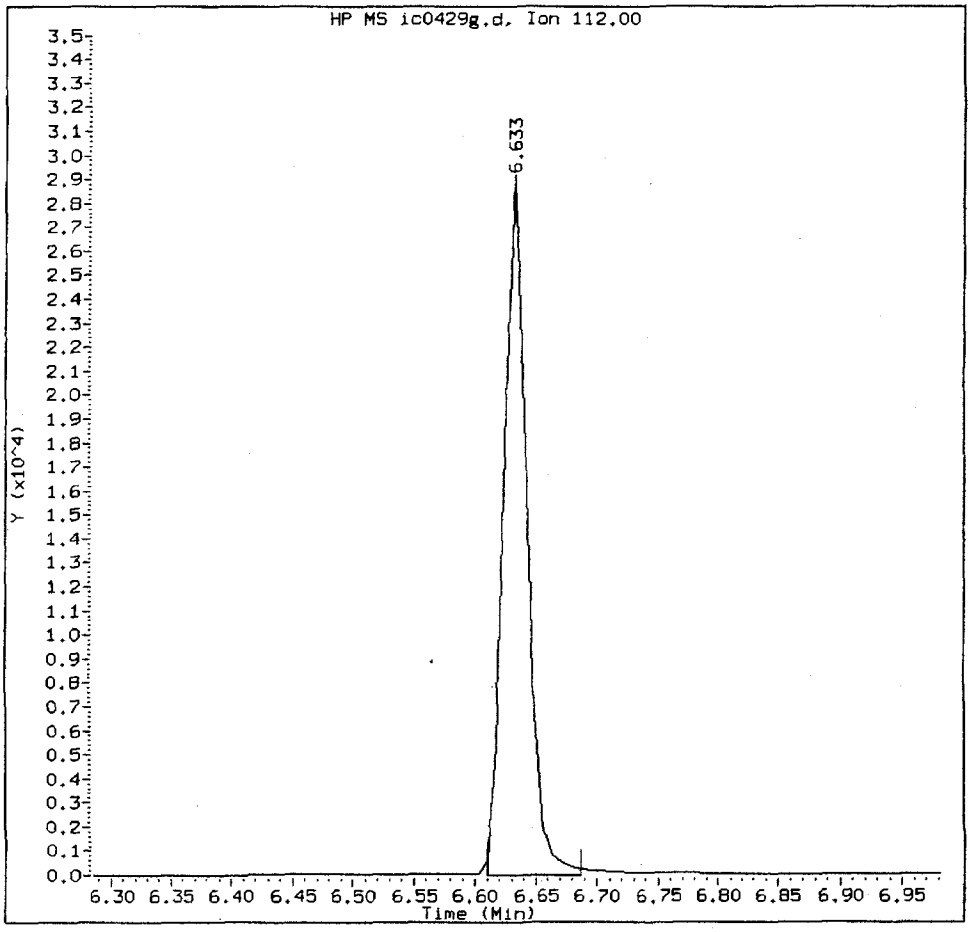
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429G, /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d

2-Fluorophenol Amount: 2.55 Area: 39175



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YB Date: 5/9/13

CO-ELUTION SUMMARY FOR FILE - ic0429g.d

Lab ID: IC0429G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2(

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Lab Smp Id: IC0429H
Inj Date : 29-APR-2013 21:11
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429H
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:11 Cal File: ic0429h.d
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 5/3/13

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.633	6.634	(0.738)	1744	0.10000	0.09619 (M)
	3	Phenol	94	8.365	8.365	(0.931)	2499	0.10000	0.09589
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	2261	0.10000	0.1053
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	51614	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	2198	0.10000	0.1028 (M)
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	1192	0.10000	0.09537
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	2088	0.10000	0.1028
	13	2-Methylphenol	108	9.550	9.551	(1.063)	1796	0.10000	0.09639
	15	4-Methylphenol	108	9.845	9.846	(1.096)	1777	0.10000	0.09366
	16	N-Nitroso-di-n-propylamine	70	9.899	9.900	(1.102)	1040	0.10000	0.09720
	22	2,4-Dimethylphenol	107	10.961	10.962	(0.941)	3433	0.20000	0.1840
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	1896	0.10000	0.1027 (M)
*	27	Naphthalene-d8	136	11.647	11.640	(1.000)	192559	4.00000	
	30	Hexachlorobutadiene	225	12.103	12.104	(1.039)	1142	0.10000	0.1017 (M)
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	3197	0.10000	0.1027
*	42	Acenaphthene-d10	162	15.539	15.540	(1.000)	107939	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	3307	0.10000	0.09377
	54	N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	1860	0.10000	0.08732
	57	Hexachlorobenzene	284	18.157	18.158	(0.965)	1462	0.10000	0.1005
	58	Pentachlorophenol	266	18.552	18.553	(0.986)	1339	0.20000	0.1501 (M)
*	59	Phenanthrene-d10	188	18.815	18.816	(1.000)	194268	4.00000	
$	66	Terphenyl-d14	244	22.026	22.027	(0.922)	2454	0.10000	0.09449 (M)
	67	Butylbenzylphthalate	149	22.971	22.971	(0.961)	1538	0.10000	0.07847
*	69	Chrysene-d12	240	23.892	23.900	(1.000)	211275	4.00000	
*	77	Perylene-d12	264	26.347	26.347	(1.000)	196007	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.710	28.703	(1.090)	3837	0.10000	0.08782
	90	N-Nitrosodimethylamine	74	4.386	4.371	(0.488)	2220	0.20000	0.1996

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429h.d
Lab Smp Id: IC0429H
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	51614	-1.98
27 Naphthalene-d8	192325	96162	384650	192559	0.12
42 Acenaphthene-d10	109274	54637	218548	107939	-1.22
59 Phenanthrene-d10	203933	101966	407866	194268	-4.74
69 Chrysene-d12	223647	111824	447294	211275	-5.53
77 Perylene-d12	211919	105960	423838	196007	-7.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.89	-0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

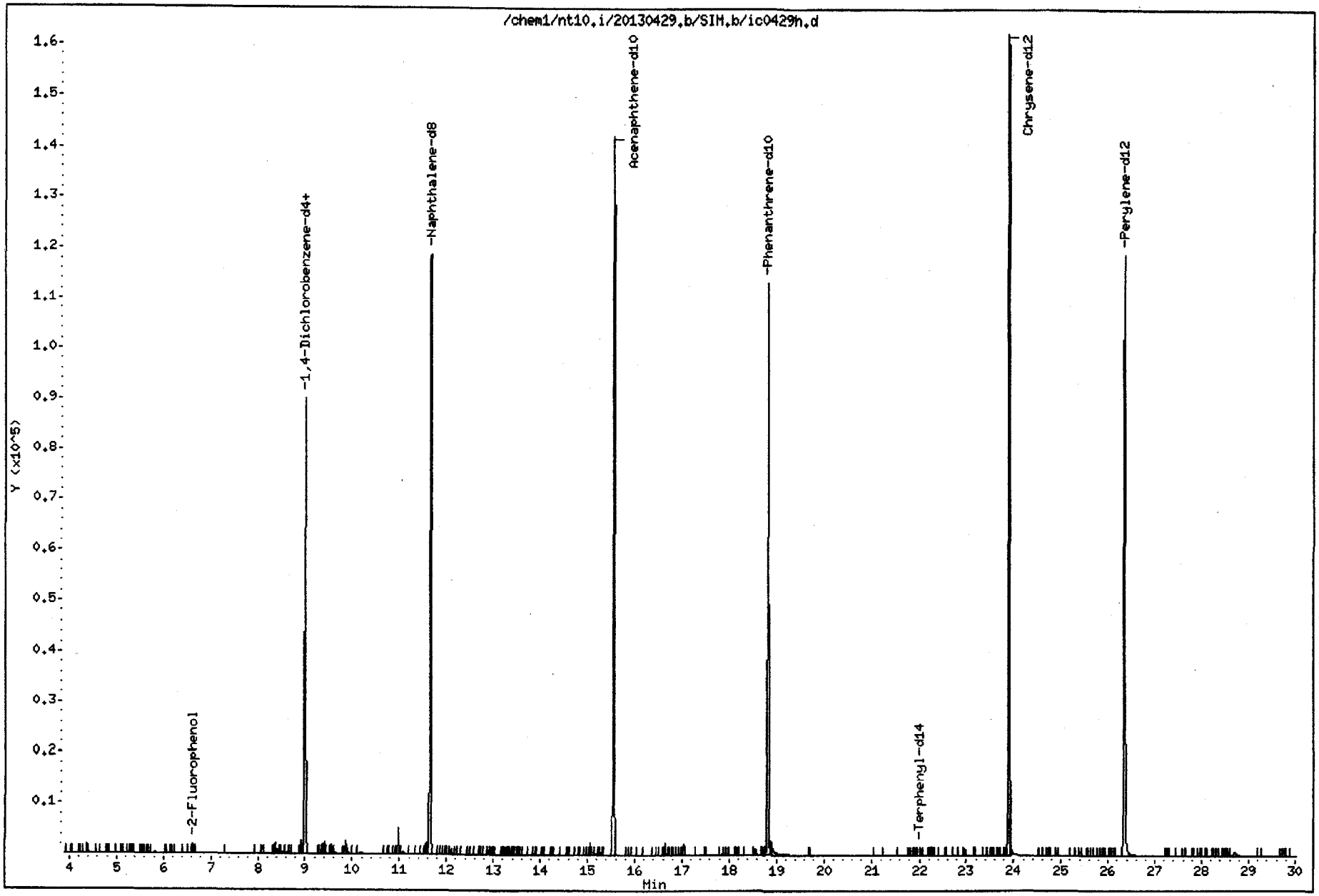
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Date : 29-APR-2013 21:11
Client ID:
Sample Info: IC0429H

Instrument: nt10.i

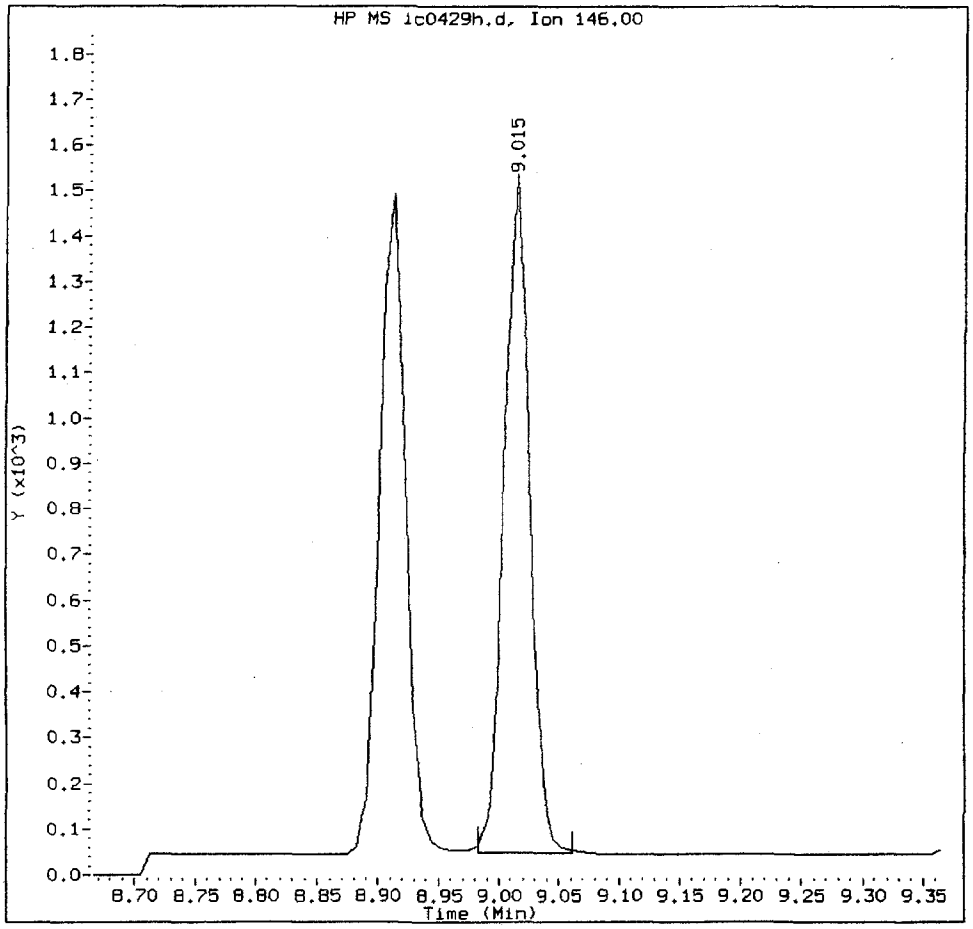
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

1,4-Dichlorobenzene Amount: 0.10 Area: 2198



MANUAL INTEGRATION for 1,4-Dichlorobenzene

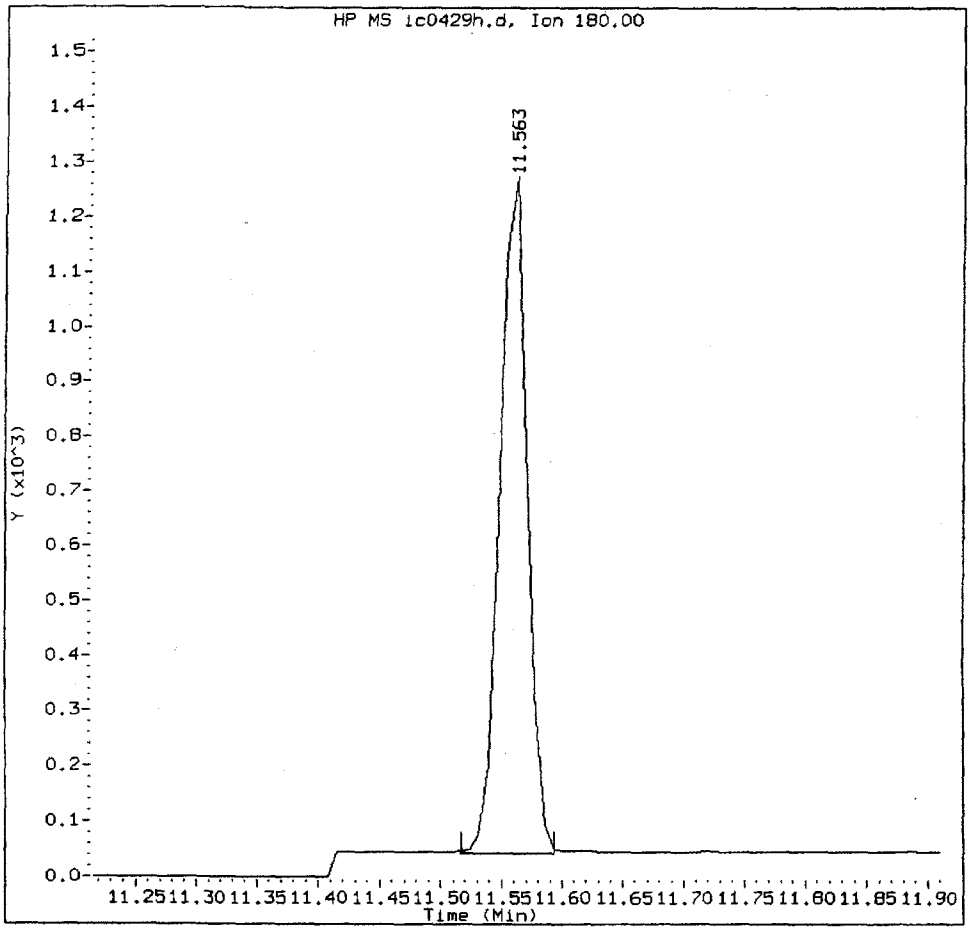
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VB Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

1,2,4-Trichlorobenzene Amount: 0.10 Area: 1896



MANUAL INTEGRATION for 1,2,4-Trichlorobenzene

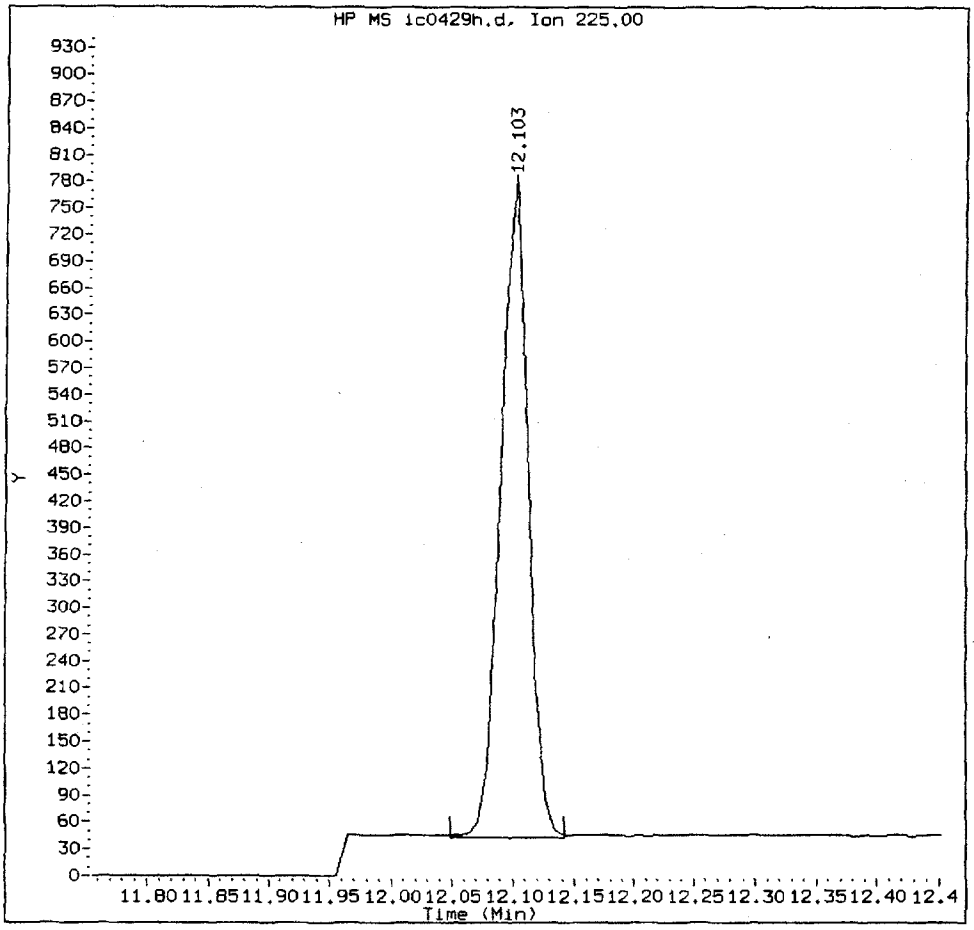
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/8/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Hexachlorobutadiene Amount: 0.10 Area: 1142



MANUAL INTEGRATION for Hexachlorobutadiene

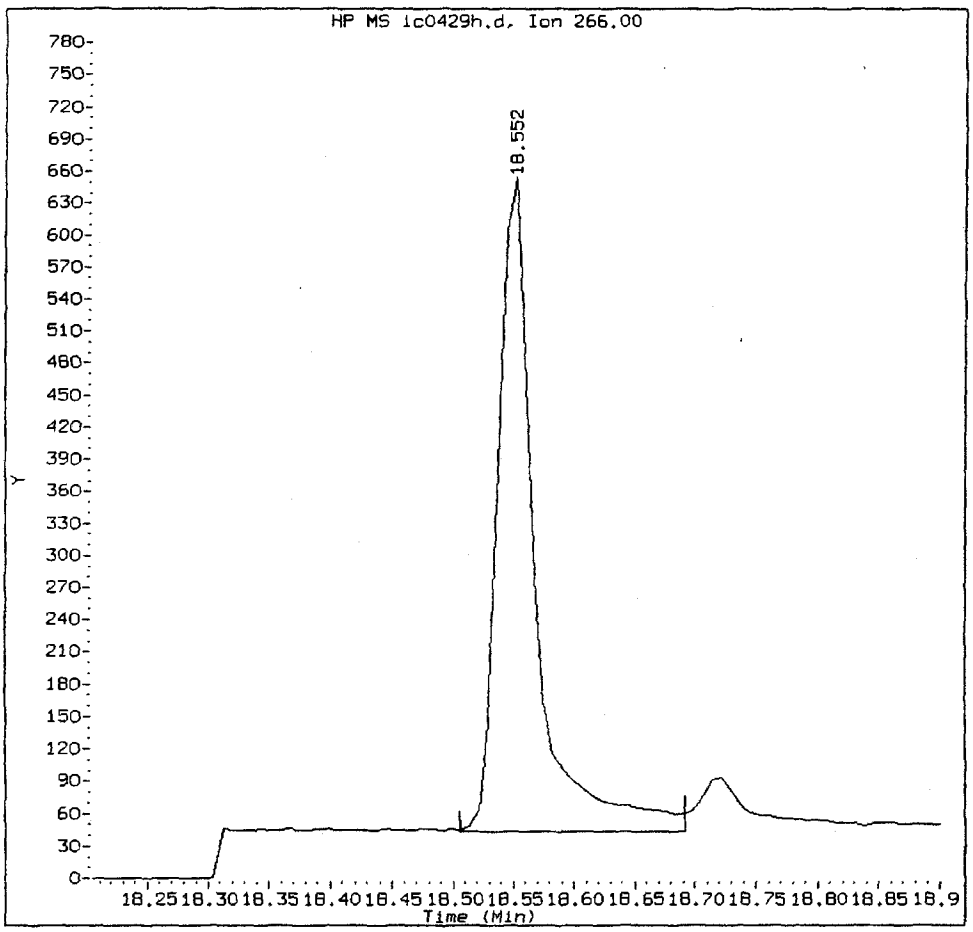
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/9/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Pentachlorophenol Amount: 0.15 Area: 1339



MANUAL INTEGRATION for Pentachlorophenol

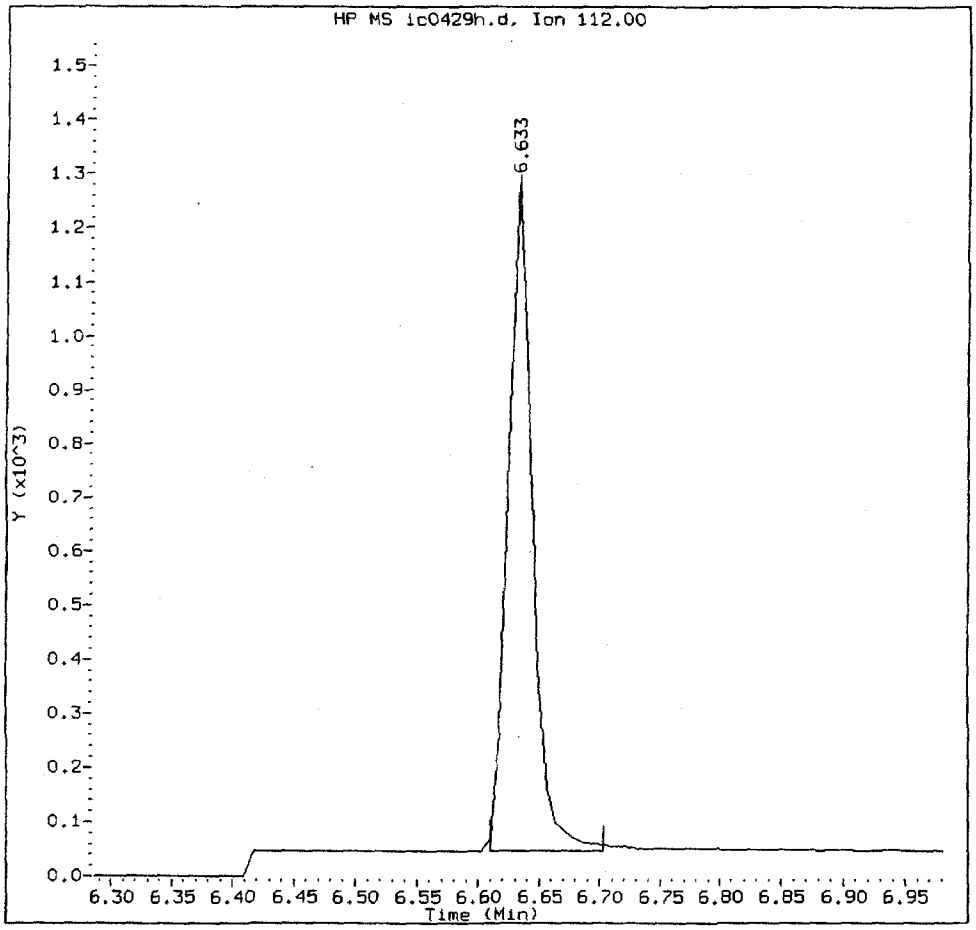
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

2-Fluorophenol Amount: 0.10 Area: 1744



MANUAL INTEGRATION for 2-Fluorophenol

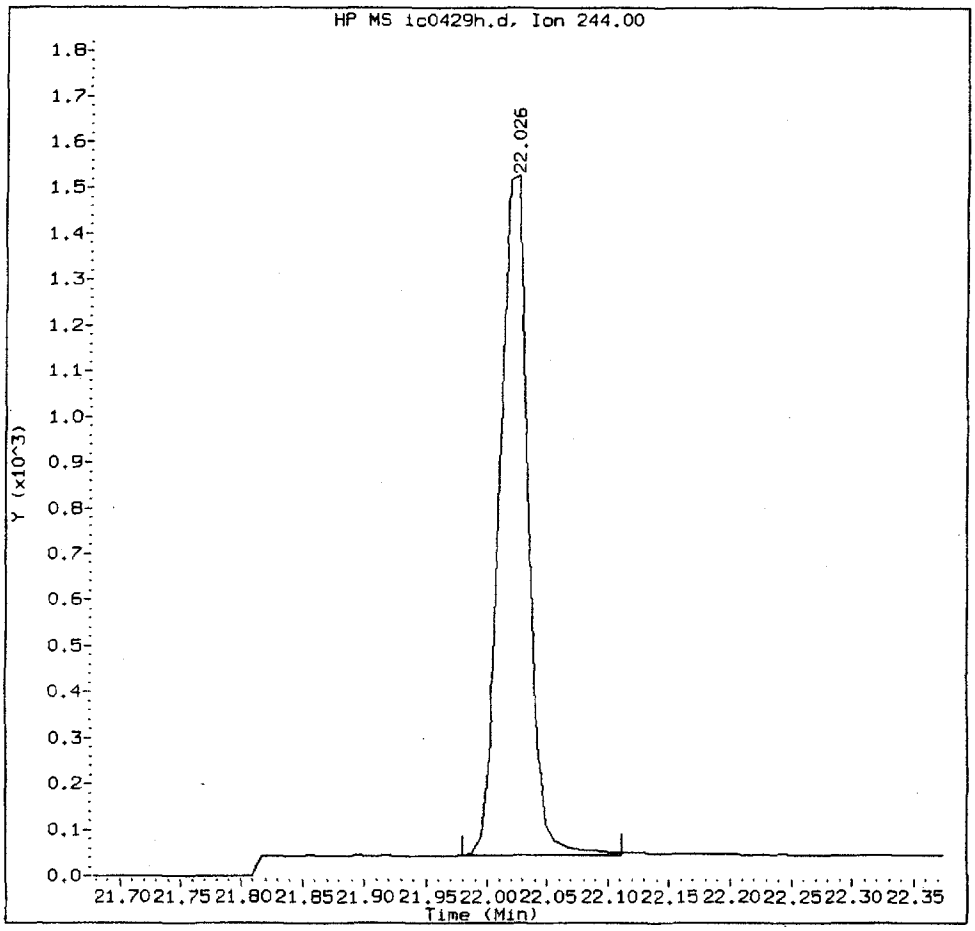
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: KZ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Terphenyl-d14 Amount: 0.09 Area: 2454



MANUAL INTEGRATION for Terphenyl-d14

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429h.d

Lab ID: IC0429H, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Lab Smp Id: IC0429I
Inj Date : 29-APR-2013 21:47
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429I
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 5/3/13

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.634	6.634	(0.738)	8113	0.50000	0.4669 (M)
	3	Phenol	94	8.365	8.365	(0.931)	11931	0.50000	0.4777
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	9817	0.50000	0.4770
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	49468	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	9757	0.50000	0.4761
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	5665	0.50000	0.4729
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	9240	0.50000	0.4745
	13	2-Methylphenol	108	9.551	9.551	(1.063)	8436	0.50000	0.4724
	15	4-Methylphenol	108	9.846	9.846	(1.096)	8566	0.50000	0.4711
	16	N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	4941	0.50000	0.4818
	22	2,4-Dimethylphenol	107	10.962	10.962	(0.942)	16956	1.00000	0.9589
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	8289	0.50000	0.4738
*	27	Naphthalene-d8	136	11.640	11.640	(1.000)	182546	4.00000	
	30	Hexachlorobutadiene	225	12.104	12.104	(1.040)	5038	0.50000	0.4730
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	14017	0.50000	0.4605
*	42	Acenaphthene-d10	162	15.540	15.540	(1.000)	105486	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	15572	0.50000	0.4518
	54	N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	10352	0.50000	0.4940
	57	Hexachlorobenzene	284	18.158	18.158	(0.965)	6394	0.50000	0.4467
	58	Pentachlorophenol	266	18.553	18.553	(0.986)	7927	1.00000	0.9033
*	59	Phenanthrene-d10	188	18.816	18.816	(1.000)	191121	4.00000	
$	66	Terphenyl-d14	244	22.027	22.027	(0.922)	11579	0.50000	0.4518
	67	Butylbenzylphthalate	149	22.971	22.971	(0.961)	8336	0.50000	0.4310
*	69	Chrysene-d12	240	23.900	23.900	(1.000)	208500	4.00000	
*	77	Perylene-d12	264	26.347	26.347	(1.000)	197777	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.703	28.703	(1.089)	19496	0.50000	0.4422
	90	N-Nitrosodimethylamine	74	4.371	4.371	(0.487)	10669	1.00000	1.001

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429i.d
Lab Smp Id: IC0429I
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	49468	-6.06
27 Naphthalene-d8	192325	96162	384650	182546	-5.08
42 Acenaphthene-d10	109274	54637	218548	105486	-3.47
59 Phenanthrene-d10	203933	101966	407866	191121	-6.28
69 Chrysene-d12	223647	111824	447294	208500	-6.77
77 Perylene-d12	211919	105960	423838	197777	-6.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.64	-0.06
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

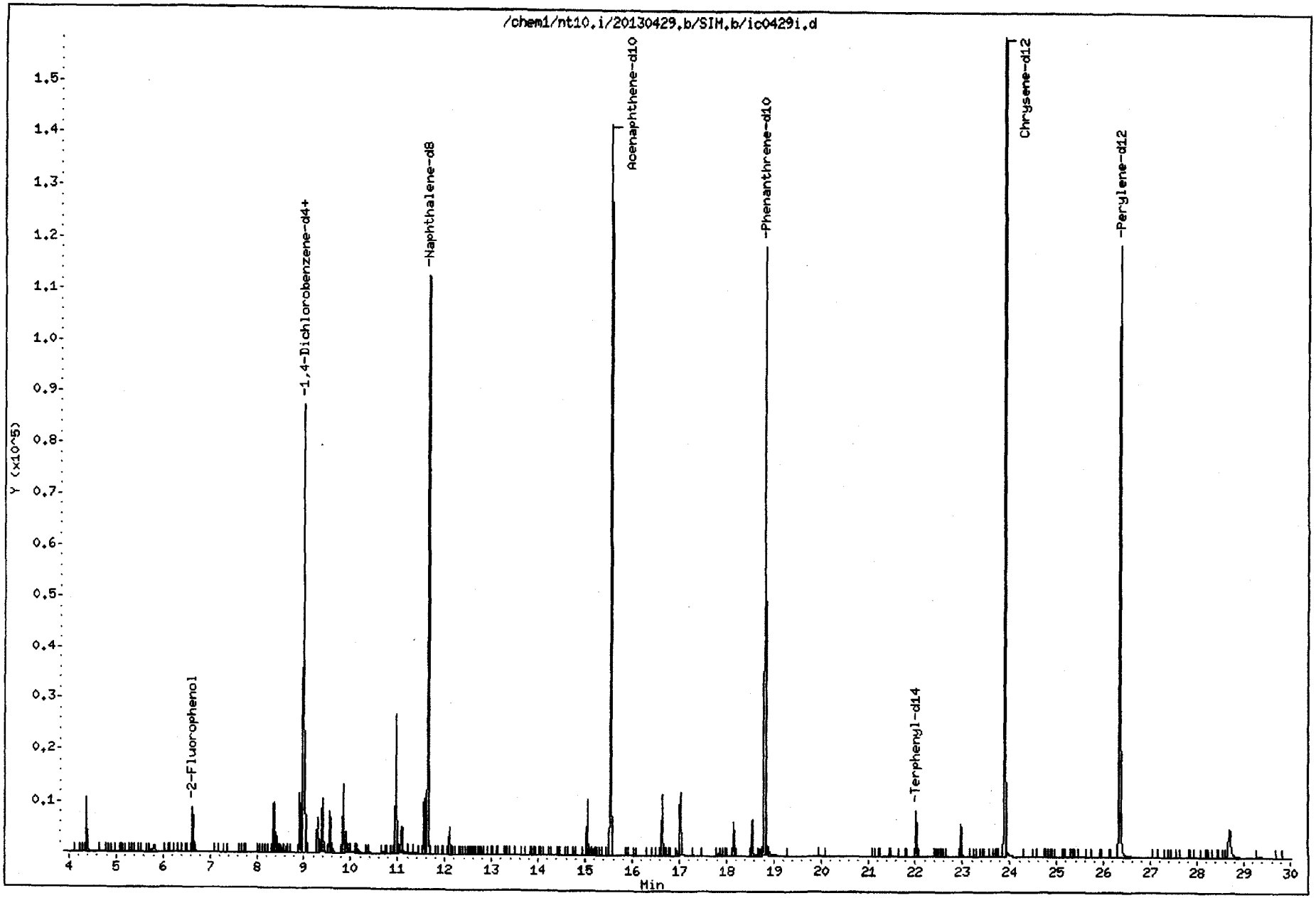
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Date : 29-APR-2013 21:47
Client ID:
Sample Info: IC0429I

Instrument: nt10.i

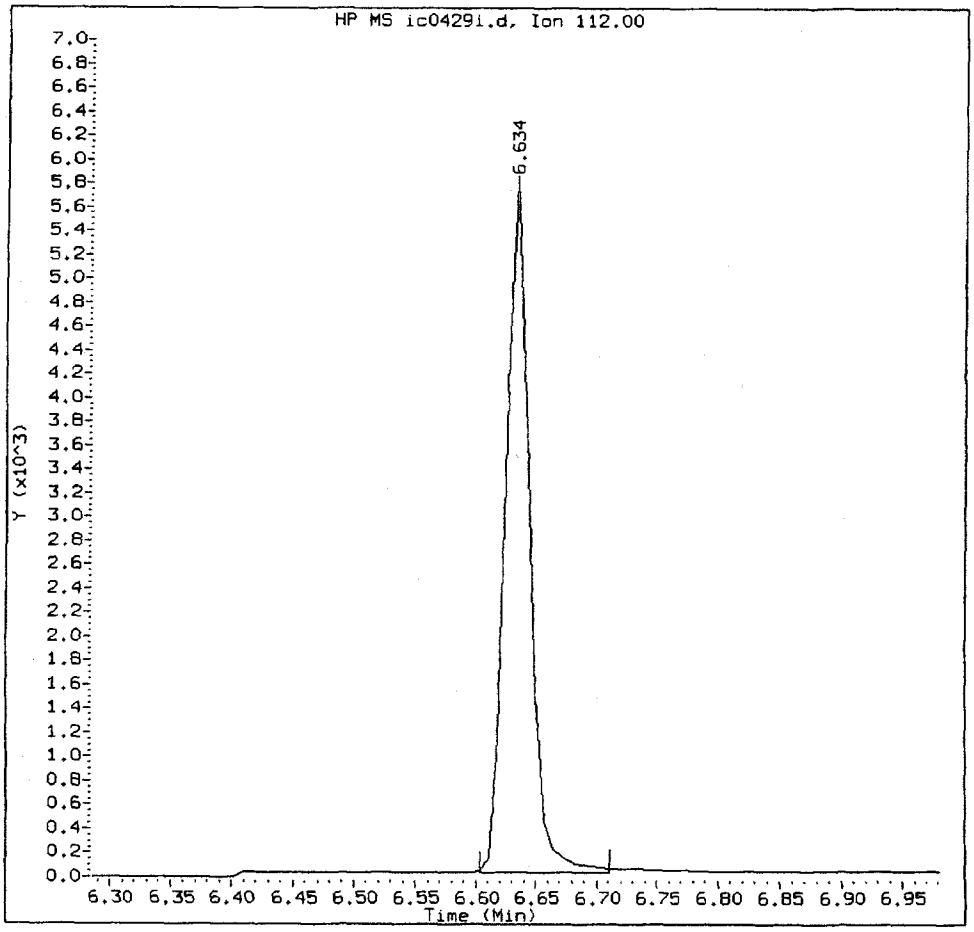
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429I, /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d

2-Fluorophenol Amount: 0.47 Area: 8113



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/31/13

CO-ELUTION SUMMARY FOR FILE - ic0429i.d

Lab ID: IC0429I, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

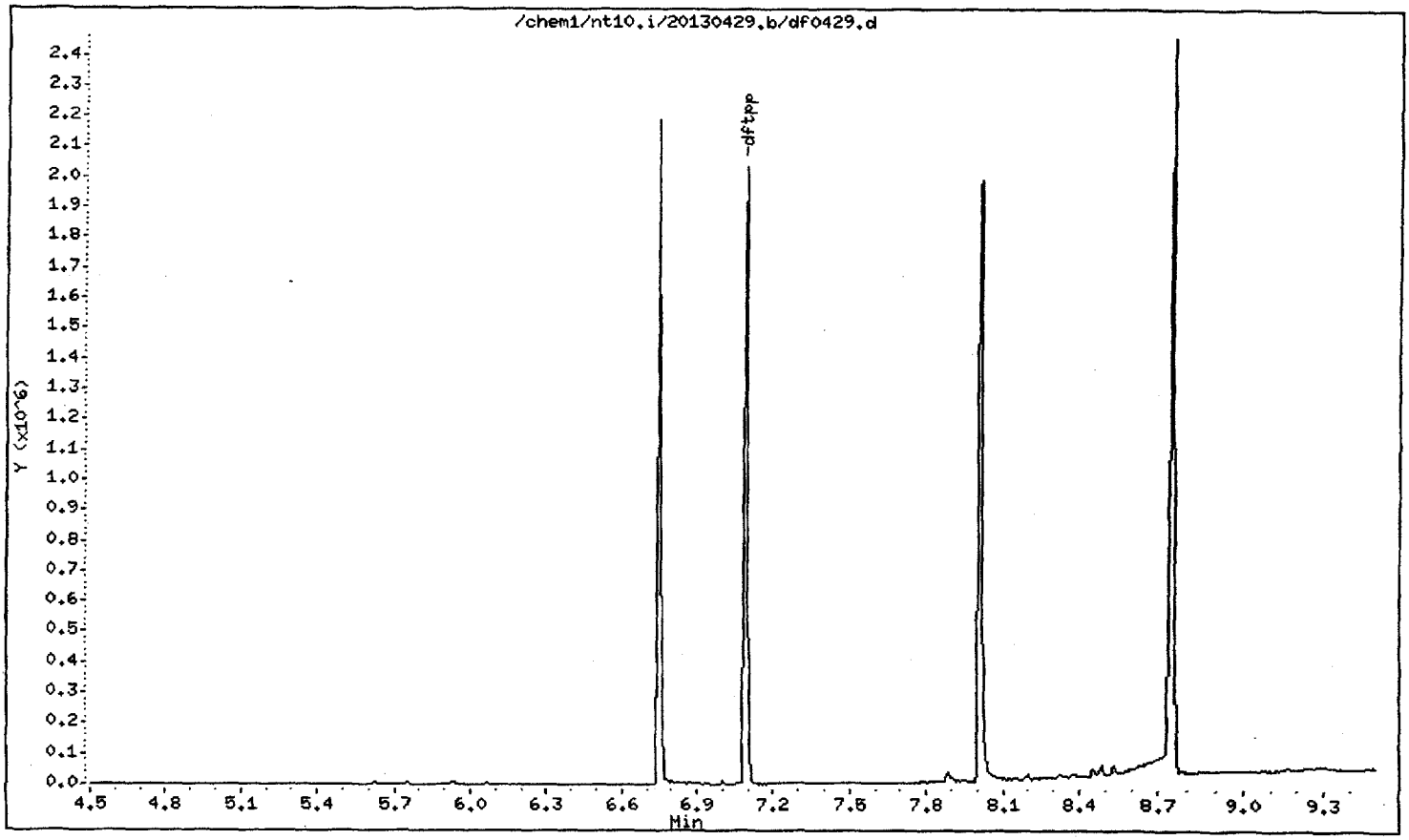
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

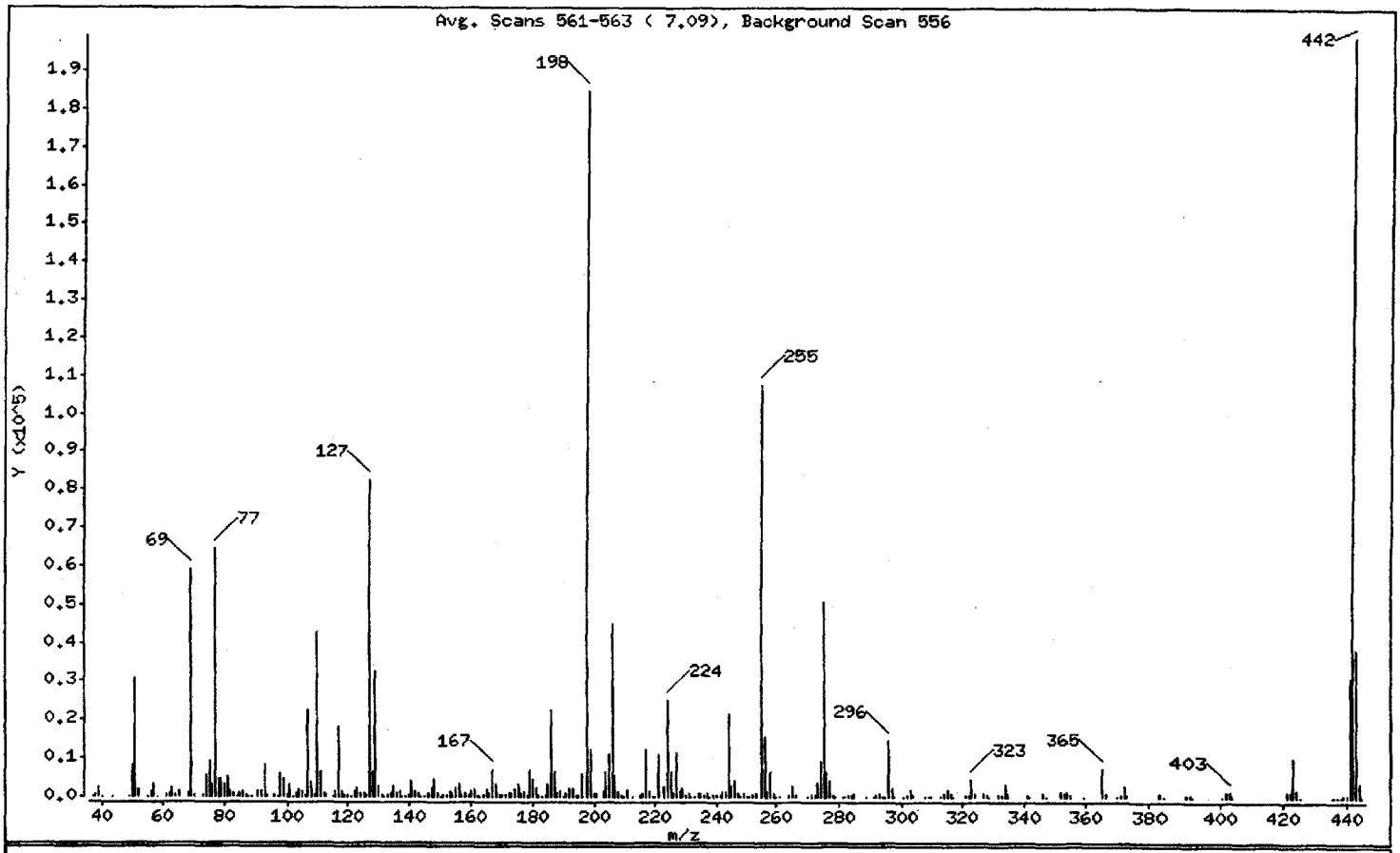
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	16.70
68	Less than 2.00% of mass 69	0.51 (1.60)
69	Mass 69 relative abundance	31.97
70	Less than 2.00% of mass 69	0.15 (0.46)
127	10.00 - 80.00% of mass 198	44.78
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	27.44
365	Greater than 1.00% of mass 198	4.00
441	0.01 - 24.00% of mass 442	16.80 (15.56)
442	50.00 - 200.00% of mass 198	107.98
443	15.00 - 24.00% of mass 442	20.84 (19.30)

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	119	128.00	6232	203.00	1259	289.00	149
38.00	415	129.00	32664	204.00	6492	291.00	55
39.00	2393	130.00	2738	205.00	11023	292.00	248
40.00	132	131.00	547	206.00	44808	293.00	944
44.00	78	132.00	207	207.00	5716	294.00	225
49.00	203	133.00	272	208.00	1602	295.00	86
50.00	8343	134.00	858	209.00	559	296.00	14604
51.00	30808	135.00	2801	210.00	130	297.00	2070
52.00	1637	136.00	916	211.00	1868	298.00	119
55.00	158	137.00	1248	213.00	64	301.00	172
56.00	1274	138.00	214	215.00	464	302.00	318
57.00	3130	139.00	128	216.00	999	303.00	1693
58.00	121	140.00	298	217.00	12350	304.00	431
61.00	576	141.00	4004	218.00	1562	308.00	140
62.00	758	142.00	1332	219.00	107	309.00	66
63.00	2110	143.00	918	220.00	86	310.00	122
64.00	365	144.00	184	221.00	10806	313.00	127
65.00	1151	145.00	229	223.00	2947	314.00	769
68.00	946	146.00	756	224.00	25312	315.00	1728
69.00	58984	147.00	2094	225.00	6355	316.00	922
70.00	271	148.00	4544	226.00	766	317.00	88
73.00	494	149.00	885	227.00	11288	321.00	436
74.00	5693	150.00	191	228.00	1533	322.00	230
75.00	9303	151.00	532	229.00	2272	323.00	4678
76.00	3182	152.00	251	230.00	340	324.00	920
77.00	64696	153.00	1367	231.00	1037	327.00	968
78.00	4399	154.00	1025	232.00	136	328.00	465
79.00	4595	155.00	2332	233.00	163	329.00	50
80.00	3355	156.00	3268	234.00	787	332.00	367
81.00	4879	157.00	652	235.00	849	333.00	490
82.00	1244	158.00	750	236.00	522	334.00	3152
83.00	1132	159.00	624	237.00	861	335.00	783
84.00	59	160.00	1324	238.00	117	341.00	568
85.00	783	161.00	1910	239.00	422	342.00	139
86.00	1346	162.00	596	240.00	404	346.00	1068

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	634	163.00	120	241.00	673	347.00	165
88.00	209	164.00	312	242.00	1491	352.00	1522
89.00	58	165.00	1684	243.00	1585	353.00	1048
91.00	1173	166.00	900	244.00	21560	354.00	1434
92.00	1265	167.00	7028	245.00	2828	355.00	307
93.00	8038	168.00	3167	246.00	4226	359.00	51
94.00	544	169.00	640	247.00	836	365.00	7383
96.00	486	170.00	289	248.00	173	366.00	950
97.00	173	171.00	367	249.00	766	370.00	83
98.00	5992	172.00	736	250.00	145	371.00	406
99.00	4376	173.00	984	251.00	198	372.00	2676
100.00	452	174.00	1650	252.00	278	373.00	680
101.00	3021	175.00	3419	253.00	722	383.00	692
102.00	131	176.00	1090	255.00	107624	384.00	117
103.00	907	177.00	1541	256.00	15761	390.00	337
104.00	1840	178.00	570	257.00	1160	391.00	291
105.00	1589	179.00	6738	258.00	6194	392.00	71
106.00	548	180.00	4416	259.00	1028	401.00	221
107.00	22656	181.00	2092	260.00	162	402.00	1163
108.00	3534	182.00	309	261.00	213	403.00	1545
109.00	609	183.00	166	264.00	253	404.00	599
110.00	42496	184.00	593	265.00	2547	421.00	1426
111.00	6272	185.00	3035	266.00	526	422.00	1250
112.00	744	186.00	22616	270.00	181	423.00	9992
113.00	246	187.00	6353	271.00	299	424.00	1966
115.00	56	188.00	695	272.00	416	425.00	183
116.00	1316	189.00	1391	273.00	3826	435.00	62
117.00	18496	190.00	224	274.00	8949	436.00	62
118.00	1424	191.00	864	275.00	50632	437.00	225
119.00	236	192.00	2063	276.00	6580	438.00	213
120.00	238	193.00	2223	277.00	4111	439.00	328
121.00	63	194.00	423	278.00	606	440.00	329
122.00	1437	195.00	416	279.00	122	441.00	31000
123.00	2280	196.00	5832	281.00	202	442.00	199232
124.00	999	198.00	184512	282.00	126	443.00	38448

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

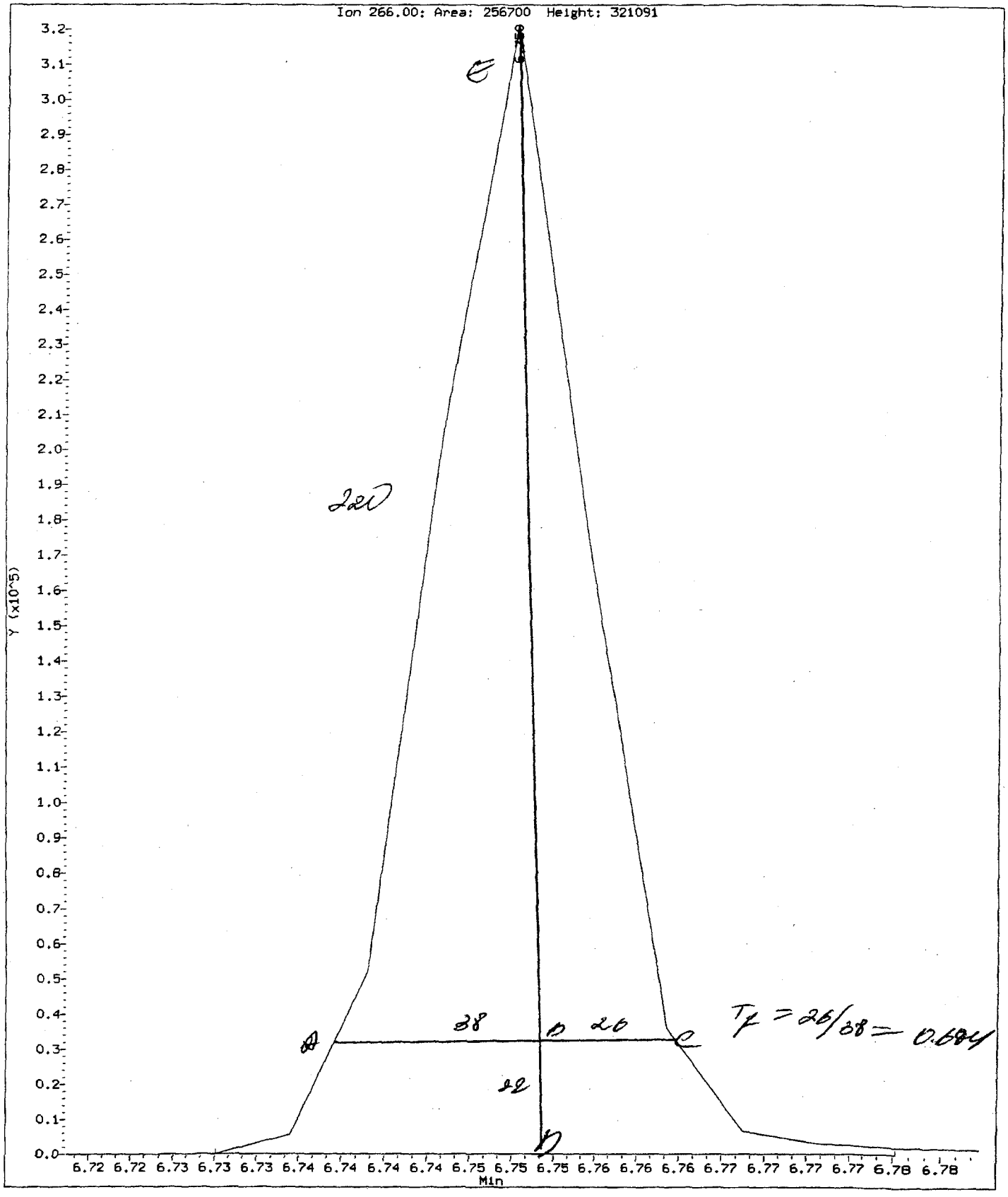
Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	975	199.00	12407	283.00	532	444.00	3455
126.00	347	200.00	963	284.00	335	445.00	131
127.00	82624	201.00	1058	285.00	774		

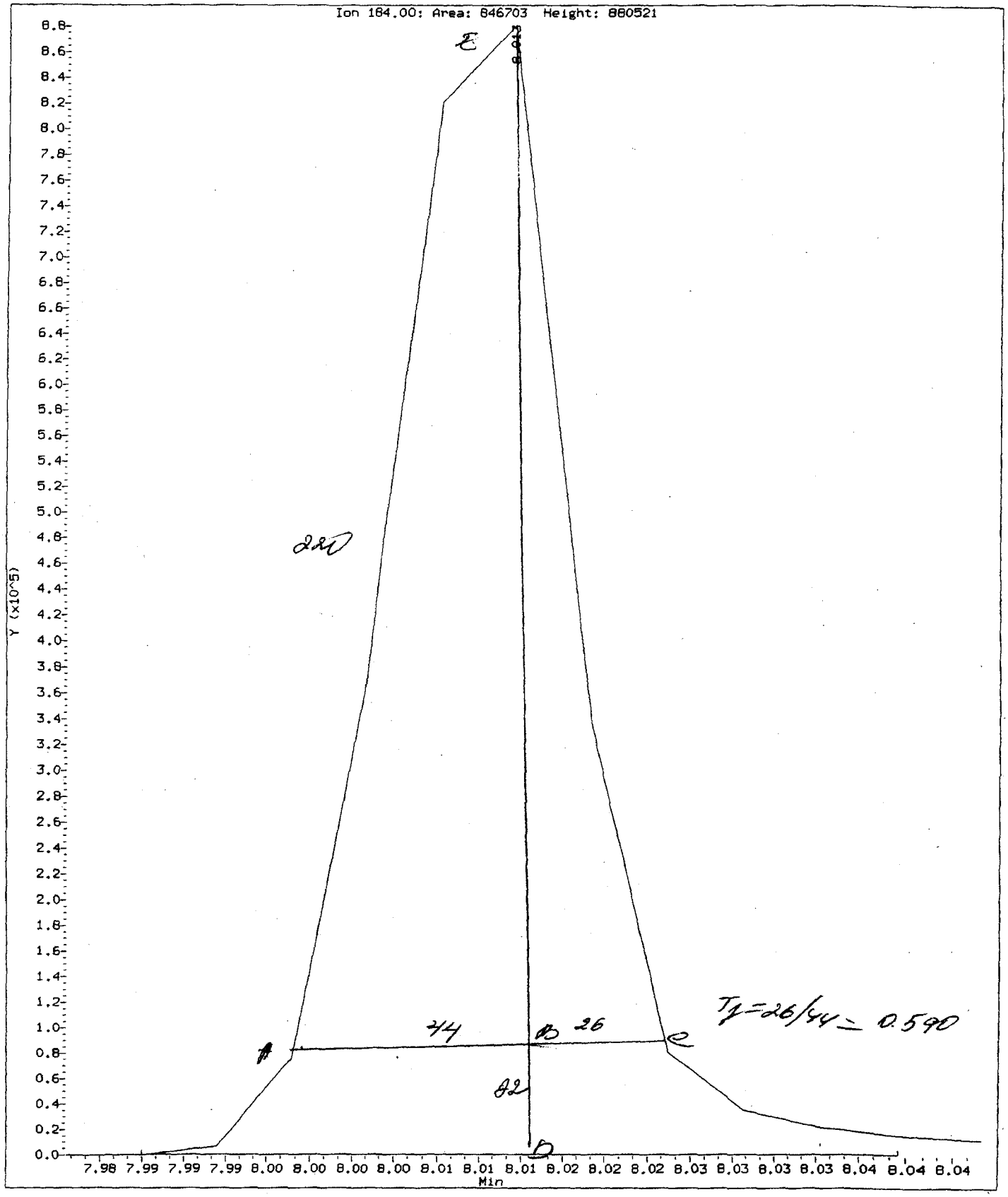
Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130429.b/ddt.b/df0429.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130429.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 29-APR-2013 16:37 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.750	256700
Benzidine	8.013	846703
4,4'-DDE	8.195	1804
4,4'-DDD	8.483	6740
4,4'-DDT	8.745	445165

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(1804 + 6740) * 100}{(1804 + 6740 + 445165)}$$

DDT Percent Breakdown = 1.9 %

SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WS21 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 (NT-10) NT11 NT12

Curve Date: 4/29/13 Analysis Start Date: 6/13/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	(Y) / N / ✓	Internal Standard within 50-200%?	(Y) N / ✓
DDT Breakdown <20%?	(Y) / N / ✓	Retention Times within Windows?	(Y) / N / ✓
Peak Tailing Factor ≤2?	(Y) / N /	Method Blank in Control?	(Y) / N / ✓
CCAL Meets %D?	(Y) N / ✓	LCS / LCSD Recovery in Control?	(Y) / N / 118%
ICAL Q Flag applied?	Y (N) ✓	LCS / LCSD RPD ≤ 30%?	NA / ~~✓~~
CCAL Q flag applied?	(Y) N / ✓	MS / MSD Recovery in Control?	Y / N / NA
Surrogate Recovery met?	(Y) / N / ✓	MS / MSD RPD ≤ 30%?	(NA) / NA
Manual Integrations?	(Y) / N /	Samples Diluted?	~~(Y)~~ (N) / ✓
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	(Y) N / ✓

Detail problems, corrective actions and/or other pertinent information below.

(Review 1) Analyst: YZ **Date:** 6/17/13

(Review 2) Reviewer: [signature] **Date:** 6/17/13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 6/13/13 Analysis: ABN/SIM ABN Analyst: V2

GC Program: ABN2 Column No: 252947 Column Type: ZB 5MS,

Instrument Tune (.U or .CT.): 130228U EM Voltage: 1729

Calibration File: DF0613 Curve Date: 4/29/13 Injection Vol.: 1ul

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 B000142	
	2073-1 1998-4.	
	2864-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130613.b

	Time	Filename	LabID	ClientId	DF									
1	1216	df0613.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1307	cc0613a.d	CC0613A		1	8.06	58483	10.64	213145	14.43	116288	17.63	220667	22.81	232122	25.07	213159
3	1345	ws49mb.d	WS49MBS1	WS49MBS1	1	8.07	56989	10.64	218544	14.44	119177	17.64	223736	22.81	232122	25.07	210573
4	1421	ws49sb.d	WS49LCSS1	WS49LCSS1	1	8.07	57812	10.64	210144	14.44	114587	17.64	211440	22.81	228571	25.08	213817
5	1458	ws49sbd.d	WS49LCSDS1	WS49LCSDS1	1	8.07	55629	10.64	203083	14.44	112054	17.64	206704	22.81	218716	25.08	207476
6	1535	ws49a.d	WS49A	FA-1-S	1	8.07	51149	10.64	192718	14.44	102356	17.64	182203	22.82	184530	25.10	175902
7	1612	ws49b.d	WS49B	FA-2-4	1	8.07	51777	10.65	197537	14.45	104929	17.64	187131	22.82	183259	25.10	180421
8	1649	ws49c.d	WS49C	FA-3-2	1	8.07	55896	10.65	213575	14.45	114040	17.64	199383	22.82	198447	25.11	188502
9	1726	ws49d.d	WS49D	FA-4-3	1	8.07	48857	10.65	186953	14.45	97684	17.64	174407	22.82	174319	25.11	171345
10	1803	wr99d.d	WR99D	KC-VT-1593-2	1	8.07	55422	10.65	212390	14.45	113058	17.65	203862	22.84	197388	25.12	188689
11	1840	wr99dms.d	WR99DMS	KC-VT-1593-2	1	8.07	51687	10.65	189590	14.45	102081	17.65	174416	22.83	187437	25.11	181554
12	1916	wr99dmsd.d	WR99DMSD	KC-VT-1593-2	1	8.07	55494	10.65	202065	14.45	109663	17.65	185441	22.83	204036	25.11	198486
13	1953	wr99e.d	WR99E	KC-CB-01-201	1	8.07	56517	10.65	213384	14.45	114345	17.64	207913	22.82	204651	25.11	194068
14	2030	wr99f.d	WR99F	KC-DD-2009-2	1	8.07	54904	10.65	207233	14.45	112128	17.65	188798	22.83	199317	25.11	185586
15	2107	ws21a.d	WS21A	KC-IV-SPS-20	1	8.07	56710	10.65	214283	14.45	108036	17.65	198678	22.82	201377	25.10	192571

V2 6/17/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130613.b/SIM.b

ARI Job No.: WS49 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 13-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1345	ws49mb.d	WS49MBS1	WS49MBS1	1	Phenol, Diethylphthalate,
1421	ws49sb.d	WS49LCSS1	WS49LCSS1	1	NO MANUAL INTEGRATION
1458	ws49sbd.d	WS49LCSDS1	WS49LCSDS1	1	NO MANUAL INTEGRATION
1803	wr99d.d	WR99D	KC-VT-1593	1	Diethylphthalate,
1840	wr99dms.d	WR99DMS	KC-VT-1593	1	NO MANUAL INTEGRATION
1916	wr99dmsd.d	WR99DMSD	KC-VT-1593	1	NO MANUAL INTEGRATION
1953	wr99e.d	WR99E	KC-CB-01-2	1	Dimethylphthalate, N-Nitrosodiphenylamine,
2030	wr99f.d	WR99F	KC-DD-2009	1	2,4-Dimethylphenol, Dimethylphthalate, N-Nitrosodiphenylamine,
2107	ws21a.d	WS21A	KC-IV-SPS-	1	1,4-Dichlorobenzene, 4-Methylphenol,
1535	ws49a.d	WS49A	FA-1-S	1	Dimethylphthalate, Diethylphthalate, N-Nitrosodiphenylamine,
1612	ws49b.d	WS49B	FA-2-4	1	2,4-Dimethylphenol, Diethylphthalate, Pentachlorophenol,
1649	ws49c.d	WS49C	FA-3-2	1	2,4-Dimethylphenol, Dimethylphthalate, Diethylphthalate,
1726	ws49d.d	WS49D	FA-4-3	1	2,4-Dimethylphenol, Dimethylphthalate, Diethylphthalate,

ACCUTEST - TACOMA

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130613.b/SIM.b

Instrument: nt10.i Date: 13-JUN-2013 Method: SIM.b/SIMABN2.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 13-JUN-2013

Compound	%D
Butylbenzylphthalate	22.2

Data File: /chem1/nt10.i/20130613.b/df0613.d

Date : 13-JUN-2013 12:16

Client ID: DFTPP

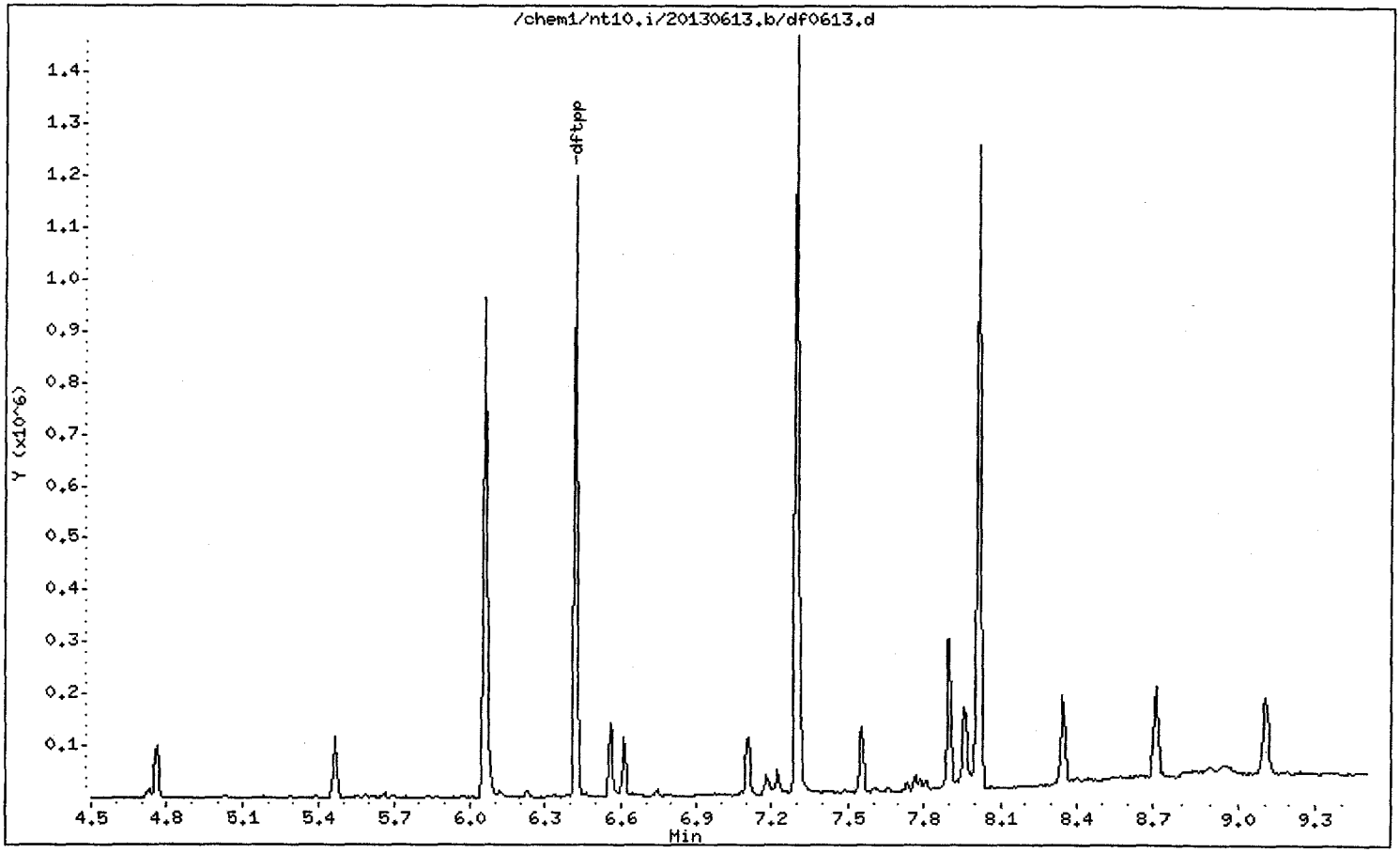
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/df0613.d

Date : 13-JUN-2013 12:16

Client ID: DFTPP

Instrument: nt10.i

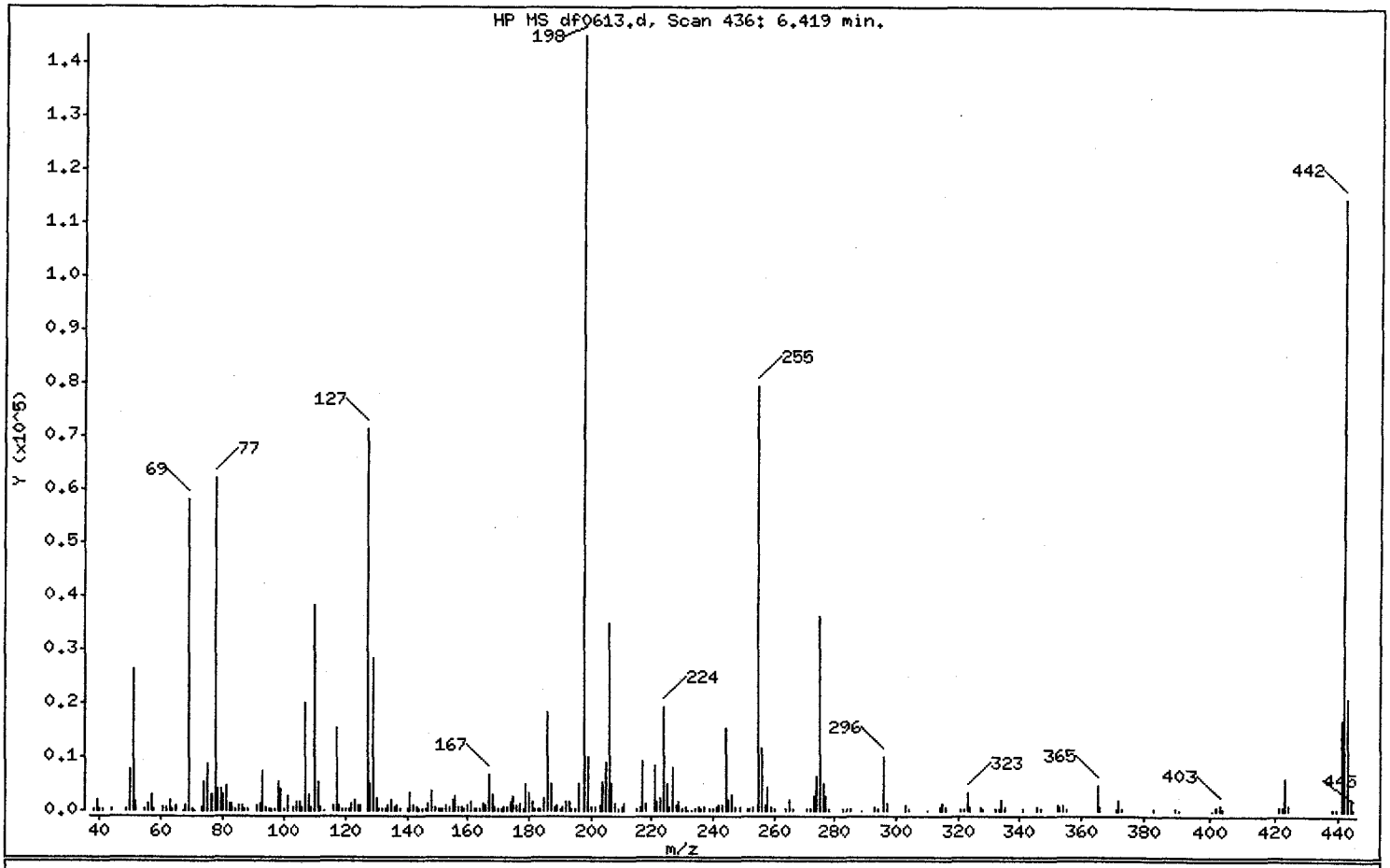
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	18.12
68	Less than 2.00% of mass 69	0.72 (1.80)
69	Mass 69 relative abundance	39.98
70	Less than 2.00% of mass 69	0.26 (0.66)
127	10.00 - 80.00% of mass 198	49.11
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 60.00% of mass 198	25.06
365	Greater than 1.00% of mass 198	3.19
441	0.01 - 24.00% of mass 442	11.63 (14.72)
442	50.00 - 200.00% of mass 198	79.01
443	15.00 - 24.00% of mass 442	14.60 (18.47)

Data File: /chem1/nt10.i/20130613.b/df0613.d

Date : 13-JUN-2013 12:16

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0613.d

Spectrum: HP MS df0613.d, Scan 436: 6.419 min.

Location of Maximum: 198.00

Number of points: 258

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	371	120.00	280	187.00	5106	265.90	283
39.10	2118	121.10	206	188.10	594	271.00	353
40.00	322	122.00	1315	188.90	993	272.10	328
41.10	192	123.00	1918	189.90	194	273.00	2623
44.00	285	124.00	984	191.00	634	274.00	6358
49.10	226	125.00	927	192.00	1703	275.00	36320
50.10	7518	127.00	71184	193.00	1701	276.00	4882
51.10	26264	128.00	5132	194.00	377	277.00	2797
52.10	1546	129.00	28456	195.00	384	278.00	368
55.00	456	130.00	2202	196.00	4853	282.90	343
56.00	1173	131.00	495	198.00	144960	284.00	280
57.00	2990	131.90	205	199.00	9914	285.00	443
57.90	177	132.90	213	200.00	714	288.90	163
61.00	678	133.90	840	201.40	664	293.00	691
62.00	785	135.00	2101	203.00	999	294.00	168
63.00	2121	136.00	829	204.00	5398	296.00	9969
64.00	395	137.00	1034	205.00	8931	297.00	1426
65.00	985	137.70	226	206.00	34904	303.00	1139
67.00	161	140.00	361	207.00	4968	304.00	295
68.00	1045	141.00	3354	208.00	1244	309.90	158
69.00	57952	142.00	1129	209.00	418	314.00	556
70.00	381	143.00	830	210.20	656	315.00	1198
71.00	164	144.00	259	211.10	1379	316.00	638
73.00	636	144.90	180	215.00	395	321.00	352
74.00	5234	146.00	468	216.00	815	321.90	190
75.00	8820	147.00	1415	217.00	9474	323.10	3206
76.00	3154	148.00	3710	218.00	1270	324.00	510
77.10	62144	149.00	714	221.00	8450	327.00	533
78.00	4064	150.10	214	221.80	1553	327.90	360
79.00	3917	151.20	466	223.00	2322	332.00	314
80.00	3066	151.80	302	224.00	19280	333.00	388
81.00	4625	153.00	1082	225.00	4878	334.00	1960
82.00	1362	154.00	748	226.00	607	335.00	536
83.00	1323	155.00	1914	227.00	7963	341.10	379
83.90	270	156.00	2727	228.00	1155	345.90	586

Data File: /chem1/nt10.i/20130613.b/df0613.d

Date : 13-JUN-2013 12:16

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0613.d

Spectrum: HP MS df0613.d, Scan 436: 6.419 min.

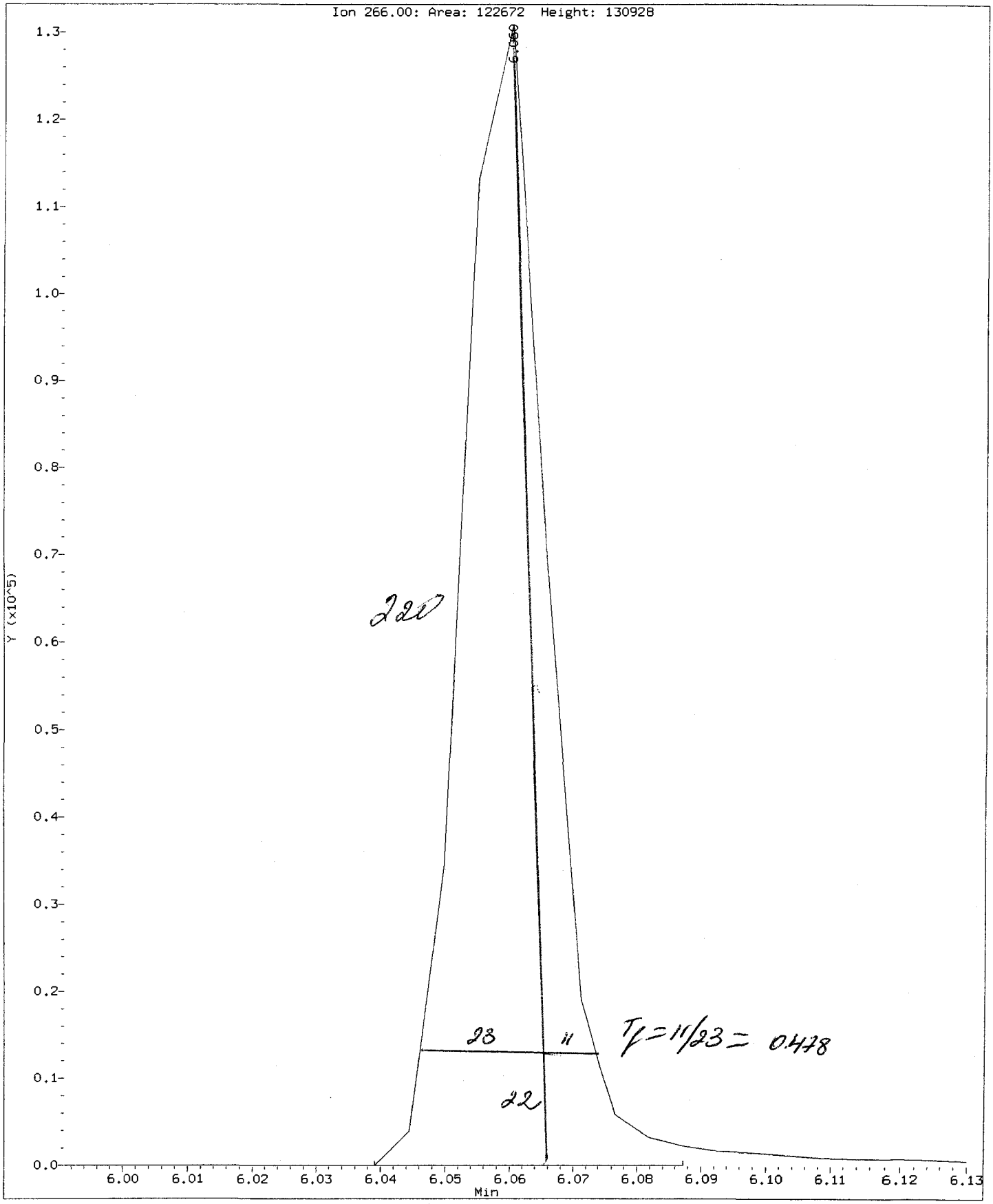
Location of Maximum: 198.00

Number of points: 258

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	870	157.00	614	229.00	1550	347.00	167
86.00	1074	157.90	601	230.10	181	352.00	926
87.00	494	158.90	445	231.00	705	353.00	552
88.00	233	160.00	1148	232.00	151	354.00	951
91.00	1078	161.00	1642	232.90	153	355.10	186
92.00	1207	162.00	386	234.00	450	365.00	4619
93.00	7286	162.90	170	235.00	570	366.00	621
93.90	519	163.90	213	236.00	405	371.10	299
95.00	222	165.00	1222	237.00	696	372.00	1842
96.00	360	166.00	1101	239.00	353	373.00	334
97.10	288	167.00	6631	240.00	222	383.00	476
98.00	5283	168.00	2861	241.00	520	389.90	214
99.00	4109	169.00	552	242.00	1076	390.90	154
99.90	354	169.90	224	243.10	1163	400.90	153
101.00	2545	170.90	370	244.00	15468	402.00	548
103.00	698	171.90	700	245.00	2139	403.00	924
104.00	1733	173.00	726	246.00	2873	404.00	413
105.00	1641	174.00	1548	247.00	618	421.00	752
106.00	535	175.00	2710	248.90	610	422.00	723
107.00	20056	176.00	999	251.00	180	423.10	5858
108.00	2983	177.00	1327	252.00	184	424.00	850
109.10	632	178.00	427	253.10	576	438.20	230
110.00	38192	179.00	5018	255.00	79432	439.40	402
111.00	5463	180.00	3407	256.00	11709	441.10	16856
112.00	754	181.00	1762	257.00	958	442.10	114536
112.80	157	181.90	227	258.00	4410	443.10	21160
116.00	920	182.90	180	259.00	742	444.10	2016
117.00	15485	183.90	455	260.00	188	445.00	175
117.90	1042	185.00	2461	263.90	222		
119.00	218	186.00	18264	265.00	2019		

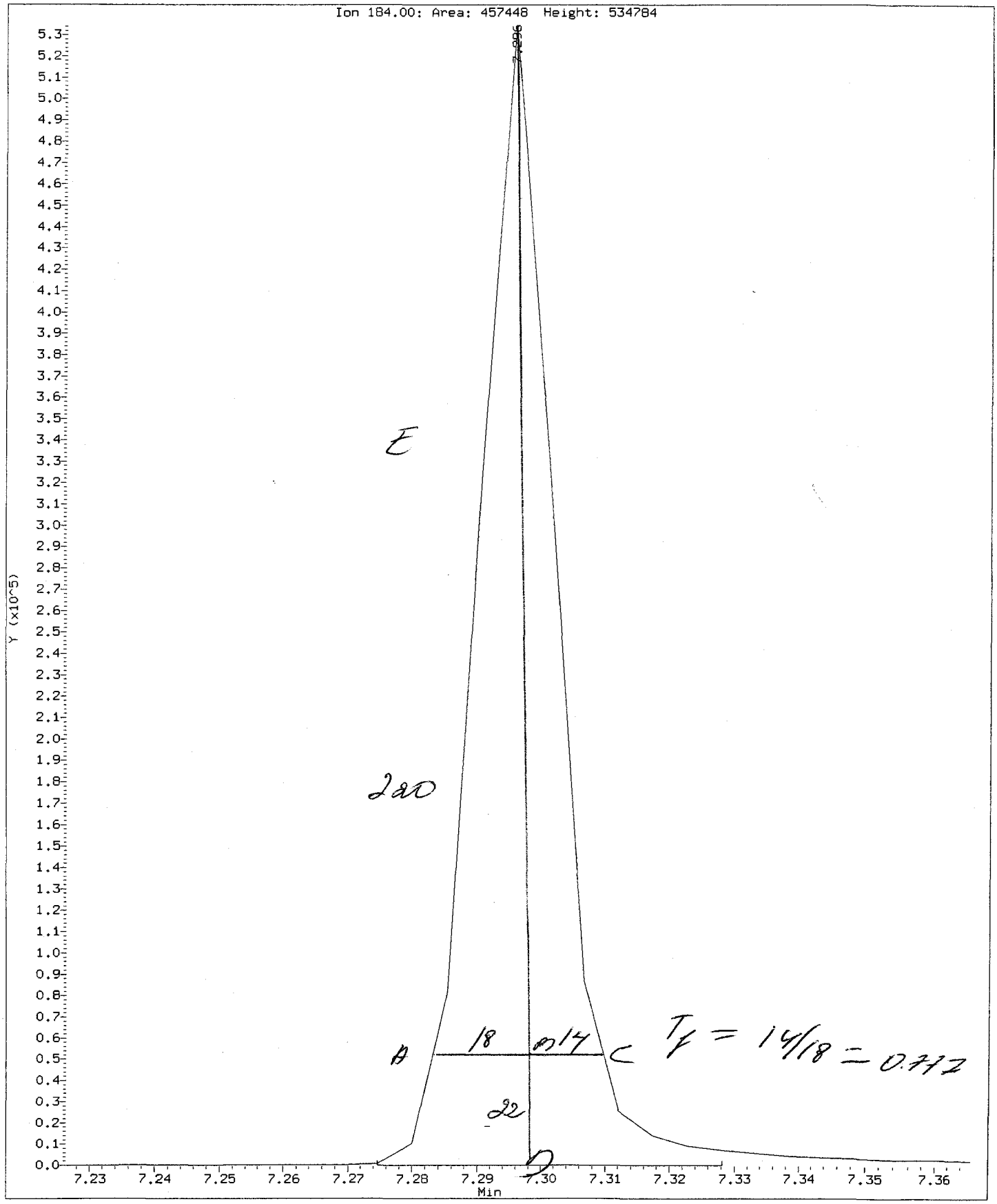
Data File: /chem1/nt10.i/20130613.b/ddt.b/df0613.d
Injection Date: 13-JUN-2013 12:16
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130613.b/ddt.b/df0613.d
Injection Date: 13-JUN-2013 12:16
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130613.b/ddt.b/df0613.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130613.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 13-JUN-2013 12:16 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.060	122672
Benzidine	7.296	457448
4,4'-DDE	7.483	660
4,4'-DDD	7.767	4908
4,4'-DDT	8.018	242365

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(660 + 4908) * 100}{(660 + 4908 + 242365)}$$

DDT Percent Breakdown = 2.2 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 13-JUN-2013 13:07
Lab File ID: cc0613a.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0613A Quant Type: ISTD
Method: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.40508	1.42867	0.010	1.67935	20.00000	Averaged	
3 Phenol	2.01971	2.38501	0.010	18.08682	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.66429	1.56172	0.010	-6.16313	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.65707	1.54710	0.010	-6.63584	20.00000	Averaged	
11 Benzyl alcohol	0.96865	0.83105	0.010	-14.20521	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.57473	1.50022	0.010	-4.73125	20.00000	Averaged	
13 2-Methylphenol	1.44396	1.62333	0.010	12.42225	20.00000	Averaged	
15 4-Methylphenol	1.47039	1.57036	0.010	6.79870	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.82918	0.85965	0.050	3.67508	20.00000	Averaged	
22 2,4-Dimethylphenol	0.38748	0.37970	0.010	-2.00619	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.38338	0.36563	0.010	-4.63033	20.00000	Averaged	
30 Hexachlorobutadiene	0.23337	0.21718	0.010	-6.93996	20.00000	Averaged	
39 Dimethylphthalate	1.15411	1.18187	0.010	2.40558	20.00000	Averaged	
50 Diethylphthalate	1.30694	1.36759	0.010	4.64025	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.43858	0.47914	0.010	9.24697	20.00000	Averaged	
57 Hexachlorobenzene	0.29961	0.28615	0.010	-4.49168	20.00000	Averaged	
58 Pentachlorophenol	0.17813	0.16653	0.005	-6.51053	20.00000	Averaged	
$ 66 Terphenyl-d14	0.49170	0.50776	0.010	3.26582	20.00000	Averaged	
67 Butylbenzylphthalate	0.37109	0.45337	0.010	22.17108	20.00000	Averaged	<-
79 Dibenzo(a,h)anthracene	0.89160	0.94431	0.010	5.91164	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.86193	0.84567	0.010	-1.88687	20.00000	Averaged	

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/SIM.b/cc0613a.d
Lab Smp Id: CC0613A
Inj Date : 13-JUN-2013 13:07
Operator : YZ Inst ID: nt10.i
Smp Info : CC0613A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 17-Jun-2013 10:13 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.825	5.825	(0.723)	20888	1.00000	1.017
	3 Phenol	94	7.518	7.518	(0.933)	34870	1.00000	1.181
	7 1,3-Dichlorobenzene	146	7.989	7.989	(0.991)	22833	1.00000	0.9384
*	8 1,4-Dichlorobenzene-d4	152	8.059	8.059	(1.000)	58483	4.00000	
	9 1,4-Dichlorobenzene	146	8.090	8.090	(1.004)	22619	1.00000	0.9336
	11 Benzyl alcohol	79	8.393	8.393	(1.041)	12150	1.00000	0.8579
	12 1,2-Dichlorobenzene	146	8.455	8.455	(1.049)	21934	1.00000	0.9527
	13 2-Methylphenol	108	8.664	8.664	(1.075)	23734	1.00000	1.124
	15 4-Methylphenol	108	8.952	8.952	(1.111)	22959	1.00000	1.068
	16 N-Nitroso-di-n-propylamine	70	8.975	8.975	(1.114)	12568	1.00000	1.037
	22 2,4-Dimethylphenol	107	10.030	10.030	(0.943)	40466	2.00000	1.960
	26 1,2,4-Trichlorobenzene	180	10.562	10.562	(0.993)	19483	1.00000	0.9537
*	27 Naphthalene-d8	136	10.639	10.639	(1.000)	213145	4.00000	
	30 Hexachlorobutadiene	225	11.095	11.095	(1.043)	11572	1.00000	0.9306
	39 Dimethylphthalate	163	14.005	14.005	(0.970)	34359	1.00000	1.024
*	42 Acenaphthene-d10	162	14.430	14.430	(1.000)	116288	4.00000	
	50 Diethylphthalate	149	15.559	15.559	(1.078)	39758	1.00000	1.046
	54 N-Nitrosodiphenylamine	169	15.914	15.914	(0.903)	26432	1.00000	1.092
	57 Hexachlorobenzene	284	16.986	16.986	(0.964)	15786	1.00000	0.9551
	58 Pentachlorophenol	266	17.389	17.389	(0.986)	18374	2.00000	1.870
*	59 Phenanthrene-d10	188	17.629	17.629	(1.000)	220667	4.00000	
$	66 Terphenyl-d14	244	20.955	20.955	(0.919)	29465	1.00000	1.033
	67 Butylbenzylphthalate	149	21.939	21.939	(0.962)	26309	1.00000	1.222
*	69 Chrysene-d12	240	22.806	22.806	(1.000)	232122	4.00000	
*	77 Perylene-d12	264	25.074	25.074	(1.000)	213159	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.827	26.827	(1.070)	50322	1.00000	1.059
	90 N-Nitrosodimethylamine	74	3.640	3.640	(0.452)	24728	2.00000	1.962

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0613a.d
Lab Smp Id: CC0613A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	58483	11.06
27 Naphthalene-d8	192325	96162	384650	213145	10.83
42 Acenaphthene-d10	109274	54637	218548	116288	6.42
59 Phenanthrene-d10	203933	101966	407866	220667	8.21
69 Chrysene-d12	223647	111824	447294	232122	3.79
77 Perylene-d12	211919	105960	423838	213159	0.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.06	0.00
27 Naphthalene-d8	10.64	10.14	11.14	10.64	0.00
42 Acenaphthene-d10	14.43	13.93	14.93	14.43	0.00
59 Phenanthrene-d10	17.63	17.13	18.13	17.63	0.00
69 Chrysene-d12	22.81	22.31	23.31	22.81	0.00
77 Perylene-d12	25.07	24.57	25.57	25.07	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130613.b/SIM.b/cc0613a.d

Date : 13-JUN-2013 13:07

Client ID:

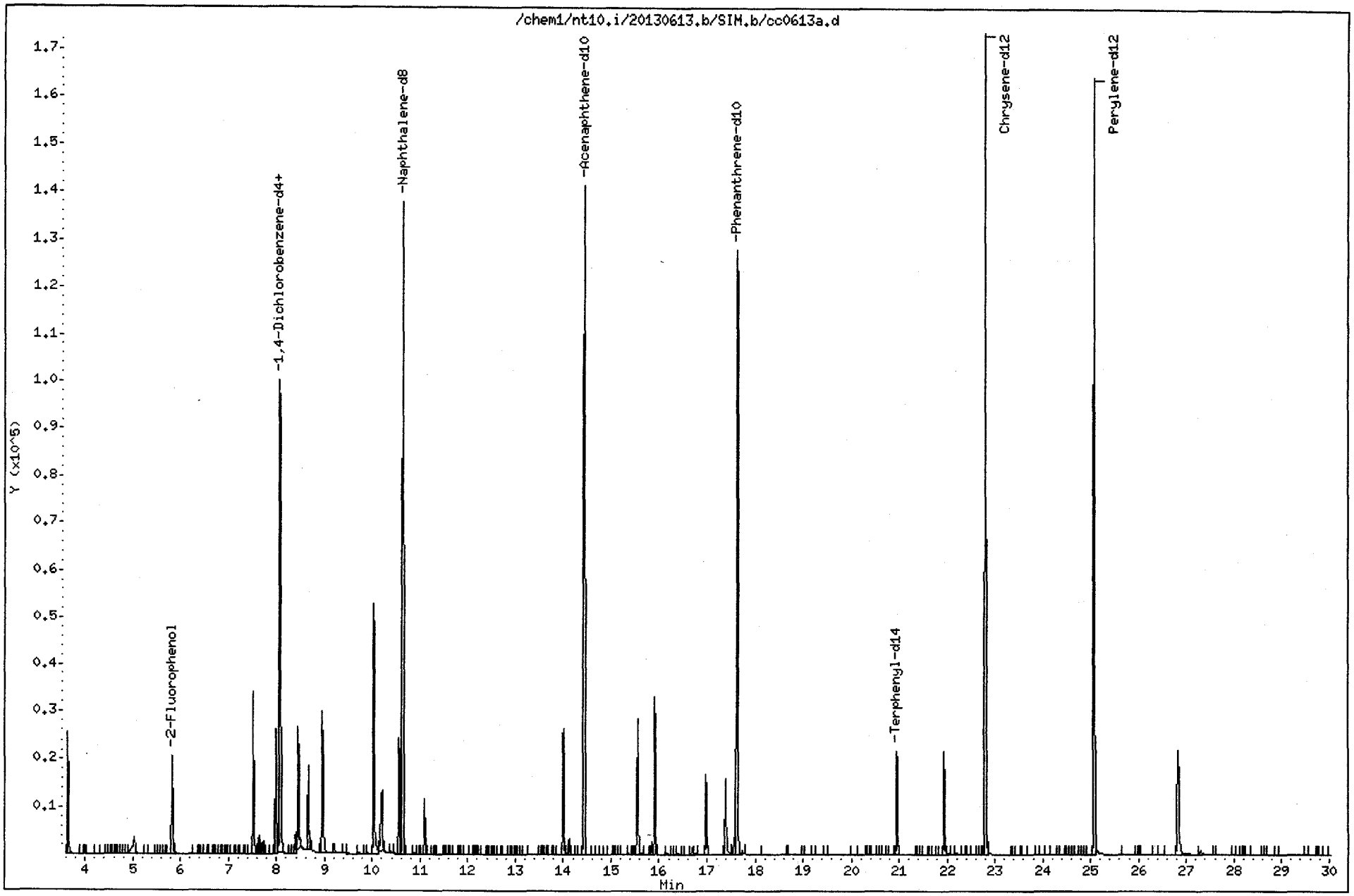
Sample Info: CC0613A

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - cc0613a.d

Lab ID: CC0613A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/SIM.b/ws49mb.d
Lab Smp Id: WS49MBS1 Client Smp ID: WS49MBS1
Inj Date : 13-JUN-2013 13:45
Operator : YZ Inst ID: nt10.i
Smp Info : WS49MBS1
Misc Info : 13-11813
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 17-Jun-2013 10:13 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1	2-Fluorophenol	112	5.841	5.825	(0.724)	93737	4.68252	468.3
	3	Phenol	94	7.525	7.518	(0.933)	821	0.02853	2.853 (RM)
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	8.067	8.059	(1.000)	56989	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	79	Compound Not Detected.					
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	15	4-Methylphenol	108	Compound Not Detected.					
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	Compound Not Detected.					
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	10.639	10.639	(1.000)	218544	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
*	42 Acenaphthene-d10	162	14.438	14.430	(1.000)	119177	4.00000	
	50 Diethylphthalate	149	15.559	15.559	(1.078)	3299	0.08472	8.472 (RM)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.636	17.629	(1.000)	223736	4.00000	
$	66 Terphenyl-d14	244	20.963	20.955	(0.919)	117606	4.12163	412.2
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	22.806	22.806	(1.000)	232122	4.00000	
*	77 Perylene-d12	264	25.074	25.074	(1.000)	210573	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49mb.d
Lab Smp Id: WS49MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: WS49MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	56989	8.22
27 Naphthalene-d8	192325	96162	384650	218544	13.63
42 Acenaphthene-d10	109274	54637	218548	119177	9.06
59 Phenanthrene-d10	203933	101966	407866	223736	9.71
69 Chrysene-d12	223647	111824	447294	232122	3.79
77 Perylene-d12	211919	105960	423838	210573	-0.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.10
27 Naphthalene-d8	10.64	10.14	11.14	10.64	0.00
42 Acenaphthene-d10	14.43	13.93	14.93	14.44	0.05
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.04
69 Chrysene-d12	22.81	22.31	23.31	22.81	0.00
77 Perylene-d12	25.07	24.57	25.57	25.07	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

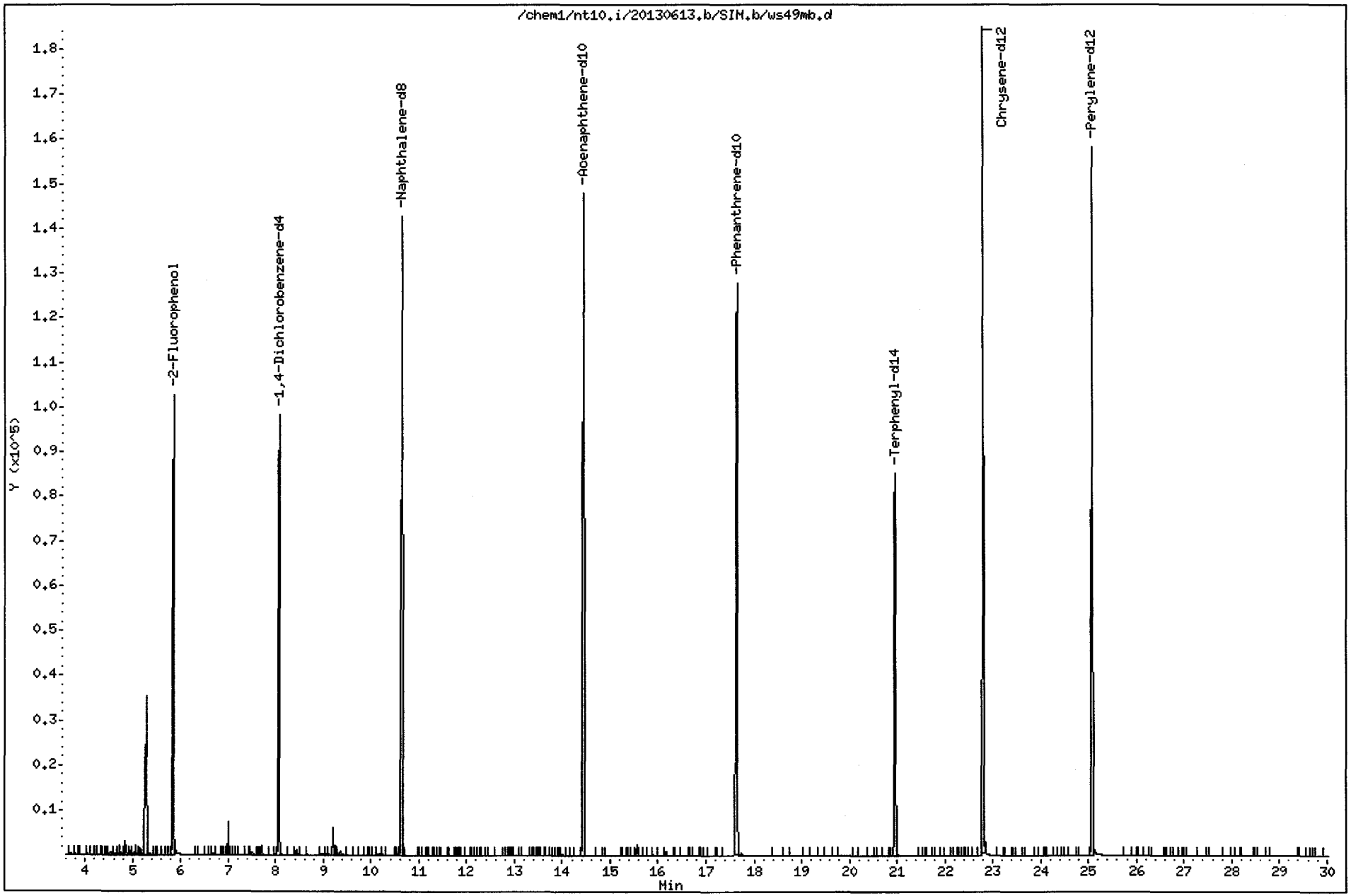
Client Name: SAIC
Client SDG: WS49
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WS49MBS1
Client Smp ID: WS49MBS1
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	2.853	0.57*	30-160
7 1,3-Dichlorobenze	500.0	0.000	*	30-160
9 1,4-Dichlorobenze	500.0	0.000	*	30-160
11 Benzyl alcohol	500.0	0.000	*	30-160
12 1,2-Dichlorobenze	500.0	0.000	*	30-160
13 2-Methylphenol	500.0	0.000	*	30-160
15 4-Methylphenol	1000	0.000	*	30-160
16 N-Nitroso-di-n-pr	500.0	0.000	*	30-160
22 2,4-Dimethylphenol	1000	0.000	*	30-160
26 1,2,4-Trichlorobe	500.0	0.000	*	30-160
30 Hexachlorobutadie	500.0	0.000	*	30-160
39 Dimethylphthalate	500.0	0.000	*	30-160
50 Diethylphthalate	500.0	8.472	1.69*	30-160
54 N-Nitrosodiphenyl	500.0	0.000	*	30-160
57 Hexachlorobenzene	500.0	0.000	*	30-160
58 Pentachlorophenol	1000	0.000	*	30-160
67 Butylbenzylphthal	500.0	0.000	*	30-160
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-160
90 N-Nitrosodimethyl	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	468.3	62.43	30-160
$ 66 Terphenyl-d14	500.0	412.2	82.43	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/ws49mb.d
Date : 13-JUN-2013 13:45
Client ID: WS49MBS1
Sample Info: WS49MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/SIM.b/ws49mb.d

Date : 13-JUN-2013 13:45

Client ID: WS49MBS1

Instrument: nt10.i

Sample Info: WS49MBS1

Volume Injected (uL): 1.0

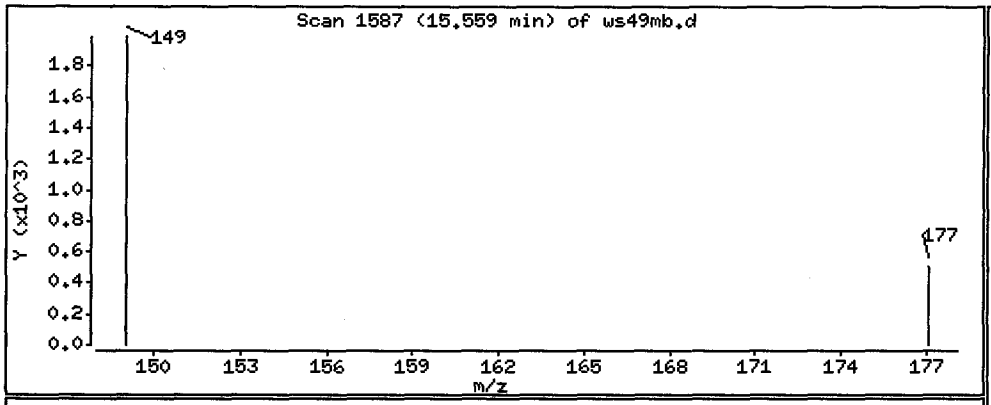
Operator: YZ

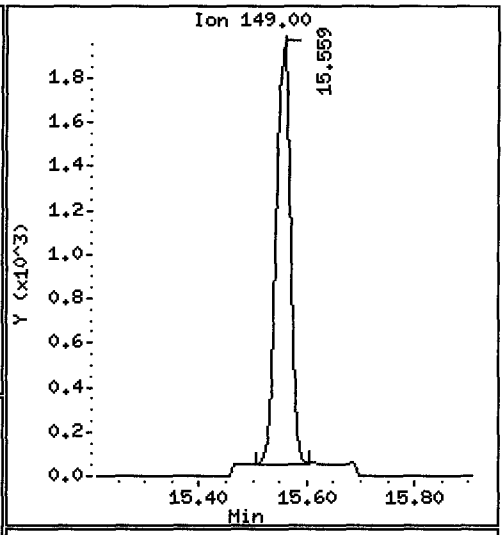
Column phase: ZB-5msi

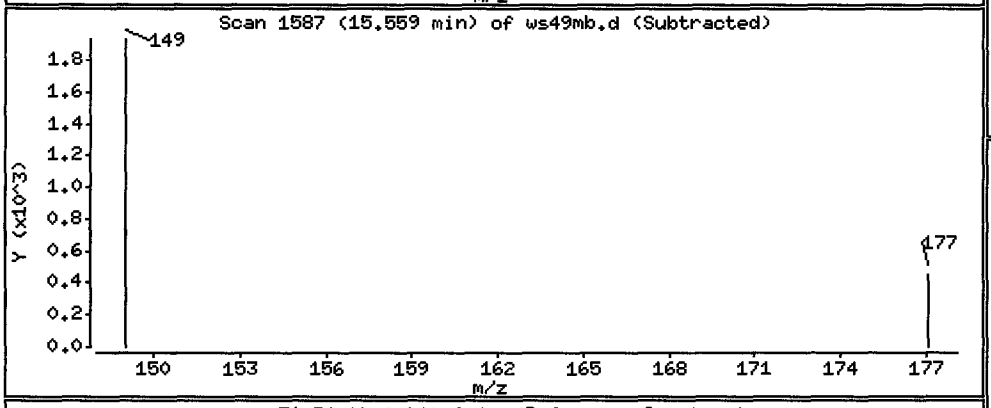
Column diameter: 0.25

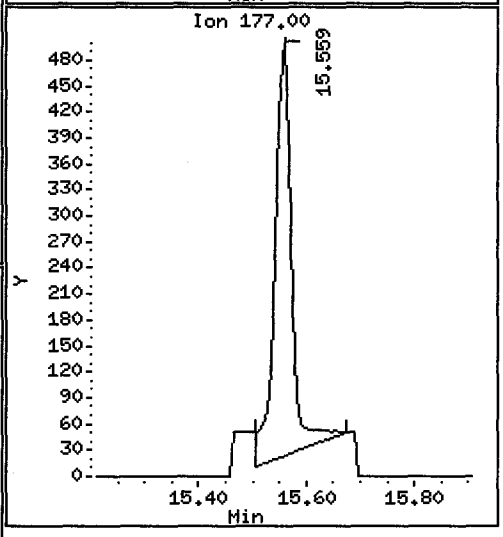
50 Diethylphthalate

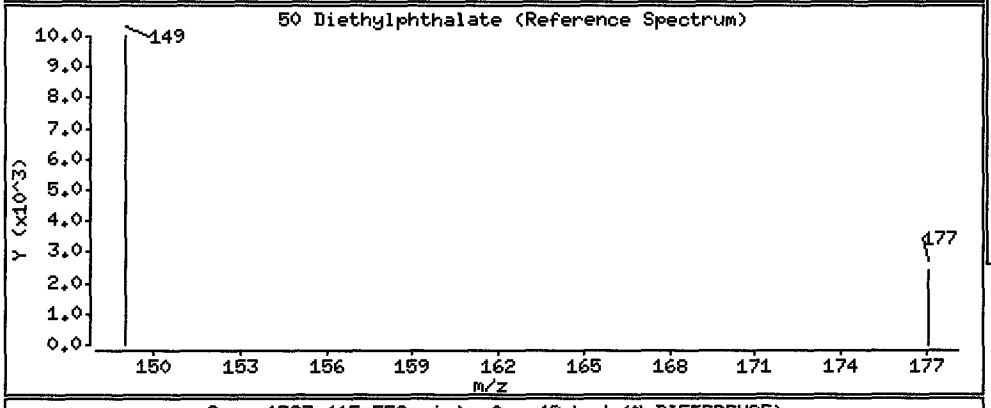
Concentration: 8.472 ug/kg

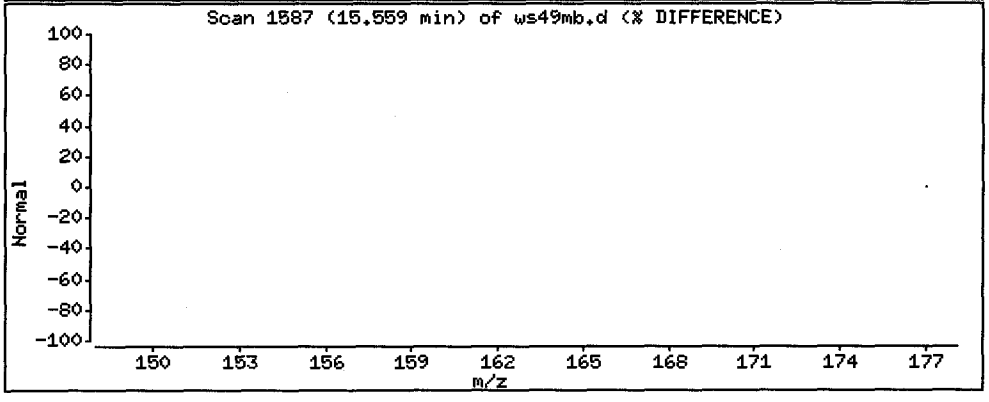






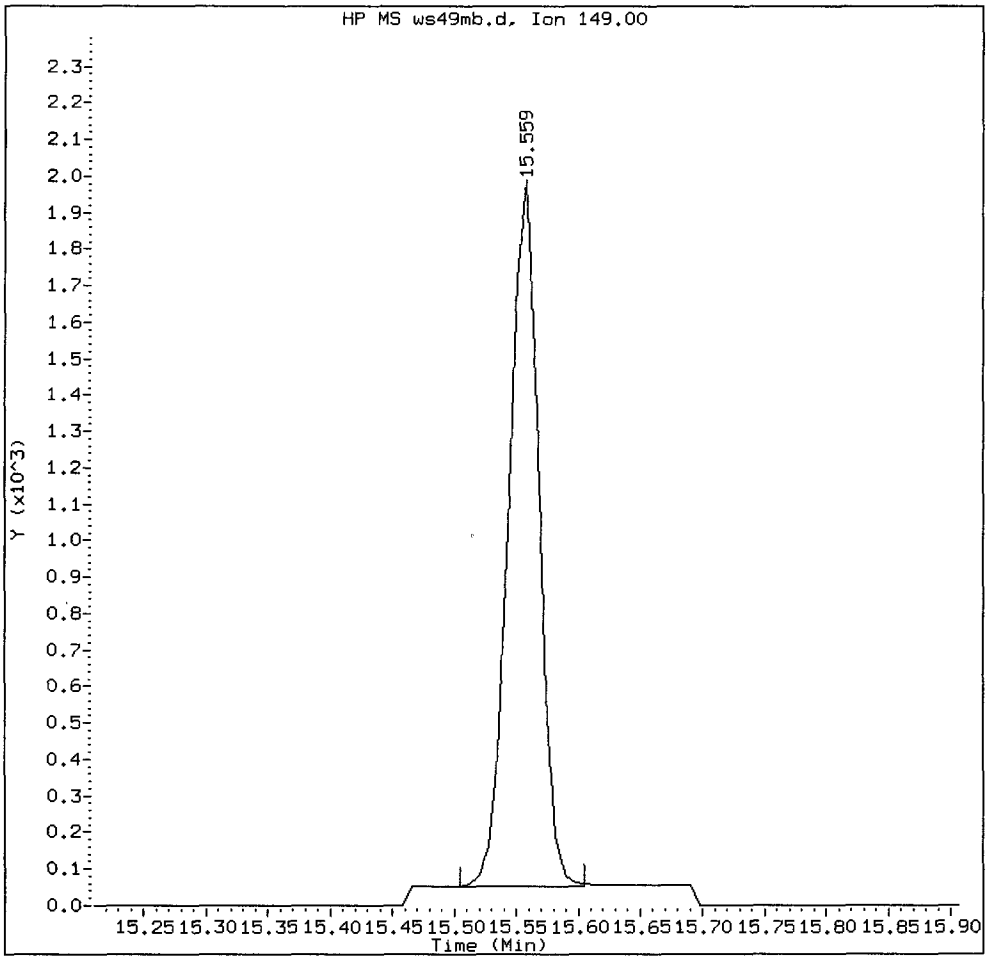






WS49MBS1, /chem1/nt10.i/20130613.b/SIM.b/ws49mb.d

Diethylphthalate Amount: 0.08 Area: 3299



MANUAL INTEGRATION for Diethylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/17/13

CO-ELUTION SUMMARY FOR FILE - ws49mb.d

Lab ID: WS49MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 6/17/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130613.b/SIM.b/ws49sb.d
Lab Smp Id: WS49LCSS1 Client Smp ID: WS49LCSS1
Inj Date : 13-JUN-2013 14:21
Operator : YZ Inst ID: nt10.i
Smp Info : WS49LCSS1
Misc Info : 13-11813
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 17-Jun-2013 09:43 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.841	5.825	(0.724)	106265	5.23277	523.3
	3 Phenol	94	7.525	7.518	(0.933)	110275	3.77772	377.8
	7 1,3-Dichlorobenzene	146	7.989	7.989	(0.990)	74922	3.11474	311.5
*	8 1,4-Dichlorobenzene-d4	152	8.067	8.059	(1.000)	57812	4.00000	
	9 1,4-Dichlorobenzene	146	8.098	8.090	(1.004)	74720	3.11989	312.0
	11 Benzyl alcohol	79	8.393	8.393	(1.040)	44573	3.18380	318.4
	12 1,2-Dichlorobenzene	146	8.455	8.455	(1.048)	72929	3.20432	320.4
	13 2-Methylphenol	108	8.665	8.664	(1.074)	64636	3.09714	309.7
	15 4-Methylphenol	108	8.967	8.952	(1.112)	132612	6.24010	624.0
	16 N-Nitroso-di-n-propylamine	70	8.975	8.975	(1.113)	44407	3.70549	370.5
	22 2,4-Dimethylphenol	107	10.038	10.030	(0.943)	111325	5.46876	546.9
	26 1,2,4-Trichlorobenzene	180	10.569	10.562	(0.993)	67227	3.33776	333.8
*	27 Naphthalene-d8	136	10.639	10.639	(1.000)	210144	4.00000	
	30 Hexachlorobutadiene	225	11.102	11.095	(1.044)	39409	3.21431	321.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.012	14.005	(0.971)	141373	4.27607	427.6
*	42 Acenaphthene-d10	162	14.438	14.430	(1.000)	114587	4.00000	
	50 Diethylphthalate	149	15.566	15.559	(1.078)	163692	4.37216	437.2
	54 N-Nitrosodiphenylamine	169	15.922	15.914	(0.903)	103880	4.48076	448.1
	57 Hexachlorobenzene	284	16.994	16.986	(0.964)	55432	3.50008	350.0
	58 Pentachlorophenol	266	17.396	17.389	(0.986)	121036	12.8543	1285
*	59 Phenanthrene-d10	188	17.636	17.629	(1.000)	211440	4.00000	
$	66 Terphenyl-d14	244	20.963	20.955	(0.919)	118600	4.22104	422.1
	67 Butylbenzylphthalate	149	21.947	21.939	(0.962)	122170	5.76128	576.1
*	69 Chrysene-d12	240	22.806	22.806	(1.000)	228571	4.00000	
*	77 Perylene-d12	264	25.082	25.074	(1.000)	213817	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.843	26.827	(1.070)	183358	3.84722	384.7
	90 N-Nitrosodimethylamine	74	3.656	3.640	(0.453)	123530	9.91614	991.6

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49sb.d
Lab Smp Id: WS49LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: WS49LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	57812	9.79
27 Naphthalene-d8	192325	96162	384650	210144	9.27
42 Acenaphthene-d10	109274	54637	218548	114587	4.86
59 Phenanthrene-d10	203933	101966	407866	211440	3.68
69 Chrysene-d12	223647	111824	447294	228571	2.20
77 Perylene-d12	211919	105960	423838	213817	0.90

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.10
27 Naphthalene-d8	10.64	10.14	11.14	10.64	0.00
42 Acenaphthene-d10	14.43	13.93	14.93	14.44	0.05
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.04
69 Chrysene-d12	22.81	22.31	23.31	22.81	0.00
77 Perylene-d12	25.07	24.57	25.57	25.08	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS49LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

Client SDG: WS49
Fraction: SV
Client Smp ID: WS49LCSS1
Operator: YZ
SampleType: LCS
Quant Type: ISTD

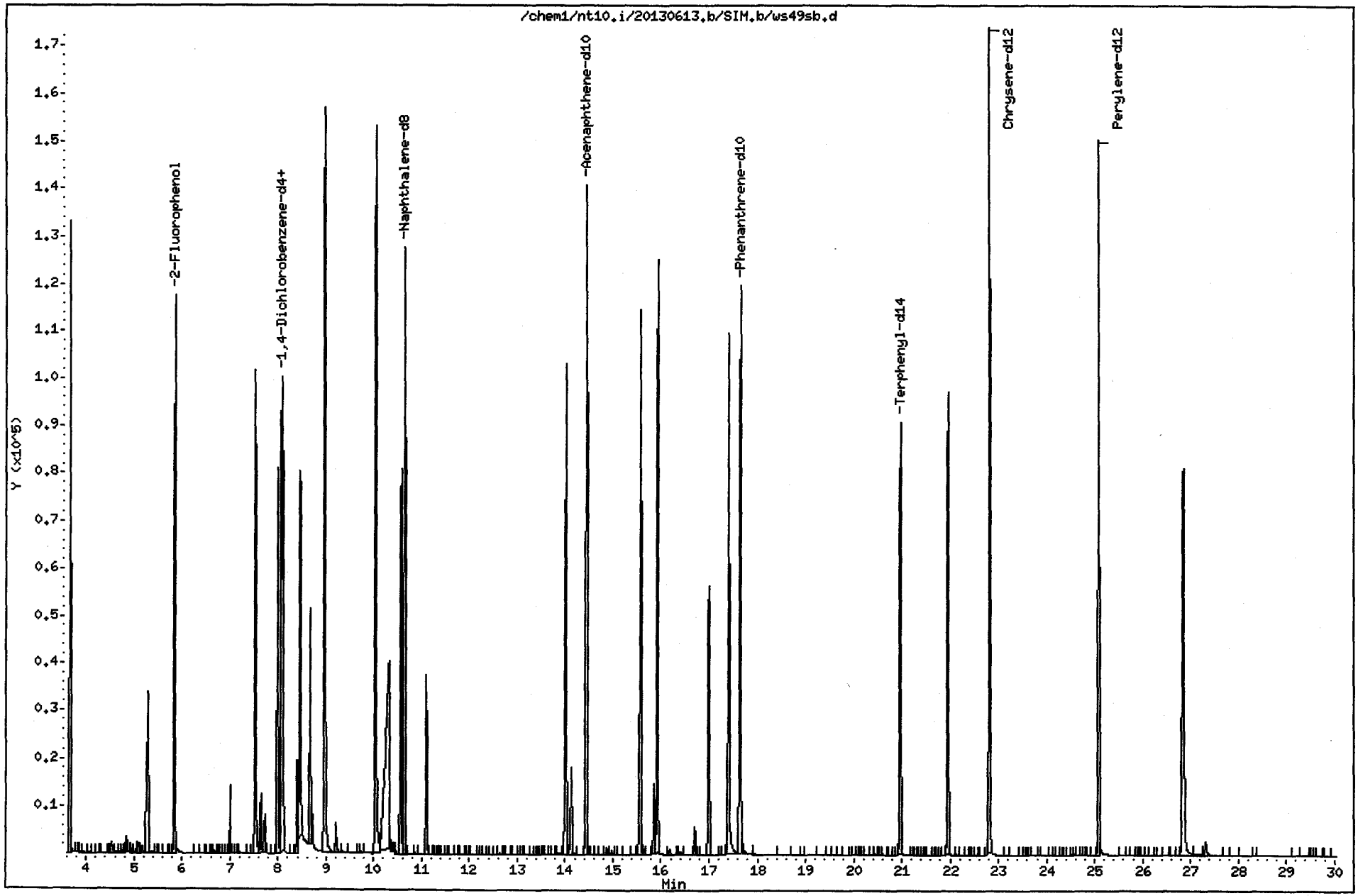
	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	377.8	75.55	30-160
7	1,3-Dichlorobenzen	500.0	311.5	62.29	30-160
9	1,4-Dichlorobenzen	500.0	312.0	62.40	30-160
11	Benzyl alcohol	500.0	318.4	63.68	30-160
12	1,2-Dichlorobenzen	500.0	320.4	64.09	30-160
13	2-Methylphenol	500.0	309.7	61.94	30-160
15	4-Methylphenol	1000	624.0	62.40	30-160
16	N-Nitroso-di-n-pro	500.0	370.5	74.11	30-160
22	2,4-Dimethylphenol	1000	546.9	54.69	30-160
26	1,2,4-Trichloroben	500.0	333.8	66.76	30-160
30	Hexachlorobutadien	500.0	321.4	64.29	30-160
39	Dimethylphthalate	500.0	427.6	85.52	30-160
50	Diethylphthalate	500.0	437.2	87.44	30-160
54	N-Nitrosodiphenyla	500.0	448.1	89.62	30-160
57	Hexachlorobenzene	500.0	350.0	70.00	30-160
58	Pentachlorophenol	1000	1285	128.54	30-160
67	Butylbenzylphthala	500.0	576.1	115.23	30-160
79	Dibenzo(a,h)anthra	500.0	384.7	76.94	30-160
90	N-Nitrosodimethyla	1000	991.6	99.16	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	523.3	69.77	30-160
$ 66	Terphenyl-d14	500.0	422.1	84.42	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/ws49sb.d
Date : 13-JUN-2013 14:21
Client ID: WS49LCSS1
Sample Info: WS49LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ws49sb.d

Lab ID: WS49LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM YZ 6/17/13

Data file : /chem1/nt10.i/20130613.b/SIM.b/ws49sbd.d
Lab Smp Id: WS49LCSDS1 Client Smp ID: WS49LCSDS1
Inj Date : 13-JUN-2013 14:58
Operator : YZ Inst ID: nt10.i
Smp Info : WS49LCSDS1
Misc Info : 13-11813
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 17-Jun-2013 09:43 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1	2-Fluorophenol	112	5.841	5.825	(0.724)	99752	5.10481	510.5
	3	Phenol	94	7.525	7.518	(0.933)	107382	3.82298	382.3
	7	1,3-Dichlorobenzene	146	7.997	7.989	(0.991)	71951	3.10861	310.9
*	8	1,4-Dichlorobenzene-d4	152	8.067	8.059	(1.000)	55629	4.00000	
	9	1,4-Dichlorobenzene	146	8.098	8.090	(1.004)	71650	3.10910	310.9
	11	Benzyl alcohol	79	8.400	8.393	(1.041)	37135	2.75660	275.7
	12	1,2-Dichlorobenzene	146	8.455	8.455	(1.048)	69751	3.18496	318.5
	13	2-Methylphenol	108	8.664	8.664	(1.074)	65413	3.25737	325.7
	15	4-Methylphenol	108	8.967	8.952	(1.112)	130049	6.35964	636.0
	16	N-Nitroso-di-n-propylamine	70	8.975	8.975	(1.113)	43126	3.73981	374.0
	22	2,4-Dimethylphenol	107	10.037	10.030	(0.943)	124193	6.31301	631.3
	26	1,2,4-Trichlorobenzene	180	10.569	10.562	(0.993)	64124	3.29439	329.4
*	27	Naphthalene-d8	136	10.639	10.639	(1.000)	203083	4.00000	
	30	Hexachlorobutadiene	225	11.102	11.095	(1.044)	37853	3.19475	319.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.012	14.005	(0.971)	138518	4.28442	428.4
*	42 Acenaphthene-d10	162	14.437	14.430	(1.000)	112054	4.00000	
	50 Diethylphthalate	149	15.566	15.559	(1.078)	160594	4.38638	438.6
	54 N-Nitrosodiphenylamine	169	15.921	15.914	(0.903)	103857	4.58241	458.2
	57 Hexachlorobenzene	284	16.994	16.986	(0.964)	54328	3.50897	350.9
	58 Pentachlorophenol	266	17.396	17.389	(0.986)	120390	13.0787	1308
*	59 Phenanthrene-d10	188	17.636	17.629	(1.000)	206704	4.00000	
$	66 Terphenyl-d14	244	20.963	20.955	(0.919)	114974	4.27637	427.6
	67 Butylbenzylphthalate	149	21.946	21.939	(0.962)	121167	5.97144	597.1
*	69 Chrysene-d12	240	22.813	22.806	(1.000)	218716	4.00000	
*	77 Perylene-d12	264	25.082	25.074	(1.000)	207476	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.842	26.827	(1.070)	186681	4.03665	403.7
	90 N-Nitrosodimethylamine	74	3.655	3.640	(0.453)	117130	9.77136	977.1

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws49sbd.d
Lab Smp Id: WS49LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: WS49LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	55629	5.64
27 Naphthalene-d8	192325	96162	384650	203083	5.59
42 Acenaphthene-d10	109274	54637	218548	112054	2.54
59 Phenanthrene-d10	203933	101966	407866	206704	1.36
69 Chrysene-d12	223647	111824	447294	218716	-2.20
77 Perylene-d12	211919	105960	423838	207476	-2.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.09
27 Naphthalene-d8	10.64	10.14	11.14	10.64	0.00
42 Acenaphthene-d10	14.43	13.93	14.93	14.44	0.05
59 Phenanthrene-d10	17.63	17.13	18.13	17.64	0.04
69 Chrysene-d12	22.81	22.31	23.31	22.81	0.03
77 Perylene-d12	25.07	24.57	25.57	25.08	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS49LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11813

Client SDG: WS49
Fraction: SV
Client Smp ID: WS49LCSDS1
Operator: YZ
SampleType: LCSD
Quant Type: ISTD

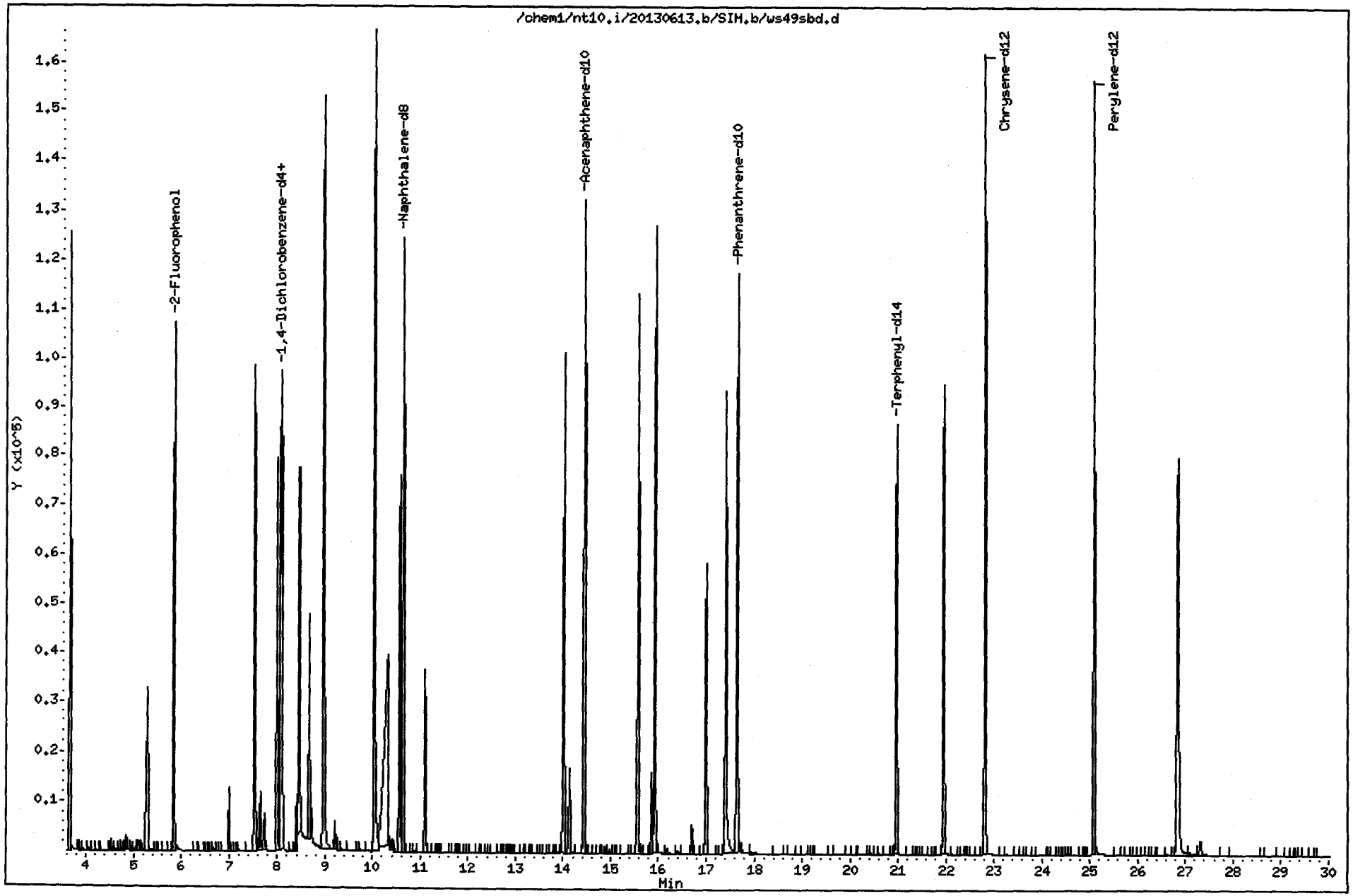
	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	382.3	76.46	30-160
7	1,3-Dichlorobenzen	500.0	310.9	62.17	30-160
9	1,4-Dichlorobenzen	500.0	310.9	62.18	30-160
11	Benzyl alcohol	500.0	275.7	55.13	30-160
12	1,2-Dichlorobenzen	500.0	318.5	63.70	30-160
13	2-Methylphenol	500.0	325.7	65.15	30-160
15	4-Methylphenol	1000	636.0	63.60	30-160
16	N-Nitroso-di-n-pro	500.0	374.0	74.80	30-160
22	2,4-Dimethylphenol	1000	631.3	63.13	30-160
26	1,2,4-Trichloroben	500.0	329.4	65.89	30-160
30	Hexachlorobutadien	500.0	319.5	63.89	30-160
39	Dimethylphthalate	500.0	428.4	85.69	30-160
50	Diethylphthalate	500.0	438.6	87.73	30-160
54	N-Nitrosodiphenyla	500.0	458.2	91.65	30-160
57	Hexachlorobenzene	500.0	350.9	70.18	30-160
58	Pentachlorophenol	1000	1308	130.79	30-160
67	Butylbenzylphthala	500.0	597.1	119.43	30-160
79	Dibenzo(a,h)anthra	500.0	403.7	80.73	30-160
90	N-Nitrosodimethyla	1000	977.1	97.71	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	510.5	68.06	30-160
$ 66	Terphenyl-d14	500.0	427.6	85.53	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/ws49sbd.d
Date : 13-JUN-2013 14:58
Client ID: WS49LCSDS1
Sample Info: WS49LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ws49sbd.d

Lab ID: WS49LCSDS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/14/13

Data file : /chem1/nt10.i/20130613.b/SIM.b/ws21a.d
Lab Smp Id: WS21A Client Smp ID: KC-IV-SPS-20130531-
Inj Date : 13-JUN-2013 21:07
Operator : YZ Inst ID: nt10.i
Smp Info : WS21A
Misc Info : 13-11678
Comment :
Method : /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Meth Date : 13-Jun-2013 13:41 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.04000	Weight of sample extracted (g)
M	19.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.849	5.825	(0.724)	90457	4.54090	429.9
	3 Phenol	94	7.549	7.518	(0.935)	1765	0.06164	5.836
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.075	8.059	(1.000)	56710	4.00000	
	9 1,4-Dichlorobenzene	146	8.098	8.090	(1.003)	654	0.02784 J	2.636(M)
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	8.463	8.455	(1.048)	901	0.04036 J	3.821
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	8.991	8.952	(1.113)	572	0.02744	2.598(M)
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.647	10.639	(1.000)	214283	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	14.453	14.430	(1.000)	108036	4.00000	
	50 Diethylphthalate	149	15.566	15.559	(1.077)	4123	0.11680 M	11.06
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.652	17.629	(1.000)	198678	4.00000	
$	66 Terphenyl-d14	244	20.971	20.955	(0.919)	99488	4.01899	380.5
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	22.822	22.806	(1.000)	201377	4.00000	
*	77 Perylene-d12	264	25.098	25.074	(1.000)	192571	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.866	26.827	(1.070)	2136	0.04976 J	4.711
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws21a.d
Lab Smp Id: WS21A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11678

Calibration Date: 13-JUN-2013
Calibration Time: 13:07
Client Smp ID: KC-IV-SPS-201305
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	56710	7.69
27 Naphthalene-d8	192325	96162	384650	214283	11.42
42 Acenaphthene-d10	109274	54637	218548	108036	-1.13
59 Phenanthrene-d10	203933	101966	407866	198678	-2.58
69 Chrysene-d12	223647	111824	447294	201377	-9.96
77 Perylene-d12	211919	105960	423838	192571	-9.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.06	7.56	8.56	8.07	0.19
27 Naphthalene-d8	10.64	10.14	11.14	10.65	0.07
42 Acenaphthene-d10	14.43	13.93	14.93	14.45	0.16
59 Phenanthrene-d10	17.63	17.13	18.13	17.65	0.13
69 Chrysene-d12	22.81	22.31	23.31	22.82	0.07
77 Perylene-d12	25.07	24.57	25.57	25.10	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

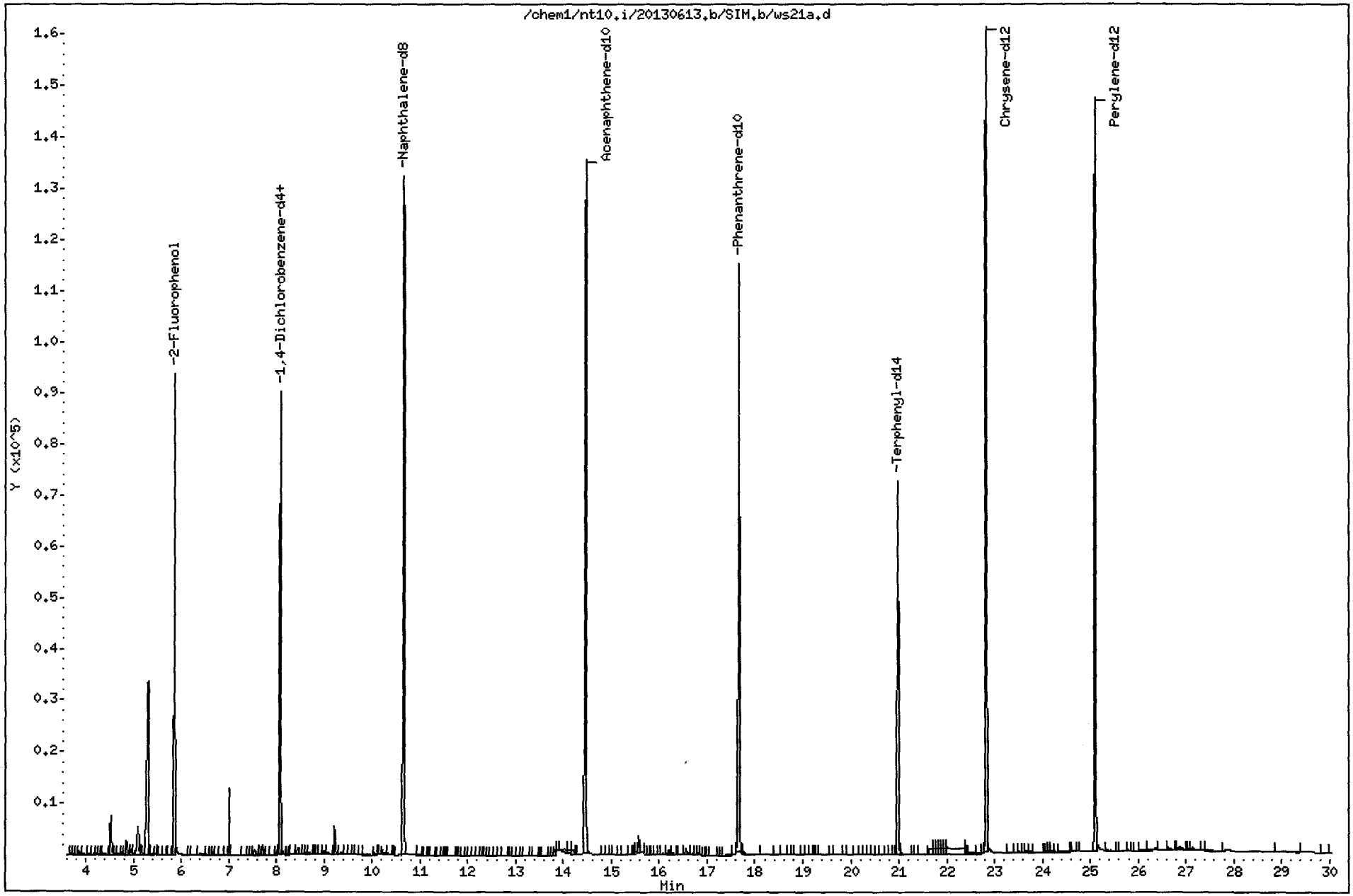
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS21A
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130613.b/SIM.b/SIMABN2.m
Misc Info: 13-11678

Client SDG: WS21
Fraction: SV
Client Smp ID: KC-IV-SPS-20130531-
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	710.1	429.9	60.55	30-160
$ 66 Terphenyl-d14	473.4	380.5	80.38	30-160

Data File: /chem1/nt10.i/20130613.b/SIM.b/ws21a.d
Date : 13-JUN-2013 21:07
Client ID: KC-IV-SPS-20130531-
Sample Info: WS21A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130613.b/SIM.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

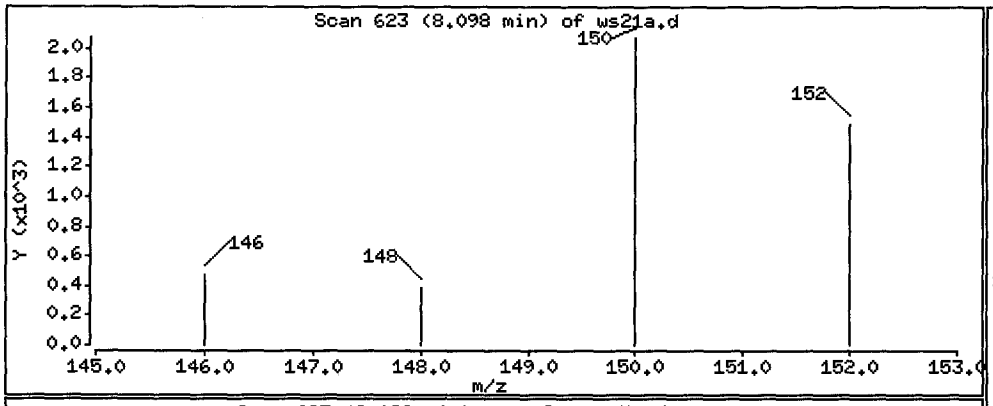
Operator: YZ

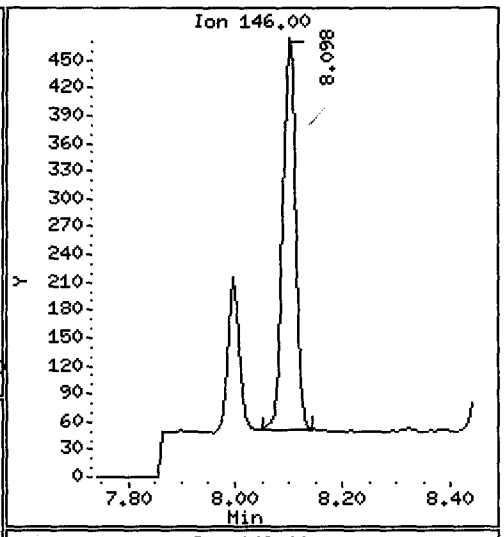
Column phase: ZB-5msi

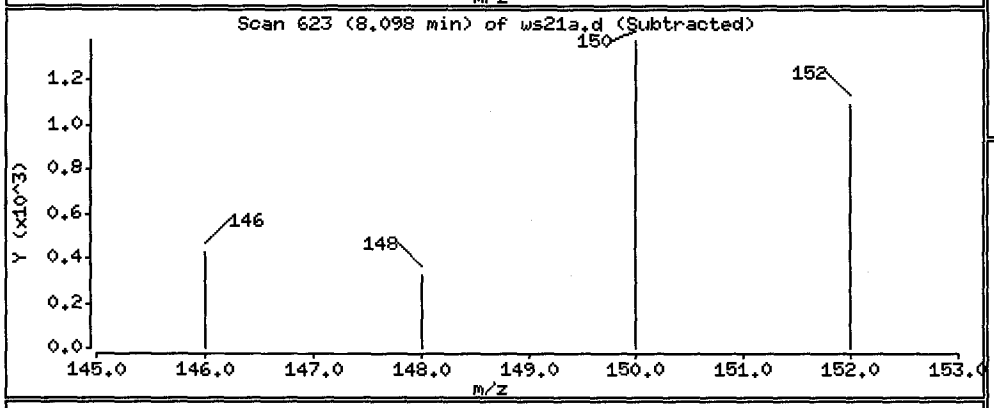
Column diameter: 0.25

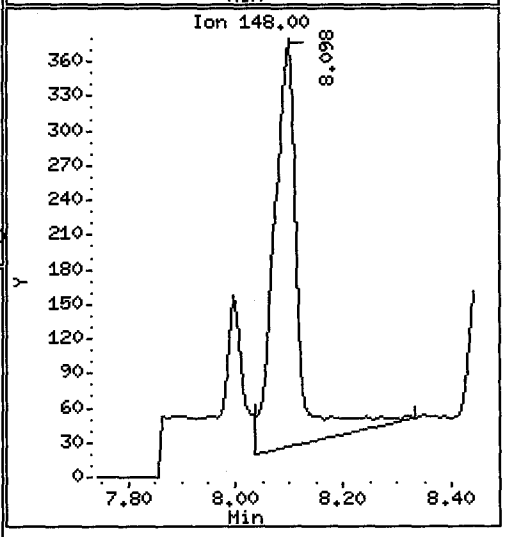
9 1,4-Dichlorobenzene

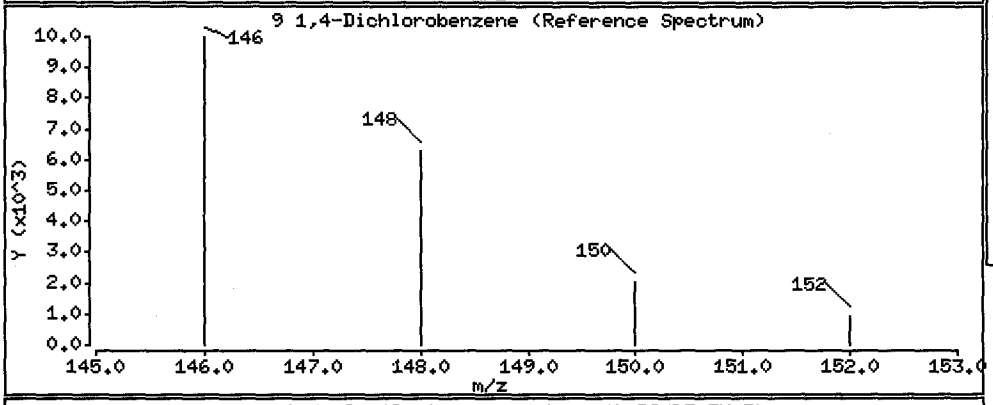
Concentration: 2.636 ug/kg

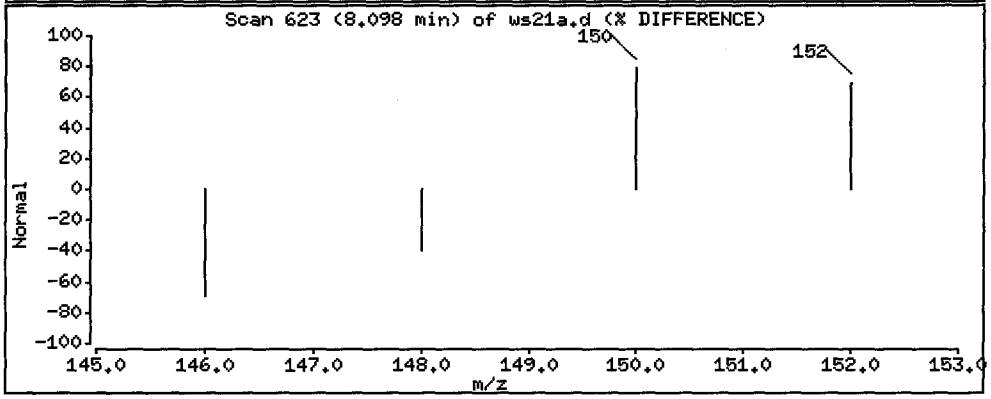












WS21 : 88365

Data File: /chem1/nt10.i/20130613.b/SIM.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

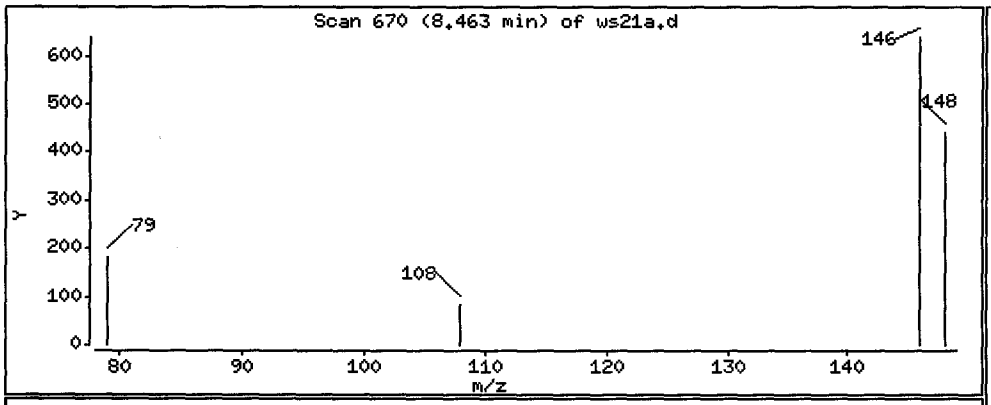
Operator: YZ

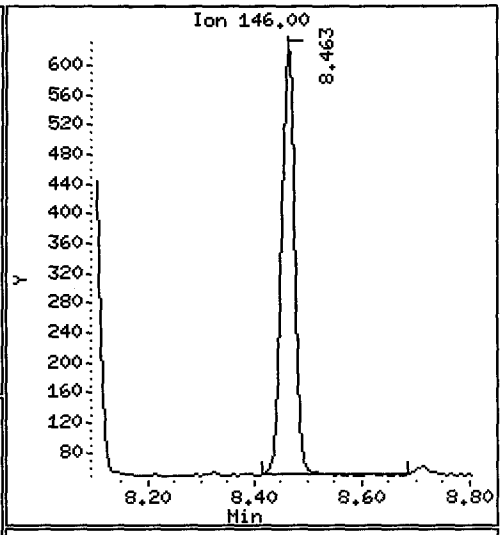
Column phase: ZB-5msi

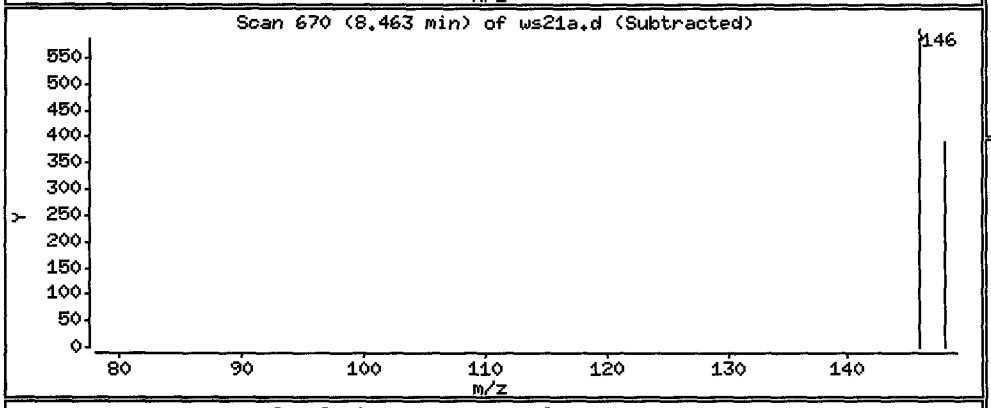
Column diameter: 0.25

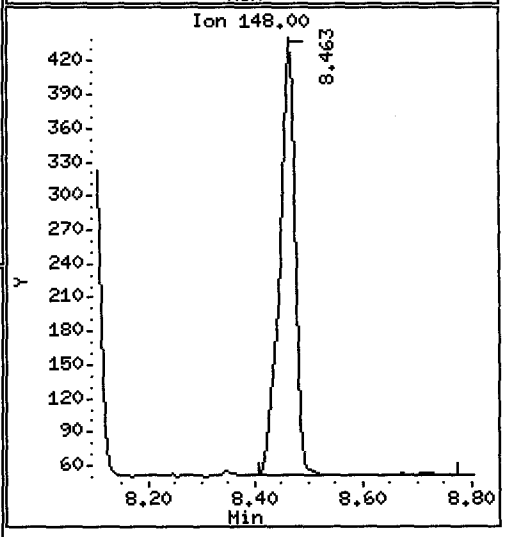
12 1,2-Dichlorobenzene

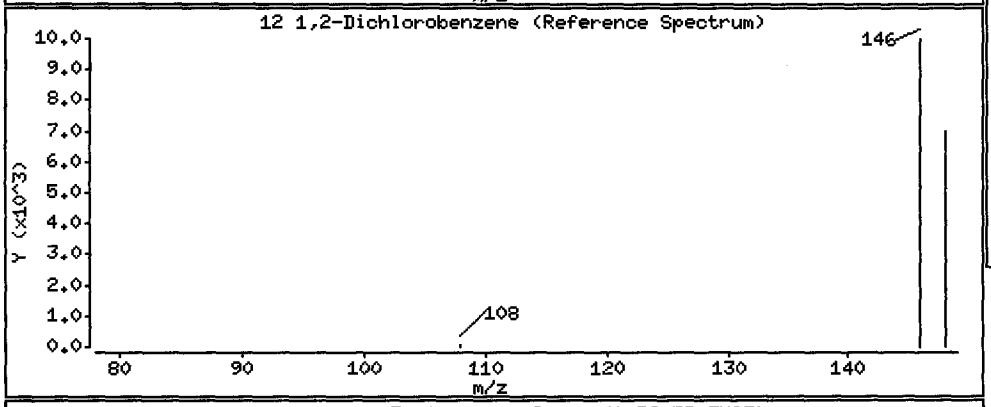
Concentration: 3.821 ug/kg

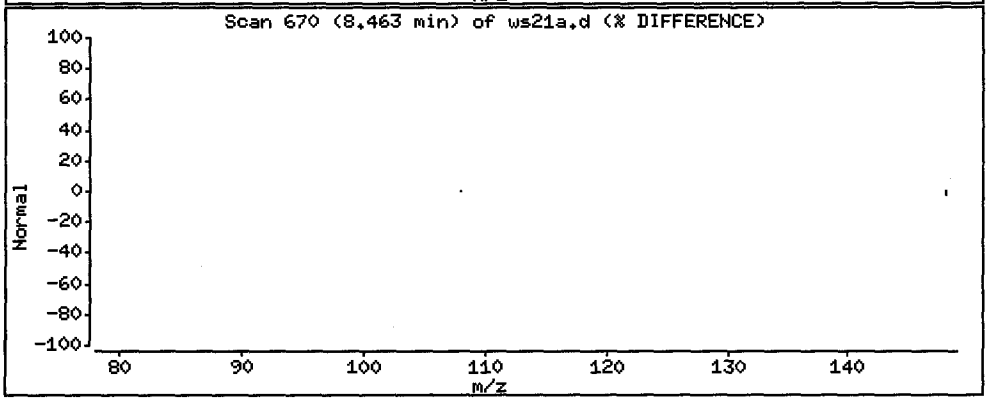












WS21 : 89996

Data File: /chem1/nt10.i/20130613.b/SIM.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

Operator: YZ

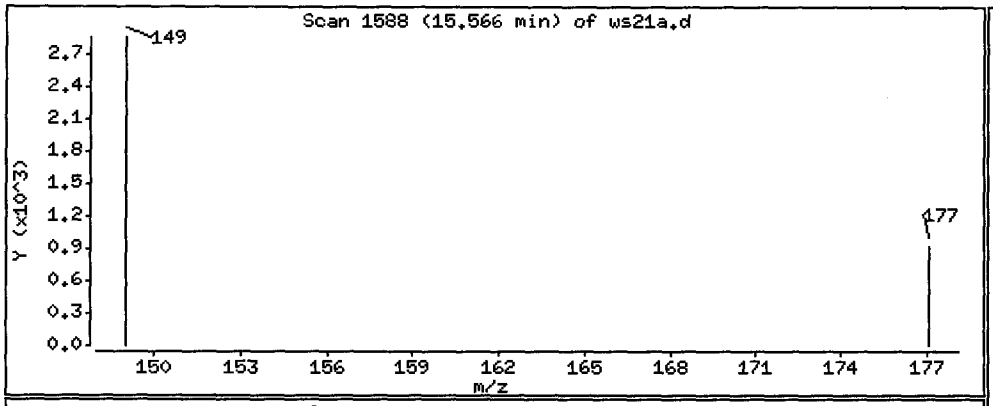
Column phase: ZB-5msi

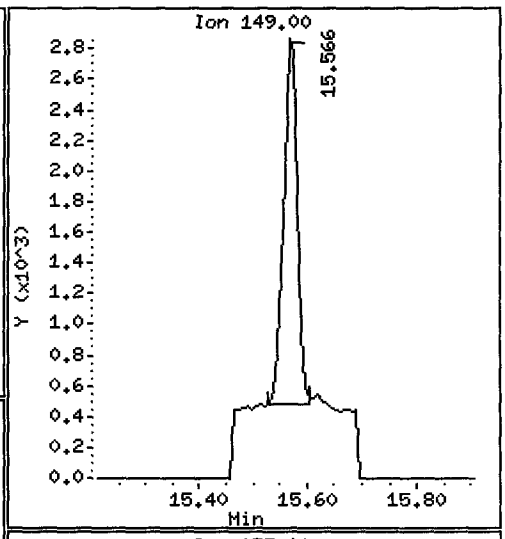
Column diameter: 0.25

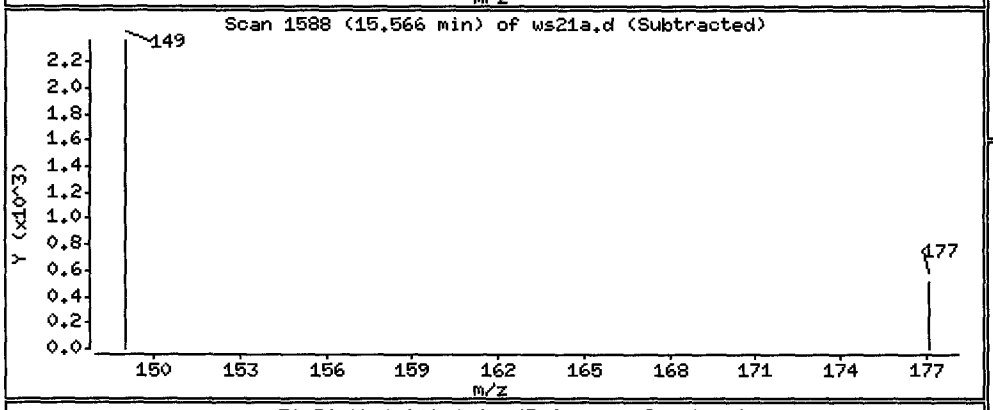
B

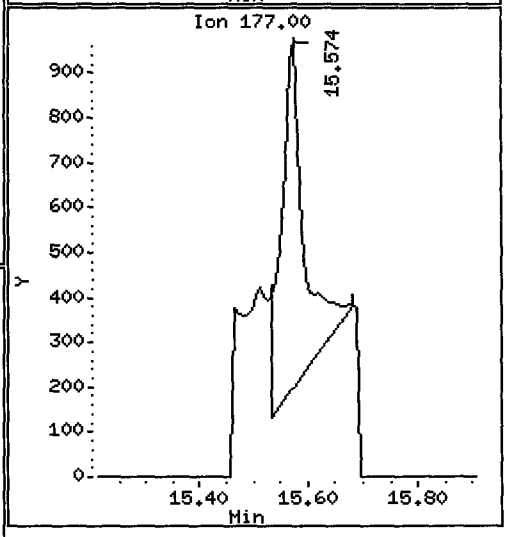
50 Diethylphthalate

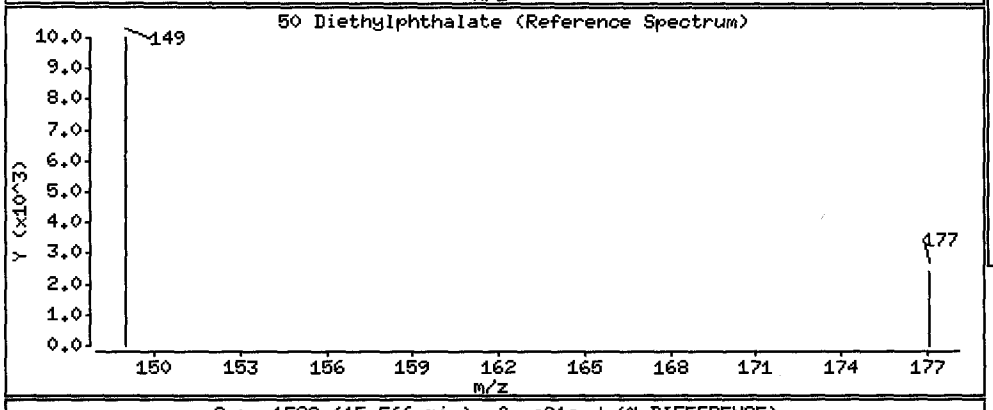
Concentration: 11.06 ug/kg

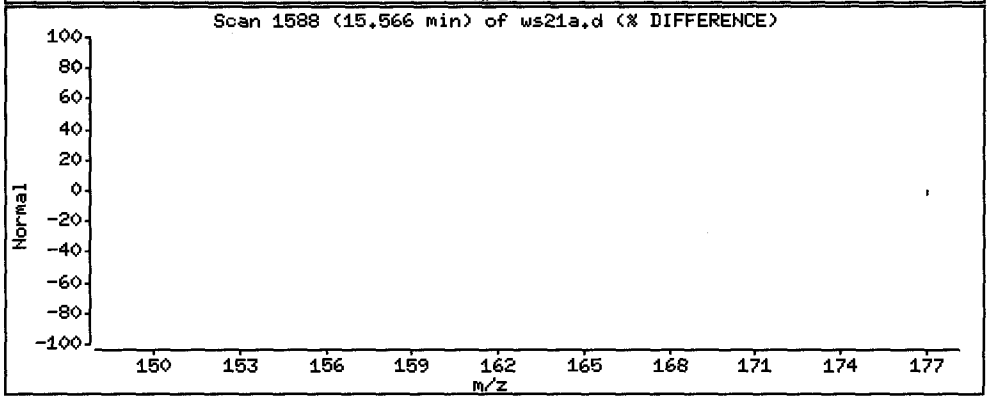












WS21 : 20937

Data File: /chem1/nt10.i/20130613.b/SIM.b/ws21a.d

Date : 13-JUN-2013 21:07

Client ID: KC-IV-SPS-20130531-

Instrument: nt10.i

Sample Info: WS21A

Volume Injected (uL): 1.0

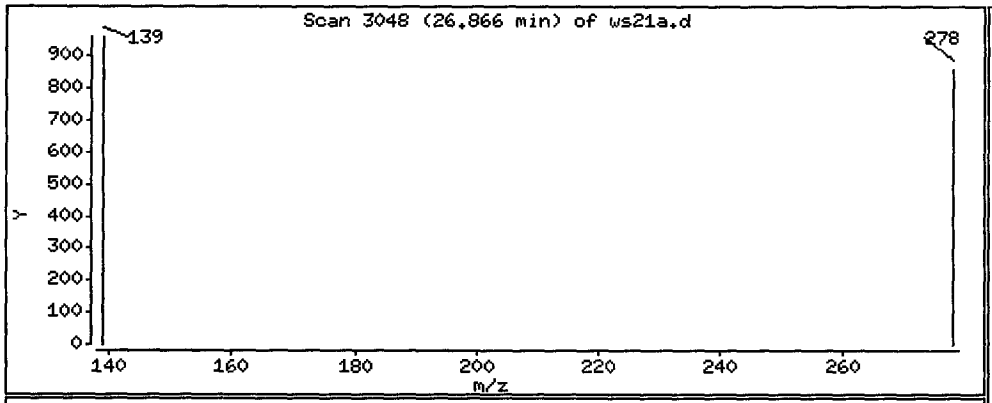
Operator: YZ

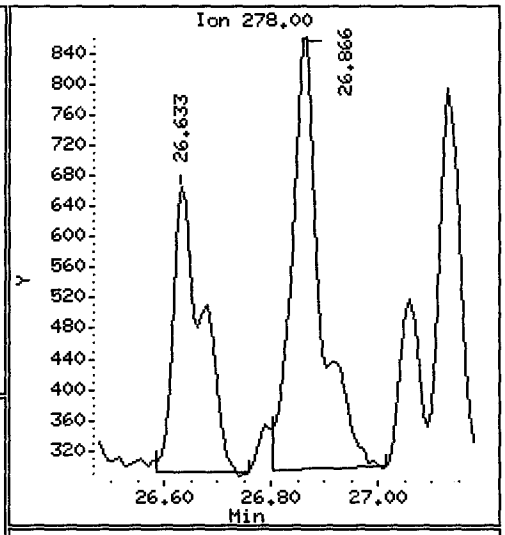
Column phase: ZB-5msi

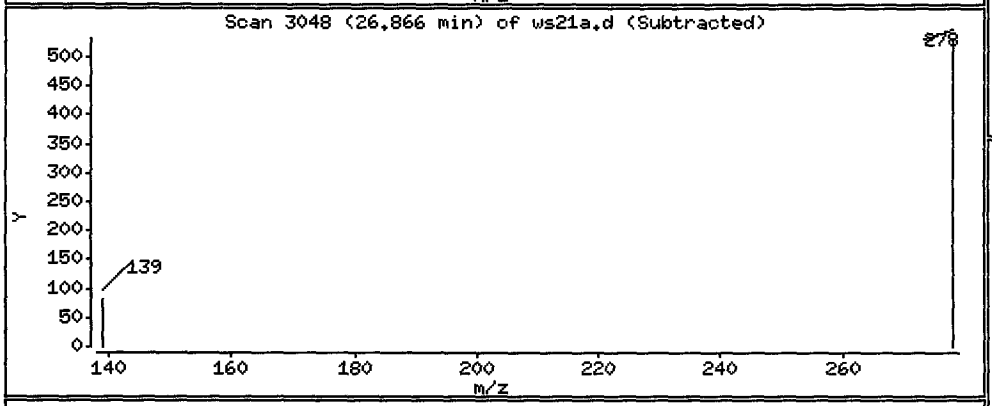
Column diameter: 0.25

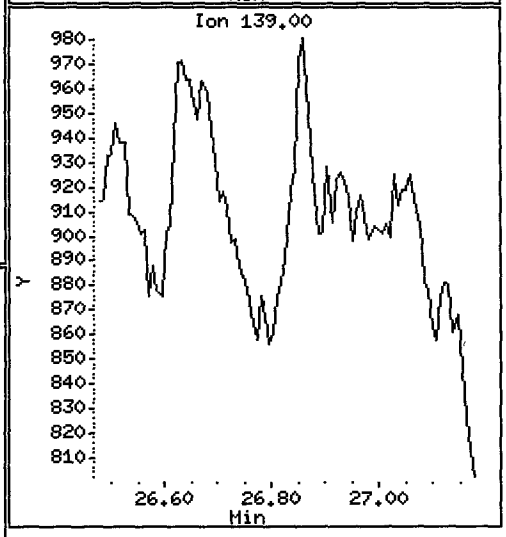
79 Dibenzo(a,h)anthracene

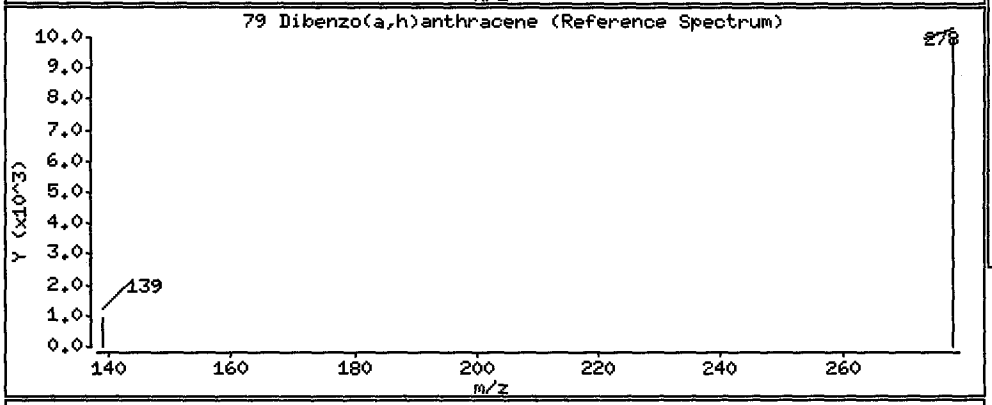
Concentration: 4.711 ug/kg

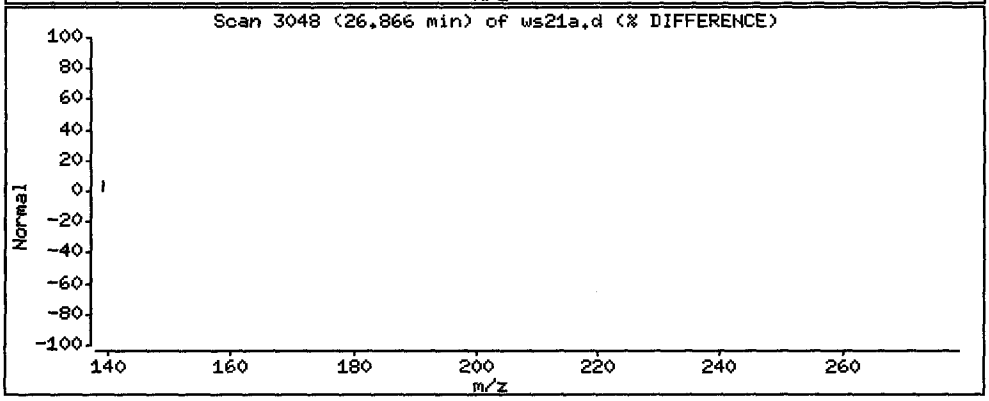






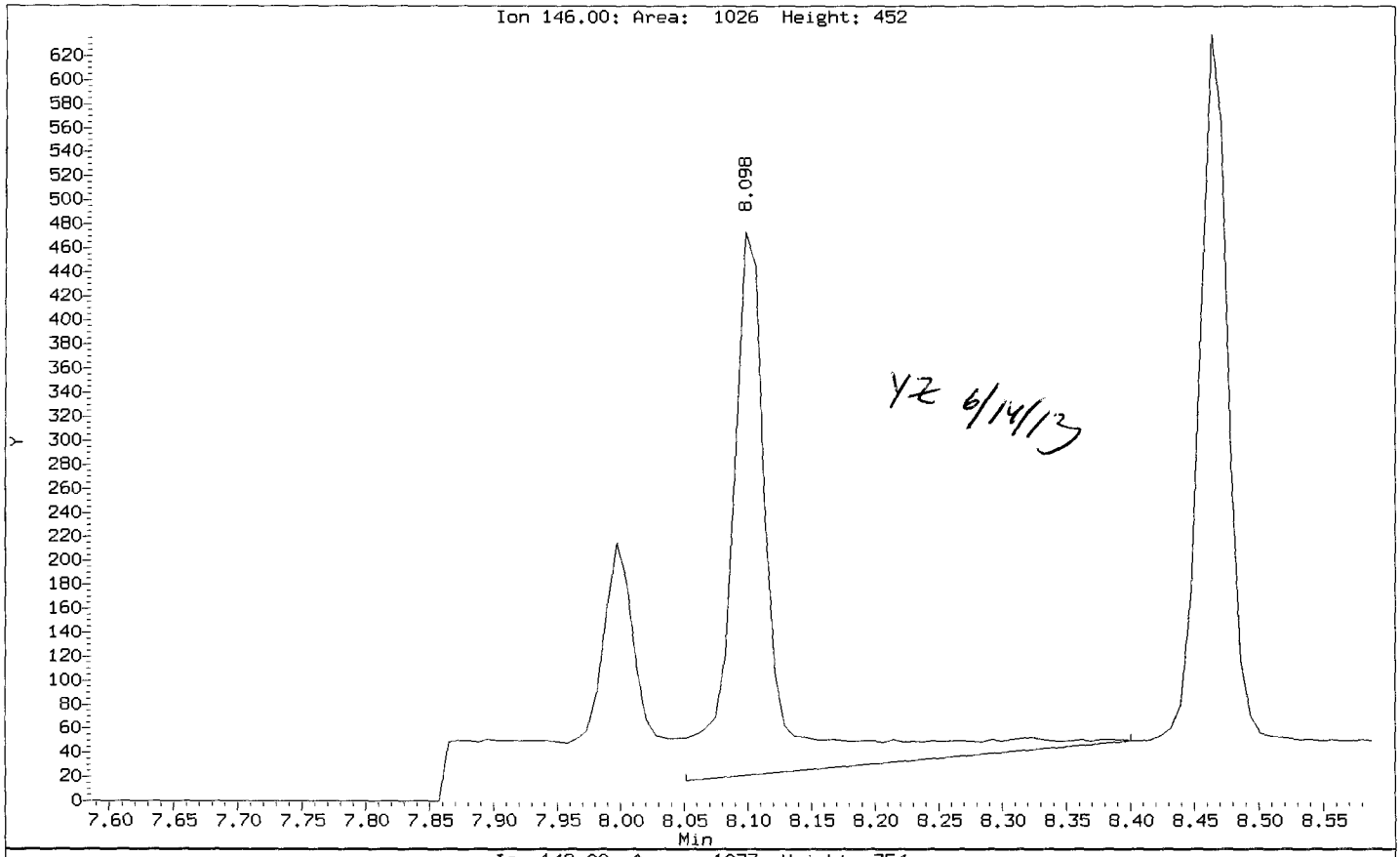




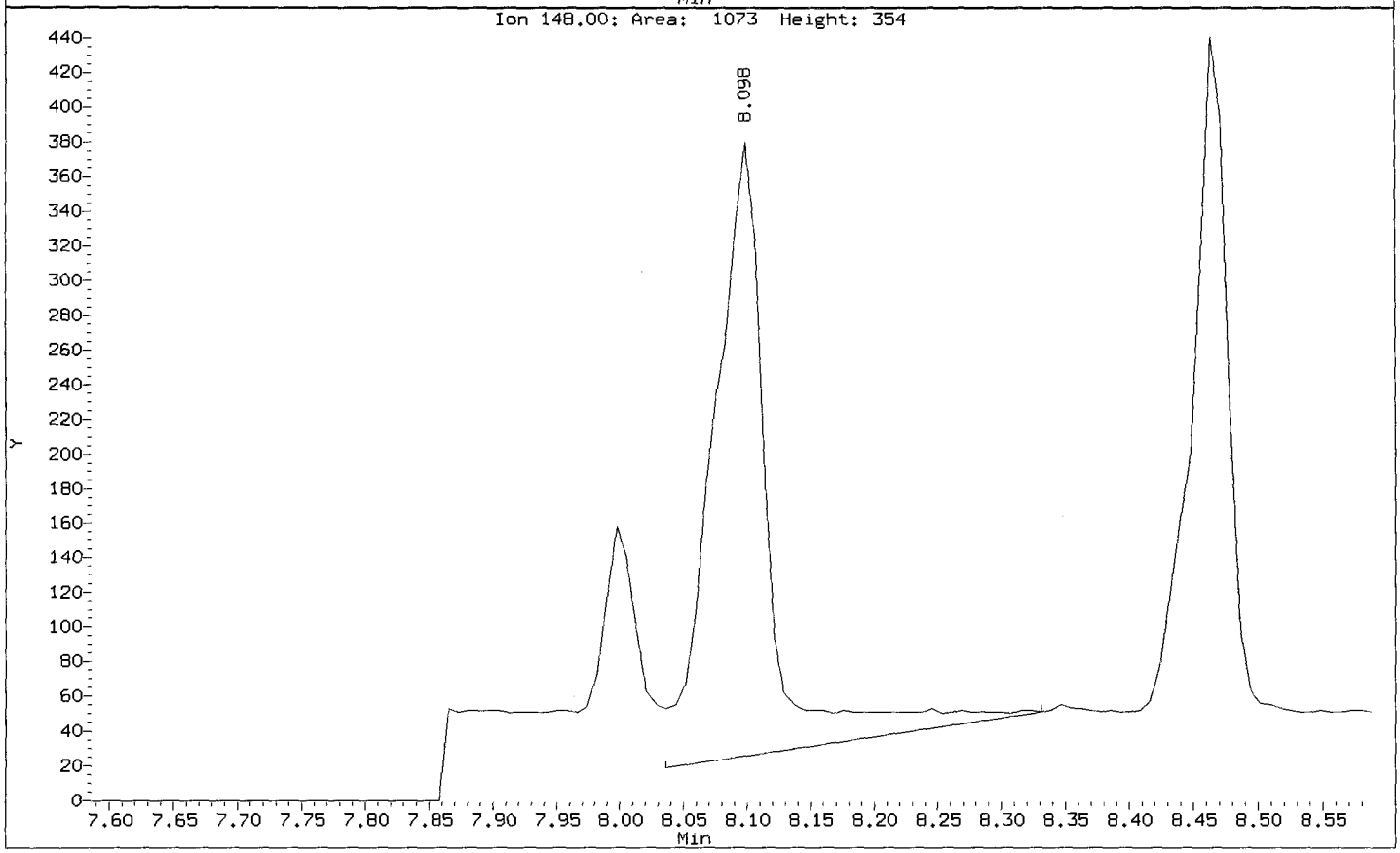


Data File: /chem1/nt10.i/20130613.b/SIM.b/ws21a.d
Injection Date: 13-JUN-2013 21:07
Instrument: nt10.i
Client Sample ID: KC-IV-SPS-20130531-

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



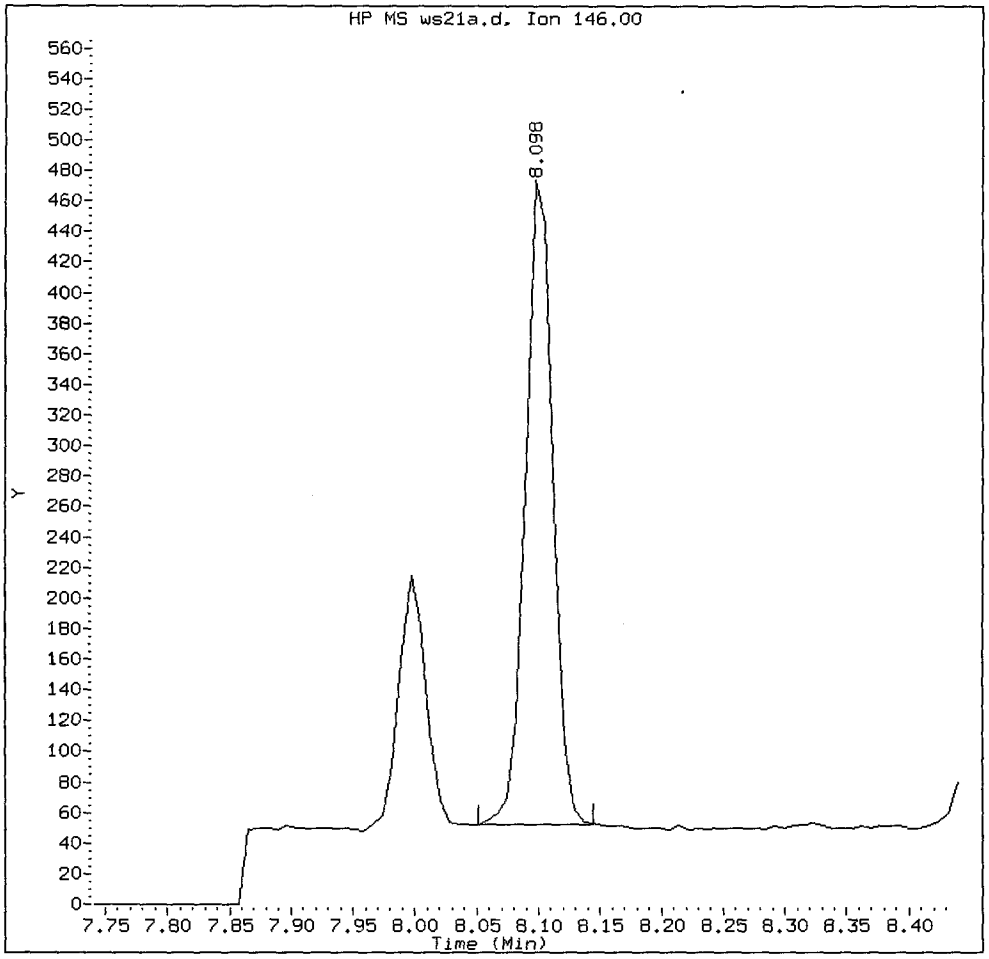
YZ 6/14/13



WS21 : 88333

WS21A, /chem1/nt10.i/20130613.b/SIM.b/ws21a.d

1,4-Dichlorobenzene Amount: 0.03 Area: 654



MANUAL INTEGRATION for 1,4-Dichlorobenzene

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/14/13

CO-ELUTION SUMMARY FOR FILE - ws21a.d

Lab ID: WS21A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 13-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290A & 1613B
Solid Samples

ARI Job No(s): WS30, WS21, WS09, WR99

Matrix (circle one)	Soil	Sediment	Oil	Tissue
Extraction Method	Start Time/Date:		End Time/Date:	
Soxhlet	1309	6/5/13	0510	6/6/13

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	M	6/5/13
Purified Sand		I8025	M	6/5/13
Toluene		8142	M	6/5/13
Hexane		I8242/I8242	PD PD	6/5/13 6/10/13
CH_2Cl_2		I8214	PD	6/10/13
H_2SO_4		I8156	PD	6/6/13
Na_2SO_4		I8130	PD	6/10/13
Glasswool		I7988	PD	6/10/13
10 % $AgNO_3$	✓			
Basic Silica		H142	PD	6/10/13
Acid Silica		H166	PD	6/10/13
0% Silica		I8035/I8035	M/PD	6/5/13 6/10/13
Activated Florisil		H127	PD	6/10/13
Dual Carbon Column	✓			
Other (SRM)		I8235	M	6/5/13
Nonane		I5167	PD	6/11/13

Bottle ID	ARI Sample ID	Sample Weight (eq to dry wt)	Roto Vap 45 °C	Final Vol.	H20 Trap Vol (mL)	Comments
6/5/13	WS30.MB	10.00g	1 (2)	10uL	0.9	
6/6/13	OPR	10.00g	(1) 2	10uL	1.0	
~~QLS~~	~~QLS~~	~~10.00g~~	~~1 / 2~~	~~10uL~~		
1	SRM	10.00	1 (2)	10uL	0.2	
3	A	14.65	(1) 2	10uL	5.0	
3	B	13.16	1 (2)	10uL	4.0	
3	C	12.97	(1) 2	10uL	3.6	
3	D	13.86	(1) 2	10uL	4.6	
3	E	13.38	1 (2)	10uL	4.4	
3	F	13.59	(1) 2	10uL	3.4	
3	G	14.05	1 (2)	10uL	3.8	
3	H	13.75	(1) 2	10uL	4.2	
5	I	14.56	1 (2)	10uL	5.0	
5	Dup	14.57	1 (2)	10uL	5.0	
3	J	14.23	(1) 2	10uL	5.0	
10	WS21.A	12.50	1 (2)	10uL	3.8	
5	WS09.A	14.60	(1) 2	10uL	3.6	
10	WR99.D	13.26	1 (2)	10uL	0.6	
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
Prep Analyst/Date		M 6/5/13	PD 6/6/13	PD 6/11/13	PD 6/6/13	

Reagent / Standard	Vol	ID / Lot Number	Solution Conc.	Expiration Date	Initials	Date	Witness
Recovery Standard	1.0 mL	B001395	2/4ng/mL	5/20/14	JW	6/5/13 JW	M
Ongoing Precision /Recovery	20 µL	2069.3	10/50/100ng/mL	2/6/14	JW	6/5/13 JW	M
~~QLS Standard~~	~~10 µL~~	211.	0.5/2.5/5ng/mL			6/5/13 JW	
Clean-up Standard	1.0 mL	B000264	0.8ng/mL	5/6/14	M	6/10/13	PD
Internal Standard	10 µL		200ng/mL				

Verify Client ID

Analyst/Date M 6/5/13

Acid Clean

(Y)N

Analyst/Date PD 6/6/13

Silica-Florisil

(Y)N

Analyst/Date PD 6/10/13

Supervisor Review: 6/11/13

Bench Sheet No.: 00050

Dioxin Raw Data
Initial Calibration

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: _____ Client ID: _____

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 6/6/13 Analysis Start Date: _____

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	Y / N / _____	Signal / Noise ≥ 2.5?	Y / N / _____
TCDD / TCDF Resolution ≤ 25%	Y / N / _____	Extraction STD Limits Met?	Y / N / _____
PCDF Windows Verified	Y / N / _____	Cleanup STD Limits Met?	Y / N / _____
CCV Meets %D Limits?	Y / N / _____	Method Blank in Control?	Y / N / _____
CCV Ion Ratios within Limits?	Y / N / _____	OPR Recovery Limits Met?	Y / N / _____
CCV RRT within Limits?	Y / N / _____	Values Exceeding Curve Range?	Y / N / _____
Manual Integrations for Samples?	Y / N _____	Samples Diluted?	Y / N / _____
Special Analysis Request?	Y / N / _____	Duplicate Sample RPD ≤ 25%?	NA / _____

Detail problems, corrective actions and/or other pertinent information below:

Dioxins Curve 6/6/13

- All cmpds % RSD < 20%
- TCDD/TCDF not calibrated in CSL. 5 pt curve w/ CS1 as low point (0.5).
- All others 6 pt. curve. CSL - CS5

(Review 1)Analyst: _____ Date: 6/10/13

(Review 2)Reviewer: _____ Date: _____

USGS : 20215

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 6/6/13 Analysis: Dioxins Analyst: NL

GC Program: 8290C Column No: I7822 Column Type: RTX-Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): Jun0613_1-5 Detector Voltage: 350

Resolution Check Files: 11:00, 20:55 Curve Date: 6/6/13

IS/SS	Ical/Ccal	LCS/ICV
	I8145 - 8149	
I8144	28155	I7383
	I7708	
	1997-2	

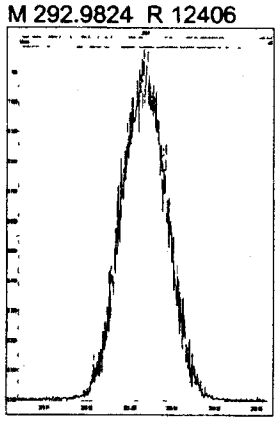
1	06-Jun-13	11:04:16	13060602	CS3WD
2	06-Jun-13	11:58:30	13060603	ISC01
3	06-Jun-13	14:34:26	13060604	CSL
4	06-Jun-13	15:31:00	13060605	CS1
5	06-Jun-13	16:22:19	13060606	CS2
6	06-Jun-13	17:15:21	13060607	CS3
7	06-Jun-13	18:08:22	13060608	CS4
8	06-Jun-13	19:01:24	13060609	CS5
9	06-Jun-13	19:54:25	13060610	ICV
10	06-Jun-13	20:55:35	13060611	ISC02

NL 6/10/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Printed: Thursday, June 06, 2013 11:00:09 Pacific Daylight Time

M 292.9824 R 12406



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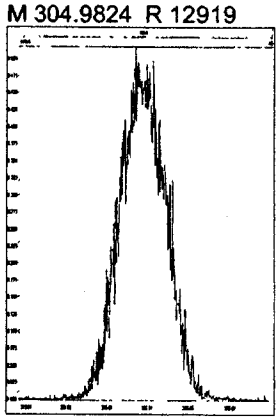

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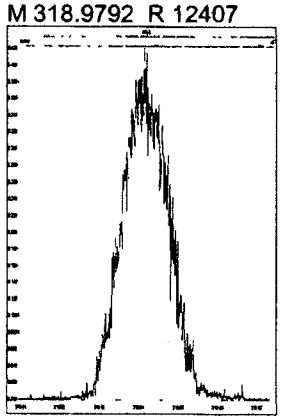

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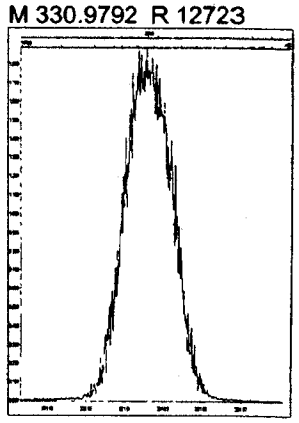

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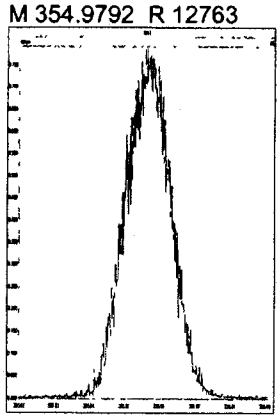

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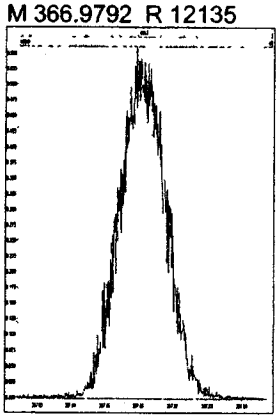

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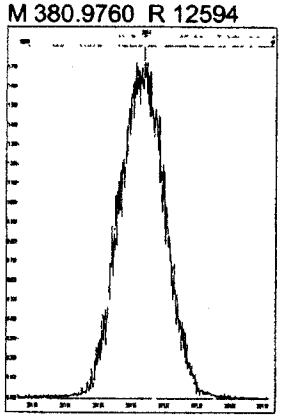

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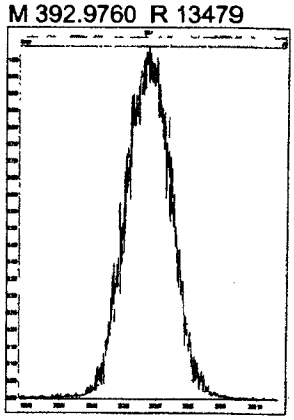

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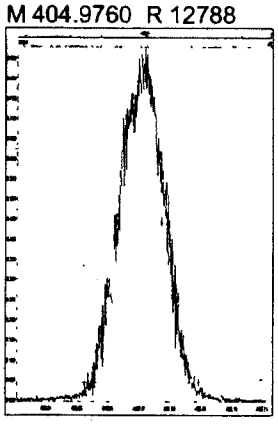

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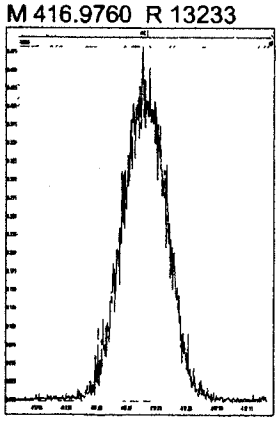

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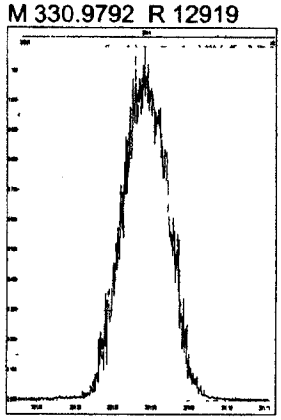

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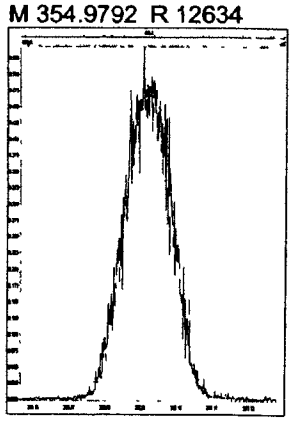

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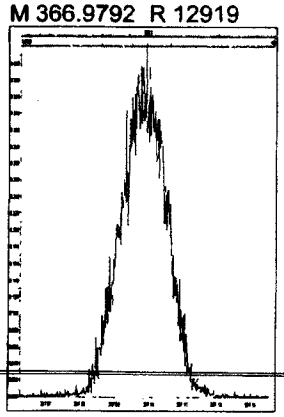

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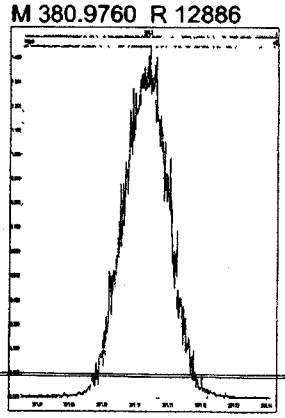

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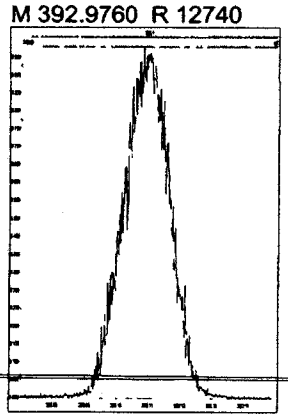

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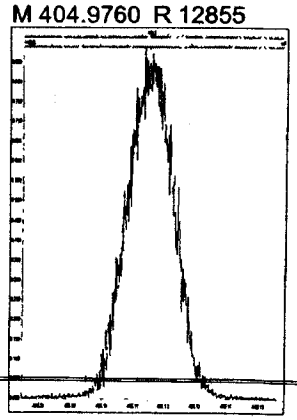

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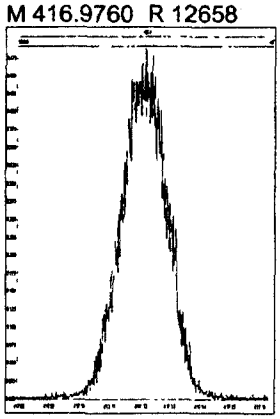

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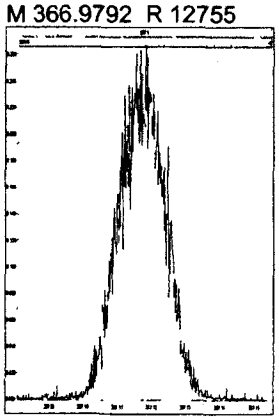

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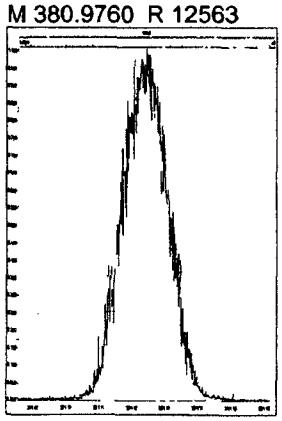

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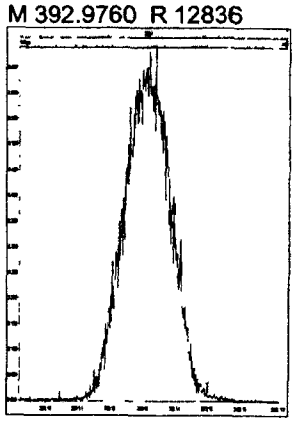

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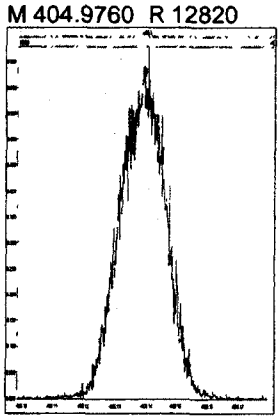

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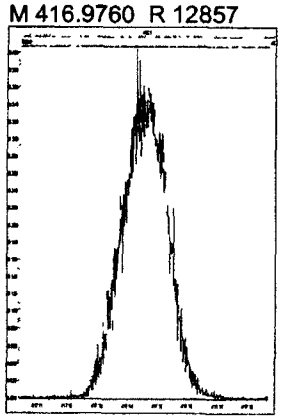

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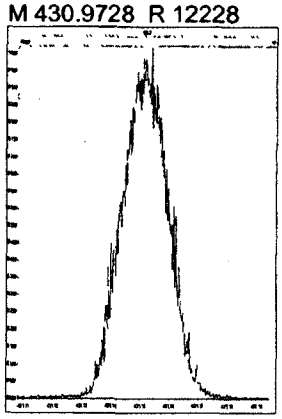

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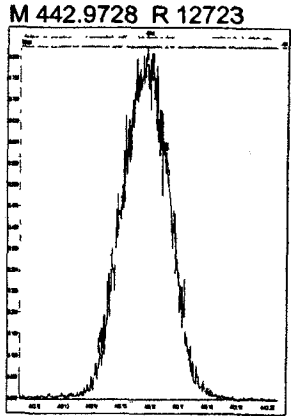

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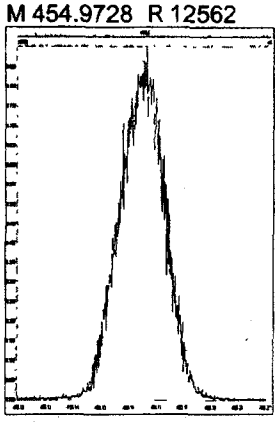

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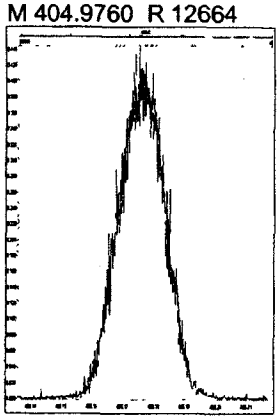

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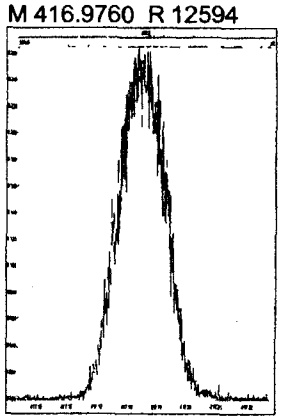

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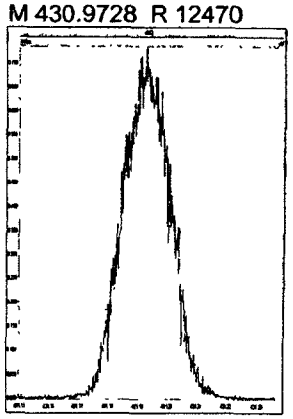

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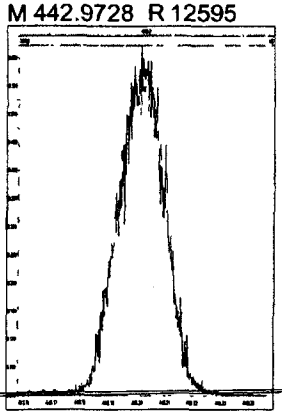

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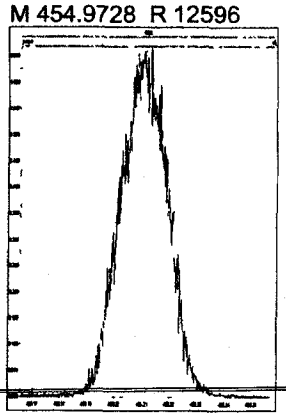

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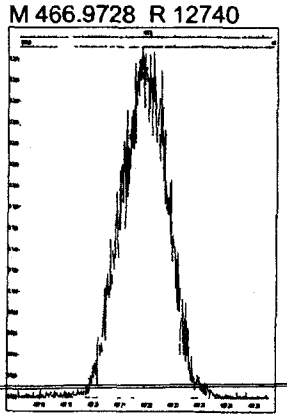

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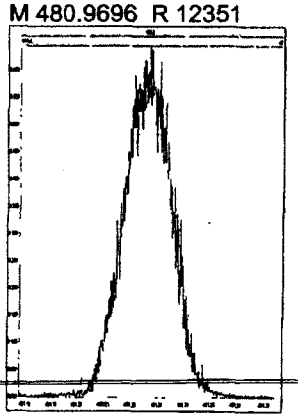

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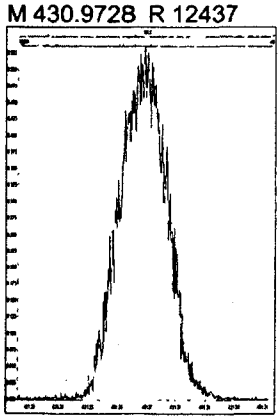

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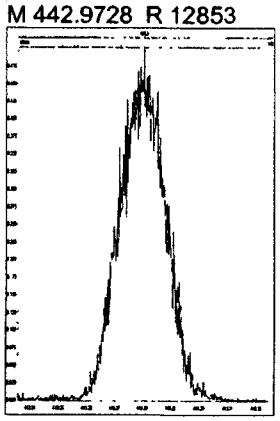

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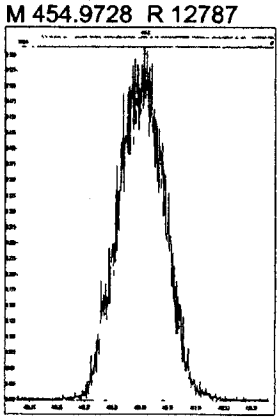

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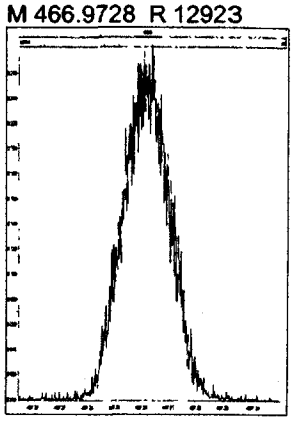

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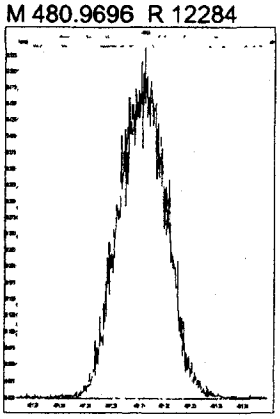

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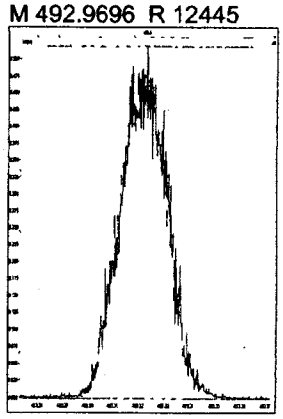

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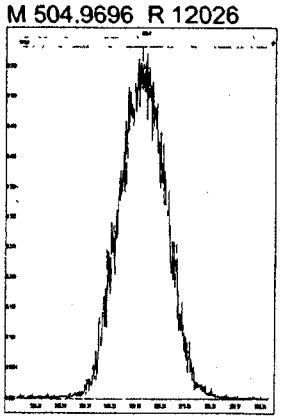

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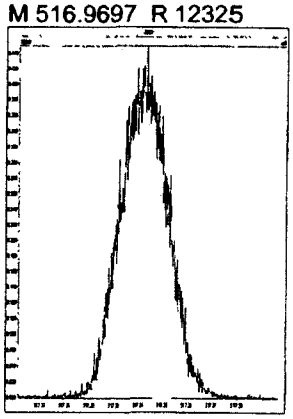

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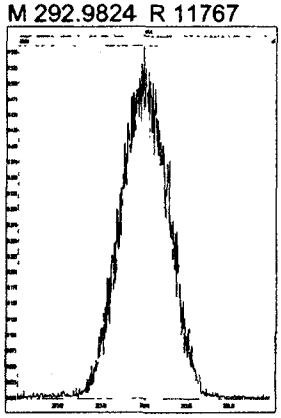

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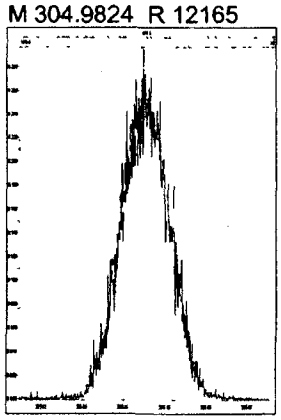

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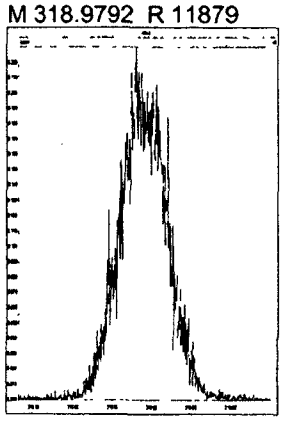

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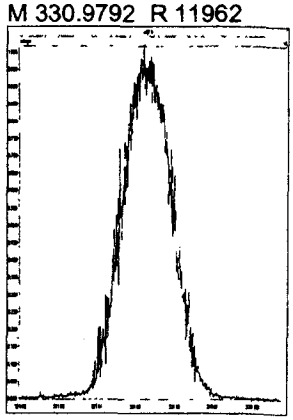

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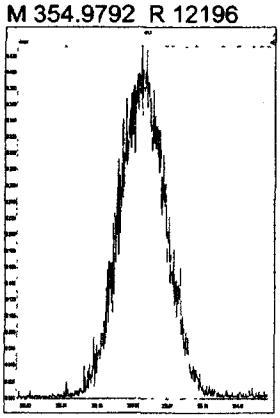

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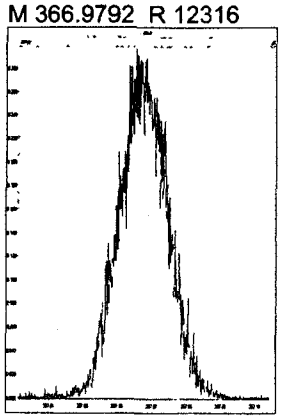

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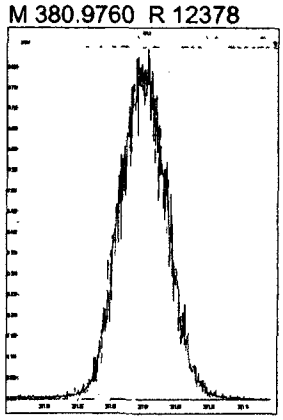

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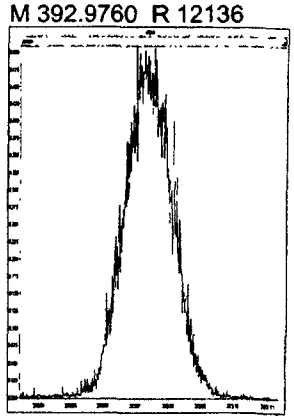

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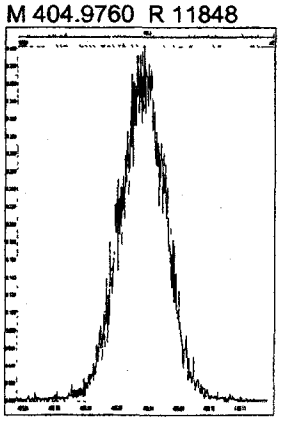

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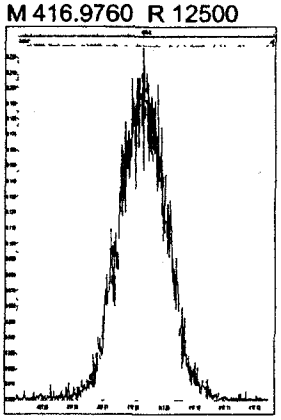

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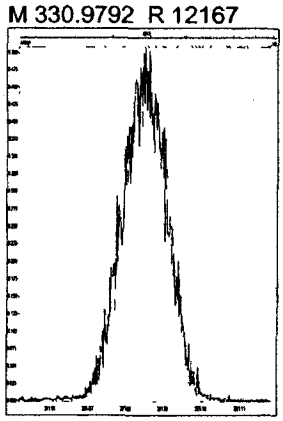

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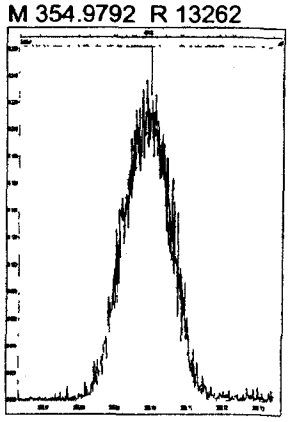

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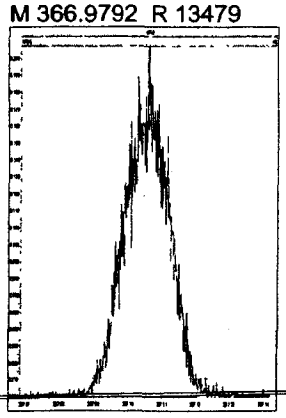

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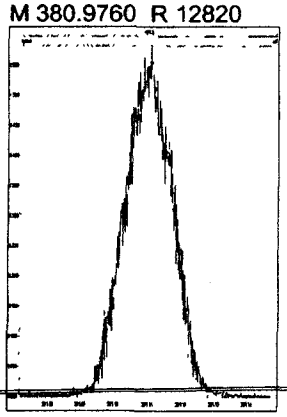
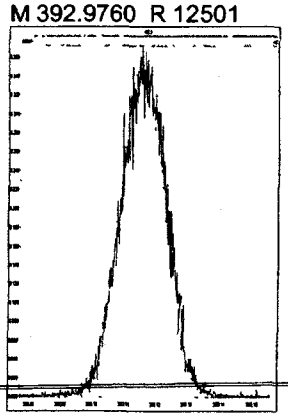
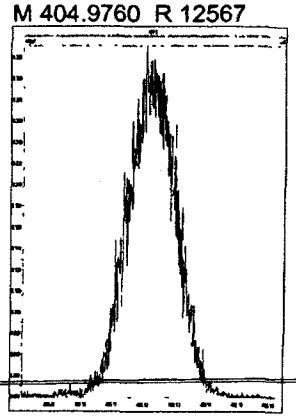


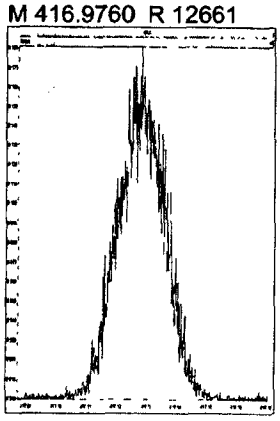
M 392.9760 R 12501



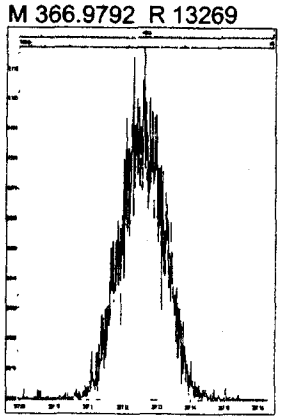
M 404.9760 R 12567



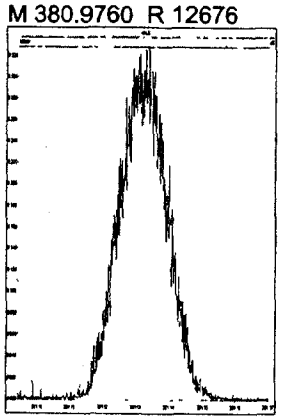
M 416.9760 R 12661



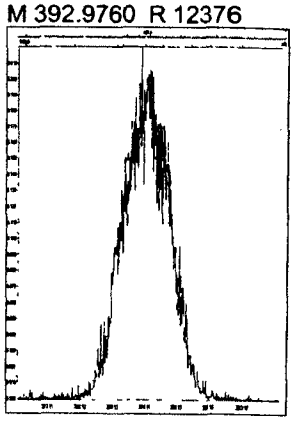
M 366.9792 R 13269



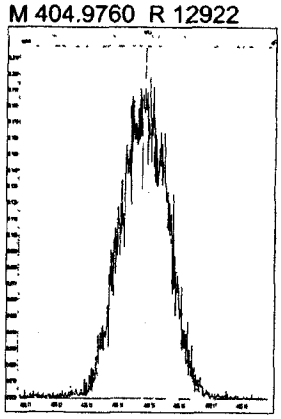
M 380.9760 R 12676



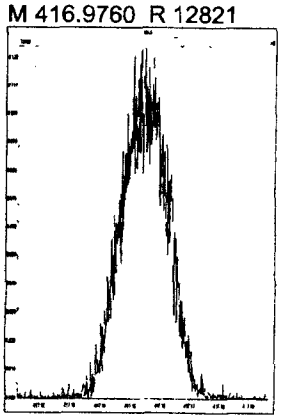
M 392.9760 R 12376



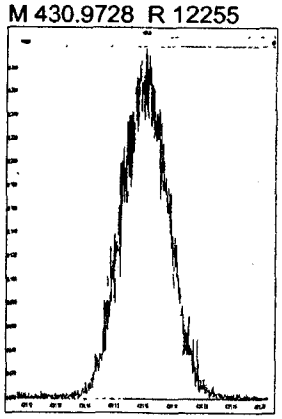
M 404.9760 R 12922



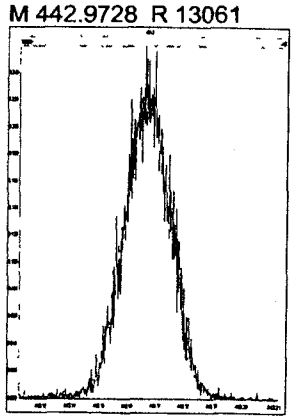
M 416.9760 R 12821



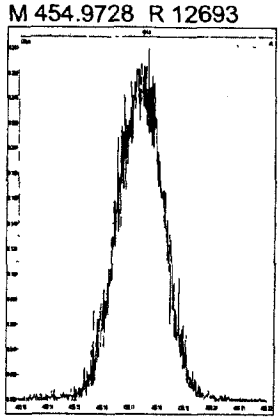
M 430.9728 R 12255



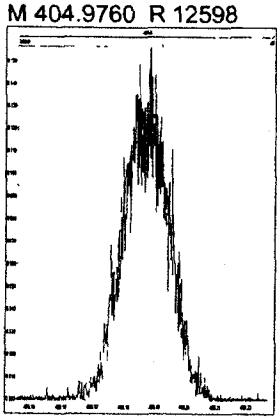
M 442.9728 R 13061



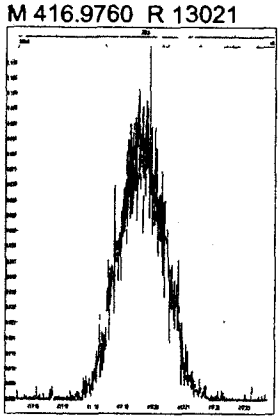
M 454.9728 R 12693



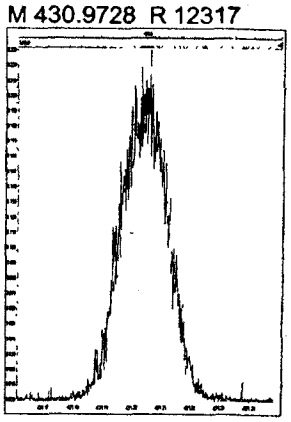
M 404.9760 R 12598



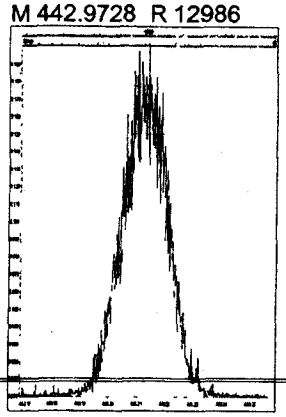
M 416.9760 R 13021



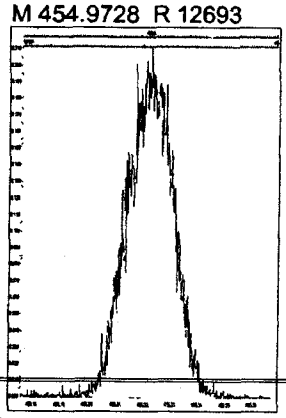
M 430.9728 R 12317



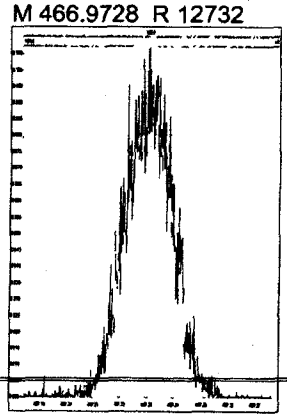
M 442.9728 R 12986



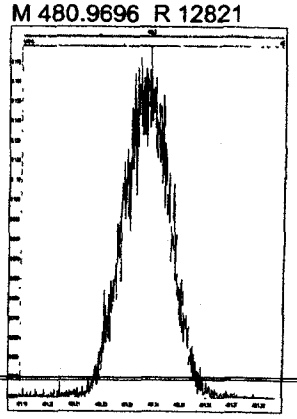
M 454.9728 R 12693



M 466.9728 R 12732



M 480.9696 R 12821



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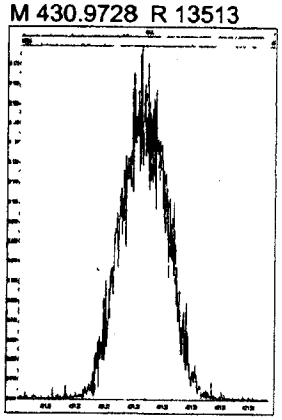
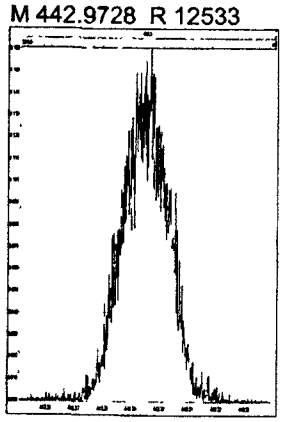
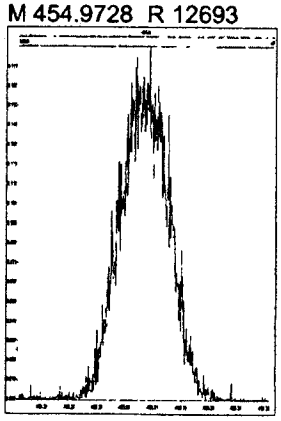
M 430.9728 R 13513



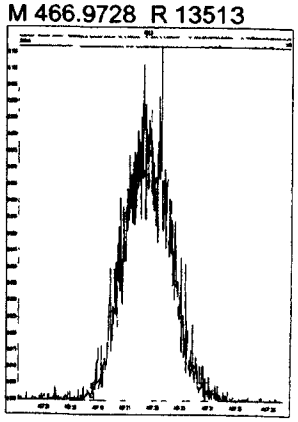
M 442.9728 R 12533



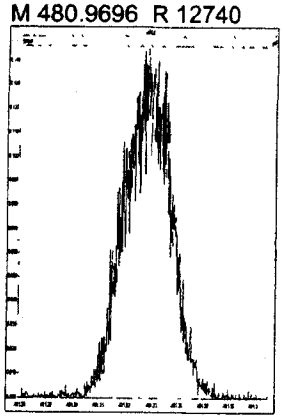
M 454.9728 R 12693



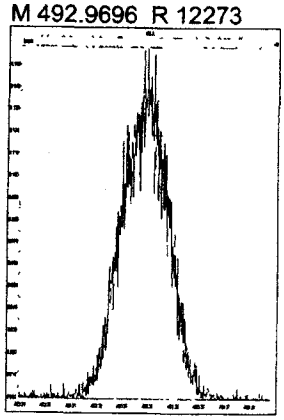
M 466.9728 R 13513



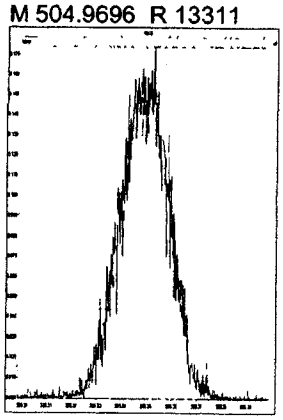
M 480.9696 R 12740



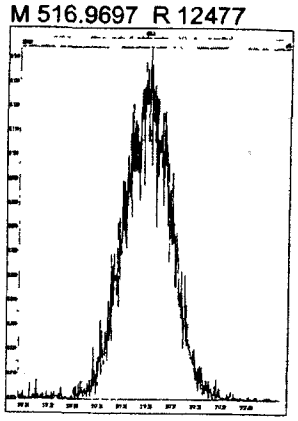
M 492.9696 R 12273

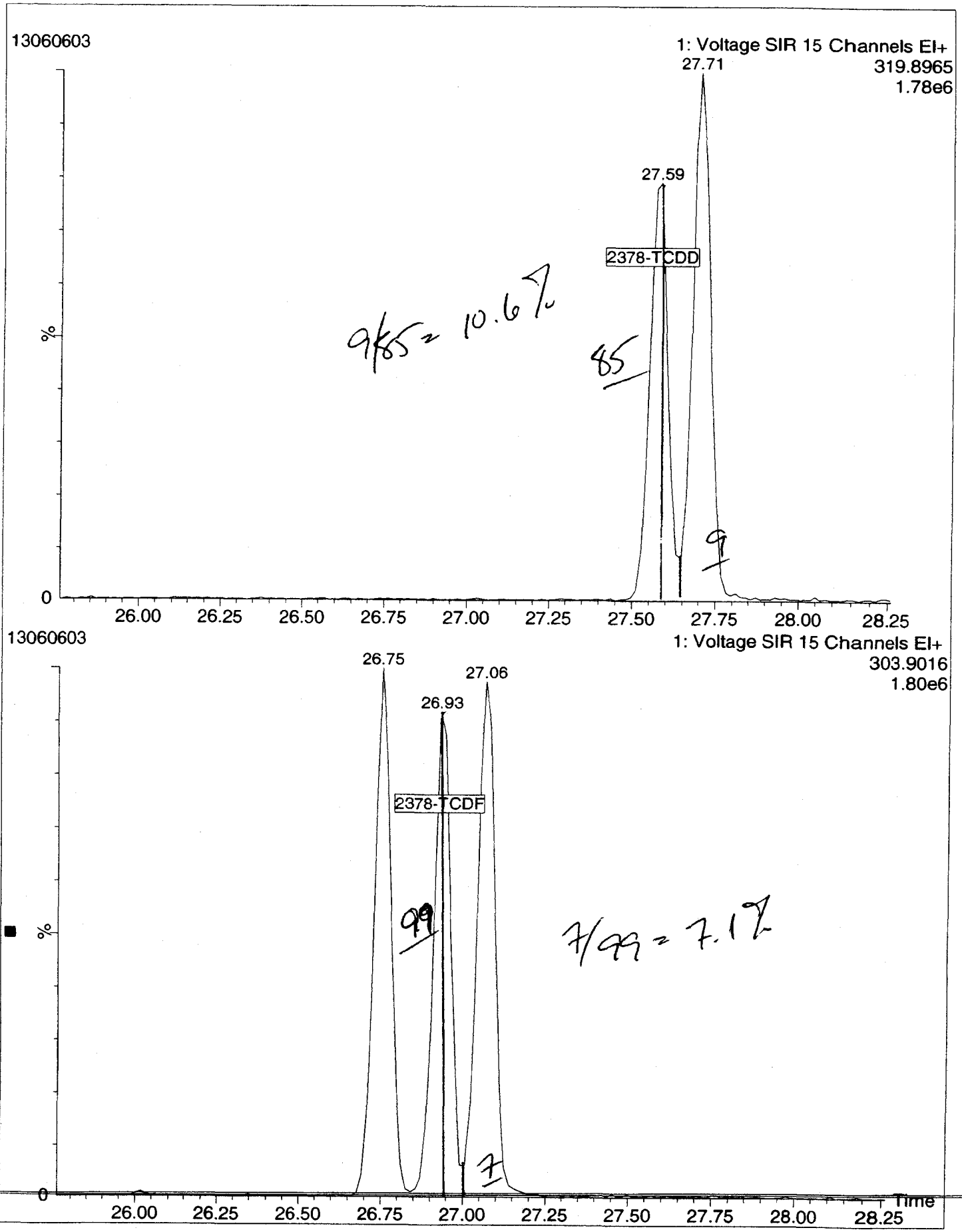


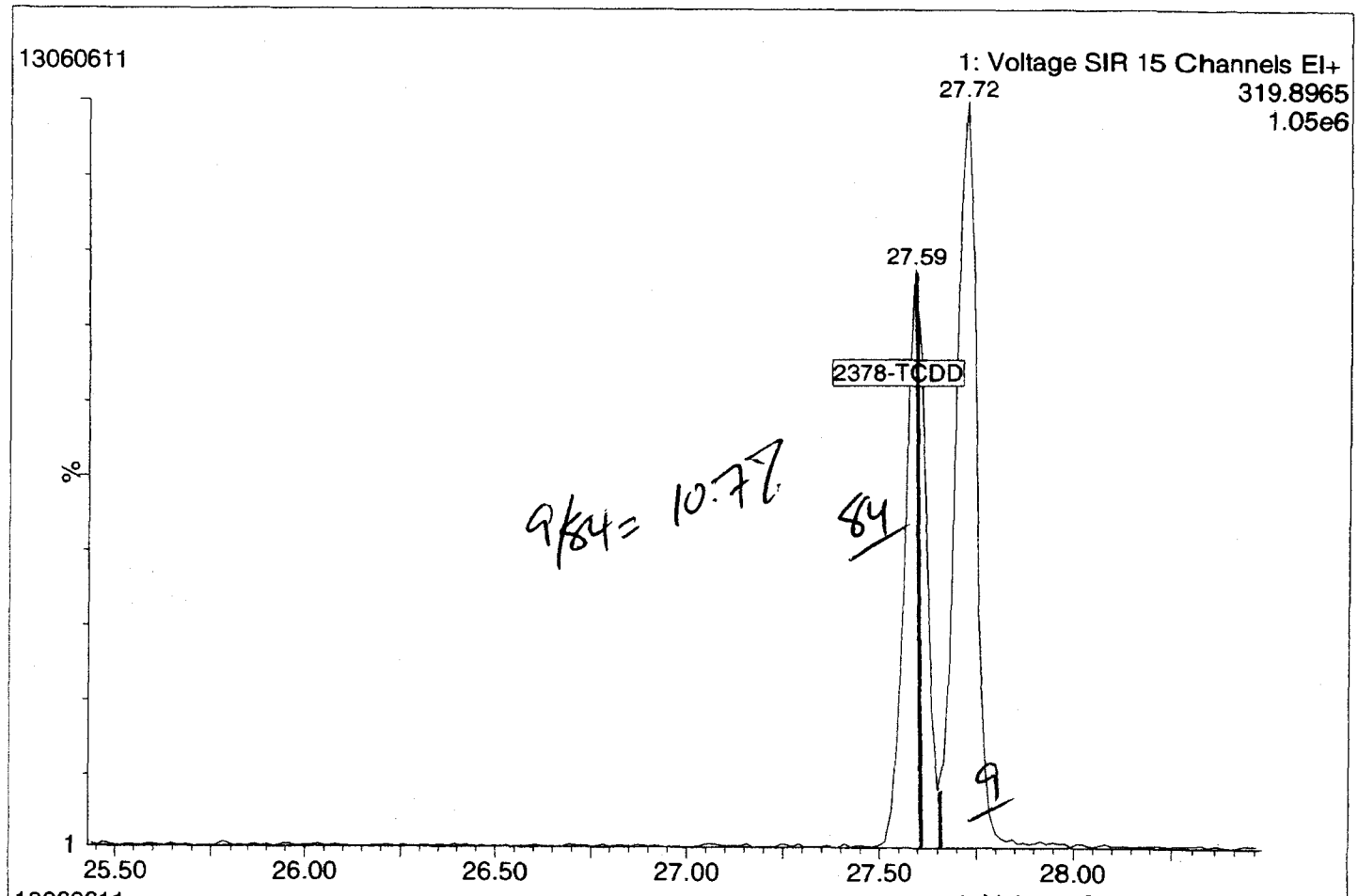
M 504.9696 R 13311

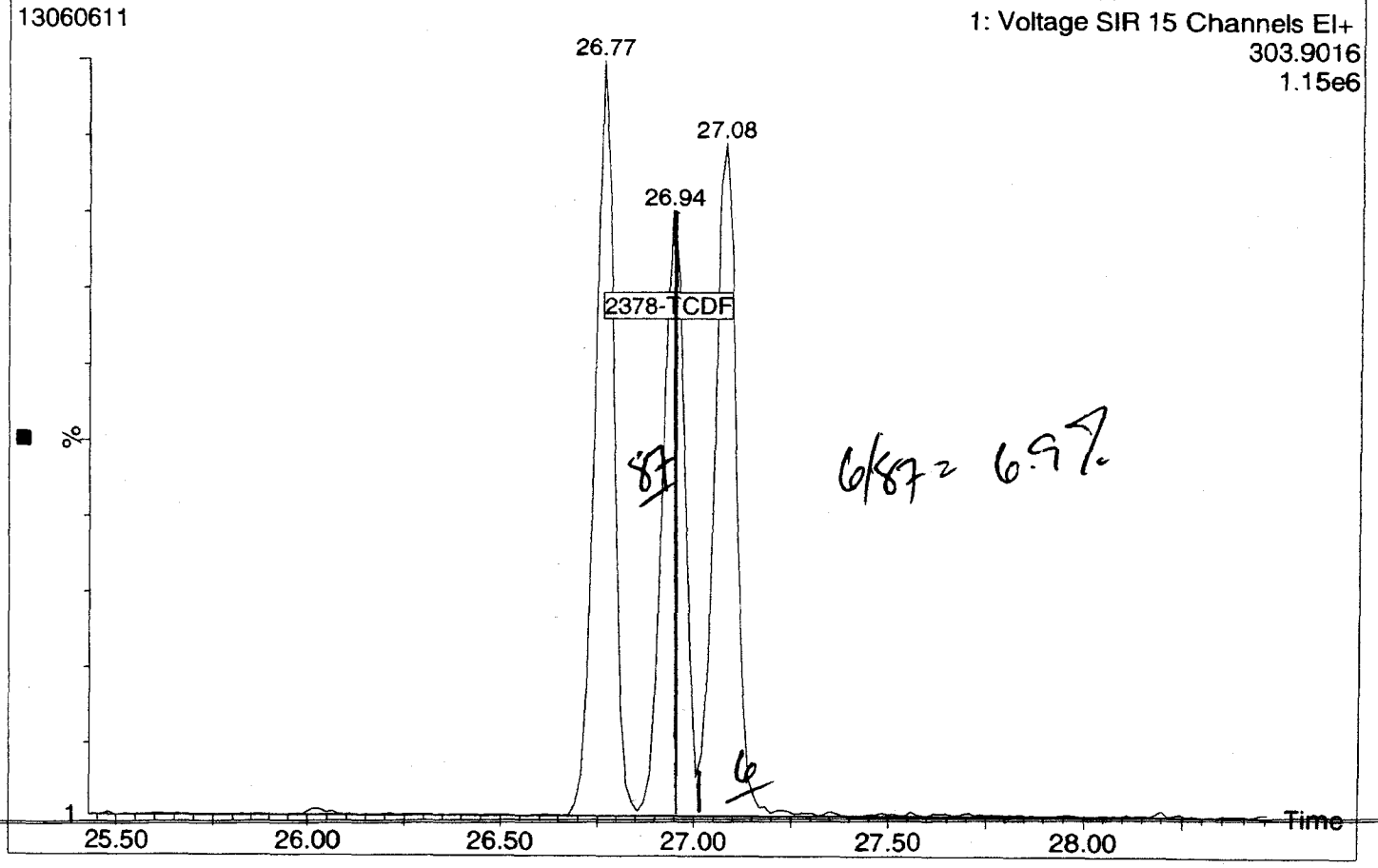


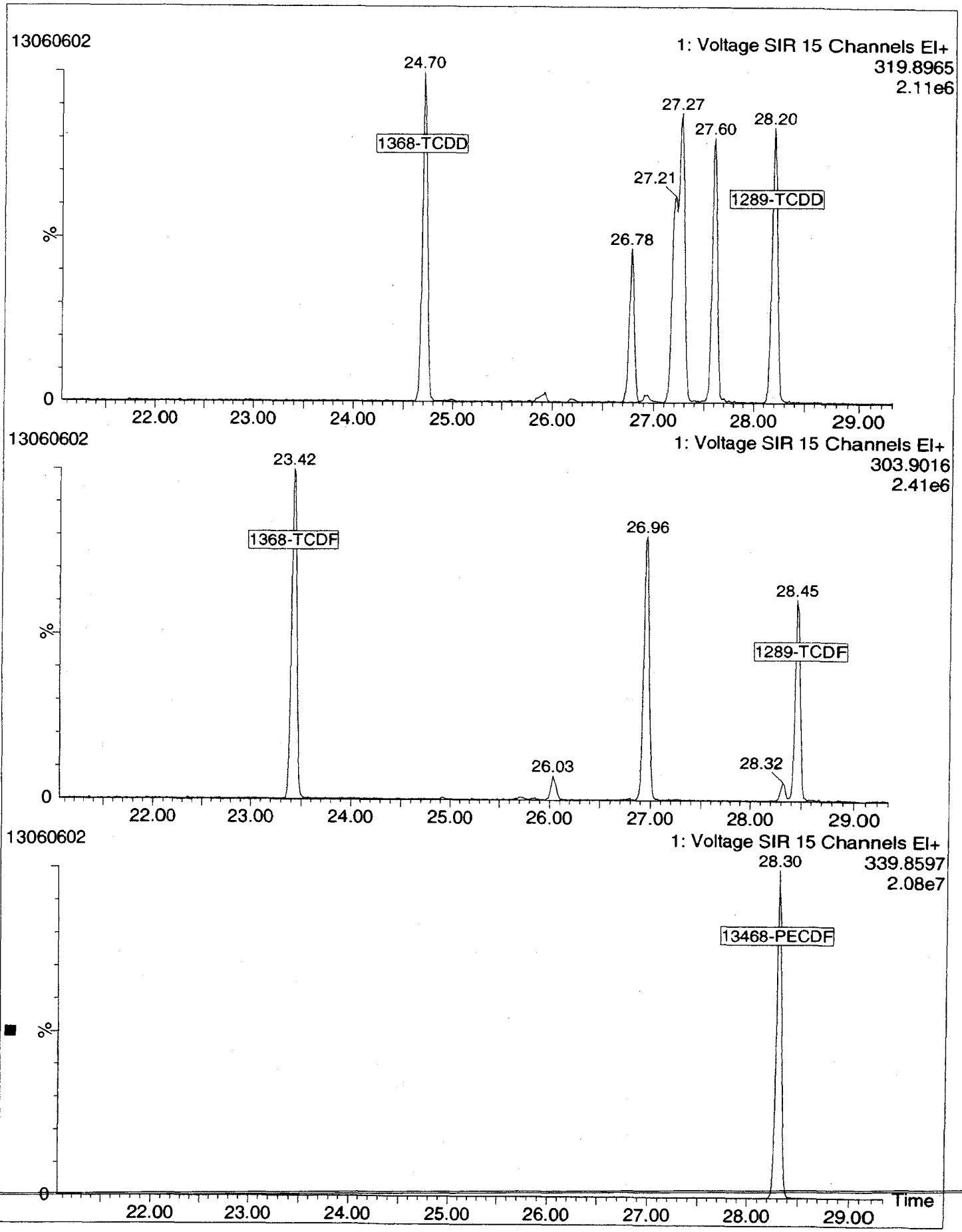
M 516.9697 R 12477

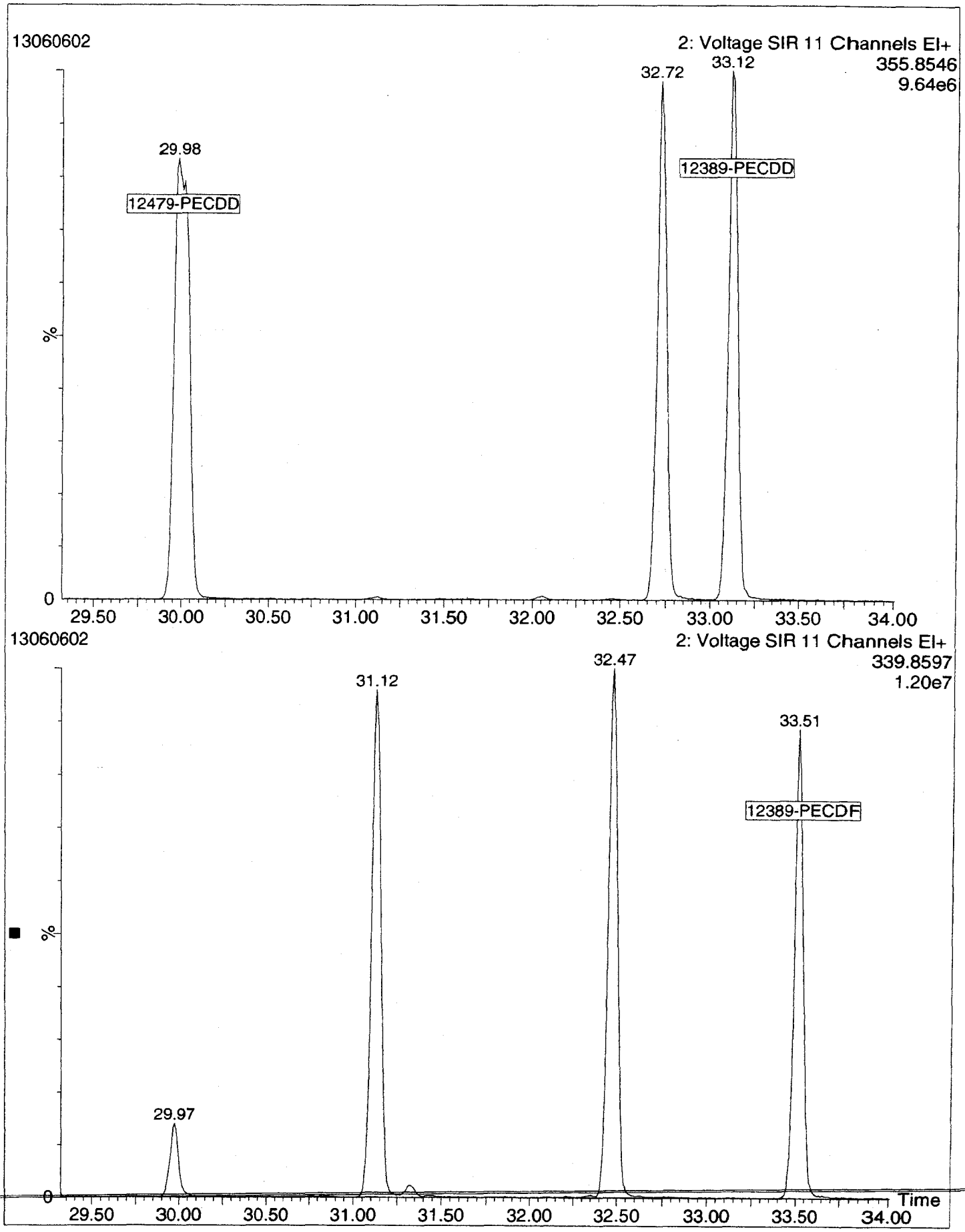


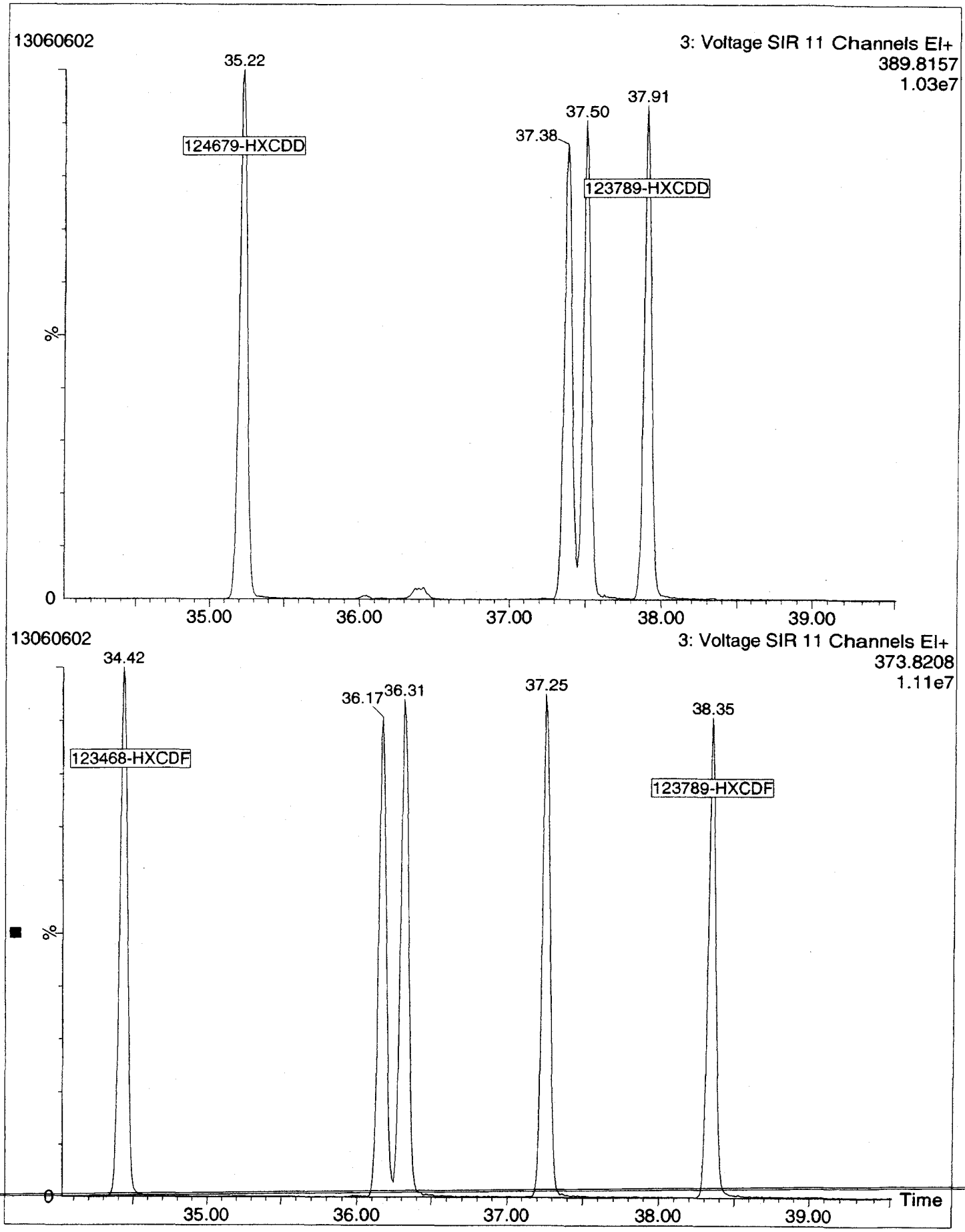

13060603
1: Voltage SIR 15 Channels EI+
319.8965
1.78e6
27.71
27.59
2378-TCDD
9/85 = 10.6%
85
9
%
0
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00
28.25
13060603
1: Voltage SIR 15 Channels EI+
303.9016
1.80e6
26.75
27.06
26.93
2378-TCDF
99
7/99 = 7.1%
7
%
0
Time
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
28.00
28.25

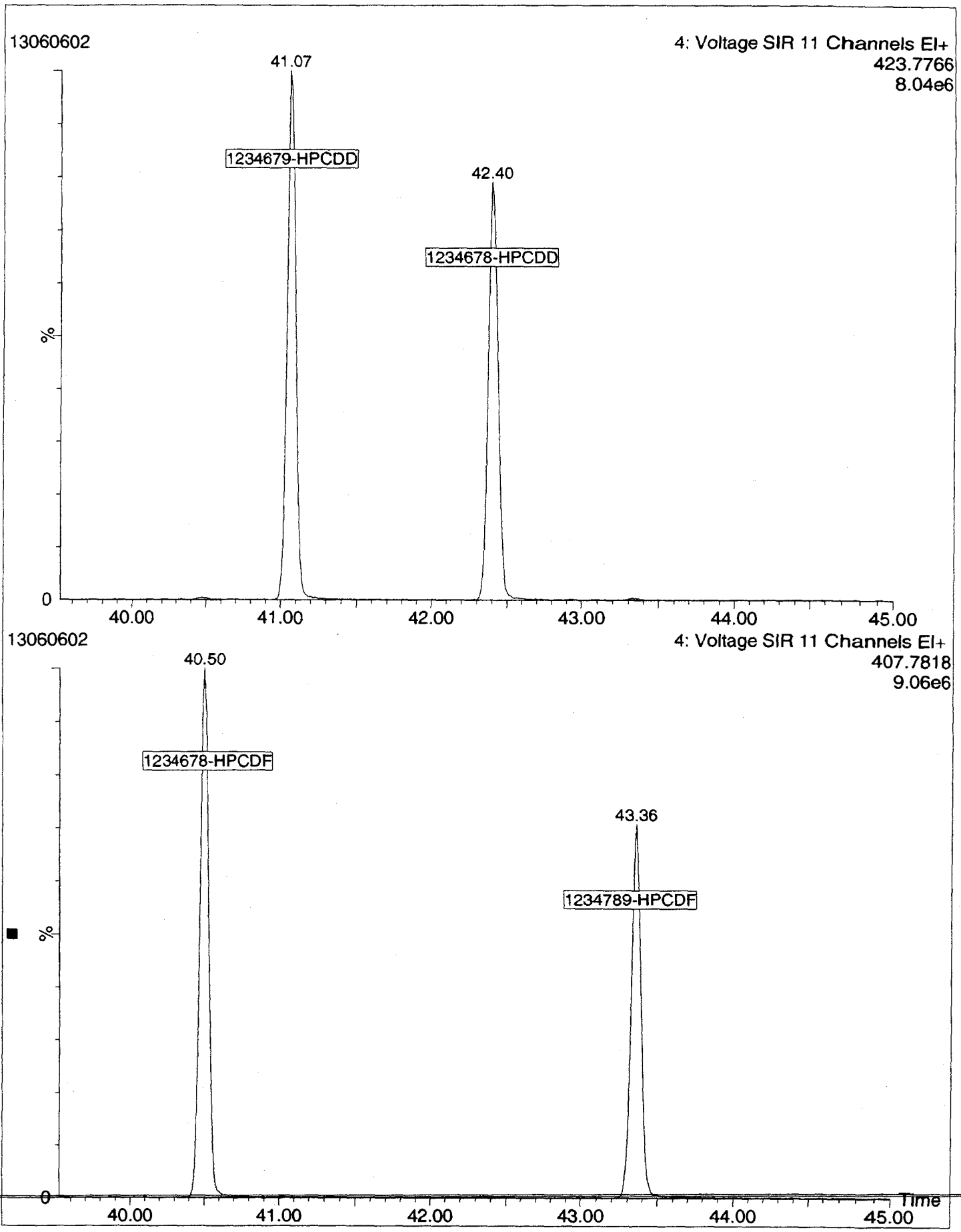

13060611
1: Voltage SIR 15 Channels EI+
319.8965
1.05e6
27.72
27.59
2378-TCDD
%
9/84= 10.7%
84
9
1
25.50
26.00
26.50
27.00
27.50
28.00


13060611
1: Voltage SIR 15 Channels EI+
303.9016
1.15e6
26.77
27.08
26.94
2378-TCDF
%
87
6/87 = 6.9%
6
1
Time
25.50
26.00
26.50
27.00
27.50
28.00


13060602
1: Voltage SIR 15 Channels EI+
319.8965
2.11e6
24.70
1368-TCDD
27.27
27.60
28.20
27.21
1289-TCDD
26.78
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
29.00
13060602
1: Voltage SIR 15 Channels EI+
303.9016
2.41e6
23.42
1368-TCDF
26.96
28.45
1289-TCDF
26.03
28.32
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
29.00
13060602
1: Voltage SIR 15 Channels EI+
339.8597
2.08e7
28.30
13468-PECDF
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00
29.00


13060602
2: Voltage SIR 11 Channels EI+
355.8546
9.64e6
29.98
12479-PECDD
32.72
33.12
12389-PECDD
%
0
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50
34.00
13060602
2: Voltage SIR 11 Channels EI+
339.8597
1.20e7
31.12
32.47
33.51
12389-PECDF
29.97
%
0
Time
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50
34.00


13060602
3: Voltage SIR 11 Channels EI+
389.8157
1.03e7
35.22
124679-HXCDD
37.91
37.50
37.38
123789-HXCDD
%
0
35.00
36.00
37.00
38.00
39.00
13060602
3: Voltage SIR 11 Channels EI+
373.8208
1.11e7
34.42
123468-HXCDF
36.17
36.31
37.25
38.35
123789-HXCDF
%
0
Time
35.00
36.00
37.00
38.00
39.00


13060602
4: Voltage SIR 11 Channels EI+
423.7766
8.04e6
41.07
1234679-HPCDD
42.40
1234678-HPCDD
%
0
40.00
41.00
42.00
43.00
44.00
45.00
13060602
4: Voltage SIR 11 Channels EI+
407.7818
9.06e6
40.50
1234678-HPCDF
43.36
1234789-HPCDF
%
0
Time
40.00
41.00
42.00
43.00
44.00
45.00

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:29 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

2378-TCDF					0.832		0.770				
12378-PeCDF	31.092	1.000	4.61e3	3.20e3	0.853	1.441	1.550	99.3	NO	0.489	0.489
23478-PeCDF	32.440	1.001	4.92e3	3.19e3	0.884	1.544	1.550	102.9	NO	0.510	0.510
123478-HxCDF	36.124	1.000	3.89e3	3.41e3	1.017	1.140	1.240	61.7	NO	0.511	0.511
234678-HxCDF	37.242	1.001	4.00e3	3.28e3	1.067	1.217	1.240	53.9	NO	0.473	0.473
123678-HxCDF	36.288	1.001	4.03e3	3.35e3	0.999	1.201	1.240	60.7	NO	0.497	0.497
123789-HxCDF	38.316	1.000	3.64e3	2.76e3	0.947	1.319	1.240	53.5	NO	0.506	0.506
1234678-HpCDF	40.465	1.000	3.19e3	3.56e3	1.151	0.895	1.050	81.3	NO	0.480	0.480
1234789-HpCDF	43.348	1.001	2.83e3	2.77e3	1.166	1.023	1.050	56.0	NO	0.490	0.490
OCDF	48.960	1.007	5.31e3	6.03e3	1.001	0.881	0.890	82.3	NO	1.057	1.057
2378-TCDD					0.939		0.770				
12378-PeCDD	32.693	1.001	3.60e3	2.29e3	0.930	1.569	1.550	43.2	NO	0.490	0.490
123478-HxCDD	37.351	1.000	3.35e3	2.82e3	0.930	1.191	1.240	61.6	NO	0.512	0.512
123678-HxCDD	37.483	1.001	3.31e3	2.73e3	0.854	1.211	1.240	59.1	NO	0.531	0.531
123789-HxCDD	37.877	1.011	3.12e3	2.78e3	0.885	1.124	1.240	50.6	NO	0.507	0.507
1234678-HpCDD	42.372	1.000	3.26e3	2.77e3	0.966	1.174	1.050	21.9	NO	0.554	0.554
OCDD	48.664	1.001	4.23e3	5.58e3	0.921	0.757	0.890	97.9	NO	0.994	0.994
13C-2378-TCDF	26.900	1.007	1.06e6	1.38e6	1.283	0.765	0.770	3648.1	NO		100.234
13C-12378-PeCDF	31.081	1.163	1.14e6	7.35e5	1.051	1.546	1.550	5117.8	NO		93.858
13C-23478-PeCDF	32.418	1.213	1.10e6	7.00e5	1.030	1.572	1.550	4914.9	NO		92.054
13C-123478-HxCDF	36.113	0.954	4.73e5	9.32e5	1.069	0.507	0.510	2315.9	NO		98.360
13C-123678-HxCDF	36.266	0.958	5.06e5	9.78e5	1.124	0.517	0.510	2458.3	NO		98.802
13C-234678-HxCDF	37.209	0.983	4.89e5	9.53e5	1.041	0.513	0.510	2488.4	NO		103.654
13C-123789-HxCDF	38.305	1.012	4.55e5	8.80e5	1.039	0.516	0.510	2328.6	NO		96.086
13C-1234678-HpCDF	40.454	1.068	3.80e5	8.40e5	0.965	0.452	0.440	2546.7	NO		94.619
13C-1234789-HpCDF	43.304	1.144	3.03e5	6.77e5	0.760	0.448	0.440	1681.2	NO		96.448
13C-1234-TCDD	26.721	0.000	8.30e5	1.07e6	1.000	0.778	0.770	1378.0	NO		100.000
13C-2378-TCDD	27.542	1.031	7.41e5	9.66e5	0.926	0.767	0.770	1204.8	NO		97.174
13C-12378-PeCDD	32.671	1.223	7.83e5	5.10e5	0.734	1.534	1.550	3159.3	NO		92.840
13C-123478-HxCDD	37.340	0.986	7.18e5	5.78e5	0.984	1.241	1.240	3546.7	NO		98.547
13C-123678-HxCDD	37.461	0.989	7.36e5	5.97e5	1.043	1.233	1.240	3732.4	NO		95.641
13C-1234678-HpCDD	42.361	1.119	5.72e5	5.55e5	0.891	1.032	1.050	3712.9	NO		94.608
13C-OCDD	48.637	1.284	1.01e6	1.13e6	0.849	0.892	0.890	5801.6	NO		188.917

ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.867	0.000	7.42e5	5.95e5	1.000	1.246	1.240	3788.8	NO	100.000
Total-tetrafurans			5.02e2		0.832					0.064
Total-penta			9.66e1							0.010
Total-pentafurans			9.54e3		0.868					0.999
Total-hexafurans			1.56e4		1.008					1.989
Total-heptafurans			6.02e3		1.159					0.970
Total-Furans			3.72e4		0.992					5.116
Total-tetradioxins			3.11e3		0.939					0.250
Total-pentadioxins			3.73e3		0.930					0.507
Total-hexadioxins			1.30e4		0.890					1.891
Total-heptadioxins			3.26e3		0.966					0.554
Total-Dioxins			2.75e4		0.918					4.214
Total-TEQ			6.47e4							9.330
37CL-2378-TCDD	27.572	1.032	1.77e3		0.989			7.7		0.094
FUNCTION1 PFK			2.17e6							
FUNCTION2 PFK			4.48e5							0.000
FUNCTION3 PFK			8.45e5							0.000
FUNCTION4 PFK			1.79e5							
FUNCTION5 PFK			1.20e4							
FUNCTION1 HXCDPE			2.36e2							0.000
FUNCTION1 HPCDPE			1.31e3							0.000
FUNCTION2 HPCDPE			6.00e2							0.000
FUNCTION3 OCDPE			7.49e1							0.000
FUNCTION4 NCDPE			2.47e2							0.000
FUNCTION5 DCDPE			0.00e0							

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Printed: Monday, June 10, 2013 10:05:29 Pacific Daylight Time

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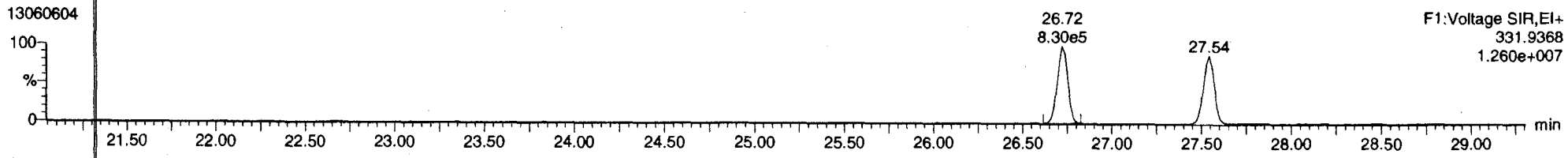
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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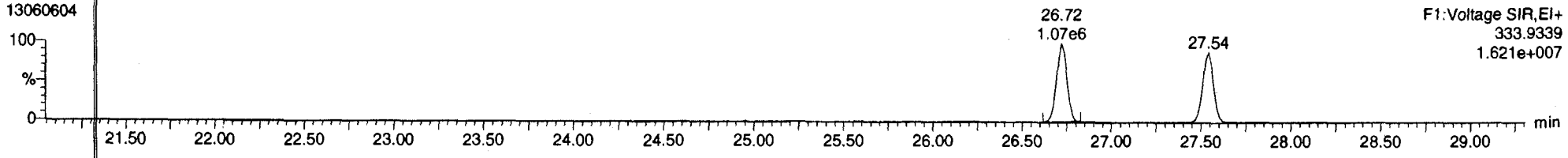

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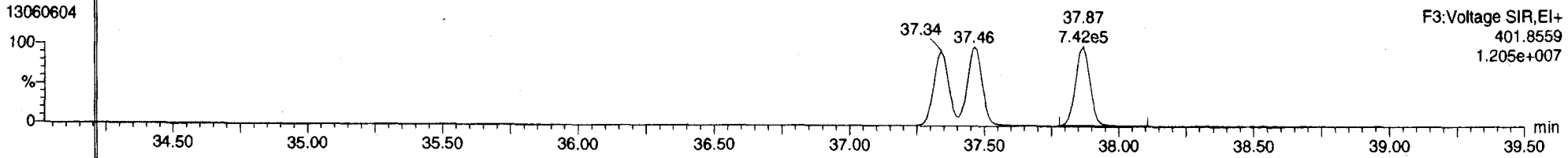

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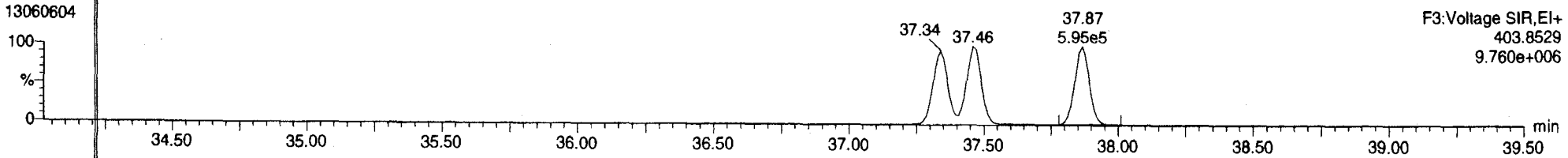

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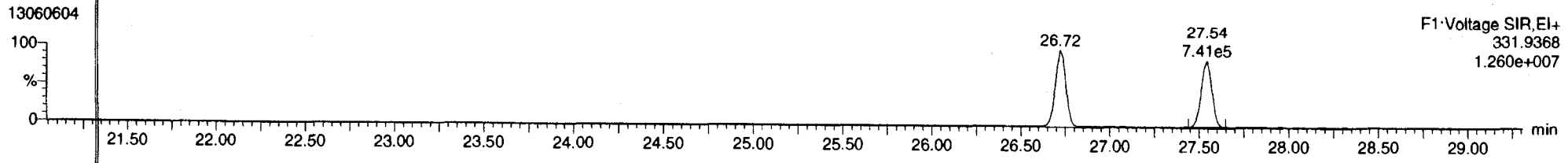

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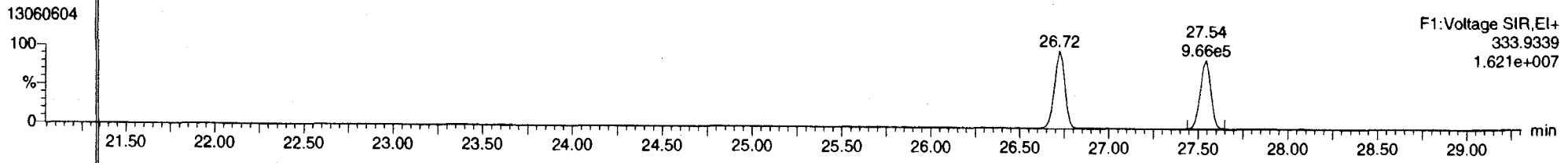
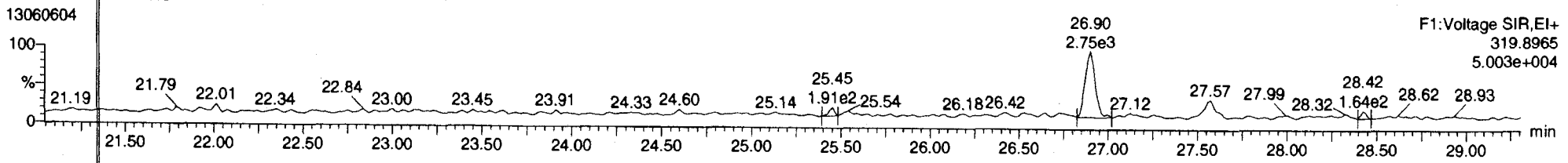
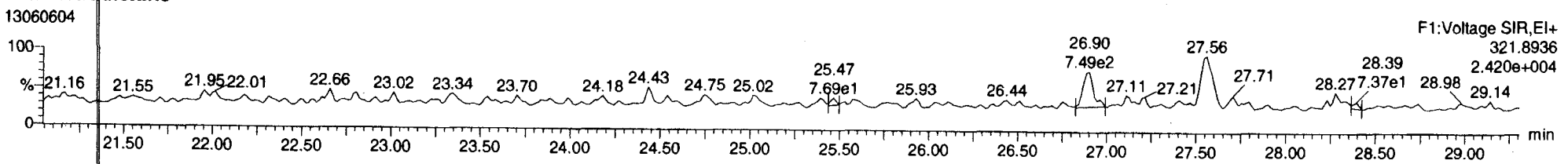


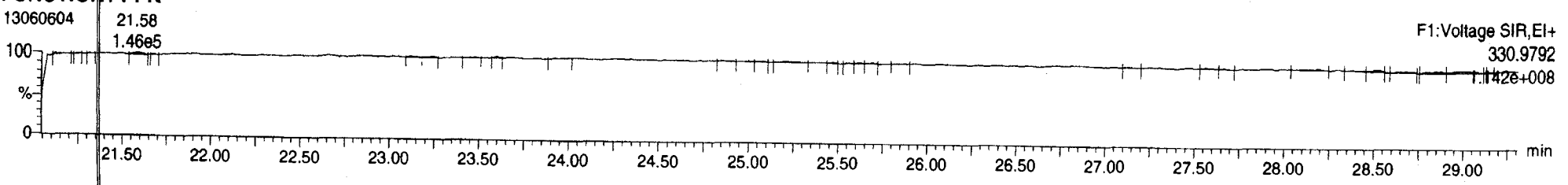
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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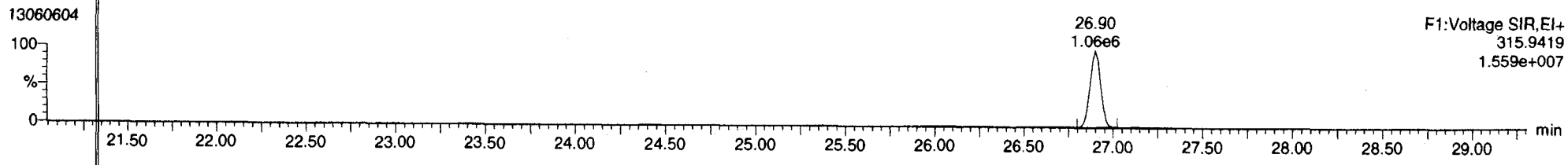
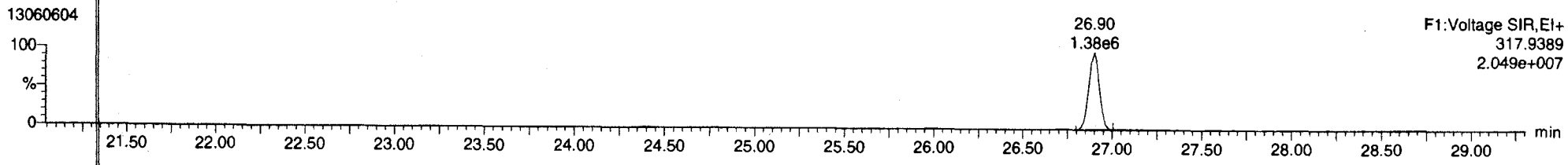
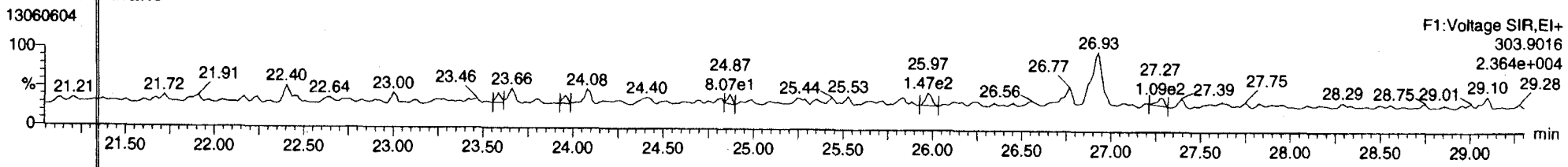
13C-2378-TCDF



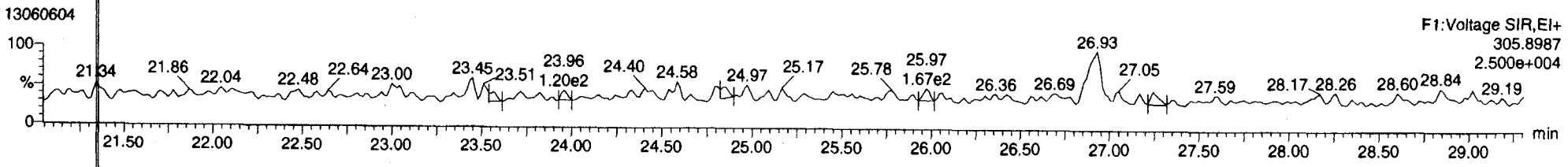
13C-2378-TCDF



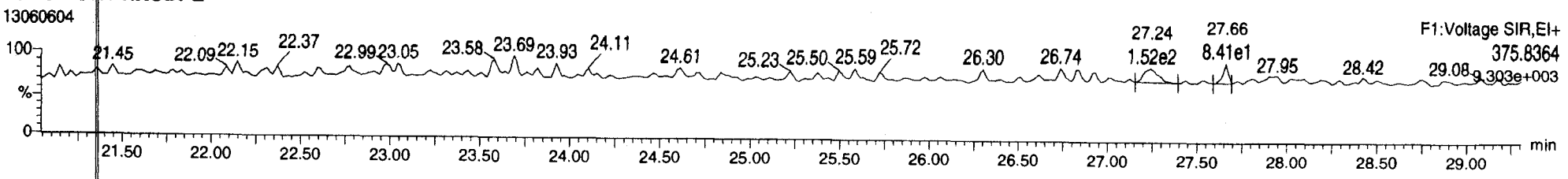
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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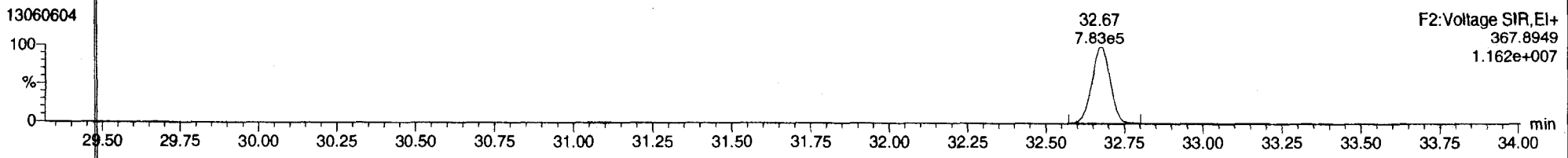
ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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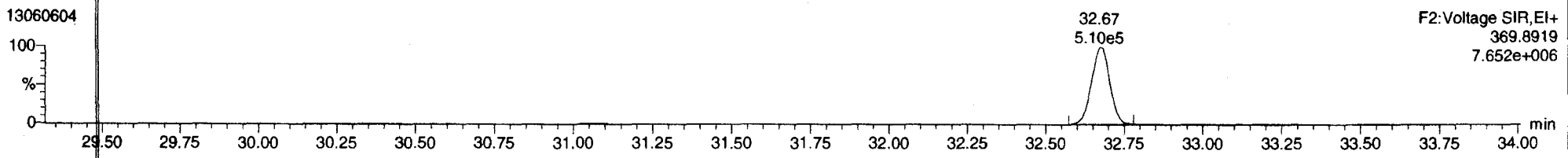
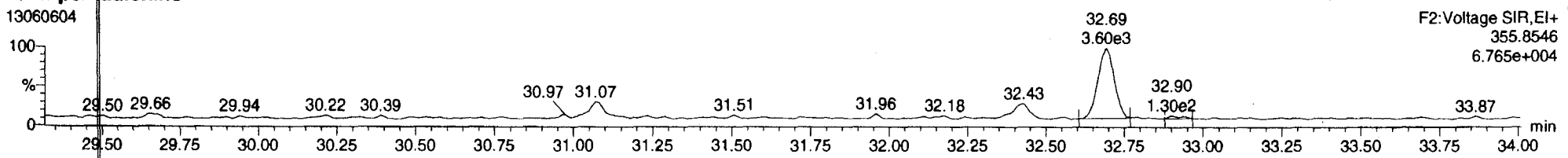
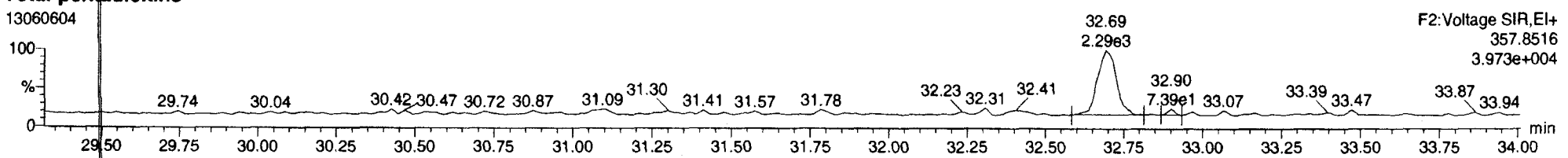


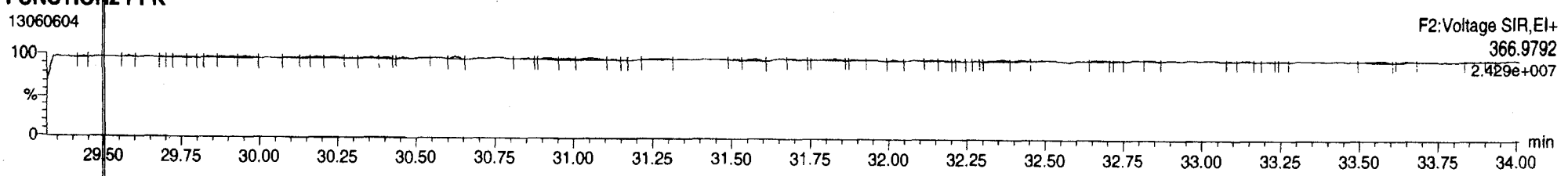
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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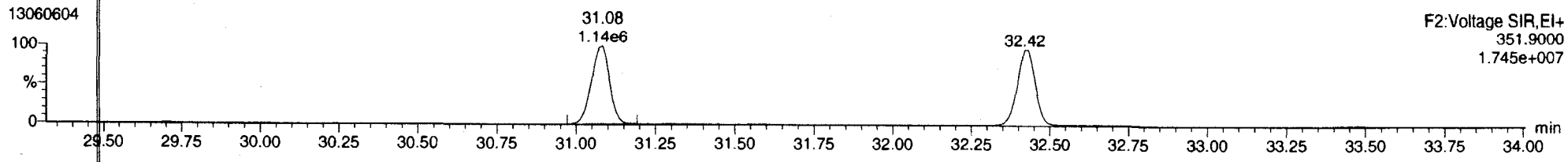
13C-12378-PeCDF



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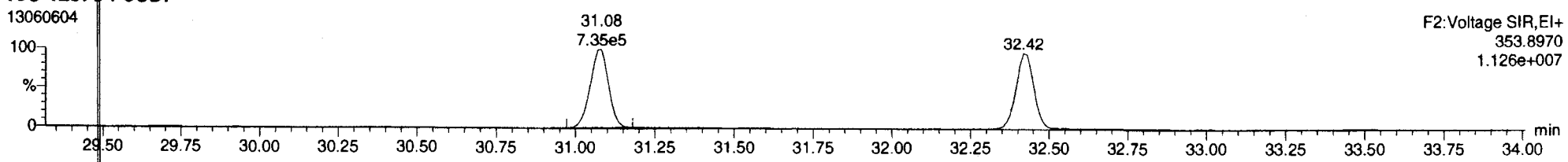
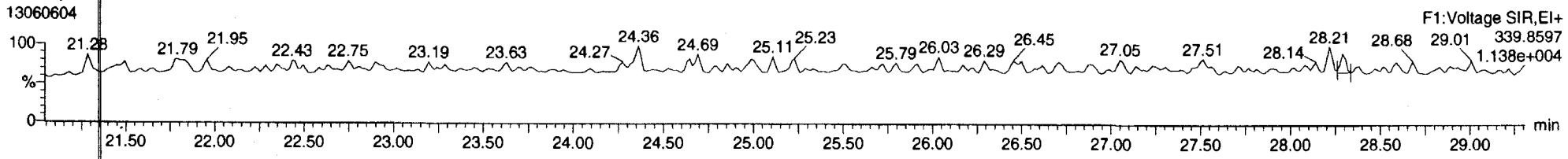
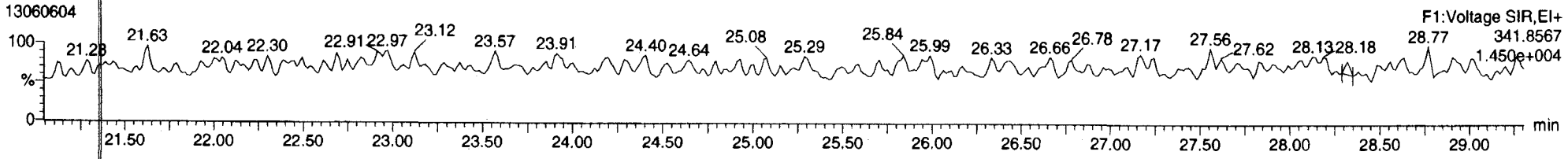


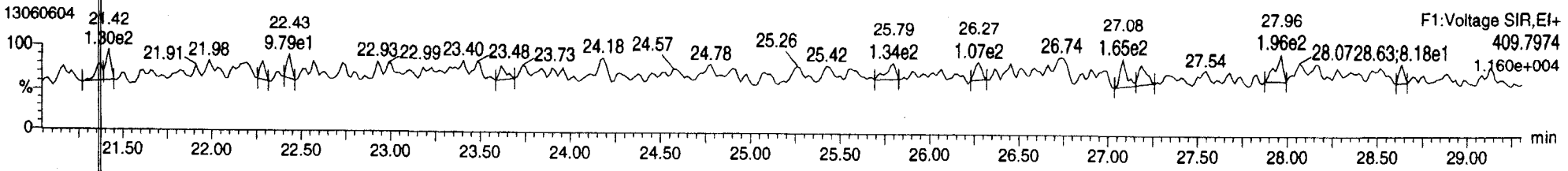
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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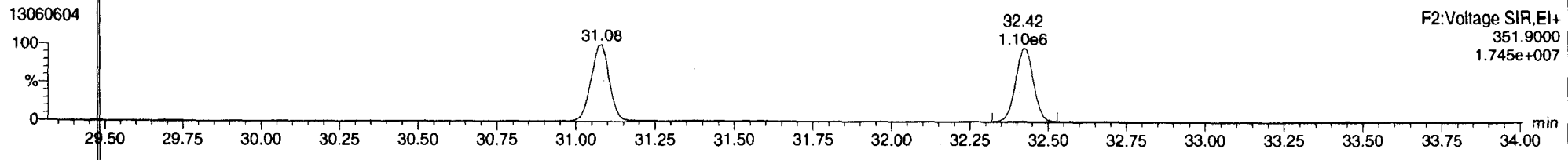
13C-23478-PeCDF



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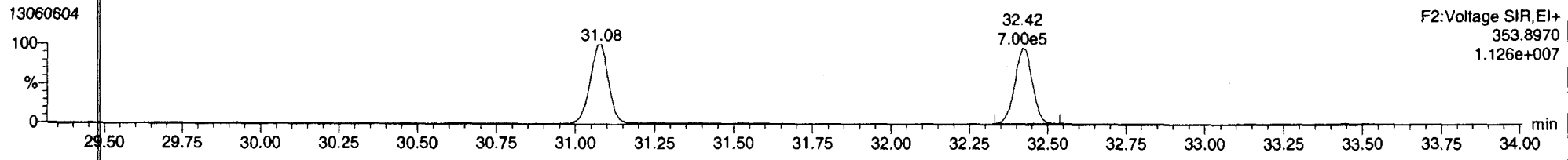
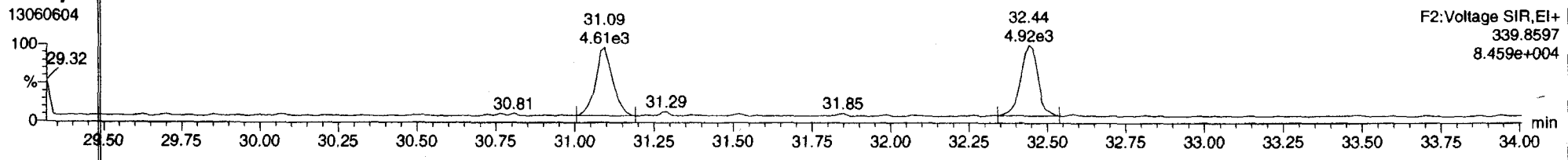
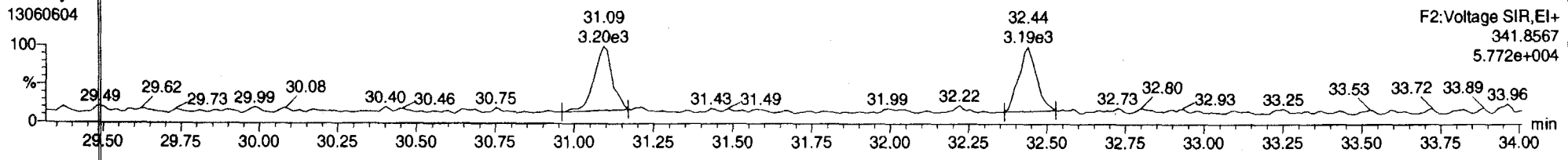


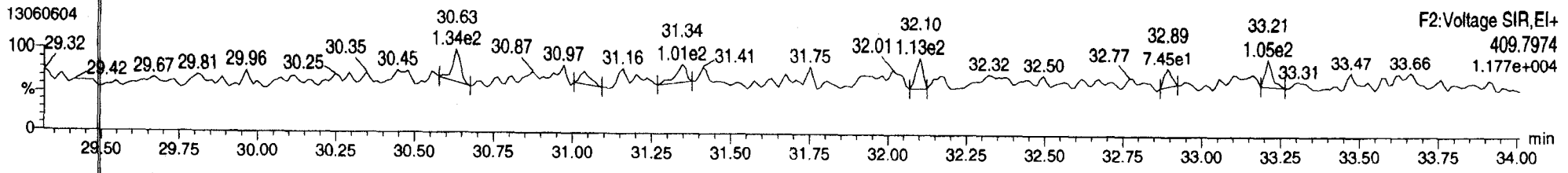
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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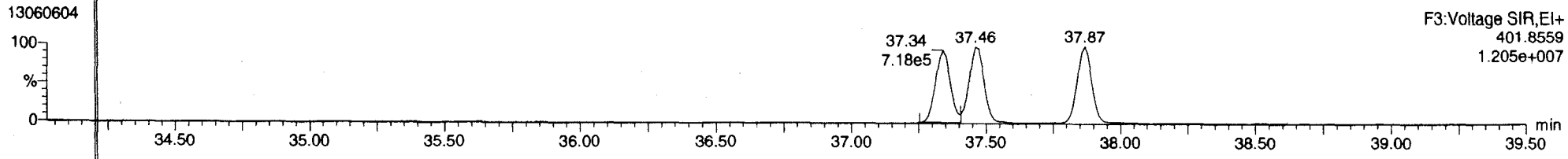
13C-123478-HxCDD



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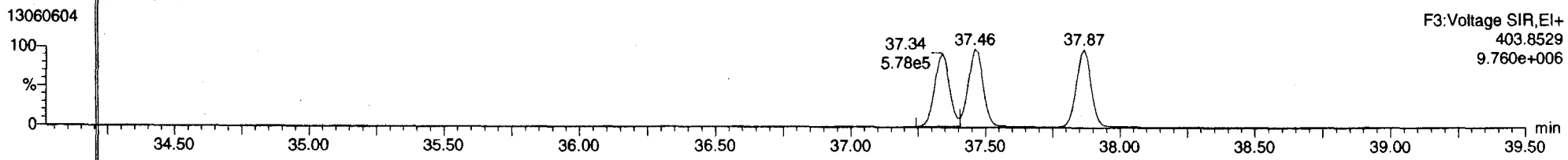
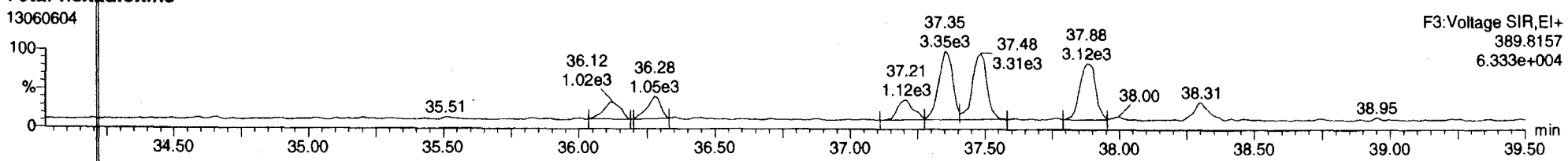
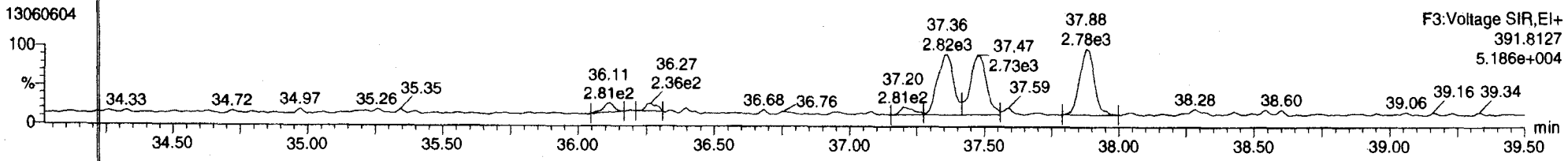


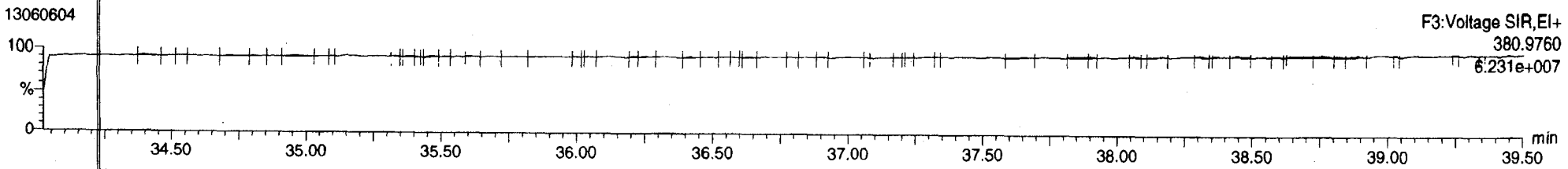
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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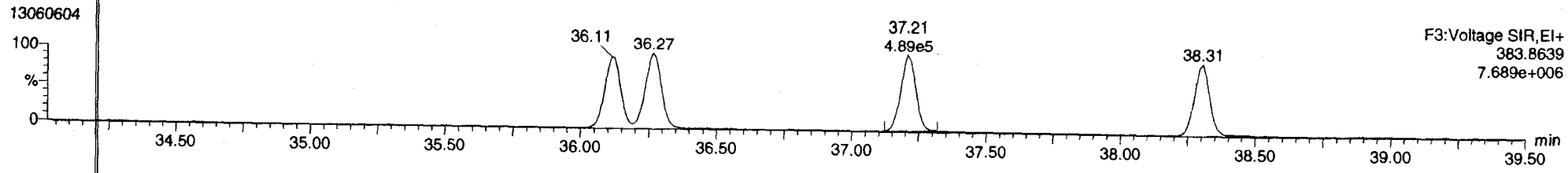
13C-234678-HxCDF



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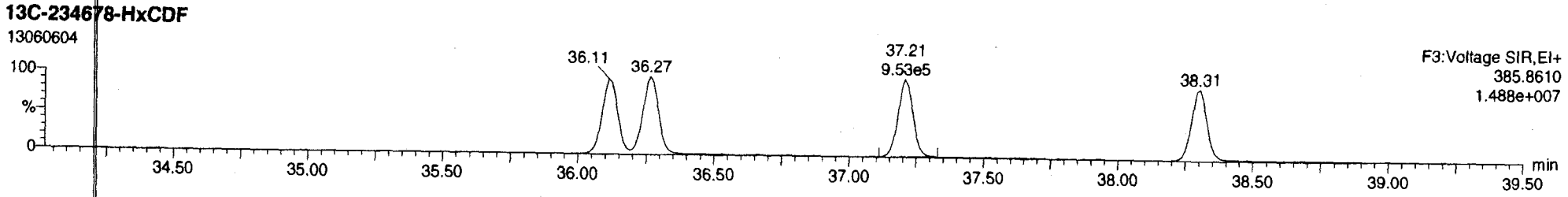
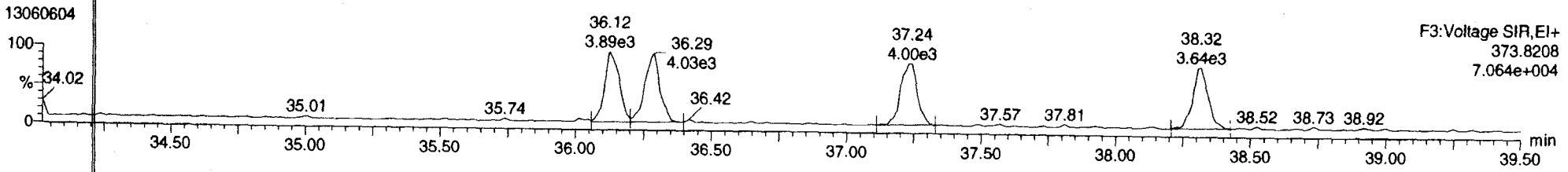
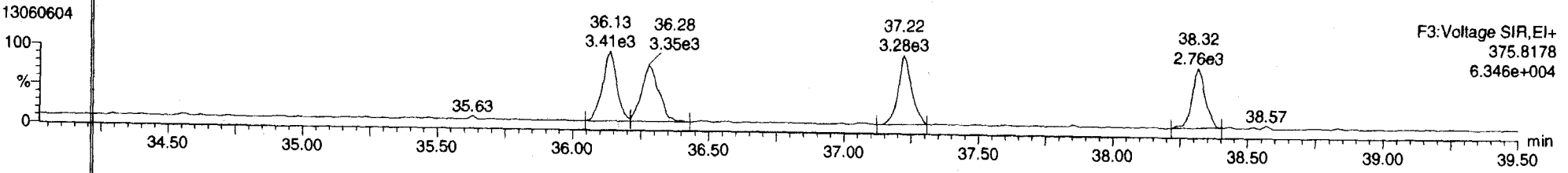


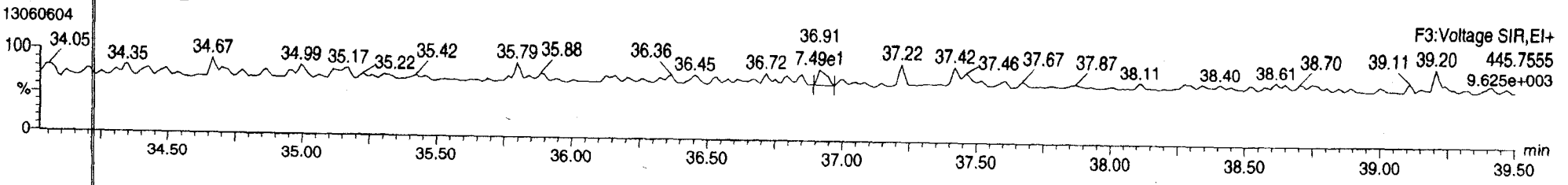
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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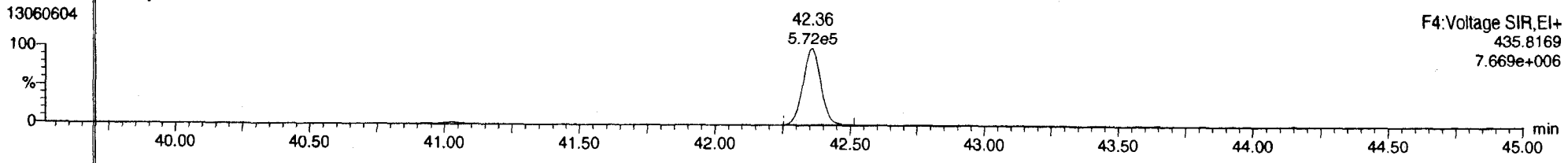
13C-1234678-HpCDD



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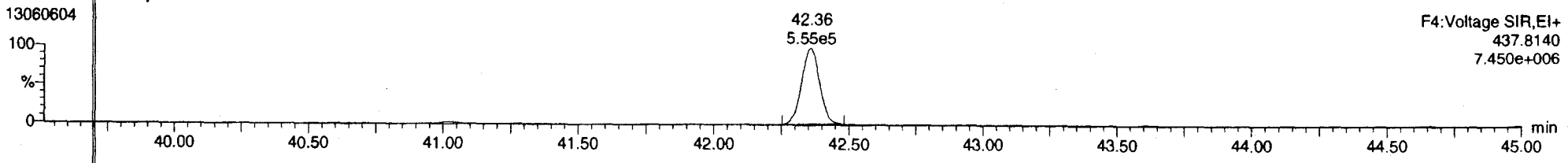
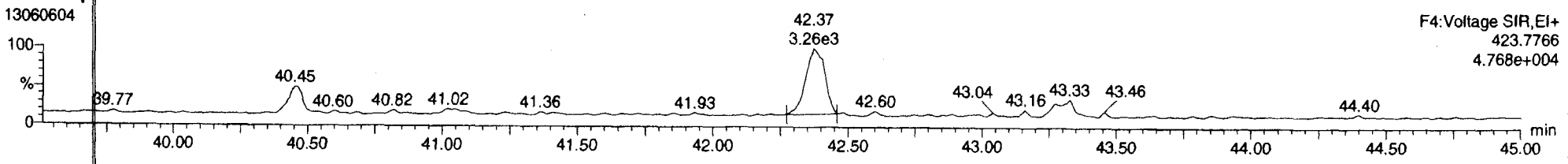
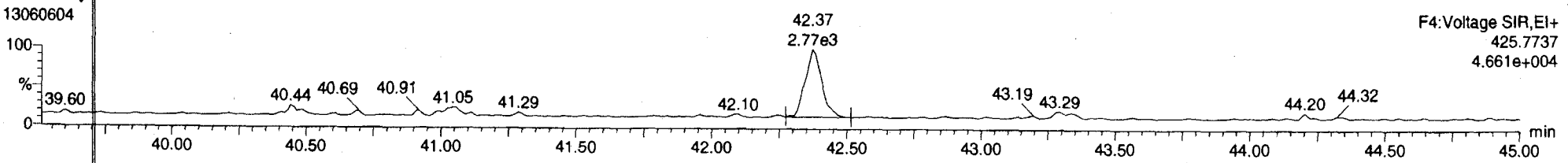


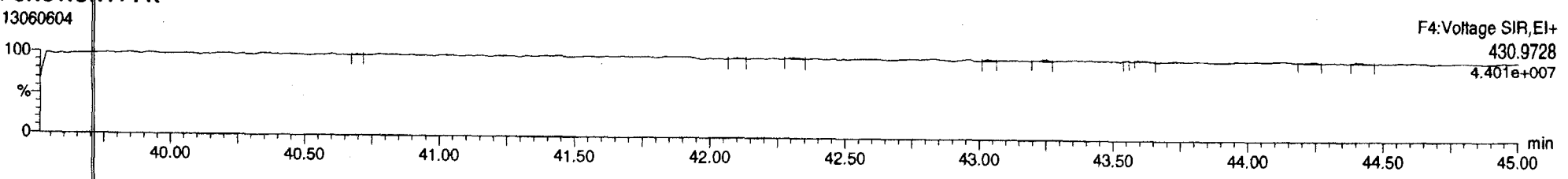
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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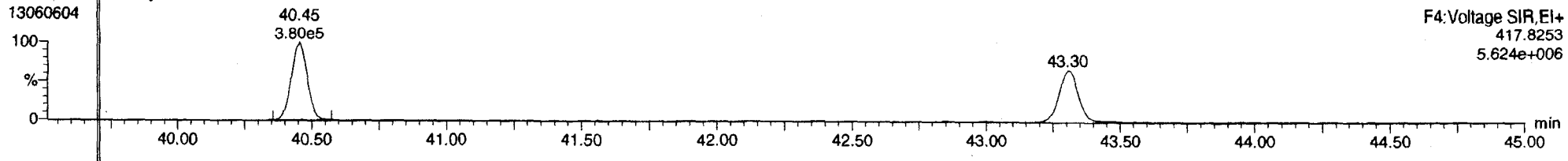
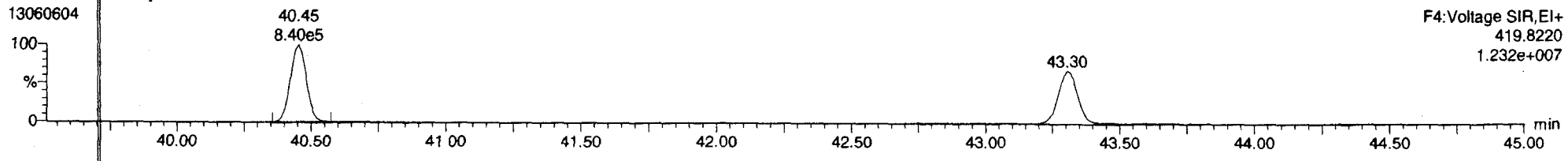
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:29 Pacific Daylight Time

ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

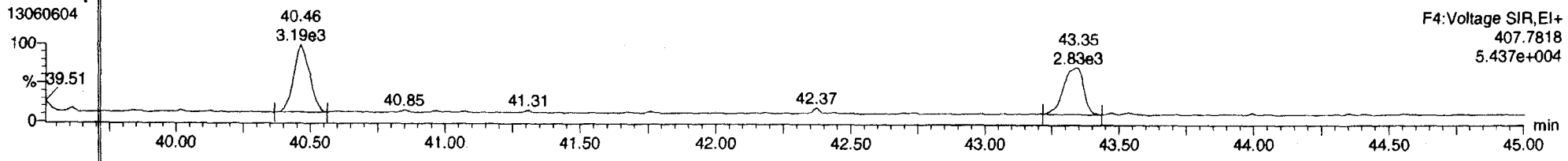
13C-1234678-HpCDF



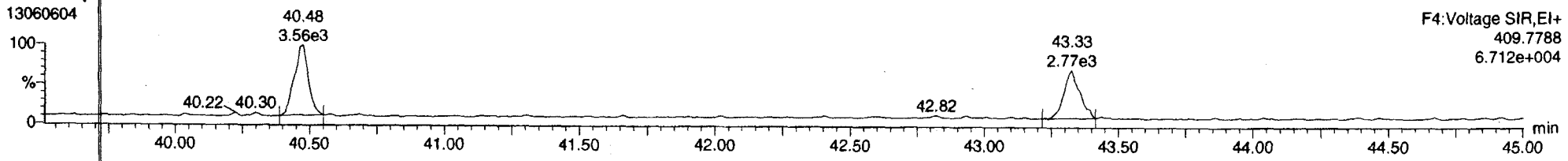
13C-1234678-HpCDF



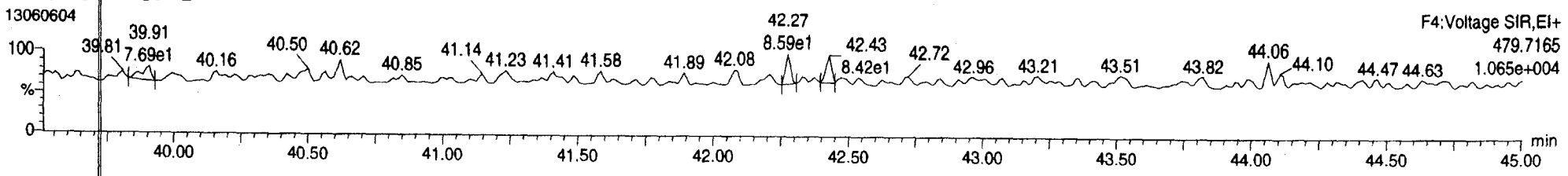
Total-heptafurans



Total-heptafurans

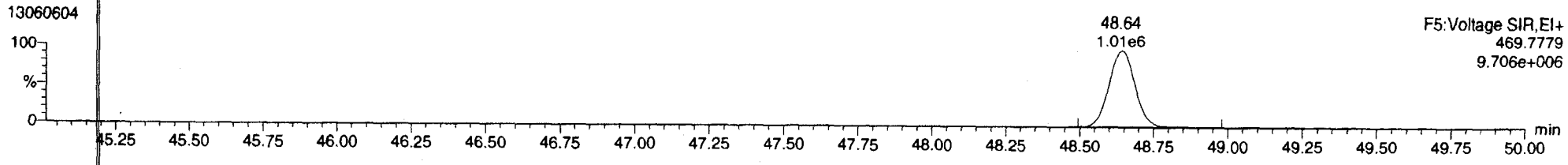


FUNCTION4 NCDPE



ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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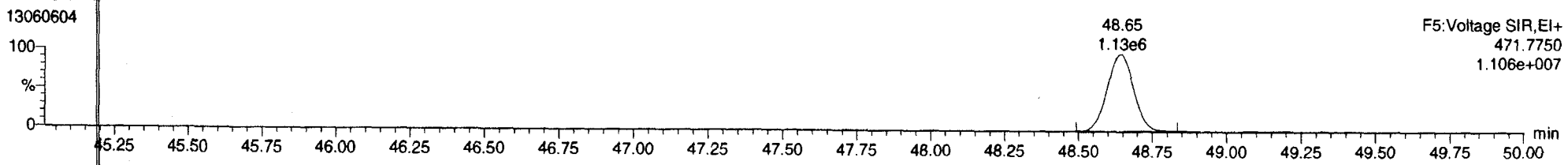

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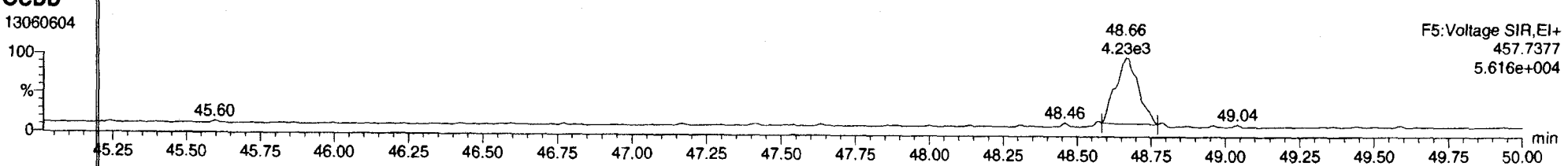

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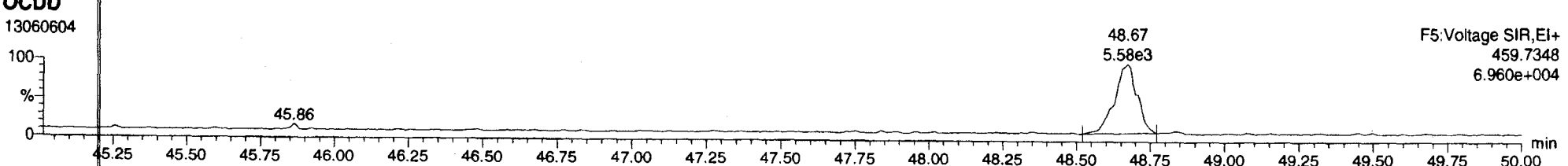
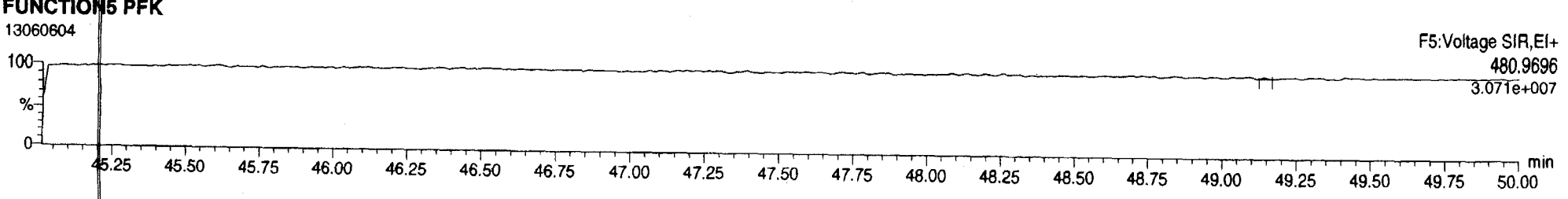
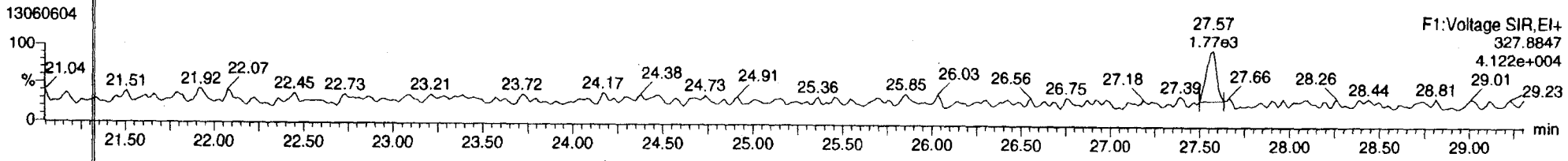


FUNCTION 5 PFK

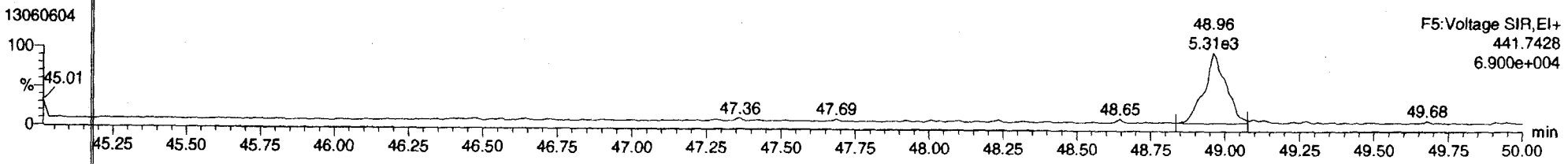


ID: CSL, Name: 13060604, Date: 06-Jun-2013, Time: 14:34:26, Conditions: AUTOSPEC01, User: pk

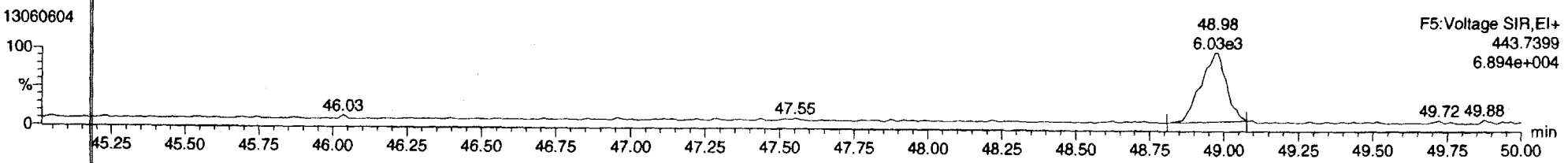
37CL-2378-TCDD



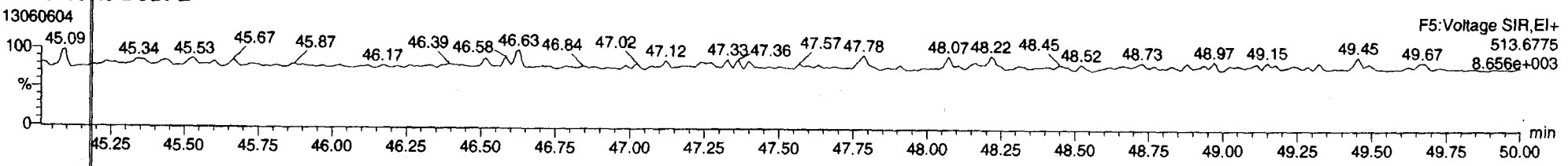
OCDF



OCDF



FUNCTION5 DCDPE



E1656 1350

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.945	1.001	3.86e3	4.38e3	0.832	0.881	0.770	63.2	NO	0.493	0.493
12378-PeCDF	31.114	1.001	2.04e4	1.36e4	0.853	1.500	1.550	176.3	NO	2.463	2.463
23478-PeCDF	32.451	1.000	2.16e4	1.35e4	0.884	1.599	1.550	176.9	NO	2.505	2.505
123478-HxCDF	36.145	1.000	1.77e4	1.52e4	1.017	1.164	1.240	237.8	NO	2.475	2.475
234678-HxCDF	37.242	1.001	1.89e4	1.48e4	1.067	1.273	1.240	267.9	NO	2.496	2.496
123678-HxCDF	36.299	1.001	1.86e4	1.56e4	0.999	1.194	1.240	248.3	NO	2.498	2.498
123789-HxCDF	38.338	1.001	1.68e4	1.37e4	0.947	1.222	1.240	235.4	NO	2.517	2.517
1234678-HpCDF	40.475	1.000	1.61e4	1.79e4	1.151	0.899	1.050	383.1	NO	2.507	2.507
1234789-HpCDF	43.336	1.000	1.37e4	1.33e4	1.166	1.031	1.050	314.6	NO	2.494	2.494
OCDF	48.977	1.007	2.24e4	2.64e4	1.001	0.849	0.890	359.8	NO	4.765	4.765
2378-TCDD	27.587	1.001	2.59e3	3.73e3	0.939	0.693	0.770	28.7	NO	0.471	0.471
12378-PeCDD	32.714	1.001	1.53e4	1.09e4	0.930	1.411	1.550	188.1	NO	2.501	2.501
123478-HxCDD	37.373	1.001	1.58e4	1.19e4	0.930	1.334	1.240	245.8	NO	2.476	2.476
123678-HxCDD	37.494	1.000	1.39e4	1.24e4	0.854	1.124	1.240	217.7	NO	2.415	2.415
123789-HxCDD	37.888	1.011	1.46e4	1.28e4	0.885	1.142	1.240	218.6	NO	2.503	2.503
1234678-HpCDD	42.382	1.000	1.30e4	1.38e4	0.966	0.944	1.050	285.0	NO	2.502	2.502
OCDD	48.690	1.001	2.24e4	2.53e4	0.921	0.886	0.890	113.1	NO	5.058	5.058
13C-2378-TCDF	26.915	1.006	8.69e5	1.14e6	1.283	0.762	0.770	3008.6	NO		97.512
13C-12378-PeCDF	31.092	1.162	9.86e5	6.29e5	1.051	1.568	1.550	3979.5	NO		95.727
13C-23478-PeCDF	32.440	1.213	9.65e5	6.22e5	1.030	1.551	1.550	3952.3	NO		95.951
13C-123478-HxCDF	36.134	0.954	4.44e5	8.61e5	1.069	0.515	0.510	2161.8	NO		99.300
13C-123678-HxCDF	36.277	0.958	4.64e5	9.03e5	1.124	0.513	0.510	2283.7	NO		98.939
13C-234678-HxCDF	37.220	0.983	4.36e5	8.29e5	1.041	0.526	0.510	2161.7	NO		98.882
13C-123789-HxCDF	38.316	1.012	4.32e5	8.47e5	1.039	0.510	0.510	2233.4	NO		100.122
13C-1234678-HpCDF	40.464	1.068	3.61e5	8.15e5	0.965	0.443	0.440	2134.7	NO		99.198
13C-1234789-HpCDF	43.325	1.144	2.82e5	6.44e5	0.760	0.437	0.440	1413.3	NO		99.109
13C-1234-TCDD	26.750	0.000	7.03e5	9.02e5	1.000	0.780	0.770	1035.9	NO		100.000
13C-2378-TCDD	27.558	1.030	6.27e5	8.04e5	0.926	0.780	0.770	952.4	NO		96.282
13C-12378-PeCDD	32.693	1.222	6.85e5	4.40e5	0.734	1.556	1.550	3212.8	NO		95.477
13C-123478-HxCDD	37.351	0.986	6.67e5	5.35e5	0.984	1.246	1.240	3215.0	NO		99.417
13C-123678-HxCDD	37.483	0.990	6.93e5	5.84e5	1.043	1.187	1.240	3326.2	NO		99.595
13C-1234678-HpCDD	42.371	1.119	5.66e5	5.40e5	0.891	1.048	1.050	3899.4	NO		101.040
13C-OCDD	48.654	1.285	9.58e5	1.09e6	0.849	0.882	0.890	4728.4	NO		196.099

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

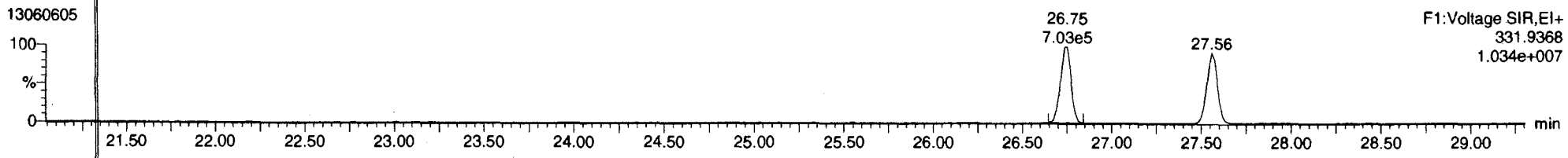
13C-123789-HxCDD	37.877	0.000	6.81e5	5.48e5	1.000	1.243	1.240	3339.6	NO	100.000
Total-tetrafurans			4.21e3		0.832					0.533
Total-pentafurans			0.00e0							
Total-pentafurans			4.25e4		0.868					5.052
Total-hexafurans			7.22e4		1.008					10.031
Total-heptafurans			2.97e4		1.159					5.002
Total-Furans			1.71e5		0.992					25.392
Total-tetradioxins			5.06e3		0.939					0.679
Total-pentadioxins			1.53e4		0.930					2.501
Total-hexadioxins			4.56e4		0.890					7.511
Total-heptadioxins			1.30e4		0.966					2.502
Total-Dioxins			1.02e5		0.918					18.302
Total-TEQ			2.73e5							43.695
37CL-2378-TCDD	27.572	1.031	7.56e3		0.989			35.1		0.476
FUNCTION1 PFK			6.04e5							
FUNCTION2 PFK			2.28e5							0.000
FUNCTION3 PFK			5.78e5							0.000
FUNCTION4 PFK			6.93e5							
FUNCTION5 PFK			4.55e5							
FUNCTION1 HXCDPE			1.51e2							0.000
FUNCTION1 HPCDPE			2 34e3							0.000
FUNCTION2 HPCDPE			8.25e2							0.000
FUNCTION3 OCDPE			0.00e0							
FUNCTION4 NCDPE			2.97e2							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

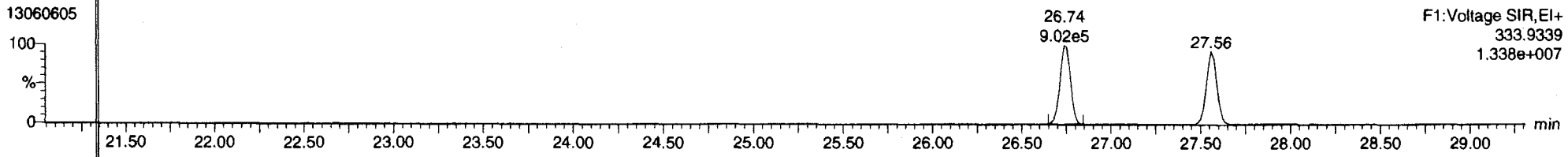
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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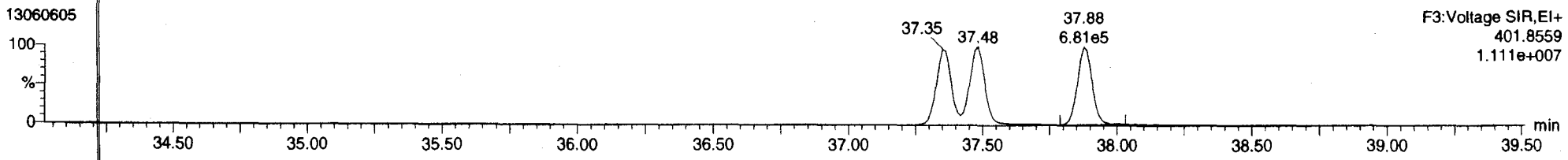

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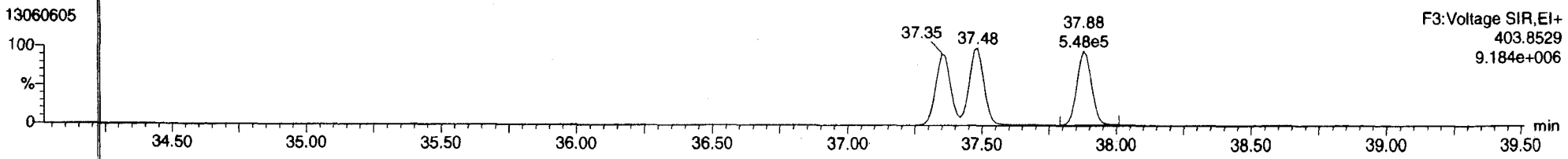

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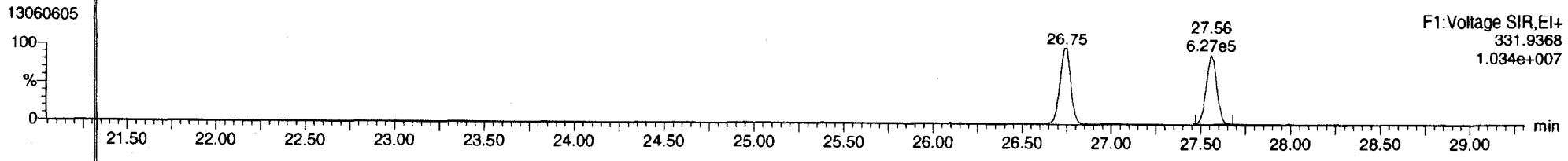
ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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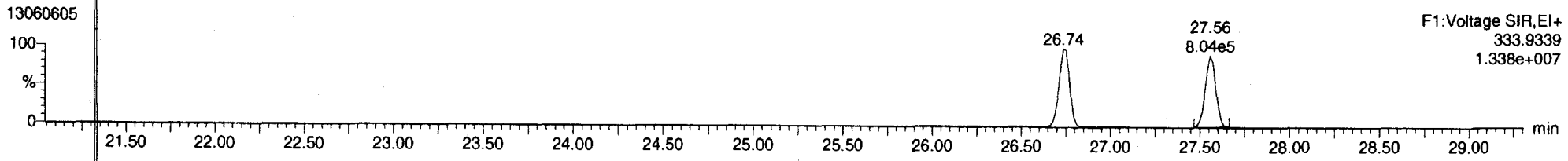
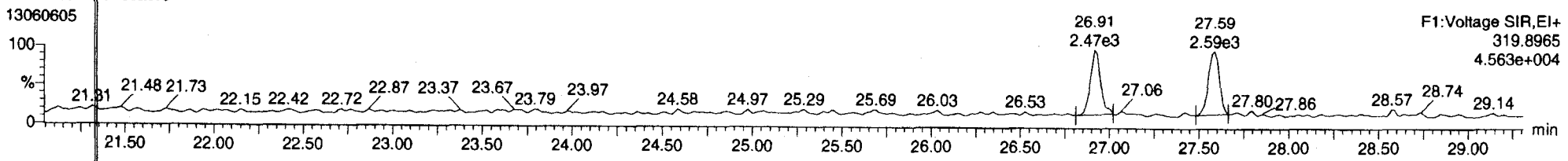
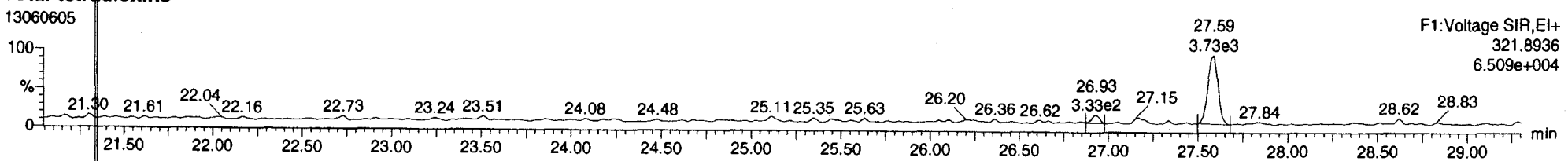


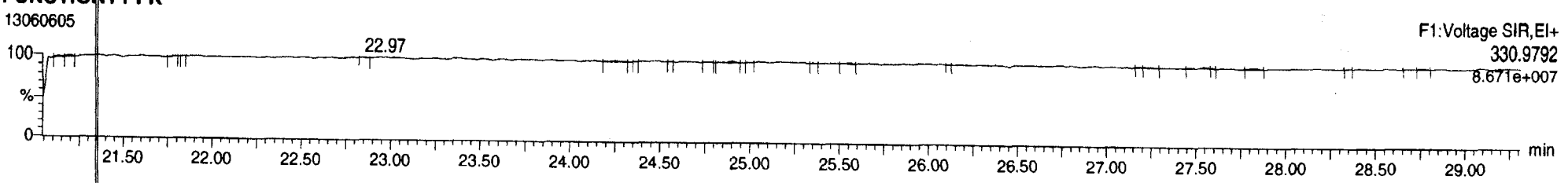
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



D1508-1254

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
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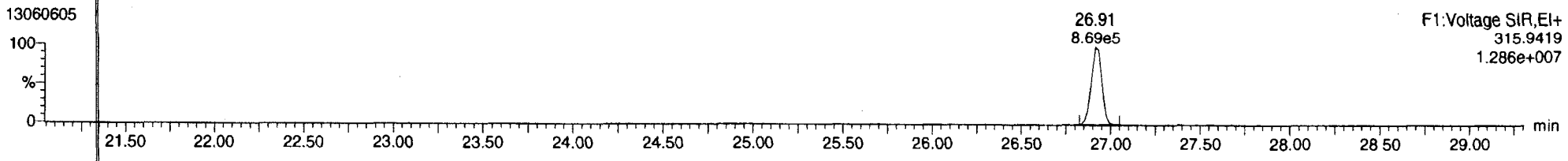
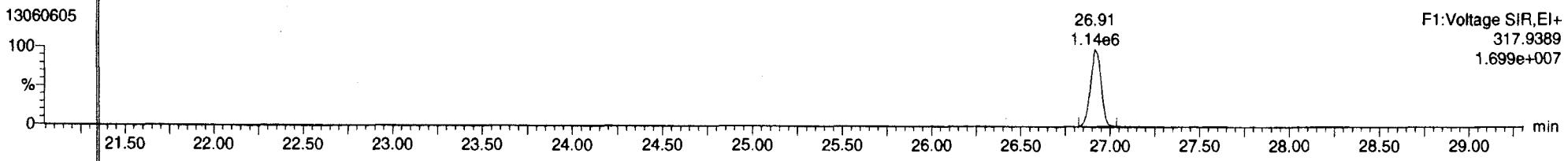
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

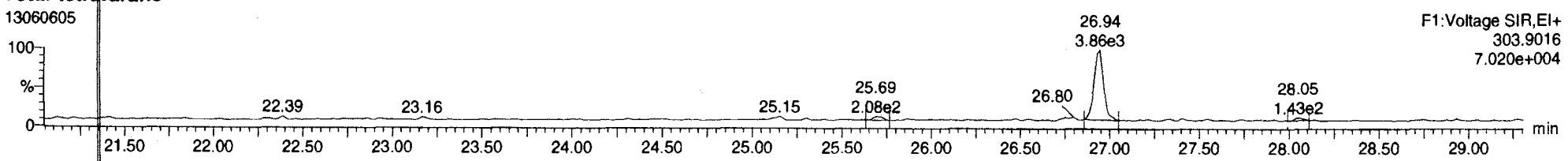
13C-2378-TCDF



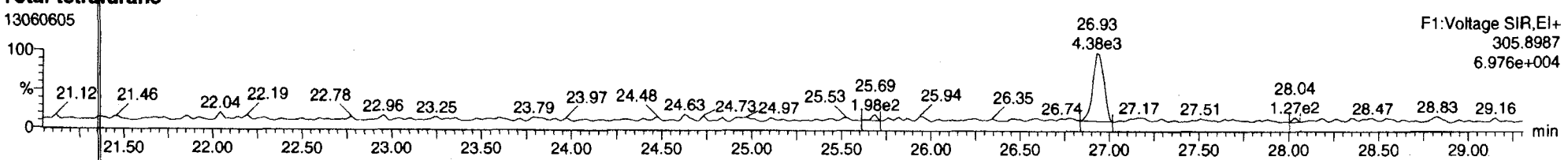
13C-2378-TCDF



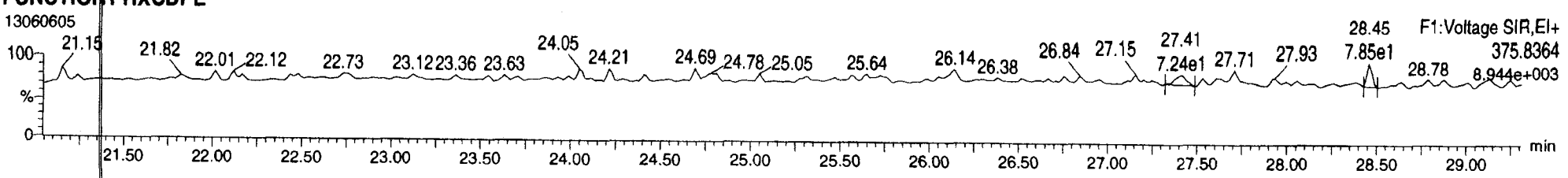
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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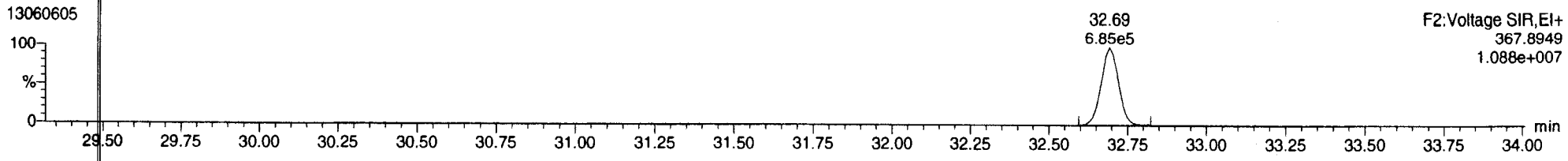
ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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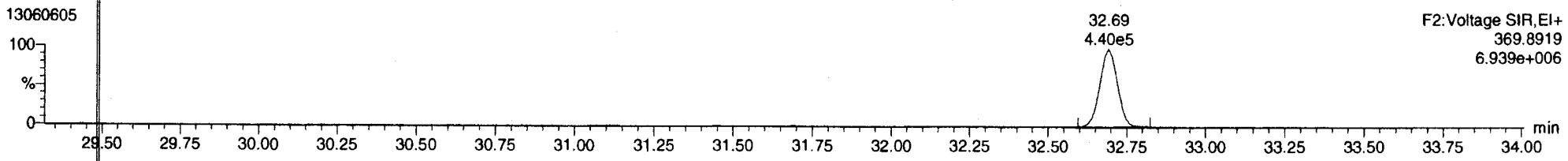
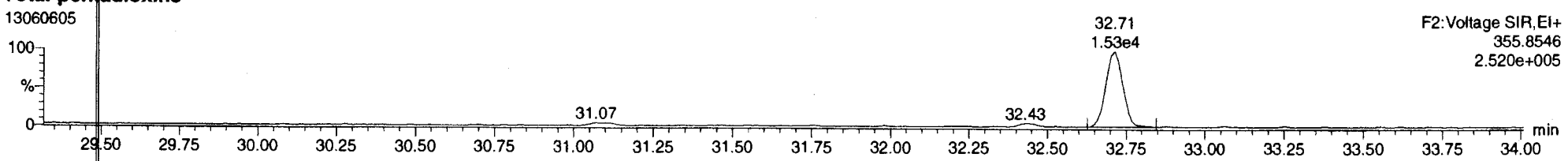
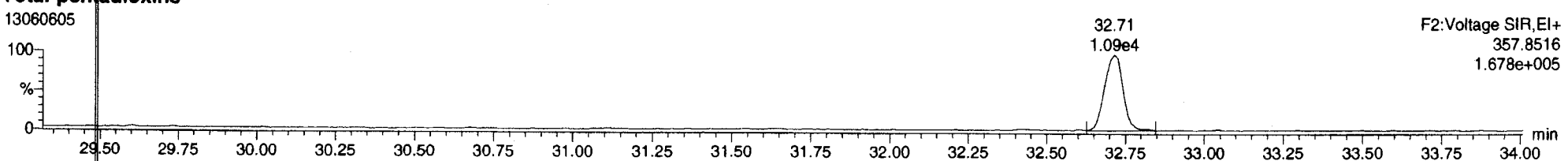


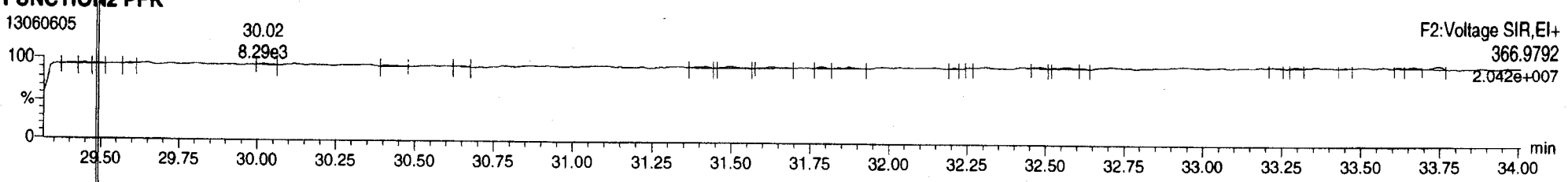
Total-pentadioxins



Total-pentadioxins

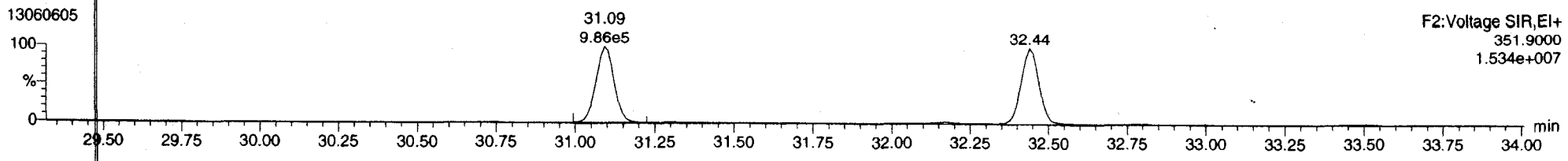


FUNCTION2 PFK



ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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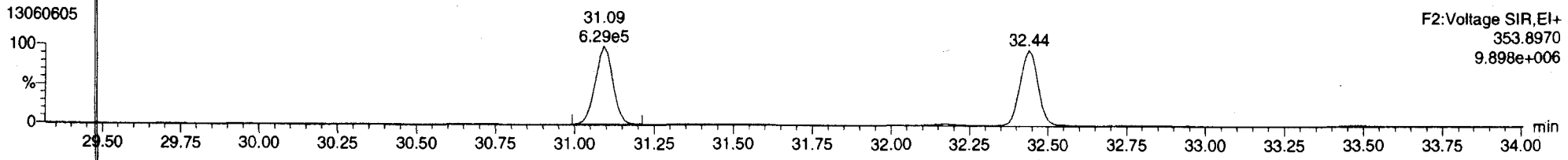
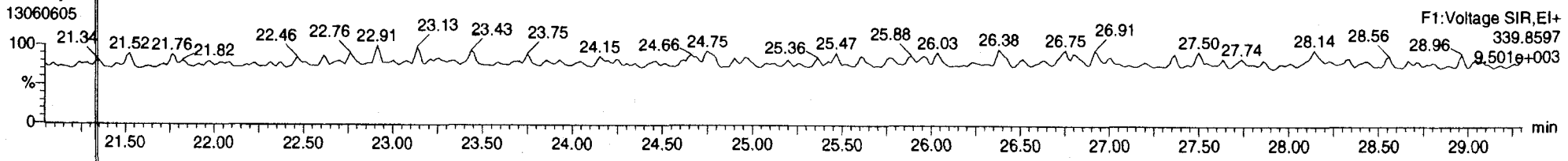


Total-penta1



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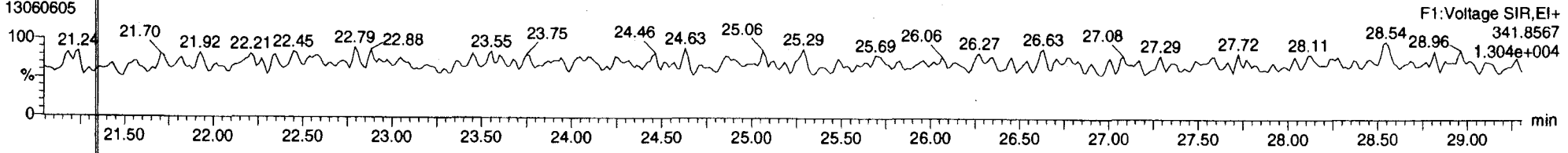
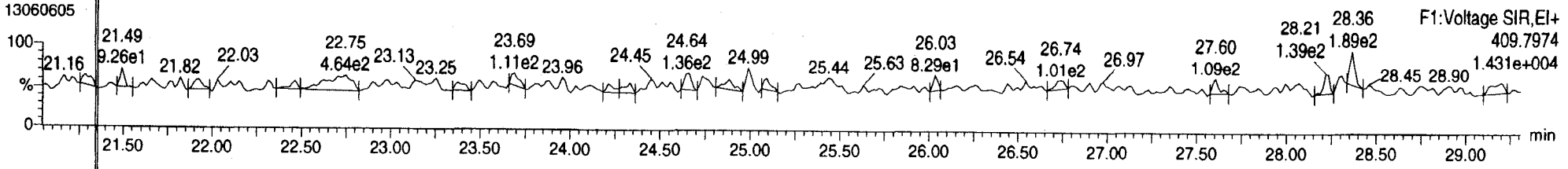


FUNCTION1 HPCDPE



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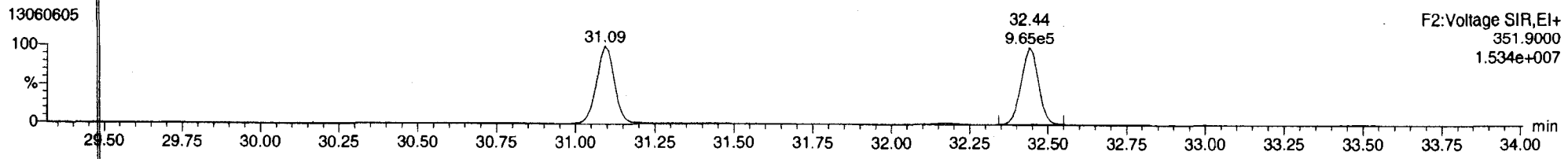
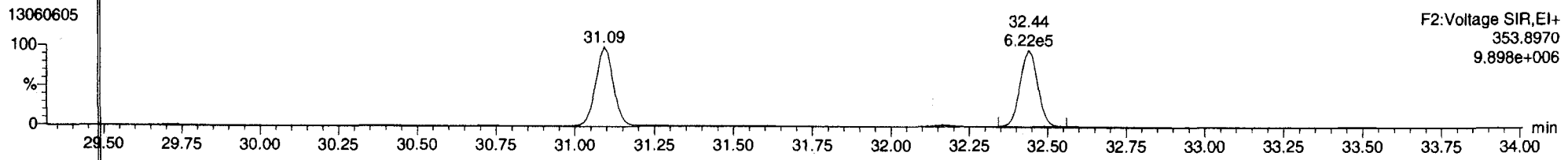
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

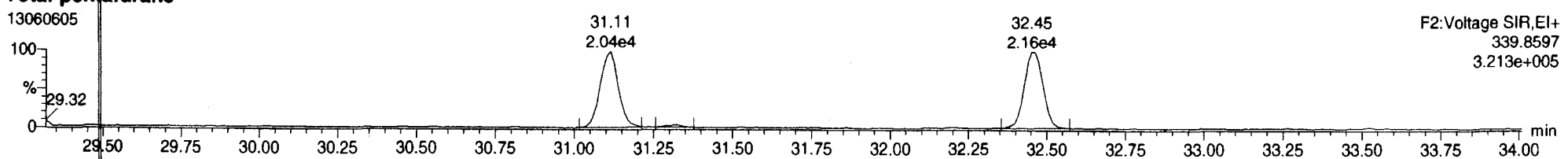
13C-23478-PeCDF



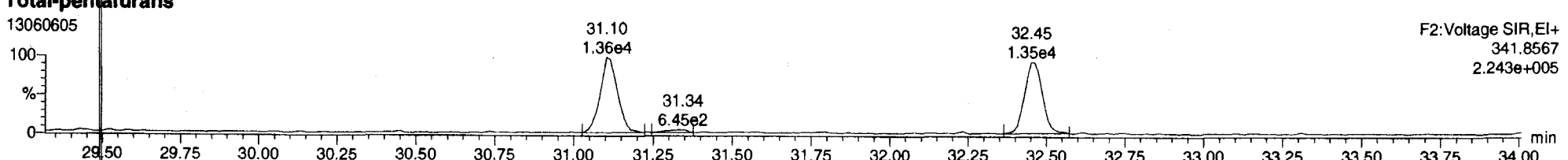
13C-23478-PeCDF



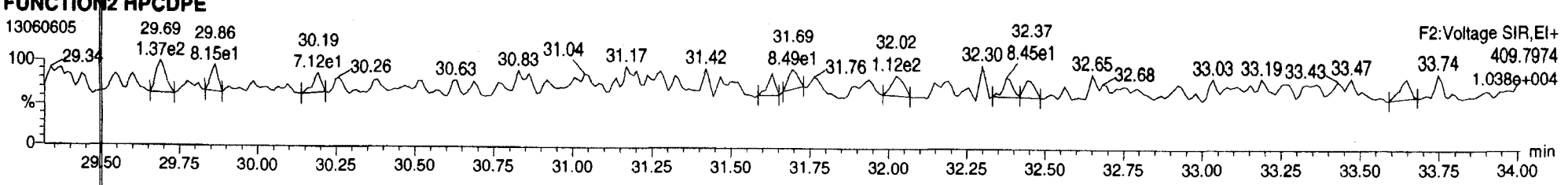
Total-pentafurans



Total-pentafurans

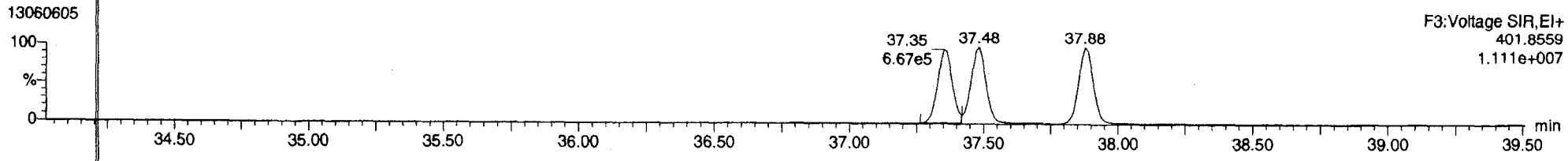


FUNCTION2 HPCDPE

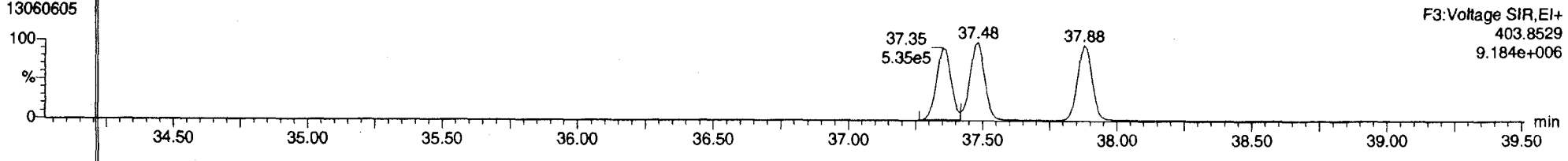


ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

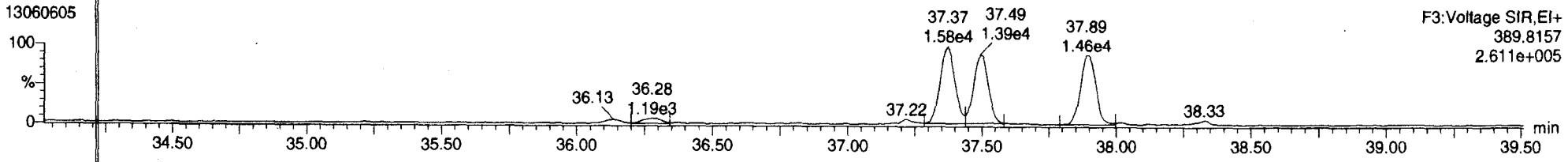
13C-123478-HxCDD



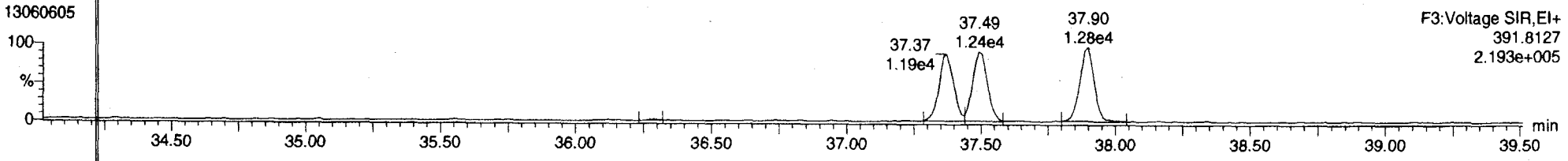
13C-123478-HxCDD



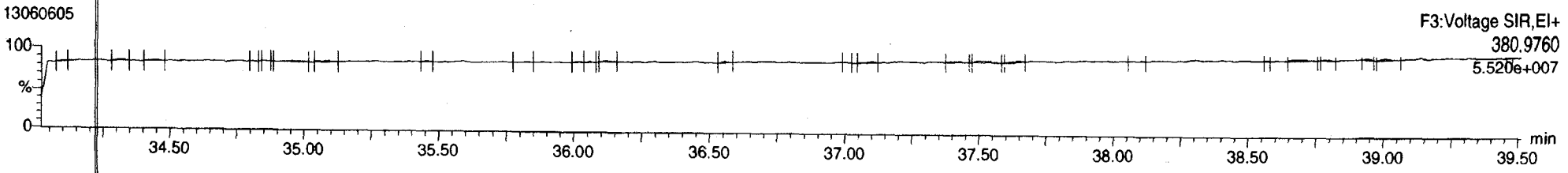
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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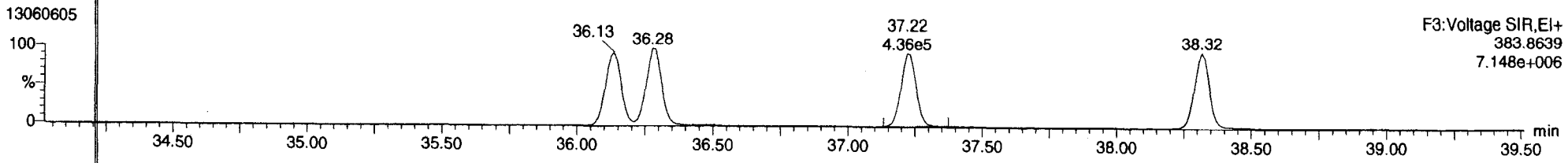

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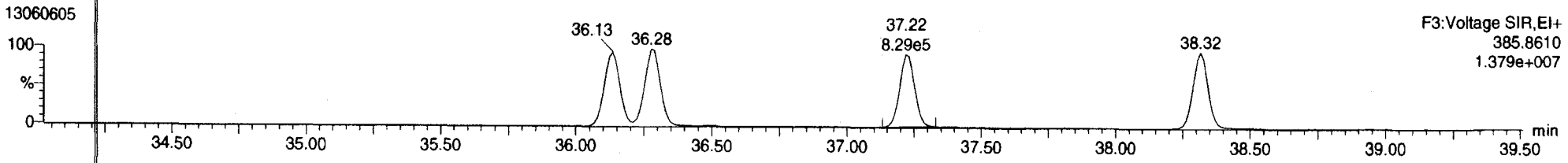
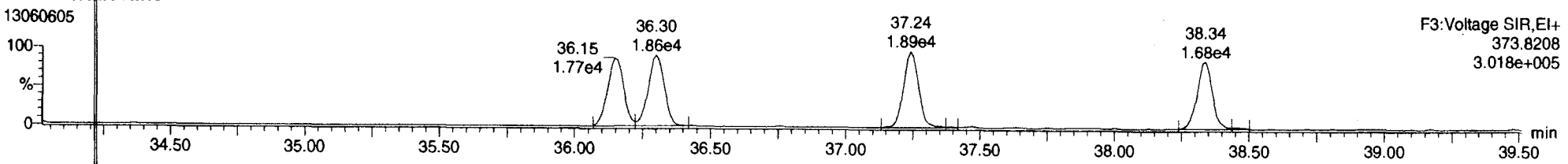
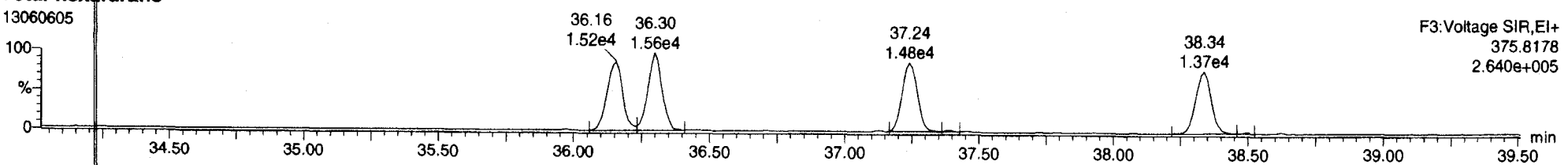


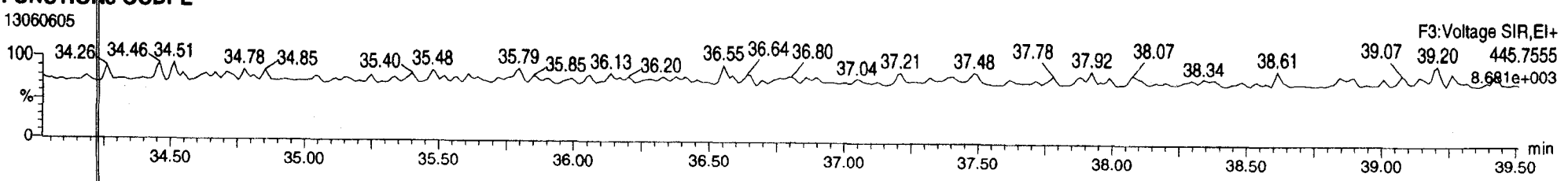
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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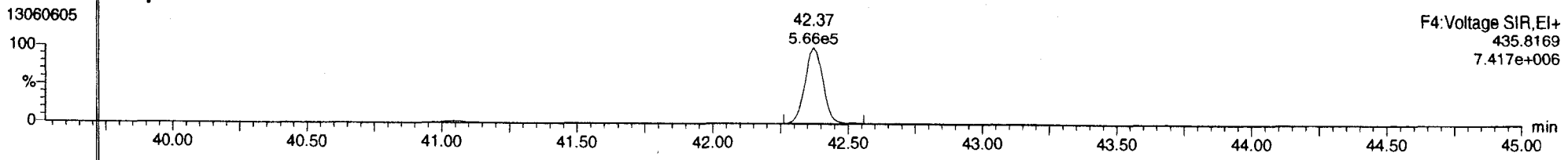
13C-1234678-HpCDD



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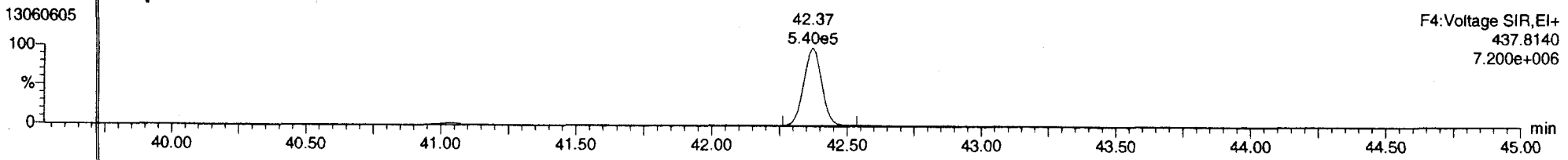
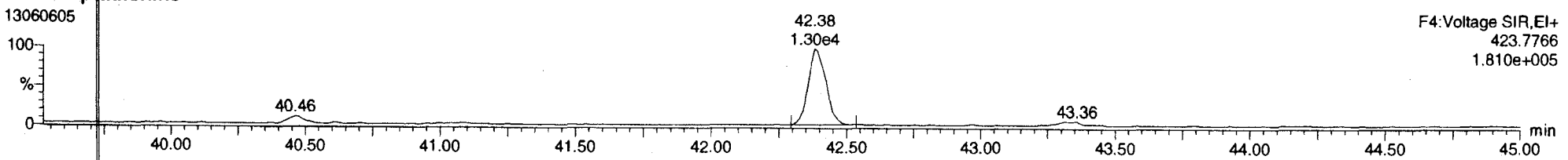


Total-heptadioxins



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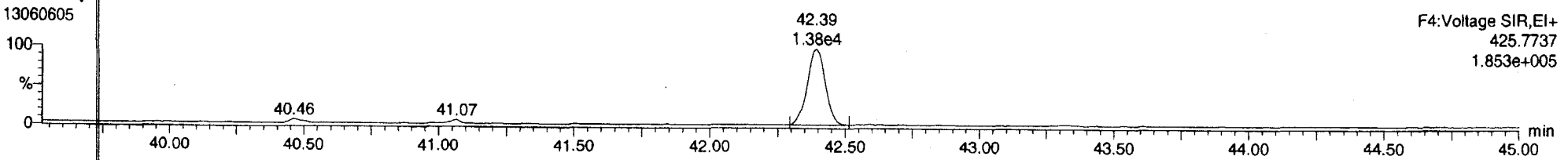
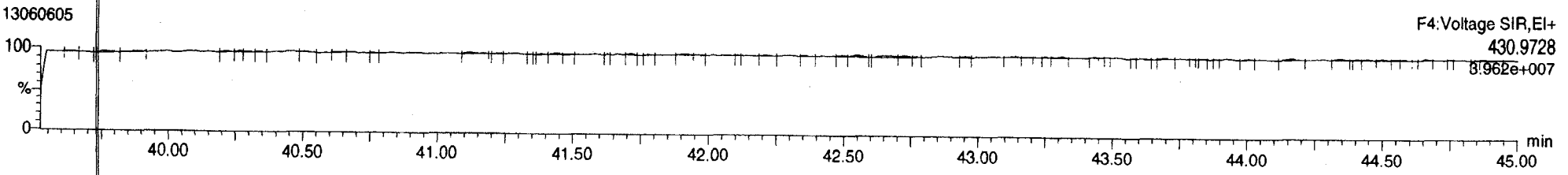


FUNCTION4 PFK



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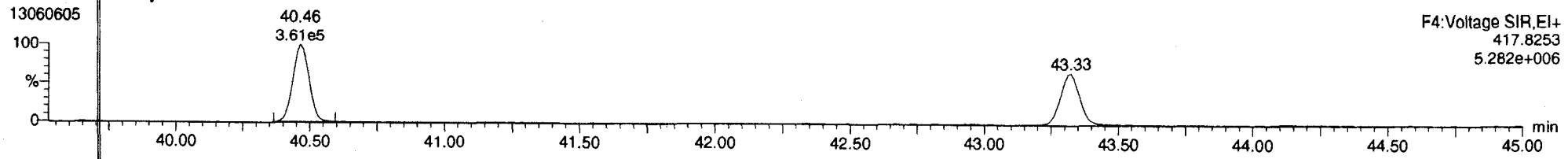
13C-1234678-HpCDF



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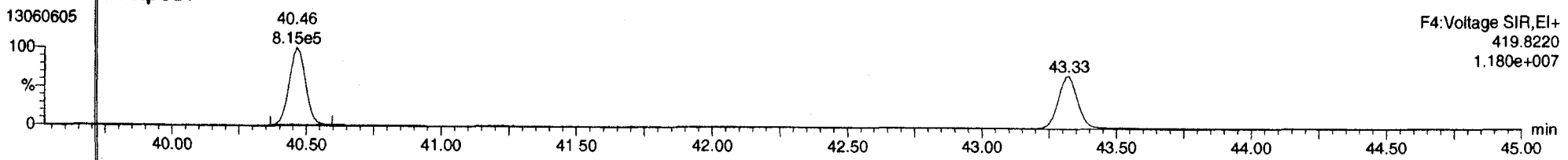
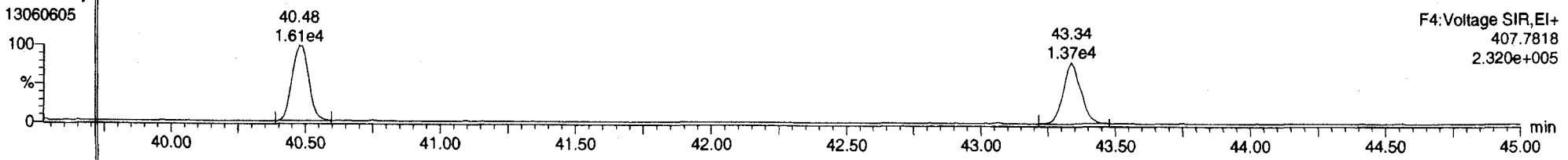


Total-heptafurans



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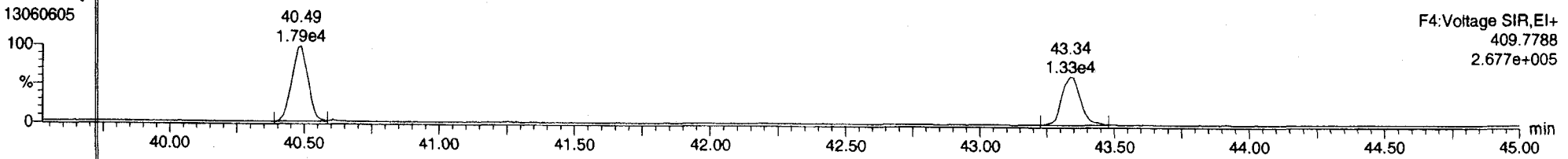
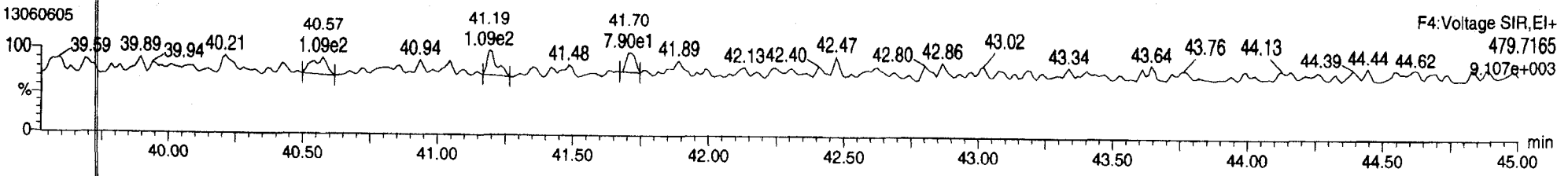


FUNCTION4 NCDPE



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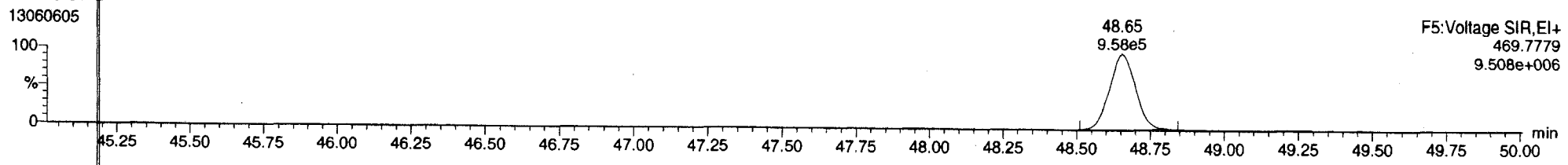
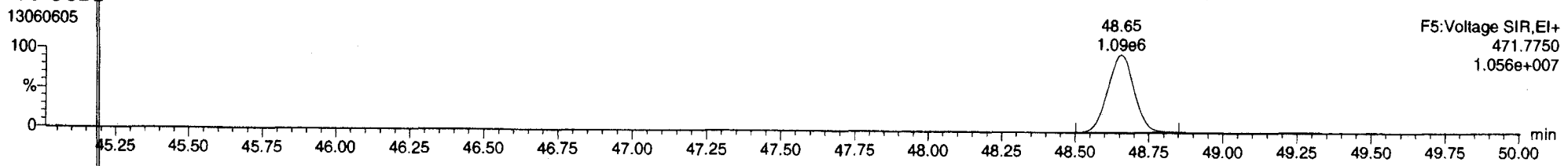
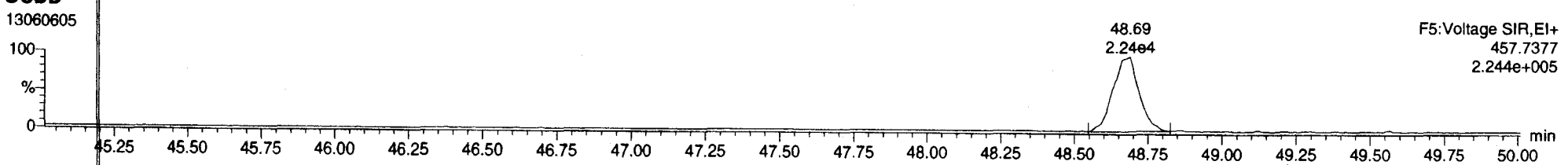
13C-OCDD



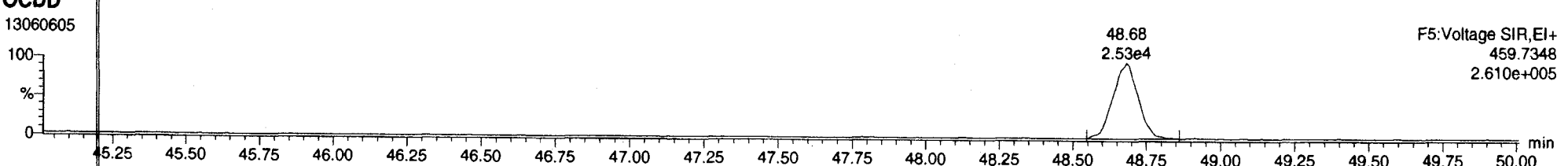
13C-OCDD



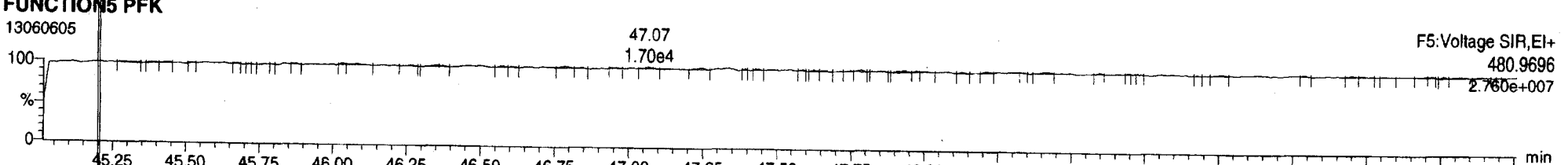
OCDD



OCDD



FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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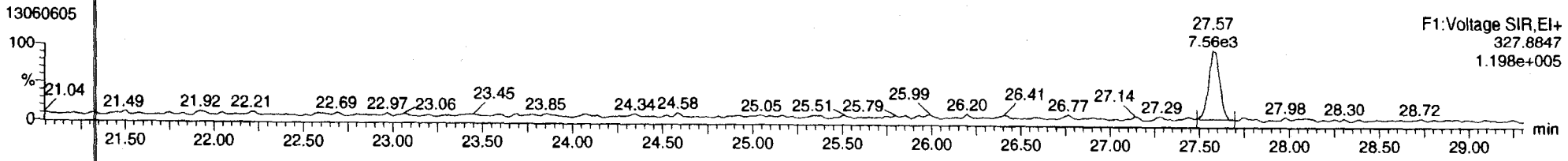
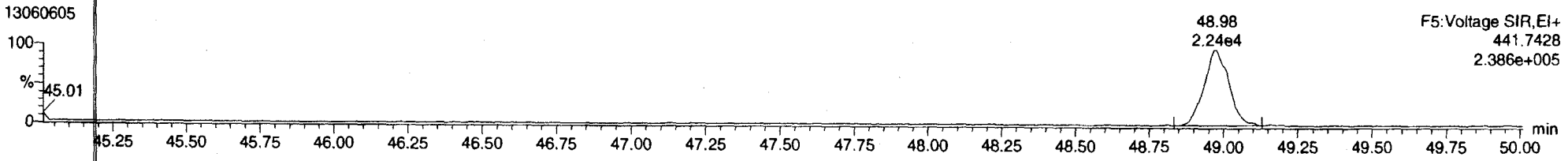
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:40 Pacific Daylight Time

ID: CS1, Name: 13060605, Date: 06-Jun-2013, Time: 15:31:00, Conditions: AUTOSPEC01, User: pk

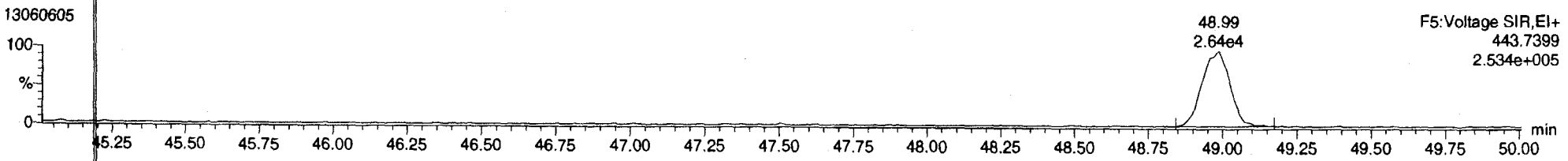
37CL-2378-TCDD



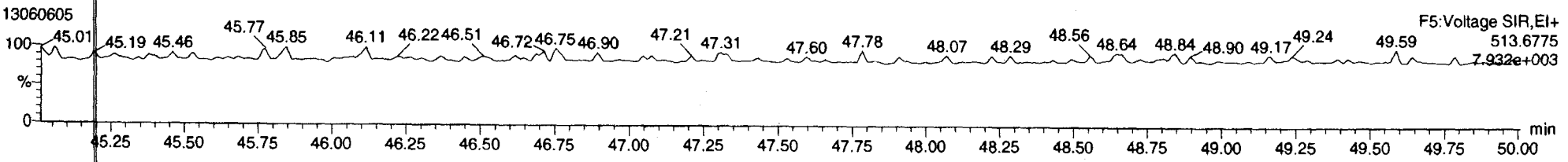
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
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Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.915	1.001	1.49e4	2.11e4	0.832	0.706	0.770	254.6	NO	2.004	2.004
12378-PeCDF	31.092	1.000	8.93e4	5.77e4	0.853	1.548	1.550	1048.0	NO	9.987	9.987
23478-PeCDF	32.440	1.000	8.82e4	5.74e4	0.884	1.536	1.550	1038.2	NO	9.795	9.795
123478-HxCDF	36.134	1.000	7.30e4	6.19e4	1.017	1.178	1.240	524.9	NO	9.914	9.914
234678-HxCDF	37.230	1.001	7.74e4	6.26e4	1.067	1.236	1.240	565.2	NO	10.202	10.202
123678-HxCDF	36.288	1.001	7.69e4	6.22e4	0.999	1.235	1.240	535.9	NO	9.896	9.896
123789-HxCDF	38.316	1.000	6.59e4	5.47e4	0.947	1.205	1.240	476.2	NO	9.743	9.743
1234678-HpCDF	40.464	1.000	7.09e4	6.91e4	1.151	1.026	1.050	728.8	NO	9.937	9.937
1234789-HpCDF	43.325	1.001	5.87e4	5.59e4	1.166	1.051	1.050	508.9	NO	10.063	10.063
OCDF	48.968	1.007	1.00e5	1.15e5	1.001	0.868	0.890	977.8	NO	19.468	19.468
2378-TCDD	27.557	1.001	1.23e4	1.64e4	0.939	0.747	0.770	120.1	NO	1.941	1.941
12378-PeCDD	32.692	1.000	6.65e4	4.43e4	0.930	1.502	1.550	768.6	NO	9.993	9.993
123478-HxCDD	37.362	1.001	6.17e4	5.01e4	0.930	1.232	1.240	1161.7	NO	9.776	9.776
123678-HxCDD	37.483	1.001	5.89e4	4.90e4	0.854	1.202	1.240	1159.9	NO	9.865	9.865
123789-HxCDD	37.877	1.011	6.01e4	4.95e4	0.885	1.215	1.240	1177.5	NO	9.864	9.864
1234678-HpCDD	42.371	1.000	5.38e4	5.11e4	0.966	1.052	1.050	638.2	NO	9.670	9.670
OCDD	48.663	1.000	9.15e4	1.09e5	0.921	0.838	0.890	1397.1	NO	19.684	19.684
13C-2378-TCDF	26.900	1.007	9.40e5	1.22e6	1.283	0.769	0.770	4648.4	NO		99.646
13C-12378-PeCDF	31.081	1.163	1.05e6	6.74e5	1.051	1.558	1.550	4504.4	NO		97.060
13C-23478-PeCDF	32.429	1.214	1.02e6	6.59e5	1.030	1.553	1.550	4364.4	NO		96.496
13C-123478-HxCDF	36.123	0.954	4.55e5	8.83e5	1.069	0.516	0.510	1825.1	NO		100.199
13C-123678-HxCDF	36.266	0.958	4.78e5	9.29e5	1.124	0.514	0.510	1924.2	NO		100.131
13C-234678-HxCDF	37.208	0.983	4.35e5	8.51e5	1.041	0.511	0.510	1787.4	NO		98.886
13C-123789-HxCDF	38.305	1.012	4.40e5	8.66e5	1.039	0.508	0.510	1820.0	NO		100.602
13C-1234678-HpCDF	40.453	1.068	3.80e5	8.44e5	0.965	0.451	0.440	3157.7	NO		101.554
13C-1234789-HpCDF	43.303	1.144	2.95e5	6.82e5	0.760	0.432	0.440	2091.0	NO		102.825
13C-1234-TCDD	26.721	0.000	7.47e5	9.45e5	1.000	0.790	0.770	1297.4	NO		100.000
13C-2378-TCDD	27.542	1.031	6.82e5	8.92e5	0.926	0.765	0.770	1163.3	NO		100.443
13C-12378-PeCDD	32.681	1.223	7.22e5	4.71e5	0.734	1.533	1.550	3116.2	NO		96.002
13C-123478-HxCDD	37.340	0.986	6.84e5	5.45e5	0.984	1.256	1.240	3027.7	NO		99.956
13C-123678-HxCDD	37.461	0.989	7.10e5	5.71e5	1.043	1.244	1.240	3160.2	NO		98.271
13C-1234678-HpCDD	42.360	1.119	5.71e5	5.51e5	0.891	1.035	1.050	2842.3	NO		100.773
13C-OCDD	48.645	1.285	1.04e6	1.17e6	0.849	0.886	0.890	4039.4	NO		208.717

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.866	0.000	6.84e5	5.65e5	1.000	1.211	1.240	3145.1	NO	100.000
Total-tetrafurans			1.50e4		0.832					2.023
Total-penta1			0.00e0							
Total-pentafurans			1.80e5		0.868					20.053
Total-hexafurans			2.94e5		1.008					39.921
Total-heptafurans			1.30e5		1.159					20.119
Total-Furans			7.19e5		0.992					101.584
Total-tetradioxins			1.54e4		0.939					2.227
Total-pentadioxins			6.82e4		0.930					10.177
Total-hexadioxins			1.84e5		0.890					29.851
Total-heptadioxins			5.41e4		0.966					9.759
Total-Dioxins			4.13e5		0.918					71.698
Total-TEQ			1.13e6							173.282
37CL-2378-TCDD	27.557	1.031	3.39e4		0.989			169.8		2.024
FUNCTION1 PFK			4.51e7							
FUNCTION2 PFK			1.82e5							0.000
FUNCTION3 PFK			0.00e0							
FUNCTION4 PFK			0.00e0							
FUNCTION5 PFK			4.47e5							
FUNCTION1 HXCDPE			1.80e2							0.000
FUNCTION1 HPCDPE			1.91e3							0.000
FUNCTION2 HPCDPE			1.16e3							0.000
FUNCTION3 OCDPE			1.08e2							0.000
FUNCTION4 NCDPE			7.96e1							0.000
FUNCTION5 DCDPE			0.00e0							

D2369-15SM

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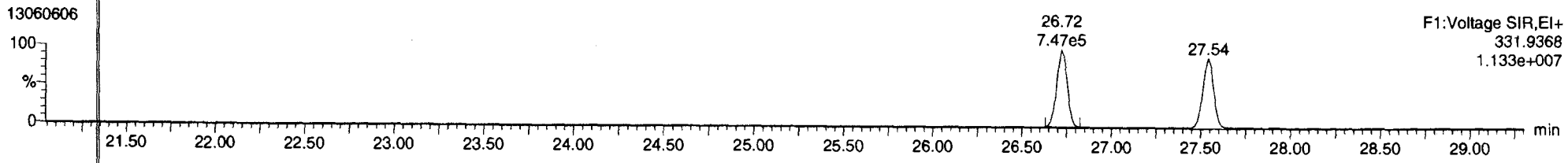
13C-1234-TCDD



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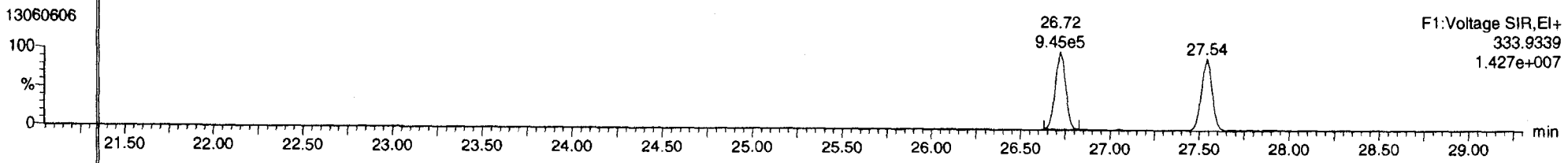
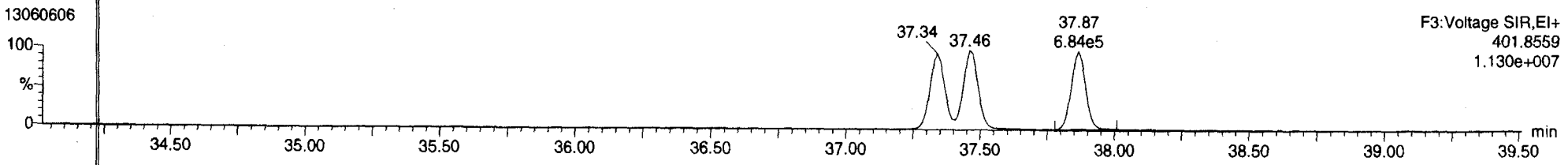


13C-123789-HxCDD



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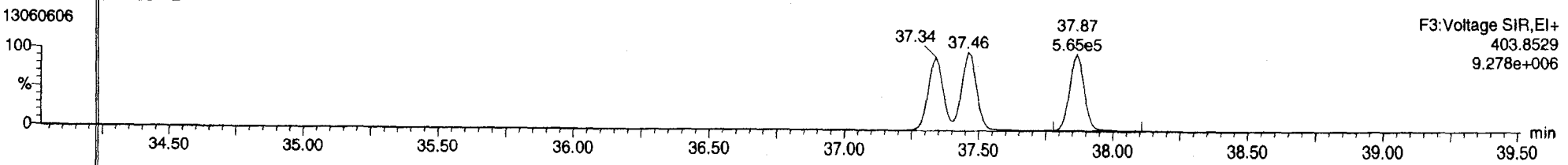

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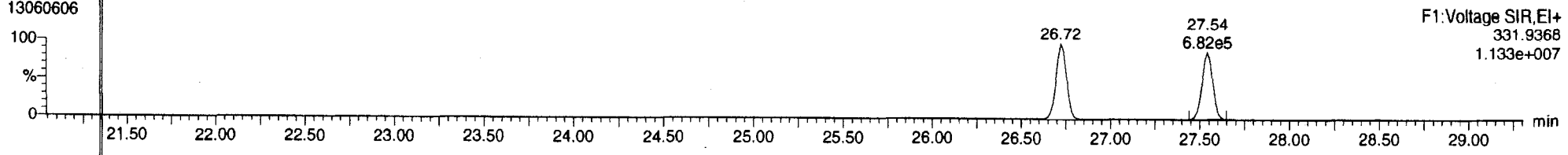
13C-2378-TCDD



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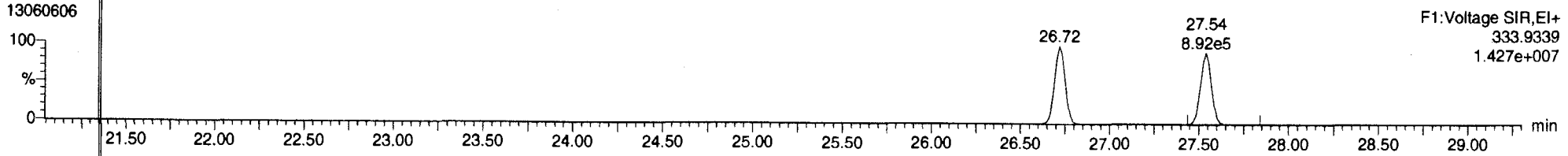
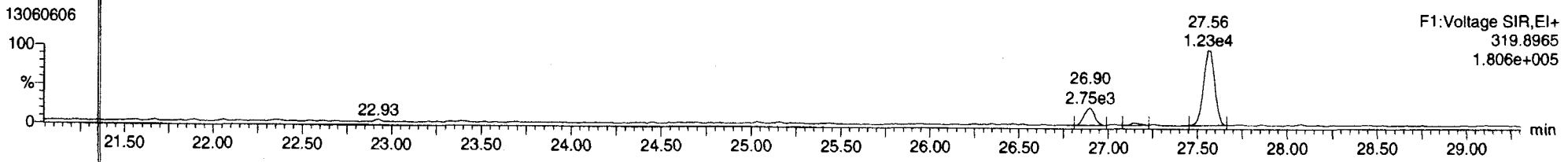
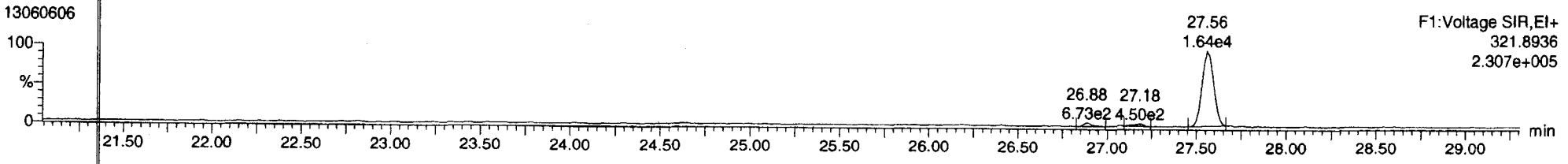


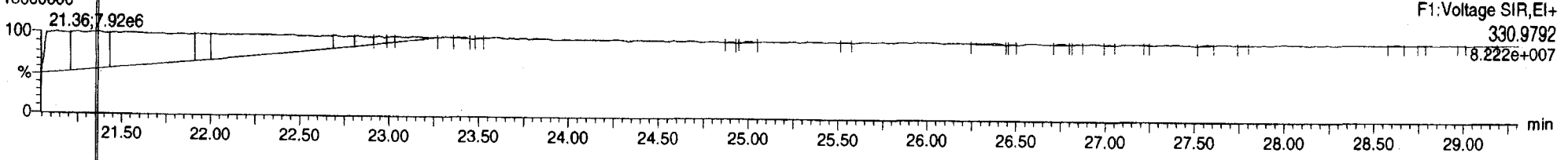
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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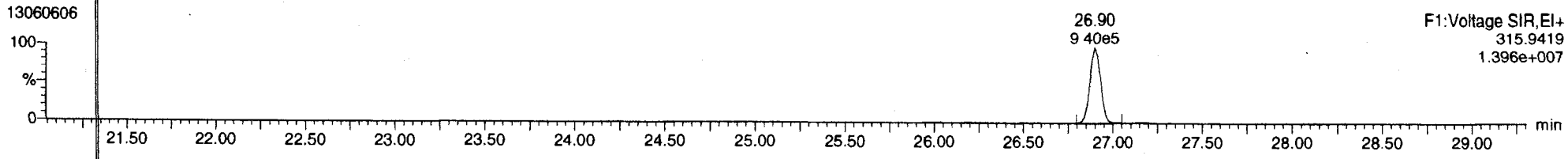
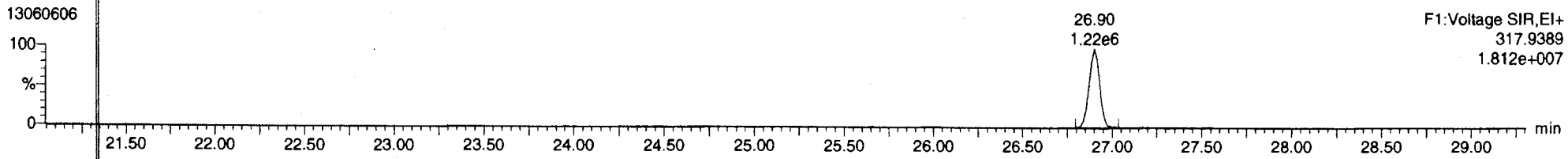
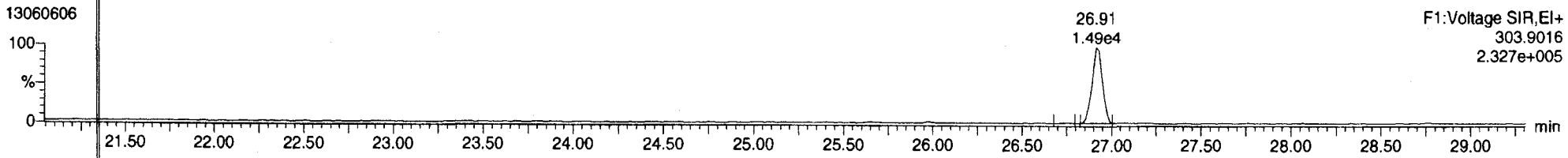
13C-2378-TCDF



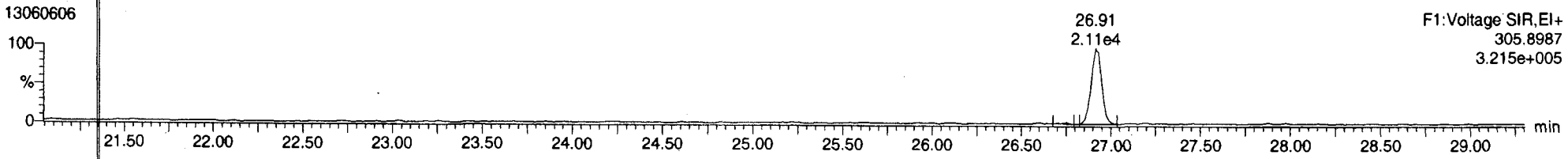
13C-2378-TCDF



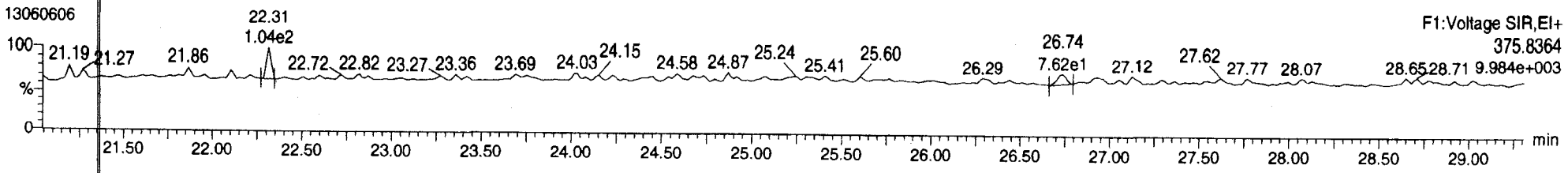
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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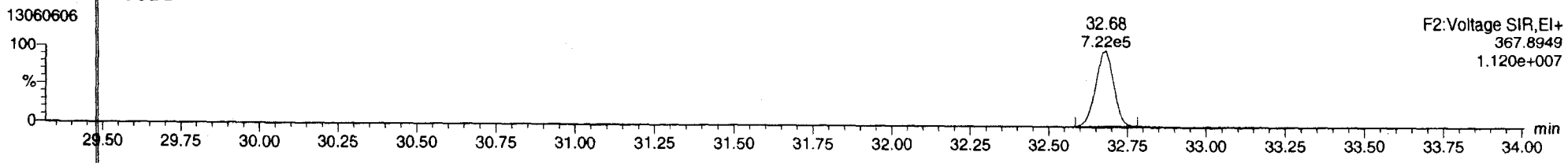
13C-12378-PeCDD



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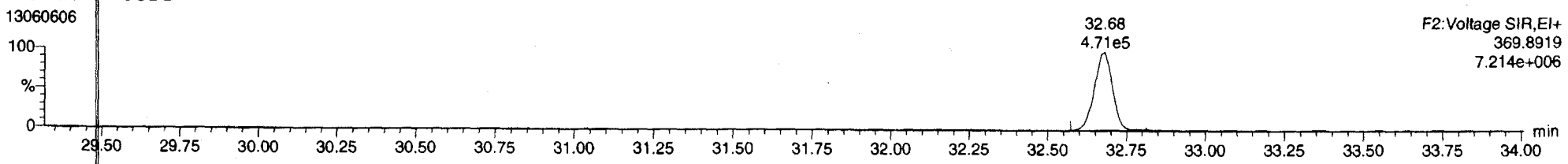
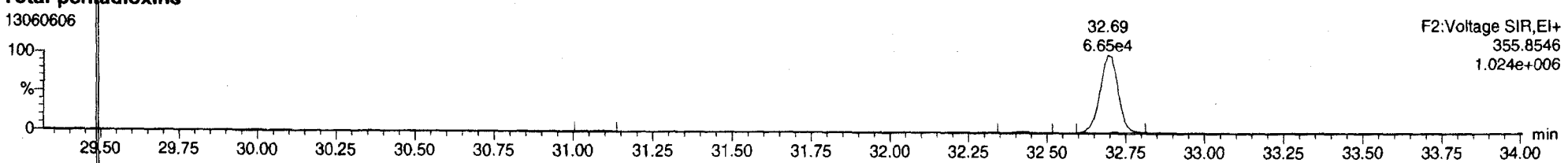
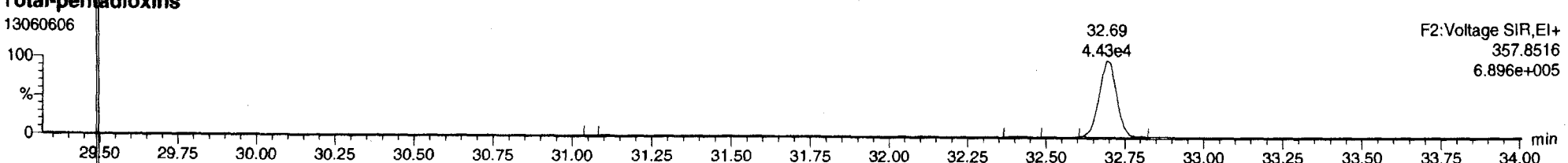


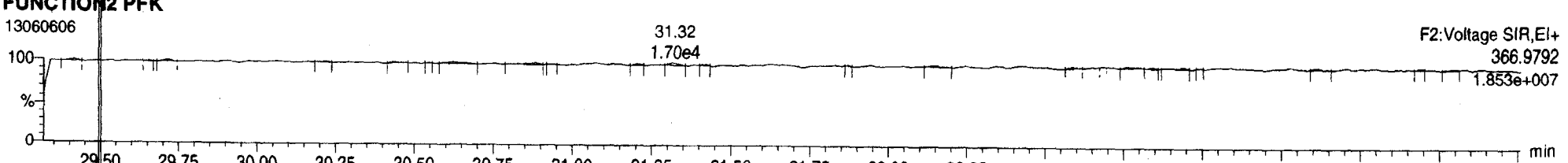
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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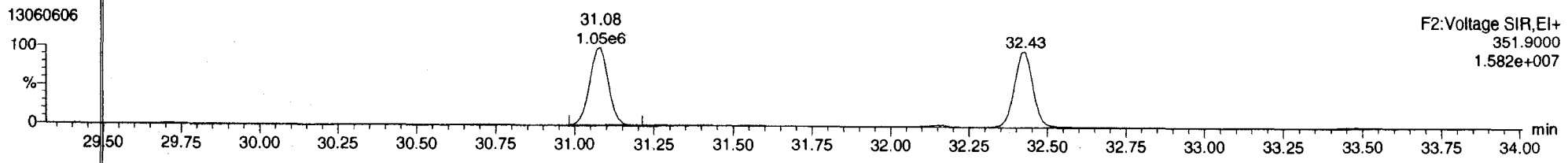
13C-12378-PeCDF



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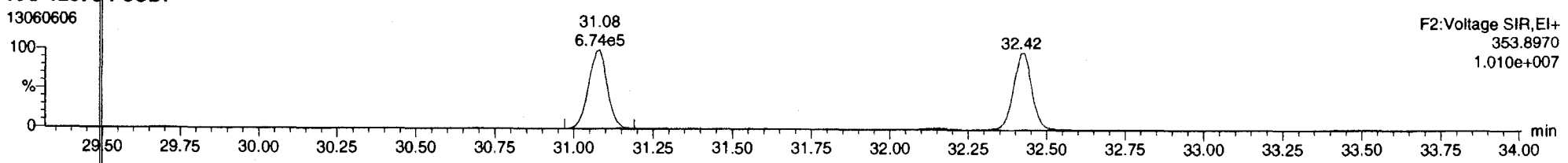
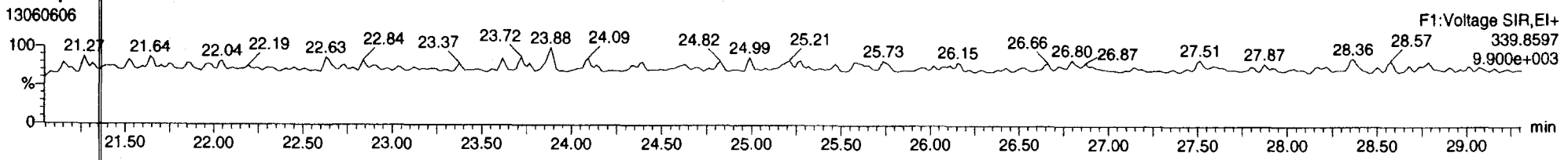
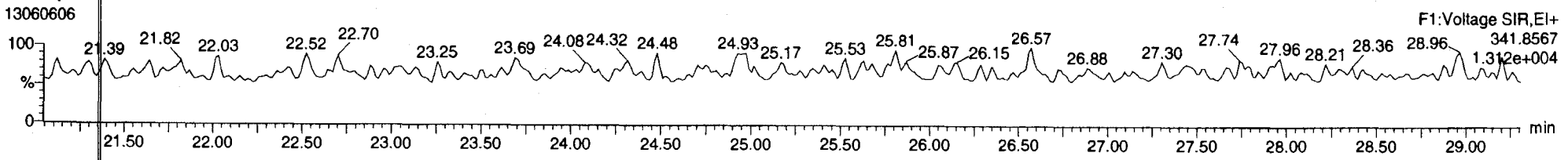


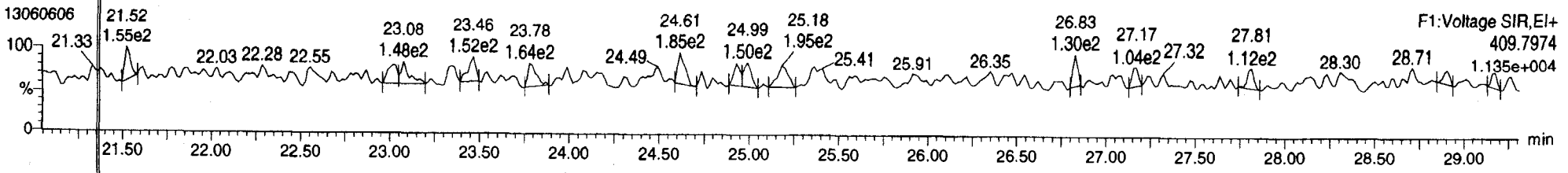
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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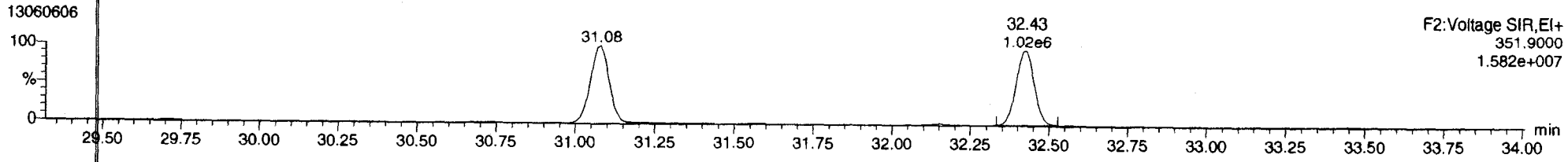
13C-23478-PeCDF



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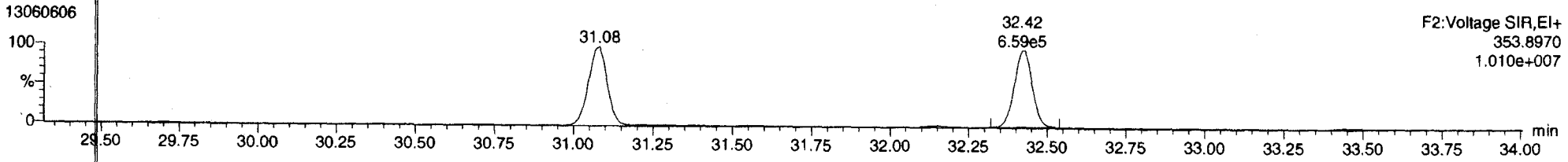
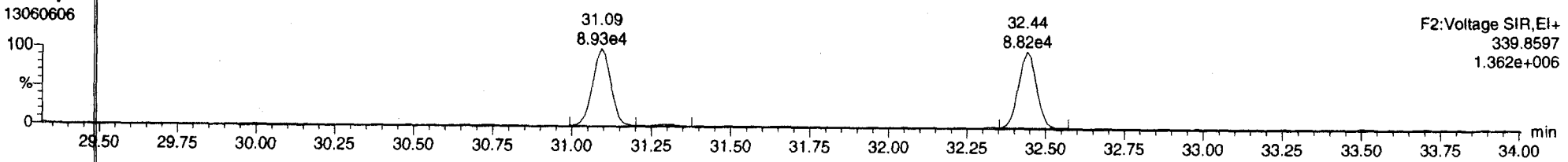
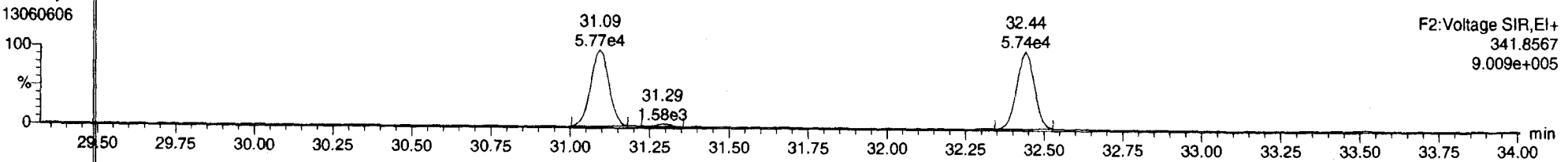


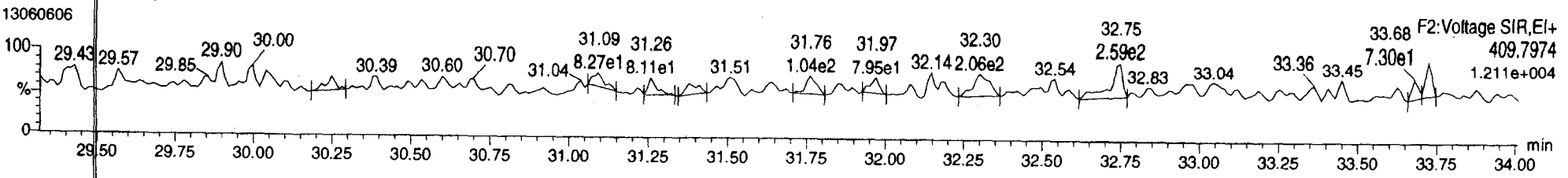
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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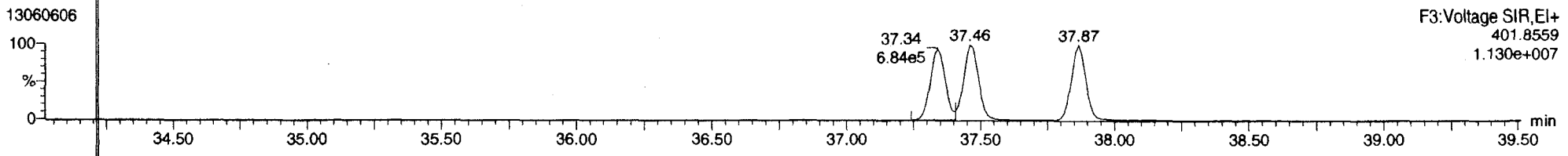
13C-123478-HxCDD



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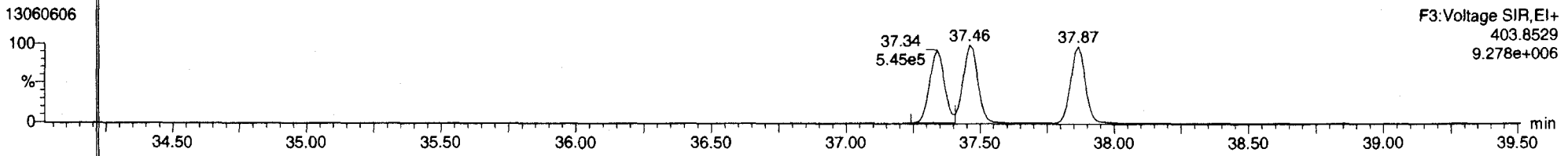
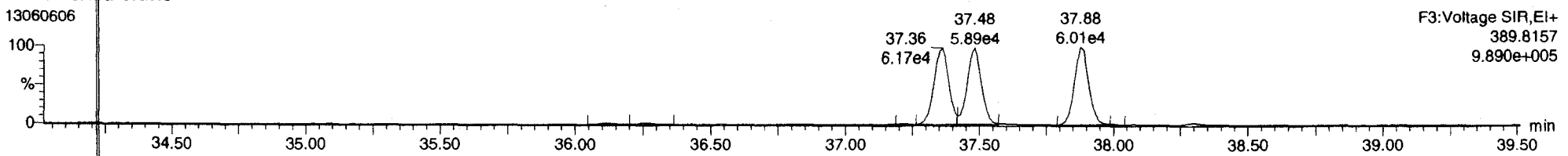
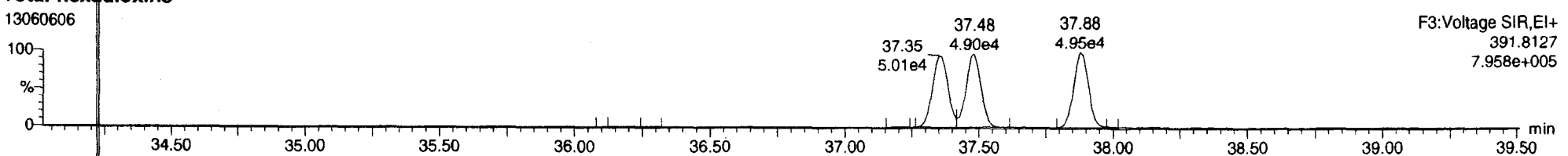


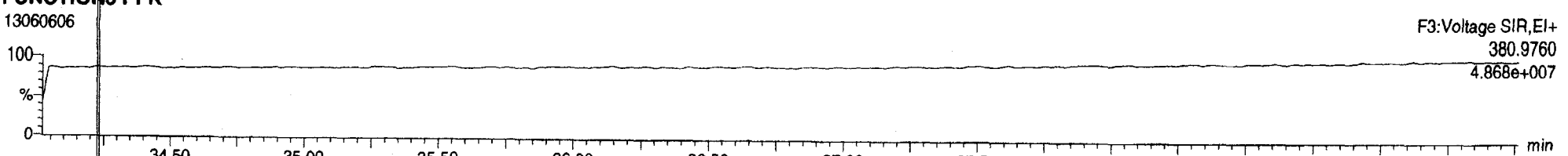
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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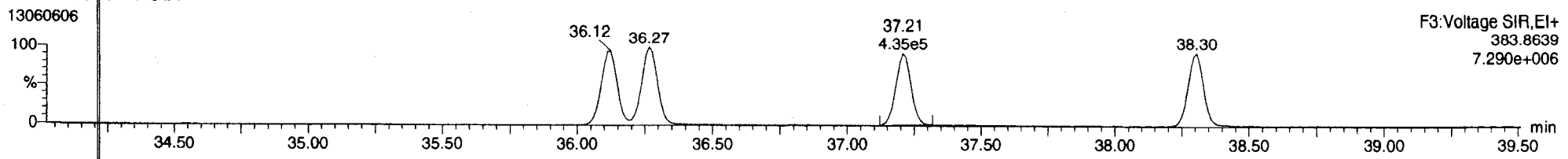
13C-234678-HxCDF



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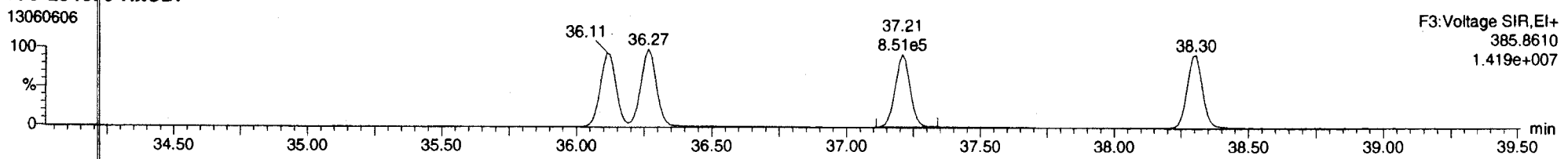
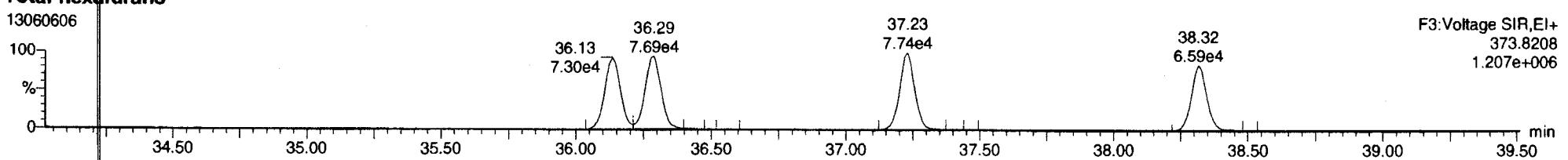
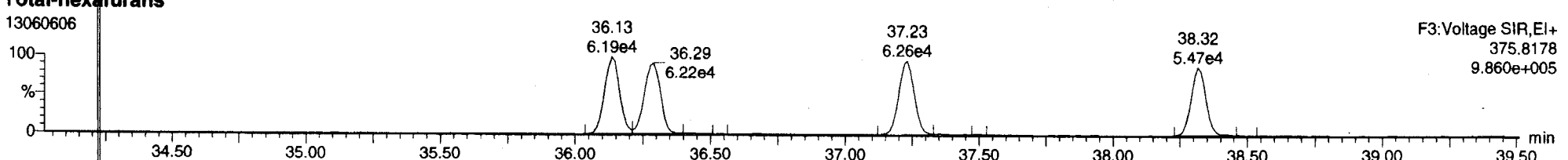


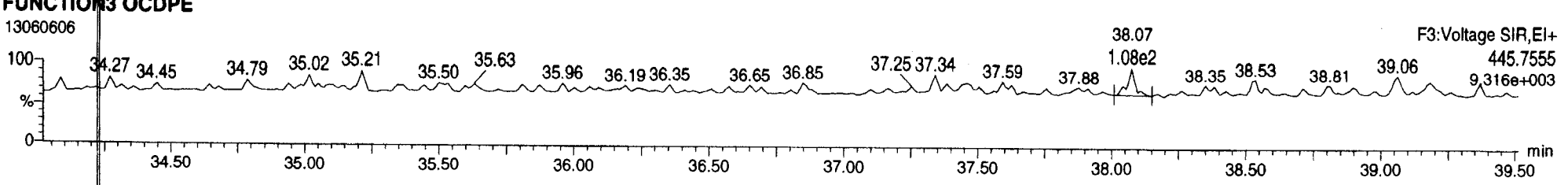
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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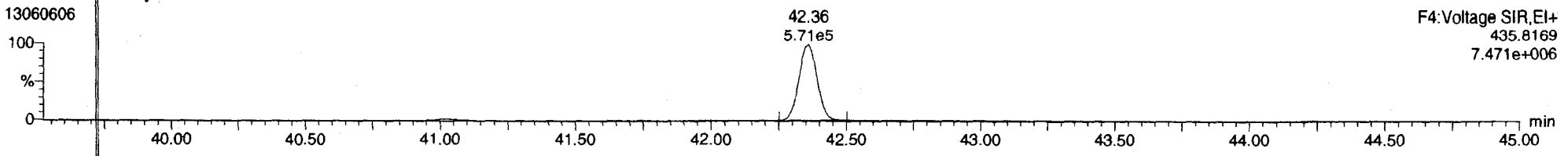
13C-1234678-HpCDD



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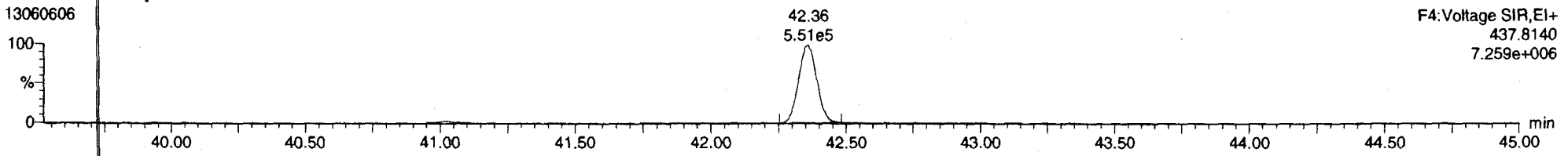
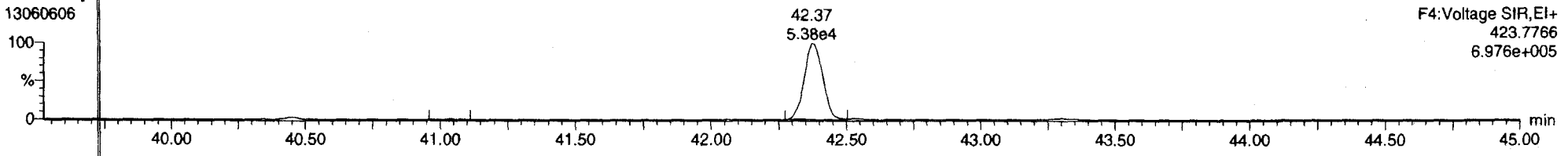
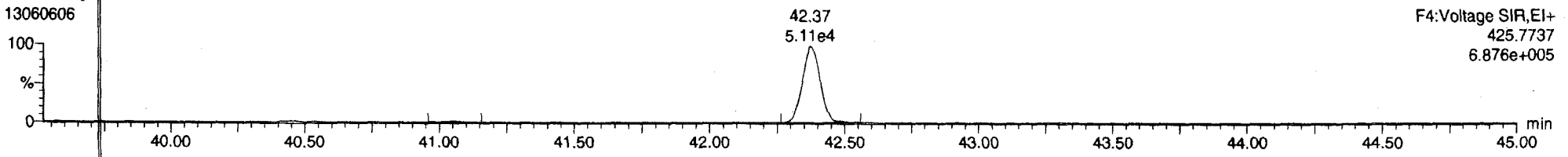


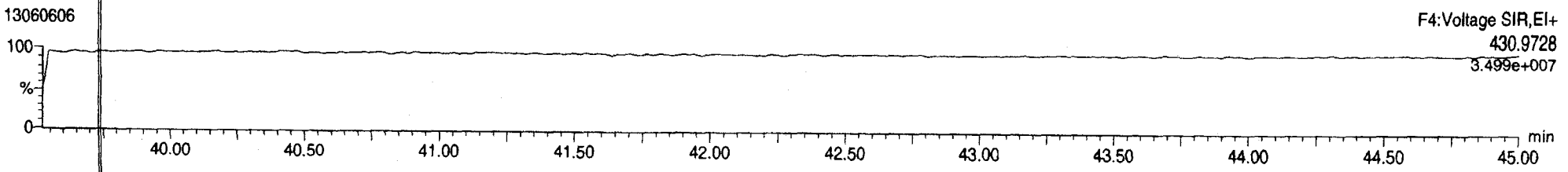
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

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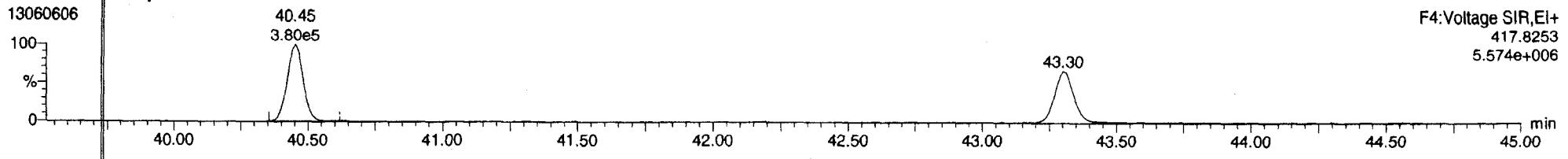
13C-1234678-HpCDF



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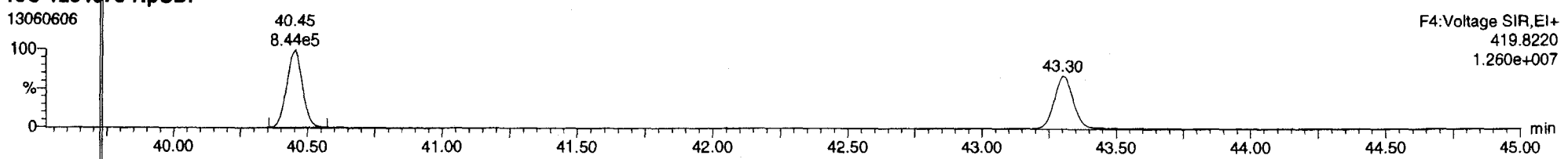
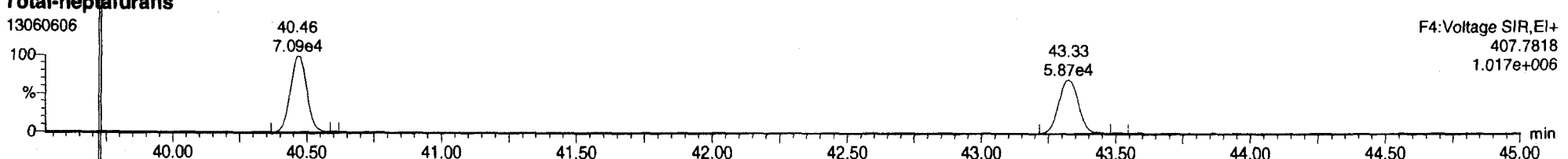


Total-heptafurans



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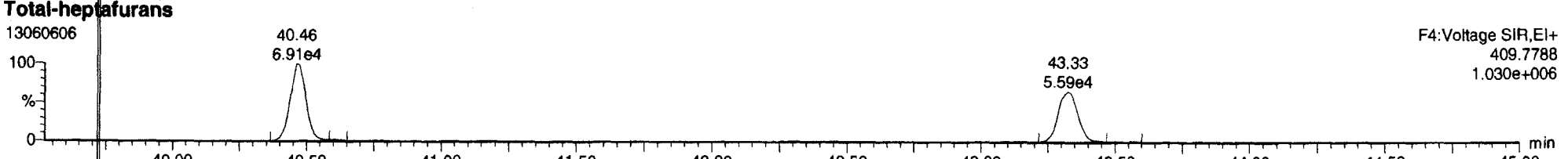
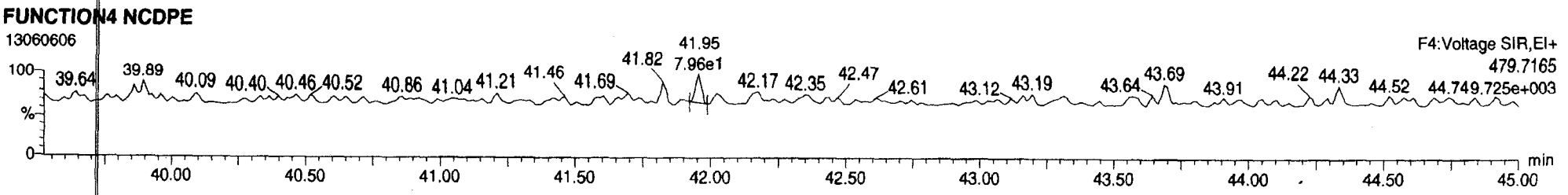


FUNCTION4 NCDPE



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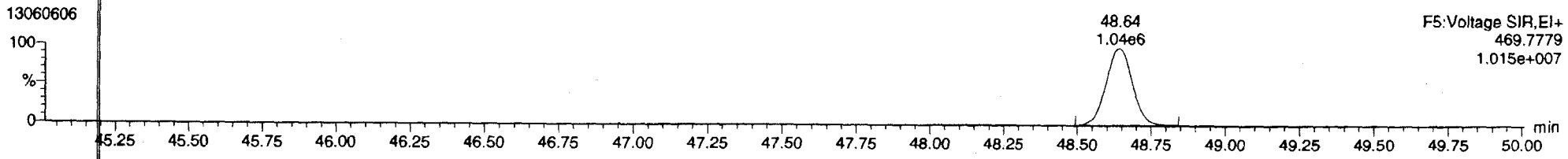
13C-OCDD



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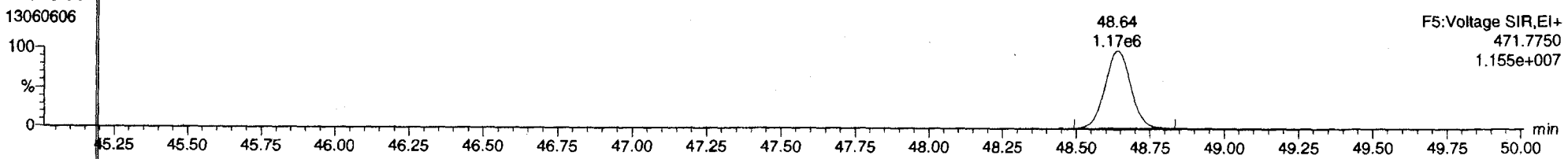

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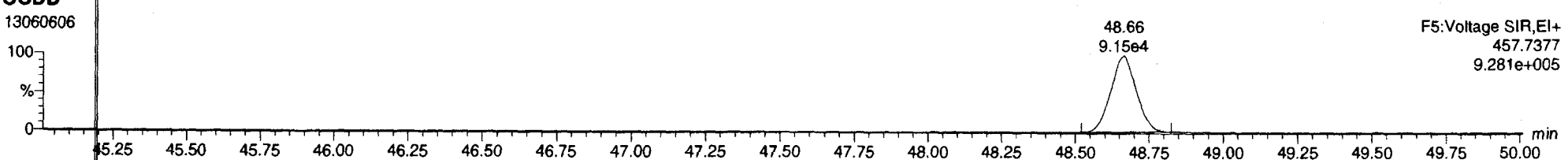

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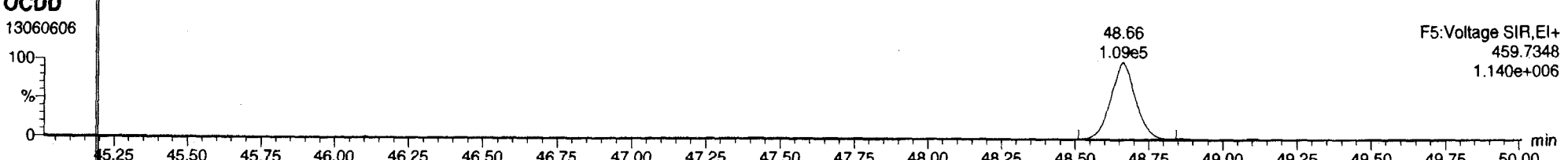
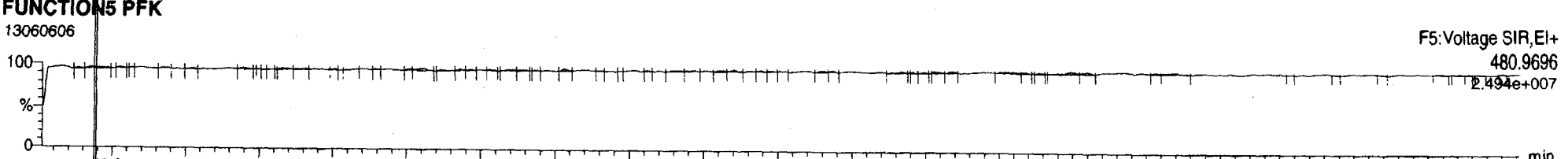


FUNCTION5 PFK



DSCN8290 - 1.SCN

Quantify Sample Report **MassLynx 4.1 SCN 714**
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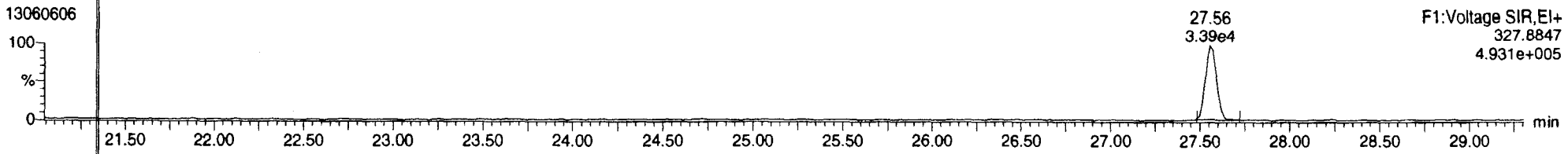
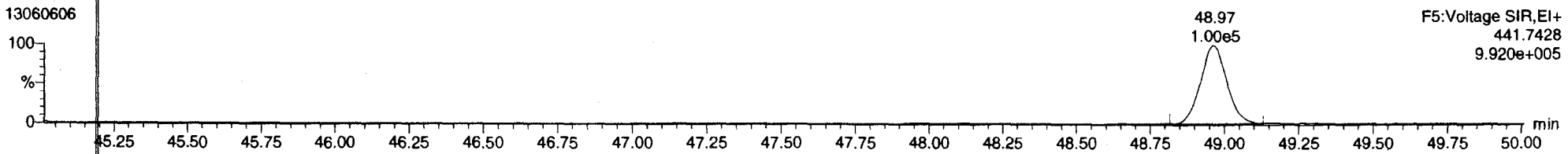
Printed: Monday, June 10, 2013 10:05:50 Pacific Daylight Time

ID: CS2, Name: 13060606, Date: 06-Jun-2013, Time: 16:22:19, Conditions: AUTOSPEC01, User: pk

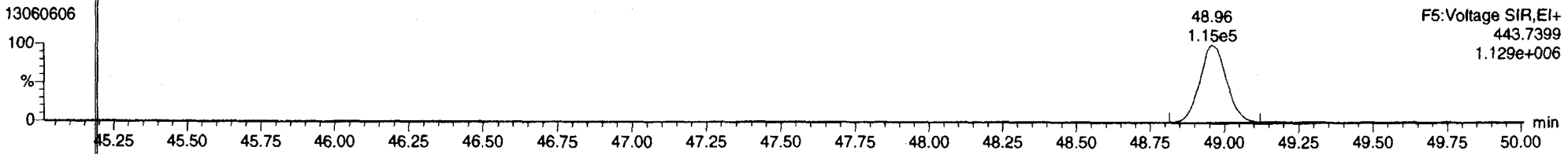
37CL-2378-TCDD



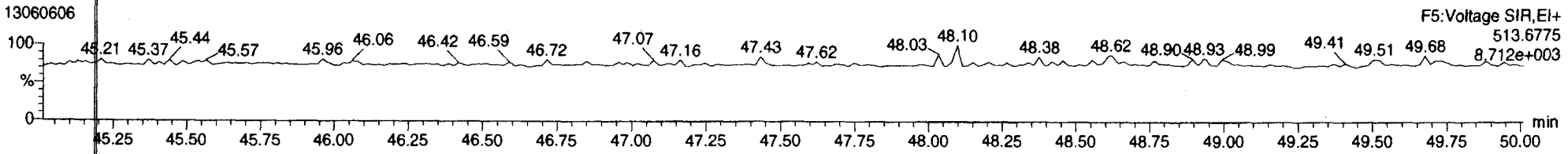
OCDF



OCDF



FUNCTION5 DCDPE



DO NOT SCAN

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.915	1.001	6.21e4	8.02e4	0.832	0.775	0.770	596.1	NO	9.935	9.935
12378-PeCDF	31.093	1.000	3.62e5	2.33e5	0.853	1.550	1.550	1510.3	NO	50.343	50.343
23478-PeCDF	32.441	1.000	3.63e5	2.41e5	0.884	1.508	1.550	1588.7	NO	49.321	49.321
123478-HxCDF	36.135	1.000	3.18e5	2.57e5	1.017	1.236	1.240	1343.9	NO	48.859	48.859
234678-HxCDF	37.231	1.001	3.20e5	2.67e5	1.067	1.201	1.240	1379.4	NO	49.583	49.583
123678-HxCDF	36.288	1.001	3.33e5	2.70e5	0.999	1.235	1.240	1418.6	NO	50.244	50.244
123789-HxCDF	38.327	1.001	2.86e5	2.39e5	0.947	1.194	1.240	1224.6	NO	49.455	49.455
1234678-HpCDF	40.475	1.001	3.05e5	3.03e5	1.151	1.009	1.050	1909.0	NO	49.285	49.285
1234789-HpCDF	43.325	1.000	2.41e5	2.37e5	1.166	1.016	1.050	1272.1	NO	50.060	50.060
OCDF	48.968	1.007	4.19e5	4.70e5	1.001	0.892	0.890	3142.2	NO	98.289	98.289
2378-TCDD	27.573	1.001	5.05e4	6.70e4	0.939	0.753	0.770	426.3	NO	10.024	10.024
12378-PeCDD	32.704	1.001	2.79e5	1.78e5	0.930	1.566	1.550	1707.2	NO	49.762	49.762
123478-HxCDD	37.362	1.001	2.69e5	2.16e5	0.930	1.249	1.240	1731.1	NO	49.065	49.065
123678-HxCDD	37.483	1.000	2.62e5	2.20e5	0.854	1.195	1.240	1733.8	NO	49.712	49.712
123789-HxCDD	37.889	1.011	2.67e5	2.18e5	0.885	1.221	1.240	1733.8	NO	49.793	49.793
1234678-HpCDD	42.383	1.001	2.29e5	2.25e5	0.966	1.021	1.050	1254.4	NO	47.940	47.940
OCDD	48.663	1.000	3.83e5	4.45e5	0.921	0.860	0.890	2117.1	NO	99.349	99.349
13C-2378-TCDF	26.900	1.007	7.51e5	9.71e5	1.283	0.774	0.770	3315.9	NO		98.327
13C-12378-PeCDF	31.082	1.163	8.43e5	5.43e5	1.051	1.553	1.550	5952.4	NO		96.621
13C-23478-PeCDF	32.430	1.214	8.43e5	5.43e5	1.030	1.552	1.550	6014.1	NO		98.576
13C-123478-HxCDF	36.124	0.954	3.95e5	7.63e5	1.069	0.517	0.510	1830.7	NO		100.837
13C-123678-HxCDF	36.266	0.958	4.10e5	7.92e5	1.124	0.518	0.510	1843.7	NO		99.525
13C-234678-HxCDF	37.209	0.983	3.80e5	7.29e5	1.041	0.521	0.510	1728.5	NO		99.192
13C-123789-HxCDF	38.305	1 012	3.80e5	7.40e5	1.039	0.514	0.510	1777.2	NO		100.365
13C-1234678-HpCDF	40.453	1.068	3.30e5	7.42e5	0.965	0.444	0.440	2612.4	NO		103.443
13C-1234789-HpCDF	43.314	1.144	2.52e5	5.67e5	0.760	0.444	0.440	1696.2	NO		100.342
13C-1234-TCDD	26.721	0.000	5.97e5	7.69e5	1.000	0.776	0.770	1347.0	NO		100.000
13C-2378-TCDD	27.543	1.031	5.42e5	7.06e5	0.926	0.768	0.770	1225.8	NO		98.722
13C-12378-PeCDD	32.682	1.223	6.03e5	3.85e5	0.734	1.567	1.550	3523.5	NO		98.539
13C-123478-HxCDD	37.340	0.986	5.93e5	4.71e5	0.984	1.259	1.240	2732.9	NO		100.583
13C-123678-HxCDD	37.472	0.990	6.27e5	5.09e5	1.043	1.231	1.240	2905.3	NO		101.381
13C-1234678-HpCDD	42.361	1.119	4.97e5	4.84e5	0.891	1.027	1.050	3391.1	NO		102.405
13C-OCDD	48.645	1.285	8.45e5	9.63e5	0.849	0.877	0.890	3826.5	NO		198.295

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.867	0.000	5.88e5	4.86e5	1.000	1.209	1.240	2753.4	NO	100.000
Total-tetrafurans			2.02e5		0.832					32.562
Total-penta1			6.00e5							78.064
Total-pentafurans			1.11e6		0.868					151.969
Total-hexafurans			1.62e6		1.008					255.744
Total-heptafurans			5.47e5		1.159					99.444
Total-Furans			4.50e6		0.992					716.072
Total-tetradioxins			2.98e5		0.939					58.778
Total-pentadioxins			9.66e5		0.930					173.298
Total-hexadioxins			1.14e6		0.890					211.633
Total-heptadioxins			4.98e5		0.966					104.324
Total-Dioxins			3.28e6		0.918					647.380
Total-TEQ			7.78e6							1363.452
37CL-2378-TCDD	27.573	1.032	1.31e5		0.989			738.2		9.720
FUNCTION1 PFK			4.82e7							
FUNCTION2 PFK			1.16e5							0.000
FUNCTION3 PFK			1.21e6							0.000
FUNCTION4 PFK			5.27e5							
FUNCTION5 PFK			1.07e5							
FUNCTION1 HXCDPE			0.00e0							
FUNCTION1 HPCDPE			1.70e3							0.000
FUNCTION2 HPCDPE			1.84e3							0.000
FUNCTION3 OCDPE			0.00e0							
FUNCTION4 NCDPE			1.60e2							0.000
FUNCTION5 DCDPE			0.00e0							

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

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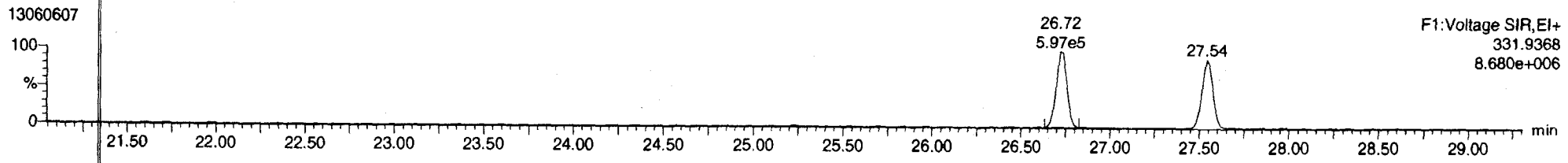
13C-1234-TCDD



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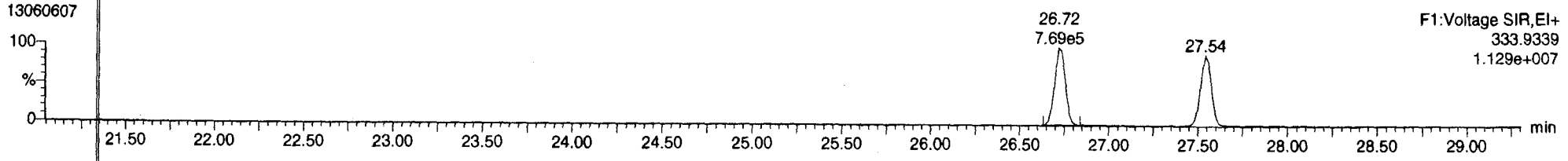

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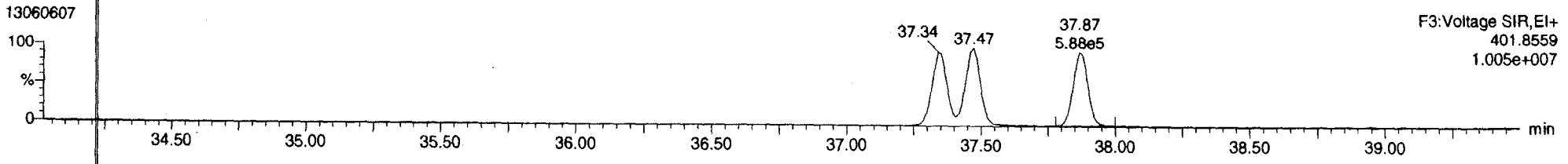

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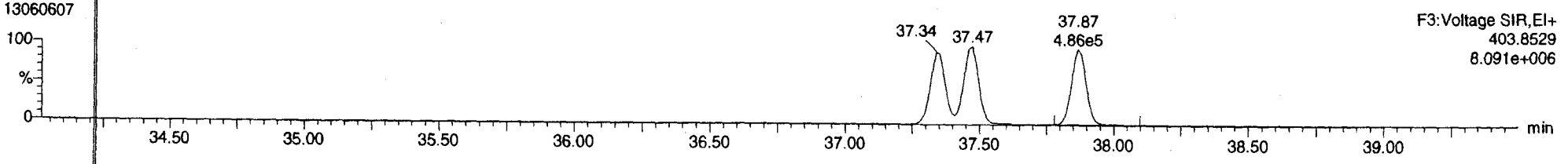
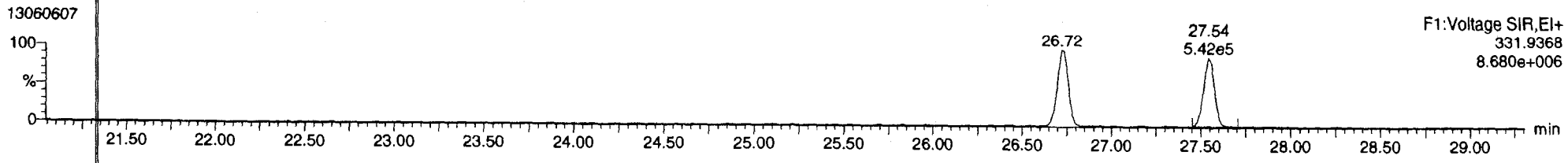


CONFIDENTIAL

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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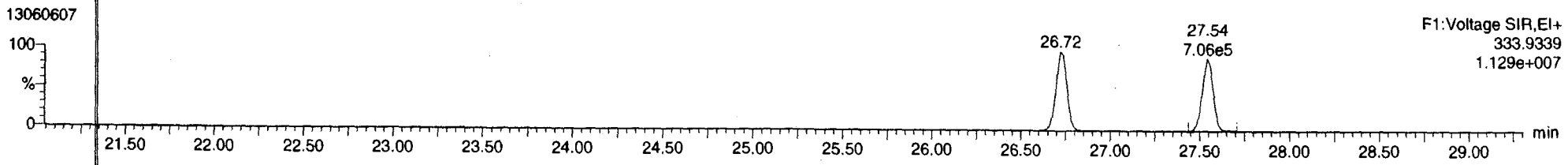
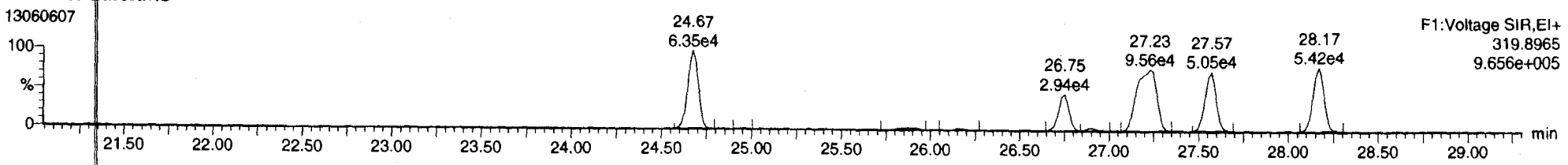
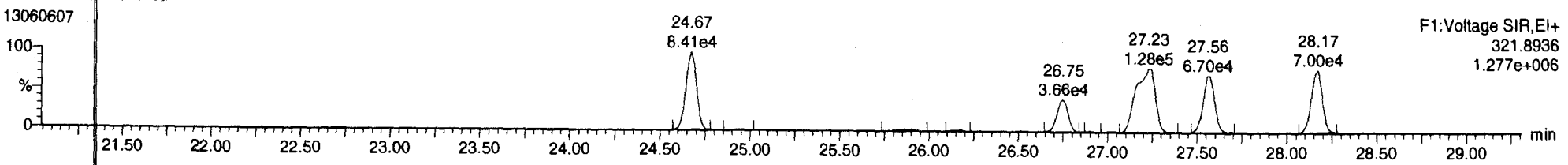


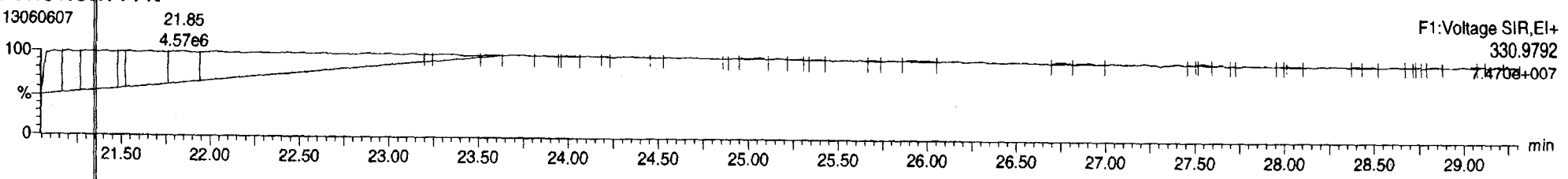
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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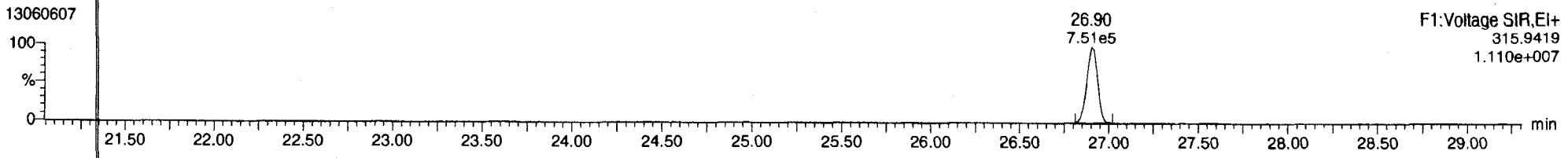
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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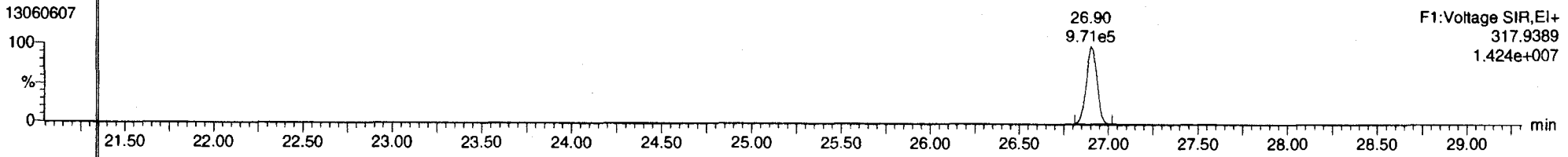
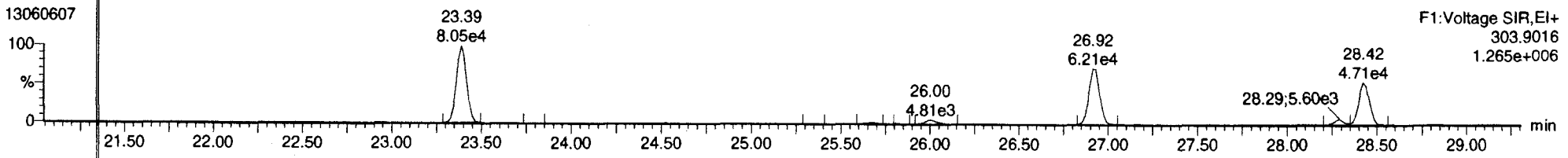
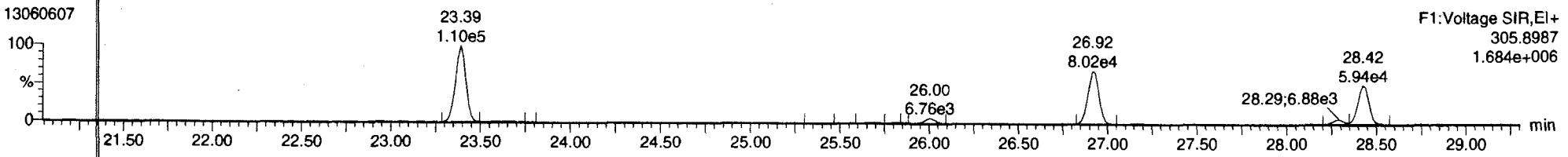


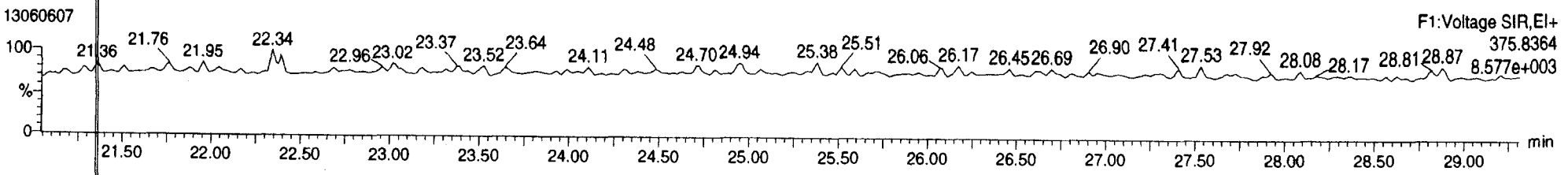
Total-tetrafurans



Total-tetrafurans



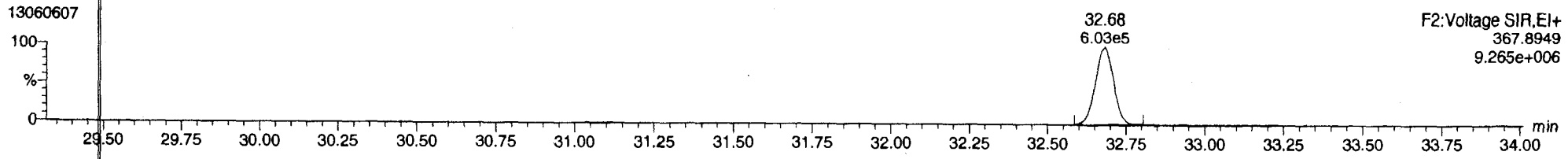
FUNCTION1 HXCDPE



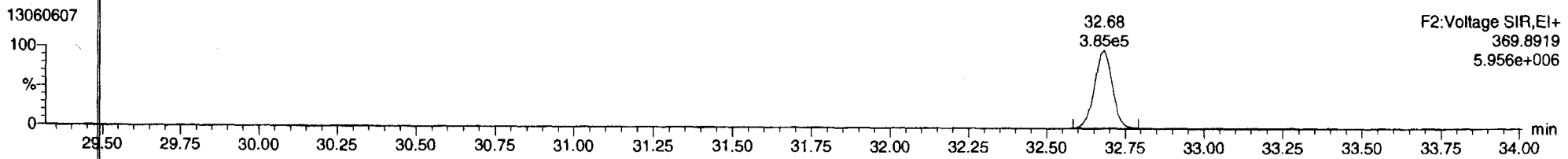
TCDF.PRO : 130606IC.qld

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

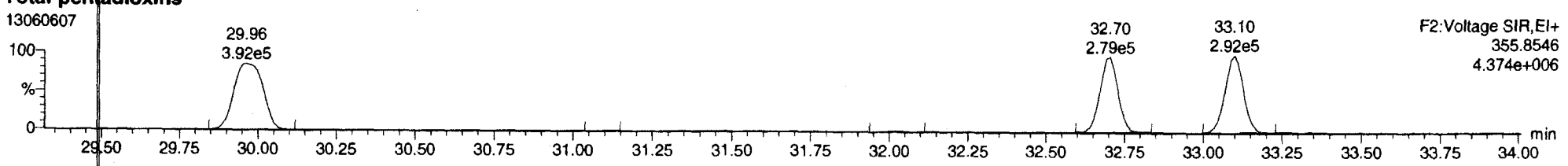
13C-12378-PeCDD



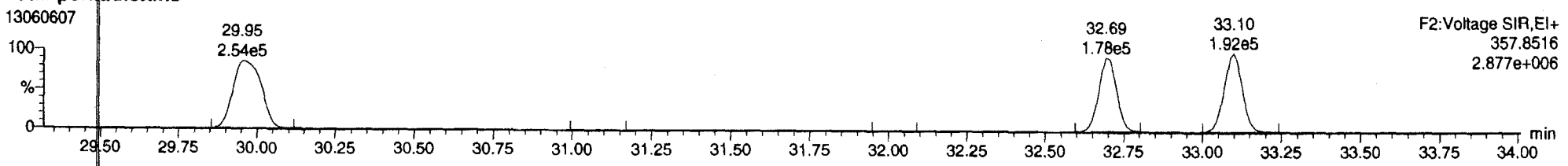
13C-12378-PeCDD



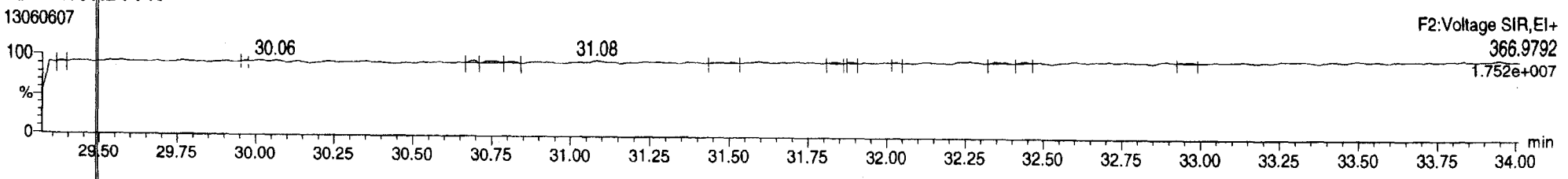
Total-pentadioxins



Total-pentadioxins

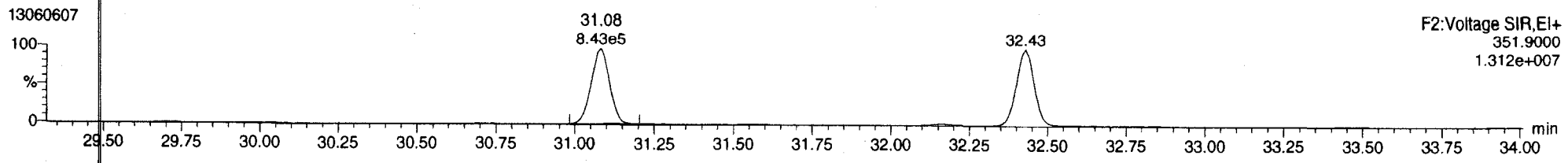


FUNCTION2 PFK



ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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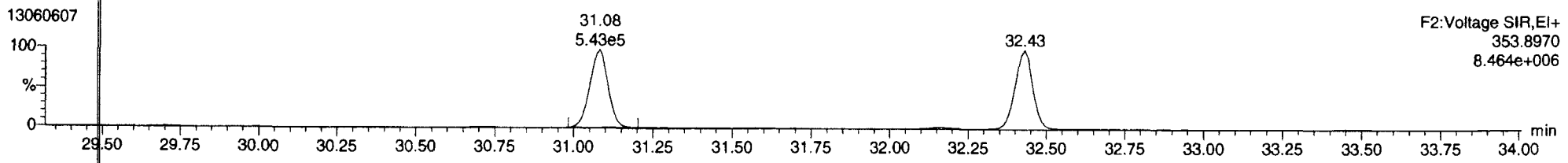
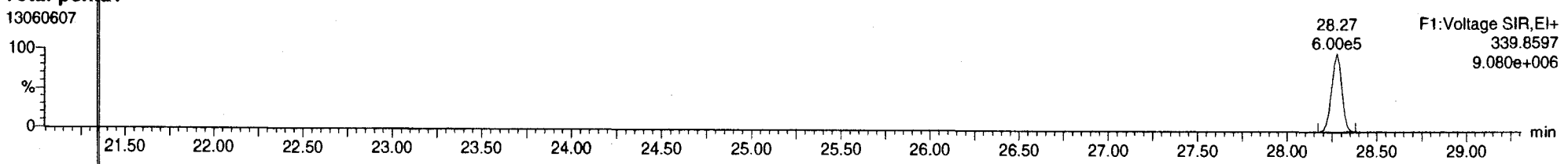


Total-penta1



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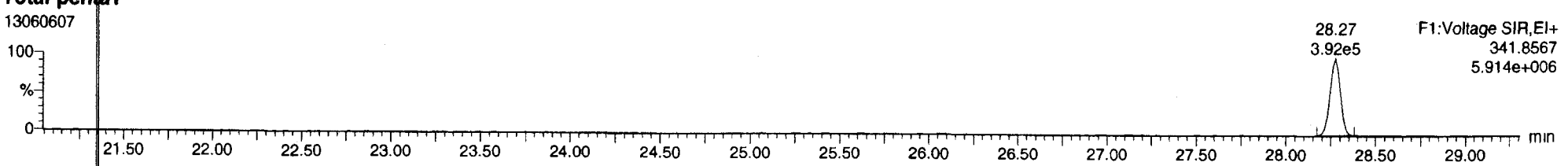
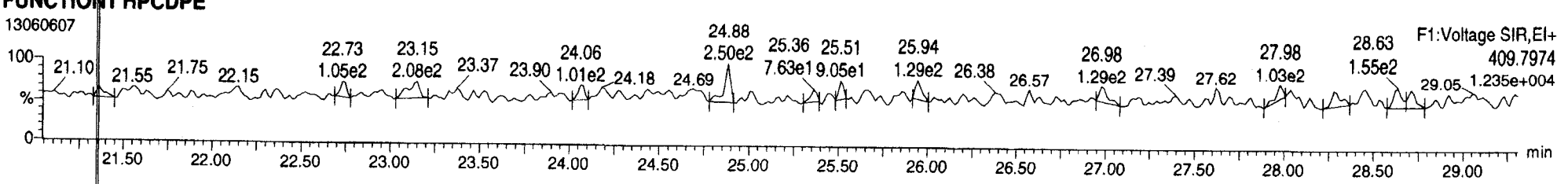
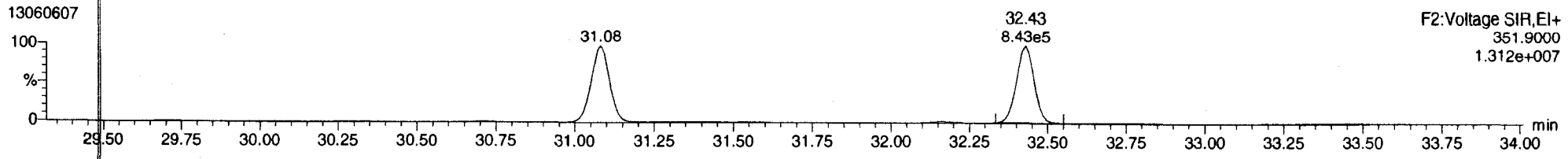


FUNCTION1 HPCDPE

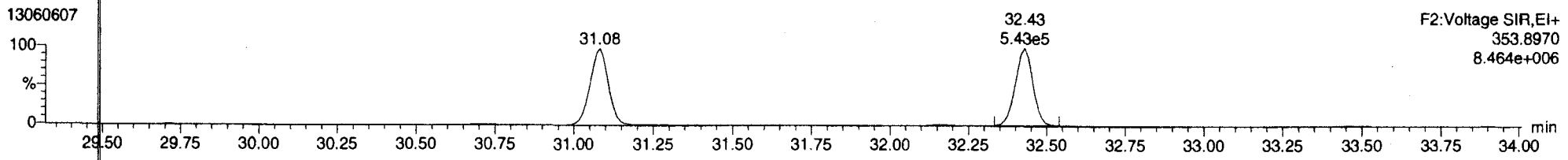


ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

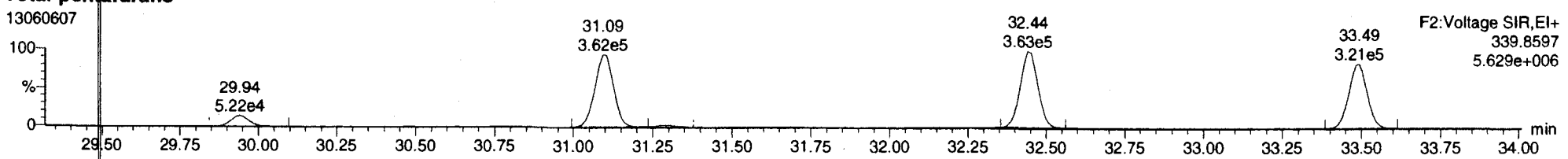
13C-23478-PeCDF



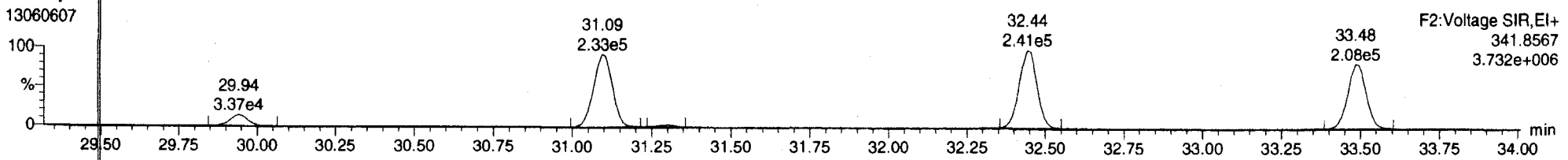
13C-23478-PeCDF



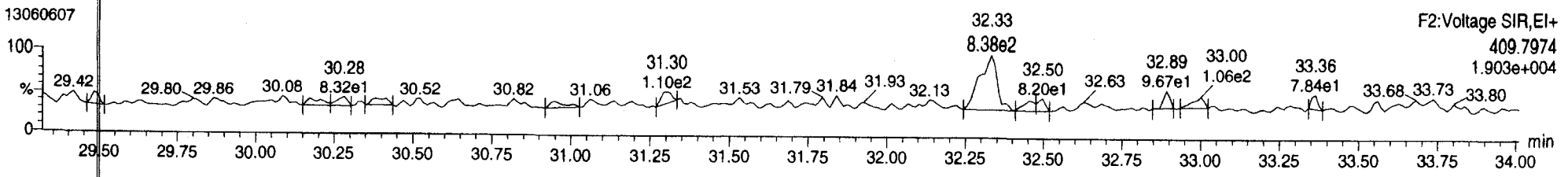
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE

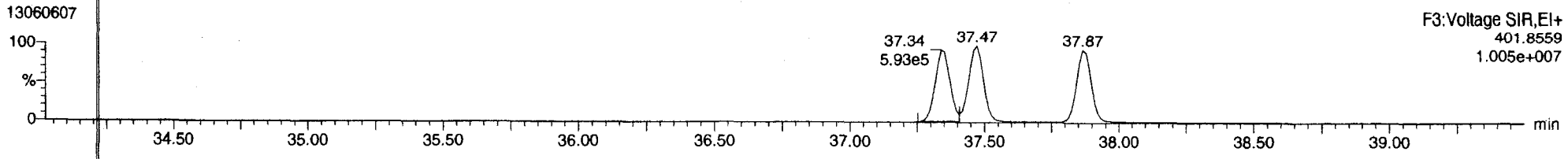


DIOXIN - TECH

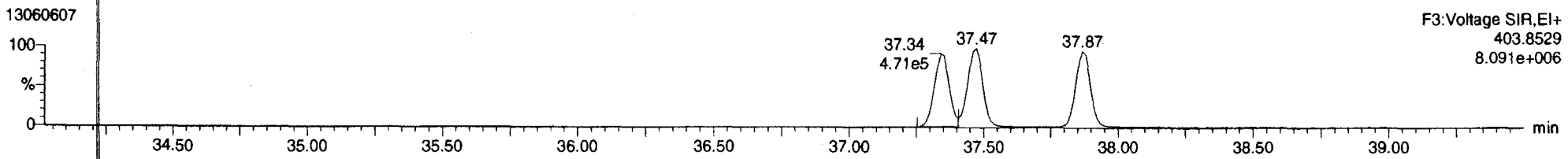
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

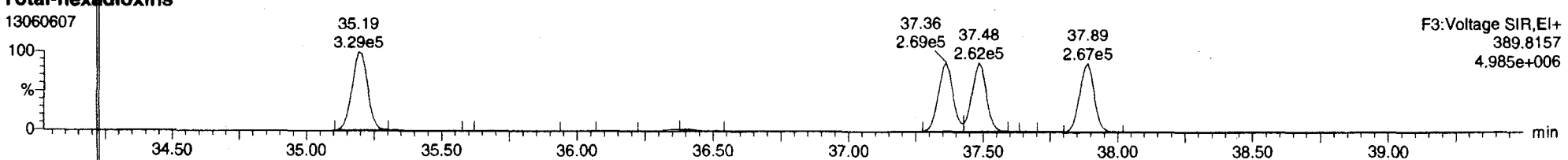
13C-123478-HxCDD



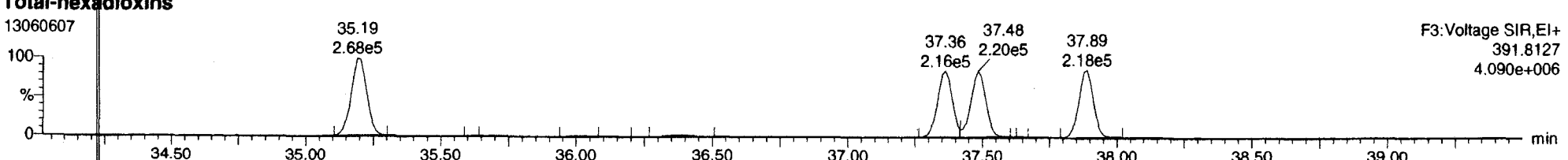
13C-123478-HxCDD



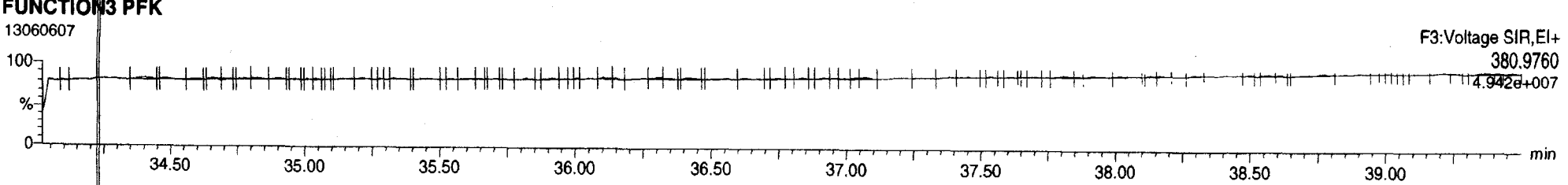
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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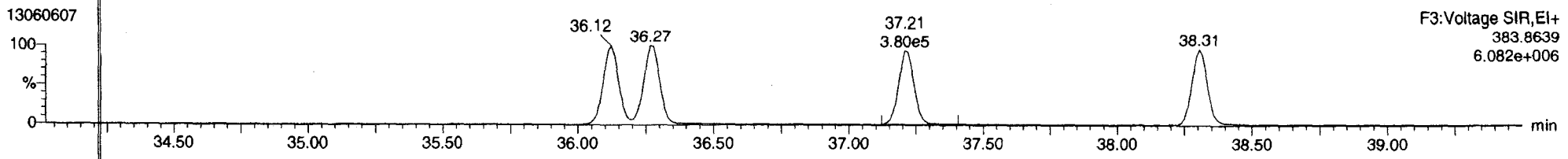
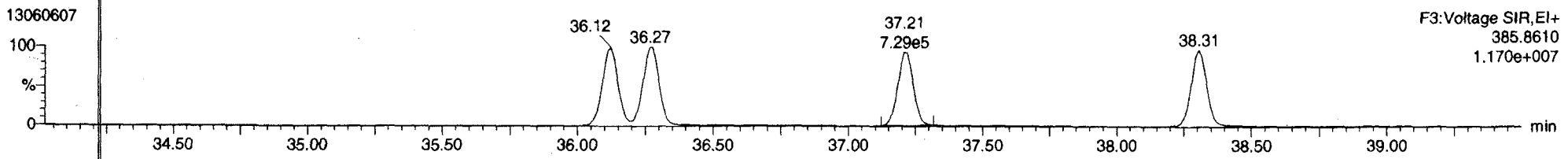
ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

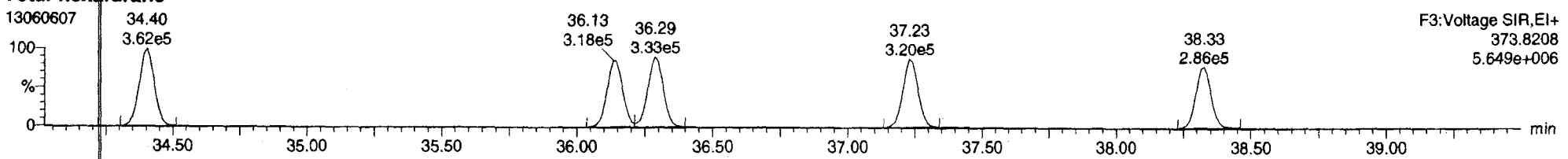
13C-234678-HxCDF



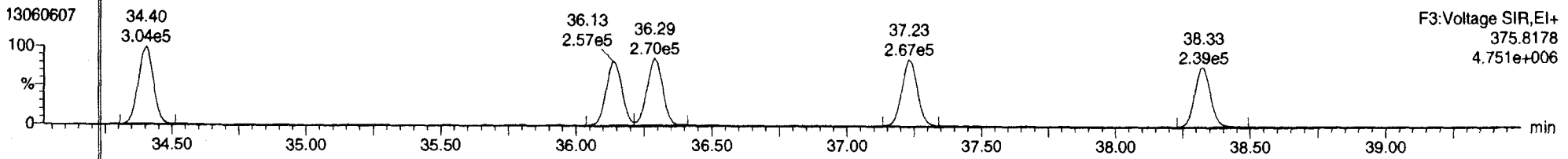
13C-234678-HxCDF



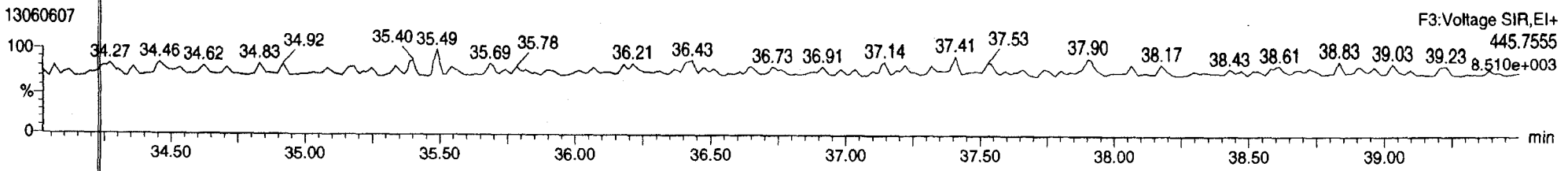
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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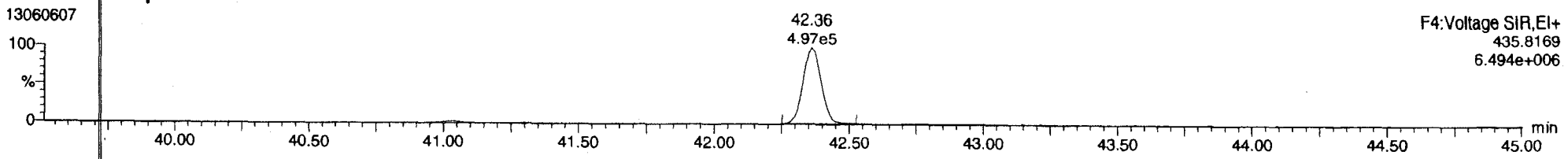
13C-1234678-HpCDD



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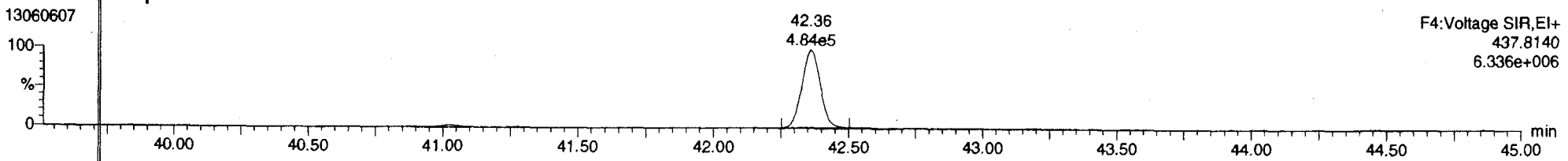
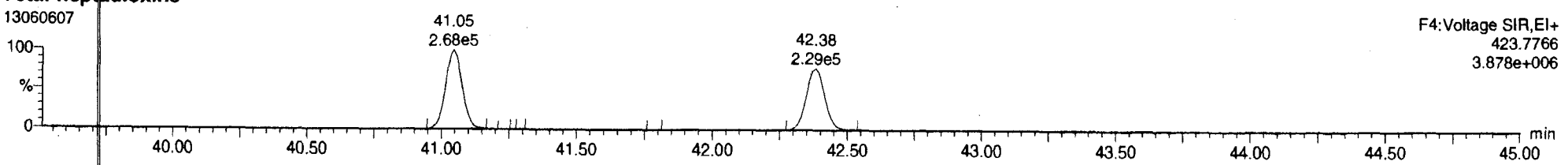
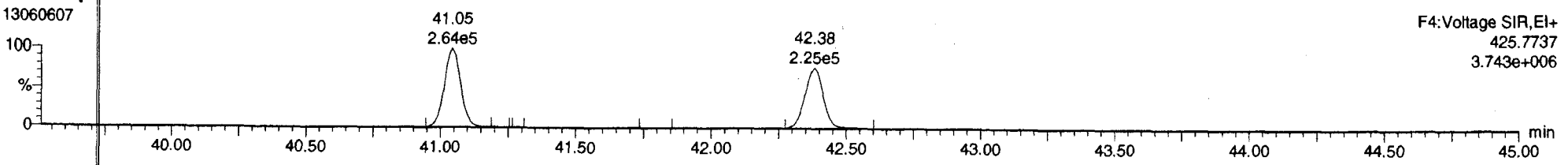


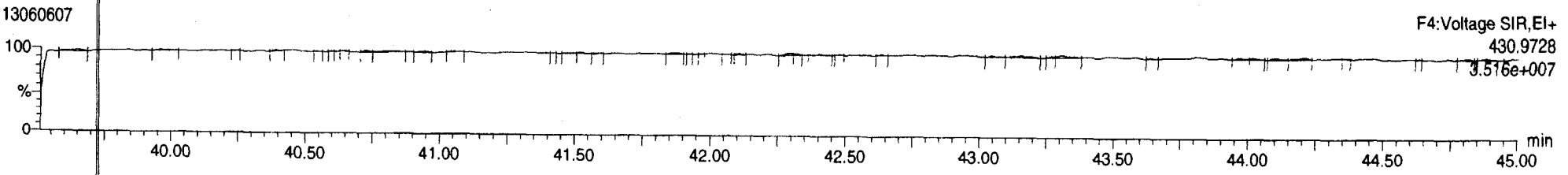
Total-heptadioxins



Total-heptadioxins

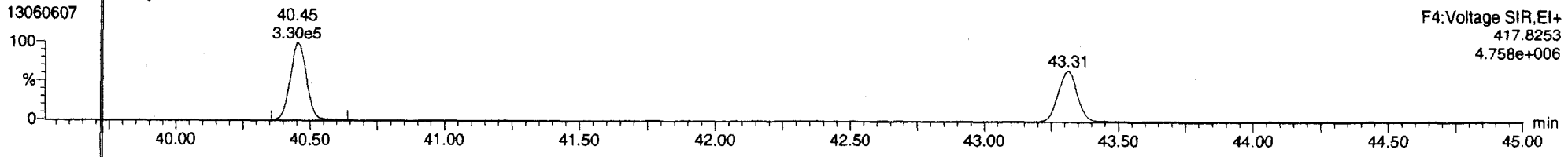


FUNCTION4 PFK

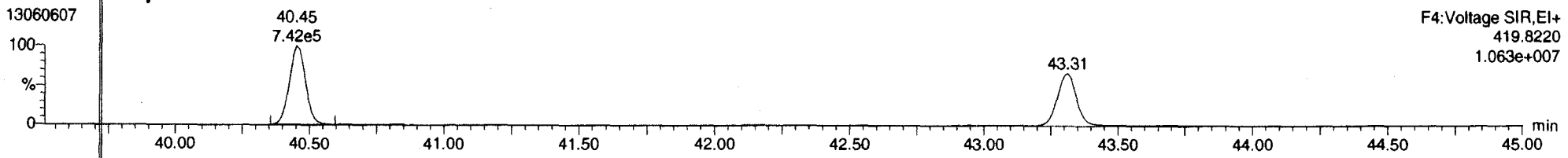


ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

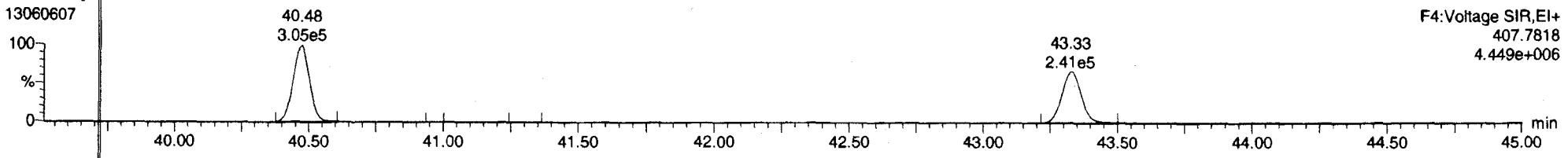
13C-1234678-HpCDF



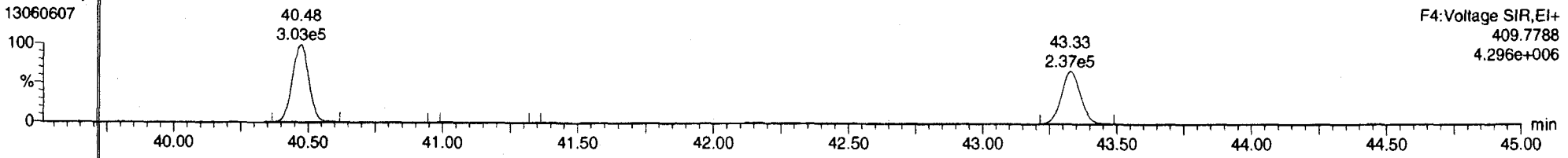
13C-1234678-HpCDF



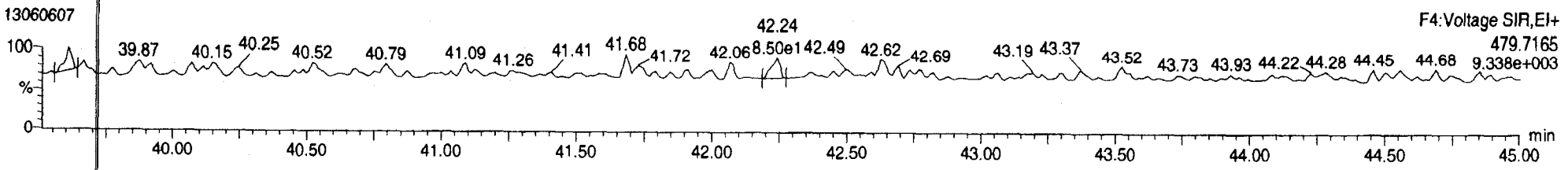
Total-heptafurans



Total-heptafurans



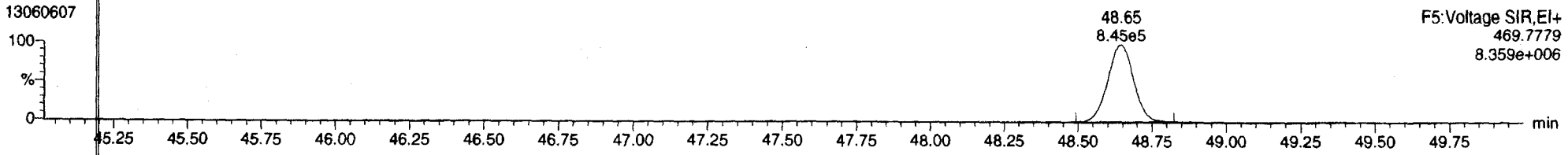
FUNCTION4 NCDPE



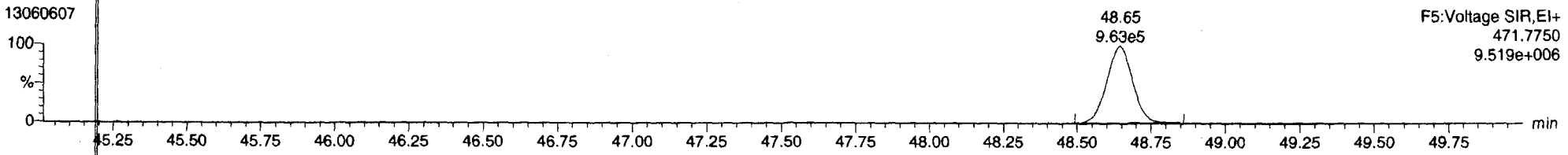
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

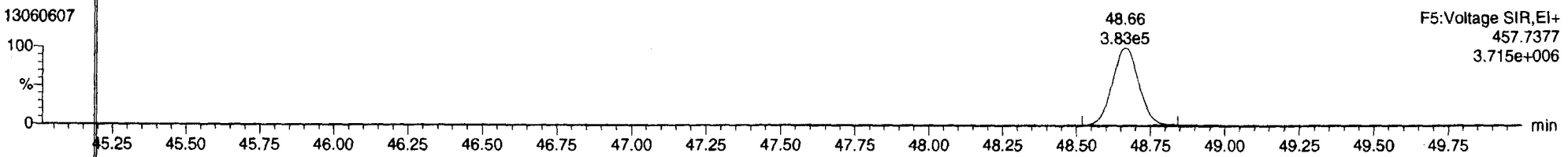
13C-OCDD



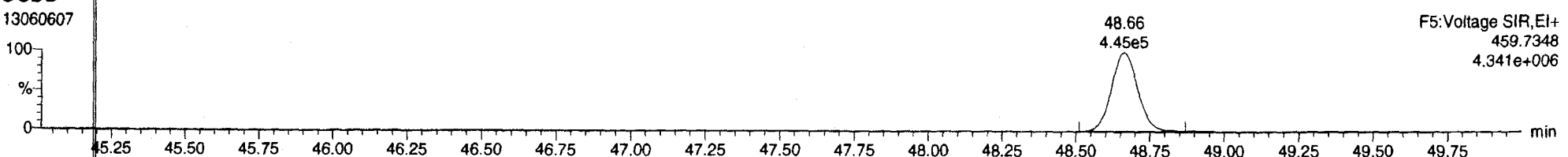
13C-OCDD



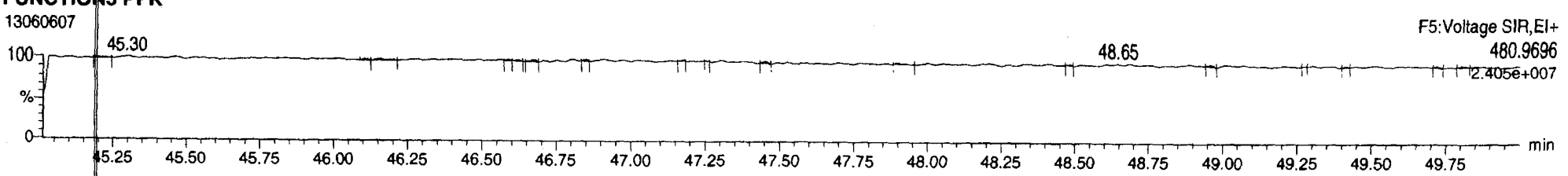
OCDD



OCDD



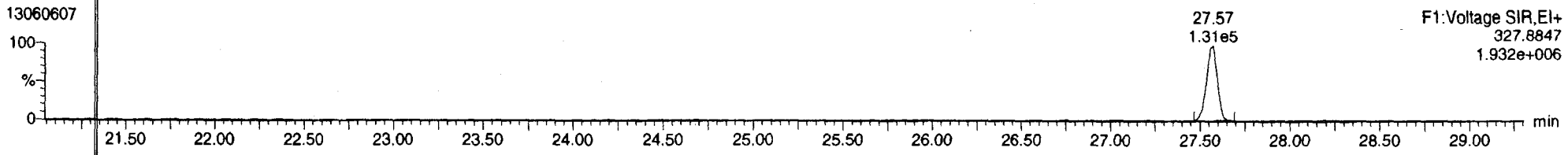
FUNCTION5 PFK



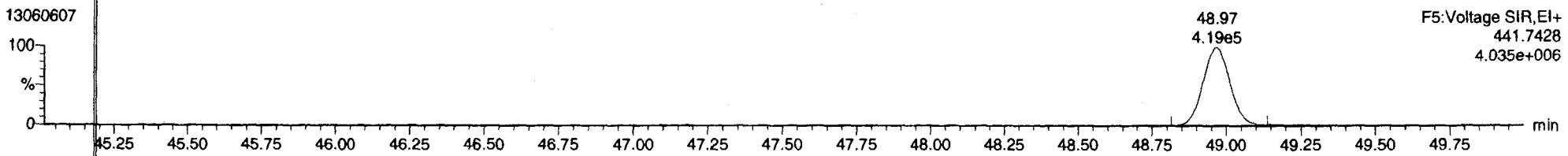
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:07 Pacific Daylight Time

ID: CS3, Name: 13060607, Date: 06-Jun-2013, Time: 17:15:21, Conditions: AUTOSPEC01, User: pk

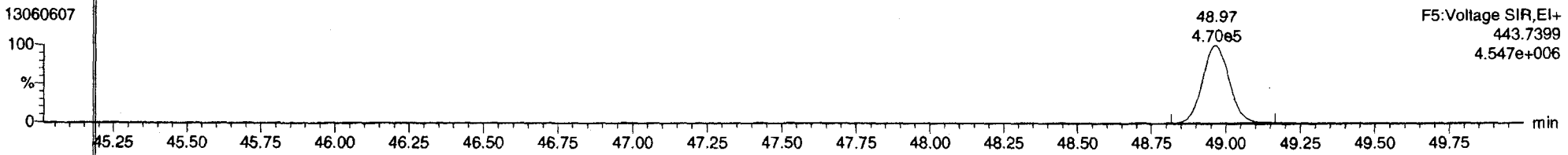
37CL-2378-TCDD



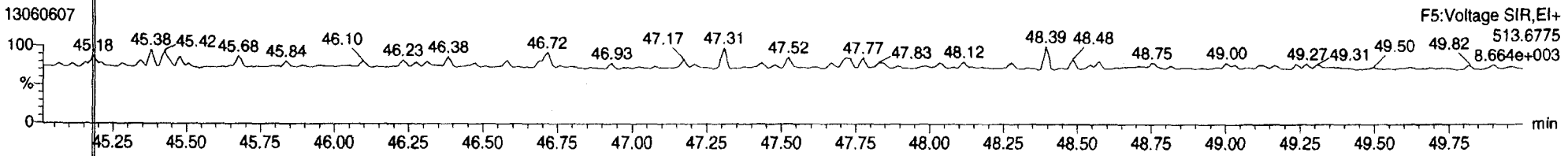
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:17 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.930	1.001	2.89e5	3.90e5	0.832	0.742	0.770	2543.4	NO	39.702	39.702
12378-PeCDF	31.103	1.001	1.79e6	1.17e6	0.853	1.532	1.550	7818.4	NO	202.915	202.915
23478-PeCDF	32.451	1.001	1.82e6	1.19e6	0.884	1.531	1.550	7924.9	NO	199.631	199.631
123478-HxCDF	36.145	1.001	1.58e6	1.30e6	1.017	1.214	1.240	5176.7	NO	201.188	201.188
234678-HxCDF	37.241	1.001	1.63e6	1.33e6	1.067	1.227	1.240	5232.1	NO	200.655	200.655
123678-HxCDF	36.287	1.000	1.64e6	1.34e6	0.999	1.220	1.240	5329.0	NO	199.283	199.283
123789-HxCDF	38.326	1.000	1.46e6	1.20e6	0.947	1.214	1.240	4919.9	NO	200.492	200.492
1234678-HpCDF	40.474	1.000	1.54e6	1.55e6	1.151	0.995	1.050	5573.4	NO	205.459	205.459
1234789-HpCDF	43.335	1.001	1.24e6	1.21e6	1.166	1.023	1.050	3802.4	NO	201.496	201.496
OCDF	48.976	1.007	2.20e6	2.49e6	1.001	0.885	0.890	14331.9	NO	399.626	399.626
2378-TCDD	27.572	1.001	2.49e5	3.28e5	0.939	0.760	0.770	2772.2	NO	41.400	41.400
12378-PeCDD	32.703	1.001	1.38e6	9.12e5	0.930	1.509	1.550	9213.2	NO	201.646	201.646
123478-HxCDD	37.361	1.000	1.35e6	1.09e6	0.930	1.238	1.240	8228.7	NO	200.528	200.528
123678-HxCDD	37.493	1.001	1.31e6	1.07e6	0.854	1.229	1.240	8006.8	NO	197.300	197.300
123789-HxCDD	37.888	1.011	1.33e6	1.08e6	0.885	1.229	1.240	8297.0	NO	199.486	199.486
1234678-HpCDD	42.382	1.000	1.17e6	1.14e6	0.966	1.030	1.050	9142.2	NO	195.451	195.451
OCDD	48.671	1.000	2.03e6	2.29e6	0.921	0.886	0.890	8710.7	NO	399.934	399.934
13C-2378-TCDF	26.915	1.007	8.95e5	1.16e6	1.283	0.769	0.770	3549.5	NO		100.890
13C-12378-PeCDF	31.081	1.163	1.04e6	6.68e5	1.051	1.553	1.550	3136.2	NO		102.183
13C-23478-PeCDF	32.429	1.213	1.04e6	6.64e5	1.030	1.565	1.550	3184.9	NO		103.964
13C-123478-HxCDF	36.123	0.954	4.76e5	9.33e5	1.069	0.510	0.510	2056.1	NO		98.978
13C-123678-HxCDF	36.277	0.958	5.06e5	9.91e5	1.124	0.511	0.510	2214.7	NO		100.012
13C-234678-HxCDF	37.219	0.983	4.63e5	9.16e5	1.041	0.505	0.510	2029.7	NO		99.539
13C-123789-HxCDF	38.315	1.012	4.80e5	9.24e5	1.039	0.520	0.510	2053.7	NO		101.474
13C-1234678-HpCDF	40.464	1.068	4.01e5	9.02e5	0.965	0.445	0.440	3363.9	NO		101.482
13C-1234789-HpCDF	43.313	1.144	3.26e5	7.18e5	0.760	0.453	0.440	2370.0	NO		103.167
13C-1234-TCDD	26.736	0.000	6.99e5	8.91e5	1.000	0.785	0.770	1438.0	NO		100.000
13C-2378-TCDD	27.542	1.030	6.52e5	8.32e5	0.926	0.784	0.770	1333.2	NO		100.778
13C-12378-PeCDD	32.681	1.222	7.44e5	4.76e5	0.734	1.566	1.550	3910.5	NO		104.523
13C-123478-HxCDD	37.350	0.986	7.28e5	5.81e5	0.984	1.253	1.240	5237.1	NO		99.886
13C-123678-HxCDD	37.471	0.989	7.75e5	6.42e5	1.043	1.207	1.240	5546.3	NO		102.032
13C-1234678-HpCDD	42.371	1.119	6.17e5	6.03e5	0.891	1.023	1.050	4411.9	NO		102.904
13C-OCDD	48.653	1.285	1.10e6	1.24e6	0.849	0.885	0.890	7086.4	NO		207.711

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.877	0.000	7.30e5	6.01e5	1.000	1.215	1.240	5330.4	NO	100.000
Total-tetrafurans			2.95e5		0.832					40.446
Total-penta1			5.83e2							0.081
Total-pentafurans			3.67e6		0.868					409.431
Total-hexafurans			6.32e6		1.008					802.676
Total-heptafurans			2.78e6		1.159					407.252
Total-Furans			1.53e7		0.992					2059.513
Total-tetradioxins			2.59e5		0.939					42.802
Total-pentadioxins			1.38e6		0.930					202.462
Total-hexadioxins			3.99e6		0.890					597.659
Total-heptadioxins			1.18e6		0.966					196.318
Total-Dioxins			8.84e6		0.918					1439.176
Total-TEQ			2.41e7							3498.688
37CL-2378-TCDD	27.572	1.031	6.39e5		0.989			3576.6		40.670
FUNCTION1 PFK			1.51e6							
FUNCTION2 PFK			3.76e5							0.000
FUNCTION3 PFK			1.32e5							0.000
FUNCTION4 PFK			9.00e5							
FUNCTION5 PFK			7.35e6							
FUNCTION1 HXCDPE			7.29e1							0.000
FUNCTION1 HPCDPE			2.51e3							0.000
FUNCTION2 HPCDPE			3.80e3							0.000
FUNCTION3 OCDPE			7.72e1							0.000
FUNCTION4 NCDPE			0.00e0							
FUNCTION5 DCDPE			0.00e0							

CS4 - TCDF

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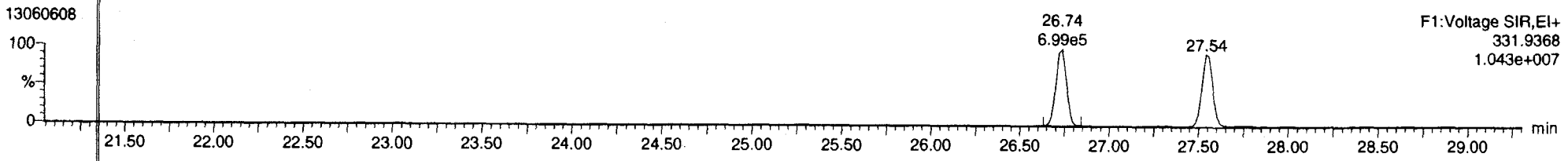
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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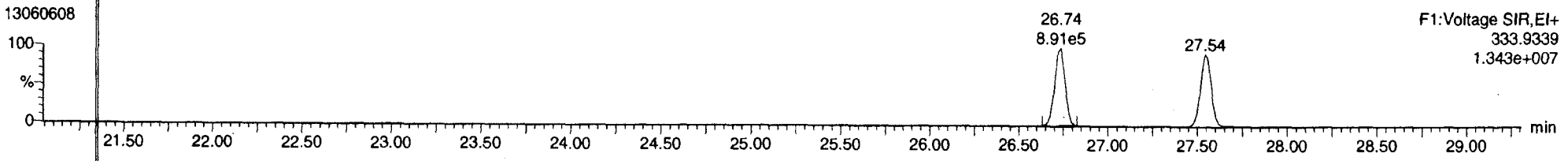
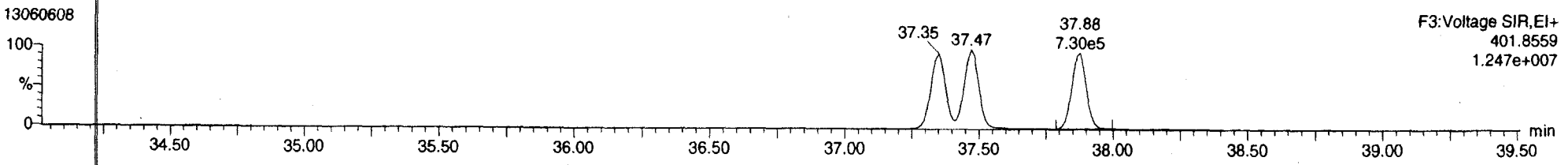


13C-123789-HxCDD



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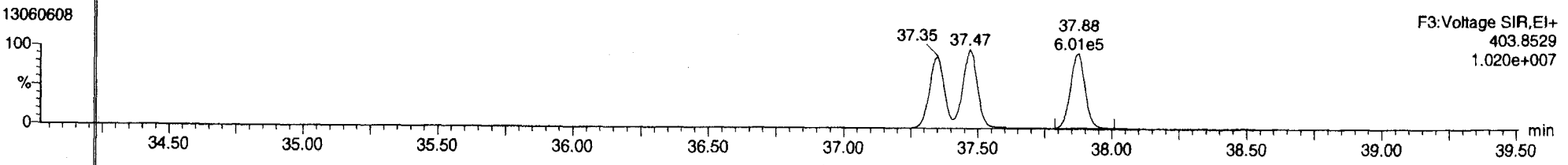

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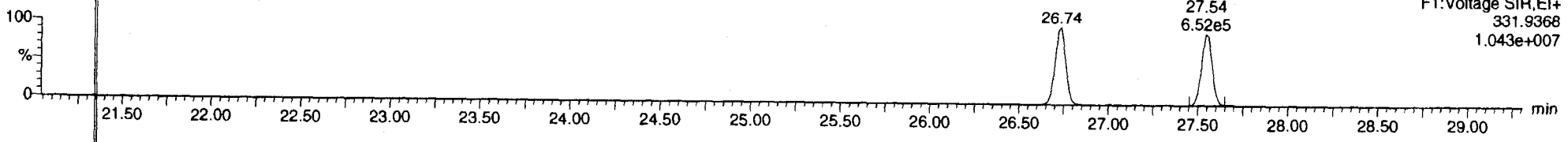
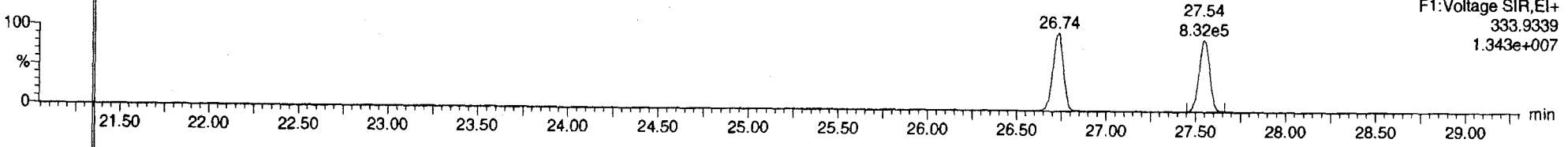
13C-2378-TCDD

13060608



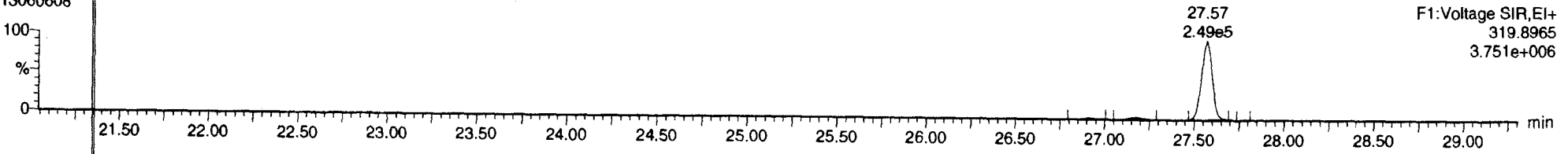
13C-2378-TCDD

13060608



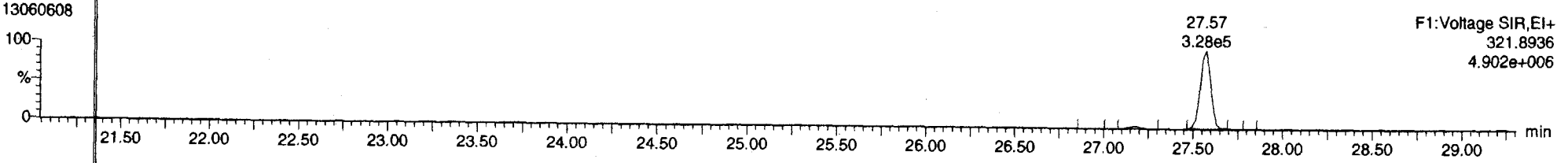
Total-tetradioxins

13060608



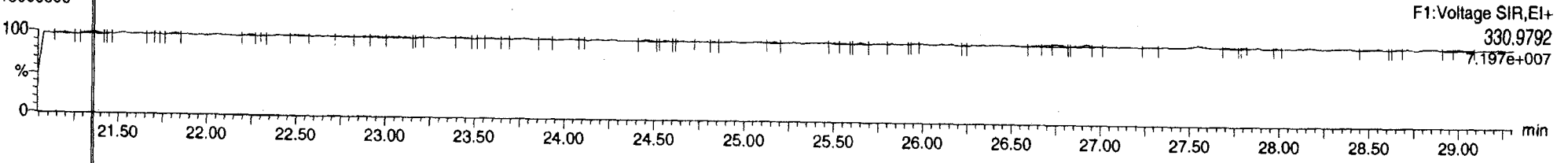
Total-tetradioxins

13060608



FUNCTION1 PFK

13060608



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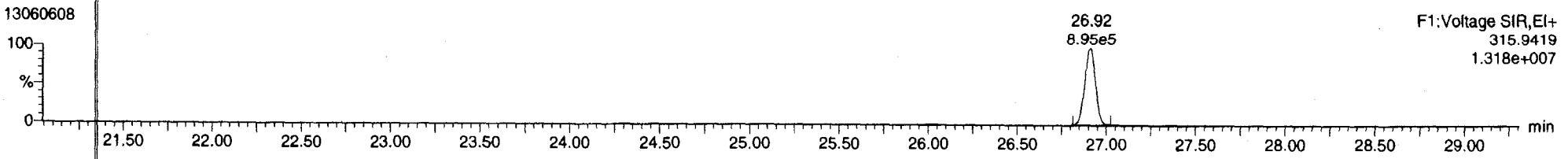
13C-2378-TCDF



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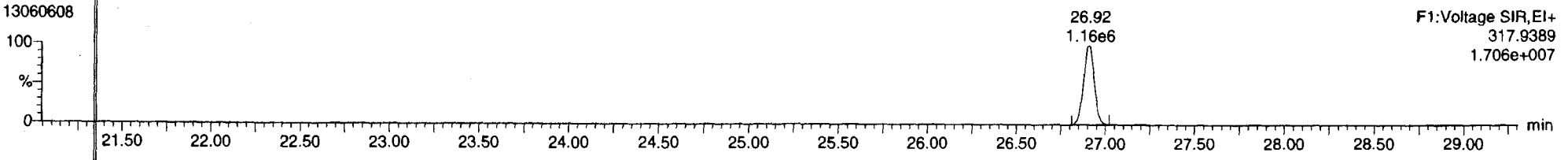
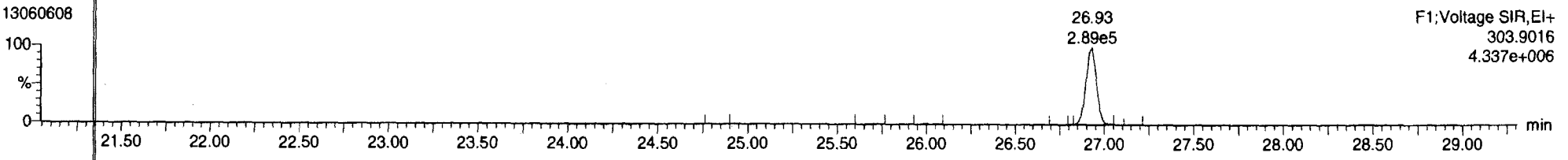
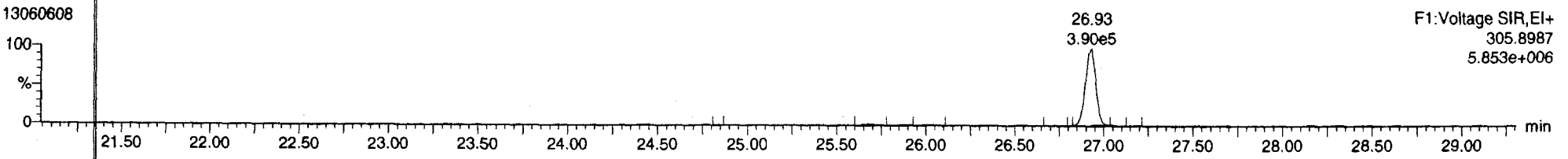


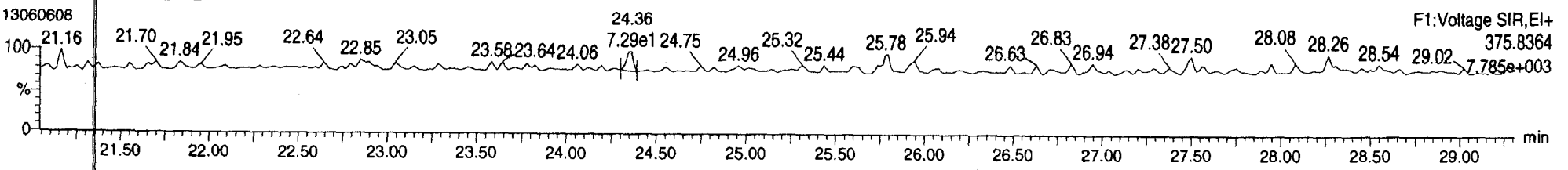
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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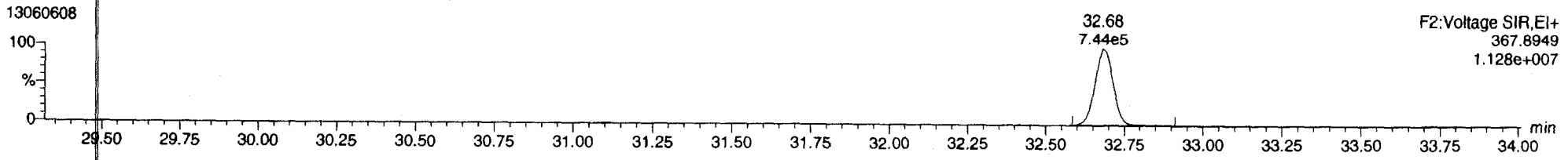
13C-12378-PeCDD



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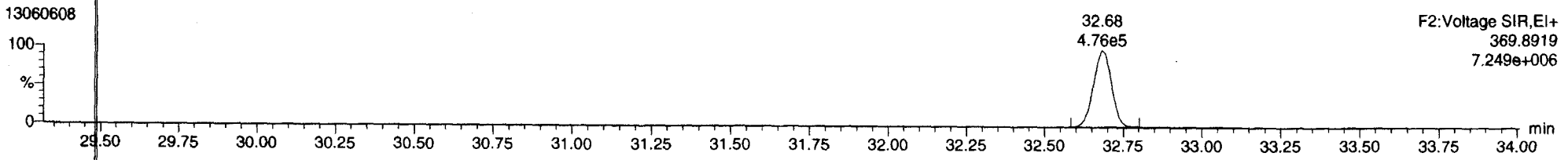
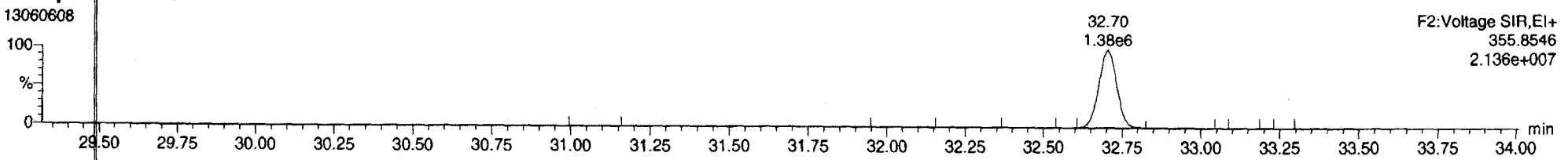
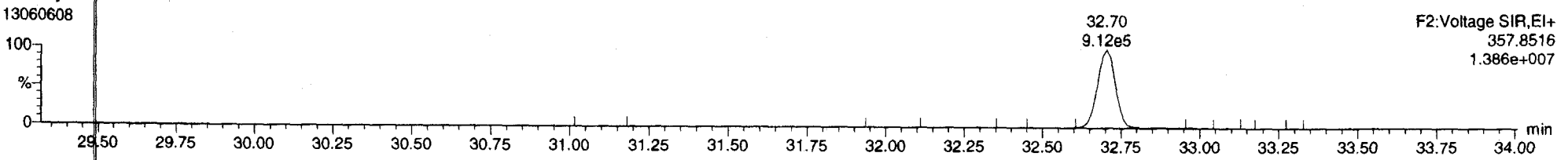


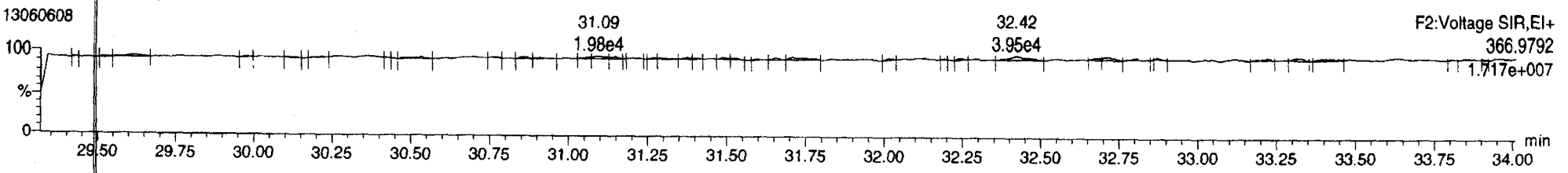
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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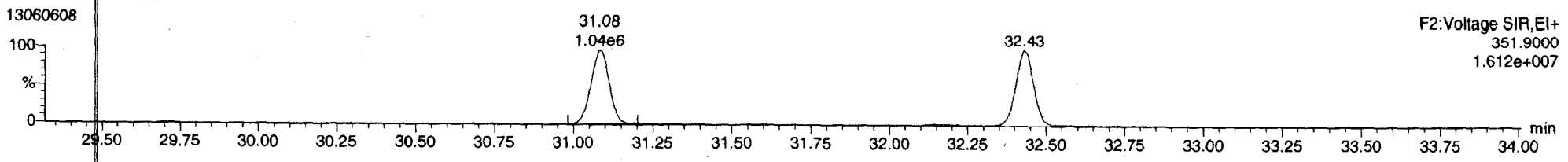
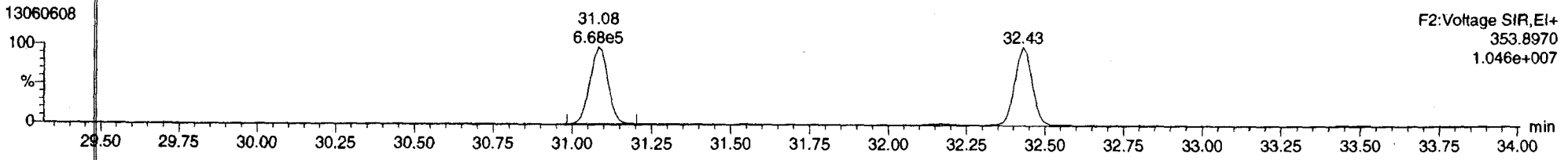
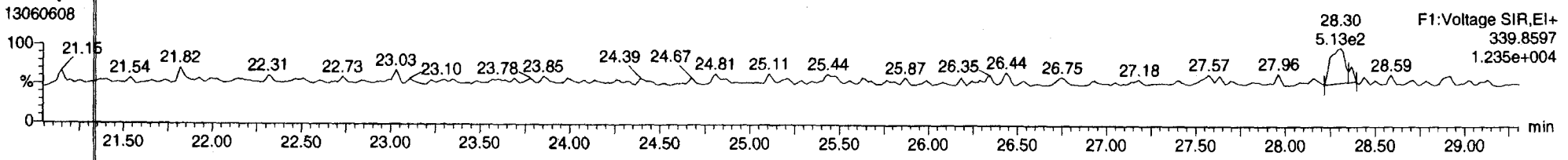


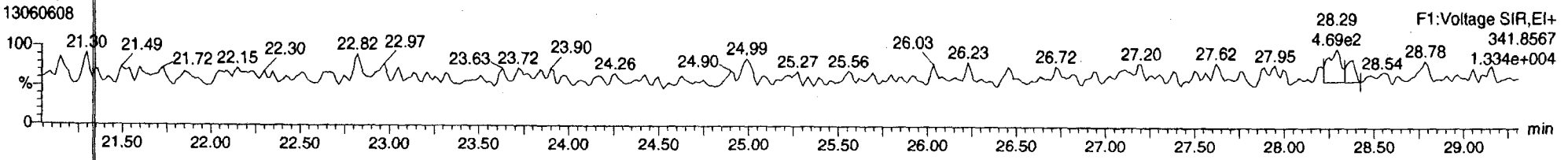
13C-12378-PeCDF



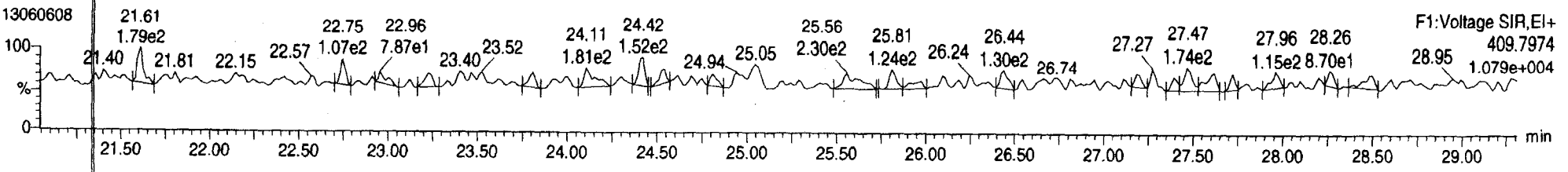
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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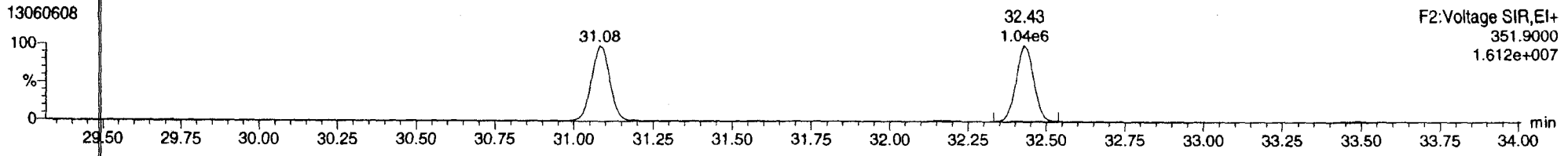
13C-23478-PeCDF



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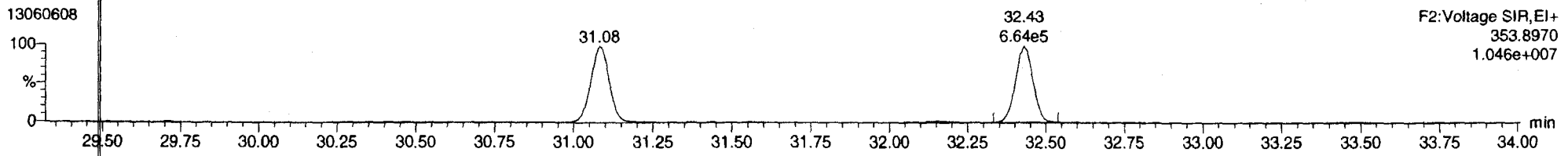
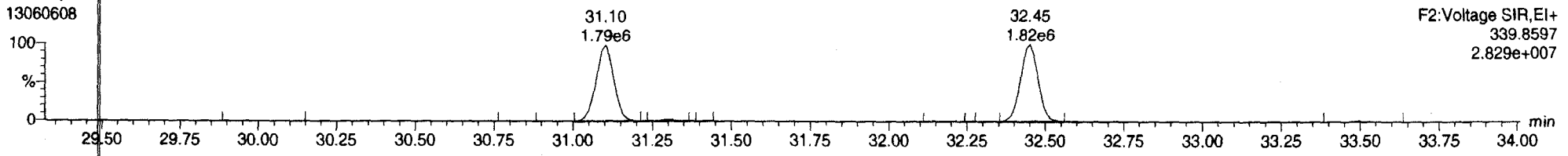


Total-pentafurans



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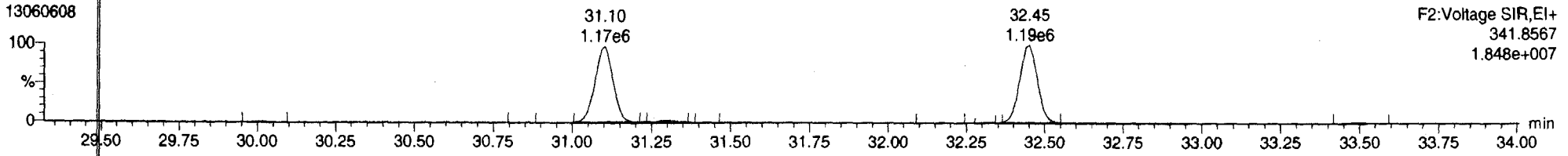
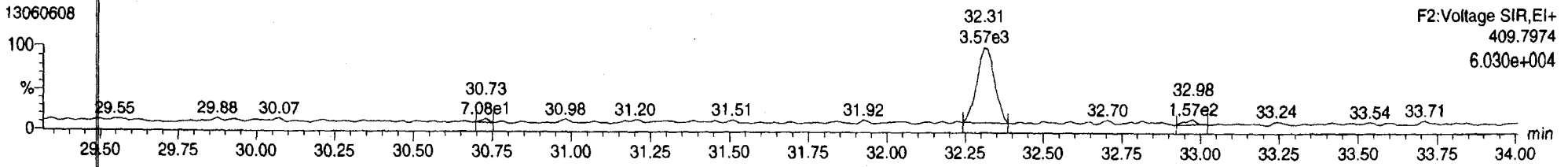


FUNCTION2 HPCDPE



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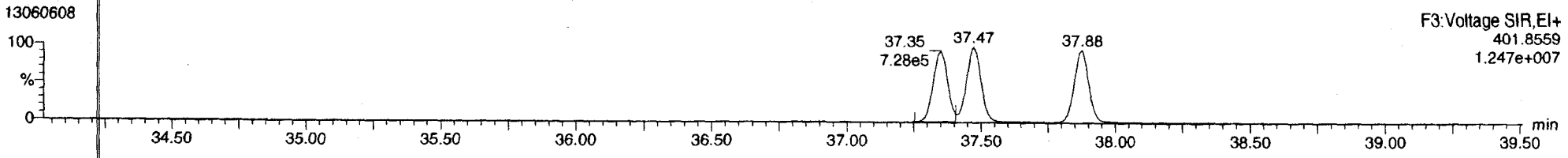
13C-123478-HxCDD



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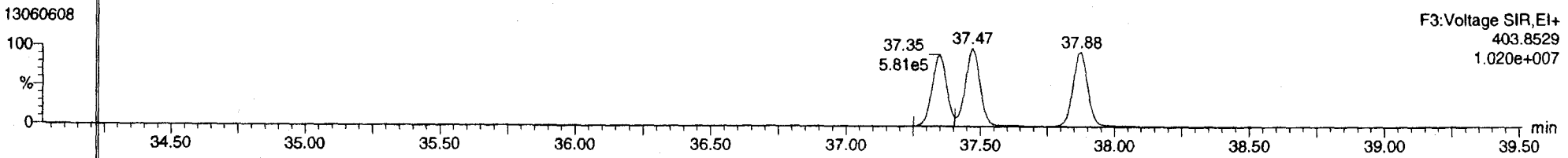
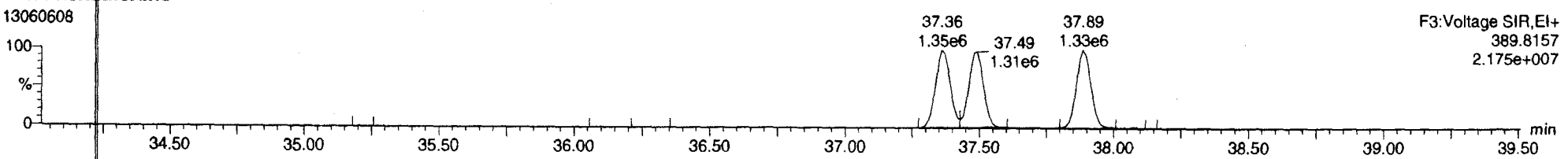
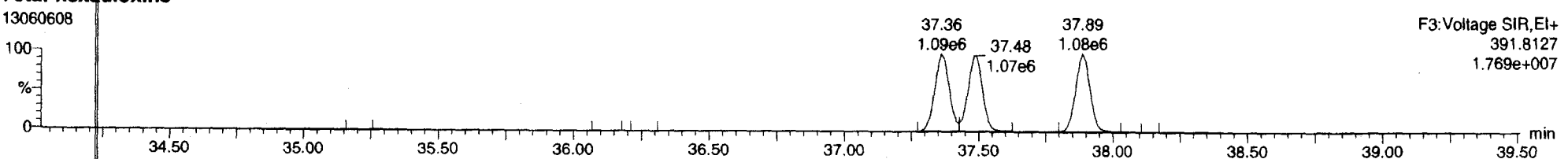


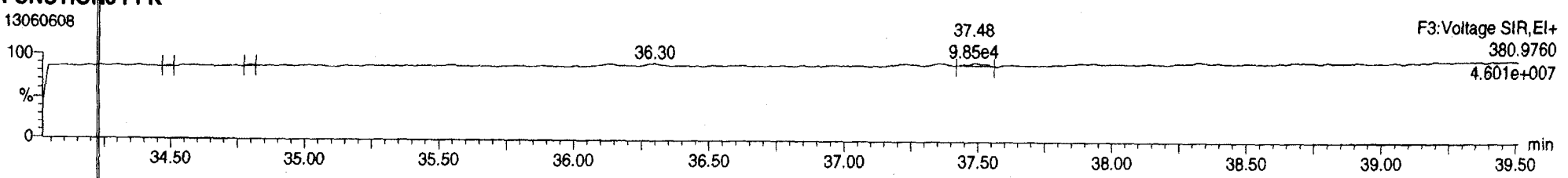
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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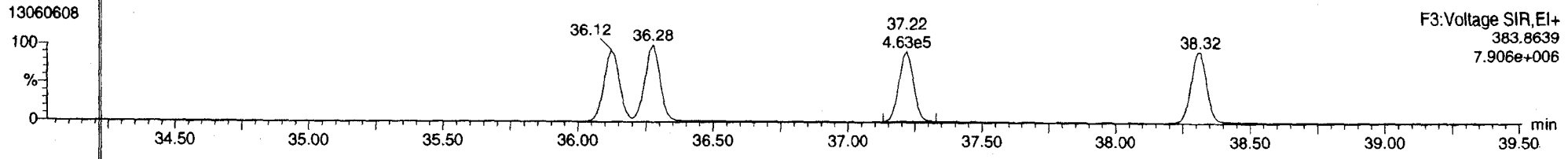
13C-234678-HxCDF



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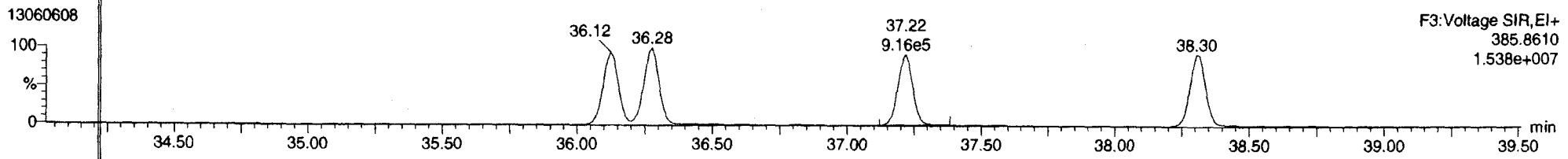
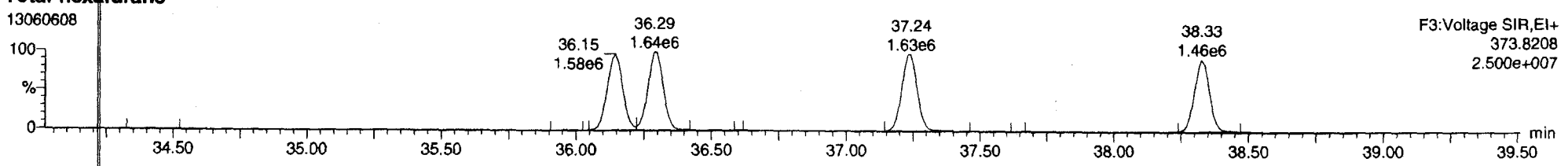
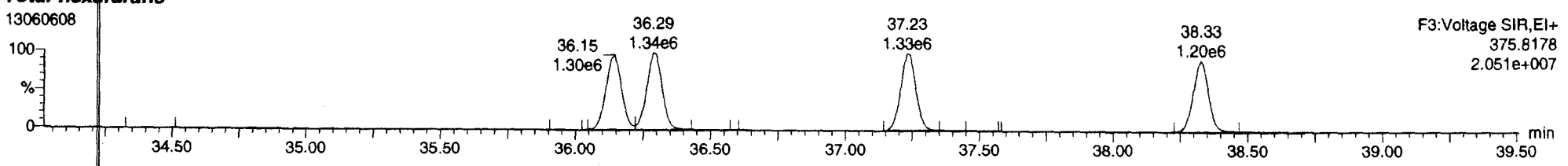


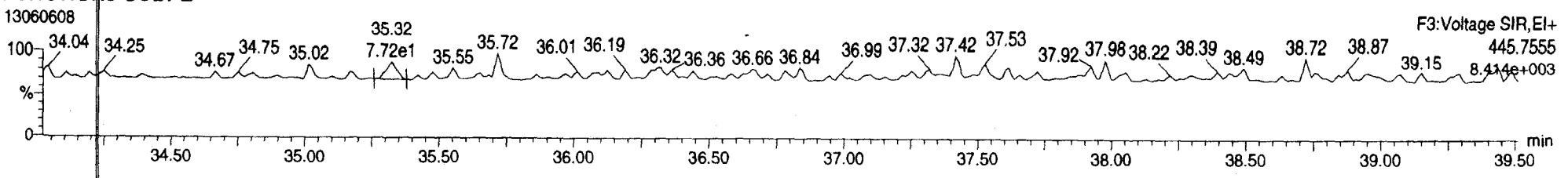
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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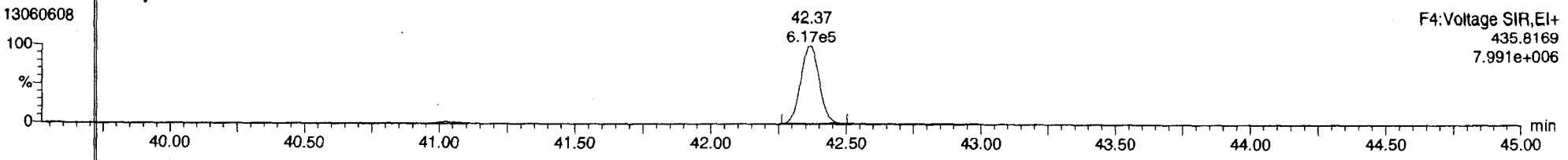
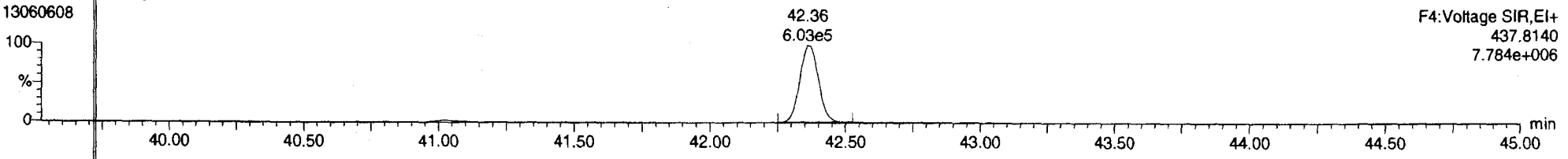
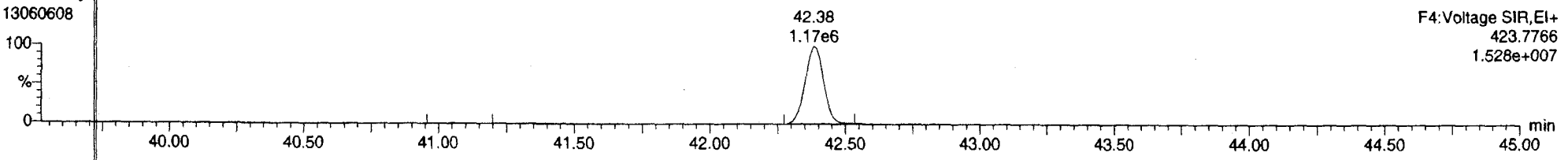
13C-1234678-HpCDD



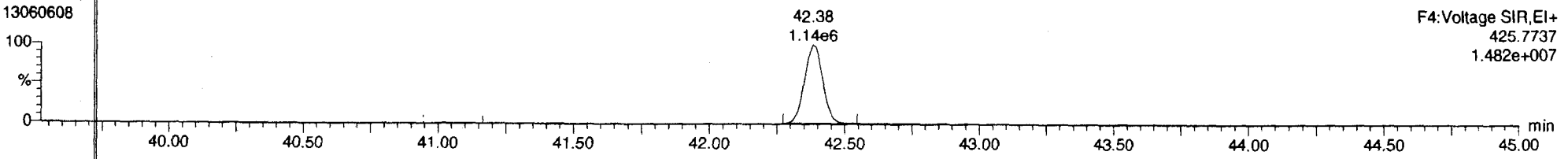
13C-1234678-HpCDD



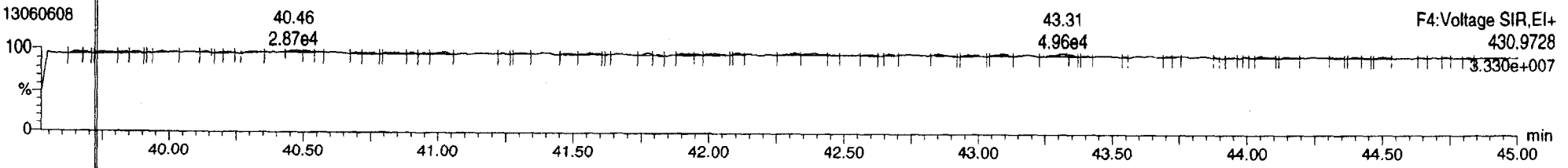
Total-heptadioxins



Total-heptadioxins



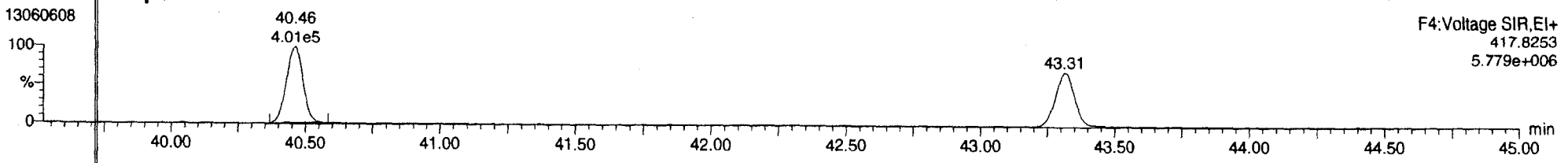
FUNCTION4 PFK



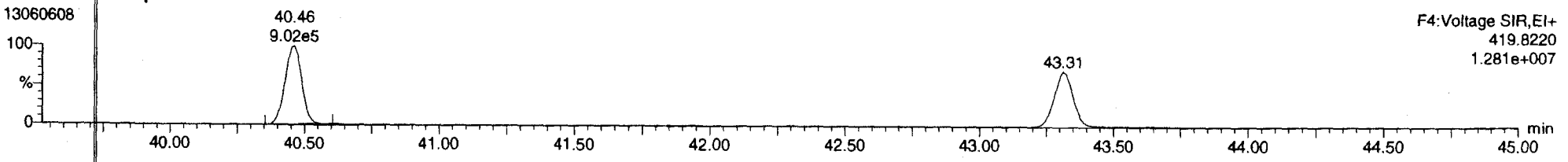
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:17 Pacific Daylight Time

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

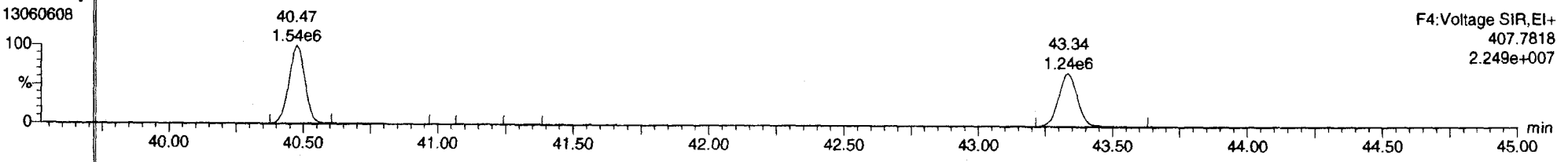
13C-1234678-HpCDF



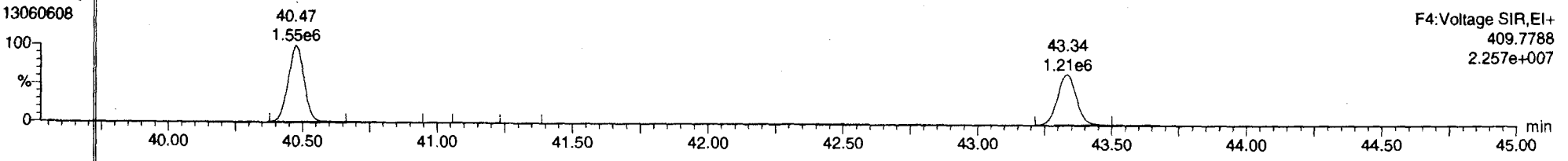
13C-1234678-HpCDF



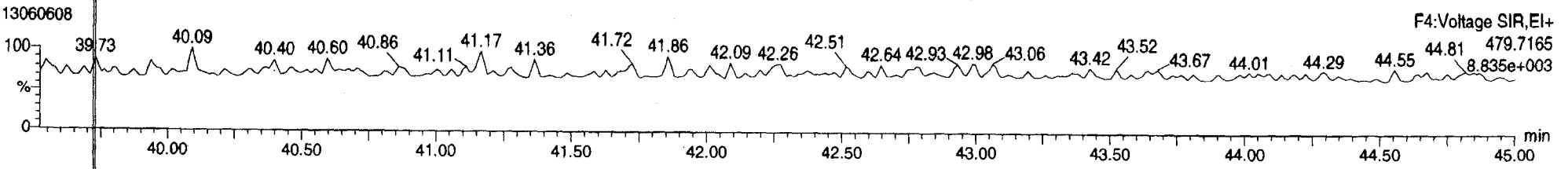
Total-heptafurans



Total-heptafurans



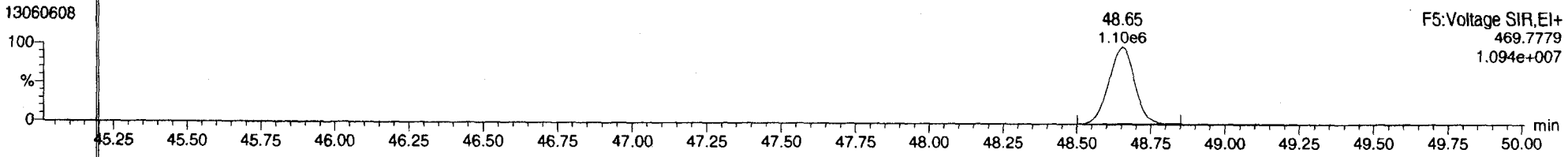
FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:17 Pacific Daylight Time

ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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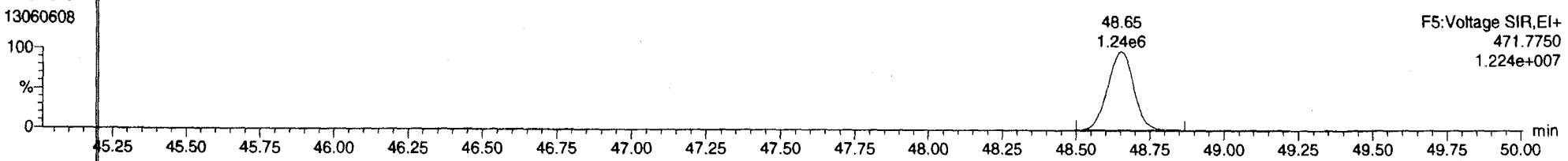

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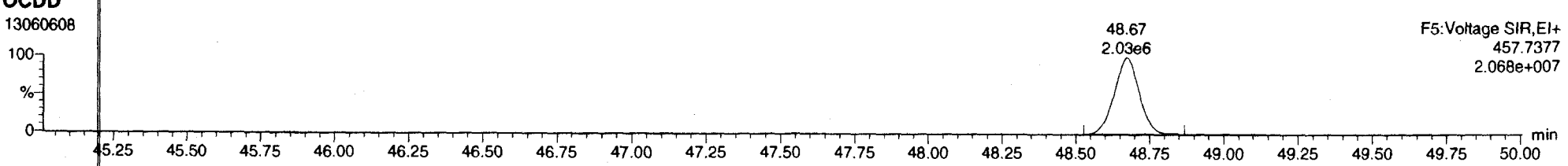

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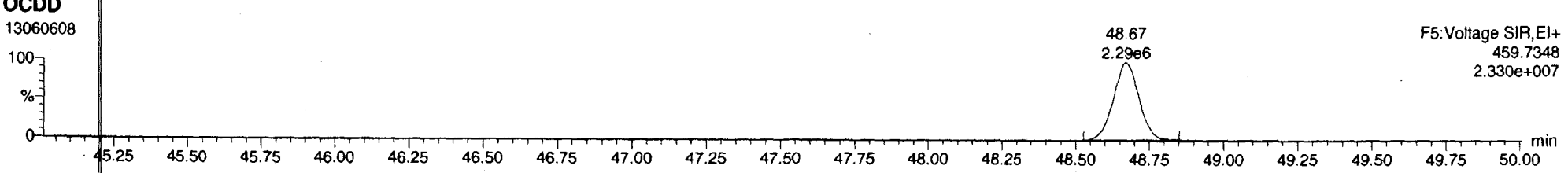
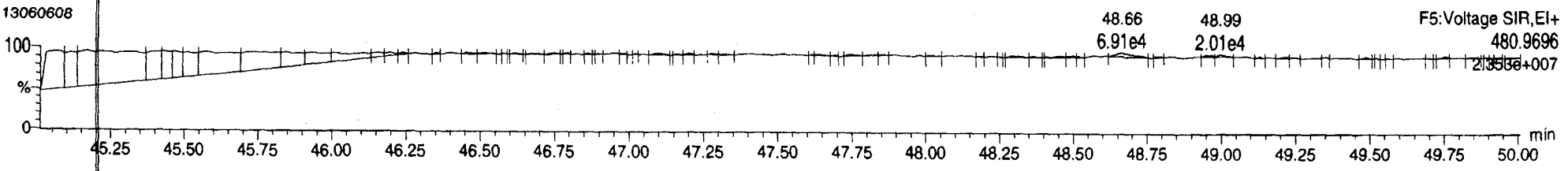
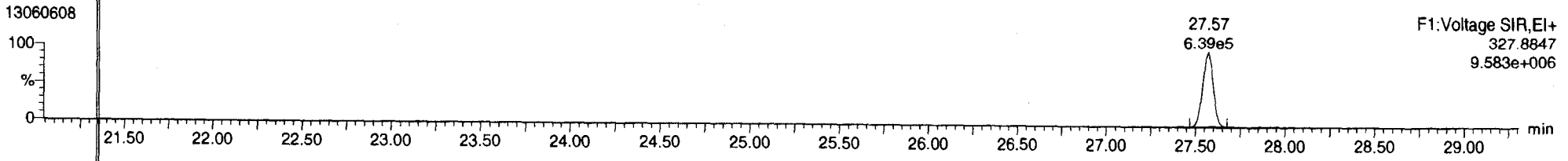


FUNCTION5 PFK

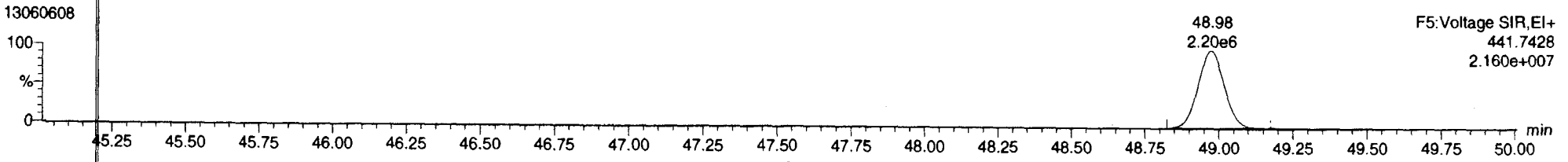


ID: CS4, Name: 13060608, Date: 06-Jun-2013, Time: 18:08:22, Conditions: AUTOSPEC01, User: pk

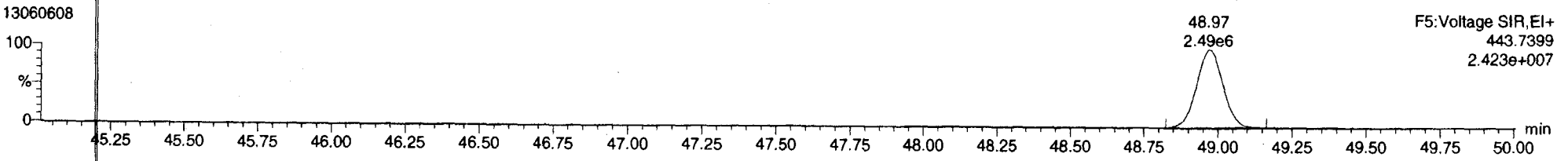
37CL-2378-TCDD



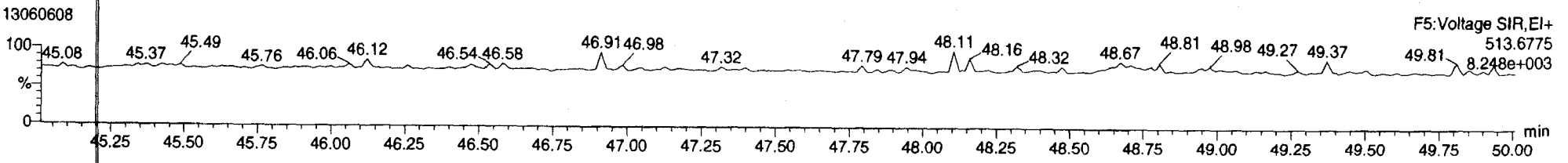
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.930	1.001	1.65e6	2.20e6	0.832	0.753	0.770	9018.8	NO	205.237	205.237
12378-PeCDF	31.103	1.001	1.07e7	7.03e6	0.853	1.522	1.550	31556.6	NO	1015.587	1015.587
23478-PeCDF	32.451	1.001	1.07e7	7.05e6	0.884	1.517	1.550	31445.6	NO	1014.116	1014.116
123478-HxCDF	36.145	1.001	8.84e6	7.22e6	1.017	1.225	1.240	18562.4	NO	1012.611	1012.611
234678-HxCDF	37.230	1.000	9.01e6	7.43e6	1.067	1.212	1.240	18740.2	NO	1039.620	1039.620
123678-HxCDF	36.287	1.000	9.13e6	7.55e6	0.999	1.209	1.240	18763.3	NO	1015.001	1015.001
123789-HxCDF	38.326	1.000	7.92e6	6.51e6	0.947	1.216	1.240	17289.9	NO	1014.625	1014.625
1234678-HpCDF	40.474	1.000	8.15e6	8.11e6	1.151	1.005	1.050	16882.0	NO	1029.369	1029.369
1234789-HpCDF	43.335	1.001	6.28e6	6.22e6	1.166	1.010	1.050	11191.6	NO	1007.672	1007.672
OCDF	48.976	1.007	1.18e7	1.33e7	1.001	0.885	0.890	33540.5	NO	2068.491	2068.491
2378-TCDD	27.572	1.001	1.43e6	1.88e6	0.939	0.761	0.770	12186.7	NO	210.230	210.230
12378-PeCDD	32.703	1.001	8.02e6	5.28e6	0.930	1.520	1.550	74813.2	NO	1016.977	1016.977
123478-HxCDD	37.361	1.000	7.49e6	6.10e6	0.930	1.228	1.240	25280.7	NO	1024.615	1024.615
123678-HxCDD	37.482	1.000	7.23e6	5.91e6	0.854	1.223	1.240	23817.6	NO	1004.587	1004.587
123789-HxCDD	37.888	1.011	7.25e6	5.93e6	0.885	1.223	1.240	24472.6	NO	1005.841	1005.841
1234678-HpCDD	42.382	1.000	6.04e6	5.89e6	0.966	1.026	1.050	14617.9	NO	988.505	988.505
OCDD	48.671	1.000	1.07e7	1.21e7	0.921	0.884	0.890	21977.7	NO	2033.253	2033.253
13C-2378-TCDF	26.900	1.006	9.76e5	1.28e6	1.283	0.762	0.770	4436.6	NO		103.391
13C-12378-PeCDF	31.081	1.163	1.25e6	8.00e5	1.051	1.559	1.550	8585.2	NO		114.551
13C-23478-PeCDF	32.429	1.213	1.21e6	7.73e5	1.030	1.561	1.550	8342.5	NO		112.959
13C-123478-HxCDF	36.123	0.954	5.25e5	1.04e6	1.069	0.507	0.510	3011.1	NO		102.326
13C-123678-HxCDF	36.276	0.958	5.59e5	1.09e6	1.124	0.514	0.510	3240.3	NO		102.591
13C-234678-HxCDF	37.219	0.983	5.05e5	9.77e5	1.041	0.516	0.510	2998.2	NO		99.847
13C-123789-HxCDF	38.315	1.012	5.11e5	9.91e5	1.039	0.516	0.510	3021.5	NO		101.351
13C-1234678-HpCDF	40.463	1.068	4.22e5	9.50e5	0.965	0.444	0.440	3871.1	NO		99.705
13C-1234789-HpCDF	43.313	1.144	3.32e5	7.32e5	0.760	0.454	0.440	2638.4	NO		98.109
13C-1234-TCDD	26.735	0.000	7.49e5	9.51e5	1.000	0.787	0.770	1197.3	NO		100.000
13C-2378-TCDD	27.542	1.030	7.31e5	9.47e5	0.926	0.772	0.770	1222.5	NO		106.602
13C-12378-PeCDD	32.681	1.222	8.55e5	5.51e5	0.734	1.551	1.550	4886.8	NO		112.619
13C-123478-HxCDD	37.350	0.986	7.91e5	6.35e5	0.984	1.247	1.240	5268.0	NO		101.611
13C-123678-HxCDD	37.471	0.989	8.46e5	6.87e5	1.043	1.232	1.240	5651.0	NO		103.081
13C-1234678-HpCDD	42.371	1.119	6.41e5	6.08e5	0.891	1.054	1.050	3903.1	NO		98.270
13C-OCDD	48.653	1.285	1.14e6	1.28e6	0.849	0.888	0.890	5138.8	NO		200.260

CS5LB : TCDF

Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

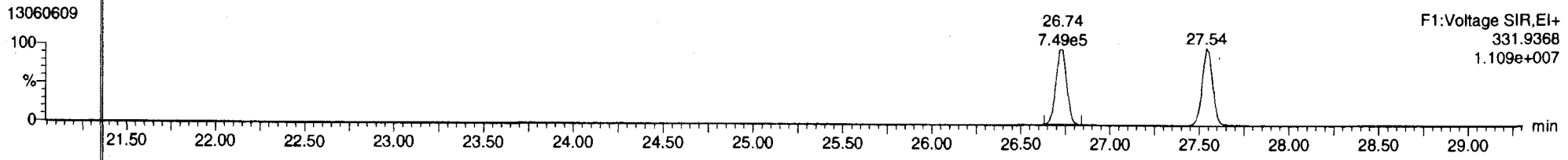
ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.876	0.000	7.88e5	6.38e5	1.000	1.236	1.240	5225.4	NO	100.000
Total-tetrafurans			1.69e6		0.832					209.091
Total-penta1			1.81e2							0.018
Total-pentafurans			2.17e7		0.868					2063.494
Total-hexafurans			3.50e7		1.008					4088.145
Total-heptafurans			1.44e7		1.159					2038.566
Total-Furans			8.46e7		0.992					10467.813
Total-tetradioxins			1.47e6		0.939					216.137
Total-pentadioxins			8.04e6		0.930					1019.381
Total-hexadioxins			2.20e7		0.890					3035.279
Total-heptadioxins			6.06e6		0.966					992.409
Total-Dioxins			4.82e7		0.918					7296.459
Total-TEQ			1.33e8							17764.272
37CL-2378-TCDD	27.572	1.031	3.71e6		0.989			18387.8		220.877
FUNCTION1 PFK			7.04e5							
FUNCTION2 PFK			3.63e5							0.000
FUNCTION3 PFK			1.82e6							0.000
FUNCTION4 PFK			0.00e0							
FUNCTION5 PFK			0.00e0							
FUNCTION1 HXCDPE			1.06e2							0.000
FUNCTION1 HPCDPE			2.42e3							0.000
FUNCTION2 HPCDPE			1.87e4							0.000
FUNCTION3 OCDPE			4.64e2							0.000
FUNCTION4 NCDPE			1.01e2							0.000
FUNCTION5 DCDPE			7.39e1							0.000

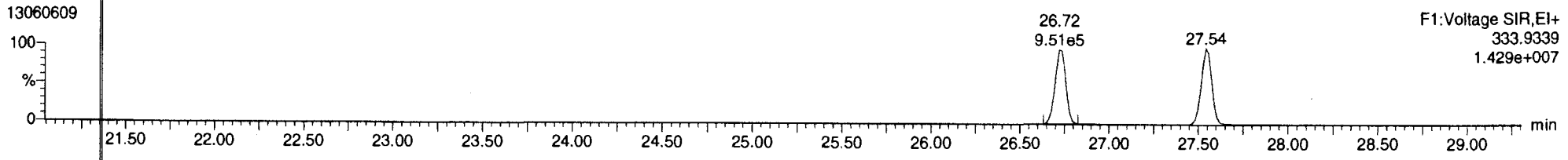
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

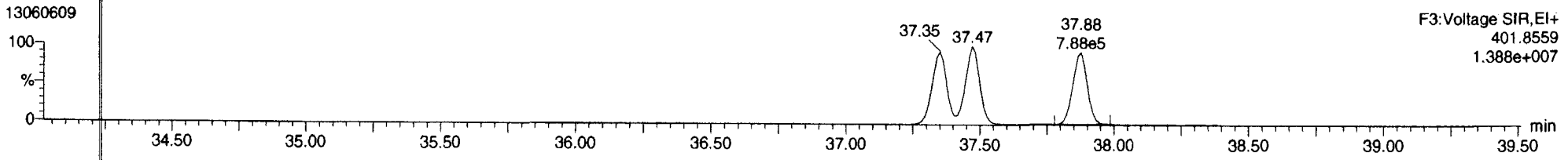
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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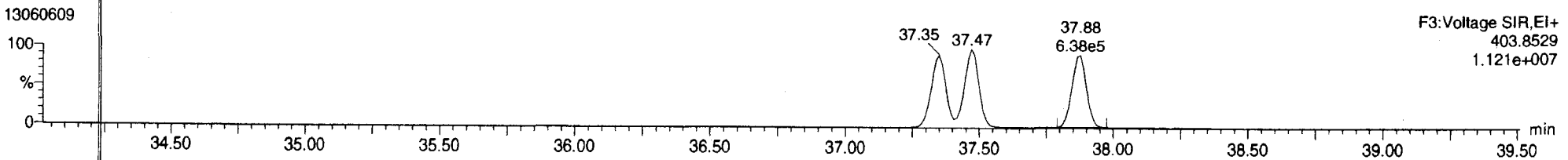
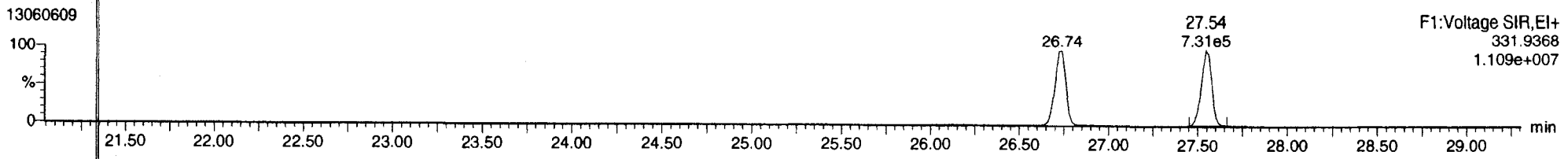


CS5 - 13C

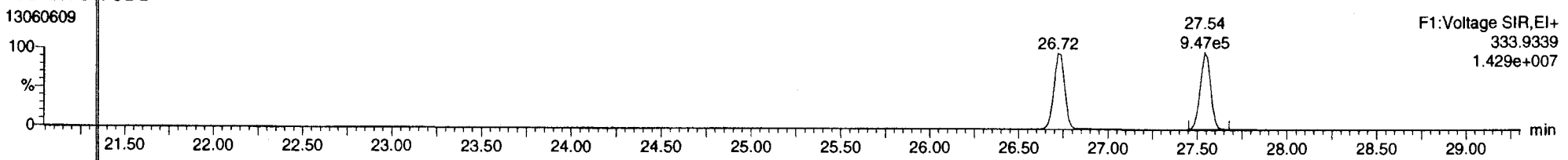
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

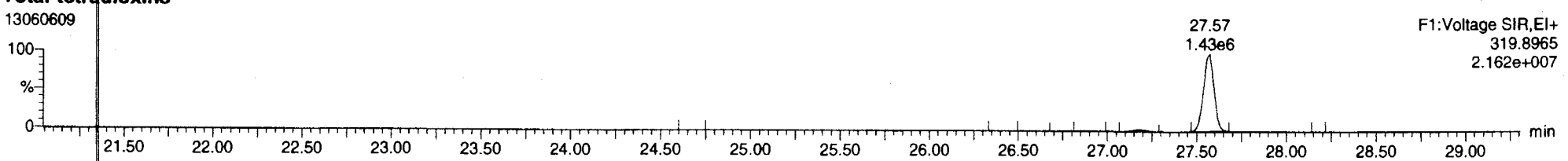
13C-2378-TCDD



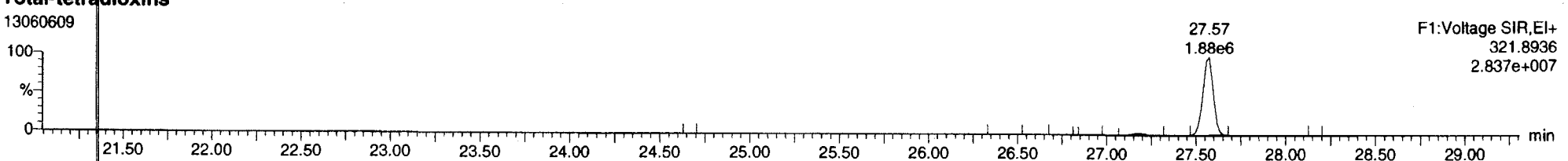
13C-2378-TCDD



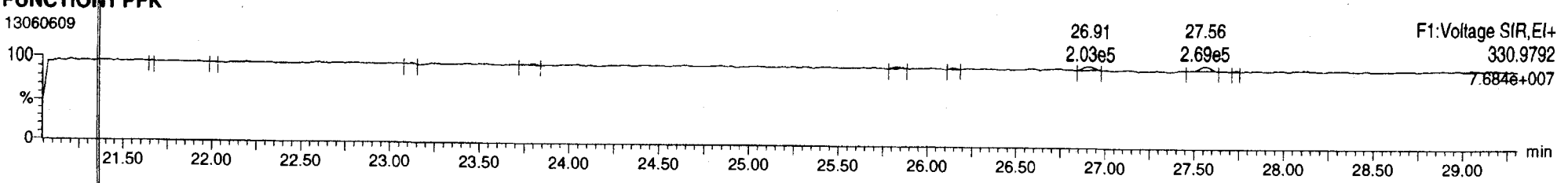
Total-tetradioxins



Total-tetradioxins



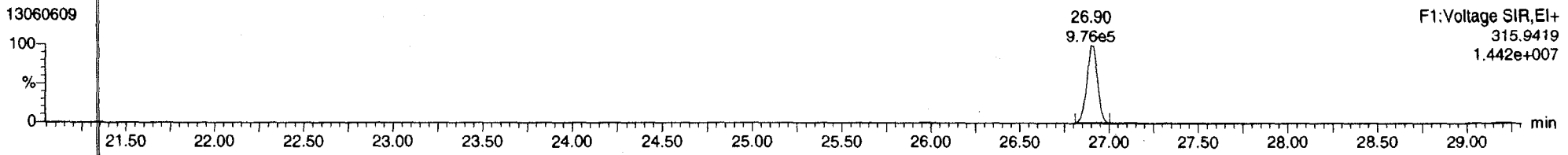
FUNCTION1 PFK



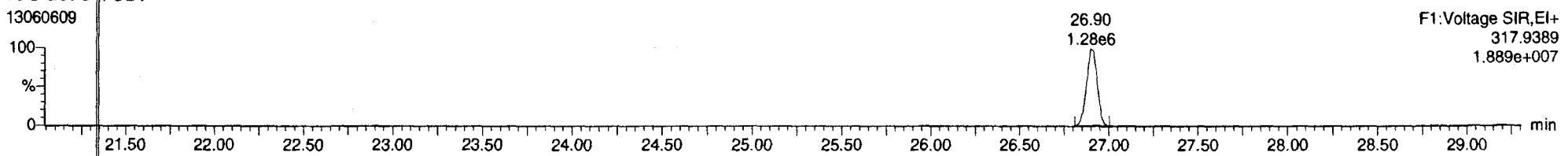
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

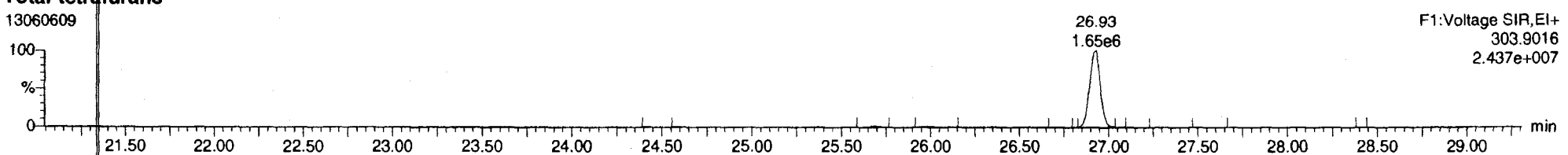
13C-2378-TCDF



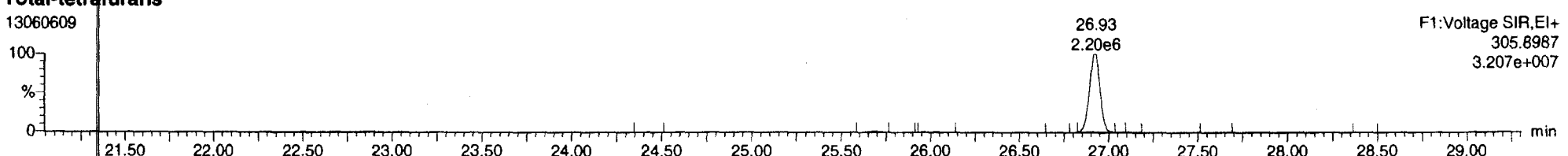
13C-2378-TCDF



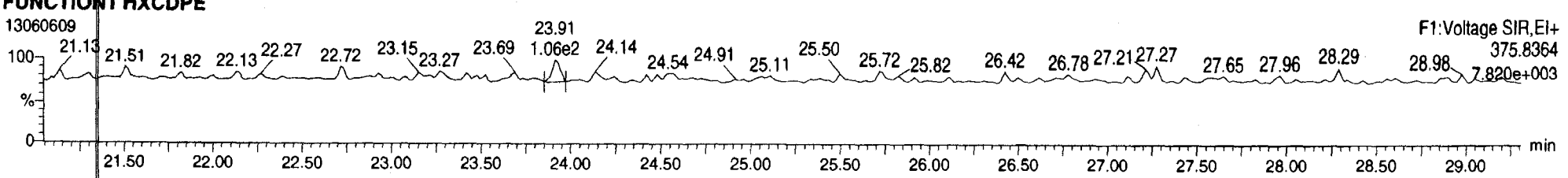
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE

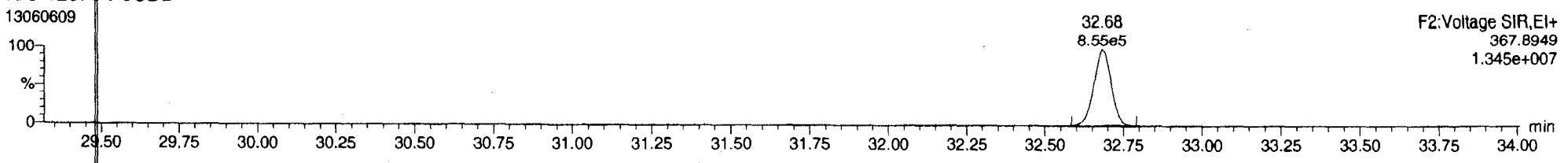


CONFIDENTIAL

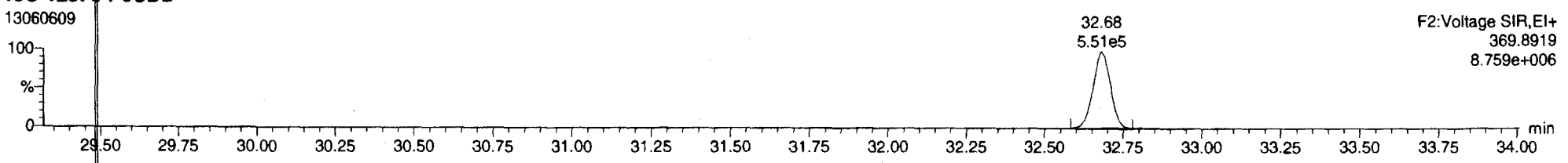
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

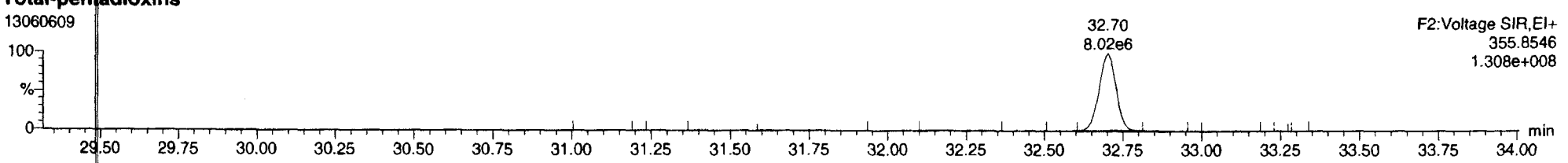
13C-12378-PeCDD



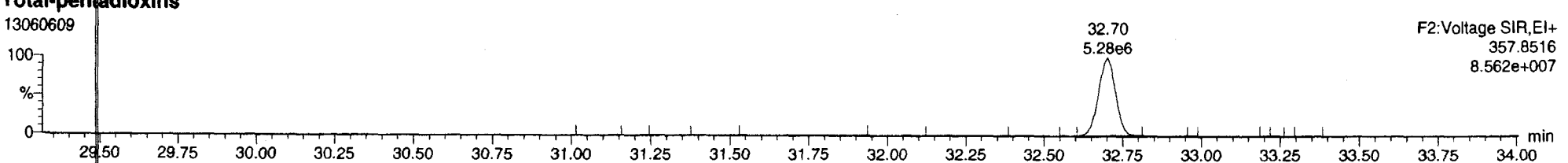
13C-12378-PeCDD



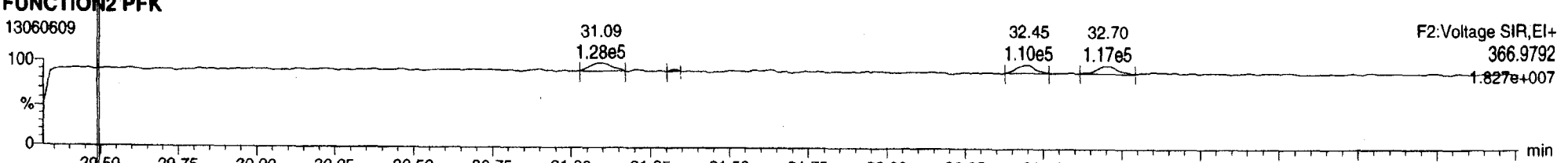
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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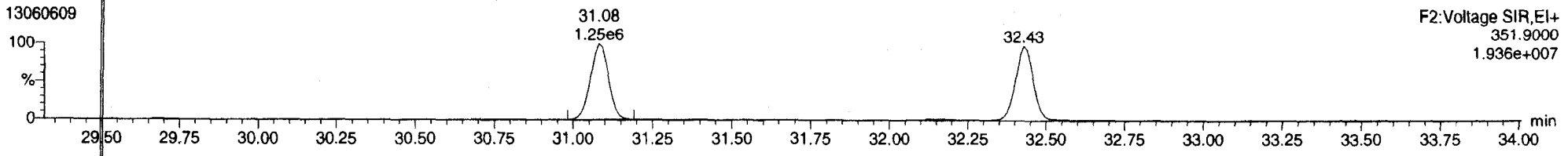
ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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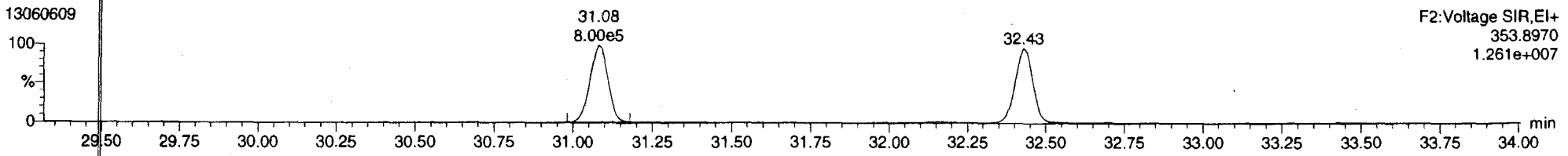
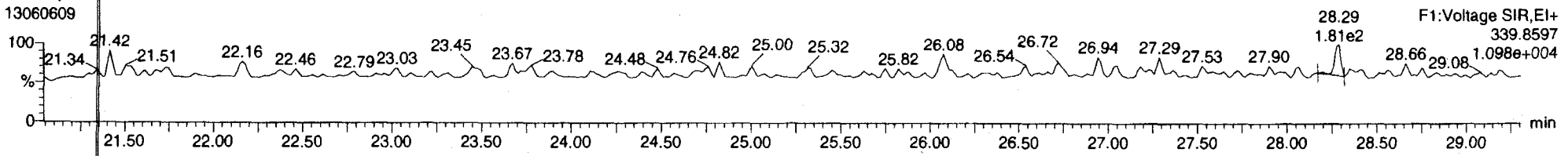
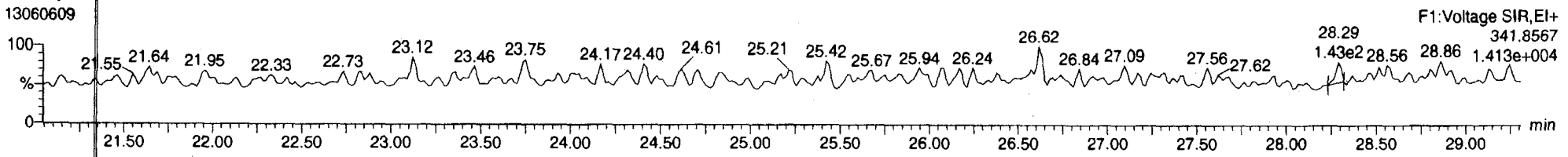


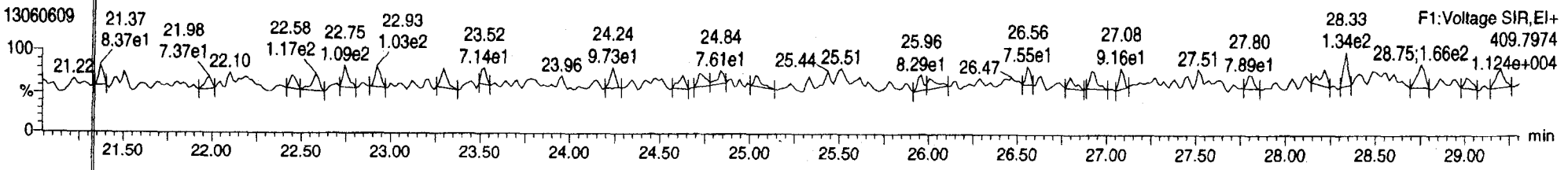
Total-penta1



Total-penta1

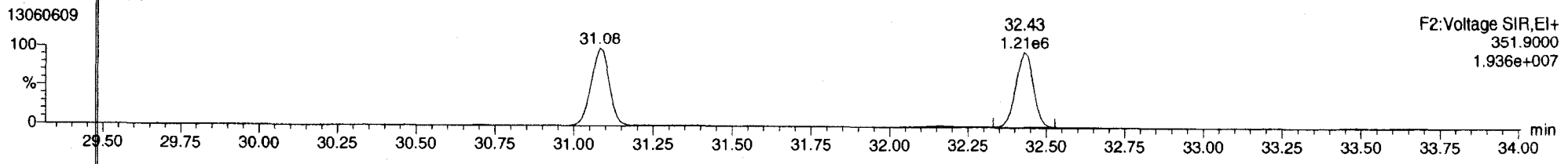


FUNCTION1 HPCDPE

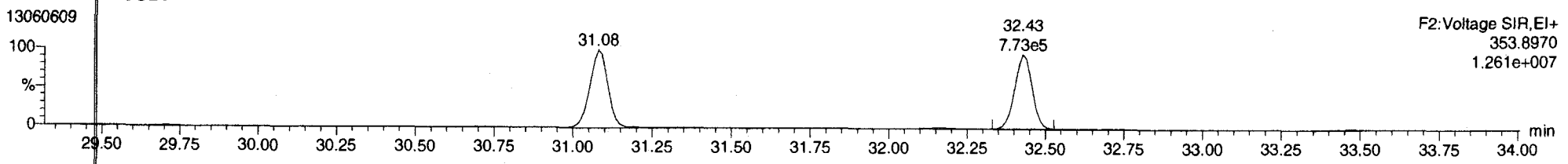


ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

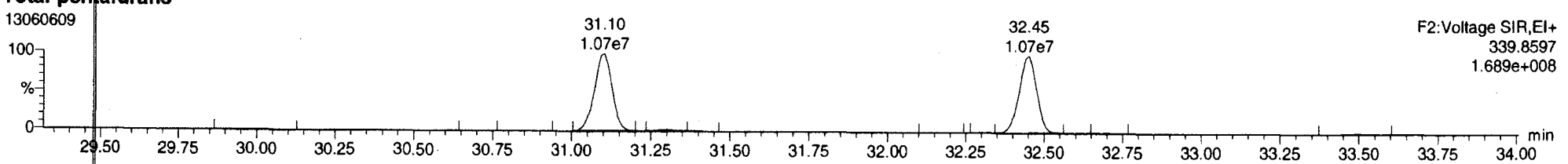
13C-23478-PeCDF



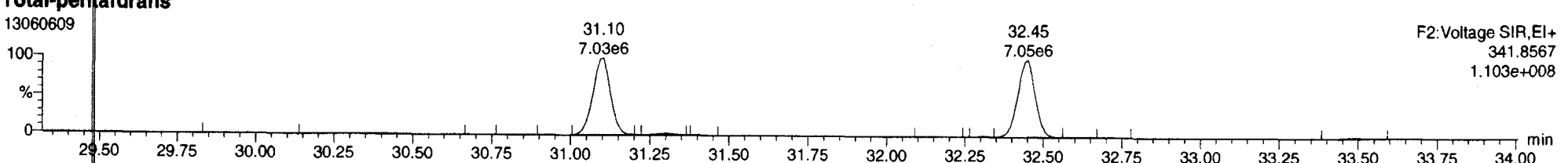
13C-23478-PeCDF



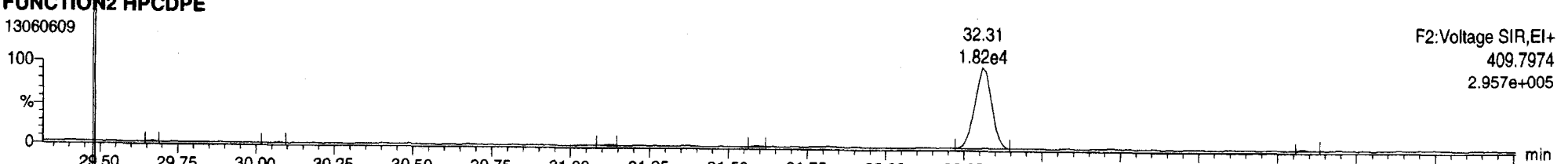
Total-pentafurans



Total-pentafurans

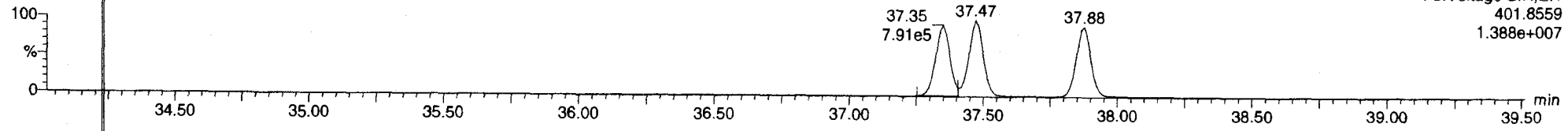


FUNCTION2 HPCDPE



ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

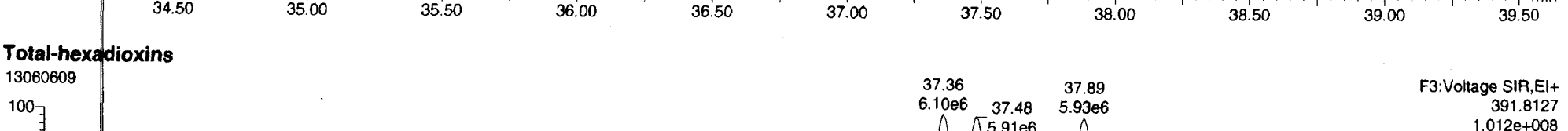
13C-123478-HxCDD



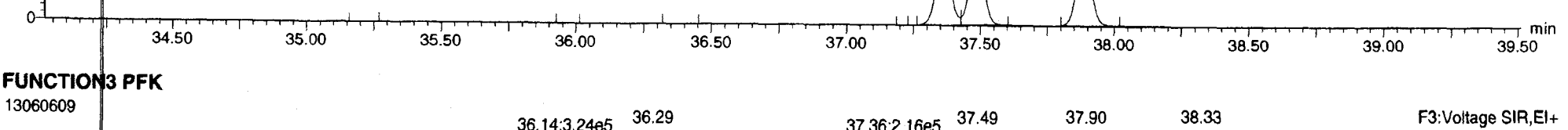
13C-123478-HxCDD

Total-hexadioxins

Total-hexadioxins



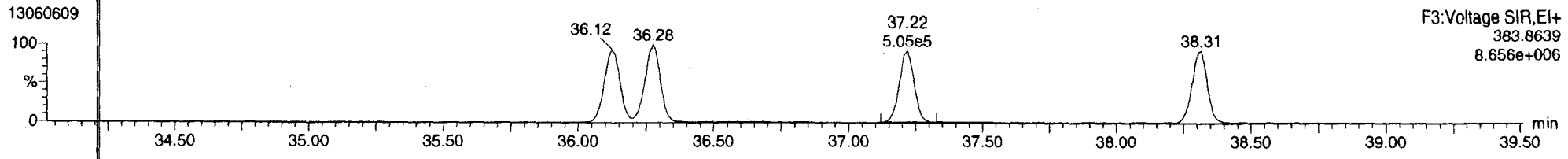
FUNCTION3 PFK



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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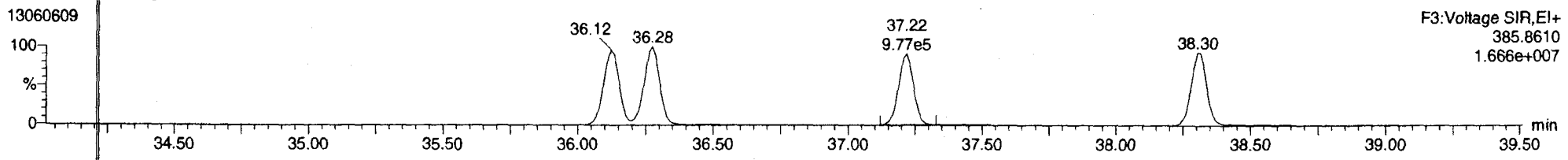
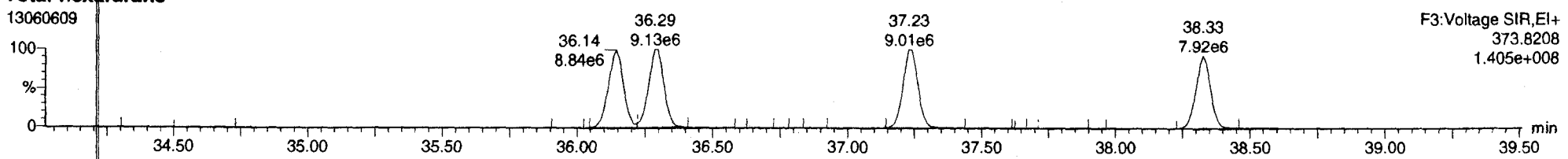
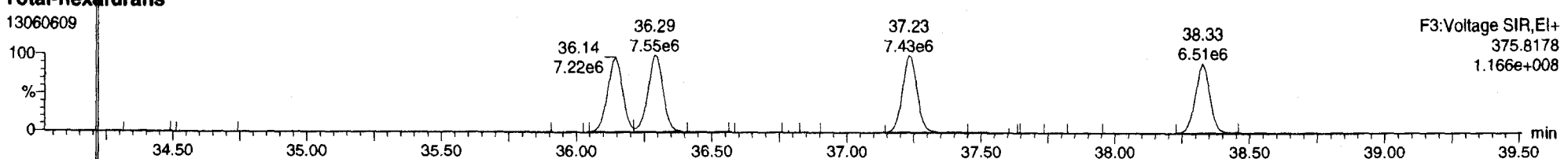


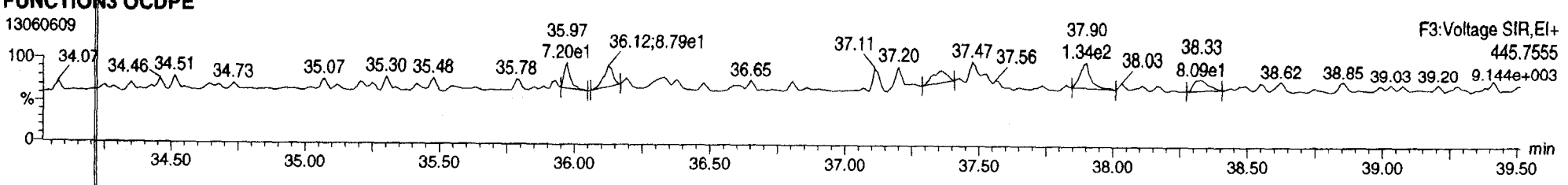
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



Dataset: P:\DIOXIN8290.PRO\130606IC.qld
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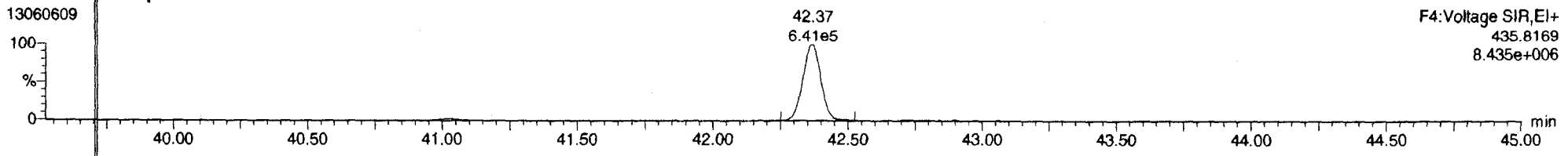
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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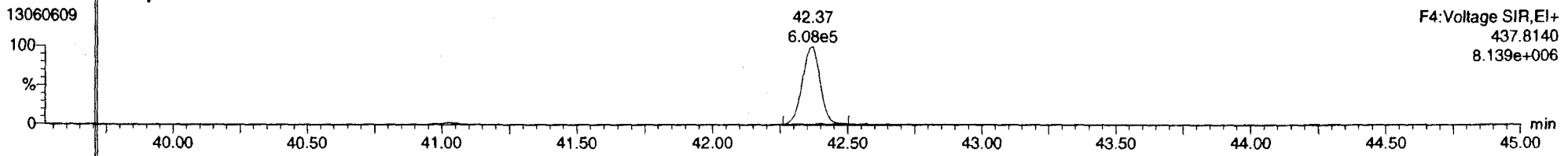
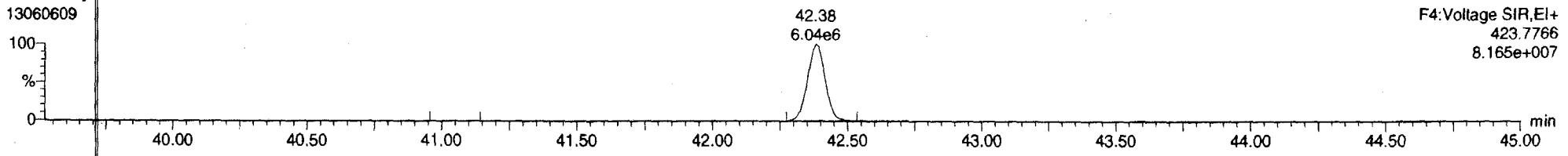
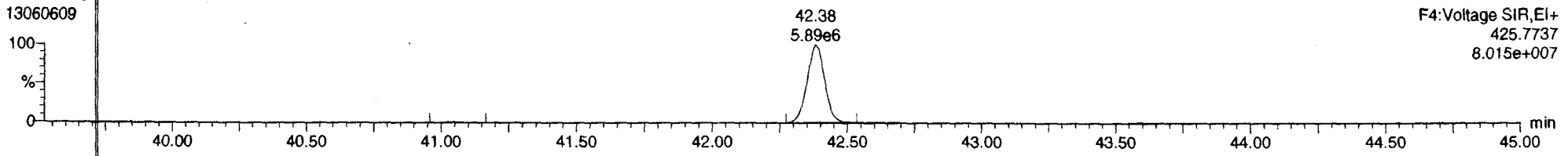


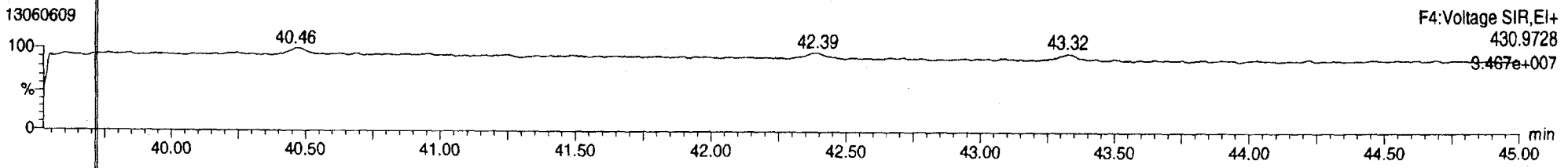
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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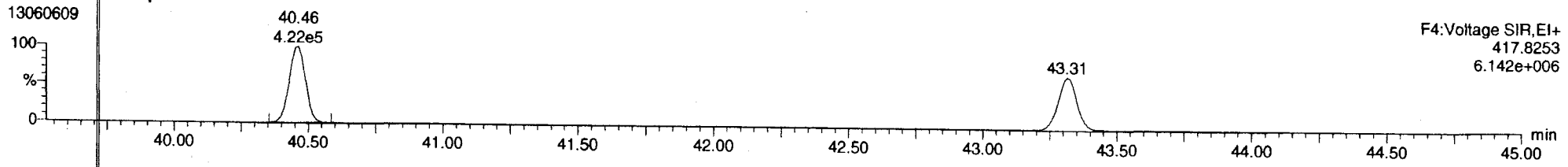
13C-1234678-HpCDF



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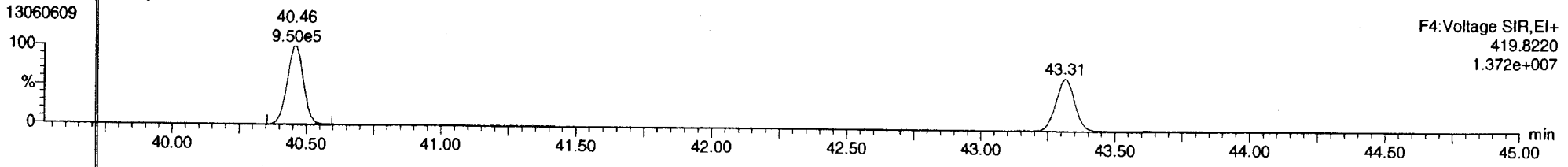
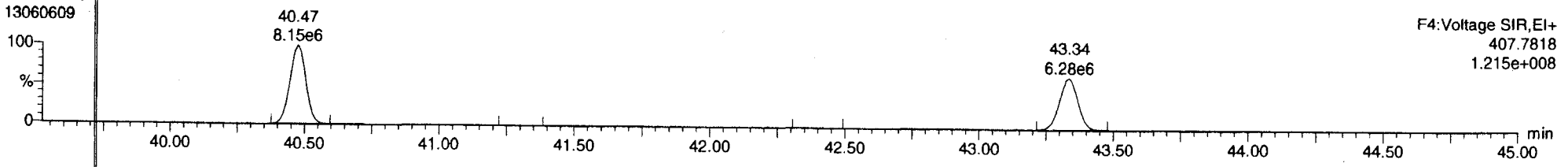
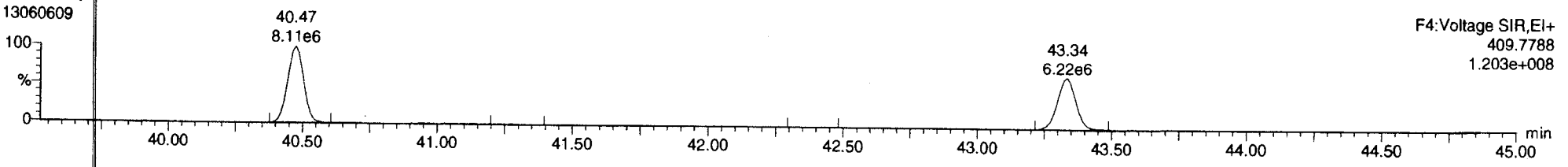


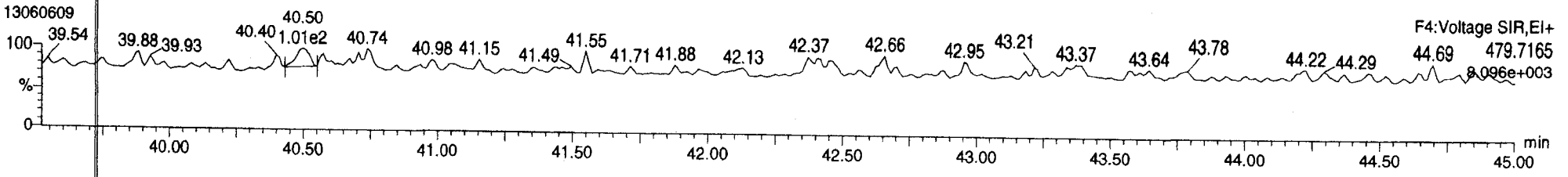
Total-heptafurans



Total-heptafurans

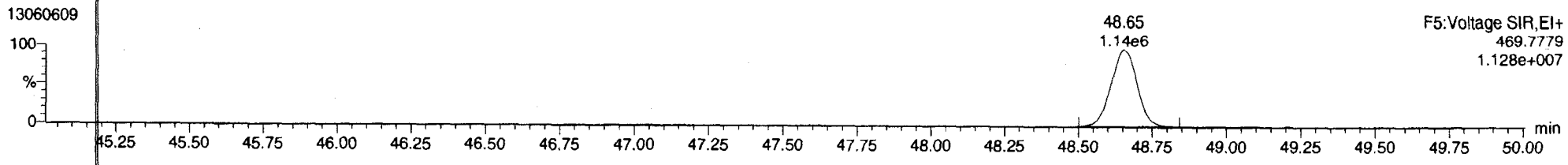


FUNCTION4 NCDPE

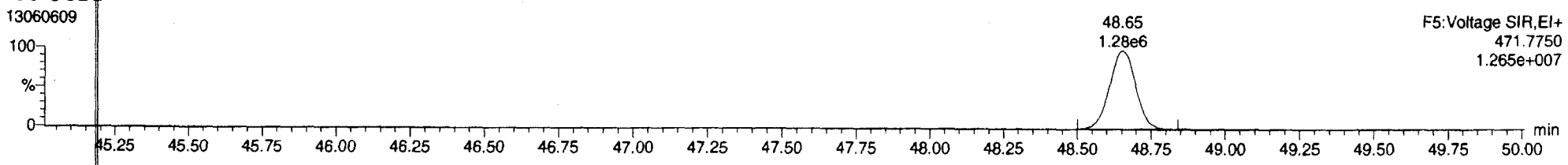


ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

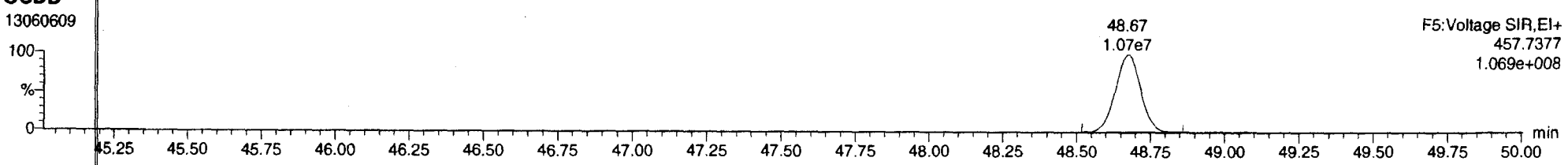
13C-OCDD



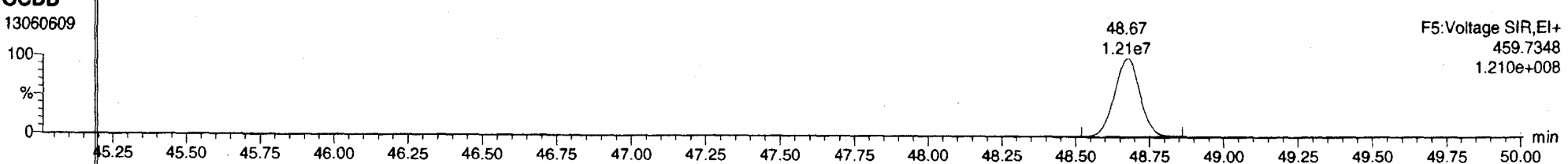
13C-OCDD



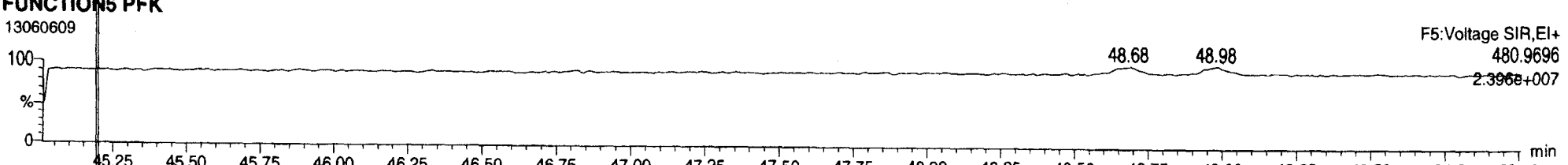
OCDD



OCDD



FUNCTION5 PFK

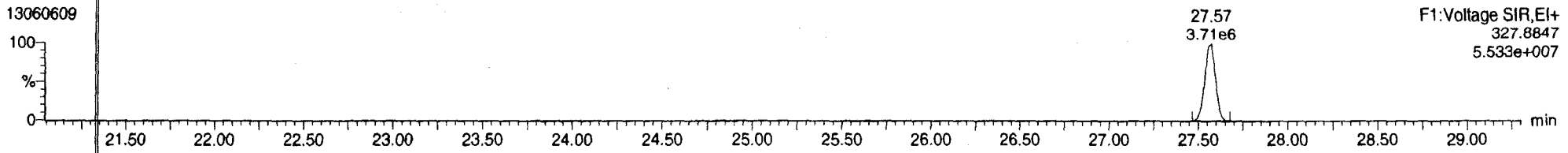


TRACE - TECH

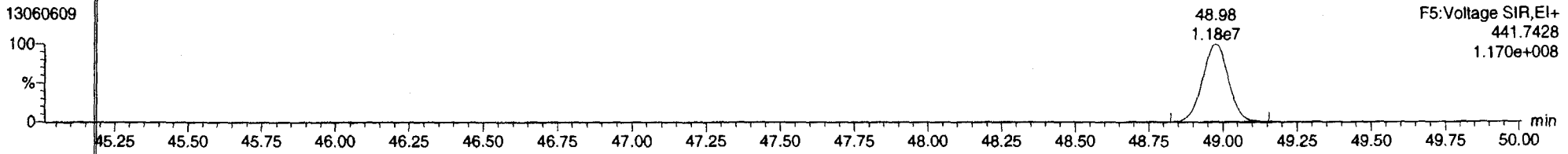
Dataset: P:\DIOXIN8290.PRO\130606IC.qld
Last Altered: Monday, June 10, 2013 09:29:35 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:06:27 Pacific Daylight Time

ID: CS5, Name: 13060609, Date: 06-Jun-2013, Time: 19:01:24, Conditions: AUTOSPEC01, User: pk

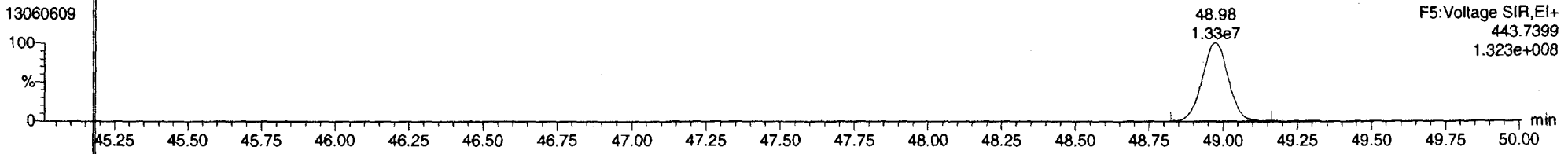
37CL-2378-TCDD



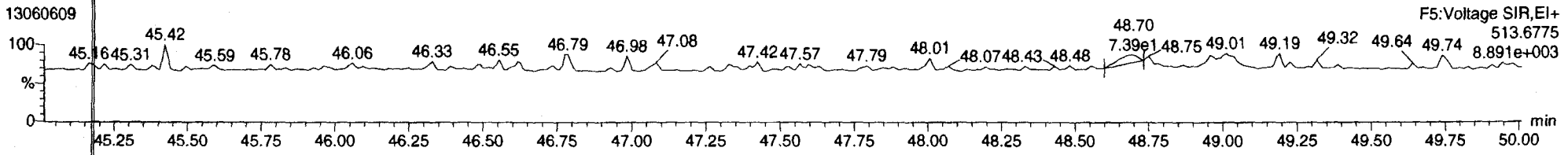
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: Untitled
Last Altered: Monday, June 10, 2013 10:06:43 Pacific Daylight Time
Printed: Monday, June 10, 2013 10:07:15 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130530.mdb 30 May 2013 15:17:38
Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: ICV, Name: 13060610, Date: 06-Jun-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.915	1.001	6.19e4	8.46e4	0.832	0.732	0.770	971.3	NO	10.340	10.340
12378-PeCDF	31.092	1.001	3.92e5	2.53e5	0.853	1.552	1.550	1520.2	NO	55.531	55.531
23478-PeCDF	32.440	1.001	3.61e5	2.41e5	0.884	1.495	1.550	1411.6	NO	50.134	50.134
123478-HxCDF	36.134	1.001	3.46e5	2.83e5	1.017	1.224	1.240	1778.7	NO	56.314	56.314
234678-HxCDF	37.230	1.001	3.35e5	2.75e5	1.067	1.218	1.240	1721.8	NO	49.015	49.015
123678-HxCDF	36.276	1.000	3.57e5	2.90e5	0.999	1.230	1.240	1752.9	NO	53.421	53.421
123789-HxCDF	38.315	1.001	3.06e5	2.54e5	0.947	1.208	1.240	1608.0	NO	56.345	56.345
1234678-HpCDF	40.464	1.001	3.08e5	3.09e5	1.151	0.997	1.050	1546.9	NO	53.972	53.972
1234789-HpCDF	43.325	1.001	2.49e5	2.45e5	1.166	1.014	1.050	1065.2	NO	49.700	49.700
OCDF	48.959	1.007	4.41e5	5.01e5	1.001	0.879	0.890	2267.2	NO	113.194	113.194
2378-TCDD	27.557	1.001	5.69e4	7.68e4	0.939	0.741	0.770	648.8	NO	10.734	10.734
12378-PeCDD	32.692	1.001	2.84e5	1.85e5	0.930	1.537	1.550	2815.2	NO	47.368	47.368
123478-HxCDD	37.351	1.000	2.71e5	2.23e5	0.930	1.216	1.240	2632.3	NO	51.955	51.955
123678-HxCDD	37.471	1.000	2.62e5	2.13e5	0.854	1.230	1.240	2523.7	NO	55.740	55.740
123789-HxCDD	37.877	1.011	2.90e5	2.37e5	0.885	1.223	1.240	2808.1	NO	59.028	59.028
1234678-HpCDD	42.371	1.001	2.46e5	2.42e5	0.966	1.019	1.050	2119.1	NO	49.584	49.584
OCDD	48.653	1.000	4.05e5	4.66e5	0.921	0.868	0.890	2776.2	NO	113.615	113.615
13C-2378-TCDF	26.900	1.007	7.45e5	9.59e5	1.283	0.777	0.770	3099.2	NO		90.115
13C-12378-PeCDF	31.070	1.163	8.30e5	5.31e5	1.051	1.562	1.550	3483.1	NO		87.886
13C-23478-PeCDF	32.418	1.213	8.30e5	5.29e5	1.030	1.570	1.550	3469.5	NO		89.532
13C-123478-HxCDF	36.112	0.954	3.71e5	7.27e5	1.069	0.511	0.510	2038.3	NO		91.202
13C-123678-HxCDF	36.265	0.958	4.12e5	7.99e5	1.124	0.516	0.510	2183.7	NO		95.675
13C-234678-HxCDF	37.208	0.983	3.95e5	7.73e5	1.041	0.511	0.510	2183.6	NO		99.673
13C-123789-HxCDF	38.293	1.011	3.54e5	6.96e5	1.039	0.508	0 510	1955.6	NO		89.662
13C-1234678-HpCDF	40.442	1.068	3.06e5	6.86e5	0.965	0.446	0.440	1751.4	NO		91.330
13C-1234789-HpCDF	43.303	1.144	2.62e5	5.90e5	0.760	0.444	0.440	1339.5	NO		99.539
13C-1234-TCDD	26.721	0.000	6.53e5	8.20e5	1.000	0.797	0.770	1235.8	NO		100.000
13C-2378-TCDD	27.542	1.031	5.90e5	7.37e5	0.926	0.801	0.770	1074.8	NO		97.239
13C-12378-PeCDD	32.670	1.223	6.43e5	4.21e5	0.734	1.528	1.550	2826.6	NO		98.256
13C-123478-HxCDD	37.340	0.986	5.70e5	4.53e5	0.984	1.260	1.240	2472.0	NO		92.300
13C-123678-HxCDD	37.460	0.989	5.52e5	4.45e5	1.043	1.240	1.240	2351.4	NO		84.844
13C-1234678-HpCDD	42.349	1.118	5.22e5	4.95e5	0.891	1.054	1.050	3284.1	NO		101.385
13C-OCDD	48.636	1.284	7.86e5	8.77e5	0.849	0.896	0.890	5063.7	NO		174.022

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13C-123789-HxCDD	37.866	0.000	6.25e5	5.02e5	1.000	1.246	1.240	2682.2	NO	100.000
Total-tetrafurans			6.26e4		0.832					10.479
Total-penta1			7.81e1							0.016
Total-pentafurans			7.60e5		0.868					106.682
Total-hexafurans			1.34e6		1.008					215.095
Total-heptafurans			5.57e5		1.159					103.800
Total-Furans			3.17e6		0.992					549.278
Total-tetradioxins			5.88e4		0.939					10.914
Total-pentadioxins			2.85e5		0.930					47.517
Total-hexadioxins			8.26e5		0.890					167.204
Total-heptadioxins			2.46e5		0.966					49.735
Total-Dioxins			1.82e6		0.918					388.984
Total-TEQ			4.99e6							938.262
37CL-2378-TCDD	27.557	1.031	1.41e5		0.989			775.3		9.692
FUNCTION1 PFK			9.64e5							
FUNCTION2 PFK			2.85e5							0.000
FUNCTION3 PFK			9.31e6							0.000
FUNCTION4 PFK			0.00e0							
FUNCTION5 PFK			1.37e5							
FUNCTION1 HXCDPE			8.84e1							0.000
FUNCTION1 HPCDPE			2.21e3							0.000
FUNCTION2 HPCDPE			7.90e2							0.000
FUNCTION3 OCDPE			8.06e1							0.000
FUNCTION4 NCDPE			5.51e2							0.000
FUNCTION5 DCDPE			8.49e1							0.000

Entered - 12Sep

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Calibration: P:\DIOXIN8290.PRO\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

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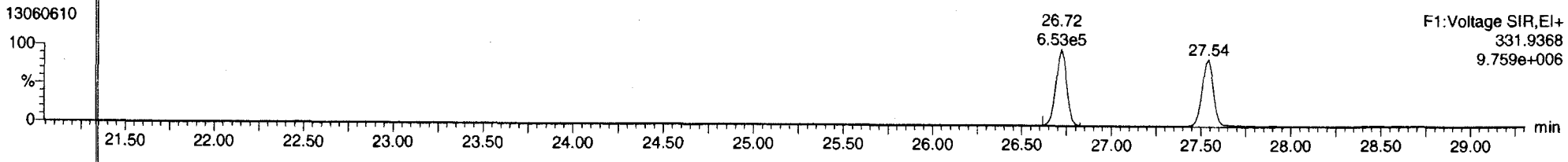
13C-1234-TCDD



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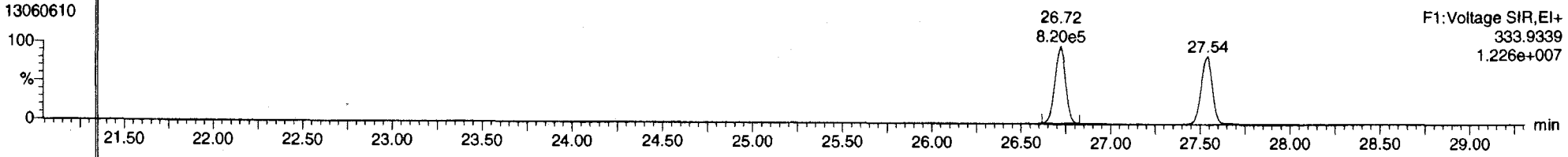

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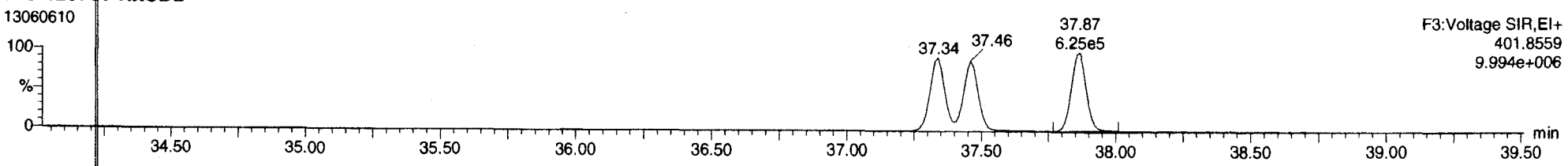

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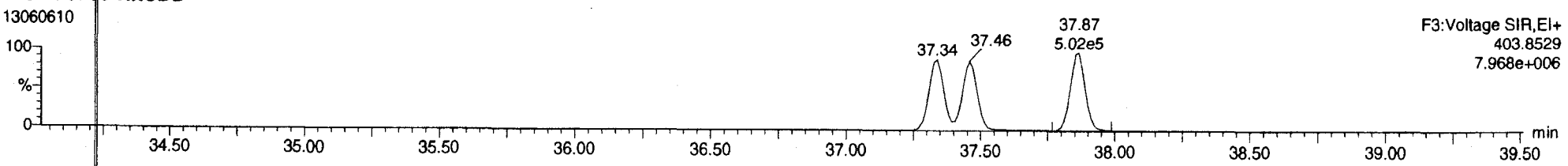

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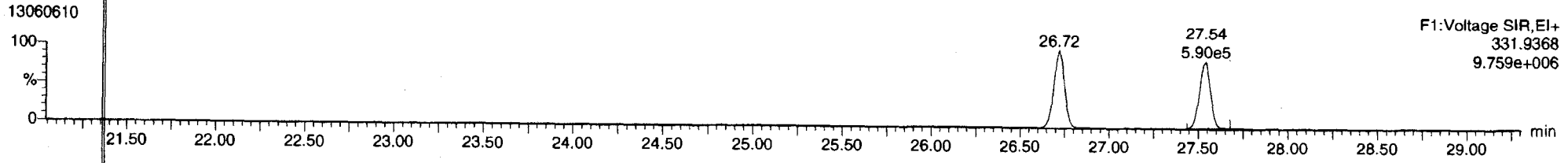
13C-2378-TCDD



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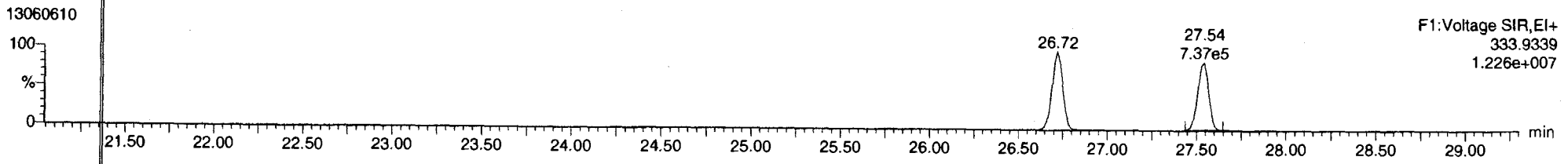
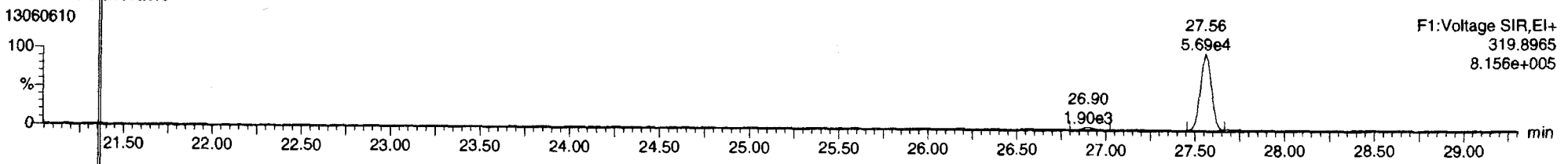
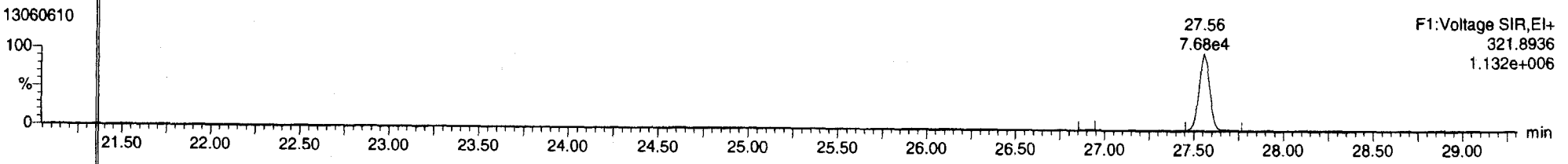


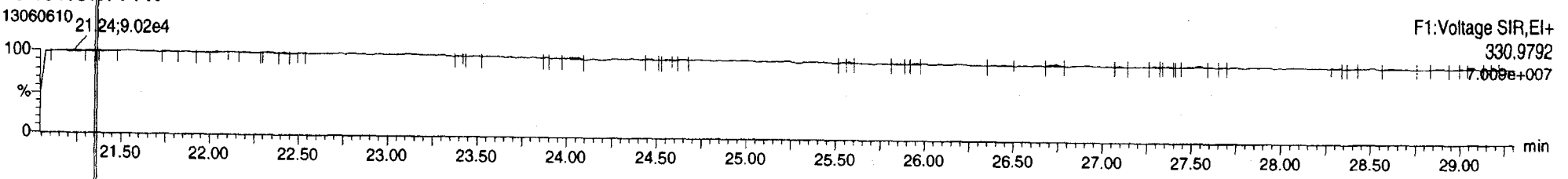
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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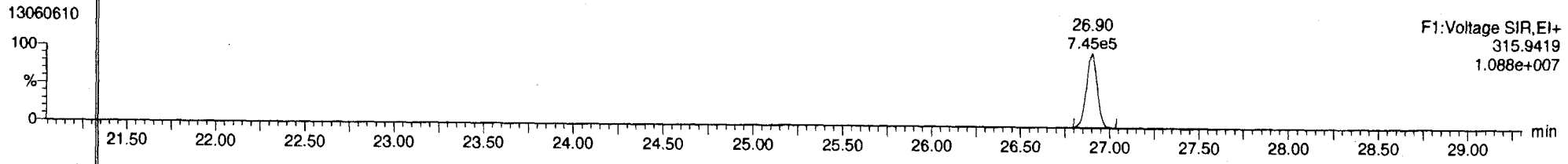

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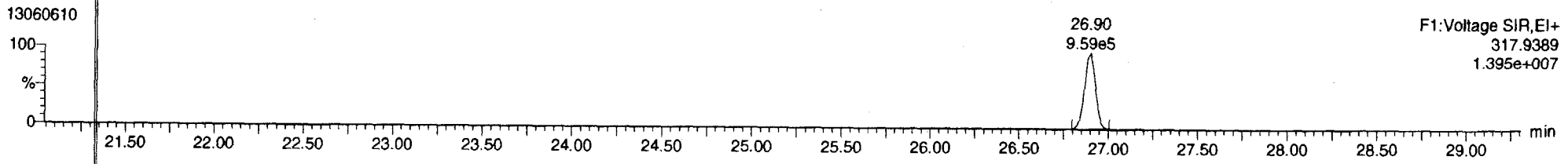
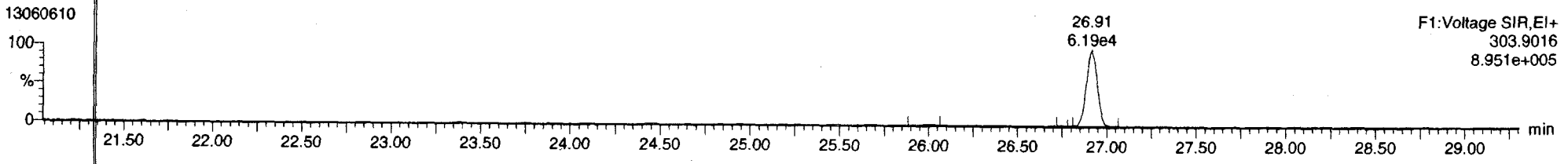


Total-tetrafurans



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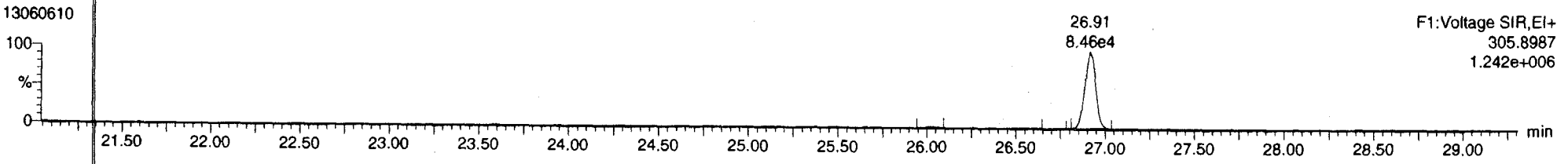
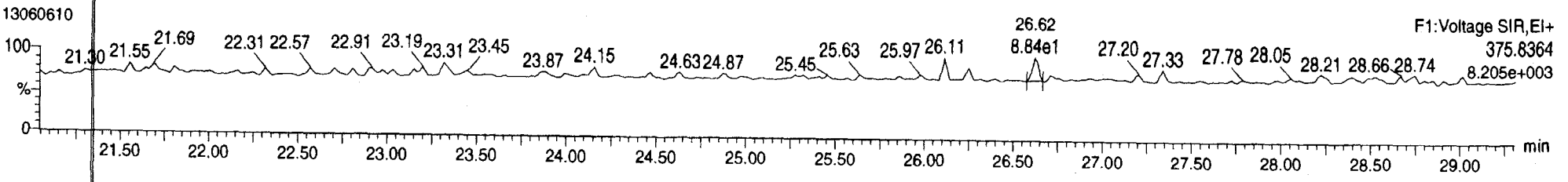


FUNCTION1 HXCDPE



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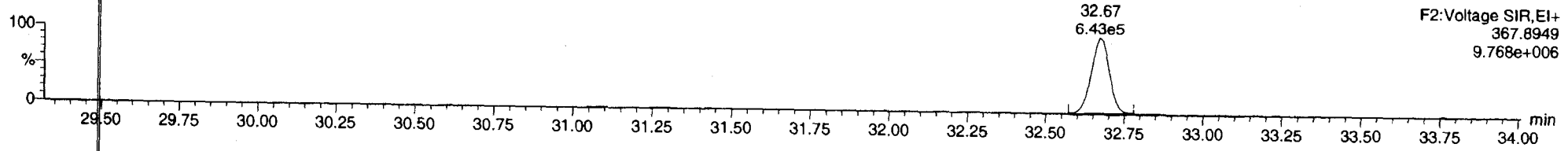
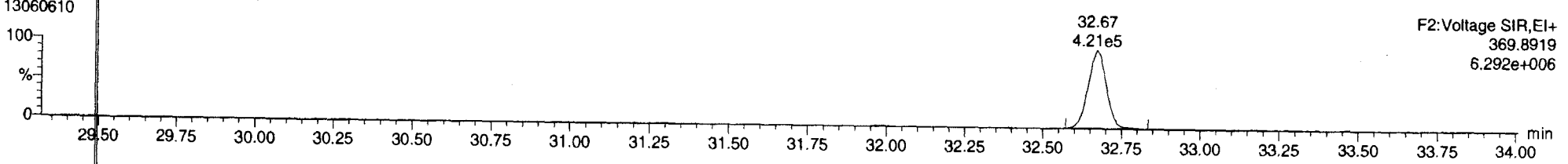
13C-12378-PeCDD

13060610



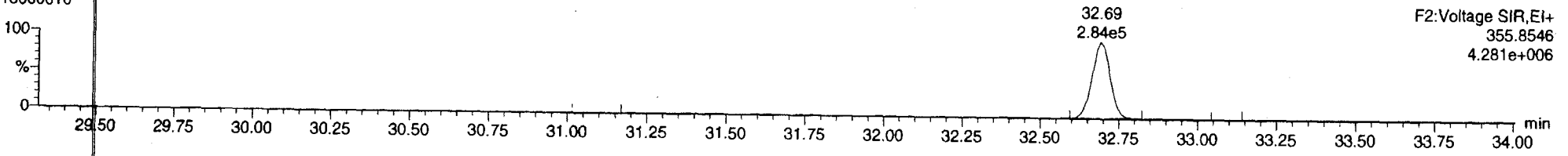
13C-12378-PeCDD

13060610



Total-pentadioxins

13060610



Total-pentadioxins

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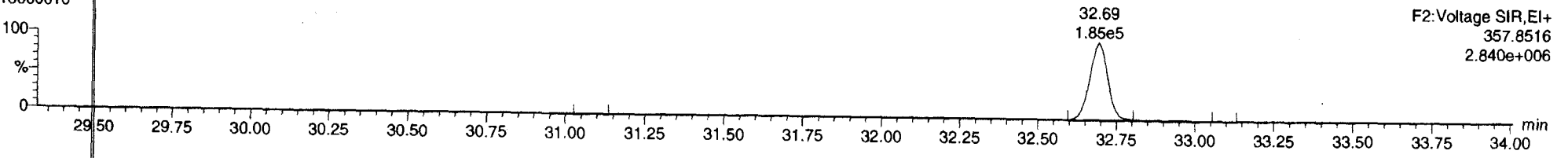
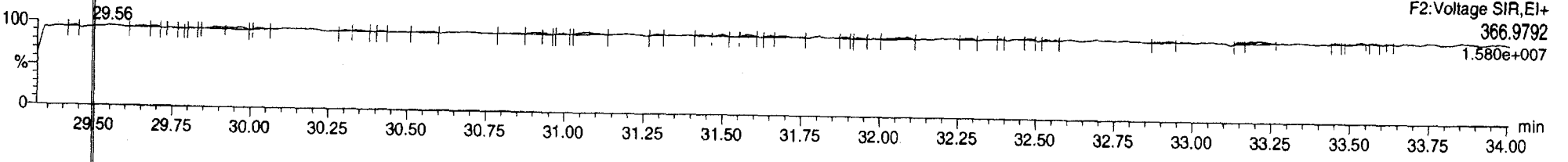


FUNCTION2 PFK

13060610



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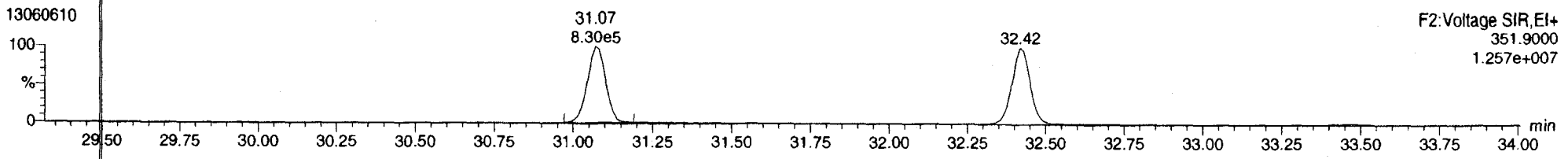
13C-12378-PeCDF



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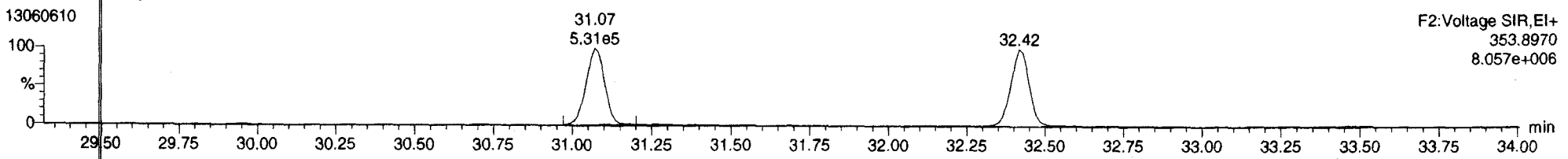
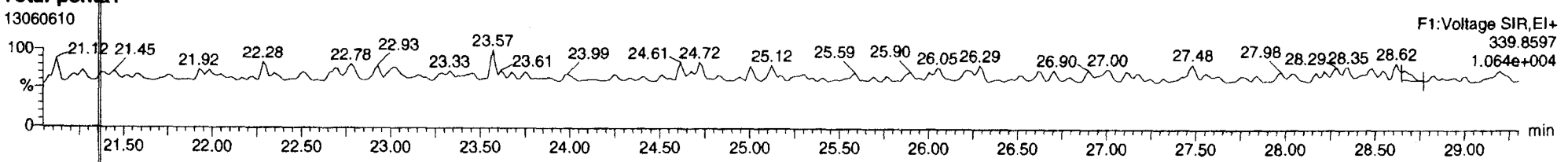
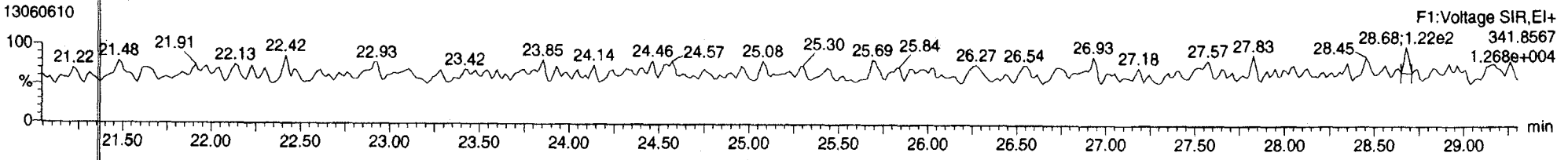


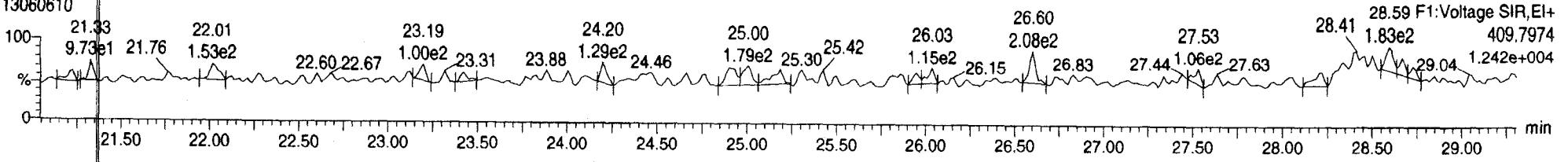
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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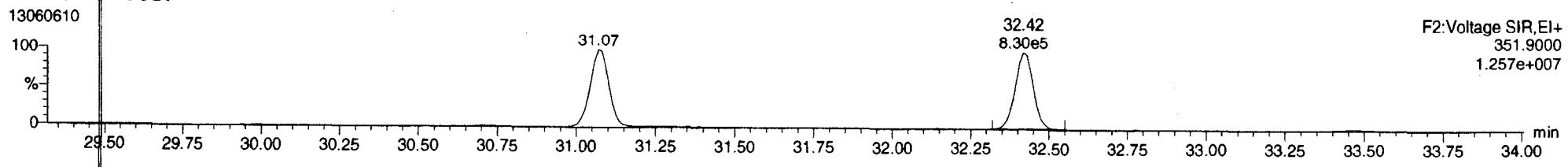

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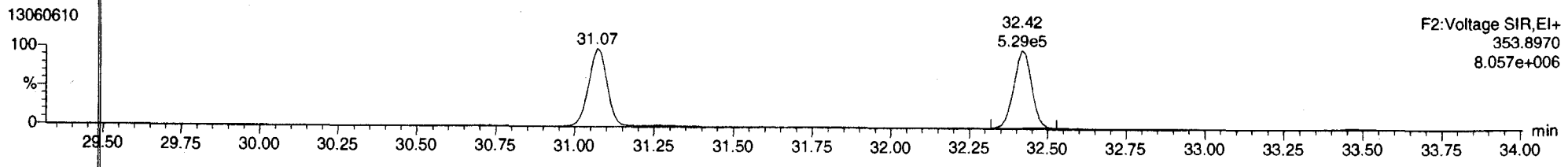
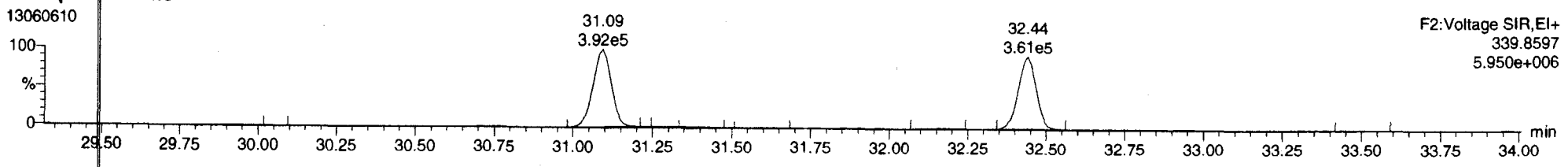


Total-pentafurans



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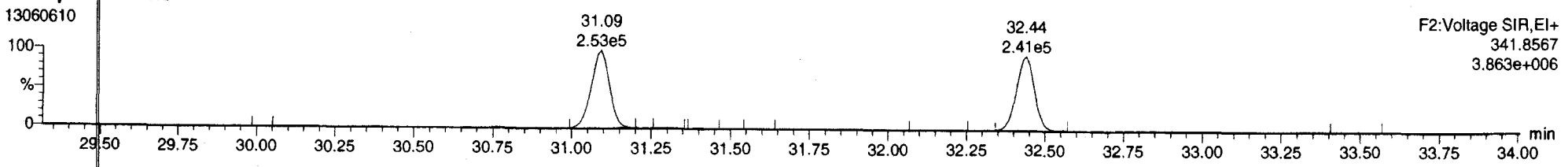
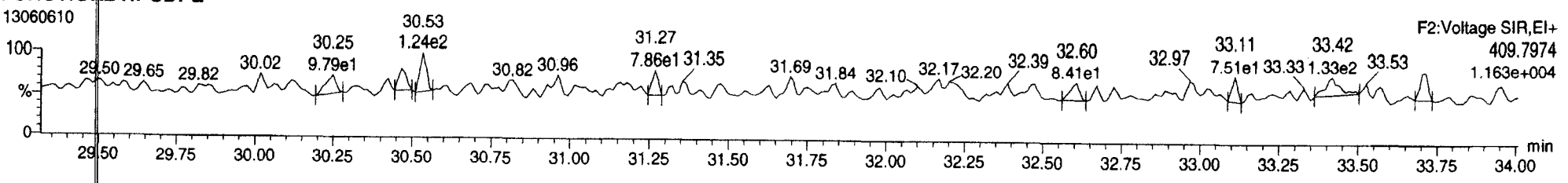


FUNCTION2 HPCDPE



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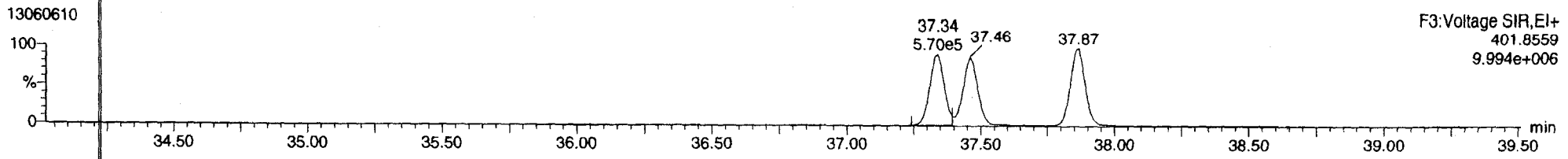
13C-123478-HxCDD



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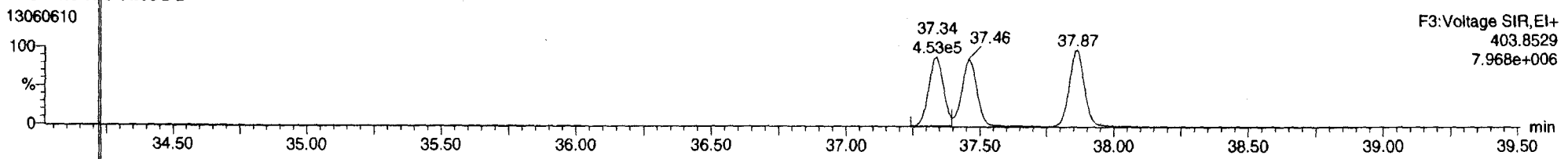
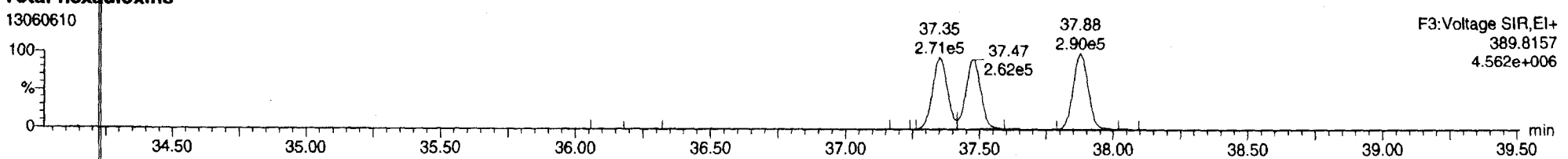
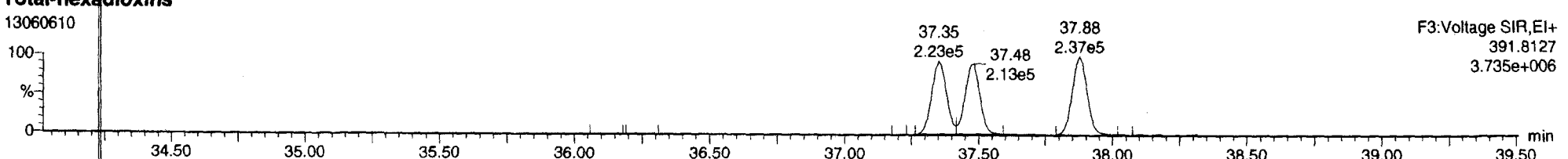


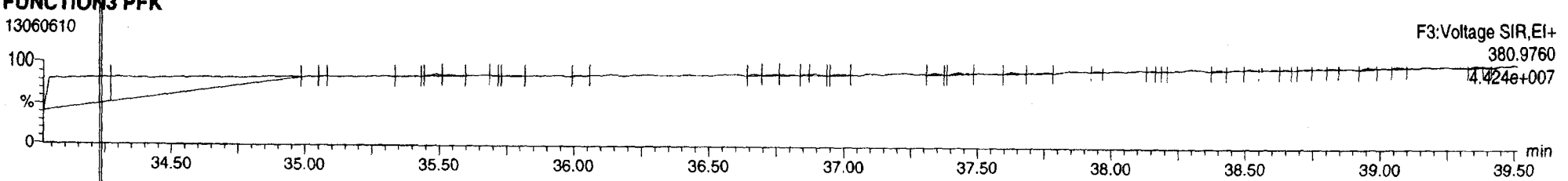
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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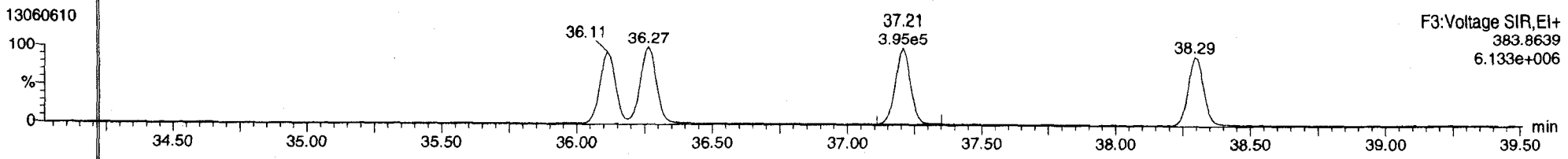
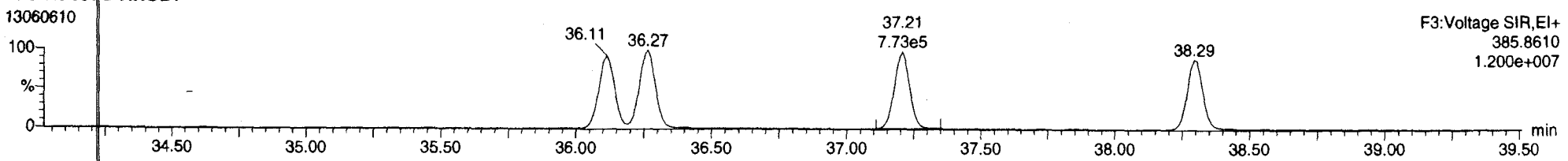
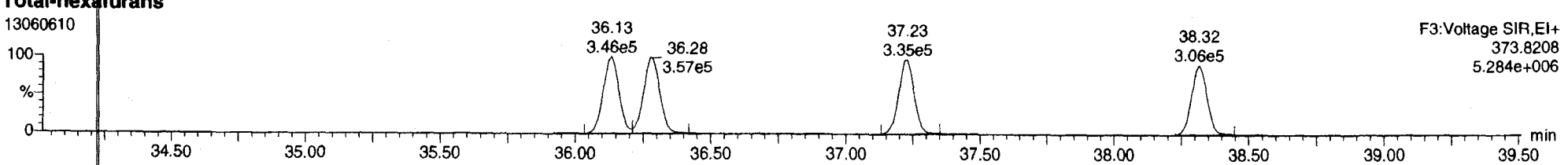
13C-234678-HxCDF



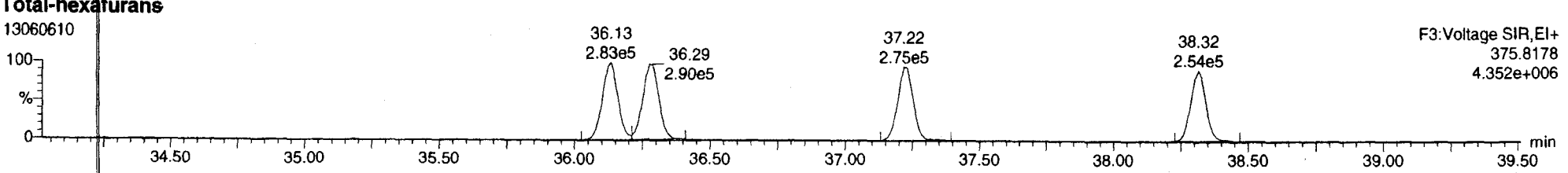
13C-234678-HxCDF



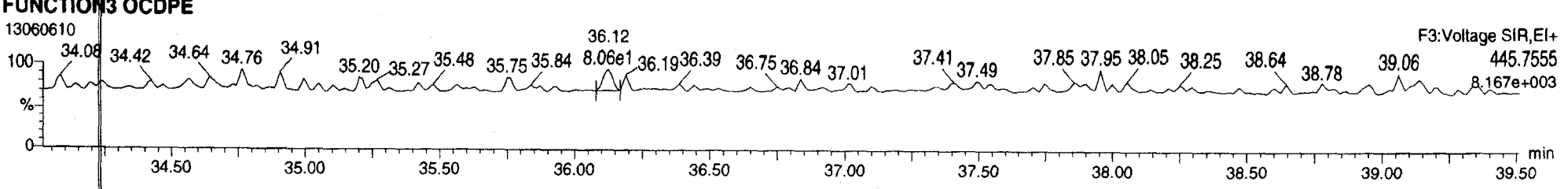
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



2C-TCDF-TCSF

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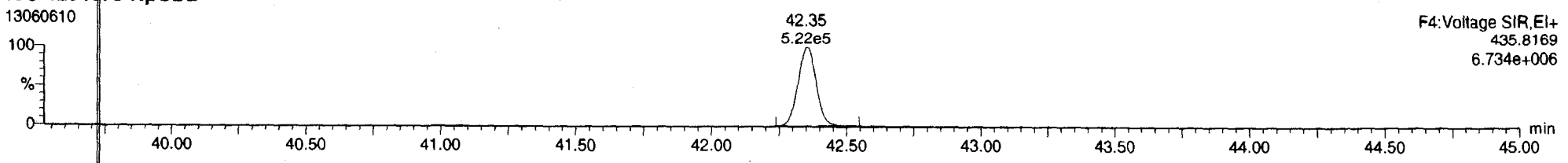
13C-1234678-HpCDD



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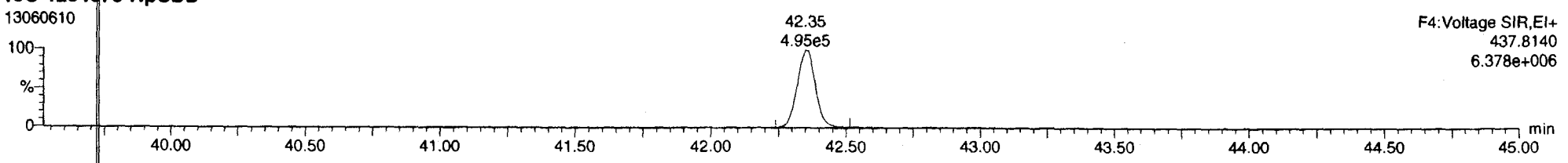

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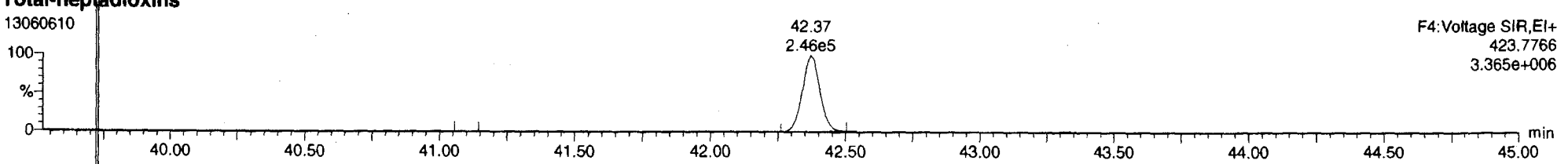

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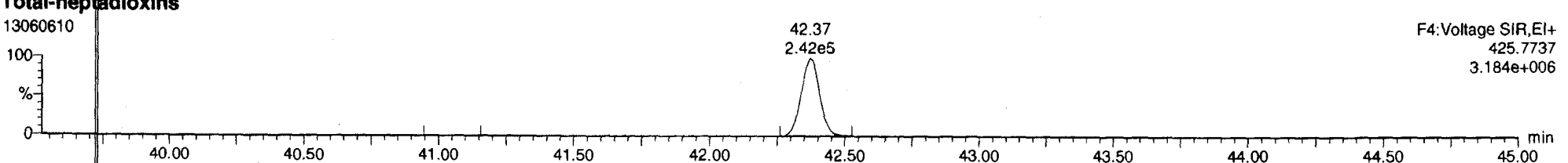

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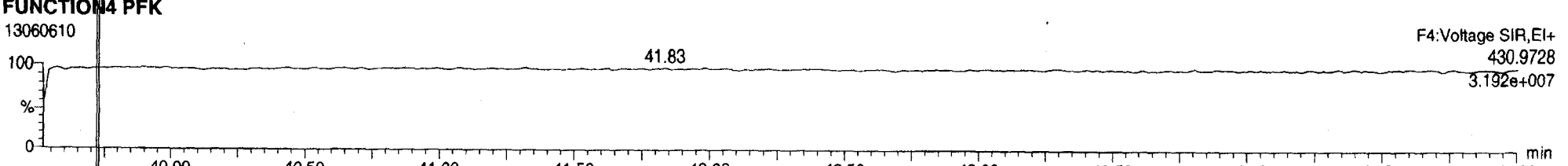

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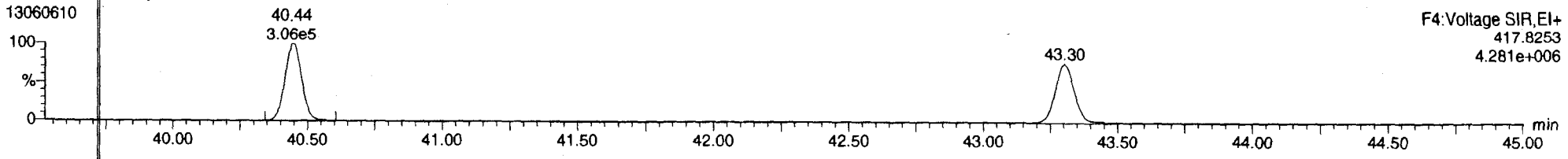

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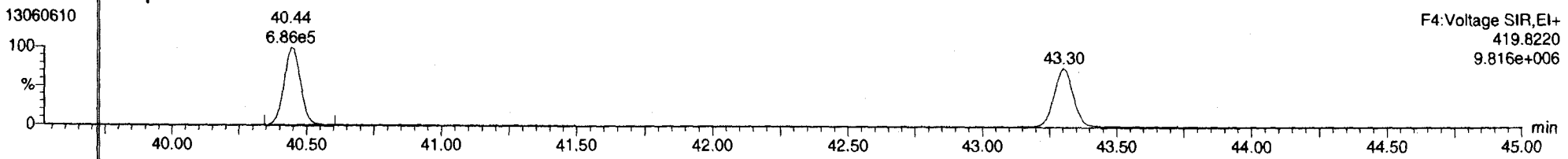

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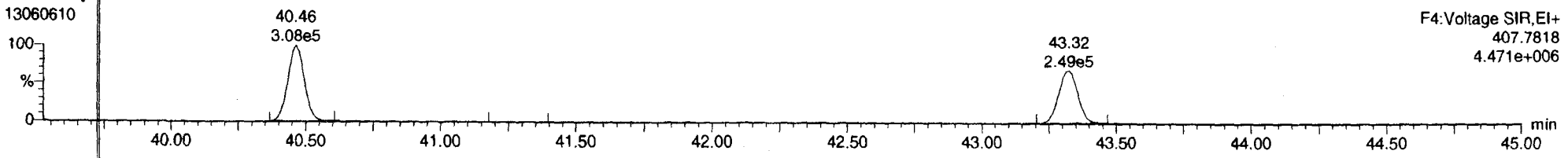

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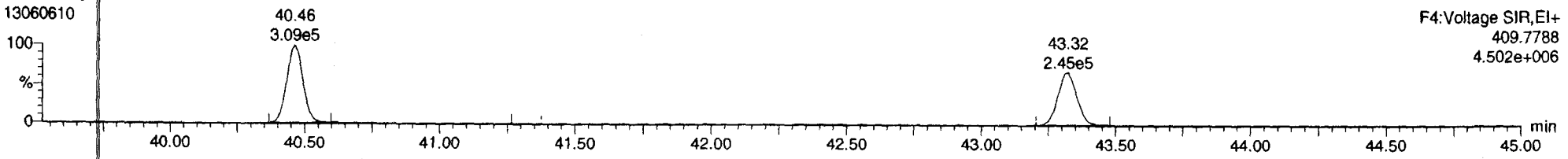

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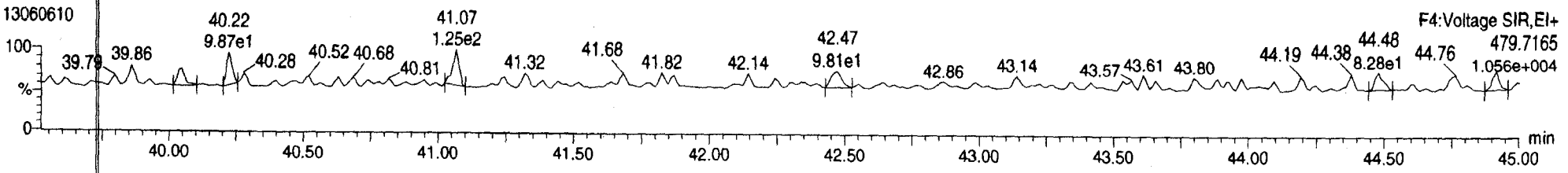

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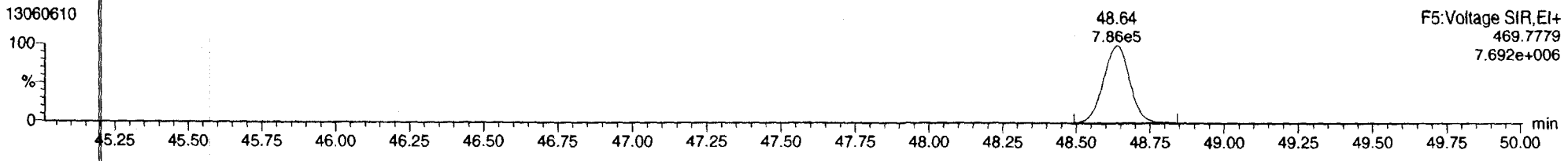

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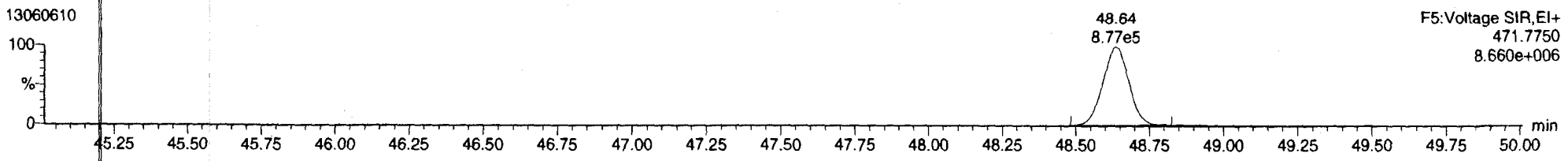

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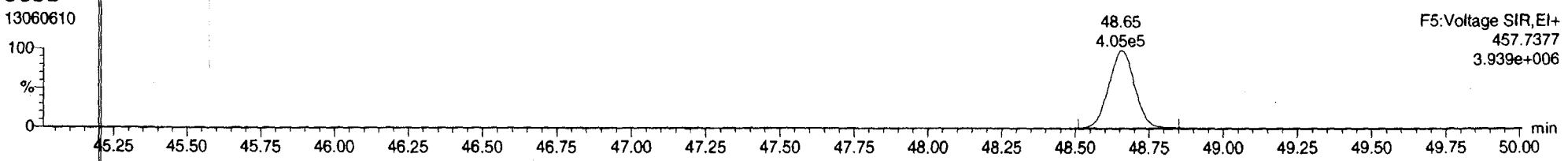

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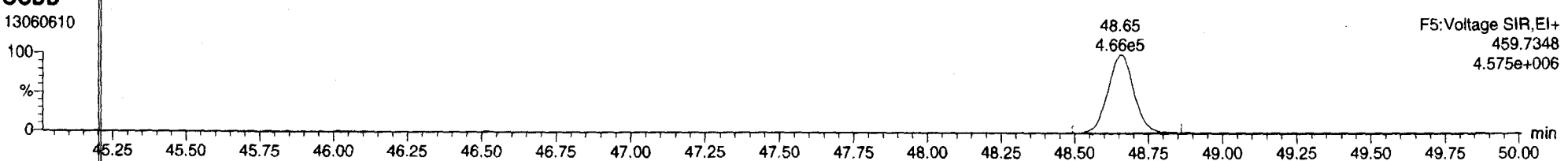

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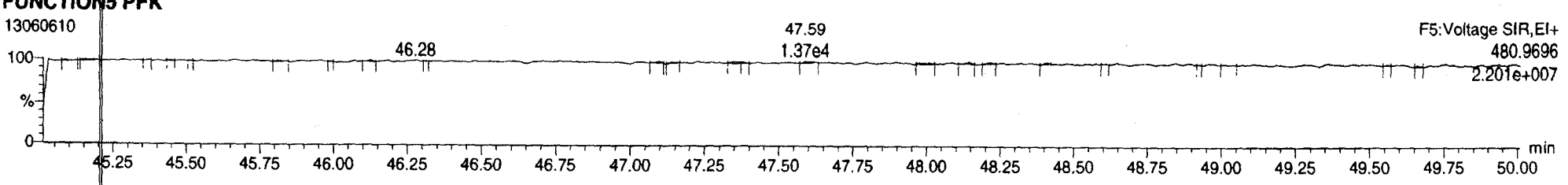

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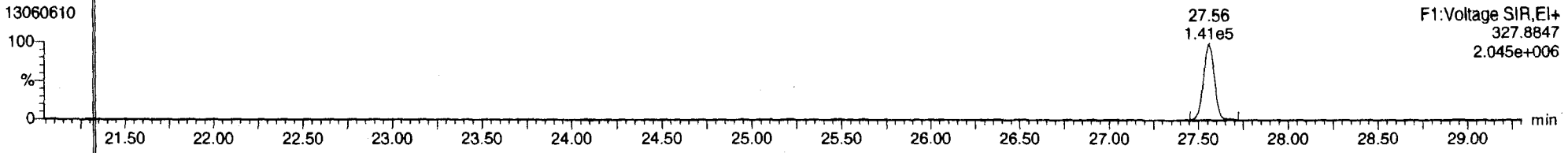

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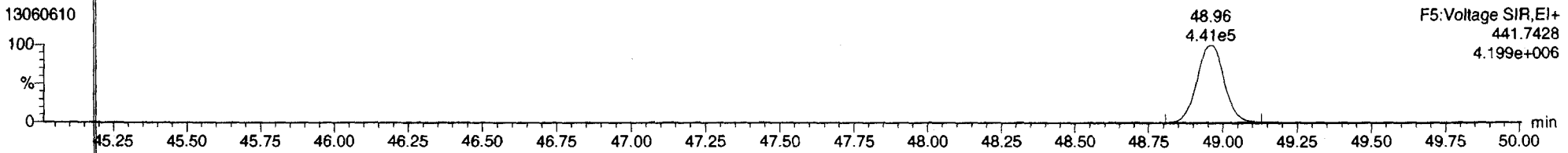

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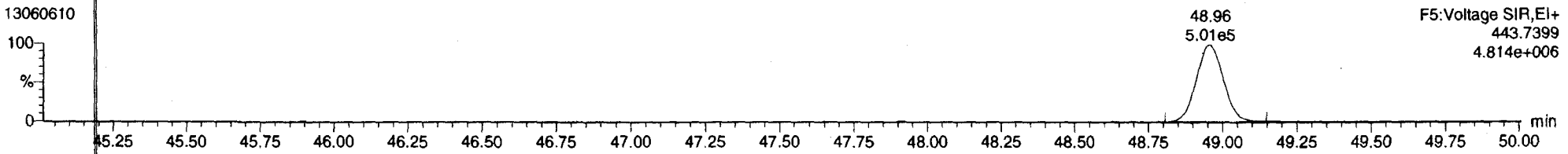

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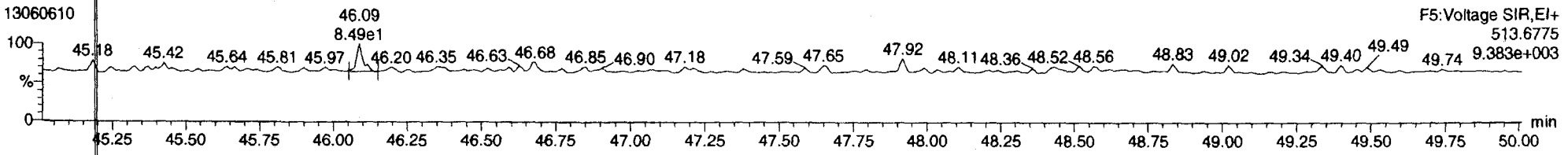

Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: WR99, WS21 Client ID: SAIC

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 6/6/13 Analysis Start Date: 6/17/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	(Y) / N / _____	Signal / Noise ≥ 2.5?	(Y) / N / _____
TCDD / TCDF Resolution ≤ 25%	(Y) / N / _____	Extraction STD Limits Met?	(Y) / N / _____
PCDF Windows Verified	(Y) / N / _____	Cleanup STD Limits Met?	(Y) / N / _____
CCV Meets %D Limits?	(Y) / N / _____	Method Blank in Control?	(Y) / N / _____
CCV Ion Ratios within Limits?	(Y) / N / _____	OPR Recovery Limits Met?	(Y) / N / _____
CCV RRT within Limits?	(Y) / N / _____	Values Exceeding Curve Range?	Y / (N) / _____
Manual Integrations for Samples?	(Y) / N / _____	Samples Diluted?	Y / N / _____
Special Analysis Request?	Y / N / _____	Duplicate Sample RPD ≤ 25%?	NA / _____

Detail problems, corrective actions and/or other pertinent information below:

Jobs batched.

(Review 1)Analyst: _____ **Date:** 6/18/13

(Review 2)Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 6/17/13 Analysis: Dioxins Analyst: JK

GC Program: 8290C Column No: I7822 Column Type: RTX-Dioxin2

Inj Vol: 1µl Instrument Tune (IPR) Jun713 1-5 Detector Voltage: 350

Resolution Check Files: 14:44, 01:37, 09:39 Curve Date: 6/6/13

IS/SS	Ical/Ccal	LCS/ICV
I8144	I7708 I997-2	

#	Acq Date	Acq Time	File	ID	Comments
1	17-Jun-13	14:49:09	13061702	CS3	
2	17-Jun-13	15:54:35	13061703	ISC01	
3	17-Jun-13	16:45:51	13061704	WS30MBS	
4	17-Jun-13	17:38:04	13061705	WS30OPR	
5	17-Jun-13	18:30:25	13061706	WS30SRM	
6	17-Jun-13	19:22:47	13061707	WS21A	
7	17-Jun-13	20:15:16	13061708	WS09A	
8	17-Jun-13	21:07:21	13061709	WR99D	
9	17-Jun-13	21:59:42	13061710	WS30A	
10	17-Jun-13	22:51:57	13061711	WS30B	
11	17-Jun-13	23:44:17	13061712	WS30C	
12	18-Jun-13	00:36:31	13061713	CS3	
13	18-Jun-13	01:37:14	13061714	WS30D	
14	18-Jun-13	02:32:44	13061715	WS30E	
15	18-Jun-13	03:24:59	13061716	WS30F	
16	18-Jun-13	04:17:26	13061717	WS30G	
17	18-Jun-13	05:09:41	13061718	WS30H	
18	18-Jun-13	06:02:00	13061719	WS30I	
19	18-Jun-13	06:54:16	13061720	WS30IDUP	
20	18-Jun-13	07:46:36	13061721	WS30J	
21	18-Jun-13	08:38:43	13061722	CS3	

JK 6/18/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

USEPA : 01855

Printed: Monday, June 17, 2013 14:44:42 Pacific Daylight Time

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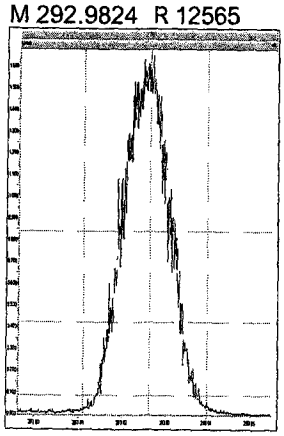

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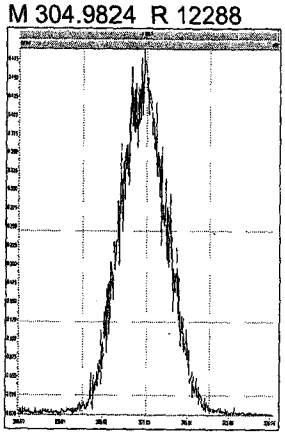

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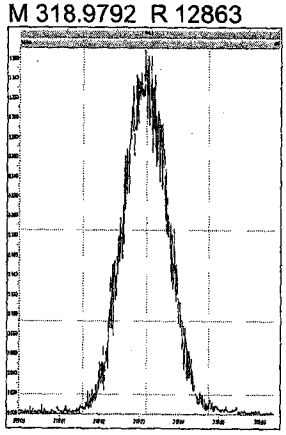

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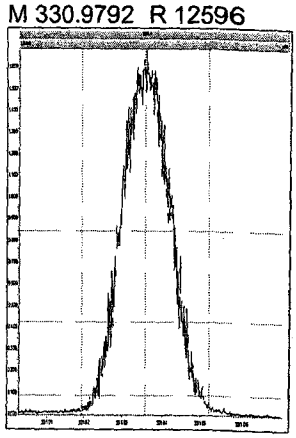

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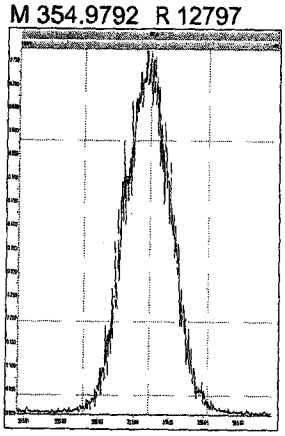

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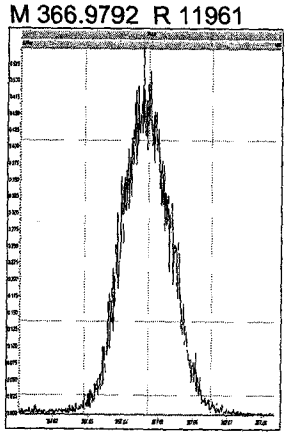

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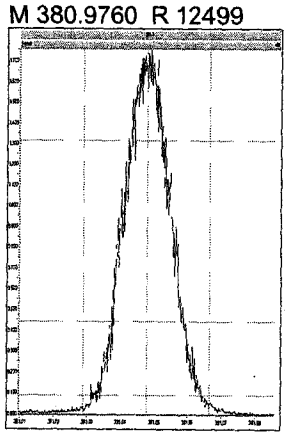

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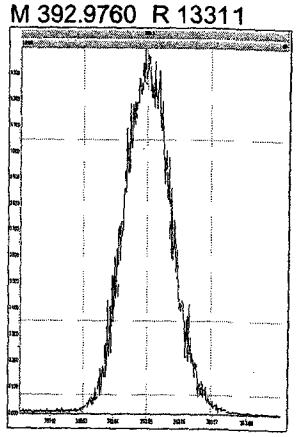

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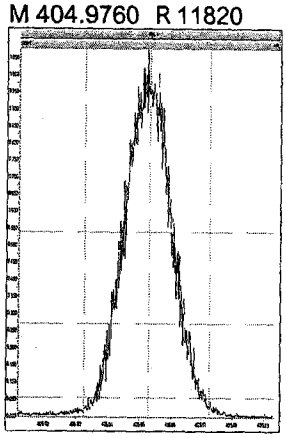

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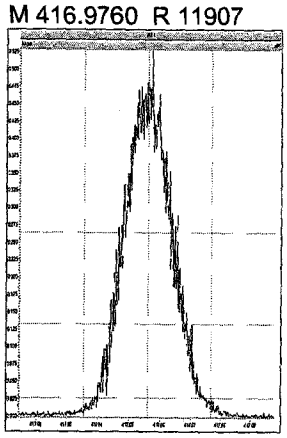

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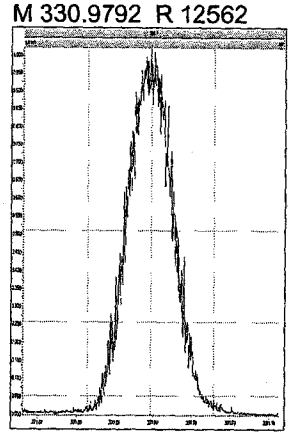

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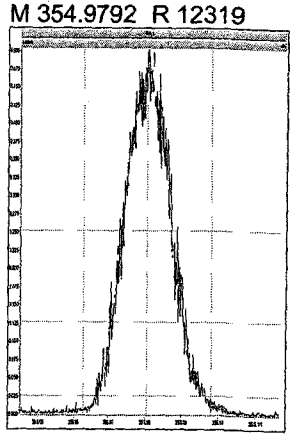

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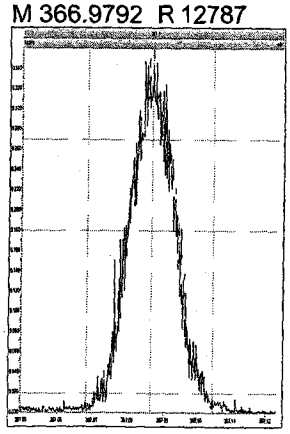

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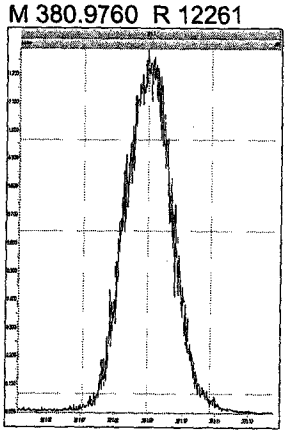

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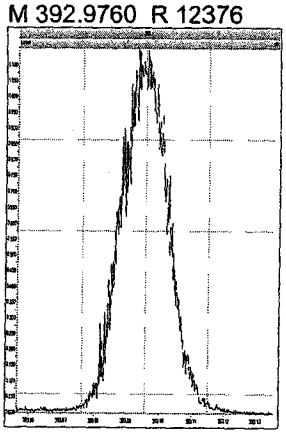

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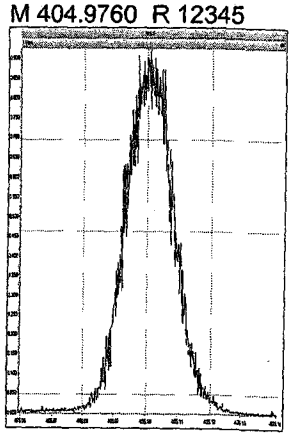

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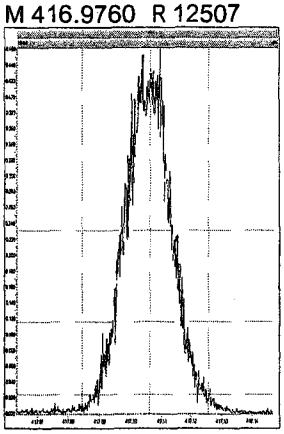

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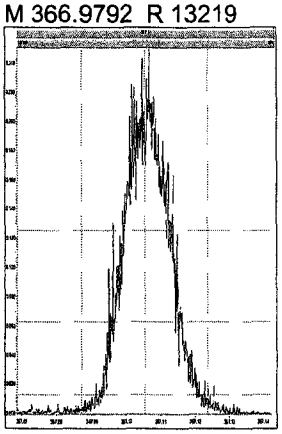

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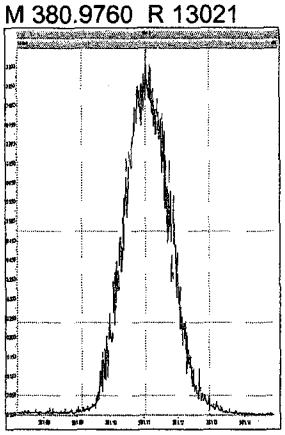

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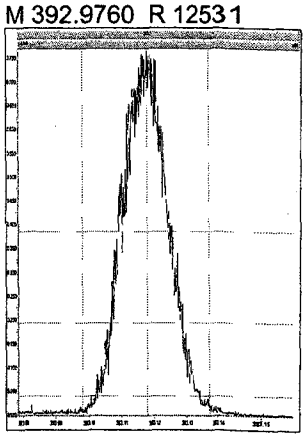

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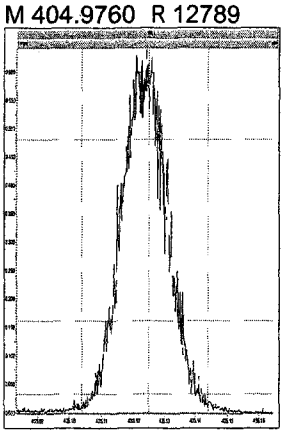

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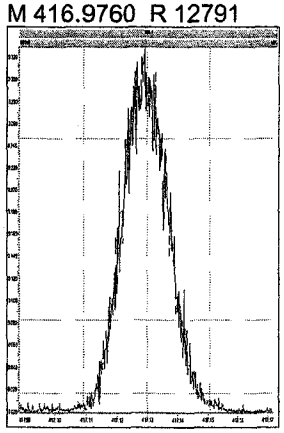

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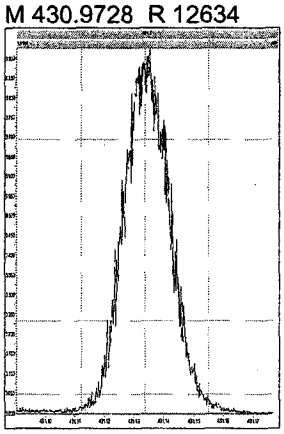

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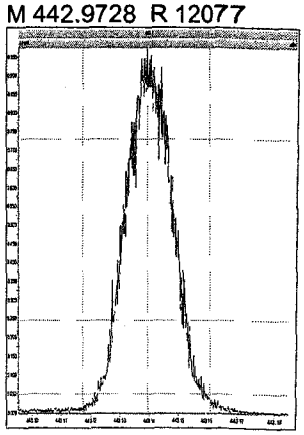

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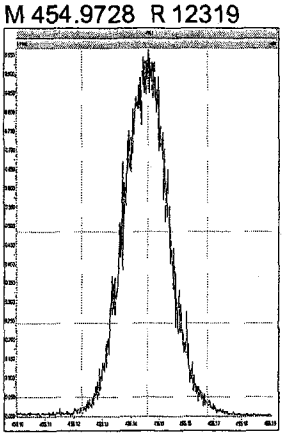

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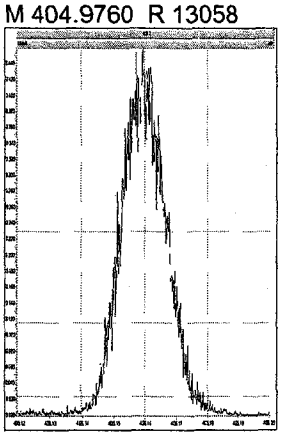
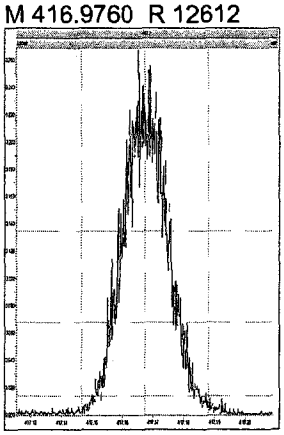
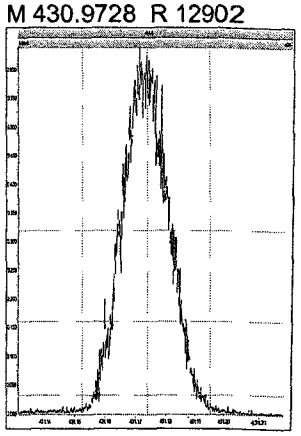


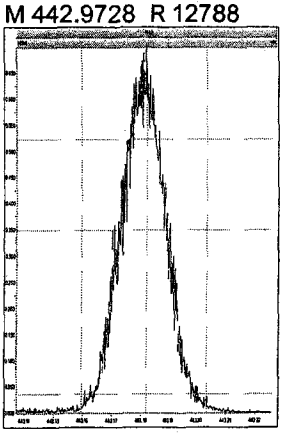
M 416.9760 R 12612



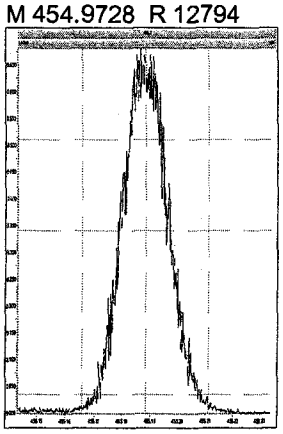
M 430.9728 R 12902



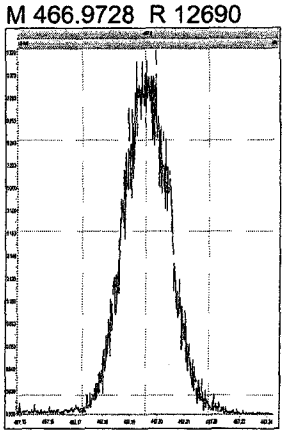
M 442.9728 R 12788



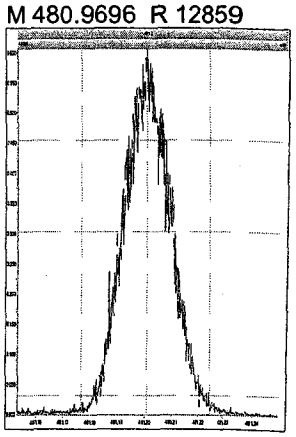
M 454.9728 R 12794



M 466.9728 R 12690

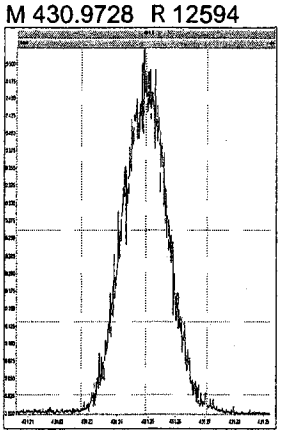


M 480.9696 R 12859

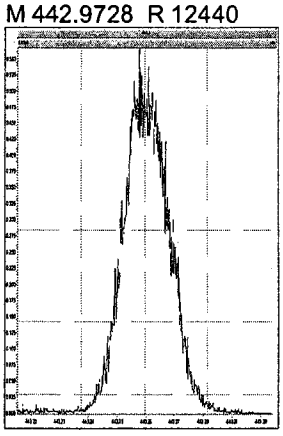


Printed: Monday, June 17, 2013 14:44:42 Pacific Daylight Time

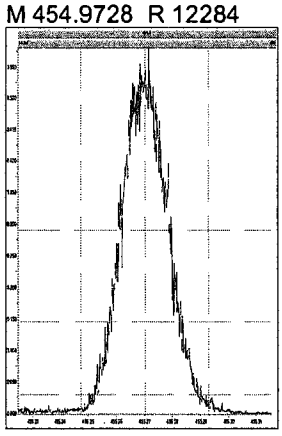
M 430.9728 R 12594



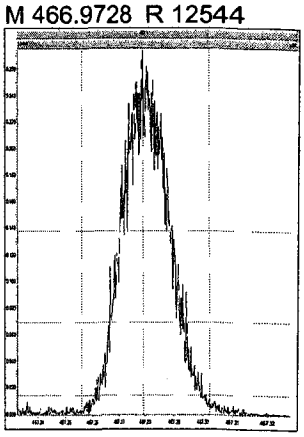
M 442.9728 R 12440



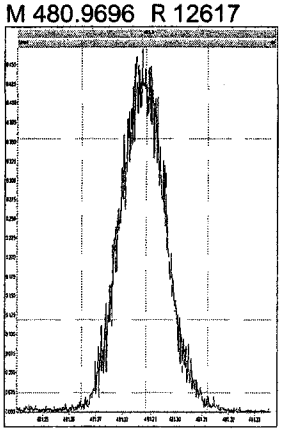
M 454.9728 R 12284



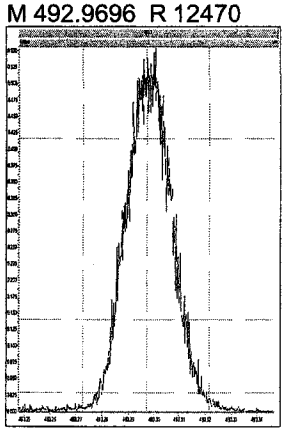
M 466.9728 R 12544



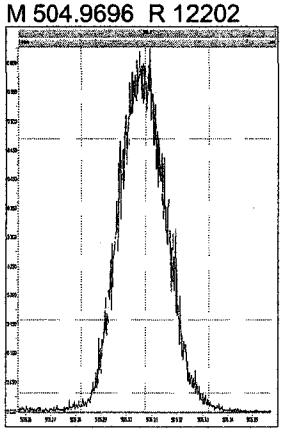
M 480.9696 R 12617



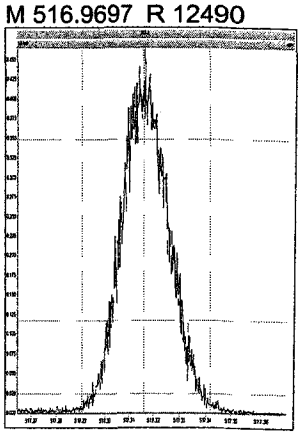
M 492.9696 R 12470

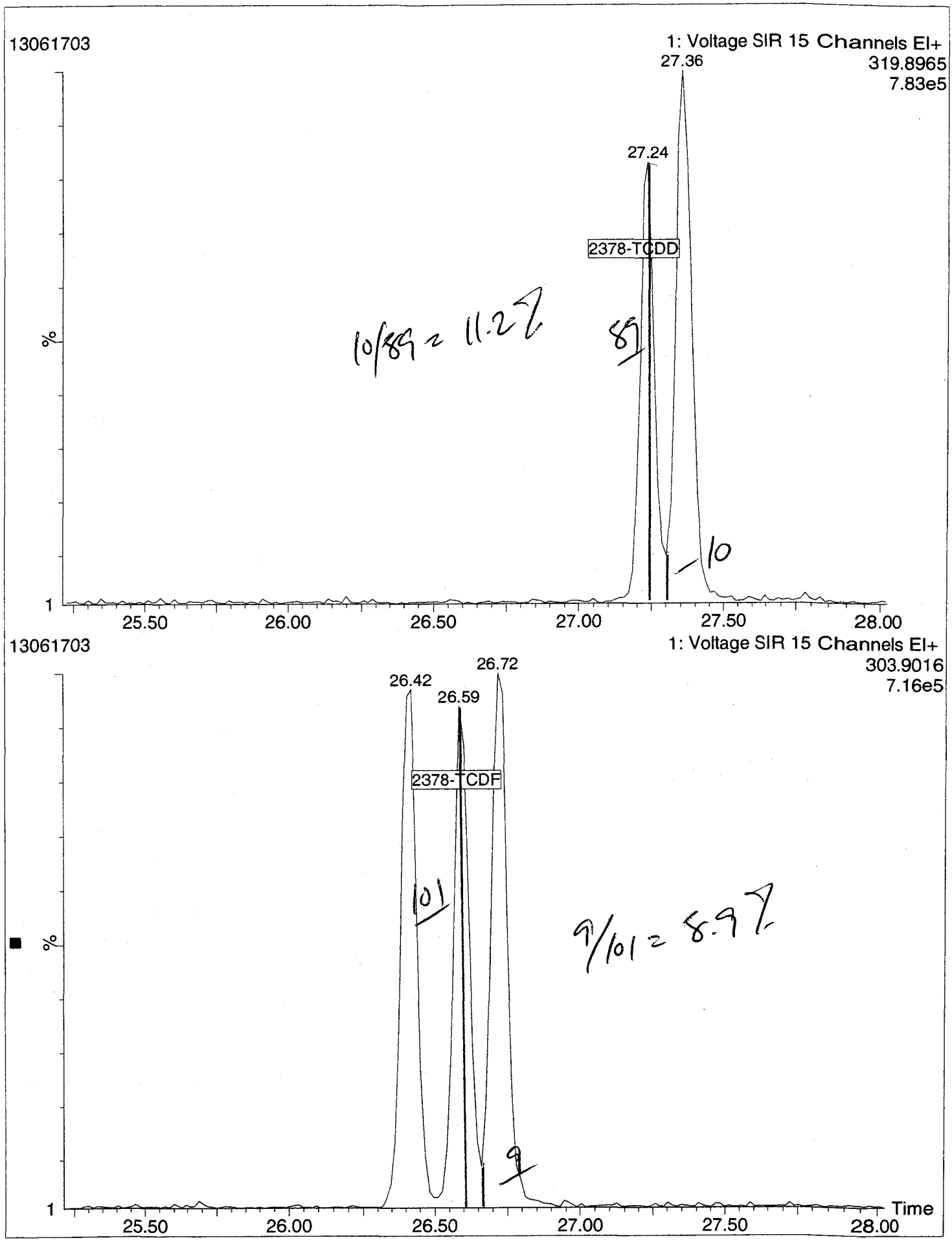


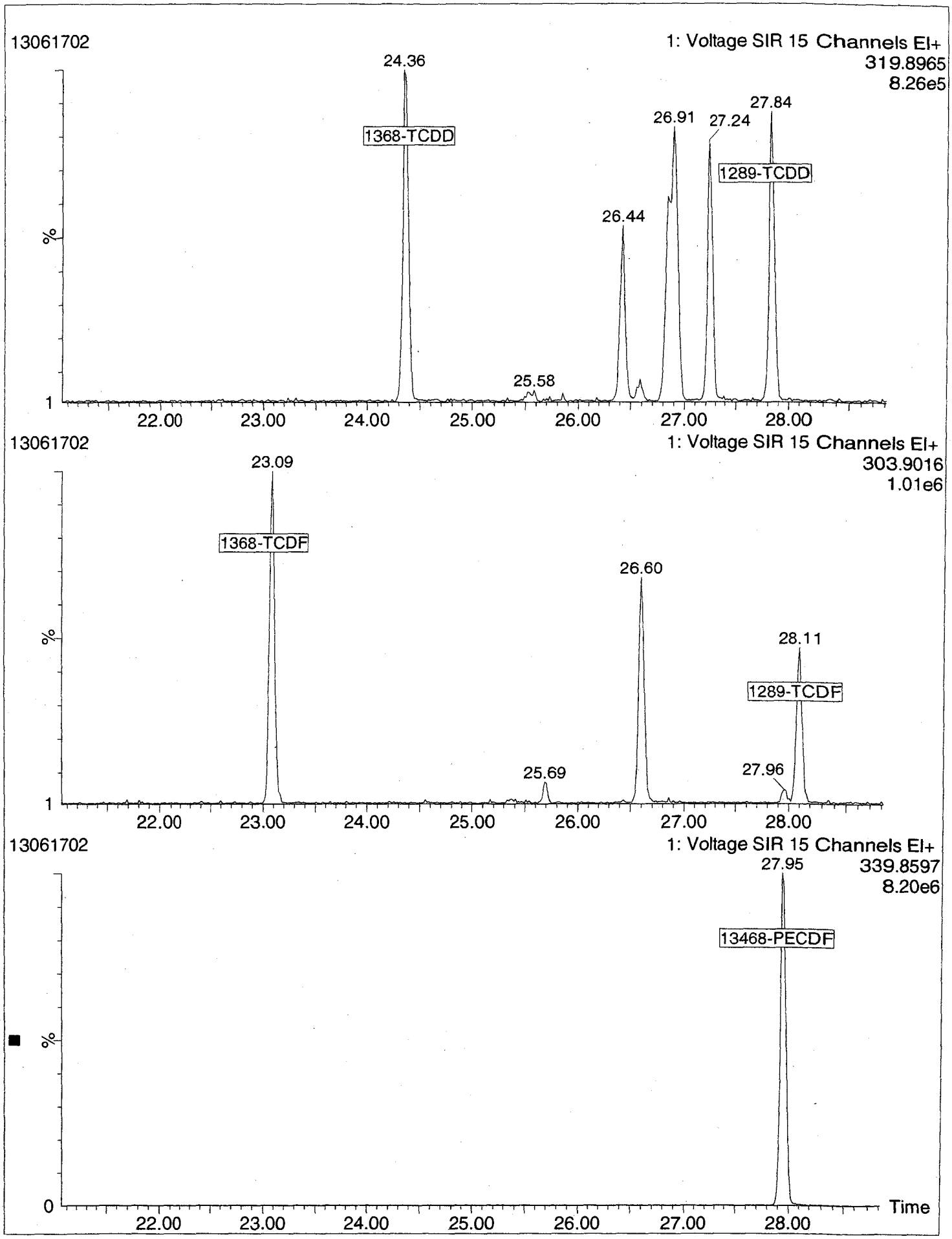
M 504.9696 R 12202

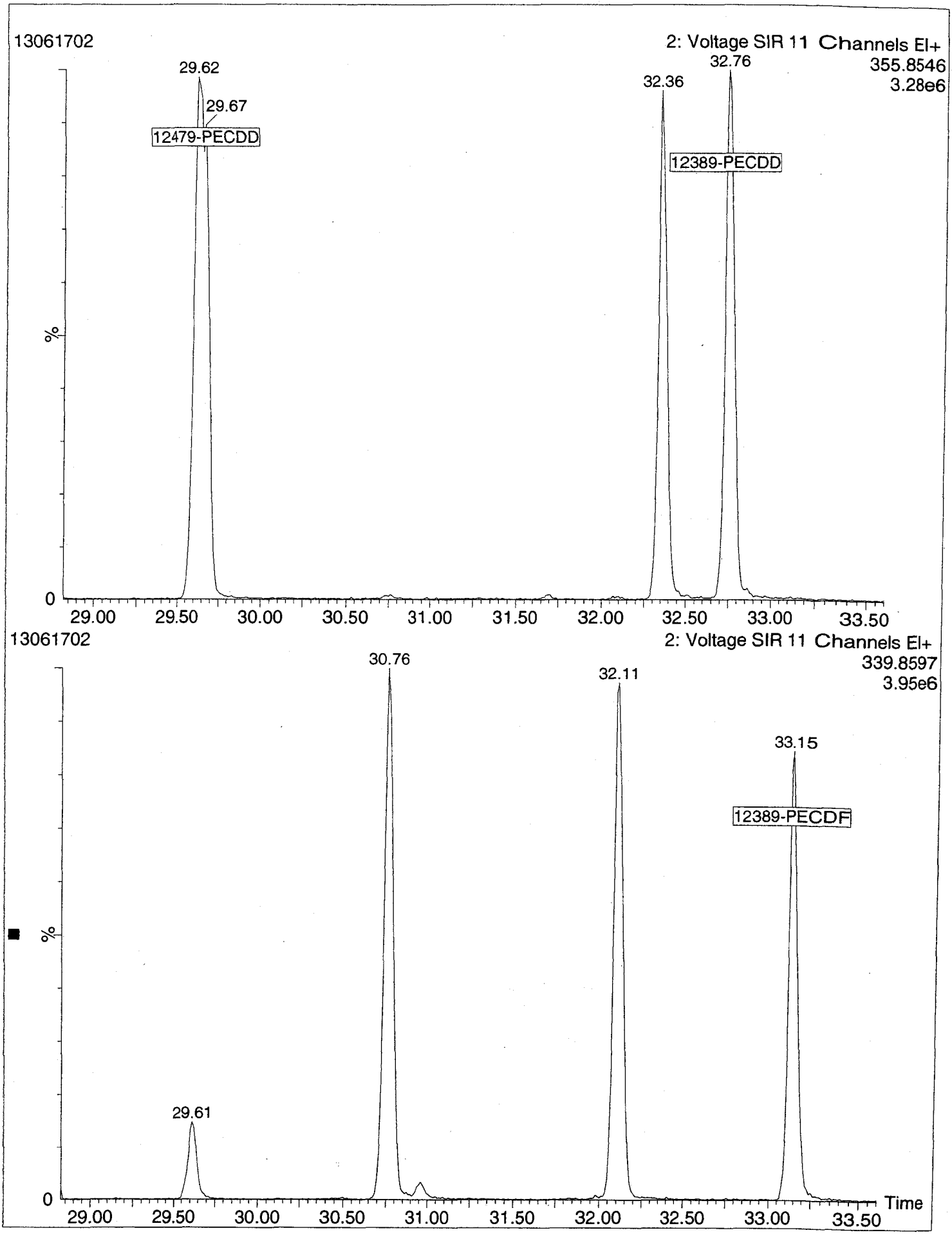


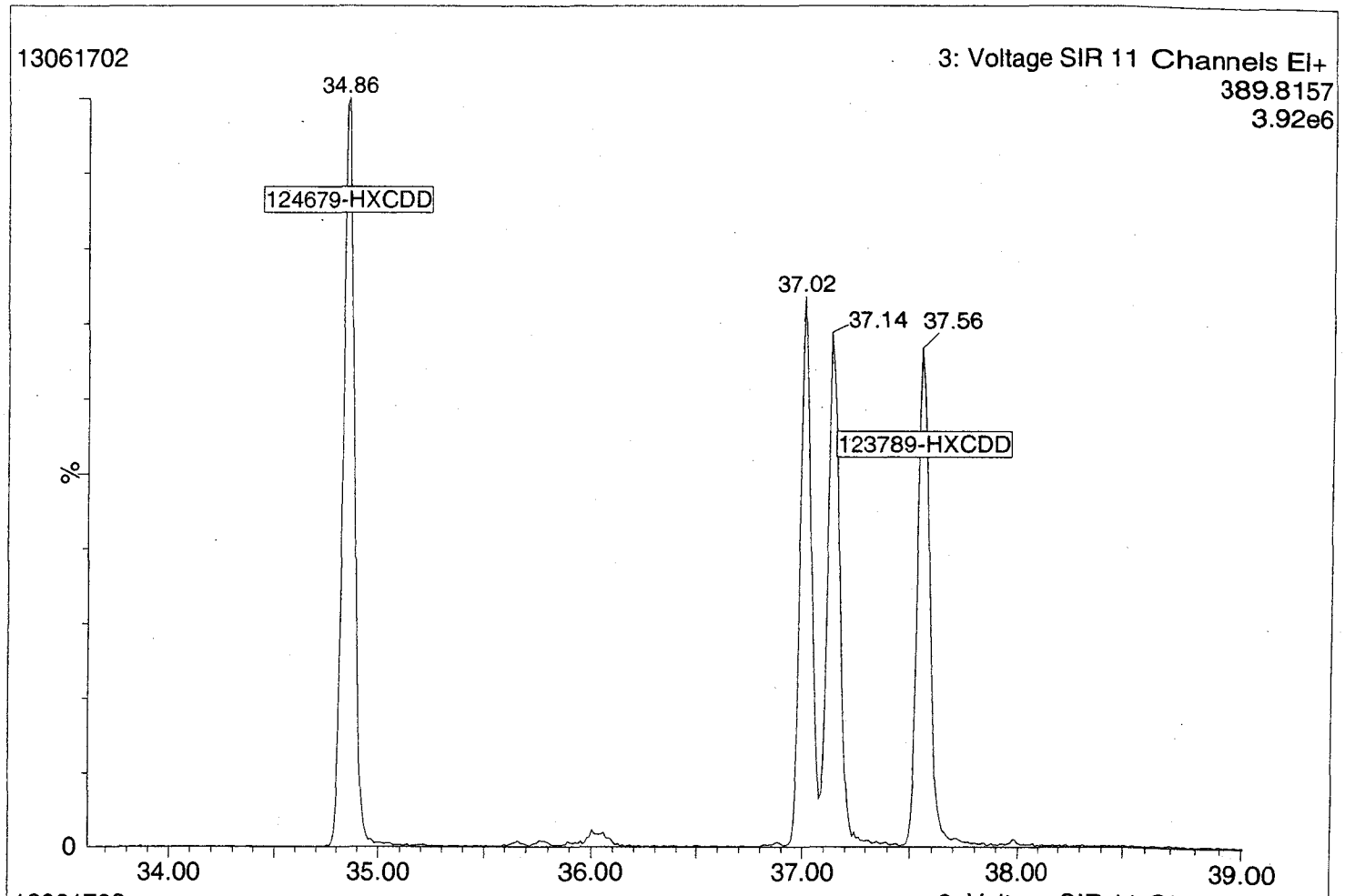
M 516.9697 R 12490

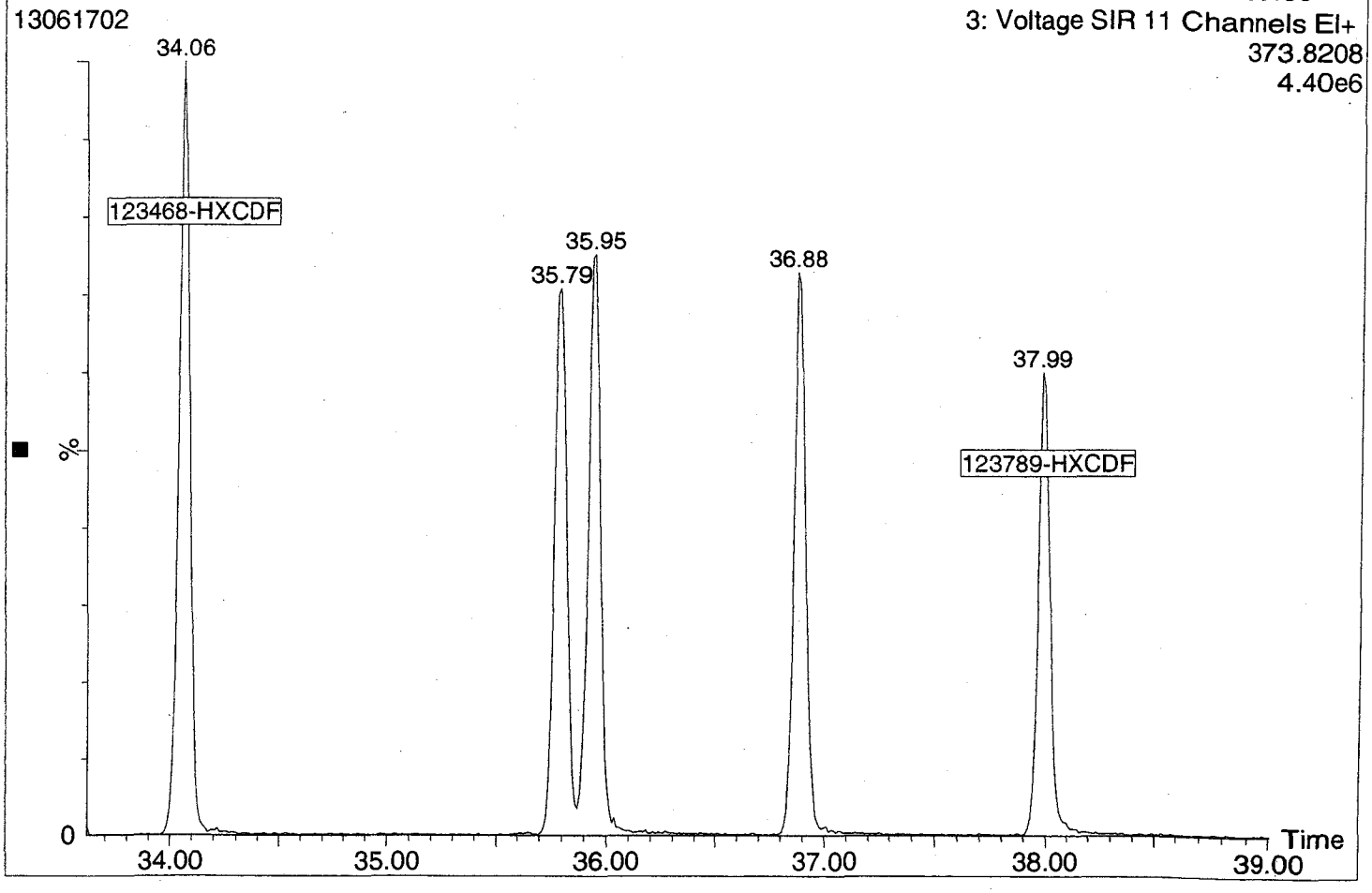


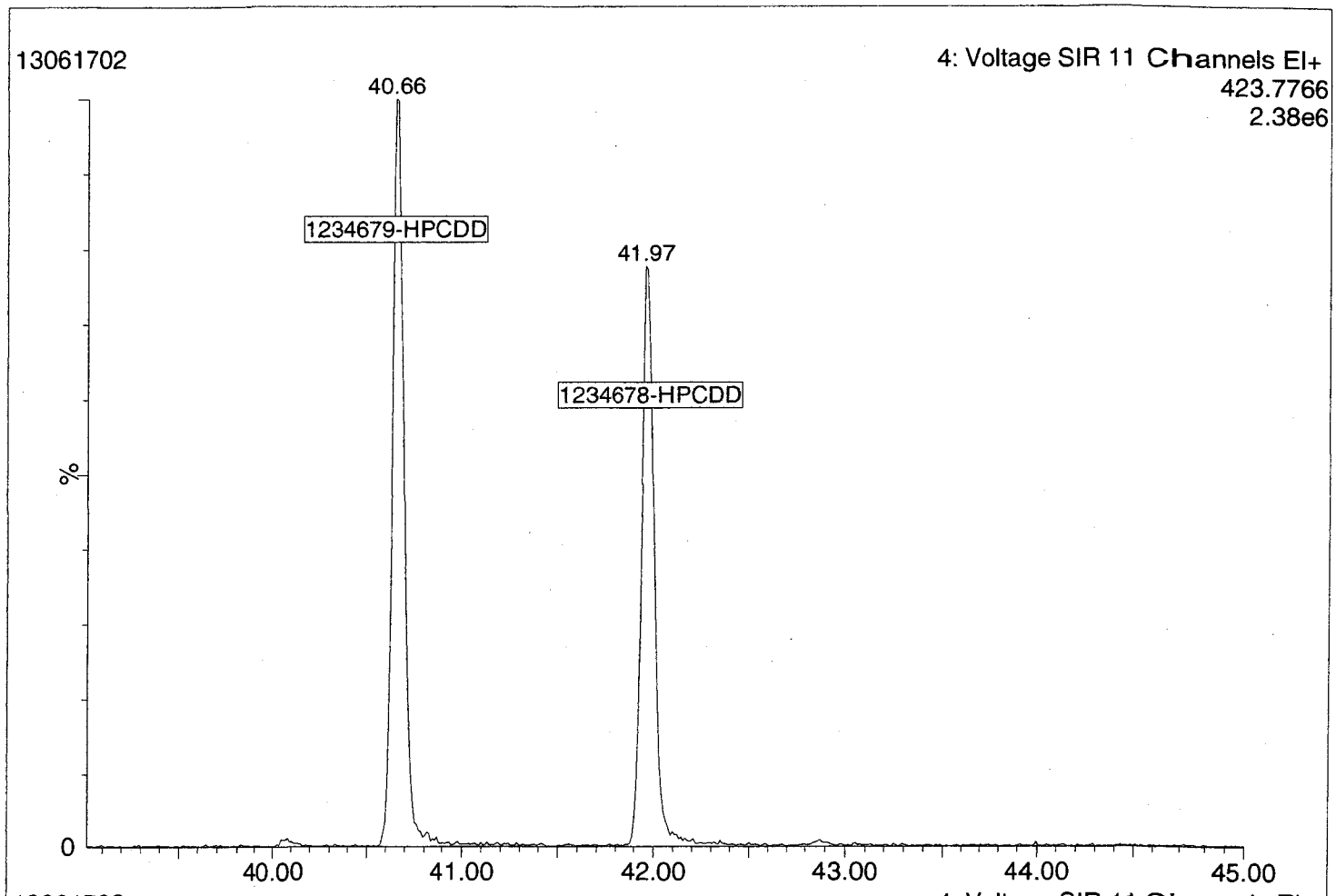

13061703
1: Voltage SIR 15 Channels EI+
319.8965
7.83e5
27.36
27.24
2378-TCDD
10/89 = 11.2%
89
10
%
1
25.50
26.00
26.50
27.00
27.50
28.00
13061703
1: Voltage SIR 15 Channels EI+
303.9016
7.16e5
26.72
26.42
26.59
2378-TCDF
101
9/101 = 8.9%
9
%
1
Time
25.50
26.00
26.50
27.00
27.50
28.00

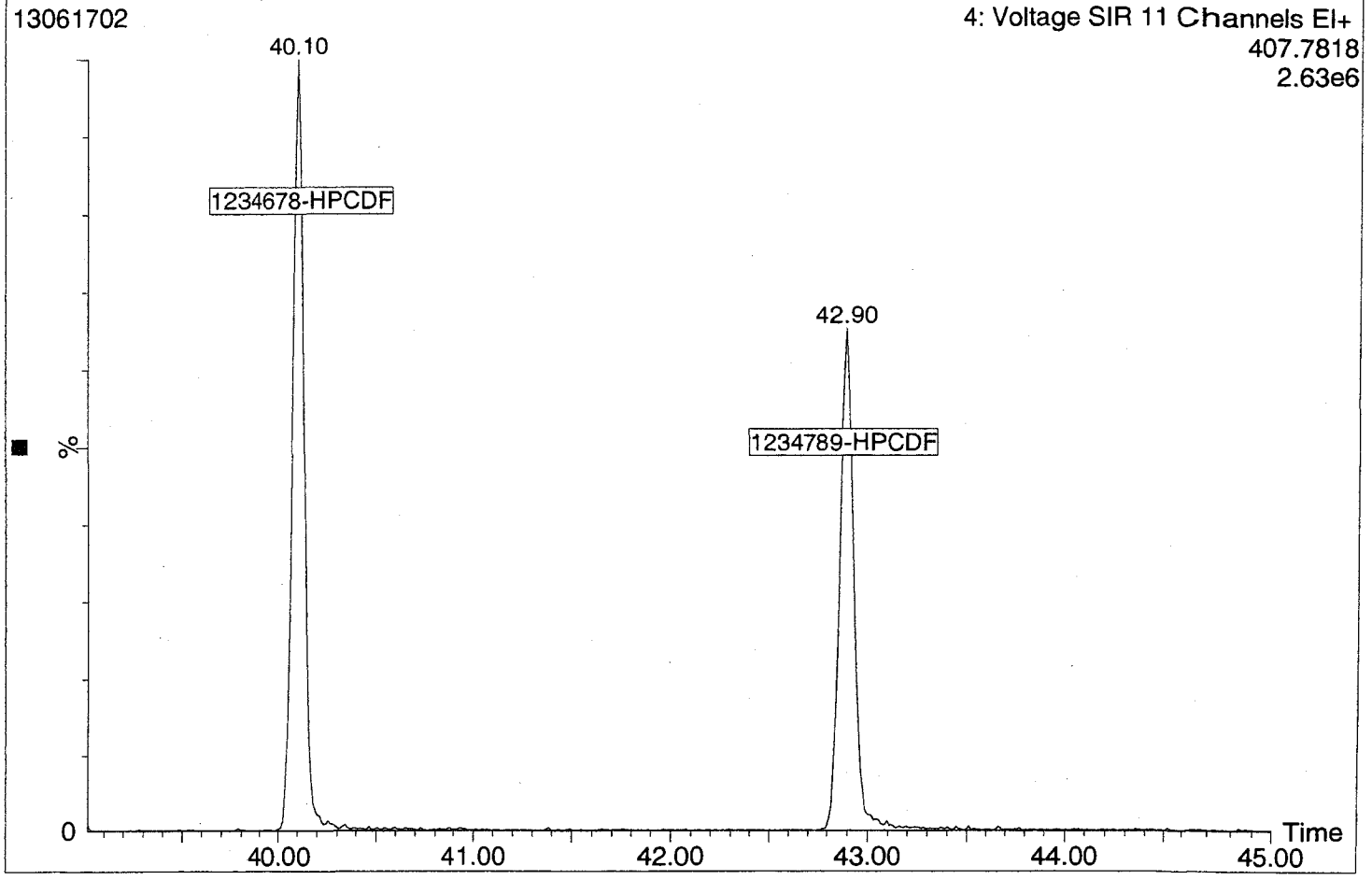

13061702
1: Voltage SIR 15 Channels EI+
319.8965
8.26e5
24.36
1368-TCDD
26.91
27.24
27.84
1289-TCDD
26.44
25.58
%
1
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13061702
1: Voltage SIR 15 Channels EI+
303.9016
1.01e6
23.09
1368-TCDF
26.60
28.11
1289-TCDF
25.69
27.96
%
1
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13061702
1: Voltage SIR 15 Channels EI+
339.8597
8.20e6
27.95
13468-PECDF
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00


13061702
2: Voltage SIR 11 Channels EI+
355.8546
3.28e6
29.62
29.67
12479-PECDD
32.36
32.76
12389-PECDD
%
0
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50
13061702
2: Voltage SIR 11 Channels EI+
339.8597
3.95e6
30.76
32.11
33.15
12389-PECDF
29.61
%
0
Time
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50


13061702
3: Voltage SIR 11 Channels EI+
389.8157
3.92e6
34.86
124679-HXCDD
37.02
37.14
37.56
123789-HXCDD
%
0
34.00
35.00
36.00
37.00
38.00
39.00


13061702
3: Voltage SIR 11 Channels EI+
373.8208
4.40e6
34.06
123468-HXCDF
35.95
35.79
36.88
37.99
123789-HXCDF
%
0
Time
34.00
35.00
36.00
37.00
38.00
39.00


13061702
4: Voltage SIR 11 Channels EI+
423.7766
2.38e6
40.66
1234679-HPCDD
41.97
1234678-HPCDD
%
0
40.00
41.00
42.00
43.00
44.00
45.00


13061702
4: Voltage SIR 11 Channels EI+
407.7818
2.63e6
40.10
1234678-HPCDF
42.90
1234789-HPCDF
%
0
Time
40.00
41.00
42.00
43.00
44.00
45.00

Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.601	1.001	4.08e4	5.45e4	0.832	0.749	0.770	336.2	NO	9.944	9.944
12378-PeCDF	30.763	1.001	2.45e5	1.61e5	0.853	1.521	1.550	1915.6	NO	49.208	49.208
23478-PeCDF	32.111	1.001	2.38e5	1.60e5	0.884	1.493	1.550	1866.1	NO	47.602	47.602
123478-HxCDF	35.794	1.001	2.02e5	1.71e5	1.017	1.178	1.240	938.0	NO	48.511	48.511
234678-HxCDF	36.890	1.001	2.01e5	1.62e5	1.067	1.240	1.240	936.5	NO	48.466	48.466
123678-HxCDF	35.948	1.001	2.10e5	1.79e5	0.999	1.172	1.240	976.0	NO	49.300	49.300
123789-HxCDF	37.987	1.000	1.61e5	1.31e5	0.947	1.230	1.240	762.2	NO	48.619	48.619
1234678-HpCDF	40.102	1.001	1.76e5	1.72e5	1.151	1.021	1.050	1616.8	NO	48.195	48.195
1234789-HpCDF	42.897	1.001	1.31e5	1.27e5	1.166	1.031	1.050	1054.8	NO	47.974	47.974
OCDF	48.394	1.007	2.55e5	2.83e5	1.001	0.900	0.890	1187.6	NO	90.046	90.046
2378-TCDD	27.243	1.001	3.74e4	4.90e4	0.939	0.765	0.770	201.7	NO	10.229	10.229
12378-PeCDD	32.363	1.001	1.91e5	1.24e5	0.930	1.547	1.550	1243.9	NO	47.433	47.433
123478-HxCDD	37.022	1.001	1.74e5	1.41e5	0.930	1.233	1.240	1204.5	NO	47.888	47.888
123678-HxCDD	37.143	1.000	1.66e5	1.38e5	0.854	1.207	1.240	1131.6	NO	47.237	47.237
123789-HxCDD	37.559	1.012	1.64e5	1.30e5	0.885	1.261	1.240	1115.2	NO	45.409	45.409
1234678-HpCDD	41.977	1.001	1.36e5	1.33e5	0.966	1.022	1.050	882.8	NO	45.380	45.380
OCDD	48.097	1.000	2.44e5	2.77e5	0.921	0.882	0.890	1284.7	NO	94.757	94.757
13C-2378-TCDF	26.586	1.007	4.91e5	6.60e5	1.283	0.744	0.770	2194.7	NO		81.605
13C-12378-PeCDF	30.741	1.164	5.83e5	3.82e5	1.051	1.526	1.550	1894.9	NO		83.590
13C-23478-PeCDF	32.090	1.215	5.77e5	3.69e5	1.030	1.564	1.550	1885.1	NO		83.538
13C-123478-HxCDF	35.772	0.953	2.53e5	5.03e5	1.069	0.503	0.510	1707.1	NO		105.197
13C-123678-HxCDF	35.926	0.957	2.72e5	5.18e5	1.124	0.524	0.510	1741.0	NO		104.477
13C-234678-HxCDF	36.868	0.982	2.35e5	4.66e5	1.041	0.504	0.510	1583.2	NO		100.170
13C-123789-HxCDF	37.976	1.011	2.13e5	4.19e5	1.039	0.509	0.510	1461.2	NO		90.519
13C-1234678-HpCDF	40.080	1.067	1.89e5	4.38e5	0.965	0.432	0.440	1188.5	NO		96.778
13C-1234789-HpCDF	42.875	1.142	1.42e5	3.21e5	0.760	0.442	0.440	765.3	NO		90.510
13C-1234-TCDD	26.407	0.000	4.83e5	6.16e5	1.000	0.785	0.770	479.2	NO		100.000
13C-2378-TCDD	27.228	1.031	3.89e5	5.11e5	0.926	0.762	0.770	382.9	NO		88.391
13C-12378-PeCDD	32.341	1.225	4.31e5	2.84e5	0.734	1.520	1.550	1627.3	NO		88.537
13C-123478-HxCDD	37.000	0.985	3.91e5	3.15e5	0.984	1.243	1.240	2108.7	NO		106.675
13C-123678-HxCDD	37.132	0.989	4.19e5	3.36e5	1.043	1.245	1.240	2172.9	NO		107.681
13C-1234678-HpCDD	41.955	1.117	3.11e5	3.03e5	0.891	1.028	1.050	2142.0	NO		102.590
13C-OCDD	48.079	1.280	5.54e5	6.40e5	0.849	0.866	0.890	1933.3	NO		209.407

DOW-1,2,3,4

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

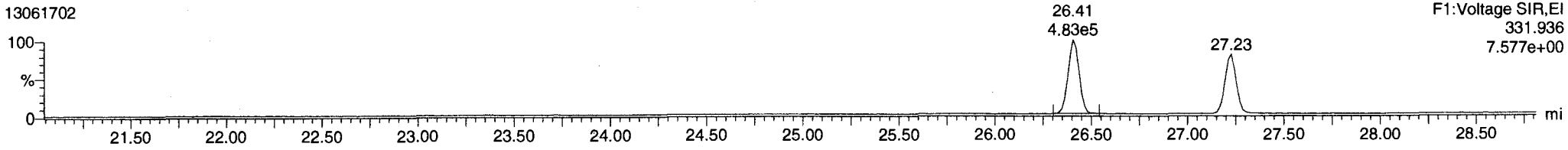
Name	RT	RRT	Area	Height	Conc	Resp	Pred R	S/N	EMPC?	EMPC	%
13C-123789-HxCDD	37.548	0.000	3.68e5	3.04e5	1.000	1.212	1.240	1986.6	NO		100.000
Total-tetrafurans			1.33e5		0.832						32.871
Total-penta1			5.00e5								94.928
Total-pentafurans			7.32e5		0.868						146.324
Total-hexafurans			1.03e6		1.008						260.830
Total-heptafurans			3.07e5		1.159						96.169
Total-Furans			2.96e6		0.992						721.168
Total-tetradioxins			2.30e5		0.939						58.044
Total-pentadioxins			7.16e5		0.930						178.436
Total-hexadioxins			7.52e5		0.890						210.261
Total-heptadioxins			3.04e5		0.966						101.067
Total-Dioxins			2.25e6		0.918						642.566
Total-TEQ			5.21e6								1363.734
37CL-2378-TCDD	27.243	1.032	9.57e4		0.989			348.2			8.807
FUNCTION1 PFK			2.48e6								
FUNCTION2 PFK			3.29e5								0.000
FUNCTION3 PFK			3.49e5								0.000
FUNCTION4 PFK			2.41e6								
FUNCTION5 PFK			7.53e6								
FUNCTION1 HXCDPE			1.02e3								0.000
FUNCTION1 HPCDPE			3.95e3								0.000
FUNCTION2 HPCDPE			2.81e3								0.000
FUNCTION3 OCDPE			7.75e1								0.000
FUNCTION4 NCDPE			9.74e2								0.000
FUNCTION5 DCDPE			0.00e0								

CS3 13-Jun-13

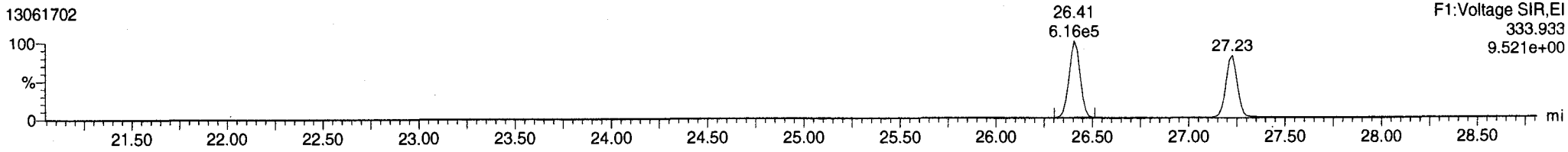
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

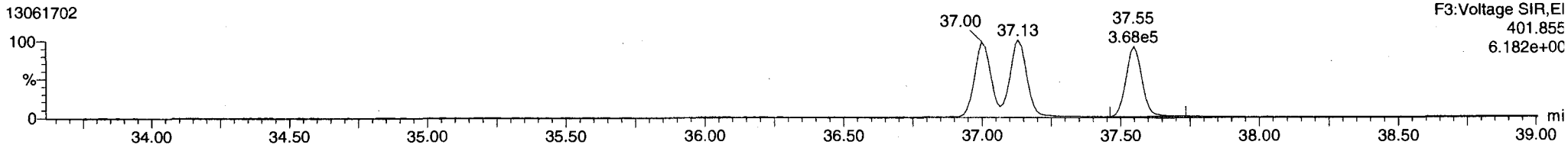
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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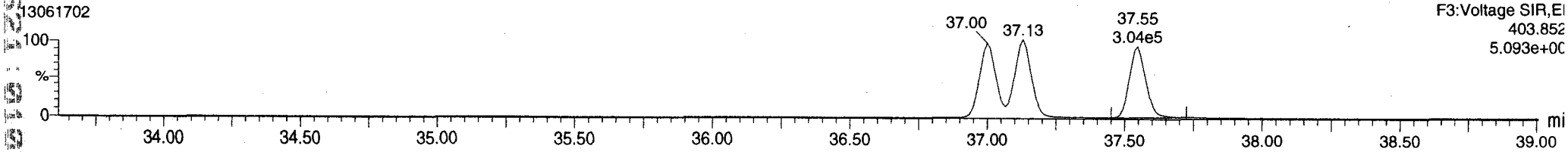
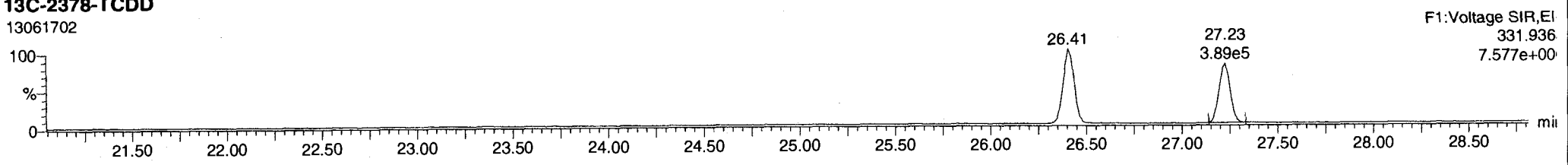


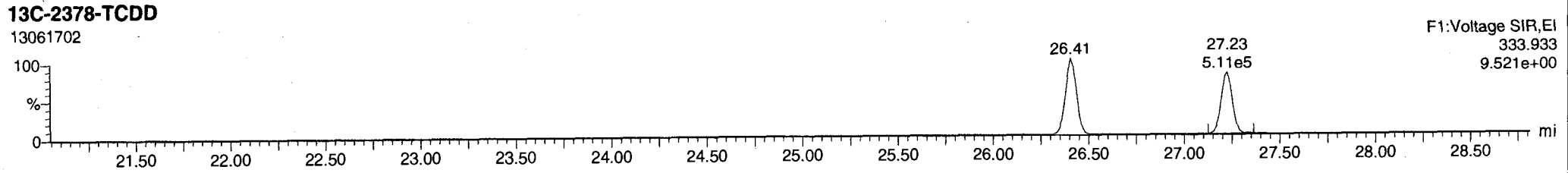
Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

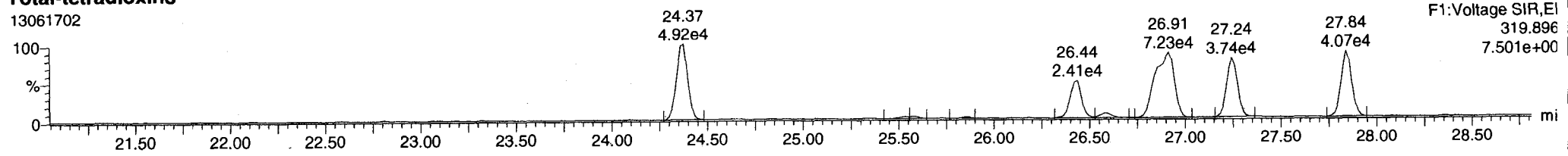
13C-2378-TCDD



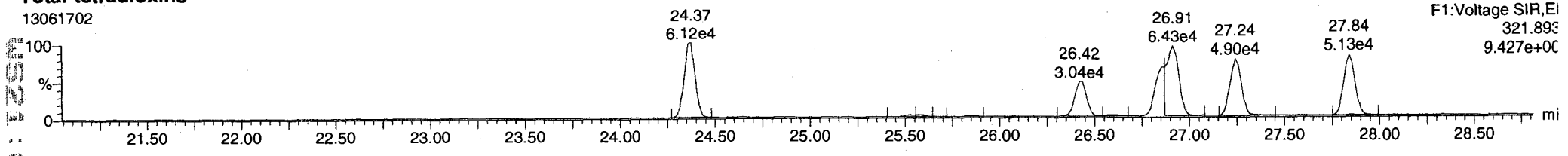
13C-2378-TCDD



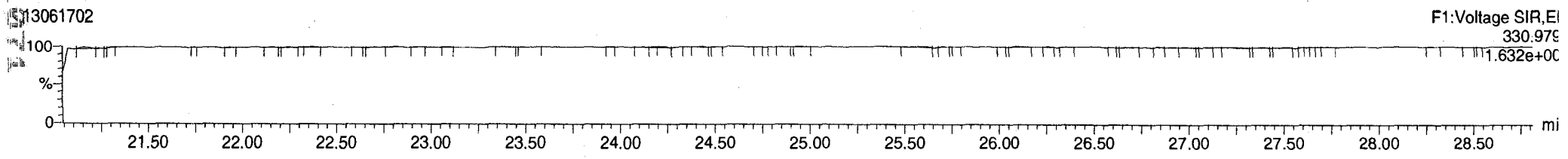
Total-tetradioxins



Total-tetradioxins



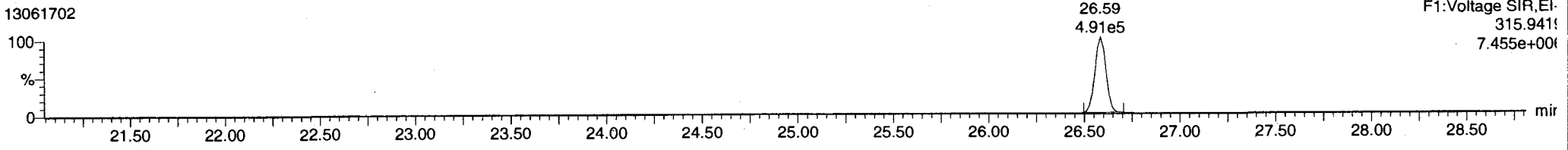
FUNCTION1 PFK



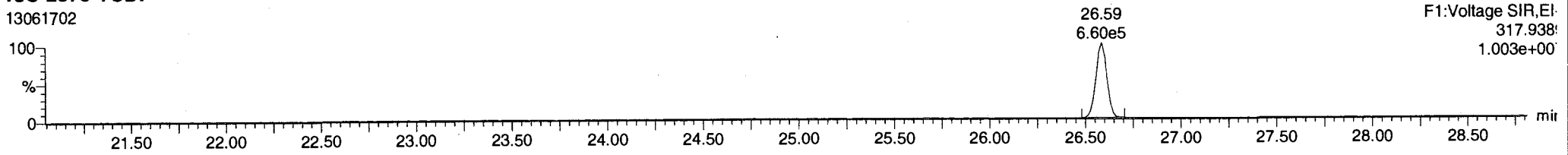
Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

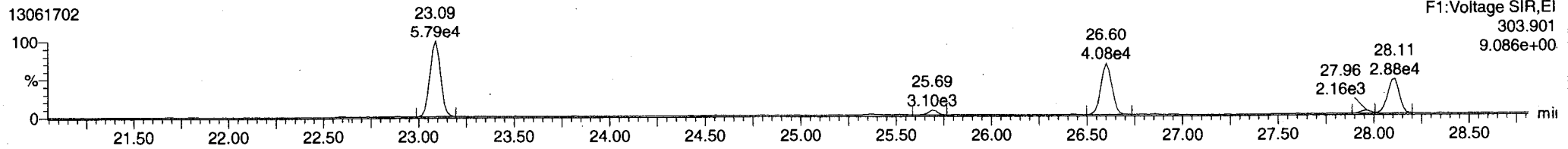
13C-2378-TCDF



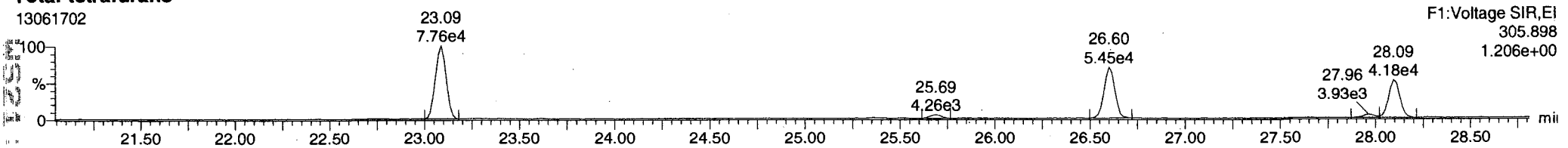
13C-2378-TCDF



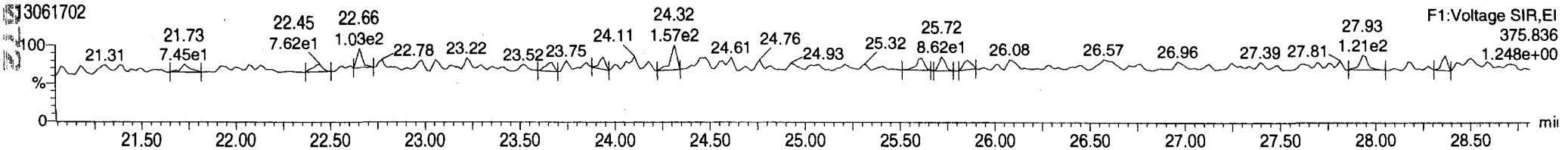
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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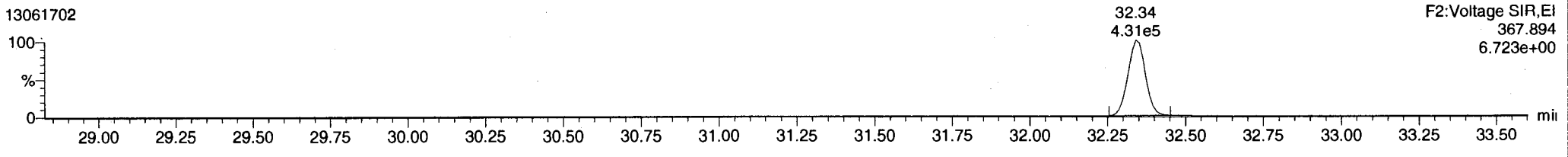
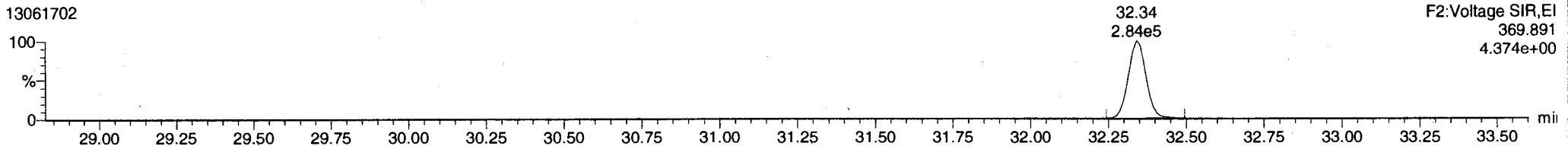
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

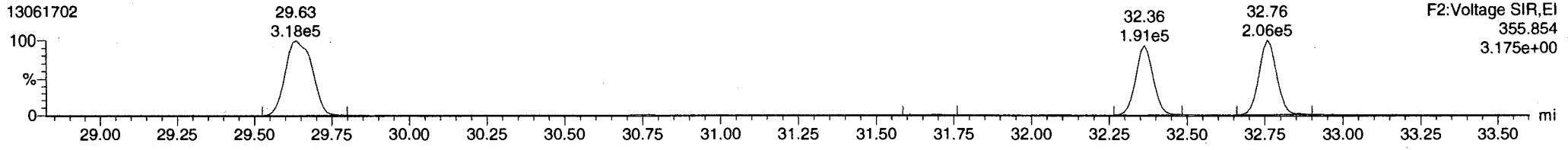
13C-12378-PeCDD



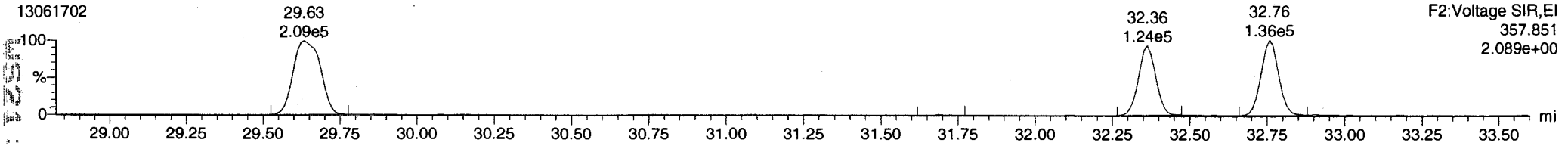
13C-12378-PeCDD



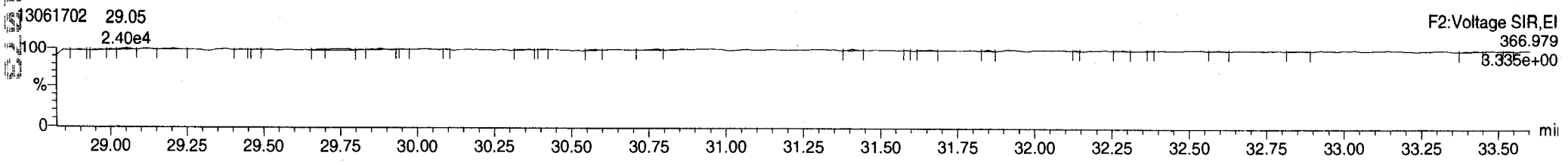
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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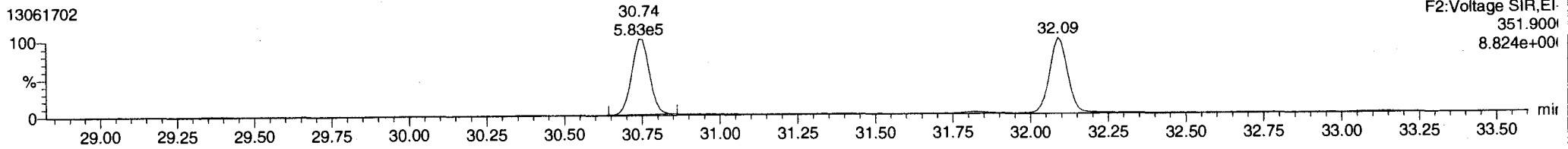
ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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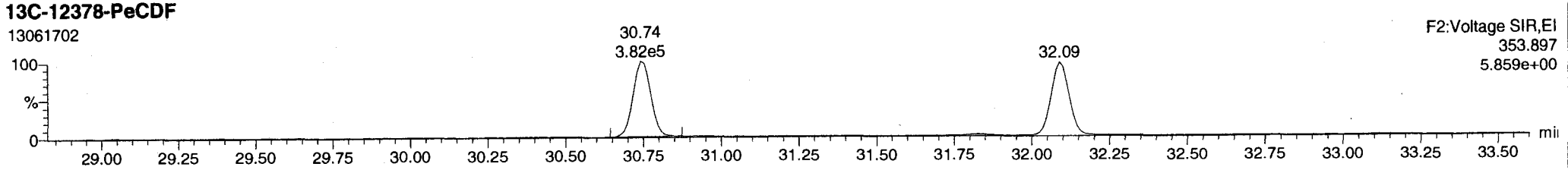
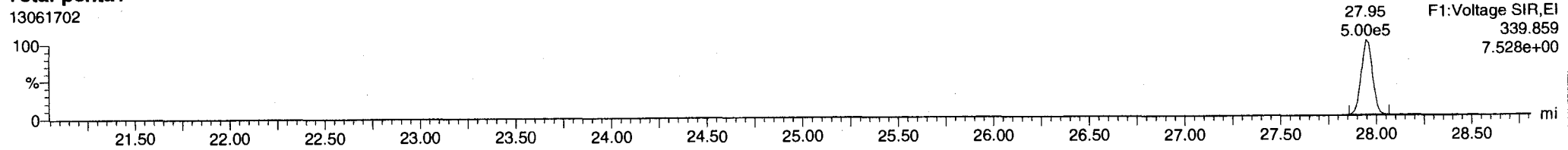
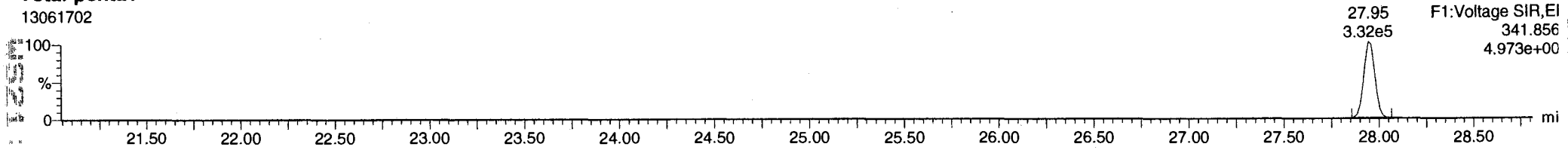


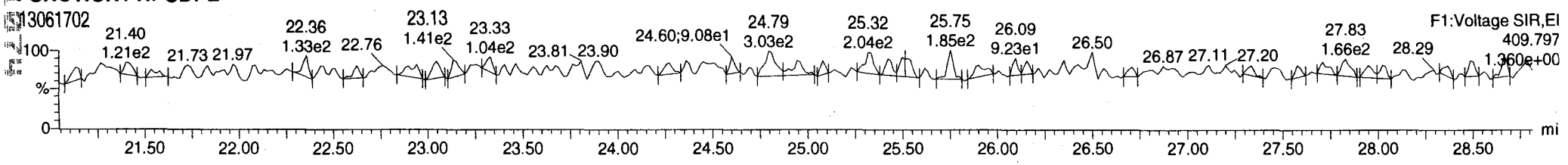
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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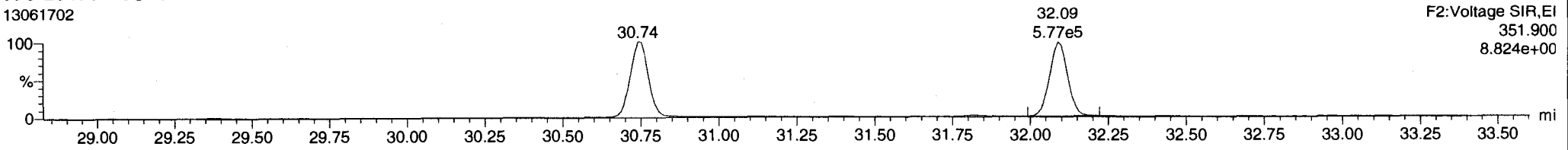
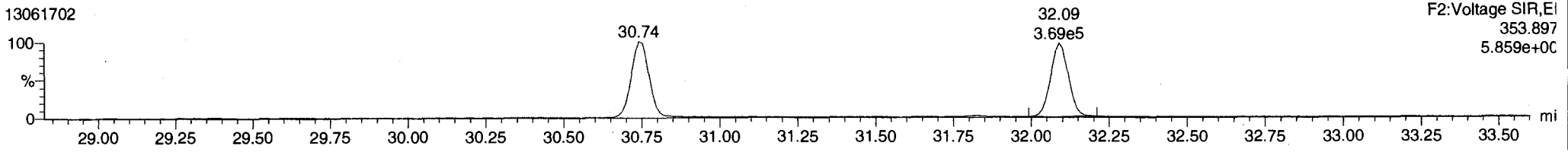
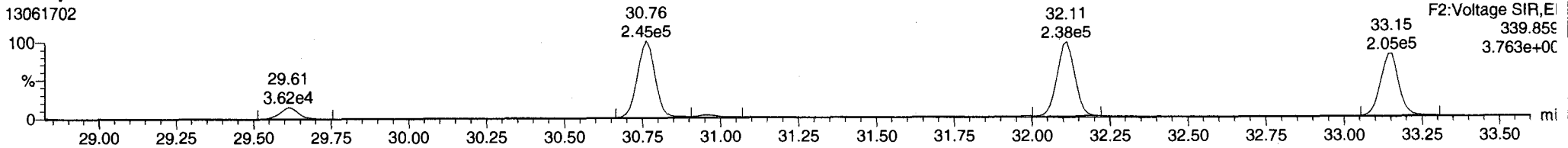
13C-23478-PeCDF



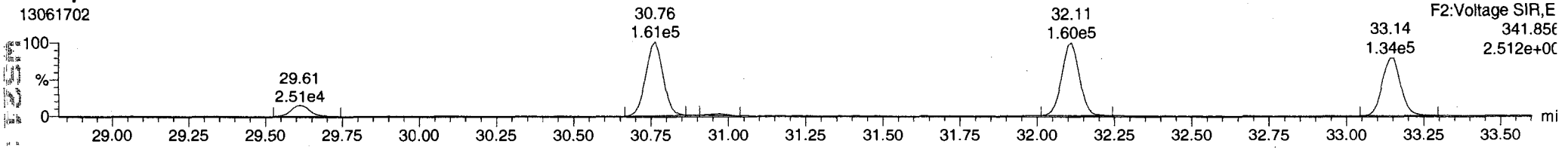
13C-23478-PeCDF



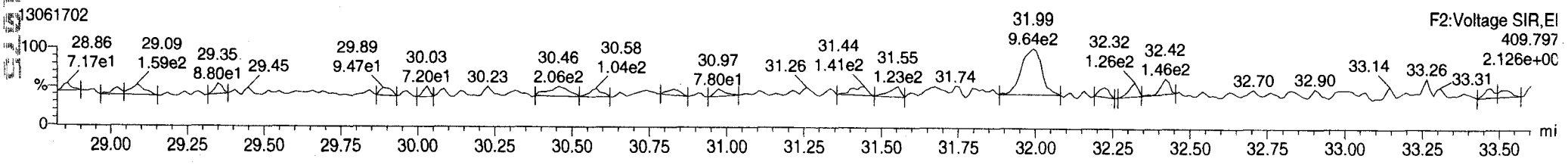
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
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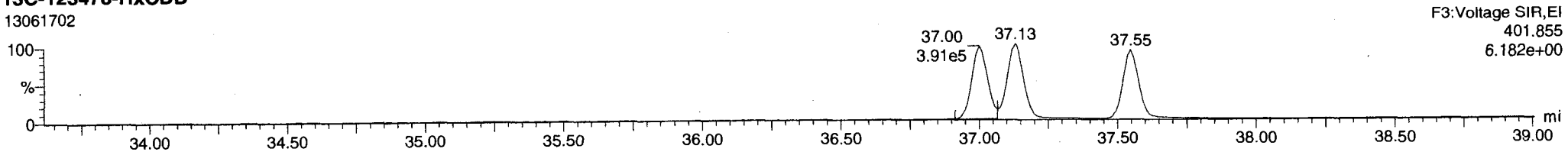
ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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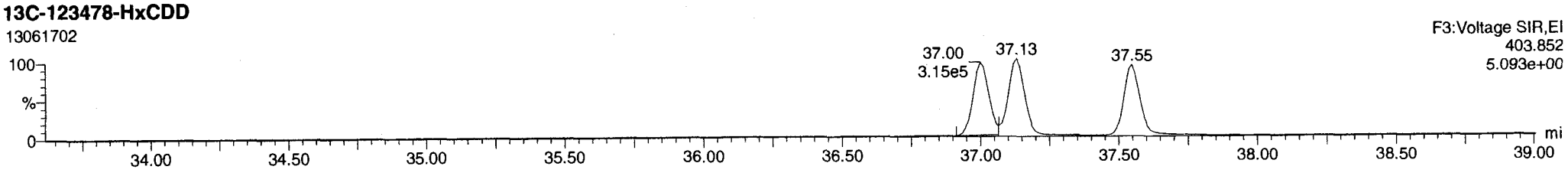
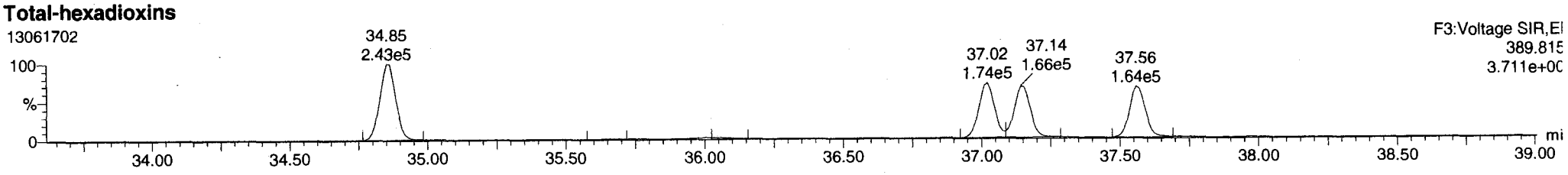
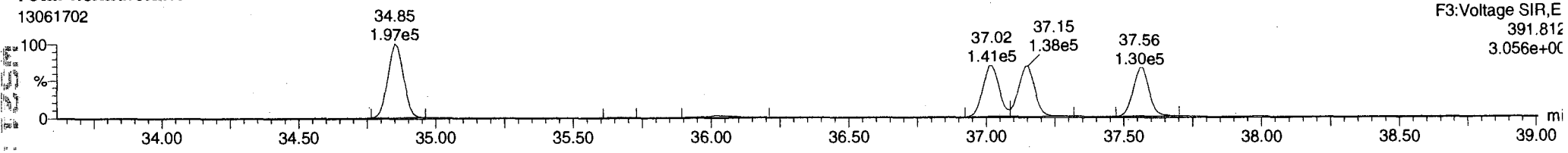


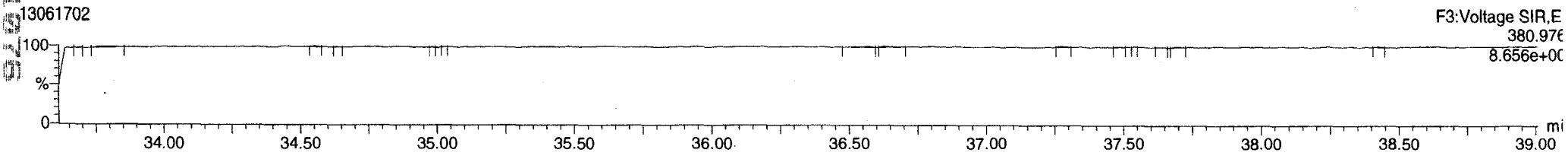
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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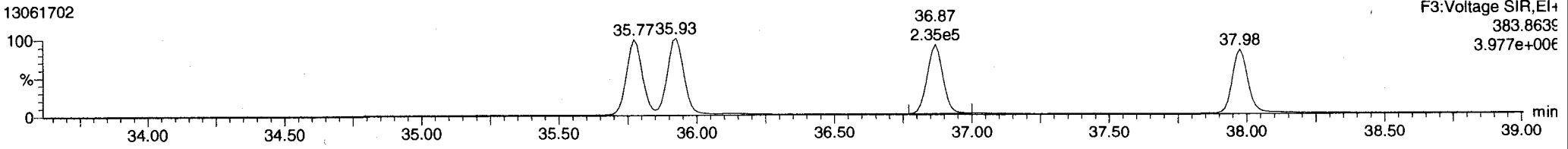
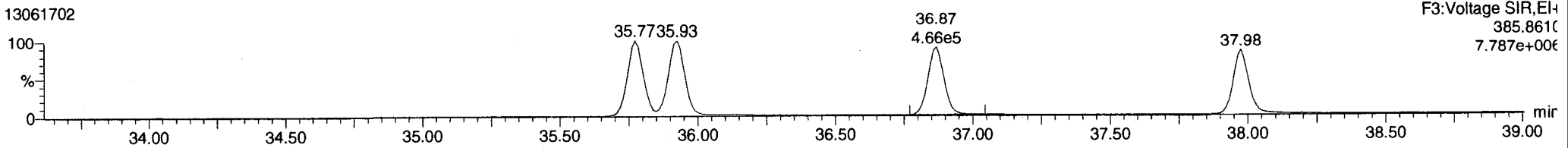
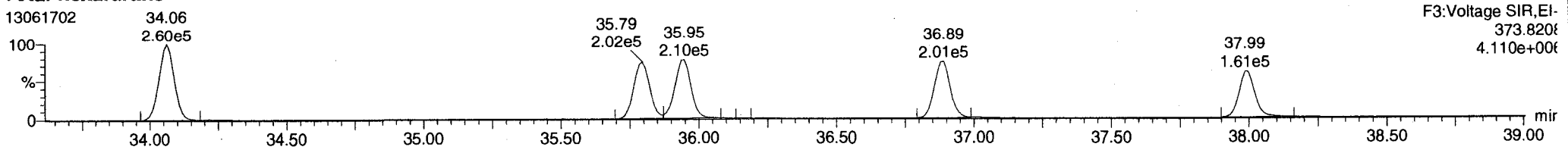
13C-234678-HxCDF



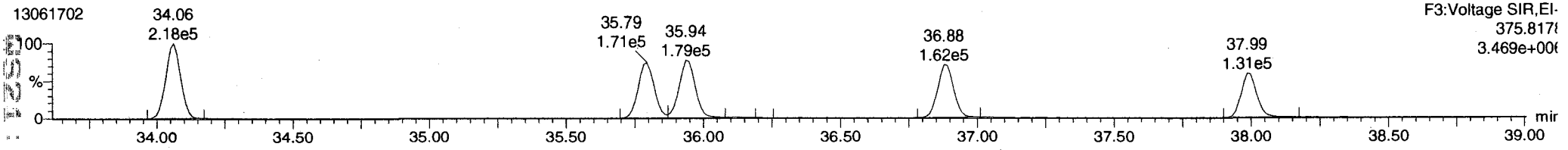
13C-234678-HxCDF



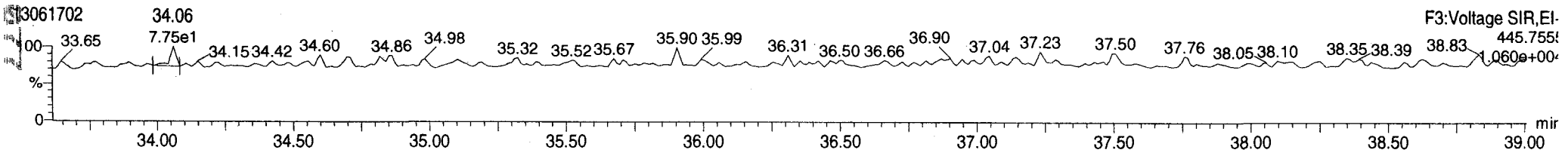
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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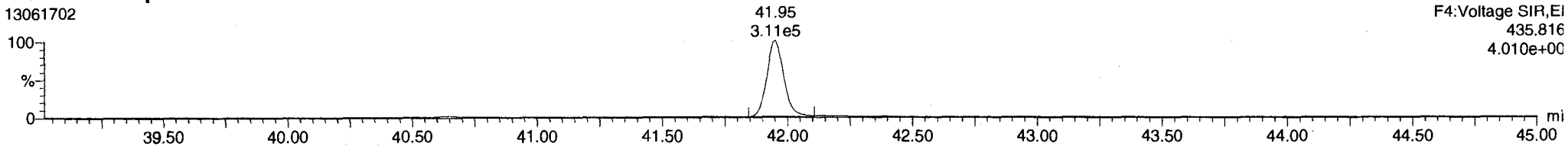
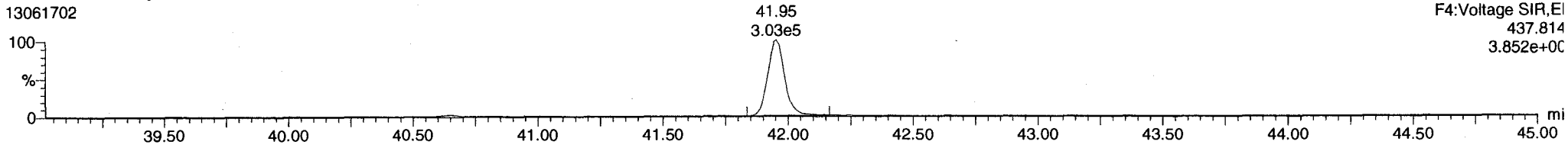
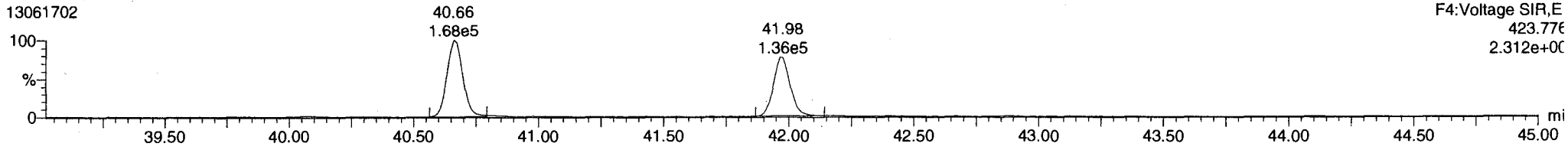
13C-1234678-HpCDD



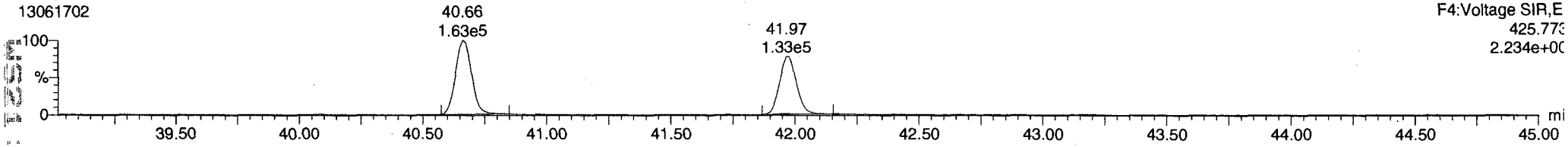
13C-1234678-HpCDD



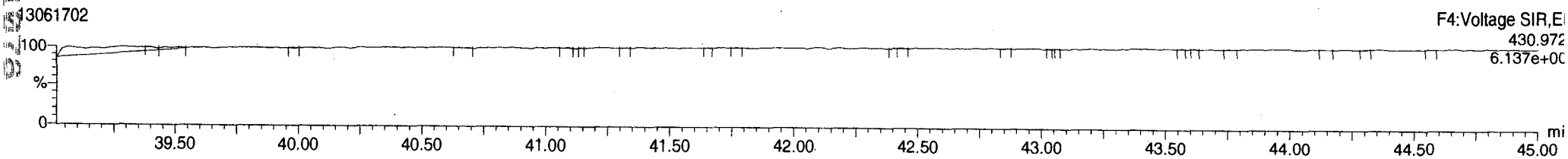
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
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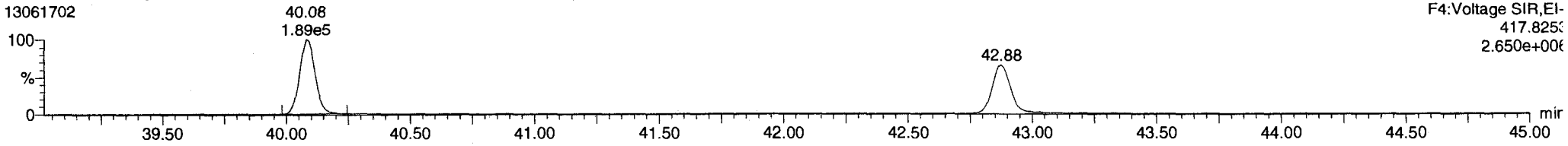
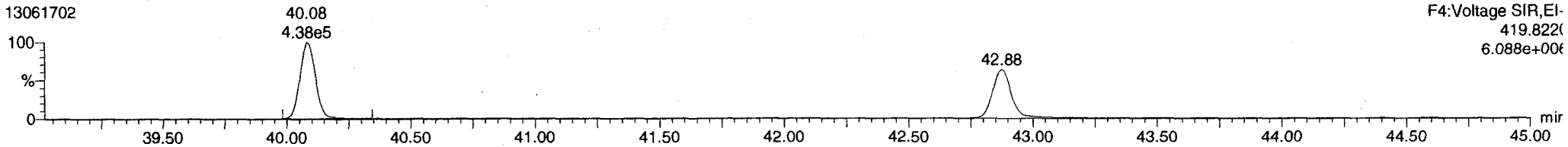
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

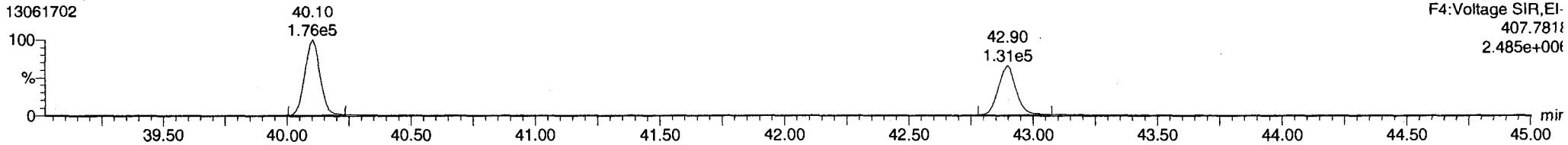
13C-1234678-HpCDF



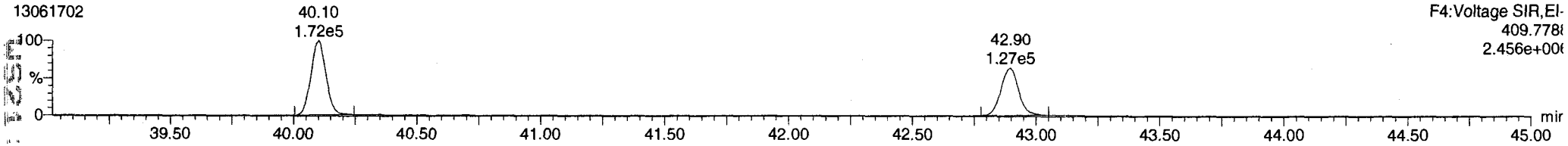
13C-1234678-HpCDF



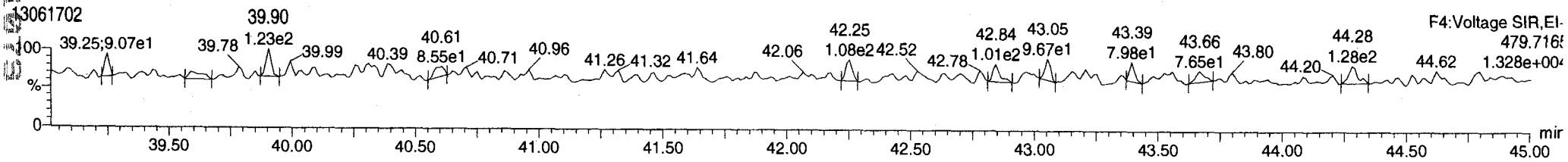
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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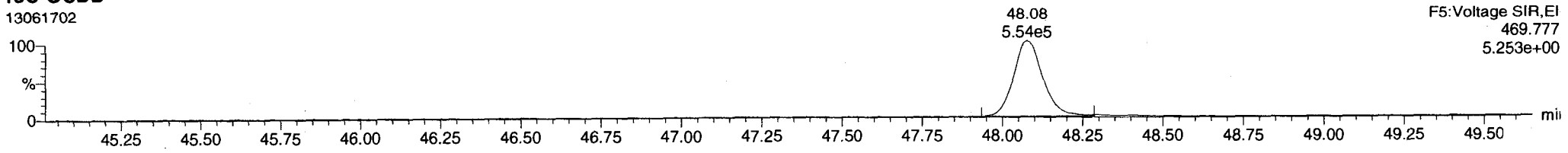
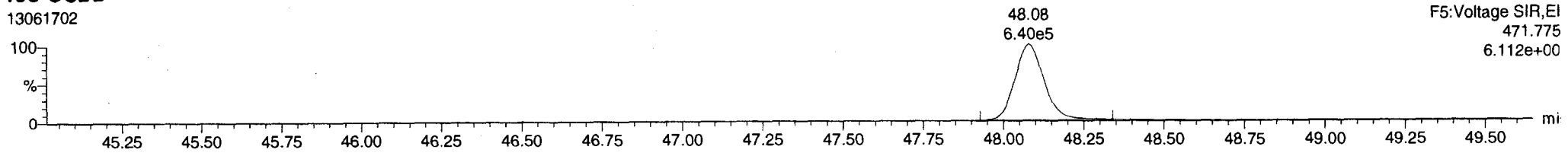
ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

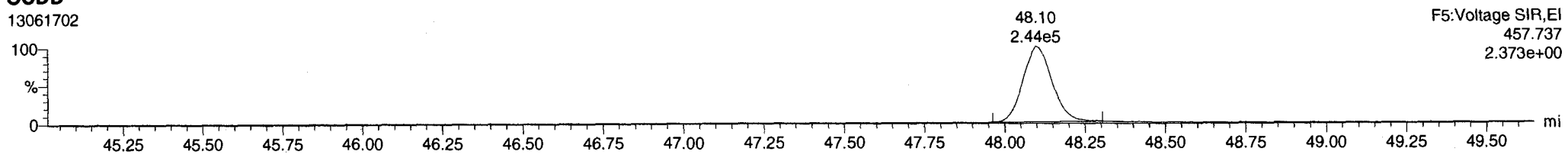
13C-OCDD



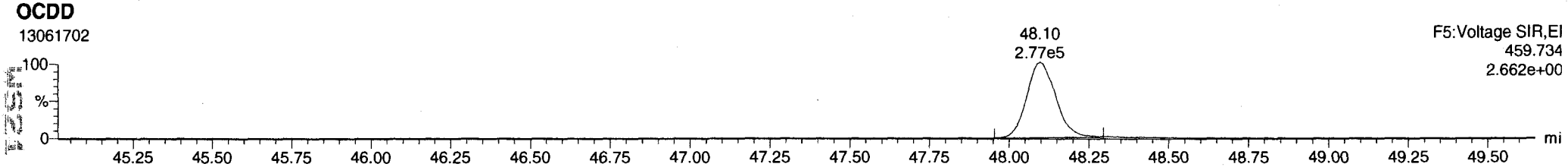
13C-OCDD



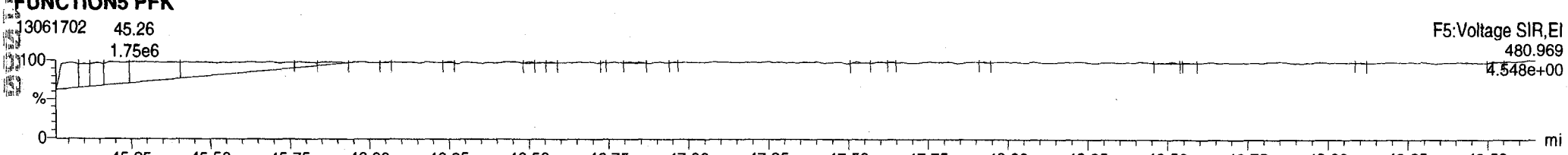
OCDD



OCDD



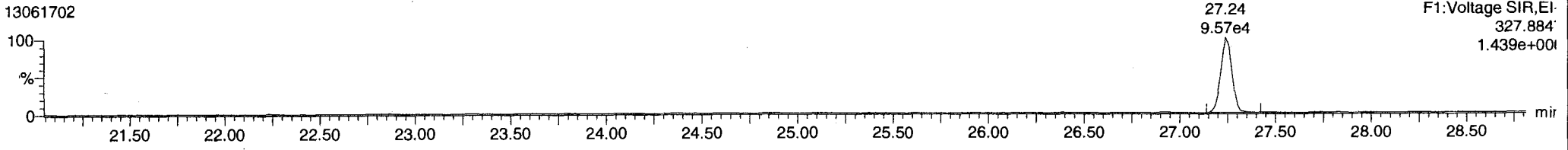
FUNCTION5 PFK



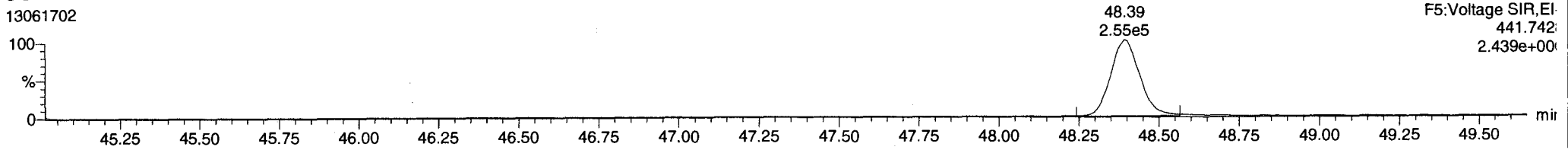
Dataset: P:\DIOXIN8290.PRO\130617OPEN.qld
Last Altered: Monday, June 17, 2013 15:40:18 Pacific Daylight Time
Printed: Monday, June 17, 2013 16:14:28 Pacific Daylight Time

ID: CS3, Name: 13061702, Date: 17-Jun-2013, Time: 14:49:09, Conditions: AUTOSPEC01, User: pk

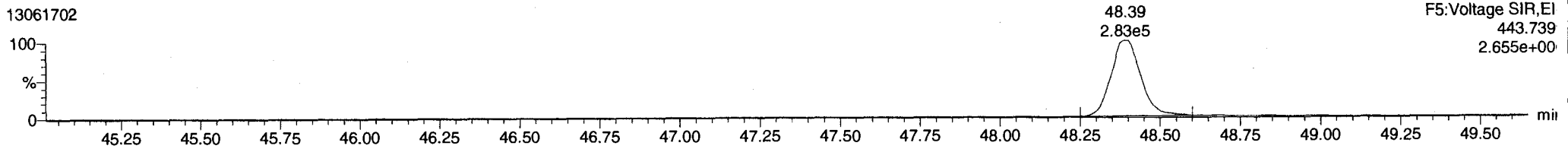
37CL-2378-TCDD



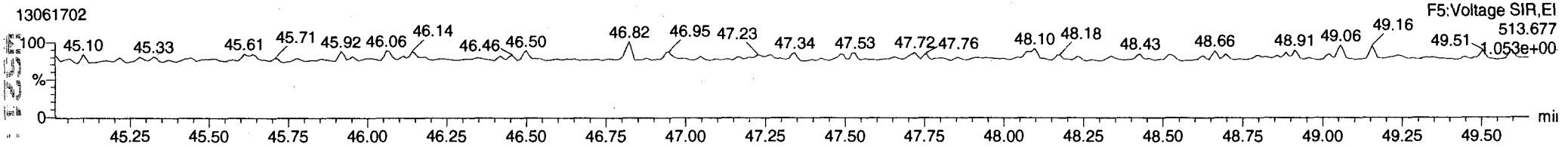
OCDF



OCDF



FUNCTION5 DCDPE



TCDD-TCSS

ARI
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: WS30MBS
Lab.File ID: 13061704
Date Analysed: 17-Jun-13

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	27.23	0.106		
12378-PeCDD	356/358	0.00			0.095
123478-HxCDD	390/392	0.00			0.078
123678-HxCDD	390/392	0.00			0.079
123789-HxCDD	390/392	0.00			0.079
1234678-HpCDD	424/426	41.96	0.251	0.206	
OCDD	458/460	48.07	1.59	1.39	
2378-TCDF	Traces	0.00			.08
12378-PeCDF	340/342	30.73	0.148	0.123	
23478-PeCDF	340/342	32.08	0.163	0.151	
123478-HxCDF	374/376	35.76	0.0913		
234678-HxCDF	374/376	36.88	0.103	0.0780	
123678-HxCDF	374/376	35.93	0.101	0.0720	
123789-HxCDF	374/376	0.00			0.062
1234678-HpCDF	408/410	40.09	0.0813	0.0580	
1234789-HpCDF	408/410	0.00			0.094
OCDF	442/444	0.00			0.17

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:23 Pacific Daylight Time

MC 6/18/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

Name	RetTime	Rel RT	Response	Response	Ratio	Ratio	Rel Ratio	Rf	S/N	Noise1	Noise2	Height1	Height2	IsoPass	Conc	Amount
2378-TCDF																
12378-PeCDF	30.731	1.000	4.80e2	4.73e2	0.853	1.016	1.550	6.3	1250	1908	7.87e3	8.72e3	YES		0.123	0.148
23478-PeCDF	32.079	1.000	5.64e2	4.36e2	0.884	1.293	1.550	7.3	1250	1908	9.11e3	6.09e3	YES		0.151	0.163
123478-HxCDF	35.762	1.000	2.75e2	2.12e2	1.017	1.297	1.240	4.9	824	567	4.00e3	3.93e3	NO		0.091	0.091
234678-HxCDF	36.880	1.001	3.61e2	1.85e2	1.067	1.956	1.240	7.1	824	567	5.87e3	4.88e3	YES		0.078	0.103
123678-HxCDF	35.926	1.001	2.35e2	3.57e2	0.999	0.659	1.240	4.9	824	567	4.03e3	6.93e3	YES		0.072	0.101
123789-HxCDF					0.947		1.240		824	567						
1234678-HpCDF	40.092	1.000	2.46e2	1.31e2	1.151	1.882	1.050	10.5	679	713	7.15e3	3.68e3	YES		0.058	0.081
1234789-HpCDF					1.166		1.050		679	713						
OCDF					1.001		0.890		855	1252						
2378-TCDD	27.229	1.001	2.69e2	4.01e2	0.939	0.670	0.770	3.7	1765	1572	6.53e3	6.55e3	NO		0.106	0.106
12378-PeCDD					0.930		1.550		1282	1596						
123478-HxCDD					0.930		1.240		940	1190						
123678-HxCDD					0.854		1.240		940	1190						
123789-HxCDD					0.885		1.240		940	1190						
1234678-HpCDD	41.955	1.000	4.11e2	5.68e2	0.966	0.724	1.050	6.1	1161	925	7.12e3	8.32e3	YES		0.206	0.251
OCDD	48.071	1.000	2.59e3	2.23e3	0.921	1.161	0.890	46.2	574	730	2.65e4	2.35e4	YES		1.390	1.589
13C-2378-TCDF	26.556	1.006	3.68e5	4.82e5	1.283	0.763	0.770	1797.7	3049	7947	5.48e6	7.22e6	NO			69.852
13C-12378-PeCDF	30.720	1.164	4.58e5	2.96e5	1.051	1.546	1.550	2057.9	3310	2100	6.81e6	4.50e6	NO			75.664
13C-23478-PeCDF	32.068	1.215	4.24e5	2.71e5	1.030	1.561	1.550	1961.5	3310	2100	6.49e6	4.13e6	NO			71.165
13C-123478-HxCDF	35.751	0.953	1.75e5	3.48e5	1.069	0.503	0.510	820.6	3124	3545	2.56e6	5.19e6	NO			97.125
13C-123678-HxCDF	35.905	0.957	2.04e5	3.85e5	1.124	0.529	0.510	931.8	3124	3545	2.91e6	5.61e6	NO			103.831
13C-234678-HxCDF	36.847	0.982	1.66e5	3.29e5	1.041	0.503	0.510	761.3	3124	3545	2.38e6	4.75e6	NO			94.258
13C-123789-HxCDF	37.954	1.011	1.42e5	2.76e5	1.039	0.516	0.510	642.9	3124	3545	2.01e6	3.92e6	NO			79.737
13C-1234678-HpCDF	40.070	1.068	1.22e5	2.80e5	0.965	0.434	0.440	772.0	2083	1786	1.61e6	3.74e6	NO			82.631
13C-1234789-HpCDF	42.854	1.142	8.61e4	1.98e5	0.760	0.436	0.440	462.4	2083	1786	9.63e5	2.26e6	NO			74.001
13C-1234-TCDD	26.392	0.000	4.10e5	5.37e5	1.000	0.764	0.770	385.8	16421	4883	6.34e6	8.06e6	NO			100.000
13C-2378-TCDD	27.199	1.031	2.92e5	3.79e5	0.926	0.771	0.770	268.3	16421	4883	4.41e6	5.69e6	NO			76.429
13C-12378-PeCDD	32.320	1.225	3.27e5	2.14e5	0.734	1.530	1.550	959.4	5127	2258	4.92e6	3.20e6	NO			77.626
13C-123478-HxCDD	36.979	0.985	2.70e5	2.25e5	0.984	1.202	1.240	1411.9	2825	1806	3.99e6	3.40e6	NO			99.764
13C-123678-HxCDD	37.110	0.989	3.16e5	2.62e5	1.043	1.206	1.240	1526.4	2825	1806	4.31e6	3.58e6	NO			109.858
13C-1234678-HpCDD	41.933	1.117	2.03e5	2.00e5	0.891	1.014	1.050	759.4	3232	2166	2.45e6	2.36e6	NO			89.774
13C-OCDD	48.071	1.281	3.03e5	3.55e5	0.849	0.853	0.890	988.1	2876	2322	2.84e6	3.15e6	NO			153.654

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:23 Pacific Daylight Time

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.527	0.000	2.82e5	2.22e5	1.000	1.272	1.240	1452.9	2825	1806	4.10e6	3.25e6	NO	100.000
Total-tetrafurans			0.00e0		0.832				1155		0.00e0			
Total-penta1			1.80e2						900		3.46e3			0.075
Total-pentafurans			1.04e3		0.868				1250		1.70e4			0.311
Total-hexafurans			8.71e2		1.008				824		1.39e4			0.295
Total-heptafurans			4.60e2		1.159				679		1.29e4			0.161
Total-Furans			2.84e3		0.992				1155		5.17e4			0.951
Total-tetradioxins			2.91e3		0.939				1765		4.22e4			0.614
Total-pentadioxins			9.88e2		0.930				1282		1.55e4			0.256
Total-hexadioxins			3.68e3		0.890				940		5.84e4			0.916
Total-heptadioxins			1.44e3		0.966				1161		2.20e4			0.795
Total-Dioxins			1.19e4		0.918				1765		1.72e5			4.244
Total-TEQ			1.47e4						1765		2.24e5			5.195
37CL-2378-TCDD	27.229	1.032	3.16e5		0.989			1476.3	3131		4.62e6			33.715
FUNCTION1 PFK			1.66e7						957947		1.45e7			
FUNCTION2 PFK			3.16e5						293442		8.13e6			0.000
FUNCTION3 PFK			7.58e6						575954		6.68e7			0.000
FUNCTION4 PFK			2.65e5						507076		9.46e6			
FUNCTION5 PFK			2.29e5						373627		1.03e7			
FUNCTION1 HXCDPE			7.10e2						767		1.53e4			0.000
FUNCTION1 HPCDPE			4.62e3						1655		9.15e4			0.000
FUNCTION2 HPCDPE			1.35e3						1742		3.39e4			0.000
FUNCTION3 OCDPE			7.65e1						753		2.85e3			0.000
FUNCTION4 NCDPE			8.47e2						1053		2.47e4			0.000
FUNCTION5 DCDPE			0.00e0						465		0.00e0			

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1												

PP

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1	36	Total-penta1	339.8597	27.95	498.347		0.075		0.57	1.55	YES	3.8

PF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1	3	23478-PeCDF	339.8597	32.08	1000.515	0.884	0.163	0.151	1.29	1.55	YES	7.3
2	2	12378-PeCDF	339.8597	30.73	953.571	0.853	0.148	0.123	1.02	1.55	YES	6.3

HF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1	5	234678-HxCDF	373.8208	36.88	546.192	1.067	0.103	0.078	1.96	1.24	YES	7.1
2	6	123678-HxCDF	373.8208	35.93	591.990	0.999	0.101	0.072	0.66	1.24	YES	4.9
3	4	123478-HxCDF	373.8208	35.76	486.265	1.017	0.091	0.091	1.30	1.24	NO	4.9

HPF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1	8	1234678-HpCDF	407.7818	40.09	376.221	1.151	0.081	0.058	1.88	1.05	YES	10.5
2	39	Total-heptafurans	407.7818	40.05	316.094	1.159	0.080		2.11	1.05	YES	8.4

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1	40	Total-Furans	303.9016	28.23	613.852	0.992	0.073		0.18	0.77	YES	1.0
2	40	Total-Furans	303.9016	21.39	299.568	0.992	0.036		1.83	0.77	YES	2.9
3	3	23478-PeCDF	339.8597	32.08	1000.515	0.884	0.163	0.151	1.29	1.55	YES	7.3
4	2	12378-PeCDF	339.8597	30.73	953.571	0.853	0.148	0.123	1.02	1.55	YES	6.3
5	5	234678-HxCDF	373.8208	36.88	546.192	1.067	0.103	0.078	1.96	1.24	YES	7.1
6	6	123678-HxCDF	373.8208	35.93	591.990	0.999	0.101	0.072	0.66	1.24	YES	4.9
7	4	123478-HxCDF	373.8208	35.76	486.265	1.017	0.091	0.091	1.30	1.24	NO	4.9
8	8	1234678-HpCDF	407.7818	40.09	376.221	1.151	0.081	0.058	1.88	1.05	YES	10.5
9	39	Total-heptafurans	407.7818	40.05	316.094	1.159	0.080		2.11	1.05	YES	8.4
10	36	Total-penta1	339.8597	27.95	498.347		0.075		0.57	1.55	YES	3.8

TD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1	11	2378-TCDD	319.8965	27.23	669.673	0.939	0.106	0.106	0.67	0.77	NO	3.7
2	41	Total-tetradioxins	319.8965	26.56	3200.317	0.939	0.508		4.70	0.77	YES	20.2

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

PD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	1° Ratio	1° R...	S/N
1	42	Total-pentadioxins	355.8546	30.72	1288.485	0.930	0.256		3.29	1.55	YES	12.1

HD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	1° Ratio	1° R...	S/N
1	43	Total-hexadioxins	389.8157	35.75	1484.208	0.890	0.311		6.29	1.24	YES	20.4
2	43	Total-hexadioxins	389.8157	34.84	330.747	0.890	0.069		1.21	1.24	NO	3.7
3	43	Total-hexadioxins	389.8157	36.84	1042.720	0.890	0.218		3.98	1.24	YES	18.0
4	43	Total-hexadioxins	389.8157	35.88	1511.762	0.890	0.317		11.31	1.24	YES	20.2

HPD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	1° Ratio	1° R...	S/N
1	16	1234678-HpCDD	423.7766	41.96	978.628	0.966	0.251	0.206	0.72	1.05	YES	6.1
2	44	Total-heptadioxins	423.7766	40.64	2121.792	0.966	0.544		0.95	1.05	NO	12.8

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	1° Ratio	1° R...	S/N
1	11	2378-TCDD	319.8965	27.23	669.673	0.939	0.106	0.106	0.67	0.77	NO	3.7
2	41	Total-tetradioxins	319.8965	26.56	3200.317	0.939	0.508		4.70	0.77	YES	20.2
3	45	Total-Dioxins	319.8965	23.61	262.178	0.918	0.043		1.84	0.77	YES	2.0
4	45	Total-Dioxins	319.8965	22.33	187.039	0.918	0.030		1.49	0.77	YES	2.1
5	42	Total-pentadioxins	355.8546	30.72	1288.485	0.930	0.256		3.29	1.55	YES	12.1
6	43	Total-hexadioxins	389.8157	35.75	1484.208	0.890	0.311		6.29	1.24	YES	20.4
7	43	Total-hexadioxins	389.8157	34.84	330.747	0.890	0.069		1.21	1.24	NO	3.7
8	43	Total-hexadioxins	389.8157	36.84	1042.720	0.890	0.218		3.98	1.24	YES	18.0
9	43	Total-hexadioxins	389.8157	35.88	1511.762	0.890	0.317		11.31	1.24	YES	20.2
10	16	1234678-HpCDD	423.7766	41.96	978.628	0.966	0.251	0.206	0.72	1.05	YES	6.1
11	44	Total-heptadioxins	423.7766	40.64	2121.792	0.966	0.544		0.95	1.05	NO	12.8
12	17	OCDD	457.7377	48.07	4814.456	0.921	1.589	1.390	1.16	0.89	YES	46.2

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs Resp	Rel RF	S/...	DS	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1	40	Total-Furans	303.9016	28.23	613.852	0.992	0.073			0.18	0.77	YES	1.0
2	40	Total-Furans	303.9016	21.39	299.568	0.992	0.036			1.83	0.77	YES	2.9
3	3	23478-PeCDF	339.8597	32.08	1000.515	0.884	0.163	0.151		1.29	1.55	YES	7.3
4	2	12378-PeCDF	339.8597	30.73	953.571	0.853	0.148	0.123		1.02	1.55	YES	6.3
5	5	234678-HxCDF	373.8208	36.88	546.192	1.067	0.103	0.078		1.96	1.24	YES	7.1
6	6	123678-HxCDF	373.8208	35.93	591.990	0.999	0.101	0.072		0.66	1.24	YES	4.9
7	4	123478-HxCDF	373.8208	35.76	486.265	1.017	0.091	0.091		1.30	1.24	NO	4.9
8	8	1234678-HpCDF	407.7818	40.09	376.221	1.151	0.081	0.058		1.88	1.05	YES	10.5
9	39	Total-heptafurans	407.7818	40.05	316.094	1.159	0.080			2.11	1.05	YES	8.4
10	36	Total-penta1	339.8597	27.95	498.347		0.075			0.57	1.55	YES	3.8
11	11	2378-TCDD	319.8965	27.23	669.673	0.939	0.106	0.106		0.67	0.77	NO	3.7
12	41	Total-tetradioxins	319.8965	26.56	3200.317	0.939	0.508			4.70	0.77	YES	20.2
13	45	Total-Dioxins	319.8965	23.61	262.178	0.918	0.043			1.84	0.77	YES	2.0
14	45	Total-Dioxins	319.8965	22.33	187.039	0.918	0.030			1.49	0.77	YES	2.1
15	42	Total-pentadioxins	355.8546	30.72	1288.485	0.930	0.256			3.29	1.55	YES	12.1
16	43	Total-hexadioxins	389.8157	35.75	1484.208	0.890	0.311			6.29	1.24	YES	20.4
17	43	Total-hexadioxins	389.8157	34.84	330.747	0.890	0.069			1.21	1.24	NO	3.7
18	43	Total-hexadioxins	389.8157	36.84	1042.720	0.890	0.218			3.98	1.24	YES	18.0
19	43	Total-hexadioxins	389.8157	35.88	1511.762	0.890	0.317			11.31	1.24	YES	20.2
20	16	1234678-HpCDD	423.7766	41.96	978.628	0.966	0.251	0.206		0.72	1.05	YES	6.1
21	44	Total-heptadioxins	423.7766	40.64	2121.792	0.966	0.544			0.95	1.05	NO	12.8
22	17	OCDD	457.7377	48.07	4814.456	0.921	1.589	1.390		1.16	0.89	YES	46.2

PFK1

	#	Name	Trace	RT	Abs Resp	RRF M...	DS	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	22.90	0.000							2.7
2	48	FUNCTION1 PFK	330.9792	21.79	0.000							12.5

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

PFK2

	#	Name	Trace	RT	Abs Resp	RSP Mul	Sq	EMPC	P Resp	P Hab	LC Re	S/N
1	49	FUNCTION2 PFK	366.9792	29.09	0.000	0.000						1.7
2	49	FUNCTION2 PFK	366.9792	28.94	0.000	0.000						3.1
3	49	FUNCTION2 PFK	366.9792	32.01	0.000	0.000						0.8
4	49	FUNCTION2 PFK	366.9792	31.93	0.000	0.000						0.7
5	49	FUNCTION2 PFK	366.9792	31.81	0.000	0.000						1.8
6	49	FUNCTION2 PFK	366.9792	31.66	0.000	0.000						1.1
7	49	FUNCTION2 PFK	366.9792	31.53	0.000	0.000						0.7
8	49	FUNCTION2 PFK	366.9792	31.49	0.000	0.000						0.6
9	49	FUNCTION2 PFK	366.9792	31.41	0.000	0.000						0.5
10	49	FUNCTION2 PFK	366.9792	31.05	0.000	0.000						1.3
11	49	FUNCTION2 PFK	366.9792	30.91	0.000	0.000						1.2
12	49	FUNCTION2 PFK	366.9792	30.62	0.000	0.000						1.5
13	49	FUNCTION2 PFK	366.9792	30.48	0.000	0.000						1.2
14	49	FUNCTION2 PFK	366.9792	30.20	0.000	0.000						1.3
15	49	FUNCTION2 PFK	366.9792	29.83	0.000	0.000						0.6
16	49	FUNCTION2 PFK	366.9792	29.60	0.000	0.000						1.0
17	49	FUNCTION2 PFK	366.9792	29.20	0.000	0.000						1.5
18	49	FUNCTION2 PFK	366.9792	29.16	0.000	0.000						1.8
19	49	FUNCTION2 PFK	366.9792	33.00	0.000	0.000						1.5
20	49	FUNCTION2 PFK	366.9792	32.94	0.000	0.000						1.5
21	49	FUNCTION2 PFK	366.9792	32.64	0.000	0.000						0.9
22	49	FUNCTION2 PFK	366.9792	32.50	0.000	0.000						1.3

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PFK3

	Ref	Name	Trace	RT	Abs Resp	RRF M...	%D	EMPC	1° Ratio	1² Ratio	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	34.99	0.000	0.000						0.9
2	50	FUNCTION3 PFK	380.9760	34.95	0.000	0.000						1.2
3	50	FUNCTION3 PFK	380.9760	34.81	0.000	0.000						0.3
4	50	FUNCTION3 PFK	380.9760	34.69	0.000	0.000						0.5
5	50	FUNCTION3 PFK	380.9760	34.64	0.000	0.000						0.4
6	50	FUNCTION3 PFK	380.9760	34.52	0.000	0.000						0.5
7	50	FUNCTION3 PFK	380.9760	34.32	0.000	0.000						6.1
8	50	FUNCTION3 PFK	380.9760	34.18	0.000	0.000						10.9
9	50	FUNCTION3 PFK	380.9760	33.96	0.000	0.000						18.6
10	50	FUNCTION3 PFK	380.9760	33.77	0.000	0.000						23.7
11	50	FUNCTION3 PFK	380.9760	33.72	0.000	0.000						25.4
12	50	FUNCTION3 PFK	380.9760	37.35	0.000	0.000						0.4
13	50	FUNCTION3 PFK	380.9760	37.26	0.000	0.000						0.7
14	50	FUNCTION3 PFK	380.9760	37.06	0.000	0.000						0.6
15	50	FUNCTION3 PFK	380.9760	36.98	0.000	0.000						0.9
16	50	FUNCTION3 PFK	380.9760	36.94	0.000	0.000						1.0
17	50	FUNCTION3 PFK	380.9760	36.88	0.000	0.000						1.2
18	50	FUNCTION3 PFK	380.9760	36.65	0.000	0.000						1.0
19	50	FUNCTION3 PFK	380.9760	36.60	0.000	0.000						1.4
20	50	FUNCTION3 PFK	380.9760	36.41	0.000	0.000						0.8
21	50	FUNCTION3 PFK	380.9760	36.35	0.000	0.000						0.6
22	50	FUNCTION3 PFK	380.9760	36.20	0.000	0.000						0.5
23	50	FUNCTION3 PFK	380.9760	36.06	0.000	0.000						0.9
24	50	FUNCTION3 PFK	380.9760	36.01	0.000	0.000						1.5
25	50	FUNCTION3 PFK	380.9760	35.94	0.000	0.000						0.9
26	50	FUNCTION3 PFK	380.9760	35.67	0.000	0.000						1.2
27	50	FUNCTION3 PFK	380.9760	35.42	0.000	0.000						1.4
28	50	FUNCTION3 PFK	380.9760	38.96	0.000	0.000						0.6
29	50	FUNCTION3 PFK	380.9760	38.92	0.000	0.000						0.9
30	50	FUNCTION3 PFK	380.9760	38.74	0.000	0.000						0.7
31	50	FUNCTION3 PFK	380.9760	38.62	0.000	0.000						0.4
32	50	FUNCTION3 PFK	380.9760	38.49	0.000	0.000						1.3
33	50	FUNCTION3 PFK	380.9760	38.27	0.000	0.000						1.0
34	50	FUNCTION3 PFK	380.9760	38.22	0.000	0.000						0.9
35	50	FUNCTION3 PFK	380.9760	37.95	0.000	0.000						1.1
36	50	FUNCTION3 PFK	380.9760	37.88	0.000	0.000						1.7
37	50	FUNCTION3 PFK	380.9760	37.81	0.000	0.000						0.9
38	50	FUNCTION3 PFK	380.9760	37.76	0.000	0.000						1.6
39	50	FUNCTION3 PFK	380.9760	37.46	0.000	0.000						1.1

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PFK4

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	51 FUNCTION4 PFK	430.9728	40.49	0.000							0.9
	51 FUNCTION4 PFK	430.9728	40.17	0.000							1.0
	51 FUNCTION4 PFK	430.9728	39.23	0.000							0.9
	51 FUNCTION4 PFK	430.9728	44.95	0.000							0.5
	51 FUNCTION4 PFK	430.9728	44.91	0.000							1.1
	51 FUNCTION4 PFK	430.9728	44.74	0.000							0.8
	51 FUNCTION4 PFK	430.9728	44.42	0.000							1.4
	51 FUNCTION4 PFK	430.9728	43.46	0.000							0.9
	51 FUNCTION4 PFK	430.9728	43.17	0.000							0.8
	51 FUNCTION4 PFK	430.9728	42.86	0.000							1.3
	51 FUNCTION4 PFK	430.9728	42.71	0.000							1.1
	51 FUNCTION4 PFK	430.9728	41.89	0.000							0.7
	51 FUNCTION4 PFK	430.9728	41.82	0.000							0.6
	51 FUNCTION4 PFK	430.9728	41.78	0.000							0.9
	51 FUNCTION4 PFK	430.9728	41.68	0.000							1.2
	51 FUNCTION4 PFK	430.9728	41.18	0.000							1.4
	51 FUNCTION4 PFK	430.9728	41.12	0.000							0.8
	51 FUNCTION4 PFK	430.9728	41.09	0.000							1.5
	51 FUNCTION4 PFK	430.9728	40.92	0.000							0.6

PFK5

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	52 FUNCTION5 PFK	480.9696	48.55	0.000							1.8
	52 FUNCTION5 PFK	480.9696	48.03	0.000							0.5
	52 FUNCTION5 PFK	480.9696	47.85	0.000							0.9
	52 FUNCTION5 PFK	480.9696	47.63	0.000							1.3
	52 FUNCTION5 PFK	480.9696	47.60	0.000							0.6
	52 FUNCTION5 PFK	480.9696	47.27	0.000							1.0
	52 FUNCTION5 PFK	480.9696	47.17	0.000							0.7
	52 FUNCTION5 PFK	480.9696	46.92	0.000							1.3
	52 FUNCTION5 PFK	480.9696	46.77	0.000							1.5
	52 FUNCTION5 PFK	480.9696	46.67	0.000							0.6
	52 FUNCTION5 PFK	480.9696	46.43	0.000							1.8
	52 FUNCTION5 PFK	480.9696	46.13	0.000							1.0
	52 FUNCTION5 PFK	480.9696	45.16	0.000							0.6
	52 FUNCTION5 PFK	480.9696	45.14	0.000							0.8
	52 FUNCTION5 PFK	480.9696	45.10	0.000							1.0
	52 FUNCTION5 PFK	480.9696	49.69	0.000							2.1
	52 FUNCTION5 PFK	480.9696	49.62	0.000							0.7
	52 FUNCTION5 PFK	480.9696	49.10	0.000							1.4
	52 FUNCTION5 PFK	480.9696	48.94	0.000							1.7
	52 FUNCTION5 PFK	480.9696	48.91	0.000							1.6
	52 FUNCTION5 PFK	480.9696	48.78	0.000							1.3
	52 FUNCTION5 PFK	480.9696	48.73	0.000							1.1
	52 FUNCTION5 PFK	480.9696	48.70	0.000							1.2
	52 FUNCTION5 PFK	480.9696	48.66	0.000							1.1

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:23 Pacific Daylight Time

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

ETHERS1

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1	53	FUNCTION1 HXCD...	375.8364	27.26	0.000		0.000					4.1
2	53	FUNCTION1 HXCD...	375.8364	27.23	0.000		0.000					3.9
3	53	FUNCTION1 HXCD...	375.8364	26.14	0.000		0.000					3.8
4	53	FUNCTION1 HXCD...	375.8364	23.34	0.000		0.000					1.5
5	53	FUNCTION1 HXCD...	375.8364	23.22	0.000		0.000					1.9
6	53	FUNCTION1 HXCD...	375.8364	22.09	0.000		0.000					2.2
7	53	FUNCTION1 HXCD...	375.8364	28.69	0.000		0.000					2.7

ETHERS2

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
1	54	FUNCTION1 HPCD...	409.7974	24.09	0.000		0.000					2.0
2	54	FUNCTION1 HPCD...	409.7974	23.99	0.000		0.000					1.3
3	54	FUNCTION1 HPCD...	409.7974	23.93	0.000		0.000					2.4
4	54	FUNCTION1 HPCD...	409.7974	23.81	0.000		0.000					1.6
5	54	FUNCTION1 HPCD...	409.7974	23.73	0.000		0.000					1.5
6	54	FUNCTION1 HPCD...	409.7974	23.66	0.000		0.000					1.5
7	54	FUNCTION1 HPCD...	409.7974	23.60	0.000		0.000					2.6
8	54	FUNCTION1 HPCD...	409.7974	23.54	0.000		0.000					1.1
9	54	FUNCTION1 HPCD...	409.7974	22.76	0.000		0.000					2.1
10	54	FUNCTION1 HPCD...	409.7974	22.40	0.000		0.000					1.9
11	54	FUNCTION1 HPCD...	409.7974	22.28	0.000		0.000					0.8
12	54	FUNCTION1 HPCD...	409.7974	21.84	0.000		0.000					2.3
13	54	FUNCTION1 HPCD...	409.7974	21.52	0.000		0.000					1.2
14	54	FUNCTION1 HPCD...	409.7974	21.31	0.000		0.000					1.4
15	54	FUNCTION1 HPCD...	409.7974	27.87	0.000		0.000					1.7
16	54	FUNCTION1 HPCD...	409.7974	27.51	0.000		0.000					1.3
17	54	FUNCTION1 HPCD...	409.7974	27.39	0.000		0.000					1.2
18	54	FUNCTION1 HPCD...	409.7974	27.33	0.000		0.000					1.7
19	54	FUNCTION1 HPCD...	409.7974	26.86	0.000		0.000					1.5
20	54	FUNCTION1 HPCD...	409.7974	26.72	0.000		0.000					1.3
21	54	FUNCTION1 HPCD...	409.7974	25.78	0.000		0.000					1.5
22	54	FUNCTION1 HPCD...	409.7974	25.65	0.000		0.000					2.5
23	54	FUNCTION1 HPCD...	409.7974	25.33	0.000		0.000					1.1
24	54	FUNCTION1 HPCD...	409.7974	25.27	0.000		0.000					2.2
25	54	FUNCTION1 HPCD...	409.7974	25.08	0.000		0.000					1.5
26	54	FUNCTION1 HPCD...	409.7974	25.02	0.000		0.000					1.7
27	54	FUNCTION1 HPCD...	409.7974	24.75	0.000		0.000					1.6
28	54	FUNCTION1 HPCD...	409.7974	24.60	0.000		0.000					1.2
29	54	FUNCTION1 HPCD...	409.7974	24.45	0.000		0.000					3.3
30	54	FUNCTION1 HPCD...	409.7974	24.17	0.000		0.000					1.3
31	54	FUNCTION1 HPCD...	409.7974	28.65	0.000		0.000					2.2
32	54	FUNCTION1 HPCD...	409.7974	28.45	0.000		0.000					1.3
33	54	FUNCTION1 HPCD...	409.7974	28.02	0.000		0.000					1.6

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ETHERS3

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	32.76	0.000		0.000					1.7
2	55	FUNCTION2 HPCD...	409.7974	32.57	0.000		0.000					2.0
3	55	FUNCTION2 HPCD...	409.7974	32.46	0.000		0.000					1.6
4	55	FUNCTION2 HPCD...	409.7974	32.08	0.000		0.000					1.4
5	55	FUNCTION2 HPCD...	409.7974	31.28	0.000		0.000					2.1
6	55	FUNCTION2 HPCD...	409.7974	30.09	0.000		0.000					1.4
7	55	FUNCTION2 HPCD...	409.7974	30.03	0.000		0.000					1.6
8	55	FUNCTION2 HPCD...	409.7974	29.81	0.000		0.000					1.2
9	55	FUNCTION2 HPCD...	409.7974	29.34	0.000		0.000					2.9
10	55	FUNCTION2 HPCD...	409.7974	28.95	0.000		0.000					3.4

ETHERS4

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445.7555	37.91	0.000		0.000					3.8

ETHERS5

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	44.96	0.000		0.000					4.3
2	57	FUNCTION4 NCDPE	479.7165	42.96	0.000		0.000					2.6
3	57	FUNCTION4 NCDPE	479.7165	42.36	0.000		0.000					2.1
4	57	FUNCTION4 NCDPE	479.7165	42.26	0.000		0.000					2.6
5	57	FUNCTION4 NCDPE	479.7165	41.83	0.000		0.000					1.8
6	57	FUNCTION4 NCDPE	479.7165	41.77	0.000		0.000					1.6
7	57	FUNCTION4 NCDPE	479.7165	39.88	0.000		0.000					3.4
8	57	FUNCTION4 NCDPE	479.7165	39.65	0.000		0.000					2.4
9	57	FUNCTION4 NCDPE	479.7165	39.47	0.000		0.000					2.7

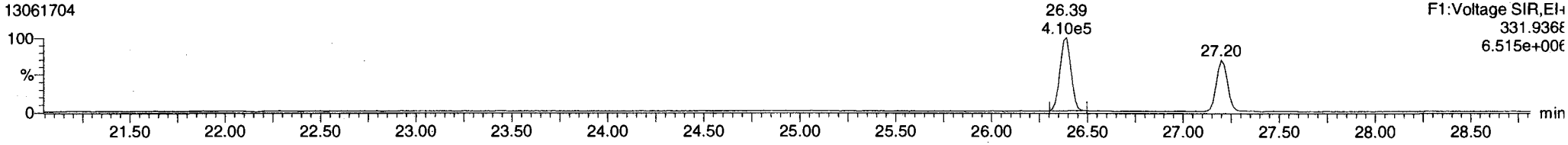
ETHERS6

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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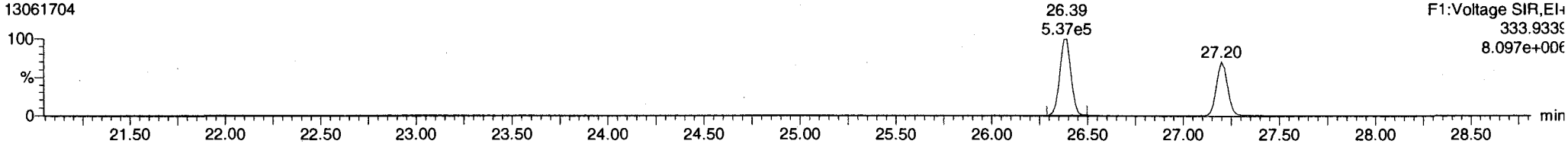

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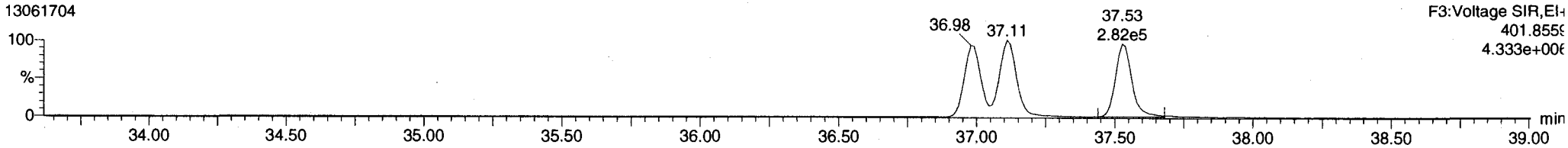

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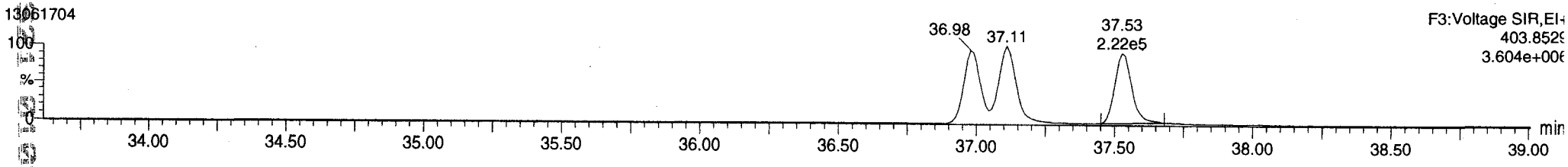
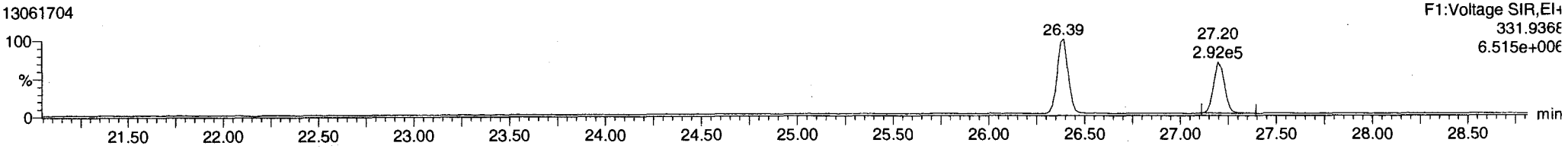


ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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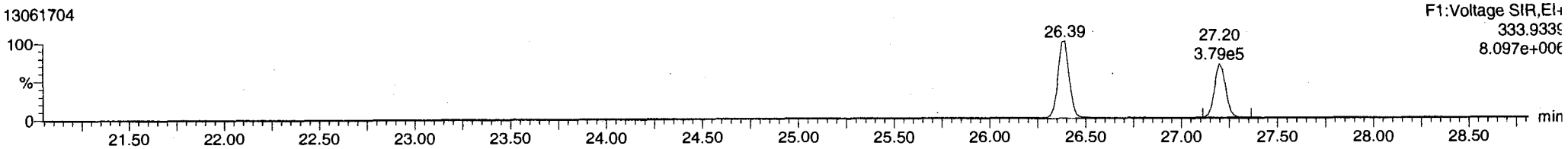

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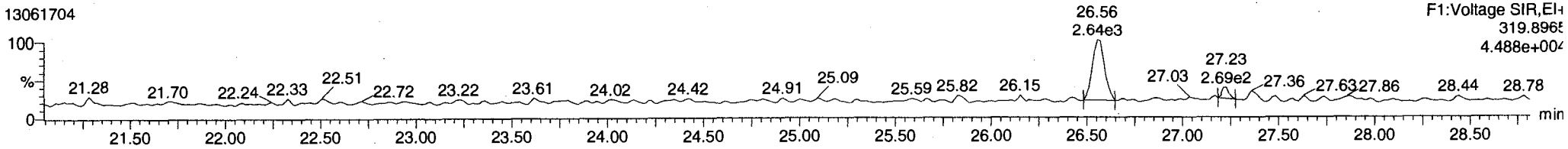

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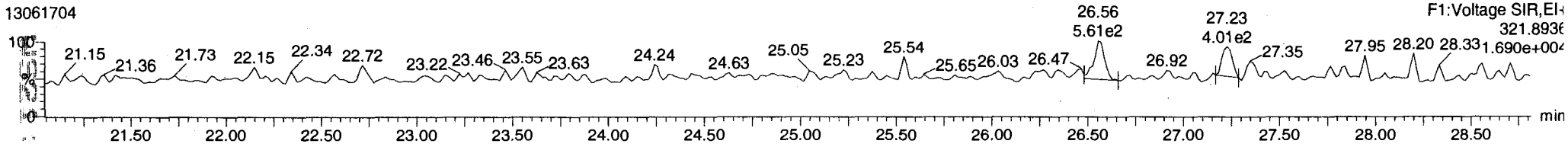
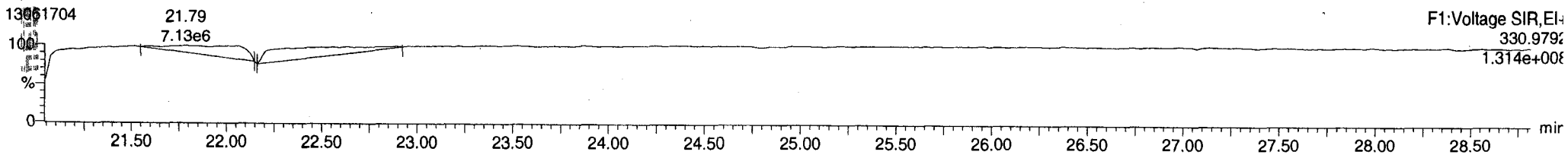


FUNCTION1 PFK



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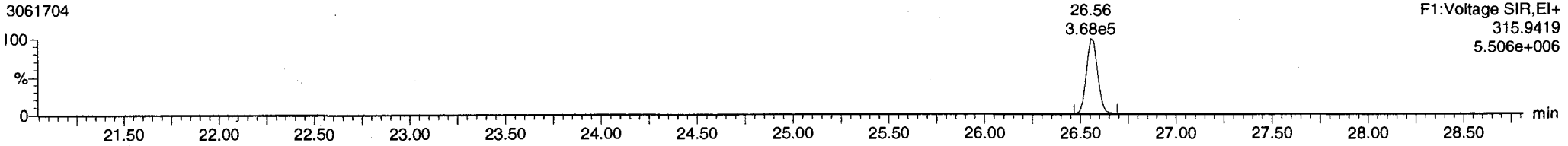
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:23 Pacific Daylight Time

D: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

3C-2378-TCDF



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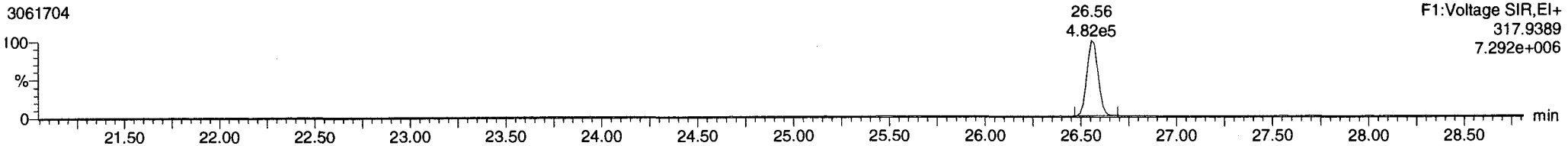
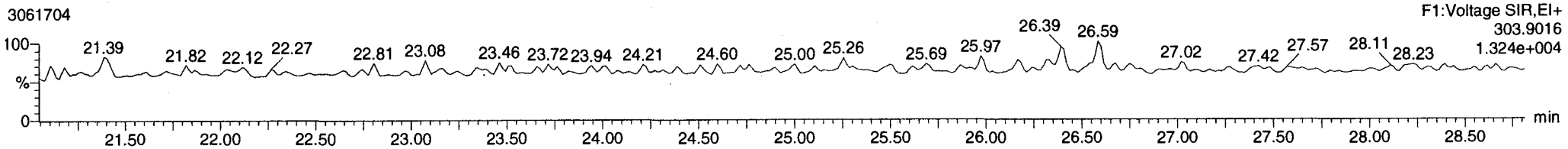
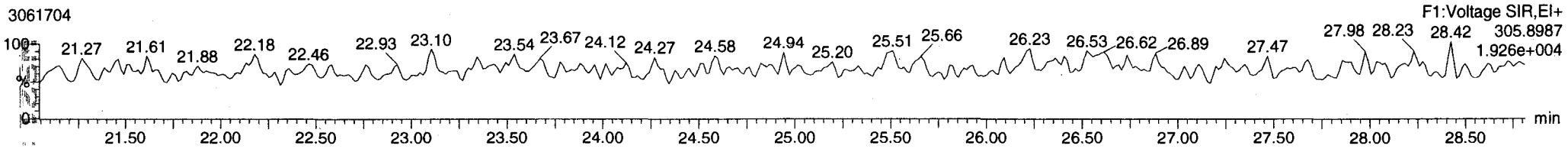


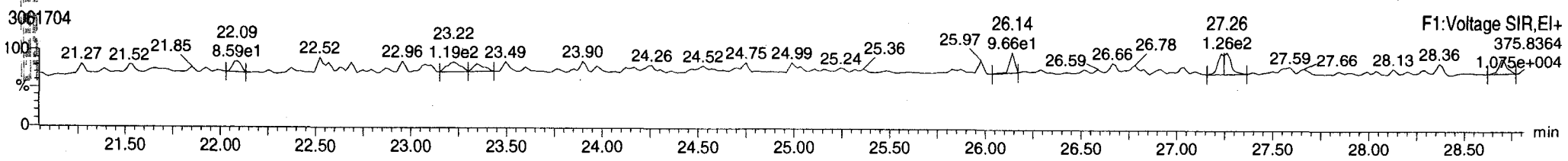
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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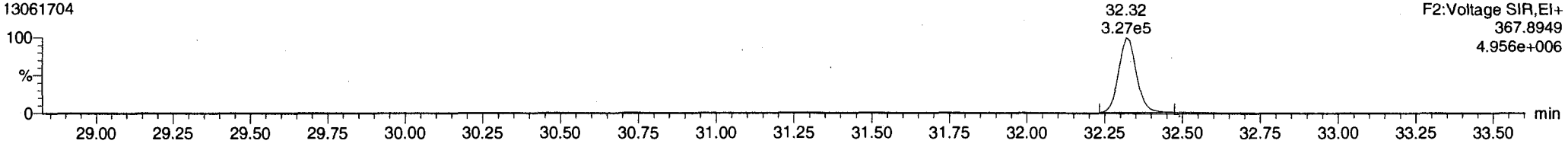
13C-12378-PeCDD



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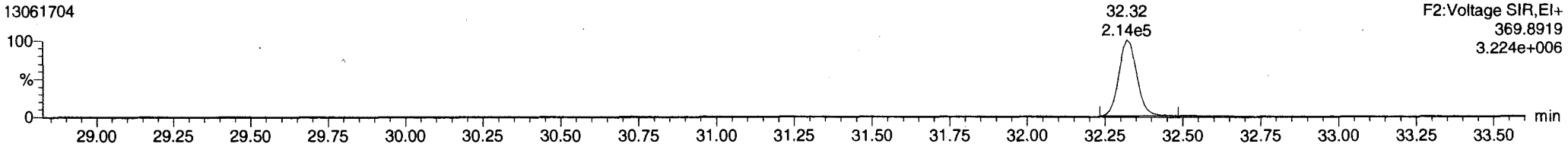
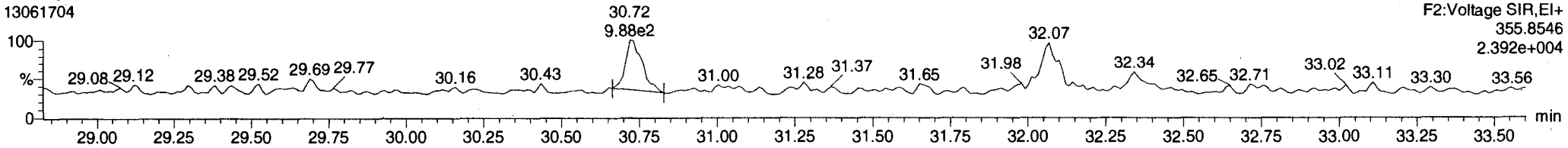
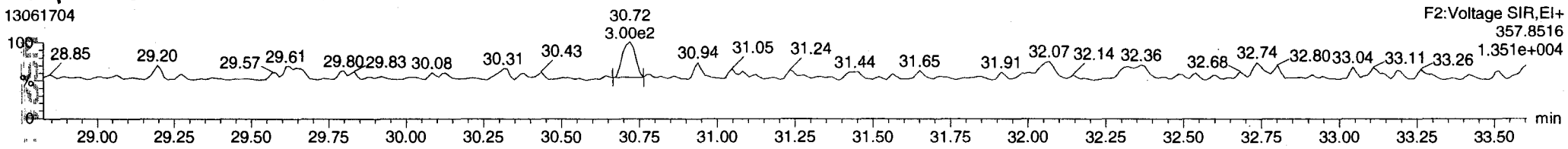


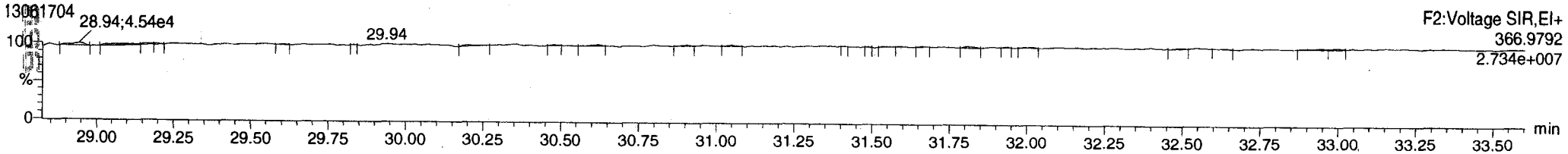
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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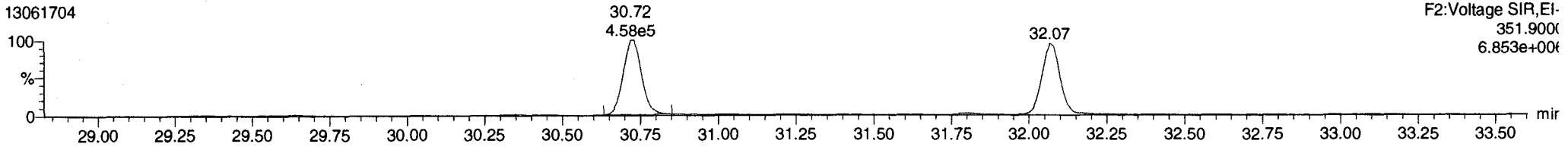
ID: WS30MBS, Name: 13061704, Date: 17-Jun-2013, Time: 16:45:51, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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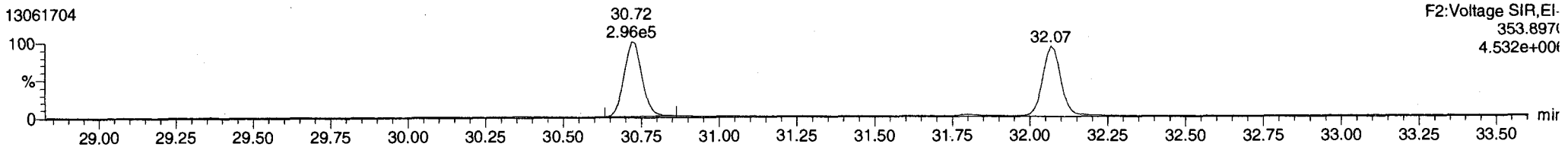

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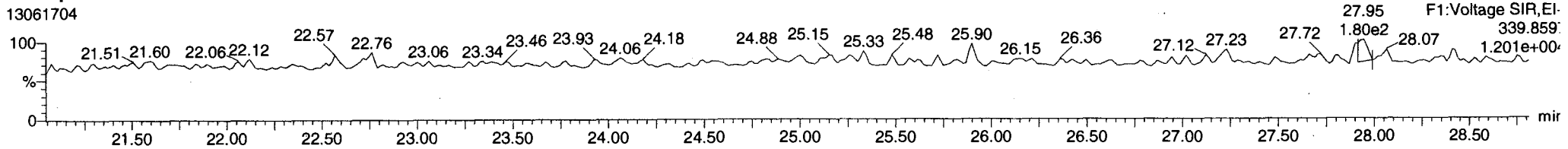
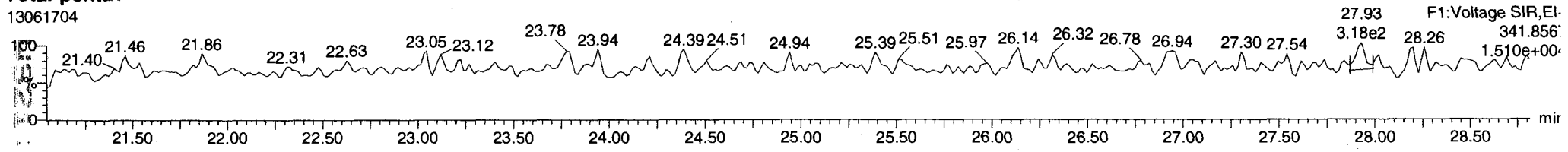
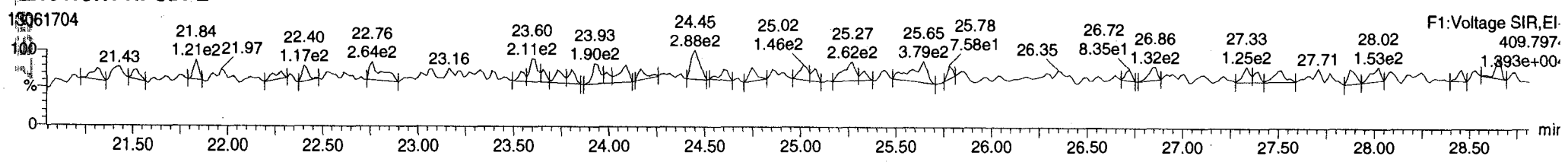


Total-penta1



FUNCTION1 HPCDPE



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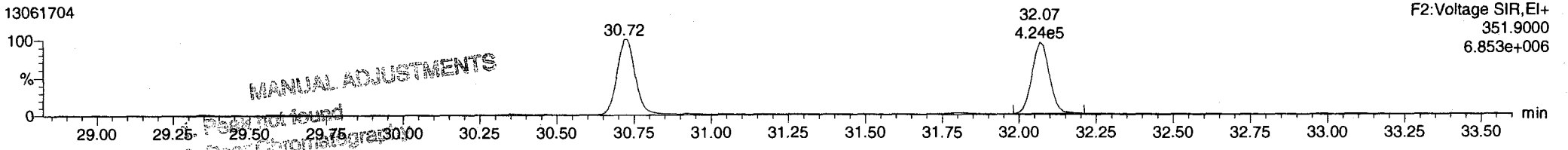
13C-23478-PeCDF



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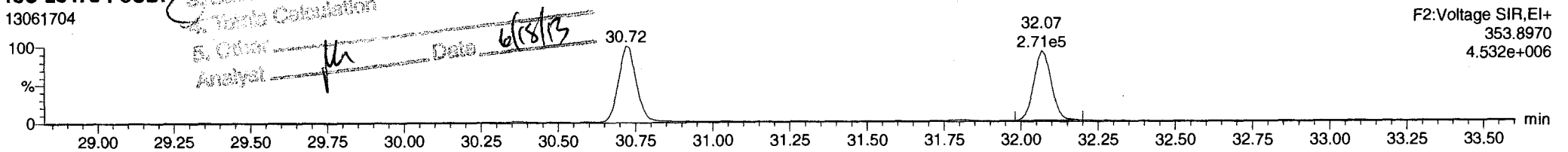
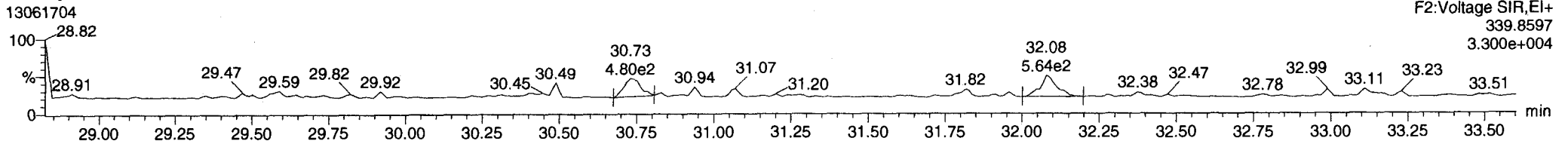
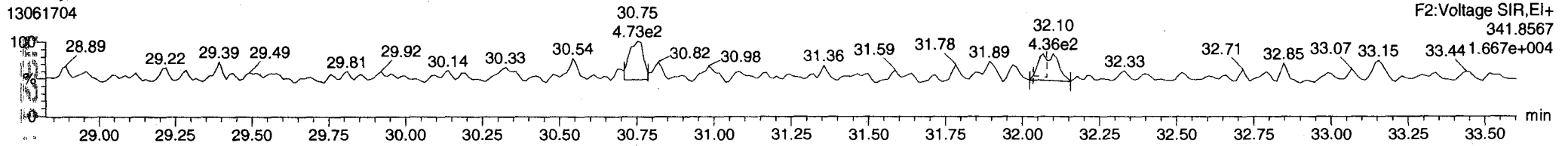


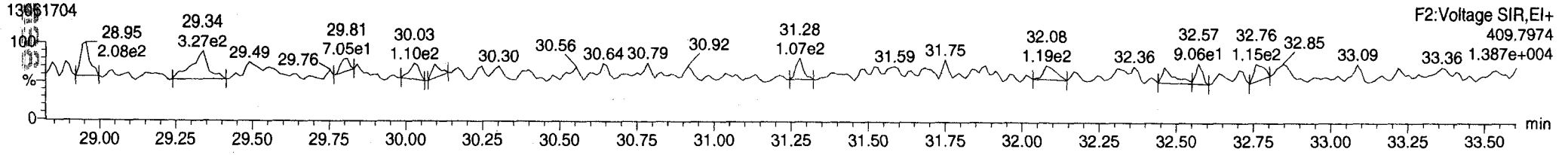
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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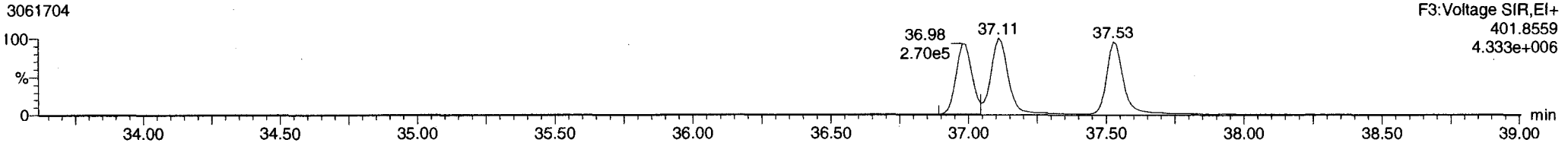
3C-123478-HxCDD



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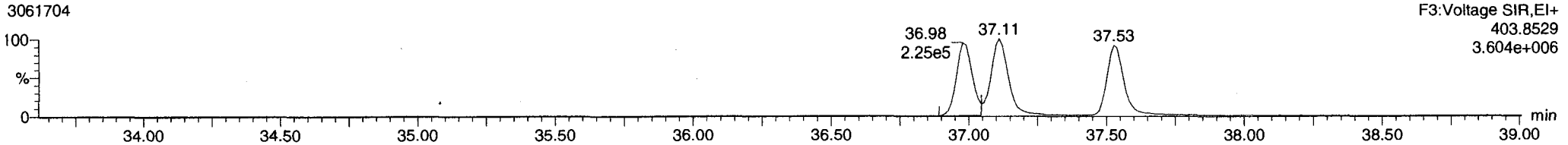

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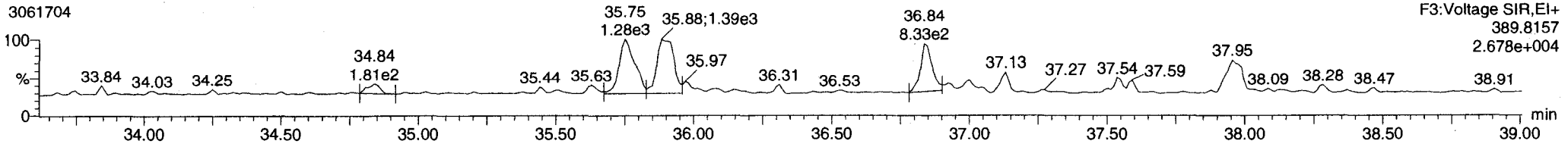
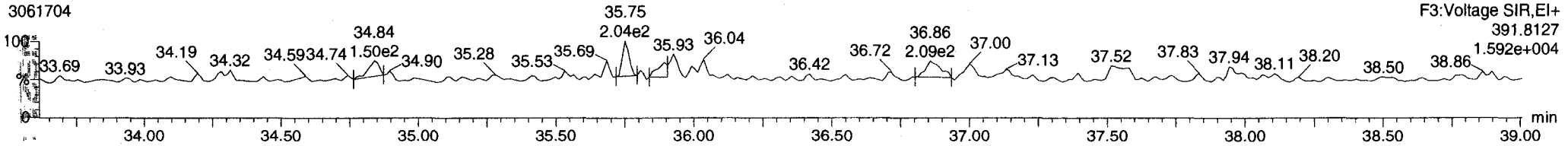
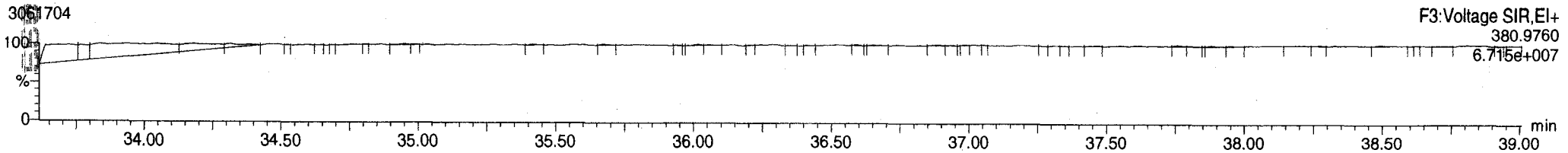


Total-hexadioxins



FUNCTION3 PFK



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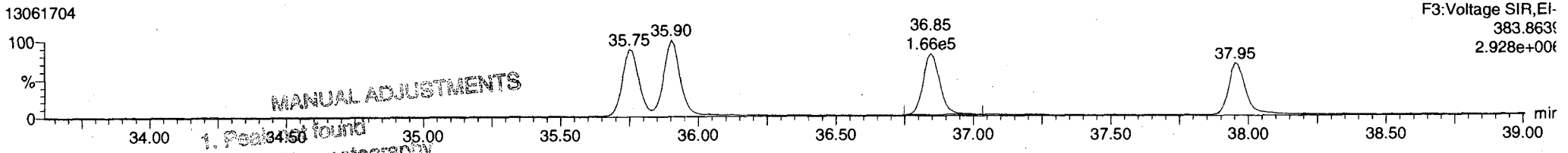
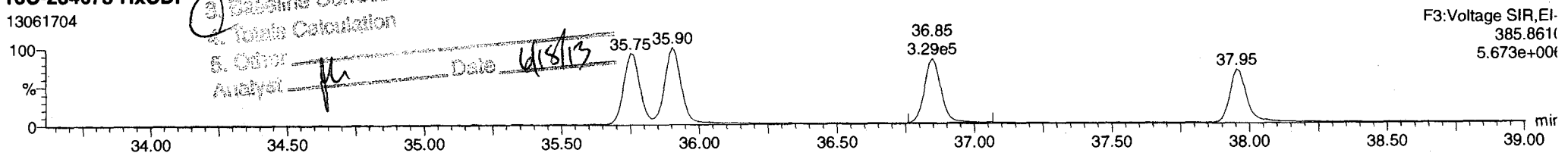
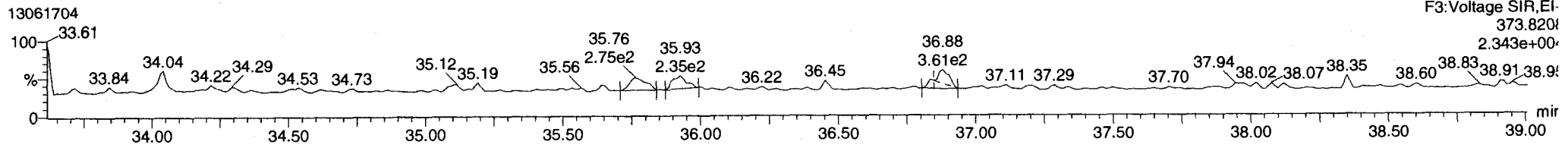
13C-234678-HxCDF



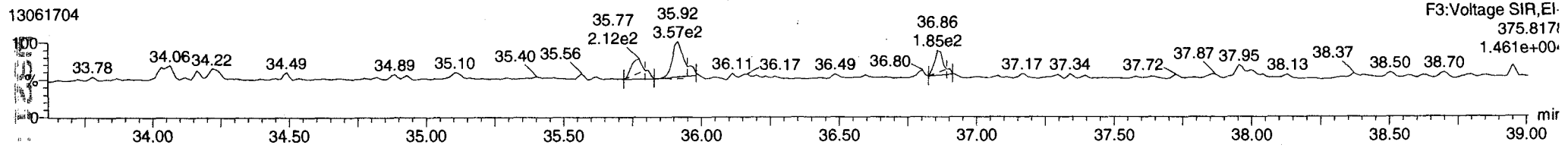
13C-234678-HxCDF



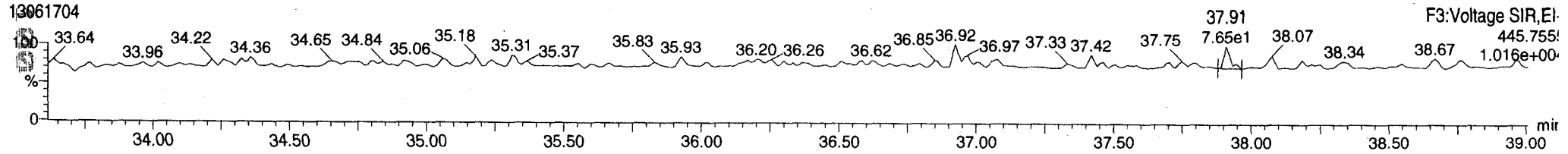
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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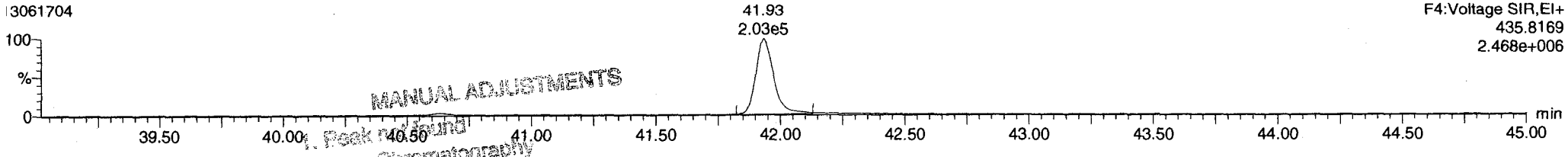
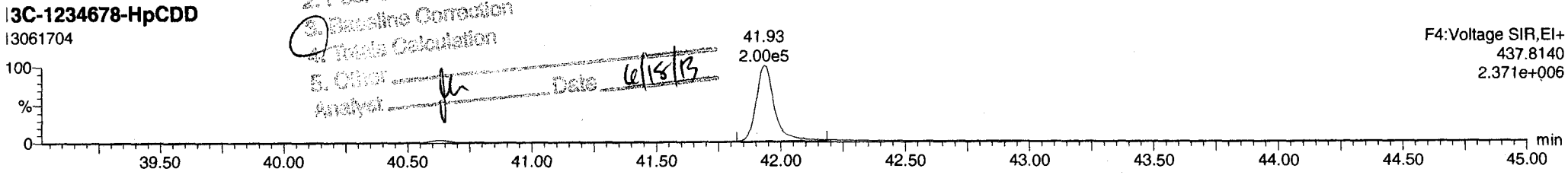
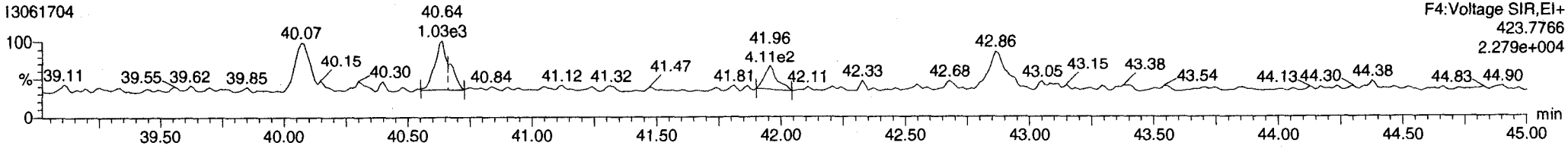
13C-1234678-HpCDD



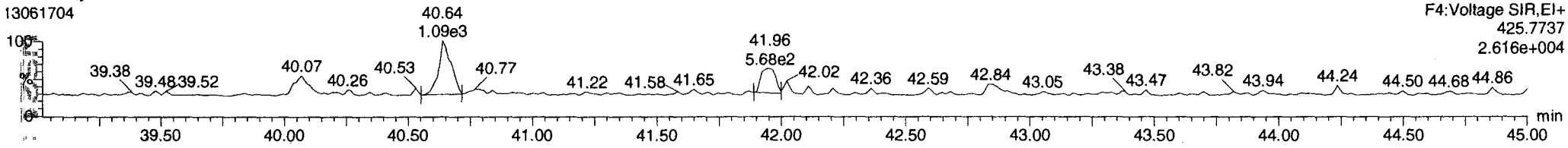
13C-1234678-HpCDD



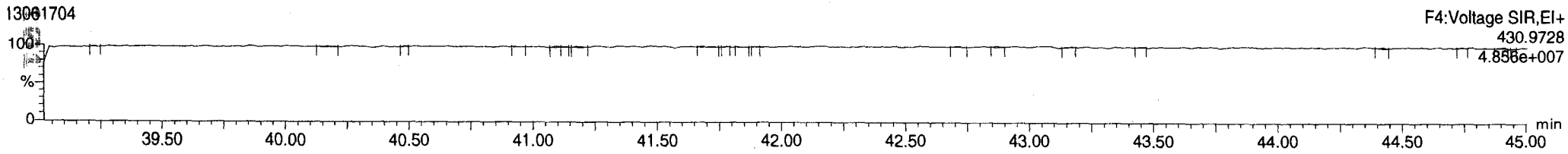
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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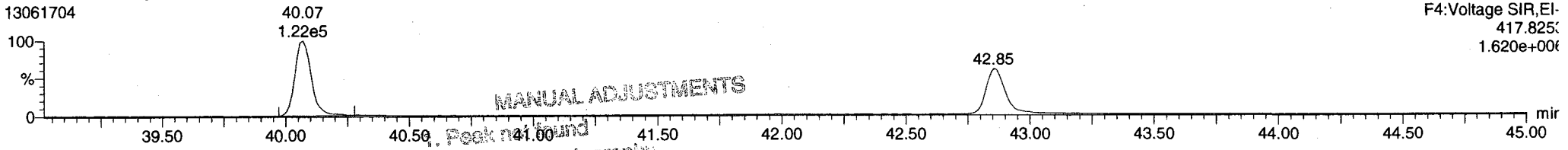
13C-1234678-HpCDF



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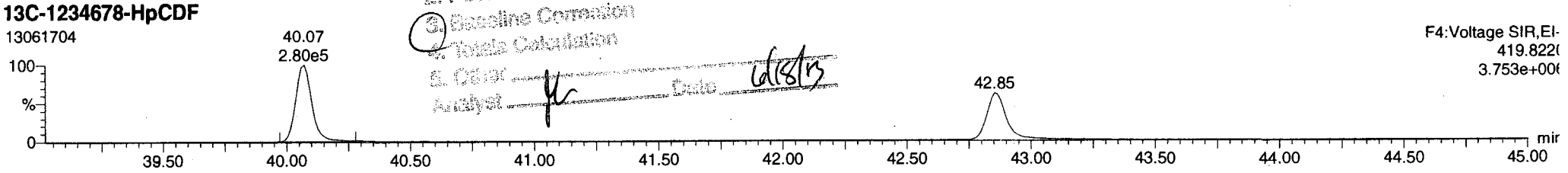
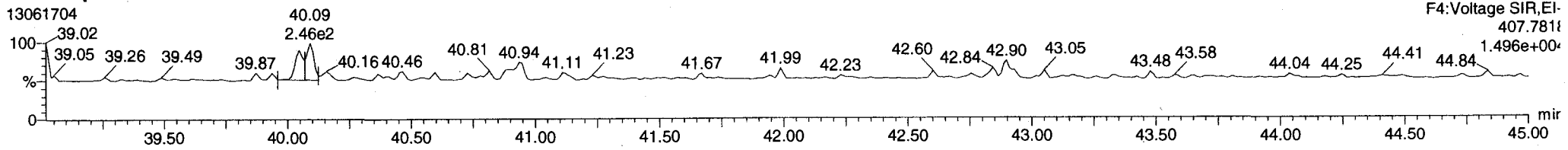
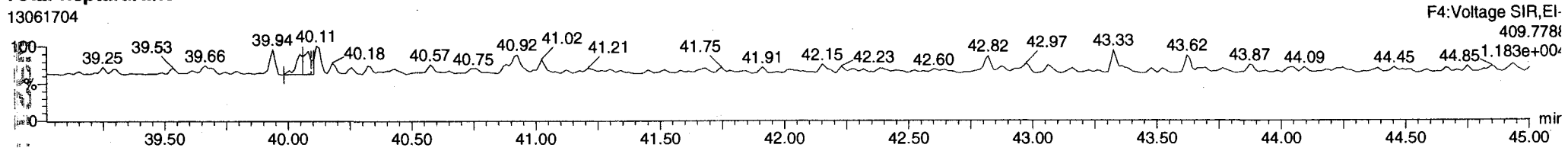


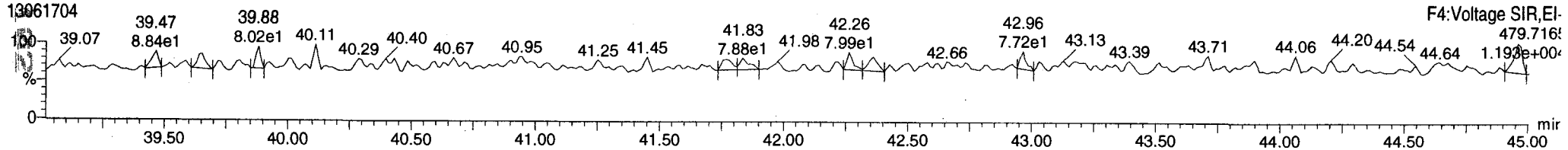
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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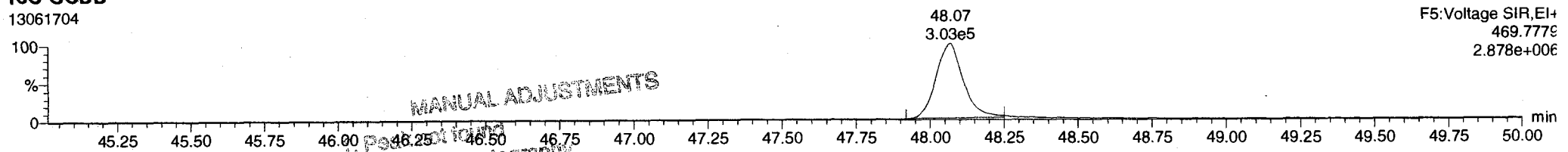
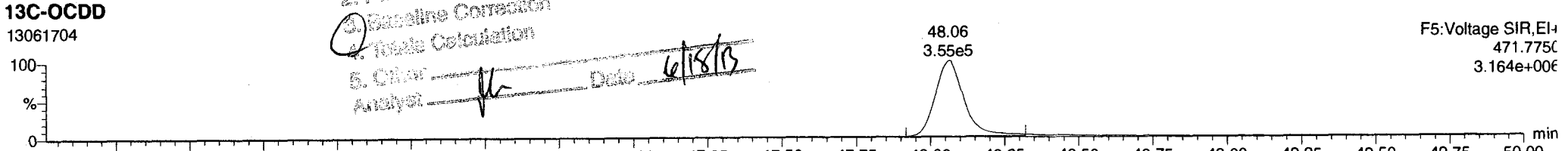
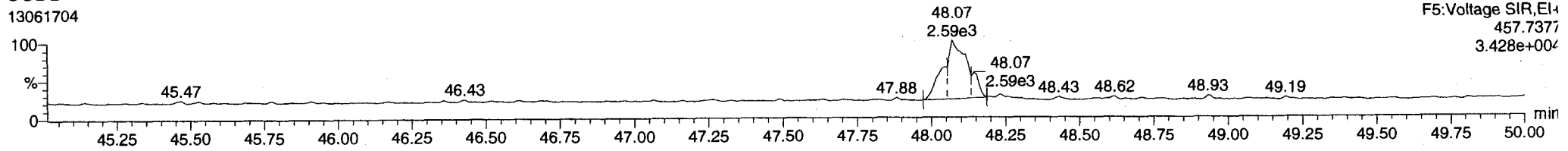
13C-OCDD



13C-OCDD



OCDD



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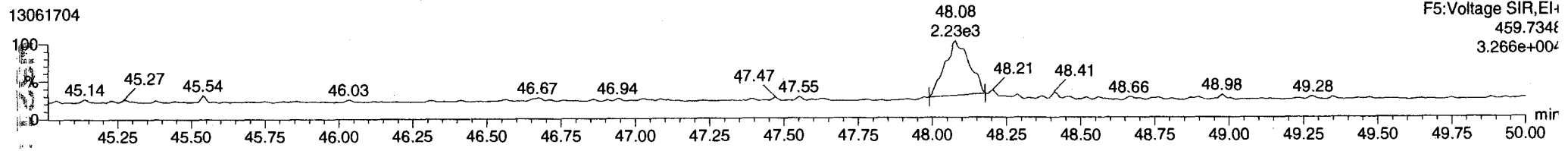
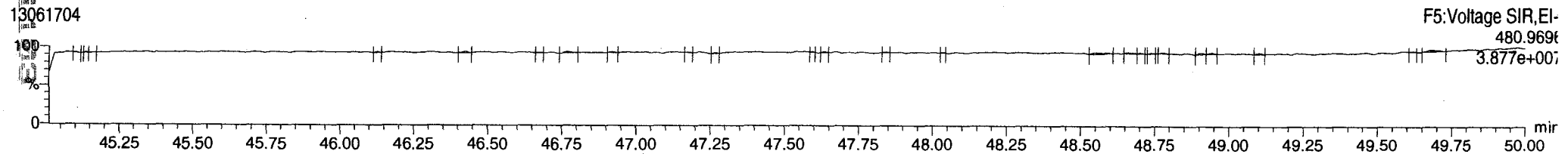


FUNCTION5 PFK



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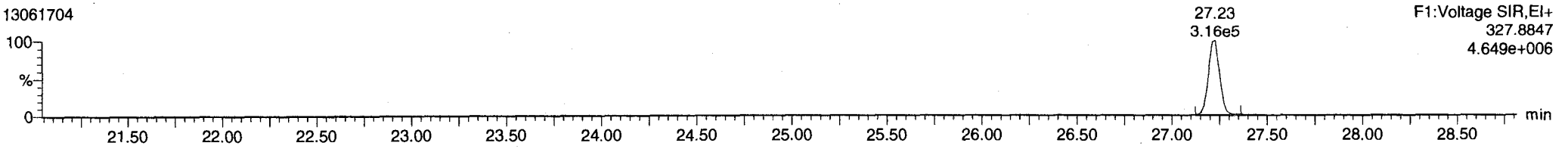
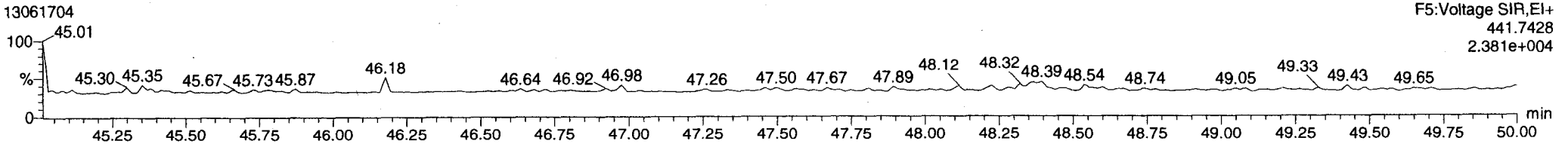
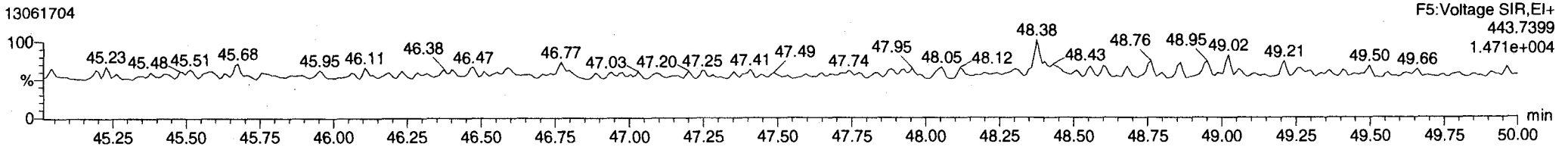
37CL-2378-TCDD



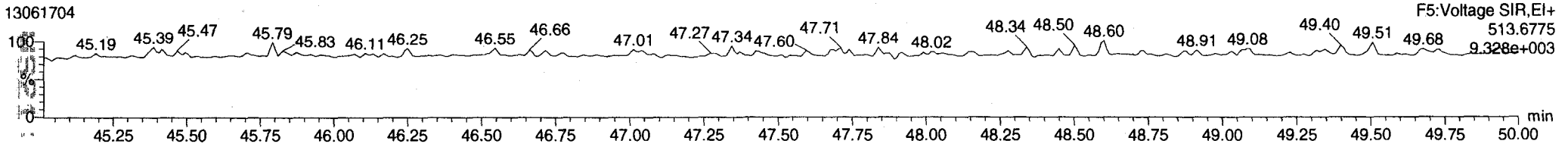
OCDF



OCDF



FUNCTION5 DCDPE



TS5 TS5

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

pk 6/18/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

Name	RT	Area	Height	Response	S/N	Ratio	Theor.	Ion Ratio	Lower	Upper	Flags	Conc.	Exp. Conc.
2378-TCDF	26.586	1.001	3.12e4	3.99e4	0.832	0.782	0.770	314.6	1363	2806	4.29e5	5.81e5	NO	9.847	9.847
12378-PeCDF	30.742	1.000	2.01e5	1.30e5	0.853	1.547	1.550	1645.1	1759	3284	2.89e6	1.91e6	NO	49.511	49.511
23478-PeCDF	32.090	1.000	1.84e5	1.22e5	0.884	1.509	1.550	1545.9	1759	3284	2.72e6	1.84e6	NO	47.303	47.303
123478-HxCDF	35.784	1.001	1.45e5	1.21e5	1.017	1.197	1.240	508.6	4177	3089	2.12e6	1.77e6	NO	49.317	49.317
234678-HxCDF	36.869	1.001	1.44e5	1.16e5	1.067	1.237	1.240	491.4	4177	3089	2.05e6	1.67e6	NO	47.981	47.981
123678-HxCDF	35.926	1.001	1.66e5	1.40e5	0.999	1.189	1.240	560.9	4177	3089	2.34e6	1.91e6	NO	50.622	50.622
123789-HxCDF	37.976	1.000	1.13e5	9.32e4	0.947	1.214	1.240	382.3	4177	3089	1.60e6	1.30e6	NO	49.426	49.426
1234678-HpCDF	40.092	1.000	1.25e5	1.23e5	1.151	1.013	1.050	747.2	2163	2375	1.62e6	1.59e6	NO	55.075	55.075
1234789-HpCDF	42.887	1.000	8.22e4	8.30e4	1.166	0.990	1.050	434.7	2163	2375	9.40e5	9.41e5	NO	47.425	47.425
OCDF	48.385	1.007	1.34e5	1.57e5	1.001	0.854	0.890	772.7	1492	2024	1.15e6	1.31e6	NO	90.866	90.866
2378-TCDD	27.229	1.001	2.98e4	4.02e4	0.939	0.741	0.770	184.8	2257	1617	4.17e5	5.70e5	NO	10.315	10.315
12378-PeCDD	32.342	1.000	1.53e5	1.02e5	0.930	1.498	1.550	1044.5	2136	1685	2.23e6	1.46e6	NO	47.618	47.618
123478-HxCDD	37.000	1.000	1.24e5	1.01e5	0.930	1.238	1.240	749.2	2471	2050	1.85e6	1.50e6	NO	46.553	46.553
123678-HxCDD	37.132	1.000	1.34e5	1.10e5	0.854	1.220	1.240	727.4	2471	2050	1.80e6	1.51e6	NO	48.714	48.714
123789-HxCDD	37.549	1.012	1.24e5	9.38e4	0.885	1.323	1.240	672.0	2471	2050	1.66e6	1.33e6	NO	44.442	44.442
1234678-HpCDD	41.955	1.000	9.53e4	9.19e4	0.966	1.037	1.050	742.9	1497	1544	1.11e6	1.08e6	NO	47.687	47.687
OCDD	48.089	1.000	1.34e5	1.56e5	0.921	0.860	0.890	777.4	1601	1777	1.24e6	1.47e6	NO	98.488	98.488
13C-2378-TCDF	26.571	1.007	3.73e5	4.95e5	1.283	0.753	0.770	2558.0	2090	10426	5.35e6	7.20e6	NO		71.653
13C-12378-PeCDF	30.730	1.164	4.73e5	3.10e5	1.051	1.527	1.550	1720.2	3981	3891	6.85e6	4.48e6	NO		78.902
13C-23478-PeCDF	32.079	1.215	4.41e5	2.89e5	1.030	1.526	1.550	1650.9	3981	3891	6.57e6	4.22e6	NO		75.160
13C-123478-HxCDF	35.762	0.953	1.77e5	3.54e5	1.069	0.501	0.510	867.9	2933	4218	2.55e6	5.12e6	NO		87.982
13C-123678-HxCDF	35.904	0.956	2.00e5	4.04e5	1.124	0.494	0.510	968.1	2933	4218	2.84e6	5.59e6	NO		95.250
13C-234678-HxCDF	36.847	0.982	1.70e5	3.38e5	1.041	0.503	0.510	795.6	2933	4218	2.33e6	4.74e6	NO		86.360
13C-123789-HxCDF	37.965	1.011	1.48e5	2.93e5	1.039	0.505	0.510	724.7	2933	4218	2.13e6	4.07e6	NO		75.198
13C-1234678-HpCDF	40.070	1.067	1.18e5	2.73e5	0.965	0.432	0.440	673.0	2376	2276	1.60e6	3.65e6	NO		71.800
13C-1234789-HpCDF	42.865	1.142	9.13e4	2.07e5	0.760	0.440	0.440	444.3	2376	2276	1.06e6	2.24e6	NO		69.611
13C-1234-TCDD	26.392	0.000	4.12e5	5.32e5	1.000	0.775	0.770	409.9	15074	4025	6.18e6	7.92e6	NO		100.000
13C-2378-TCDD	27.199	1.031	3.12e5	4.11e5	0.926	0.758	0.770	293.7	15074	4025	4.43e6	5.88e6	NO		82.728
13C-12378-PeCDD	32.331	1.225	3.51e5	2.26e5	0.734	1.553	1.550	1405.0	3672	1925	5.16e6	3.28e6	NO		83.275
13C-123478-HxCDD	36.990	0.985	2.88e5	2.32e5	0.984	1.240	1.240	2234.0	1912	1973	4.27e6	3.39e6	NO		93.572
13C-123678-HxCDD	37.121	0.989	3.24e5	2.64e5	1.043	1.227	1.240	2235.6	1912	1973	4.28e6	3.55e6	NO		99.917
13C-1234678-HpCDD	41.944	1.117	2.07e5	1.99e5	0.891	1.042	1.050	945.2	2558	3078	2.42e6	2.29e6	NO		80.754
13C-OCDD	48.071	1.281	3.04e5	3.35e5	0.849	0.907	0.890	996.6	2695	2257	2.69e6	3.03e6	NO		133.531

TSS 13-25-CN

ID: WS30PR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

Name	RT	Area	Height	Response	Ratio	Ratio R	Ratio L	S/N	Ions 1	Ions 2	Result 1	Result 2	Confirm	Std Amt	Rf
13C-123789-HxCDD	37.538	0.000	3.08e5	2.56e5	1.000	1.202	1.240	2259.5	1912	1973	4.32e6	3.57e6	NO		100.000
Total-tetrafurans			3.24e4		0.832				1363		4.48e5				10.273
Total-penta1			0.00e0						801		0.00e0				
Total-pentafurans			3.98e5		0.868				1759		5.78e6				99.958
Total-hexafurans			5.73e5		1.008				4177		8.22e6				199.089
Total-heptafurans			2.10e5		1.159				2163		2.61e6				103.873
Total-Furans			1.35e6		0.992				1363		1.82e7				504.058
Total-tetradioxins			3.09e4		0.939				2257		4.30e5				10.643
Total-pentadioxins			1.54e5		0.930				2136		2.25e6				47.910
Total-hexadioxins			3.87e5		0.890				2471		5.38e6				140.885
Total-heptadioxins			1.00e5		0.966				1497		1.18e6				49.734
Total-Dioxins			8.07e5		0.918				2257		1.05e7				347.661
Total-TEQ			2.15e6						2257		2.87e7				851.719
37CL-2378-TCDD	27.229	1.032	3.30e5		0.989			1586.9	2996		4.75e6				35.413
FUNCTION1 PFK			2.87e7						803053		1.74e8				
FUNCTION2 PFK			2.38e5						270533		7.50e6				0.000
FUNCTION3 PFK			7.35e5						527961		2.16e7				0.000
FUNCTION4 PFK			5.95e5						369317		2.04e7				
FUNCTION5 PFK			4.99e6						433841		5.80e7				
FUNCTION1 HXCDPE			4.98e2						574		1.25e4				0.000
FUNCTION1 HPCDPE			3.64e3						1821		8.29e4				0.000
FUNCTION2 HPCDPE			1.04e3						1875		2.57e4				0.000
FUNCTION3 OCDPE			0.00e0						598		0.00e0				
FUNCTION4 NCDPE			3.62e2						860		8.95e3				0.000
FUNCTION5 DCDPE			0.00e0						560		0.00e0				

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS300PR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
1	1	2378-TCDF	303.9016	26.59	71073.904	0.832	9.847	9.847	0.78	0.77	NO	314.6
2	35	Total-tetrafurans	303.9016	25.48	3078.518	0.832	0.427		0.67	0.77	NO	13.7

PP

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
1												

PF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
1	37	Total-pentafurans	339.8597	33.14	2262.301	0.868	0.344		1.17	1.55	YES	11.1
2	3	23478-PeCDF	339.8597	32.09	305509.875	0.884	47.303	47.303	1.51	1.55	NO	1545.9
3	37	Total-pentafurans	339.8597	30.95	10276.785	0.868	1.564		1.60	1.55	NO	49.0
4	2	12378-PeCDF	339.8597	30.74	330485.445	0.853	49.511	49.511	1.55	1.55	NO	1645.1
5	37	Total-pentafurans	339.8597	30.37	2617.184	0.868	0.398		1.39	1.55	NO	15.7
6	37	Total-pentafurans	339.8597	29.66	5502.874	0.868	0.837		3.03	1.55	YES	21.5

HF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
1	4	123478-HxCDF	373.8208	35.78	266140.196	1.017	49.317	49.317	1.20	1.24	NO	508.6
2	38	Total-hexafurans	373.8208	34.26	2934.558	1.008	0.559		0.88	1.24	YES	5.6
3	38	Total-hexafurans	373.8208	38.18	2255.651	1.008	0.430					6.5
4	7	123789-HxCDF	373.8208	37.98	206447.922	0.947	49.426	49.426	1.21	1.24	NO	382.3
5	5	234678-HxCDF	373.8208	36.87	259626.719	1.067	47.981	47.981	1.24	1.24	NO	491.4
6	38	Total-hexafurans	373.8208	36.16	1706.117	1.008	0.325		1.04	1.24	YES	5.1
7	38	Total-hexafurans	373.8208	36.09	2245.781	1.008	0.428		1.27	1.24	NO	6.9
8	6	123678-HxCDF	373.8208	35.93	305722.328	0.999	50.622	50.622	1.19	1.24	NO	560.9

HPF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
1	39	Total-heptafurans	407.7818	40.91	1708.519	1.159	0.428		1.23	1.05	YES	7.0
2	39	Total-heptafurans	407.7818	40.60	867.362	1.159	0.217		0.91	1.05	NO	4.2
3	8	1234678-HpCDF	407.7818	40.09	247880.961	1.151	55.075	55.075	1.01	1.05	NO	747.2
4	39	Total-heptafurans	407.7818	43.03	2910.332	1.159	0.728					15.5
5	9	1234789-HpCDF	407.7818	42.89	165162.907	1.166	47.425	47.425	0.99	1.05	NO	434.7

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
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ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Resp...	1° Ratio	1° Fl...	S/N
1	2378-TCDF	303.9016	26.59	71073.904	0.832	9.847	9.847	0.78	0.77	NO	314.6
35	Total-tetrafurans	303.9016	25.48	3078.518	0.832	0.427		0.67	0.77	NO	13.7
37	Total-pentafurans	339.8597	33.14	2262.301	0.868	0.344		1.17	1.55	YES	11.1
3	23478-PeCDF	339.8597	32.09	305509.875	0.884	47.303	47.303	1.51	1.55	NO	1545.9
37	Total-pentafurans	339.8597	30.95	10276.785	0.868	1.564		1.60	1.55	NO	49.0
2	12378-PeCDF	339.8597	30.74	330485.445	0.853	49.511	49.511	1.55	1.55	NO	1645.1
37	Total-pentafurans	339.8597	30.37	2617.184	0.868	0.398		1.39	1.55	NO	15.7
37	Total-pentafurans	339.8597	29.66	5502.874	0.868	0.837		3.03	1.55	YES	21.5
4	123478-HxCDF	373.8208	35.78	266140.196	1.017	49.317	49.317	1.20	1.24	NO	508.6
38	Total-hexafurans	373.8208	34.26	2934.558	1.008	0.559		0.88	1.24	YES	5.6
38	Total-hexafurans	373.8208	38.18	2255.651	1.008	0.430					6.5
7	123789-HxCDF	373.8208	37.98	206447.922	0.947	49.426	49.426	1.21	1.24	NO	382.3
5	234678-HxCDF	373.8208	36.87	259626.719	1.067	47.981	47.981	1.24	1.24	NO	491.4
38	Total-hexafurans	373.8208	36.16	1706.117	1.008	0.325		1.04	1.24	YES	5.1
38	Total-hexafurans	373.8208	36.09	2245.781	1.008	0.428		1.27	1.24	NO	6.9
6	123678-HxCDF	373.8208	35.93	305722.328	0.999	50.622	50.622	1.19	1.24	NO	560.9
39	Total-heptafurans	407.7818	40.91	1708.519	1.159	0.428		1.23	1.05	YES	7.0
39	Total-heptafurans	407.7818	40.60	867.362	1.159	0.217		0.91	1.05	NO	4.2
8	1234678-HpCDF	407.7818	40.09	247880.961	1.151	55.075	55.075	1.01	1.05	NO	747.2
39	Total-heptafurans	407.7818	43.03	2910.332	1.159	0.728					15.5
9	1234789-HpCDF	407.7818	42.89	165162.907	1.166	47.425	47.425	0.99	1.05	NO	434.7
10	OCDF	441.7428	48.39	290811.907	1.001	90.866	90.866	0.85	0.89	NO	772.7

TD

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	1° Ratio	1° R...	S/N
11	2378-TCDD	319.8965	27.23	70017.729	0.939	10.315	10.315	0.74	0.77	NO	184.8
41	Total-tetradioxins	319.8965	26.86	2230.206	0.939	0.329		0.96	0.77	YES	5.6

PD

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	1° Ratio	1° R...	S/N
12	12378-PeCDD	355.8546	32.34	255504.157	0.930	47.618	47.618	1.50	1.55	NO	1044.5
42	Total-pentadioxins	355.8546	30.74	1570.895	0.930	0.293		3.98	1.55	YES	8.6

HD

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	1° Ratio	1° R...	S/N
15	123789-HxCDD	389.8157	37.55	217968.937	0.885	44.442	44.442	1.32	1.24	NO	672.0
43	Total-hexadioxins	389.8157	37.32	2991.829	0.890	0.607		2.05	1.24	YES	14.3
14	123678-HxCDD	389.8157	37.13	244515.008	0.854	48.714	48.714	1.22	1.24	NO	727.4
13	123478-HxCDD	389.8157	37.00	224987.500	0.930	46.553	46.553	1.24	1.24	NO	749.2
43	Total-hexadioxins	389.8157	36.04	770.027	0.890	0.156		1.94	1.24	YES	3.0
43	Total-hexadioxins	389.8157	35.92	1407.635	0.890	0.286		7.07	1.24	YES	7.2
43	Total-hexadioxins	389.8157	34.83	623.139	0.890	0.126		1.59	1.24	YES	2.7

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ID: WS30PR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

HPD

	Lvl	Name	Trace	RT	Abs Resp	RRF/M	Conc	EMPC	I Ratio	T Ratio	I.R.	S/N
1	44	Total-heptadioxins	423.7766	42.15	3348.421	0.966	0.853					23.2
2	16	1234678-HpCDD	423.7766	41.96	187169.180	0.966	47.687	47.687	1.04	1.05	NO	742.9
3	44	Total-heptadioxins	423.7766	40.65	4687.256	0.966	1.194		1.07	1.05	NO	23.4

Dioxins,TD,PD,HD,HPD,OD

	Lvl	Name	Trace	RT	Abs Resp	RRF/M	Conc	EMPC	I Ratio	T Ratio	I.R.	S/N
1	11	2378-TCDD	319.8965	27.23	70017.729	0.939	10.315	10.315	0.74	0.77	NO	184.8
2	41	Total-tetradioxins	319.8965	26.86	2230.206	0.939	0.329		0.96	0.77	YES	5.6
3	12	12378-PeCDD	355.8546	32.34	255504.157	0.930	47.618	47.618	1.50	1.55	NO	1044.5
4	42	Total-pentadioxins	355.8546	30.74	1570.895	0.930	0.293		3.98	1.55	YES	8.6
5	15	123789-HxCDD	389.8157	37.55	217968.937	0.885	44.442	44.442	1.32	1.24	NO	672.0
6	43	Total-hexadioxins	389.8157	37.32	2991.829	0.890	0.607		2.05	1.24	YES	14.3
7	14	123678-HxCDD	389.8157	37.13	244515.008	0.854	48.714	48.714	1.22	1.24	NO	727.4
8	13	123478-HxCDD	389.8157	37.00	224987.500	0.930	46.553	46.553	1.24	1.24	NO	749.2
9	43	Total-hexadioxins	389.8157	36.04	770.027	0.890	0.156		1.94	1.24	YES	3.0
10	43	Total-hexadioxins	389.8157	35.92	1407.635	0.890	0.286		7.07	1.24	YES	7.2
11	43	Total-hexadioxins	389.8157	34.83	623.139	0.890	0.126		1.59	1.24	YES	2.7
12	44	Total-heptadioxins	423.7766	42.15	3348.421	0.966	0.853					23.2
13	16	1234678-HpCDD	423.7766	41.96	187169.180	0.966	47.687	47.687	1.04	1.05	NO	742.9
14	44	Total-heptadioxins	423.7766	40.65	4687.256	0.966	1.194		1.07	1.05	NO	23.4
15	17	OCDD	457.7377	48.09	290167.594	0.921	98.488	98.488	0.86	0.89	NO	777.4

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TotalTEQ,Furans,Dioxins

	Name	Trace	RT	Abs Resp	RRF M	%I	EMPC	9 Peak	1 Ratio	1 R	S/N
1	2378-TCDF	303.9016	26.59	71073.904	0.832	9.847	9.847	0.78	0.77	NO	314.6
35	Total-tetrafurans	303.9016	25.48	3078.518	0.832	0.427		0.67	0.77	NO	13.7
37	Total-pentafurans	339.8597	33.14	2262.301	0.868	0.344		1.17	1.55	YES	11.1
3	23478-PeCDF	339.8597	32.09	305509.875	0.884	47.303	47.303	1.51	1.55	NO	1545.9
37	Total-pentafurans	339.8597	30.95	10276.785	0.868	1.564		1.60	1.55	NO	49.0
2	12378-PeCDF	339.8597	30.74	330485.445	0.853	49.511	49.511	1.55	1.55	NO	1645.1
37	Total-pentafurans	339.8597	30.37	2617.184	0.868	0.398		1.39	1.55	NO	15.7
37	Total-pentafurans	339.8597	29.66	5502.874	0.868	0.837		3.03	1.55	YES	21.5
4	123478-HxCDF	373.8208	35.78	266140.196	1.017	49.317	49.317	1.20	1.24	NO	508.6
38	Total-hexafurans	373.8208	34.26	2934.558	1.008	0.559		0.88	1.24	YES	5.6
38	Total-hexafurans	373.8208	38.18	2255.651	1.008	0.430					6.5
7	123789-HxCDF	373.8208	37.98	206447.922	0.947	49.426	49.426	1.21	1.24	NO	382.3
5	234678-HxCDF	373.8208	36.87	259626.719	1.067	47.981	47.981	1.24	1.24	NO	491.4
38	Total-hexafurans	373.8208	36.16	1706.117	1.008	0.325		1.04	1.24	YES	5.1
38	Total-hexafurans	373.8208	36.09	2245.781	1.008	0.428		1.27	1.24	NO	6.9
6	123678-HxCDF	373.8208	35.93	305722.328	0.999	50.622	50.622	1.19	1.24	NO	560.9
39	Total-heptafurans	407.7818	40.91	1708.519	1.159	0.428		1.23	1.05	YES	7.0
39	Total-heptafurans	407.7818	40.60	867.362	1.159	0.217		0.91	1.05	NO	4.2
8	1234678-HpCDF	407.7818	40.09	247880.961	1.151	55.075	55.075	1.01	1.05	NO	747.2
39	Total-heptafurans	407.7818	43.03	2910.332	1.159	0.728					15.5
9	1234789-HpCDF	407.7818	42.89	165162.907	1.166	47.425	47.425	0.99	1.05	NO	434.7
10	OCDF	441.7428	48.39	290811.907	1.001	90.866	90.866	0.85	0.89	NO	772.7
11	2378-TCDD	319.8965	27.23	70017.729	0.939	10.315	10.315	0.74	0.77	NO	184.8
41	Total-tetradioxins	319.8965	26.86	2230.206	0.939	0.329		0.96	0.77	YES	5.6
12	12378-PeCDD	355.8546	32.34	255504.157	0.930	47.618	47.618	1.50	1.55	NO	1044.5
42	Total-pentadioxins	355.8546	30.74	1570.895	0.930	0.293		3.98	1.55	YES	8.6
15	123789-HxCDD	389.8157	37.55	217968.937	0.885	44.442	44.442	1.32	1.24	NO	672.0
43	Total-hexadioxins	389.8157	37.32	2991.829	0.890	0.607		2.05	1.24	YES	14.3
14	123678-HxCDD	389.8157	37.13	244515.008	0.854	48.714	48.714	1.22	1.24	NO	727.4
13	123478-HxCDD	389.8157	37.00	224987.500	0.930	46.553	46.553	1.24	1.24	NO	749.2
43	Total-hexadioxins	389.8157	36.04	770.027	0.890	0.156		1.94	1.24	YES	3.0
43	Total-hexadioxins	389.8157	35.92	1407.635	0.890	0.286		7.07	1.24	YES	7.2
43	Total-hexadioxins	389.8157	34.83	623.139	0.890	0.126		1.59	1.24	YES	2.7
44	Total-heptadioxins	423.7766	42.15	3348.421	0.966	0.853					23.2
16	1234678-HpCDD	423.7766	41.96	187169.180	0.966	47.687	47.687	1.04	1.05	NO	742.9
44	Total-heptadioxins	423.7766	40.65	4687.256	0.966	1.194		1.07	1.05	NO	23.4
17	OCDD	457.7377	48.09	290167.594	0.921	98.488	98.488	0.86	0.89	NO	777.4

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PFK1

	Name	Trace	RT	Abs Resp	PRF-M	pg	EMPC	1° Ratio	1° Rati	1°R	SN
	48 FUNCTION1 PFK	330.9792	24.09	0.000							2.4
	48 FUNCTION1 PFK	330.9792	23.91	0.000							2.8
	48 FUNCTION1 PFK	330.9792	23.76	0.000							0.5
	48 FUNCTION1 PFK	330.9792	23.36	0.000							1.1
	48 FUNCTION1 PFK	330.9792	23.27	0.000							0.5
	48 FUNCTION1 PFK	330.9792	23.21	0.000							0.6
	48 FUNCTION1 PFK	330.9792	22.69	0.000							1.0
	48 FUNCTION1 PFK	330.9792	22.48	0.000							0.5
	48 FUNCTION1 PFK	330.9792	22.42	0.000							0.3
	48 FUNCTION1 PFK	330.9792	22.36	0.000							1.2
	48 FUNCTION1 PFK	330.9792	21.76	0.000							24.9
	48 FUNCTION1 PFK	330.9792	21.30	0.000							44.3
	48 FUNCTION1 PFK	330.9792	21.21	0.000							47.9
	48 FUNCTION1 PFK	330.9792	21.13	0.000							51.3
	48 FUNCTION1 PFK	330.9792	27.36	0.000							1.3
	48 FUNCTION1 PFK	330.9792	26.87	0.000							0.8
	48 FUNCTION1 PFK	330.9792	26.72	0.000							0.7
	48 FUNCTION1 PFK	330.9792	26.53	0.000							0.9
	48 FUNCTION1 PFK	330.9792	26.39	0.000							1.7
	48 FUNCTION1 PFK	330.9792	26.06	0.000							1.3
	48 FUNCTION1 PFK	330.9792	25.87	0.000							1.3
	48 FUNCTION1 PFK	330.9792	25.12	0.000							0.6
	48 FUNCTION1 PFK	330.9792	24.85	0.000							1.4
	48 FUNCTION1 PFK	330.9792	24.78	0.000							1.5
	48 FUNCTION1 PFK	330.9792	24.67	0.000							1.5
	48 FUNCTION1 PFK	330.9792	24.63	0.000							2.0
	48 FUNCTION1 PFK	330.9792	24.52	0.000							1.5
	48 FUNCTION1 PFK	330.9792	24.30	0.000							1.3
	48 FUNCTION1 PFK	330.9792	24.21	0.000							3.3
	48 FUNCTION1 PFK	330.9792	24.14	0.000							2.6
	48 FUNCTION1 PFK	330.9792	28.77	0.000							2.0
	48 FUNCTION1 PFK	330.9792	28.72	0.000							2.1
	48 FUNCTION1 PFK	330.9792	28.53	0.000							3.0
	48 FUNCTION1 PFK	330.9792	28.18	0.000							1.1
	48 FUNCTION1 PFK	330.9792	28.05	0.000							1.2
	48 FUNCTION1 PFK	330.9792	27.95	0.000							0.6
	48 FUNCTION1 PFK	330.9792	27.80	0.000							1.5
	48 FUNCTION1 PFK	330.9792	27.65	0.000							1.3
	48 FUNCTION1 PFK	330.9792	27.45	0.000							0.8

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PFK2

	Name	Type	Rt	Abs Resp	RRF M...	pg	EMPC	1° Ratl	1° Ratl...	L R	SDV
1	49 FUNCTION2 PFK	366.9792	29.73	0.000	0.000						0.6
2	49 FUNCTION2 PFK	366.9792	29.57	0.000	0.000						0.9
3	49 FUNCTION2 PFK	366.9792	29.47	0.000	0.000						1.0
4	49 FUNCTION2 PFK	366.9792	29.21	0.000	0.000						1.0
5	49 FUNCTION2 PFK	366.9792	28.91	0.000	0.000						0.4
6	49 FUNCTION2 PFK	366.9792	28.87	0.000	0.000						0.5
7	49 FUNCTION2 PFK	366.9792	32.68	0.000	0.000						1.5
8	49 FUNCTION2 PFK	366.9792	32.57	0.000	0.000						1.3
9	49 FUNCTION2 PFK	366.9792	32.43	0.000	0.000						2.0
10	49 FUNCTION2 PFK	366.9792	32.13	0.000	0.000						0.7
11	49 FUNCTION2 PFK	366.9792	31.95	0.000	0.000						0.7
12	49 FUNCTION2 PFK	366.9792	31.66	0.000	0.000						0.7
13	49 FUNCTION2 PFK	366.9792	31.40	0.000	0.000						1.2
14	49 FUNCTION2 PFK	366.9792	31.32	0.000	0.000						1.0
15	49 FUNCTION2 PFK	366.9792	30.97	0.000	0.000						0.8
16	49 FUNCTION2 PFK	366.9792	30.93	0.000	0.000						0.6
17	49 FUNCTION2 PFK	366.9792	30.82	0.000	0.000						0.4
18	49 FUNCTION2 PFK	366.9792	30.69	0.000	0.000						0.8
19	49 FUNCTION2 PFK	366.9792	30.64	0.000	0.000						0.6
20	49 FUNCTION2 PFK	366.9792	30.36	0.000	0.000						1.1
21	49 FUNCTION2 PFK	366.9792	30.25	0.000	0.000						0.4
22	49 FUNCTION2 PFK	366.9792	29.77	0.000	0.000						0.8
23	49 FUNCTION2 PFK	366.9792	33.57	0.000	0.000						1.5
24	49 FUNCTION2 PFK	366.9792	33.51	0.000	0.000						1.2
25	49 FUNCTION2 PFK	366.9792	33.31	0.000	0.000						0.9
26	49 FUNCTION2 PFK	366.9792	33.19	0.000	0.000						1.9
27	49 FUNCTION2 PFK	366.9792	33.13	0.000	0.000						0.8
28	49 FUNCTION2 PFK	366.9792	33.09	0.000	0.000						0.6
29	49 FUNCTION2 PFK	366.9792	32.97	0.000	0.000						1.3
30	49 FUNCTION2 PFK	366.9792	32.88	0.000	0.000						0.7

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PFK3

	#	Name	Trace	RT	Area Resp	RRF M	d9	EMPC	1° Ratio	1° Hati	1° R	S/N
1	50	FUNCTION3 PFK	380.9760	34.23	0.000	0.000						1.0
2	50	FUNCTION3 PFK	380.9760	34.17	0.000	0.000						1.2
3	50	FUNCTION3 PFK	380.9760	34.10	0.000	0.000						1.0
4	50	FUNCTION3 PFK	380.9760	33.87	0.000	0.000						2.2
5	50	FUNCTION3 PFK	380.9760	33.78	0.000	0.000						1.4
6	50	FUNCTION3 PFK	380.9760	33.71	0.000	0.000						2.7
7	50	FUNCTION3 PFK	380.9760	33.68	0.000	0.000						2.8
8	50	FUNCTION3 PFK	380.9760	36.88	0.000	0.000						1.1
9	50	FUNCTION3 PFK	380.9760	36.85	0.000	0.000						1.4
10	50	FUNCTION3 PFK	380.9760	36.60	0.000	0.000						0.3
11	50	FUNCTION3 PFK	380.9760	36.46	0.000	0.000						0.9
12	50	FUNCTION3 PFK	380.9760	36.29	0.000	0.000						0.5
13	50	FUNCTION3 PFK	380.9760	36.12	0.000	0.000						2.0
14	50	FUNCTION3 PFK	380.9760	35.93	0.000	0.000						1.0
15	50	FUNCTION3 PFK	380.9760	35.75	0.000	0.000						2.3
16	50	FUNCTION3 PFK	380.9760	35.71	0.000	0.000						1.1
17	50	FUNCTION3 PFK	380.9760	35.49	0.000	0.000						1.6
18	50	FUNCTION3 PFK	380.9760	35.41	0.000	0.000						0.6
19	50	FUNCTION3 PFK	380.9760	35.18	0.000	0.000						1.0
20	50	FUNCTION3 PFK	380.9760	35.10	0.000	0.000						0.5
21	50	FUNCTION3 PFK	380.9760	34.93	0.000	0.000						0.9
22	50	FUNCTION3 PFK	380.9760	34.40	0.000	0.000						1.6
23	50	FUNCTION3 PFK	380.9760	34.34	0.000	0.000						1.6
24	50	FUNCTION3 PFK	380.9760	38.95	0.000	0.000						0.4
25	50	FUNCTION3 PFK	380.9760	38.90	0.000	0.000						0.5
26	50	FUNCTION3 PFK	380.9760	38.82	0.000	0.000						0.6
27	50	FUNCTION3 PFK	380.9760	38.72	0.000	0.000						0.5
28	50	FUNCTION3 PFK	380.9760	38.67	0.000	0.000						1.1
29	50	FUNCTION3 PFK	380.9760	38.61	0.000	0.000						0.5
30	50	FUNCTION3 PFK	380.9760	38.45	0.000	0.000						0.9
31	50	FUNCTION3 PFK	380.9760	37.90	0.000	0.000						1.5
32	50	FUNCTION3 PFK	380.9760	37.81	0.000	0.000						0.9
33	50	FUNCTION3 PFK	380.9760	37.64	0.000	0.000						1.1
34	50	FUNCTION3 PFK	380.9760	37.29	0.000	0.000						0.8
35	50	FUNCTION3 PFK	380.9760	37.13	0.000	0.000						0.3
36	50	FUNCTION3 PFK	380.9760	36.99	0.000	0.000						0.6
37	50	FUNCTION3 PFK	380.9760	36.92	0.000	0.000						0.6

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PFK4

	Masses	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rau...	1° R...	S/N
1	51 FUNCTION4 PFK	430.9728	39.08	0.000							2.5
2	51 FUNCTION4 PFK	430.9728	40.88	0.000							0.4
3	51 FUNCTION4 PFK	430.9728	40.74	0.000							1.1
4	51 FUNCTION4 PFK	430.9728	40.65	0.000							1.3
5	51 FUNCTION4 PFK	430.9728	40.49	0.000							1.1
6	51 FUNCTION4 PFK	430.9728	40.35	0.000							0.8
7	51 FUNCTION4 PFK	430.9728	40.31	0.000							1.0
8	51 FUNCTION4 PFK	430.9728	40.23	0.000							0.8
9	51 FUNCTION4 PFK	430.9728	40.19	0.000							0.8
10	51 FUNCTION4 PFK	430.9728	39.98	0.000							1.0
11	51 FUNCTION4 PFK	430.9728	39.95	0.000							1.1
12	51 FUNCTION4 PFK	430.9728	39.88	0.000							1.7
13	51 FUNCTION4 PFK	430.9728	39.82	0.000							1.4
14	51 FUNCTION4 PFK	430.9728	39.68	0.000							1.4
15	51 FUNCTION4 PFK	430.9728	39.51	0.000							1.2
16	51 FUNCTION4 PFK	430.9728	39.39	0.000							0.6
17	51 FUNCTION4 PFK	430.9728	39.34	0.000							0.7
18	51 FUNCTION4 PFK	430.9728	42.62	0.000							1.2
19	51 FUNCTION4 PFK	430.9728	42.43	0.000							0.7
20	51 FUNCTION4 PFK	430.9728	42.35	0.000							0.8
21	51 FUNCTION4 PFK	430.9728	42.30	0.000							0.6
22	51 FUNCTION4 PFK	430.9728	42.04	0.000							0.7
23	51 FUNCTION4 PFK	430.9728	42.01	0.000							0.7
24	51 FUNCTION4 PFK	430.9728	41.98	0.000							0.9
25	51 FUNCTION4 PFK	430.9728	41.92	0.000							0.5
26	51 FUNCTION4 PFK	430.9728	41.88	0.000							1.7
27	51 FUNCTION4 PFK	430.9728	41.81	0.000							1.9
28	51 FUNCTION4 PFK	430.9728	41.75	0.000							1.4
29	51 FUNCTION4 PFK	430.9728	41.66	0.000							1.8
30	51 FUNCTION4 PFK	430.9728	41.59	0.000							1.5
31	51 FUNCTION4 PFK	430.9728	41.07	0.000							0.8
32	51 FUNCTION4 PFK	430.9728	40.98	0.000							1.0
33	51 FUNCTION4 PFK	430.9728	40.94	0.000							0.7
34	51 FUNCTION4 PFK	430.9728	44.64	0.000							1.3
35	51 FUNCTION4 PFK	430.9728	44.50	0.000							1.3
36	51 FUNCTION4 PFK	430.9728	44.47	0.000							1.5
37	51 FUNCTION4 PFK	430.9728	44.24	0.000							1.6
38	51 FUNCTION4 PFK	430.9728	44.17	0.000							1.0
39	51 FUNCTION4 PFK	430.9728	44.01	0.000							1.0
40	51 FUNCTION4 PFK	430.9728	43.88	0.000							1.1
41	51 FUNCTION4 PFK	430.9728	43.81	0.000							0.9
42	51 FUNCTION4 PFK	430.9728	43.58	0.000							0.8
43	51 FUNCTION4 PFK	430.9728	43.52	0.000							0.8
44	51 FUNCTION4 PFK	430.9728	43.41	0.000							0.5
45	51 FUNCTION4 PFK	430.9728	43.38	0.000							0.3
46	51 FUNCTION4 PFK	430.9728	43.27	0.000							1.1
47	51 FUNCTION4 PFK	430.9728	43.23	0.000							1.0
48	51 FUNCTION4 PFK	430.9728	43.02	0.000							1.4
49	51 FUNCTION4 PFK	430.9728	42.89	0.000							1.1

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PFK4

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	51	FUNCTION4 PFK	430.9728	44.97	0.000							1.1
51	51	FUNCTION4 PFK	430.9728	44.84	0.000							0.4
52	51	FUNCTION4 PFK	430.9728	44.76	0.000							0.6
53	51	FUNCTION4 PFK	430.9728	44.72	0.000							0.7

PFK5

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	3° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480.9696	46.03	0.000							0.8
2	52	FUNCTION5 PFK	480.9696	45.95	0.000							0.6
3	52	FUNCTION5 PFK	480.9696	45.92	0.000							0.7
4	52	FUNCTION5 PFK	480.9696	45.83	0.000							1.5
5	52	FUNCTION5 PFK	480.9696	45.71	0.000							2.5
6	52	FUNCTION5 PFK	480.9696	45.70	0.000							2.5
7	52	FUNCTION5 PFK	480.9696	45.54	0.000							9.3
8	52	FUNCTION5 PFK	480.9696	45.36	0.000							16.7
9	52	FUNCTION5 PFK	480.9696	45.21	0.000							23.1
10	52	FUNCTION5 PFK	480.9696	45.16	0.000							24.3
11	52	FUNCTION5 PFK	480.9696	45.07	0.000							28.0
12	52	FUNCTION5 PFK	480.9696	47.95	0.000							1.0
13	52	FUNCTION5 PFK	480.9696	47.81	0.000							1.6
14	52	FUNCTION5 PFK	480.9696	47.77	0.000							0.4
15	52	FUNCTION5 PFK	480.9696	47.61	0.000							0.6
16	52	FUNCTION5 PFK	480.9696	47.43	0.000							1.0
17	52	FUNCTION5 PFK	480.9696	47.36	0.000							0.3
18	52	FUNCTION5 PFK	480.9696	46.94	0.000							1.3
19	52	FUNCTION5 PFK	480.9696	46.81	0.000							0.7
20	52	FUNCTION5 PFK	480.9696	46.79	0.000							0.5
21	52	FUNCTION5 PFK	480.9696	46.74	0.000							1.4
22	52	FUNCTION5 PFK	480.9696	46.68	0.000							0.9
23	52	FUNCTION5 PFK	480.9696	46.58	0.000							0.4
24	52	FUNCTION5 PFK	480.9696	46.47	0.000							0.3
25	52	FUNCTION5 PFK	480.9696	46.38	0.000							0.4
26	52	FUNCTION5 PFK	480.9696	46.29	0.000							1.3
27	52	FUNCTION5 PFK	480.9696	46.08	0.000							0.9
28	52	FUNCTION5 PFK	480.9696	49.75	0.000							1.3
29	52	FUNCTION5 PFK	480.9696	49.70	0.000							0.7
30	52	FUNCTION5 PFK	480.9696	49.63	0.000							0.4
31	52	FUNCTION5 PFK	480.9696	49.40	0.000							1.2
32	52	FUNCTION5 PFK	480.9696	49.31	0.000							1.4
33	52	FUNCTION5 PFK	480.9696	49.23	0.000							0.7
34	52	FUNCTION5 PFK	480.9696	49.08	0.000							0.5
35	52	FUNCTION5 PFK	480.9696	49.05	0.000							1.3
36	52	FUNCTION5 PFK	480.9696	48.90	0.000							0.4
37	52	FUNCTION5 PFK	480.9696	48.55	0.000							0.7
38	52	FUNCTION5 PFK	480.9696	48.03	0.000							1.1
39	52	FUNCTION5 PFK	480.9696	48.00	0.000							1.0

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD...	375.8364	24.12	0.000		0.000					3.1
2	53	FUNCTION1 HXCD...	375.8364	23.28	0.000		0.000					4.4
3	53	FUNCTION1 HXCD...	375.8364	21.39	0.000		0.000					4.4
4	53	FUNCTION1 HXCD...	375.8364	25.75	0.000		0.000					3.4
5	53	FUNCTION1 HXCD...	375.8364	25.63	0.000		0.000					4.0
6	53	FUNCTION1 HXCD...	375.8364	24.91	0.000		0.000					2.5

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD...	409.7974	23.69	0.000		0.000					1.5
2	54	FUNCTION1 HPCD...	409.7974	23.14	0.000		0.000					1.5
3	54	FUNCTION1 HPCD...	409.7974	23.00	0.000		0.000					1.5
4	54	FUNCTION1 HPCD...	409.7974	22.76	0.000		0.000					2.2
5	54	FUNCTION1 HPCD...	409.7974	22.55	0.000		0.000					1.5
6	54	FUNCTION1 HPCD...	409.7974	22.43	0.000		0.000					1.1
7	54	FUNCTION1 HPCD...	409.7974	22.36	0.000		0.000					3.2
8	54	FUNCTION1 HPCD...	409.7974	22.27	0.000		0.000					1.3
9	54	FUNCTION1 HPCD...	409.7974	21.69	0.000		0.000					1.5
10	54	FUNCTION1 HPCD...	409.7974	21.43	0.000		0.000					1.3
11	54	FUNCTION1 HPCD...	409.7974	21.34	0.000		0.000					1.4
12	54	FUNCTION1 HPCD...	409.7974	21.22	0.000		0.000					2.1
13	54	FUNCTION1 HPCD...	409.7974	28.51	0.000		0.000					1.3
14	54	FUNCTION1 HPCD...	409.7974	28.36	0.000		0.000					1.3
15	54	FUNCTION1 HPCD...	409.7974	28.24	0.000		0.000					1.4
16	54	FUNCTION1 HPCD...	409.7974	27.96	0.000		0.000					2.2
17	54	FUNCTION1 HPCD...	409.7974	27.71	0.000		0.000					1.1
18	54	FUNCTION1 HPCD...	409.7974	27.35	0.000		0.000					1.5
19	54	FUNCTION1 HPCD...	409.7974	26.44	0.000		0.000					1.2
20	54	FUNCTION1 HPCD...	409.7974	25.96	0.000		0.000					1.3
21	54	FUNCTION1 HPCD...	409.7974	25.66	0.000		0.000					1.1
22	54	FUNCTION1 HPCD...	409.7974	25.54	0.000		0.000					0.8
23	54	FUNCTION1 HPCD...	409.7974	25.15	0.000		0.000					1.5
24	54	FUNCTION1 HPCD...	409.7974	24.67	0.000		0.000					1.0
25	54	FUNCTION1 HPCD...	409.7974	24.55	0.000		0.000					1.4
26	54	FUNCTION1 HPCD...	409.7974	24.38	0.000		0.000					3.0
27	54	FUNCTION1 HPCD...	409.7974	23.94	0.000		0.000					1.7
28	54	FUNCTION1 HPCD...	409.7974	23.85	0.000		0.000					1.8
29	54	FUNCTION1 HPCD...	409.7974	28.75	0.000		0.000					1.6

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
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ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

ETHERS3

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	33.47	0.000	0.000						1.7
2	55	FUNCTION2 HPCD...	409.7974	33.09	0.000	0.000						1.2
3	55	FUNCTION2 HPCD...	409.7974	32.58	0.000	0.000						2.0
4	55	FUNCTION2 HPCD...	409.7974	30.41	0.000	0.000						1.7
5	55	FUNCTION2 HPCD...	409.7974	29.58	0.000	0.000						1.3
6	55	FUNCTION2 HPCD...	409.7974	29.51	0.000	0.000						1.7
7	55	FUNCTION2 HPCD...	409.7974	29.25	0.000	0.000						2.5
8	55	FUNCTION2 HPCD...	409.7974	28.94	0.000	0.000						1.5

ETHERS4

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS5

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	44.88	0.000	0.000						2.2
2	57	FUNCTION4 NCDPE	479.7165	44.13	0.000	0.000						2.9
3	57	FUNCTION4 NCDPE	479.7165	43.77	0.000	0.000						3.3
4	57	FUNCTION4 NCDPE	479.7165	43.07	0.000	0.000						2.0

ETHERS6

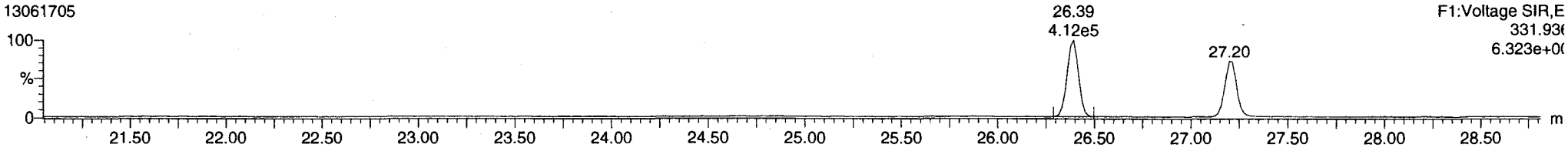
	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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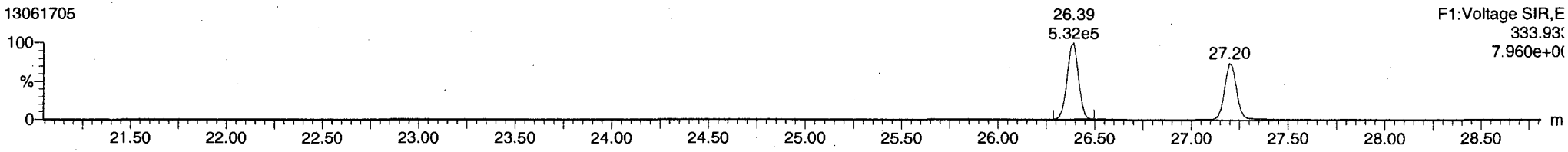

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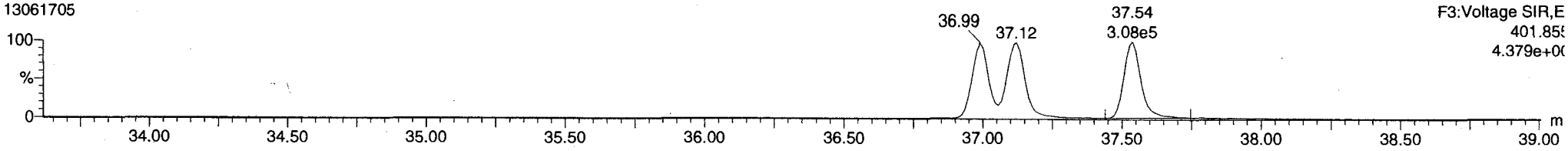

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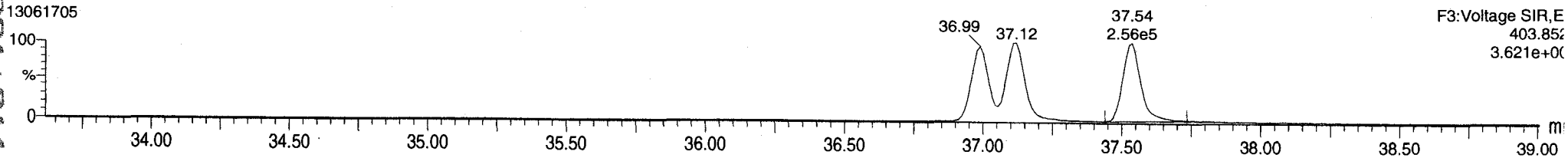
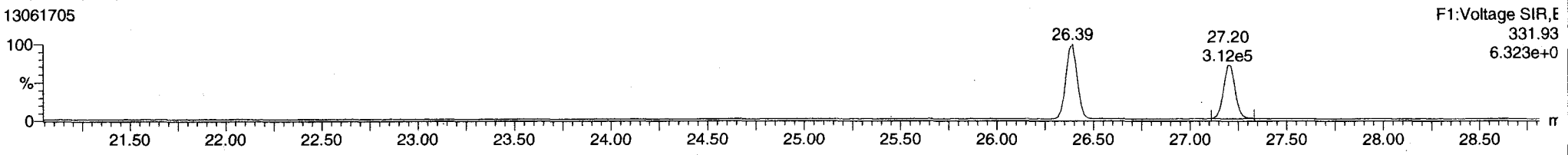


ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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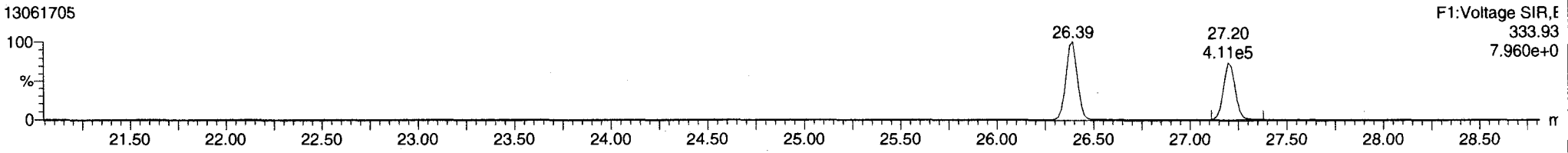
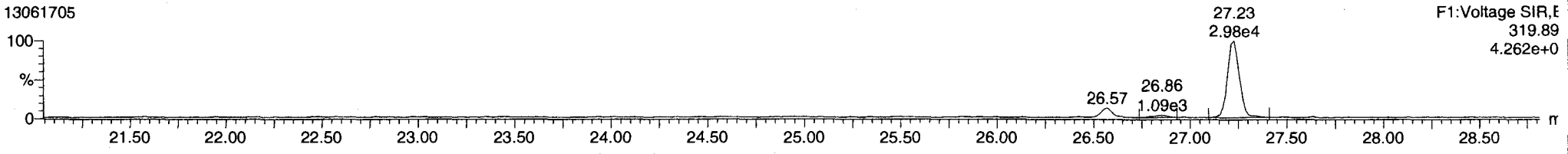
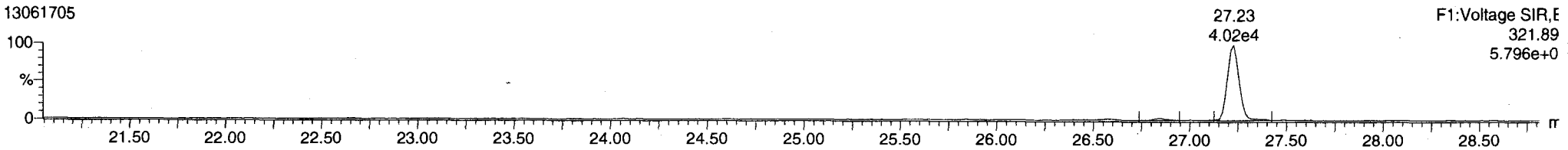


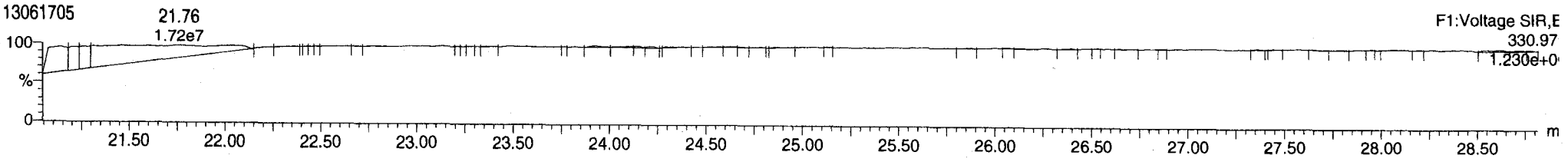
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



ID: WS30PR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

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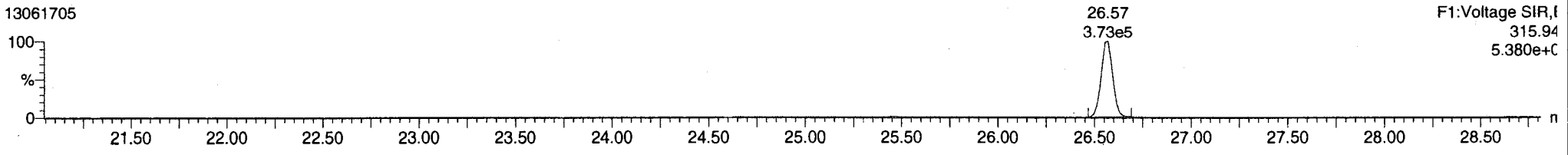

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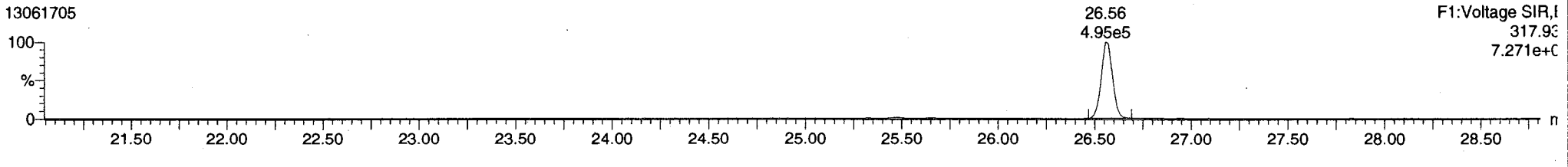
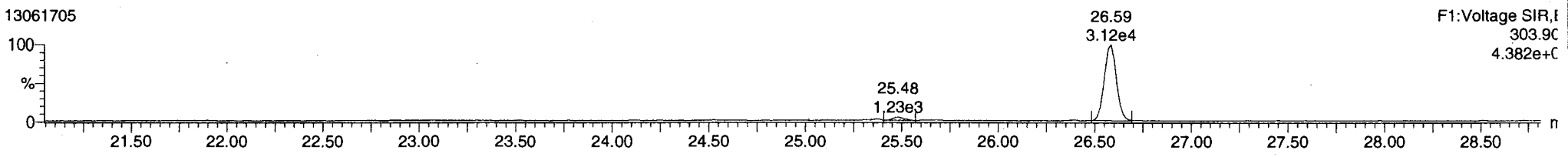
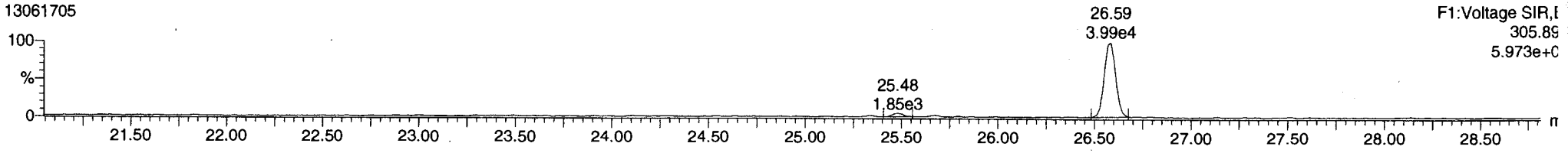


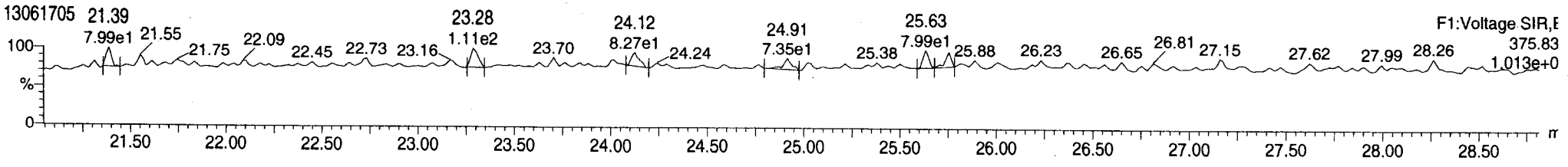
Total-tetrafurans



Total-tetrafurans

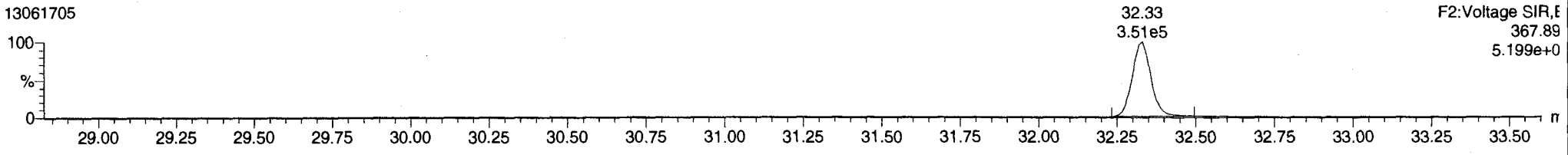


FUNCTION1 HXCDPE



ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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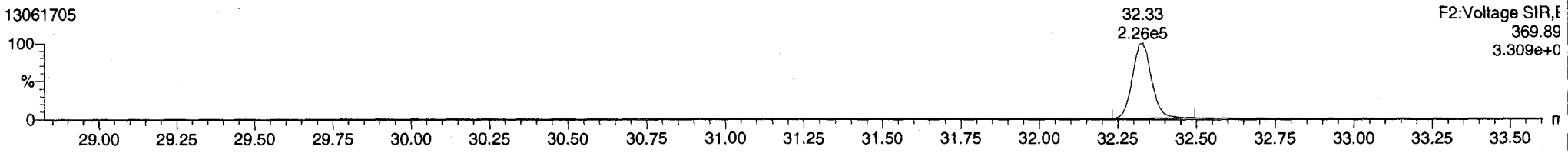
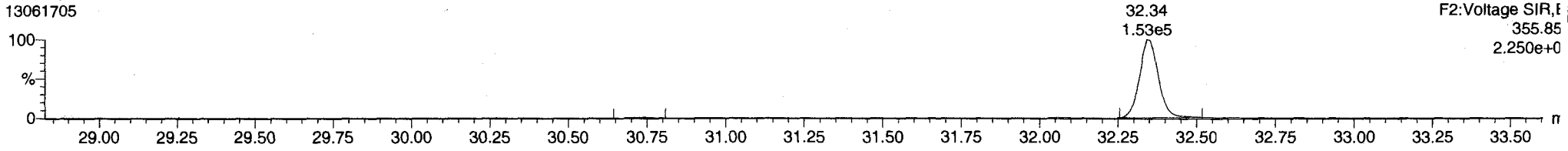
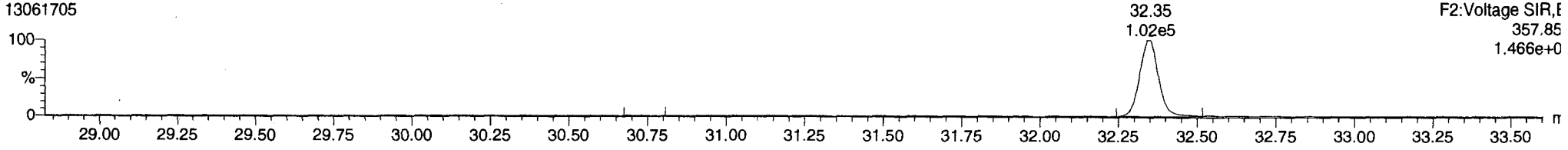


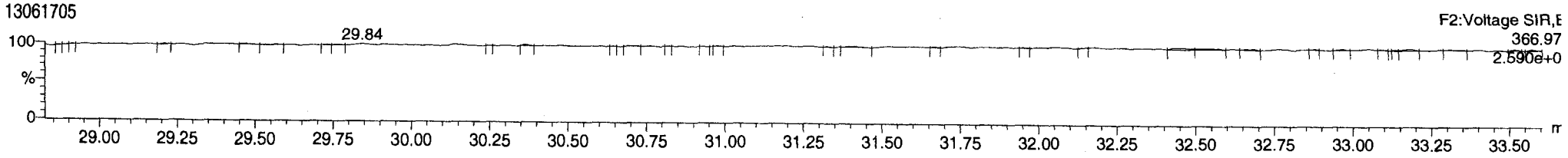
Total-pentadioxins



Total-pentadioxins

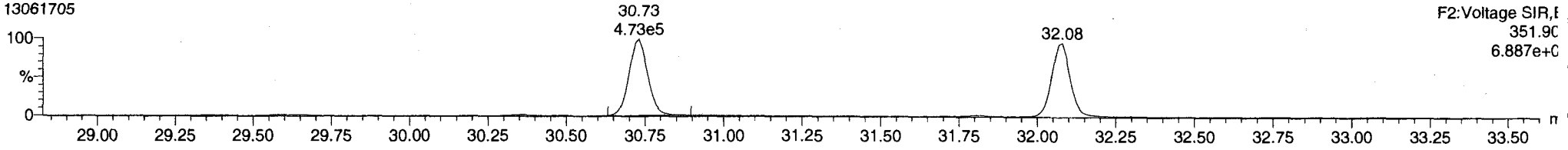


FUNCTION2 PFK

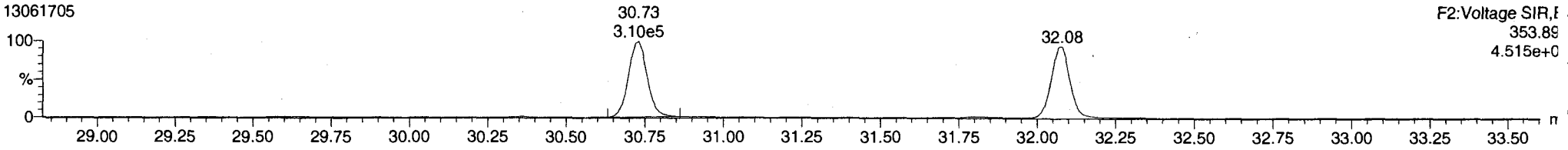


ID: WS30PR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

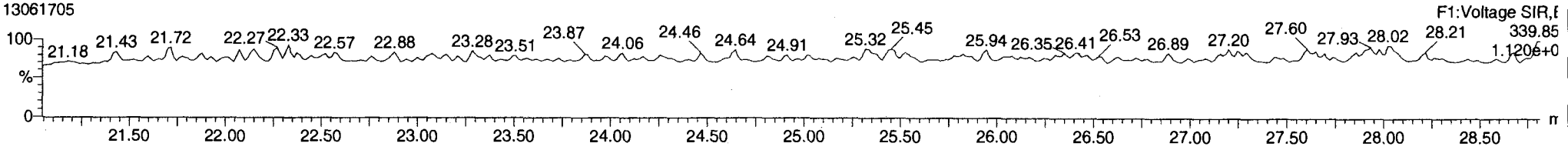
13C-12378-PeCDF



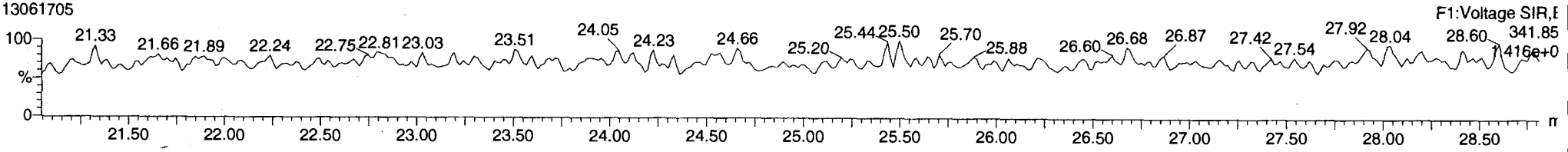
13C-12378-PeCDF



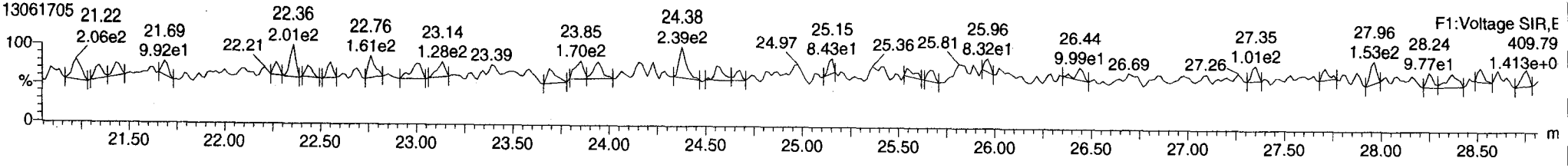
Total-penta1



Total-penta1



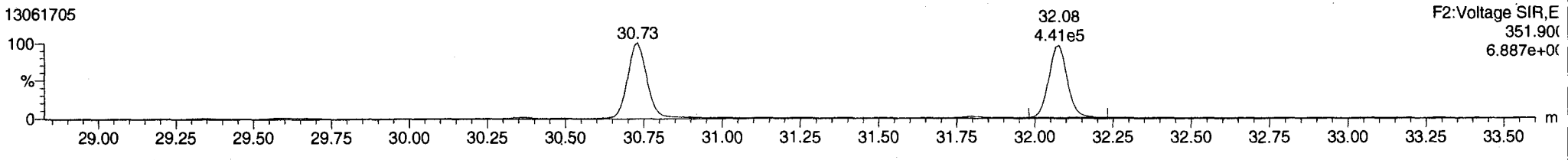
FUNCTION1 HPCDPE



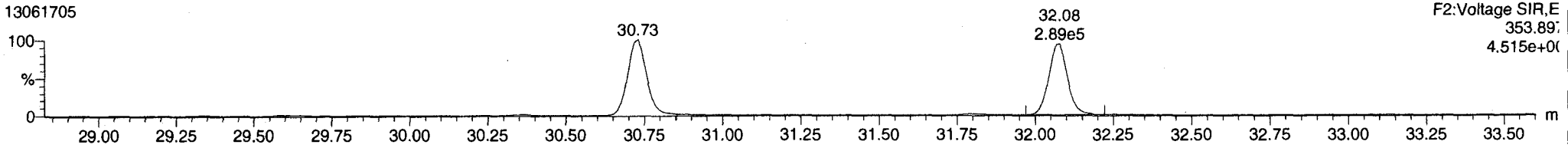
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: *Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time*
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

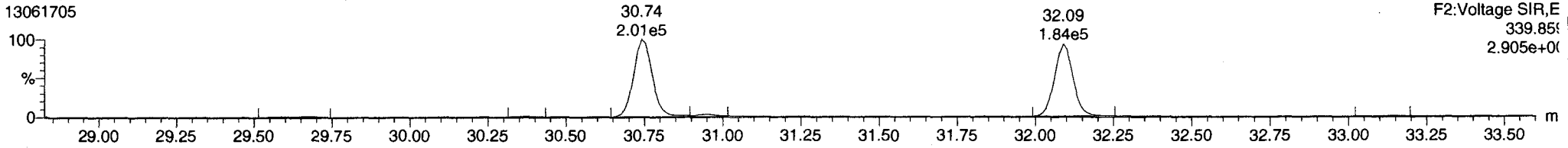
13C-23478-PeCDF



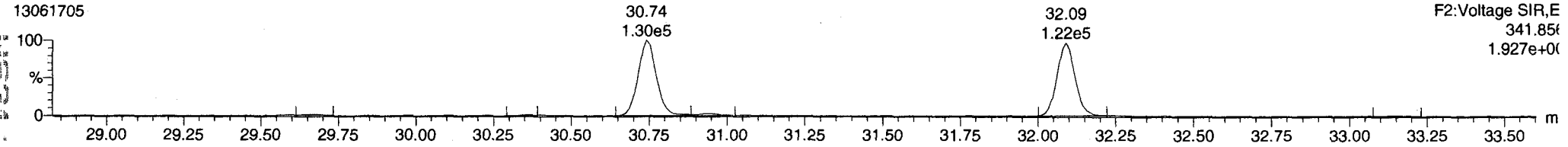
13C-23478-PeCDF



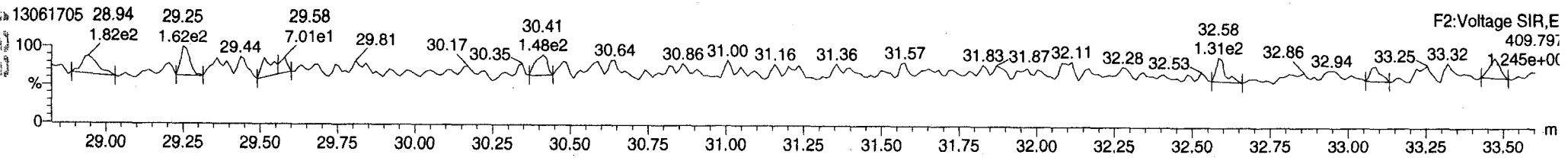
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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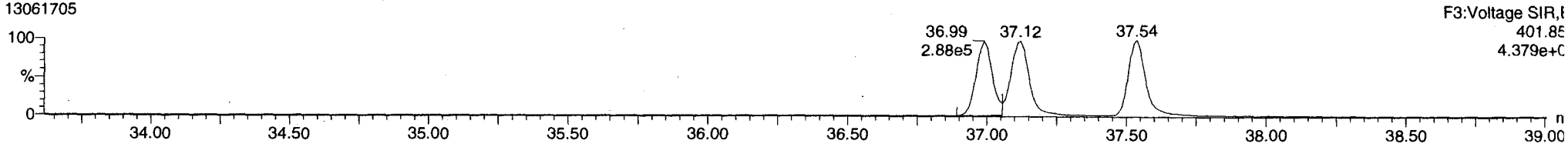
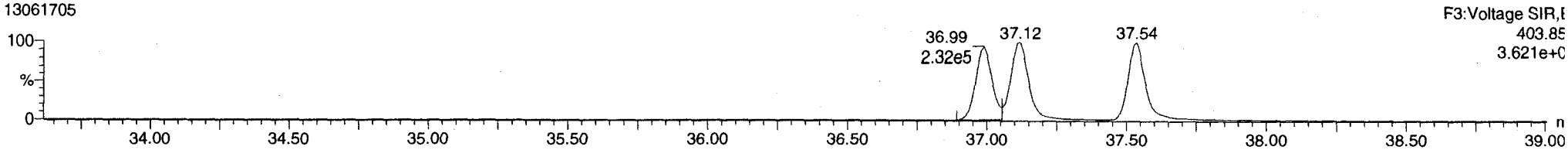
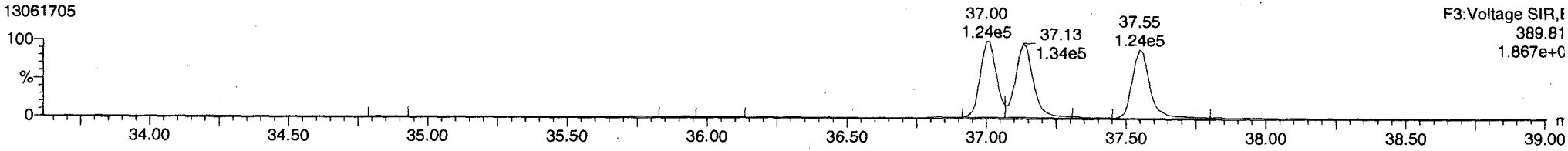
13C-123478-HxCDD



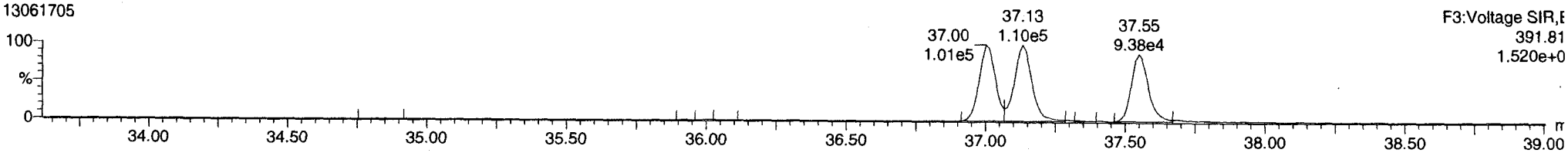
13C-123478-HxCDD



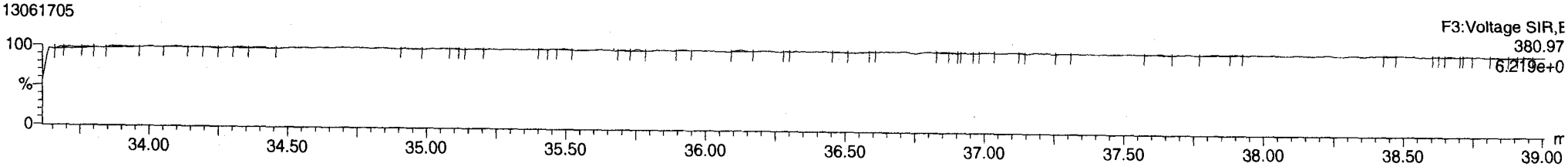
Total-hexadioxins



Total-hexadioxins

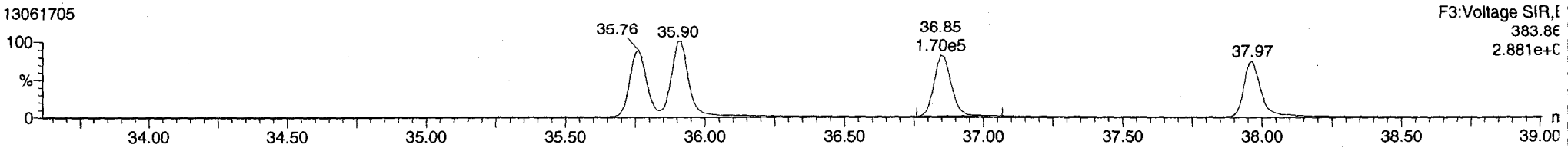


FUNCTION3 PFK



ID: WS30PR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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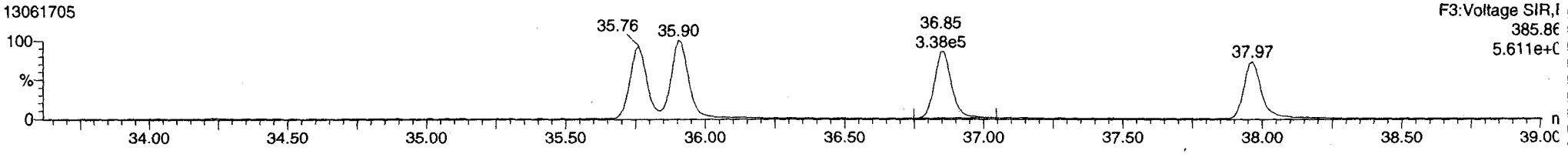
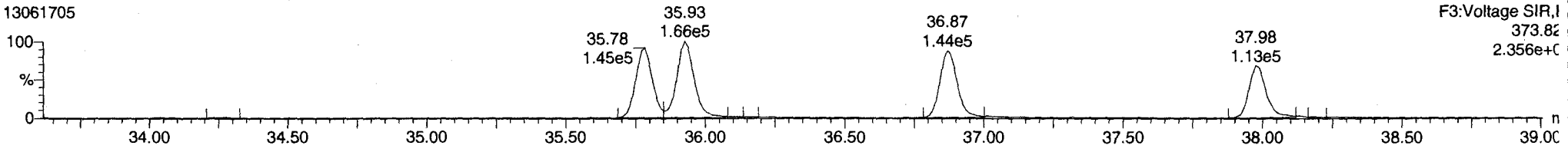
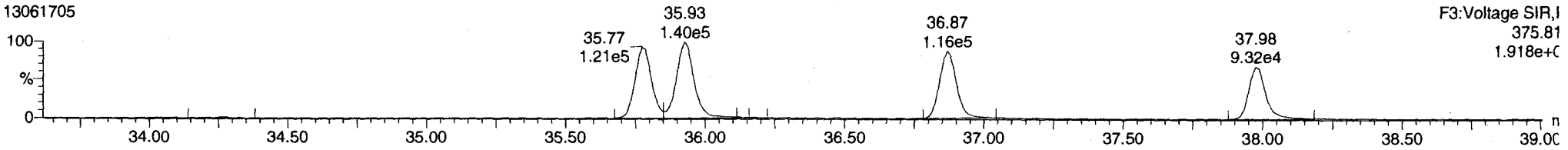


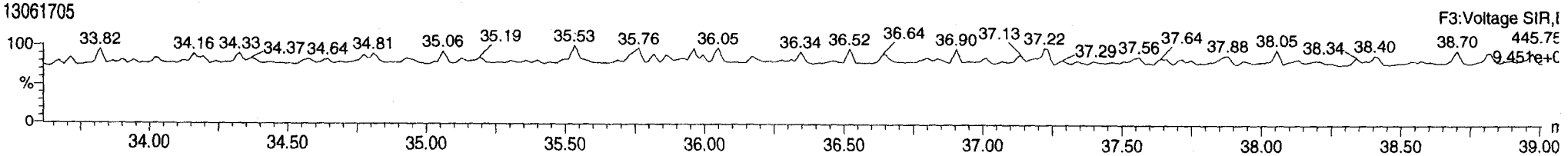
Total-hexafurans



Total-hexafurans

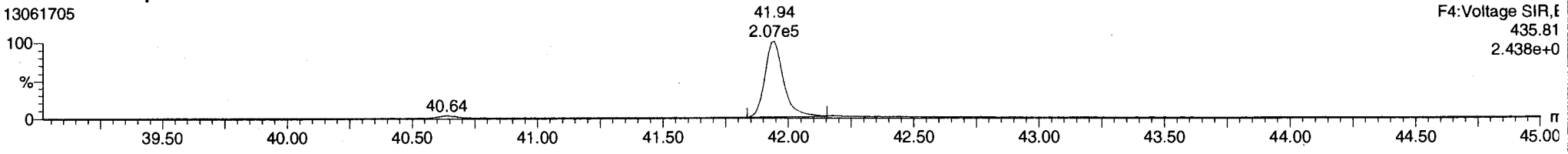


FUNCTION3 OCDPE

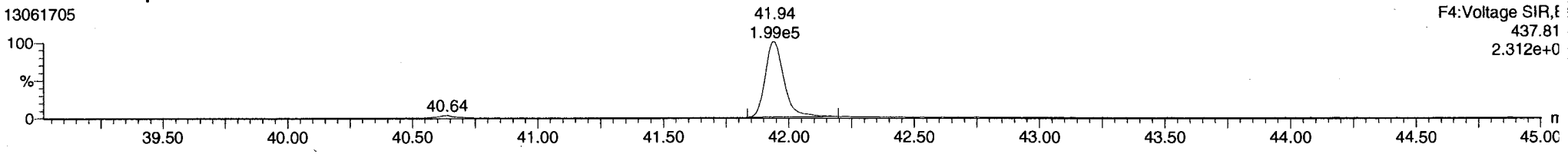


ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

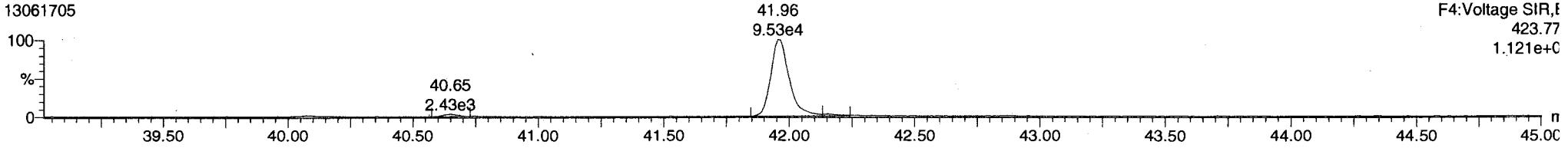
13C-1234678-HpCDD



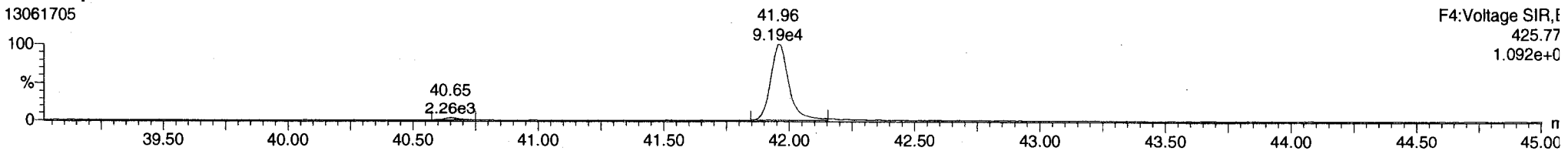
13C-1234678-HpCDD



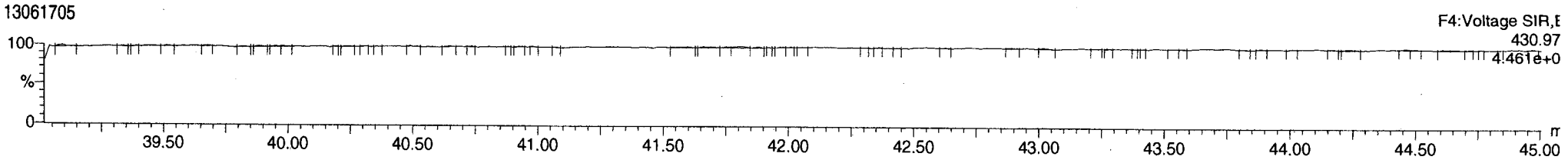
Total-heptadioxins



Total-heptadioxins



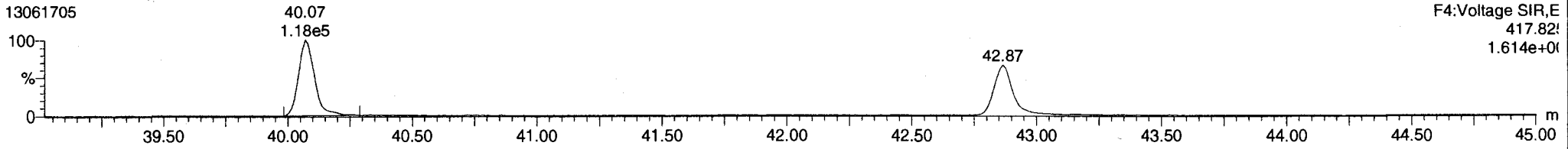
FUNCTION4 PFK



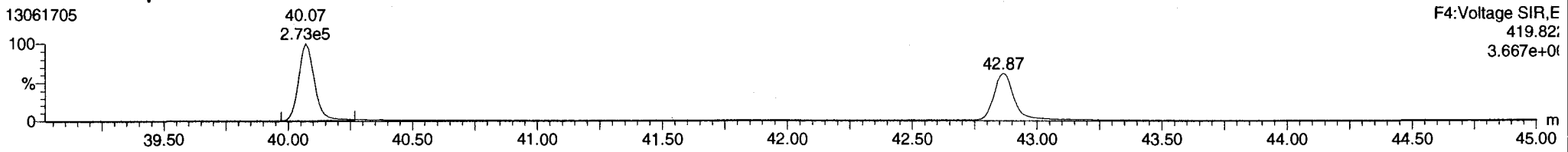
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

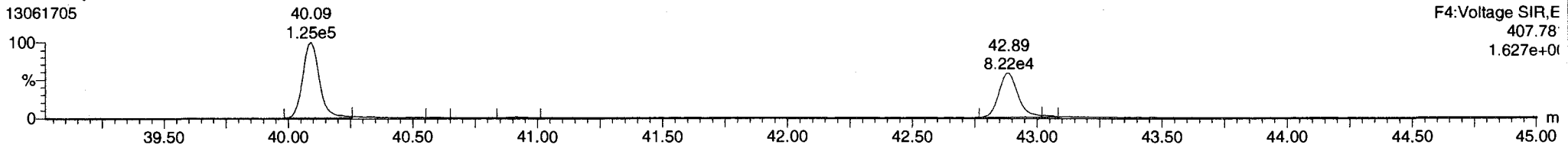
13C-1234678-HpCDF



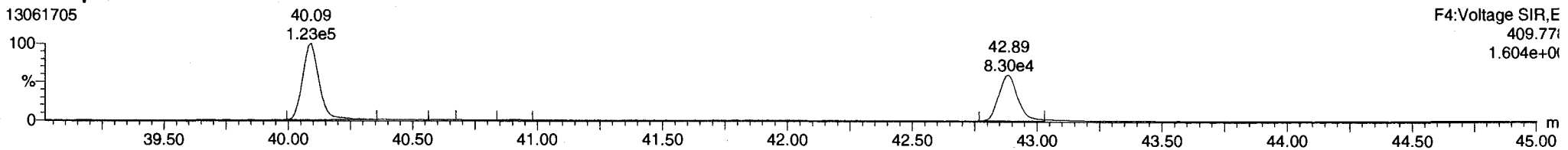
13C-1234678-HpCDF



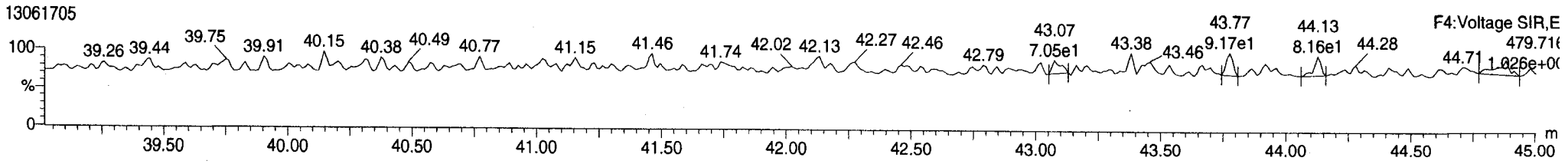
Total-heptafurans



Total-heptafurans



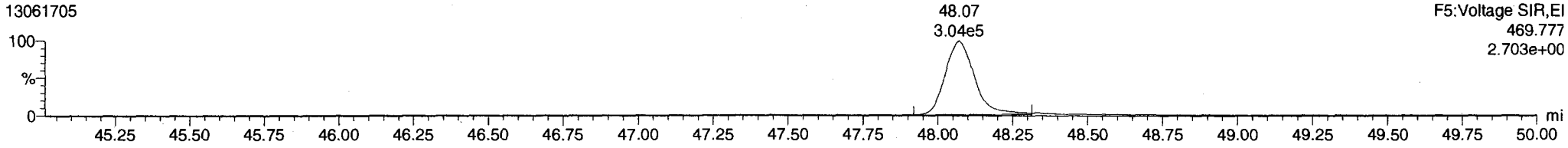
FUNCTION4 NCDPE



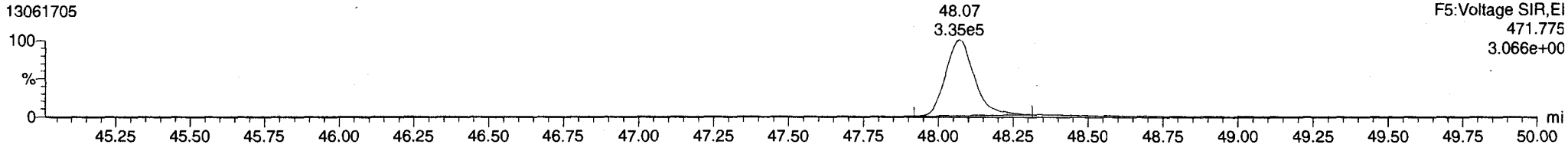
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:41:43 Pacific Daylight Time

ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

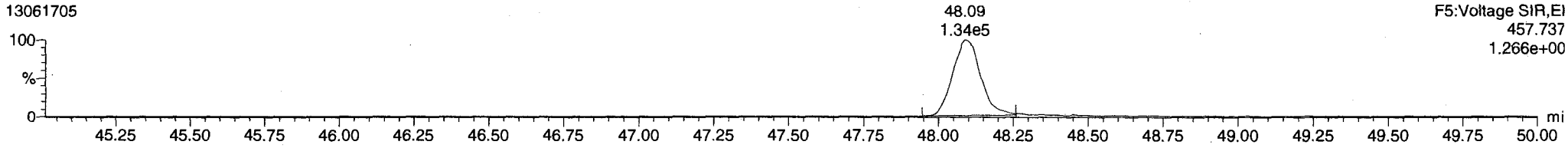
13C-OCDD



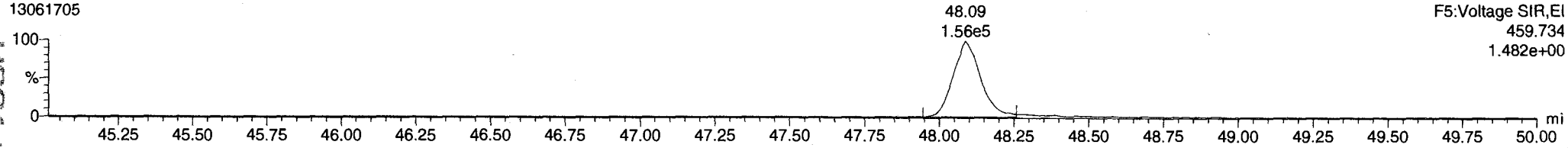
13C-OCDD



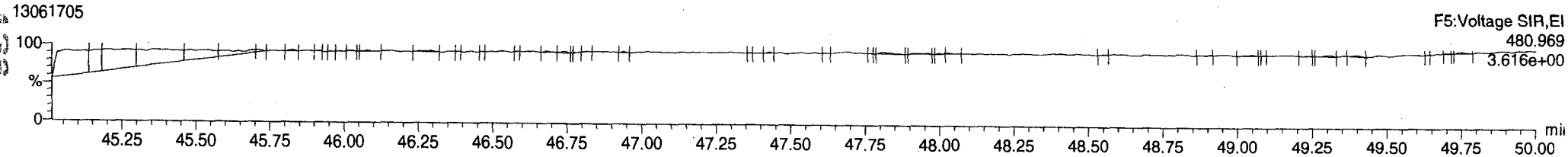
OCDD



OCDD

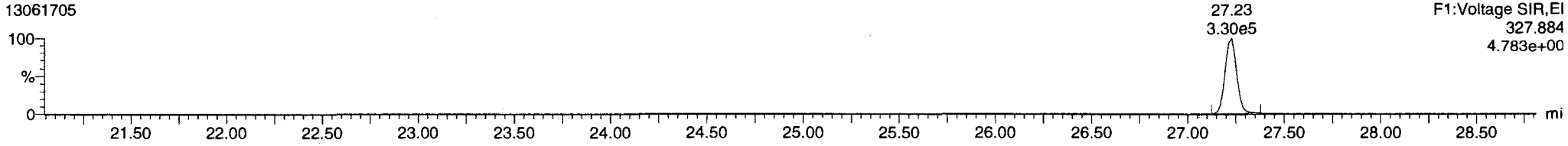


FUNCTION5 PFK

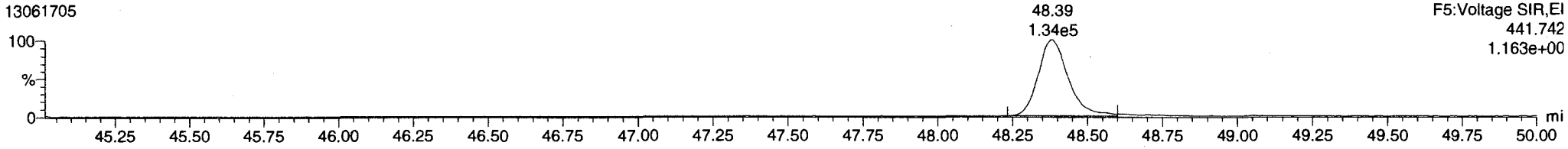


ID: WS30OPR, Name: 13061705, Date: 17-Jun-2013, Time: 17:38:04, Conditions: AUTOSPEC01, User: pk

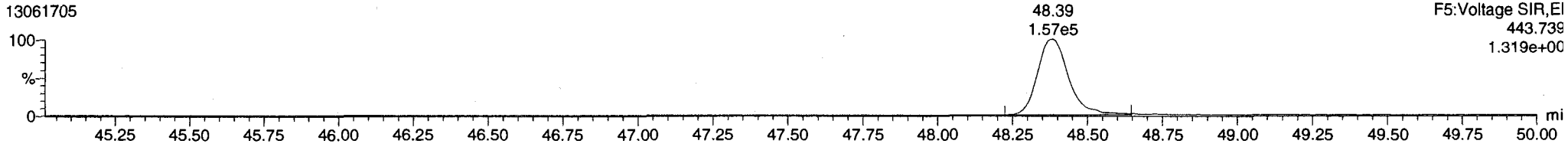
37CL-2378-TCDD



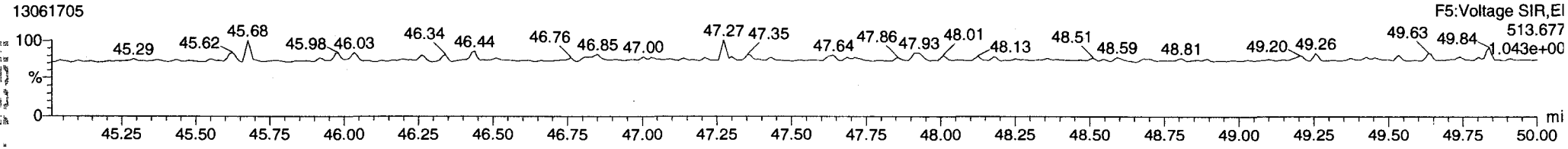
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:42:29 Pacific Daylight Time

6/18/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N	Noise 1	Noise 2	Height 1	Height 2	EMPC?	EMPC	pg	
2378-TCDF	26.571	1.001	3.67e2	7.12e2	0.832	0.516	0.770	4.8	1468	2857	7.07e3	9.88e3	YES	0.081	0.104	
12378-PeCDF	30.731	1.000	6.71e2	5.29e2	0.853	1.267	1.550	12.4	871	1613	1.08e4	8.95e3	YES	0.114	0.124	B
23478-PeCDF	32.090	1.001	7.90e2	3.44e2	0.884	2.296	1.550	18.0	871	1613	1.56e4	9.61e3	YES	0.092	0.119	B
123478-HxCDF	35.773	1.001	1.19e3	1.06e3	1.017	1.116	1.240	18.4	1088	717	2.00e4	1.82e4	NO	0.262	0.262	B
234678-HxCDF	36.825	0.999	5.97e2	4.22e2	1.067	1.413	1.240	9.2	1088	717	1.00e4	4.75e3	NO	0.120	0.120	B
123678-HxCDF	35.915	1.000	7.77e2	6.82e2	0.999	1.140	1.240	11.7	1088	717	1.27e4	1.21e4	NO	0.164	0.164	B
123789-HxCDF	37.954	1.000	5.29e2	3.23e2	0.947	1.640	1.240	6.5	1088	717	7.05e3	5.35e3	YES	0.100	0.118	
1234678-HpCDF	40.080	1.000	2.47e3	2.62e3	1.151	0.941	1.050	68.3	517	614	3.53e4	4.02e4	NO	0.691	0.691	B
1234789-HpCDF	42.875	1.000	2.86e2	3.96e2	1.166	0.722	1.050	10.5	517	614	5.45e3	6.41e3	YES	0.095	0.115	
OCDF	48.367	1.006	3.55e3	4.61e3	1.001	0.770	0.890	67.5	558	846	3.77e4	4.69e4	NO	1.494	1.494	
2378-TCDD	27.214	1.001	3.05e3	4.25e3	0.939	0.719	0.770	30.7	1401	1764	4.30e4	6.32e4	NO	0.780	0.780	B
12378-PeCDD	32.353	1.001	6.23e2	4.73e2	0.930	1.318	1.550	8.7	1305	789	1.13e4	6.00e3	NO	0.140	0.140	
123478-HxCDD	37.000	1.000	2.41e2	1.56e2	0.930	1.541	1.240	5.2	1239	1257	6.48e3	3.72e3	YES	0.045	0.051	
123678-HxCDD	37.132	1.000	1.01e3	9.10e2	0.854	1.104	1.240	13.5	1239	1257	1.67e4	1.58e4	NO	0.258	0.258	
123789-HxCDD	37.548	1.012	7.50e2	6.48e2	0.885	1.159	1.240	10.5	1239	1257	1.30e4	1.27e4	NO	0.185	0.185	
1234678-HpCDD	41.944	1.000	7.60e3	7.79e3	0.966	0.976	1.050	123.0	922	1188	1.13e5	1.04e5	NO	2.347	2.347	B
OCDD	48.088	1.001	4.56e4	5.10e4	0.921	0.893	0.890	341.3	1267	678	4.32e5	5.11e5	NO	19.200	19.200	
13C-2378-TCDF	26.556	1.007	5.45e5	7.02e5	1.283	0.777	0.770	3606.6	2190	6822	7.90e6	1.01e7	NO		66.396	
13C-12378-PeCDF	30.720	1.165	6.86e5	4.49e5	1.051	1.530	1.550	4309.1	2386	2206	1.03e7	6.77e6	NO		73.761	
13C-23478-PeCDF	32.068	1.216	6.55e5	4.26e5	1.030	1.536	1.550	4240.3	2386	2206	1.01e7	6.50e6	NO		71.664	
13C-123478-HxCDF	35.751	0.952	2.86e5	5.60e5	1.069	0.510	0.510	1644.0	2637	2607	4.34e6	8.37e6	NO		81.905	
13C-123678-HxCDF	35.904	0.956	3.01e5	5.90e5	1.124	0.510	0.510	1673.5	2637	2607	4.41e6	8.54e6	NO		82.111	
13C-234678-HxCDF	36.847	0.982	2.73e5	5.23e5	1.041	0.523	0.510	1540.7	2637	2607	4.06e6	7.79e6	NO		79.237	
13C-123789-HxCDF	37.954	1.011	2.58e5	5.05e5	1.039	0.510	0.510	1475.2	2637	2607	3.89e6	7.60e6	NO		76.046	
13C-1234678-HpCDF	40.069	1.067	1.95e5	4.45e5	0.965	0.438	0.440	1724.1	1590	1646	2.74e6	6.30e6	NO		68.668	
13C-1234789-HpCDF	42.853	1.142	1.53e5	3.53e5	0.760	0.433	0.440	1182.4	1590	1646	1.88e6	4.34e6	NO		68.985	
13C-1234-TCDD	26.377	0.000	6.41e5	8.24e5	1.000	0.778	0.770	692.4	13574	3935	9.40e6	1.23e7	NO		100.000	
13C-2378-TCDD	27.199	1.031	4.32e5	5.65e5	0.926	0.765	0.770	460.8	13574	3935	6.26e6	8.23e6	NO		73.503	
13C-12378-PeCDD	32.320	1.225	5.10e5	3.32e5	0.734	1.535	1.550	2750.2	2817	1913	7.75e6	4.97e6	NO		78.366	
13C-123478-HxCDD	36.989	0.985	4.62e5	3.73e5	0.984	1.239	1.240	2350.9	2884	1618	6.78e6	5.42e6	NO		87.823	
13C-123678-HxCDD	37.121	0.989	4.79e5	3.91e5	1.043	1.224	1.240	2391.5	2884	1618	6.90e6	5.78e6	NO		86.357	
13C-1234678-HpCDD	41.933	1.117	3.46e5	3.33e5	0.891	1.039	1.050	2790.3	1561	1751	4.36e6	4.28e6	NO		78.833	
13C-OCDD	48.062	1.280	5.08e5	5.84e5	0.849	0.871	0.890	2174.7	2191	1784	4.76e6	5.40e6	NO		133.300	

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
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ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N	Noise 1	Noise 2	Height 1	Height 2	EMPC?	EMPC	pg
13C-123789-HxCDD	37.537	0.000	5.24e5	4.42e5	1.000	1.186	1.240	2798.0	2884	1618	8.07e6	6.66e6	NO		100.000
Total-tetrafurans			5.36e3		0.832				1468		7.36e4				1.172
Total-penta1			8.90e3						738		1.24e5				1.483
Total-pentafurans			6.96e3		0.868				871		1.18e5				1.234
Total-hexafurans			9.37e3		1.008				1088		1.45e5				2.037
Total-heptafurans			7.44e3		1.159				517		1.05e5				2.149
Total-Furans			4.16e4		0.992				1468		6.04e5				9.569
Total-tetradioxins			8.64e3		0.939				1401		1.26e5				1.733
Total-pentadioxins			7.48e3		0.930				1305		1.29e5				1.382
Total-hexadioxins			1.22e4		0.890				1239		1.90e5				2.692
Total-heptadioxins			1.74e4		0.966				922		2.37e5				5.352
Total-Dioxins			9.13e4		0.918				1401		1.11e6				30.359
Total-TEQ			1.33e5						1401		1.72e6				39.928
37CL-2378-TCDD	27.214	1.032	4.48e5		0.989			2992.1	2154		6.45e6				30.933
FUNCTION1 PFK			1.84e6						733154		2.77e7				
FUNCTION2 PFK			0.00e0						228997		0.00e0				
FUNCTION3 PFK			6.92e5						453263		1.99e7				0.000
FUNCTION4 PFK			0.00e0						338597		0.00e0				
FUNCTION5 PFK			1.51e5						309702		6.28e6				
FUNCTION1 HXCDPE			7.96e1						625		1.82e3				0.000
FUNCTION1 HPCDPE			1.96e3						1478		4.54e4				0.000
FUNCTION2 HPCDPE			3.52e2						1268		8.77e3				0.000
FUNCTION3 OCDPE			0.00e0						481		0.00e0				
FUNCTION4 NCDPE			1.20e3						825		3.30e4				0.000
FUNCTION5 DCDPE			0.00e0						414		0.00e0				

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.23	1213.291	0.832	0.117		0.69	0.77	NO	6.7
2	35	Total-tetrafurans	303.9016	24.54	1363.125	0.832	0.131		0.56	0.77	YES	4.9
3	35	Total-tetrafurans	303.9016	24.32	1083.816	0.832	0.104		1.15	0.77	YES	5.7
4	35	Total-tetrafurans	303.9016	23.90	3087.230	0.832	0.297		1.00	0.77	YES	10.7
5	35	Total-tetrafurans	303.9016	23.05	672.657	0.832	0.065		0.34	0.77	YES	3.0
6	35	Total-tetrafurans	303.9016	26.80	1039.162	0.832	0.100		0.64	0.77	YES	4.3
7	1	2378-TCDF	303.9016	26.57	1079.527	0.832	0.104	0.081	0.52	0.77	YES	4.8
8	35	Total-tetrafurans	303.9016	26.38	868.939	0.832	0.084		1.39	0.77	YES	4.2
9	35	Total-tetrafurans	303.9016	25.51	1751.704	0.832	0.169		0.83	0.77	NO	5.9

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339.8597	28.01	15070.928		1.483		1.44	1.55	NO	168.3

PF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37	Total-pentafurans	339.8597	31.83	541.893	0.868	0.056		1.74	1.55	NO	6.0
2	37	Total-pentafurans	339.8597	30.94	1125.792	0.868	0.117		1.40	1.55	NO	13.1
3	2	12378-PeCDF	339.8597	30.73	1200.130	0.853	0.124	0.114	1.27	1.55	YES	12.4
4	37	Total-pentafurans	339.8597	30.37	1671.603	0.868	0.174		2.33	1.55	YES	20.3
5	37	Total-pentafurans	339.8597	29.66	3566.168	0.868	0.371		1.20	1.55	YES	36.6
6	37	Total-pentafurans	339.8597	29.58	1217.830	0.868	0.127		1.35	1.55	NO	16.5
7	3	23478-PeCDF	339.8597	32.09	1134.161	0.884	0.119	0.092	2.30	1.55	YES	18.0
8	37	Total-pentafurans	339.8597	32.03	324.231	0.868	0.034		0.38	1.55	YES	4.3
9	37	Total-pentafurans	339.8597	31.95	1087.792	0.868	0.113		1.21	1.55	YES	8.8

HF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	38	Total-hexafurans	373.8208	34.24	5787.510	1.008	0.697		1.05	1.24	YES	40.0
2	38	Total-hexafurans	373.8208	34.04	976.787	1.008	0.118		2.45	1.24	YES	11.0
3	7	123789-HxCDF	373.8208	37.95	851.569	0.947	0.118	0.100	1.64	1.24	YES	6.5
4	5	234678-HxCDF	373.8208	36.83	1019.125	1.067	0.120	0.120	1.41	1.24	NO	9.2
5	6	123678-HxCDF	373.8208	35.92	1458.743	0.999	0.164	0.164	1.14	1.24	NO	11.7
6	4	123478-HxCDF	373.8208	35.77	2250.819	1.017	0.262	0.262	1.12	1.24	NO	18.4
7	38	Total-hexafurans	373.8208	35.60	334.330	1.008	0.040		0.71	1.24	YES	3.3
8	38	Total-hexafurans	373.8208	35.13	4303.483	1.008	0.518		1.37	1.24	NO	33.1

HPF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	39	Total-heptafurans	407.7818	40.90	8915.440	1.159	1.343		1.11	1.05	NO	125.0
2	8	1234678-HpCDF	407.7818	40.08	5089.701	1.151	0.691	0.691	0.94	1.05	NO	68.3
3	9	1234789-HpCDF	407.7818	42.88	682.043	1.166	0.115	0.095	0.72	1.05	YES	10.5

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.23	1213.291	0.832	0.117		0.69	0.77	NO	6.7
2	35	Total-tetrafurans	303.9016	24.54	1363.125	0.832	0.131		0.56	0.77	YES	4.9
3	35	Total-tetrafurans	303.9016	24.32	1083.816	0.832	0.104		1.15	0.77	YES	5.7
4	35	Total-tetrafurans	303.9016	23.90	3087.230	0.832	0.297		1.00	0.77	YES	10.7
5	35	Total-tetrafurans	303.9016	23.05	672.657	0.832	0.065		0.34	0.77	YES	3.0
6	35	Total-tetrafurans	303.9016	26.80	1039.162	0.832	0.100		0.64	0.77	YES	4.3
7	1	2378-TCDF	303.9016	26.57	1079.527	0.832	0.104	0.081	0.52	0.77	YES	4.8
8	35	Total-tetrafurans	303.9016	26.38	868.939	0.832	0.084		1.39	0.77	YES	4.2
9	35	Total-tetrafurans	303.9016	25.51	1751.704	0.832	0.169		0.83	0.77	NO	5.9
10	37	Total-pentafurans	339.8597	31.83	541.893	0.868	0.056		1.74	1.55	NO	6.0
11	37	Total-pentafurans	339.8597	30.94	1125.792	0.868	0.117		1.40	1.55	NO	13.1
12	2	12378-PeCDF	339.8597	30.73	1200.130	0.853	0.124	0.114	1.27	1.55	YES	12.4
13	37	Total-pentafurans	339.8597	30.37	1671.603	0.868	0.174		2.33	1.55	YES	20.3
14	37	Total-pentafurans	339.8597	29.66	3566.168	0.868	0.371		1.20	1.55	YES	36.6
15	37	Total-pentafurans	339.8597	29.58	1217.830	0.868	0.127		1.35	1.55	NO	16.5
16	3	23478-PeCDF	339.8597	32.09	1134.161	0.884	0.119	0.092	2.30	1.55	YES	18.0
17	37	Total-pentafurans	339.8597	32.03	324.231	0.868	0.034		0.38	1.55	YES	4.3
18	37	Total-pentafurans	339.8597	31.95	1087.792	0.868	0.113		1.21	1.55	YES	8.8
19	38	Total-hexafurans	373.8208	34.24	5787.510	1.008	0.697		1.05	1.24	YES	40.0
20	38	Total-hexafurans	373.8208	34.04	976.787	1.008	0.118		2.45	1.24	YES	11.0
21	7	123789-HxCDF	373.8208	37.95	851.569	0.947	0.118	0.100	1.64	1.24	YES	6.5
22	5	234678-HxCDF	373.8208	36.83	1019.125	1.067	0.120	0.120	1.41	1.24	NO	9.2
23	6	123678-HxCDF	373.8208	35.92	1458.743	0.999	0.164	0.164	1.14	1.24	NO	11.7
24	4	123478-HxCDF	373.8208	35.77	2250.819	1.017	0.262	0.262	1.12	1.24	NO	18.4
25	38	Total-hexafurans	373.8208	35.60	334.330	1.008	0.040		0.71	1.24	YES	3.3
26	38	Total-hexafurans	373.8208	35.13	4303.483	1.008	0.518		1.37	1.24	NO	33.1
27	39	Total-heptafurans	407.7818	40.90	8915.440	1.159	1.343		1.11	1.05	NO	125.0
28	8	1234678-HpCDF	407.7818	40.08	5089.701	1.151	0.691	0.691	0.94	1.05	NO	68.3
29	10	OCDF	441.7428	48.37	8168.354	1.001	1.494	1.494	0.77	0.89	NO	67.5
30	9	1234789-HpCDF	407.7818	42.88	682.043	1.166	0.115	0.095	0.72	1.05	YES	10.5
31	36	Total-penta1	339.8597	28.01	15070.928		1.483		1.44	1.55	NO	168.3

TD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11	2378-TCDD	319.8965	27.21	7296.305	0.939	0.780	0.780	0.72	0.77	NO	30.7
2	41	Total-tetradioxins	319.8965	26.56	5485.269	0.939	0.586		3.55	0.77	YES	42.5
3	41	Total-tetradioxins	319.8965	25.82	551.345	0.939	0.059		1.03	0.77	YES	3.3
4	41	Total-tetradioxins	319.8965	24.60	986.103	0.939	0.105		0.46	0.77	YES	5.0
5	41	Total-tetradioxins	319.8965	24.35	1900.909	0.939	0.203		0.62	0.77	YES	8.1

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PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42	Total-pentadioxins	355.8546	32.74	229.119	0.930	0.029		1.95	1.55	YES	3.3
2	12	12378-PeCDD	355.8546	32.35	1095.435	0.930	0.140	0.140	1.32	1.55	NO	8.7
3	42	Total-pentadioxins	355.8546	32.07	1633.848	0.930	0.209		6.64	1.55	YES	20.9
4	42	Total-pentadioxins	355.8546	31.10	1006.376	0.930	0.128		1.56	1.55	NO	9.6
5	42	Total-pentadioxins	355.8546	30.72	3827.258	0.930	0.488		2.95	1.55	YES	32.6
6	42	Total-pentadioxins	355.8546	29.65	1899.798	0.930	0.242		2.07	1.55	YES	13.8
7	42	Total-pentadioxins	355.8546	29.59	1133.643	0.930	0.145		0.90	1.55	YES	9.7

HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43	Total-hexadioxins	389.8157	34.84	3710.332	0.890	0.489		1.15	1.24	NO	25.5
2	15	123789-HxCDD	389.8157	37.55	1397.936	0.885	0.185	0.185	1.16	1.24	NO	10.5
3	14	123678-HxCDD	389.8157	37.13	1915.769	0.854	0.258	0.258	1.10	1.24	NO	13.5
4	43	Total-hexadioxins	389.8157	37.03	440.446	0.890	0.058		2.13	1.24	YES	5.9
5	13	123478-HxCDD	389.8157	37.00	397.239	0.930	0.051	0.045	1.54	1.24	YES	5.2
6	43	Total-hexadioxins	389.8157	36.85	1742.473	0.890	0.230		5.40	1.24	YES	17.8
7	43	Total-hexadioxins	389.8157	36.05	4982.881	0.890	0.657		0.98	1.24	YES	23.7
8	43	Total-hexadioxins	389.8157	35.92	1807.301	0.890	0.238		5.18	1.24	YES	18.6
9	43	Total-hexadioxins	389.8157	35.75	2341.657	0.890	0.309		2.57	1.24	YES	19.8
10	43	Total-hexadioxins	389.8157	35.63	1635.631	0.890	0.216		0.99	1.24	YES	12.5

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423.7766	41.94	15385.277	0.966	2.347	2.347	0.98	1.05	NO	123.0
2	44	Total-heptadioxins	423.7766	40.65	19699.976	0.966	3.005		0.98	1.05	NO	134.2

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
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ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
1	11	2378-TCDD	319.8965	27.21	7296.305	0.939	0.780	0.780	0.72	0.77	NO	30.7
2	41	Total-tetradioxins	319.8965	26.56	5485.269	0.939	0.586		3.55	0.77	YES	42.5
3	41	Total-tetradioxins	319.8965	25.82	551.345	0.939	0.059		1.03	0.77	YES	3.3
4	41	Total-tetradioxins	319.8965	24.60	986.103	0.939	0.105		0.46	0.77	YES	5.0
5	41	Total-tetradioxins	319.8965	24.35	1900.909	0.939	0.203		0.62	0.77	YES	8.1
6	42	Total-pentadioxins	355.8546	32.74	229.119	0.930	0.029		1.95	1.55	YES	3.3
7	12	12378-PeCDD	355.8546	32.35	1095.435	0.930	0.140	0.140	1.32	1.55	NO	8.7
8	42	Total-pentadioxins	355.8546	32.07	1633.848	0.930	0.209		6.64	1.55	YES	20.9
9	42	Total-pentadioxins	355.8546	31.10	1006.376	0.930	0.128		1.56	1.55	NO	9.6
10	42	Total-pentadioxins	355.8546	30.72	3827.258	0.930	0.488		2.95	1.55	YES	32.6
11	42	Total-pentadioxins	355.8546	29.65	1899.798	0.930	0.242		2.07	1.55	YES	13.8
12	42	Total-pentadioxins	355.8546	29.59	1133.643	0.930	0.145		0.90	1.55	YES	9.7
13	43	Total-hexadioxins	389.8157	34.84	3710.332	0.890	0.489		1.15	1.24	NO	25.5
14	15	123789-HxCDD	389.8157	37.55	1397.936	0.885	0.185	0.185	1.16	1.24	NO	10.5
15	14	123678-HxCDD	389.8157	37.13	1915.769	0.854	0.258	0.258	1.10	1.24	NO	13.5
16	43	Total-hexadioxins	389.8157	37.03	440.446	0.890	0.058		2.13	1.24	YES	5.9
17	13	123478-HxCDD	389.8157	37.00	397.239	0.930	0.051	0.045	1.54	1.24	YES	5.2
18	43	Total-hexadioxins	389.8157	36.85	1742.473	0.890	0.230		5.40	1.24	YES	17.8
19	43	Total-hexadioxins	389.8157	36.05	4982.881	0.890	0.657		0.98	1.24	YES	23.7
20	43	Total-hexadioxins	389.8157	35.92	1807.301	0.890	0.238		5.18	1.24	YES	18.6
21	43	Total-hexadioxins	389.8157	35.75	2341.657	0.890	0.309		2.57	1.24	YES	19.8
22	43	Total-hexadioxins	389.8157	35.63	1635.631	0.890	0.216		0.99	1.24	YES	12.5
23	16	1234678-HpCDD	423.7766	41.94	15385.277	0.966	2.347	2.347	0.98	1.05	NO	123.0
24	44	Total-heptadioxins	423.7766	40.65	19699.976	0.966	3.005		0.98	1.05	NO	134.2
25	17	OCDD	457.7377	48.09	96620.101	0.921	19.200	19.200	0.89	0.89	NO	341.3

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35	Total-tetrafurans	303.9016	25.23	1213.291	0.832	0.117		0.69	0.77	NO	6.7
2	35	Total-tetrafurans	303.9016	24.54	1363.125	0.832	0.131		0.56	0.77	YES	4.9
3	35	Total-tetrafurans	303.9016	24.32	1083.816	0.832	0.104		1.15	0.77	YES	5.7
4	35	Total-tetrafurans	303.9016	23.90	3087.230	0.832	0.297		1.00	0.77	YES	10.7
5	35	Total-tetrafurans	303.9016	23.05	672.657	0.832	0.065		0.34	0.77	YES	3.0
6	35	Total-tetrafurans	303.9016	26.80	1039.162	0.832	0.100		0.64	0.77	YES	4.3
7	1	2378-TCDF	303.9016	26.57	1079.527	0.832	0.104	0.081	0.52	0.77	YES	4.8
8	35	Total-tetrafurans	303.9016	26.38	868.939	0.832	0.084		1.39	0.77	YES	4.2
9	35	Total-tetrafurans	303.9016	25.51	1751.704	0.832	0.169		0.83	0.77	NO	5.9
10	37	Total-pentafurans	339.8597	31.83	541.893	0.868	0.056		1.74	1.55	NO	6.0
11	37	Total-pentafurans	339.8597	30.94	1125.792	0.868	0.117		1.40	1.55	NO	13.1
12	2	12378-PeCDF	339.8597	30.73	1200.130	0.853	0.124	0.114	1.27	1.55	YES	12.4
13	37	Total-pentafurans	339.8597	30.37	1671.603	0.868	0.174		2.33	1.55	YES	20.3
14	37	Total-pentafurans	339.8597	29.66	3566.168	0.868	0.371		1.20	1.55	YES	36.6
15	37	Total-pentafurans	339.8597	29.58	1217.830	0.868	0.127		1.35	1.55	NO	16.5
16	3	23478-PeCDF	339.8597	32.09	1134.161	0.884	0.119	0.092	2.30	1.55	YES	18.0
17	37	Total-pentafurans	339.8597	32.03	324.231	0.868	0.034		0.38	1.55	YES	4.3
18	37	Total-pentafurans	339.8597	31.95	1087.792	0.868	0.113		1.21	1.55	YES	8.8
19	38	Total-hexafurans	373.8208	34.24	5787.510	1.008	0.697		1.05	1.24	YES	40.0
20	38	Total-hexafurans	373.8208	34.04	976.787	1.008	0.118		2.45	1.24	YES	11.0
21	7	123789-HxCDF	373.8208	37.95	851.569	0.947	0.118	0.100	1.64	1.24	YES	6.5
22	5	234678-HxCDF	373.8208	36.83	1019.125	1.067	0.120	0.120	1.41	1.24	NO	9.2
23	6	123678-HxCDF	373.8208	35.92	1458.743	0.999	0.164	0.164	1.14	1.24	NO	11.7
24	4	123478-HxCDF	373.8208	35.77	2250.819	1.017	0.262	0.262	1.12	1.24	NO	18.4
25	38	Total-hexafurans	373.8208	35.60	334.330	1.008	0.040		0.71	1.24	YES	3.3
26	38	Total-hexafurans	373.8208	35.13	4303.483	1.008	0.518		1.37	1.24	NO	33.1
27	39	Total-heptafurans	407.7818	40.90	8915.440	1.159	1.343		1.11	1.05	NO	125.0
28	8	1234678-HpCDF	407.7818	40.08	5089.701	1.151	0.691	0.691	0.94	1.05	NO	68.3
29	10	OCDF	441.7428	48.37	8168.354	1.001	1.494	1.494	0.77	0.89	NO	67.5
30	9	1234789-HpCDF	407.7818	42.88	682.043	1.166	0.115	0.095	0.72	1.05	YES	10.5
31	36	Total-penta1	339.8597	28.01	15070.928		1.483		1.44	1.55	NO	168.3
32	11	2378-TCDD	319.8965	27.21	7296.305	0.939	0.780	0.780	0.72	0.77	NO	30.7
33	41	Total-tetradioxins	319.8965	26.56	5485.269	0.939	0.586		3.55	0.77	YES	42.5
34	41	Total-tetradioxins	319.8965	25.82	551.345	0.939	0.059		1.03	0.77	YES	3.3
35	41	Total-tetradioxins	319.8965	24.60	986.103	0.939	0.105		0.46	0.77	YES	5.0
36	41	Total-tetradioxins	319.8965	24.35	1900.909	0.939	0.203		0.62	0.77	YES	8.1
37	42	Total-pentadioxins	355.8546	32.74	229.119	0.930	0.029		1.95	1.55	YES	3.3
38	12	12378-PeCDD	355.8546	32.35	1095.435	0.930	0.140	0.140	1.32	1.55	NO	8.7
39	42	Total-pentadioxins	355.8546	32.07	1633.848	0.930	0.209		6.64	1.55	YES	20.9
40	42	Total-pentadioxins	355.8546	31.10	1006.376	0.930	0.128		1.56	1.55	NO	9.6
41	42	Total-pentadioxins	355.8546	30.72	3827.258	0.930	0.488		2.95	1.55	YES	32.6
42	42	Total-pentadioxins	355.8546	29.65	1899.798	0.930	0.242		2.07	1.55	YES	13.8
43	42	Total-pentadioxins	355.8546	29.59	1133.643	0.930	0.145		0.90	1.55	YES	9.7
44	43	Total-hexadioxins	389.8157	34.84	3710.332	0.890	0.489		1.15	1.24	NO	25.5
45	15	123789-HxCDD	389.8157	37.55	1397.936	0.885	0.185	0.185	1.16	1.24	NO	10.5
46	14	123678-HxCDD	389.8157	37.13	1915.769	0.854	0.258	0.258	1.10	1.24	NO	13.5
47	43	Total-hexadioxins	389.8157	37.03	440.446	0.890	0.058		2.13	1.24	YES	5.9
48	13	123478-HxCDD	389.8157	37.00	397.239	0.930	0.051	0.045	1.54	1.24	YES	5.2
49	43	Total-hexadioxins	389.8157	36.85	1742.473	0.890	0.230		5.40	1.24	YES	17.8

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TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	43	Total-hexadioxins	389.8157	36.05	4982.881	0.890	0.657		0.98	1.24	YES	23.7
51	43	Total-hexadioxins	389.8157	35.92	1807.301	0.890	0.238		5.18	1.24	YES	18.6
52	43	Total-hexadioxins	389.8157	35.75	2341.657	0.890	0.309		2.57	1.24	YES	19.8
53	43	Total-hexadioxins	389.8157	35.63	1635.631	0.890	0.216		0.99	1.24	YES	12.5
54	16	1234678-HpCDD	423.7766	41.94	15385.277	0.966	2.347	2.347	0.98	1.05	NO	123.0
55	44	Total-heptadioxins	423.7766	40.65	19699.976	0.966	3.005		0.98	1.05	NO	134.2
56	17	OCDD	457.7377	48.09	96620.101	0.921	19.200	19.200	0.89	0.89	NO	341.3

PFK1

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	22.78	0.000							0.7
2	48	FUNCTION1 PFK	330.9792	22.33	0.000							1.2
3	48	FUNCTION1 PFK	330.9792	22.04	0.000							2.3
4	48	FUNCTION1 PFK	330.9792	21.70	0.000							0.9
5	48	FUNCTION1 PFK	330.9792	21.43	0.000							1.6
6	48	FUNCTION1 PFK	330.9792	21.33	0.000							1.9
7	48	FUNCTION1 PFK	330.9792	21.21	0.000							1.4
8	48	FUNCTION1 PFK	330.9792	26.99	0.000							2.4
9	48	FUNCTION1 PFK	330.9792	26.90	0.000							2.4
10	48	FUNCTION1 PFK	330.9792	26.80	0.000							1.7
11	48	FUNCTION1 PFK	330.9792	26.44	0.000							0.5
12	48	FUNCTION1 PFK	330.9792	26.33	0.000							1.4
13	48	FUNCTION1 PFK	330.9792	26.24	0.000							1.2
14	48	FUNCTION1 PFK	330.9792	25.90	0.000							1.7
15	48	FUNCTION1 PFK	330.9792	25.60	0.000							1.0
16	48	FUNCTION1 PFK	330.9792	25.42	0.000							2.0
17	48	FUNCTION1 PFK	330.9792	24.75	0.000							1.4
18	48	FUNCTION1 PFK	330.9792	23.81	0.000							1.4
19	48	FUNCTION1 PFK	330.9792	23.73	0.000							1.3
20	48	FUNCTION1 PFK	330.9792	23.66	0.000							1.2
21	48	FUNCTION1 PFK	330.9792	23.12	0.000							1.7
22	48	FUNCTION1 PFK	330.9792	23.06	0.000							0.7
23	48	FUNCTION1 PFK	330.9792	22.88	0.000							1.1
24	48	FUNCTION1 PFK	330.9792	28.77	0.000							1.0
25	48	FUNCTION1 PFK	330.9792	27.53	0.000							1.4
26	48	FUNCTION1 PFK	330.9792	27.27	0.000							1.3
27	48	FUNCTION1 PFK	330.9792	27.20	0.000							1.1

PFK2

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

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PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	34.98	0.000		0.000					1.4
2	50	FUNCTION3 PFK	380.9760	34.79	0.000		0.000					0.5
3	50	FUNCTION3 PFK	380.9760	34.63	0.000		0.000					1.3
4	50	FUNCTION3 PFK	380.9760	34.45	0.000		0.000					0.6
5	50	FUNCTION3 PFK	380.9760	34.33	0.000		0.000					1.1
6	50	FUNCTION3 PFK	380.9760	34.13	0.000		0.000					0.7
7	50	FUNCTION3 PFK	380.9760	33.89	0.000		0.000					0.7
8	50	FUNCTION3 PFK	380.9760	33.85	0.000		0.000					0.7
9	50	FUNCTION3 PFK	380.9760	33.73	0.000		0.000					1.8
10	50	FUNCTION3 PFK	380.9760	33.68	0.000		0.000					0.3
11	50	FUNCTION3 PFK	380.9760	37.21	0.000		0.000					0.8
12	50	FUNCTION3 PFK	380.9760	37.15	0.000		0.000					0.9
13	50	FUNCTION3 PFK	380.9760	37.00	0.000		0.000					0.7
14	50	FUNCTION3 PFK	380.9760	36.86	0.000		0.000					1.1
15	50	FUNCTION3 PFK	380.9760	36.74	0.000		0.000					2.1
16	50	FUNCTION3 PFK	380.9760	36.28	0.000		0.000					1.6
17	50	FUNCTION3 PFK	380.9760	36.18	0.000		0.000					1.2
18	50	FUNCTION3 PFK	380.9760	36.13	0.000		0.000					1.0
19	50	FUNCTION3 PFK	380.9760	36.09	0.000		0.000					1.3
20	50	FUNCTION3 PFK	380.9760	35.98	0.000		0.000					0.6
21	50	FUNCTION3 PFK	380.9760	35.78	0.000		0.000					0.8
22	50	FUNCTION3 PFK	380.9760	35.64	0.000		0.000					1.3
23	50	FUNCTION3 PFK	380.9760	35.50	0.000		0.000					1.5
24	50	FUNCTION3 PFK	380.9760	35.32	0.000		0.000					1.4
25	50	FUNCTION3 PFK	380.9760	35.20	0.000		0.000					0.4
26	50	FUNCTION3 PFK	380.9760	35.16	0.000		0.000					1.0
27	50	FUNCTION3 PFK	380.9760	38.91	0.000		0.000					0.6
28	50	FUNCTION3 PFK	380.9760	38.82	0.000		0.000					1.2
29	50	FUNCTION3 PFK	380.9760	38.73	0.000		0.000					0.9
30	50	FUNCTION3 PFK	380.9760	38.70	0.000		0.000					0.3
31	50	FUNCTION3 PFK	380.9760	38.49	0.000		0.000					0.6
32	50	FUNCTION3 PFK	380.9760	38.34	0.000		0.000					1.1
33	50	FUNCTION3 PFK	380.9760	38.21	0.000		0.000					1.1
34	50	FUNCTION3 PFK	380.9760	38.14	0.000		0.000					1.3
35	50	FUNCTION3 PFK	380.9760	37.99	0.000		0.000					0.5
36	50	FUNCTION3 PFK	380.9760	37.93	0.000		0.000					1.0
37	50	FUNCTION3 PFK	380.9760	37.57	0.000		0.000					0.9
38	50	FUNCTION3 PFK	380.9760	37.50	0.000		0.000					1.8
39	50	FUNCTION3 PFK	380.9760	37.46	0.000		0.000					0.9
40	50	FUNCTION3 PFK	380.9760	37.38	0.000		0.000					1.8
41	50	FUNCTION3 PFK	380.9760	37.32	0.000		0.000					1.9
42	50	FUNCTION3 PFK	380.9760	37.25	0.000		0.000					1.1

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

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PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52	FUNCTION5 PFK	480.9696	48.58	0.000							1.4
2	52	FUNCTION5 PFK	480.9696	48.30	0.000							1.2
3	52	FUNCTION5 PFK	480.9696	48.21	0.000							0.8
4	52	FUNCTION5 PFK	480.9696	47.95	0.000							1.5
5	52	FUNCTION5 PFK	480.9696	47.91	0.000							1.2
6	52	FUNCTION5 PFK	480.9696	47.88	0.000							1.1
7	52	FUNCTION5 PFK	480.9696	47.68	0.000							0.7
8	52	FUNCTION5 PFK	480.9696	47.32	0.000							0.6
9	52	FUNCTION5 PFK	480.9696	46.63	0.000							1.0
10	52	FUNCTION5 PFK	480.9696	46.49	0.000							1.4
11	52	FUNCTION5 PFK	480.9696	46.45	0.000							0.8
12	52	FUNCTION5 PFK	480.9696	46.06	0.000							1.3
13	52	FUNCTION5 PFK	480.9696	45.55	0.000							0.7
14	52	FUNCTION5 PFK	480.9696	45.51	0.000							0.8
15	52	FUNCTION5 PFK	480.9696	49.86	0.000							0.6
16	52	FUNCTION5 PFK	480.9696	49.81	0.000							0.7
17	52	FUNCTION5 PFK	480.9696	49.78	0.000							1.0
18	52	FUNCTION5 PFK	480.9696	49.65	0.000							0.8
19	52	FUNCTION5 PFK	480.9696	48.92	0.000							0.7
20	52	FUNCTION5 PFK	480.9696	48.73	0.000							1.0
21	52	FUNCTION5 PFK	480.9696	48.64	0.000							1.0

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53	FUNCTION1 HXCD...	375.8364	23.12	0.000		0.000					2.9

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD...	409.7974	24.12	0.000		0.000					1.8
2	54	FUNCTION1 HPCD...	409.7974	23.81	0.000		0.000					1.3
3	54	FUNCTION1 HPCD...	409.7974	23.54	0.000		0.000					2.3
4	54	FUNCTION1 HPCD...	409.7974	23.03	0.000		0.000					1.7
5	54	FUNCTION1 HPCD...	409.7974	22.88	0.000		0.000					3.2
6	54	FUNCTION1 HPCD...	409.7974	22.22	0.000		0.000					1.8
7	54	FUNCTION1 HPCD...	409.7974	28.53	0.000		0.000					1.3
8	54	FUNCTION1 HPCD...	409.7974	28.08	0.000		0.000					1.6
9	54	FUNCTION1 HPCD...	409.7974	27.66	0.000		0.000					1.8
10	54	FUNCTION1 HPCD...	409.7974	27.56	0.000		0.000					1.4
11	54	FUNCTION1 HPCD...	409.7974	27.45	0.000		0.000					1.8
12	54	FUNCTION1 HPCD...	409.7974	26.86	0.000		0.000					2.2
13	54	FUNCTION1 HPCD...	409.7974	26.80	0.000		0.000					1.9
14	54	FUNCTION1 HPCD...	409.7974	26.33	0.000		0.000					2.4
15	54	FUNCTION1 HPCD...	409.7974	25.85	0.000		0.000					1.2
16	54	FUNCTION1 HPCD...	409.7974	24.46	0.000		0.000					1.8
17	54	FUNCTION1 HPCD...	409.7974	24.36	0.000		0.000					1.2

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ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	32.82	0.000		0.000					2.0
2	55	FUNCTION2 HPCD...	409.7974	32.25	0.000		0.000					1.6
3	55	FUNCTION2 HPCD...	409.7974	31.05	0.000		0.000					1.9
4	55	FUNCTION2 HPCD...	409.7974	29.97	0.000		0.000					1.3

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	44.57	0.000		0.000					2.3
2	57	FUNCTION4 NCDPE	479.7165	43.77	0.000		0.000					2.8
3	57	FUNCTION4 NCDPE	479.7165	43.18	0.000		0.000					2.6
4	57	FUNCTION4 NCDPE	479.7165	43.09	0.000		0.000					2.4
5	57	FUNCTION4 NCDPE	479.7165	42.51	0.000		0.000					4.3
6	57	FUNCTION4 NCDPE	479.7165	40.95	0.000		0.000					2.9
7	57	FUNCTION4 NCDPE	479.7165	39.74	0.000		0.000					5.1
8	57	FUNCTION4 NCDPE	479.7165	39.66	0.000		0.000					11.5
9	57	FUNCTION4 NCDPE	479.7165	39.63	0.000		0.000					6.1

ETHERS6

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

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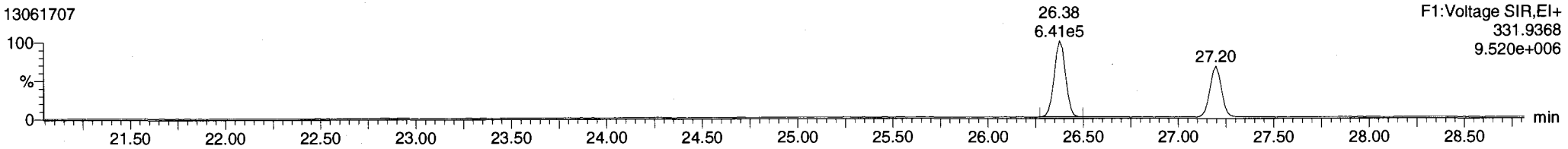
Printed: Tuesday, June 18, 2013 12:42:29 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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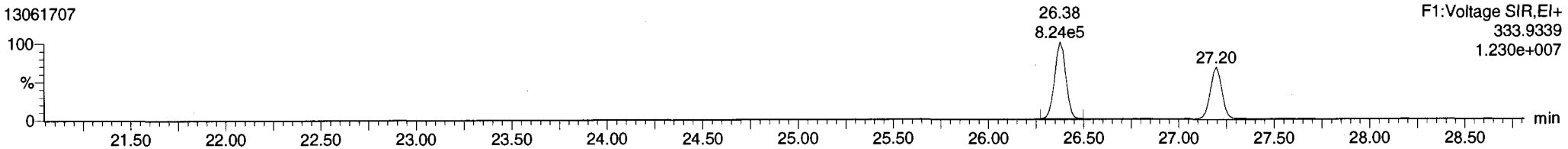

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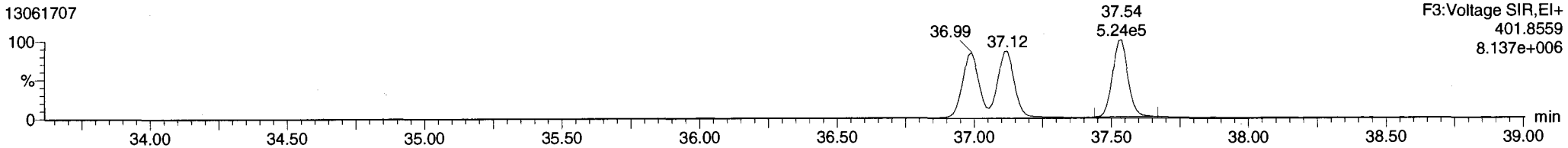

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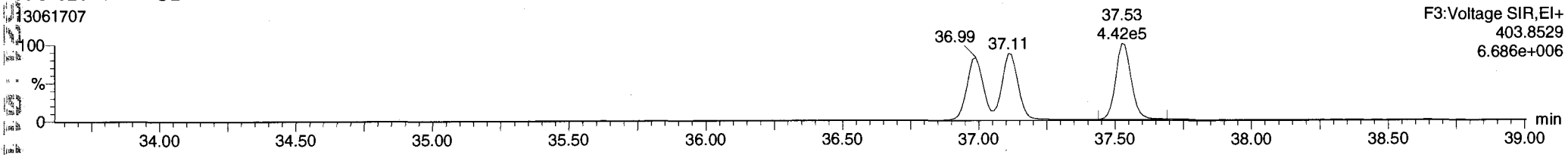

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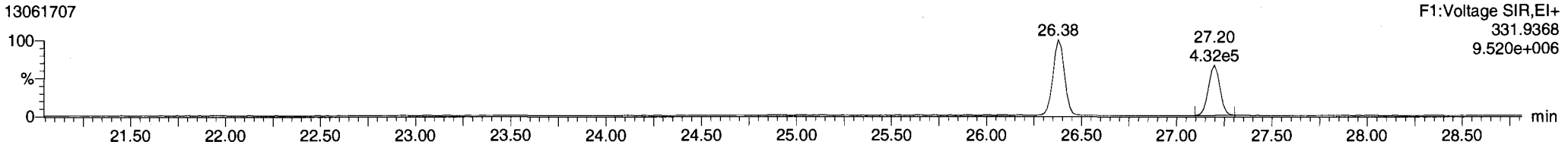
ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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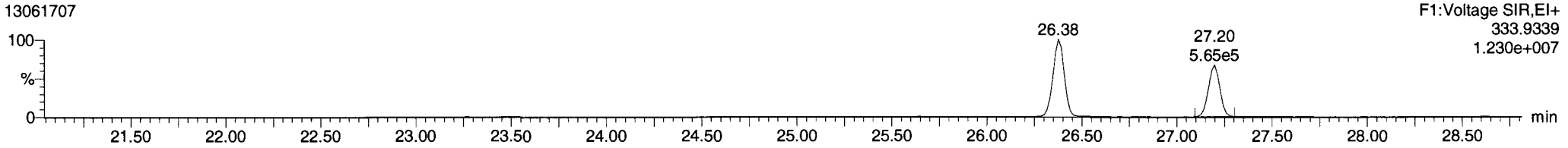

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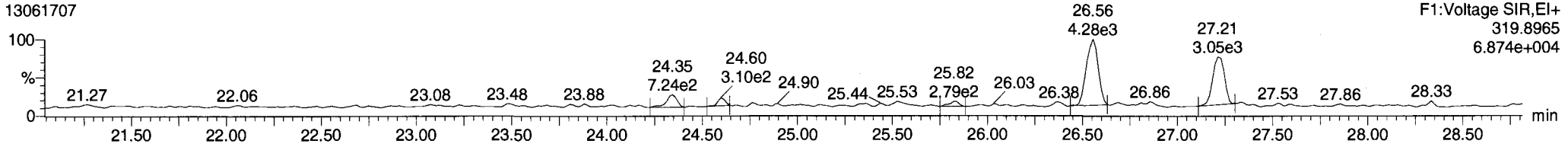

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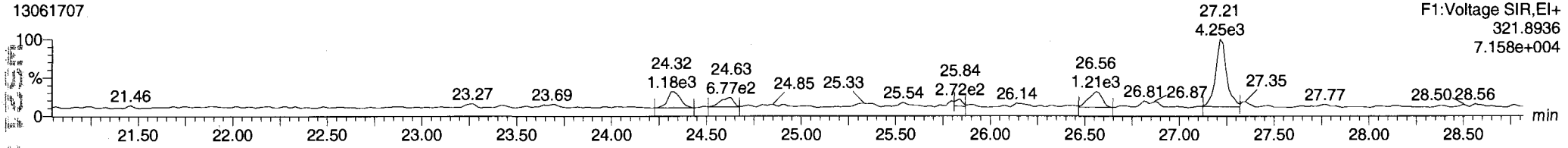
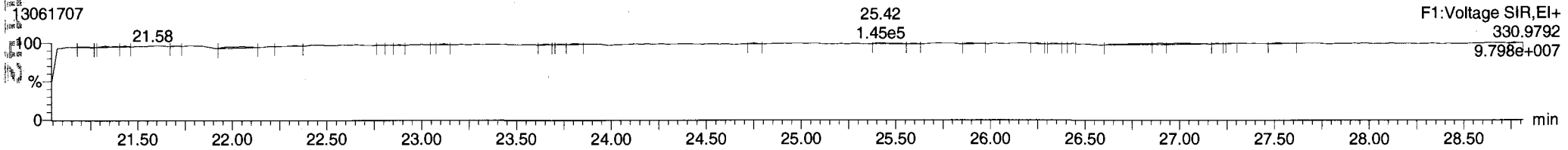


FUNCTION1 PFK



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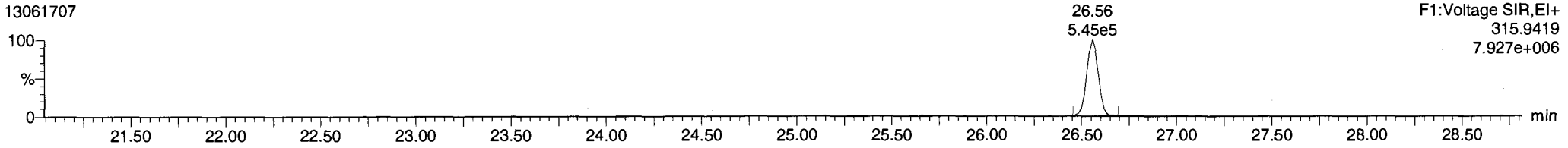
ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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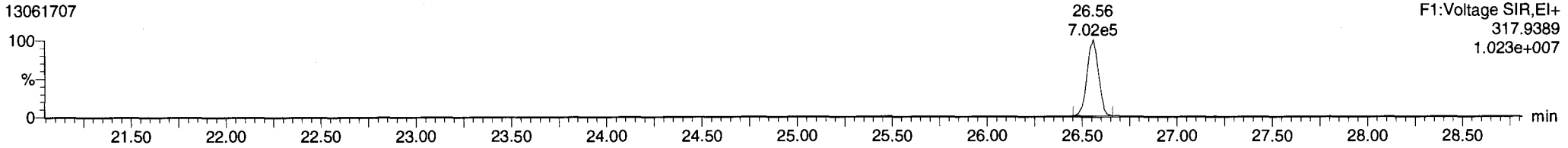

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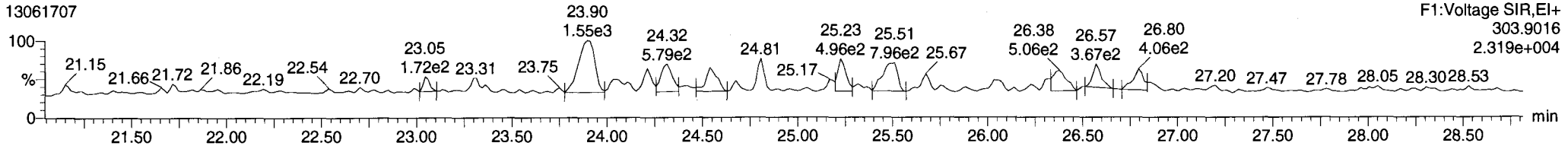
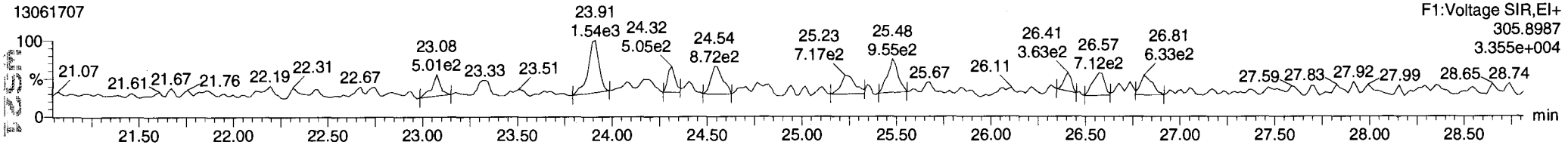
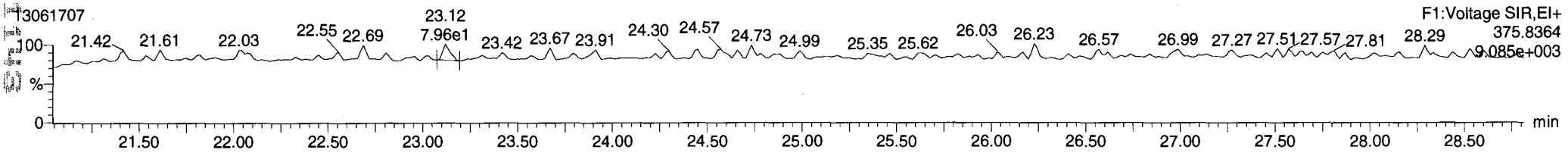


Total-tetrafurans

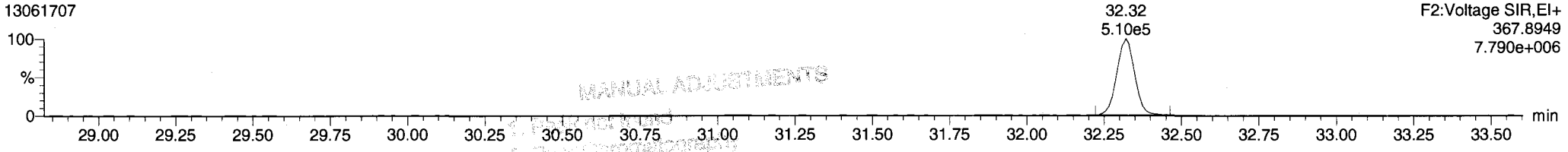


FUNCTION1 HXCDPE



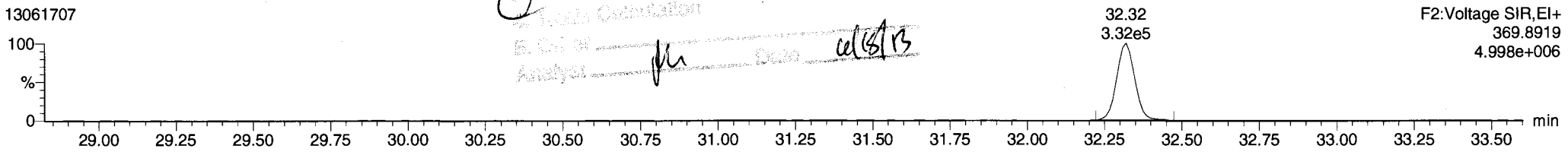
ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD

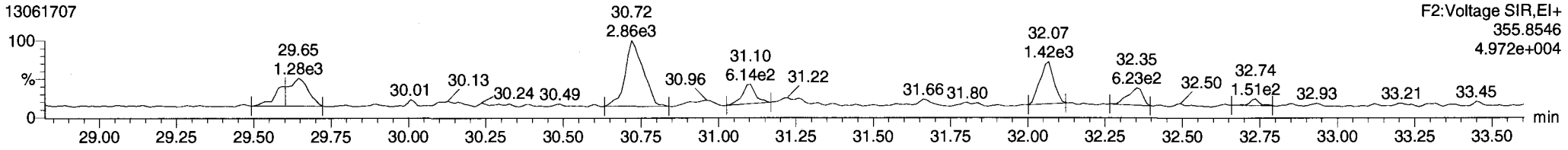


MANUAL ADJUSTMENTS
1. Baseline & Peak
2. Peak Integration
3. Peak Identification
4. Peak Calculation
5. Check all
Analyst Date 6/18/13

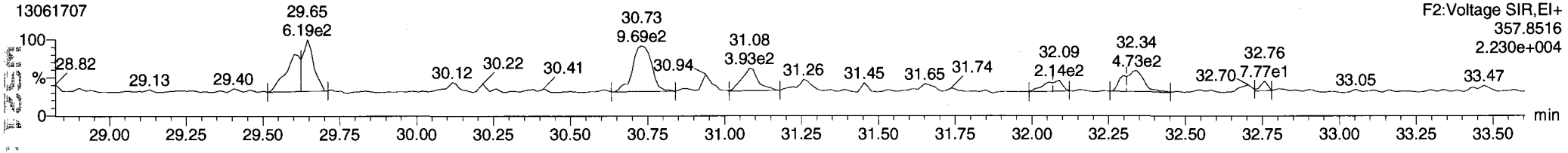
13C-12378-PeCDD



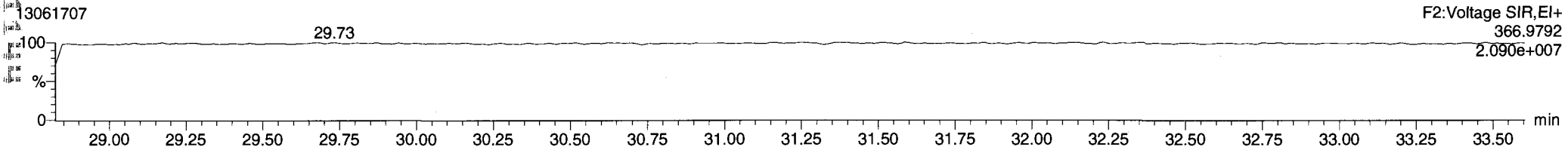
Total-pentadioxins



Total-pentadioxins



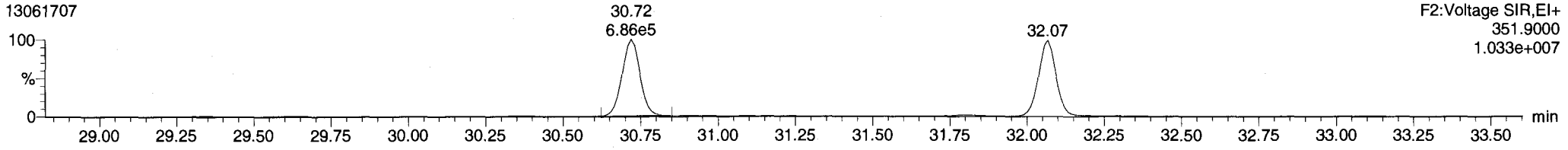
FUNCTION2 PFK



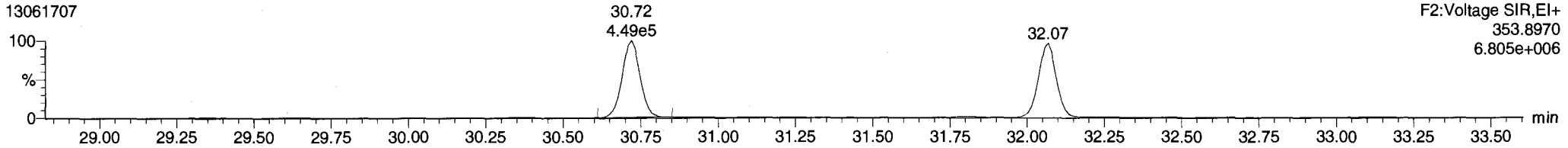
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:42:29 Pacific Daylight Time

ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

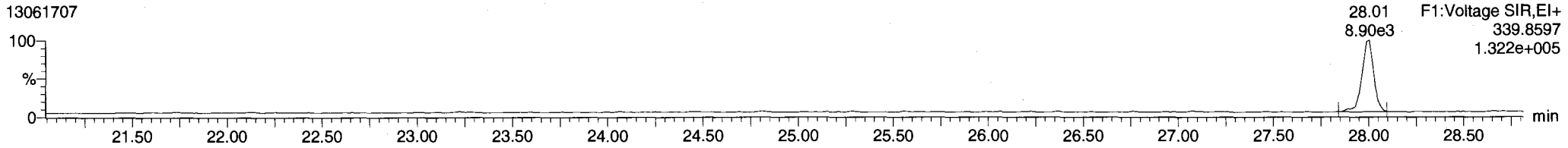
13C-12378-PeCDF



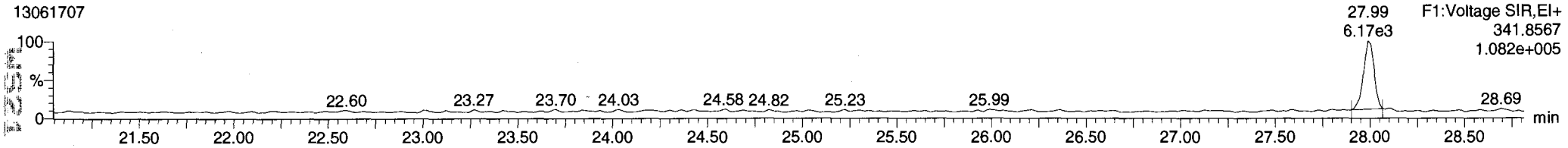
13C-12378-PeCDF



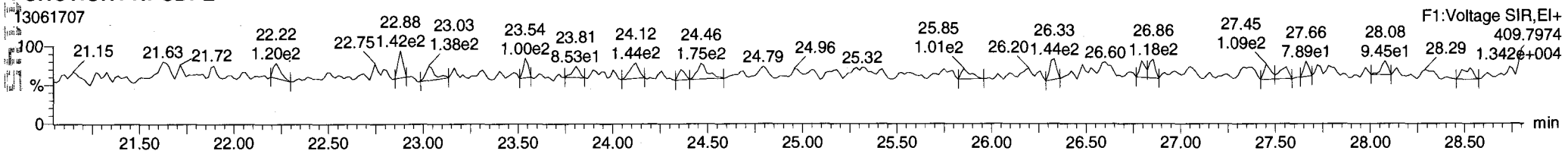
Total-penta1



Total-penta1



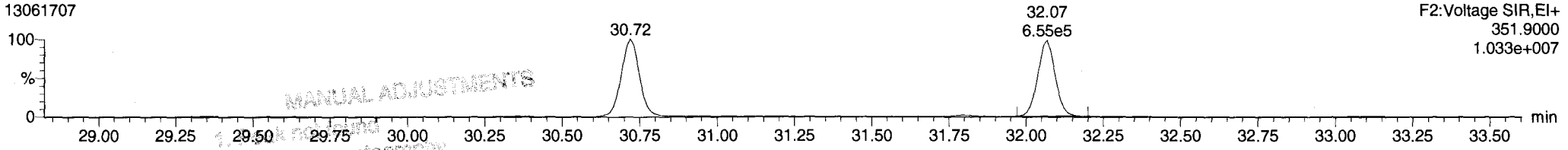
FUNCTION1 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:42:29 Pacific Daylight Time

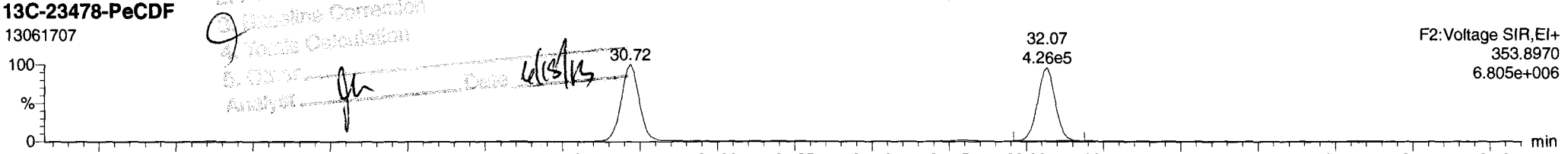
ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF

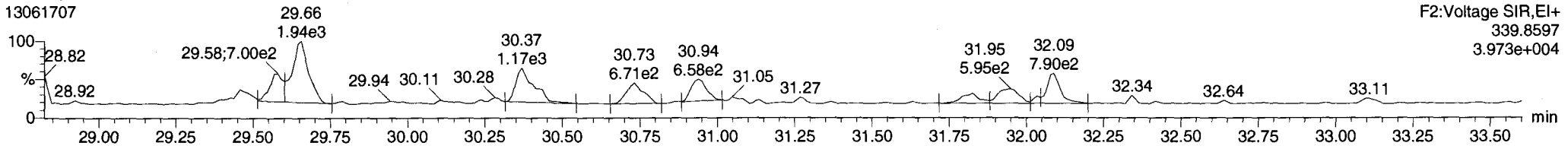


MANUAL ADJUSTMENTS
1. Peak Resolution
2. Poor Chromatography
3. Baseline Correction
4. Ratio Calculation
5. QC SP
Analyst

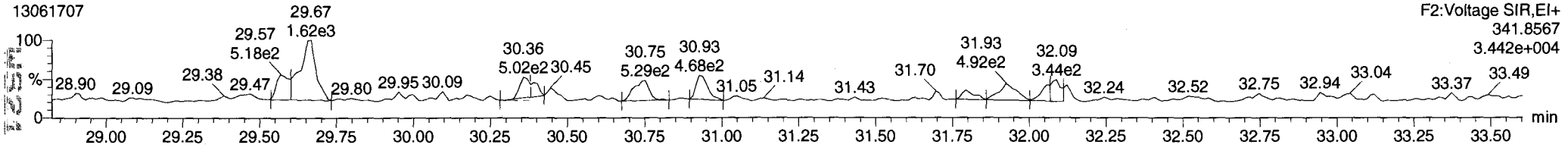
13C-23478-PeCDF



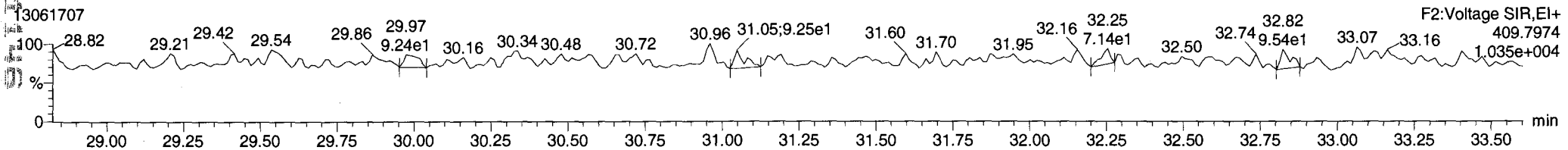
Total-pentafurans



Total-pentafurans



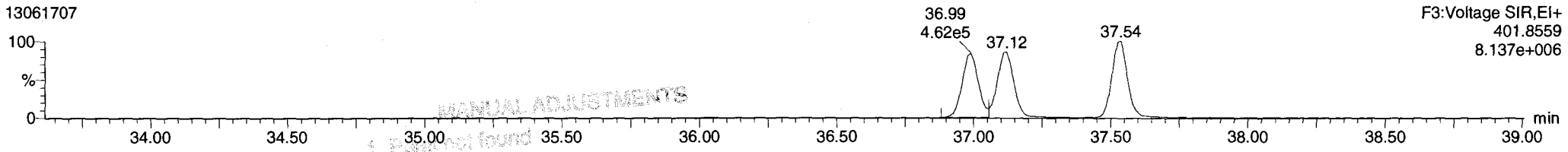
FUNCTION2 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:42:29 Pacific Daylight Time

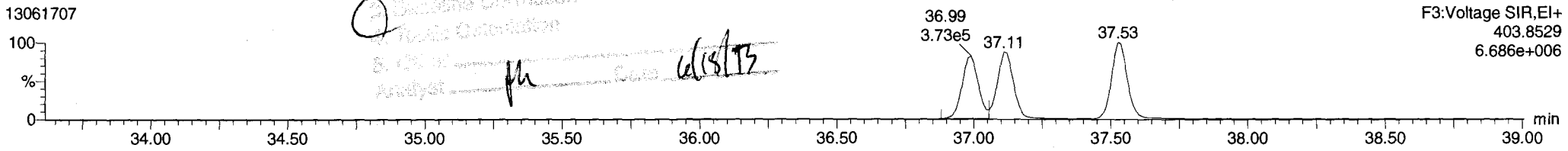
ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD

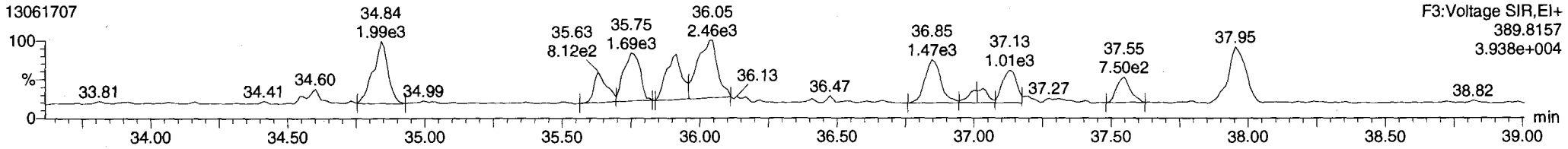


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Peak Identification
5. QC Fail
Analyst pk Date 6/18/13

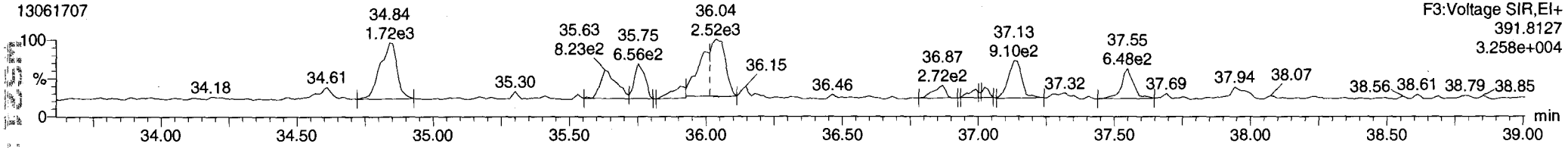
13C-123478-HxCDD



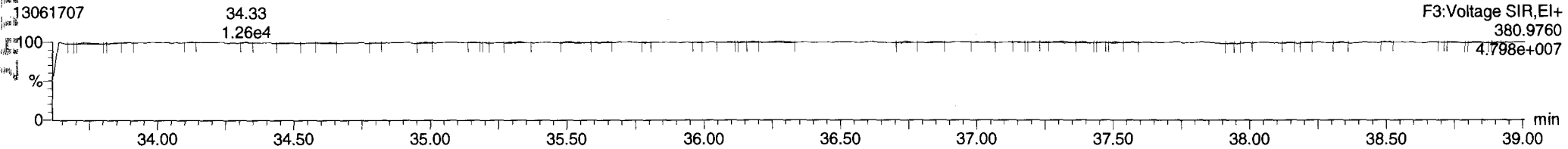
Total-hexadioxins



Total-hexadioxins



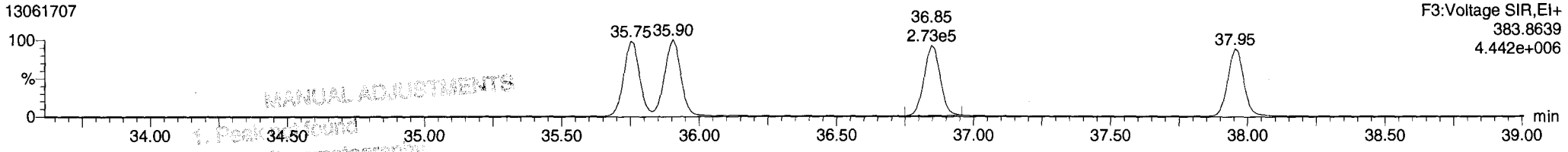
FUNCTION3 PFK



Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:42:29 Pacific Daylight Time

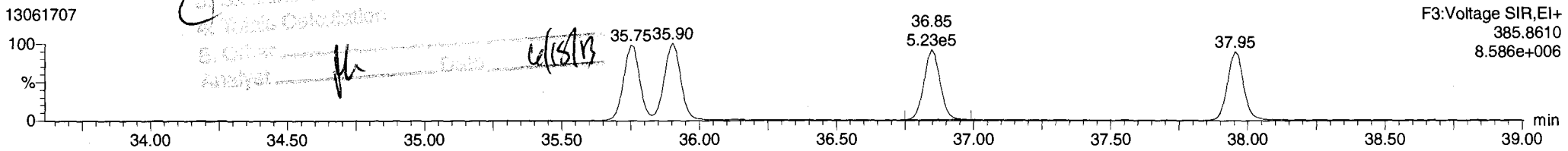
ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF

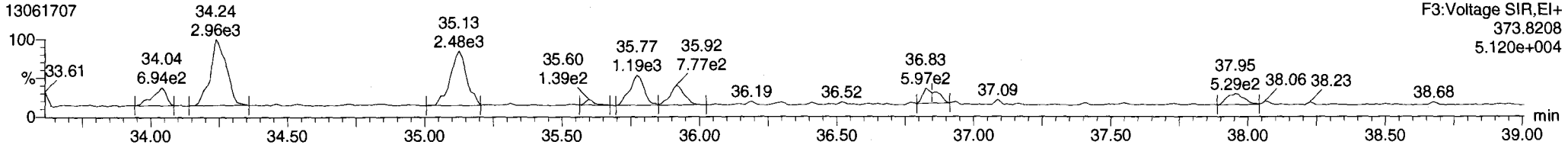


MANUAL ADJUSTMENTS
1. Peaks not found
2. Poor Chromatography
3. Baseline Correction
4. Ratio Deviation
5. Other
Analyst Date 6/18/13

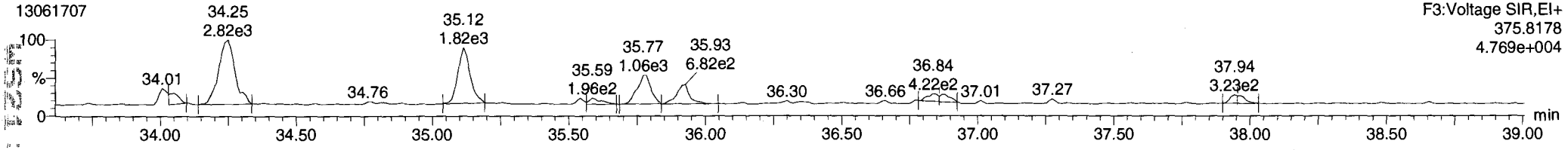
13C-234678-HxCDF



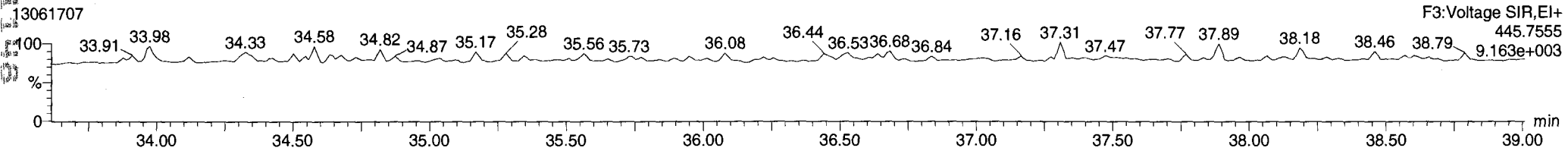
Total-hexafurans



Total-hexafurans



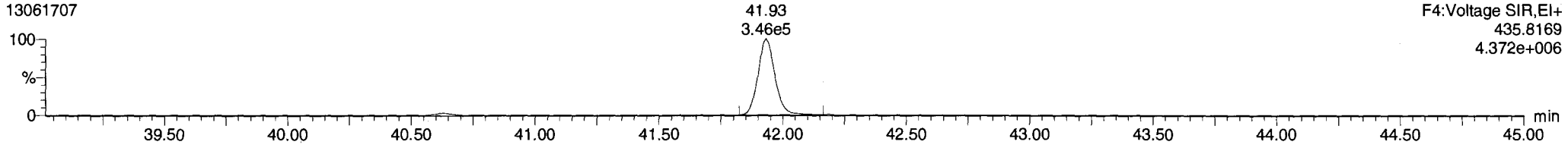
FUNCTION3 OCDPE



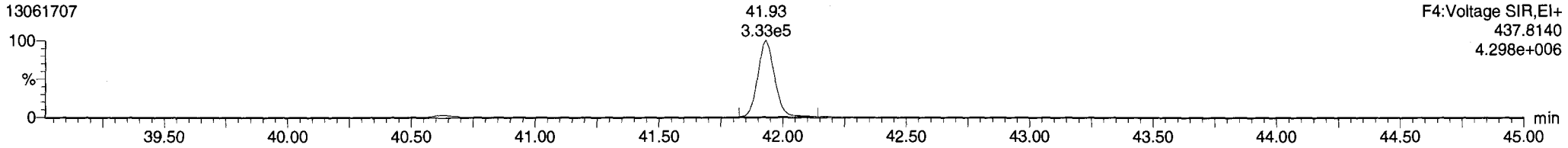
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:42:29 Pacific Daylight Time

ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

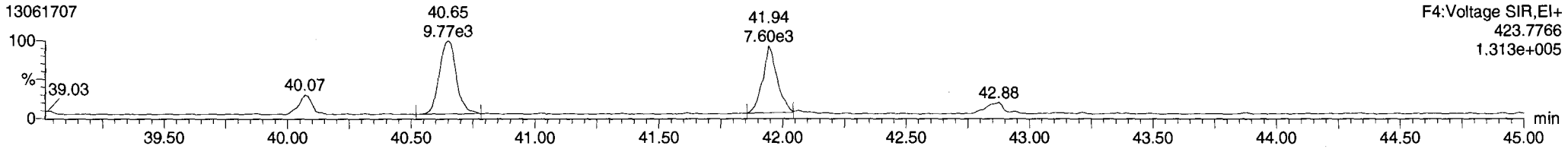
13C-1234678-HpCDD



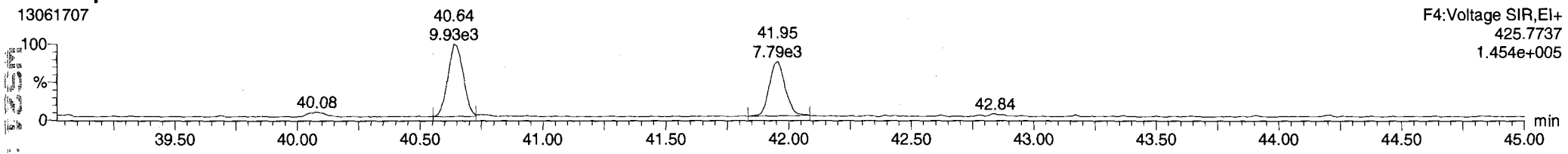
13C-1234678-HpCDD



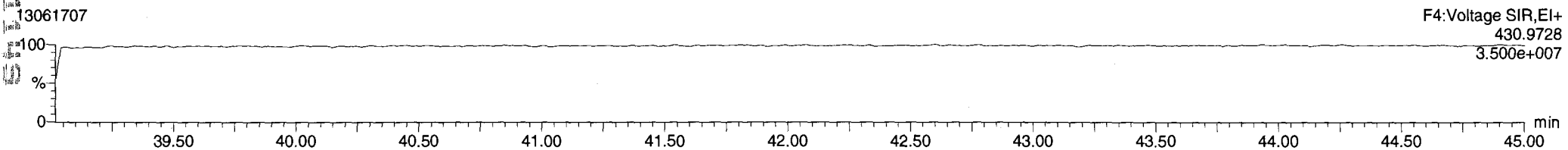
Total-heptadioxins



Total-heptadioxins



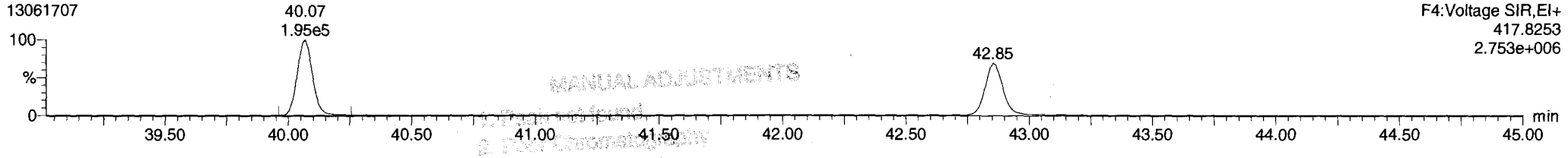
FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:42:29 Pacific Daylight Time

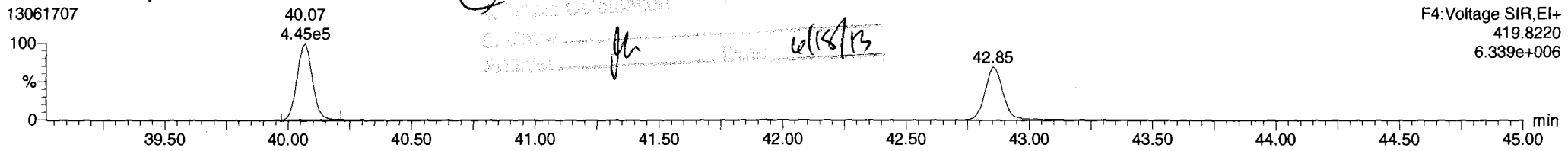
ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF

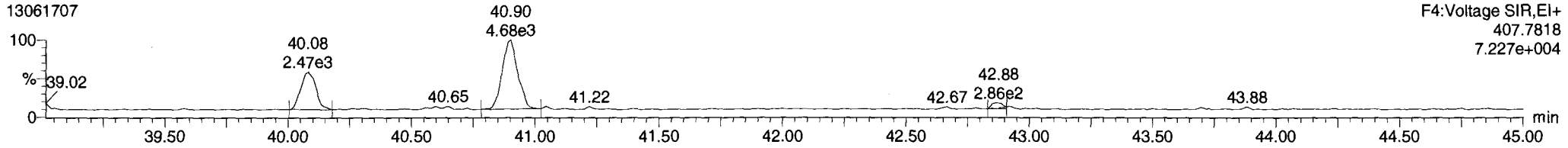


MANUAL ADJUSTMENTS
1. Baseline
2. Peak Integration
3. Co-eluting Compound
4. Peak Calculation
5. Other
Analyst Date 6/18/13

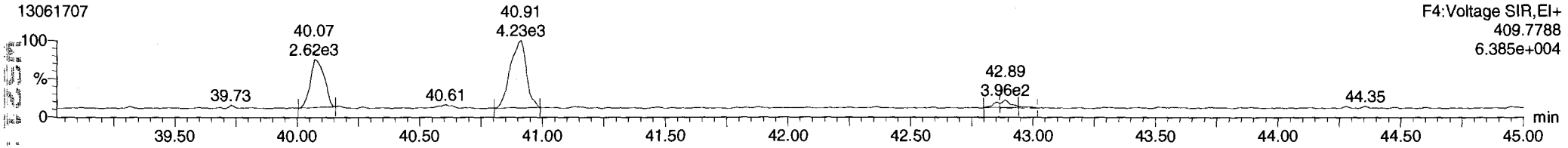
13C-1234678-HpCDF



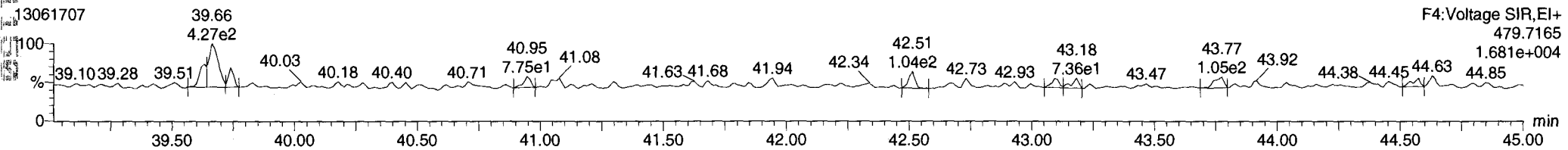
Total-heptafurans



Total-heptafurans



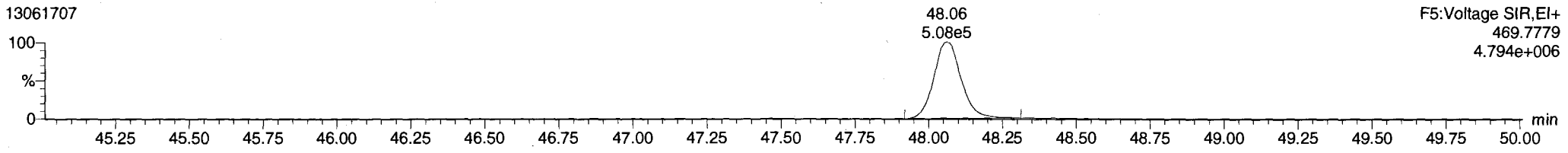
FUNCTION4 NCDPE



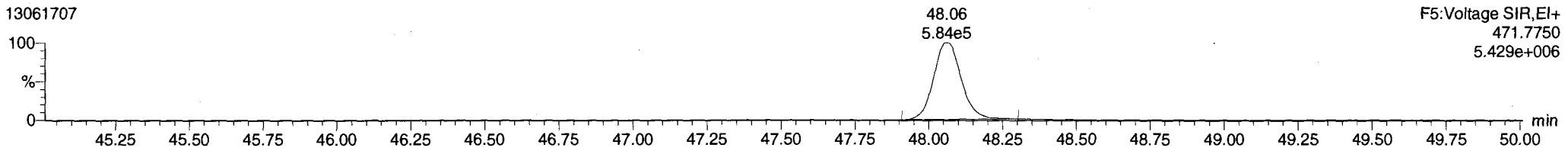
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:42:29 Pacific Daylight Time

ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

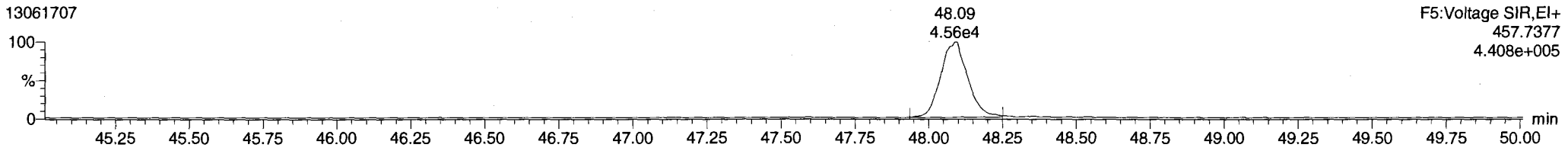
13C-OCDD



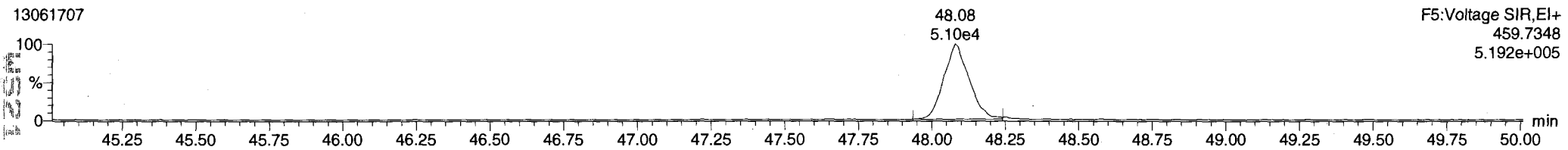
13C-OCDD



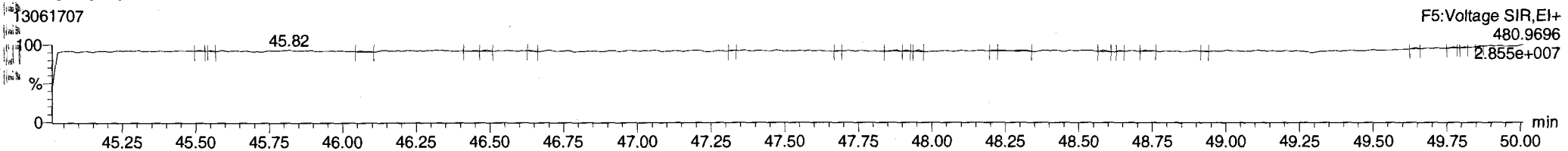
OCDD



OCDD



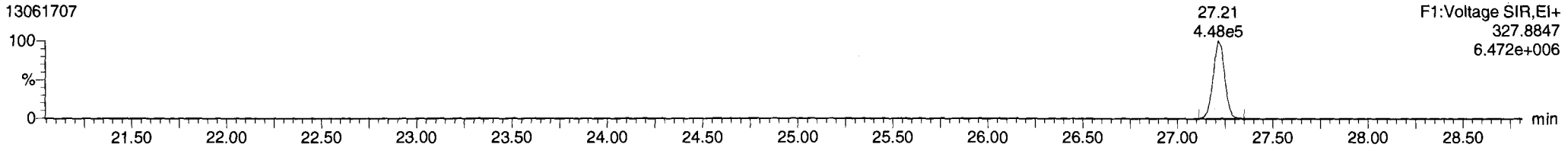
FUNCTION5 PFK



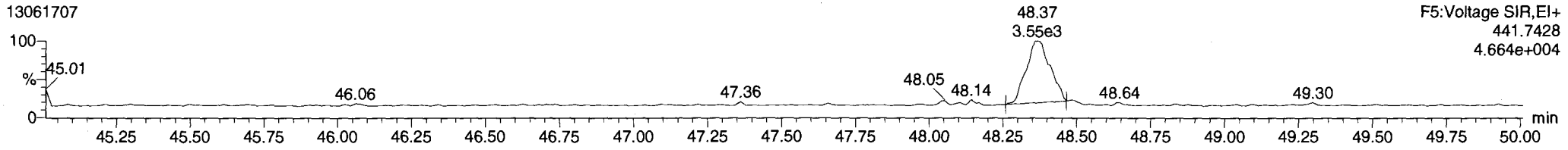
Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:42:29 Pacific Daylight Time

ID: WS21A, Name: 13061707, Date: 17-Jun-2013, Time: 19:22:47, Conditions: AUTOSPEC01, User: pk

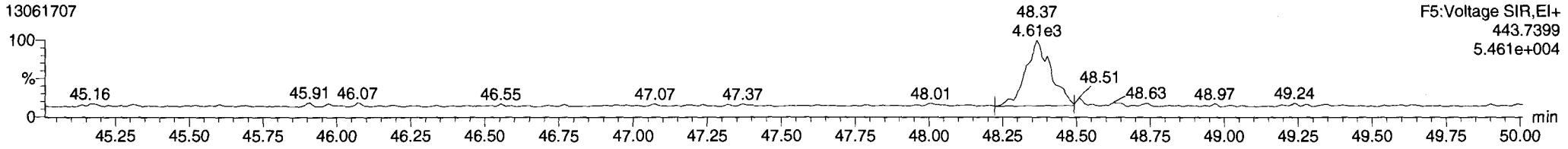
37CL-2378-TCDD



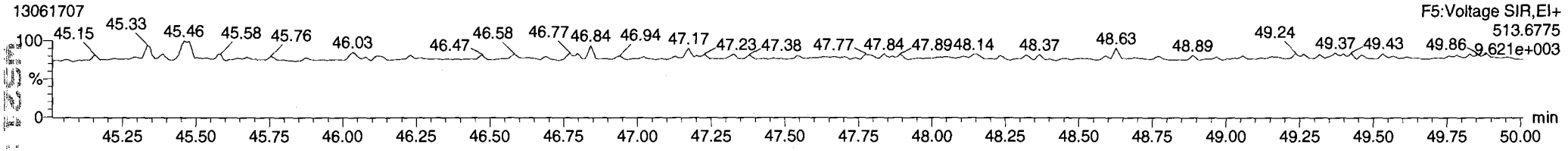
OCDF



OCDF



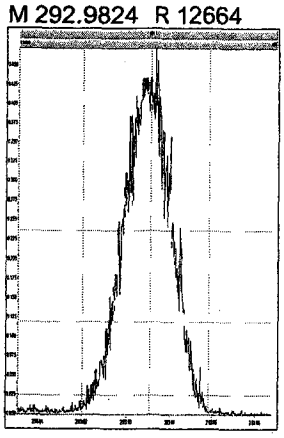
FUNCTION5 DCDPE



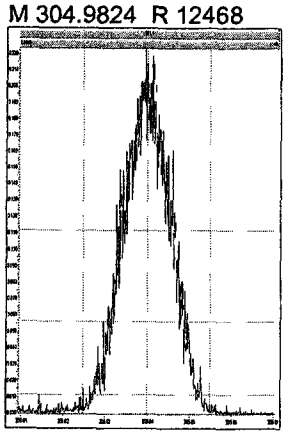
DO NOT COPY

Printed: Tuesday, June 18, 2013 01:37:12 Pacific Daylight Time

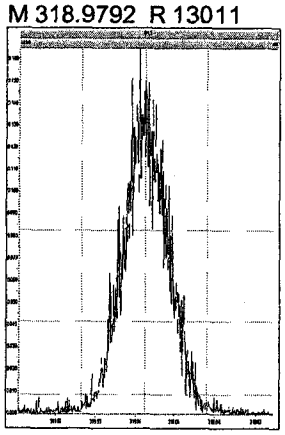
M 292.9824 R 12664



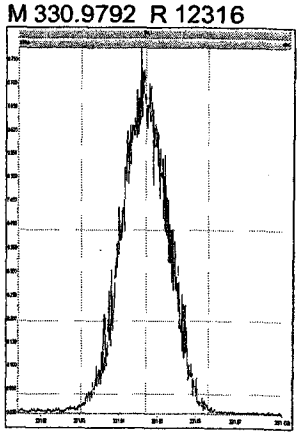
M 304.9824 R 12468



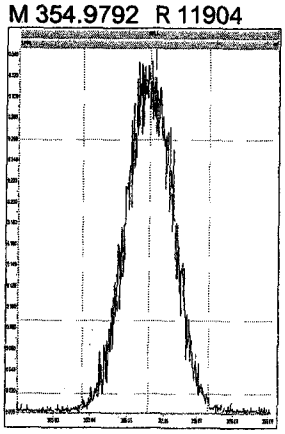
M 318.9792 R 13011



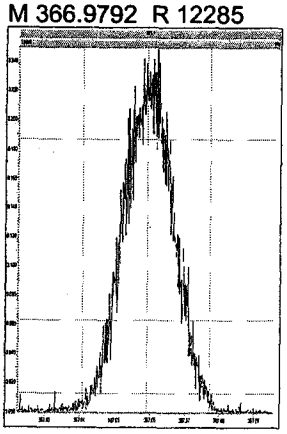
M 330.9792 R 12316



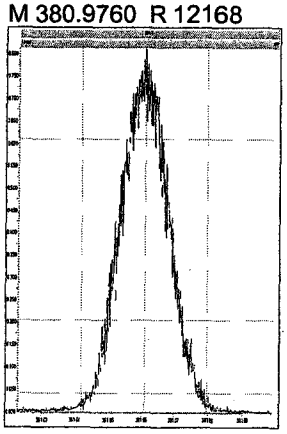
M 354.9792 R 11904



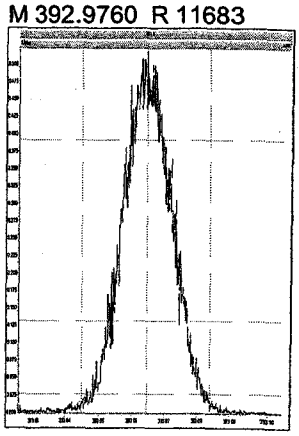
M 366.9792 R 12285



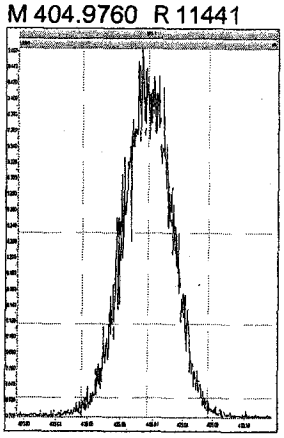
M 380.9760 R 12168



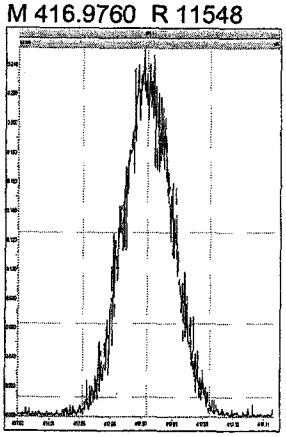
M 392.9760 R 11683



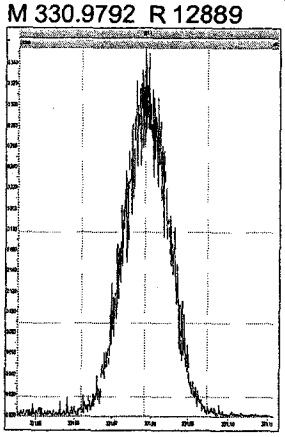
M 404.9760 R 11441



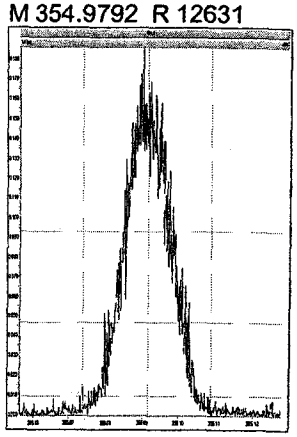
M 416.9760 R 11548



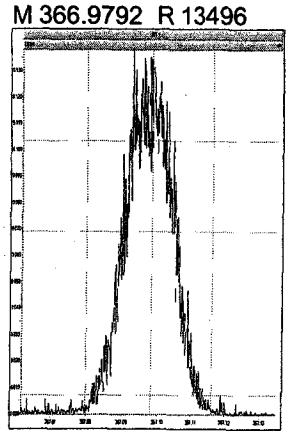
M 330.9792 R 12889



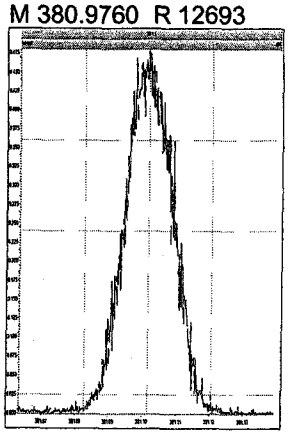
M 354.9792 R 12631



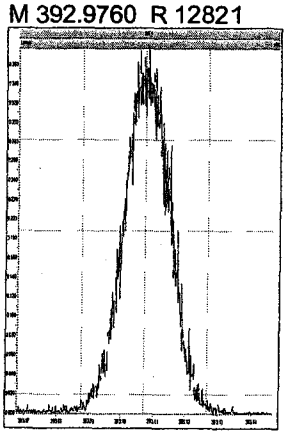
M 366.9792 R 13496



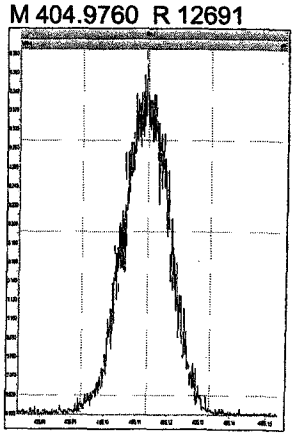
M 380.9760 R 12693



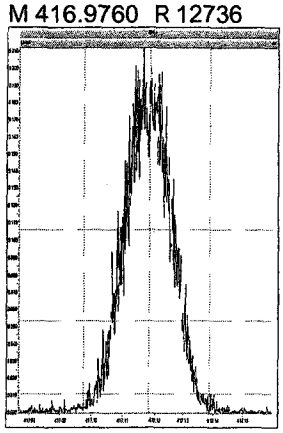
M 392.9760 R 12821



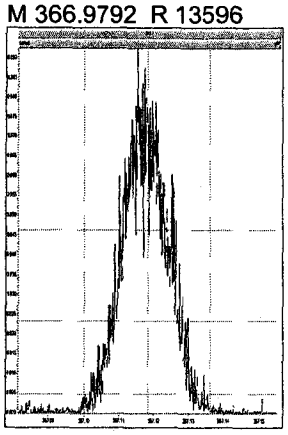
M 404.9760 R 12691



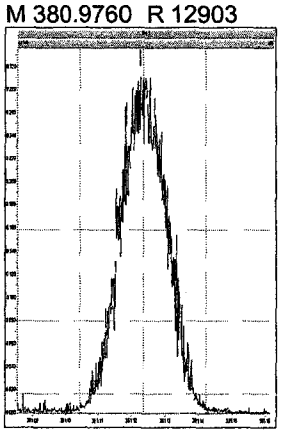
M 416.9760 R 12736



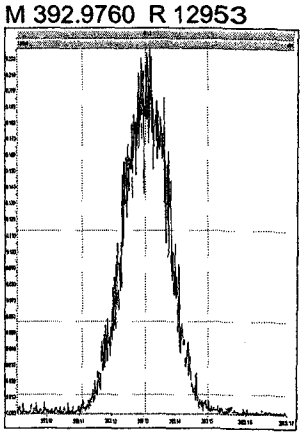
M 366.9792 R 13596



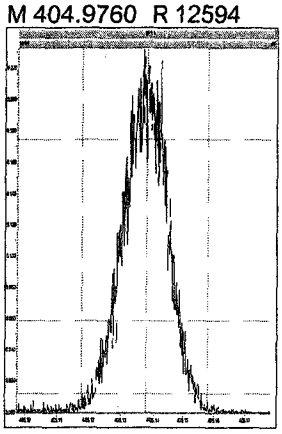
M 380.9760 R 12903



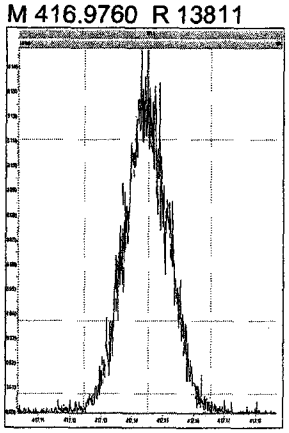
M 392.9760 R 12953



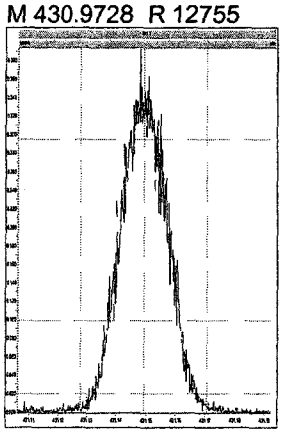
M 404.9760 R 12594



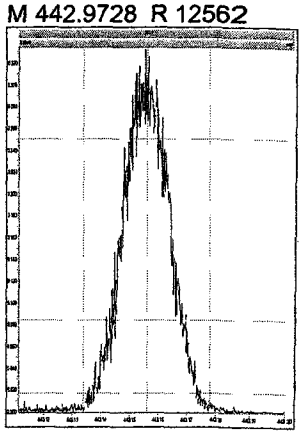
M 416.9760 R 13811



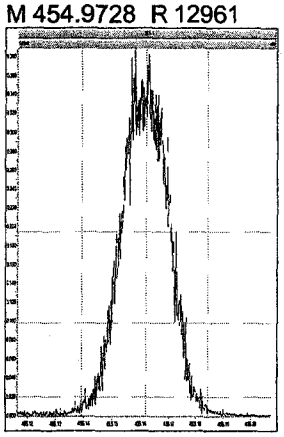
M 430.9728 R 12755



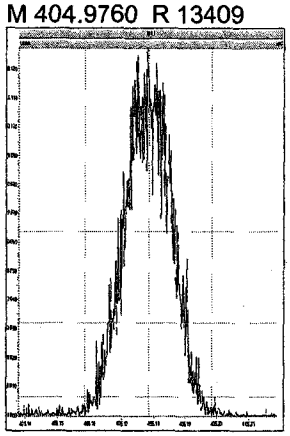
M 442.9728 R 12562



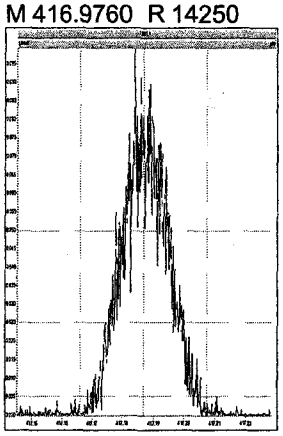
M 454.9728 R 12961



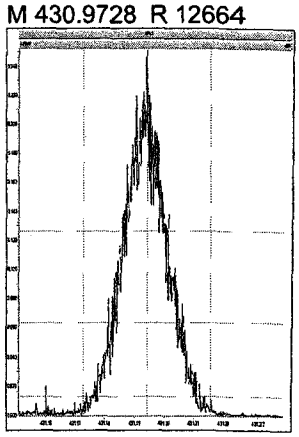
M 404.9760 R 13409



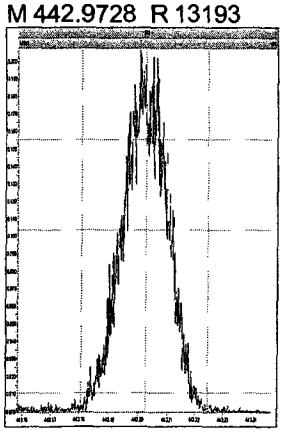
M 416.9760 R 14250



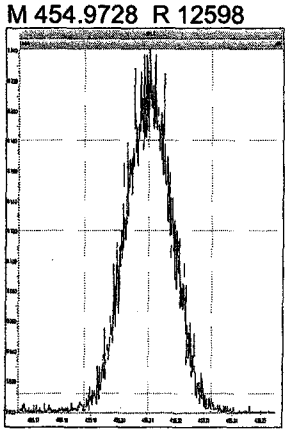
M 430.9728 R 12664



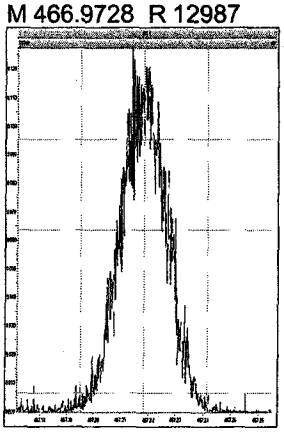
M 442.9728 R 13193



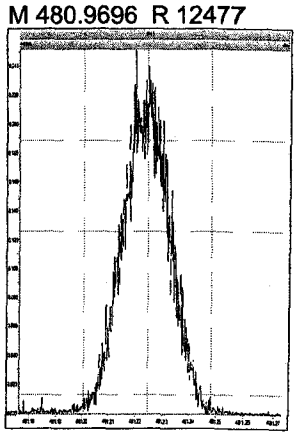
M 454.9728 R 12598



M 466.9728 R 12987

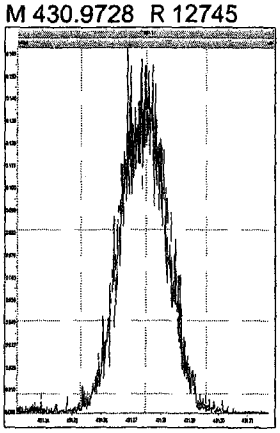


M 480.9696 R 12477

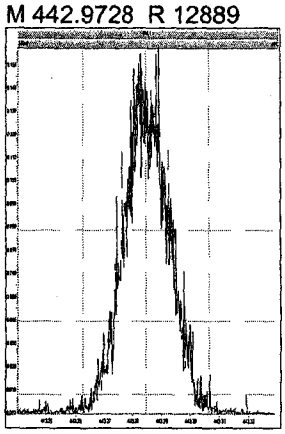


Printed: Tuesday, June 18, 2013 01:37:12 Pacific Daylight Time

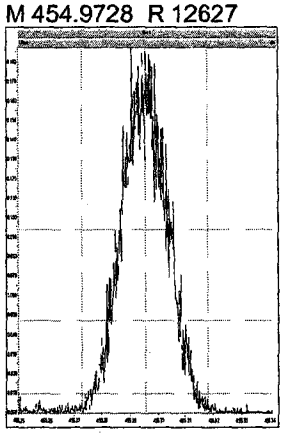
M 430.9728 R 12745



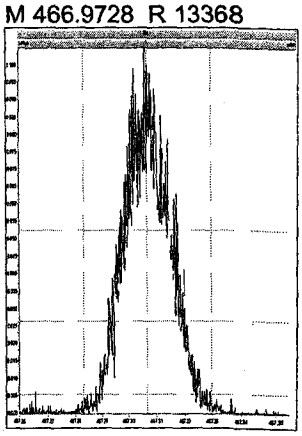
M 442.9728 R 12889



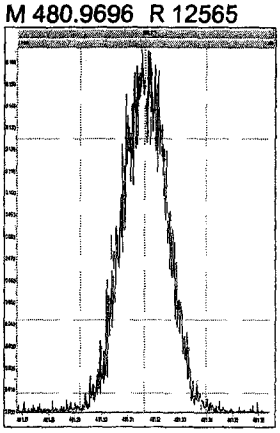
M 454.9728 R 12627



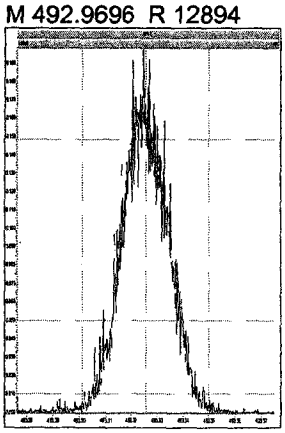
M 466.9728 R 13368



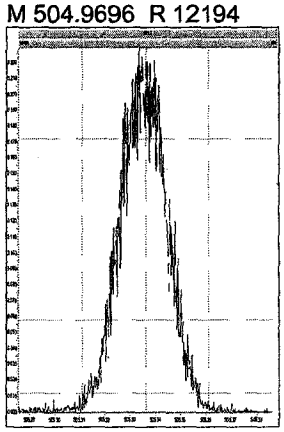
M 480.9696 R 12565



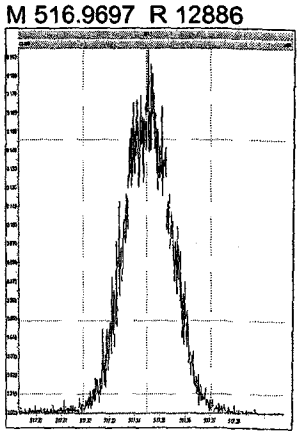
M 492.9696 R 12894



M 504.9696 R 12194



M 516.9697 R 12886



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Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:40:44 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

Name	RT	Area	Height	Response	Ion Ratio	Theor.	Ratio Flag	S/N	EMPC?	EMPC	Conc.
2378-TCDF	26.556	1.001	3.84e4	5.17e4	0.832	0.742	0.770	604.6	NO	9.167	9.167
12378-PeCDF	30.719	1.000	2.25e5	1.55e5	0.853	1.451	1.550	1492.8	NO	47.220	47.220
23478-PeCDF	32.068	1.000	2.25e5	1.50e5	0.884	1.498	1.550	1517.2	NO	45.857	45.857
123478-HxCDF	35.751	1.000	1.83e5	1.50e5	1.017	1.223	1.240	1045.7	NO	46.905	46.905
234678-HxCDF	36.847	1.000	1.82e5	1.50e5	1.067	1.211	1.240	1054.7	NO	48.178	48.178
123678-HxCDF	35.904	1.001	1.88e5	1.61e5	0.999	1.169	1.240	1063.2	NO	47.774	47.774
123789-HxCDF	37.965	1.001	1.46e5	1.26e5	0.947	1.163	1.240	847.5	NO	46.520	46.520
1234678-HpCDF	40.070	1.000	1.50e5	1.54e5	1.151	0.975	1.050	1388.3	NO	48.066	48.066
1234789-HpCDF	42.854	1.000	1.17e5	1.19e5	1.166	0.988	1.050	929.3	NO	47.904	47.904
OCDF	48.349	1.007	2.14e5	2.48e5	1.001	0.865	0.890	1478.6	NO	86.924	86.924
2378-TCDD	27.199	1.000	3.73e4	4.91e4	0.939	0.759	0.770	399.1	NO	9.813	9.813
12378-PeCDD	32.331	1.001	1.85e5	1.24e5	0.930	1.496	1.550	1489.8	NO	46.325	46.325
123478-HxCDD	36.978	1.000	1.59e5	1.29e5	0.930	1.237	1.240	980.5	NO	45.389	45.389
123678-HxCDD	37.110	1.000	1.62e5	1.32e5	0.854	1.222	1.240	953.3	NO	48.413	48.413
123789-HxCDD	37.527	1.012	1.50e5	1.26e5	0.885	1.188	1.240	920.4	NO	44.606	44.606
1234678-HpCDD	41.933	1.000	1.22e5	1.21e5	0.966	1.014	1.050	868.0	NO	45.363	45.363
OCDD	48.062	1.001	2.18e5	2.48e5	0.921	0.878	0.890	2363.3	NO	95.176	95.176
13C-2378-TCDF	26.541	1.007	5.10e5	6.71e5	1.283	0.760	0.770	4101.8	NO		90.720
13C-12378-PeCDF	30.708	1.165	5.68e5	3.75e5	1.051	1.516	1.550	2663.8	NO		88.449
13C-23478-PeCDF	32.057	1.216	5.57e5	3.69e5	1.030	1.510	1.550	2590.6	NO		88.622
13C-123478-HxCDF	35.740	0.953	2.36e5	4.62e5	1.069	0.511	0.510	1562.1	NO		99.335
13C-123678-HxCDF	35.882	0.956	2.49e5	4.81e5	1.124	0.516	0.510	1618.5	NO		98.834
13C-234678-HxCDF	36.836	0.982	2.14e5	4.33e5	1.041	0.495	0.510	1418.2	NO		94.633
13C-123789-HxCDF	37.943	1.011	2.09e5	4.09e5	1.039	0.511	0.510	1388.2	NO		90.569
13C-1234678-HpCDF	40.048	1.067	1.64e5	3.86e5	0.965	0.426	0.440	1335.8	NO		86.839
13C-1234789-HpCDF	42.843	1.142	1.27e5	2.96e5	0.760	0.430	0.440	856.3	NO		84.697
13C-1234-TCDD	26.362	0.000	4.43e5	5.71e5	1.000	0.776	0.770	638.9	NO		100.000
13C-2378-TCDD	27.184	1.031	4.09e5	5.28e5	0.926	0.776	0.770	593.1	NO		99.721
13C-12378-PeCDD	32.309	1.226	4.37e5	2.80e5	0.734	1.563	1.550	2463.3	NO		96.157
13C-123478-HxCDD	36.967	0.985	3.76e5	3.06e5	0.984	1.228	1.240	2867.5	NO		105.638
13C-123678-HxCDD	37.099	0.989	3.90e5	3.22e5	1.043	1.211	1.240	2895.3	NO		103.887
13C-1234678-HpCDD	41.911	1.117	2.81e5	2.73e5	0.891	1.029	1.050	1385.5	NO		94.705
13C-OCDD	48.035	1.280	4.94e5	5.68e5	0.849	0.870	0.890	3154.2	NO		190.613

ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

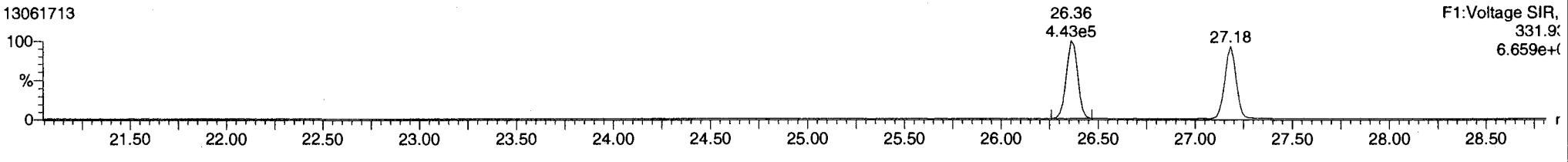
Name	RT	Dev(min)	Peak Area	Response	RRF	Ratio	Prod R	S/N	EMPC?	EMPC	Conc
13C-123789-HxCDD	37.515	0.000	3.61e5	2.96e5	1.000	1.222	1.240	2798.9	NO		100.000
Total-tetrafurans			1.20e5		0.832						29.034
Total-penta1			4.86e5								94.213
Total-pentafurans			6.80e5		0.868						140.003
Total-hexafurans			9.19e5		1.008						248.202
Total-heptafurans			2.69e5		1.159						96.257
Total-Furans			2.69e6		0.992						694.634
Total-tetradioxins			2.13e5		0.939						56.215
Total-pentadioxins			6.67e5		0.930						166.403
Total-hexadioxins			6.83e5		0.890						201.219
Total-heptadioxins			2.66e5		0.966						98.200
Total-Dioxins			2.05e6		0.918						617.213
Total-TEQ			4.73e6								1311.847
37CL-2378-TCDD	27.199	1.032	9.92e4		0.989			583.7			9.887
FUNCTION1 PFK			6.59e5								
FUNCTION2 PFK			0.00e0								
FUNCTION3 PFK			8.49e6								0.000
FUNCTION4 PFK			1.71e5								
FUNCTION5 PFK			3.40e5								
FUNCTION1 HXCDPE			3.95e2								0.000
FUNCTION1 HPCDPE			2.65e3								0.000
FUNCTION2 HPCDPE			1.86e3								0.000
FUNCTION3 OCDPE			1.07e2								0.000
FUNCTION4 NCDPE			1.84e2								0.000
FUNCTION5 DCDPE			0.00e0								

Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
Printed: Tuesday, June 18, 2013 12:40:44 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 17 Jun 2013 14:09:16
Calibration: P:\DIOXIN8290.pro\CurveDB\130606ICAL.cdb 10 Jun 2013 09:29:34

ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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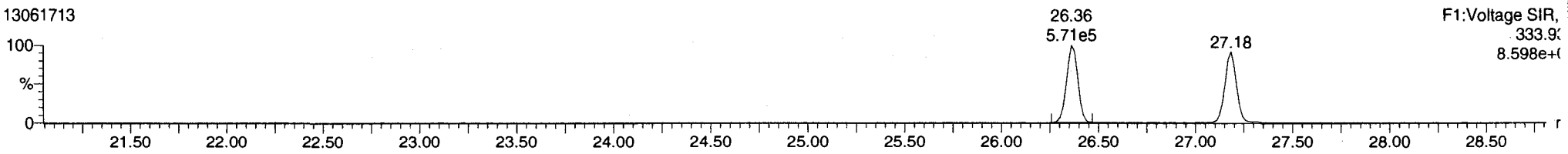

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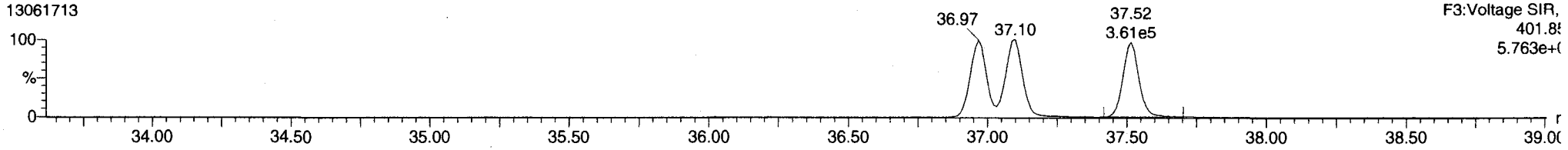

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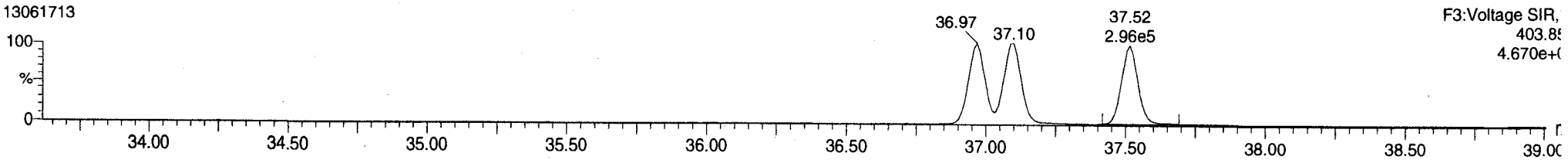

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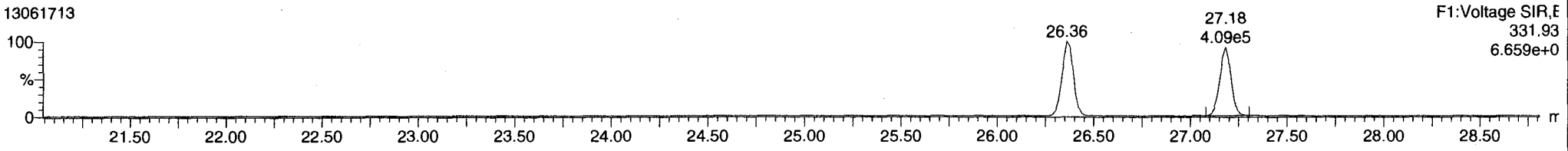
ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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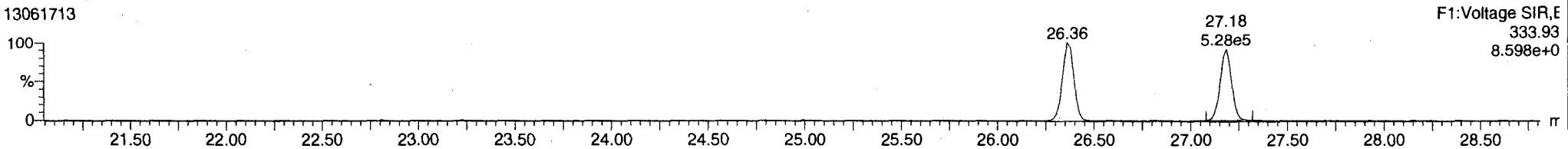
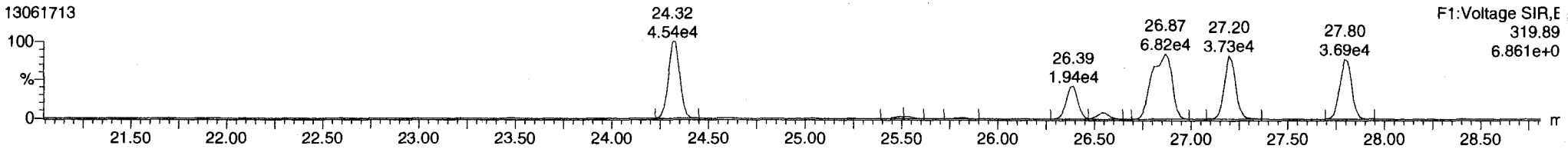
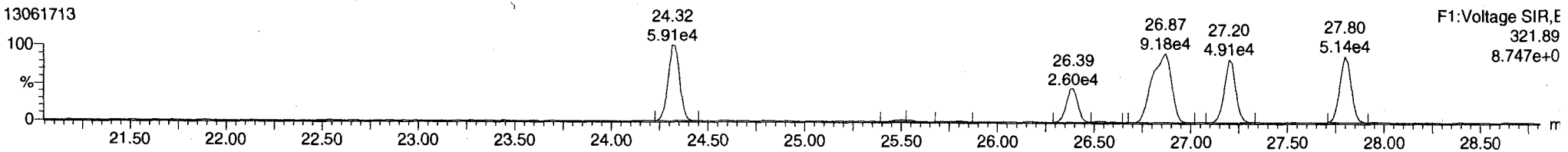


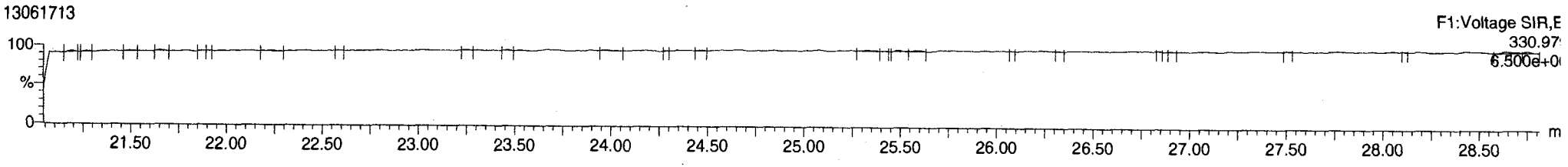
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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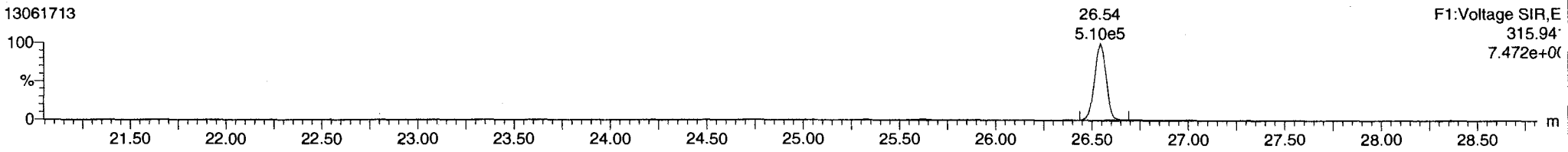
13C-2378-TCDF



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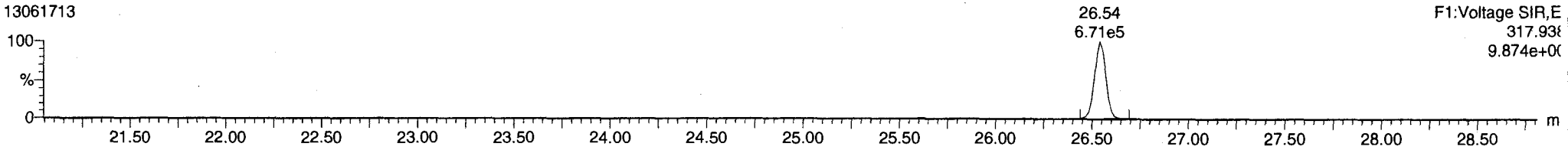
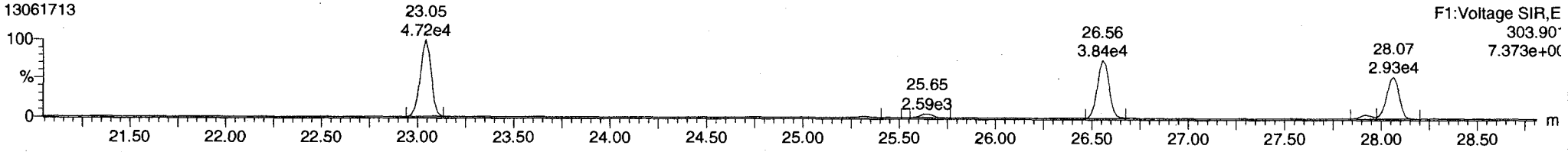
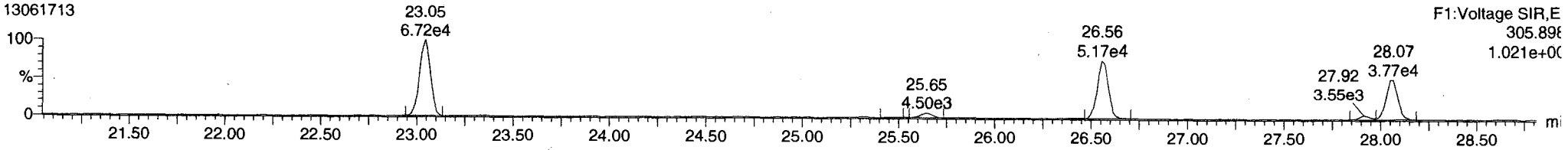


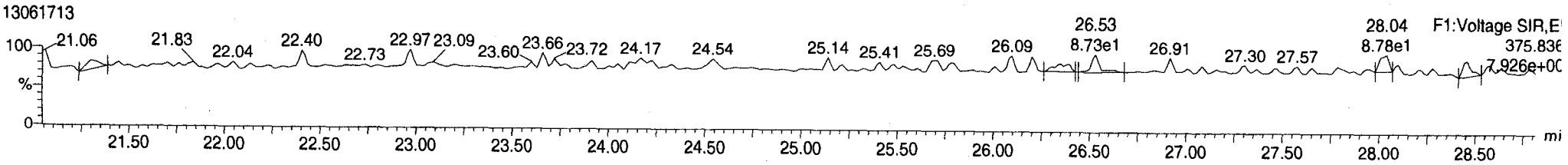
Total-tetrafurans



Total-tetrafurans

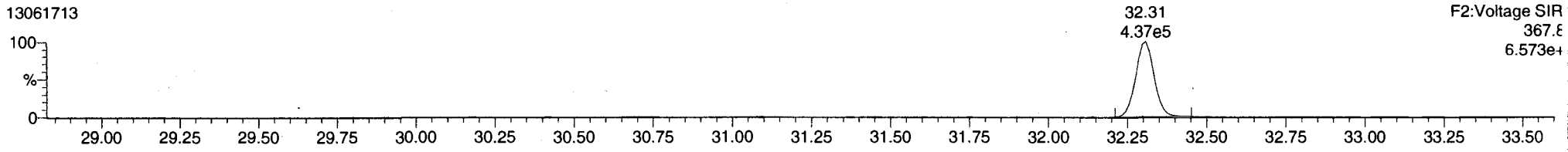


FUNCTION1 HXCDPE



ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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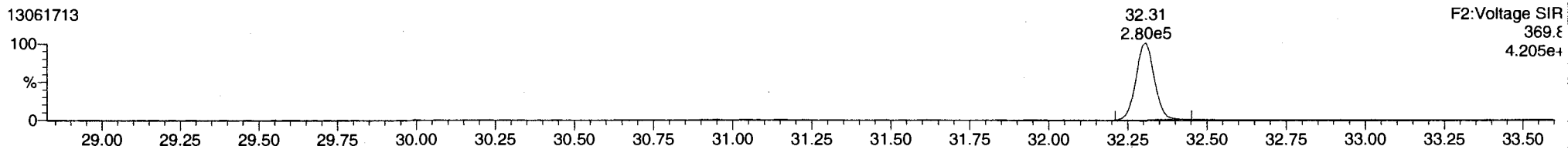

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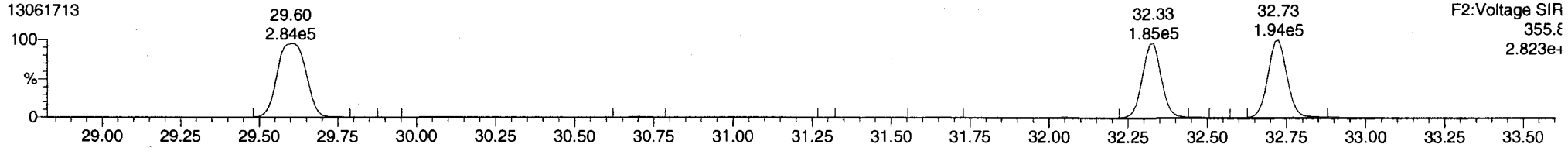
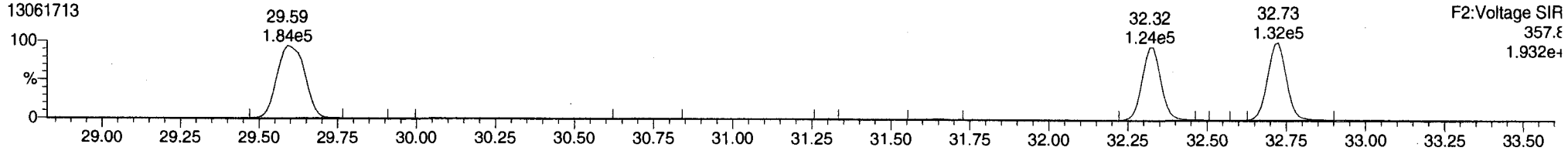
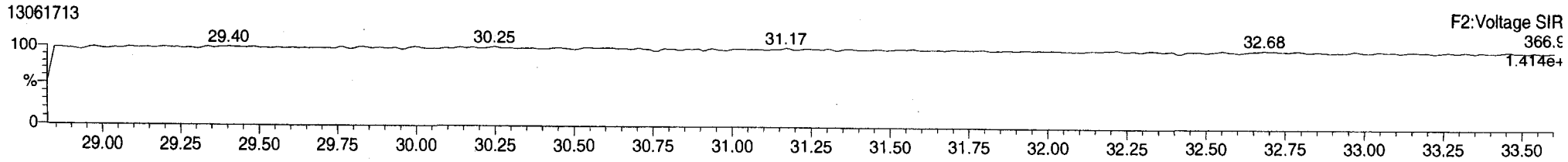


Total-pentadioxins



FUNCTION2 PFK



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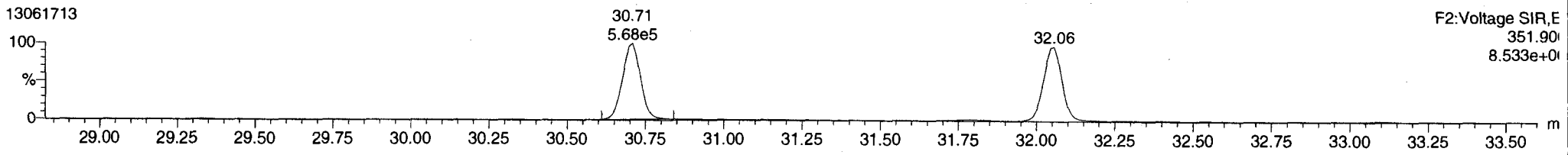
13C-12378-PeCDF



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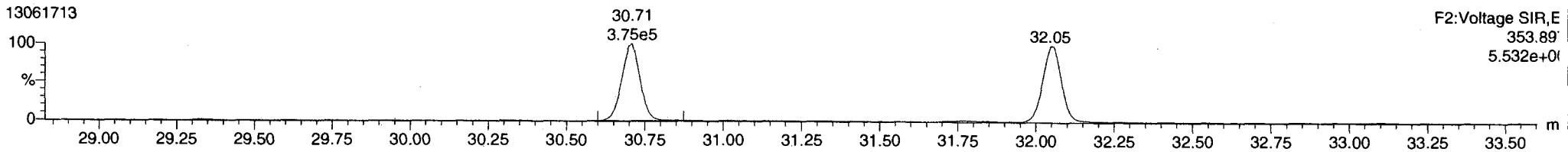
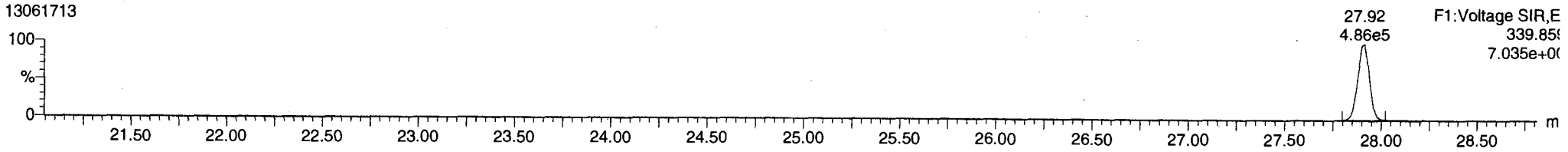
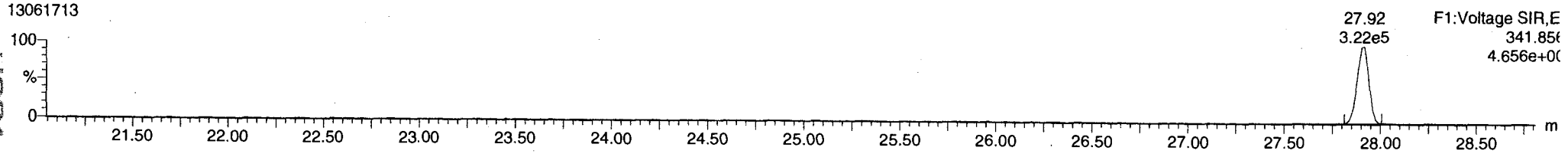


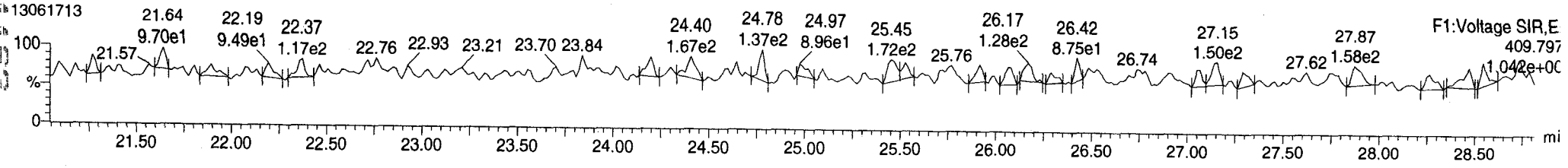
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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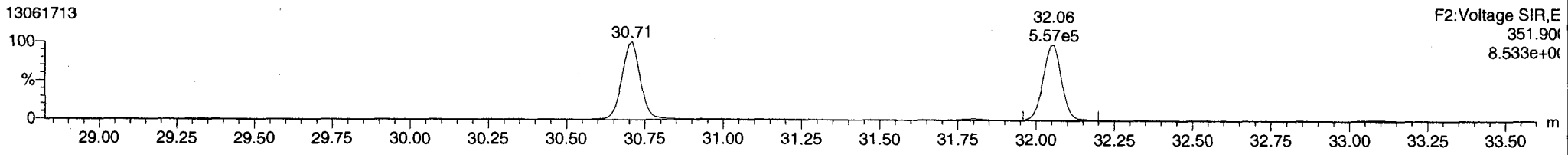
13C-23478-PeCDF



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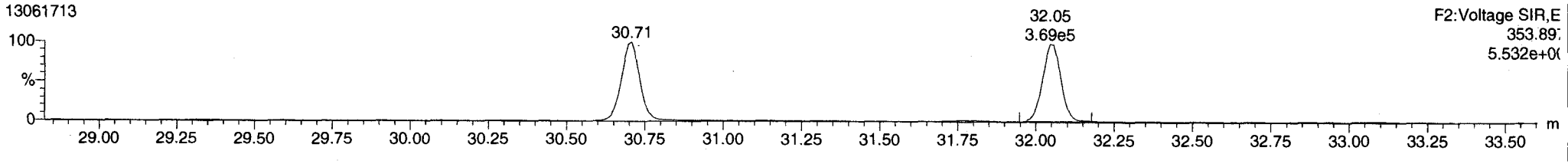
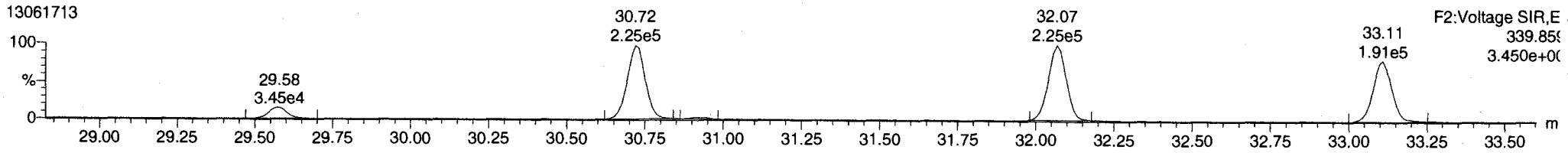
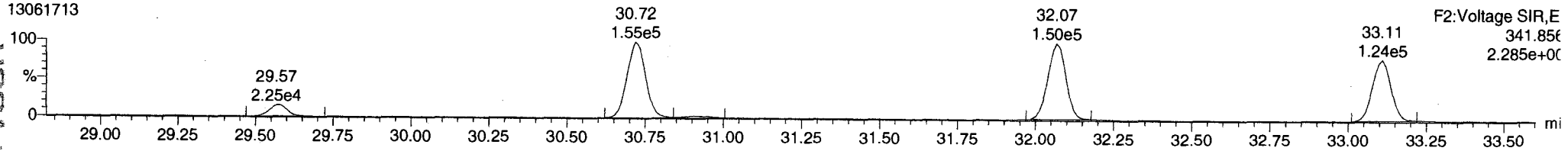


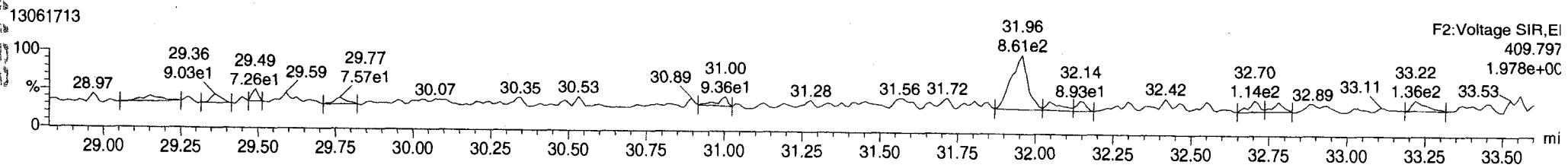
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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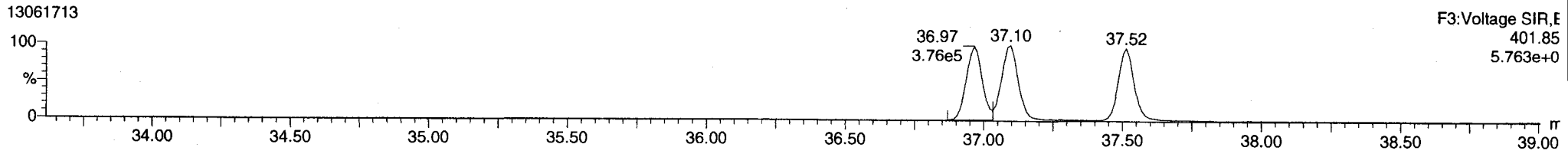
13C-123478-HxCDD



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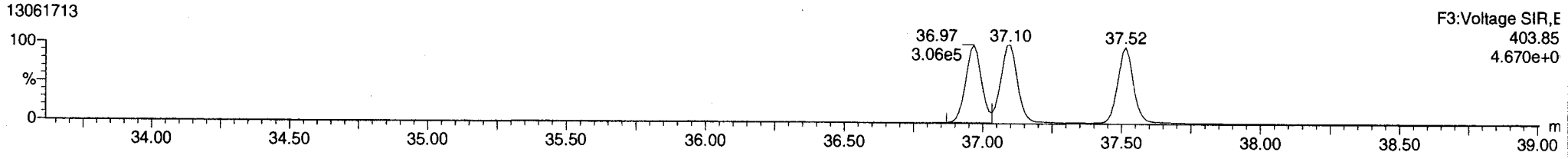
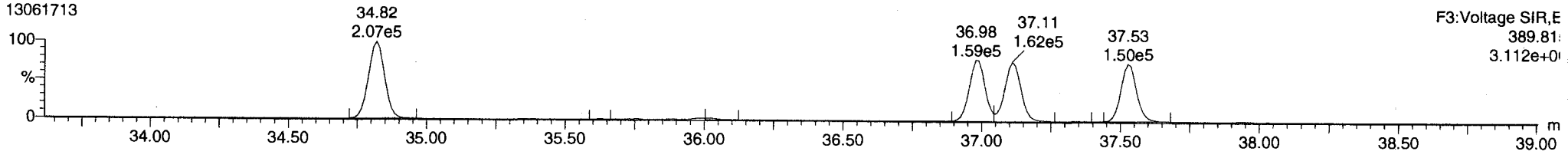
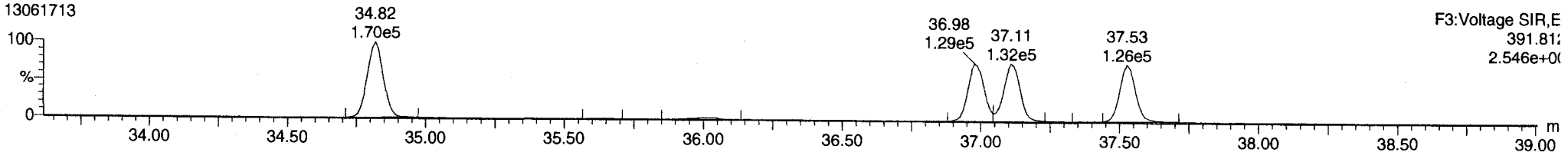


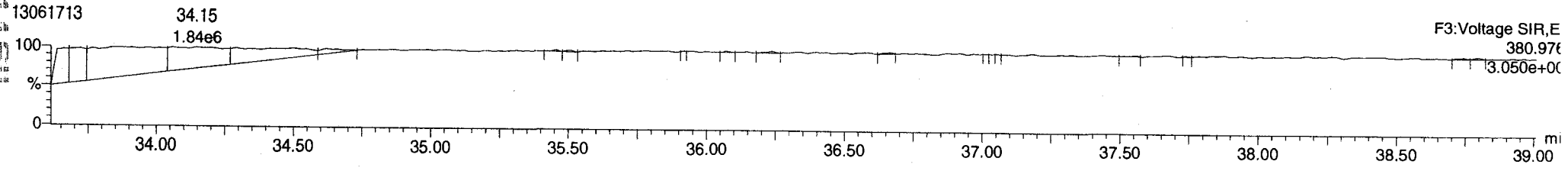
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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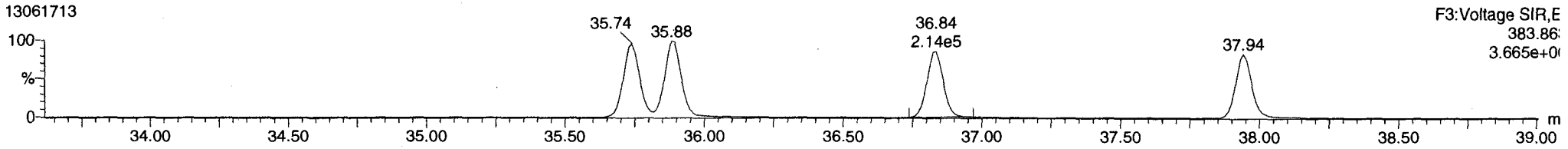
13C-234678-HxCDF



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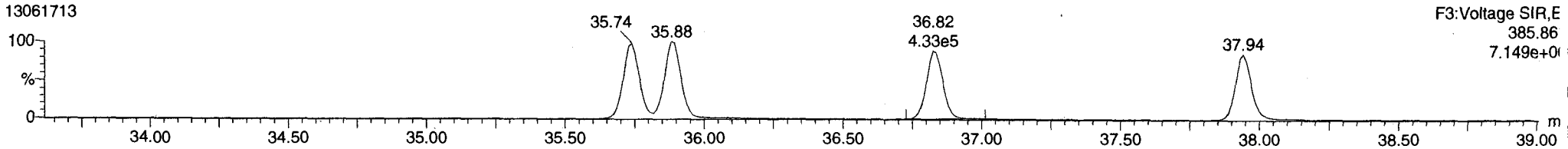
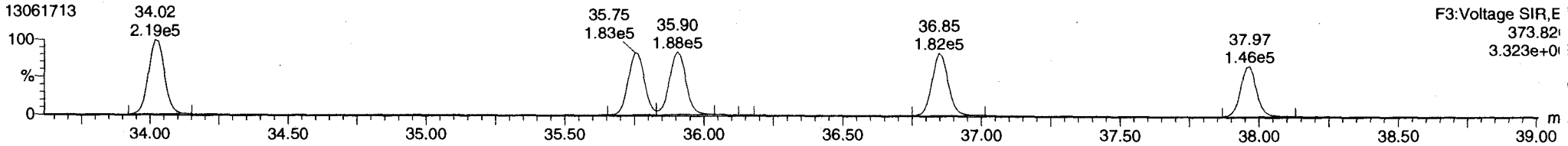
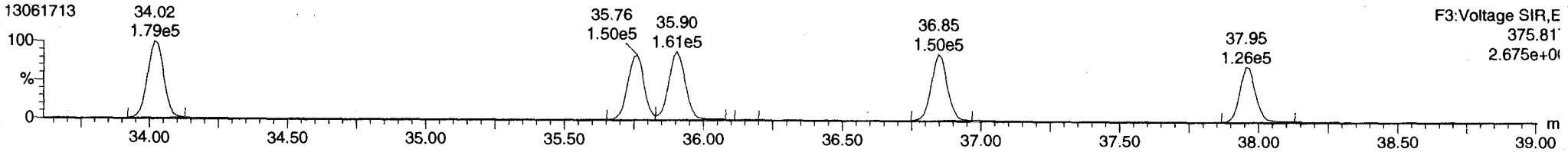


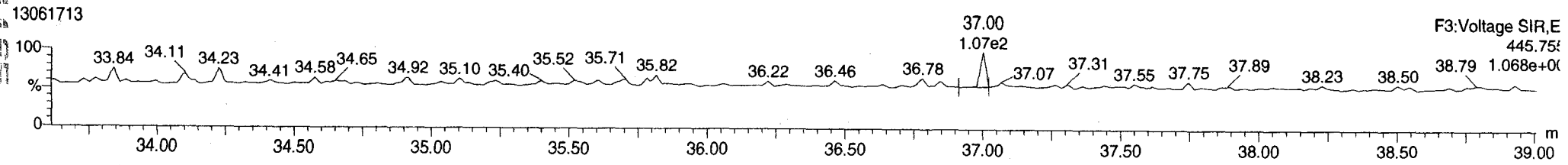
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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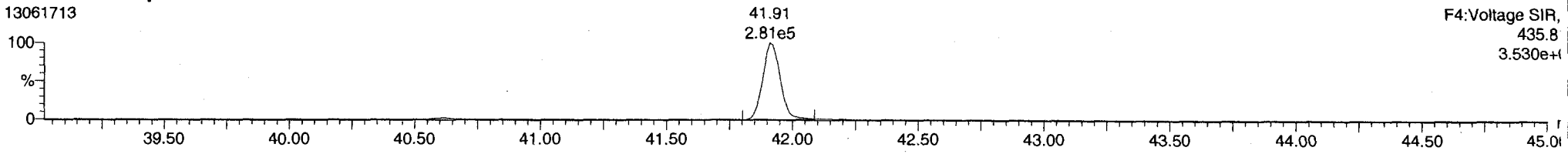
13C-1234678-HpCDD



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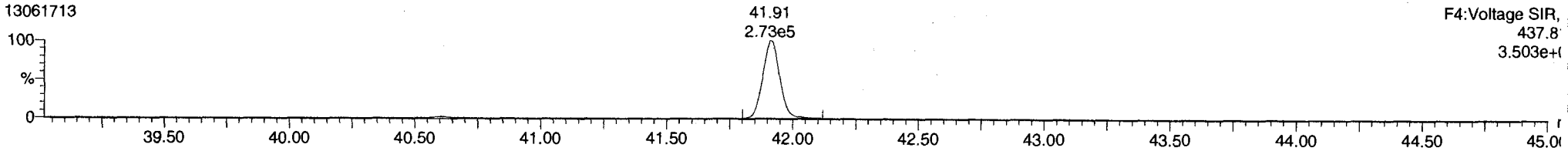
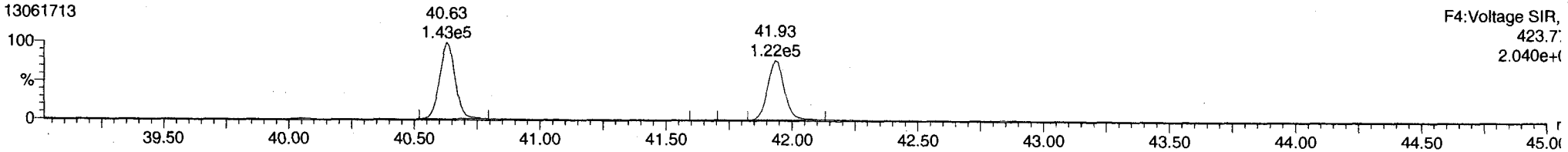
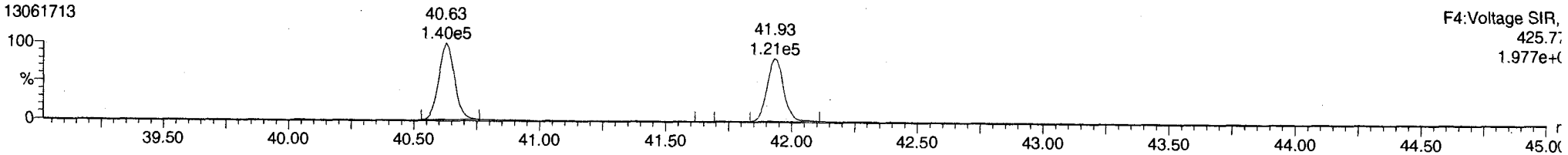


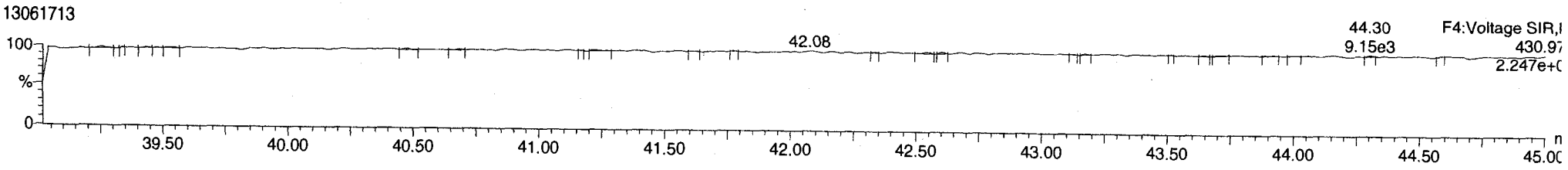
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\130617DATA1.qld
Last Altered: Tuesday, June 18, 2013 12:37:35 Pacific Daylight Time
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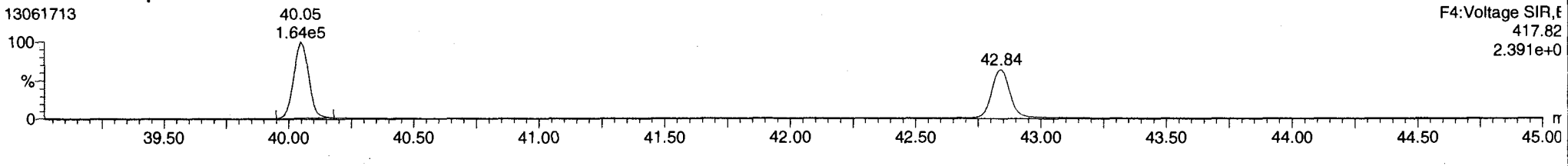
ID: CS3, Name: 13061713, Date: 18-Jun-2013, Time: 00:36:31, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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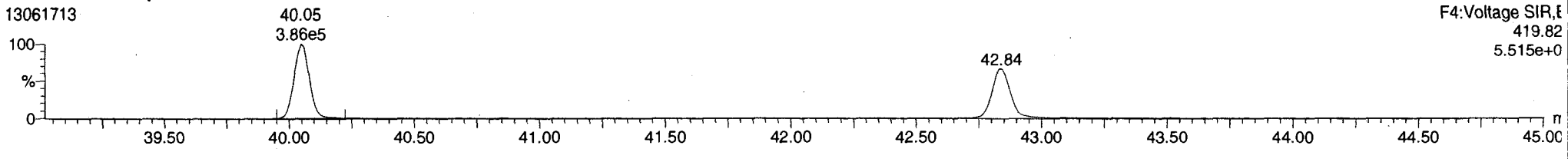
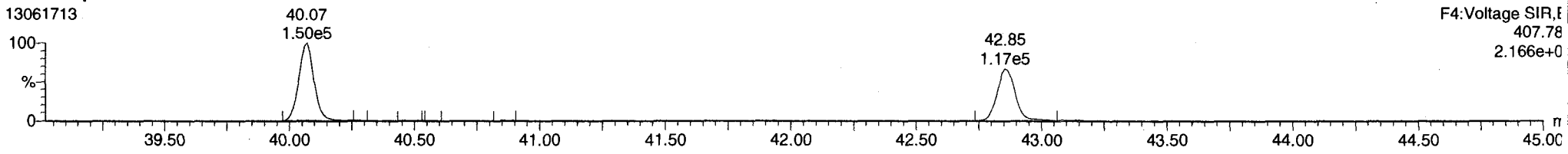


Total-heptafurans



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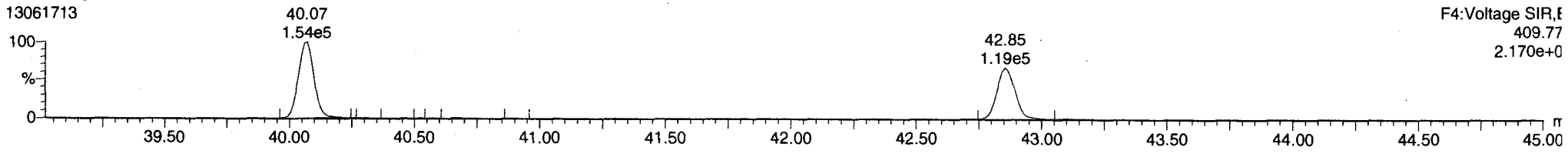
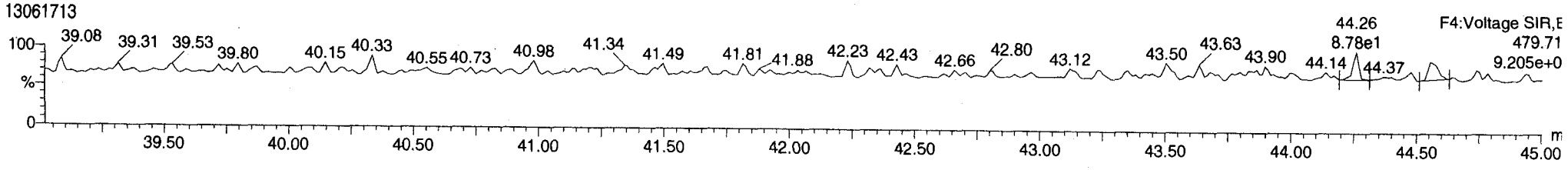


FUNCTION4 NCDPE



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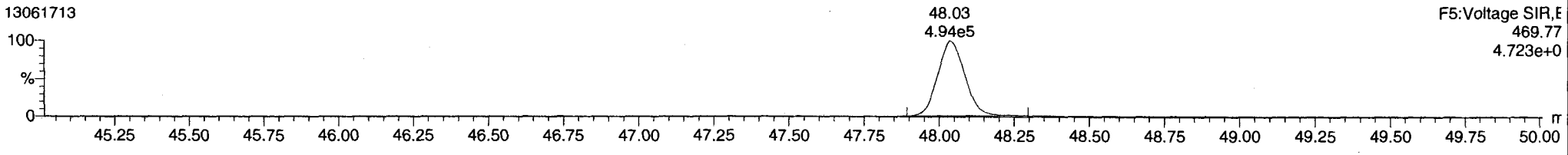
13C-OCDD



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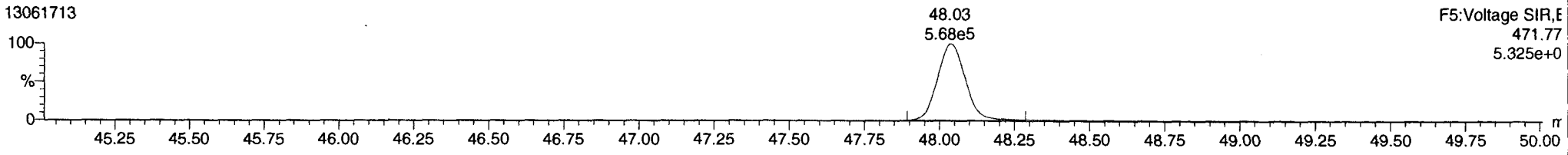

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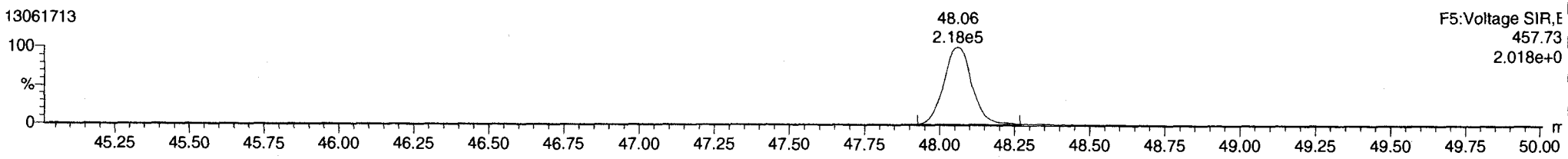

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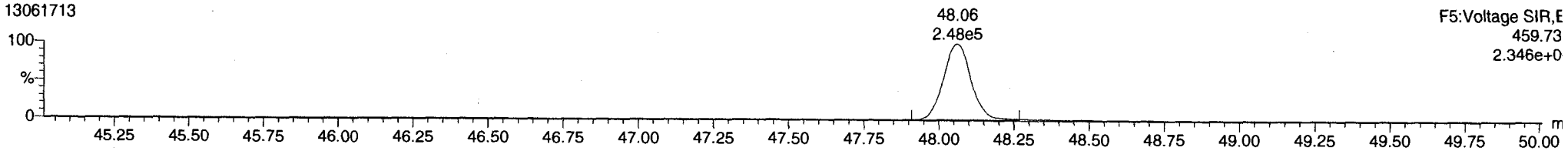

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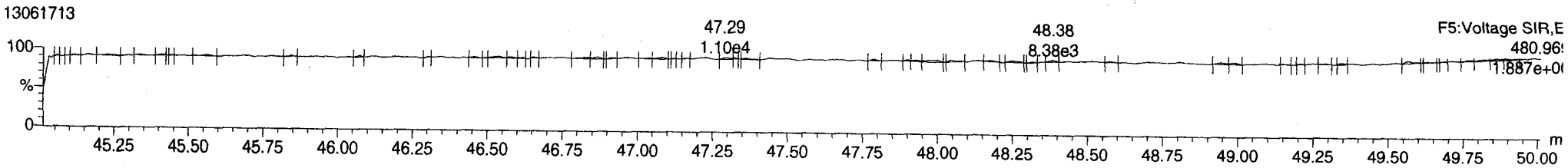

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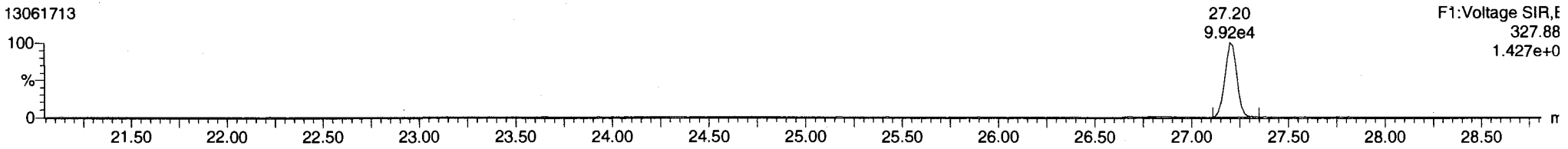
37CL-2378-TCDD



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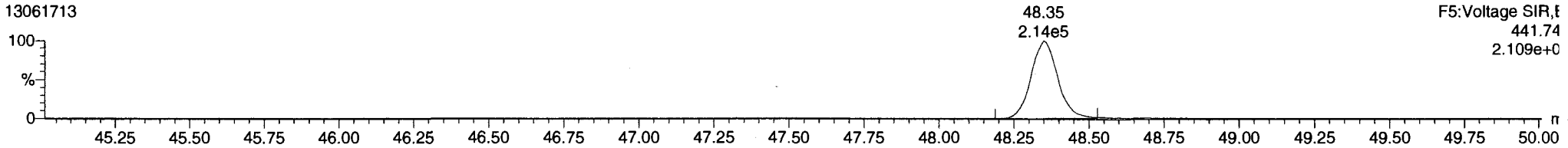

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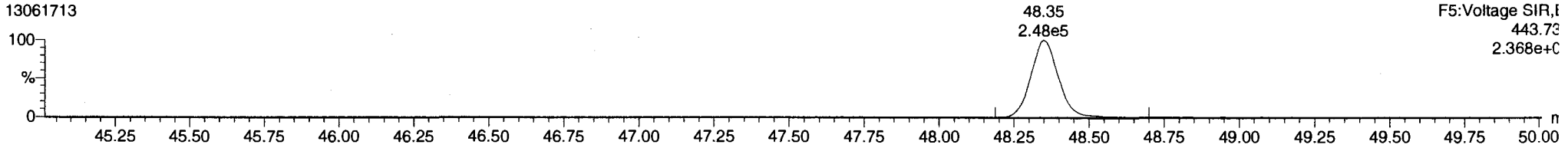

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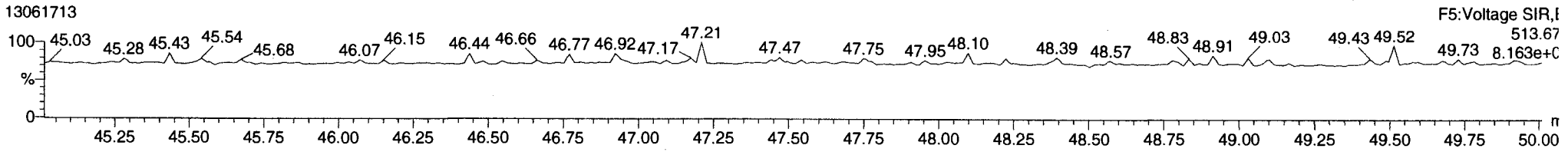

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Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8081B) Pest PSDDA – Soil/Sed
Microwave (3546) (SOP # 3304S)

Preparation Test Pest # 5 (PESSDMP)

PSDDA (1-2ppb)

ARI Job No(s) WR99, W521 Page 1 of 1 Batch set up by: JH

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5 dry wt)	(REQ) Sulfur Clean 2mL+0.5mL Ethyl Acetate 1 2 (3) Very high Sulfur	(REQ) Silica Gel Clean (1:2.5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID YL 06/10/13 Analyst/Date
	WR99 MBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 (2) 3 CT 06-10-13
	SBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	
	~~SBS Dup.~~	~~12.5g~~	~~2.5mL~~	~~(1:2.5) 1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	Analyst/Date
	QLS WR99	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	KD 100°C Hexane Exchange (2 X 20mL) (1) 2 3 4 5 6 YL/TH 06/11/13 Analyst/Date
8	D	17.02	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
8	DMS	17.04	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
8	DMSD	17.03	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
3	E	5.03	2.5mL	(1:2.5) 1mL	2.5mL	1mL	See Analyst Notes	TurboVap 1 (2) 3 Pre-Cleanups ww 6/11/13
3	F	2.53	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
8	W521 A	16.02	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			~~2.5mL~~	~~(1:2.5) 1mL~~	~~2.5mL~~	1mL		Analyst/Date
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 (2) 3 Post Cleanups ww 6/12/13
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			~~2.5mL~~	~~(1:2.5) 1mL~~	~~2.5mL~~	1mL		
Analyst/Date YL 06/10/13			ww 6/11/13	ww 6/12/13	ww 6/11/13	ww 6/12/13	Reviewed By: ww 6/12/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (B060151)	2µg/mL	50µL	4/30/14	CT	AC
Spike	3 (2079-2)	0.5/1/5µg/mL	100µL	12/10/13	CT	AC
QLS Spike	10 (B060567)	0.25-2.5µg/mL	25µL	12/10/13	CT	AC
Extraction Time: 1:25			Balance ID: B146426 14			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel.
Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels).
3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike.
5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing neutral glasswool. 8. Rinse with Hexane 9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (Small ~~or large~~ drying column) to 5mL at 100°C. 12. Exchange to Hexane (2 X with 20mL).
13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial in Hexane.
A. Need Total Solids Y /(N) B. Archive/Freeze Y /(N)

W521 : 9117

Reagent and Solutions Identification

(8081B) Pest PSDDA – Soil/Sed)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WR99, W521

(8081B) Pest PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Anhydrous Sodium Sulfate: (I# 8134 + jar date 5-24-13)	CT 06-11-13
Neutral Glasswool: (I# 7998 + jar date 4-15-13)	
1:1 Hexane/Acetone: (H# 194)	
80:20 Hexane/Acetone: (H# 177)	
Hexane: (I# 8269)	KD
KD Station:	YC/TH
Hexane: (I# 8269)	06/11/13
Anhydrous Sodium Sulfate: (I# 8134 + jar date 5/24/13)	
Neutral Glasswool: (I# 7998 + jar date 4/15/13)	Vialing
Vialing Station:	VW
Hexane: (I# 8269)	6/12/13
Ethyl Acetate: (I# 6079)	
Tetrabutylammonium hydrogensulfate (TBAS): (H# 165)	
Sodium Sulfite: (I# 7704)	
Silica Gel (SPE) Darts: (I# 8127)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WS21 Client ID: SAIC

Parameter: Pest PSDDA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
[X] No Anomalies (standard soil/wet sediment/sand/gravel)= A	YC 05/31/13
[X] Standing Water Decanted (Not shared)= A	YC 05/31/13
[ ] Standing Water Homogenized (Shared samples)=	
[ ] Clay/Clumps (Difficult to homogenize)=	
[ ] Rocks (%+size)?	
[ ] Organics (Leaves/sticks/grass)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Other (Details)=	
Aqueous:	
[ ] No Anomalies	
[ ] Turbid/Color=	
[ ] Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
[ ] Emulsions (%)=	
[ ] Other (Details)=	
[X] Other Notes/Comments= (Note problems, concerns, corrective actions). Folder received on 6/03/13. (Centrifuge#1 used for all Centrifugations)	
GC analyst, Sample pre-screen indicates possible aroclor activity.	JH 6/07/13

3056F

Revision 009
08/14/12

WS21 : 06178

Pesticide Raw Data
Initial Calibration

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 05/14/13 Internal Standard ID 2006-1 Expiration 7/26/13

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO
ICV Exceeding ±30%? YES / NO
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	B00037 O	8/29/13	UCT-Q	2023-1	10/4/13
	B000337	12/10/13			
	2048-2	05/16/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YZ **Date:** 5/16/13

Reviewer: VD **Date:** 5.16.13

US21:01175

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 5/14/13 (5/10) Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1085684 Column Type: 5TX CCP

Column 2 Serial No.: 1094709 Column Type: 5TX CCP2

GC Method: Pest ICal Date: 05/14/13

IS	Ical/Ccal	ICV
2000-1	B000370 5/10	2023-1
	B000337 5/10	
	2048-2.	

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/ical-1.b

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1	14-MAY-2013 14:17	0514a004.d	1	DS	
2	14-MAY-2013 14:37	0514a005.d	1	INDAE	
3	14-MAY-2013 14:57	0514a006.d	1	INDAA	
4	14-MAY-2013 15:17	0514a007.d	1	INDAB	
5	14-MAY-2013 15:37	0514a008.d	1	INDAC	
6	14-MAY-2013 15:56	0514a009.d	1	INDAD	
7	14-MAY-2013 16:16	0514a010.d	1	INDAF	
8	14-MAY-2013 16:34	0514a011.d	1	INDAG	
9	14-MAY-2013 16:54	0514a012.d	1	INDAICV	
10	14-MAY-2013 17:12	0514a013.d	1	TOXAPH	
11	14-MAY-2013 17:31	0514a014.d	1	DS	
12	14-MAY-2013 17:48	0514a015.d	1	INDAE	
13	14-MAY-2013 18:06	0514a016.d	1	WO26MBS1	
14	14-MAY-2013 18:24	0514a017.d	1	WO26LCSS1	
15	14-MAY-2013 18:42	0514a018.d	1	WO26LCSDS1	
16	14-MAY-2013 19:00	0514a019.d	1	WO26QLS	
17	14-MAY-2013 19:17	0514a020.d	5	WO26A	5
18	14-MAY-2013 19:35	0514a021.d	5	WO26B	5
19	14-MAY-2013 19:53	0514a022.d	5	WO26C	5
20	14-MAY-2013 20:11	0514a023.d	5	WO26D	5
21	14-MAY-2013 20:29	0514a024.d	5	WO26E	5
22	14-MAY-2013 20:46	0514a025.d	5	WO26F	5
23	14-MAY-2013 21:04	0514a026.d	5	WO26G	5
24	14-MAY-2013 21:22	0514a027.d	5	WO26H	5
25	14-MAY-2013 21:40	0514a028.d	1	WO26MBS1	
26	14-MAY-2013 21:58	0514a029.d	1	WO26LCSS1	
27	14-MAY-2013 22:15	0514a030.d	1	WO26LCSDS1	
28	14-MAY-2013 22:33	0514a031.d	1	DS	
29	14-MAY-2013 22:51	0514a032.d	1	INDAE	
30	14-MAY-2013 23:09	0514a033.d	5	WO26I	5
31	14-MAY-2013 23:27	0514a034.d	1	WO26J	
32	14-MAY-2013 23:44	0514a035.d	1	WO26K	
33	15-MAY-2013 00:02	0514a036.d	5	WO26KMS	
34	15-MAY-2013 00:20	0514a037.d	1	WO26KMSD	
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36	15-MAY-2013 00:56	0514a039.d	1	WO27LCSS1	
37	15-MAY-2013 01:13	0514a040.d	1	WO27LCSDS1	
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39	15-MAY-2013 01:49	0514a042.d	1	INDAE	
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41	15-MAY-2013 02:25	0514a044.d	5	WO27B	5
42	15-MAY-2013 02:42	0514a045.d	5	WO27C	5
43	15-MAY-2013 03:00	0514a046.d	5	WO27CMS	5
44	15-MAY-2013 03:18	0514a047.d	5	WO27CMSD	5
45	15-MAY-2013 03:36	0514a048.d	5	WO27D	5
46	15-MAY-2013 03:54	0514a049.d	5	WO27E	5
47	15-MAY-2013 04:11	0514a050.d	5	WO27F	5
48	15-MAY-2013 04:29	0514a051.d	5	WO27G	5
49	15-MAY-2013 04:47	0514a052.d	1	WO27MBS1	
50	15-MAY-2013 05:05	0514a053.d	1	WO27LCSS1	
51	15-MAY-2013 05:23	0514a054.d	1	WO27LCSDS1	
52	15-MAY-2013 05:40	0514a055.d	1	DS	
53	15-MAY-2013 05:58	0514a056.d	1	INDAE	
54	15-MAY-2013 06:16	0514a057.d	5	WO27H	5
55	15-MAY-2013 06:34	0514a058.d	5	WO27I	5
56	15-MAY-2013 06:52	0514a059.d	5	WO27J	5
57	15-MAY-2013 07:09	0514a060.d	5	WO27K	5
58	15-MAY-2013 07:27	0514a061.d	1	WO27MBS1	
59	15-MAY-2013 07:45	0514a062.d	1	WO27LCSS1	
60	15-MAY-2013 08:03	0514a063.d	1	WO27LCSDS1	
61	15-MAY-2013 08:21	0514a064.d	1	DS	
62	15-MAY-2013 08:38	0514a065.d	1	INDAE	

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Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0514a005	0514a006	0514a007	0514a008	0514a009	0514a010	0514a011
INJ.DATE:	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013
INJ.TIME:	14:37	14:57	15:17	15:37	15:56	16:16	16:34

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.336	2.336	2.336	2.336	2.336	2.336	2.336	2.336	2.286-2.386	2.336	0.000
* 54 1Bromo-2nitrobenzene	3.162	3.162	3.162	3.161	3.160	3.161	3.160	3.162	3.112-3.212	3.161	0.001
* 58 Hexabromobiphenyl	8.997	8.998	8.998	8.999	8.998	8.999	8.999	8.997	8.947-9.047	8.998	0.001
$ 2 Tetrachloro-m-xylene	3.840	3.842	3.842	3.840	3.837	3.837	3.835	3.840	3.790-3.890	3.839	0.003
3 Hexachlorobenzene	4.186	4.197	4.195	4.190	4.186	4.183	4.179	4.186	4.136-4.236	4.188	0.006
4 alpha-BHC	4.332	4.331	4.332	4.331	4.328	4.329	4.326	4.332	4.282-4.382	4.330	0.002
5 gamma-BHC (Lindane)	4.617	4.618	4.619	4.618	4.614	4.614	4.611	4.617	4.567-4.667	4.616	0.003
6 beta-BHC	4.697	4.724	4.720	4.712	4.702	4.692	4.687	4.697	4.647-4.747	4.705	0.014
7 delta-BHC	4.868	4.894	4.890	4.882	4.872	4.863	4.858	4.868	4.818-4.918	4.875	0.014
8 Heptachlor	5.065	5.065	5.066	5.065	5.062	5.063	5.059	5.065	5.015-5.115	5.063	0.002
9 Aldrin	5.359	5.359	5.360	5.359	5.356	5.357	5.353	5.359	5.309-5.409	5.358	0.002
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
11 Heptachlor epoxide b	5.933	5.935	5.936	5.934	5.931	5.931	5.928	5.933	5.883-5.983	5.933	0.003
12 gamma-Chlordane	6.054	6.060	6.059	6.057	6.052	6.051	6.048	6.054	6.004-6.104	6.054	0.005
13 alpha-Chlordane	6.177	6.183	6.182	6.180	6.176	6.175	6.172	6.177	6.127-6.227	6.178	0.004
14 Endosulfan I	6.310	6.315	6.314	6.313	6.309	6.309	6.306	6.310	6.260-6.360	6.311	0.003

Reviewer 1 YZ Date: 5/15/13

Reviewer 2 [illegible] Date: 5-16-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
15 4,4'-DDE	6.235	6.247	6.245	6.241	6.235	6.232	6.229	6.235	6.185-6.285	6.238	0.007
16 Dieldrin	6.532	6.536	6.536	6.534	6.531	6.531	6.528	6.532	6.482-6.582	6.533	0.003
17 Endrin	6.751	6.755	6.755	6.753	6.750	6.749	6.747	6.751	6.701-6.801	6.751	0.003
18 4,4'-DDD	6.800	6.812	6.812	6.809	6.806	6.795	6.787	6.800	6.750-6.850	6.803	0.009
19 Endosulfan II	6.959	6.966	6.964	6.962	6.958	6.956	6.953	6.959	6.909-7.009	6.960	0.004
20 4,4'-DDT	7.053	7.063	7.062	7.059	7.056	7.049	7.043	7.053	7.003-7.103	7.055	0.007
21 Endrin aldehyde	7.336	7.341	7.341	7.339	7.336	7.334	7.330	7.336	7.286-7.386	7.337	0.004
22 Methoxychlor	7.479	7.487	7.486	7.484	7.482	7.478	7.474	7.479	7.429-7.529	7.482	0.005
23 Endosulfan sulfate	7.727	7.731	7.730	7.729	7.726	7.725	7.721	7.727	7.677-7.777	7.727	0.003
24 Endrin ketone	7.983	7.987	7.986	7.985	7.982	7.981	7.977	7.983	7.933-8.033	7.983	0.003
$ 25 Decachlorobiphenyl	8.832	8.834	8.834	8.833	8.832	8.832	8.830	8.832	8.782-8.882	8.833	0.002
26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.006	6.956-7.056	+++++	+++++
39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.911	5.861-5.961	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.347-6.447	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.636	6.586-6.686	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.754	1.704-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.840	5.790-5.890	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.162	6.112-6.212	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.778	6.728-6.828	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.653	7.603-7.703	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.837	4.787-4.887	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0514a005	0514a006	0514a007	0514a008	0514a009	0514a010	0514a011
INJ.DATE:	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013
INJ.TIME:	14:37	14:57	15:17	15:37	15:56	16:16	16:34

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.493	2.492	2.493	2.492	2.492	2.493	2.493	2.493	2.443-2.543	2.493	0.000
* 52 1Bromo-2nitrobenzene	3.331	3.331	3.331	3.330	3.329	3.330	3.329	3.331	3.281-3.381	3.330	0.001
* 55 Hexabromobiphenyl	10.370	10.370	10.371	10.372	10.370	10.372	10.371	10.370	10.320-10.421	10.371	0.001
$ 2 Tetrachloro-m-xylene	4.168	4.169	4.170	4.168	4.165	4.166	4.166	4.168	4.118-4.218	4.168	0.002
3 Hexachlorobenzene	4.633	4.638	4.638	4.635	4.631	4.630	4.627	4.633	4.583-4.683	4.633	0.004
4 alpha-BHC	4.756	4.755	4.756	4.756	4.752	4.754	4.752	4.756	4.706-4.806	4.754	0.002
5 gamma-BHC (Lindane)	5.115	5.115	5.116	5.115	5.112	5.113	5.111	5.115	5.065-5.165	5.114	0.002
6 beta-BHC	5.189	5.204	5.203	5.198	5.190	5.186	5.183	5.189	5.139-5.239	5.193	0.008
7 delta-BHC	5.501	5.513	5.512	5.508	5.502	5.498	5.495	5.501	5.451-5.551	5.504	0.007
8 Heptachlor	5.579	5.579	5.580	5.579	5.577	5.577	5.575	5.579	5.529-5.629	5.578	0.002
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	5.917	5.917	5.917	5.917	5.915	5.916	5.913	5.917	5.867-5.967	5.916	0.001
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	6.470	6.472	6.472	6.471	6.469	6.470	6.467	6.470	6.420-6.520	6.470	0.002
12 gamma-Chlordane	6.653	6.657	6.657	6.656	6.653	6.652	6.650	6.653	6.603-6.703	6.654	0.003
13 alpha-Chlordane	6.791	6.793	6.794	6.793	6.790	6.790	6.788	6.791	6.741-6.841	6.791	0.002
14 Endosulfan I	6.858	6.861	6.861	6.860	6.857	6.857	6.855	6.858	6.808-6.908	6.859	0.002

Reviewer 1 YZ Date: 5/15/13
Reviewer 2 Date: 5/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
15 4,4'-DDE	6.918	6.925	6.923	6.921	6.918	6.916	6.915	6.918	6.868-6.968	6.919	0.004
16 Dieldrin	7.116	7.117	7.118	7.116	7.114	7.115	7.113	7.116	7.066-7.166	7.116	0.002
17 Endrin	7.405	7.407	7.407	7.406	7.404	7.404	7.403	7.405	7.355-7.455	7.405	0.002
18 4,4'-DDD	7.460	7.466	7.465	7.464	7.462	7.457	7.454	7.460	7.410-7.510	7.461	0.004
19 Endosulfan II	7.594	7.598	7.598	7.596	7.594	7.593	7.592	7.594	7.544-7.644	7.595	0.002
20 4,4'-DDT	7.745	7.749	7.749	7.748	7.746	7.743	7.740	7.745	7.695-7.795	7.746	0.003
21 Endrin aldehyde	7.892	7.895	7.896	7.893	7.892	7.891	7.889	7.892	7.842-7.942	7.892	0.002
22 Endosulfan sulfate	8.138	8.139	8.140	8.138	8.137	8.136	8.134	8.138	8.088-8.188	8.138	0.002
23 Methoxychlor	8.327	8.329	8.330	8.329	8.327	8.326	8.325	8.327	8.277-8.377	8.328	0.002
24 Endrin ketone	8.629	8.631	8.631	8.630	8.629	8.628	8.627	8.629	8.579-8.679	8.629	0.002
$ 25 Decachlorobiphenyl	9.791	9.791	9.792	9.792	9.790	9.791	9.791	9.791	9.741-9.841	9.791	0.001
26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.338	7.288-7.388	+++++	+++++
38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.631	6.581-6.681	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.115	7.065-7.165	+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.404	7.354-7.454	+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.732	1.682-1.782	+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.385	6.335-6.435	+++++	+++++
43 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.691-6.791	+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.465	7.415-7.515	+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.619	8.569-8.669	+++++	+++++
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.369	5.319-5.419	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a006.d
Level 2: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a007.d
Level 3: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a008.d
Level 4: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a009.d
Level 5: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d
Level 6: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a010.d
Level 7: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a011.d
Level 8: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d/0514a013.cdf

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.79325	1.69392	1.74961	1.78148	1.75119	1.71302		
	1.98781	+++++					1.78147	5.471
3 Hexachlorobenzene	1.49749	1.39055	1.33447	1.32478	1.26906	1.22701		
	1.39069	+++++					1.34772	6.607
4 alpha-BHC	1.59686	1.53923	1.58723	1.69009	1.72967	1.74432		
	2.04256	+++++					1.70428	9.858
5 gamma-BHC (Lindane)	1.37757	1.32209	1.37386	1.47369	1.50450	1.51729		
	1.76991	+++++					1.47699	10.069
6 beta-BHC	0.73008	0.68228	0.67383	0.64825	0.64133	0.63188		
	0.72204	+++++					0.67567	5.734
7 delta-BHC	1.27862	1.26192	1.31879	1.44766	1.43894	1.47751		
	1.73280	+++++					1.42232	11.390

WS21:01169

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.44016	1.35450	1.36987	1.44472	1.43635	1.40950		
	1.59374	+++++					1.43555	5.447
9 Aldrin	1.33913	1.32192	1.35890	1.43056	1.44425	1.42846		
	1.62361	+++++					1.42098	7.160
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.31883	1.22935	1.23549	1.29042	1.26295	1.24015		
	1.39299	+++++					1.28146	4.594
12 gamma-Chlordane	1.34328	1.29043	1.30193	1.38657	1.37855	1.37018		
	1.54904	+++++					1.37428	6.228
13 alpha-Chlordane	1.26506	1.18635	1.20487	1.27829	1.28473	1.27759		
	1.45008	+++++					1.27814	6.667
14 Endosulfan I	1.33723	1.22412	1.19481	1.20636	1.16700	1.12310		
	1.25888	+++++					1.21593	5.636
15 4,4'-DDE	1.07900	0.99206	0.98337	1.00262	1.00227	1.00380		
	1.18006	+++++					1.03474	6.900

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.28138	1.23307	1.26288	1.31804	1.29159	1.25290		
	1.40559	+++++					1.29221	4.417
17 Endrin	1.00045	0.95140	0.98797	1.05878	1.05845	1.07061		
	1.20035	+++++					1.04686	7.715
18 4,4'-DDD	1.22524	1.14701	1.15954	1.20318	1.16084	1.17739		
	1.32680	+++++					1.20000	5.184
19 Endosulfan II	1.12524	1.08894	1.05454	1.15097	1.11621	1.13029		
	1.27640	+++++					1.13466	6.160
20 4,4'-DDT	1.00324	0.95977	0.99273	1.06721	1.05511	1.10036		
	1.26486	+++++					1.06332	9.513
21 Endrin aldehyde	1.01452	0.92945	0.92202	0.94895	0.90871	0.92167		
	1.03644	+++++					0.95454	5.274
22 Methoxychlor	0.54273	0.50238	0.49266	0.49601	0.47525	0.48309		
	0.56389	+++++					0.50800	6.446
23 Endosulfan sulfate	1.04430	0.96556	0.97447	1.00876	0.98463	1.00608		
	1.14237	+++++					1.01803	5.968
24 Endrin ketone	1.44182	1.27425	1.25105	1.26006	1.20536	1.22442		
	1.39160	+++++					1.29265	6.880

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.04979	+++++		
	+++++	0.04979					0.04979	0.000
(2)	+++++	+++++	+++++	+++++	0.03856	+++++		
	+++++	+++++					0.03856	0.000
(3)	+++++	+++++	+++++	+++++	0.05763	+++++		
	+++++	+++++					0.05763	0.000
(4)	+++++	+++++	+++++	+++++	0.05405	+++++		
	+++++	+++++					0.05405	0.000
(5)	+++++	+++++	+++++	+++++	0.03832	+++++		
	+++++	+++++					0.03832	0.000
(6)	+++++	+++++	+++++	+++++	0.03390	+++++		
	+++++	+++++					0.03390	0.000
39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
$ 2 Tetrachloro-m-xylene	1.05731	1.02496	1.04909	1.09575	1.10430	1.07844		
	1.22555	+++++					1.09077	6.002
$ 25 Decachlorobiphenyl	1.36908	1.17032	1.18645	1.09539	1.01496	0.99573		
	1.12973	+++++					1.13738	11.007

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a006.d
Level 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a007.d
Level 3: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a008.d
Level 4: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a009.d
Level 5: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d
Level 6: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a010.d
Level 7: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a011.d
Level 8: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d/0514a013.cdf

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.60053	1.49408	1.47331	1.53778	1.43422	1.40997		
	1.56693	+++++					1.50240	4.639
3 Hexachlorobenzene	1.91130	1.81415	1.84722	1.93843	1.89171	1.80326		
	1.99642	+++++					1.88607	3.694
4 alpha-BHC	1.59644	1.60778	1.71794	1.85564	1.87161	1.84057		
	2.08612	+++++					1.79658	9.554
5 gamma-BHC (Lindane)	1.41279	1.39821	1.47572	1.59627	1.61089	1.59098		
	1.82714	+++++					1.55886	9.485
6 beta-BHC	0.67540	0.64906	0.66168	0.69664	0.70034	0.68947		
	0.76488	+++++					0.69107	5.428
7 delta-BHC	1.25042	1.25618	1.36398	1.51769	1.57828	1.57346		
	1.78854	+++++					1.47551	13.302

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.52144	1.46615	1.50731	1.56510	1.51707	1.41707		
	1.49206	+++++					1.49803	3.120
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.36731	1.34038	1.38390	1.47646	1.46628	1.38183		
	1.48140	+++++					1.41394	4.156
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.31110	1.18086	1.22473	1.27311	1.25167	1.18019		
	1.24678	+++++					1.23835	3.848
12 gamma-Chlordane	1.27948	1.21377	1.25856	1.33964	1.33160	1.27964		
	1.38294	+++++					1.29795	4.382
13 alpha-Chlordane	1.14954	1.11506	1.16114	1.24321	1.22852	1.18631		
	1.28714	+++++					1.19585	5.019
14 Endosulfan I	1.12895	1.09165	1.12764	1.19879	1.17527	1.11474		
	1.17124	+++++					1.14404	3.350
15 4,4'-DDE	1.24203	1.21383	1.24821	1.28890	1.20552	1.12039		
	1.15989	+++++					1.21125	4.679

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.21939	1.20049	1.19568	1.22906	1.15598	1.05909		
	1.10103	+++++					1.16582	5.498
17 Endrin	1.54901	1.48644	1.53945	1.58915	1.52214	1.42686		
	1.49666	+++++					1.51567	3.431
18 4,4'-DDD	1.88151	1.77566	1.81334	1.83674	1.73699	1.64836		
	1.79856	+++++					1.78445	4.221
19 Endosulfan II	1.82350	1.73853	1.79597	1.88652	1.77228	1.65784		
	1.77324	+++++					1.77827	3.991
20 4,4'-DDT	1.40789	1.35837	1.42769	1.51306	1.44947	1.46591		
	1.66557	+++++					1.46971	6.727
21 Endrin aldehyde	1.51334	1.40321	1.41383	1.43030	1.36548	1.30518		
	1.40698	+++++					1.40547	4.499
22 Endosulfan sulfate	1.47464	1.39724	1.44210	1.49521	1.44784	1.40238		
	1.52333	+++++					1.45468	3.199
23 Methoxychlor	0.67502	0.62296	0.60582	0.57954	0.51795	0.47598		
	0.48760	+++++					0.56641	13.184
24 Endrin ketone	1.70322	1.58267	1.59409	1.60970	1.52594	1.46607		
	1.60759	+++++					1.58418	4.668

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	0.08641	+++++		
	+++++	+++++					0.08641	0.000
(3)	+++++	+++++	+++++	+++++	0.09252	+++++		
	+++++	+++++					0.09252	0.000
(4)	+++++	+++++	+++++	+++++	0.06545	+++++		
	+++++	+++++					0.06545	0.000
(5)	+++++	+++++	+++++	+++++	0.08604	+++++		
	+++++	+++++					0.08604	0.000
38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
39 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
43 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.36753	1.31204	1.33239	1.36072	1.28841	1.21312		
	1.22974	+++++					1.30057	4.662
$ 25 Decachlorobiphenyl	1.80274	1.62026	1.59384	1.59909	1.52505	1.48844		
	1.68340	+++++					1.61612	6.428

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a005.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a005.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 14:37
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YB 5/15/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.162	0.000	5500669	3.331	0.002	29060499	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.332	0.000	2378587	4.756	0.004	13597458	20.2980	20.8352	2.6	alpha-BHC
4.697	0.000	881930	5.189	0.006	5088022	18.9835	20.2683	6.5	beta-BHC
4.868	0.000	1978785	5.501	0.006	11466386	20.2337	21.3930	5.6	delta-BHC
4.617	0.000	2068937	5.115	0.004	11703292	20.3725	20.6675	1.4	gamma-BHC (Lindane)
5.065	0.000	1975223	5.579	0.004	11021714	20.0112	20.2542	1.2	Heptachlor
5.359	0.000	1986091	5.917	0.004	10652708	20.3276	20.7404	2.0	Aldrin
5.933	0.000	1736770	6.470	0.003	9093575	19.7112	20.2152	2.5	Heptachlor epoxide b
6.310	0.000	1604825	6.858	0.003	8538511	19.1953	20.5460	6.8	Endosulfan I
6.532	0.000	3552297	7.116	0.003	16796653	39.9808	39.6624	0.8	Dieldrin
6.235	0.000	2756569	6.918	0.003	17516467	38.7447	39.8107	2.7	4,4'-DDE
6.751	0.000	2814950	7.405	0.002	12569567	40.4428	40.1706	0.7	Endrin
6.959	0.000	2968558	7.594	0.003	14635204	39.3496	39.8653	1.3	Endosulfan II
6.800	0.000	3087253	7.460	0.006	14343775	38.6946	38.9360	0.6	4,4'-DDD
7.727	0.000	2618632	8.138	0.003	11956025	38.6879	39.8119	2.9	Endosulfan sulfate
7.053	0.000	2806075	7.745	0.004	11969550	39.6911	39.4493	0.6	4,4'-DDT
7.479	0.000	6319705	8.327	0.002	21385691	187.1070	182.8875	2.3	Methoxychlor
7.983	0.000	3205646	8.629	0.002	12600957	37.2987	38.5293	3.2	Endrin ketone
7.336	0.000	2416722	7.892	0.003	11275916	38.0797	38.8617	2.0	Endrin aldehyde
6.054	0.000	1895741	6.653	0.003	9674267	20.0621	20.5186	2.2	gamma-Chlordane
6.177	0.000	1766712	6.791	0.003	8925381	20.1031	20.5465	2.2	alpha-Chlordane
2.336	0.000	2408182	2.493	0.000	10419791	19.6601	19.0923	2.9	Hexachlorobutadiene
4.186	0.000	1745176	4.633	0.006	13743481	18.8327	20.0598	6.3	Hexachlorobenzene
8.997	0.000	5319006	10.370	-0.001	16515704	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	0.000	3037199	4.168	0.002	18720888	40.4962	39.6261	2.2	Tetrachloro-m-xylen
8.832	0.000	2699302	9.791	0.001	12593626	35.6948	37.7460	5.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	101.2	99.1	99.1~	115- 0
Decachlorobiphenyl	89.2	94.4	89.2~	115- 0

~ Indicates recovery outside QC Limits

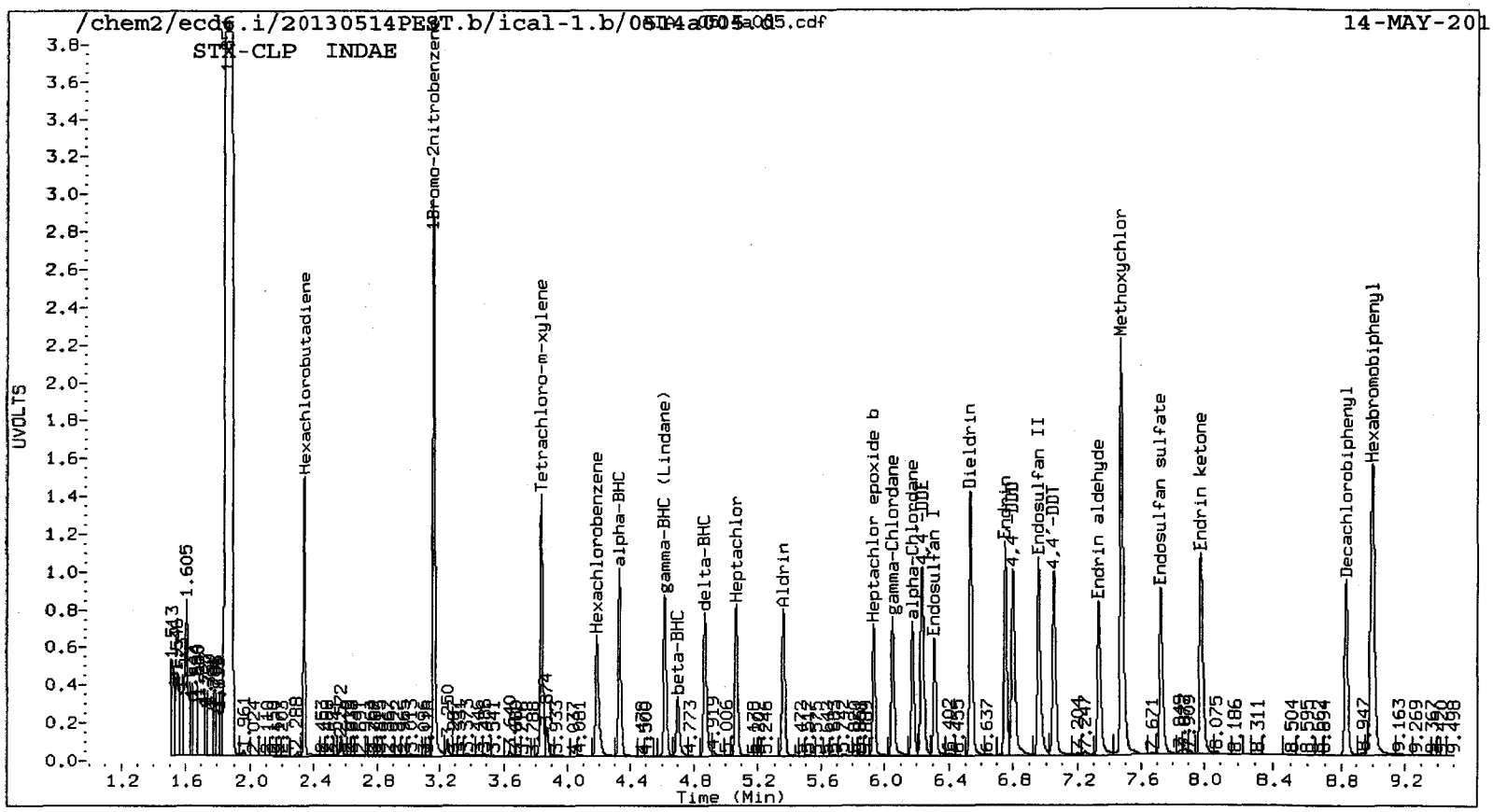
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	%D
Bromo-Nitrobenzene	5500669	5500669	0.0
Hexabromobiphenyl	5319006	5319006	0.0

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	%D
Bromo-Nitrobenzene	29060499	29060499	0.0
Hexabromobiphenyl	16515704	16515704	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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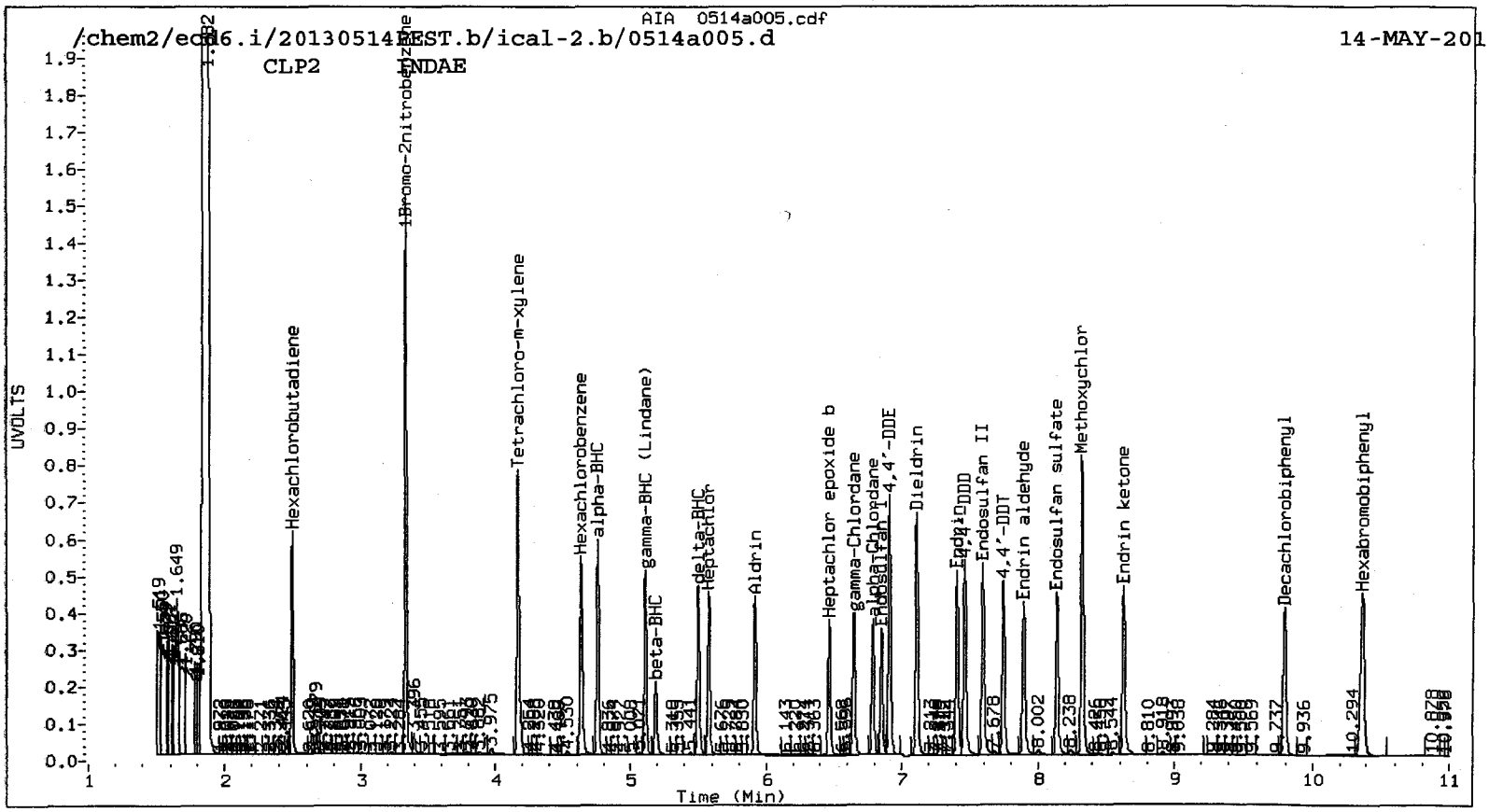
STX-CLP INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a006.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a006.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 14:57
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	0.000	5276720	3.331	0.001	28661245	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	131659	4.755	0.004	714937	1.1712	1.1107	5.3	alpha-BHC
4.724	0.000	60194	5.204	0.021	302466	1.3507	1.2217	10.0	beta-BHC
4.894	0.000	105421	5.513	0.018	559976	1.1237	1.0593	5.9	delta-BHC
4.618	0.000	113579	5.115	0.004	632692	1.1659	1.1329	2.9	gamma-BHC (Lindane)
5.065	0.000	118739	5.579	0.004	681351	1.2540	1.2695	1.2	Heptachlor
5.359	0.000	110410	5.917	0.003	612325	1.1780	1.2088	2.6	Aldrin
5.935	0.000	108736	6.472	0.004	587152	1.2865	1.3234	2.8	Heptachlor epoxide b
6.315	0.000	110253	6.861	0.006	505578	1.3747	1.2335	10.8	Endosulfan I
6.536	0.000	211297	7.117	0.004	1092166	2.4791	2.6149	5.3	Dieldrin
6.247	0.000	177925	6.925	0.010	1112439	2.6069	2.5635	1.7	4,4'-DDE
6.755	0.000	157918	7.407	0.004	778157	2.3892	2.5550	6.7	Endrin
6.966	0.000	177617	7.598	0.006	916046	2.4793	2.5636	3.3	Endosulfan II
6.812	0.000	193401	7.466	0.012	945192	2.5526	2.6360	3.2	4,4'-DDD
7.731	0.000	164840	8.139	0.005	740798	2.5645	2.5343	1.2	Endosulfan sulfate
7.063	0.000	158359	7.749	0.009	707264	2.3587	2.3948	1.5	4,4'-DDT
7.487	0.000	428340	8.329	0.004	1695513	13.3544	14.8969	10.9	Methoxychlor
7.987	0.000	227587	8.631	0.004	855623	2.7885	2.6878	3.7	Endrin ketone
7.341	0.000	160140	7.895	0.007	760235	2.6571	2.6919	1.3	Endrin aldehyde
6.060	0.000	110752	6.657	0.007	572990	1.2218	1.2322	0.8	gamma-Chlordane
6.183	0.000	104303	6.793	0.006	514801	1.2372	1.2016	2.9	alpha-Chlordane
2.336	0.000	147851	2.492	-0.001	716768	1.2583	1.3316	5.7	Hexachlorobutadiene
4.197	0.000	123466	4.638	0.010	855939	1.3889	1.2667	9.2	Hexachlorobenzene
8.998	0.000	5051117	10.370	-0.001	16075431	80.0000	80.0000	0.0	Hexabromobiphenyl
3.842	0.000	174347	4.169	0.003	1224847	2.4233	2.6287	8.1	Tetrachloro-m-xylene
8.834	0.000	216105	9.791	0.001	905617	3.0093	2.7887	7.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	6.1	6.6	6.1~	115- 0
Decachlorobiphenyl	7.5	7.0	7.0~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

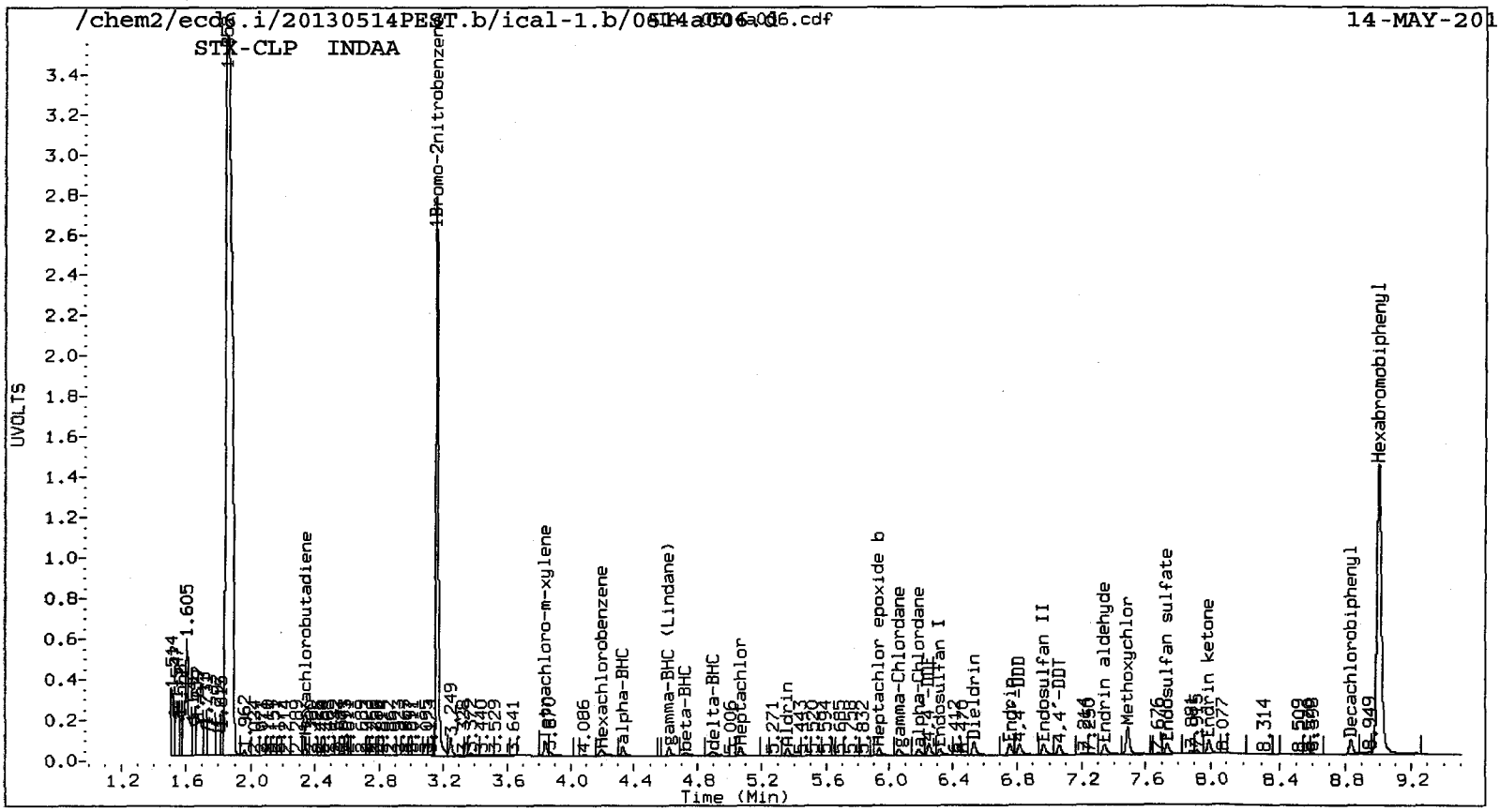
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5276720	-4.1
Hexabromobiphenyl	5319006	5051117	-5.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	28661245	-1.4
Hexabromobiphenyl	16515704	16075431	-2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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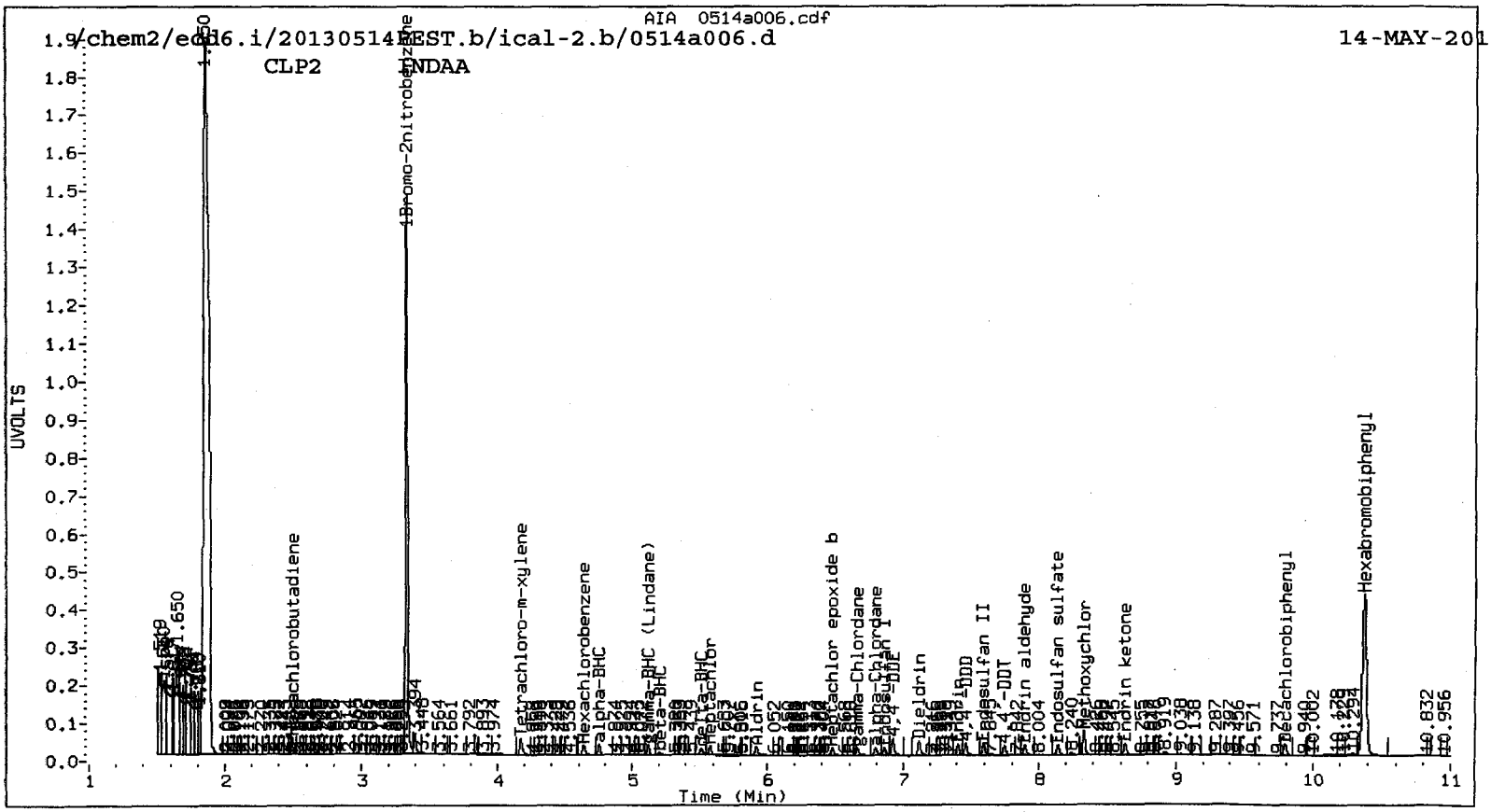
STX-CLP INDAA
UVOLTS
Time (Min)
Tetrachlorobutadiene
Tetrachloro-m-xylene
Bromo-2nitrobenzene
Hexachlorobenzene
Alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-MAY-201
CLP2 INDAA
UVOLTS
Time (Min)
Tetrachlorobutadiene
Tetrachloro-m-xylene
Bromo-2nitrobenzene
Hexachlorobenzene
Alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a007.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a007.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Injection Date: 14-MAY-2013 15:17
Compound Sublist: INDA
Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	0.000	5534770	3.331	0.002	30201103	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.332	0.000	266227	4.756	0.005	1517399	2.2579	2.2373	0.9	alpha-BHC
4.720	0.000	118008	5.203	0.020	612573	2.5245	2.3480	7.2	beta-BHC
4.890	0.000	218264	5.512	0.017	1185561	2.2181	2.1284	4.1	delta-BHC
4.619	0.000	228671	5.116	0.006	1319610	2.2378	2.2424	0.2	gamma-BHC (Lindane)
5.066	0.000	234277	5.580	0.005	1383730	2.3589	2.4468	3.7	Heptachlor
5.360	0.000	228641	5.917	0.004	1265030	2.3257	2.3699	1.9	Aldrin
5.936	0.000	212631	6.472	0.005	1114482	2.3984	2.3839	0.6	Heptachlor epoxide b
6.314	0.000	211726	6.861	0.006	1030282	2.5168	2.3855	5.4	Endosulfan I
6.536	0.000	426547	7.118	0.005	2266016	4.7712	5.1487	7.6	Dieldrin
6.245	0.000	343175	6.923	0.008	2291185	4.7937	5.0106	4.4	4,4'-DDE
6.755	0.000	319855	7.407	0.004	1592938	4.5441	4.9036	7.6	Endrin
6.964	0.000	366093	7.598	0.006	1863085	4.7985	4.8883	1.9	Endosulfan II
6.812	0.000	385618	7.465	0.011	1902877	4.7792	4.9754	4.0	4,4'-DDD
7.730	0.000	324616	8.140	0.005	1497340	4.7423	4.8026	1.3	Endosulfan sulfate
7.062	0.000	322667	7.749	0.009	1455693	4.5130	4.6212	2.4	4,4'-DDT
7.486	0.000	844492	8.330	0.005	3337982	24.7235	27.4961	10.6	Methoxychlor
7.986	0.000	428395	8.631	0.005	1696063	4.9288	4.9952	1.3	Endrin ketone
7.341	0.000	312474	7.896	0.007	1503742	4.8686	4.9919	2.5	Endrin aldehyde
6.059	0.000	223194	6.657	0.007	1145536	2.3475	2.3379	0.4	gamma-Chlordane
6.182	0.000	205193	6.794	0.006	1052375	2.3205	2.3311	0.5	alpha-Chlordane
2.336	0.000	292983	2.493	0.000	1410088	2.3771	2.4861	4.5	Hexachlorobutadiene
4.195	0.000	240511	4.638	0.010	1712164	2.5794	2.4047	7.0	Hexachlorobenzene
8.998	0.000	5379091	10.371	0.000	17146317	80.0000	80.0000	0.0	Hexabromobiphenyl
3.842	0.000	354557	4.170	0.003	2476566	4.6983	5.0441	7.1	Tetrachloro-m-xylene
8.834	0.000	393452	9.792	0.002	1736343	5.1448	5.0128	2.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	11.7	12.6	11.7~	115- 0
Decachlorobiphenyl	12.9	12.5	12.5~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

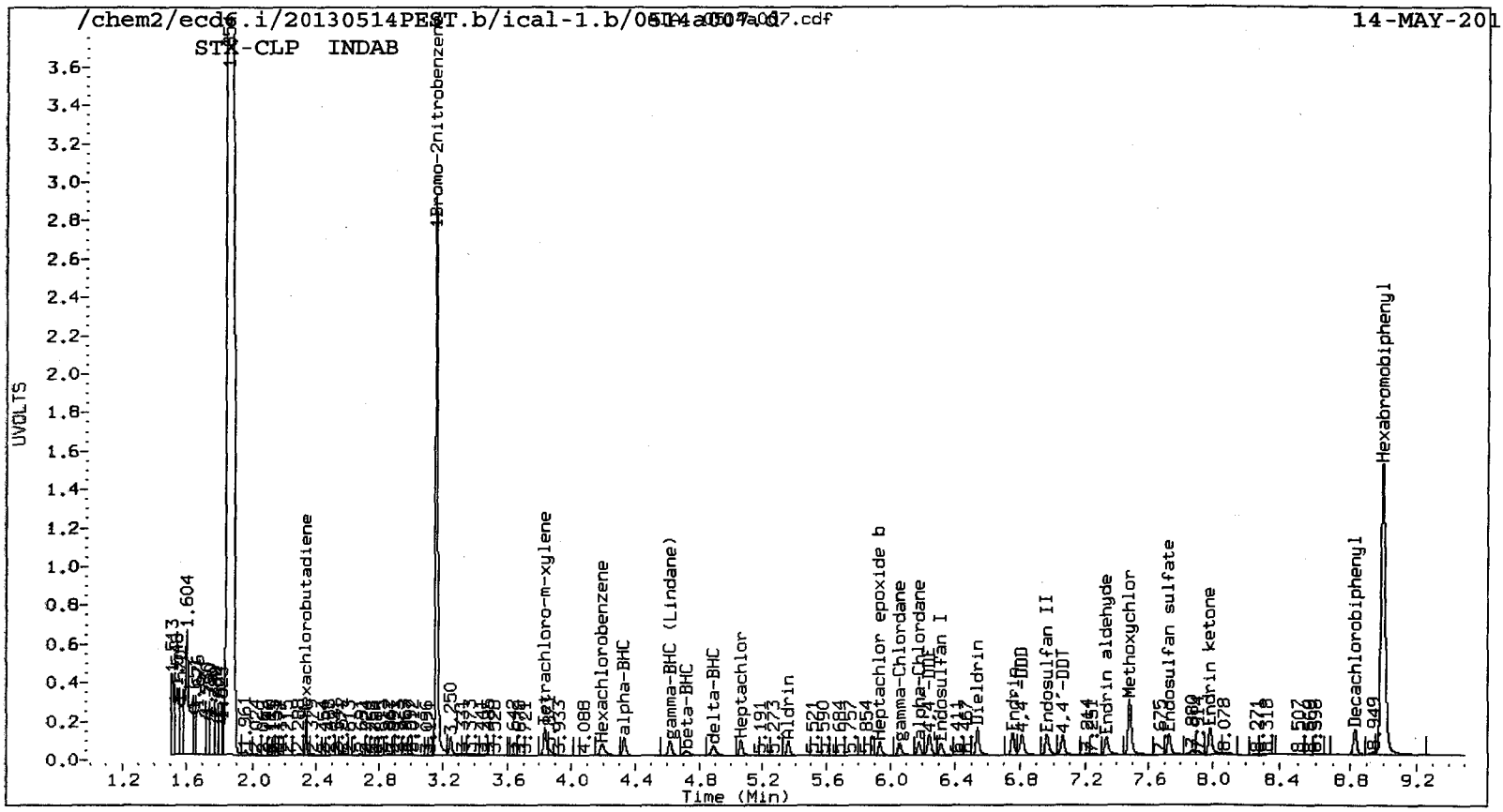
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5534770	0.6
Hexabromobiphenyl	5319006	5379091	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	30201103	3.9
Hexabromobiphenyl	16515704	17146317	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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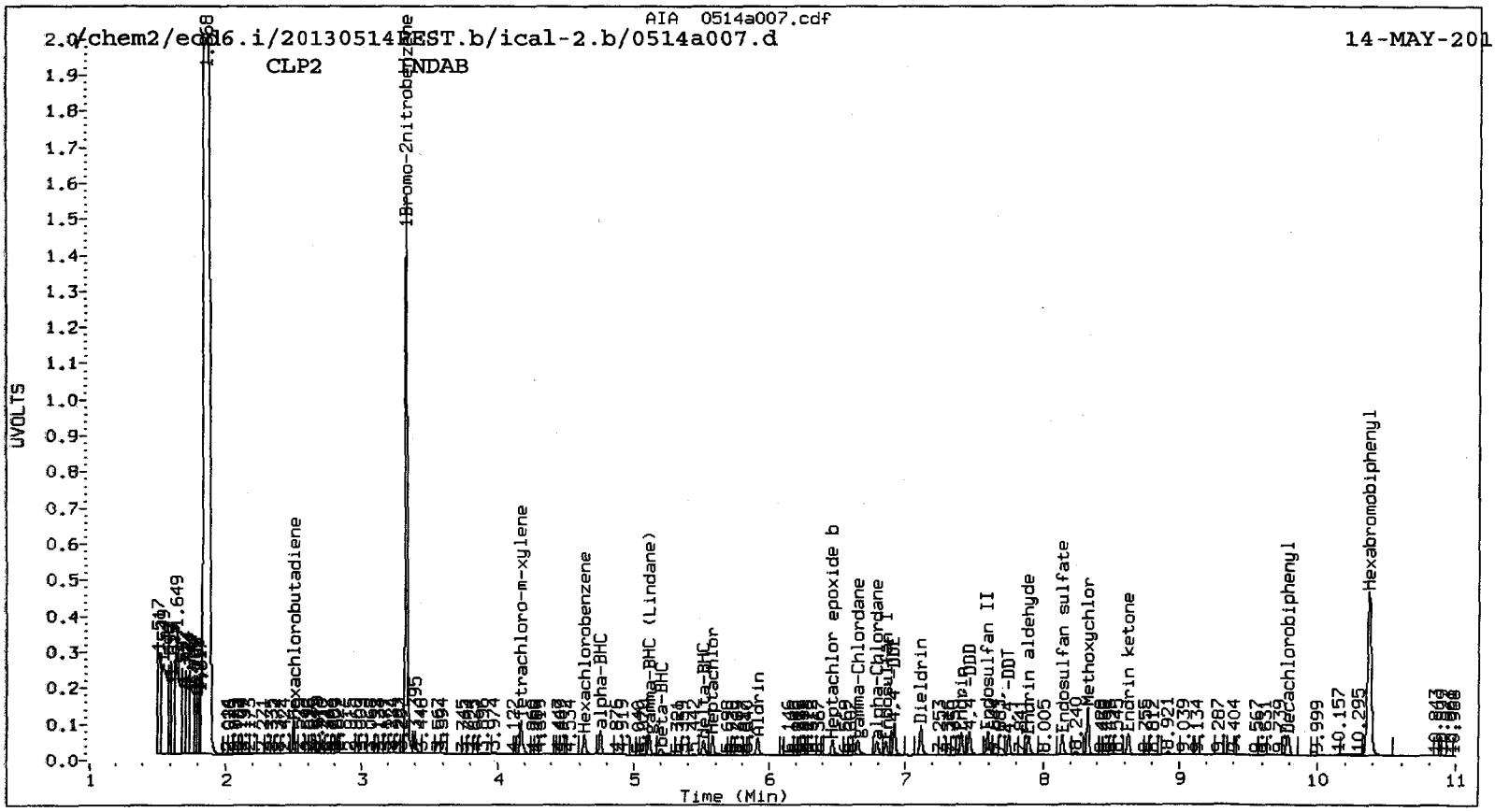
14-MAY-201
STX-CLP INDAB
UVOLTS
Time (Min)
1.604
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-MAY-201
CLP2 INDAB
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a008.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a008.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 15:37
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 5/15/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.161	0.000	5478422	3.330	0.001	29972511	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	543471	4.756	0.004	3218177	4.6566	4.7811	2.6	alpha-BHC
4.712	0.000	230721	5.198	0.015	1239504	4.9864	4.7874	4.1	beta-BHC
4.882	0.000	451555	5.508	0.012	2555115	4.6360	4.6221	0.3	delta-BHC
4.618	0.000	470412	5.115	0.004	2764445	4.6509	4.7334	1.8	gamma-BHC (Lindane)
5.065	0.000	469047	5.579	0.004	2823616	4.7713	5.0310	5.3	Heptachlor
5.359	0.000	465290	5.917	0.004	2592438	4.7816	4.8938	2.3	Aldrin
5.934	0.000	423034	6.471	0.004	2294257	4.8207	4.9450	2.5	Heptachlor epoxide b
6.313	0.000	409103	6.860	0.004	2112396	4.9131	4.9283	0.3	Endosulfan I
6.534	0.000	864822	7.116	0.003	4479682	9.7730	10.2561	4.8	Dieldrin
6.241	0.000	673413	6.921	0.006	4676501	9.5035	10.3051	8.1	4,4'-DDE
6.753	0.000	657274	7.406	0.003	3232003	9.4374	10.1569	7.3	Endrin
6.962	0.000	701565	7.596	0.004	3770541	9.2939	10.0995	8.3	Endosulfan II
6.809	0.000	771416	7.464	0.010	3807006	9.6628	10.1619	5.0	4,4'-DDD
7.729	0.000	648297	8.138	0.004	3027616	9.5722	9.9135	3.5	Endosulfan sulfate
7.059	0.000	660441	7.748	0.007	2997363	9.3361	9.7141	4.0	4,4'-DDT
7.484	0.000	1638780	8.329	0.004	6359453	48.4899	53.4789	9.8	Methoxychlor
7.985	0.000	832294	8.630	0.003	3346715	9.6782	10.0626	3.9	Endrin ketone
7.339	0.000	613397	7.893	0.005	2968269	9.6593	10.0595	4.1	Endrin aldehyde
6.057	0.000	445784	6.656	0.006	2357637	4.7368	4.8483	2.3	gamma-Chlordane
6.180	0.000	412550	6.793	0.005	2175134	4.7134	4.8549	3.0	alpha-Chlordane
2.336	0.000	599069	2.492	-0.001	2759930	4.9106	4.9032	0.2	Hexachlorobutadiene
4.190	0.000	456923	4.635	0.008	3460369	4.9508	4.8970	1.1	Hexachlorobenzene
8.999	0.000	5322227	10.372	0.001	16795593	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	0.000	718422	4.168	0.002	4991895	9.6179	10.2447	6.3	Tetrachloro-m-xylene
8.833	0.000	789319	9.792	0.001	3346191	10.4314	9.8622	5.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	24.0	25.6	24.0~	115- 0
Decachlorobiphenyl	26.1	24.7	24.7~	115- 0

~ Indicates recovery outside QC Limits

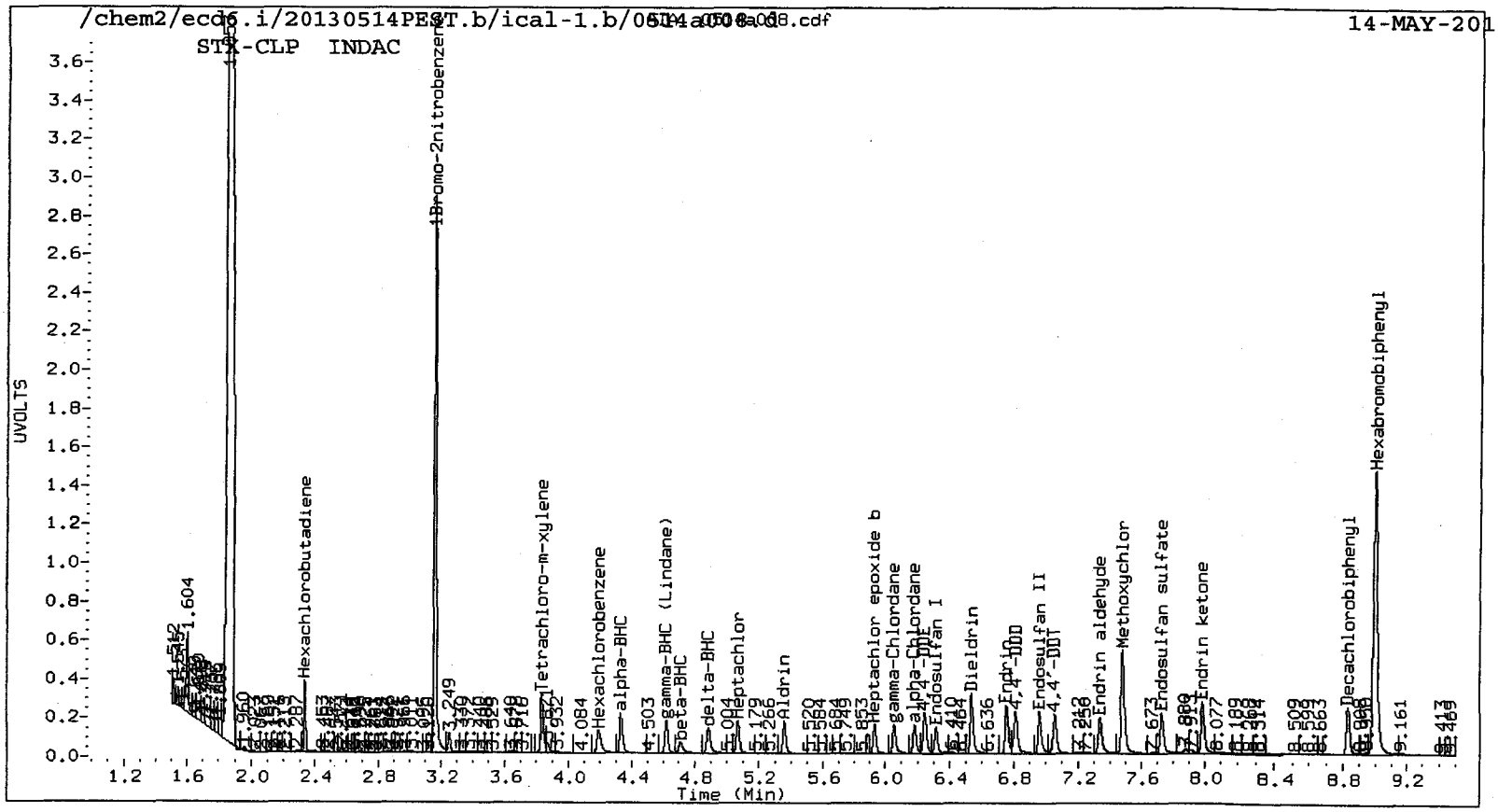
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5500669	5478422	-0.4
Hexabromobiphenyl	5319006	5322227	0.1

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	29060499	29972511	3.1
Hexabromobiphenyl	16515704	16795593	1.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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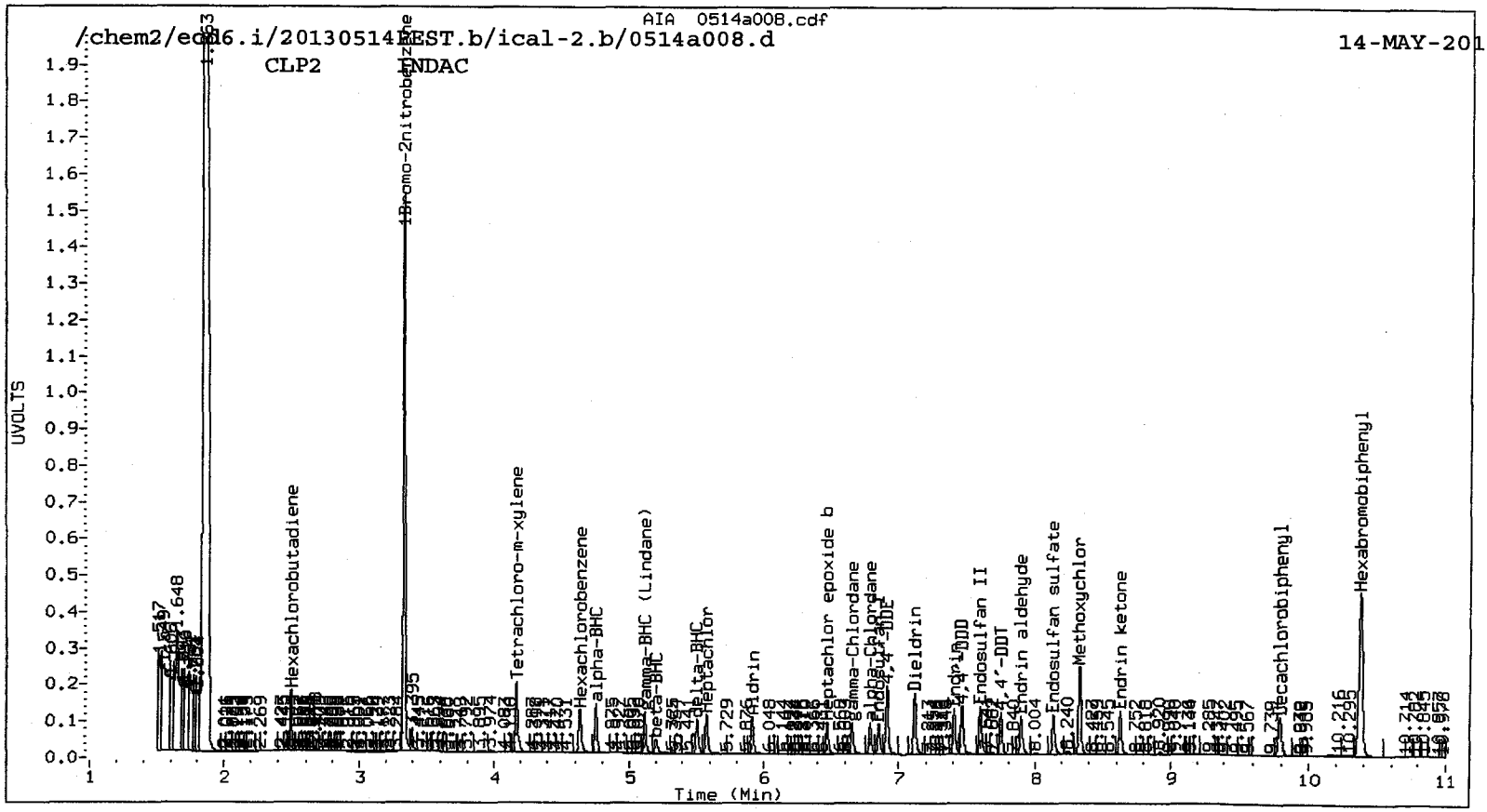
STX-CLP INDAC
UVOLTS
Time (Min)
1.604
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
4.084
Hexachlorobenzene
alpha-BHC
4.503
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
5.179
5.266
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
6.636
4,4'-DDD
Endrin
Endosulfan II
4,4'-DDT
7.212
Endrin aldehyde
Methoxychlor
7.673
Endosulfan sulfate
Endrin ketone
9.161
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 INDAC
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Time (Min)
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Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a009.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a009.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Injection Date: 14-MAY-2013 15:56
Compound Sublist: INDA
Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

YZ 5/16/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	0.000	5395940	3.329	0.000	29160968	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.328	0.000	1139950	4.752	0.001	6764016	9.9167	10.3287	4.1	alpha-BHC
4.702	0.000	437239	5.190	0.008	2539348	9.5942	10.0807	4.9	beta-BHC
4.872	0.000	976436	5.502	0.006	5532164	10.1781	10.2859	1.1	delta-BHC
4.614	0.000	993991	5.112	0.002	5818591	9.9777	10.2400	2.6	gamma-BHC (Lindane)
5.062	0.000	974450	5.577	0.002	5704997	10.0639	10.4478	3.7	Heptachlor
5.356	0.000	964900	5.915	0.002	5381877	10.0674	10.4422	3.7	Aldrin
5.931	0.000	870381	6.469	0.001	4640629	10.0700	10.2807	2.1	Heptachlor epoxide b
6.309	0.000	813681	6.857	0.002	4369749	9.9213	10.4786	5.5	Endosulfan I
6.531	0.000	1778022	7.114	0.001	8960153	20.3999	21.0850	3.3	Dieldrin
6.235	0.000	1352520	6.918	0.003	9396365	19.3792	21.2821	9.4	4,4'-DDE
6.750	0.000	1372588	7.404	0.001	6565999	20.2278	20.9695	3.6	Endrin
6.958	0.000	1492098	7.594	0.002	7794686	20.2876	21.2175	4.5	Endosulfan II
6.806	0.000	1559782	7.462	0.008	7589012	20.0530	20.5861	2.6	4,4'-DDD
7.726	0.000	1307738	8.137	0.003	6177871	19.8180	20.5573	3.7	Endosulfan sulfate
7.056	0.000	1383512	7.746	0.006	6251609	20.0731	20.5899	2.5	4,4'-DDT
7.482	0.000	3215078	8.327	0.002	11972694	97.6388	102.3181	4.7	Methoxychlor
7.982	0.000	1633514	8.629	0.002	6650933	19.4957	20.3222	4.2	Endrin ketone
7.336	0.000	1230206	7.892	0.003	5909701	19.8830	20.3533	2.3	Endrin aldehyde
6.052	0.000	935231	6.653	0.003	4883146	10.0894	10.3212	2.3	gamma-Chlordane
6.176	0.000	862198	6.790	0.002	4531641	10.0012	10.3961	3.9	alpha-Chlordane
2.336	0.000	1201598	2.492	-0.001	5605387	10.0001	10.2355	2.3	Hexachlorobutadiene
4.186	0.000	893552	4.631	0.004	7065810	9.8298	10.2776	4.5	Hexachlorobenzene
8.998	0.000	5185525	10.370	-0.001	16527116	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.000	1478146	4.165	-0.001	9919999	20.0912	20.9251	4.1	Tetrachloro-m-xylene
8.832	0.000	1420049	9.790	0.000	6607102	19.2617	19.7893	2.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	50.2	52.3	50.2~	115- 0
Decachlorobiphenyl	48.2	49.5	48.2~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

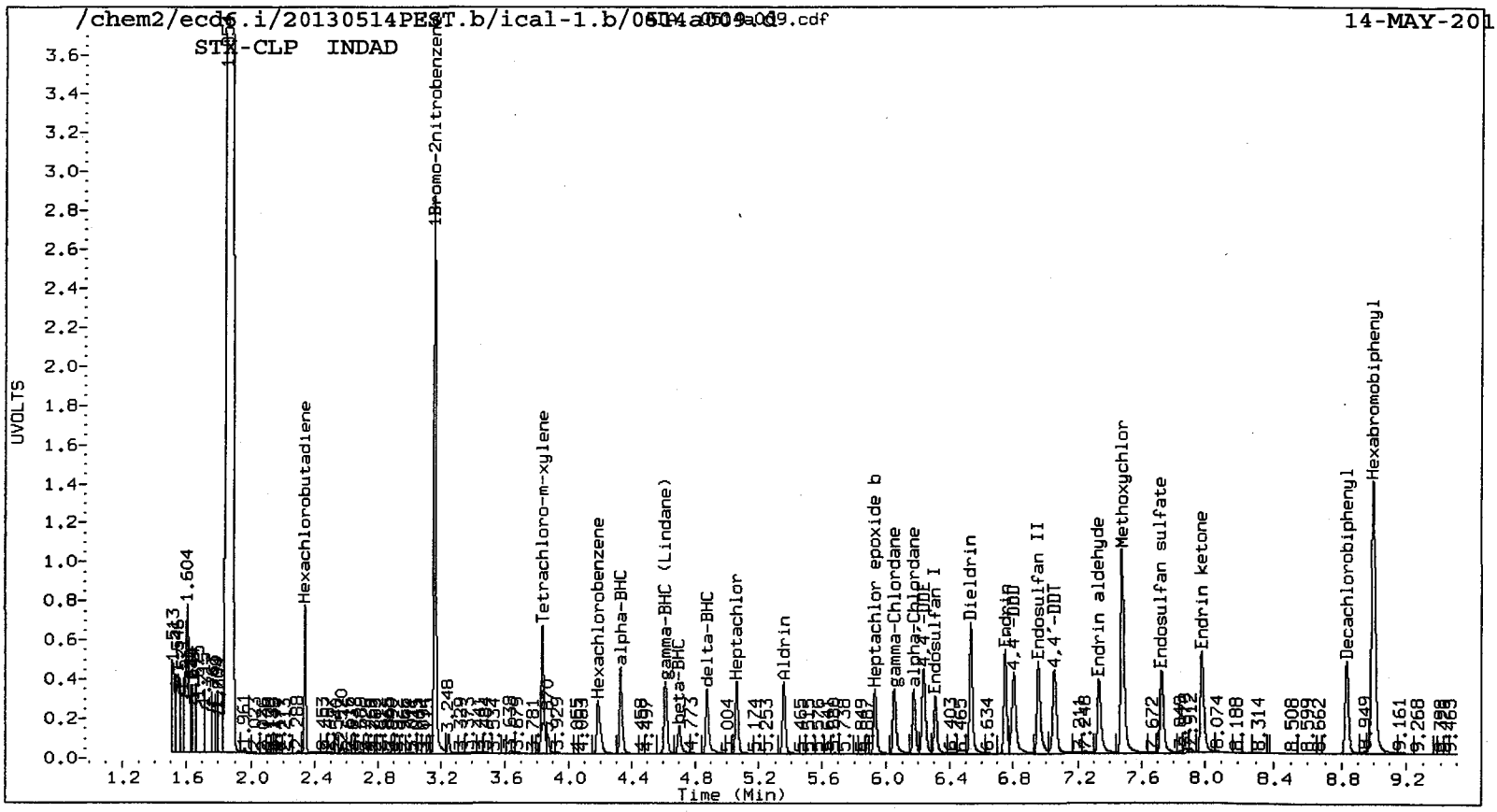
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5395940	-1.9
Hexabromobiphenyl	5319006	5185525	-2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29160968	0.3
Hexabromobiphenyl	16515704	16527116	0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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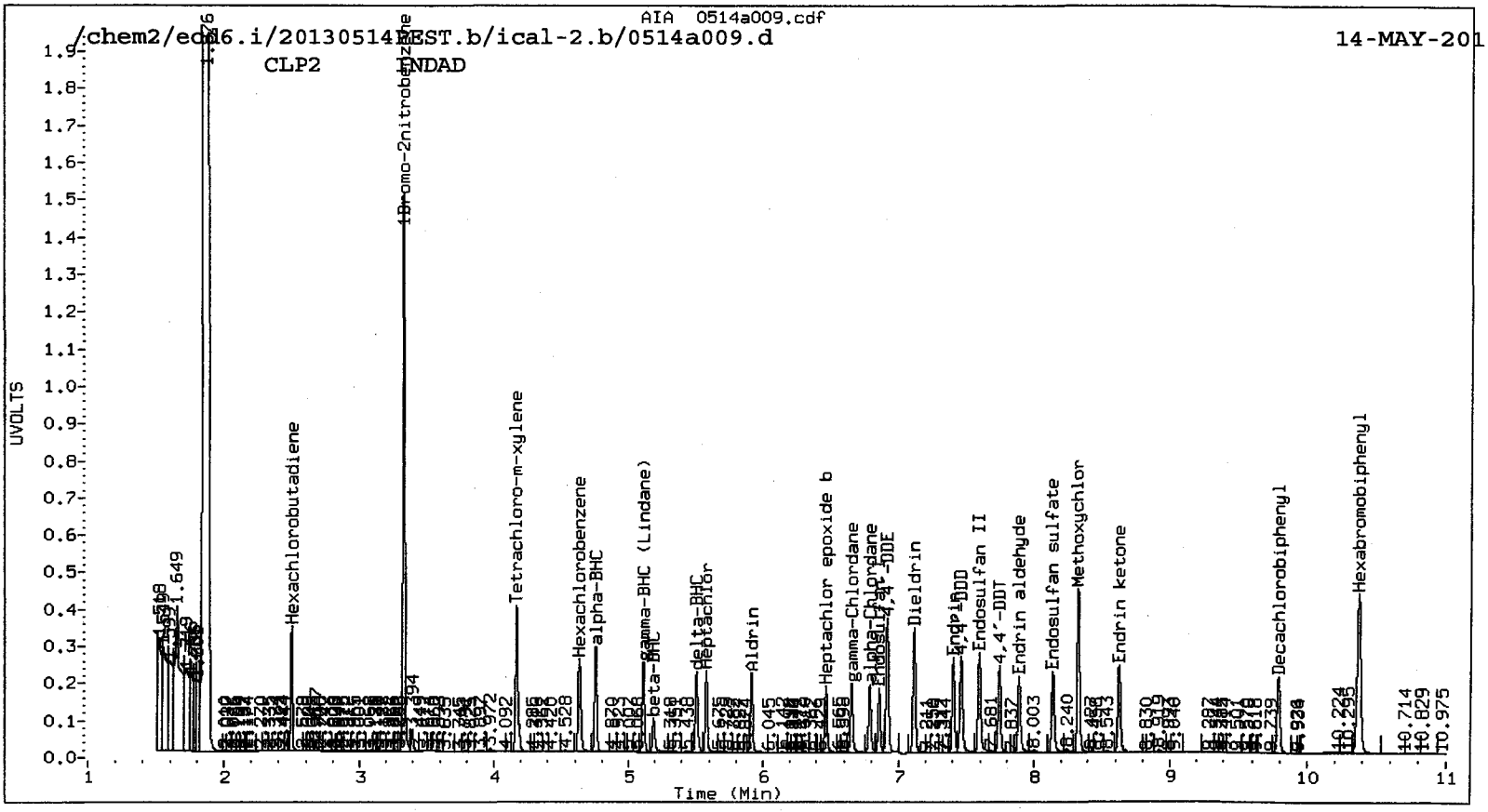
14-MAY-201
STR-CLP INDAD
UVOLTS
Time (Min)
Hexachlorobutadiene
1.604
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-MAY-201
CLP2 INDAD
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a010.d ARI ID: INDAF
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a010.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 16:16
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.161	0.000	5385380	3.330	0.001	29405183	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.329	0.000	4696911	4.754	0.002	27061082	40.9398	40.9793	0.1	alpha-BHC
4.692	0.000	1701444	5.186	0.003	10136932	37.4075	39.9074	6.5	beta-BHC
4.863	0.000	3978478	5.498	0.003	23133964	41.5521	42.6555	2.6	delta-BHC
4.614	0.000	4085589	5.113	0.002	23391530	41.0915	40.8243	0.7	gamma-BHC (Lindane)
5.063	0.000	3795342	5.577	0.002	20834563	39.2741	37.8382	3.7	Heptachlor
5.357	0.000	3846389	5.916	0.002	20316416	40.2106	39.0916	2.8	Aldrin
5.931	0.000	3339340	6.470	0.002	17351838	38.7107	38.1214	1.5	Heptachlor epoxide
6.309	0.000	3024165	6.857	0.002	16389635	36.9463	38.9756	5.3	Endosulfan I
6.531	0.000	6747354	7.115	0.002	31142629	77.5666	72.6760	6.5	Dieldrin
6.232	0.000	5405842	6.916	0.002	32945159	77.6079	73.9986	4.8	4,4'-DDE
6.749	0.000	5376621	7.404	0.001	23448845	81.8151	75.3121	8.3	Endrin
6.956	0.000	5676334	7.593	0.001	27244763	79.6922	74.5822	6.6	Endosulfan II
6.795	0.000	5912865	7.457	0.003	27089075	78.4926	73.8989	6.0	4,4'-DDD
7.725	0.000	5052560	8.136	0.002	23046636	79.0614	77.1240	2.5	Endosulfan sulfate
7.049	0.000	5526006	7.743	0.003	24090708	82.7862	79.7934	3.7	4,4'-DDT
7.478	0.000	12130490	8.326	0.001	39111410	380.3859	336.1400	12.4	Methoxychlor
7.981	0.000	6149035	8.628	0.002	24093264	75.7772	74.0354	2.3	Endrin ketone
7.334	0.000	4628640	7.891	0.002	21449280	77.2455	74.2914	3.9	Endrin aldehyde
6.051	0.000	3689472	6.652	0.002	18814044	39.8806	39.4359	1.1	gamma-Chlordane
6.175	0.000	3440149	6.790	0.002	17441880	39.9828	39.6812	0.8	alpha-Chlordane
2.336	0.000	4612620	2.493	-0.001	20730266	38.4630	37.5391	2.4	Hexachlorobutadiene
4.183	0.000	3303966	4.630	0.003	26512574	36.4174	38.2438	4.9	Hexachlorobenzene
8.999	0.000	5022010	10.372	0.001	16433920	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.000	5807812	4.166	0.000	35671955	79.0956	74.6210	5.8	Tetrachloro-m-xylen
8.832	0.000	5000587	9.791	0.001	24460912	70.0370	73.6798	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	197.7	186.6	186.6~	115- 0
Decachlorobiphenyl	175.1	184.2	175.1~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

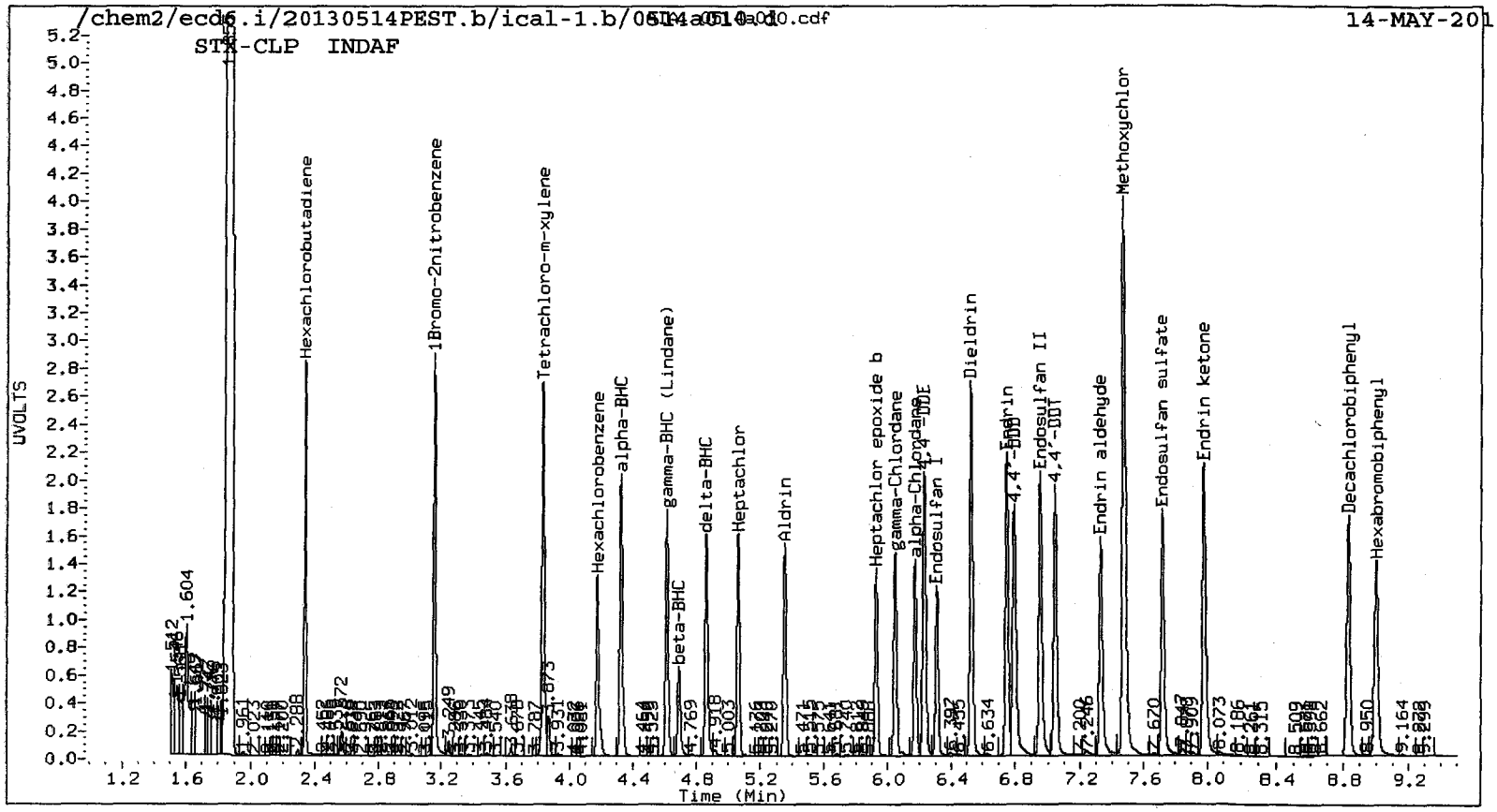
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5385380	-2.1
Hexabromobiphenyl	5319006	5022010	-5.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29405183	1.2
Hexabromobiphenyl	16515704	16433920	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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STX-CLP INDAF
UVOLTS
Time (Min)
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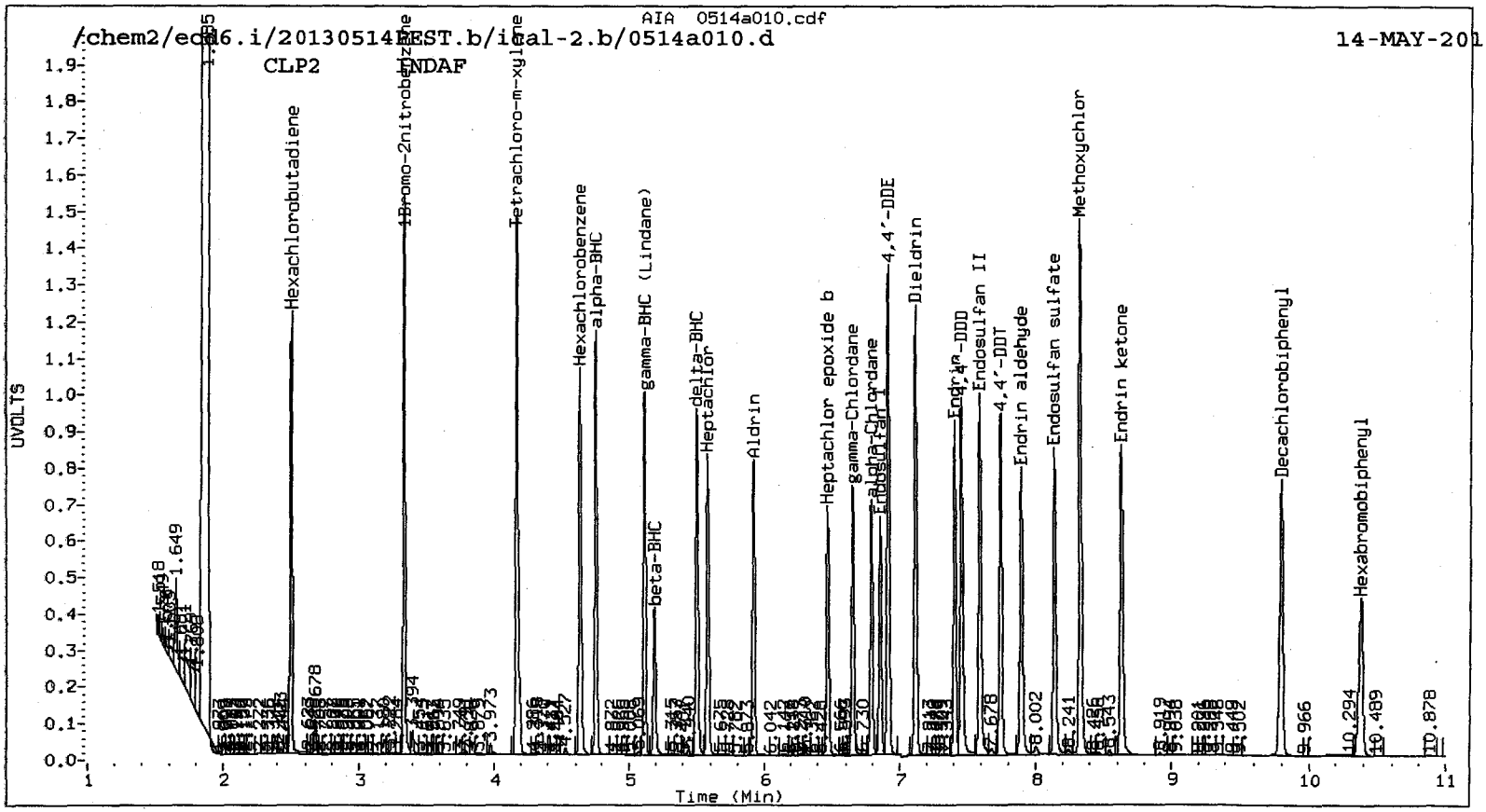
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-MAY-201
CLP2 INDAF
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

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Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a011.d Client ID:
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Injection Date: 14-MAY-2013 16:34
Compound Sublist: INDA
Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	0.000	4447256	3.329	0.000	24971444	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.326	0.000	9083784	4.752	0.000	52093305	95.8791	92.8926	3.2	alpha-BHC
4.687	0.000	3211079	5.183	0.000	19100075	85.4901	88.5447	3.5	beta-BHC
4.858	0.000	7706224	5.495	0.000	44662411	97.4634	96.9723	0.5	delta-BHC
4.611	0.000	7871237	5.111	0.000	45626240	95.8659	93.7681	2.2	gamma-BHC (Lindane)
5.059	0.000	7087765	5.575	0.000	37258776	88.8156	79.6810	10.8	Heptachlor
5.353	0.000	7220609	5.913	0.000	36992672	91.4082	83.8170	8.7	Aldrin
5.928	0.000	6194985	6.467	0.000	31134002	86.9630	80.5449	7.7	Heptachlor epoxide
6.306	0.000	5598549	6.855	0.000	29247673	82.8257	81.9022	1.1	Endosulfan I
6.528	0.000	12502052	7.113	0.000	54988789	174.0391	151.1088	14.1	Dieldrin
6.229	0.000	10496099	6.915	0.000	57928305	182.4713	153.2156	17.4	4,4'-DDE
6.747	0.000	10042433	7.403	0.000	41365984	183.4598	157.9933	14.9	Endrin
6.953	0.000	10678636	7.592	0.000	49010258	179.9873	159.5478	12.0	Endosulfan II
6.787	0.000	11100345	7.454	0.000	49710150	176.9071	161.2653	9.3	4,4'-DDD
7.721	0.000	9557351	8.134	0.000	42103099	179.5431	167.5514	6.9	Endosulfan sulfate
7.043	0.000	10582072	7.740	0.000	46034366	190.3247	181.3223	4.8	4,4'-DDT
7.474	0.000	23588324	8.325	0.000	67383324	888.0169	688.6854	25.3	Methoxychlor
7.977	0.000	11642474	8.627	0.000	44431774	172.2483	162.3638	5.9	Endrin ketone
7.330	0.000	8671066	7.889	0.000	38887201	173.7281	160.1712	8.1	Endrin aldehyde
6.048	0.000	6888968	6.650	0.000	34534060	90.1728	85.2387	5.6	gamma-Chlordane
6.172	0.000	6448867	6.788	0.000	32141725	90.7618	86.1074	5.3	alpha-Chlordane
2.336	0.000	8840303	2.493	0.000	39128589	89.2662	83.4361	6.8	Hexachlorobutadiene
4.179	0.000	6184773	4.627	0.000	49853539	82.5509	84.6808	2.5	Hexachlorobenzene
8.999	0.000	4183112	10.371	0.000	13819406	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	0.000	10900686	4.166	0.000	61416989	179.7703	151.2874	17.2	Tetrachloro-m-xyl
8.830	0.000	9451613	9.791	0.000	46527110	158.9243	166.6610	4.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	449.4	378.2	378.2~	115- 0
Decachlorobiphenyl	397.3	416.7	397.3~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

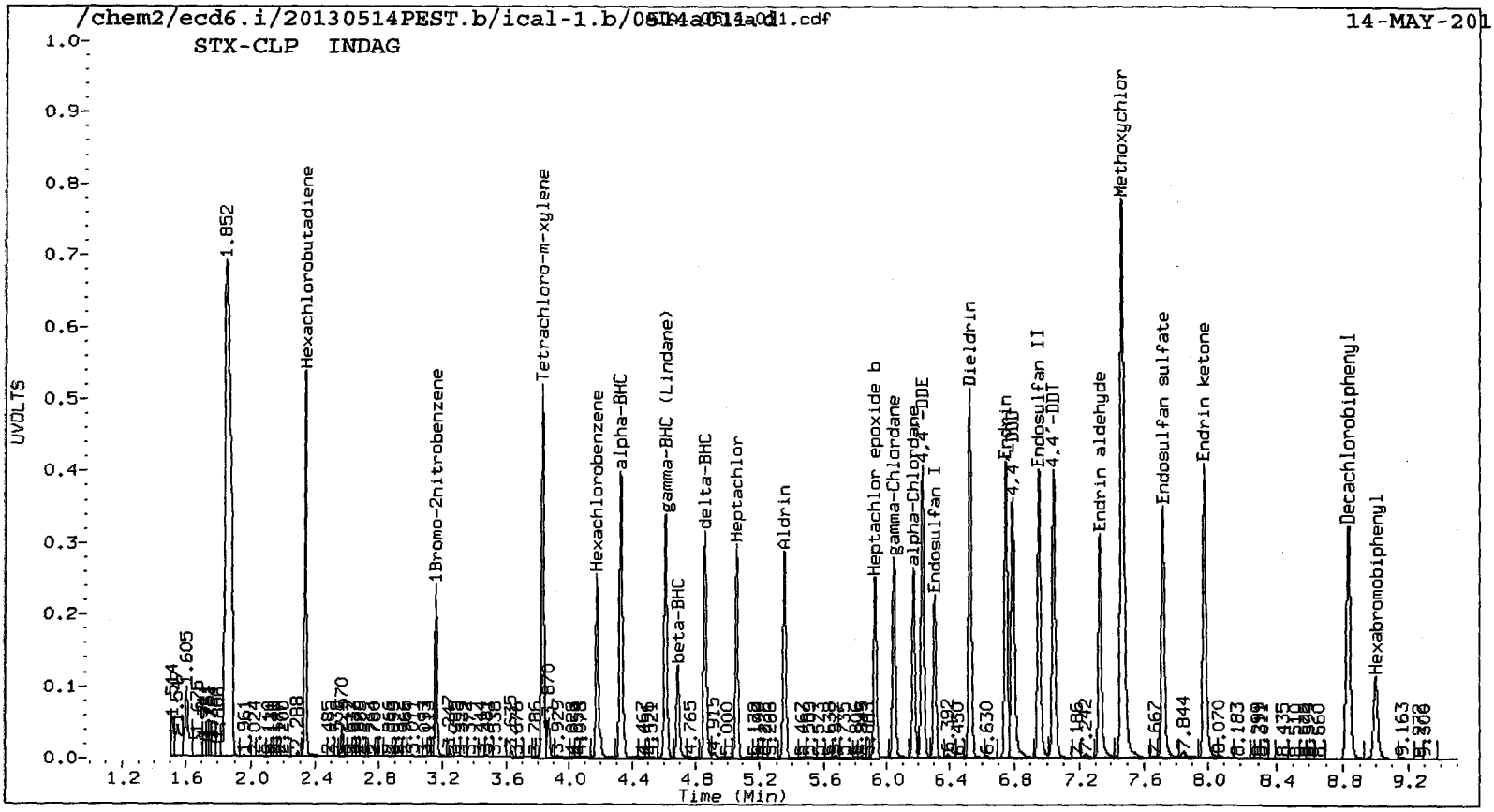
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	4447256	-19.2
Hexabromobiphenyl	5319006	4183112	-21.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	24971444	-14.1
Hexabromobiphenyl	16515704	13819406	-16.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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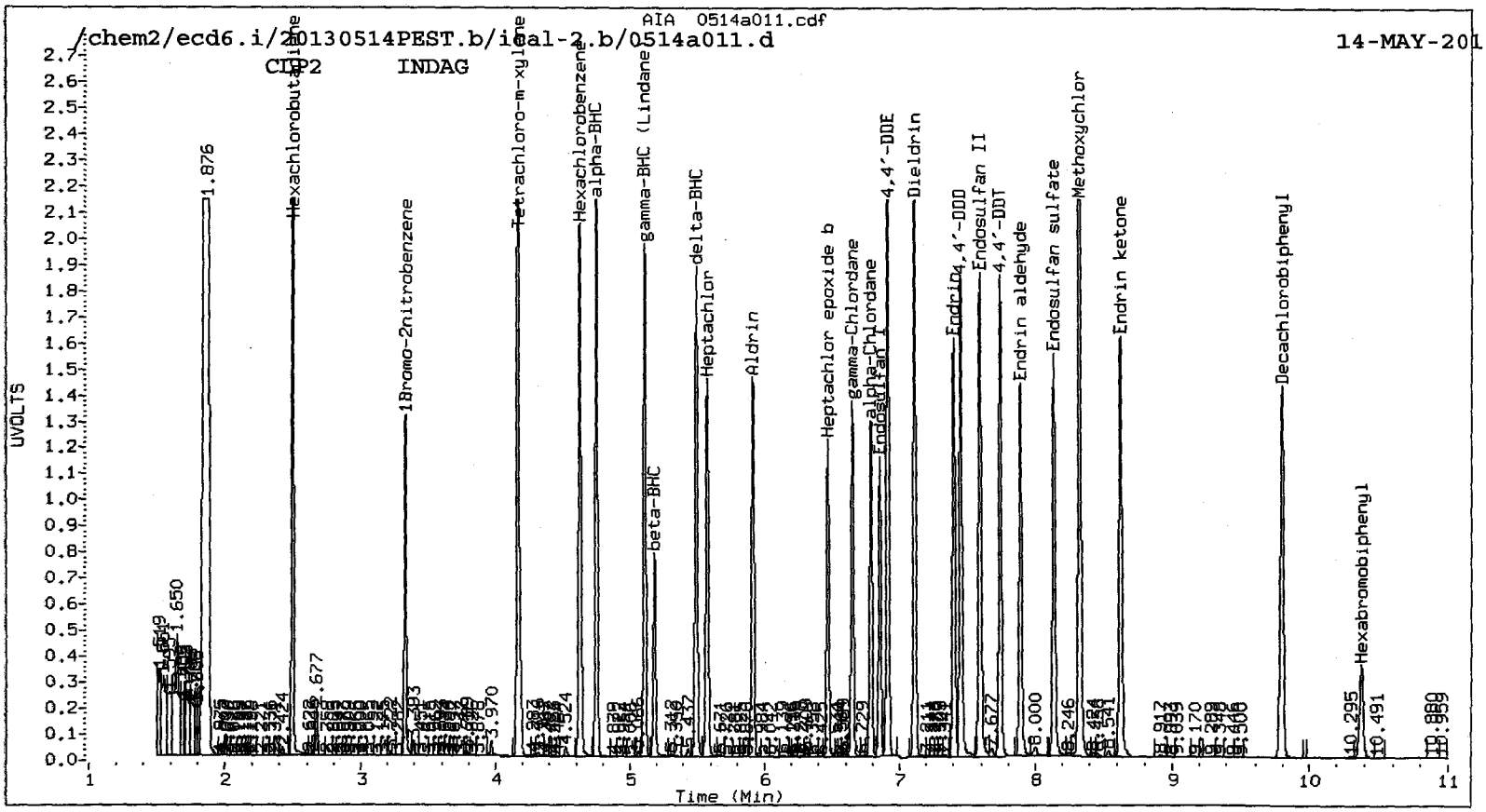
14-MAY-201
STX-CLP INDAG
UVOLTS
Time (Min)
1.852
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0514a011.cdf
14-MAY-201
CLP2 INDAG
UVOLTS
Time (Min)
1.876
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 17:12
Compound Sublist: TOXAPH Report Date: 05/15/2013 14:43
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 5/15/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.160	0.000	5170972	3.329	0.000	29085221	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.999	0.000	5171544	10.371	0.000	16639283	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.003	2463544	4.165	-0.001	18029402	34.9417	38.1300	8.7	Tetrachloro-m-xylen
8.832	0.002	2745039	9.792	0.001	12769214	37.3347	37.9880	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	87.4	95.3	87.4~	150- 0
Decachlorobiphenyl	93.3	95.0	93.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

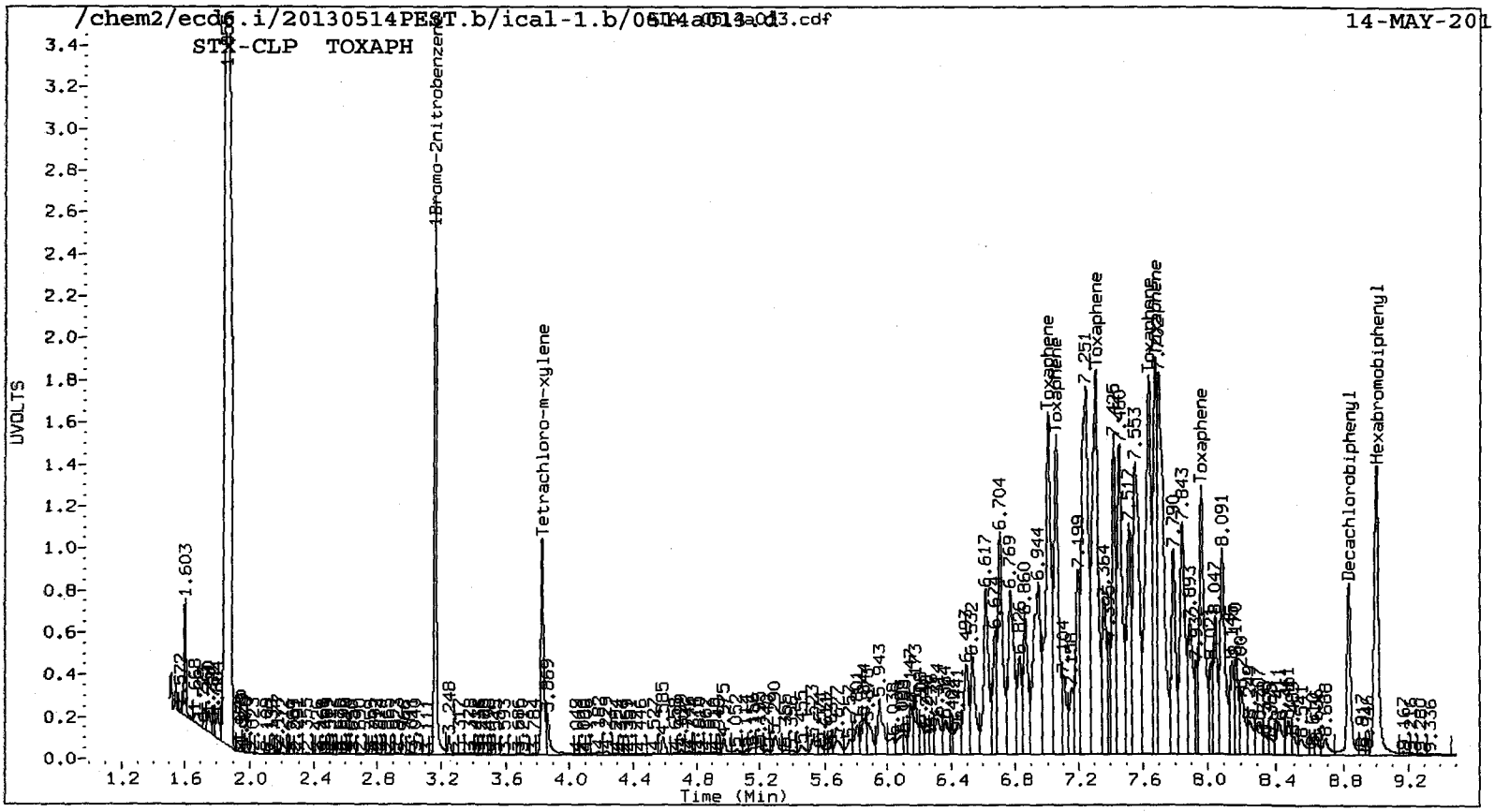
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5170972	-6.0
Hexabromobiphenyl	5319006	5171544	-2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29085221	0.1
Hexabromobiphenyl	16515704	16639283	0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.006	0.000	8045822	2500.0	1	7.338	0.000	30225007	2500.0
Toxaphene	2	7.057	0.000	6231410	2500.0	2	7.664	0.000	44930131	2500.0
Toxaphene	3	7.314	0.000	9313581	2500.0	3	7.894	0.000	48107139	2500.0
Toxaphene	4	7.640	0.000	8735760	2500.0	4	8.363	0.000	34031049	2500.0
Toxaphene	5	7.681	0.000	6192990	2500.0	5	8.401	0.000	44737734	2500.0
Toxaphene	6	7.961	0.000	5478732	2500.0	NS	---			----
Total STX-CLPAve (6 peaks): 2500.000						Total CLP2Ave (5 peaks): 2500.000				RPD = 0
Corrected Ave (6 peaks): 2500.000						Corrected Ave (5 peaks): 2500.000				RPD = 0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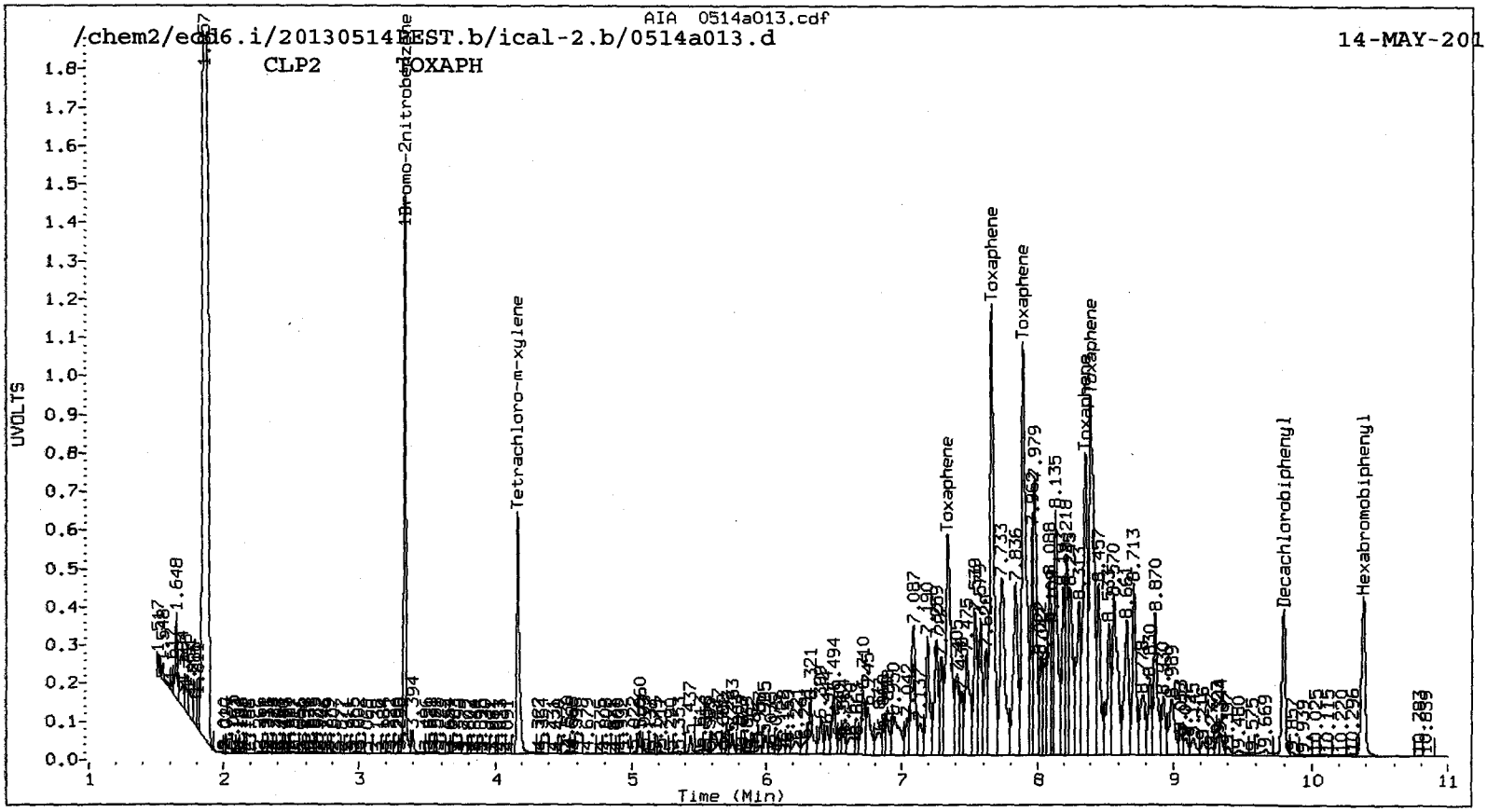
AIA 0514a013.cdf
14-MAY-201
STX-CLP TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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AIA 0514a013.cdf
14-MAY-201
CLP2 TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/16/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a012.d ARI ID: INDAICV
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a012.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Injection Date: 14-MAY-2013 16:54
Compound Sublist: INDA
Report Date: 05/16/2013 12:55
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	0.000	5229139	3.331	0.001	29203550	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	4591630	4.755	0.003	26999593	41.2179	41.1684	0.1	alpha-BHC
4.708	-0.015	1792584	5.197	0.014	10448458	40.5888	41.4178	2.0	beta-BHC
4.882	0.022	3879613	5.509	0.014	21726867	41.7302	40.3376	3.4	delta-BHC
4.617	-0.001	3908034	5.114	0.004	23234633	40.4801	40.8304	0.9	gamma-BHC (Lindane)
5.064	0.000	3722436	5.579	0.004	21669499	39.6706	39.6263	0.1	Heptachlor
5.359	0.000	3844529	5.916	0.003	20810347	41.3920	40.3184	2.6	Aldrin
5.933	-0.002	3258516	6.471	0.004	17450909	38.9024	38.6037	0.8	Heptachlor epoxide
6.313	-0.002	3463827	6.859	0.004	16375535	43.5821	39.2110	10.6	Endosulfan I
6.534	-0.002	3468526	7.116	0.003	17381588	41.0650	40.8426	0.5	Dieldrin
6.252	0.004	3415443	6.926	0.011	17667309	50.4982	39.9568	23.3	4,4'-DDE
6.753	-0.002	2584296	7.406	0.003	12436481	38.9320	39.8967	2.4	Endrin
6.963	-0.002	2790296	7.597	0.005	14886672	38.7828	40.7048	4.8	Endosulfan II
6.812	0.000	3064870	7.465	0.011	14854516	40.2794	40.4761	0.5	4,4'-DDD
7.729	-0.001	2508266	8.139	0.005	11996679	38.8568	40.0995	3.1	Endosulfan sulfate
7.062	0.000	2701822	7.749	0.009	12175344	40.0722	40.2805	0.5	4,4'-DDT
7.490	0.003	1272077	8.331	0.006	5107174	39.4912	43.8423	10.4	Methoxychlor
7.985	-0.002	2977417	8.631	0.004	12316529	36.3255	37.8032	4.0	Endrin ketone
7.340	-0.002	2247383	7.894	0.006	11004894	37.1310	38.0722	2.5	Endrin aldehyde
6.057	-0.003	3572622	6.656	0.006	18499116	39.7714	39.0435	1.8	gamma-Chlordane
6.179	-0.003	3331051	6.792	0.004	17217290	39.8715	39.4406	1.1	alpha-Chlordane
2.356	0.020	10785	2.481	-0.012	5157	0.0926	0.0094	163.1*	Hexachlorobutadiene
4.186	-0.011	36977	4.635	0.007	5355	0.4198	0.0078	192.7*	Hexachlorobenzene
9.001	0.003	5072678	10.372	0.001	16453002	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	-0.002	2680346	4.168	0.001	18925047	37.5939	39.8620	5.9	Tetrachloro-m-xylen
8.835	0.001	2583146	9.794	0.003	12580025	35.8175	37.8489	5.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.0	99.7	94.0~	115- 0
Decachlorobiphenyl	89.5	94.6	89.5~	115- 0

~ Indicates recovery outside QC Limits

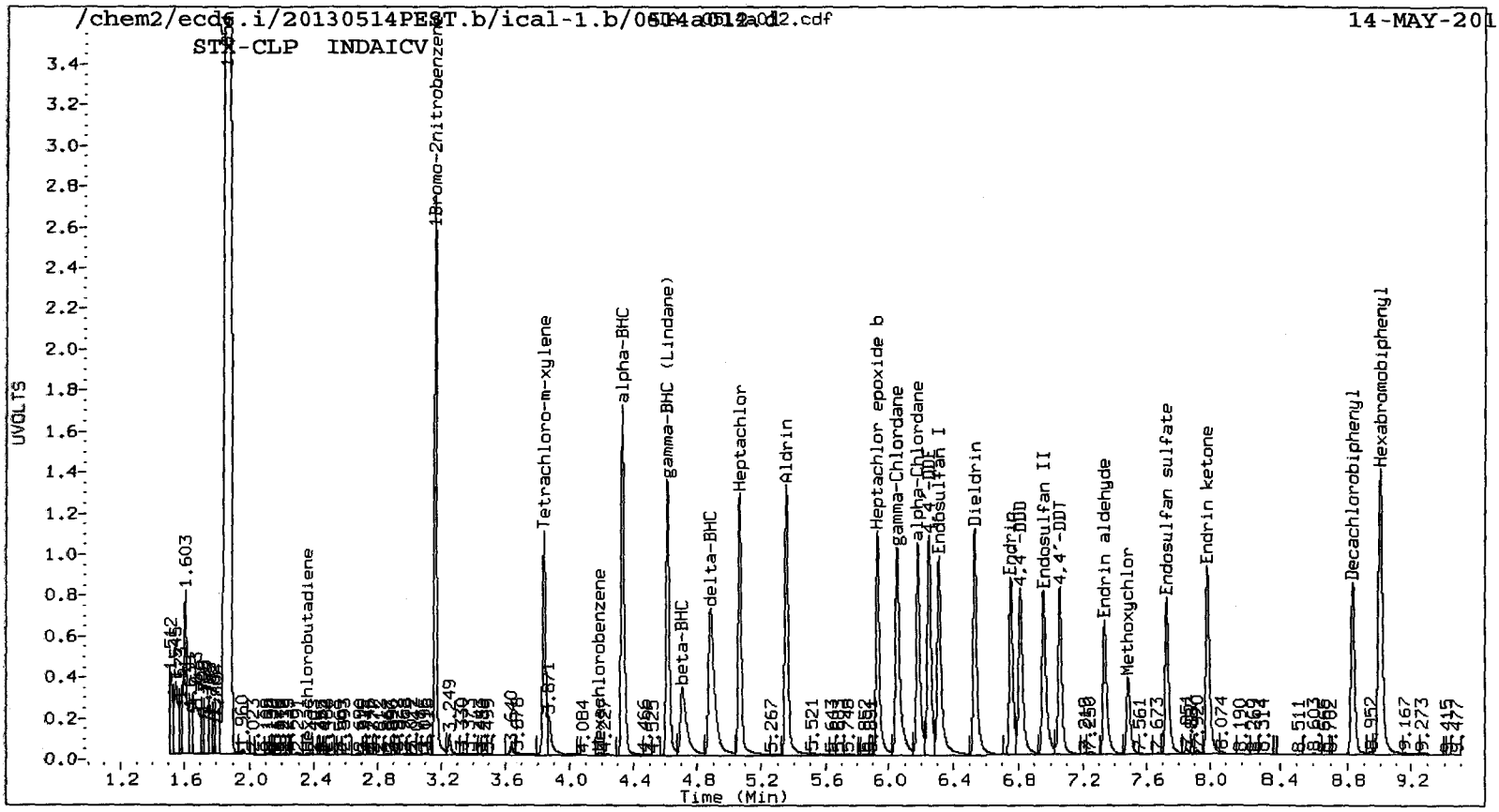
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5500669	5229139	-4.9
Hexabromobiphenyl	5319006	5072678	-4.6

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	29060499	29203550	0.5
Hexabromobiphenyl	16515704	16453002	-0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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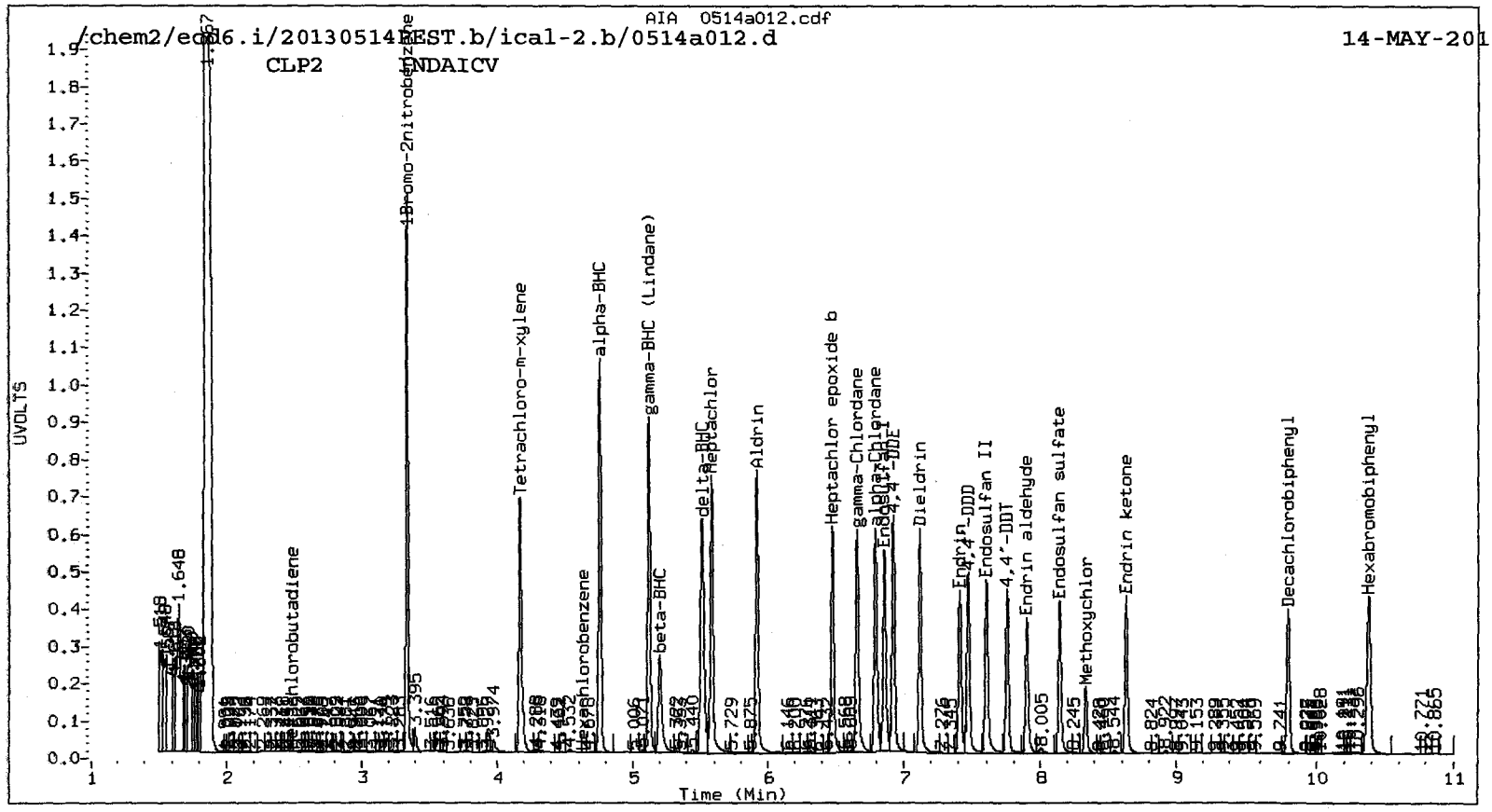
14-MAY-201
ST-CLP INDAICV
UVOLTS
Time (Min)
1.603
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-MAY-201
CLP2 INDAICV
UVOLTS
Time (Min)
1.648
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WR99 / WS21 Client ID: NPDES

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ~~ECD-6~~ ECD-7 ECD-8

Curve Date: 05/14/13 Analysis Start Date: 06/14/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / LCS only
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / See Form III
Internal STD. within 50-200%?	NA / Y / N / ✓	MS / MSD RPD ≤30%?	NA /
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below

samples diluted due to matrix, pcb's in samples inflate pest results, y-flag's mostly due to PCB's in samples. ms/msd j-flagged due to dil., misc peaks in sample/MD inflate MS/msd rec. RT shift is due to maintenance 06/18/13, surr rec. inflated by misc peak, reported as NR due to misc peak.

(Review 1) Analyst: _____ **Date:** 06/18/13

(Review 2) Reviewer: _____ **Date:** 6/18/13

WS21 : 01223

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0614-1.b

ARI Job No.: DS Method: PEST0514.m Instrument: ecd6.i Date: 14-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1138	0614a017.d	DS		1	NO MANUAL INTEGRATION
1155	0614a018.d	INDAE		1	NO MANUAL INTEGRATION
1213	0614a019.d	TOXAPH		1	NO MANUAL INTEGRATION
1231	0614a020.d	WR99MBS1	WR99MBS1	1	NO MANUAL INTEGRATION
1249	0614a021.d	WR99LCSS1	WR99LCSS1	1	NO MANUAL INTEGRATION
1307	0614a022.d	WR99QLS		1	NO MANUAL INTEGRATION
1324	0614a023.d	WR99D	KC-VT-1593	5	NO MANUAL INTEGRATION
1342	0614a024.d	WR99DMS	KC-VT-1593	5	NO MANUAL INTEGRATION
1400	0614a025.d	WR99DMSD	KC-VT-1593	5	NO MANUAL INTEGRATION
1420	0614a026.d	WR99E	KC-CB-01-2	10	NO MANUAL INTEGRATION
1438	0614a027.d	WR99F	KC-DD-2009	10	NO MANUAL INTEGRATION
1455	0614a028.d	WS21A	KC-IV-SPS-	5	NO MANUAL INTEGRATION
1513	0614a029.d	DS		1	NO MANUAL INTEGRATION
1531	0614a030.d	INDAE		1	NO MANUAL INTEGRATION
1551	0614a031.d	TOXAPH		1	NO MANUAL INTEGRATION
1609	0614a032.d	WND		1	NO MANUAL INTEGRATION
1626	0614a033.d	WS30MBS1		1	NO MANUAL INTEGRATION
1644	0614a034.d	WS30LCSS1		1	NO MANUAL INTEGRATION
1702	0614a035.d	WS30SRM1		1	NO MANUAL INTEGRATION
1720	0614a036.d	WS30A		1	NO MANUAL INTEGRATION

1738 0614a037.d WS30B 1 NO MANUAL INTEGRATION

CONFIDENTIAL

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0614-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1756	0614a038.d	WS30C		1	NO MANUAL INTEGRATION
1813	0614a039.d	WS30D		1	NO MANUAL INTEGRATION
1831	0614a040.d	WS30E		1	NO MANUAL INTEGRATION
1849	0614a041.d	WS30F		1	NO MANUAL INTEGRATION
1907	0614a042.d	WS30G		1	NO MANUAL INTEGRATION
1924	0614a043.d	WS30H		1	NO MANUAL INTEGRATION
1942	0614a044.d	DS		1	NO MANUAL INTEGRATION
2000	0614a045.d	INDAE		1	NO MANUAL INTEGRATION
2018	0614a046.d	WND		1	NO MANUAL INTEGRATION
2036	0614a047.d	WS30I		1	NO MANUAL INTEGRATION
2053	0614a048.d	WS30IMS		1	NO MANUAL INTEGRATION
2111	0614a049.d	WS30IMSD		1	NO MANUAL INTEGRATION
2129	0614a050.d	WS30J		1	NO MANUAL INTEGRATION
2147	0614a051.d	DS		1	NO MANUAL INTEGRATION
2205	0614a052.d	INDAE		1	NO MANUAL INTEGRATION
2222	0614a053.d	WND		1	NO MANUAL INTEGRATION

EPA-CHROM

Q-FLAG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0614-2.b

Instrument: ecd6.i Date: 14-JUN-2013 Method: PEST0514B.m

INITIAL CAL: 14-MAY-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 14-JUN-2013

Compound	%D
NO Q-FLAGS	

INITIAL CAL: 14-MAY-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 14-JUN-2013

Compound	%D
NO Q-FLAGS	

INITIAL CAL: 14-MAY-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 14-JUN-2013

Compound	%D
NO Q-FLAGS	

INITIAL CAL: 14-MAY-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 14-JUN-2013

Compound	%D
NO Q-FLAGS	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a018.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a018.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 11:55
Compound Sublist: INDA Report Date: 06/18/2013 09:43
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 6/18/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.129	0.000	5062298	3.299	-0.001	27642194	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.285	0.000	2474191	4.709	0.000	14316349	22.9422	23.0623	0.5	alpha-BHC
4.642	0.001	906140	5.138	0.001	5272796	21.1936	22.0821	4.1	beta-BHC
4.812	0.001	2028001	5.449	0.001	12143577	22.5327	23.8190	5.6	delta-BHC
4.567	0.000	2213085	5.065	0.000	12274216	23.6790	22.7879	3.8	gamma-BHC (Lindane)
5.013	0.001	2072538	5.529	0.000	11841649	22.8153	22.8775	0.3	Heptachlor
5.306	0.001	2094570	5.867	0.000	11488815	23.2943	23.5160	0.9	Aldrin
5.880	0.001	1888172	6.421	0.000	9849727	23.2852	23.0196	1.1	Heptachlor epoxide b
6.258	0.001	1732569	6.809	0.000	8813081	22.5177	22.2948	1.0	Endosulfan I
6.480	0.001	3733157	7.066	0.000	17366340	45.6548	43.1117	5.7	Dieldrin
6.181	0.001	2782146	6.868	0.000	17634104	42.4904	42.1344	0.8	4,4'-DDE
6.698	0.001	3068761	7.355	0.000	13096725	46.7420	44.0117	6.0	Endrin
6.903	0.001	3024267	7.544	0.000	13950688	42.5000	39.9586	6.2	Endosulfan II
6.737	0.001	3041066	7.406	0.000	13844973	40.4089	39.5183	2.2	4,4'-DDD
7.671	0.001	2623977	8.087	0.000	11094555	41.0992	38.8467	5.6	Endosulfan sulfate
6.995	0.001	2835446	7.694	0.000	11582228	42.5195	40.1395	5.8	4,4'-DDT
7.421	0.001	6371638	8.277	0.000	21303360	199.9943	191.5699	4.3	Methoxychlor
7.926	0.001	3234043	8.578	0.000	11576431	39.8931	37.2204	6.9	Endrin ketone
7.281	0.001	2406639	7.842	0.000	10248563	40.2023	37.1408	7.9	Endrin aldehyde
6.000	0.001	1968724	6.604	0.000	9983620	22.6387	22.2612	1.7	gamma-Chlordane
6.124	0.001	1880900	6.741	0.000	9217701	23.2557	22.3082	4.2	alpha-Chlordane
2.310	0.001	2547863	2.467	0.001	10973115	22.6017	21.1378	6.7	Hexachlorobutadiene
4.139	0.001	1807346	4.585	0.001	14954022	21.1926	22.9466	7.9	Hexachlorobenzene
8.921	0.001	5017151	10.289	-0.001	15706475	80.0000	80.0000	0.0	Hexabromobiphenyl
3.798	0.001	3195401	4.126	0.000	20129068	46.2950	44.7929	3.3	Tetrachloro-m-xylen
8.772	0.001	2624948	9.725	0.000	12443388	36.8000	39.2173	6.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	115.7	112.0	112.0~	115- 0
Decachlorobiphenyl	92.0	98.0	92.0~	115- 0

WSP1 : 91223

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

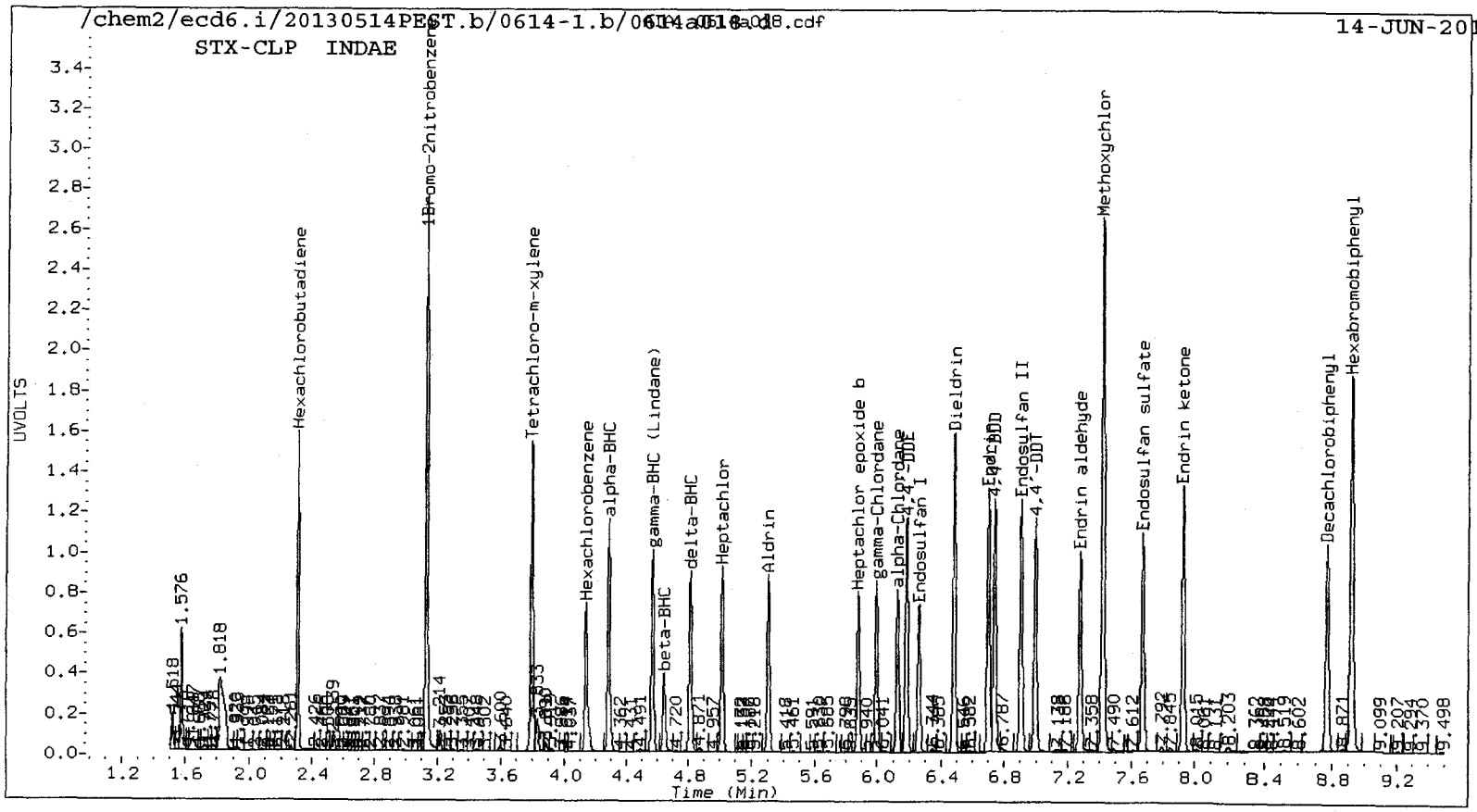
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5062298	-8.0
Hexabromobiphenyl	5319006	5017151	-5.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	27642194	-4.9
Hexabromobiphenyl	16515704	15706475	-4.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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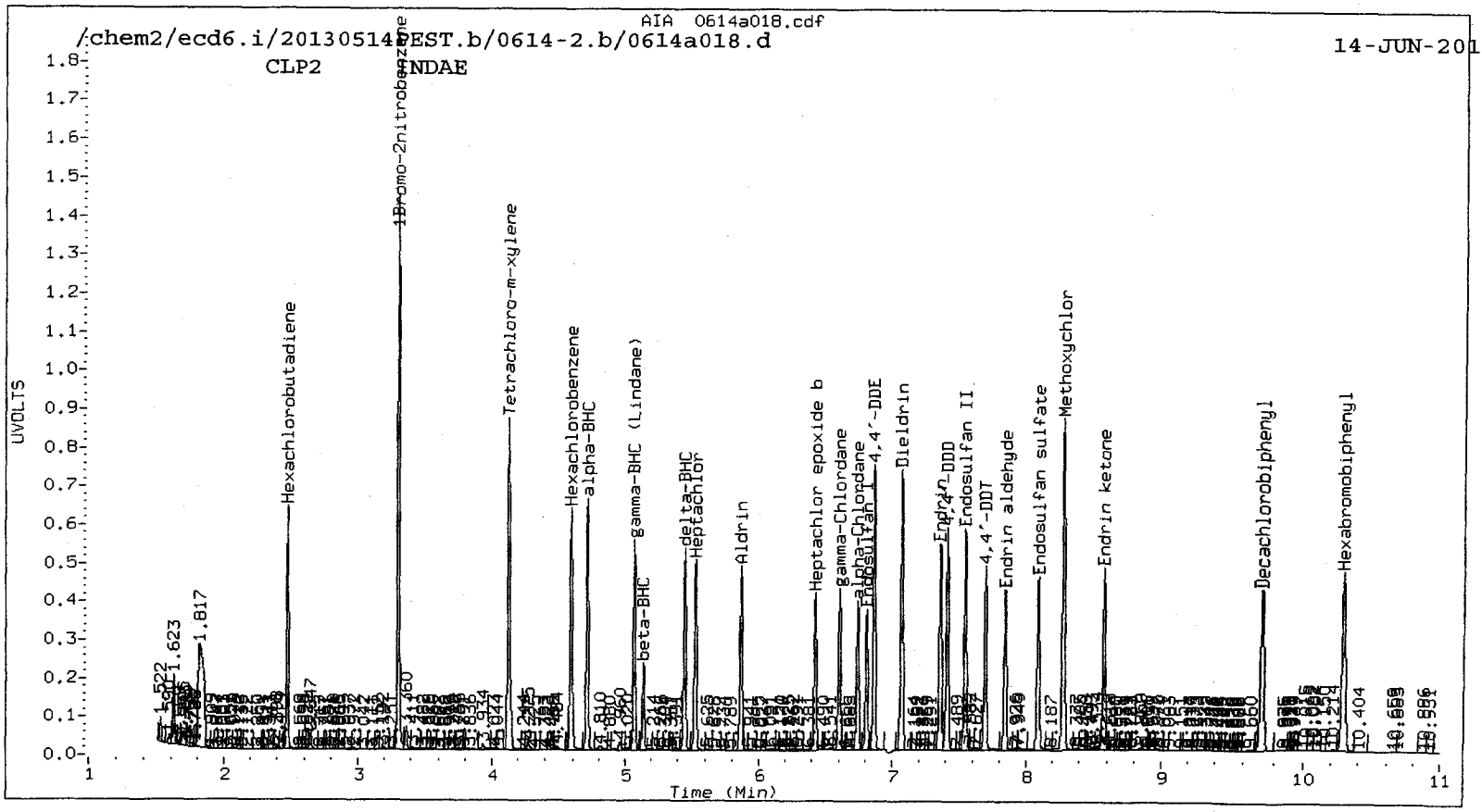
14-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.576
1.818
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
1.623
1.817
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a019.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a019.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: TOXAPH
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 14-JUN-2013 12:13
Report Date: 06/18/2013 09:43
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.128	0.000	6490816	3.299	-0.001	34809892	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.919	-0.001	6578881	10.287	-0.003	18801167	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	0.000	2839992	4.125	0.000	17901706	32.0903	31.6337	1.4	Tetrachloro-m-xylen
8.770	0.000	2784434	9.723	-0.002	12485837	29.7693	32.8738	9.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	80.2	79.1	79.1~	150- 0
Decachlorobiphenyl	74.4	82.2	74.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

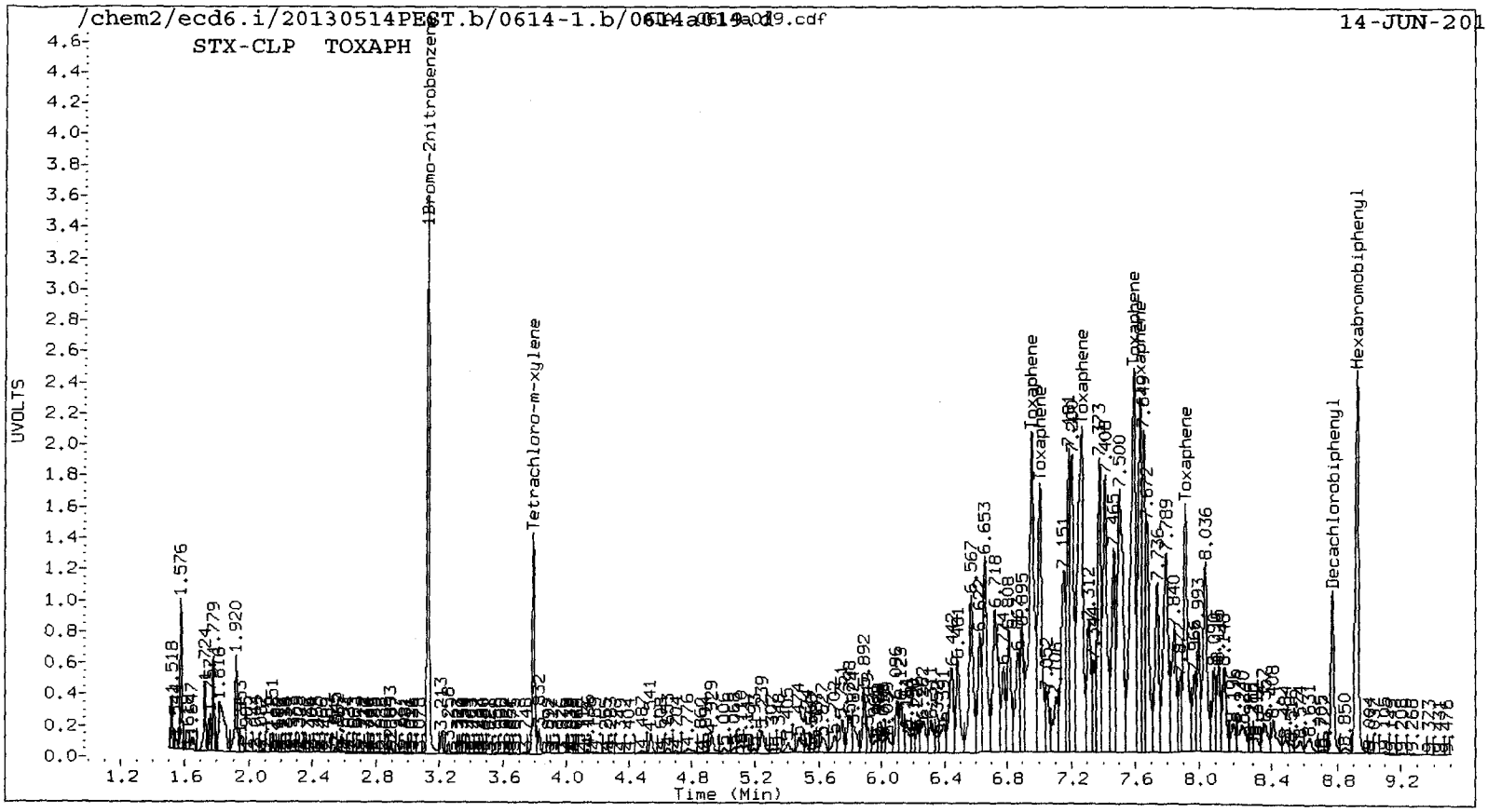
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6490816	18.0
Hexabromobiphenyl	5319006	6578881	23.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	34809892	19.8
Hexabromobiphenyl	16515704	18801167	13.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.954	-0.001	9045000	2209.3	1	7.290	-0.001	30315713	2219.2
Toxaphene	2	7.006	-0.001	6065196	1912.8	2	7.615	-0.001	44427257	2187.8
Toxaphene	3	7.263	-0.001	10092128	2129.5	3	7.845	-0.001	46678088	2146.8
Toxaphene	4	7.588	-0.001	10061586	2263.5	4	8.313	-0.001	33144498	2154.9
Toxaphene	5	7.627	0.000	6612985	2098.5	5	8.353	0.000	41795319	2067.0
Toxaphene	6	7.907	-0.001	5707031	2047.1	NS	---			----
	Total STX-CLPAve (6 peaks): 2110.096					Total CLP2Ave (5 peaks): 2155.132				RPD = 2
	Corrected Ave (6 peaks): 2110.096					Corrected Ave (5 peaks): 2155.132				RPD = 2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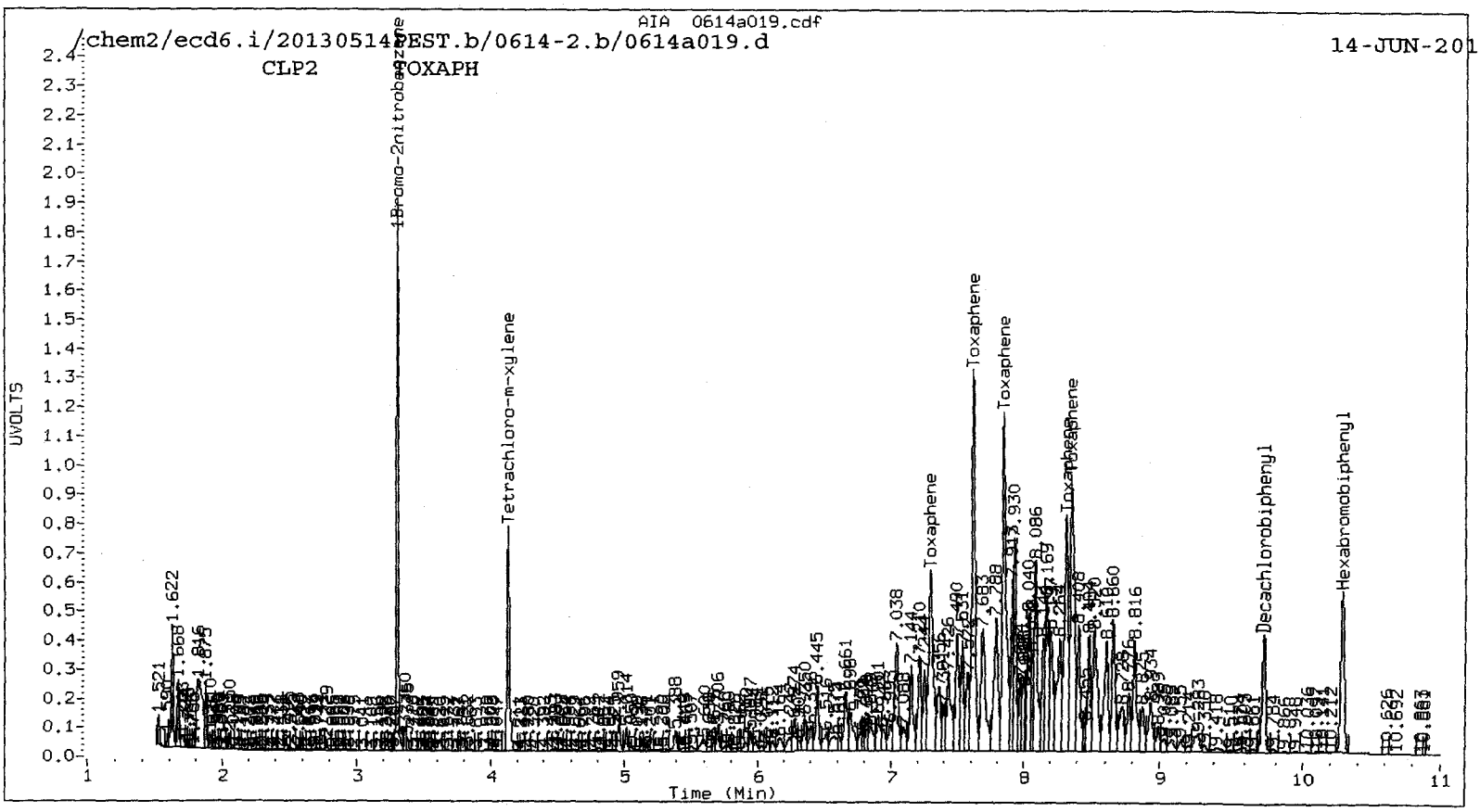
14-JUN-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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14-JUN-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/18/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a020.d ARI ID: WR99MBS1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a020.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 12:31
Compound Sublist: wpest Report Date: 06/18/2013 09:43
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.128	-0.001	5992911	3.298	-0.001	28970198	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.281	-0.003	7014	4.707	-0.001	24551	0.0549	0.0377	37.1	alpha-BHC
4.663	0.021	20713	5.152	0.015	77656	0.4092	0.3103	27.5	beta-BHC
4.796	-0.015	40249	5.452	0.004	38191	0.3778	0.0715	136.4*	delta-BHC
4.565	-0.002	7368	5.043	-0.022	141944	0.0666	0.2514	116.2*	gamma-BHC (Lindane)
5.010	-0.002	5545	5.501	-0.028	80318	0.0516	0.1481	96.7*	Heptachlor
5.324	0.019	74095	5.850	-0.016	242455	0.6961	0.4735	38.1	Aldrin
5.876	-0.003	23207	6.397	-0.024	75976	0.2418	0.1694	35.2	Heptachlor epoxide b
6.220	-0.036	3650	6.786	-0.022	20888	0.0401	0.0504	22.9	Endosulfan I
6.459	-0.021	9013	7.102	0.036	12794	0.0931	0.0303	101.8*	Dieldrin
6.178	-0.002	10105	6.851	-0.017	24355	0.1304	0.0555	80.5*	4,4'-DDE
6.658	-0.039	3639	7.371	0.015	89903	0.0463	0.2672	140.9*	Endrin
6.920	0.017	2600	7.547	0.002	69989	0.0305	0.1773	141.3*	Endosulfan II
6.754	0.018	3407	----			0.0378	0.0000	---	4,4'-DDD
7.669	-0.002	1823	8.087	0.000	40910	0.0238	0.1267	136.6*	Endosulfan sulfate
6.972	-0.022	29972	7.706	0.012	166981	0.3753	0.5118	30.8	4,4'-DDT
7.420	0.001	1528	8.291	0.014	99373	0.0400	0.7903	180.7*	Methoxychlor
7.919	-0.007	16903	8.584	0.006	117115	0.1741	0.3330	62.7*	Endrin ketone
7.276	-0.004	2679	7.840	-0.001	34512	0.0374	0.1106	99.0*	Endrin aldehyde
5.996	-0.003	8370	6.627	0.023	51524	0.0813	0.1096	29.7	gamma-Chlordane
6.139	0.015	7625	6.747	0.006	12122	0.0796	0.0280	96.0*	alpha-Chlordane
2.314	0.005	40176	2.490	0.024	56739	0.3011	0.1043	97.1*	Hexachlorobutadiene
4.136	-0.002	50978	4.567	-0.017	91250	0.5049	0.1336	116.3*	Hexachlorobenzene
5.780	-0.004	7719	6.354	0.022	28404	0.0961	0.0719	28.8	Oxychlordane
----			6.569	-0.011	53689	0.0000	0.1820	---	2,4-DDE
6.088	-0.019	3233	6.675	-0.017	28256	0.0328	0.0709	73.5*	trans-Nonachlor
6.329	-0.014	2279	----			0.0425	0.0000	---	2,4-DDD
----			----			0.0000	0.0000	---	2,4-DDT
6.710	-0.013	19600	7.450	0.033	18540	0.1841	0.0445	122.2*	cis-Nonachlor
7.594	-0.002	1461	8.533	-0.031	383258	0.0222	1.7281	194.9*	Mirex
8.919	-0.001	6008642	10.288	-0.002	17759464	80.0000	80.0000	0.0	Hexabromobiphenyl
1.754	-0.001	35857	1.742	0.018	20755244	0.0000	0.0000	---	Hexachloroethane
6.548	-0.033	13497	7.313	-0.023	37923	0.0000	0.0000	---	Kepone
3.796	-0.001	2602826	4.125	-0.001	13972191	31.8540	29.6668	7.1	Tetrachloro-m-xylen
8.771	0.000	2854920	9.724	-0.001	12746784	33.4196	35.5294	6.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	79.6	74.2	74.2	42-112
Decachlorobiphenyl	83.5	88.8	83.5	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

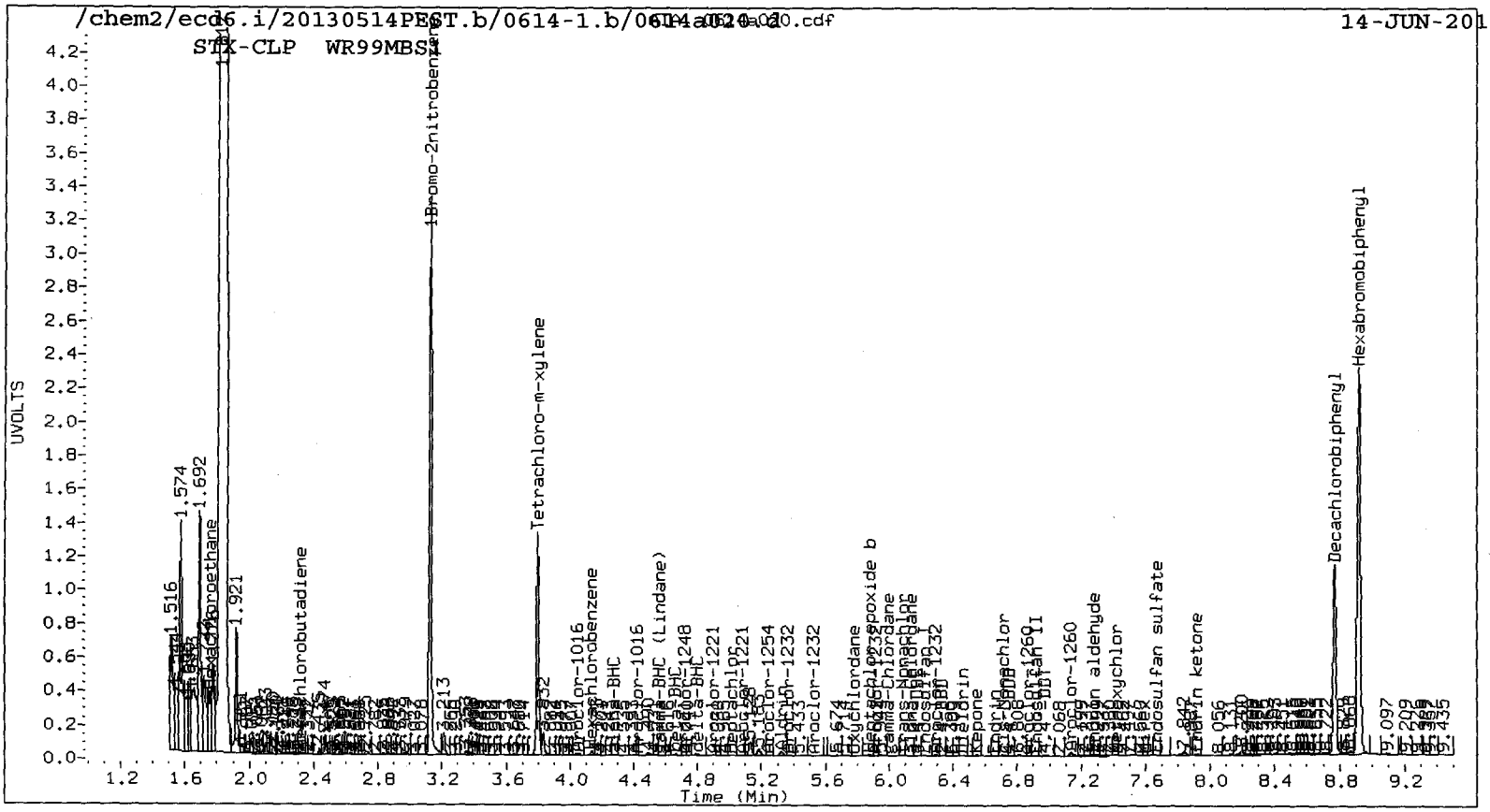
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5992911	8.9
Hexabromobiphenyl	5319006	6008642	13.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	28970198	-0.3
Hexabromobiphenyl	16515704	17759464	7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.972	0.017	29972	8.0	1	7.313	0.022	37923	2.9
Toxaphene	2	---			0.000	2	7.626	0.010	23392	1.2
Toxaphene	3	7.276	0.012	2679	0.6	3	7.840	-0.006	34512	1.7
Toxaphene	4	7.594	0.005	1461	0.4	4	8.330	0.016	51153	3.5
Toxaphene	5	---			0.000	5	---			0.000
Toxaphene	6	7.919	0.010	16903	6.6	NS	---			----
Total STX-CLPAve (4 peaks): 3.908						Total CLP2Ave (4 peaks): 2.340				RPD = 50*
Corrected Ave (3 peaks): 2.539						Corrected Ave (4 peaks): 2.340				RPD = 8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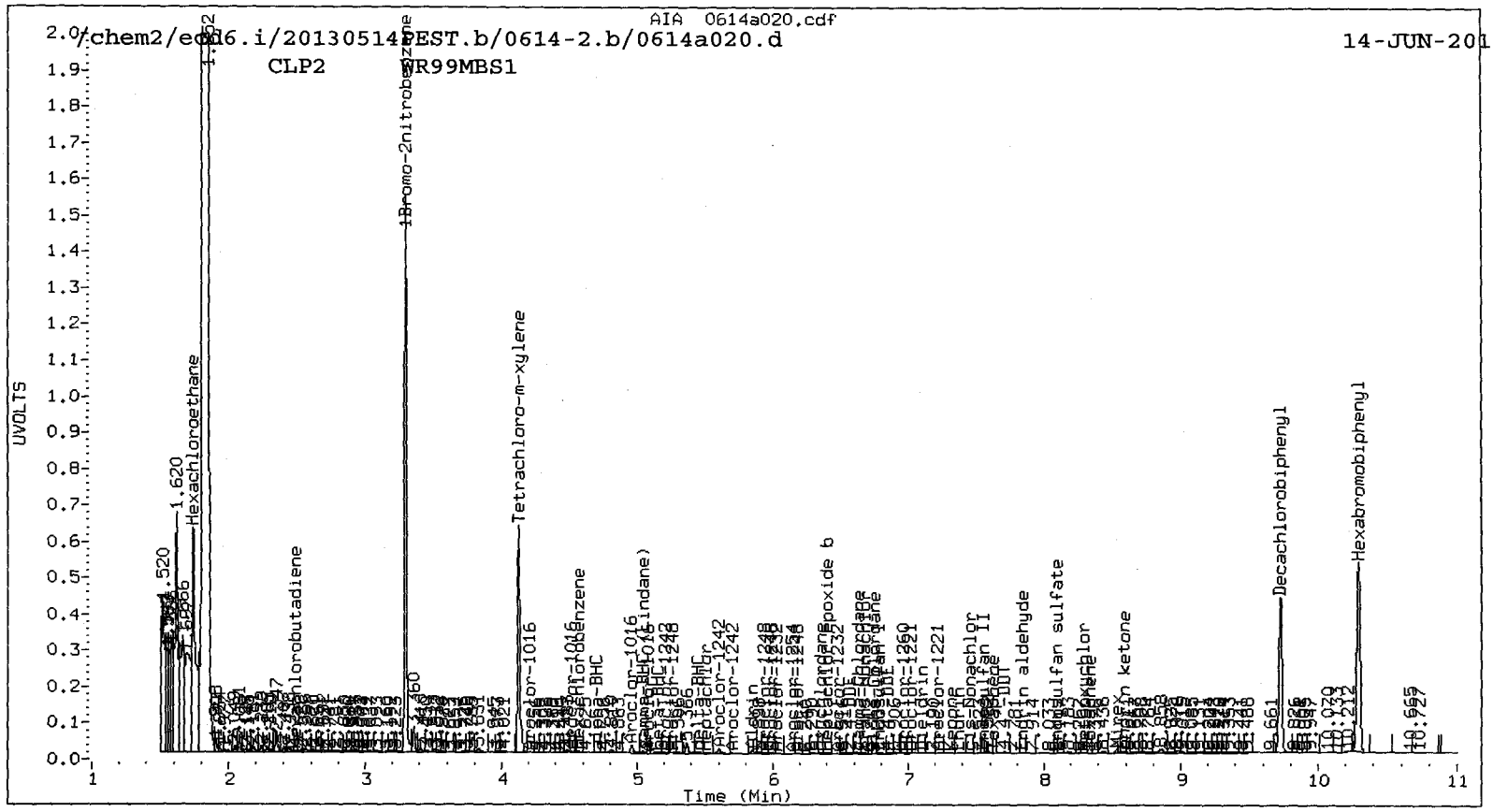
14-JUN-201
STX-CLP WR99MBS1
UVOLTS
Time (Min)
1,516
1,574
1,692
1,921
Hexachloroethane
Hexachlorobutadiene
1,3,5-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
Naphthalene
2-Methylnaphthalene
1-Methylnaphthalene
Hexachlorocyclopentadiene
2-Chloronaphthalene
2-Nitroaniline
Dimethylphthalate
Acenaphthylene
2,6-Dinitrotoluene
3-Nitroaniline
Acenaphthene
2,4-Dinitrophenol
4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
Diethylphthalate
4-Chlorophenyl-phenylether
Fluorene
4-Nitroaniline
4,6-Dinitro-2-methylphenol
N-Nitrosodiphenylamine
4-Bromophenyl-phenylether
Hexachlorobenzene
Atrazine
Pentachlorophenol
Phenanthrene
Anthracene
Carbazole
Di-n-butylphthalate
Fluoranthene
Pyrene
Butylbenzylphthalate
3,3'-Dichlorobenzidine
Benzo(a)anthracene
Chrysene
Bis(2-ethylhexyl)phthalate
Di-n-octylphthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0614a020.cdf
14-JUN-201
CLP2 WR99MBS1
UVOLTS
Time (Min)
1,520
1,620
Hexachloroethane
Hexachlorobutadiene
1,3,5-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
Naphthalene
2-Methylnaphthalene
1-Methylnaphthalene
Hexachlorocyclopentadiene
2-Chloronaphthalene
2-Nitroaniline
Dimethylphthalate
Acenaphthylene
2,6-Dinitrotoluene
3-Nitroaniline
Acenaphthene
2,4-Dinitrophenol
4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
Diethylphthalate
4-Chlorophenyl-phenylether
Fluorene
4-Nitroaniline
4,6-Dinitro-2-methylphenol
N-Nitrosodiphenylamine
4-Bromophenyl-phenylether
Hexachlorobenzene
Atrazine
Pentachlorophenol
Phenanthrene
Anthracene
Carbazole
Di-n-butylphthalate
Fluoranthene
Pyrene
Butylbenzylphthalate
3,3'-Dichlorobenzidine
Benzo(a)anthracene
Chrysene
Bis(2-ethylhexyl)phthalate
Di-n-octylphthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/18/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a021.d ARI ID: WR99LCSS1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a021.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 12:49
Compound Sublist: wpest Report Date: 06/18/2013 09:43
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.128	-0.001	6382179	3.298	-0.002	29378191	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.283	-0.001	2475044	4.707	-0.001	12173561	18.2038	18.4517	1.4	alpha-BHC
4.640	-0.001	969671	5.137	0.000	4803067	17.9892	18.9262	5.1	beta-BHC
4.810	-0.001	2231590	5.447	-0.001	11093373	19.6670	20.4733	4.0	delta-BHC
4.566	-0.001	2315055	5.063	-0.001	10566983	19.6474	18.4591	6.2	gamma-BHC (Lindane)
5.012	-0.001	2161076	5.528	-0.001	10685554	18.8701	19.4241	2.9	Heptachlor
5.304	-0.001	2138770	5.866	-0.001	9935058	18.8668	19.1340	1.4	Aldrin
5.879	-0.001	2114864	6.420	-0.001	9640175	20.6871	21.1986	2.4	Heptachlor epoxide b
6.256	-0.001	1951106	6.808	-0.001	8649837	20.1138	20.5888	2.3	Endosulfan I
6.478	-0.001	4158884	7.065	-0.001	17612951	40.3427	41.1402	2.0	Dieldrin
6.180	0.000	3961239	6.867	-0.001	17476055	47.9867	39.2893	19.9	4,4'-DDE
6.697	0.000	3519954	7.354	-0.001	13507839	39.9302	38.4425	3.8	Endrin
6.902	0.000	3505006	7.543	-0.001	14257994	36.6841	34.5854	5.9	Endosulfan II
6.736	0.000	3433395	7.406	-0.001	14186556	33.9778	34.2928	0.9	4,4'-DDD
7.669	-0.001	3055400	8.085	-0.001	12103477	35.6420	35.8901	0.7	Endosulfan sulfate
6.994	0.000	3218462	7.693	-0.001	11322747	35.9448	33.2316	7.8	4,4'-DDT
7.419	0.000	7302651	8.275	-0.002	22978238	170.7134	174.9909	2.5	Methoxychlor
7.924	-0.001	3759044	8.576	-0.001	12556270	34.5342	34.1890	1.0	Endrin ketone
7.279	-0.001	1247336	7.840	-0.001	5269656	15.5183	16.1730	4.1	Endrin aldehyde
5.999	-0.001	2164010	6.603	-0.001	9812881	19.7380	20.5875	4.2	gamma-Chlordane
6.123	0.000	2065832	6.741	0.000	9032005	20.2599	20.5671	1.5	alpha-Chlordane
2.308	-0.001	2223701	2.465	-0.001	8496264	15.6466	15.3995	1.6	Hexachlorobutadiene
4.137	-0.001	1769833	4.583	-0.001	12582644	16.4609	18.1668	9.9	Hexachlorobenzene
5.796	0.012	20232	6.338	0.006	2818	0.2246	0.0070	187.9*	Oxychlordane
5.833	-0.024	1421	6.540	-0.039	135707	0.0209	0.4537	182.4*	2,4-DDE
----			6.685	-0.007	16430	0.0000	0.0395	---	trans-Nonachlor
6.343	-0.001	37982	----			0.6311	0.0000	---	2,4-DDD
6.581	-0.001	18804	----			0.2794	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.611	0.015	44122	8.533	-0.032	451687	0.5971	1.9503	106.2*	Mirex
8.918	-0.002	6736535	10.286	-0.004	18546379	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.754	-0.002	11403	1.708	-0.017	7578338	0.0000	0.0000	---	Hexachloroethane
6.545	-0.036	3587	7.290	-0.046	68564	0.0000	0.0000	---	Kepone
3.796	-0.001	2575832	4.124	-0.001	13556760	29.6009	28.3850	4.2	Tetrachloro-m-xylen
8.770	-0.001	2809709	9.722	-0.002	12222072	29.3365	32.6214	10.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	74.0	71.0	71.0	42-112
Decachlorobiphenyl	73.3	81.6	73.3	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6382179	16.0
Hexabromobiphenyl	5319006	6736535	26.7

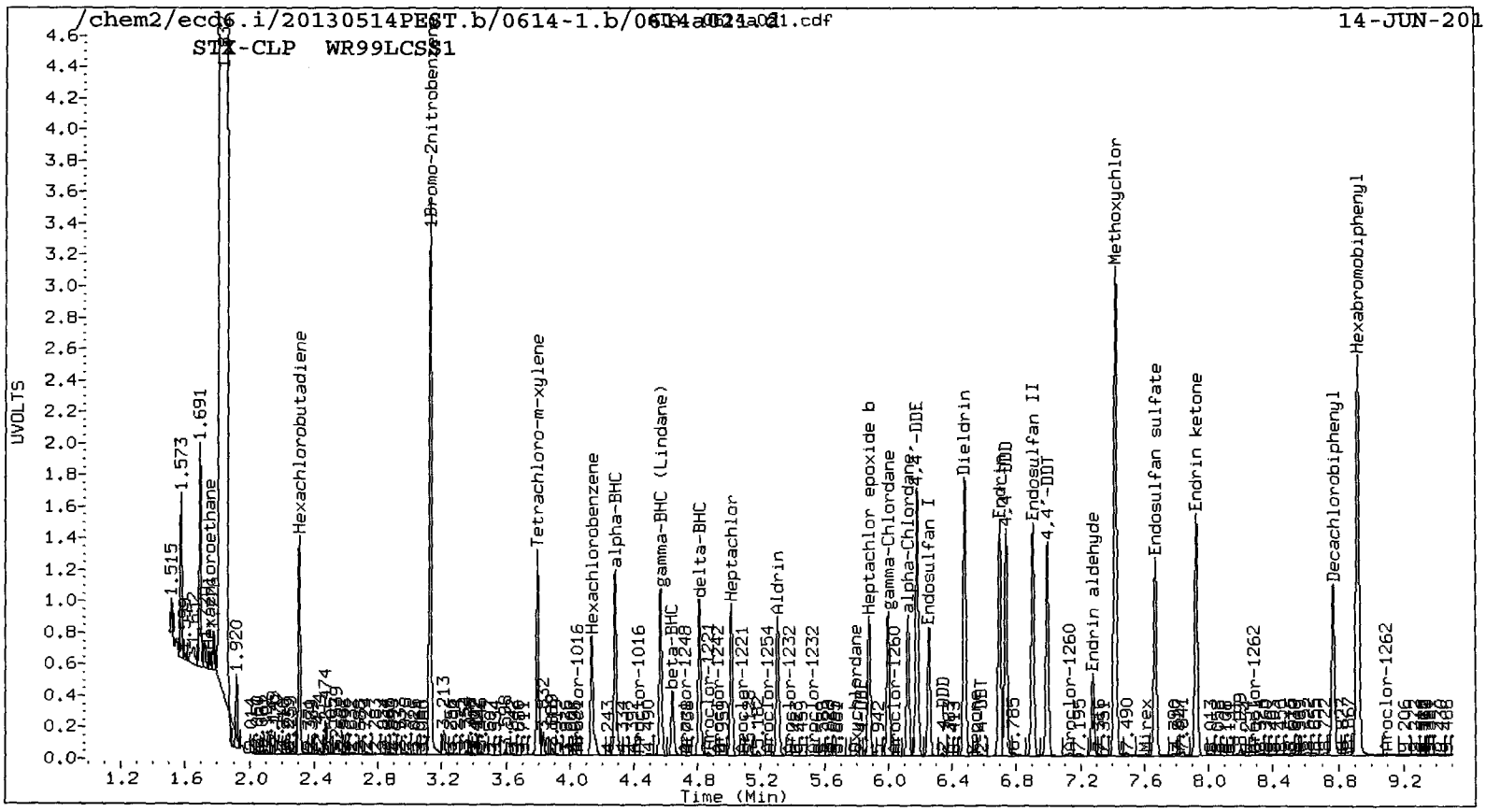
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29378191	1.1
Hexabromobiphenyl	16515704	18546379	12.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.994	0.039	3218462	767.7	1	7.290	-0.001	68564	5.1
Toxaphene	2	---			0.000	2	7.626	0.010	423422	21.1
Toxaphene	3	7.279	0.015	1247336	257.0	3	7.840	-0.006	5269656	245.7
Toxaphene	4	7.611	0.022	44122	9.7	4	8.275	-0.039	22978238	1514.5
Toxaphene	5	---			0.000	5	8.375	0.022	372723	18.7
Toxaphene	6	7.924	0.015	3759044	1316.8	NS	---			----
Total STX-CLPAve (4 peaks): 587.812						Total CLP2Ave (5 peaks): 361.012				RPD = 48*
Corrected Ave (3 peaks): 344.815						Corrected Ave (4 peaks): 72.651				RPD = 130*

WS21:01239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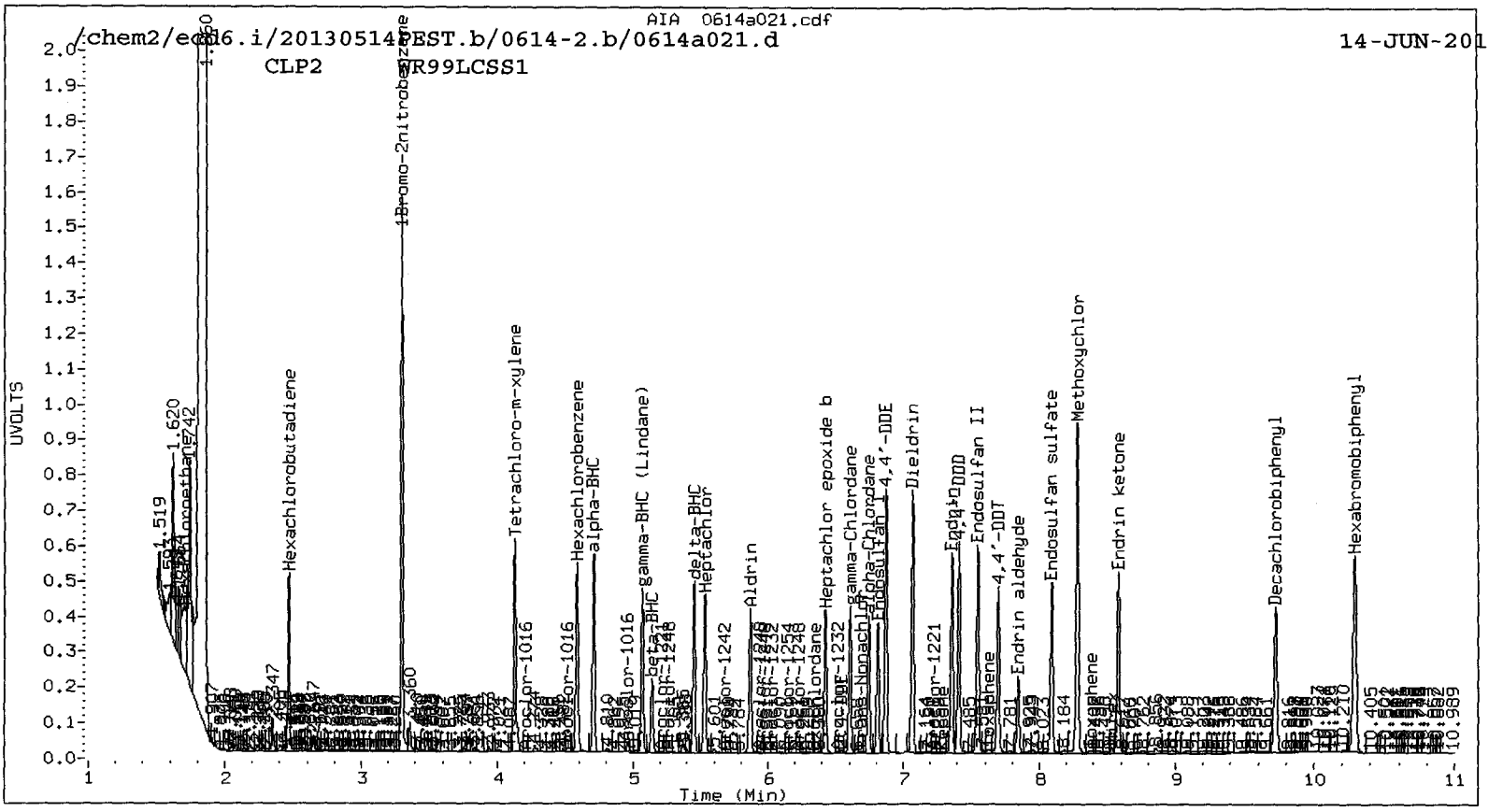
14-JUN-201
STX-CLP WR99LCSS1
UVOLTS
Time (Min)
1.515
1.573
1.691
Hexachlorobutadiene
1.920
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-JUN-201
CLP2 WR99LCSS1
UVOLTS
Time (Min)
1.519
1.620
Hexachlorobutadiene
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a028.d ARI ID: WS21A
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a028.d Client ID: 5
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 14:55
Compound Sublist: wpest Report Date: 06/18/2013 09:44
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

06/19/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.127	-0.002	6366167	3.297	-0.002	26604719	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.270	-0.014	28861	4.698	-0.011	177626	0.2128	0.2973	33.1	alpha-BHC
4.615	-0.026	19013	5.142	0.005	140197	0.3536	0.6100	53.2*	beta-BHC
4.797	-0.014	130626	5.425	-0.023	48390	1.1541	0.0986	168.5*	delta-BHC
4.559	-0.007	23594	5.050	-0.014	147183	0.2007	0.2839	34.3	gamma-BHC (Lindane)
5.026	0.014	25142	5.531	0.003	85213	0.2201	0.1710	25.1	Heptachlor
5.320	0.015	55306	5.848	-0.019	340870	0.4891	0.7249	38.8	Aldrin
5.911	0.032	51954	6.399	-0.022	514238	0.5095	1.2487	84.1*	Heptachlor epoxide b
6.247	-0.010	2952	----			0.0305	0.0000	---	Endosulfan I
6.457	-0.022	117596	7.044	-0.022	216343	1.1436	0.5580	68.8*	Dieldrin
6.177	-0.002	62526	6.867	-0.001	519359	0.7593	1.2893	51.7*	4,4'-DDE ?
6.708	0.011	103335	7.369	0.014	573919	1.2273	2.5382	69.6*	Endrin
6.920	0.017	24293	7.523	-0.022	776948	0.2662	2.9287	166.7*	Endosulfan II
6.731	-0.005	128235	7.404	-0.002	433669	1.3287	1.6290	20.3	4,4'-DDD
7.676	0.006	10500	8.113	0.026	322556	0.1282	1.4863	168.2*	Endosulfan sulfate
6.970	-0.024	234223	7.684	-0.010	317003	2.7388	1.4458	61.8*	4,4'-DDT
7.457	0.038	70580	8.256	-0.020	754398	1.7275	8.9277	135.1*	Methoxychlor
7.948	0.023	7189	8.584	0.007	674329	0.0691	2.8532	190.5*	Endrin ketone
7.264	-0.015	16635	7.828	-0.014	279218	0.2167	1.3317	144.0*	Endrin aldehyde
5.994	-0.005	17739	6.606	0.002	25387	0.1622	0.0588	93.6*	gamma-Chlordane
6.135	0.012	19131	----			0.1881	0.0000	---	alpha-Chlordane
2.318	0.009	19887	2.451	-0.015	40017	0.1403	0.0801	54.6*	Hexachlorobutadiene
4.135	-0.002	27001	4.565	-0.019	361978	0.2518	0.5771	78.5*	Hexachlorobenzene
5.785	0.001	13019	6.315	-0.017	432664	0.1513	1.1928	155.0*	Oxychlordane
5.866	0.009	18281	6.567	-0.013	56718	0.2815	0.2094	29.4	2,4-DDE
6.067	-0.039	33189	6.678	-0.014	115568	0.3145	0.4316	31.4	trans-Nonachlor
6.332	-0.012	41188	7.063	-0.001	507377	0.7165	3.4075	130.5*	2,4-DDD
6.601	0.018	7419	----			0.1154	0.0000	---	2,4-DDT
----			7.452	0.035	371842	0.0000	1.3276	---	cis-Nonachlor
7.605	0.009	28797	8.532	-0.033	357867	0.4080	2.4012	141.9*	Mirex
8.919	-0.001	6434119	10.287	-0.002	11934849	80.0000	80.0000	0.0	Hexabromobiphenyl
1.756	0.001	4037	1.742	0.018	2569137	0.0000	0.0000	---	Hexachloroethane
6.547	-0.034	45105	7.311	-0.025	417688	0.0000	0.0000	---	Kepone
3.795	-0.002	532553	4.123	-0.002	2272881	6.1354	5.2550	15.5	Tetrachloro-m-xylene
8.771	0.000	536866	9.724	-0.001	1258195	5.8690	5.2185	11.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	15.3	13.1	13.1~	42-112
Decachlorobiphenyl	14.7	13.0	13.0~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

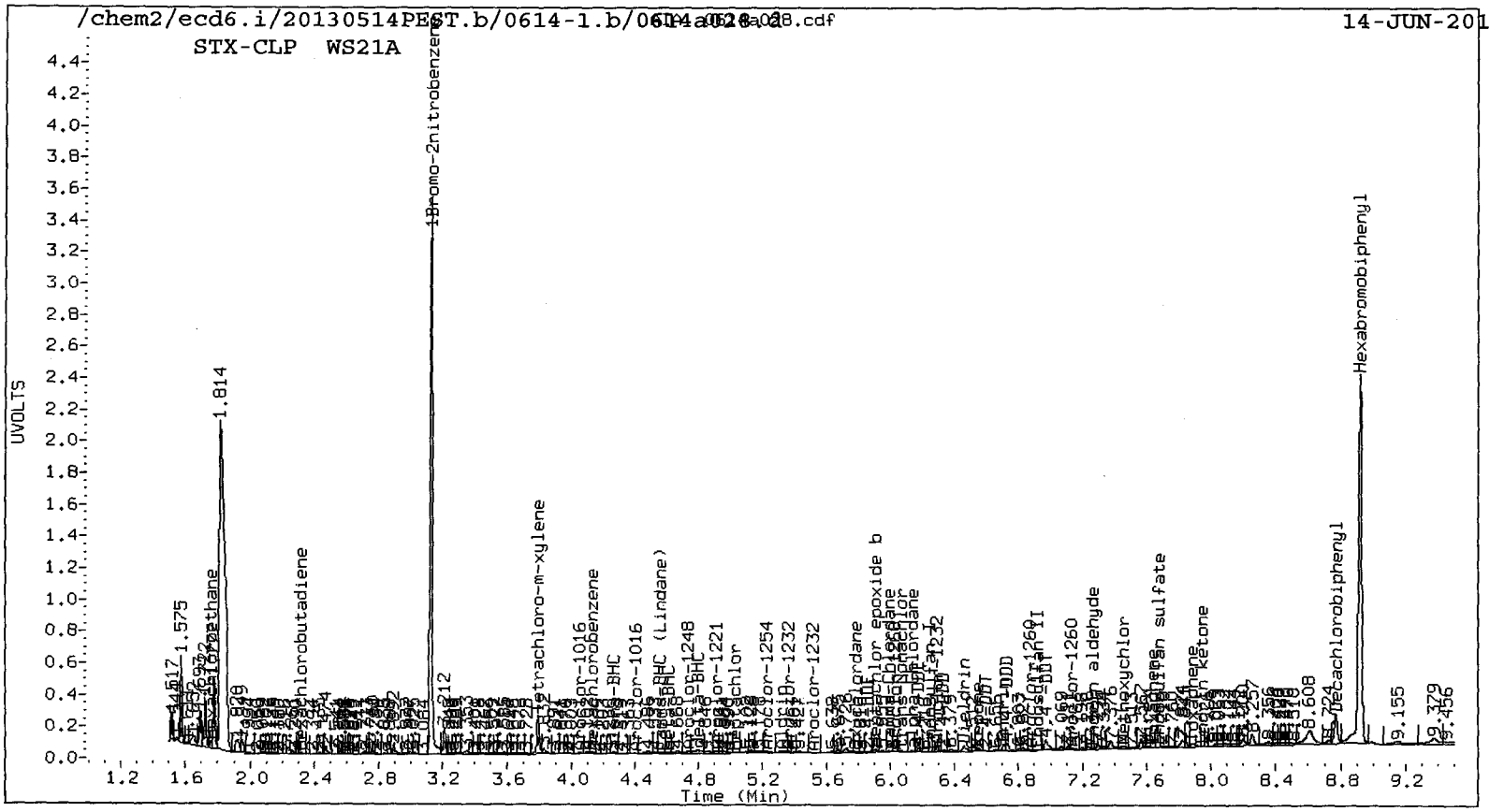
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6366167	15.7
Hexabromobiphenyl	5319006	6434119	21.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	26604719	-8.5
Hexabromobiphenyl	16515704	11934849	-27.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.970	0.015	234223	58.5	1	7.281	-0.010	217181	25.0
Toxaphene	2	---			0.000	2	7.605	-0.011	138848	10.8
Toxaphene	3	7.264	0.001	16635	3.6	3	7.828	-0.018	279218	20.2
Toxaphene	4	7.605	0.016	28797	6.6	4	8.338	0.024	717466	73.5
Toxaphene	5	7.640	0.013	5732	1.9	5	---			0.0
Toxaphene	6	7.887	-0.022	88191	32.3	NS	---			----
Total STX-CLPAve (5 peaks): 20.583						Total CLP2Ave (4 peaks): 32.382				RPD = 45*
Corrected Ave (4 peaks): 11.105						Corrected Ave (3 peaks): 18.682				RPD = 51*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STX-CLP WS21A
UVOLTS
Time (Min)
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1.517
1.372
1.212
1.084
1.028
.829
.759
.612
.559
.504
.454
.404
.354
.257
.155
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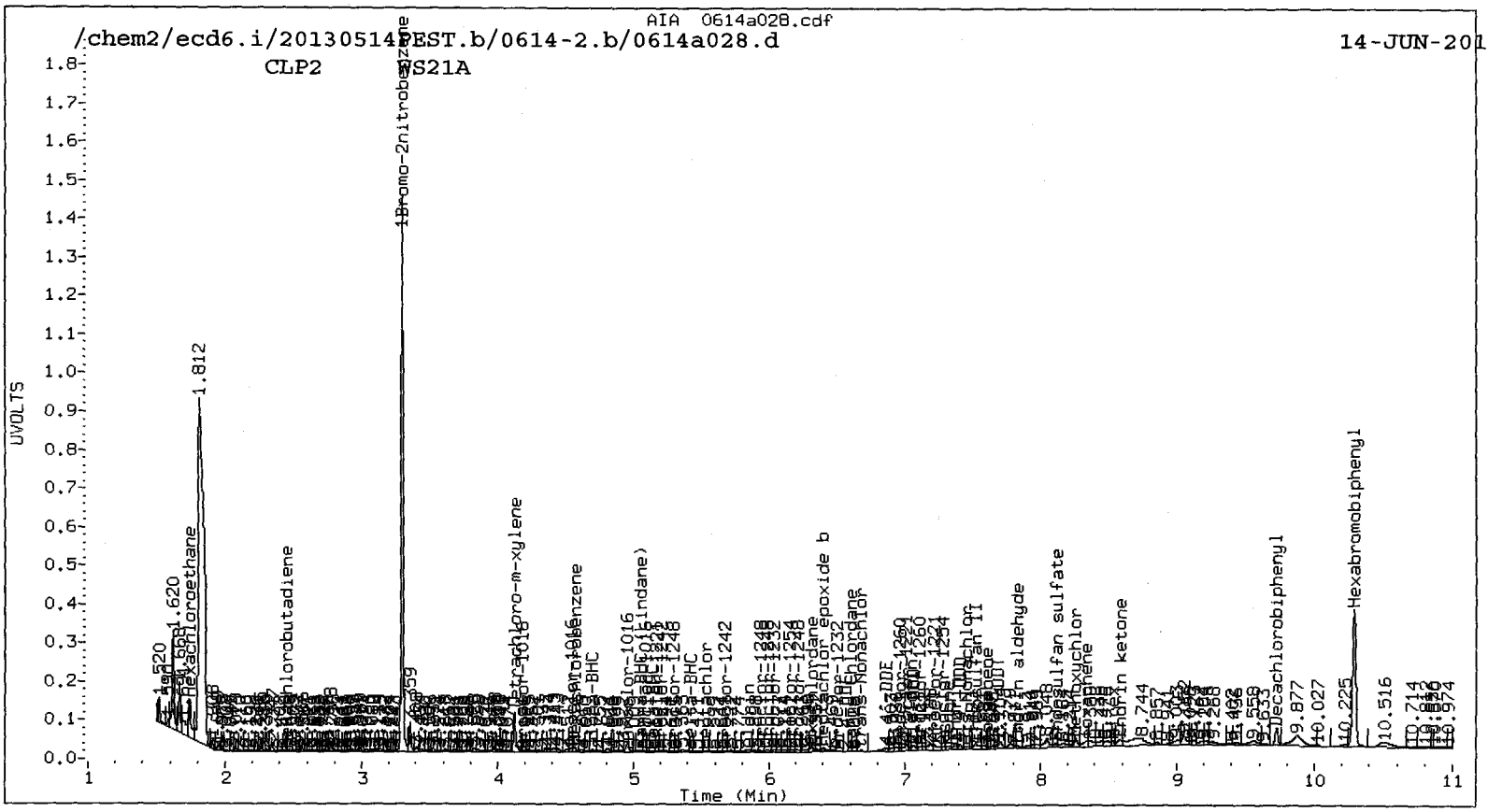
.379
.456
1-Bromo-2nitrobenzene
Hexachloroethane
Hexachlorobutadiene
1,2,4-Trichloro-m-xylene
Pentachloronitrobenzene
Alpha-BHC
Gamma-Chlordane
Alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-JUN-201
CLP2 WS21A
UVOLTS
Time (Min)
1.812
1.620
1.520
1-Bromo-2nitrobenzene
Hexachloroethane
Hexachlorobutadiene
1,2,4-Trichloro-m-xylene
Pentachloronitrobenzene
Alpha-BHC
Gamma-Chlordane
Alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a030.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a030.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 15:31
Compound Sublist: INDA Report Date: 06/18/2013 09:44
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.128	-0.001	5519699	3.298	-0.001	27028833	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.283	-0.001	2692672	4.708	-0.001	13384125	22.8990	22.0498	3.8	alpha-BHC
4.641	-0.001	974047	5.137	0.000	4882285	20.8940	20.9106	0.1	beta-BHC
4.811	0.000	2165919	5.448	0.000	10833943	22.0708	21.7324	1.5	delta-BHC
4.565	-0.001	2378482	5.064	-0.001	11364495	23.3398	21.5778	7.8	gamma-BHC (Lindane)
5.011	-0.001	2237013	5.527	-0.001	10562531	22.5853	20.8694	7.9	Heptachlor
5.304	-0.001	2276400	5.865	-0.001	9969857	23.2186	20.8700	10.7	Aldrin
5.878	-0.001	2018108	6.420	-0.001	8341169	22.8252	19.9364	13.5	Heptachlor epoxide b
6.255	-0.001	1831939	6.807	-0.001	6880737	21.8362	17.8015	20.4	Endosulfan I
6.478	-0.001	3902464	7.065	-0.002	12752829	43.7705	32.3771	29.9	Dieldrin
6.178	-0.001	3029810	6.867	-0.001	13990701	42.4384	34.1876	21.5	4,4'-DDE
6.696	-0.001	3232687	7.354	-0.001	10133103	47.5211	43.4956	8.8	Endrin
6.901	-0.001	3179785	7.543	-0.001	10874531	43.1266	39.7852	8.1	Endosulfan II
6.736	-0.001	3227120	7.405	-0.001	10833499	41.3852	39.4977	4.7	4,4'-DDD
7.669	-0.001	2620268	8.085	-0.002	8214838	39.6094	36.7401	7.5	Endosulfan sulfate
6.993	-0.001	2833421	7.692	-0.002	8651547	41.0069	38.2975	6.8	4,4'-DDT
7.419	-0.001	6674052	8.275	-0.001	18006499	202.1785	206.8259	2.3	Methoxychlor
7.924	-0.001	3325800	8.576	-0.002	8934931	39.5938	36.6939	7.6	Endrin ketone
7.278	-0.002	2547271	7.840	-0.001	8410025	41.0671	38.9298	5.3	Endrin aldehyde
5.998	-0.001	2068666	6.602	-0.001	8249101	21.8167	18.8110	14.8	gamma-Chlordane
6.122	-0.001	1974004	6.740	-0.001	7285857	22.3844	18.0330	21.5	alpha-Chlordane
2.308	0.000	2771321	2.466	0.000	10739884	22.5467	21.1581	6.4	Hexachlorobutadiene
4.137	-0.001	1972488	4.584	0.000	14021505	21.2124	22.0039	3.7	Hexachlorobenzene
8.919	-0.001	5198503	10.287	-0.003	12296519	80.0000	80.0000	0.0	Hexabromobiphenyl
3.796	0.000	3466088	4.125	0.000	18995664	46.0554	43.2300	6.3	Tetrachloro-m-xylen
8.770	-0.001	2716344	9.723	-0.002	10136232	36.7528	40.8048	10.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	115.1	108.1	108.1~	115- 0
Decachlorobiphenyl	91.9	102.0	91.9~	115- 0

~ Indicates recovery outside QC Limits

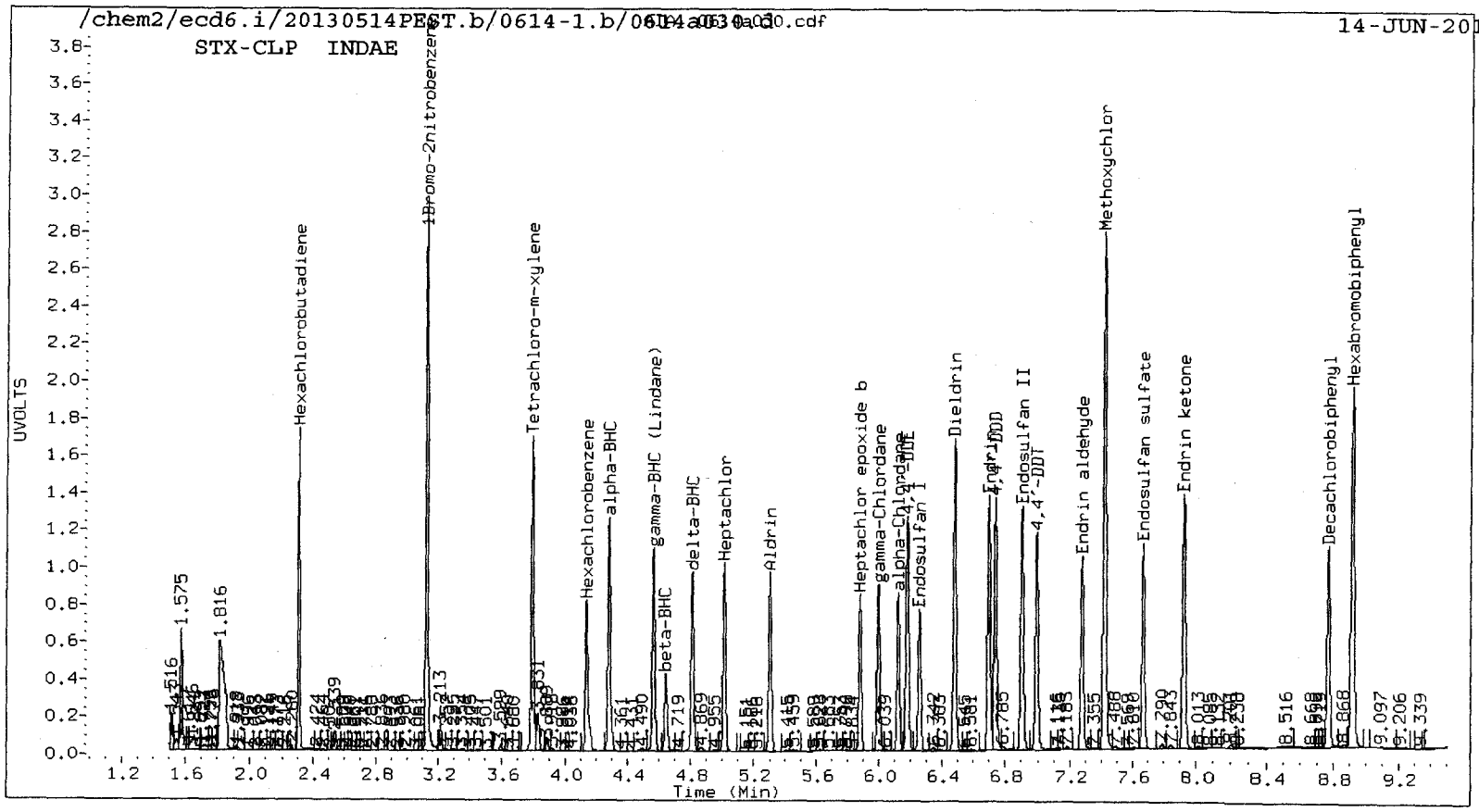
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5500669	5519699	0.3
Hexabromobiphenyl	5319006	5198503	-2.3

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	29060499	27028833	-7.0
Hexabromobiphenyl	16515704	12296519	-25.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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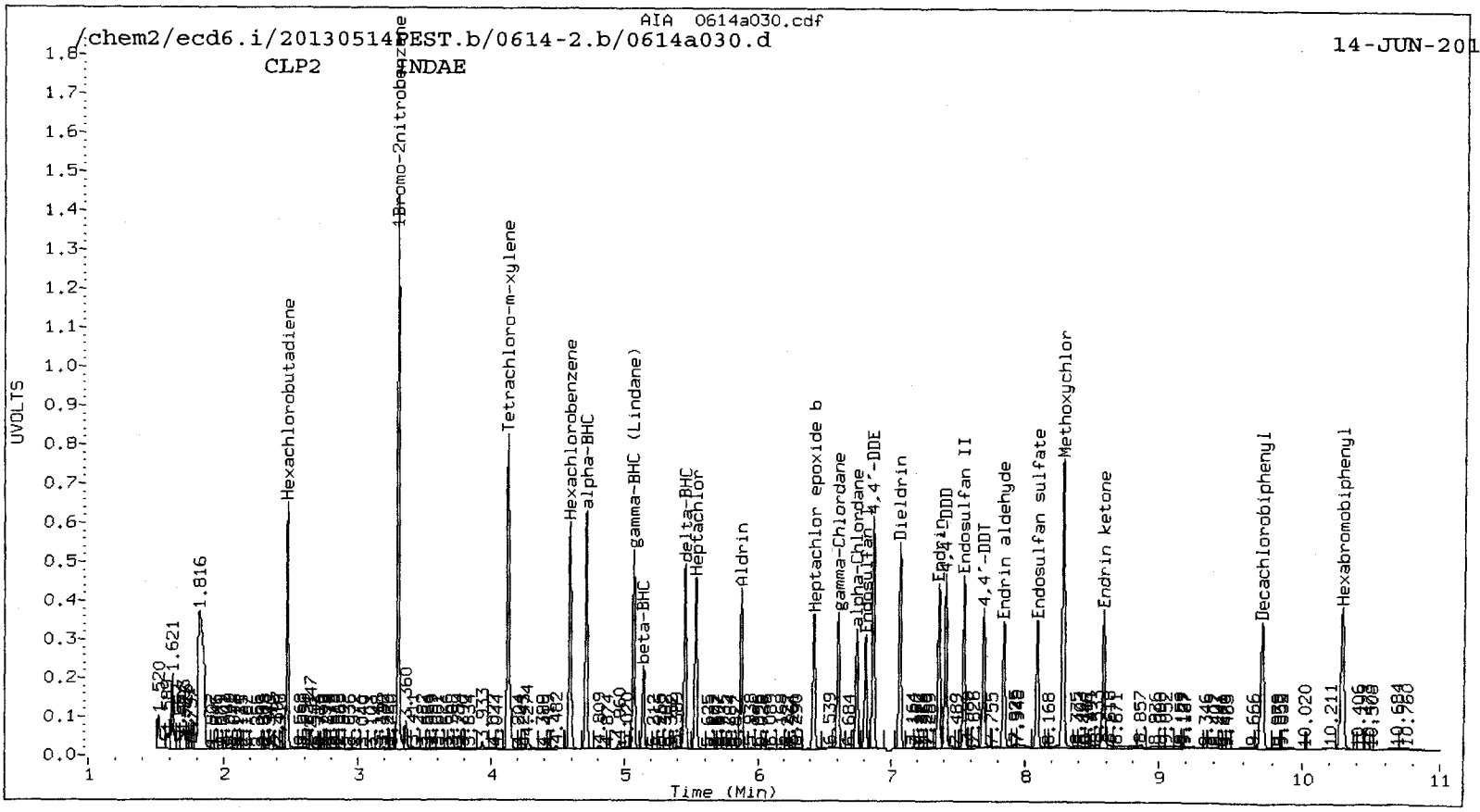
STX-CLP INDAE
14-JUN-201
UVOLTS
Time (Min)
1,4-Dibromobenzene
Hexachlorobutadiene
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0614a030.cdf
/chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a030.d
CLP2 INDAE
14-JUN-201
UVOLTS
Time (Min)
1,4-Dibromobenzene
Hexachlorobutadiene
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0614-1.b/0614a031.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/0614-2.b/0614a031.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-JUN-2013 15:51
Compound Sublist: TOXAPH Report Date: 06/18/2013 09:44
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.129	0.000	7094744	3.299	-0.001	34759697	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.922	0.002	6789314	10.289	-0.001	16322638	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.002	3082298	4.127	0.001	17962347	31.8636	31.7867	0.2	Tetrachloro-m-xylen
8.773	0.002	2777492	9.725	0.000	10647231	28.7747	32.2897	11.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	79.7	79.5	79.5~	150- 0
Decachlorobiphenyl	71.9	80.7	71.9~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

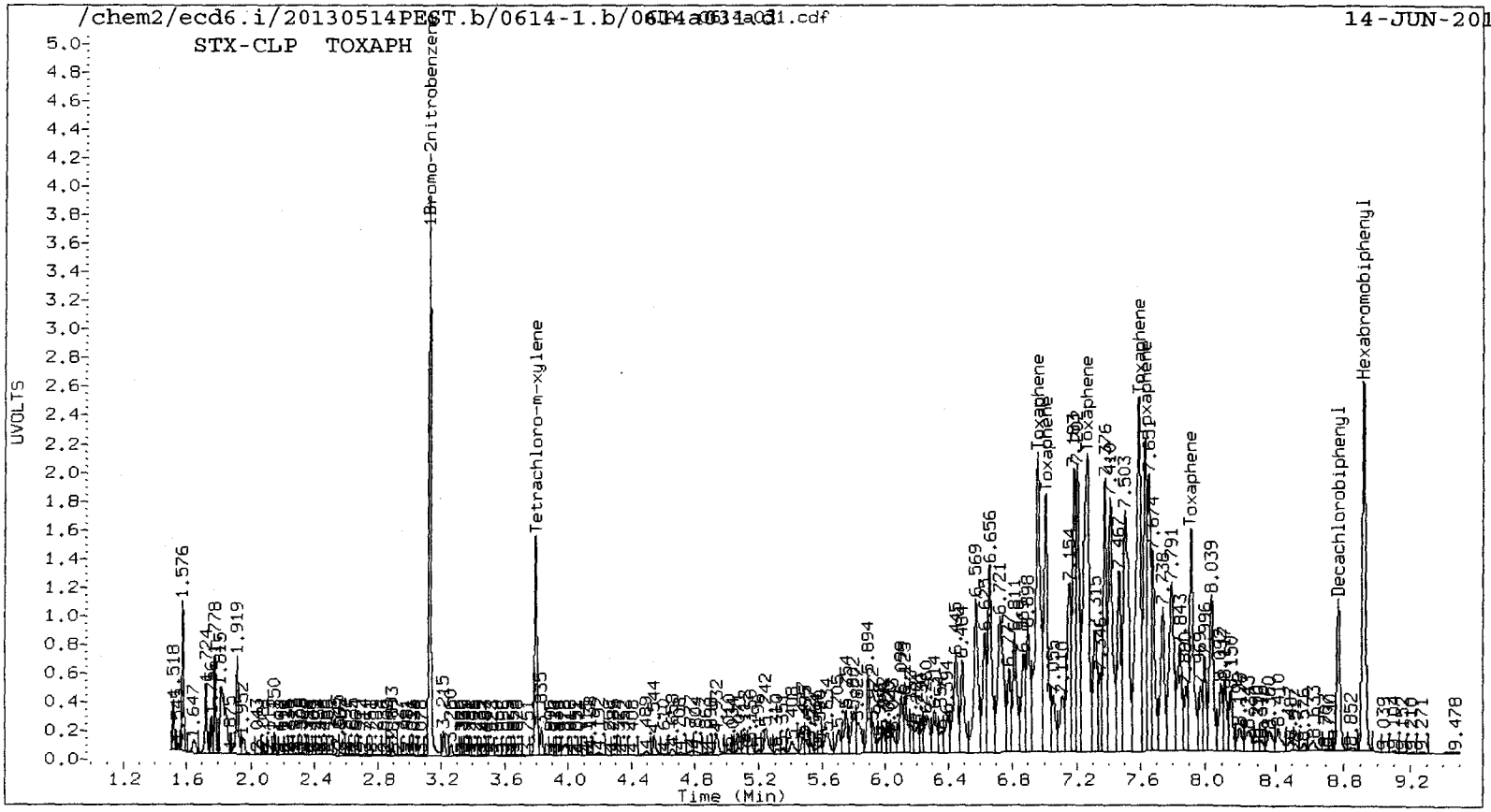
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	7094744	29.0
Hexabromobiphenyl	5319006	6789314	27.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	34759697	19.6
Hexabromobiphenyl	16515704	16322638	-1.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.957	0.002	9359494	2215.2	1	7.292	0.001	26539501	2237.7
Toxaphene	2	7.008	0.001	6268280	1915.6	2	7.616	0.000	37266114	2113.8
Toxaphene	3	7.266	0.002	10144480	2074.2	3	7.846	0.000	37638778	1993.9
Toxaphene	4	7.590	0.002	9914118	2161.2	4	8.314	0.000	25988717	1946.2
Toxaphene	5	7.629	0.002	6382424	1962.5	5	8.353	0.000	32022241	1824.2
Toxaphene	6	7.911	0.002	5410358	1880.5	NS	---			----
Total STX-CLPAve (6 peaks): 2034.867						Total CLP2Ave (5 peaks): 2023.169				RPD = 1
Corrected Ave (6 peaks): 2034.867						Corrected Ave (5 peaks): 2023.169				RPD = 1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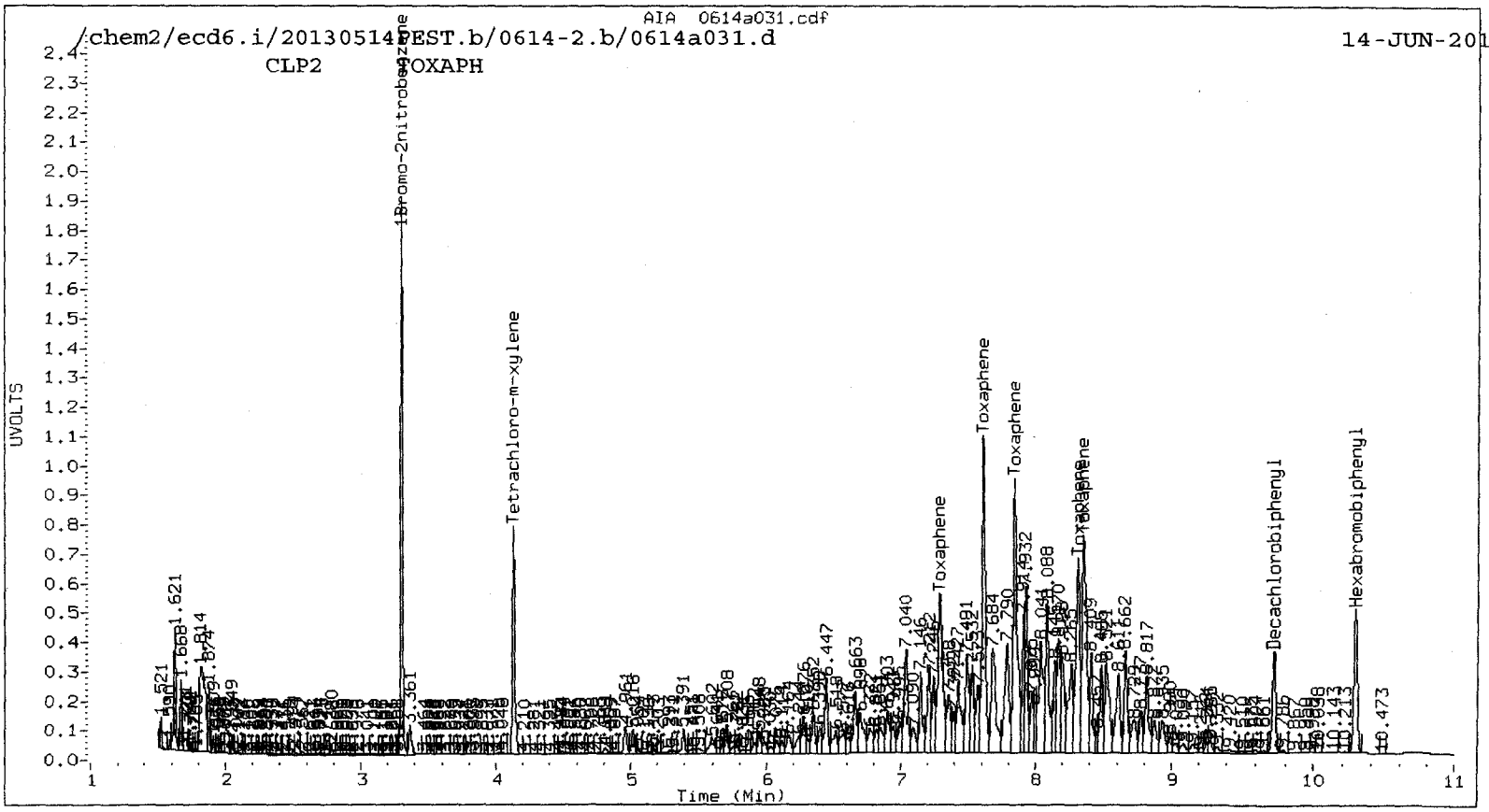
AIA 0614a031.cdf
14-JUN-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0614a031.cdf
14-JUN-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS21

Incorporated
Analytical Chemists and Consultants

(8082A) PCB – (Soil / Sediment)
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 19 (PCBSDMP4)

ARI Job No(s) W549, WR99, W521, W569 Page 1 of 1

PSDDA (4ppb)
Batch set up by: JH

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5g dry wt)	(REQ) Acid Clean (2.5mL)	(REQ) Sulfur Clean (2.5mL) Very High 1 2 (3) Sulfur	(REQ) Silica Gel Clean (1:2.5)	Extraction Final Volume	Volume to Lab	Comments	Verify Client ID
	MBS W549	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual W)	YL 06/14/13 Analyst/Date
	SBS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 (2) 3 CT 06-14-13
	SBSDup	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Analyst/Date
	~~QLS~~	~~12.50g~~	~~2.5mL~~	~~2.5mL~~	~~1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
2	W549 A	14.03	2.5mL	2.5mL	1mL	2.5mL	1mL		KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 4 5 6 YL 06/11/13 Analyst/Date
2	B	14.01	2.5mL	2.5mL	1mL	2.5mL	1mL		
2	C	14.00	2.5mL	2.5mL	1mL	2.5mL	1mL	SEE NOTES	
2	D	15.03	2.5mL	2.5mL	1mL	2.5mL	1mL		
8	WR99 D	17.04	2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 (2) 3 Pre-Cleanups CSZ 6/12/13 Analyst/Date
8	Dms	17.03	2.5mL	2.5mL	1mL	2.5mL	1mL		
8	Dmsd	17.04	2.5mL	2.5mL	1mL	2.5mL	1mL		
3	E	5.00	2.5mL	2.5mL	1mL	2.5mL	1mL	see Analyst Notes	
3	F	2.51	2.5mL	2.5mL	1mL	2.5mL	1mL	↓	TurboVap 1 (2) 3 Post Cleanups CSZ 6/12/13 Analyst/Date
3	W521 A	16.01	2.5mL	2.5mL	1mL	2.5mL	1mL		
1	W569 A	2.51	2.5mL	2.5mL	1mL	2.5mL	1mL	see Analyst Notes	
Analyst/Date	YL 06/14/13		CSZ 6/12/13	CSZ 6/12/13	CSZ 6/12/13	CSZ 6/12/13	CSZ 6/12/13		

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(B###151)	2µg/mL	50µL	4/3/14	CT Date	AC
Spike	1 (2074-4)	20µg/mL	63µL	1/31/13	CT	AC
~~QLS Spike~~	~~5 ( )~~	~~2µg/mL~~	~~25µL~~			

Extraction Time: 12:45 Balance ID: B14642614

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in cold water 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in bottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches above the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (Small ~~or large~~ Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate). 12. Exchange (2 X with 20mL) Hexane. 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial with Hexane.

A. Need Total Solids Y / (N) B. ~~Archive~~/Freeze (Y) N

W549, WR99 and W521 only

W521 : 81251

Reagent and Solutions Identification

(8082A) PCB – (Soil / Sediment)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) W549, WR99, W521, W569

(8082A) PCB PSDDA (4ppb) Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Anhydrous Sodium Sulfate: (I# 8134 jar date 5-24-13) Neutral Glasswool: (I# 7998 + jar date 4-15-13) 1:1 Hexane/Acetone: (H# 194) 80:20 Hexane/Acetone: (H# 177) Hexane: (I# 8269)	Microwave CT 6-14-13
KD Station: Hexane: (I# 8269) Anhydrous Sodium Sulfate: (I# 8134 jar date 5/24/13) Neutral Glasswool: (I# 7998 jar date 4/15/13)	KD YC 6/11/13
Vialing Station: Hexane: (I# 8269) Concentrated Sulfuric Acid: (I# 8156) Tetrabutylammonium hydrogensulfate (TBAS): (H# 165) Sodium Sulfite: (I# 7704) Silica Gel (SPE) Darts: (I# 8127)	Vialing CJE 6/12/13

W521 : 912552

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: W521 Client ID: SAIC

Parameter: PCB PSDDA (4ppb) Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A	YL 05/31/13
☒ Standing Water Decanted (Not shared)= A	YL 05/31/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). Folder received	
(Centrifuge#1 used for all Centrifugations) on 6/03/13.	
GC analyst, Sample pre-screen indicates possible aroclor activity.	JH 6/07/13

W521 : 01253

PCB Raw Data
Initial Calibration

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B ~~FID-4A~~ FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 05/07/13 Internal Standard ID 2006-1 Expiration 07/26/13

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO
ICV Exceeding ±30%? YES / NO
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
IB	1982-2	05/16/13	AR1660	~~B207~~ 05/09/13 B182	04/30/14
AR1660	B161	04/30/14	AR1242	B190	
AR1242	B163		AR1248	B191	
AR1248	B172		AR1254	B192	
AR1254	B173		AR2162	B193	
AR2162	B174		AR2268	B194	
AR2268	B175				
BD	2067-1	05/16/13			
DDT~	1991-2	01/21/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JR **Date:** 05/07/13

Reviewer: MD **Date:** 5-8-13

WS21 : 01255

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/ical-1.b

ARI Job No.: IB Method: PCB1.m Instrument: ecd5.i Date: 07-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1619	0507a003.d	IB		1	NO MANUAL INTEGRATION
1639	0507a004.d	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1659	0507a005.d	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1719	0507a006.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1739	0507a007.d	1PPMAR1660		1	NO MANUAL INTEGRATION
1759	0507a008.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1819	0507a009.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1839	0507a010.d	AR1242		1	NO MANUAL INTEGRATION
1859	0507a011.d	AR1248		1	NO MANUAL INTEGRATION
1920	0507a012.d	AR1254		1	NO MANUAL INTEGRATION
1940	0507a013.d	AR2162		1	NO MANUAL INTEGRATION
2000	0507a014.d	AR3268		1	NO MANUAL INTEGRATION
2021	0507a015.d	AR1242	ICV	1	NO MANUAL INTEGRATION
2041	0507a016.d	AR1248	ICV	1	NO MANUAL INTEGRATION
2101	0507a017.d	AR1254	ICV	1	NO MANUAL INTEGRATION
2121	0507a018.d	AR1660	ICV	1	NO MANUAL INTEGRATION
2142	0507a019.d	AR2162	ICV	1	NO MANUAL INTEGRATION
2202	0507a020.d	AR3268	ICV	1	NO MANUAL INTEGRATION

052813.SUB

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB	2.727	2.727	2.726	2.727	2.725	2.725	2.724	2.624-2.824	2.726	0.001
$ 2 Tetrachloro-m-xylene	4.414	4.413	4.413	4.414	4.413	4.412	4.412	4.312-4.512	4.413	0.001
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	3.694	3.594-3.794	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.165	6.066-6.266	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.167	6.067-6.267	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.800	6.700-6.900	+++++	+++++
7 Aroclor-1016	6.167	6.167	6.167	6.167	6.167	6.166	6.166	6.066-6.266	6.167	0.000
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.298	8.198-8.398	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.260	10.160-10.360	+++++	+++++
9 Aroclor-1260	10.261	10.262	10.262	10.260	10.262	10.260	10.260	10.160-10.360	10.261	0.001
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.507	11.407-11.607	+++++	+++++
$ 13 Decachlorobiphenyl	13.206	13.206	13.205	13.203	13.204	13.204	13.205	13.105-13.305	13.205	0.001
* 12 IS-HBBP	14.074	14.073	14.073	14.072	14.073	14.073	14.072	13.972-14.172	14.073	0.001
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.560	8.510-8.610	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.246	9.196-9.296	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.949	8.849-9.049	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.713	9.613-9.813	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.148	10.048-10.248	+++++	+++++

SGS-ECD : 2564

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.250	2.250	2.250	2.249	2.249	2.249	2.249	2.149-2.349	2.249	0.001
$ 1 Tetrachloro-m-xylene	4.412	4.411	4.411	4.410	4.411	4.411	4.411	4.311-4.511	4.411	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	5.064	4.964-5.164	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.059	5.959-6.159	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.060	5.960-6.160	+++++	+++++
7 Aroclor-1016	6.062	6.062	6.062	6.059	6.061	6.060	6.060	5.960-6.160	6.061	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.467	6.367-6.567	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.192	8.092-8.292	+++++	+++++
9 Aroclor-1260	9.968	9.968	9.968	9.967	9.967	9.967	9.967	9.867-10.067	9.967	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.283	10.183-10.383	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.175	11.075-11.275	+++++	+++++
$ 13 Decachlorobiphenyl	12.829	12.828	12.828	12.827	12.828	12.827	12.828	12.728-12.928	12.828	0.001
* 12 IS-HBBP	13.191	13.191	13.191	13.189	13.191	13.190	13.191	13.091-13.291	13.190	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.156	8.106-8.206	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	8.707	8.657-8.757	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.210	9.160-9.260	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.589	8.489-8.689	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

EXHIBIT 1

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.163	9.063-9.263	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.675	9.575-9.775	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-1.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-1.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-1.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-1.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-1.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-1.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-1.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-1.b/0507a021.d/0507a021.cdf

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03259	+++++	0.03259	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00997	+++++	0.00997	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01408	+++++	0.01408	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02881	+++++	0.02881	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.08837	+++++	0.08837	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03943	+++++	0.03943	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04869	+++++					0.04869	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01482	+++++					0.01482	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04536	+++++					0.04536	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02357	+++++					0.02357	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02708	+++++					0.02708	0.000
7 Aroclor-1016(1)	0.04186	0.03922	0.03800	0.03458	0.03232	0.03038		
	+++++	+++++					0.03606	12.136
(2)	0.12934	0.12017	0.11740	0.10631	0.09981	0.09343		
	+++++	+++++					0.11108	12.195
(3)	0.05884	0.05458	0.05260	0.04727	0.04418	0.04111		
	+++++	+++++					0.04976	13.510
(4)	0.04321	0.04072	0.03932	0.03524	0.03340	0.03123		
	+++++	+++++					0.03718	12.437

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05630	+++++					0.05630	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06332	+++++					0.06332	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08051	+++++					0.08051	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05614	+++++					0.05614	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07461	+++++					0.07461	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04925	+++++					0.04925	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10267	+++++					0.10267	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10574	+++++					0.10574	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03999	+++++					0.03999	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
9 Aroclor-1260(1)	0.08092	0.07140	0.06872	0.06239	0.05721	0.05245		
	+++++	+++++					0.06551	15.742
(2)	0.07490	0.06756	0.06590	0.06047	0.05602	+++++		
	+++++	+++++					0.06497	11.060
(3)	0.17376	0.16180	0.15830	0.14675	0.13829	+++++		
	+++++	+++++					0.15578	8.810
(4)	0.08420	0.07867	0.07662	0.07158	0.06832	+++++		
	+++++	+++++					0.07588	8.154
(5)	0.04297	0.04212	0.04155	0.03881	0.03753	+++++		
	+++++	+++++					0.04060	5.708
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07490	+++++					0.07490	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.17600	+++++					0.17600	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05574	+++++					0.05574	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07824	+++++					0.07824	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06005	+++++					0.06005	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.16835	+++++					0.16835	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18617	+++++					0.18617	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13825	+++++					0.13825	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.38949	+++++					0.38949	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1111					1111	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1189					1189	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1453					1453	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1128					1128	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1294					1294	0.000
$ 1 Tetrachloro-m-xylene	1.27779	1.27691	1.30214	1.24444	1.19768	1.14335		
	+++++	+++++					1.24039	4.811
$ 13 Decachlorobiphenyl	1.45250	1.28741	1.22687	1.12094	1.06410	1.01848		
	+++++	+++++					1.19505	13.474

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-2.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-2.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-2.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-2.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-2.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-2.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-2.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-2.b/0507a021.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00820	+++++					0.00820	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01373	+++++					0.01373	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00748	+++++					0.00748	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02352	+++++					0.02352	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02053	+++++					0.02053	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04099	+++++					0.04099	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01709	+++++					0.01709	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01434	+++++					0.01434	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03645	+++++					0.03645	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08006	+++++					0.08006	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03345	+++++					0.03345	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02802	+++++					0.02802	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05013	+++++					0.05013	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04157	+++++					0.04157	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04304	+++++					0.04304	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05593	+++++					0.05593	0.000
7 Aroclor-1016(1)	0.05136	0.05104	0.04862	0.04453	0.04104	0.03730		
	+++++	+++++					0.04565	12.493
(2)	0.11167	0.10627	0.10431	0.09724	0.09163	0.08432		
	+++++	+++++					0.09924	10.221
(3)	0.02778	0.02695	0.02737	0.02574	0.02469	0.02316		
	+++++	+++++					0.02595	6.857
(4)	0.02758	0.02578	0.02560	0.02332	0.02231	0.02042		
	+++++	+++++					0.02417	10.869
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03879	+++++					0.03879	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04792	+++++					0.04792	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03671	+++++					0.03671	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07862	+++++					0.07862	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04427	+++++					0.04427	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11065	+++++					0.11065	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10118	+++++					0.10118	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18978	+++++					0.18978	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.12335	+++++					0.12335	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05956	+++++					0.05956	0.000
9 Aroclor-1260(1)	0.08456	0.07842	0.07600	0.07099	0.06556	0.05983		
	+++++	+++++					0.07256	12.383
(2)	0.09657	0.09048	0.08853	0.08437	0.07825	0.07177		
	+++++	+++++					0.08500	10.489
(3)	0.16866	0.16707	0.16406	0.15713	0.14786	0.13685		
	+++++	+++++					0.15694	7.943

WS21:01279

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	0.04850	0.04574	0.04367	0.04155	0.03920	0.03660		
	+++++	+++++					0.04254	10.221
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19311	+++++					0.19311	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18203	+++++					0.18203	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.14408	+++++					0.14408	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.37318	+++++					0.37318	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	757					757	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	727					727	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1214					1214	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	916					916	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
$ 2 Tetrachloro-m-xylene	1.13790	1.10316	1.09698	1.08696	1.05825	1.00770		
	+++++	+++++					1.08183	4.115
$ 13 Decachlorobiphenyl	1.43878	1.24550	1.16217	1.06757	1.02392	0.96937		
	+++++	+++++					1.15122	14.943

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a003.d
Data file 2: 20130507.b/ical-2.b/0507a003.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 07-MAY-2013 16:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	32061788	4.413	0.002	8759043	42.4	42.7	0.7	Tetrachloro-m-xylen
12.829	0.000	27295255	13.206	0.001	4923666	35.8	35.7	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.9	106.6
Decachlorobiphenyl	89.6	89.2

JK 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48807947	-0.3
Hexabromobiphenyl	50004151	51001521	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15184482	2.3
Hexabromobiphenyl	9345340	9588268	2.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

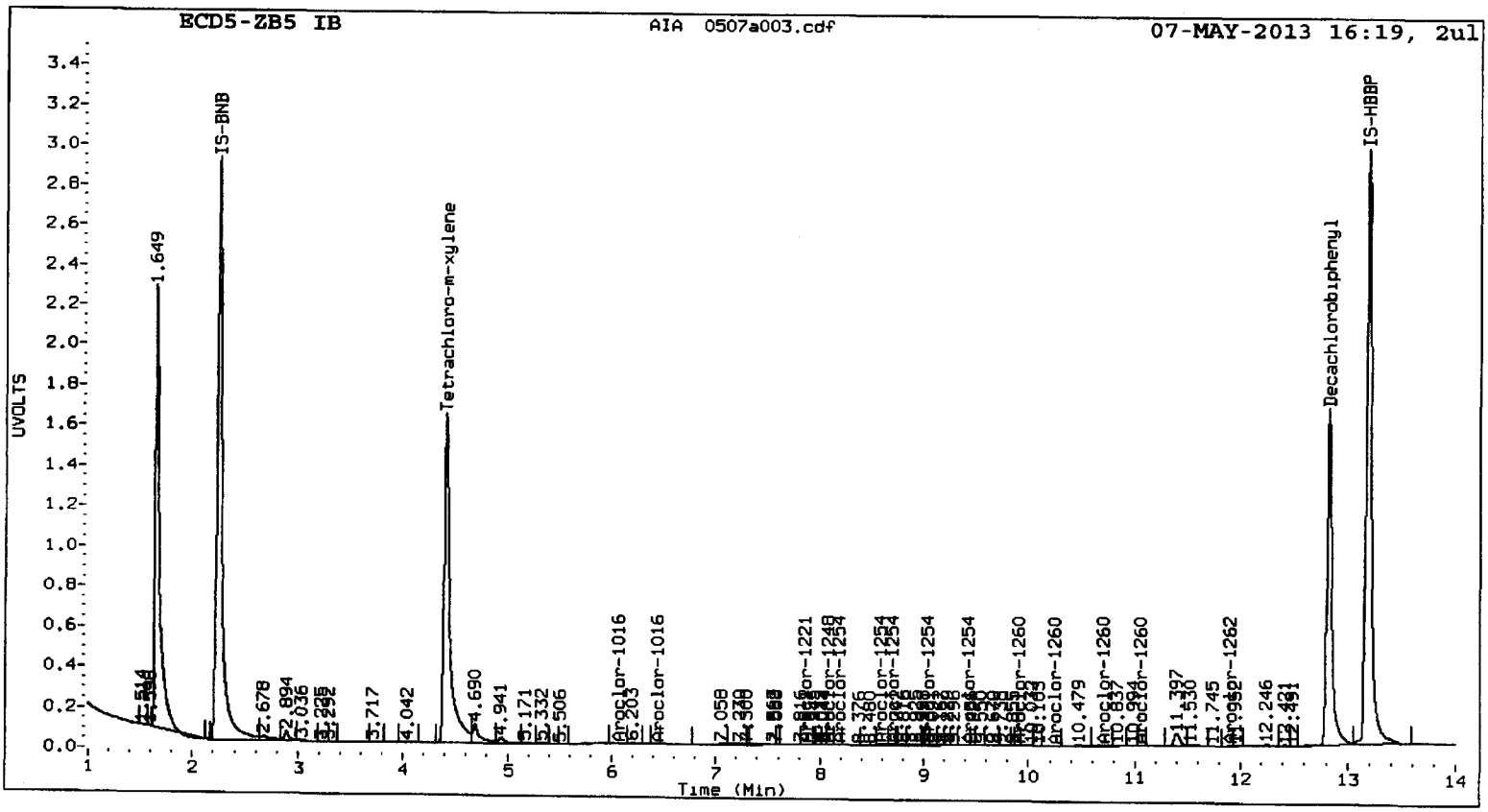
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.073	0.012	22097	1.0	1	---			0.0
Aroclor-1016	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.444	-0.024	12954	2.1	2	5.113	0.019	112267	43.1
Aroclor-1221	3	7.865	-0.013	88509	10.3	3	---			0.0
Aroclor-1221	NS	---			----	4	5.468	0.008	21627	4.8
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	6.073	0.012	22097	2.4	1	---			0.0
Aroclor-1232	2	6.444	-0.025	12954	0.5	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	7.865	-0.009	88509	5.4	4	---			0.0
		Total Col1Ave (3 peaks):		2.8			Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	6.073	0.013	22097	1.3	1	---			0.0
Aroclor-1242	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	7.865	-0.007	88509	3.0	4	---			0.0
		Total Col1Ave (3 peaks):		1.5			Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	6.444	-0.022	12954	0.4	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	7.865	-0.009	88509	1.8	3	---			0.0
Aroclor-1248	4	8.084	-0.027	42411	1.2	4	---			0.0
		Total Col1Ave (3 peaks):		1.1			Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	8.193	0.001	54179	1.2	1	---			0.0
Aroclor-1254	2	8.591	0.027	84538	2.8	2	---			0.0
Aroclor-1254	3	8.702	0.002	41716	0.7	3	---			0.0
Aroclor-1254	4	9.044	-0.009	43297	0.7	4	---			0.0
Aroclor-1254	5	9.430	0.068	73478	3.0	5	---			0.0
		Total Col1Ave (5 peaks):		1.7			Col2Ave: <3 Quant Peaks			
Aroclor-1260	1	9.912	-0.055	26920	0.6	1	---			0.0
Aroclor-1260	2	10.257	-0.027	72723	1.8	2	---			0.0
Aroclor-1260	3	10.709	0.050	104804	1.1	3	---			0.0
Aroclor-1260	4	11.055	-0.003	13255	0.3	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
		Total Col1Ave (4 peaks):		0.9			Col2Ave: <3 Quant Peaks			
Aroclor-1262	1	10.257	-0.026	72723	1.5	1	---			0.0
Aroclor-1262	2	10.709	0.051	104804	0.9	2	---			0.0
Aroclor-1262	3	11.055	-0.005	13255	0.4	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	11.906	-0.012	20784	0.5	5	---			0.0
		Total Col1Ave (4 peaks):		0.8			Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (4.511 - 12.728) = 7126262 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 766675 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.649
2.678
2.894
3.036
5.717
4.042
4.690
4.941
5.171
5.332
5.506
6.203
Aroclor-1016
Aroclor-1016
Z.058
Aroclor-1221
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1260
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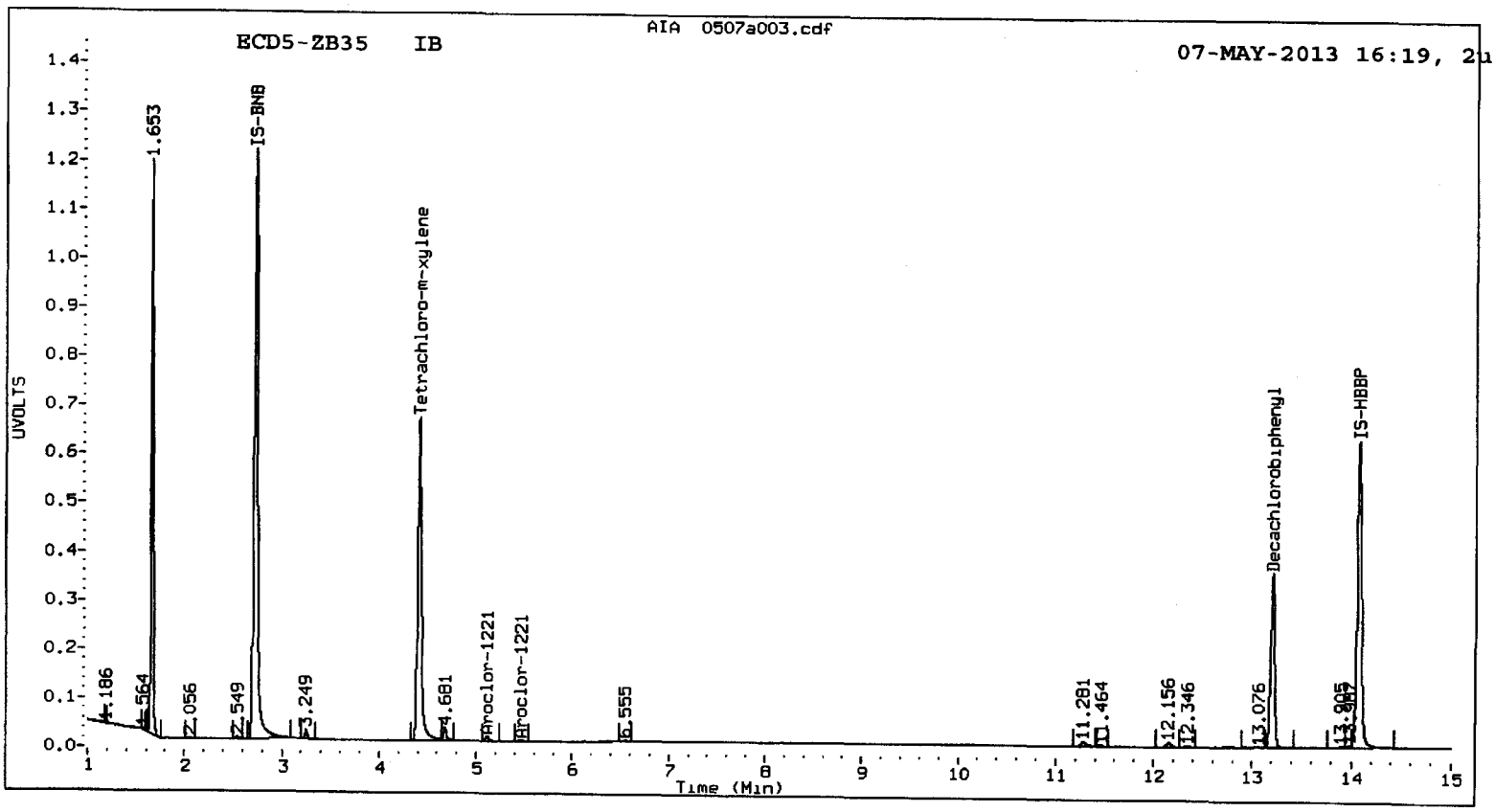
12.246
12.431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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.653
4.186
4.564
Z.056
Z.549
3.249
4.681
Aroclor-1221
Aroclor-1221
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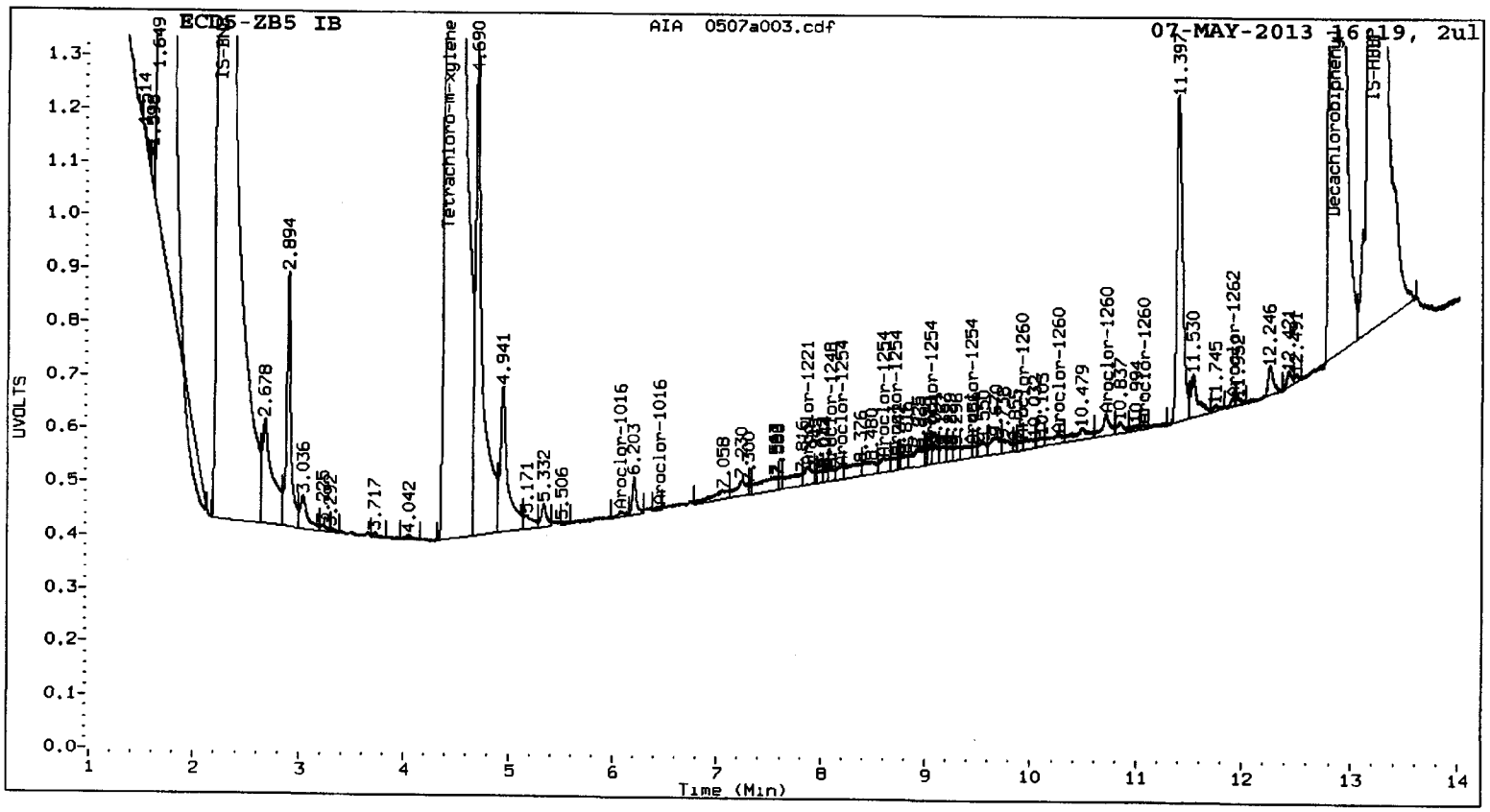
11.281
11.464
12.156
12.346
13.076
13.805
13.907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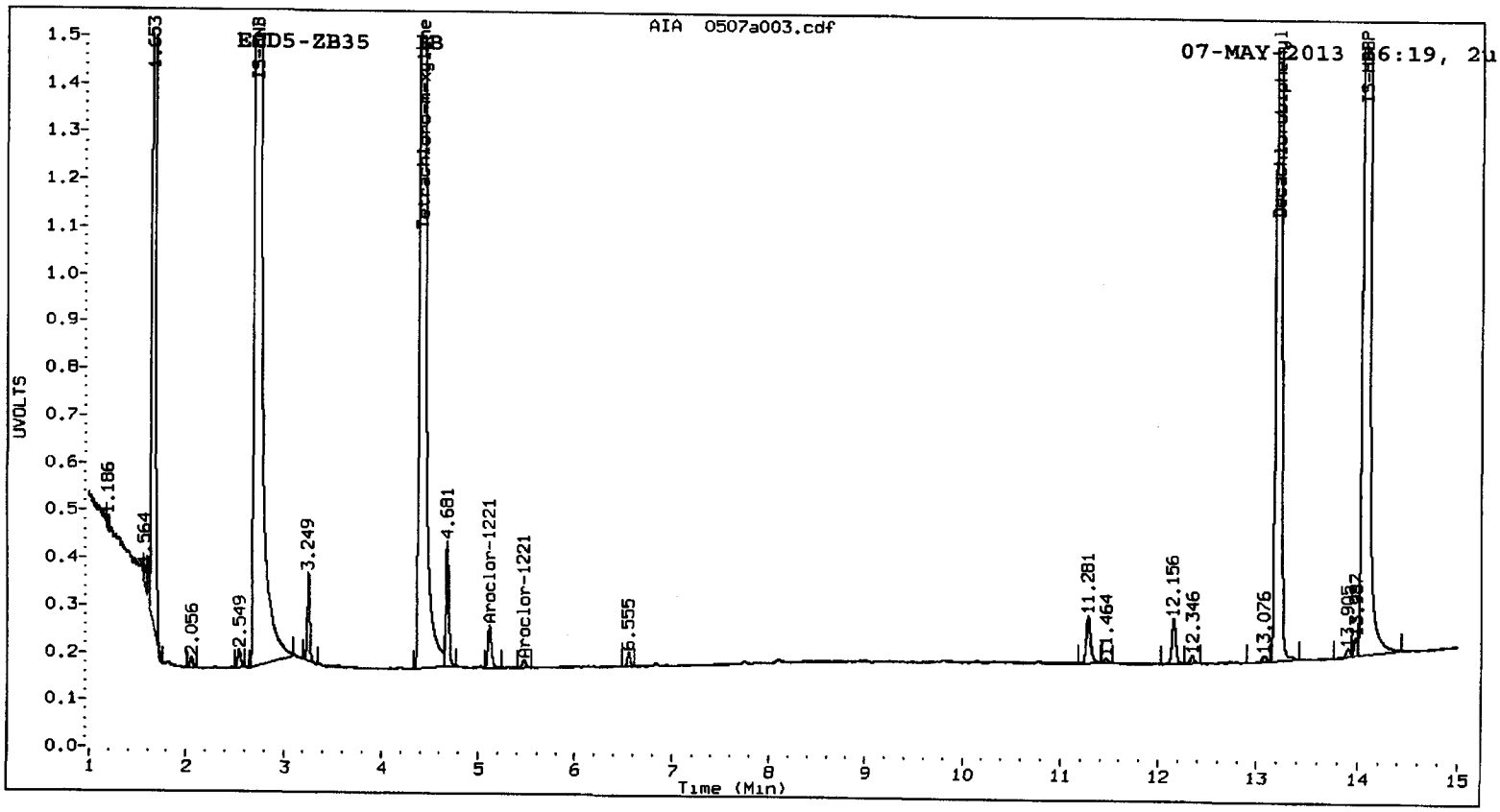
07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1254
Aroclor-1260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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1254
Aroclor-1260

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a004.d
Data file 2: 20130507.b/ical-2.b/0507a004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.412	0.002	15237305	4.414	0.002	4032555	20.1	20.1	0.1	Tetrachloro-m-xylen
12.829	0.000	14012855	13.206	0.000	2494212	18.8	18.5	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.2	50.2
Decachlorobiphenyl	46.9	46.4

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48977254	0.0
Hexabromobiphenyl	50004151	50004151	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14839715	0.0
Hexabromobiphenyl	9345340	9345340	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

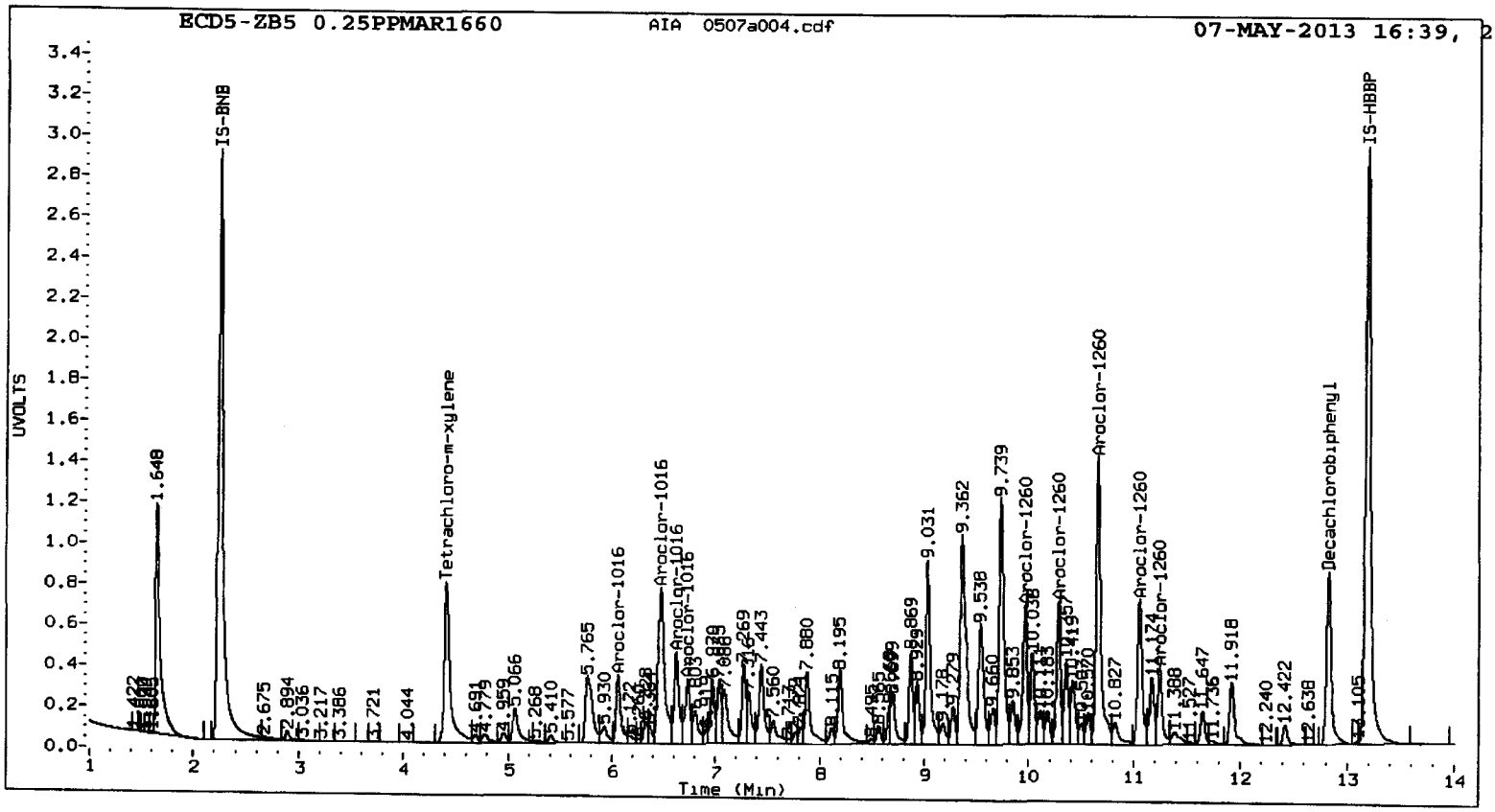
Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	5292322	239.7	1	6.167	0.001	2064971	243.9
Aroclor-1016	2	6.470	0.002	16270732	239.3	2	6.803	0.002	4509319	245.0
Aroclor-1016	3	6.619	0.002	7234719	237.5	3	7.187	0.002	1193712	248.0
Aroclor-1016	4	6.731	0.003	5392918	236.9	4	7.360	0.002	1081244	241.2
Total Col1Ave (4 peaks):				238.3		Total Col2Ave (4 peaks):			244.5	RPD = 3
Corrected Ave (3 peaks):				237.9		Corrected Ave (3 peaks):			243.3	RPD = 2
Aroclor-1260	1	9.968	0.001	9749945	238.1	1	10.261	0.001	2073273	244.6
Aroclor-1260	2	10.284	0.001	9449895	232.7	2	10.711	0.001	2464050	248.2
Aroclor-1260	3	10.660	0.000	22932169	235.5	3	10.986	0.001	4588966	250.3
Aroclor-1260	4	11.059	0.001	11185744	235.8	4	11.507	0.002	1213324	244.1
Aroclor-1260	5	11.247	0.000	6064816	239.0	NS	---			----
Total Col1Ave (5 peaks):				236.2		Total Col2Ave (4 peaks):			246.8	RPD = 4
Corrected Ave (4 peaks):				235.5		Corrected Ave (3 peaks):			245.6	RPD = 4

Total PCB Area Col1 (4.511 - 12.728) = 301049488 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 65038970 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 16:39,
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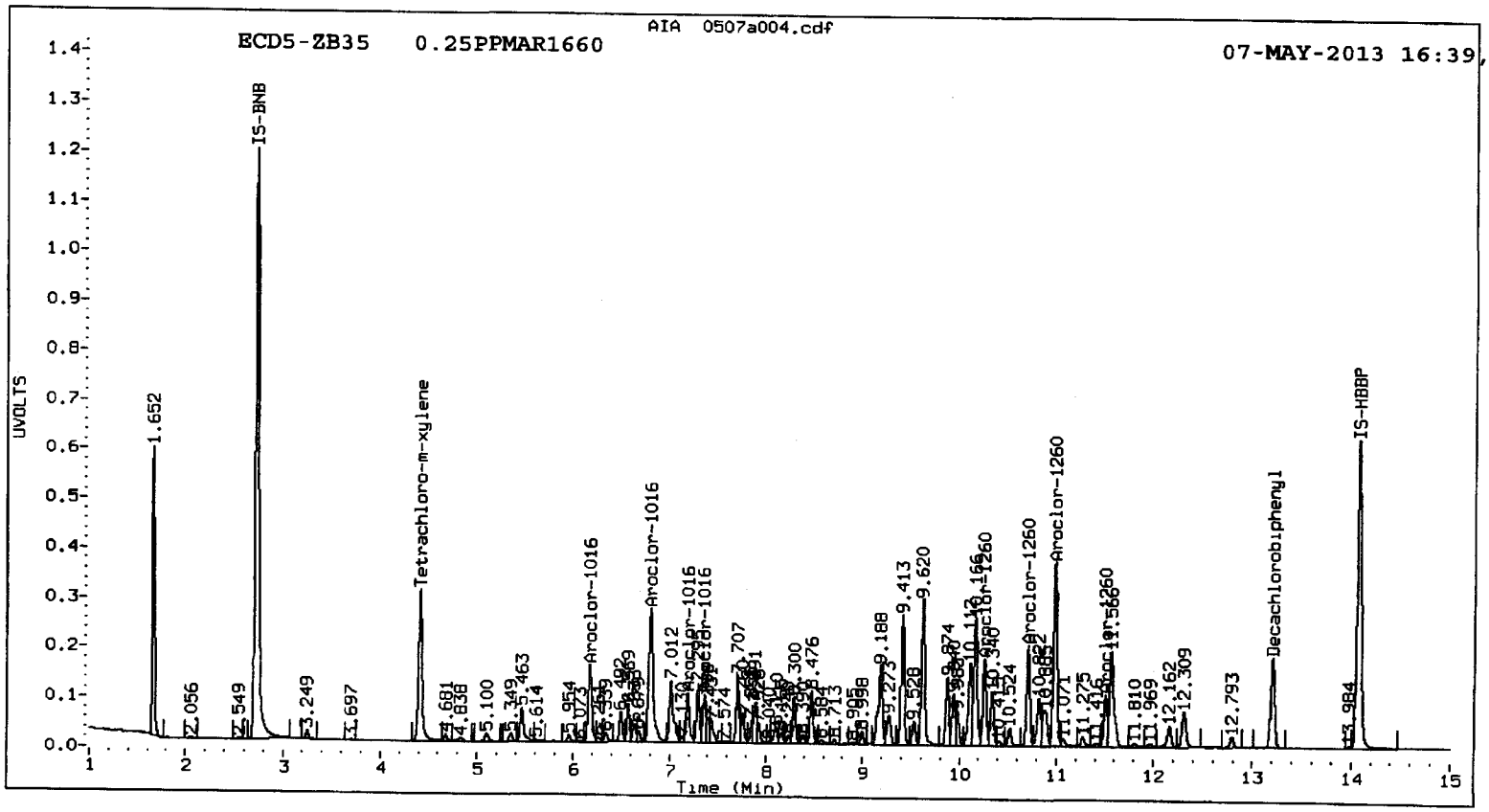
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Tetrachloro-m-xylene
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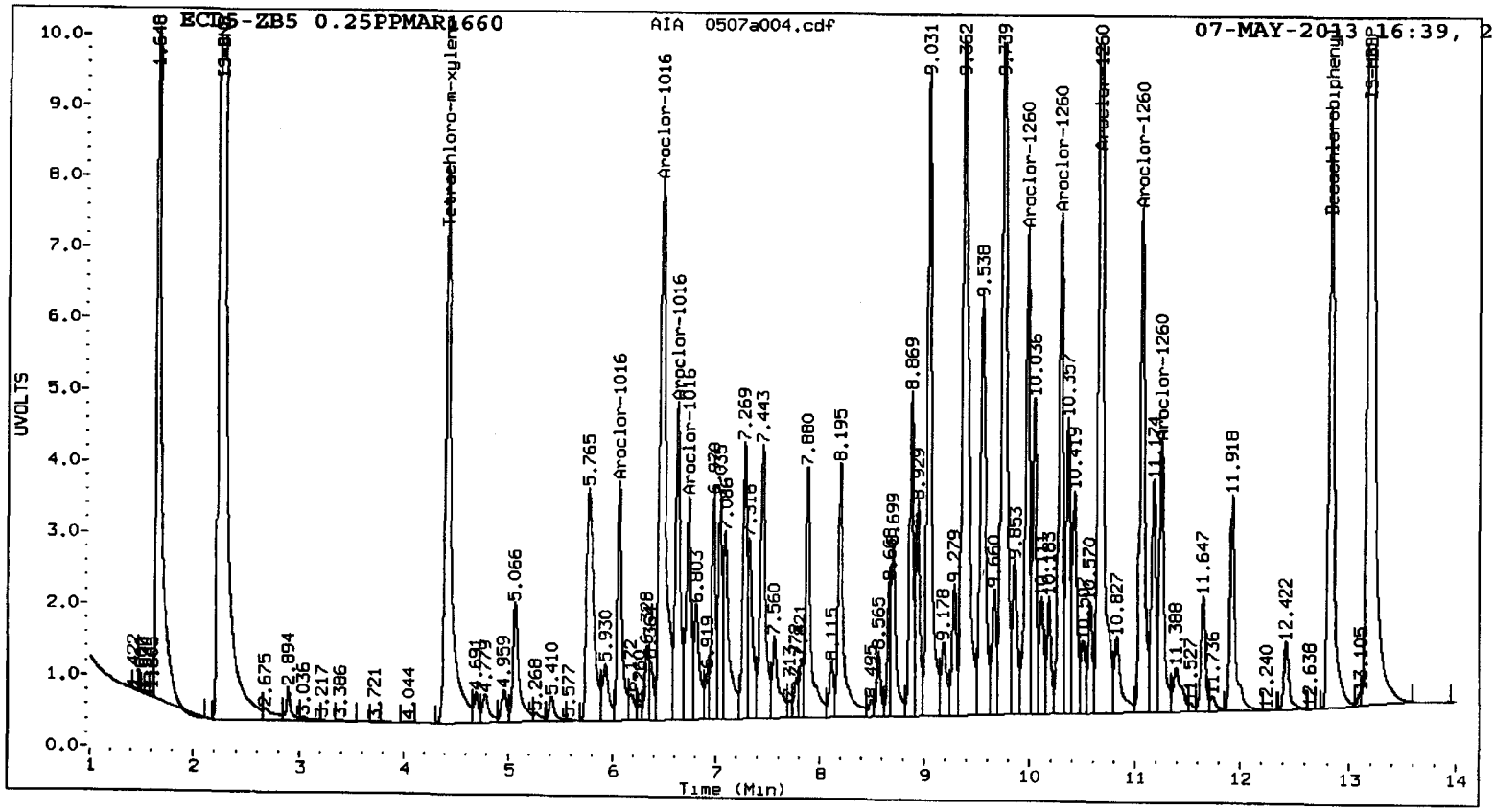
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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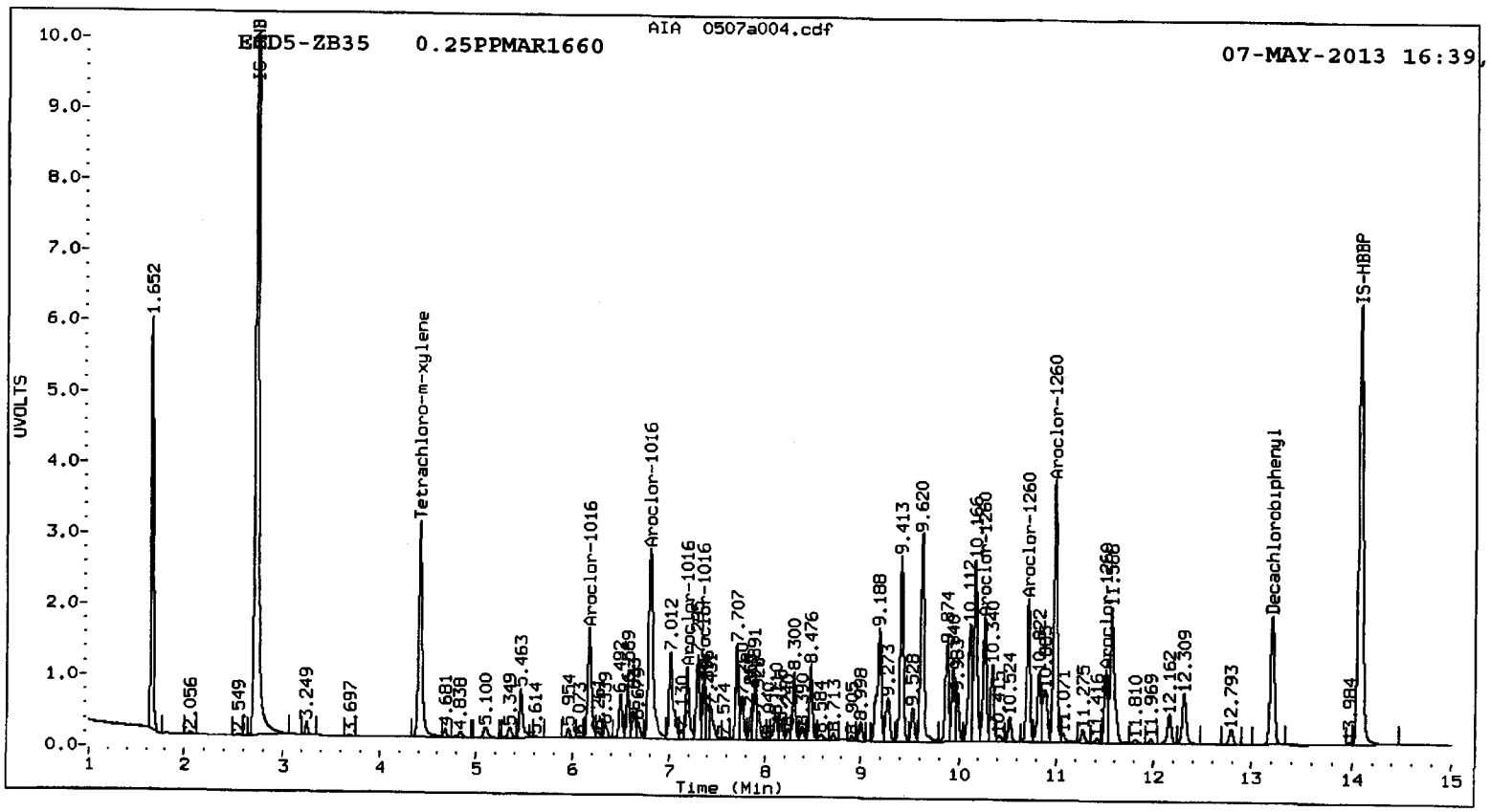
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a005.d
Data file 2: 20130507.b/ical-2.b/0507a005.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.411	0.001	1277251	4.413	0.002	336292	1.6	1.7	2.1	Tetrachloro-m-xylen
12.828	0.000	1463829	13.206	0.001	269190	1.9	2.0	2.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	4.1	4.2
Decachlorobiphenyl	4.9	5.0

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49978735	2.0
Hexabromobiphenyl	50004151	50389911	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14776833	-0.4
Hexabromobiphenyl	9345340	9354827	0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

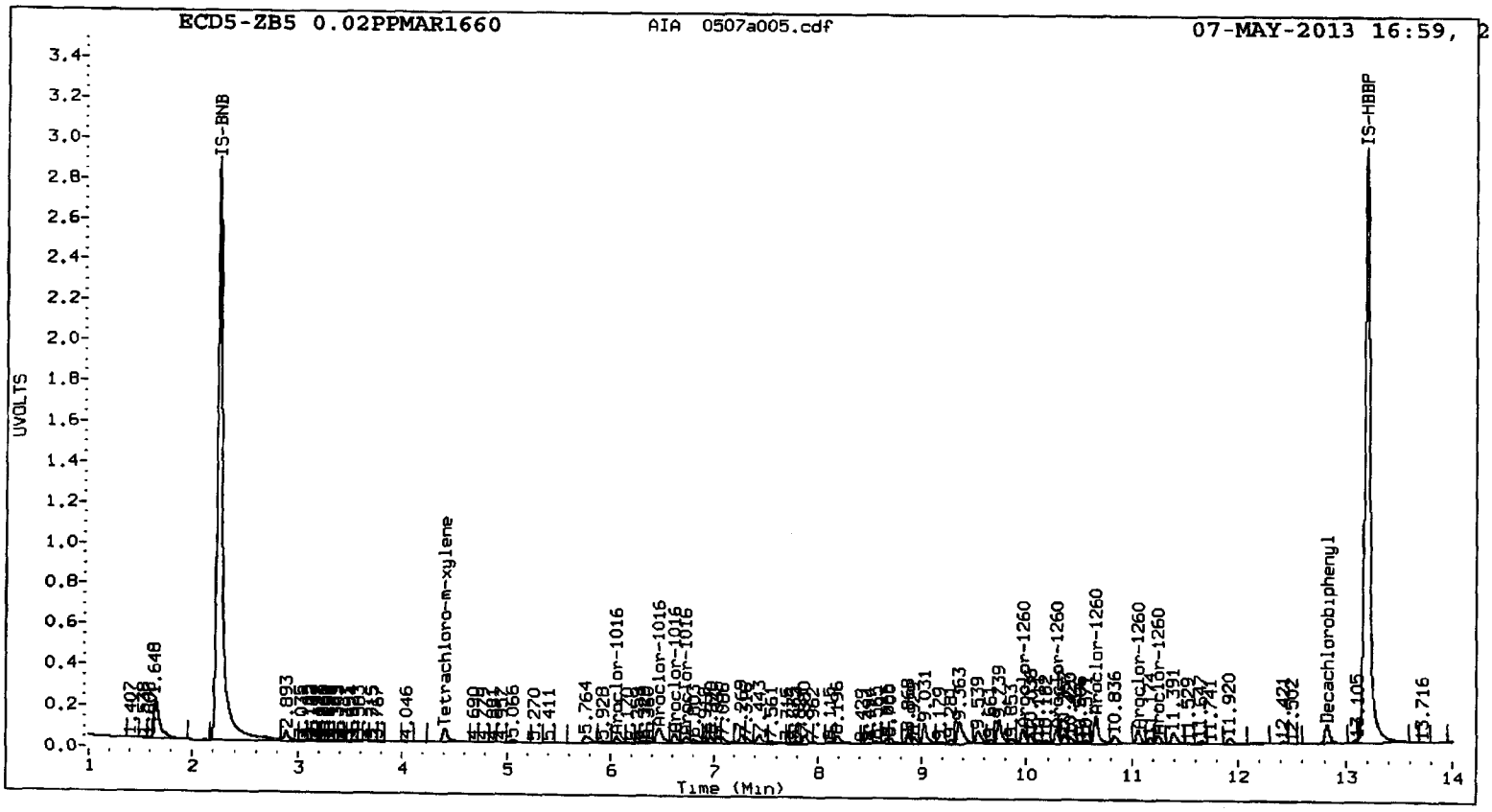
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	522973	23.2	1	6.167	0.001	189742	22.5
Aroclor-1016	2	6.471	0.003	1616098	23.3	2	6.805	0.004	412537	22.5
Aroclor-1016	3	6.620	0.004	735232	23.6	3	7.188	0.003	102632	21.4
Aroclor-1016	4	6.731	0.003	539914	23.2	4	7.360	0.002	101879	22.8
Total Col1Ave (4 peaks):					23.3	Total Col2Ave (4 peaks):			22.3	RPD = 5
Corrected Ave (3 peaks):					23.2	Corrected Ave (3 peaks):			22.1	RPD = 5
Aroclor-1260	1	9.968	0.001	1019399	24.7	1	10.262	0.002	197758	23.3
Aroclor-1260	2	10.284	0.001	943544	23.1	2	10.711	0.002	225842	22.7
Aroclor-1260	3	10.661	0.001	2188991	22.3	3	10.987	0.002	394454	21.5
Aroclor-1260	4	11.060	0.003	1060689	22.2	4	11.507	0.002	113428	22.8
Aroclor-1260	5	11.249	0.002	541330	21.2	NS	---			----
Total Col1Ave (5 peaks):					22.7	Total Col2Ave (4 peaks):			22.6	RPD = 0
Corrected Ave (4 peaks):					22.2	Corrected Ave (3 peaks):			22.3	RPD = 1

Total PCB Area Col1 (4.511 - 12.728) = 32498603 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 6010068 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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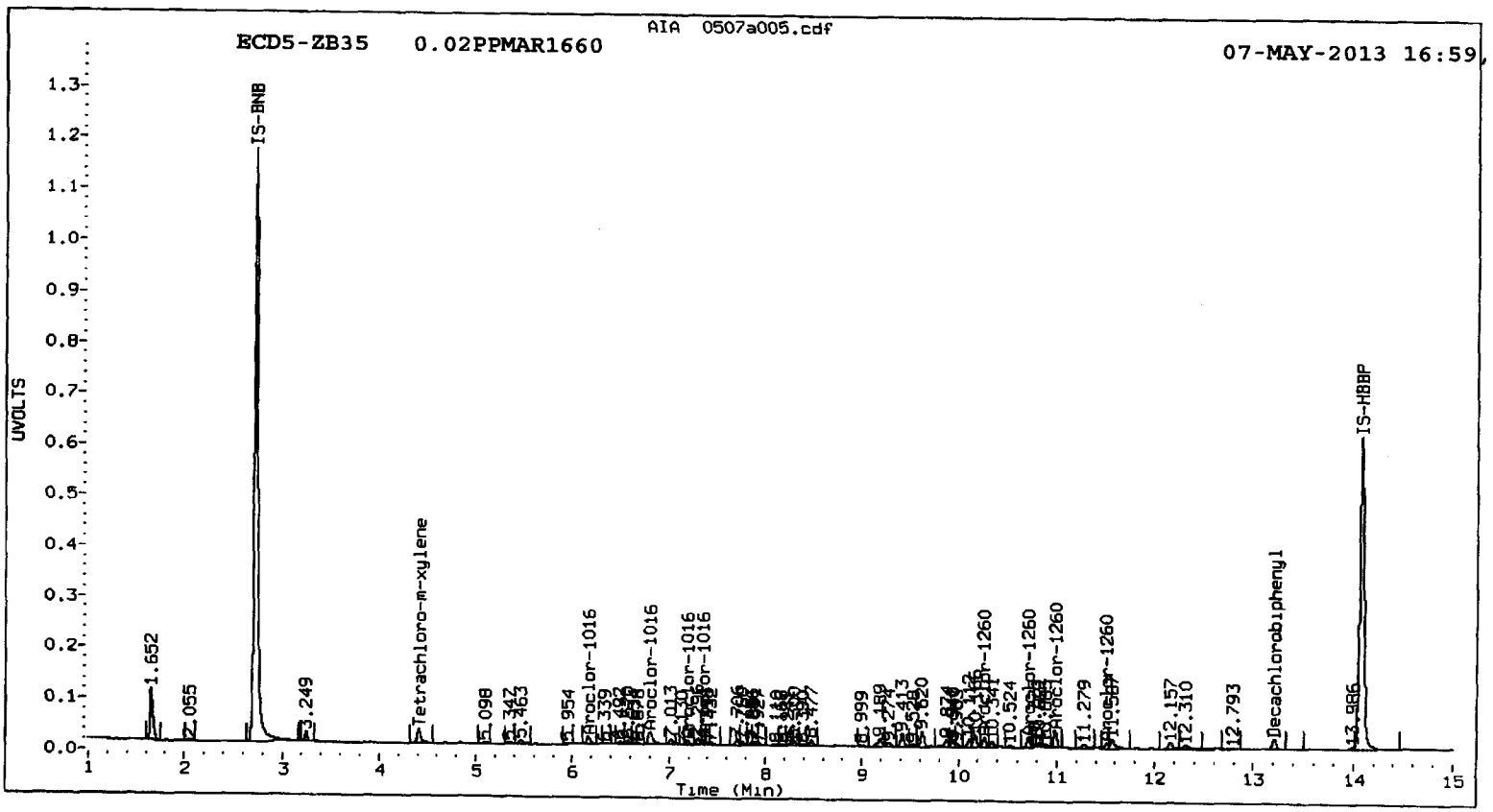
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)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Tetrachloro-m-xylene
Decachlorobiphenyl
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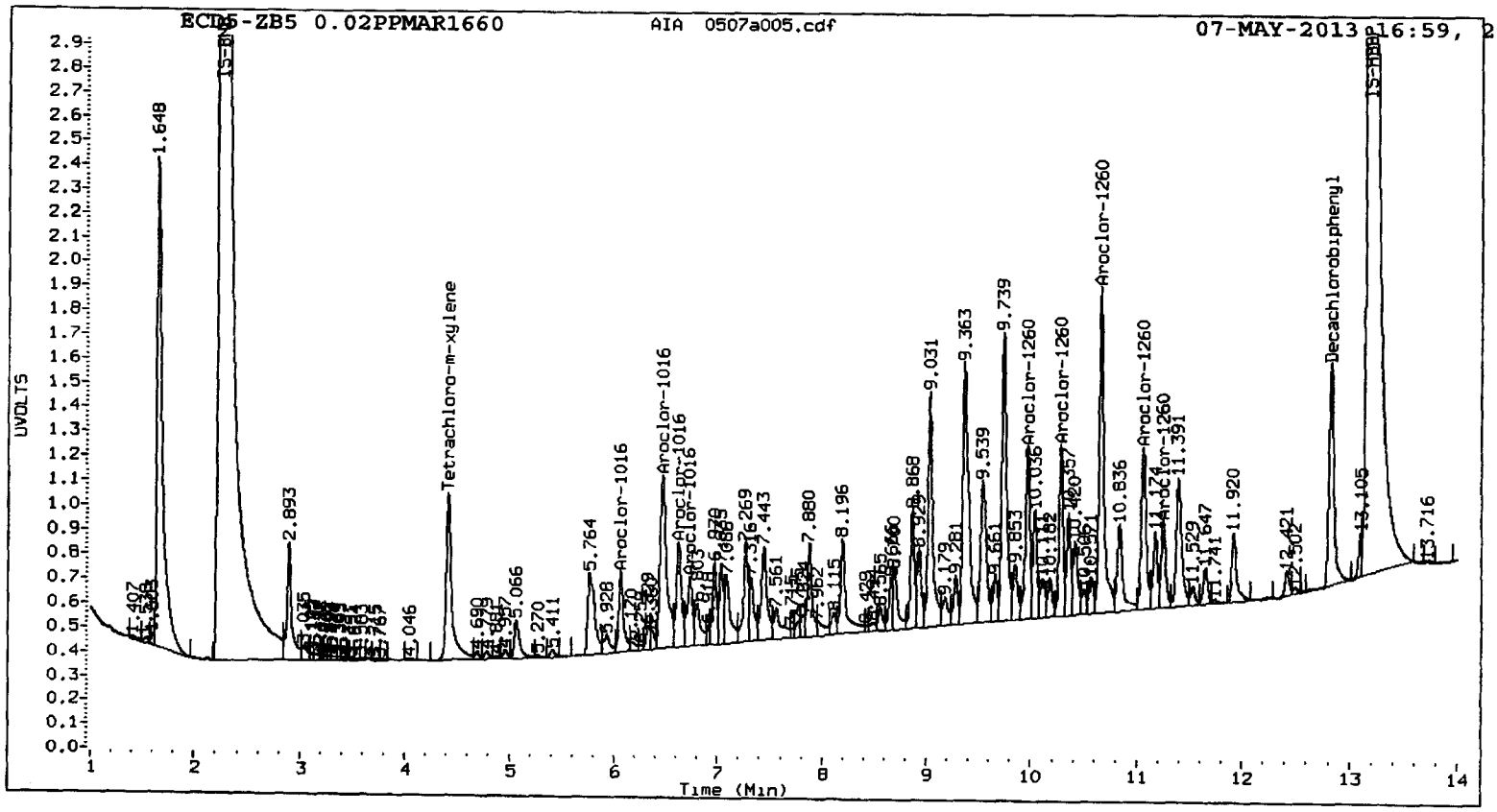
Time (Min)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Time (Min)
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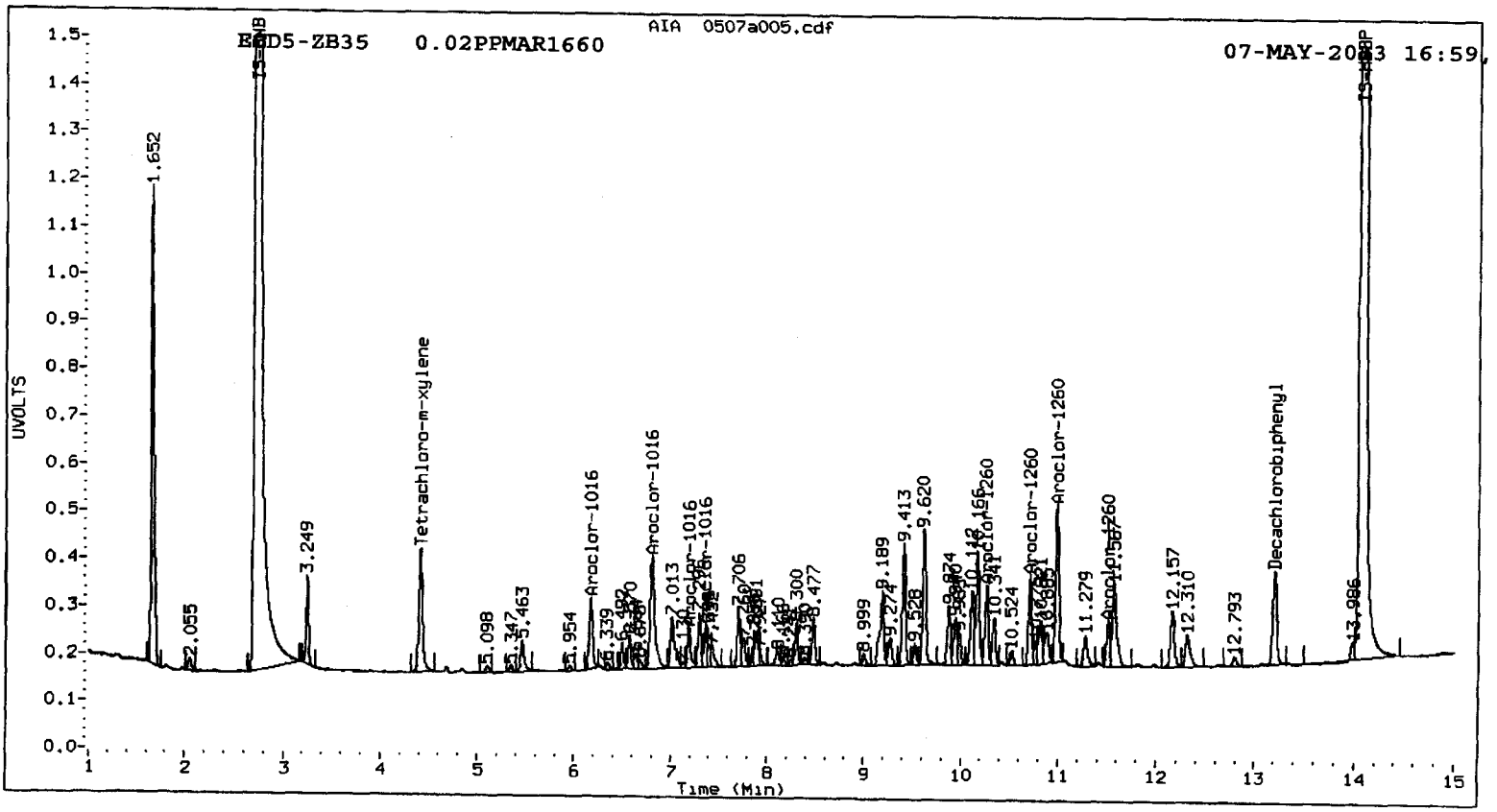
Decachlorobiphenyl
13.716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UVOLTS
Time (Min)
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3.249
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
13.986

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a006.d
Data file 2: 20130507.b/ical-2.b/0507a006.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.001	3240306	4.413	0.001	828310	4.1	4.1	0.9	Tetrachloro-m-xylen
12.828	0.000	3422581	13.205	0.000	610804	4.3	4.3	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	10.3	10.2
Decachlorobiphenyl	10.8	10.8

JR 05/07/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50752482	3.6
Hexabromobiphenyl	50004151	53170067	6.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15017003	1.2
Hexabromobiphenyl	9345340	9808139	5.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

WS21:01266

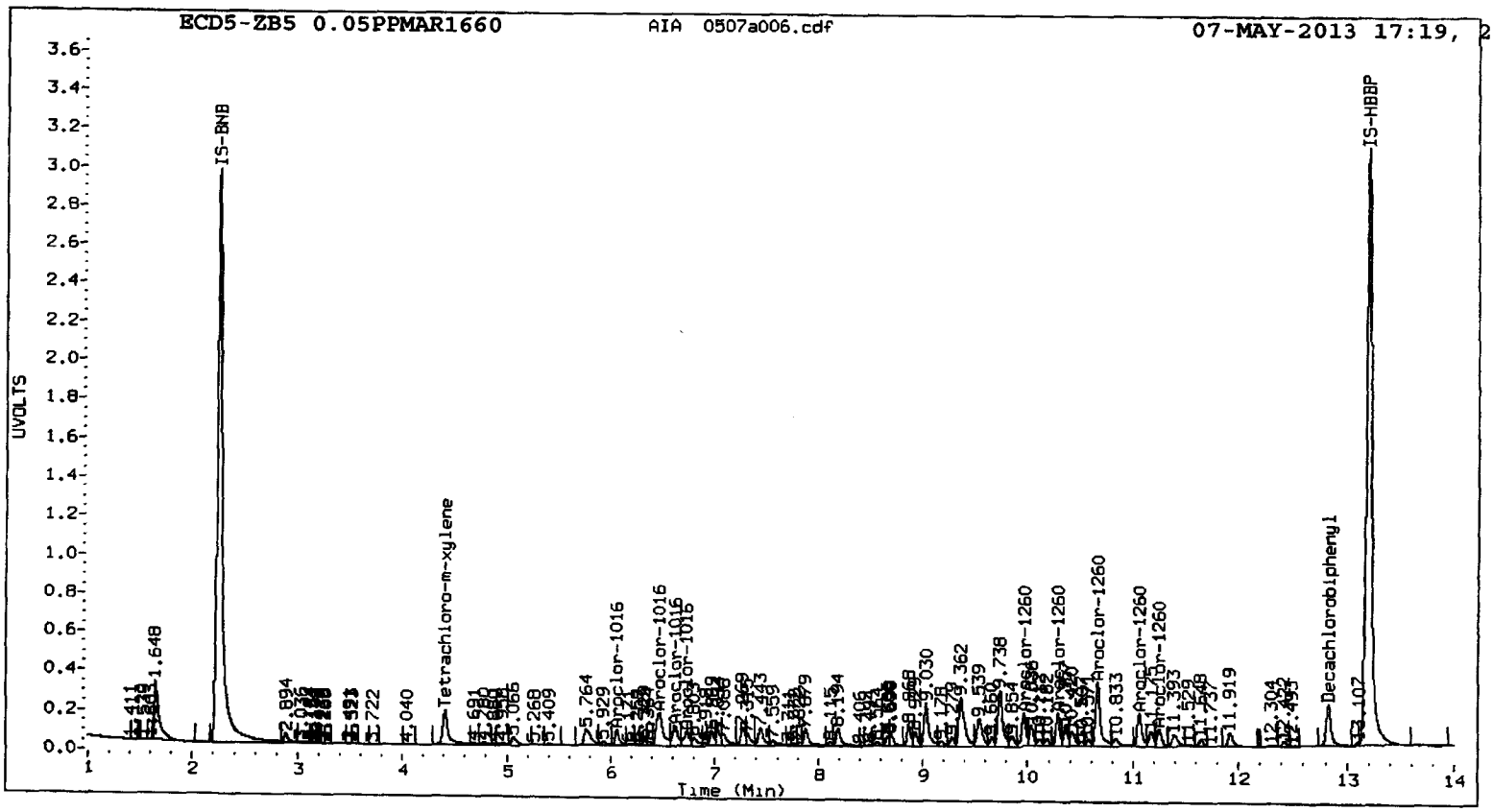
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	1244105	54.4	1	6.167	0.001	479006	55.9
Aroclor-1016	2	6.471	0.002	3811814	54.1	2	6.804	0.003	997455	53.5
Aroclor-1016	3	6.620	0.003	1731330	54.8	3	7.187	0.002	252974	51.9
Aroclor-1016	4	6.731	0.003	1291534	54.7	4	7.359	0.001	242005	53.3
Total Col1Ave (4 peaks):					54.5	Total Col2Ave (4 peaks):				53.7 RPD = 2
Corrected Ave (3 peaks):					54.4	Corrected Ave (3 peaks):				52.9 RPD = 3
Aroclor-1260	1	9.968	0.001	2372653	54.5	1	10.262	0.002	480726	54.0
Aroclor-1260	2	10.284	0.001	2245127	52.0	2	10.711	0.002	554671	53.2
Aroclor-1260	3	10.661	0.001	5376976	51.9	3	10.987	0.003	1024158	53.2
Aroclor-1260	4	11.059	0.002	2614350	51.8	4	11.507	0.002	280398	53.8
Aroclor-1260	5	11.248	0.001	1399830	51.9	NS	---			----
Total Col1Ave (5 peaks):					52.4	Total Col2Ave (4 peaks):				53.6 RPD = 2
Corrected Ave (4 peaks):					51.9	Corrected Ave (3 peaks):				53.4 RPD = 3

Total PCB Area Col1 (4.511 - 12.728) = 73710860 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 14729318 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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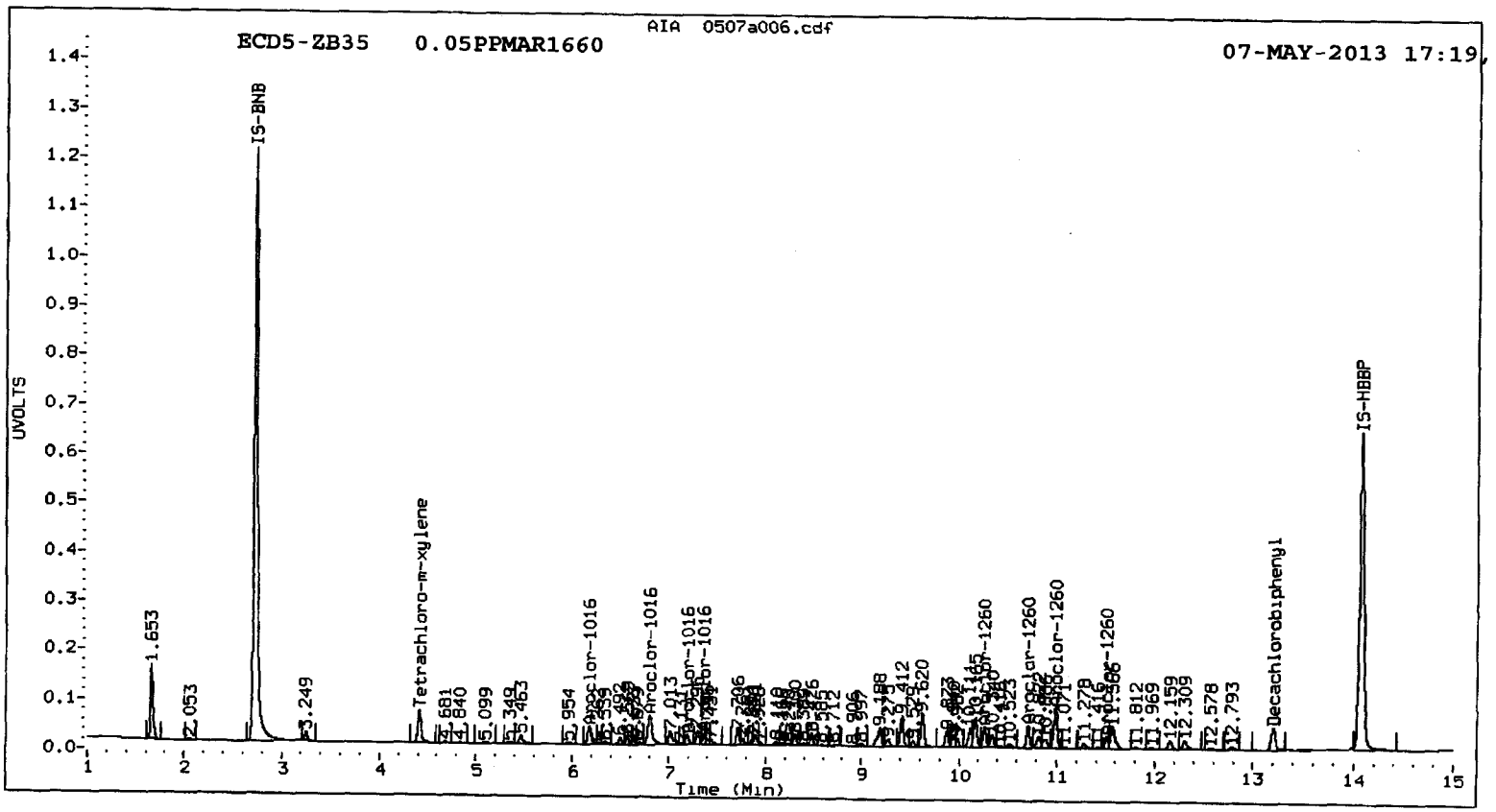
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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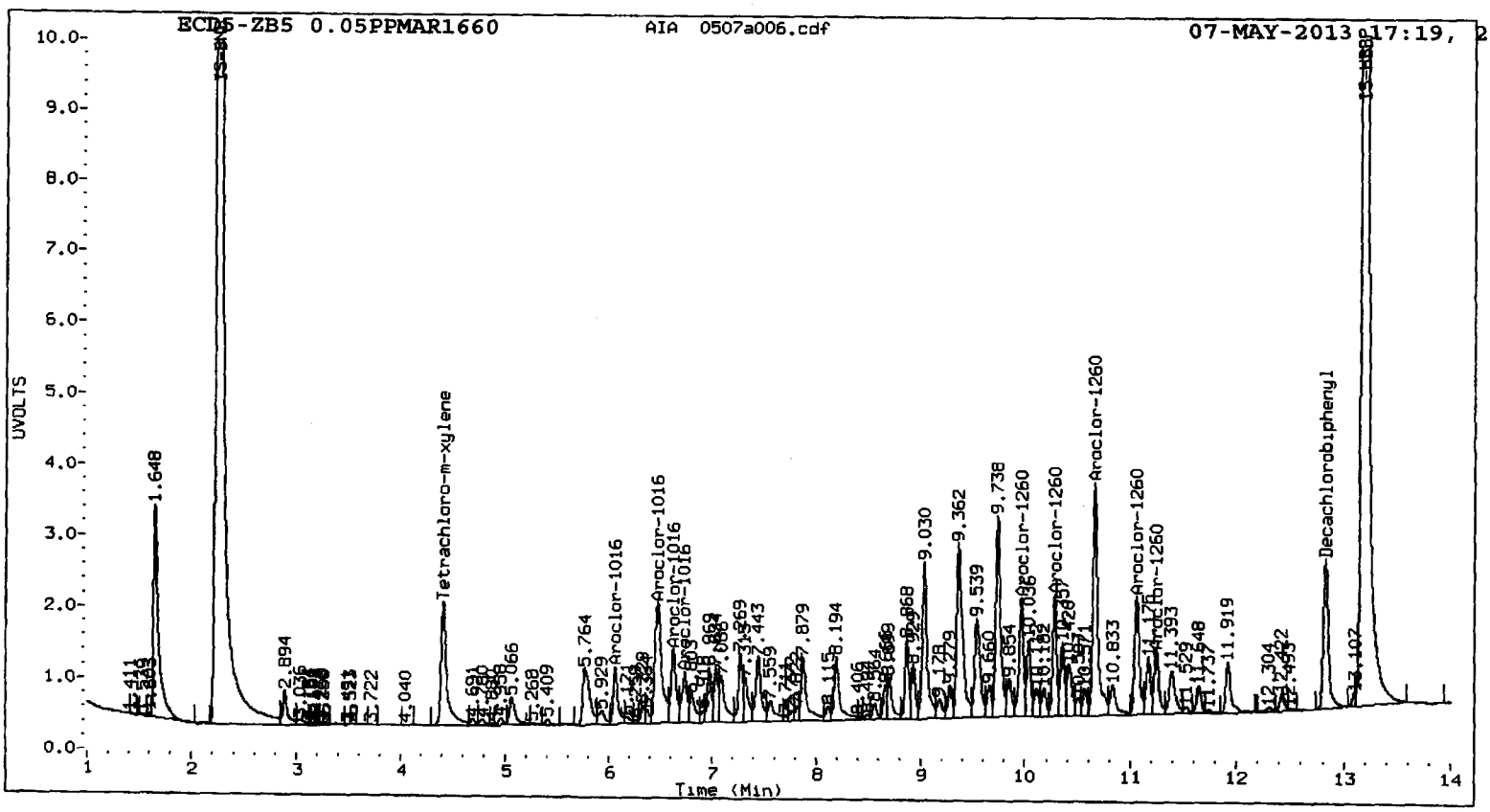
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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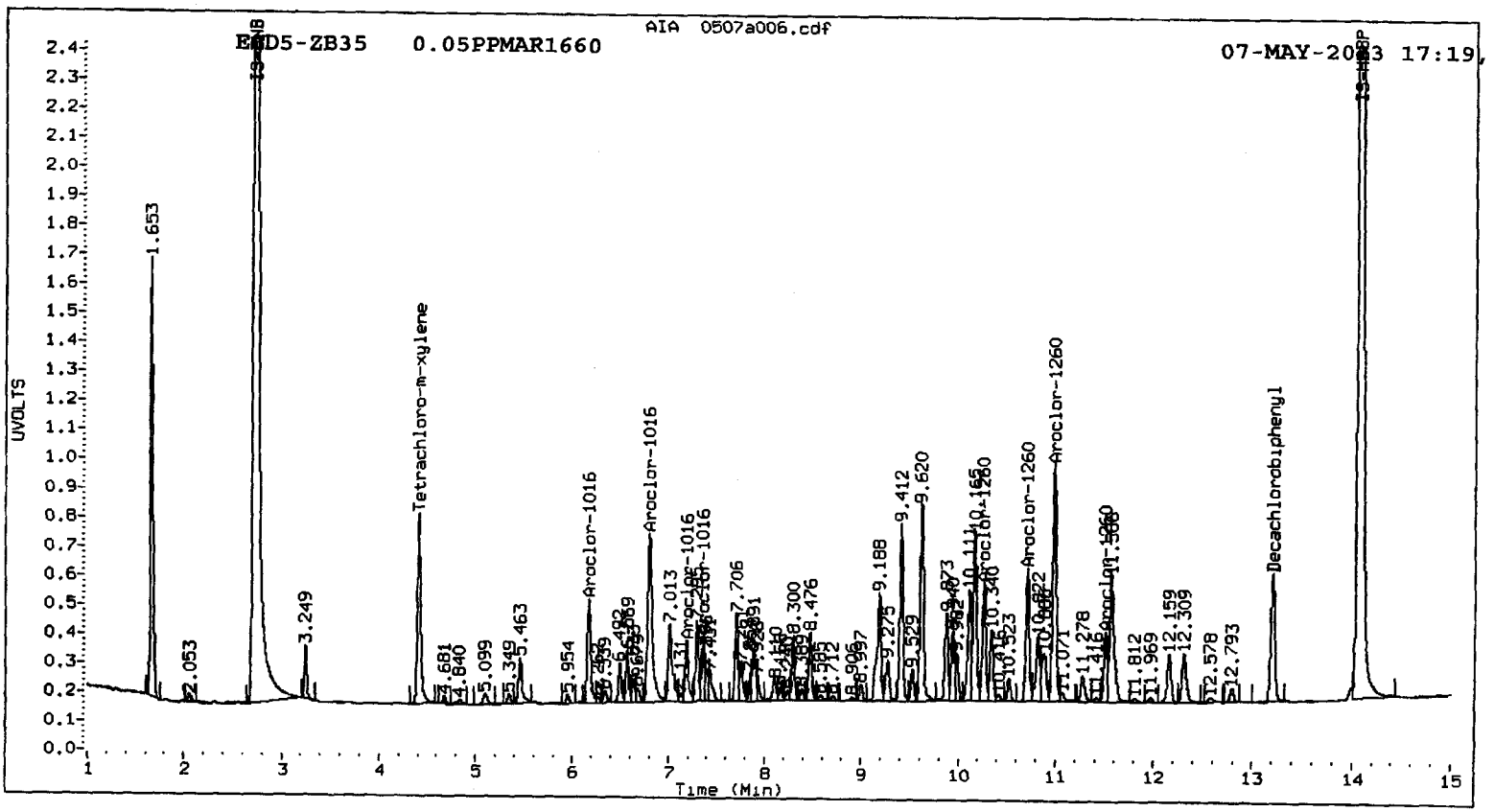
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a007.d
Data file 2: 20130507.b/ical-2.b/0507a007.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	56438104	4.414	0.003	14978631	73.7	74.5	1.0	Tetrachloro-m-xylen
12.827	-0.001	54253911	13.203	-0.002	9605990	68.2	67.4	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/08/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	184.4	186.3
Decachlorobiphenyl	170.5	168.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49361946	0.8
Hexabromobiphenyl	50004151	53269354	6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14864205	0.2
Hexabromobiphenyl	9345340	9909484	6.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

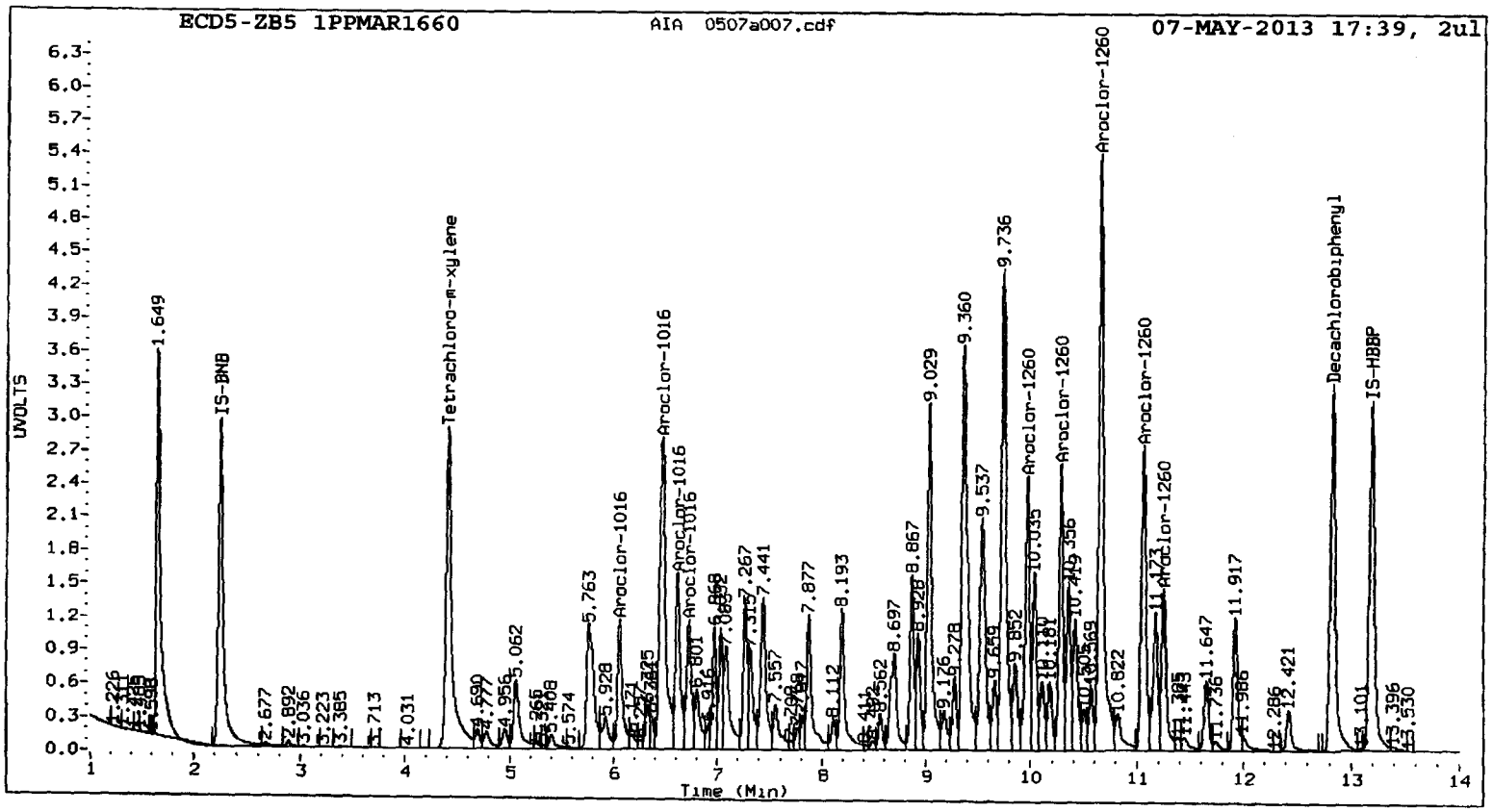
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.059	-0.001	18746470	842.5	1	6.167	0.001	6930745	817.2
Aroclor-1016	2	6.467	-0.002	57649136	841.1	2	6.801	0.000	15666487	849.6
Aroclor-1016	3	6.616	-0.001	25366020	826.1	3	7.186	0.000	4302384	892.4
Aroclor-1016	4	6.727	-0.001	19267159	839.8	4	7.359	0.001	3794728	845.1
Total Col1Ave (4 peaks):					837.4	Total Col2Ave (4 peaks):				851.1 RPD = 2
Corrected Ave (3 peaks):					835.7	Corrected Ave (3 peaks):				837.3 RPD = 0
Aroclor-1260	1	9.967	0.000	34921569	800.5	1	10.260	0.000	7411124	824.6
Aroclor-1260	2	10.283	-0.001	34401497	795.2	2	10.709	0.000	8889960	844.4
Aroclor-1260	3	10.659	0.000	86265488	831.6	3	10.986	0.001	16951381	872.0
Aroclor-1260	4	11.057	0.000	42604682	843.2	4	11.506	0.000	4533121	860.2
Aroclor-1260	5	11.247	0.000	23577619	872.2	NS	---			----
Total Col1Ave (5 peaks):					828.6	Total Col2Ave (4 peaks):				850.3 RPD = 3
Corrected Ave (4 peaks):					817.6	Corrected Ave (3 peaks):				843.1 RPD = 3

Total PCB Area Col1 (4.511 - 12.728) = 1078983721 Col1 Total PCB = 1.8 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 230522338 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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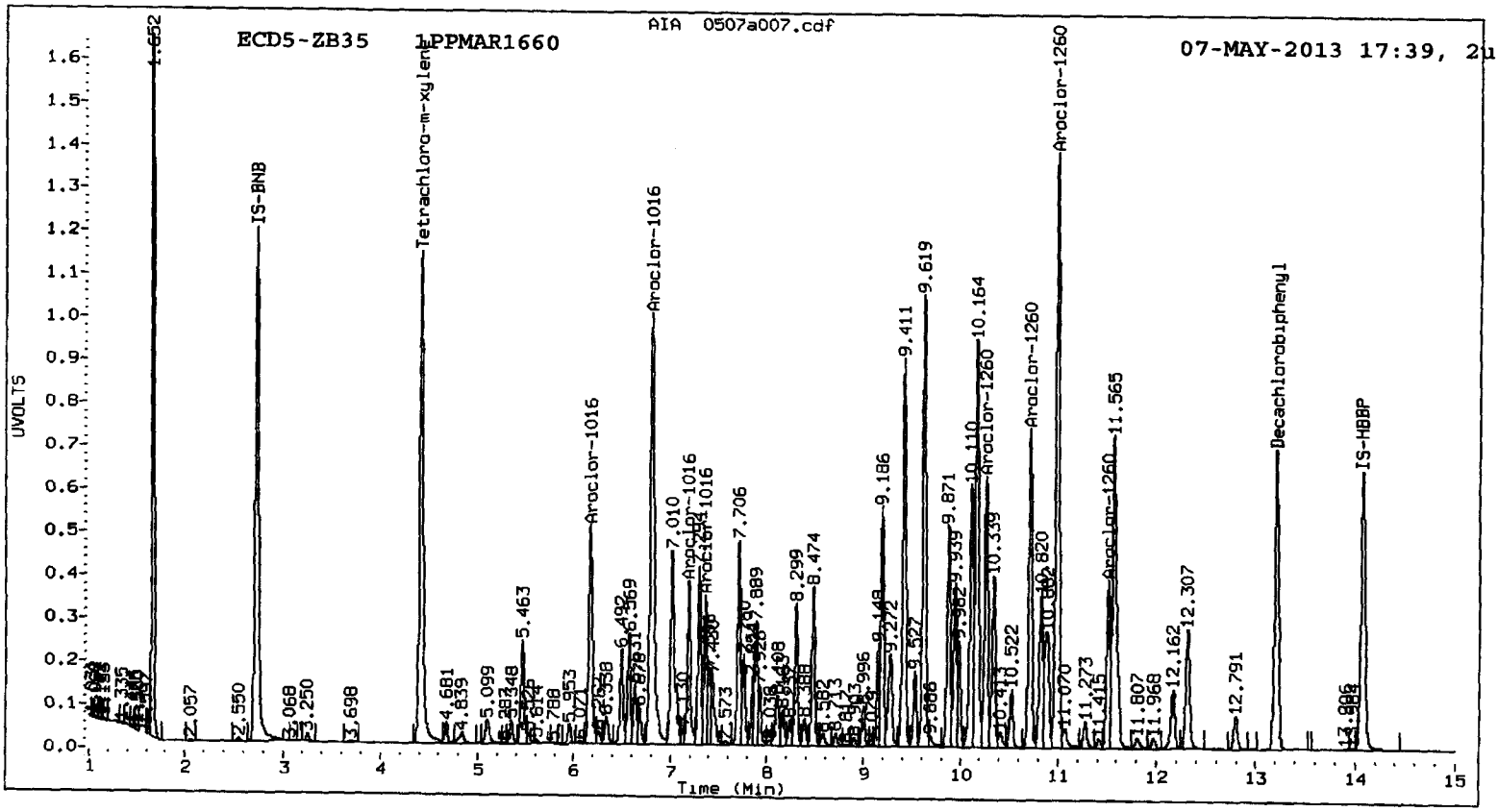
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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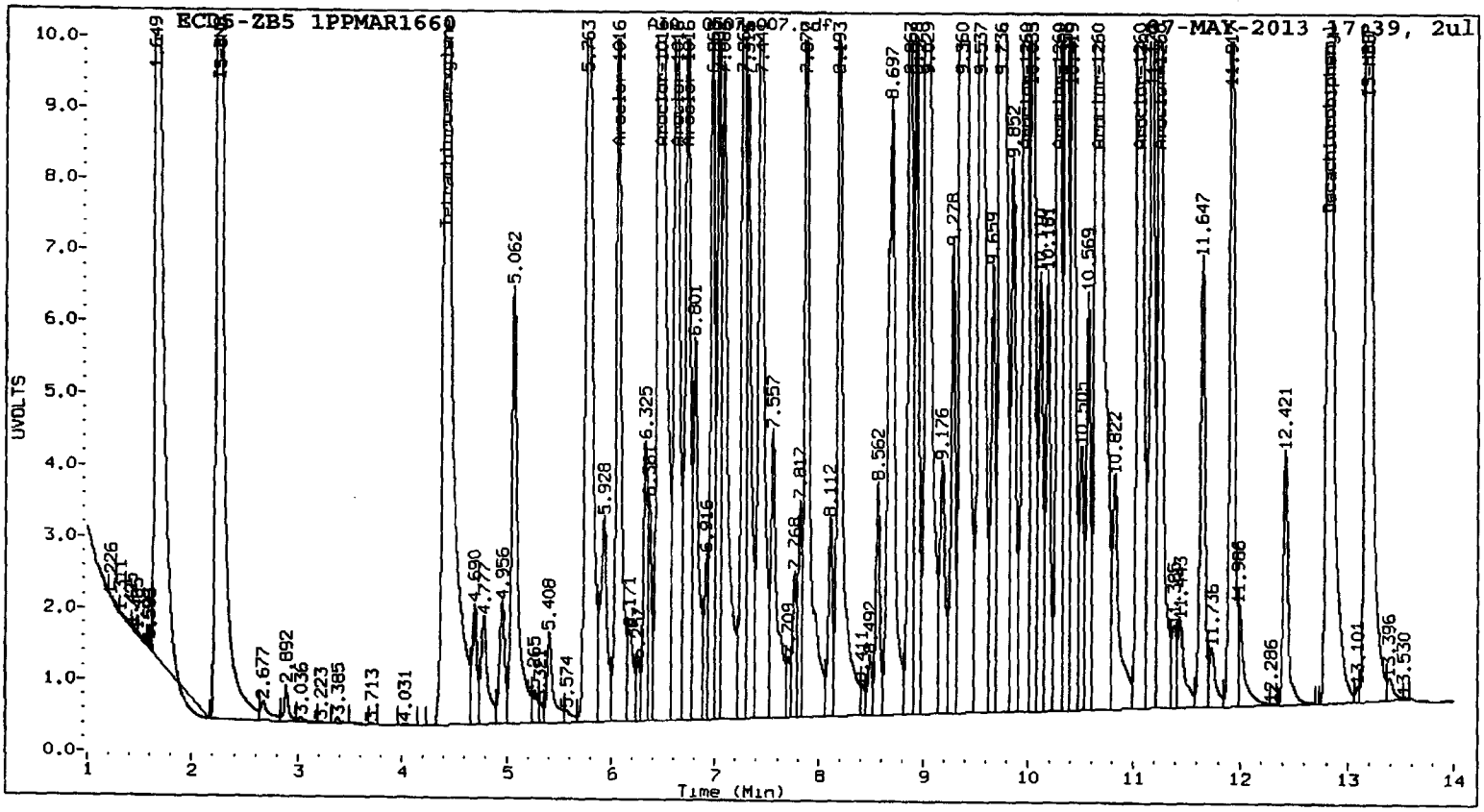
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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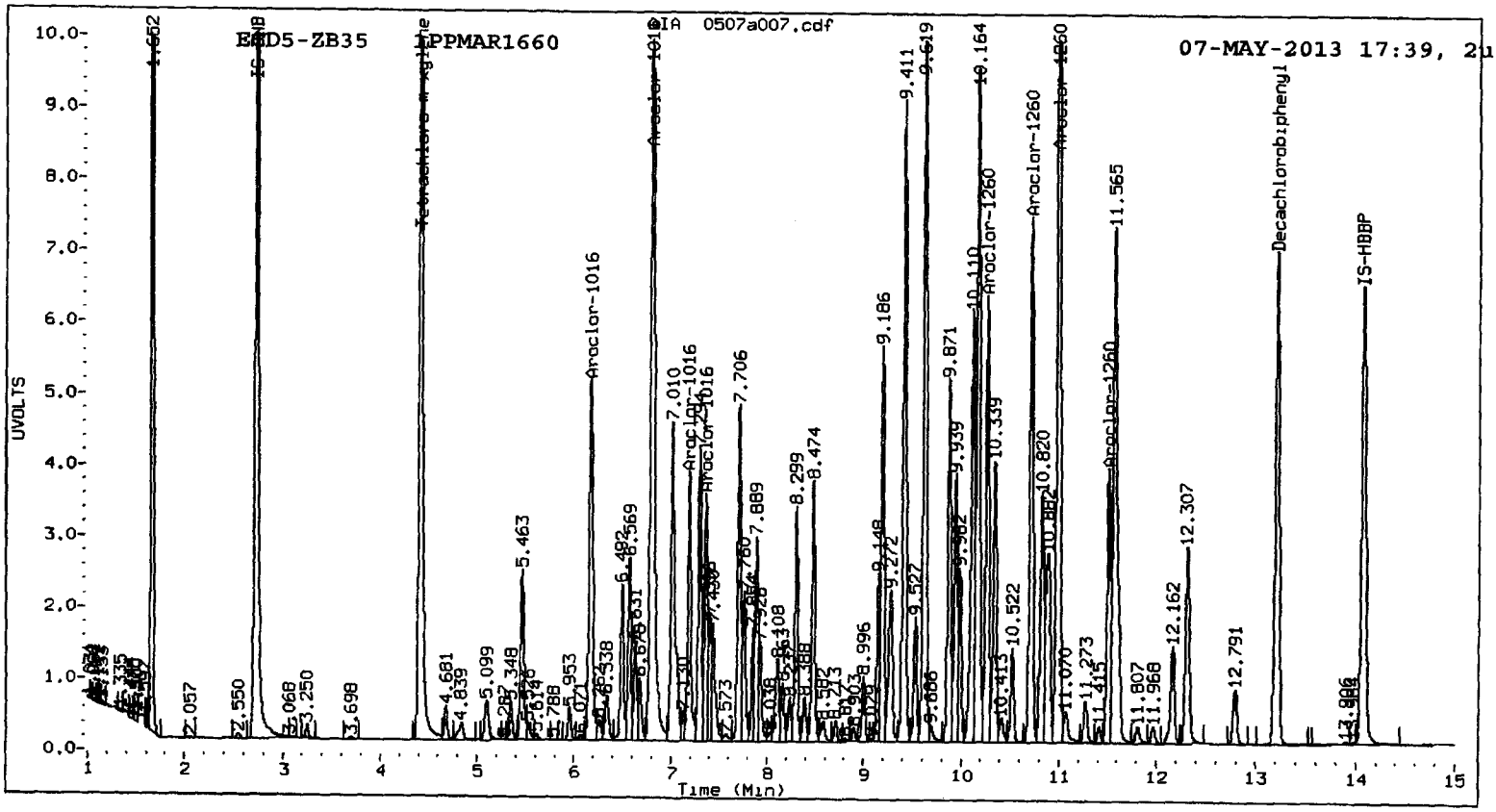
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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07-MAY-2013 17:39, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a008.d
Data file 2: 20130507.b/ical-2.b/0507a008.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	6731015	4.413	0.001	1684319	8.4	8.1	3.5	Tetrachloro-m-xylen
12.828	0.000	6587362	13.204	-0.001	1145480	8.2	8.1	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	21.0	20.3
Decachlorobiphenyl	20.5	20.2

JS 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51692067	5.5
Hexabromobiphenyl	50004151	53692342	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15354151	3.5
Hexabromobiphenyl	9345340	9856374	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

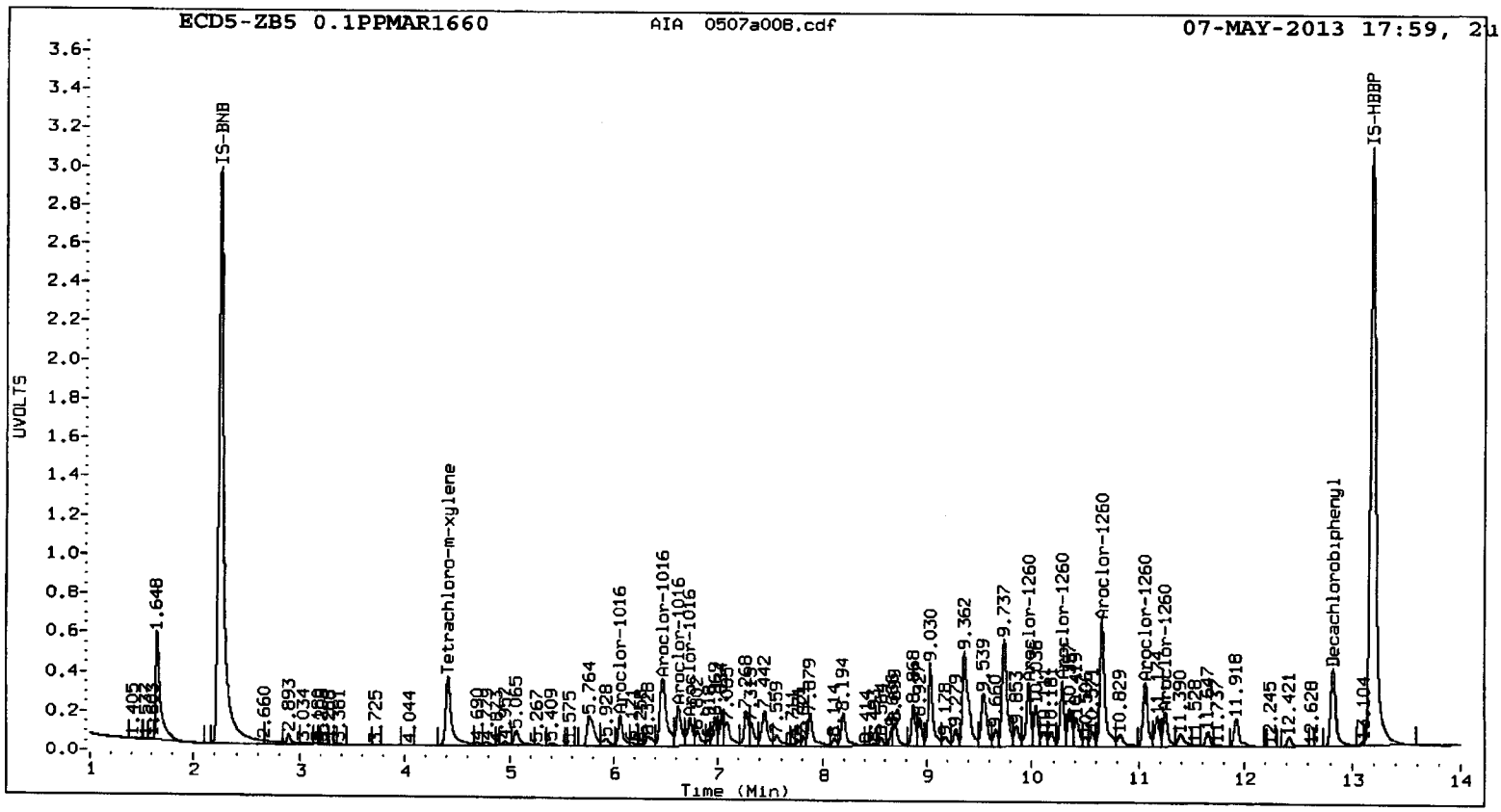
Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.061	0.000	2455484	105.4	1	6.167	0.001	933103	106.5
Aroclor-1016	2	6.469	0.001	7585703	105.7	2	6.803	0.003	2002074	105.1
Aroclor-1016	3	6.619	0.002	3398868	105.7	3	7.187	0.002	525355	105.5
Aroclor-1016	4	6.730	0.002	2540359	105.7	4	7.359	0.001	491272	105.9
Total Col1Ave (4 peaks):					105.6	Total Col2Ave (4 peaks):				105.8 RPD = 0
Corrected Ave (3 peaks):					105.6	Corrected Ave (3 peaks):				105.5 RPD = 0
Aroclor-1260	1	9.967	0.001	4612344	104.9	1	10.262	0.002	936375	104.7
Aroclor-1260	2	10.284	0.001	4422973	101.4	2	10.710	0.001	1090787	104.2
Aroclor-1260	3	10.660	0.000	10624516	101.6	3	10.986	0.001	2021333	104.5
Aroclor-1260	4	11.059	0.001	5142675	101.0	4	11.507	0.002	538050	102.7
Aroclor-1260	5	11.248	0.001	2788613	102.3	NS	---			----
Total Col1Ave (5 peaks):					102.3	Total Col2Ave (4 peaks):				104.0 RPD = 2
Corrected Ave (4 peaks):					101.6	Corrected Ave (3 peaks):				103.8 RPD = 2

Total PCB Area Col1 (4.511 - 12.728) = 143086545 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 29038947 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
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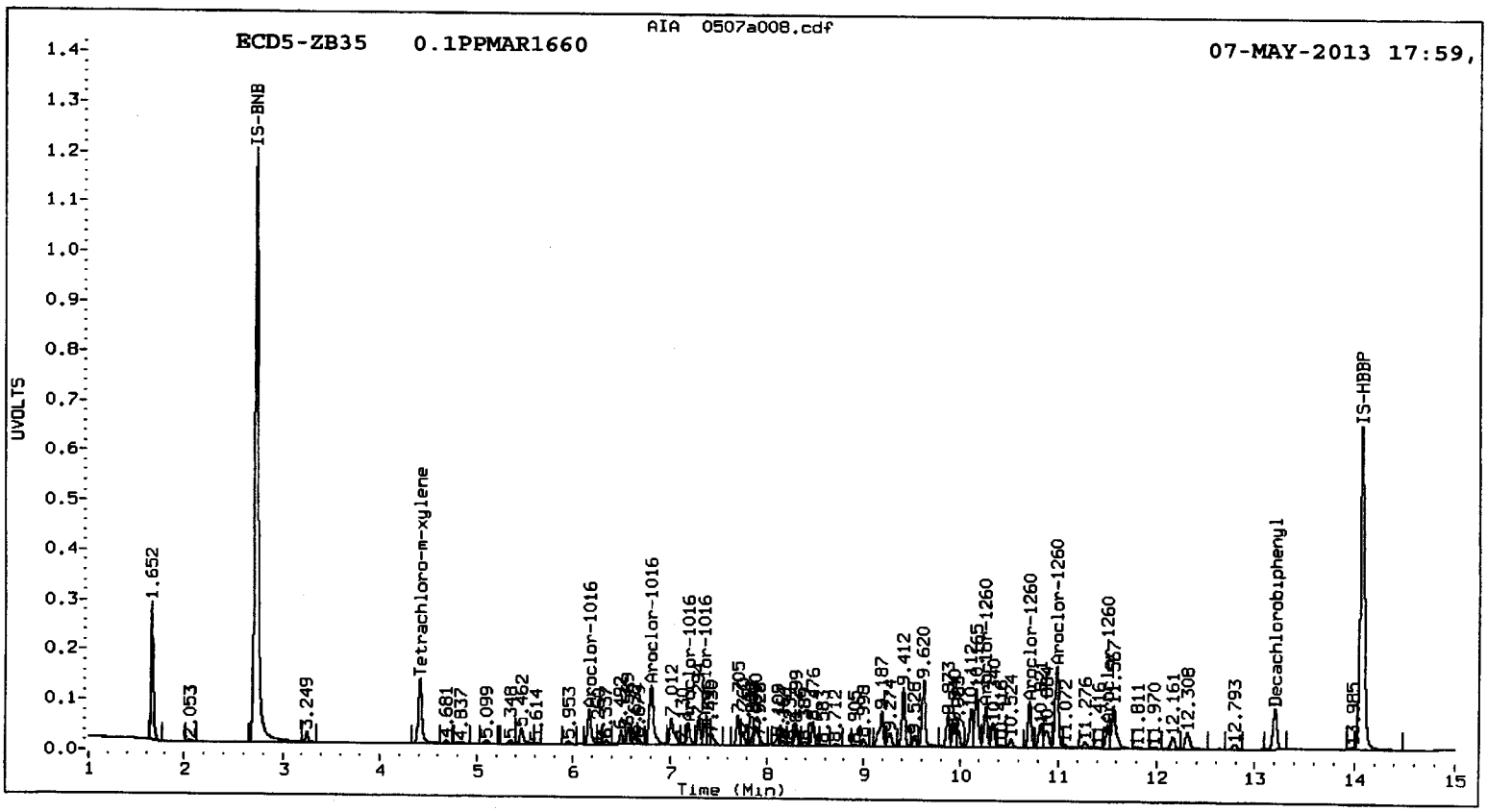
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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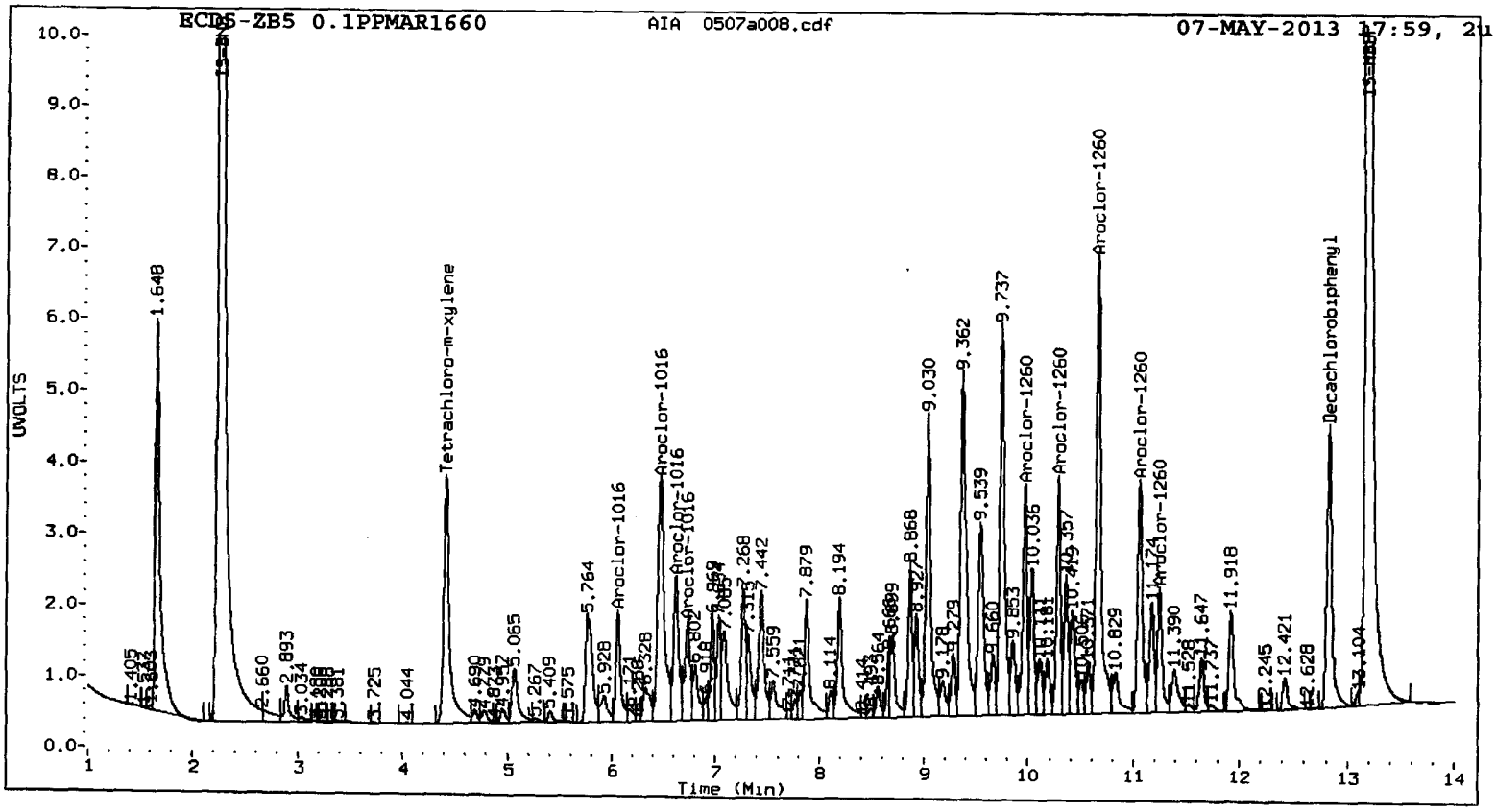
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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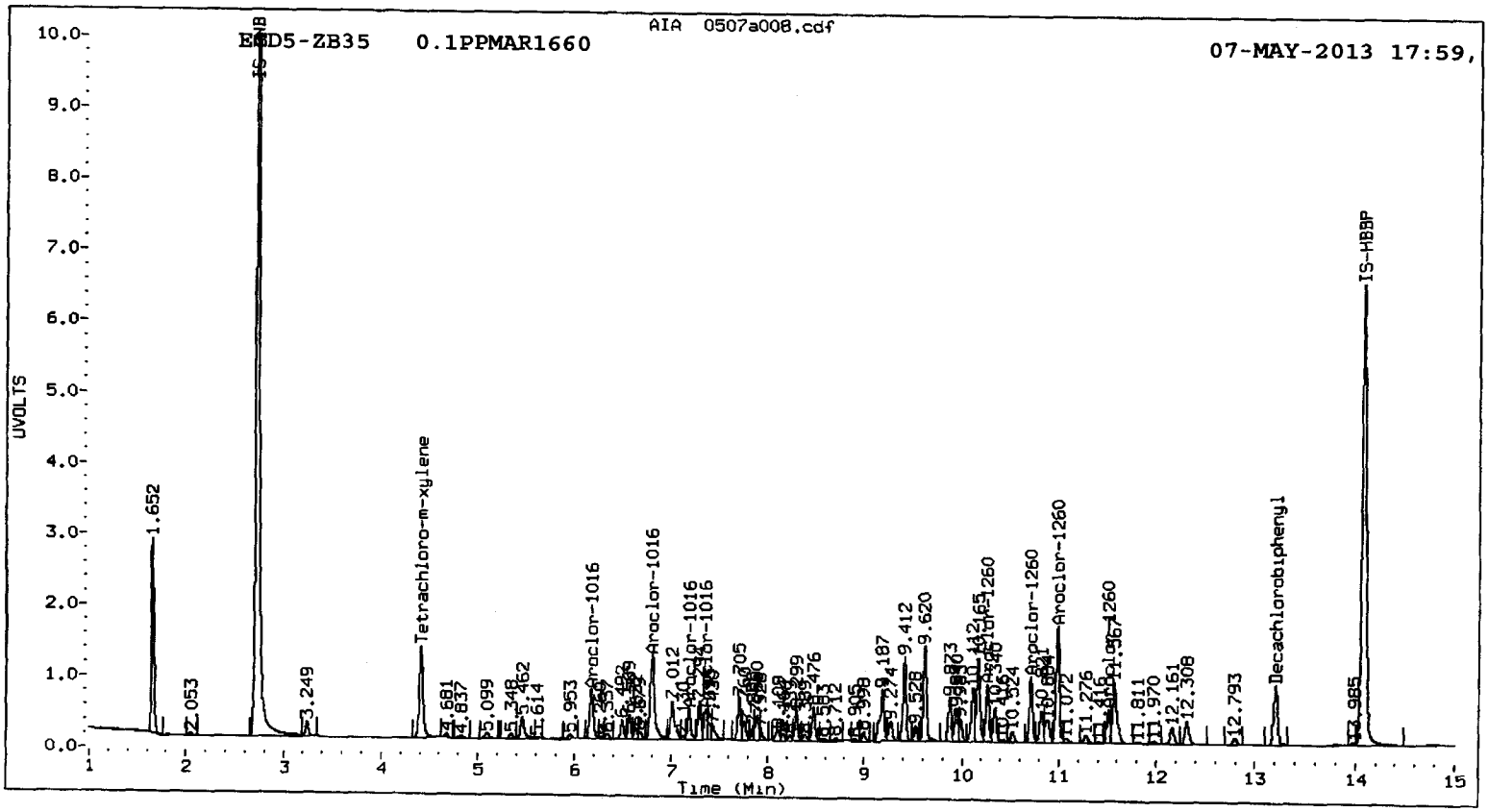
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Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a009.d
Data file 2: 20130507.b/ical-2.b/0507a009.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 18:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	30263952	4.412	0.001	7879158	38.6	39.1	1.3	Tetrachloro-m-xylen
12.827	-0.001	28353890	13.204	-0.001	4992554	35.6	35.6	0.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.6	97.8
Decachlorobiphenyl	89.0	88.9

5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50537542	3.2
Hexabromobiphenyl	50004151	53291913	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14890872	0.3
Hexabromobiphenyl	9345340	9751846	4.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

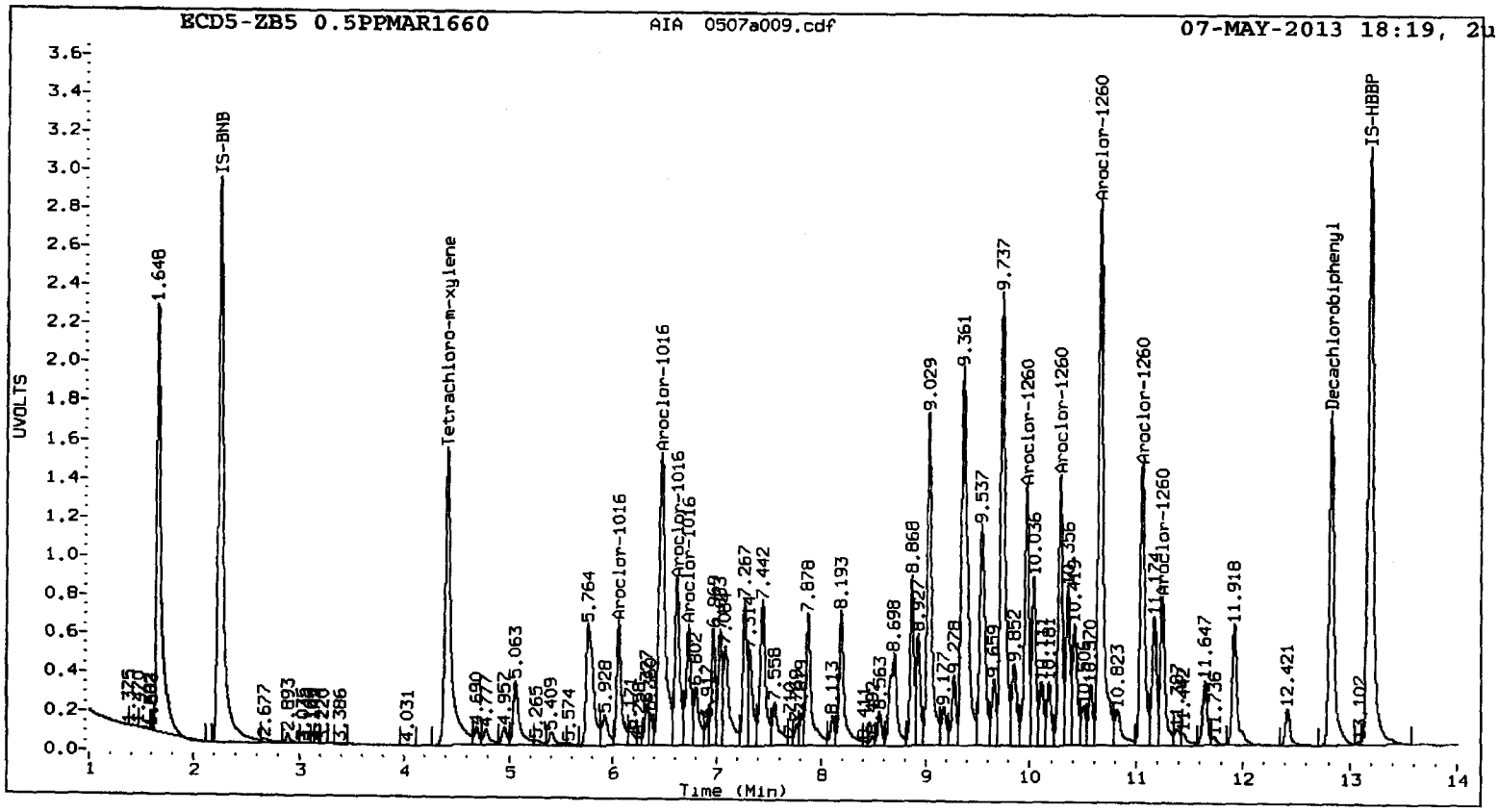
Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.060	0.000	10209142	448.2	1	6.166	0.000	3819812	449.6
Aroclor-1016	2	6.469	0.000	31525506	449.3	2	6.801	0.000	8527560	461.6
Aroclor-1016	3	6.617	0.000	13954591	443.9	3	7.185	0.000	2297705	475.7
Aroclor-1016	4	6.728	0.000	10550969	449.2	4	7.358	0.000	2075939	461.5
Total Col1Ave (4 peaks):					447.6	Total Col2Ave (4 peaks):				462.1 RPD = 3
Corrected Ave (3 peaks):					447.1	Corrected Ave (3 peaks):				457.6 RPD = 2
Aroclor-1260	1	9.967	0.000	19054399	436.6	1	10.260	0.000	3995682	451.7
Aroclor-1260	2	10.284	0.000	18658025	431.1	2	10.709	0.000	4769094	460.3
Aroclor-1260	3	10.659	0.000	46060556	443.9	3	10.985	0.000	9011917	471.1
Aroclor-1260	4	11.058	0.000	22756673	450.2	4	11.505	0.000	2389092	460.7
Aroclor-1260	5	11.247	0.000	12499862	462.2	NS	---			----
Total Col1Ave (5 peaks):					444.8	Total Col2Ave (4 peaks):				461.0 RPD = 4
Corrected Ave (4 peaks):					440.4	Corrected Ave (3 peaks):				457.6 RPD = 4

Total PCB Area Col1 (4.511 - 12.728) = 589049282 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 124374053 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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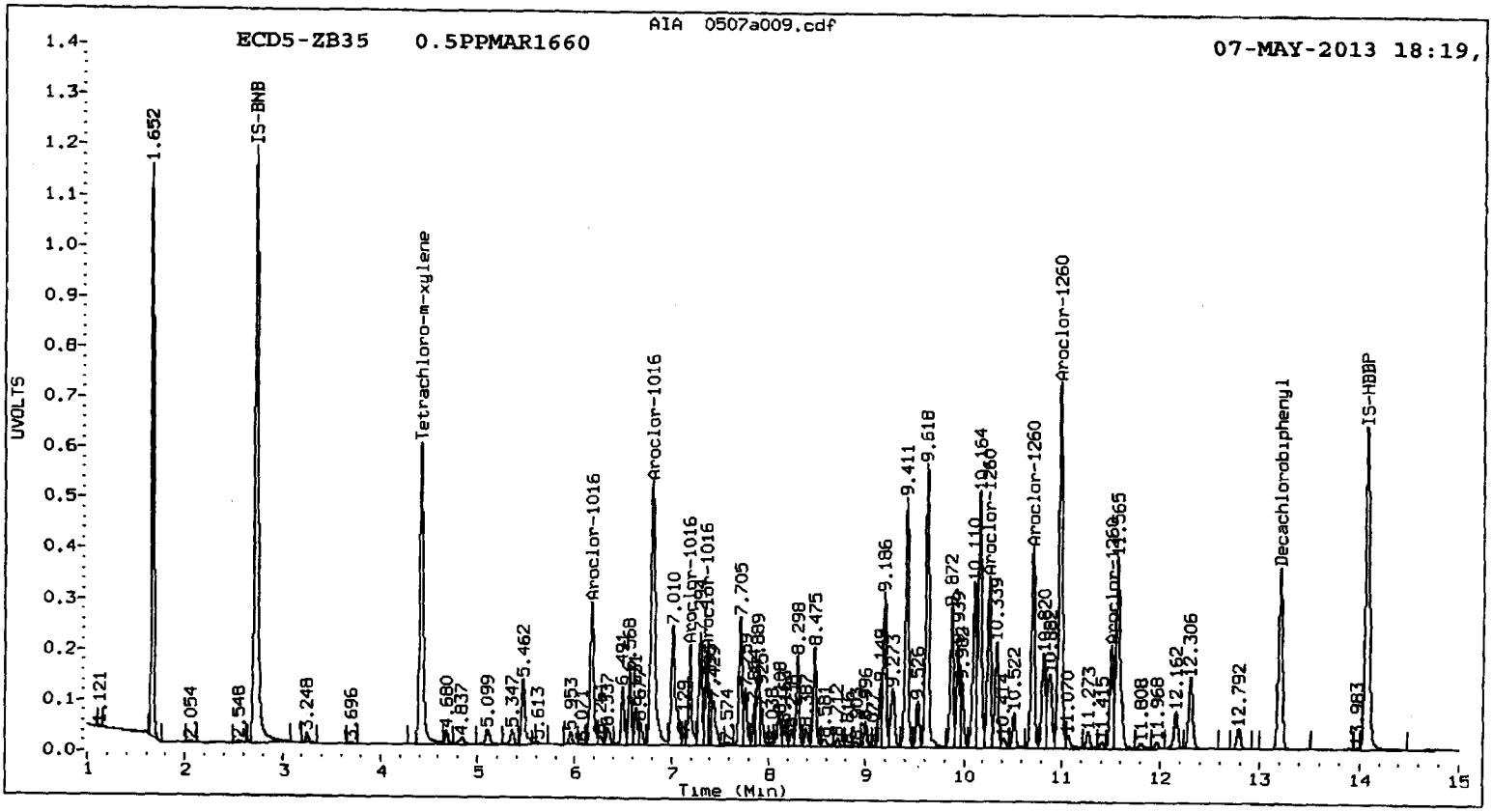
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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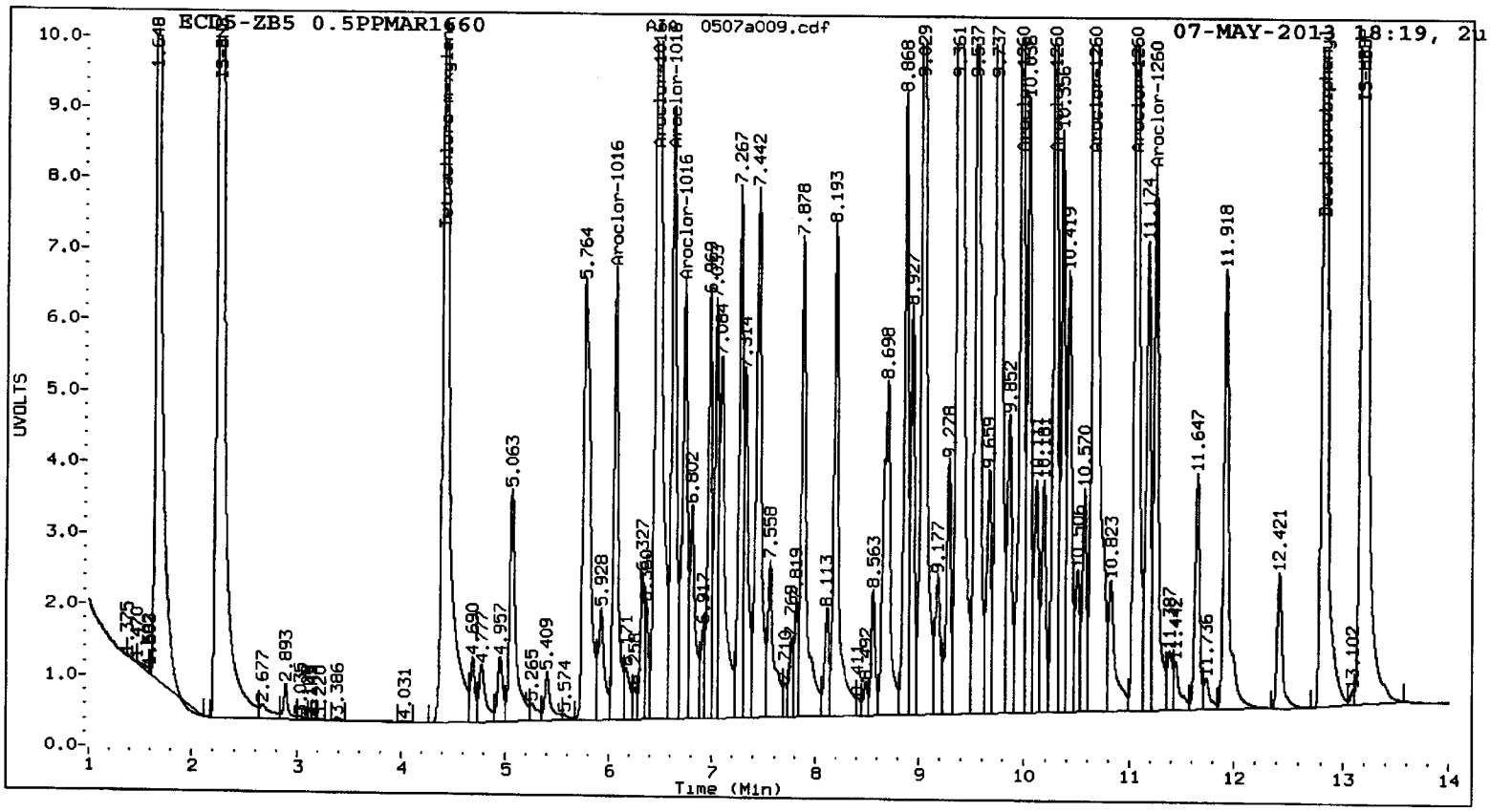
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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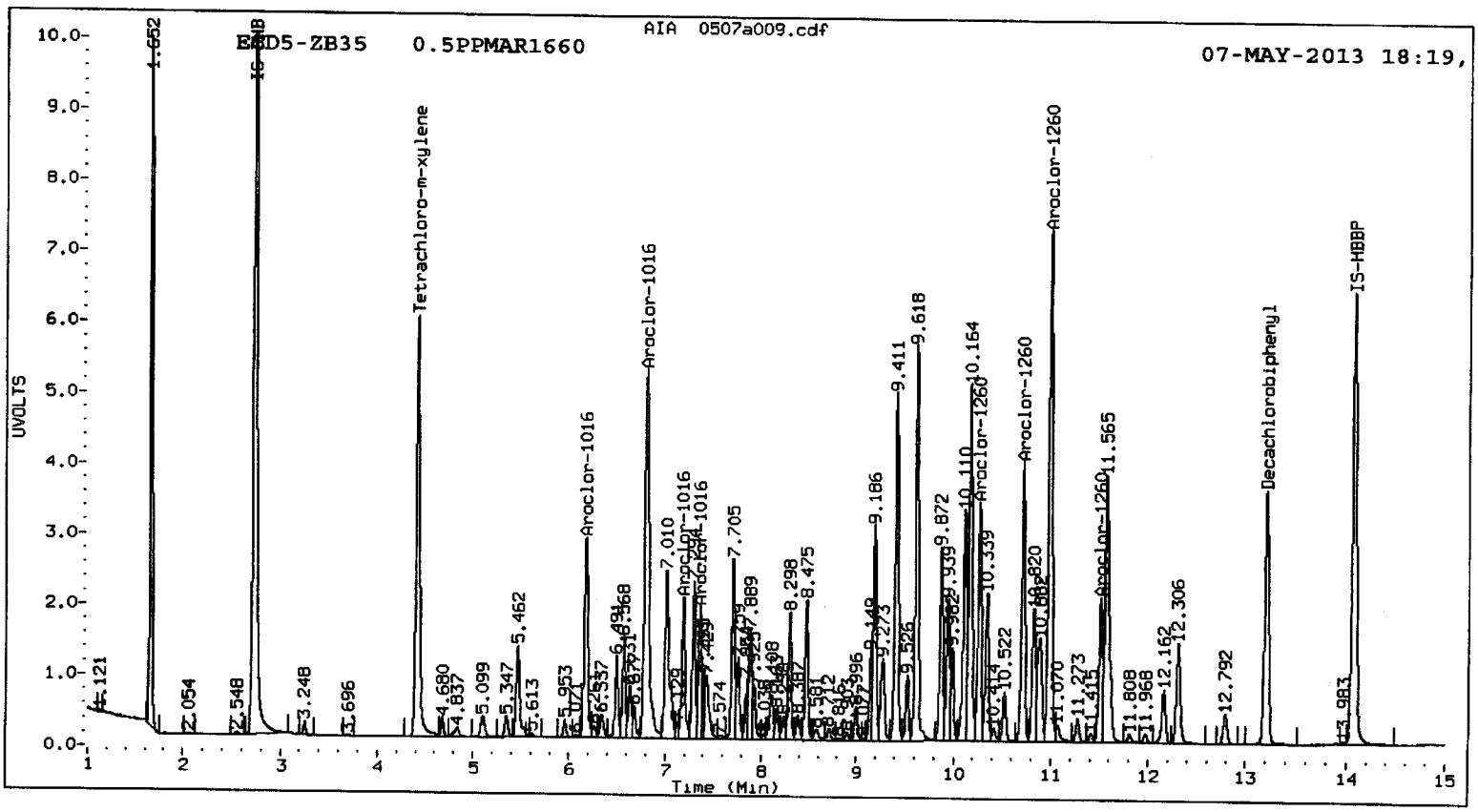
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a010.d
Data file 2: 20130507.b/ical-2.b/0507a010.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 07-MAY-2013 18:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	31274266	4.414	0.003	8134040	39.1	39.8	1.9	Tetrachloro-m-xylen
12.828	-0.001	31253738	13.204	-0.001	5452308	37.9	37.4	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.7	99.6
Decachlorobiphenyl	94.8	93.6

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51594521	5.3
Hexabromobiphenyl	50004151	55145987	10.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15094795	1.7
Hexabromobiphenyl	9345340	10120992	8.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	6.059	0.000	4645645	250.0	1	6.167	0.000	1719309	250.0
Aroclor-1242	2	6.468	0.000	14248309	250.0	2	6.803	0.000	3776677	250.0
Aroclor-1242	3	6.617	0.000	6357384	250.0	3	7.011	0.000	1577853	250.0
Aroclor-1242	4	7.873	0.000	7850170	250.0	4	8.239	0.000	1321956	250.0

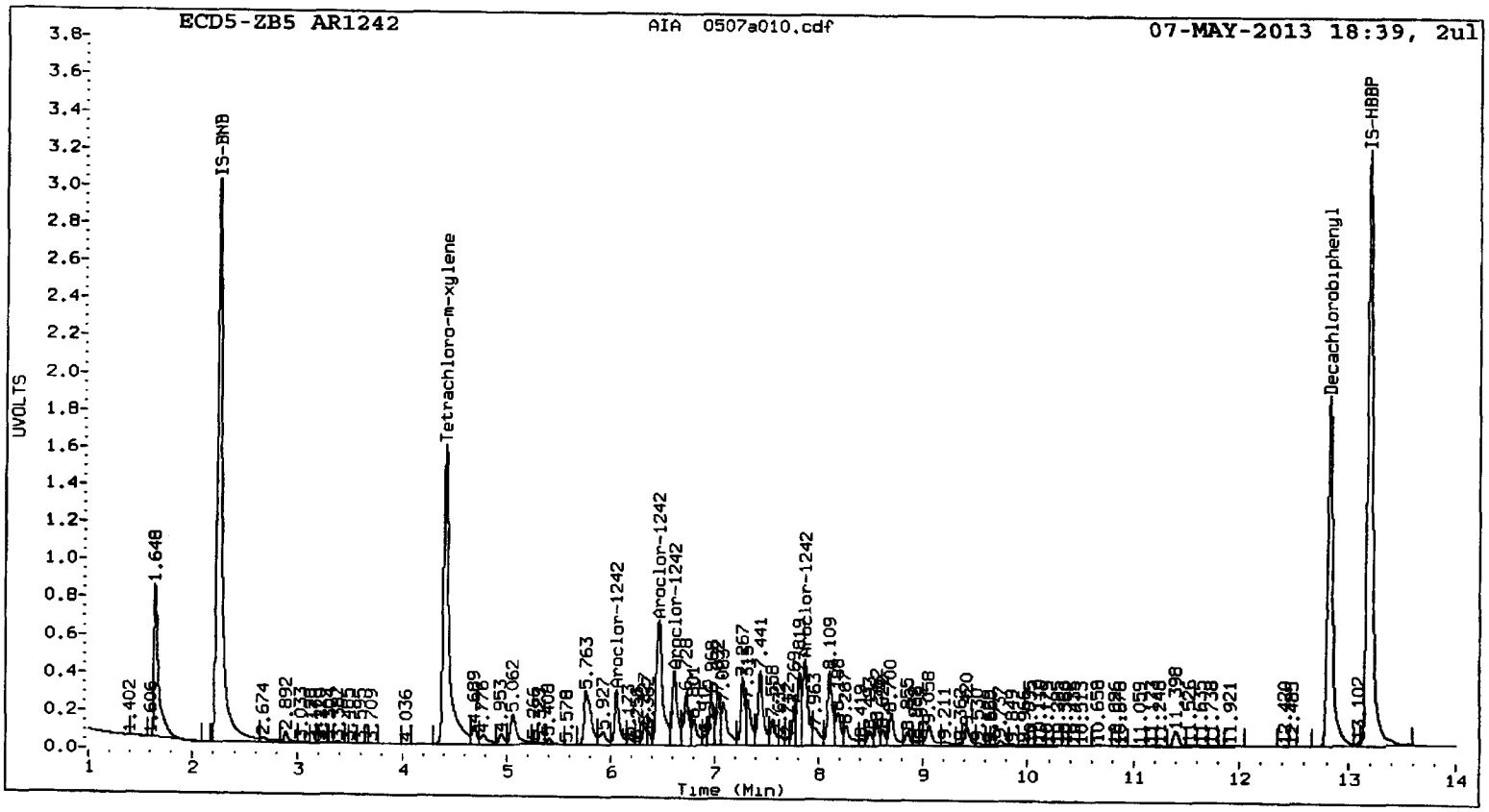
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 132730122 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 28500992 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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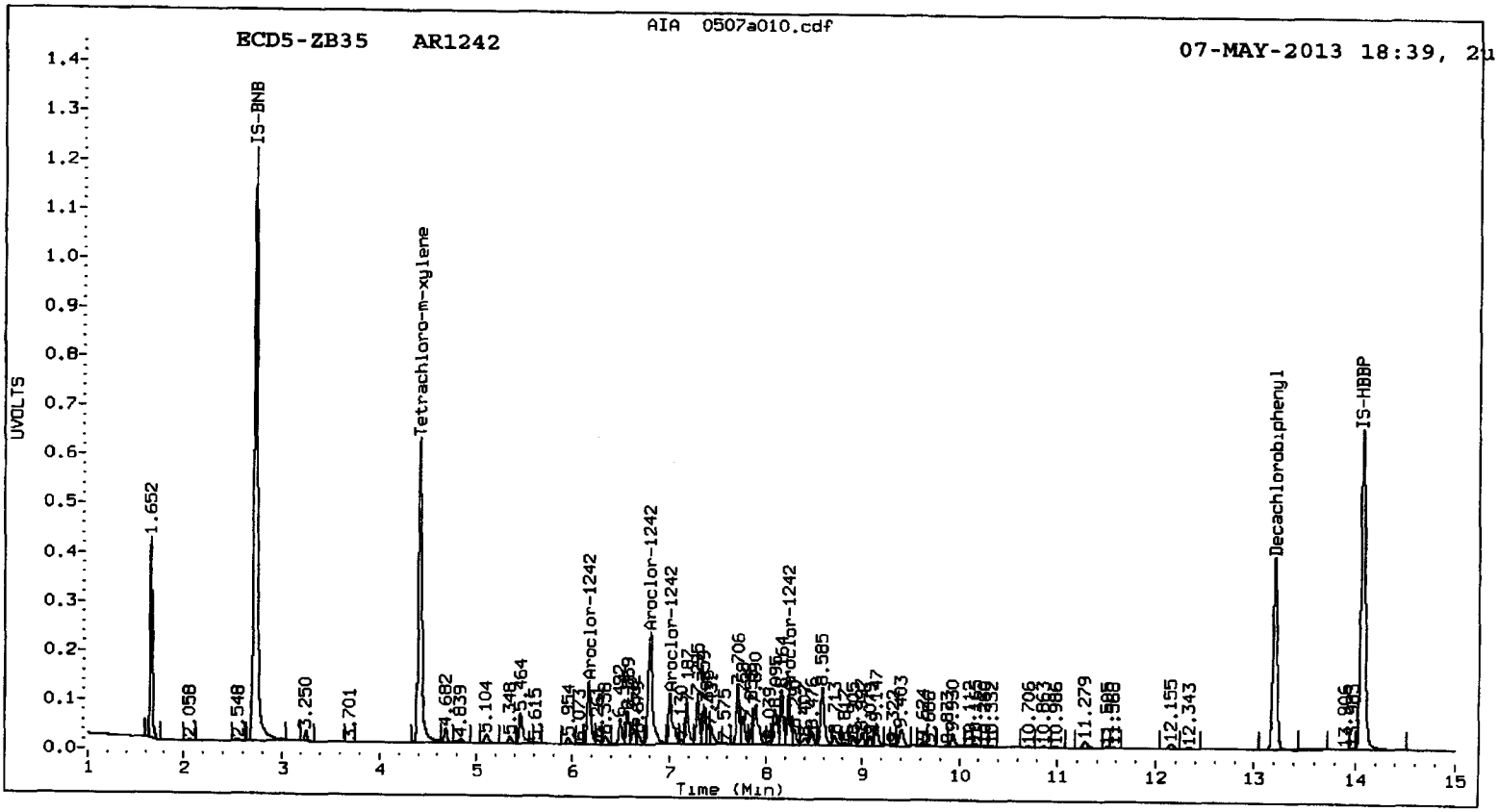
AIA 0507a010.cdf
07-MAY-2013 18:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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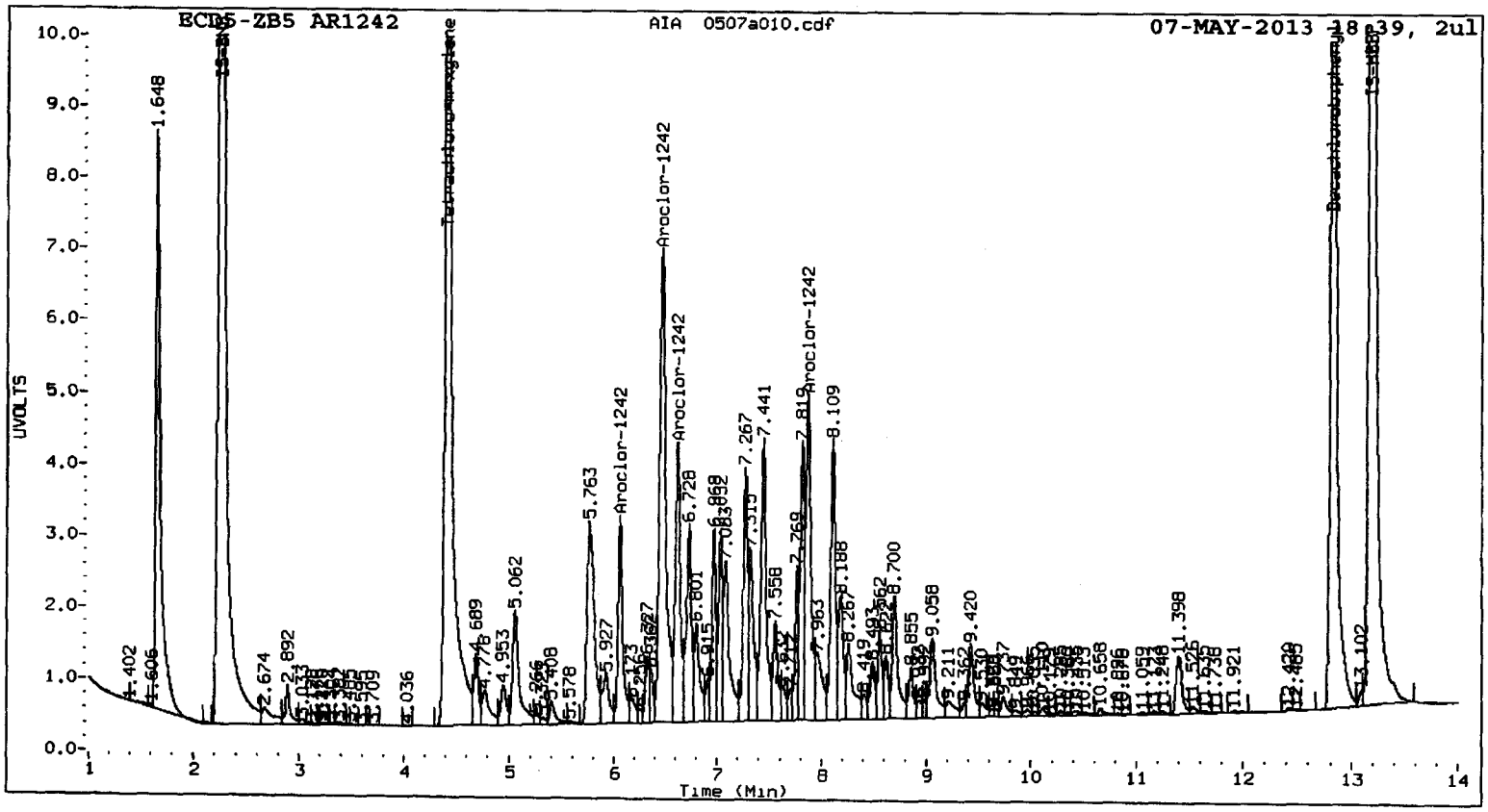
AIA 0507a010.cdf
07-MAY-2013 18:39, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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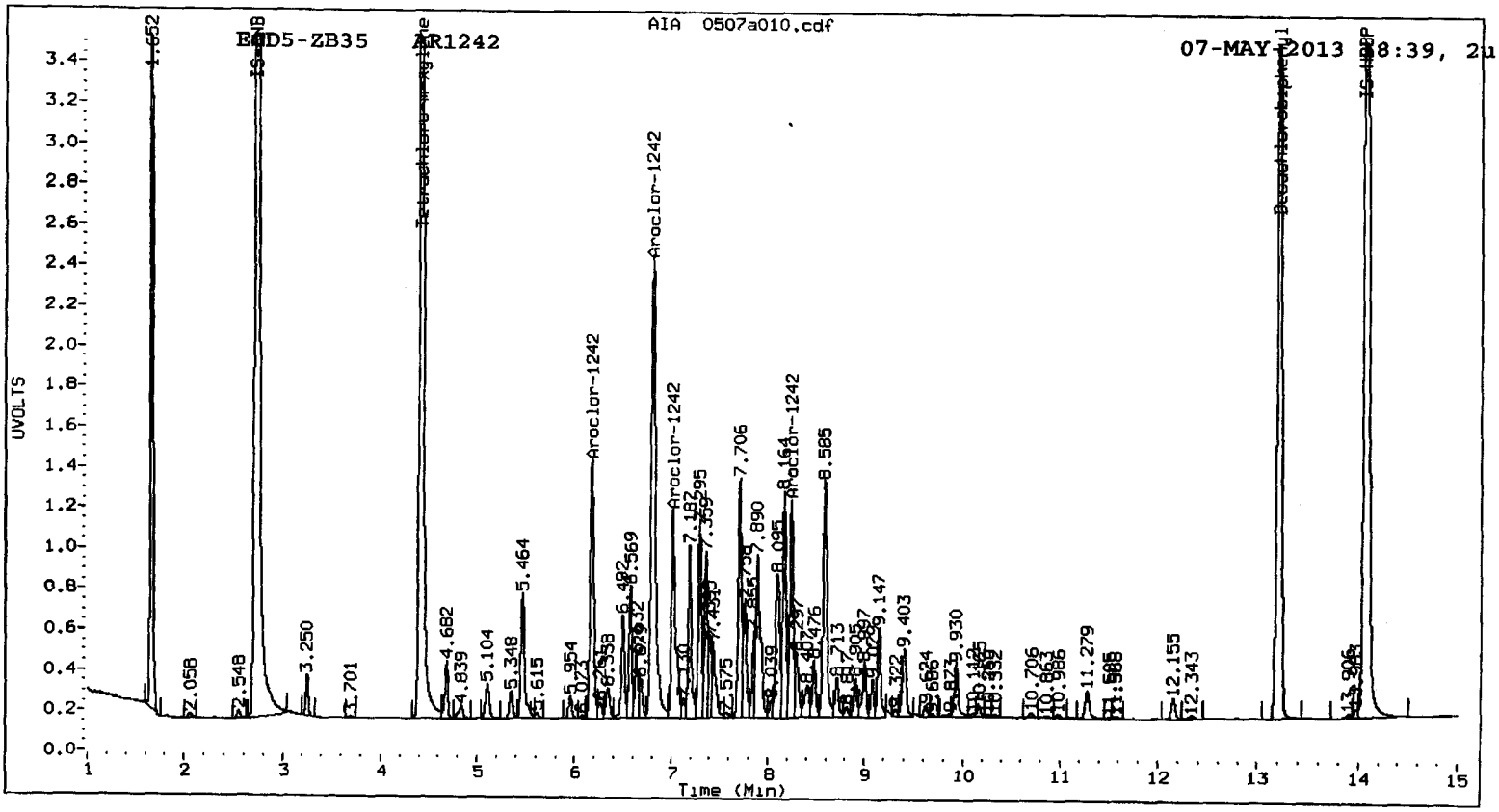
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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AIA 0507a010.cdf
07-MAY-2013 18:39, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a011.d
Data file 2: 20130507.b/ical-2.b/0507a011.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 07-MAY-2013 18:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31267686	4.412	0.000	8079724	38.2	39.1	2.2	Tetrachloro-m-xylen
12.828	0.000	29535239	13.204	-0.001	5138640	34.6	34.4	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	95.5	97.6
Decachlorobiphenyl	86.5	85.9

5/07/13 08
5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52790343	7.8
Hexabromobiphenyl	50004151	57162764	14.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15297537	3.1
Hexabromobiphenyl	9345340	10392760	11.2

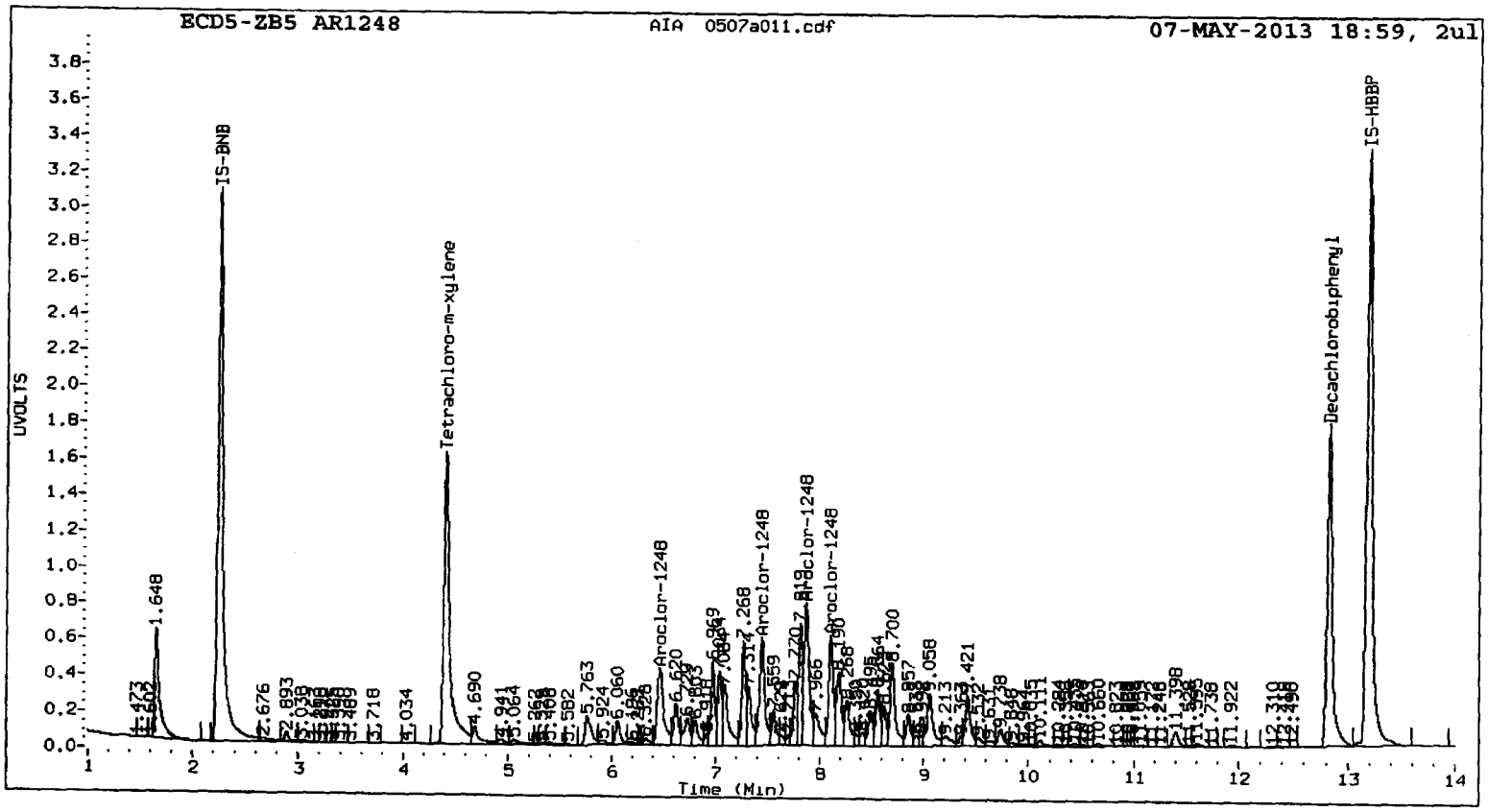
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	6.467	0.000	9288203	250.0	1	6.800	0.000	2396407	250.0
Aroclor-1248	2	7.442	0.000	10446110	250.0	2	7.706	0.000	1987417	250.0
Aroclor-1248	3	7.874	0.000	13282472	250.0	3	8.239	0.000	2057504	250.0
Aroclor-1248	4	8.110	0.000	9261094	250.0	4	8.584	0.000	2673699	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 170915176 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 35045707 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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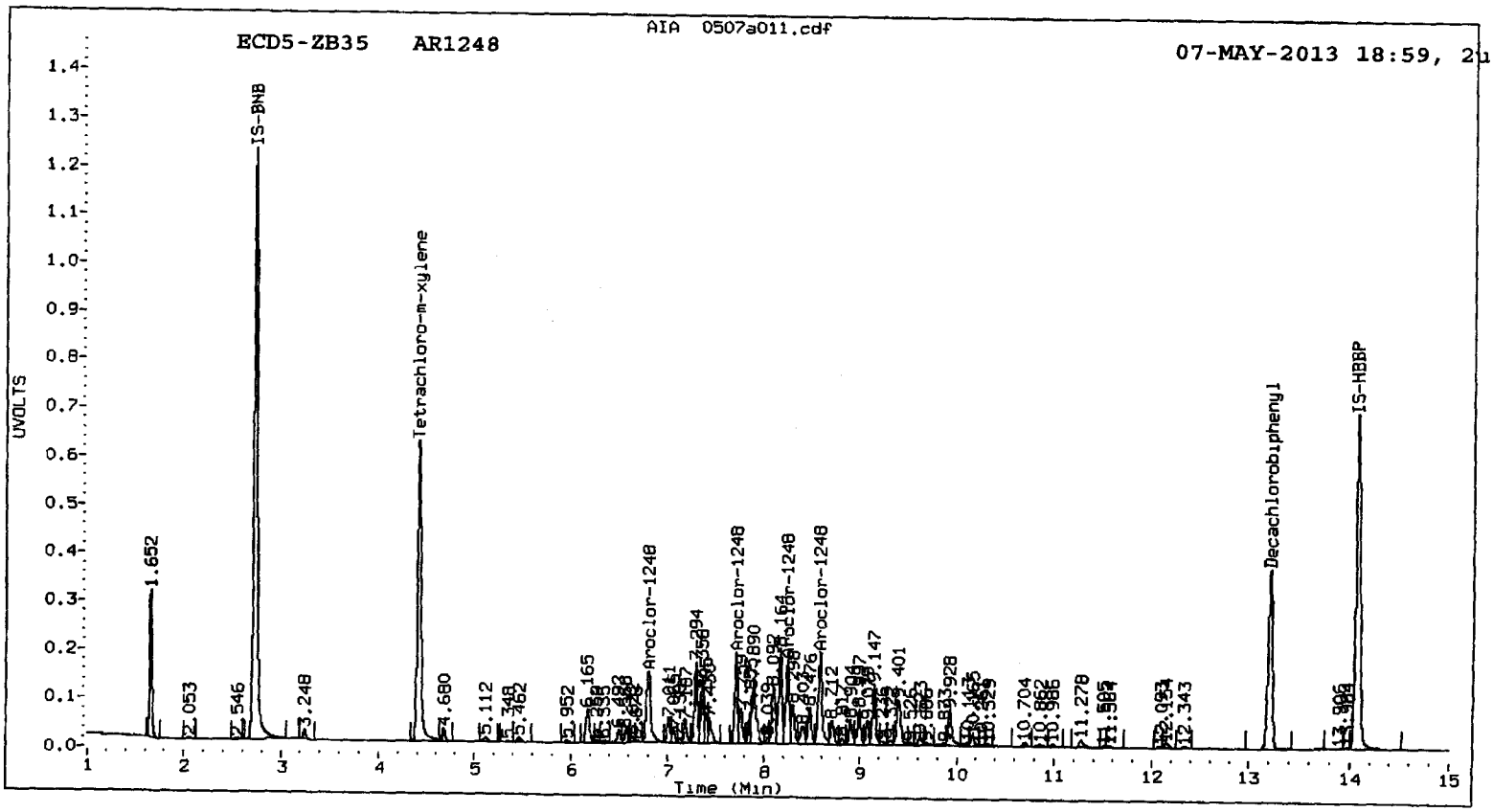
AIA 0507a011.cdf
07-MAY-2013 18:59, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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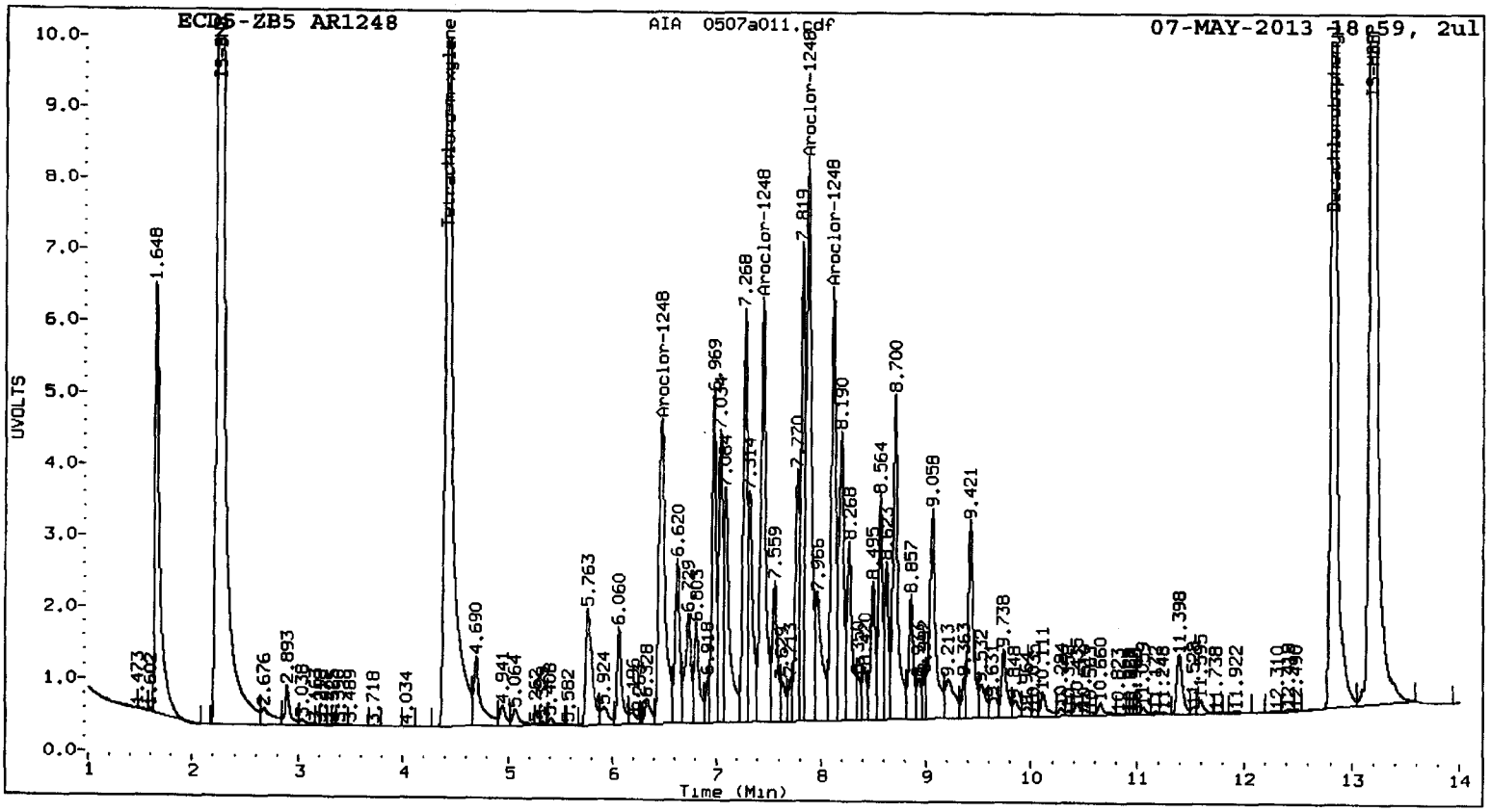
AIA 0507a011.cdf
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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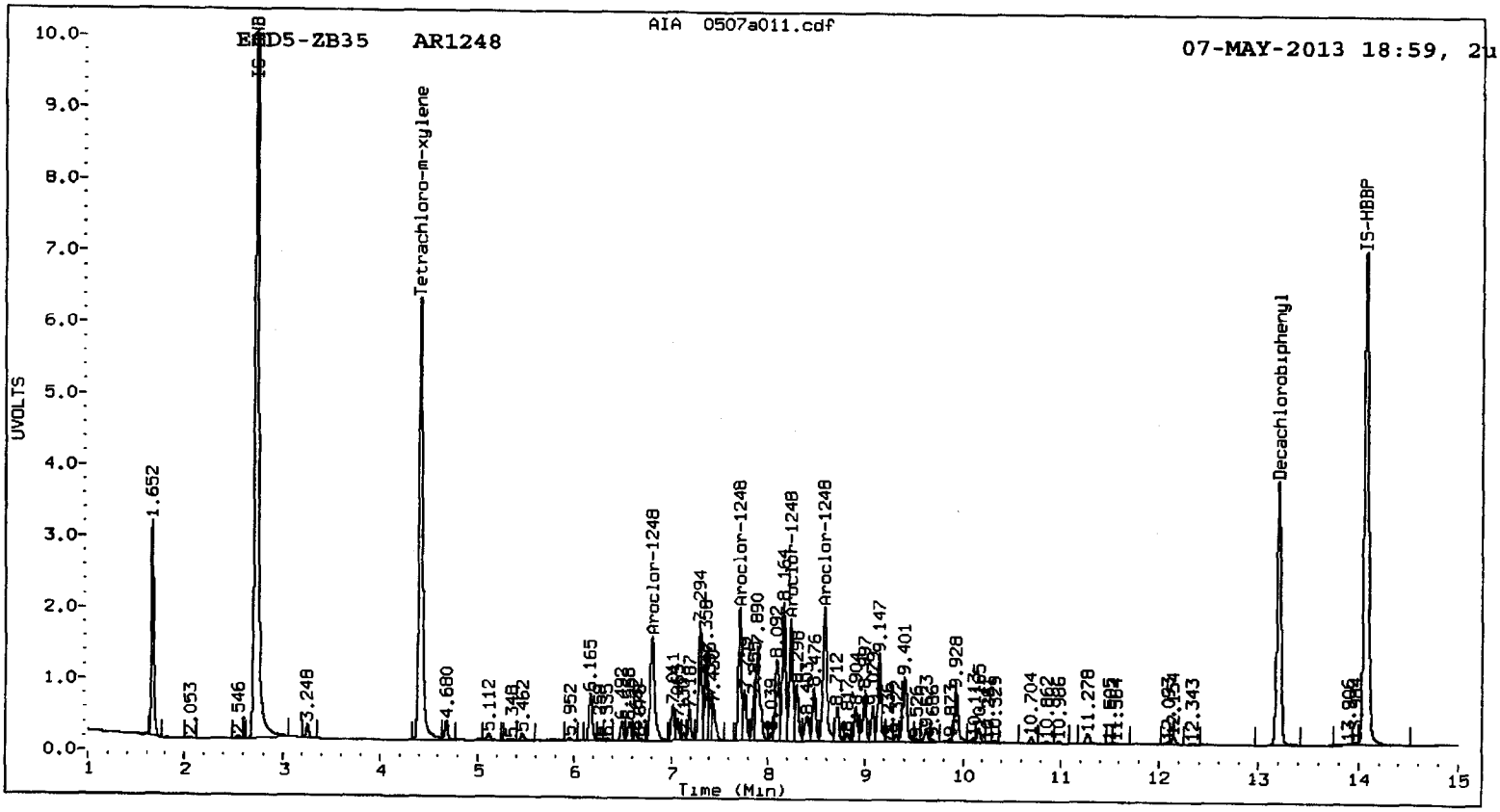
07-MAY-2013 18:59, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl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AIA 0507a011.cdf
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a012.d
Data file 2: 20130507.b/ical-2.b/0507a012.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 07-MAY-2013 19:20
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31597187	4.412	0.000	8169778	38.5	39.8	3.2	Tetrachloro-m-xylen
12.828	0.000	30575045	13.204	-0.001	5300158	35.4	35.2	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.3	99.4
Decachlorobiphenyl	88.4	87.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52930034	8.1
Hexabromobiphenyl	50004151	57859101	15.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15196733	2.4
Hexabromobiphenyl	9345340	10477901	12.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

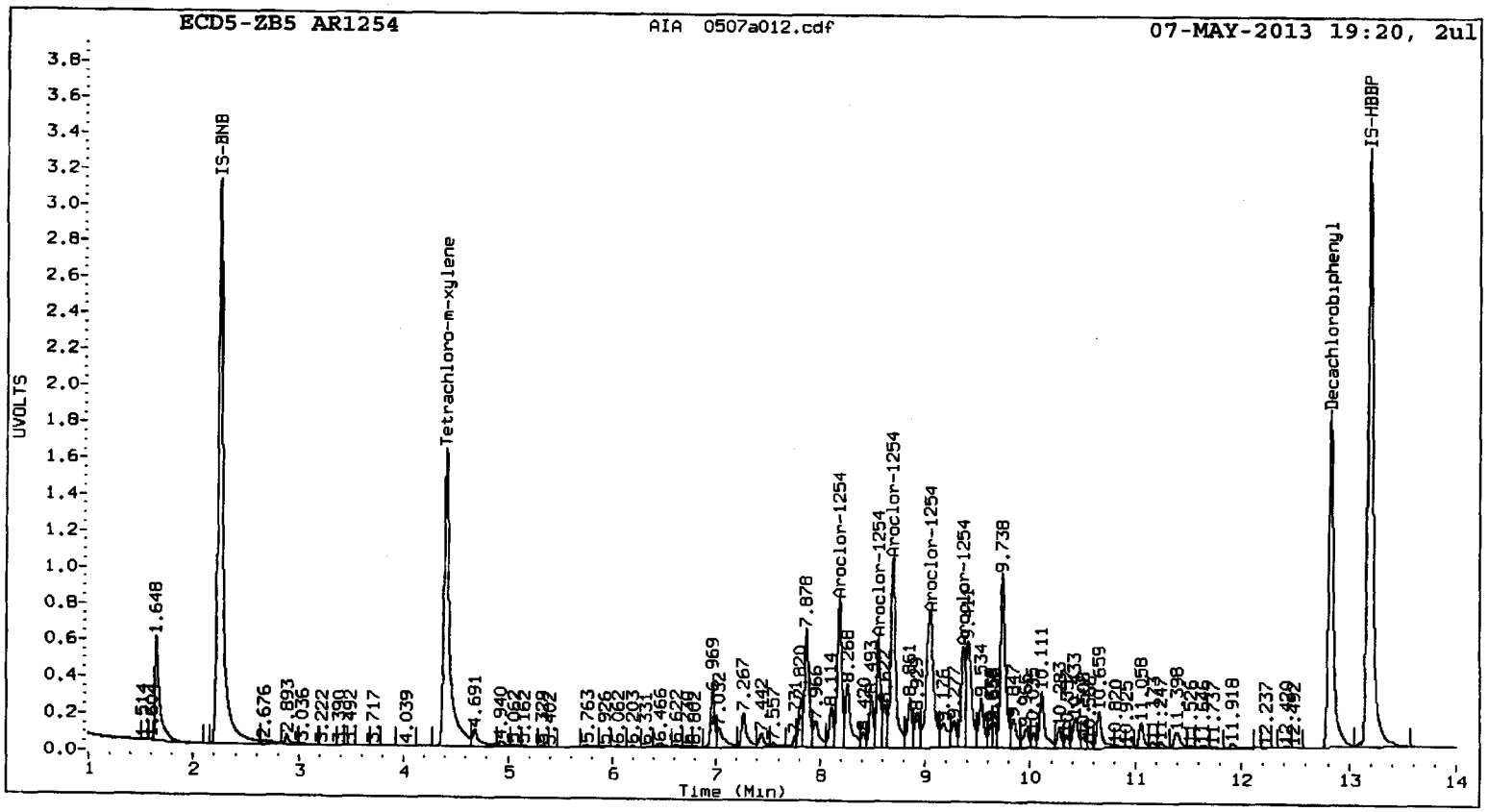
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	8.192	0.000	12340679	250.0	1	8.298	0.000	1842172	250.0
Aroclor-1254	2	8.564	0.000	8145566	250.0	2	8.475	0.000	2275796	250.0
Aroclor-1254	3	8.700	0.000	16981832	250.0	3	8.996	0.000	1743263	250.0
Aroclor-1254	4	9.053	0.000	17490326	250.0	4	9.147	0.000	3733641	250.0
Aroclor-1254	5	9.362	0.000	6614633	250.0	5	9.935	0.000	2102395	250.0
Total Col1Ave (5 peaks):					250.0	Total Col2Ave (5 peaks):				250.0 RPD = 0
Corrected Ave (4 peaks):					250.0	Corrected Ave (4 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 185172722 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 35929102 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

USGL : 021317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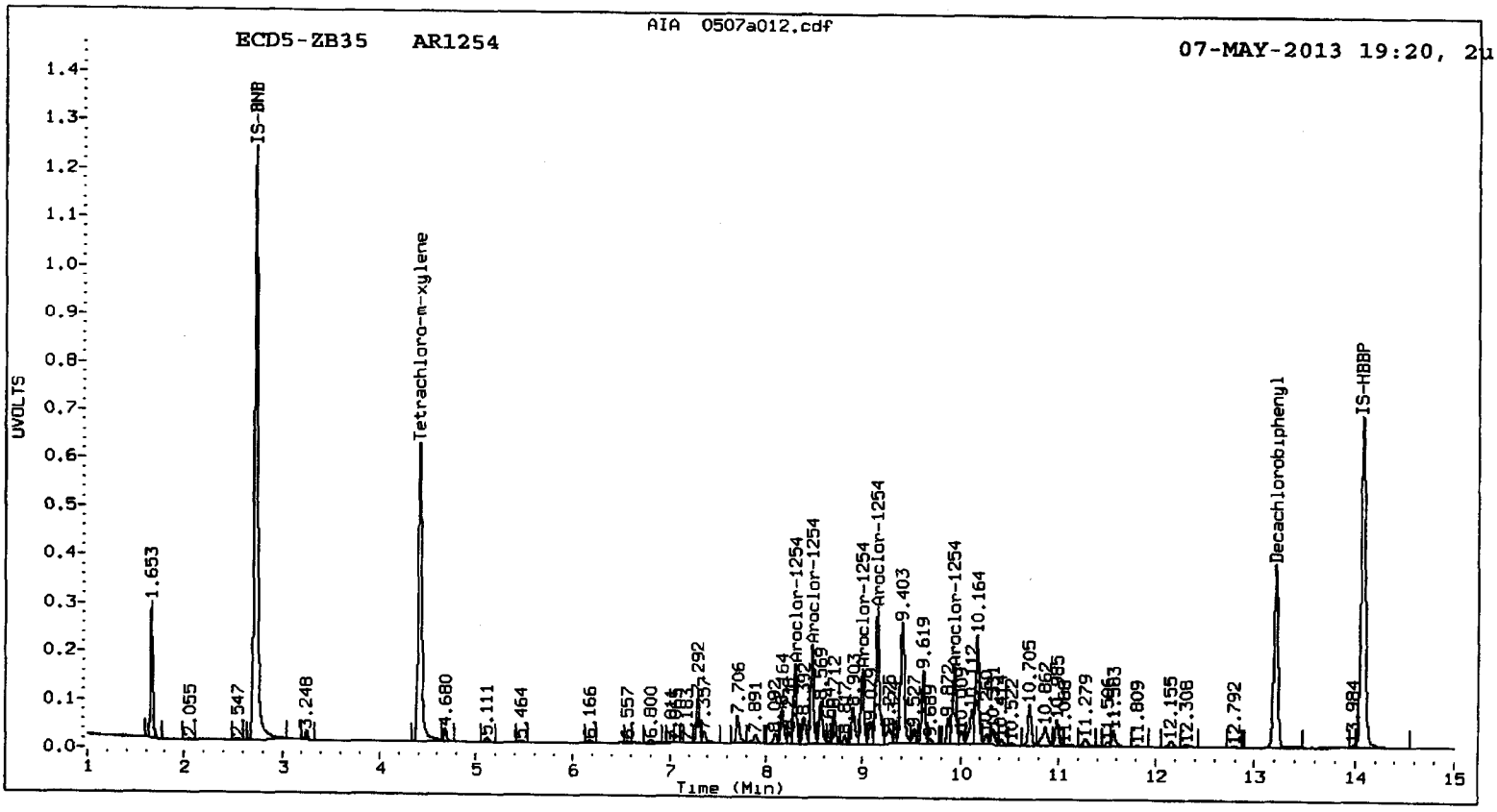
AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1254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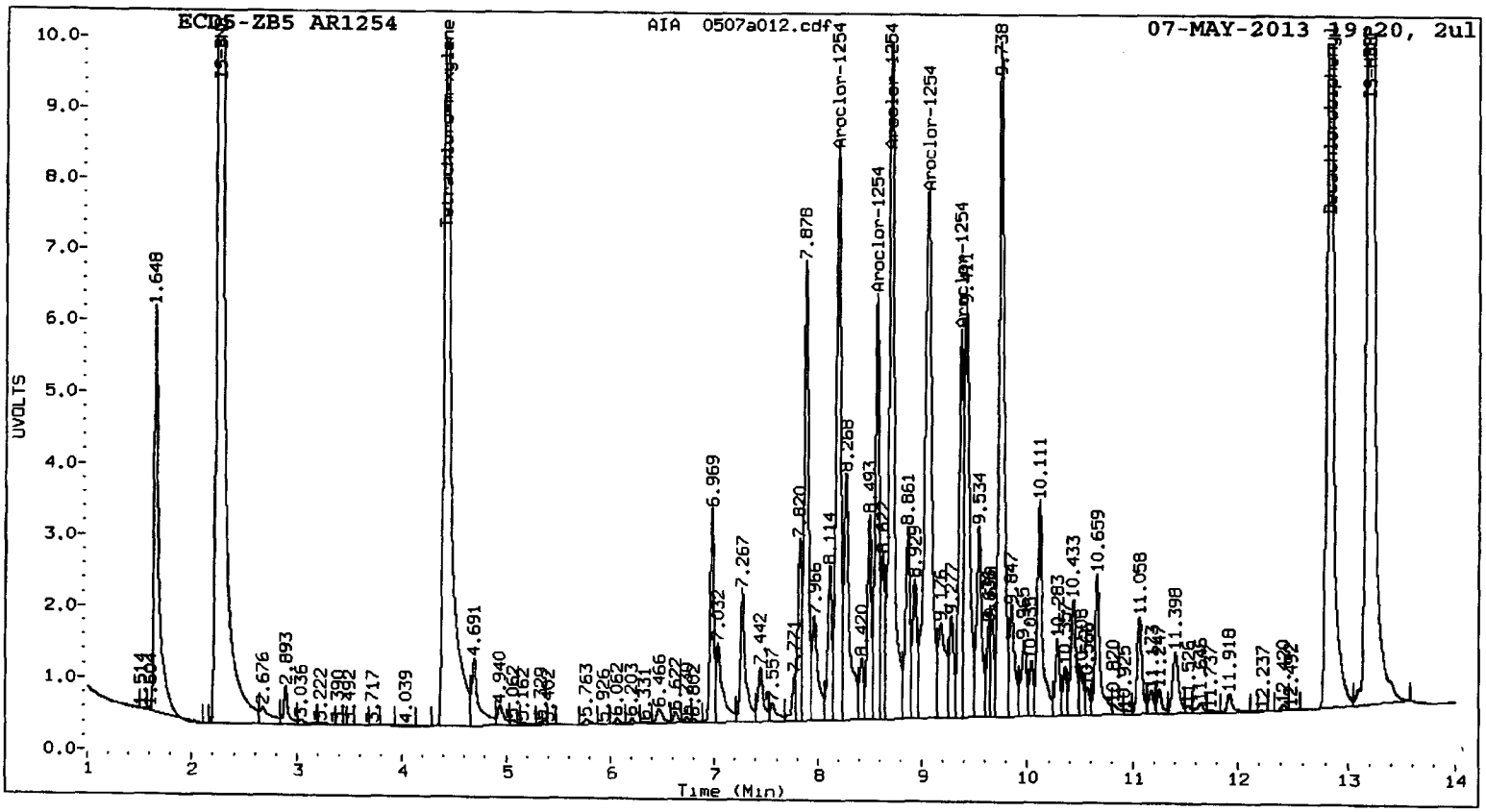
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1254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AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
UVOLTS
Time (Min)
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6.969
7.267
7.878
8.288
8.493
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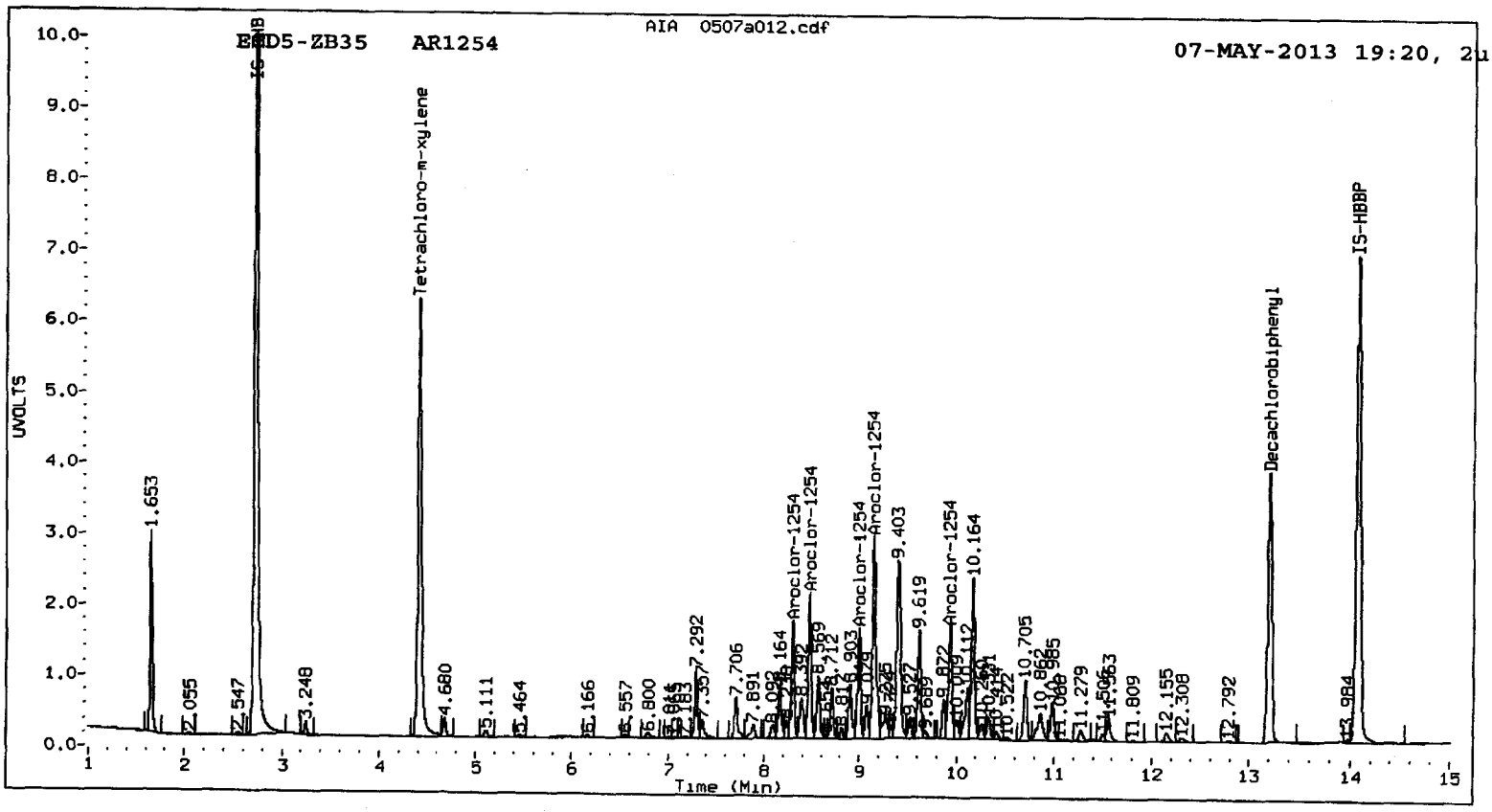
10.659
11.058
11.398
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl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AIA 0507a012.cdf
07-MAY-2013 19:20, 2u
UVOLTS
Time (Min)
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7.292
7.706
7.891
9.403
9.619
10.164
10.705
11.279
11.809
12.155
12.308
12.792
13.984
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a013.d
Data file 2: 20130507.b/ical-2.b/0507a013.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 07-MAY-2013 19:40
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	32354650	4.411	-0.001	8289820	38.8	40.0	2.9	Tetrachloro-m-xylen
12.828	-0.001	30623420	13.203	-0.002	5314887	35.1	34.9	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.1	99.9
Decachlorobiphenyl	87.9	87.2

1 05/09/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53739671	9.7
Hexabromobiphenyl	50004151	58323154	16.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15340978	3.4
Hexabromobiphenyl	9345340	10583916	13.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

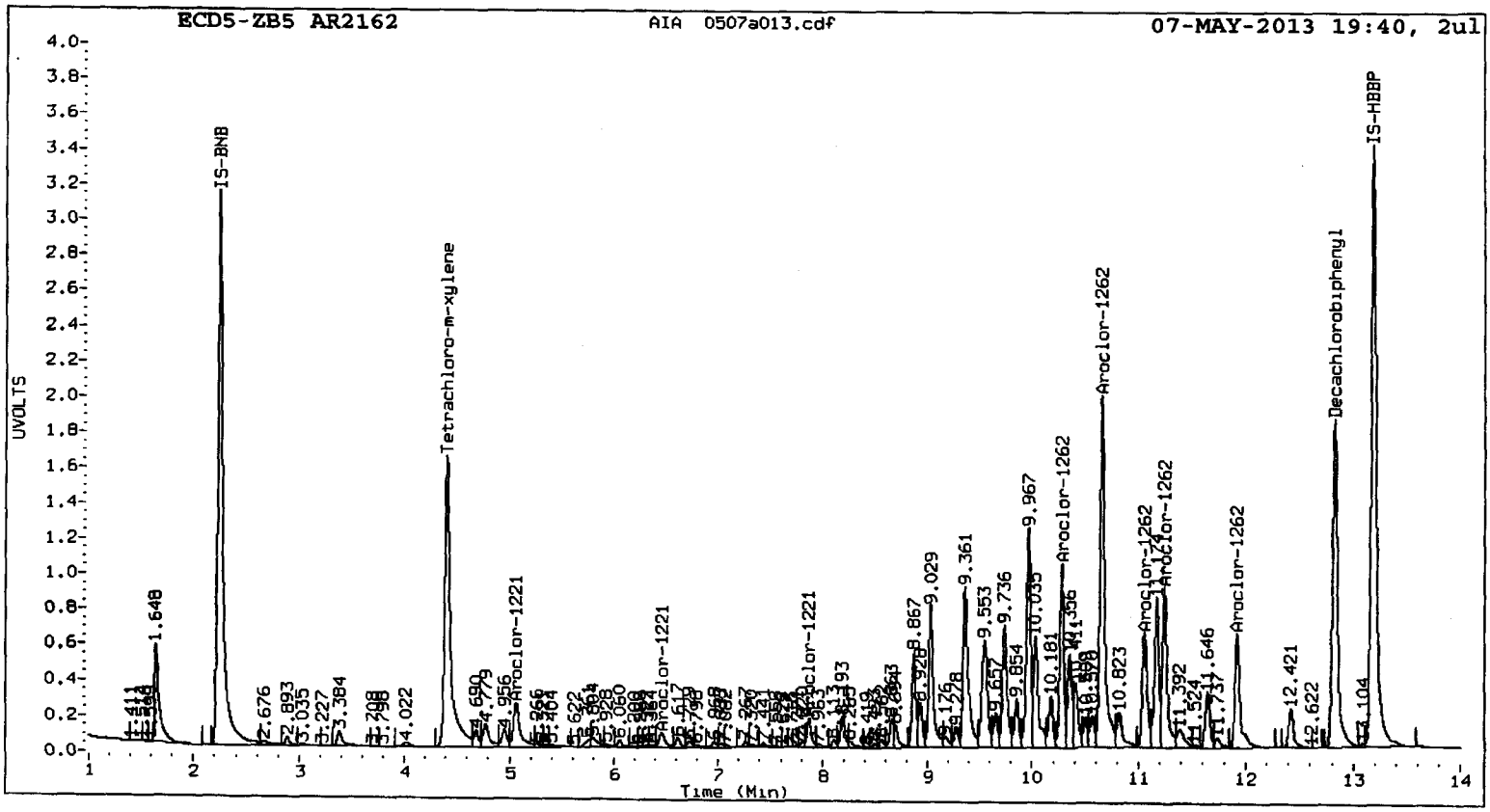
Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1221	1	5.064	0.000	5473596	250.0	1	3.694	0.000	393179	250.0
Aroclor-1221	2	6.468	0.000	1674697	250.0	2	5.095	0.000	658077	250.0
Aroclor-1221	3	7.878	0.000	2364906	250.0	3	5.345	0.000	358396	250.0
Aroclor-1221	NS	---			----	4	5.460	0.000	1127517	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			250.0	
Aroclor-1262	1	10.283	0.000	13652093	250.0	1	10.260	0.000	3659800	250.0
Aroclor-1262	2	10.659	0.000	32077138	250.0	2	10.710	0.000	3346602	250.0
Aroclor-1262	3	11.059	0.000	10159557	250.0	3	10.985	0.000	6277067	250.0
Aroclor-1262	4	11.247	0.000	14260811	250.0	4	11.567	0.000	4079795	250.0
Aroclor-1262	5	11.918	0.000	10944344	250.0	5	12.306	0.000	1969832	250.0
Total Col1Ave (5 peaks):					250.0	Total Col2Ave (5 peaks):			250.0	RPD = 0
Corrected Ave (4 peaks):					250.0	Corrected Ave (4 peaks):			250.0	RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 262283464 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 51791020 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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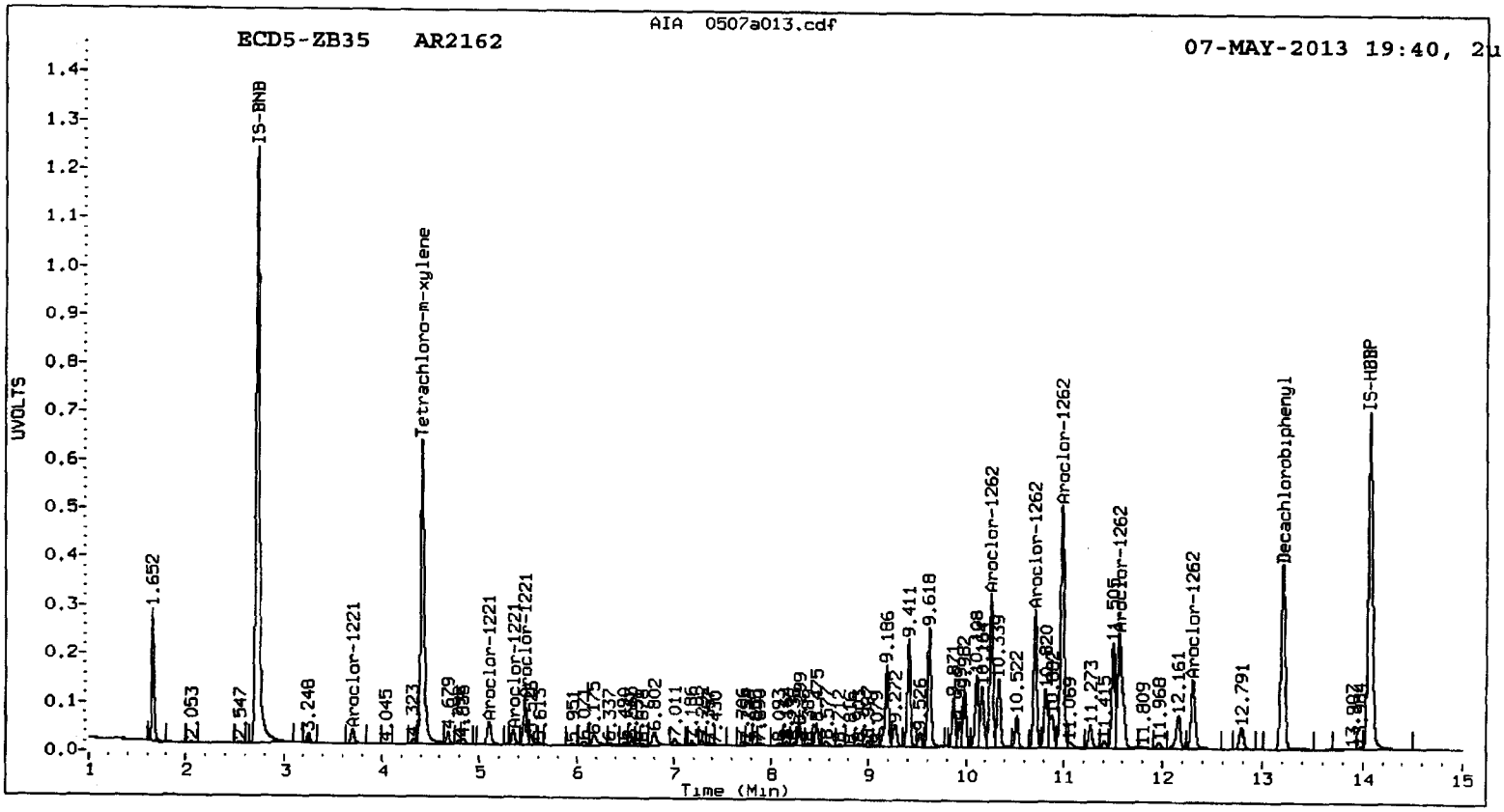
AIA 0507a013.cdf
07-MAY-2013 19:40, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 19:40, 2u
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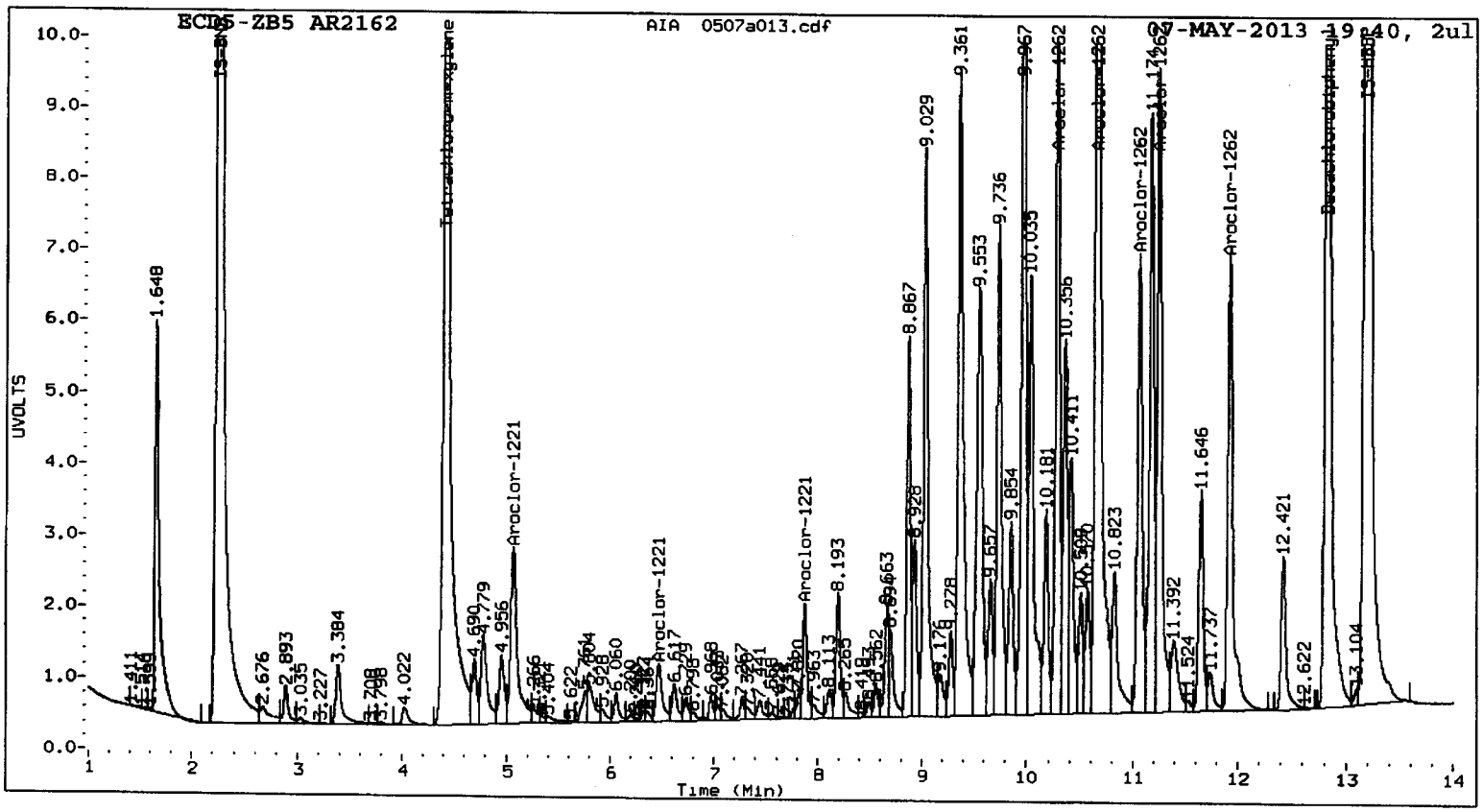
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 19:40, 2ul
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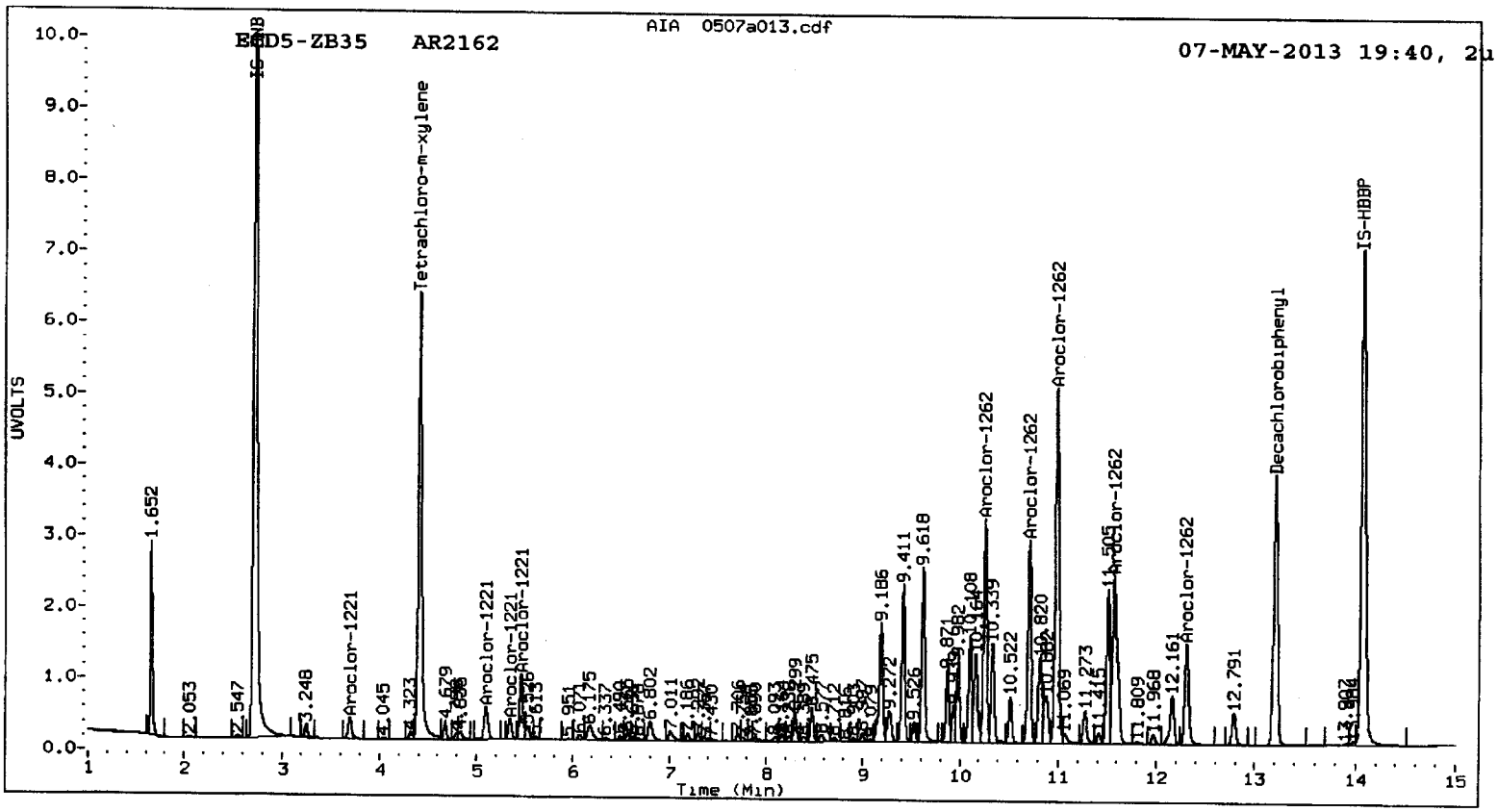
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 19:40, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a014.d
Data file 2: 20130507.b/ical-2.b/0507a014.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 07-MAY-2013 20:00
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.411	0.000	31984640	4.412	0.000	8241550	38.7	40.0	3.2	Tetrachloro-m-xylen
12.828	0.000	43449498	13.205	0.000	7536002	50.6	49.8	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.8	100.0
Decachlorobiphenyl	126.5	124.5

A 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53262724	8.7
Hexabromobiphenyl	50004151	57460185	14.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15239954	2.7
Hexabromobiphenyl	9345340	10518547	12.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

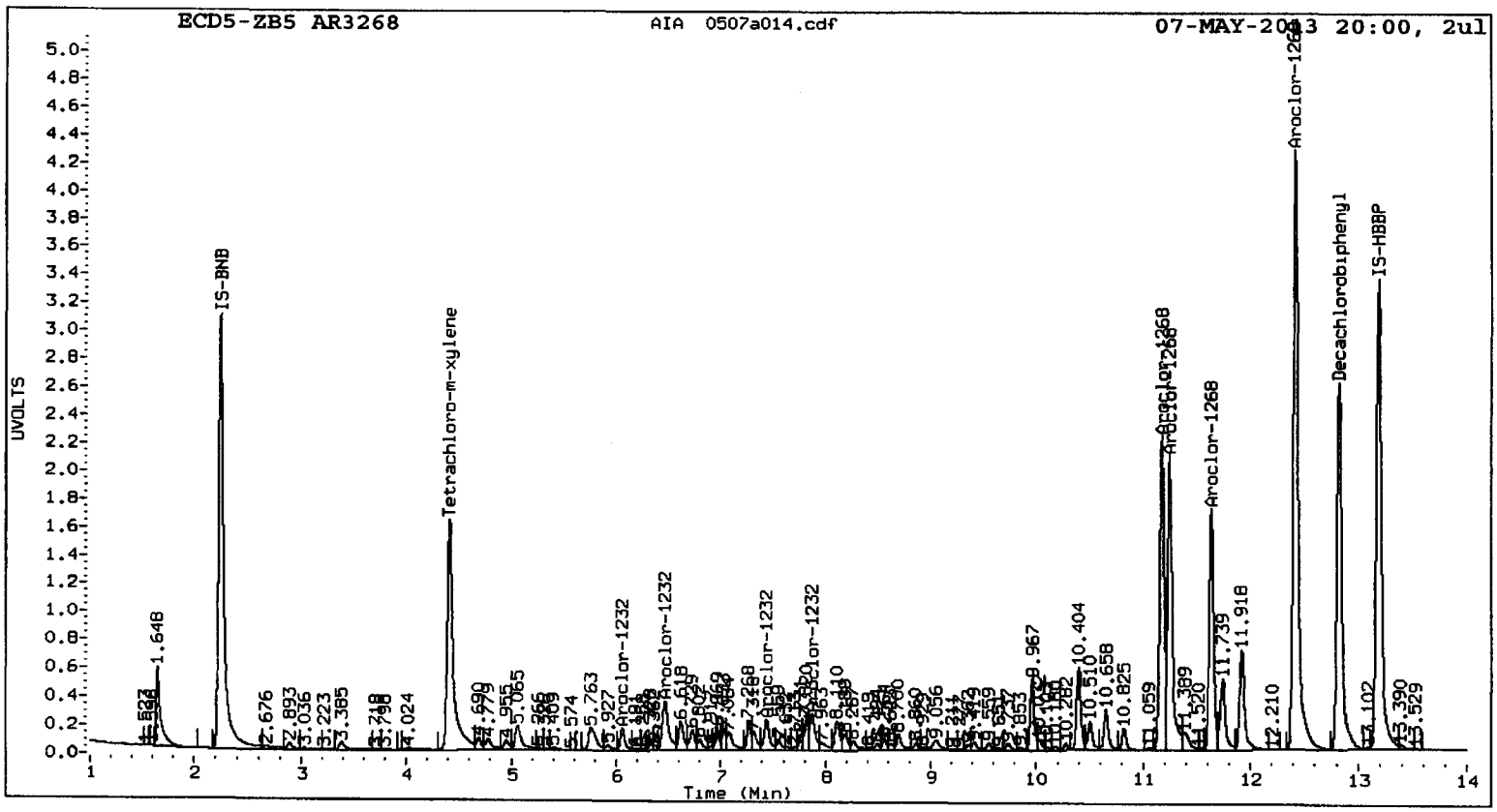
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1232	1	6.060	0.000	2466405	250.0	1	6.165	0.000	977839	250.0
Aroclor-1232	2	6.469	0.000	7549613	250.0	2	6.801	0.000	1952023	250.0
Aroclor-1232	3	7.442	0.000	3923778	250.0	3	7.011	0.000	813950	250.0
Aroclor-1232	4	7.874	0.000	4507818	250.0	4	8.239	0.000	683109	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	11.175	0.000	30229266	250.0	1	11.507	0.000	6347619	250.0
Aroclor-1268	2	11.246	0.000	33428922	250.0	2	11.573	0.000	5983248	250.0
Aroclor-1268	3	11.632	0.000	24825470	250.0	3	11.969	0.000	4735989	250.0
Aroclor-1268	4	12.422	0.000	69938717	250.0	4	12.792	0.000	12266670	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 288711386 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 55525050 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 20:00, 2ul
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Time (Min)
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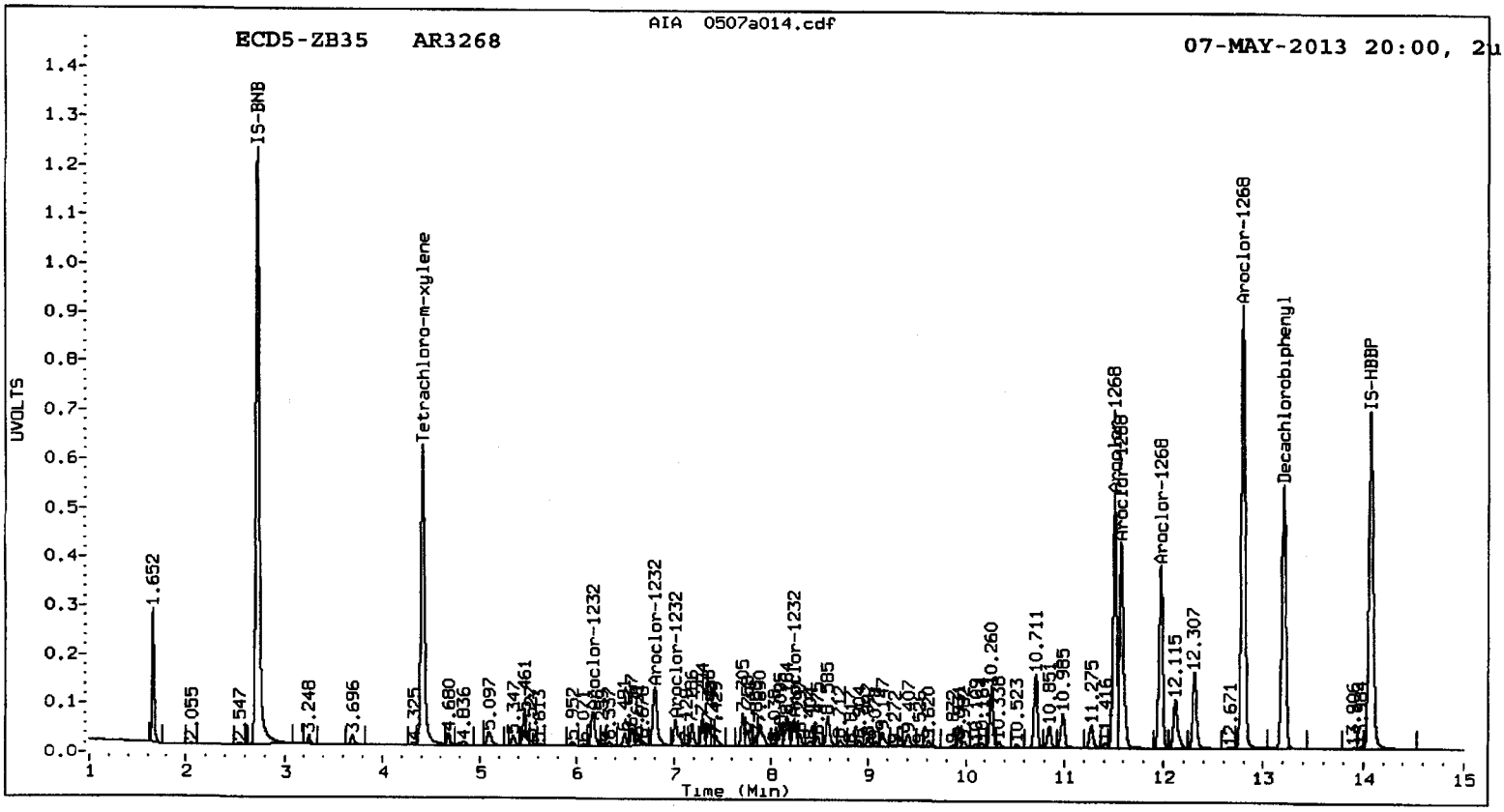
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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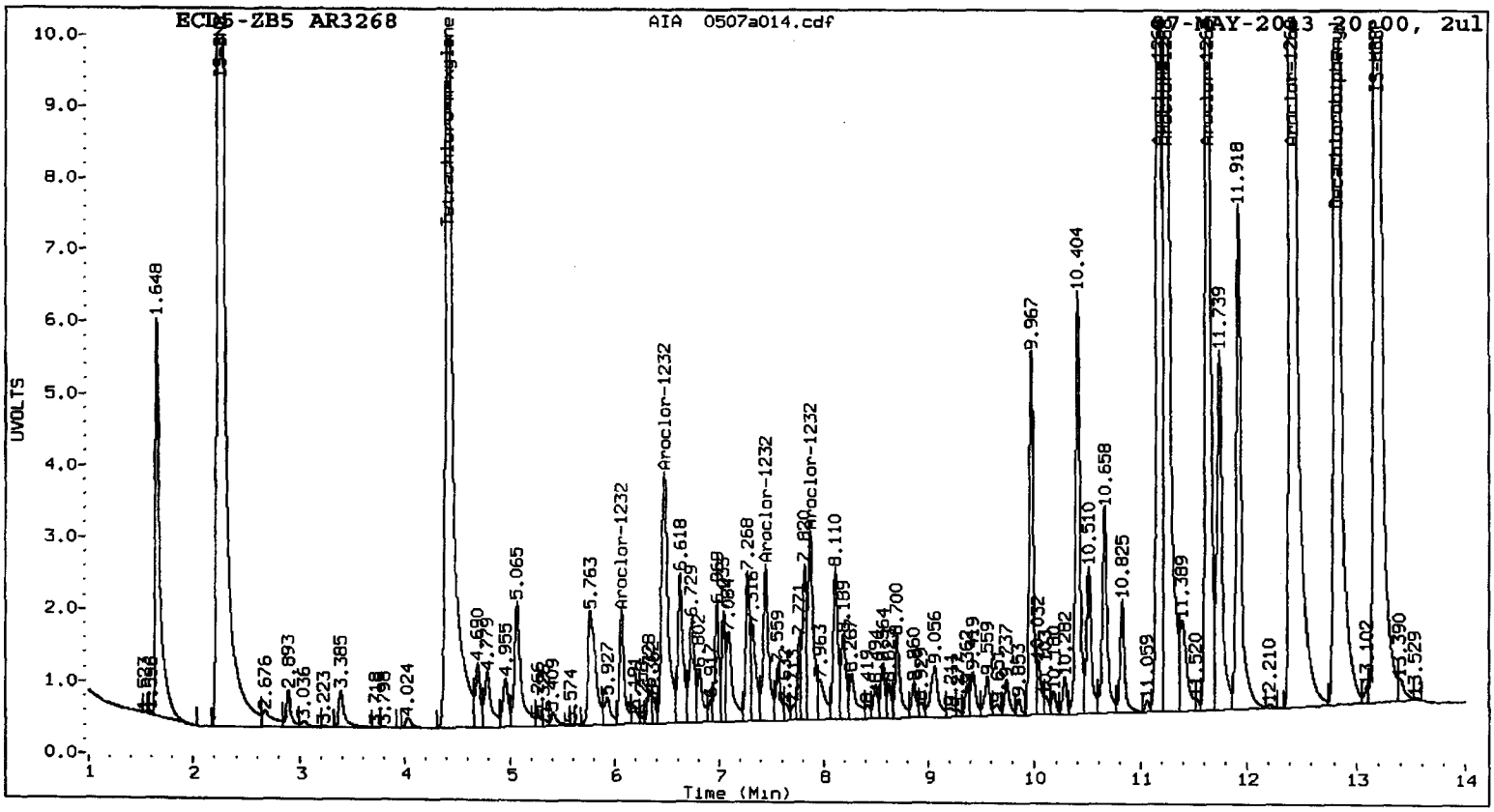
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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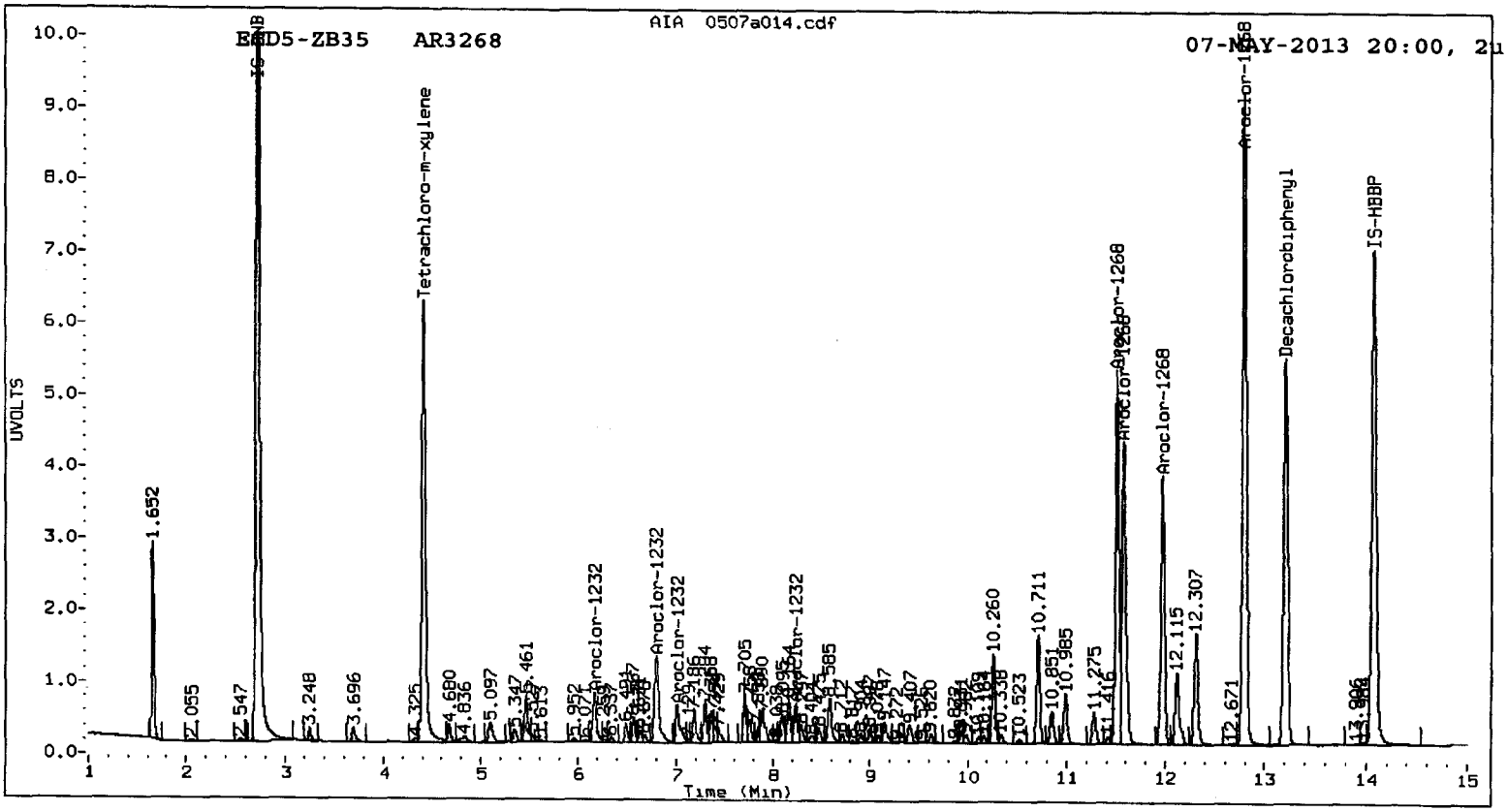
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 20:00, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a015.d
Data file 2: 20130507.b/ical-2.b/0507a015.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 07-MAY-2013 20:21
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	31924156	4.411	0.000	8216234	38.0	38.8	2.2	Tetrachloro-m-xylen
12.828	0.000	30828729	13.205	0.000	5320370	34.3	34.0	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.9	97.0
Decachlorobiphenyl	85.8	84.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54248541	10.8
Hexabromobiphenyl	50004151	60099807	20.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15658755	5.5
Hexabromobiphenyl	9345340	10888882	16.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.060	-0.001	4470855	182.8	1	6.166	0.000	1663757	186.2
Aroclor-1016	2	6.468	0.000	13617695	180.8	2	6.802	0.001	3565246	183.5
Aroclor-1016	3	6.617	0.001	6113829	181.2	3	7.185	0.000	947812	186.6
Aroclor-1016	4	6.729	0.001	4549783	180.4	4	7.358	0.000	881454	186.3
Total Col1Ave (4 peaks):					181.3	Total Col2Ave (4 peaks):				185.7 RPD = 2
Corrected Ave (3 peaks):					180.8	Corrected Ave (3 peaks):				185.4 RPD = 2
Aroclor-1221	1	5.063	-0.001	3230223	146.2	1	---			0.0
Aroclor-1221	2	6.468	0.000	13617695	2013.8	2	5.101	0.006	254025	94.5
Aroclor-1221	3	7.874	-0.004	7607955	796.7	3	5.346	0.001	163596	111.8
Aroclor-1221	NS	---			---	4	5.461	0.001	799065	173.6
Total Col1Ave (3 peaks):					985.6	Total Col2Ave (3 peaks):				126.6 RPD = 154*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.060	-0.001	4470855	444.9	1	6.166	0.000	1663757	414.0
Aroclor-1232	2	6.468	-0.001	13617695	442.7	2	6.802	0.000	3565246	444.4
Aroclor-1232	3	7.442	0.000	6893473	431.2	3	7.009	-0.002	1501264	448.8
Aroclor-1232	4	7.874	0.000	7607955	414.3	4	8.238	-0.001	1167882	416.0
Total Col1Ave (4 peaks):					433.3	Total Col2Ave (4 peaks):				430.8 RPD = 1
Corrected Ave (3 peaks):					429.4	Corrected Ave (3 peaks):				424.8 RPD = 1
Aroclor-1242	1	6.060	0.000	4470855	228.8	1	6.166	-0.002	1663757	233.2
Aroclor-1242	2	6.468	0.000	13617695	227.2	2	6.802	-0.001	3565246	227.5
Aroclor-1242	3	6.617	0.001	6113829	228.7	3	7.009	-0.002	1501264	229.3
Aroclor-1242	4	7.874	0.001	7607955	230.4	4	8.238	-0.001	1167882	212.9
Total Col1Ave (4 peaks):					228.8	Total Col2Ave (4 peaks):				225.7 RPD = 1
Corrected Ave (3 peaks):					228.2	Corrected Ave (3 peaks):				223.2 RPD = 2
Aroclor-1248	1	6.468	0.002	13617695	356.7	1	6.802	0.002	3565246	363.4
Aroclor-1248	2	7.442	-0.001	6893473	160.5	2	7.705	-0.001	1266936	155.7
Aroclor-1248	3	7.874	-0.001	7607955	139.3	3	8.238	-0.001	1167882	138.6
Aroclor-1248	4	8.110	0.000	5502492	144.5	4	8.584	0.001	1486653	135.8
Total Col1Ave (4 peaks):					200.3	Total Col2Ave (4 peaks):				198.4 RPD = 1
Corrected Ave (3 peaks):					148.1	Corrected Ave (3 peaks):				143.4 RPD = 3
Aroclor-1254	1	8.190	-0.002	3647666	72.1	1	8.298	0.000	493209	65.0
Aroclor-1254	2	8.564	0.000	3121258	63.5	2	8.475	0.000	469897	50.1
Aroclor-1254	3	8.700	0.000	3853127	55.3	3	8.996	0.000	426802	59.4
Aroclor-1254	4	9.057	0.005	3495648	48.8	4	9.147	0.000	714252	46.4
Aroclor-1254	5	9.362	0.000	680923	25.1	5	9.930	-0.004	413402	47.7
Total Col1Ave (5 peaks):					53.0	Total Col2Ave (5 peaks):				53.7 RPD = 1
Corrected Ave (4 peaks):					48.2	Corrected Ave (4 peaks):				50.9 RPD = 5
Aroclor-1260	1	9.966	-0.001	248097	5.0	1	10.260	0.001	14609	1.5
Aroclor-1260	2	10.282	-0.001	177183	3.6	2	10.704	-0.005	88810	7.7
Aroclor-1260	3	10.658	-0.001	314580	2.7	3	10.985	0.001	50951	2.4
Aroclor-1260	4	11.058	0.000	188167	3.3	4	11.506	0.001	16977	2.9
Aroclor-1260	5	11.248	0.001	45330	1.5	NS	---			----
Total Col1Ave (5 peaks):					3.2	Total Col2Ave (4 peaks):				3.6 RPD = 11
Corrected Ave (4 peaks):					2.8	Corrected Ave (3 peaks):				2.3 RPD = 20
Aroclor-1262	1	10.282	0.000	177183	3.1	1	10.260	0.001	14609	1.0
Aroclor-1262	2	10.658	-0.001	314580	2.4	2	10.704	-0.006	88810	6.4
Aroclor-1262	3	11.058	-0.001	188167	4.5	3	10.985	0.000	50951	2.0
Aroclor-1262	4	11.248	0.001	45330	0.8	4	11.564	-0.003	37242	2.2
Aroclor-1262	5	11.923	0.005	55055	1.2	5	12.344	0.038	32722	4.0
Total Col1Ave (5 peaks):					2.4	Total Col2Ave (5 peaks):				3.1 RPD = 26
Corrected Ave (4 peaks):					1.9	Corrected Ave (4 peaks):				2.3 RPD = 20
Aroclor-1268	1	11.173	-0.002	51213	0.4	1	11.506	0.000	16977	0.6

Aroclor-1268 2	11.248	0.002	45330	0.3	2	11.564	-0.009	37242	1.5
Aroclor-1268 3	11.629	-0.004	63465	0.6	3	---			0.0
Aroclor-1268 4	12.419	-0.003	91475	0.3	4	12.791	-0.001	10921	0.2

Total Col1Ave (4 peaks): 0.4 Total Col2Ave (3 peaks): 0.8 RPD = 62*

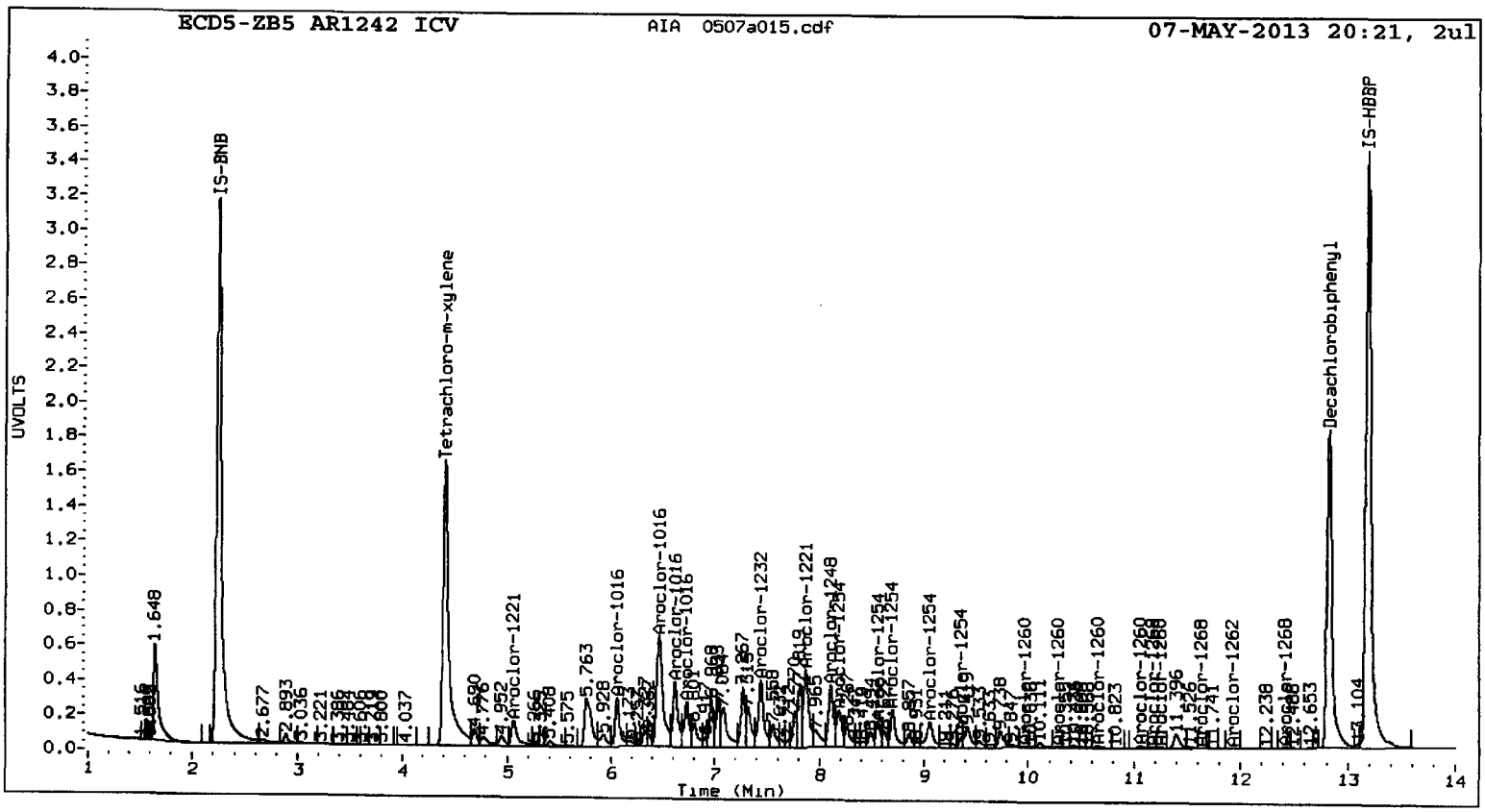
Corrected Ave (3 peaks): 0.3 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (4.511 - 12.728) = 136701149 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 28787302 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 20:21, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.648
2.677
2.893
3.036
4.037
5.763
5.928
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
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Aroclor-1262
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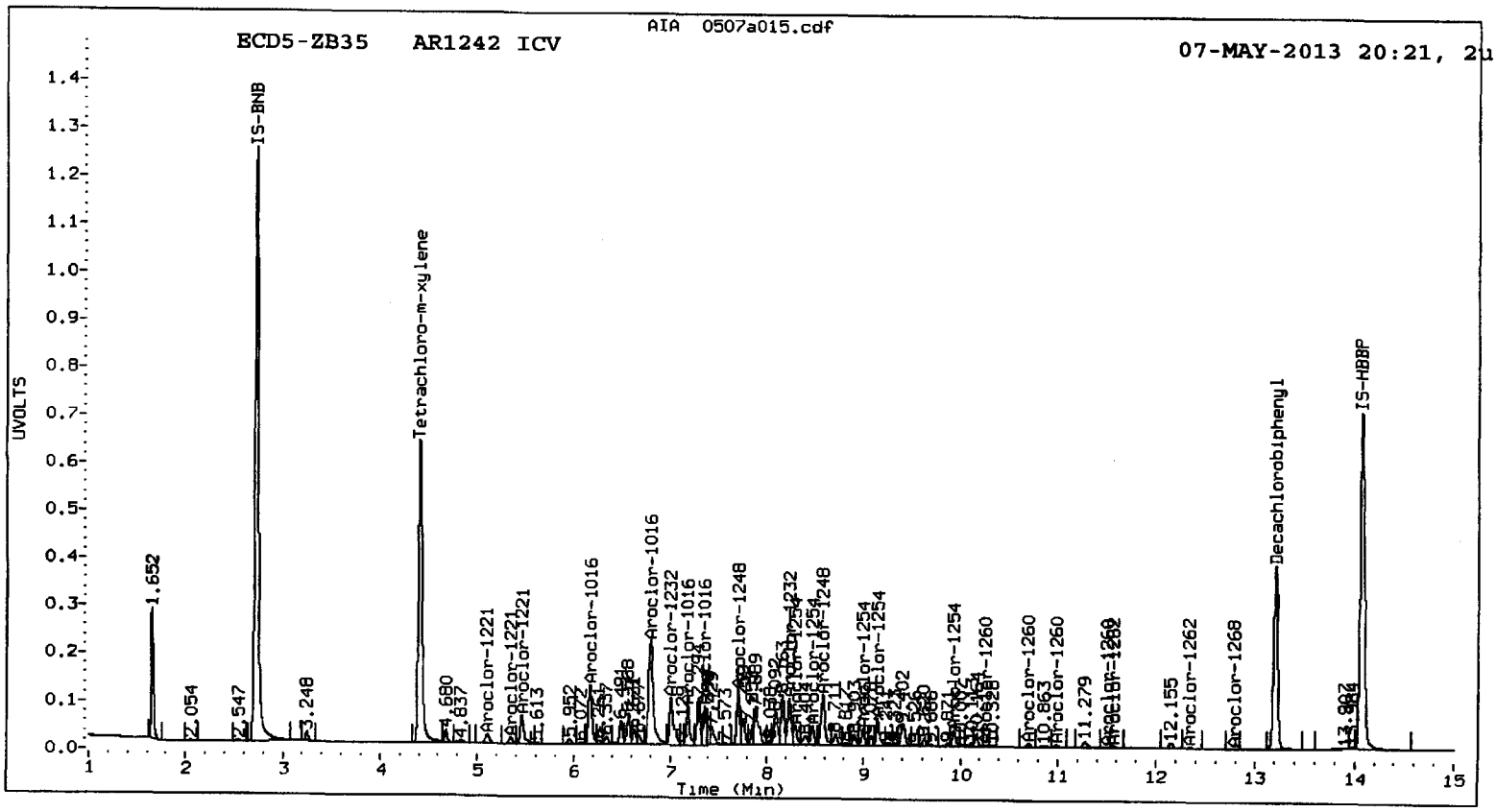
13.104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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.652
2.054
2.547
3.248
4.680
4.837
5.952
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
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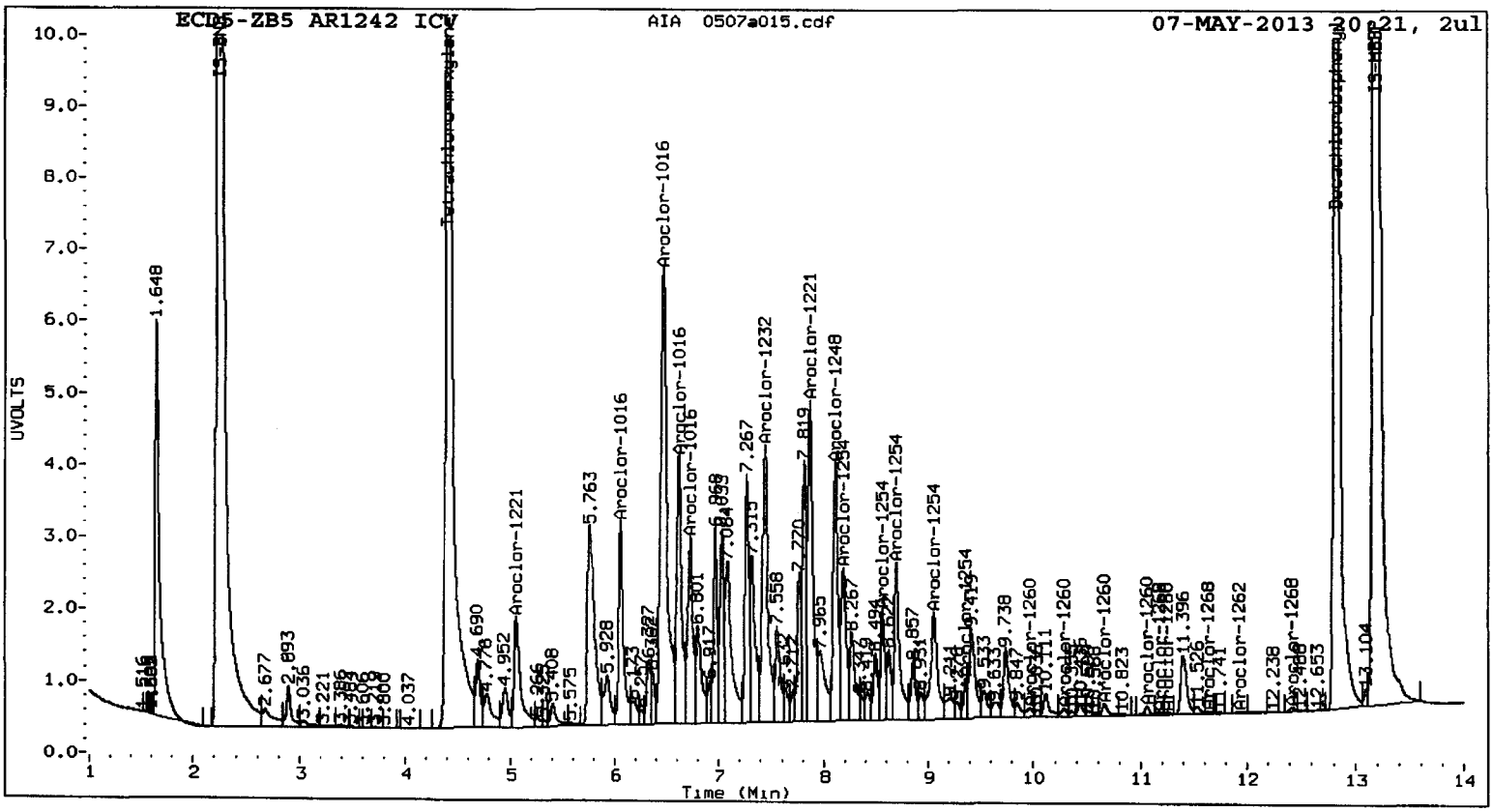
13.902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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
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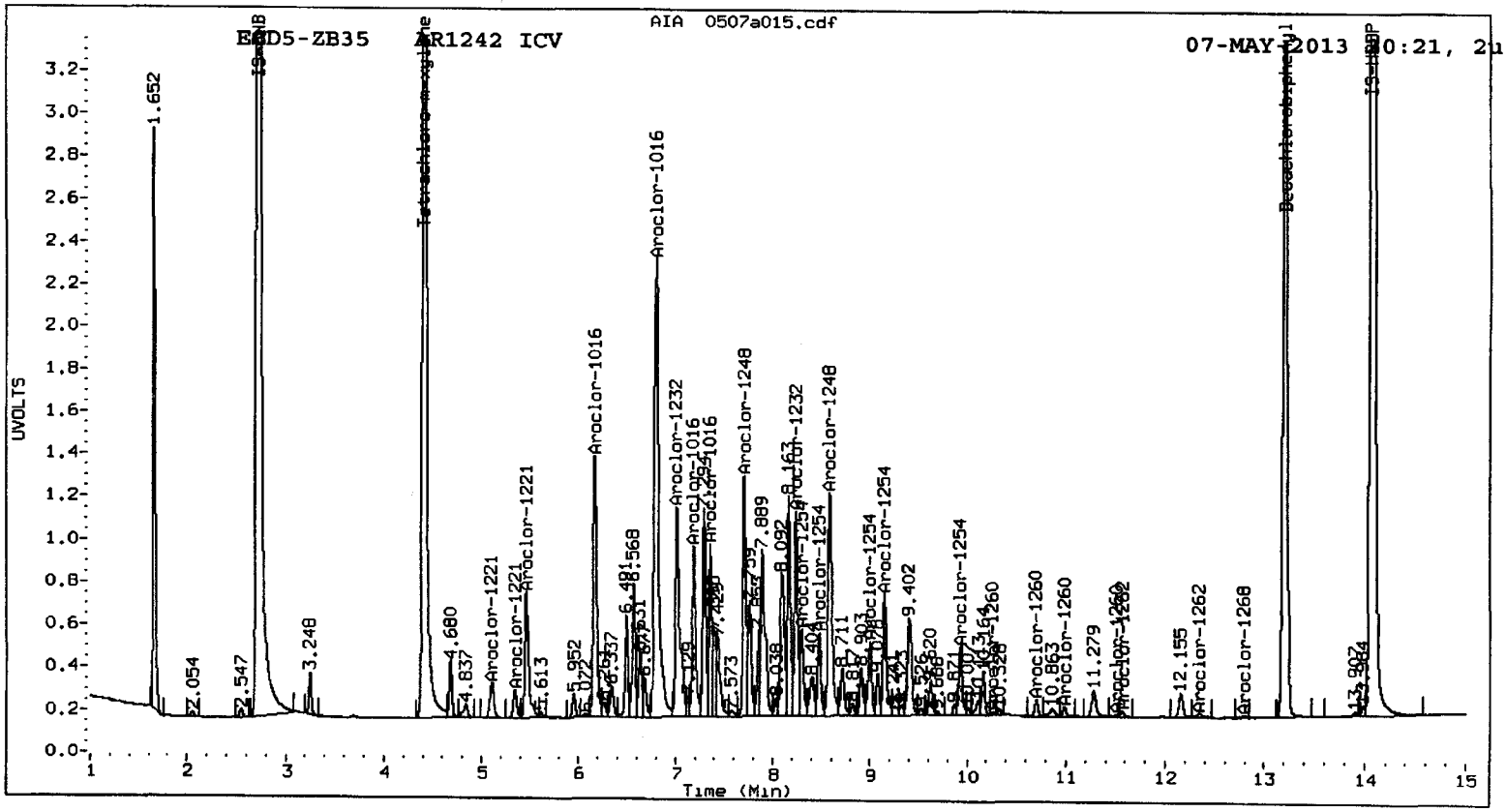
Aroclor-1268
Decachlorobiphenyl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Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a016.d
Data file 2: 20130507.b/ical-2.b/0507a016.d
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Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 07-MAY-2013 20:41
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	30900777	4.412	0.000	7953899	37.1	38.1	2.5	Tetrachloro-m-xylen
12.828	0.000	31048472	13.203	-0.002	5334093	34.3	33.8	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	92.9	95.2
Decachlorobiphenyl	85.7	84.6

05/03/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53651835	9.5
Hexabromobiphenyl	50004151	60660565	21.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15441440	4.1
Hexabromobiphenyl	9345340	10952020	17.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	6.060	-0.001	2318537	95.9	1	6.163	-0.002	909531	103.2	
Aroclor-1016	2	6.467	-0.002	9438131	126.7	2	6.800	-0.001	2390530	124.8	
Aroclor-1016	3	6.619	0.002	3851669	115.4	3	7.186	0.000	515984	103.0	
Aroclor-1016	4	6.729	0.001	2894284	116.1	4	7.358	0.000	1263898	270.9	
Total Col1Ave (4 peaks):		113.5			Total Col2Ave (4 peaks):		150.5			RPD = 28	
Corrected Ave (3 peaks):		109.1			Corrected Ave (3 peaks):		110.3			RPD = 1	
Aroclor-1221	1	5.063	0.000	864224	39.5	1	---			0.0	
Aroclor-1221	2	6.467	-0.001	9438131	1411.2	2	5.110	0.015	123396	46.6	
Aroclor-1221	3	7.874	-0.004	12549915	1328.9	3	5.348	0.003	31614	21.9	
Aroclor-1221	NS	---			----	4	5.462	0.001	185951	41.0	
Total Col1Ave (3 peaks):		926.5			Total Col2Ave (3 peaks):		36.5			RPD = 185*	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						
Aroclor-1232	1	6.060	-0.001	2318537	233.3	1	6.163	-0.002	909531	229.5	
Aroclor-1232	2	6.467	-0.002	9438131	310.3	2	6.800	-0.001	2390530	302.2	
Aroclor-1232	3	7.441	0.000	9852880	623.2	3	7.010	-0.001	586053	177.7	
Aroclor-1232	4	7.874	0.000	12549915	691.0	4	8.238	-0.001	1898417	685.7	
Total Col1Ave (4 peaks):		464.4			Total Col2Ave (4 peaks):		348.8			RPD = 28	
Corrected Ave (3 peaks):		388.9			Corrected Ave (3 peaks):		236.4			RPD = 49*	
Aroclor-1242	1	6.060	0.000	2318537	120.0	1	6.163	-0.004	909531	129.3	
Aroclor-1242	2	6.467	-0.001	9438131	159.3	2	6.800	-0.003	2390530	154.7	
Aroclor-1242	3	6.619	0.003	3851669	145.7	3	7.010	-0.001	586053	90.8	
Aroclor-1242	4	7.874	0.001	12549915	384.3	4	8.238	-0.001	1898417	351.0	
Total Col1Ave (4 peaks):		202.3			Total Col2Ave (4 peaks):		181.4			RPD = 11	
Corrected Ave (3 peaks):		141.6			Corrected Ave (3 peaks):		124.9			RPD = 13	
Aroclor-1248	1	6.467	0.000	9438131	250.0	1	6.800	0.000	2390530	247.1	
Aroclor-1248	2	7.441	-0.001	9852880	232.0	2	7.705	-0.001	1901637	237.0	
Aroclor-1248	3	7.874	-0.001	12549915	232.4	3	8.238	-0.001	1898417	228.5	
Aroclor-1248	4	8.110	0.000	8659425	230.0	4	8.584	0.000	2478354	229.6	
Total Col1Ave (4 peaks):		236.1			Total Col2Ave (4 peaks):		235.5			RPD = 0	
Corrected Ave (3 peaks):		231.5			Corrected Ave (3 peaks):		231.7			RPD = 0	
Aroclor-1254	1	8.190	-0.003	6700207	133.9	1	8.298	0.000	911407	121.7	
Aroclor-1254	2	8.563	0.000	4108008	124.4	2	8.476	0.001	848875	91.8	
Aroclor-1254	3	8.700	0.000	7416000	107.7	3	8.996	0.000	845277	119.3	
Aroclor-1254	4	9.057	0.005	6343972	89.5	4	9.147	0.000	1366372	90.0	
Aroclor-1254	5	9.362	0.000	724814	27.0	5	9.929	-0.006	923605	108.1	
Total Col1Ave (5 peaks):		96.5			Total Col2Ave (5 peaks):		106.2			RPD = 10	
Corrected Ave (4 peaks):		87.1			Corrected Ave (4 peaks):		102.3			RPD = 16	
Aroclor-1260	1	9.965	-0.002	449508	9.0	1	10.261	0.001	42393	4.3	
Aroclor-1260	2	10.283	0.000	290261	5.9	2	10.705	-0.004	108079	9.3	
Aroclor-1260	3	10.658	-0.001	538597	4.6	3	10.986	0.001	81136	3.8	
Aroclor-1260	4	11.058	0.000	190563	3.3	4	11.505	0.000	34540	5.9	
Aroclor-1260	5	11.248	0.001	168155	5.5	NS	---			----	
Total Col1Ave (5 peaks):		5.7			Total Col2Ave (4 peaks):		5.8			RPD = 3	
Corrected Ave (4 peaks):		4.8			Corrected Ave (3 peaks):		4.7			RPD = 3	
Aroclor-1262	1	10.283	0.000	290261	5.1	1	10.261	0.001	42393	2.8	
Aroclor-1262	2	10.658	0.000	538597	4.0	2	10.705	-0.005	108079	7.8	
Aroclor-1262	3	11.058	-0.002	190563	4.5	3	10.986	0.000	81136	3.1	
Aroclor-1262	4	11.248	0.000	168155	2.8	4	11.567	0.000	56086	3.3	
Aroclor-1262	5	11.919	0.001	152715	3.4	5	12.341	0.035	50555	6.2	
Total Col1Ave (5 peaks):		4.0			Total Col2Ave (5 peaks):		4.6			RPD = 16	
Corrected Ave (4 peaks):		3.7			Corrected Ave (4 peaks):		3.9			RPD = 5	
Aroclor-1268	1	11.173	-0.002	164171	1.3	1	11.505	-0.001	34540	1.3	

Aroclor-1268	2	11.248	0.002	168155	1.2	2	11.567	-0.006	56086	2.3
Aroclor-1268	3	11.641	0.008	89736	0.9	3	---			0.0
Aroclor-1268	4	12.419	-0.002	102180	0.3	4	12.793	0.001	11794	0.2

Total Col1Ave (4 peaks): 0.9 Total Col2Ave (3 peaks): 1.3 RPD = 31

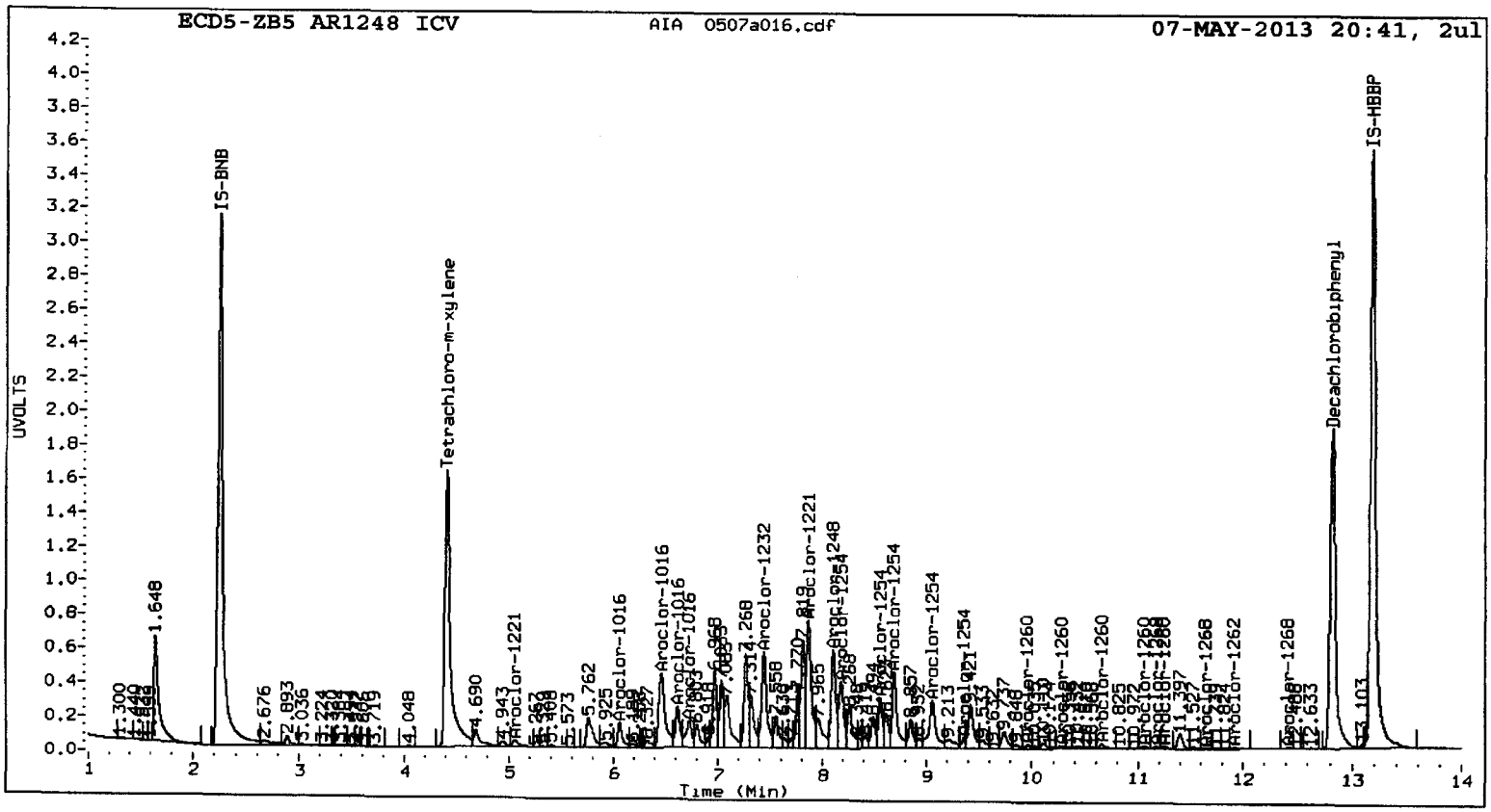
Corrected Ave (3 peaks): 0.8 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (4.511 - 12.728) = 167287666 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 33824743 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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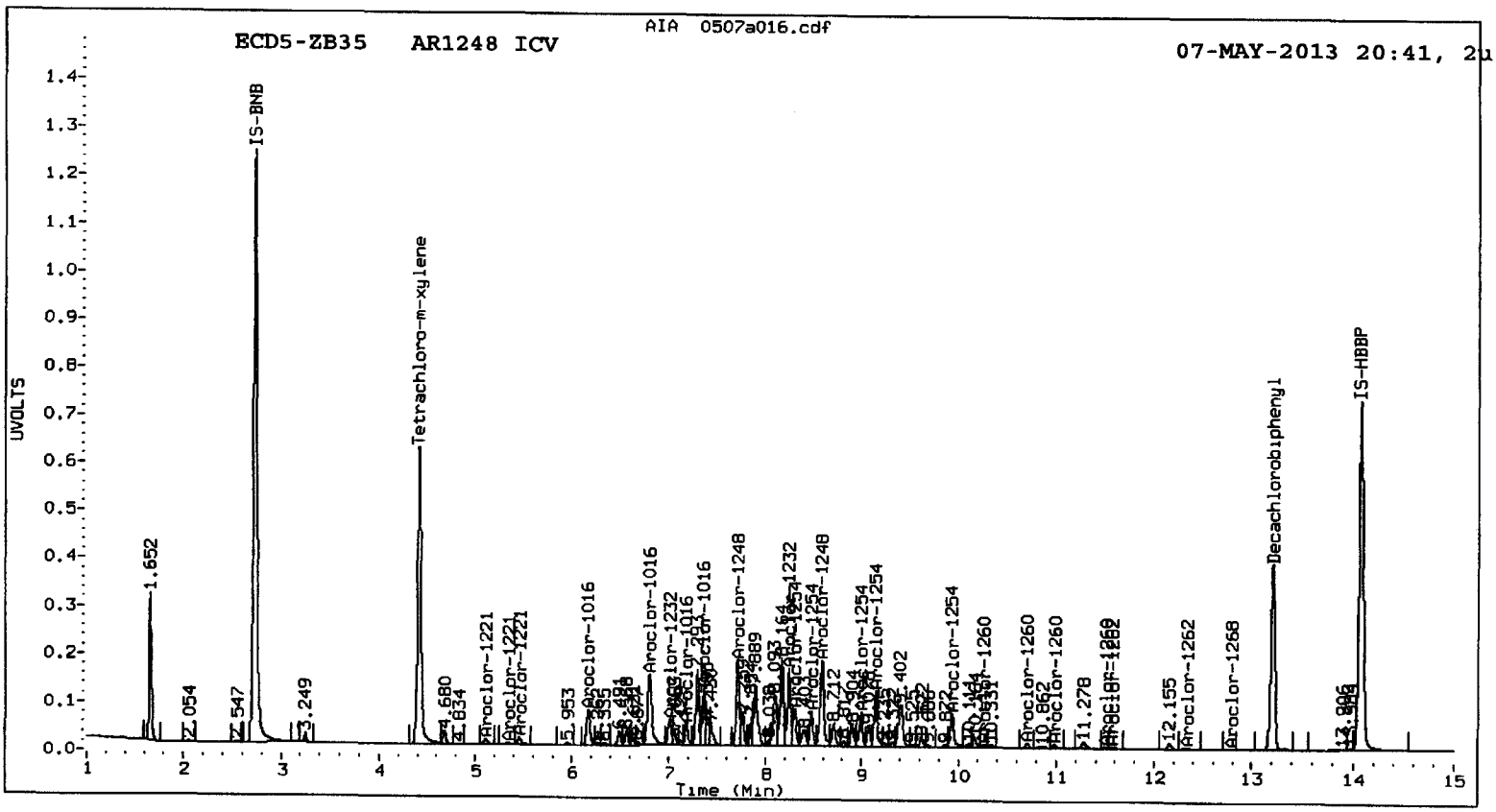
07-MAY-2013 20:41, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Tetrachloro-m-xylene
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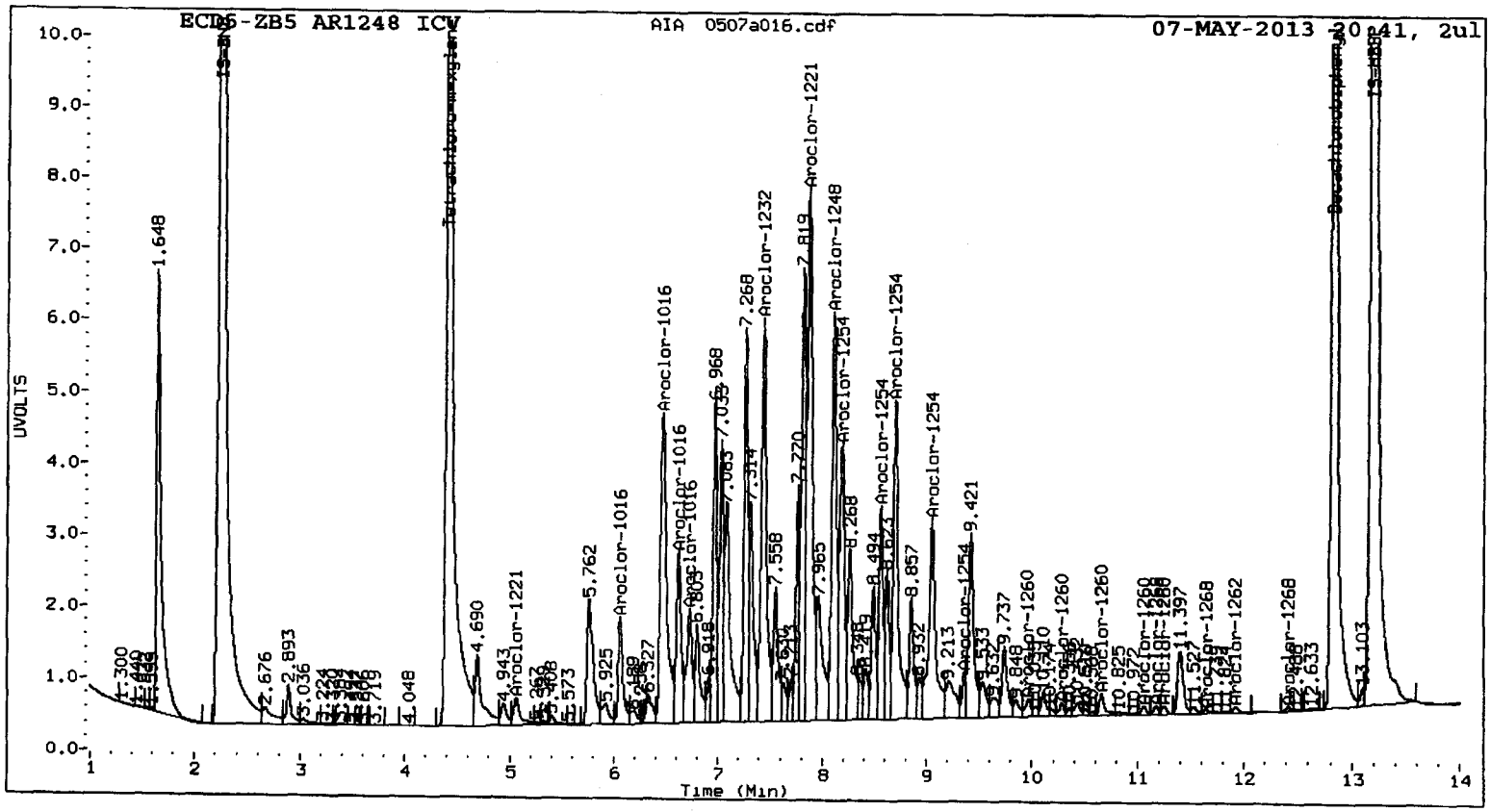
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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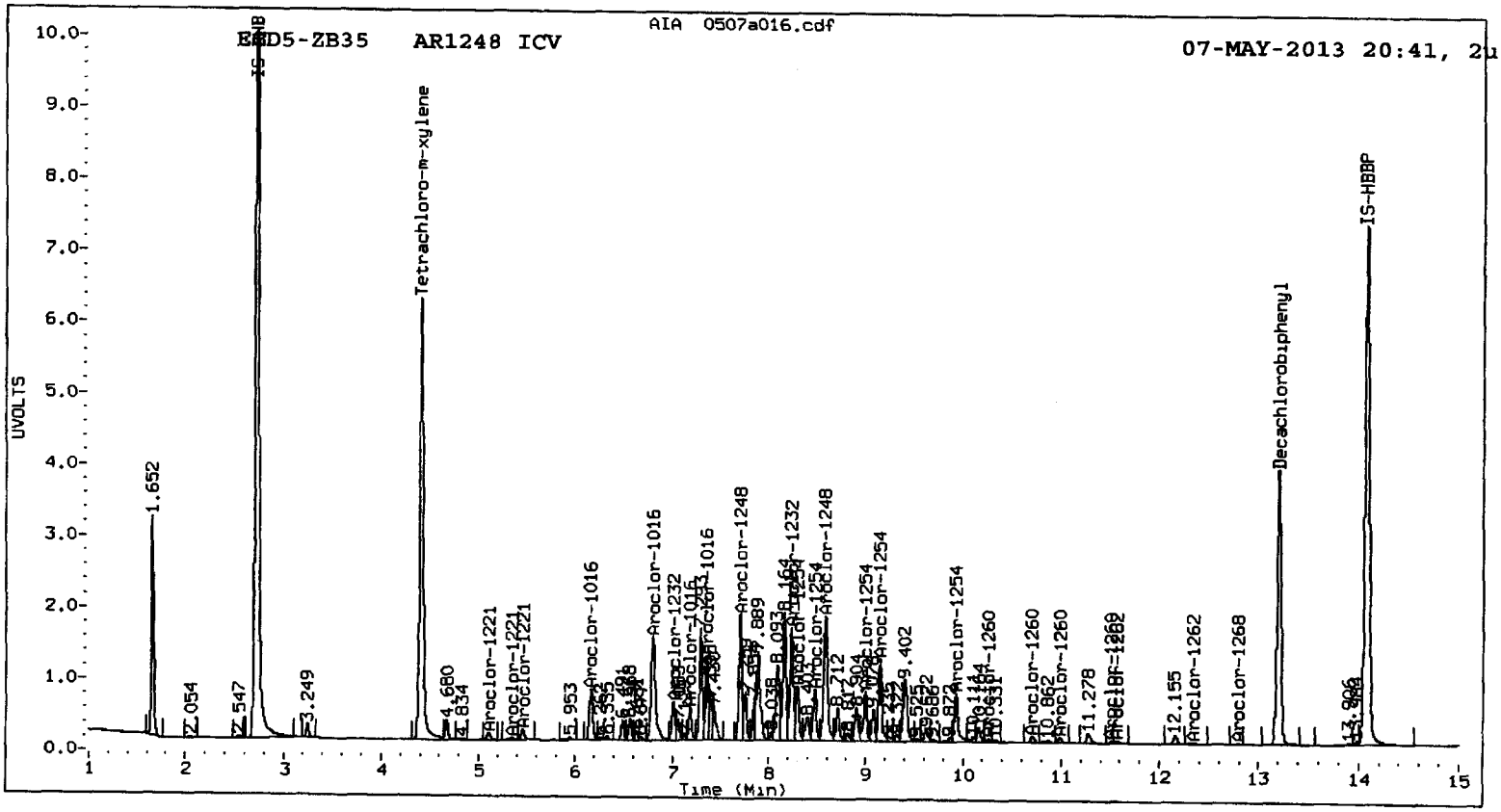
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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07-MAY-2013 20:41, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a017.d
Data file 2: 20130507.b/ical-2.b/0507a017.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 07-MAY-2013 21:01
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	31249884	4.411	0.000	8016298	37.6	38.6	2.7	Tetrachloro-m-xylen
12.828	0.000	30201361	13.205	-0.001	5162177	34.7	34.1	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	93.9	96.5
Decachlorobiphenyl	86.9	85.3

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53642771	9.5
Hexabromobiphenyl	50004151	58188446	16.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15360402	3.5
Hexabromobiphenyl	9345340	10510294	12.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount	
Aroclor-1016	1	6.061	0.001	74537	3.1	1	6.163	-0.003	28483	3.2	
Aroclor-1016	2	6.462	-0.007	337320	4.5	2	6.793	-0.007	84978	4.5	
Aroclor-1016	3	6.623	0.006	206176	6.2	3	7.187	0.001	11814	2.4	
Aroclor-1016	4	6.730	0.002	85227	3.4	4	7.357	-0.001	459146	98.9	
Total Col1Ave (4 peaks):					4.3	Total Col2Ave (4 peaks):				27.3	RPD = 145*
Corrected Ave (3 peaks):					3.7	Corrected Ave (3 peaks):				3.4	RPD = 9
Aroclor-1221	1	5.059	-0.005	147002	6.7	1	---			0.0	
Aroclor-1221	2	6.462	-0.007	337320	50.4	2	5.111	0.016	103036	39.1	
Aroclor-1221	3	7.878	0.000	10714695	1134.7	3	---			0.0	
Aroclor-1221	NS	---			----	4	5.465	0.004	27897	6.2	
Total Col1Ave (3 peaks):					397.3	Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	6.061	0.001	74537	7.5	1	6.163	-0.002	28483	7.2	
Aroclor-1232	2	6.462	-0.008	337320	11.1	2	6.793	-0.008	84978	10.8	
Aroclor-1232	3	7.442	0.001	1732024	109.6	3	7.010	-0.001	15916	4.9	
Aroclor-1232	4	7.878	0.004	10714695	590.0	4	8.237	-0.001	361750	131.4	
Total Col1Ave (4 peaks):					179.5	Total Col2Ave (4 peaks):				38.6	RPD = 129*
Corrected Ave (3 peaks):					42.7	Corrected Ave (3 peaks):				7.6	RPD = 139*
Aroclor-1242	1	6.061	0.002	74537	3.9	1	6.163	-0.004	28483	4.1	
Aroclor-1242	2	6.462	-0.006	337320	5.7	2	6.793	-0.010	84978	5.5	
Aroclor-1242	3	6.623	0.006	206176	7.8	3	7.010	-0.001	15916	2.5	
Aroclor-1242	4	7.878	0.006	10714695	328.2	4	8.237	-0.002	361750	67.2	
Total Col1Ave (4 peaks):					86.4	Total Col2Ave (4 peaks):				19.8	RPD = 125*
Corrected Ave (3 peaks):					5.8	Corrected Ave (3 peaks):				4.0	RPD = 36
Aroclor-1248	1	6.462	-0.005	337320	8.9	1	6.793	-0.007	84978	8.8	
Aroclor-1248	2	7.442	0.000	1732024	40.8	2	7.705	-0.001	756815	94.8	
Aroclor-1248	3	7.878	0.004	10714695	198.5	3	8.237	-0.001	361750	43.8	
Aroclor-1248	4	8.113	0.003	3375422	89.7	4	8.569	-0.015	1382582	128.7	
Total Col1Ave (4 peaks):					84.5	Total Col2Ave (4 peaks):				69.0	RPD = 20
Corrected Ave (3 peaks):					46.5	Corrected Ave (3 peaks):				49.1	RPD = 6
Aroclor-1254	1	8.192	0.000	14171059	283.3	1	8.299	0.001	2103454	282.4	
Aroclor-1254	2	8.563	0.000	9711755	294.1	2	8.475	0.000	2629736	285.8	
Aroclor-1254	3	8.700	0.000	19370984	281.4	3	8.996	0.000	2093024	297.0	
Aroclor-1254	4	9.054	0.002	20541352	289.7	4	9.148	0.001	4267118	282.7	
Aroclor-1254	5	9.362	0.000	7016935	261.7	5	9.933	-0.001	2526495	297.2	
Total Col1Ave (5 peaks):					282.0	Total Col2Ave (5 peaks):				289.0	RPD = 2
Corrected Ave (4 peaks):					279.0	Corrected Ave (4 peaks):				287.0	RPD = 3
Aroclor-1260	1	9.964	-0.003	1762734	37.0	1	10.260	0.000	214372	22.5	
Aroclor-1260	2	10.284	0.000	1461583	30.9	2	10.704	-0.005	1157323	103.6	
Aroclor-1260	3	10.658	-0.001	2962044	26.1	3	10.985	0.000	606704	29.4	
Aroclor-1260	4	11.057	0.000	2253674	40.8	4	11.506	0.001	77148	13.8	
Aroclor-1260	5	11.247	0.000	227786	7.7	NS	---			----	
Total Col1Ave (5 peaks):					28.5	Total Col2Ave (4 peaks):				42.3	RPD = 39
Corrected Ave (4 peaks):					25.4	Corrected Ave (3 peaks):				21.9	RPD = 15
Aroclor-1262	1	10.284	0.001	1461583	26.8	1	10.260	0.000	214372	14.7	
Aroclor-1262	2	10.658	0.000	2962044	23.1	2	10.704	-0.006	1157323	87.1	
Aroclor-1262	3	11.057	-0.002	2253674	55.6	3	10.985	0.000	606704	24.3	
Aroclor-1262	4	11.247	0.000	227786	4.0	4	11.563	-0.004	395081	24.4	
Aroclor-1262	5	11.918	0.000	149251	3.4	5	12.340	0.034	39786	5.1	
Total Col1Ave (5 peaks):					22.6	Total Col2Ave (5 peaks):				31.1	RPD = 32
Corrected Ave (4 peaks):					14.3	Corrected Ave (4 peaks):				17.1	RPD = 18
Aroclor-1268	1	11.171	-0.004	198308	1.6	1	11.506	0.000	77148	3.0	
Aroclor-1268	2	11.247	0.001	227786	1.7	2	11.563	-0.010	395081	16.5	

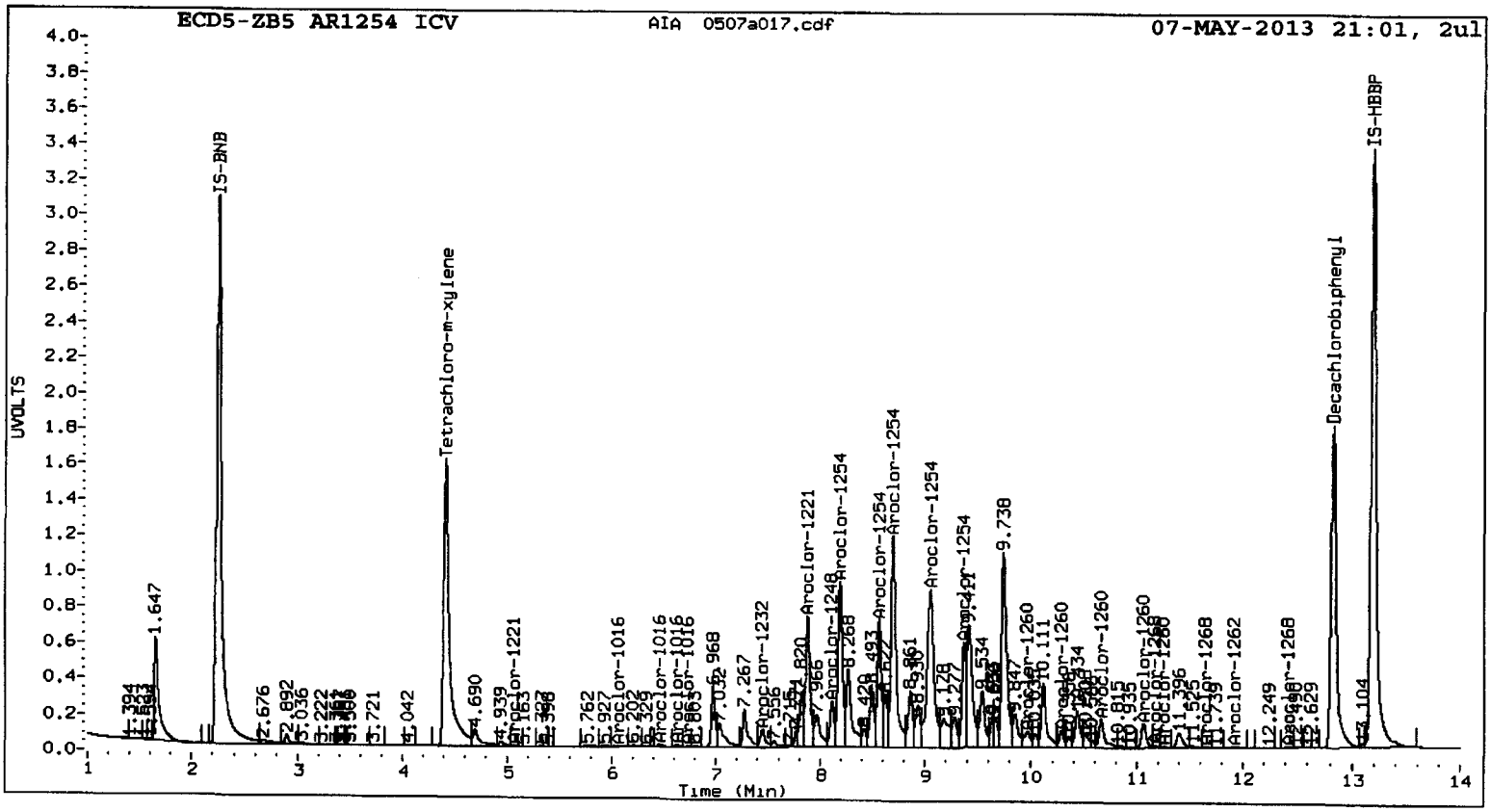
Aroclor-1268 3	11.643	0.011	109759	1.1	3	---	0.0
Aroclor-1268 4	12.420	-0.002	62105	0.2	4	---	0.0
Total Col1Ave (4 peaks):				1.2	Col2Ave: <3 Quant Peaks		

Total PCB Area Col1 (4.511 - 12.728) = 211898856 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 42309153 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 21:01, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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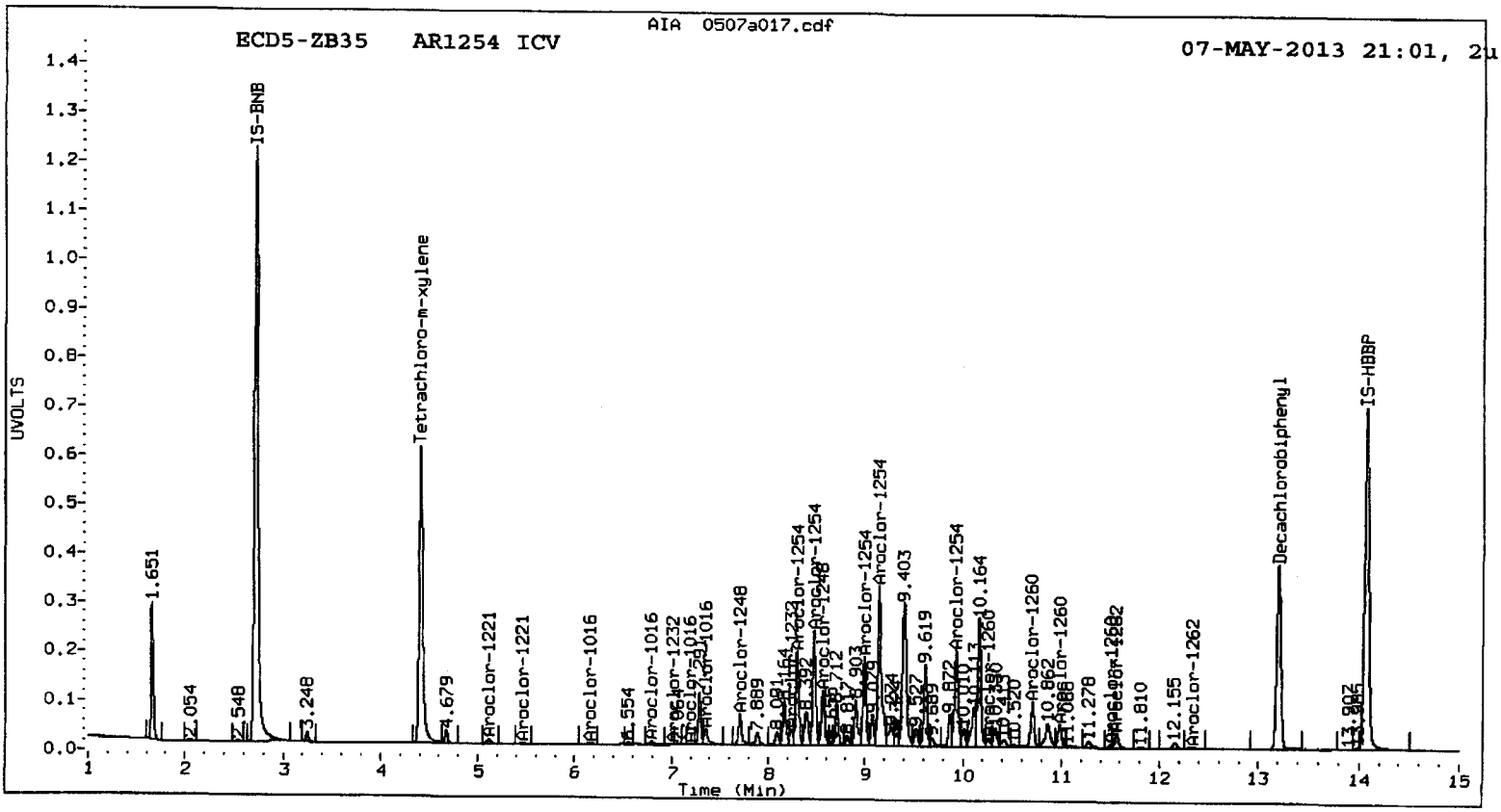
9.738
10.111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UVOLTS
Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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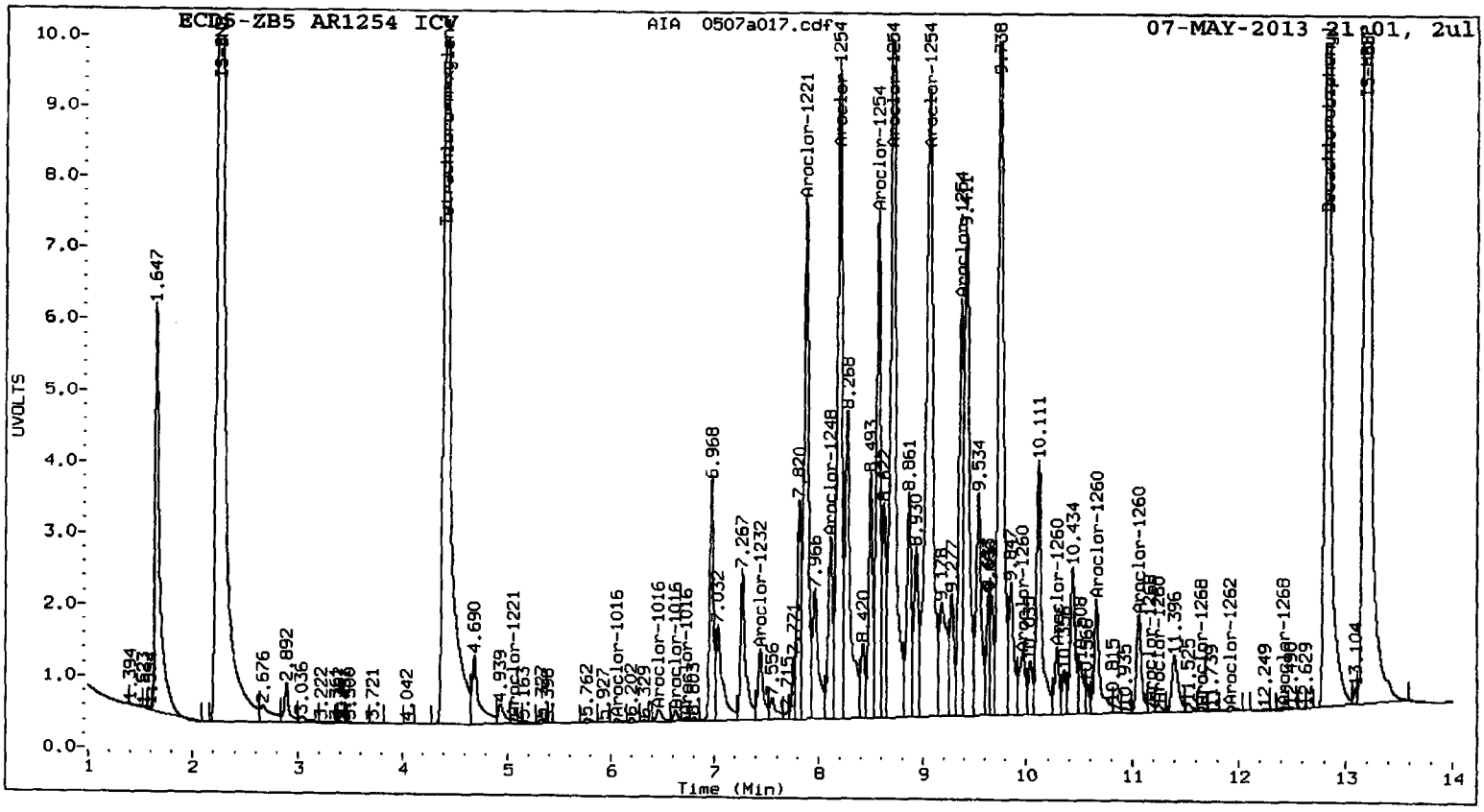
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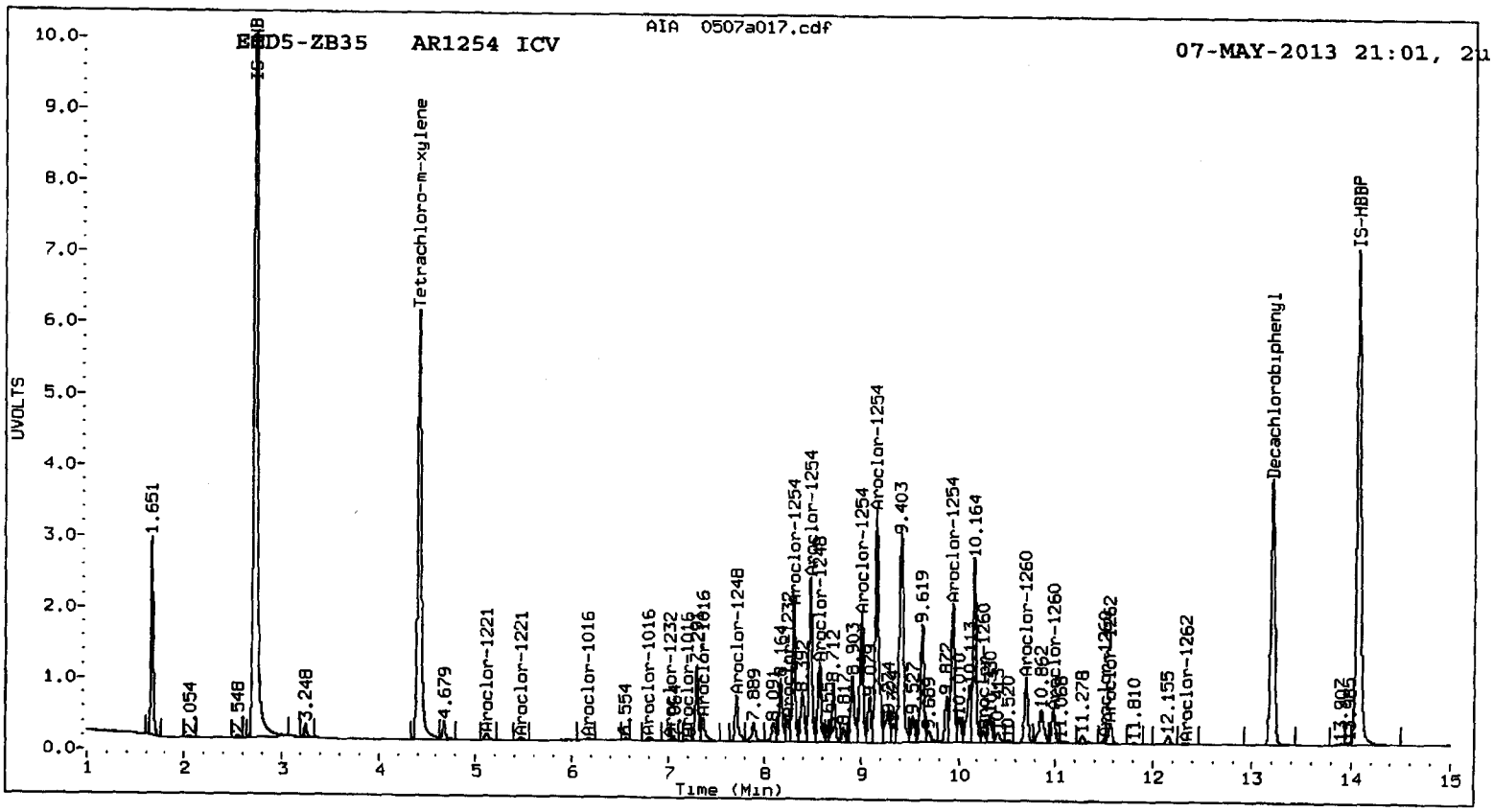
07-MAY-2013 21:01, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a018.d
Data file 2: 20130507.b/ical-2.b/0507a018.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 07-MAY-2013 21:21
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	31767638	4.411	0.000	8077710	37.7	38.5	2.1	Tetrachloro-m-xylen
12.827	-0.001	30552007	13.205	0.000	5210574	34.7	34.1	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.2	96.2
Decachlorobiphenyl	86.8	85.3

M 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54355833	11.0
Hexabromobiphenyl	50004151	58930522	17.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15522820	4.6
Hexabromobiphenyl	9345340	10608758	13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.060	0.000	5710646	233.1	1	6.166	0.000	2083969	235.3
Aroclor-1016	2	6.468	0.000	17399600	230.5	2	6.800	0.000	4481969	232.8
Aroclor-1016	3	6.618	0.001	7785800	230.3	3	7.185	0.000	1171797	232.7
Aroclor-1016	4	6.729	0.001	5827980	230.7	4	7.357	-0.001	1070181	228.2
Total Col1Ave (4 peaks):					231.1	Total Col2Ave (4 peaks):				232.2 RPD = 0
Corrected Ave (3 peaks):					230.5	Corrected Ave (3 peaks):				231.2 RPD = 0
Aroclor-1221	1	5.063	0.000	4136002	186.8	1	3.696	0.001	11910	7.5
Aroclor-1221	2	6.468	0.000	17399600	2568.0	2	5.100	0.006	292561	109.8
Aroclor-1221	3	7.878	0.000	5153861	538.7	3	5.347	0.002	209236	144.2
Aroclor-1221	NS	---			----	4	5.461	0.001	1022087	224.0
Total Col1Ave (3 peaks):					1097.8	Total Col2Ave (4 peaks):				121.4 RPD = 160*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				87.2
Aroclor-1232	1	6.060	0.000	5710646	567.2	1	6.166	0.000	2083969	523.1
Aroclor-1232	2	6.468	-0.001	17399600	564.6	2	6.800	-0.001	4481969	563.6
Aroclor-1232	3	7.442	0.000	8239430	514.4	3	7.010	-0.001	1862855	561.7
Aroclor-1232	4	7.878	0.004	5153861	280.1	4	8.237	-0.002	198387	71.3
Total Col1Ave (4 peaks):					481.6	Total Col2Ave (4 peaks):				429.9 RPD = 11
Corrected Ave (3 peaks):					453.0	Corrected Ave (3 peaks):				385.4 RPD = 16
Aroclor-1242	1	6.060	0.001	5710646	291.7	1	6.166	-0.002	2083969	294.7
Aroclor-1242	2	6.468	0.000	17399600	289.8	2	6.800	-0.002	4481969	288.5
Aroclor-1242	3	6.618	0.001	7785800	290.6	3	7.010	-0.001	1862855	287.0
Aroclor-1242	4	7.878	0.006	5153861	155.8	4	8.237	-0.002	198387	36.5
Total Col1Ave (4 peaks):					257.0	Total Col2Ave (4 peaks):				226.7 RPD = 13
Corrected Ave (3 peaks):					245.4	Corrected Ave (3 peaks):				204.0 RPD = 18
Aroclor-1248	1	6.468	0.001	17399600	454.8	1	6.800	0.001	4481969	460.8
Aroclor-1248	2	7.442	0.000	8239430	191.5	2	7.705	-0.001	1494414	185.3
Aroclor-1248	3	7.878	0.004	5153861	94.2	3	8.237	-0.002	198387	23.8
Aroclor-1248	4	8.113	0.003	956546	25.1	4	8.584	0.000	77790	7.2
Total Col1Ave (4 peaks):					191.4	Total Col2Ave (4 peaks):				169.2 RPD = 12
Corrected Ave (3 peaks):					103.6	Corrected Ave (3 peaks):				72.1 RPD = 36
Aroclor-1254	1	8.194	0.002	5604593	110.6	1	8.299	0.000	888811	118.1
Aroclor-1254	2	8.563	0.000	760107	22.7	2	8.475	0.000	906791	97.5
Aroclor-1254	3	8.696	-0.004	2725232	39.1	3	8.997	0.001	149462	21.0
Aroclor-1254	4	9.029	-0.024	14910986	207.5	4	9.187	0.040	2306321	151.2
Aroclor-1254	5	9.361	-0.001	20865390	767.9	5	9.939	0.004	1000144	116.4
Total Col1Ave (5 peaks):					229.6	Total Col2Ave (5 peaks):				100.8 RPD = 78*
Corrected Ave (4 peaks):					95.0	Corrected Ave (4 peaks):				88.3 RPD = 7
Aroclor-1260	1	9.967	0.000	12336540	255.6	1	10.261	0.001	2515434	261.4
Aroclor-1260	2	10.283	-0.001	11792031	246.4	2	10.710	0.001	2780218	246.7
Aroclor-1260	3	10.659	-0.001	28793615	250.9	3	10.986	0.001	5491310	263.9
Aroclor-1260	4	11.059	0.001	13292663	237.8	4	11.506	0.001	1529990	271.2
Aroclor-1260	5	11.247	0.000	8346657	279.1	NS	---			----
Total Col1Ave (5 peaks):					254.0	Total Col2Ave (4 peaks):				260.8 RPD = 3
Corrected Ave (4 peaks):					247.7	Corrected Ave (3 peaks):				257.3 RPD = 4
Aroclor-1262	1	10.283	0.000	11792031	213.7	1	10.261	0.001	2515434	171.4
Aroclor-1262	2	10.659	0.000	28793615	222.1	2	10.710	0.000	2780218	207.2
Aroclor-1262	3	11.059	-0.001	13292663	323.7	3	10.986	0.001	5491310	218.2
Aroclor-1262	4	11.247	0.000	8346657	144.8	4	11.565	-0.002	3586824	219.3
Aroclor-1262	5	11.918	0.000	7146896	161.6	5	12.307	0.001	1281460	162.3
Total Col1Ave (5 peaks):					213.2	Total Col2Ave (5 peaks):				195.7 RPD = 9
Corrected Ave (4 peaks):					185.5	Corrected Ave (4 peaks):				189.8 RPD = 2
Aroclor-1268	1	11.174	-0.001	6512368	52.5	1	11.506	-0.001	1529990	59.7

Aroclor-1268	2	11.247	0.001	8346657	60.9	2	11.565	-0.008	3586824	148.6
Aroclor-1268	3	11.648	0.015	3204605	31.5	3	11.967	-0.002	50714	2.7
Aroclor-1268	4	12.420	-0.001	1403153	4.9	4	12.792	0.000	228513	4.6

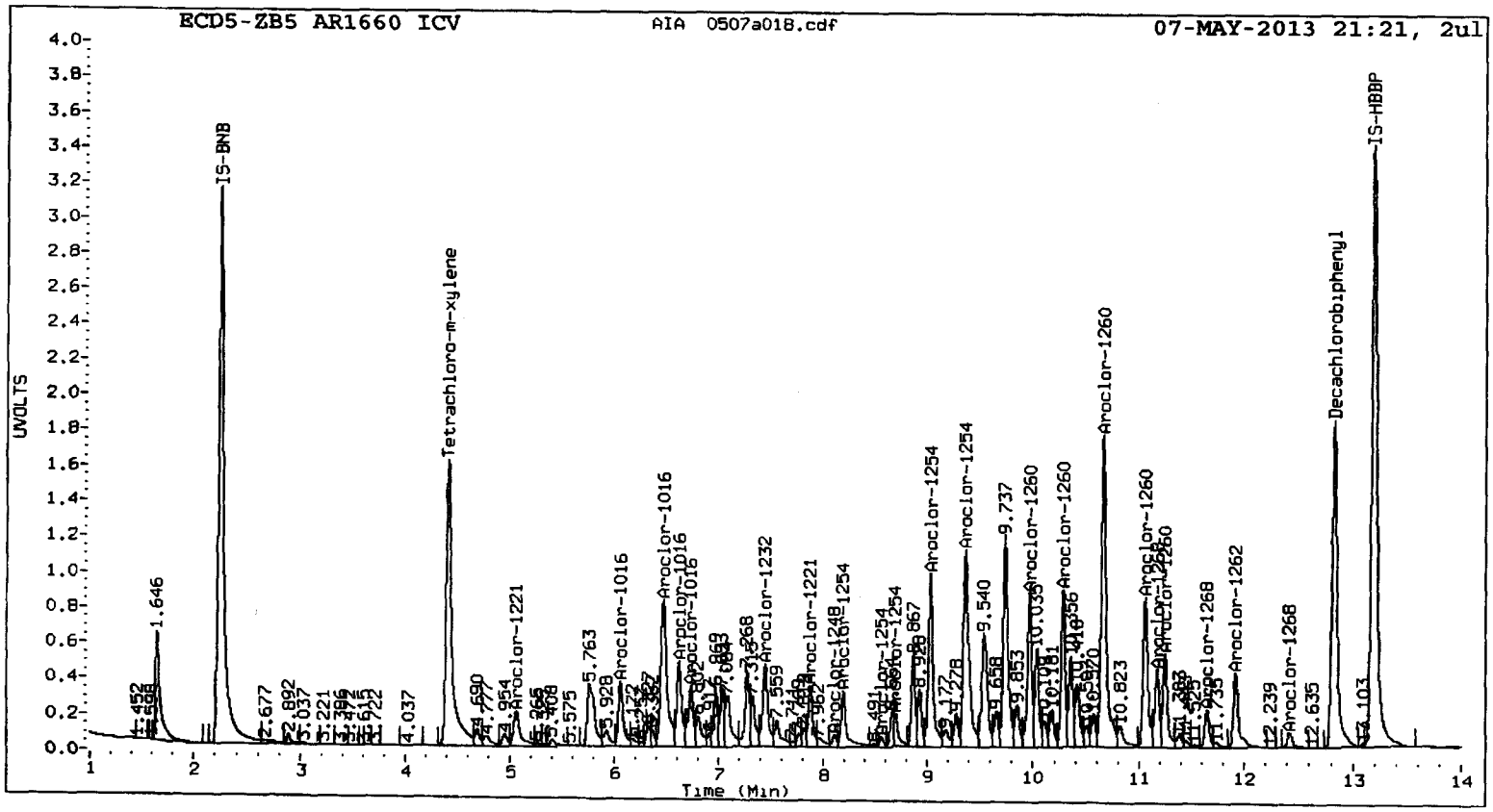
Total Col1Ave (4 peaks): 37.4 Total Col2Ave (4 peaks): 53.9 RPD = 36

Corrected Ave (3 peaks): 29.6 Corrected Ave (3 peaks): 22.3 RPD = 28

Total PCB Area Col1 (4.511 - 12.728) = 339033302 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 67437339 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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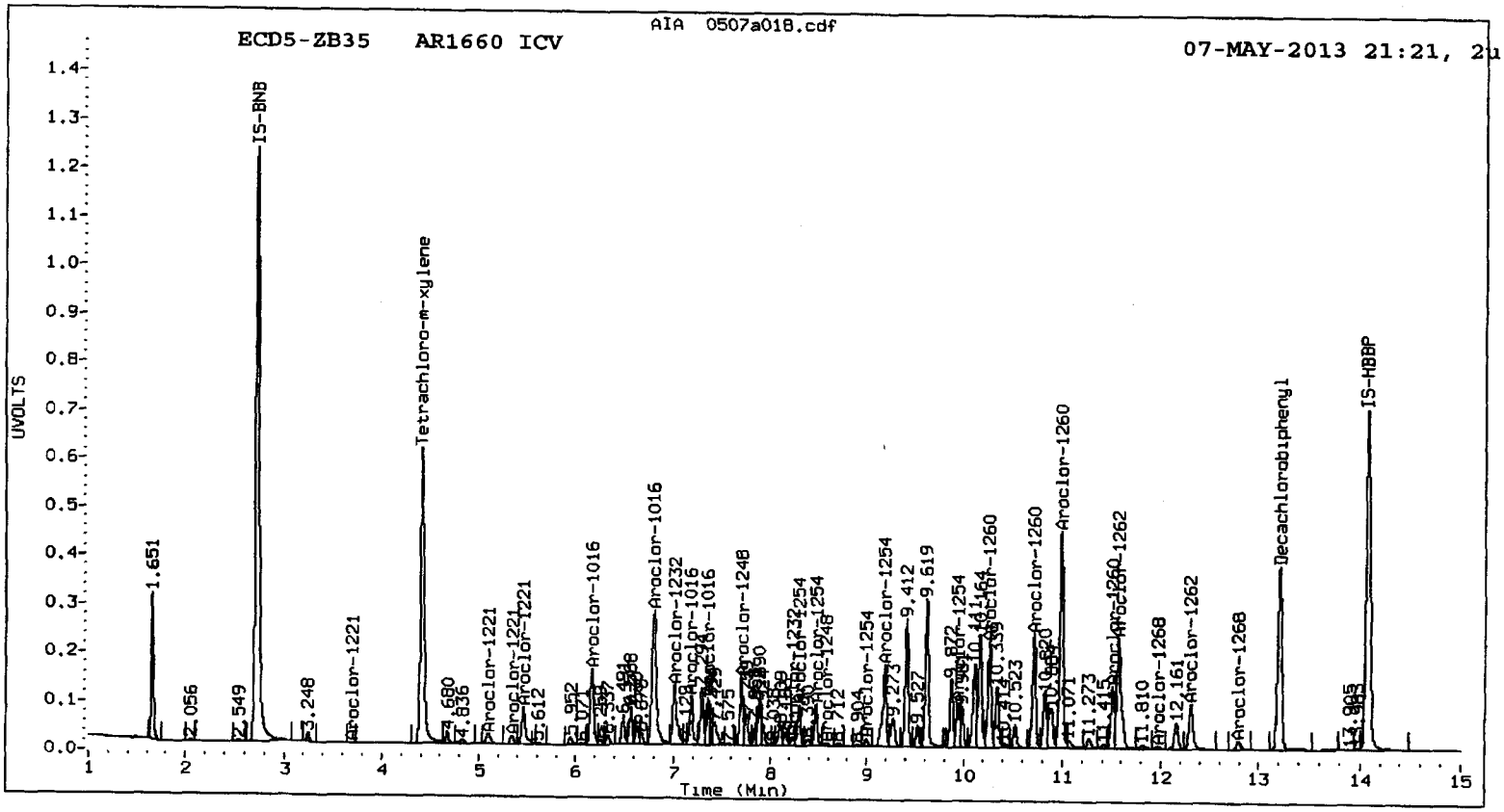
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Time (Min)
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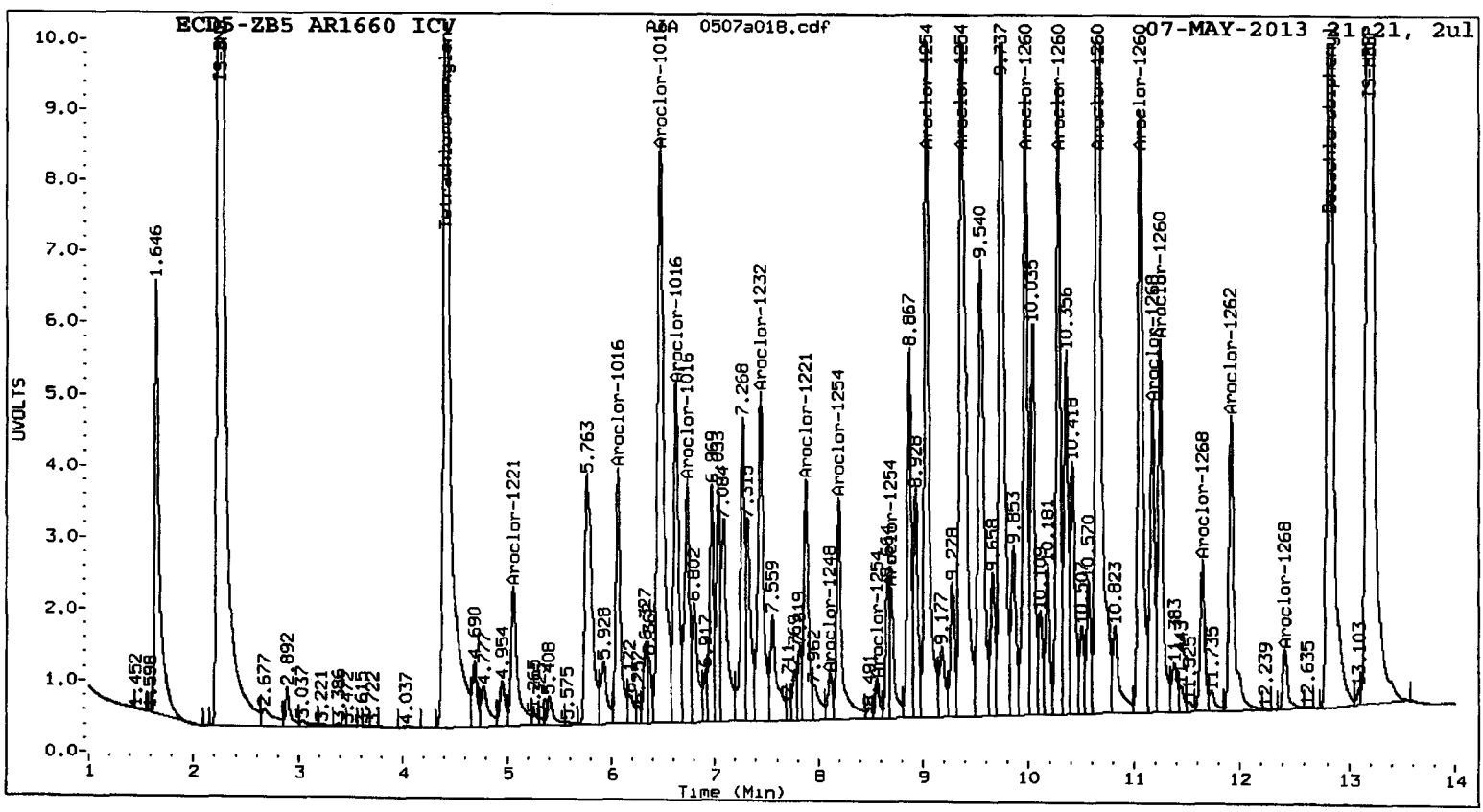
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
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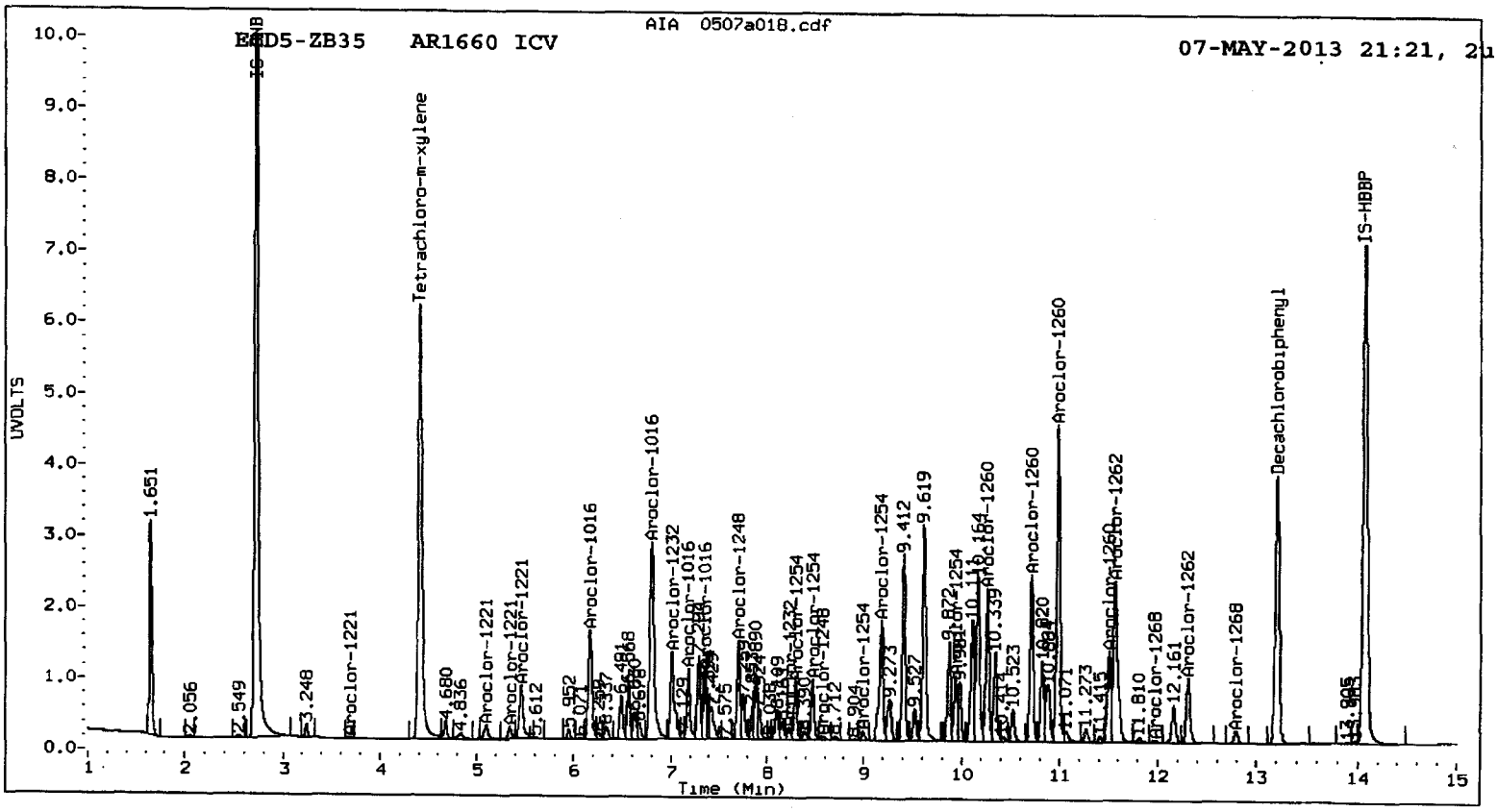
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a019.d
Data file 2: 20130507.b/ical-2.b/0507a019.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 07-MAY-2013 21:42
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	32723514	4.412	0.000	8175501	38.5	39.3	2.2	Tetrachloro-m-xylen
12.828	0.000	30887403	13.205	0.000	5217278	35.3	34.6	1.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/08/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.1	98.3
Decachlorobiphenyl	88.3	86.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54884040	12.1
Hexabromobiphenyl	50004151	58566252	17.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15378234	3.6
Hexabromobiphenyl	9345340	10470042	12.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.060	-0.001	613149	24.8	1	6.177	0.011	386723	44.1
Aroclor-1016	2	6.470	0.001	1448260	19.0	2	6.803	0.002	348544	18.3
Aroclor-1016	3	6.617	0.000	702982	20.6	3	7.186	0.001	92186	18.5
Aroclor-1016	4	6.729	0.001	468102	18.3	4	7.357	-0.001	67755	14.6
Total Col1Ave (4 peaks):				20.7		Total Col2Ave (4 peaks):			23.9	RPD = 14
Corrected Ave (3 peaks):				19.3		Corrected Ave (3 peaks):			17.1	RPD = 12
Aroclor-1221	1	5.064	0.000	5852175	261.7	1	3.696	0.002	409204	259.6
Aroclor-1221	2	6.470	0.002	1448260	211.7	2	5.095	0.001	683679	259.1
Aroclor-1221	3	7.878	0.000	2211598	228.9	3	5.346	0.001	375497	261.3
Aroclor-1221	NS	---			----	4	5.461	0.001	1172244	259.3
Total Col1Ave (3 peaks):				234.1		Total Col2Ave (4 peaks):			259.8	RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			259.3	
Aroclor-1232	1	6.060	-0.001	613149	60.3	1	6.177	0.011	386723	98.0
Aroclor-1232	2	6.470	0.001	1448260	46.5	2	6.803	0.002	348544	44.2
Aroclor-1232	3	7.441	0.000	391114	24.2	3	7.011	0.000	157577	48.0
Aroclor-1232	4	7.878	0.004	2211598	119.0	4	8.239	0.001	57476	20.8
Total Col1Ave (4 peaks):				62.5		Total Col2Ave (4 peaks):			52.8	RPD = 17
Corrected Ave (3 peaks):				43.7		Corrected Ave (3 peaks):			37.7	RPD = 15
Aroclor-1242	1	6.060	0.000	613149	31.0	1	6.177	0.009	386723	55.2
Aroclor-1242	2	6.470	0.002	1448260	23.9	2	6.803	0.000	348544	22.6
Aroclor-1242	3	6.617	0.000	702982	26.0	3	7.011	0.000	157577	24.5
Aroclor-1242	4	7.878	0.005	2211598	66.2	4	8.239	0.000	57476	10.7
Total Col1Ave (4 peaks):				36.8		Total Col2Ave (4 peaks):			28.3	RPD = 26
Corrected Ave (3 peaks):				27.0		Corrected Ave (3 peaks):			19.3	RPD = 33
Aroclor-1248	1	6.470	0.003	1448260	37.5	1	6.803	0.003	348544	36.2
Aroclor-1248	2	7.441	-0.001	391114	9.0	2	7.705	-0.001	87992	11.0
Aroclor-1248	3	7.878	0.004	2211598	40.0	3	8.239	0.000	57476	6.9
Aroclor-1248	4	8.113	0.003	478072	12.4	4	8.578	-0.005	115261	10.7
Total Col1Ave (4 peaks):				24.7		Total Col2Ave (4 peaks):			16.2	RPD = 42*
Corrected Ave (3 peaks):				19.6		Corrected Ave (3 peaks):			9.6	RPD = 69*
Aroclor-1254	1	8.194	0.002	2387711	46.6	1	8.299	0.000	421166	56.5
Aroclor-1254	2	8.563	0.000	484981	14.4	2	8.475	0.000	484426	52.6
Aroclor-1254	3	8.663	-0.037	3505604	49.8	3	8.997	0.000	101058	14.3
Aroclor-1254	4	9.029	-0.024	12603810	173.7	4	9.186	0.040	2047860	135.5
Aroclor-1254	5	9.361	-0.001	15873155	578.6	5	9.939	0.004	484038	56.9
Total Col1Ave (5 peaks):				172.6		Total Col2Ave (5 peaks):			63.2	RPD = 93*
Corrected Ave (4 peaks):				71.1		Corrected Ave (4 peaks):			45.1	RPD = 45*
Aroclor-1260	1	9.967	0.000	17243313	359.5	1	10.261	0.001	3588073	377.8
Aroclor-1260	2	10.282	-0.001	14266396	299.9	2	10.711	0.002	3379274	303.8
Aroclor-1260	3	10.659	0.000	31833903	279.1	3	10.986	0.001	6071825	295.6
Aroclor-1260	4	11.059	0.002	10098810	181.8	4	11.507	0.002	2715788	487.8
Aroclor-1260	5	11.248	0.001	14639139	492.6	NS	---			----
Total Col1Ave (5 peaks):				322.6		Total Col2Ave (4 peaks):			366.3	RPD = 13
Corrected Ave (4 peaks):				280.1		Corrected Ave (3 peaks):			325.7	RPD = 15
Aroclor-1262	1	10.282	0.000	14266396	260.2	1	10.261	0.001	3588073	247.8
Aroclor-1262	2	10.659	0.000	31833903	247.1	2	10.711	0.001	3379274	255.2
Aroclor-1262	3	11.059	0.000	10098810	247.5	3	10.986	0.001	6071825	244.5
Aroclor-1262	4	11.248	0.000	14639139	255.6	4	11.569	0.002	4096791	253.8
Aroclor-1262	5	11.917	-0.001	11001830	250.3	5	12.308	0.002	1957515	251.1
Total Col1Ave (5 peaks):				252.1		Total Col2Ave (5 peaks):			250.5	RPD = 1
Corrected Ave (4 peaks):				250.1		Corrected Ave (4 peaks):			249.3	RPD = 0
Aroclor-1268	1	11.173	-0.002	12852069	104.3	1	11.507	0.000	2715788	107.5

Aroclor-1268	2	11.248	0.002	14639139	107.4	2	11.569	-0.004	4096791	172.0
Aroclor-1268	3	11.648	0.016	5026777	49.7	3	11.970	0.001	170870	9.1
Aroclor-1268	4	12.421	0.000	3714076	13.0	4	12.792	0.000	626393	12.8

Total Col1Ave (4 peaks): 68.6 Total Col2Ave (4 peaks): 75.3 RPD = 9

Corrected Ave (3 peaks): 55.7 Corrected Ave (3 peaks): 43.1 RPD = 25

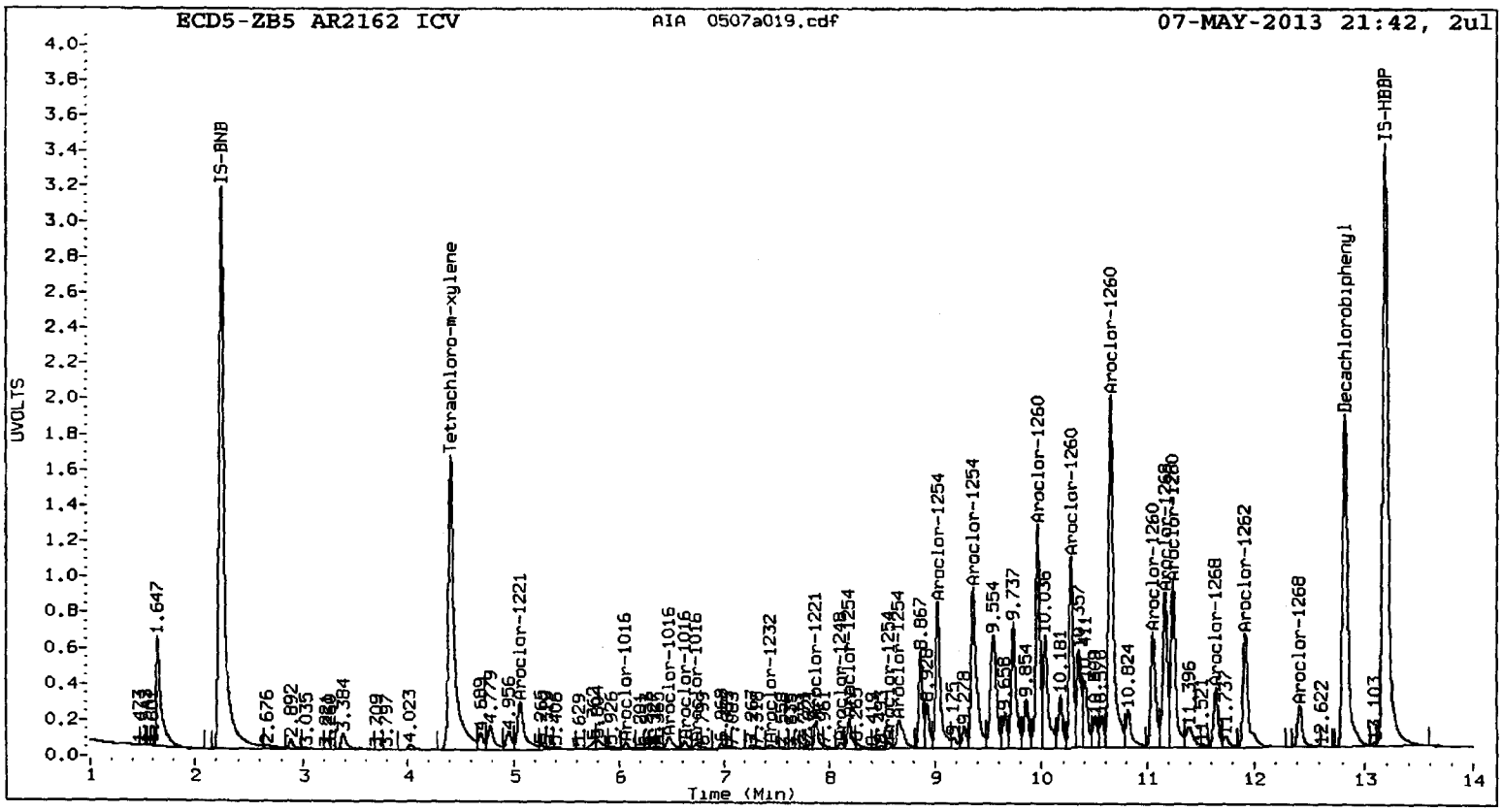
Total PCB Area Col1 (4.511 - 12.728) = 265426514 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 50390342 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

WS21 : 01352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Aroclor-1221
Aroclor-1016
Aroclor-1232
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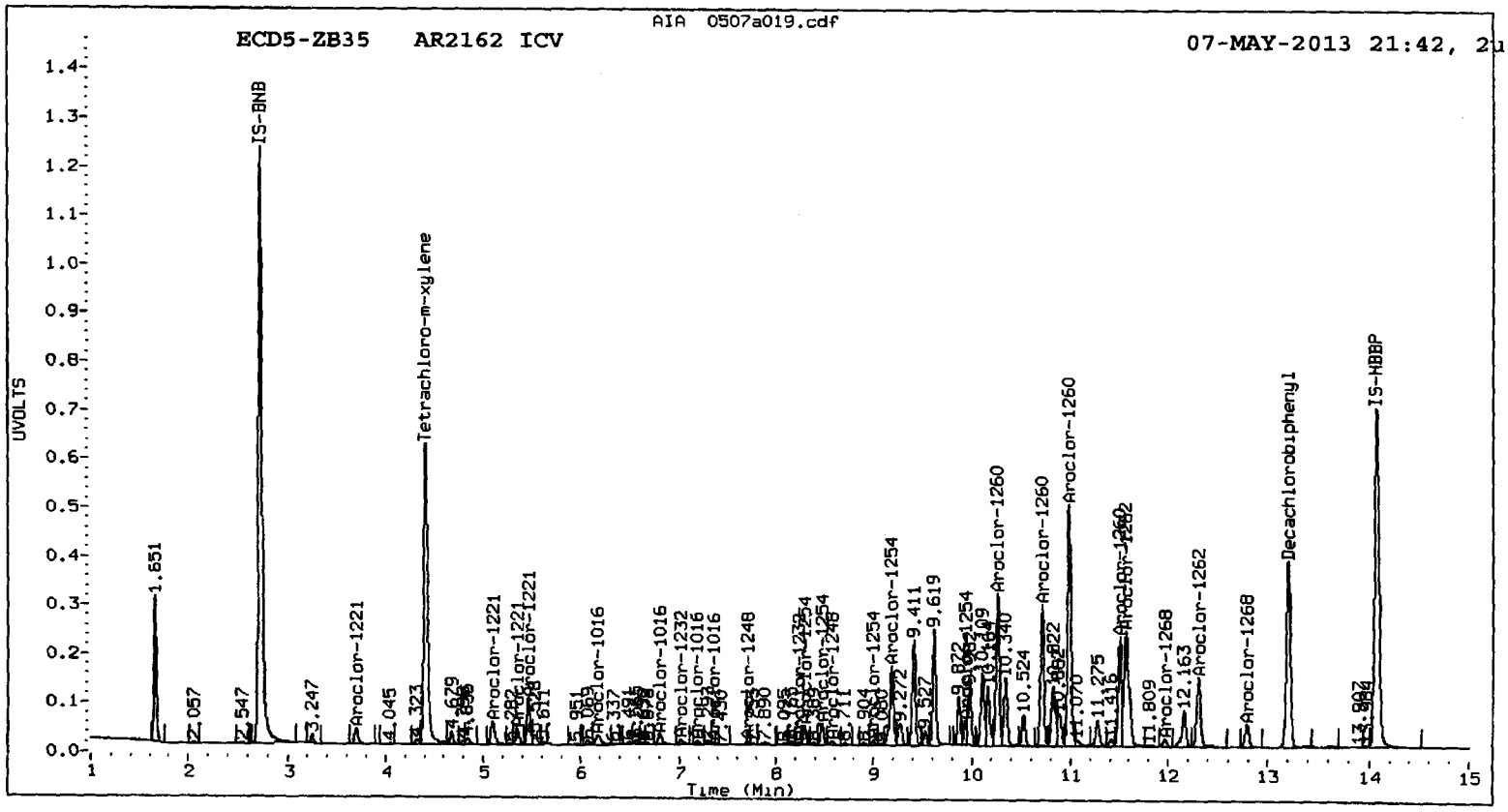
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Aroclor-1232
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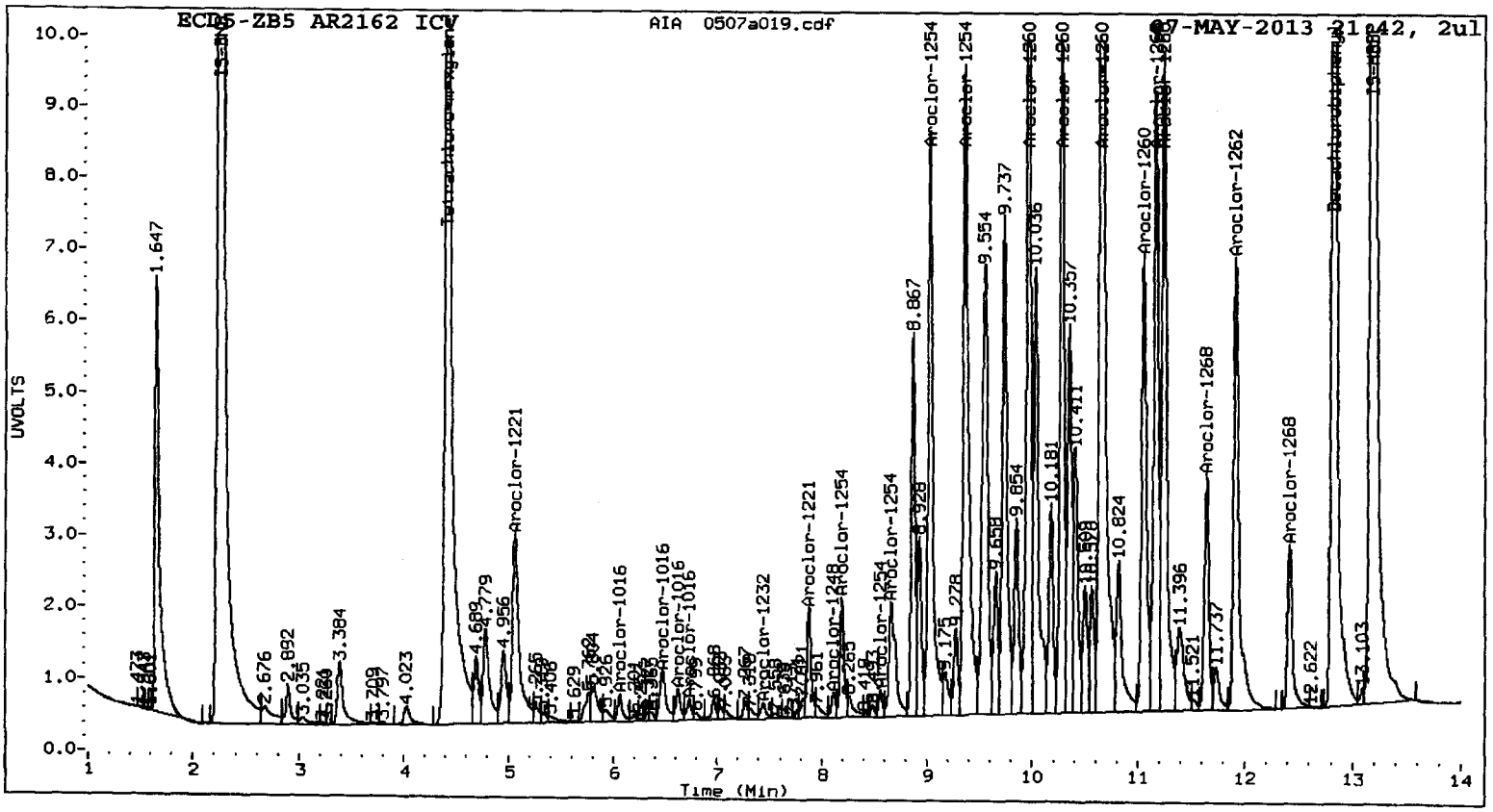
Decachlorobiphenyl
IS-HBBP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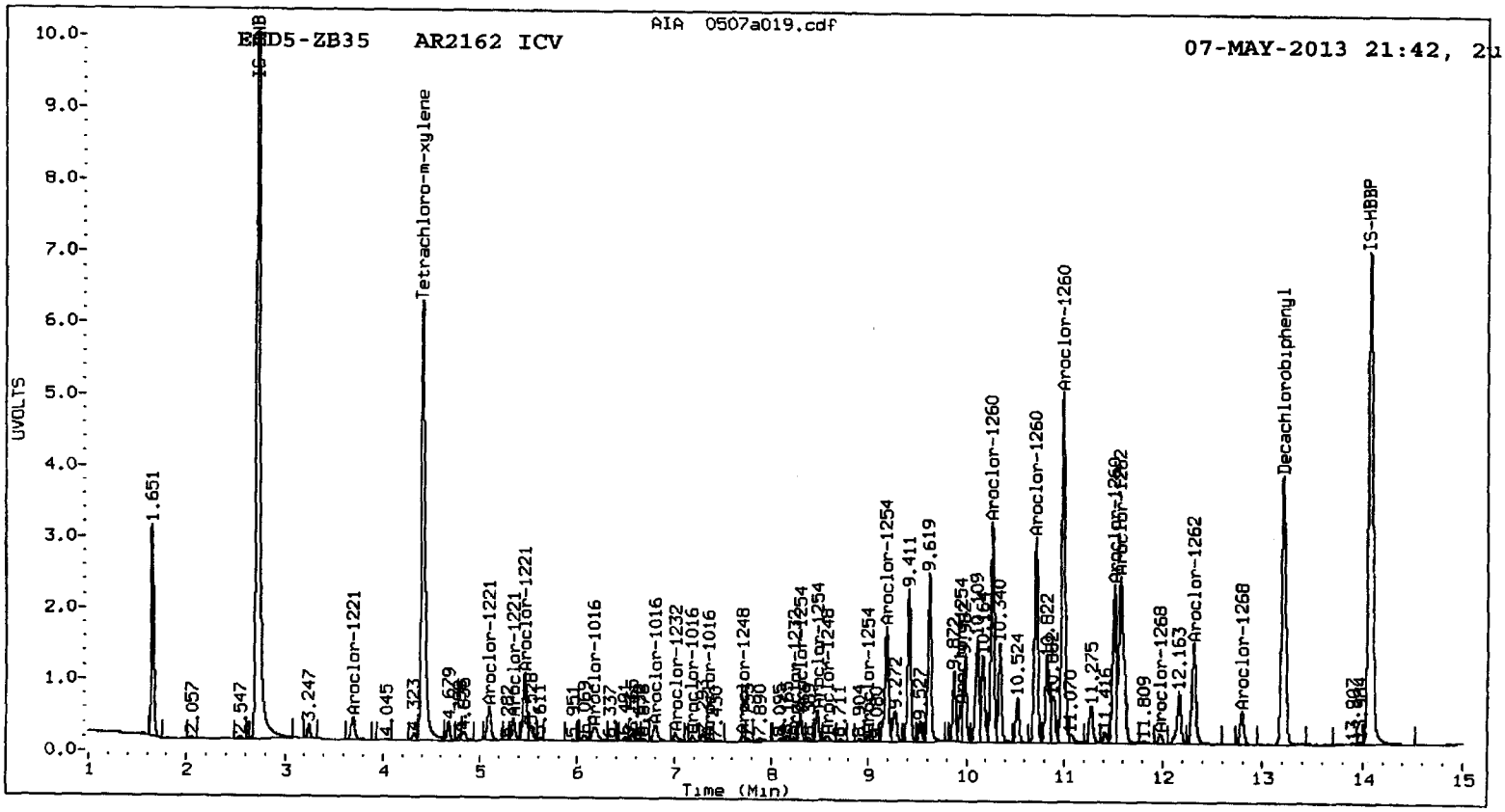
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Time (Min)
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Decachlorobiphenyl
IS-HBBP
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Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
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Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a020.d
Data file 2: 20130507.b/ical-2.b/0507a020.d
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Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 07-MAY-2013 22:02
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	32178954	4.411	-0.001	8089911	37.9	39.1	3.0	Tetrachloro-m-xylen
12.827	-0.001	41292857	13.204	-0.001	6993423	45.8	45.1	1.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.8	97.7
Decachlorobiphenyl	114.6	112.8

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54747539	11.8
Hexabromobiphenyl	50004151	60316622	20.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15307215	3.2
Hexabromobiphenyl	9345340	10773388	15.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	6.060	-0.001	2754975	111.6	1	6.165	-0.001	1064635	121.9	
Aroclor-1016	2	6.468	0.000	8293080	109.1	2	6.801	0.001	2096355	110.4	
Aroclor-1016	3	6.617	0.000	3727765	109.5	3	7.186	0.000	553151	111.4	
Aroclor-1016	4	6.729	0.001	2773984	109.0	4	7.357	-0.001	453332	98.0	
Total Col1Ave (4 peaks):		109.8				Total Col2Ave (4 peaks):		110.4		RPD = 1	
Corrected Ave (3 peaks):		109.2				Corrected Ave (3 peaks):		106.6		RPD = 2	
Aroclor-1221	1	5.063	0.000	4449445	199.5	1	3.695	0.001	235147	149.8	
Aroclor-1221	2	6.468	0.000	8293080	1215.2	2	5.097	0.002	434232	165.3	
Aroclor-1221	3	7.874	-0.004	4148169	430.4	3	5.346	0.001	253609	177.3	
Aroclor-1221	NS	---			----	4	5.461	0.000	945969	210.2	
Total Col1Ave (3 peaks):		615.0				Total Col2Ave (4 peaks):		175.7		RPD = 111*	
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):		164.2			
Aroclor-1232	1	6.060	-0.001	2754975	271.7	1	6.165	0.000	1064635	271.0	
Aroclor-1232	2	6.468	-0.001	8293080	267.2	2	6.801	0.000	2096355	267.3	
Aroclor-1232	3	7.441	0.000	3759089	233.0	3	7.010	-0.001	874326	267.4	
Aroclor-1232	4	7.874	0.000	4148169	223.8	4	8.239	0.000	645903	235.3	
Total Col1Ave (4 peaks):		248.9				Total Col2Ave (4 peaks):		260.3		RPD = 4	
Corrected Ave (3 peaks):		241.3				Corrected Ave (3 peaks):		256.7		RPD = 6	
Aroclor-1242	1	6.060	0.000	2754975	139.7	1	6.165	-0.002	1064635	152.7	
Aroclor-1242	2	6.468	0.000	8293080	137.1	2	6.801	-0.001	2096355	136.8	
Aroclor-1242	3	6.617	0.001	3727765	138.1	3	7.010	-0.001	874326	136.6	
Aroclor-1242	4	7.874	0.001	4148169	124.5	4	8.239	0.000	645903	120.5	
Total Col1Ave (4 peaks):		134.9				Total Col2Ave (4 peaks):		136.6		RPD = 1	
Corrected Ave (3 peaks):		133.3				Corrected Ave (3 peaks):		131.3		RPD = 1	
Aroclor-1248	1	6.468	0.002	8293080	215.2	1	6.801	0.002	2096355	218.6	
Aroclor-1248	2	7.441	-0.001	3759089	86.7	2	7.705	-0.002	686789	86.3	
Aroclor-1248	3	7.874	0.000	4148169	75.3	3	8.239	0.000	645903	78.4	
Aroclor-1248	4	8.111	0.001	3087951	80.4	4	8.585	0.002	769968	71.9	
Total Col1Ave (4 peaks):		114.4				Total Col2Ave (4 peaks):		113.8		RPD = 1	
Corrected Ave (3 peaks):		80.8				Corrected Ave (3 peaks):		78.9		RPD = 2	
Aroclor-1254	1	8.189	-0.003	1593730	31.2	1	8.297	-0.002	213975	28.8	
Aroclor-1254	2	8.564	0.000	750392	22.3	2	8.476	0.001	185955	20.3	
Aroclor-1254	3	8.700	0.001	1491908	21.2	3	8.996	0.000	159149	22.7	
Aroclor-1254	4	9.035	-0.018	1725047	23.8	4	9.148	0.001	236498	15.7	
Aroclor-1254	5	9.362	0.000	1079040	39.4	5	9.932	-0.003	135485	16.0	
Total Col1Ave (5 peaks):		27.6				Total Col2Ave (5 peaks):		20.7		RPD = 29	
Corrected Ave (4 peaks):		24.6				Corrected Ave (4 peaks):		18.7		RPD = 28	
Aroclor-1260	1	9.967	0.000	9566796	193.7	1	10.260	0.000	2036369	208.4	
Aroclor-1260	2	10.283	-0.001	1540353	31.4	2	10.711	0.002	2209727	193.1	
Aroclor-1260	3	10.658	-0.001	7448068	63.4	3	10.985	0.000	1398883	66.2	
Aroclor-1260	4	11.059	0.002	580097	10.1	4	11.505	0.000	6860604	1197.5	
Aroclor-1260	5	11.246	-0.001	39714854	1297.5	NS	---			----	
Total Col1Ave (5 peaks):		319.2				Total Col2Ave (4 peaks):		416.3		RPD = 26	
Corrected Ave (4 peaks):		74.7				Corrected Ave (3 peaks):		155.9		RPD = 70*	
Aroclor-1262	1	10.283	0.000	1540353	27.3	1	10.260	0.000	2036369	136.7	
Aroclor-1262	2	10.658	0.000	7448068	56.1	2	10.711	0.001	2209727	162.2	
Aroclor-1262	3	11.059	0.000	580097	13.8	3	10.985	-0.001	1398883	54.7	
Aroclor-1262	4	11.246	-0.001	39714854	673.2	4	11.572	0.005	7134271	429.5	
Aroclor-1262	5	11.918	0.000	12822548	283.2	5	12.307	0.001	2273742	283.5	
Total Col1Ave (5 peaks):		210.7				Total Col2Ave (5 peaks):		213.3		RPD = 1	
Corrected Ave (4 peaks):		95.1				Corrected Ave (4 peaks):		159.3		RPD = 50*	
Aroclor-1268	1	11.174	-0.001	33104578	260.8	1	11.505	-0.001	6860604	263.8	

WS21 : 81356

Aroclor-1268 2	11.246	0.000	39714854	282.9	2	11.572	-0.001	7134271	291.0
Aroclor-1268 3	11.632	-0.001	24428545	234.4	3	11.969	0.000	4550691	234.5
Aroclor-1268 4	12.422	0.000	64120345	218.3	4	12.791	-0.002	11103711	220.9

Total Col1Ave (4 peaks): 249.1 Total Col2Ave (4 peaks): 252.6 RPD = 1

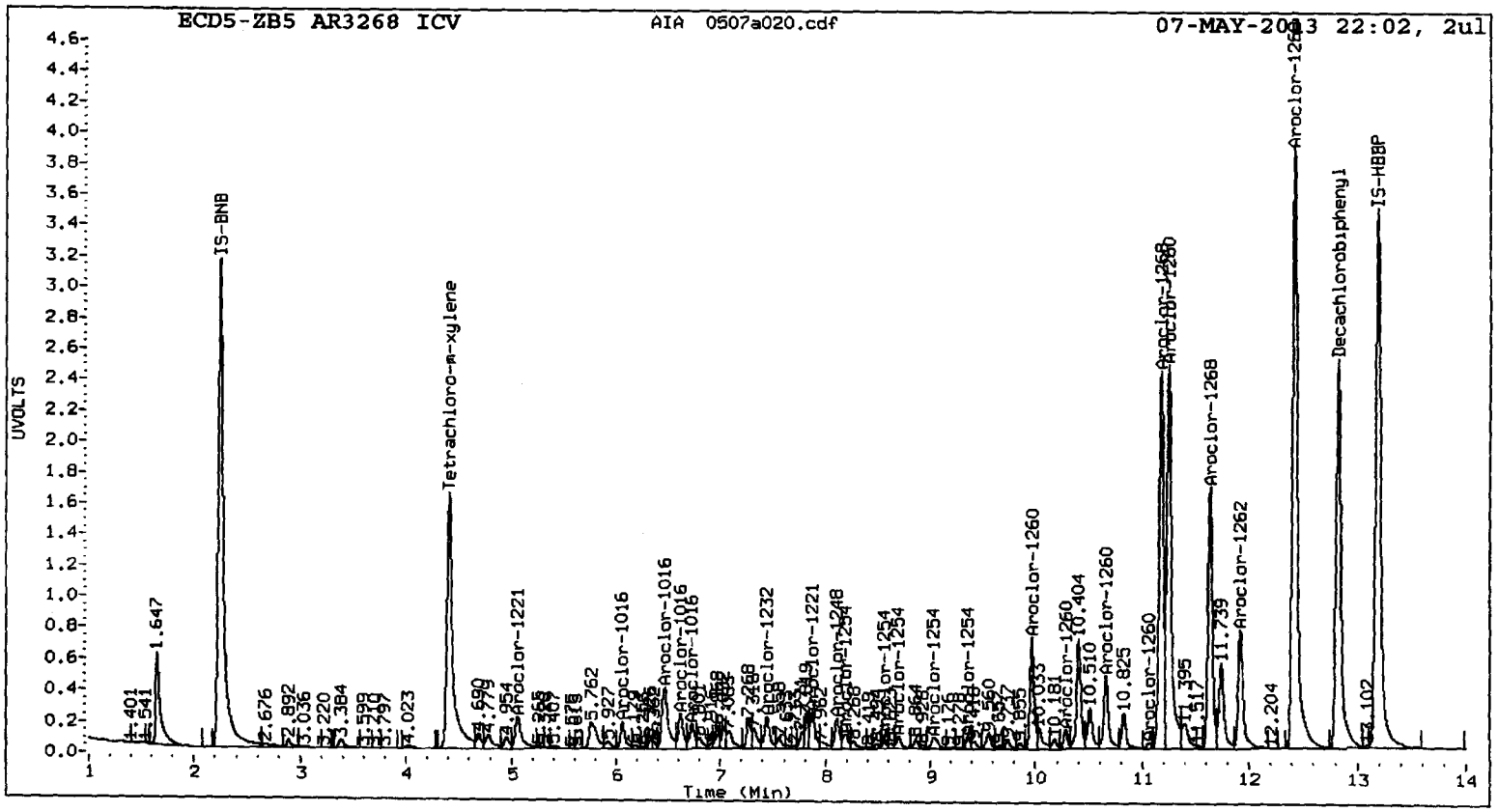
Corrected Ave (3 peaks): 237.8 Corrected Ave (3 peaks): 239.8 RPD = 1

Total PCB Area Col1 (4.511 - 12.728) = 308240732 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 58535775 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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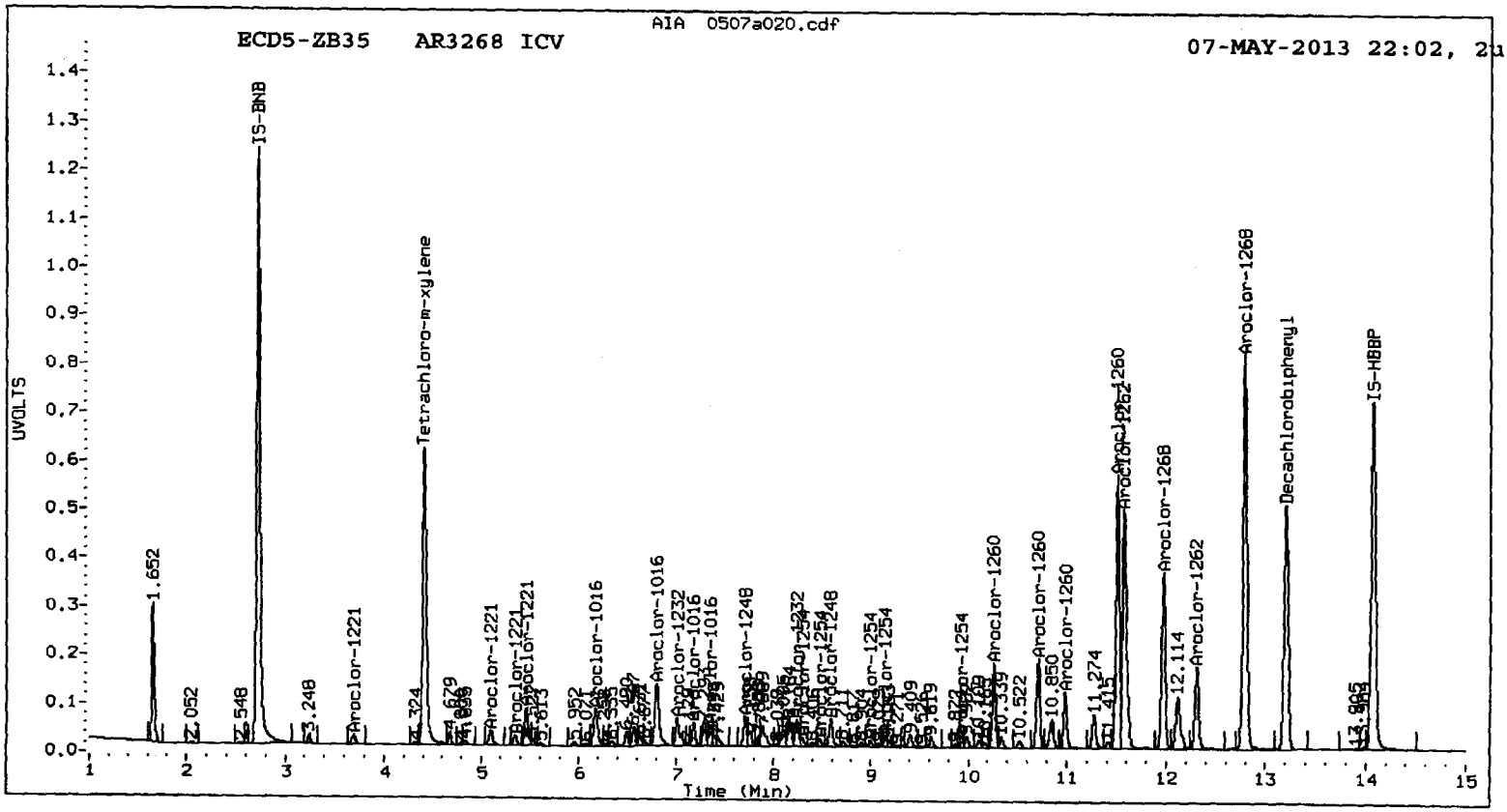
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
IS-BNB
Tetrachloro-m-xylene
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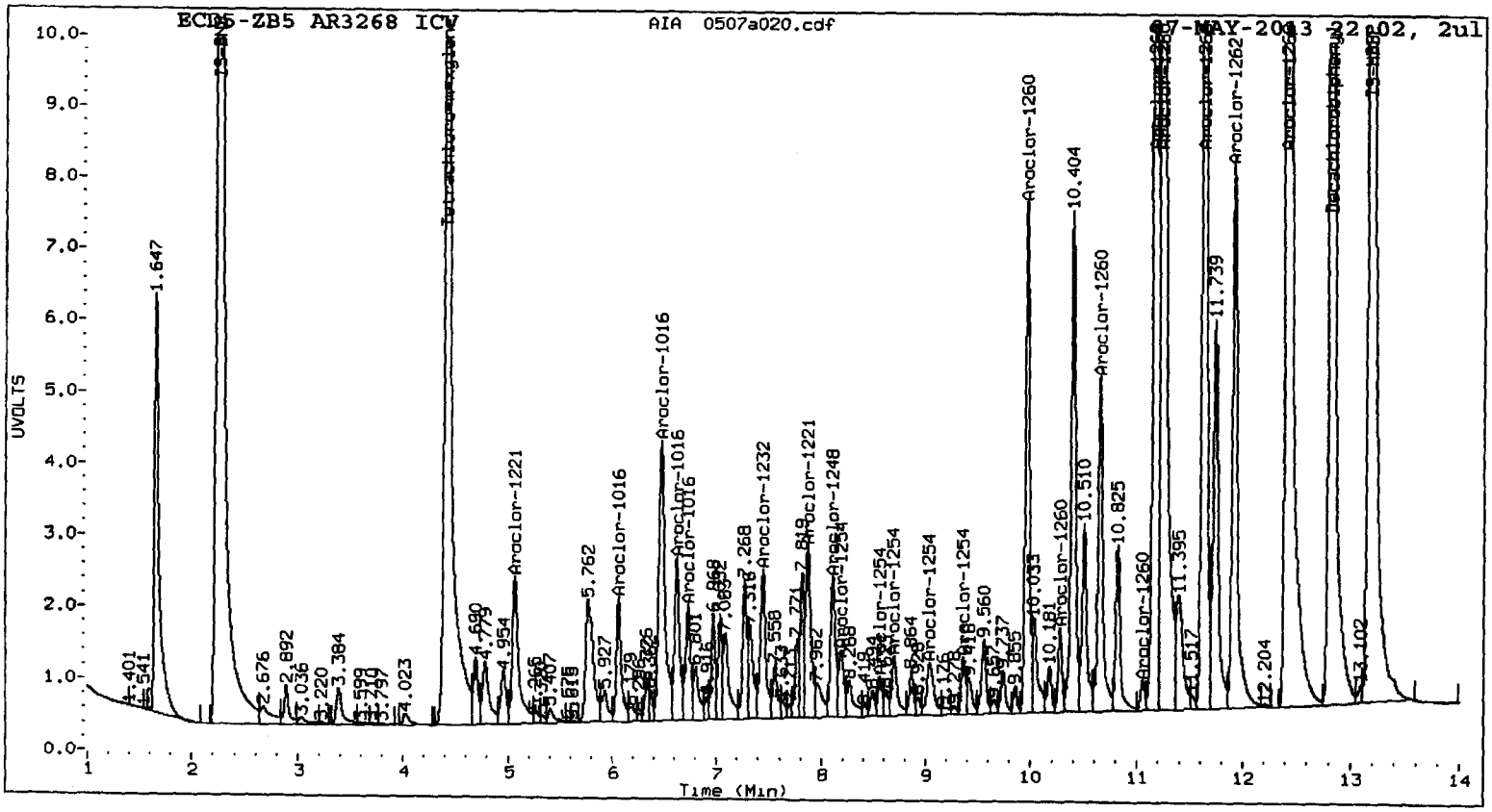
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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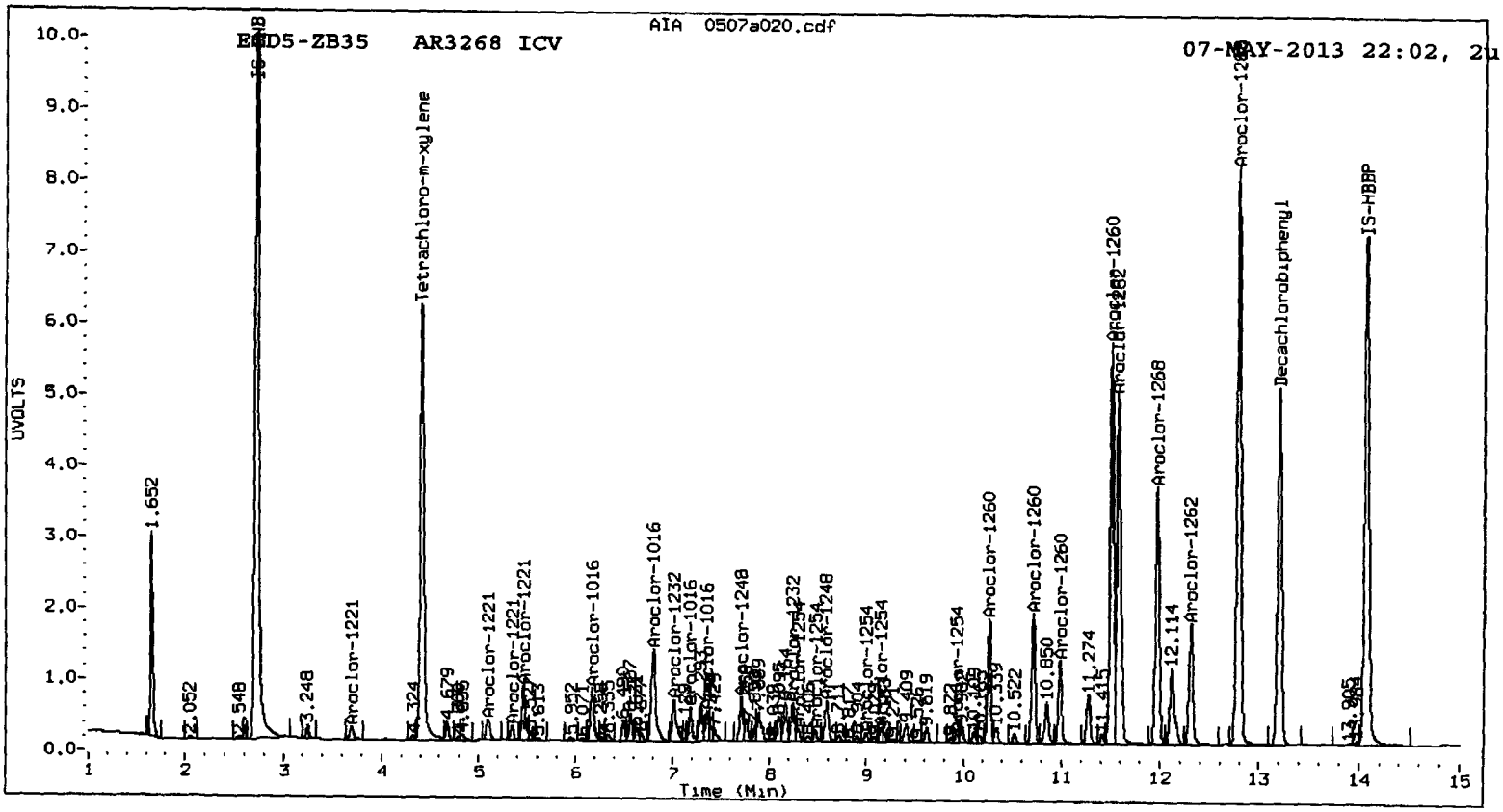
07-MAY-2013 22:02, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Decachlorobiphenyl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07-MAY-2013 22:02, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130507.b/ddt-1.b/0507a021.d ARI ID: 0.1 PPM DDTS

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
8.156	0.000	70648560	8.560	0.000	14556975	0.100	0.100	0.0	2,4-DDE
8.707	0.000	75652806	9.246	0.000	13980580	0.100	0.100	0.0	2,4-DDD
9.210	0.000	80992371	9.713	0.000	35257917	0.100	0.200#	66.7*	2,4-DDT
8.589	0.000	98960725	8.949	0.000	23356763	0.100	0.100	0.0	4,4-DDE
9.163	0.000	76831347	9.713	0.000	35257917	0.100	0.200#	66.7*	4,4-DDD
9.675	0.000	88164078	10.148	0.000	19956133	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/08/13

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 07-MAY-2013 22:43 Init. Calib. Date: 07-MAY-2013

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.590	867273
4,4-DDD	9.168	6982253
4,4-DDT	9.676	87775915

Col 1: 4,4-DDT Percent Breakdown = 8.2 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.950	168832
4,4-DDD/2,4-DDT	9.719	1384968
4,4-DDT	10.149	20474911

Col 2: 4,4-DDT Percent Breakdown = 7.1 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/08/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WR99 | WS21 Client ID: NPDES

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 05/07/13 Analysis Start Date: 06/12/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N /	LCS / LCSD Recovery in Control?	Y / N /
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / <10 %
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / ✓
Internal STD. within 50-200%?	NA / Y / N /	MS / MSD RPD ≤30%?	NA / ✓
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N /

Detail problems, corrective actions and/or other pertinent information below

went w/ best fit, y-flags are for ranges

(Review 1) Analyst: [signature] **Date:** 06/13/13

(Review 2) Reviewer: [signature] **Date:** 6/13/13

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS21

Analytical Resources Inc.: Organics Instrument Log

ECD-5 Serial No.: US00034118

Date: 06/12/13 Analysis: PCB Analyst: JL

Column 1 Serial No.: 196290 Column Type: ZB5

Column 2 Serial No.: 192259 Column Type: ZB35

GC Method: PCB 2 ICal Date: 05/07/13 Injection Volume: 2µL

IS	Ical/Ccal	ICV
2006-1	B161	B182
	B162	B191
	B173	B192
	B174	B193
	B175	B194
	B207	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	12-JUN-2013 14:53	0612b001.d	1	RINSE
2	12-JUN-2013 15:13	0612b002.d	1	DDT
3	12-JUN-2013 15:33	0612b003.d	1	DDT BD
4	12-JUN-2013 15:54	0612b004.d	1	AR1254
5	12-JUN-2013 16:14	0612b005.d	1	AR1660
6	12-JUN-2013 16:34	0612b006.d	1	WS49MBS1
7	12-JUN-2013 16:54	0612b007.d	1	WS49LCSS1
8	12-JUN-2013 17:15	0612b008.d	1	WS49LCSDS1
9	12-JUN-2013 17:35	0612b009.d	1	WS49A
10	12-JUN-2013 17:55	0612b010.d	1	WS49B
11	12-JUN-2013 18:16	0612b011.d	1	WS49C
12	12-JUN-2013 18:36	0612b012.d	1	WS49D
13	12-JUN-2013 18:56	0612b013.d	1	AR1248
14	12-JUN-2013 19:16	0612b014.d	1	AR1660
15	12-JUN-2013 19:37	0612b015.d	1	WR99D
16	12-JUN-2013 19:57	0612b016.d	1	WR99DMS
17	12-JUN-2013 20:17	0612b017.d	1	WR99DMSD
18	12-JUN-2013 20:38	0612b018.d	10	WR99E
19	12-JUN-2013 20:58	0612b019.d	10	WR99F
20	12-JUN-2013 21:18	0612b020.d	1	WS21A
21	12-JUN-2013 21:39	0612b021.d	10	WS69A
22	12-JUN-2013 21:59	0612b022.d	1	AR1242
23	12-JUN-2013 22:19	0612b023.d	1	AR1660

06/13/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/0612-1.b

ARI Job No.: RINS Method: PCB1.m Instrument: ecd5.i Date: 12-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1453	0612b001.d	RINSE		1	NO MANUAL INTEGRATION
1513	0612b002.d	DDT		1	NO MANUAL INTEGRATION
1533	0612b003.d	DDT BD		1	NO MANUAL INTEGRATION
1554	0612b004.d	AR1254		1	NO MANUAL INTEGRATION
1614	0612b005.d	AR1660		1	NO MANUAL INTEGRATION
1634	0612b006.d	WS69MBS1	WS69MBS1	1	NO MANUAL INTEGRATION
1654	0612b007.d	WS69LCSS1	WS69LCSS1	1	NO MANUAL INTEGRATION
1715	0612b008.d	WS69LCSDS1	WS69LCSDS1	1	NO MANUAL INTEGRATION
1735	0612b009.d	WS49A	FA-1-S	1	NO MANUAL INTEGRATION
1755	0612b010.d	WS49B	FA-2-4	1	NO MANUAL INTEGRATION
1816	0612b011.d	WS49C	FA-3-2	1	NO MANUAL INTEGRATION
1836	0612b012.d	WS49D	FA-4-3	1	NO MANUAL INTEGRATION
1856	0612b013.d	AR1248		1	NO MANUAL INTEGRATION
1916	0612b014.d	AR1660		1	NO MANUAL INTEGRATION
1937	0612b015.d	WR99D	KC-VT-1593	1	NO MANUAL INTEGRATION
1957	0612b016.d	WR99DMS	KC-VT-1593	1	NO MANUAL INTEGRATION
2017	0612b017.d	WR99DMSD	KC-VT-1593	1	NO MANUAL INTEGRATION
2038	0612b018.d	WR99E	KC-CB-01-2	10	NO MANUAL INTEGRATION
2058	0612b019.d	WR99F	KC-DD-2009	10	NO MANUAL INTEGRATION
2118	0612b020.d	WS21A	KC-IV-SPS-	1	NO MANUAL INTEGRATION

2139 0612b021.d WS69A SD-PEB015 10 NO MANUAL INTEGRATION

DO NOT FAX

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/0612-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2159	0612b022.d	AR1242		1	NO MANUAL INTEGRATION
2219	0612b023.d	AR1660		1	NO MANUAL INTEGRATION

ECD-TSCA

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b004.d
Data file 2: 20130507.b/0612-2.b/0612b004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 12-JUN-2013 15:54
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	34259147	4.411	0.004	8267921	39.7	38.5	3.0	Tetrachloro-m-xylen
12.825	0.000	33437227	13.202	0.001	5647526	35.5	37.8	6.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	99.1	96.2
Decachlorobiphenyl	88.6	94.6

06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	55717451	13.8
Hexabromobiphenyl	50004151	63128266	26.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15886848	7.1
Hexabromobiphenyl	9345340	10370835	11.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

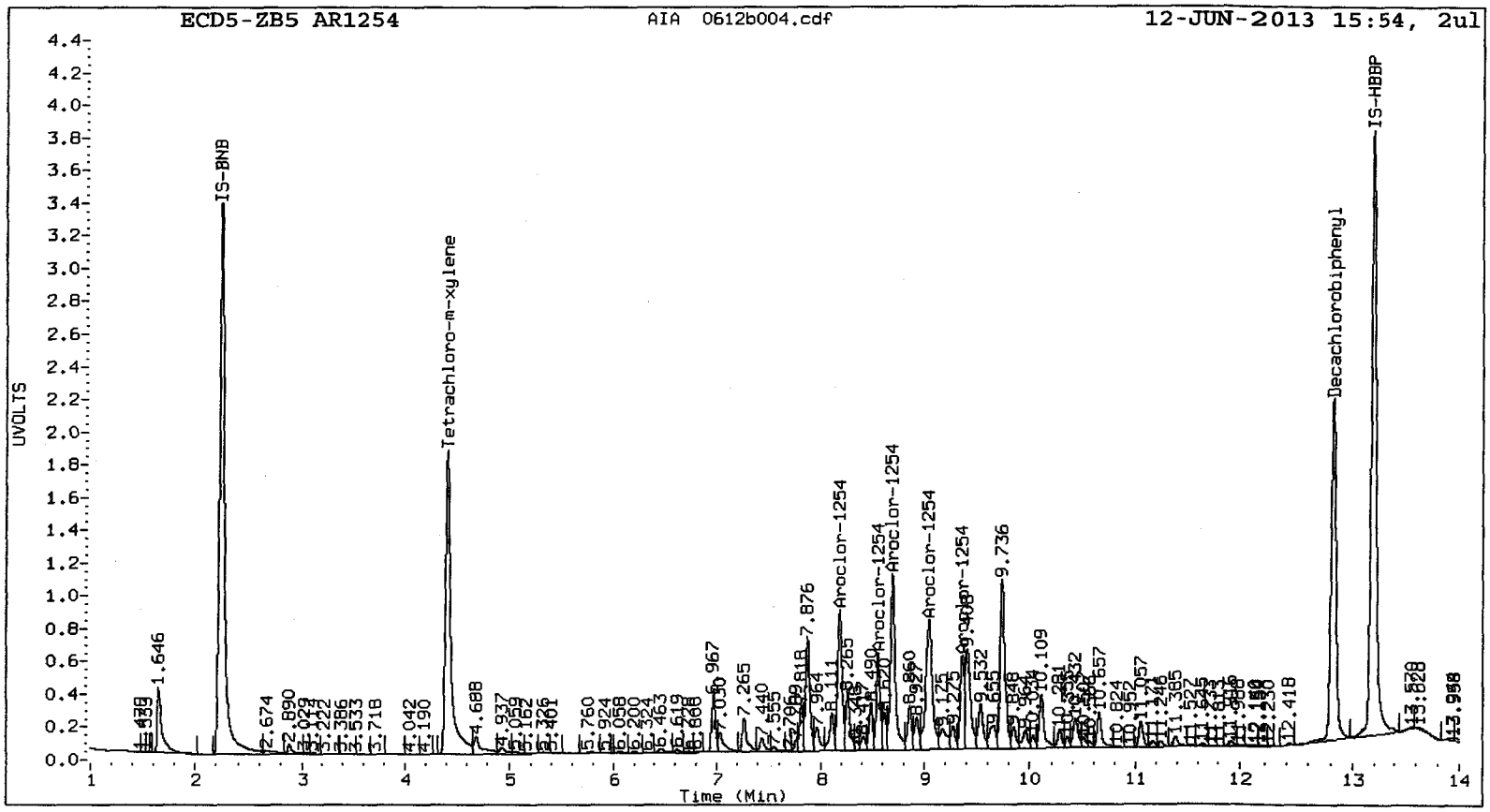
/chem2/ecd5.i/20130507.b/0612-1.b/0612b004.d AR1254

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	8.190	0.000	12800180	246.3	1	8.298	0.000	1821265	236.4
Aroclor-1254	2	8.561	0.000	7678448	223.9	2	8.474	0.000	2247284	236.1
Aroclor-1254	3	8.698	0.000	16704554	233.6	3	8.996	0.000	1747052	239.7
Aroclor-1254	4	9.051	0.000	17762333	241.2	4	9.147	0.000	3635840	232.9
Aroclor-1254	5	9.359	0.000	6890957	247.4	5	9.932	0.000	2114032	240.5
Total Col1Ave (5 peaks):					238.5	Total Col2Ave (5 peaks):				237.1 RPD = 1
Corrected Ave (4 peaks):					236.3	Corrected Ave (4 peaks):				236.3 RPD = 0

Total PCB Area Col1 (4.507 - 12.726) = 185524234 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 36761122 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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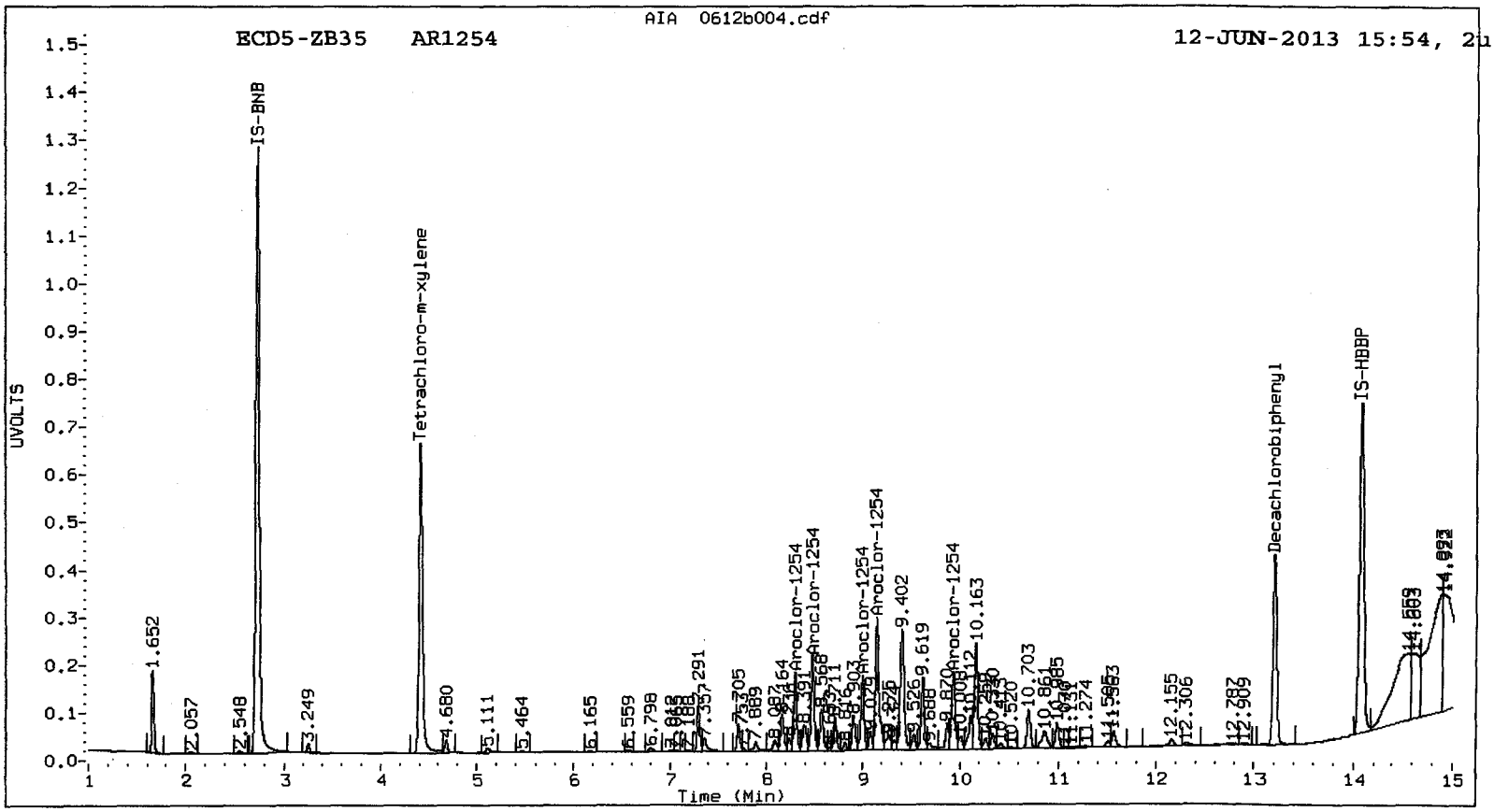
Aroclor-1254
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b005.d
Data file 2: 20130507.b/0612-2.b/0612b005.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 12-JUN-2013 16:14
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	35092424	4.413	0.005	8441604	39.5	38.2	3.3	Tetrachloro-m-xylen
12.826	0.001	35911358	13.203	0.002	6025755	36.3	37.1	2.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

6/20/13/13

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	98.8	95.6
Decachlorobiphenyl	90.6	92.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57257025	16.9
Hexabromobiphenyl	50004151	66302804	32.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16325735	10.0
Hexabromobiphenyl	9345340	11278282	20.7

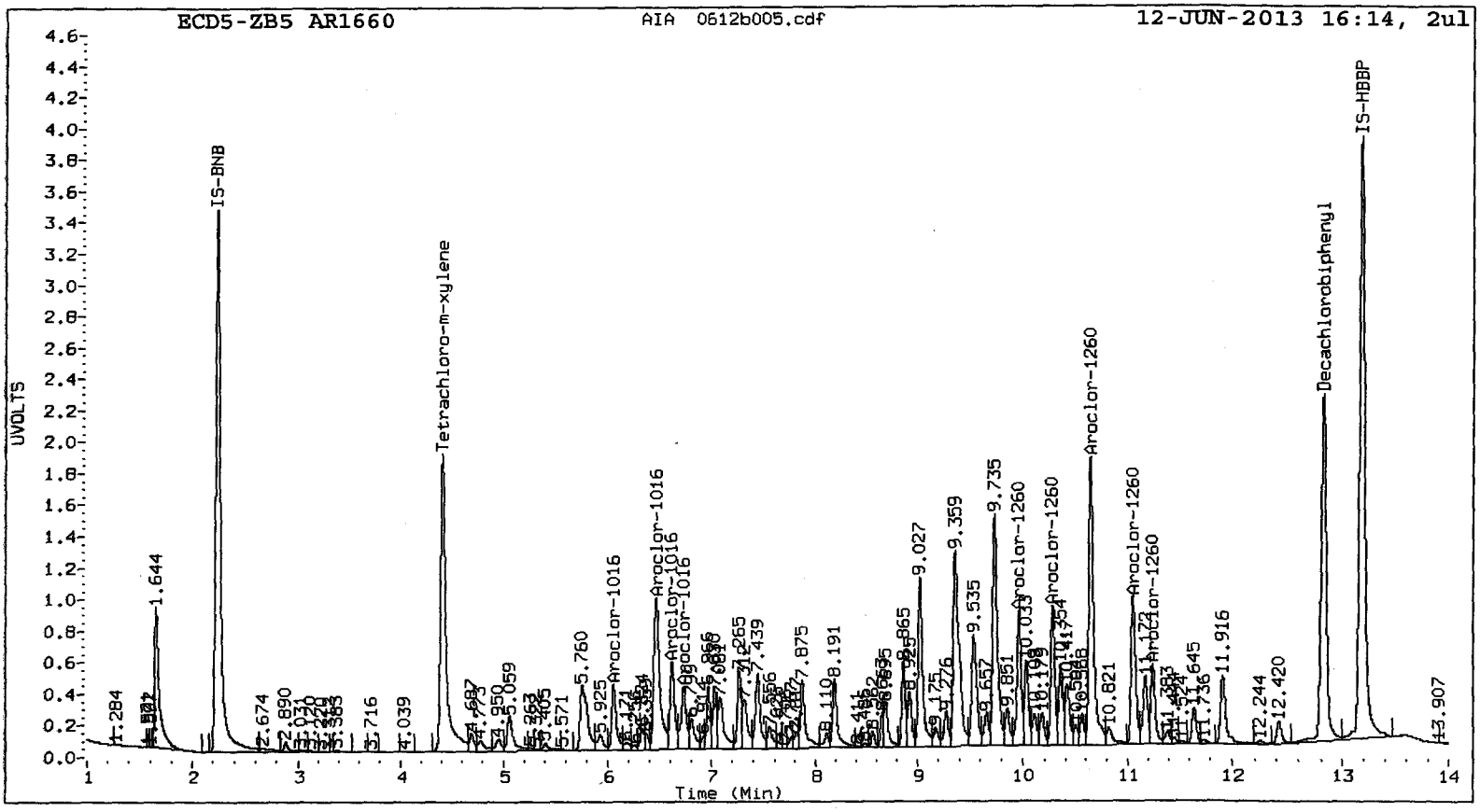
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.057	0.000	6413667	248.5	1	6.165	0.003	2195921	235.7
Aroclor-1016	2	6.466	0.000	19975970	251.3	2	6.801	0.003	4840467	239.0
Aroclor-1016	3	6.615	0.000	8759756	245.9	3	7.185	0.003	1279883	241.7
Aroclor-1016	4	6.725	-0.001	6596228	247.9	4	7.358	0.003	1141020	231.4
Total Col1Ave (4 peaks):					248.4	Total Col2Ave (4 peaks):				236.9 RPD = 5
Corrected Ave (3 peaks):					247.4	Corrected Ave (3 peaks):				235.4 RPD = 5
Aroclor-1260	1	9.965	0.000	11883327	218.9	1	10.260	0.004	2225096	217.5
Aroclor-1260	2	10.281	0.000	11801815	219.2	2	10.709	0.002	2607410	217.6
Aroclor-1260	3	10.657	0.001	29168321	225.9	3	10.985	0.002	5101448	230.6
Aroclor-1260	4	11.056	0.000	14781376	235.0	4	11.505	0.003	1466628	244.5
Aroclor-1260	5	11.246	0.001	7780690	231.3	NS	---			----
Total Col1Ave (5 peaks):					226.0	Total Col2Ave (4 peaks):				227.6 RPD = 1
Corrected Ave (4 peaks):					223.8	Corrected Ave (3 peaks):				221.9 RPD = 1

Total PCB Area Col1 (4.507 - 12.726) = 367357490 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 71149382 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Tetrachloro-m-xylene
Aroclor-1016
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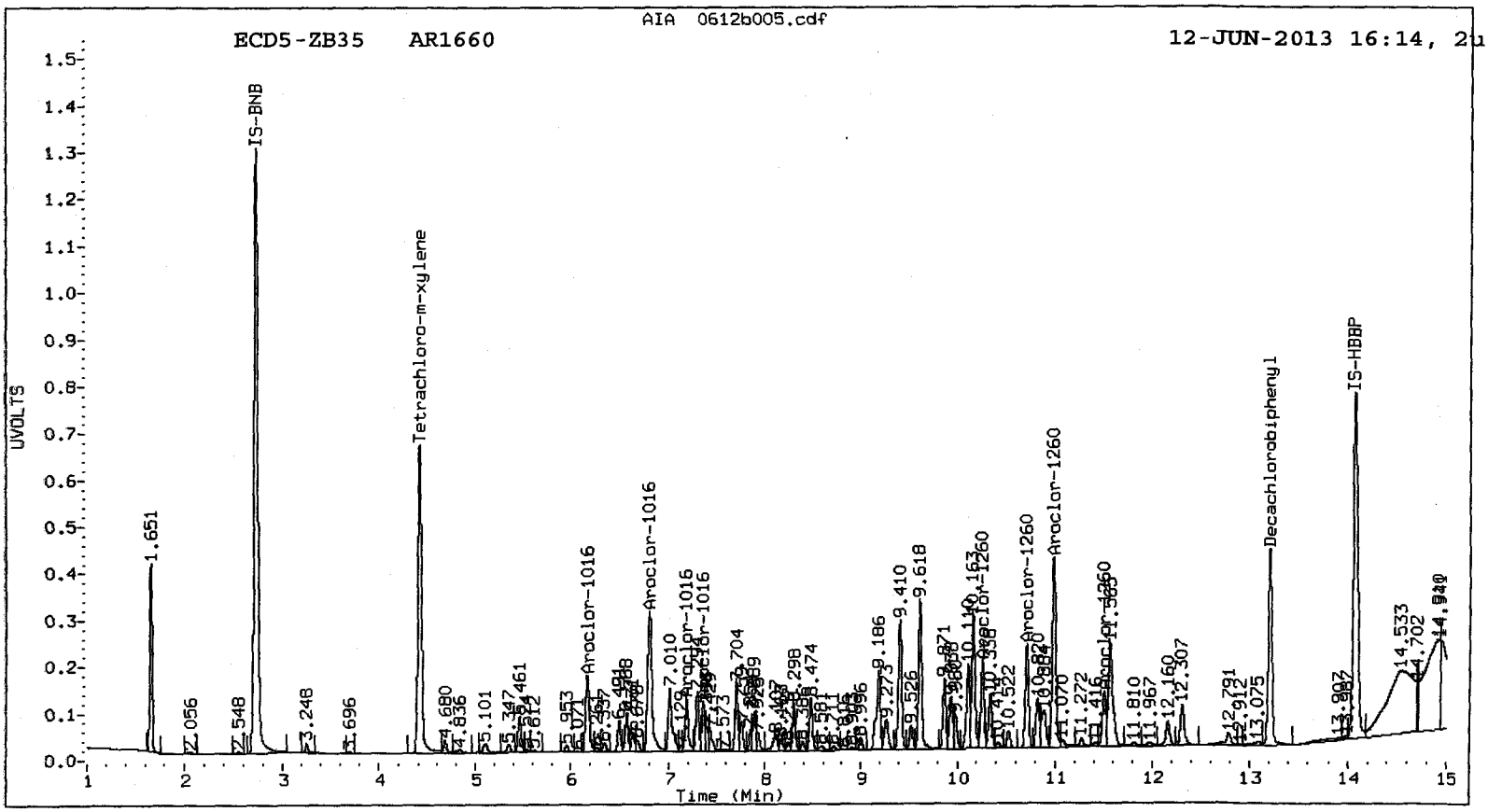
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b006.d
Data file 2: 20130507.b/0612-2.b/0612b006.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS49MBS1
Client ID: WS49MBS1
Injection Date: 12-JUN-2013 16:34
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.407	0.000	26911064	4.412	0.004	6330101	31.8	29.8	6.5	Tetrachloro-m-xylen
12.827	0.001	30887676	13.204	0.004	5253371	32.1	32.0	0.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	79.5	74.5
Decachlorobiphenyl	80.2	80.1

JK 06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54564860	11.4
Hexabromobiphenyl	50004151	64458811	28.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15704773	5.8
Hexabromobiphenyl	9345340	11398988	22.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

WS21 : 0137L

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.065	0.008	264233	10.7	1	---			0.0
Aroclor-1016	2	6.469	0.004	391585	5.2	2	---			0.0
Aroclor-1016	3	6.620	0.005	296542	8.7	3	---			0.0
Aroclor-1016	4	6.728	0.002	218758	8.6	4	---			0.0
Total Col1Ave (4 peaks):					8.3	Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	3.682	-0.012	107237	66.6
Aroclor-1221	2	6.469	0.001	391585	57.6	2	5.113	0.019	77793	28.9
Aroclor-1221	3	7.871	-0.007	295122	30.7	3	5.371	0.026	120211	81.9
Aroclor-1221	NS	---			----	4	5.471	0.010	19741	4.3
Col1Ave: <3 Quant Peaks						Col2Ave: 45.4				
Aroclor-1232	1	6.065	0.005	264233	26.1	1	---			0.0
Aroclor-1232	2	6.469	0.000	391585	12.7	2	---			0.0
Aroclor-1232	3	7.435	-0.006	277324	17.2	3	---			0.0
Aroclor-1232	4	7.871	-0.003	295122	16.0	4	---			0.0
Total Col1Ave (4 peaks):					18.0	Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.065	0.008	264233	13.4	1	---			0.0
Aroclor-1242	2	6.469	0.003	391585	6.5	2	---			0.0
Aroclor-1242	3	6.620	0.005	296542	11.0	3	---			0.0
Aroclor-1242	4	7.871	0.001	295122	8.9	4	---			0.0
Total Col1Ave (4 peaks):					10.0	Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.469	0.006	391585	10.2	1	---			0.0
Aroclor-1248	2	7.435	-0.005	277324	6.4	2	---			0.0
Aroclor-1248	3	7.871	-0.001	295122	5.4	3	---			0.0
Aroclor-1248	4	8.107	0.000	134615	3.5	4	---			0.0
Total Col1Ave (4 peaks):					6.4	Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.188	-0.001	140942	2.8	1	---			0.0
Aroclor-1254	2	8.570	0.009	102527	3.1	2	---			0.0
Aroclor-1254	3	8.699	0.001	93266	1.3	3	8.999	0.003	268557	37.3
Aroclor-1254	4	9.052	0.002	104225	1.4	4	9.149	0.002	19251	1.2
Aroclor-1254	5	9.361	0.001	36294	1.3	5	---			0.0
Total Col1Ave (5 peaks):					2.0	Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	9.962	-0.002	17850	0.3	1	10.309	0.052	23970	2.3
Aroclor-1260	2	10.283	0.002	13461	0.3	2	---			0.0
Aroclor-1260	3	10.701	0.044	352217	2.8	3	---			0.0
Aroclor-1260	4	11.059	0.003	36644	0.6	4	11.460	-0.042	52655	8.7
Aroclor-1260	5	11.243	-0.002	12627	0.4	NS	---			----
Total Col1Ave (5 peaks):					0.9	Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.283	0.000	13461	0.2	1	10.309	0.049	23970	1.5
Aroclor-1262	2	10.701	0.042	352217	2.5	2	---			0.0
Aroclor-1262	3	11.059	0.000	36644	0.8	3	---			0.0
Aroclor-1262	4	11.243	-0.004	12627	0.2	4	---			0.0
Aroclor-1262	5	11.900	-0.018	178913	3.7	5	12.342	0.036	21833	2.6
Total Col1Ave (5 peaks):					1.5	Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	11.175	0.000	32372	0.2	1	11.460	-0.047	52655	1.9
Aroclor-1268	2	11.243	-0.003	12627	0.1	2	---			0.0
Aroclor-1268	3	11.589	-0.044	143519	1.3	3	11.971	0.002	33350	1.6
Aroclor-1268	4	12.419	-0.003	47631	0.2	4	12.787	-0.006	17639	0.3
Total Col1Ave (4 peaks):					0.4	Total Col2Ave (3 peaks):			1.3	RPD = 98*
Corrected Ave (3 peaks):					0.2	Corrected Ave: < 3 Peaks				

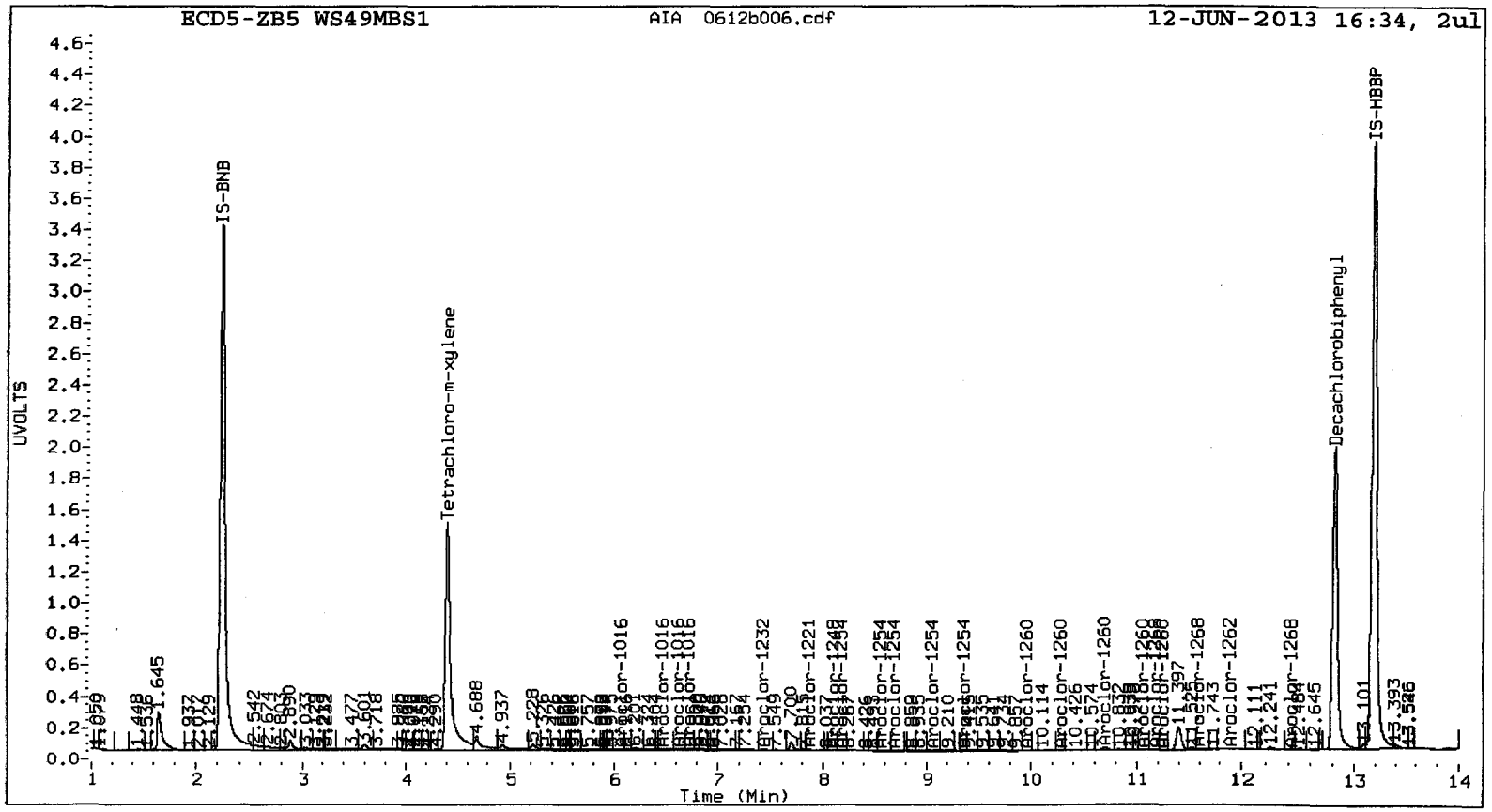
Total PCB Area Col1 (4.507 - 12.726) = 16722343 Col1 Total PCB = 0.0 ppm*

WS21 : 21575

Total PCB Area Col2 (4.508 - 13.101) = 1617319 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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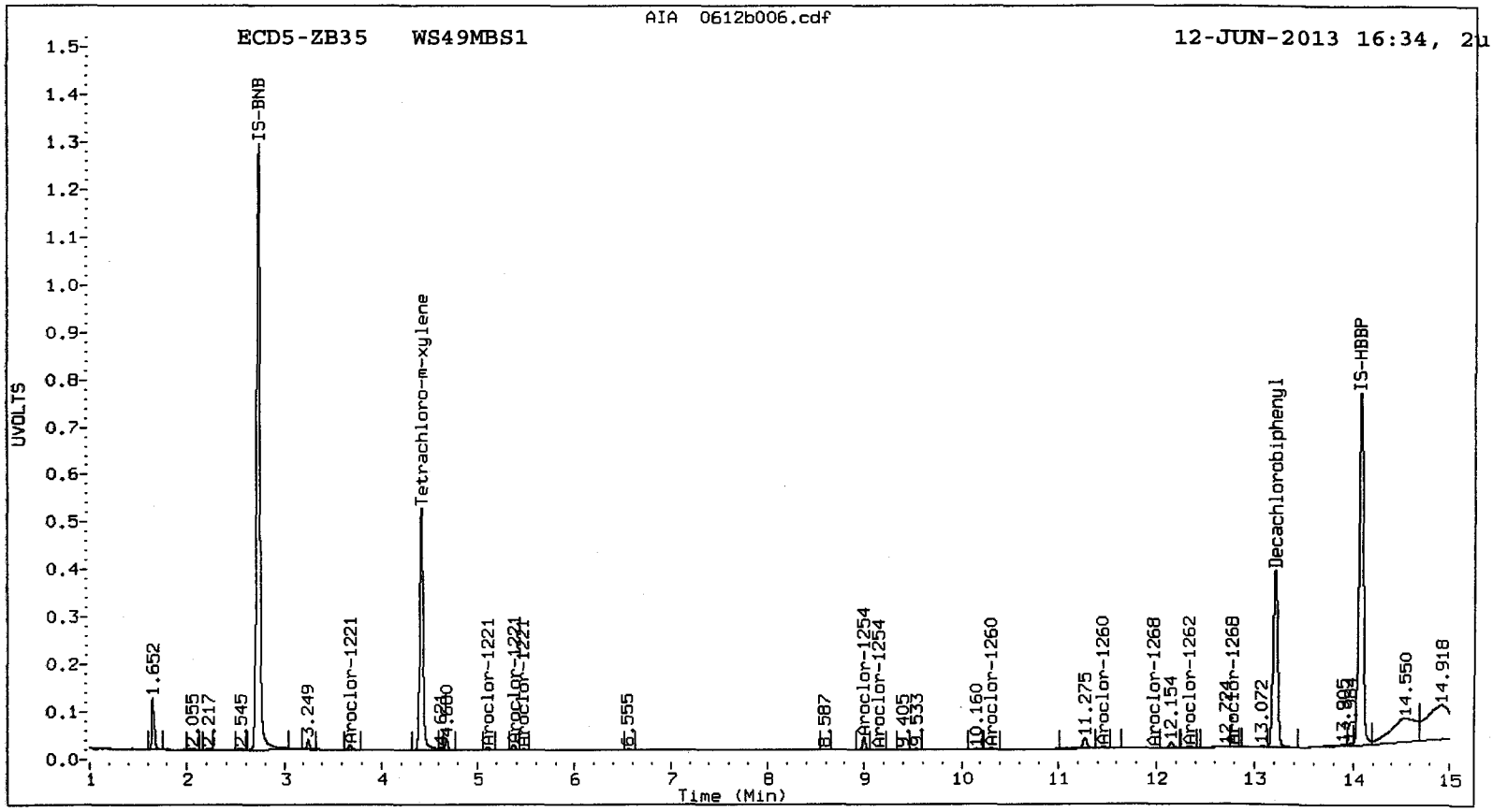
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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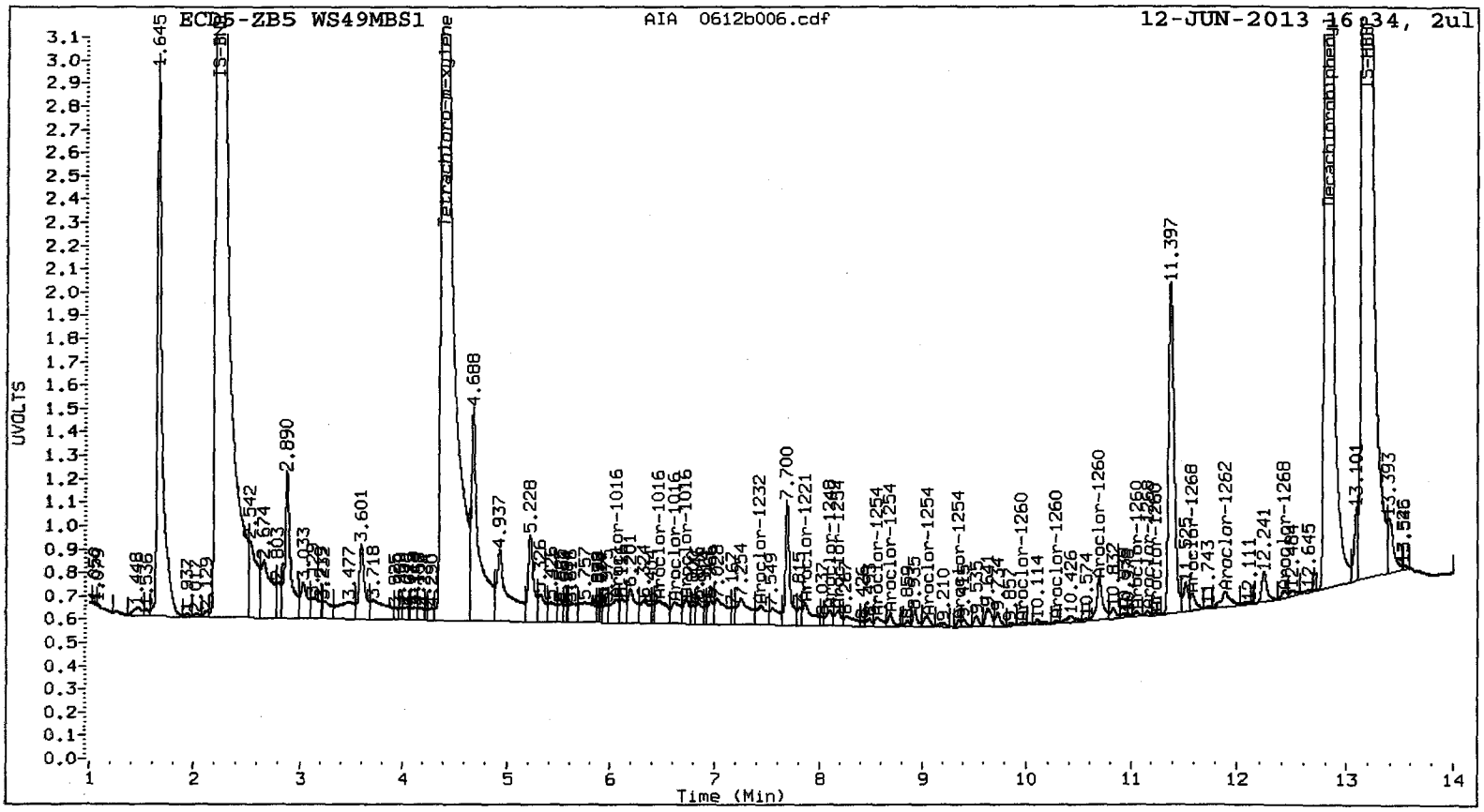
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
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7.700
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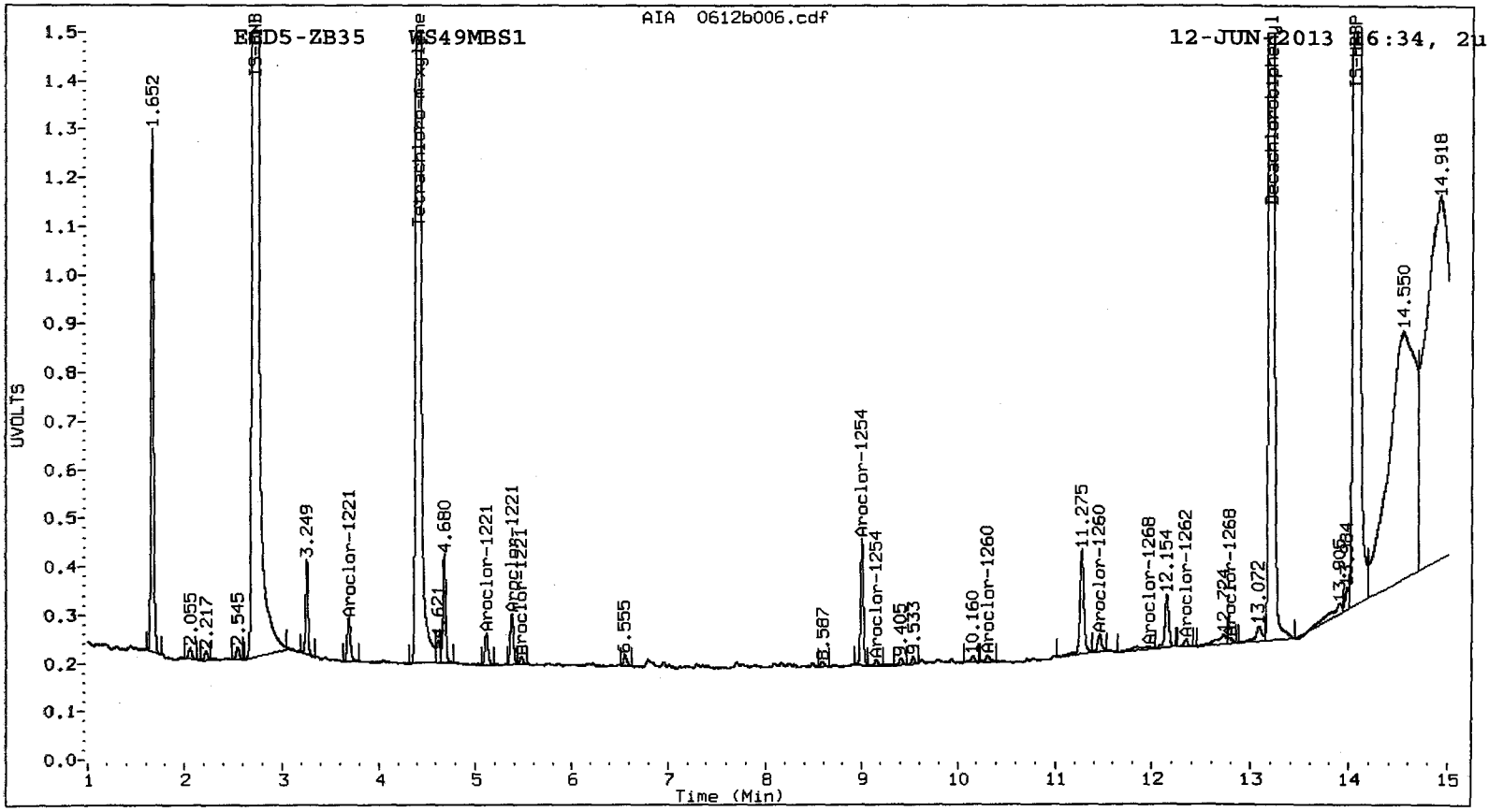
3.601
4.937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4.680
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1268
Aroclor-1262
11.275
12.154
13.072
14.550
14.918

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b007.d
Data file 2: 20130507.b/0612-2.b/0612b007.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS49LCSS1
Client ID: WS49LCSS1
Injection Date: 12-JUN-2013 16:54
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	24803374	4.412	0.005	5856619	28.7	27.4	4.7	Tetrachloro-m-xylen
12.826	0.000	31182488	13.203	0.002	5316349	31.8	31.6	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	71.7	68.4
Decachlorobiphenyl	79.6	79.1

JR 06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	55808676	13.9
Hexabromobiphenyl	50004151	65552837	31.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15833995	6.7
Hexabromobiphenyl	9345340	11676897	24.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.058	0.000	9758755	387.9	1	6.166	0.004	3336014	369.2
Aroclor-1016	2	6.465	-0.001	31089523	401.2	2	6.801	0.003	7659297	389.9
Aroclor-1016	3	6.614	-0.001	13256399	381.9	3	7.185	0.003	2040472	397.3
Aroclor-1016	4	6.725	-0.001	10198629	393.2	4	7.358	0.004	1858417	388.5
Total Col1Ave (4 peaks):		391.0				Total Col2Ave (4 peaks):		386.2		RPD = 1
Corrected Ave (3 peaks):		387.6				Corrected Ave (3 peaks):		382.6		RPD = 1
Aroclor-1221	1	5.059	-0.005	6013148	264.5	1	3.686	-0.008	34774	21.4
Aroclor-1221	2	6.465	-0.003	31089523	4469.0	2	5.096	0.002	323923	119.2
Aroclor-1221	3	7.876	-0.002	10164852	1034.7	3	5.347	0.002	311693	210.7
Aroclor-1221	NS	---			----	4	5.462	0.002	1358997	291.9
Total Col1Ave (3 peaks):		1922.7				Total Col2Ave (4 peaks):		160.8		RPD = 169*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):		117.1		
Aroclor-1232	1	6.058	-0.003	9758755	944.0	1	6.166	0.001	3336014	820.9
Aroclor-1232	2	6.465	-0.004	31089523	982.5	2	6.801	0.000	7659297	944.1
Aroclor-1232	3	7.440	-0.002	13574659	825.4	3	7.011	0.000	3144189	929.5
Aroclor-1232	4	7.876	0.002	10164852	538.0	4	8.236	-0.002	355453	125.2
Total Col1Ave (4 peaks):		822.5				Total Col2Ave (4 peaks):		704.9		RPD = 15
Corrected Ave (3 peaks):		769.2				Corrected Ave (3 peaks):		625.2		RPD = 21
Aroclor-1242	1	6.058	0.000	9758755	485.5	1	6.166	0.004	3336014	462.4
Aroclor-1242	2	6.465	-0.002	31089523	504.3	2	6.801	0.001	7659297	483.3
Aroclor-1242	3	6.614	-0.001	13256399	481.9	3	7.011	0.003	3144189	474.9
Aroclor-1242	4	7.876	0.005	10164852	299.3	4	8.236	0.001	355453	64.1
Total Col1Ave (4 peaks):		442.8				Total Col2Ave (4 peaks):		371.2		RPD = 18
Corrected Ave (3 peaks):		422.2				Corrected Ave (3 peaks):		333.8		RPD = 23
Aroclor-1248	1	6.465	0.001	31089523	791.5	1	6.801	0.006	7659297	772.0
Aroclor-1248	2	7.440	0.000	13574659	307.3	2	7.705	0.002	2572262	312.6
Aroclor-1248	3	7.876	0.004	10164852	181.0	3	8.236	0.002	355453	41.7
Aroclor-1248	4	8.110	0.002	2149703	54.9	4	8.581	0.001	191928	17.3
Total Col1Ave (4 peaks):		333.7				Total Col2Ave (4 peaks):		285.9		RPD = 15
Corrected Ave (3 peaks):		181.1				Corrected Ave (3 peaks):		123.9		RPD = 37
Aroclor-1254	1	8.191	0.001	11661842	224.1	1	8.299	0.000	1799297	234.4
Aroclor-1254	2	8.560	-0.001	2315288	67.4	2	8.474	0.001	2021545	213.1
Aroclor-1254	3	8.695	-0.003	10699811	149.4	3	8.996	0.000	551082	75.8
Aroclor-1254	4	9.027	-0.023	27179814	368.5	4	9.149	0.002	922040	59.3
Aroclor-1254	5	9.359	0.000	39094684	1401.4	5	9.938	0.006	2137387	243.9
Total Col1Ave (5 peaks):		442.1				Total Col2Ave (5 peaks):		165.3		RPD = 91*
Corrected Ave (4 peaks):		202.3				Corrected Ave (4 peaks):		145.6		RPD = 33
Aroclor-1260	1	9.965	0.000	20341519	378.9	1	10.260	0.003	3910620	369.2
Aroclor-1260	2	10.281	0.001	20294140	381.2	2	10.709	0.003	4736138	381.8
Aroclor-1260	3	10.657	0.000	50599012	396.4	3	10.985	0.002	9158166	399.8
Aroclor-1260	4	11.055	-0.001	25923799	416.9	4	11.506	0.004	2556911	411.8
Aroclor-1260	5	11.245	0.000	13811741	415.2	NS	---			----
Total Col1Ave (5 peaks):		397.7				Total Col2Ave (4 peaks):		390.6		RPD = 2
Corrected Ave (4 peaks):		392.9				Corrected Ave (3 peaks):		383.6		RPD = 2
Aroclor-1262	1	10.281	-0.001	20294140	330.6	1	10.260	0.000	3910620	242.1
Aroclor-1262	2	10.657	-0.002	50599012	350.9	2	10.709	-0.001	4736138	320.7
Aroclor-1262	3	11.055	-0.004	25923799	567.6	3	10.985	0.000	9158166	330.6
Aroclor-1262	4	11.245	-0.002	13811741	215.4	4	11.564	-0.003	6182378	343.4
Aroclor-1262	5	11.916	-0.002	11470641	233.1	5	12.305	-0.001	2173388	250.0
Total Col1Ave (5 peaks):		339.5				Total Col2Ave (5 peaks):		297.4		RPD = 13
Corrected Ave (4 peaks):		282.5				Corrected Ave (4 peaks):		285.9		RPD = 1
Aroclor-1268	1	11.172	-0.003	11164707	80.9	1	11.506	-0.001	2556911	90.7

WS21 : 913888

Aroclor-1268	2	11.245	-0.001	13811741	90.5	2	11.564	-0.009	6182378	232.7
Aroclor-1268	3	11.645	0.012	6218376	54.9	3	11.968	-0.001	167130	7.9
Aroclor-1268	4	12.418	-0.003	3735474	11.7	4	12.791	-0.002	627354	11.5

Total Col1Ave (4 peaks): 59.5 Total Col2Ave (4 peaks): 85.7 RPD = 36

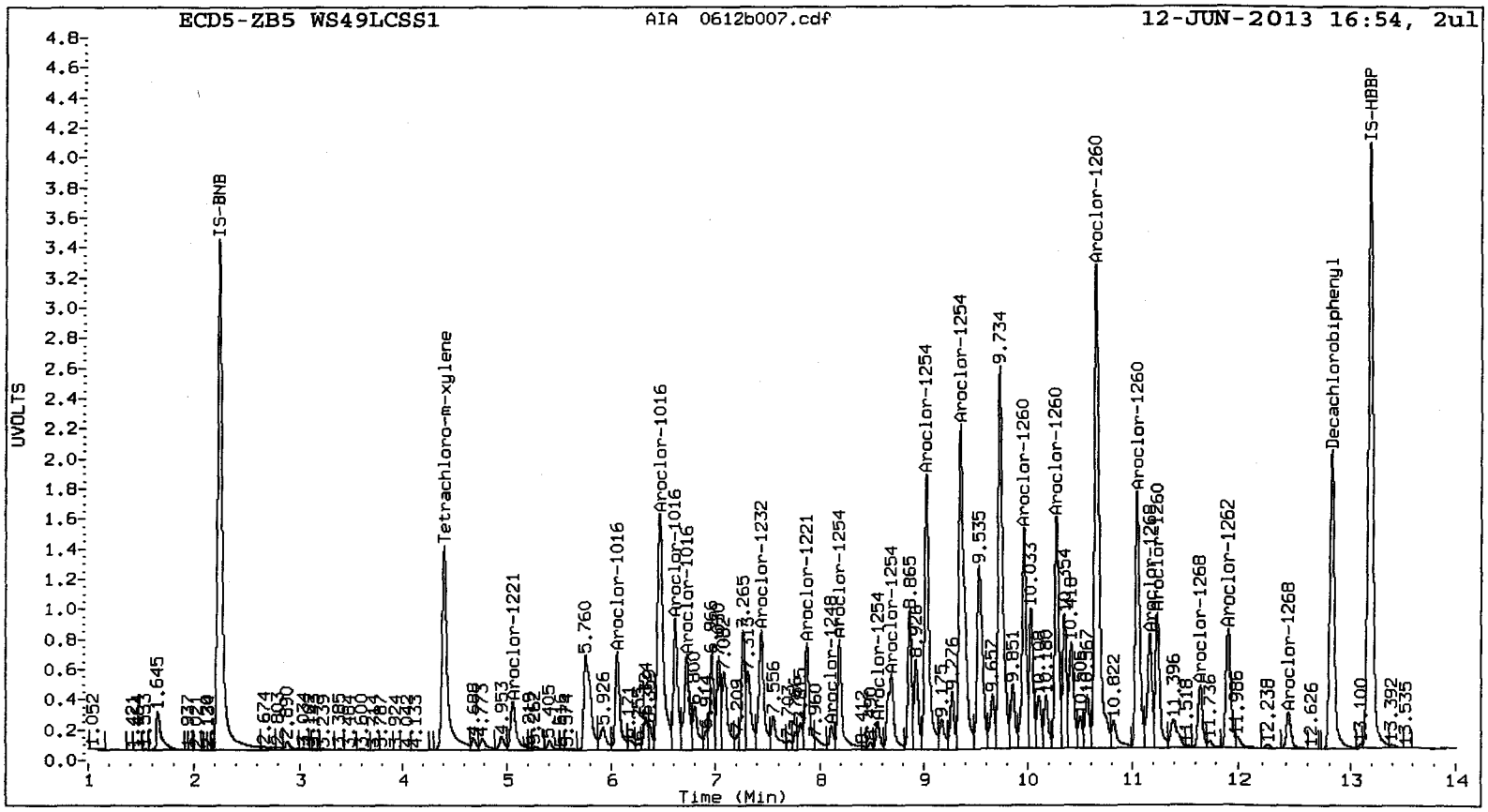
Corrected Ave (3 peaks): 49.2 Corrected Ave (3 peaks): 36.7 RPD = 29

Total PCB Area Col1 (4.507 - 12.726) = 608732156 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 118020422 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

WS21:01381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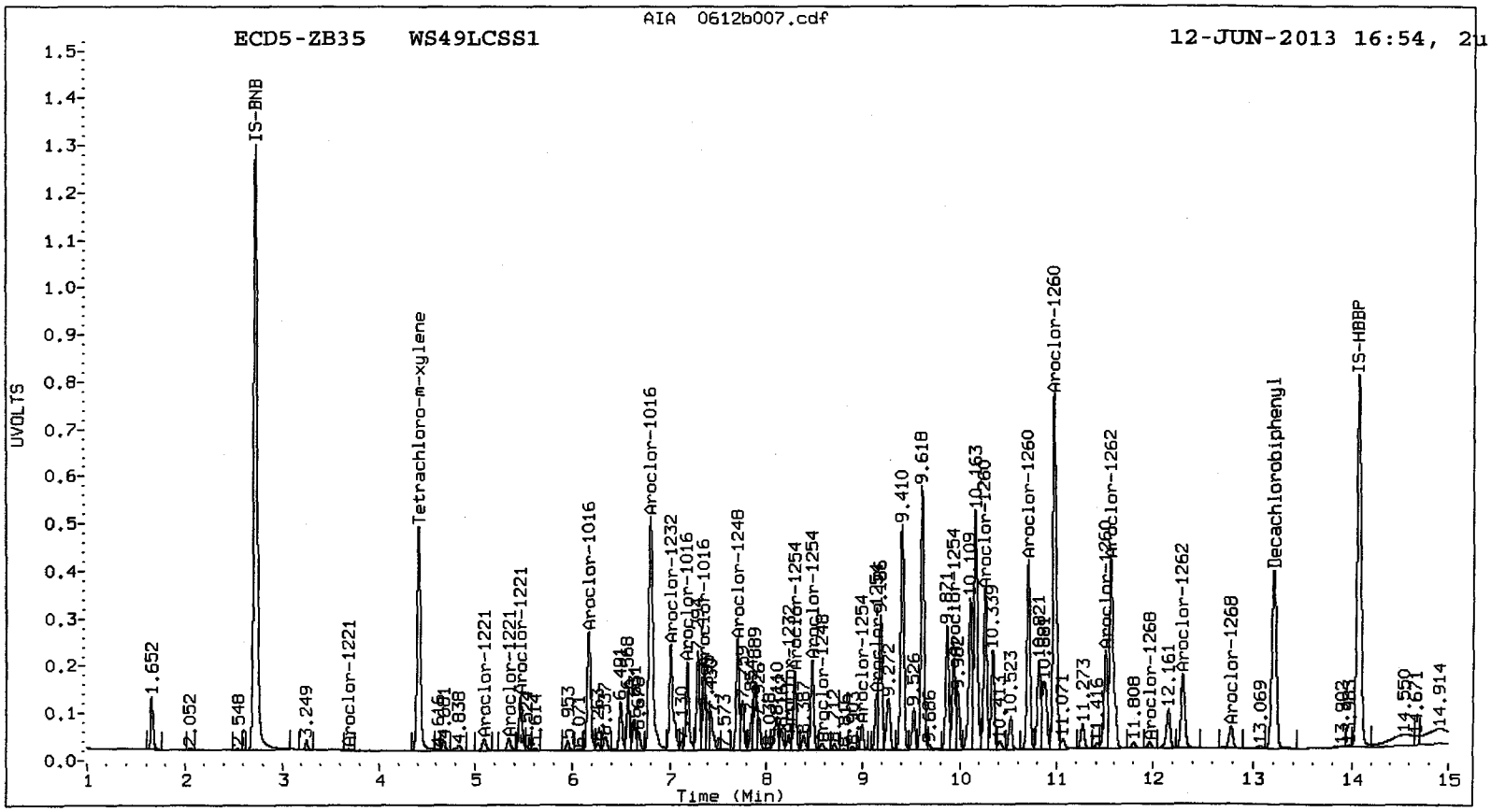
IS-HBBP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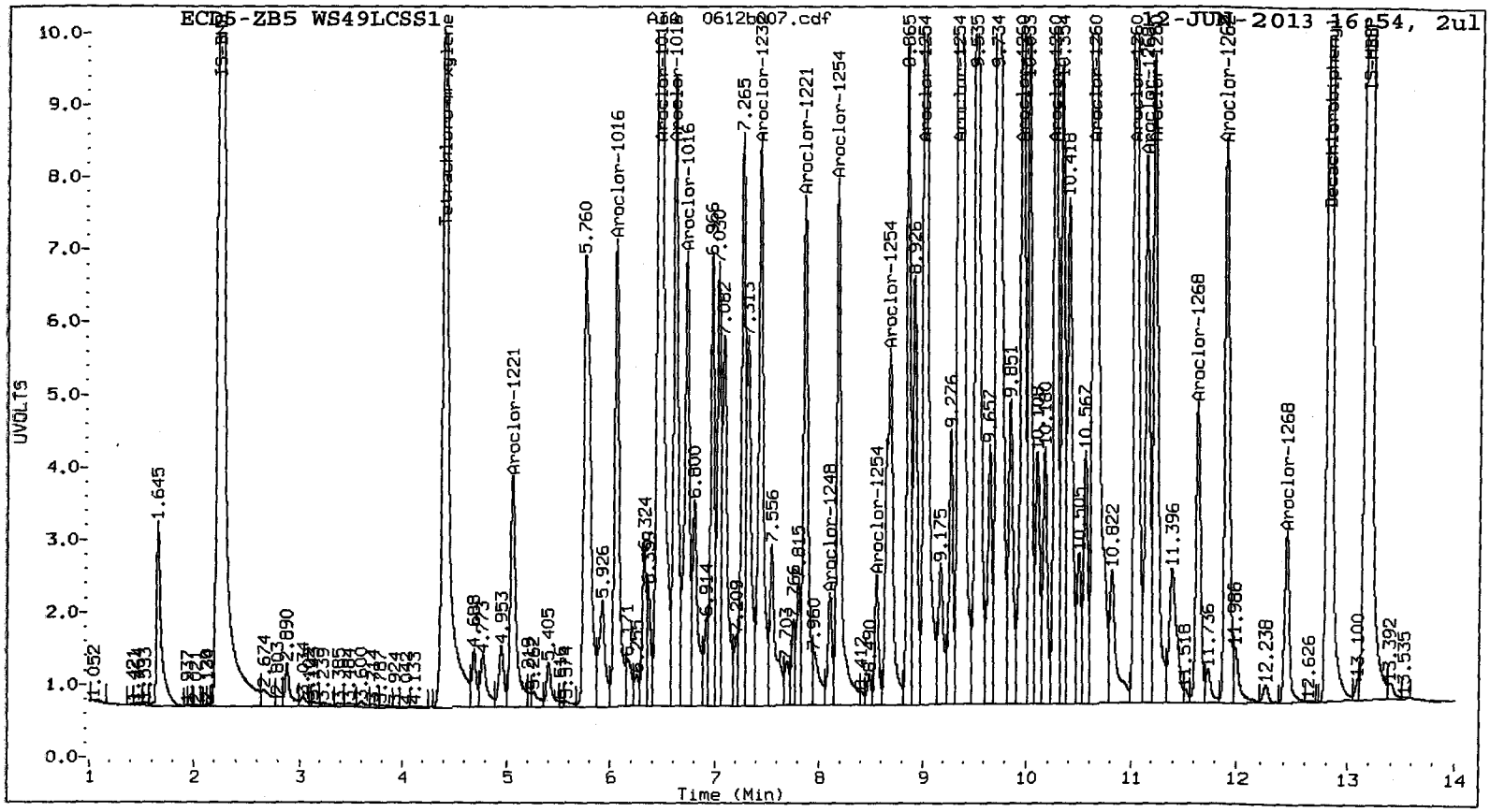
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Aroclor-1016
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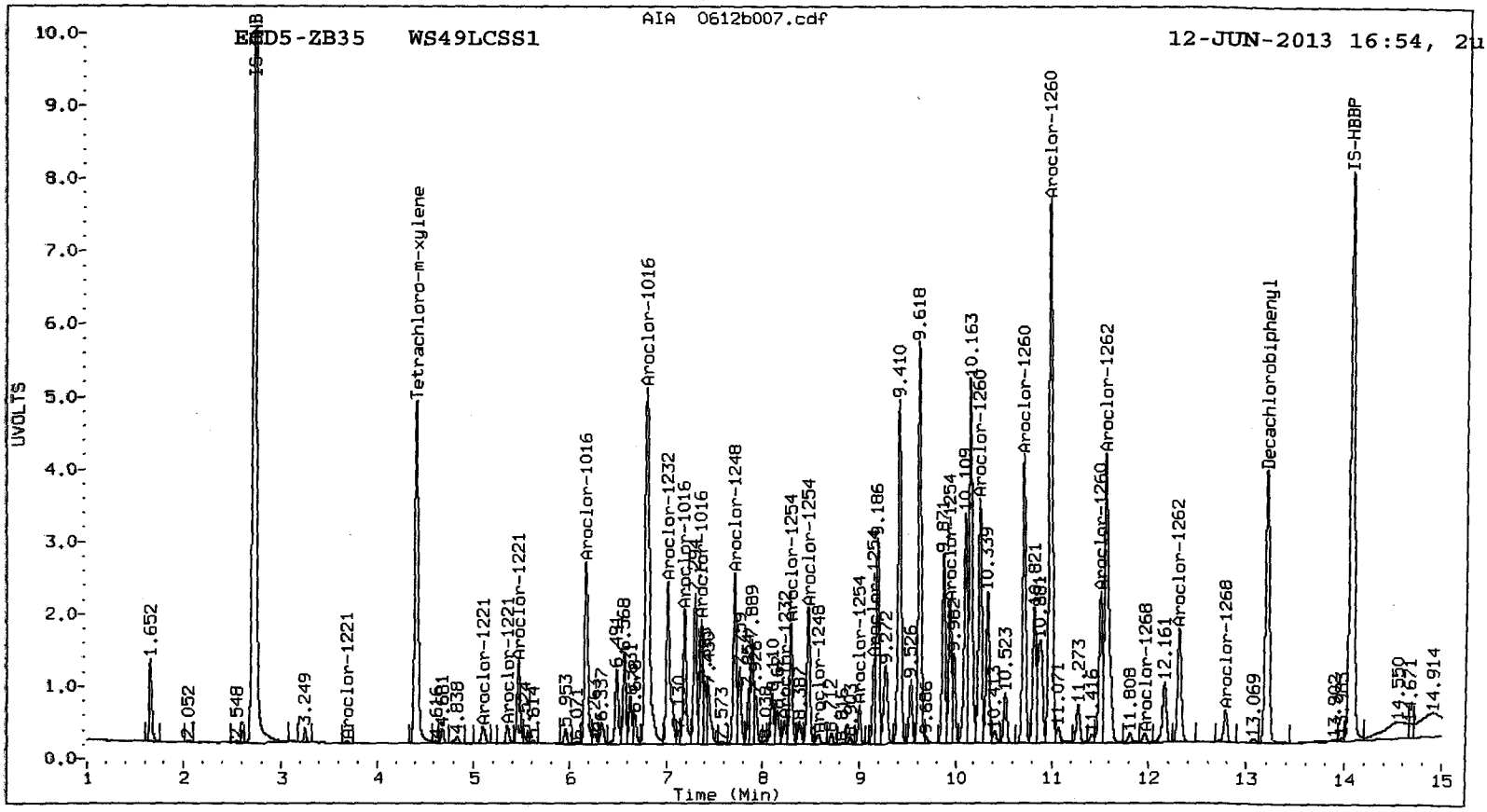
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b008.d
Data file 2: 20130507.b/0612-2.b/0612b008.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS49LCSDS1
Client ID: WS49LCSDS1
Injection Date: 12-JUN-2013 17:15
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.406	-0.001	26193091	4.412	0.004	6193909	30.6	29.8	2.7	Tetrachloro-m-xylen
12.826	0.000	33937004	13.204	0.003	5726850	34.9	34.2	1.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	76.5	74.4
Decachlorobiphenyl	87.2	85.5

JK 06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	55233395	12.8
Hexabromobiphenyl	50004151	65166408	30.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15392655	3.7
Hexabromobiphenyl	9345340	11634249	24.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount	
Aroclor-1016	1	6.057	0.000	10224933	410.7	1	6.166	0.004	3523308	401.1	
Aroclor-1016	2	6.465	-0.001	32146969	419.2	2	6.801	0.002	8057167	422.0	
Aroclor-1016	3	6.615	0.000	12577503	366.1	3	7.186	0.003	2153989	431.4	
Aroclor-1016	4	6.725	-0.001	10441628	406.7	4	7.358	0.004	1950624	419.5	
Total Col1Ave (4 peaks):					400.7	Total Col2Ave (4 peaks):				418.5	RPD = 4
Corrected Ave (3 peaks):					394.5	Corrected Ave (3 peaks):				414.2	RPD = 5
Aroclor-1221	1	5.059	-0.005	6285472	279.3	1	3.689	-0.005	31544	20.0	
Aroclor-1221	2	6.465	-0.003	32146969	4669.1	2	5.096	0.002	354078	134.1	
Aroclor-1221	3	7.876	-0.002	10613935	1091.7	3	5.346	0.001	338030	235.0	
Aroclor-1221	NS	---			----	4	5.461	0.000	1445150	319.4	
Total Col1Ave (3 peaks):					2013.4	Total Col2Ave (4 peaks):				177.1	RPD = 168*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				129.7	
Aroclor-1232	1	6.057	-0.003	10224933	999.4	1	6.166	0.000	3523308	891.9	
Aroclor-1232	2	6.465	-0.005	32146969	1026.5	2	6.801	-0.001	8057167	1021.7	
Aroclor-1232	3	7.439	-0.002	14029677	862.0	3	7.010	-0.001	3249274	988.1	
Aroclor-1232	4	7.876	0.002	10613935	567.6	4	8.237	-0.001	348896	126.4	
Total Col1Ave (4 peaks):					863.9	Total Col2Ave (4 peaks):				757.0	RPD = 13
Corrected Ave (3 peaks):					809.7	Corrected Ave (3 peaks):				668.8	RPD = 19
Aroclor-1242	1	6.057	-0.001	10224933	514.0	1	6.166	0.004	3523308	502.4	
Aroclor-1242	2	6.465	-0.002	32146969	526.9	2	6.801	0.001	8057167	523.0	
Aroclor-1242	3	6.615	-0.001	12577503	462.0	3	7.010	0.003	3249274	504.9	
Aroclor-1242	4	7.876	0.005	10613935	315.7	4	8.237	0.002	348896	64.7	
Total Col1Ave (4 peaks):					454.7	Total Col2Ave (4 peaks):				398.7	RPD = 13
Corrected Ave (3 peaks):					430.6	Corrected Ave (3 peaks):				357.3	RPD = 19
Aroclor-1248	1	6.465	0.001	32146969	827.0	1	6.801	0.005	8057167	835.4	
Aroclor-1248	2	7.439	-0.001	14029677	320.9	2	7.705	0.002	2717482	339.7	
Aroclor-1248	3	7.876	0.004	10613935	190.9	3	8.237	0.003	348896	42.1	
Aroclor-1248	4	8.111	0.003	2208656	57.0	4	8.582	0.001	201084	18.7	
Total Col1Ave (4 peaks):					349.0	Total Col2Ave (4 peaks):				309.0	RPD = 12
Corrected Ave (3 peaks):					189.6	Corrected Ave (3 peaks):				133.5	RPD = 35
Aroclor-1254	1	8.191	0.001	12226234	237.4	1	8.299	0.000	1882588	252.2	
Aroclor-1254	2	8.560	-0.001	2447356	72.0	2	8.475	0.001	2133552	231.4	
Aroclor-1254	3	8.696	-0.002	7790246	109.9	3	8.996	0.001	574383	81.3	
Aroclor-1254	4	9.028	-0.023	28965216	396.8	4	9.187	0.040	4597334	303.9	
Aroclor-1254	5	9.359	0.000	41685625	1509.8	5	9.939	0.007	2291569	269.0	
Total Col1Ave (5 peaks):					465.2	Total Col2Ave (5 peaks):				227.6	RPD = 69*
Corrected Ave (4 peaks):					204.0	Corrected Ave (4 peaks):				208.5	RPD = 2
Aroclor-1260	1	9.965	0.001	21705494	406.7	1	10.261	0.004	4209679	398.9	
Aroclor-1260	2	10.281	0.000	21638656	408.9	2	10.710	0.004	5141808	416.0	
Aroclor-1260	3	10.656	0.000	53934860	425.0	3	10.986	0.003	10044013	440.1	
Aroclor-1260	4	11.056	0.000	27720375	448.5	4	11.506	0.004	2695514	435.7	
Aroclor-1260	5	11.246	0.001	14829287	448.4	NS	---			----	
Total Col1Ave (5 peaks):					427.5	Total Col2Ave (4 peaks):				422.7	RPD = 1
Corrected Ave (4 peaks):					422.3	Corrected Ave (3 peaks):				416.9	RPD = 1
Aroclor-1262	1	10.281	-0.002	21638656	354.6	1	10.261	0.001	4209679	261.6	
Aroclor-1262	2	10.656	-0.002	53934860	376.2	2	10.710	0.000	5141808	349.4	
Aroclor-1262	3	11.056	-0.003	27720375	610.5	3	10.986	0.001	10044013	363.9	
Aroclor-1262	4	11.246	-0.001	14829287	232.7	4	11.564	-0.003	6625425	369.3	
Aroclor-1262	5	11.916	-0.002	12306788	251.6	5	12.306	0.000	2349447	271.3	
Total Col1Ave (5 peaks):					365.1	Total Col2Ave (5 peaks):				323.1	RPD = 12
Corrected Ave (4 peaks):					303.8	Corrected Ave (4 peaks):				311.6	RPD = 3
Aroclor-1268	1	11.172	-0.003	11981154	87.4	1	11.506	-0.001	2695514	96.0	

Aroclor-1268	2	11.246	0.000	14829287	97.8	2	11.564	-0.008	6625425	250.3
Aroclor-1268	3	11.645	0.012	6635594	58.9	3	11.969	0.000	179797	8.6
Aroclor-1268	4	12.419	-0.002	4036412	12.7	4	12.791	-0.001	655692	12.1

Total Col1Ave (4 peaks): 64.2 Total Col2Ave (4 peaks): 91.7 RPD = 35

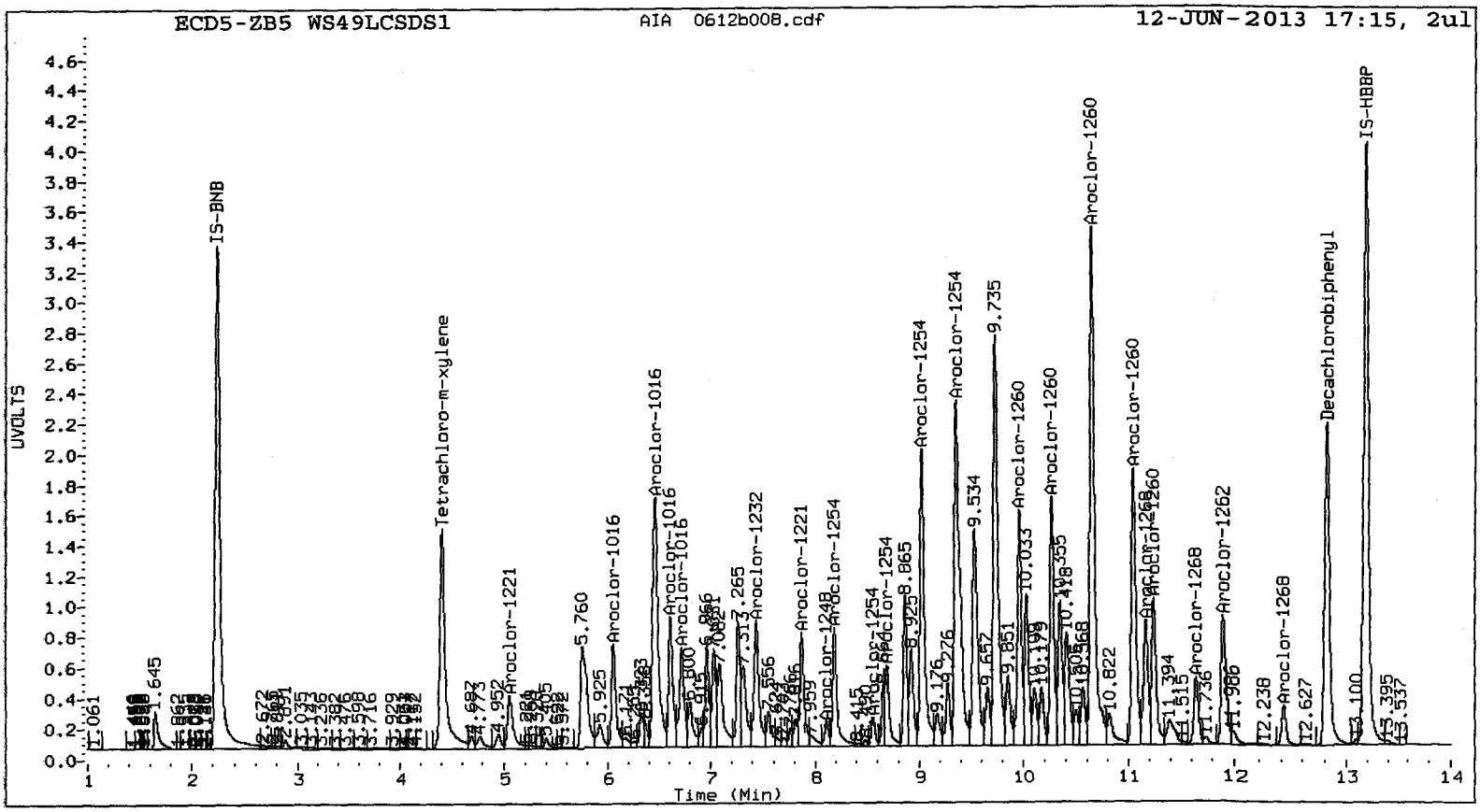
Corrected Ave (3 peaks): 53.0 Corrected Ave (3 peaks): 38.9 RPD = 31

Total PCB Area Col1 (4.507 - 12.726) = 643166274 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 126196236 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

USA : 01386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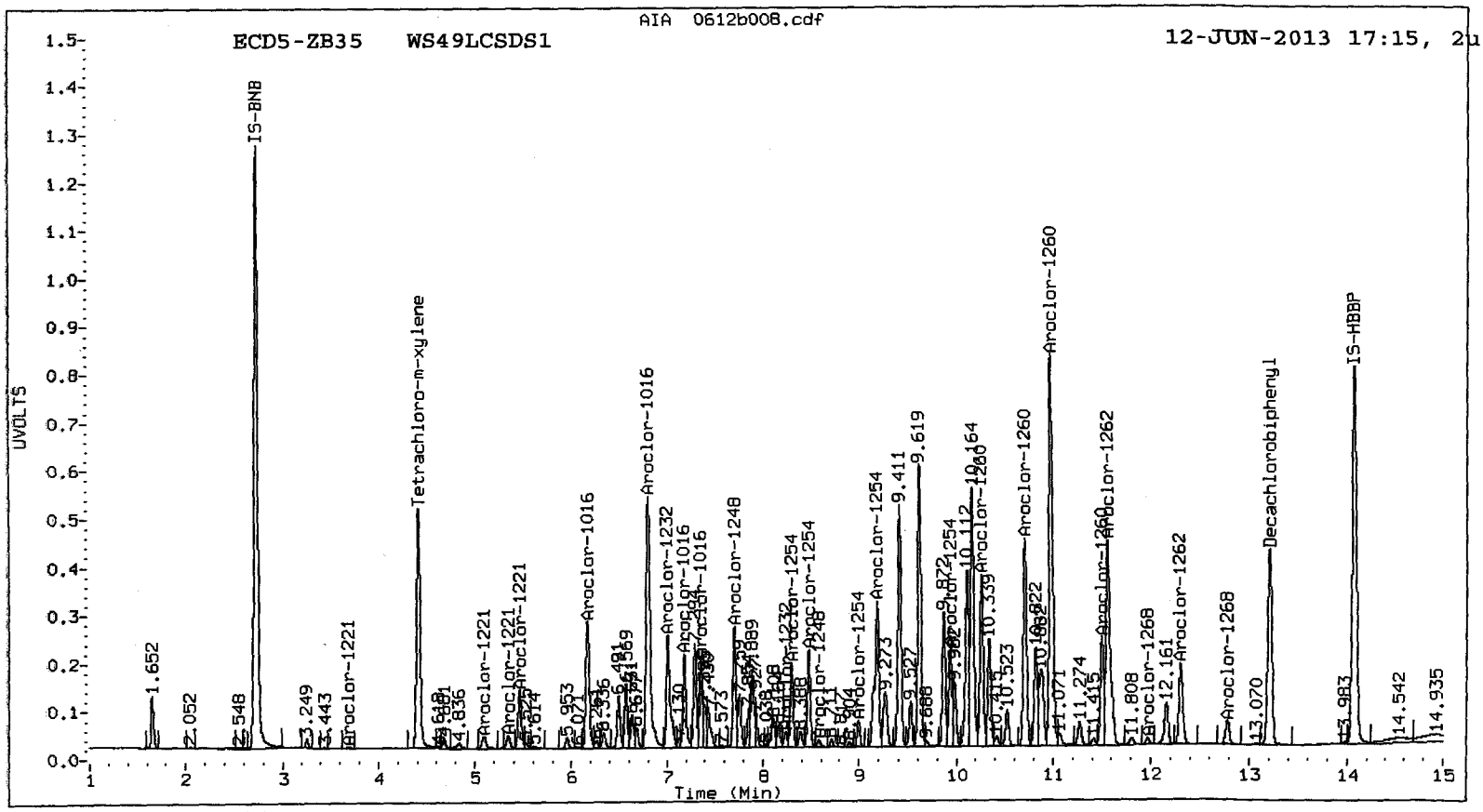
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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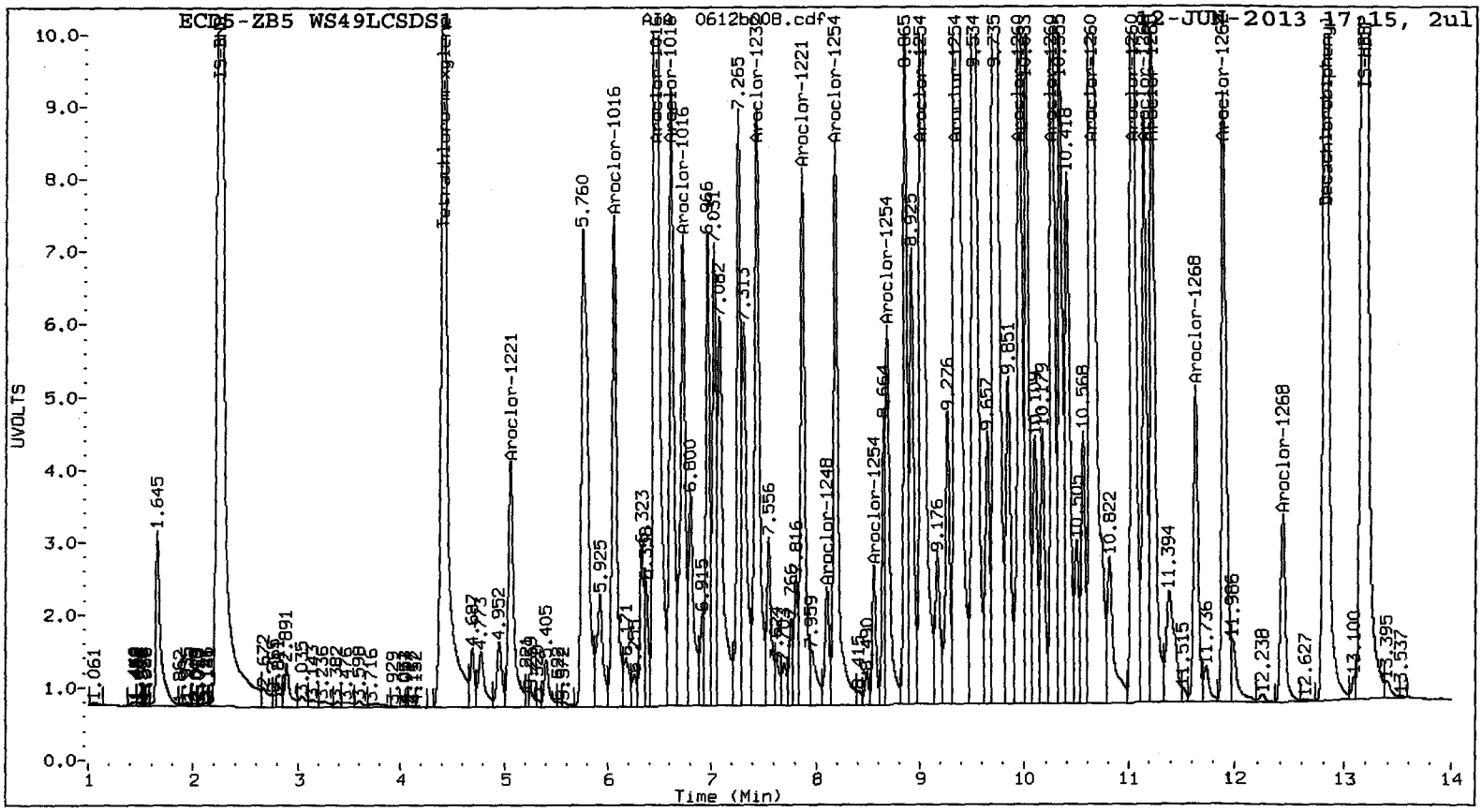
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
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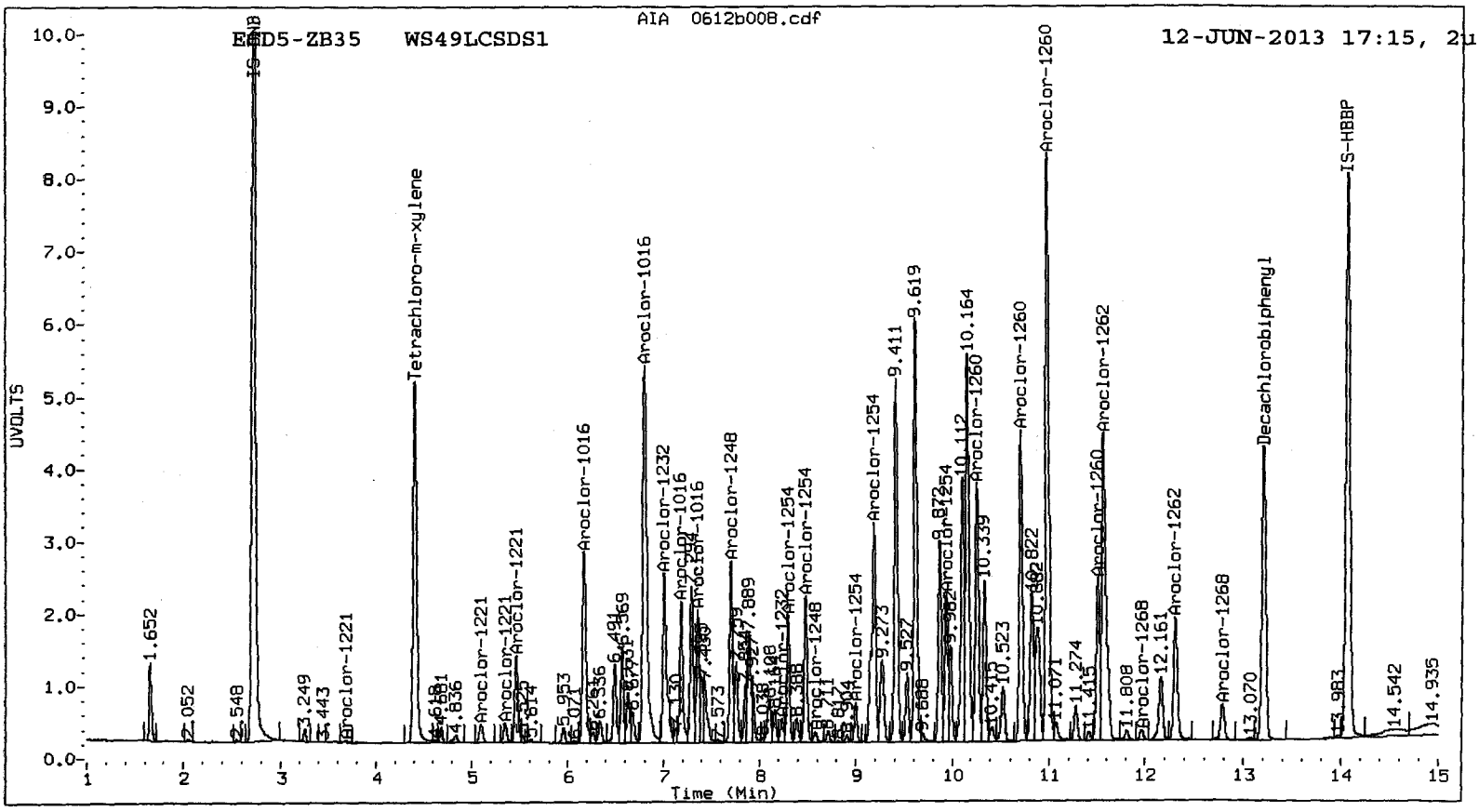
Decachlorobiphenyl
IS-HBBP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Time (Min)
IS-DCB
Tetrachloro-m-xylene
Aroclor-1221
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Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b013.d
Data file 2: 20130507.b/0612-2.b/0612b013.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 12-JUN-2013 18:56
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.408	0.001	35226377	4.409	0.001	8419907	39.0	38.3	1.7	Tetrachloro-m-xylen
12.827	0.001	33264167	13.203	0.002	5657563	36.4	35.4	2.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.4	95.7
Decachlorobiphenyl	91.0	88.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	58322257	19.1
Hexabromobiphenyl	50004151	61167163	22.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16259753	9.6
Hexabromobiphenyl	9345340	11097948	18.8

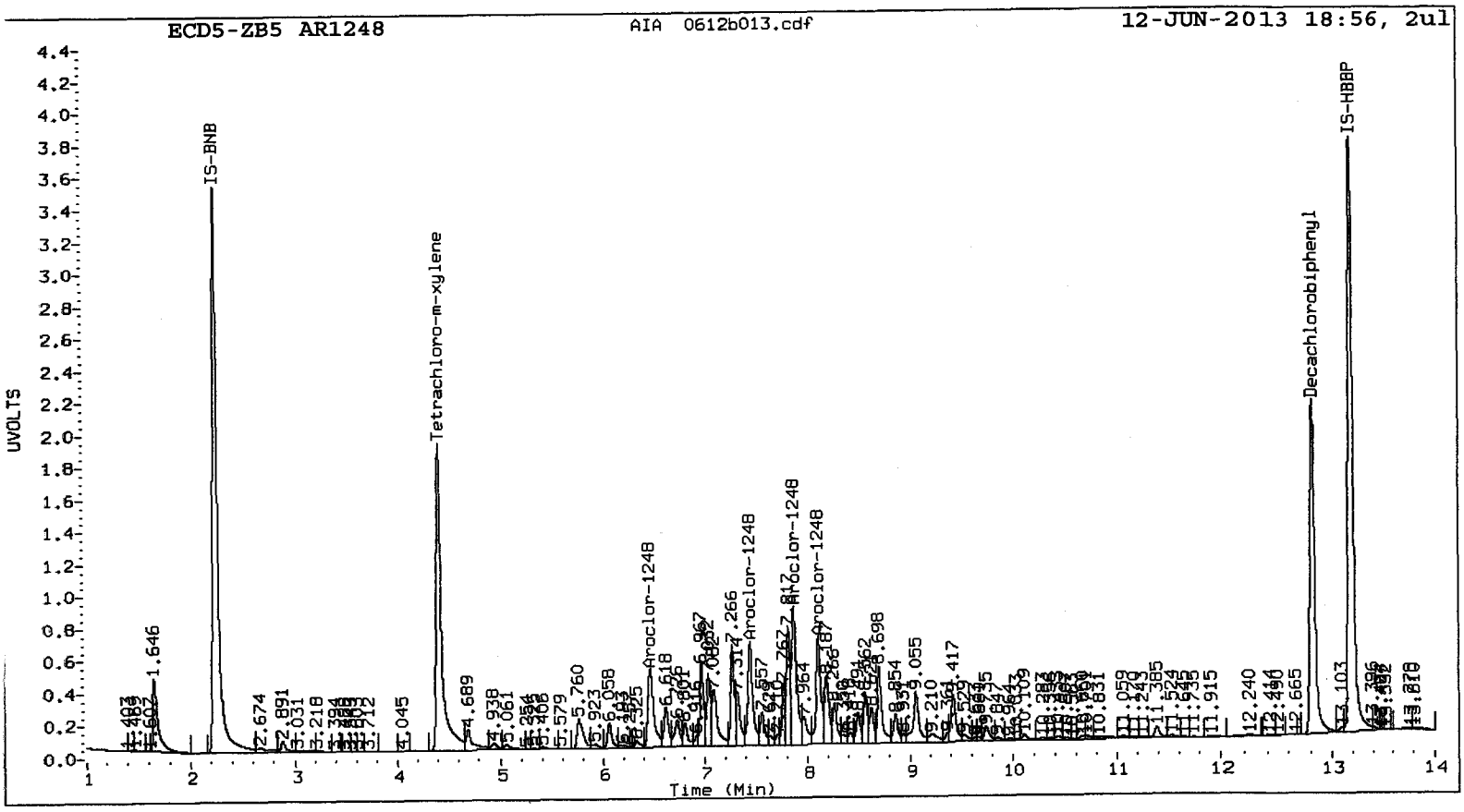
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	6.463	0.000	10048409	244.8	1	6.795	0.000	2400000	235.6
Aroclor-1248	2	7.440	0.000	10772425	233.4	2	7.703	0.000	1936955	229.2
Aroclor-1248	3	7.872	0.000	13695240	233.3	3	8.235	0.000	1988556	227.3
Aroclor-1248	4	8.107	0.000	10074908	246.2	4	8.580	0.000	2522166	221.9
Total Col1Ave (4 peaks):					239.4	Total Col2Ave (4 peaks):				228.5 RPD = 5
Corrected Ave (3 peaks):					237.2	Corrected Ave (3 peaks):				226.1 RPD = 5

Total PCB Area Col1 (4.507 - 12.726) = 177478186 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 33909490 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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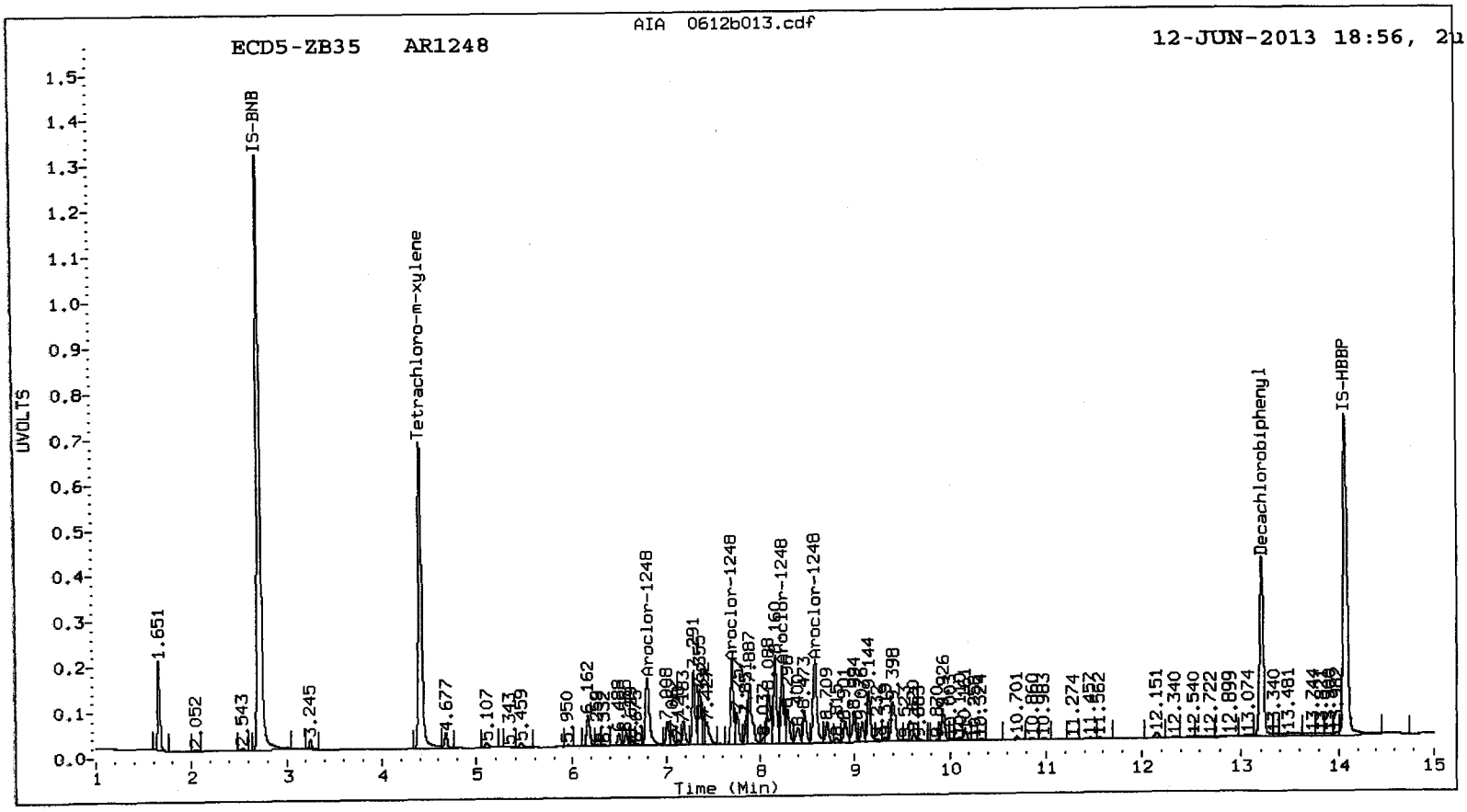
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b014.d
Data file 2: 20130507.b/0612-2.b/0612b014.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 12-JUN-2013 19:16
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.409	0.002	35425286	4.408	0.001	8455885	38.7	37.9	2.0	Tetrachloro-m-xylen
12.827	0.002	34319765	13.202	0.001	5709209	36.6	35.8	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.8	94.9
Decachlorobiphenyl	91.5	89.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	59009209	20.5
Hexabromobiphenyl	50004151	62782280	25.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16480424	11.1
Hexabromobiphenyl	9345340	11097077	18.7

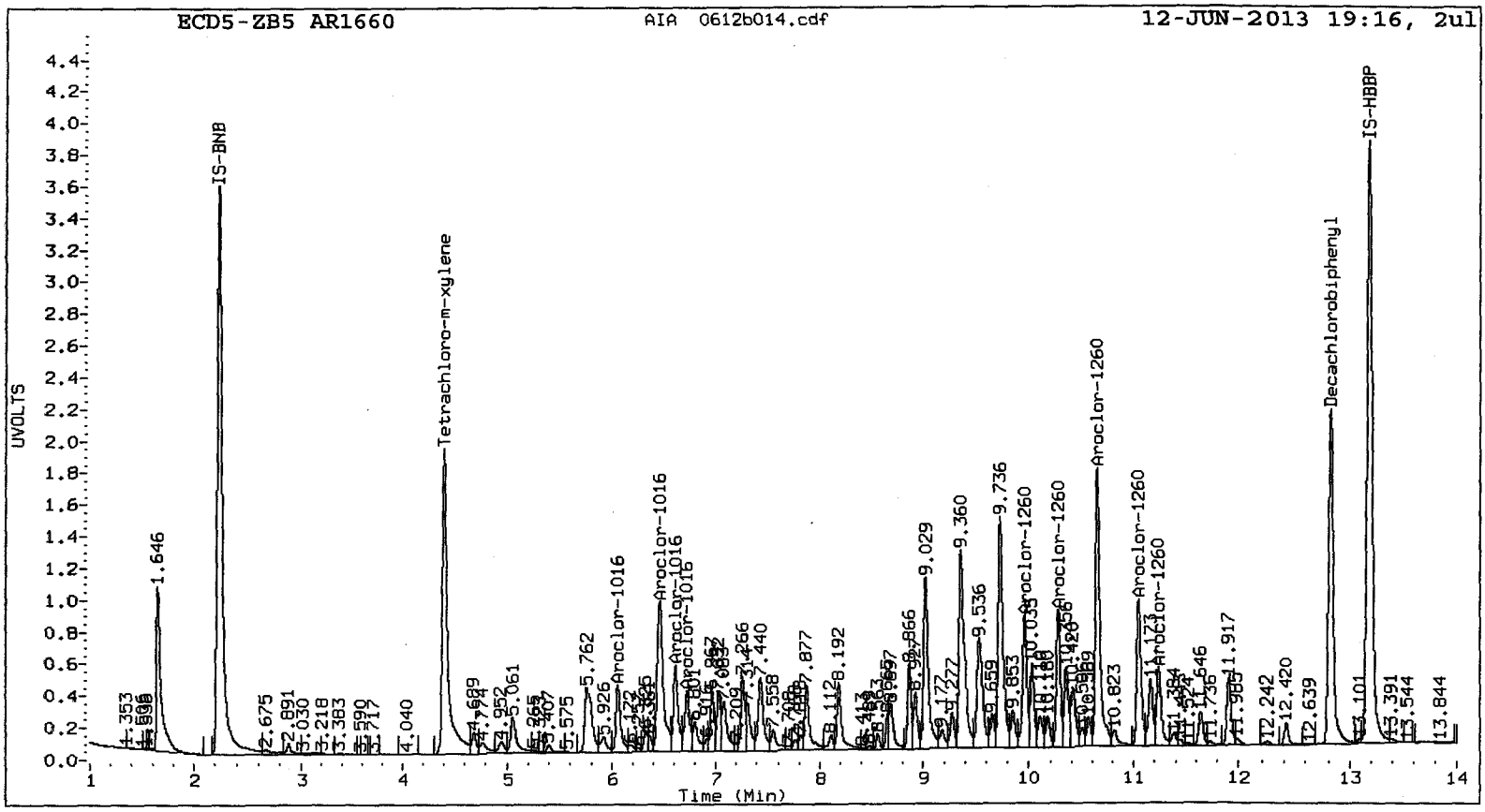
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.059	0.001	6318215	237.5	1	6.163	0.001	2170007	230.8
Aroclor-1016	2	6.467	0.002	19520639	238.3	2	6.800	0.002	4697570	229.8
Aroclor-1016	3	6.616	0.001	8433275	229.7	3	7.184	0.001	1214227	227.1
Aroclor-1016	4	6.727	0.001	6330092	230.8	4	7.356	0.001	1102631	221.5
Total Col1Ave (4 peaks):		234.1				Total Col2Ave (4 peaks):			227.3	RPD = 3
Corrected Ave (3 peaks):		232.7				Corrected Ave (3 peaks):			226.1	RPD = 3
Aroclor-1260	1	9.966	0.002	11540651	224.5	1	10.258	0.002	2163161	214.9
Aroclor-1260	2	10.282	0.002	11349252	222.6	2	10.708	0.002	2603736	220.8
Aroclor-1260	3	10.658	0.001	27563632	225.5	3	10.984	0.002	5046338	231.8
Aroclor-1260	4	11.058	0.002	14064916	236.2	4	11.504	0.002	1398524	237.0
Aroclor-1260	5	11.247	0.002	7570694	237.6	NS	---			----
Total Col1Ave (5 peaks):		229.3				Total Col2Ave (4 peaks):			226.1	RPD = 1
Corrected Ave (4 peaks):		227.2				Corrected Ave (3 peaks):			222.5	RPD = 2

Total PCB Area Col1 (4.507 - 12.726) = 355910596 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 68105696 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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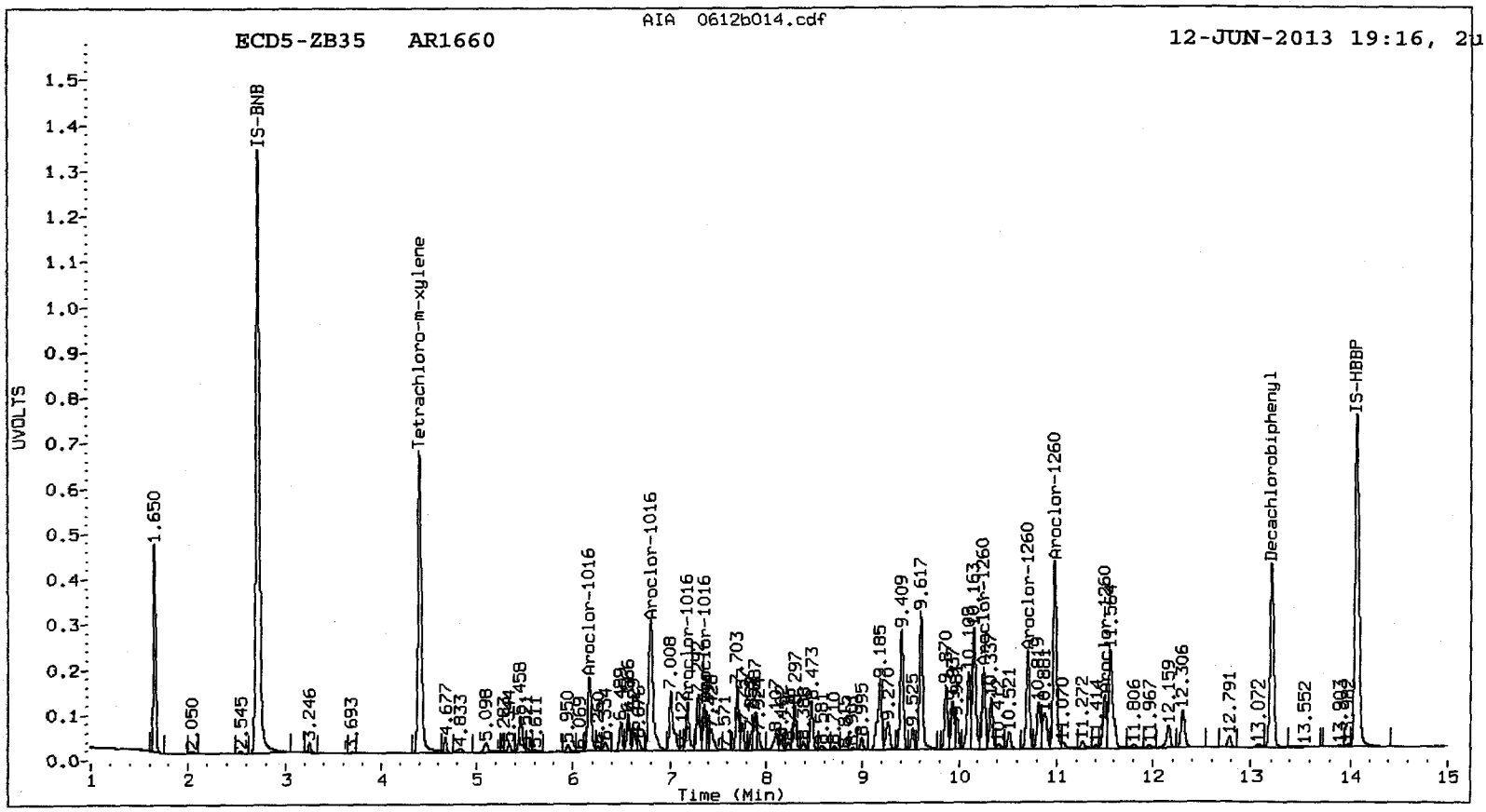
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b020.d
Data file 2: 20130507.b/0612-2.b/0612b020.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS21A
Client ID: KC-IV-SPS-20130531-
Injection Date: 12-JUN-2013 21:18
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	22950325	4.407	-0.001	5399853	27.1	26.4	2.7	Tetrachloro-m-xylen
12.825	-0.001	36039930	13.201	0.001	4938189	35.2	30.7	13.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	67.9	66.1
Decachlorobiphenyl	88.0	76.8

06/13/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54526230	11.3
Hexabromobiphenyl	50004151	68547695	37.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15111850	1.8
Hexabromobiphenyl	9345340	11176503	19.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.030	-0.027	259162	10.5	1	6.162	0.000	10174	1.2
Aroclor-1016	2	6.462	-0.004	179389	2.4	2	6.797	-0.001	74356	4.0
Aroclor-1016	3	6.622	0.007	91540	2.7	3	---			0.0
Aroclor-1016	4	6.726	-0.001	123709	4.9	4	7.353	-0.002	79327	17.4
	Total Col1Ave (4 peaks):				5.1	Total Col2Ave (3 peaks):			7.5	RPD = 38
	Corrected Ave (3 peaks):				3.3	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	5.075	0.012	110072	5.0	1	3.678	-0.016	115652	74.7
Aroclor-1221	2	6.462	-0.007	179389	26.4	2	5.105	0.010	77950	30.1
Aroclor-1221	3	7.875	-0.004	2342247	244.0	3	5.364	0.019	155136	109.9
Aroclor-1221	NS	---			----	4	5.476	0.016	129801	29.2
	Total Col1Ave (3 peaks):				91.8	Total Col2Ave (4 peaks):			60.9	RPD = 40*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			44.6	
Aroclor-1232	1	6.030	-0.030	259162	25.7	1	6.162	-0.004	10174	2.6
Aroclor-1232	2	6.462	-0.008	179389	5.8	2	6.797	-0.004	74356	9.6
Aroclor-1232	3	7.434	-0.007	331634	20.6	3	7.016	0.005	17324	5.4
Aroclor-1232	4	7.875	0.000	2342247	126.9	4	8.230	-0.008	111482	41.1
	Total Col1Ave (4 peaks):				44.7	Total Col2Ave (4 peaks):			14.7	RPD = 101*
	Corrected Ave (3 peaks):				17.4	Corrected Ave (3 peaks):			5.9	RPD = 99*
Aroclor-1242	1	6.030	-0.028	259162	13.2	1	6.162	-0.001	10174	1.5
Aroclor-1242	2	6.462	-0.005	179389	3.0	2	6.797	-0.003	74356	4.9
Aroclor-1242	3	6.622	0.007	91540	3.4	3	7.016	0.009	17324	2.7
Aroclor-1242	4	7.875	0.004	2342247	70.6	4	8.230	-0.005	111482	21.1
	Total Col1Ave (4 peaks):				22.5	Total Col2Ave (4 peaks):			7.5	RPD = 100*
	Corrected Ave (3 peaks):				6.5	Corrected Ave (3 peaks):			3.0	RPD = 73*
Aroclor-1248	1	6.462	-0.002	179389	4.7	1	6.797	0.002	74356	7.9
Aroclor-1248	2	7.434	-0.005	331634	7.7	2	7.701	-0.002	116672	14.9
Aroclor-1248	3	7.875	0.003	2342247	42.7	3	8.230	-0.004	111482	13.7
Aroclor-1248	4	8.107	-0.001	823918	21.5	4	8.564	-0.017	318620	30.2
	Total Col1Ave (4 peaks):				19.1	Total Col2Ave (4 peaks):			16.6	RPD = 14
	Corrected Ave (3 peaks):				11.3	Corrected Ave (3 peaks):			12.1	RPD = 7
Aroclor-1254	1	8.187	-0.003	2953496	58.1	1	8.294	-0.004	459143	62.7
Aroclor-1254	2	8.580	0.018	3507578	104.5	2	8.470	-0.004	483331	53.4
Aroclor-1254	3	8.696	-0.002	7413143	105.9	3	8.992	-0.004	447424	64.5
Aroclor-1254	4	9.030	-0.021	6569884	91.2	4	9.142	-0.005	1130065	76.1
Aroclor-1254	5	9.358	-0.002	5097885	187.0	5	9.931	-0.002	766278	91.6
	Total Col1Ave (5 peaks):				109.3	Total Col2Ave (5 peaks):			69.7	RPD = 44*
	Corrected Ave (4 peaks):				89.9	Corrected Ave (4 peaks):			64.2	RPD = 33
Aroclor-1260	1	9.960	-0.004	4306726	76.7	1	10.257	0.000	649936	64.1
Aroclor-1260	2	10.280	0.000	3523716	63.3	2	10.704	-0.002	1020951	86.0
Aroclor-1260	3	10.655	-0.002	10714086	80.3	3	10.982	0.000	1816209	82.8
Aroclor-1260	4	11.054	-0.002	4054347	62.4	4	11.502	0.000	517768	87.1
Aroclor-1260	5	11.245	0.000	2685958	77.2	NS	---			----
	Total Col1Ave (5 peaks):				72.0	Total Col2Ave (4 peaks):			80.0	RPD = 11
	Corrected Ave (4 peaks):				69.9	Corrected Ave (3 peaks):			77.6	RPD = 10
Aroclor-1262	1	10.280	-0.002	3523716	54.9	1	10.257	-0.003	649936	42.0
Aroclor-1262	2	10.655	-0.004	10714086	71.0	2	10.704	-0.006	1020951	72.2
Aroclor-1262	3	11.054	-0.005	4054347	84.9	3	10.982	-0.003	1816209	68.5
Aroclor-1262	4	11.245	-0.003	2685958	40.1	4	11.561	-0.006	1096782	63.6
Aroclor-1262	5	11.914	-0.004	2377119	46.2	5	12.303	-0.003	443723	53.3
	Total Col1Ave (5 peaks):				59.4	Total Col2Ave (5 peaks):			59.9	RPD = 1
	Corrected Ave (4 peaks):				53.1	Corrected Ave (4 peaks):			56.9	RPD = 7
Aroclor-1268	1	11.171	-0.004	2459965	17.1	1	11.502	-0.005	517768	19.2

Aroclor-1268	2	11.245	-0.001	2685958	16.8	2	11.561	-0.011	1096782	43.1
Aroclor-1268	3	11.643	0.010	1228209	10.4	3	11.966	-0.003	41289	2.1
Aroclor-1268	4	12.419	-0.002	926169	2.8	4	12.788	-0.004	142099	2.7

Total Col1Ave (4 peaks): 11.8 Total Col2Ave (4 peaks): 16.8 RPD = 35

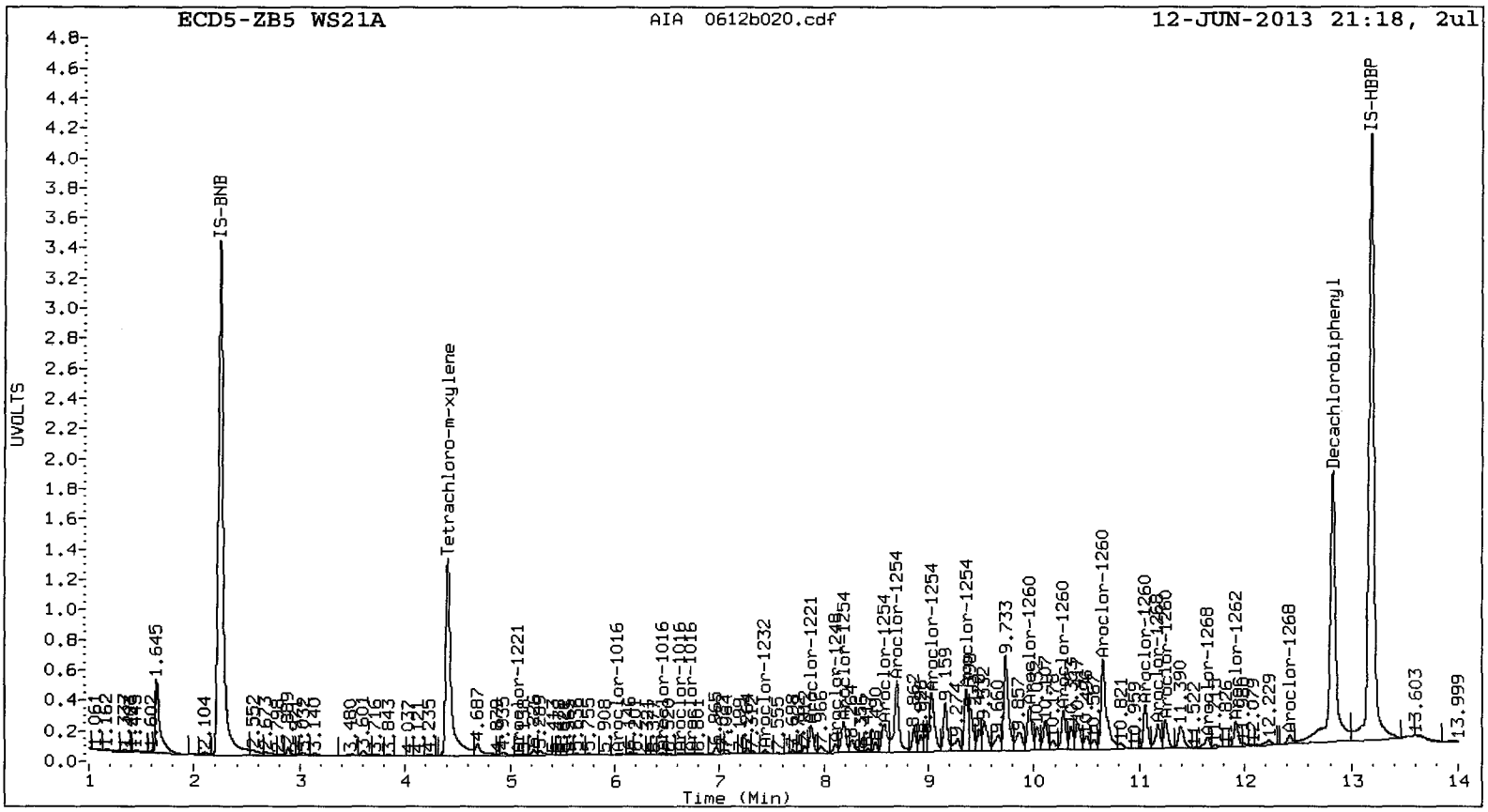
Corrected Ave (3 peaks): 10.0 Corrected Ave (3 peaks): 8.0 RPD = 22

Total PCB Area Col1 (4.507 - 12.726) = 122684715 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 24246115 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

US21 : 21597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Decachlorobiphenyl
IS-HBBP
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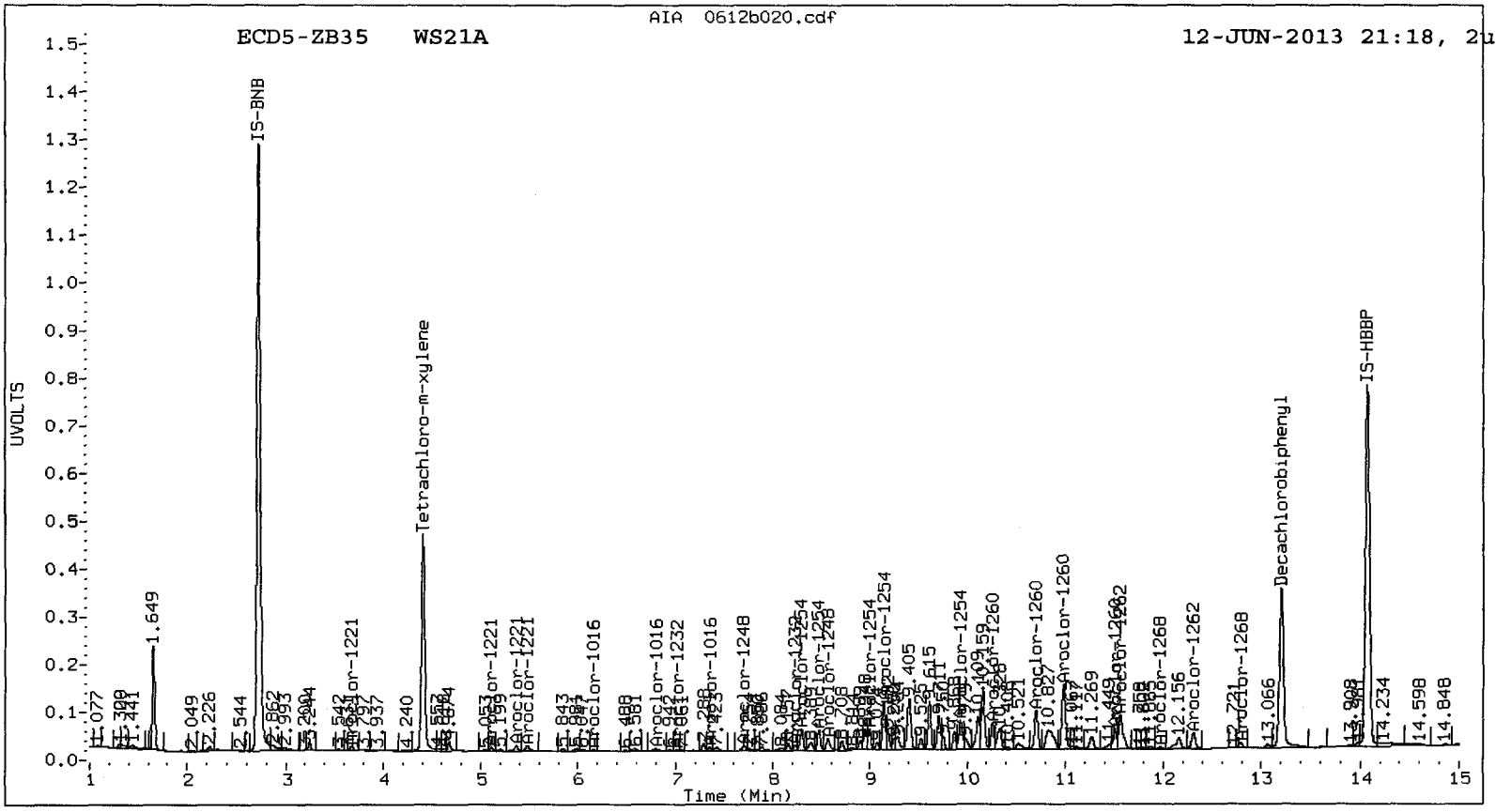
13.999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Decachlorobiphenyl
IS-HBBP
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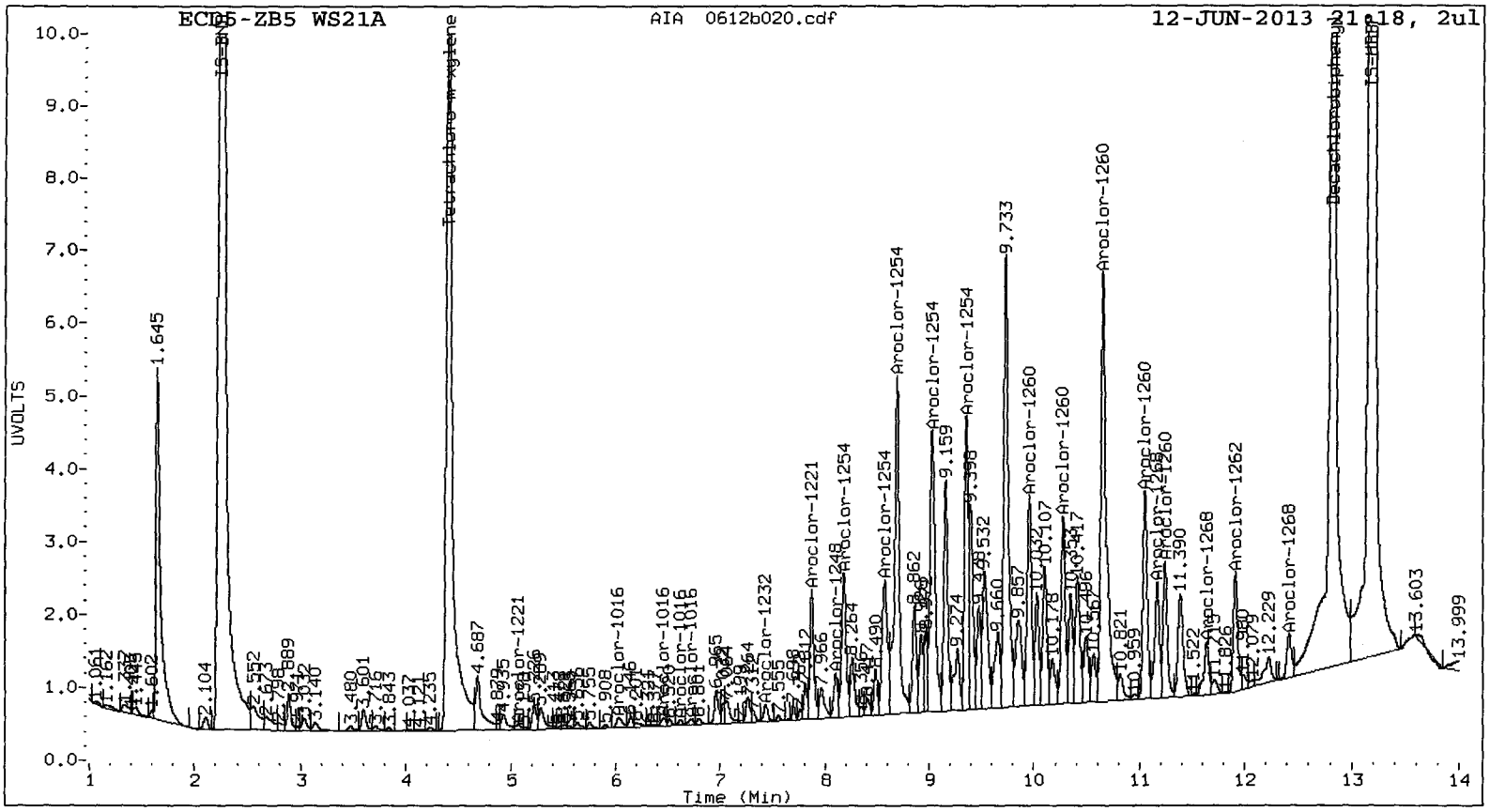
14.848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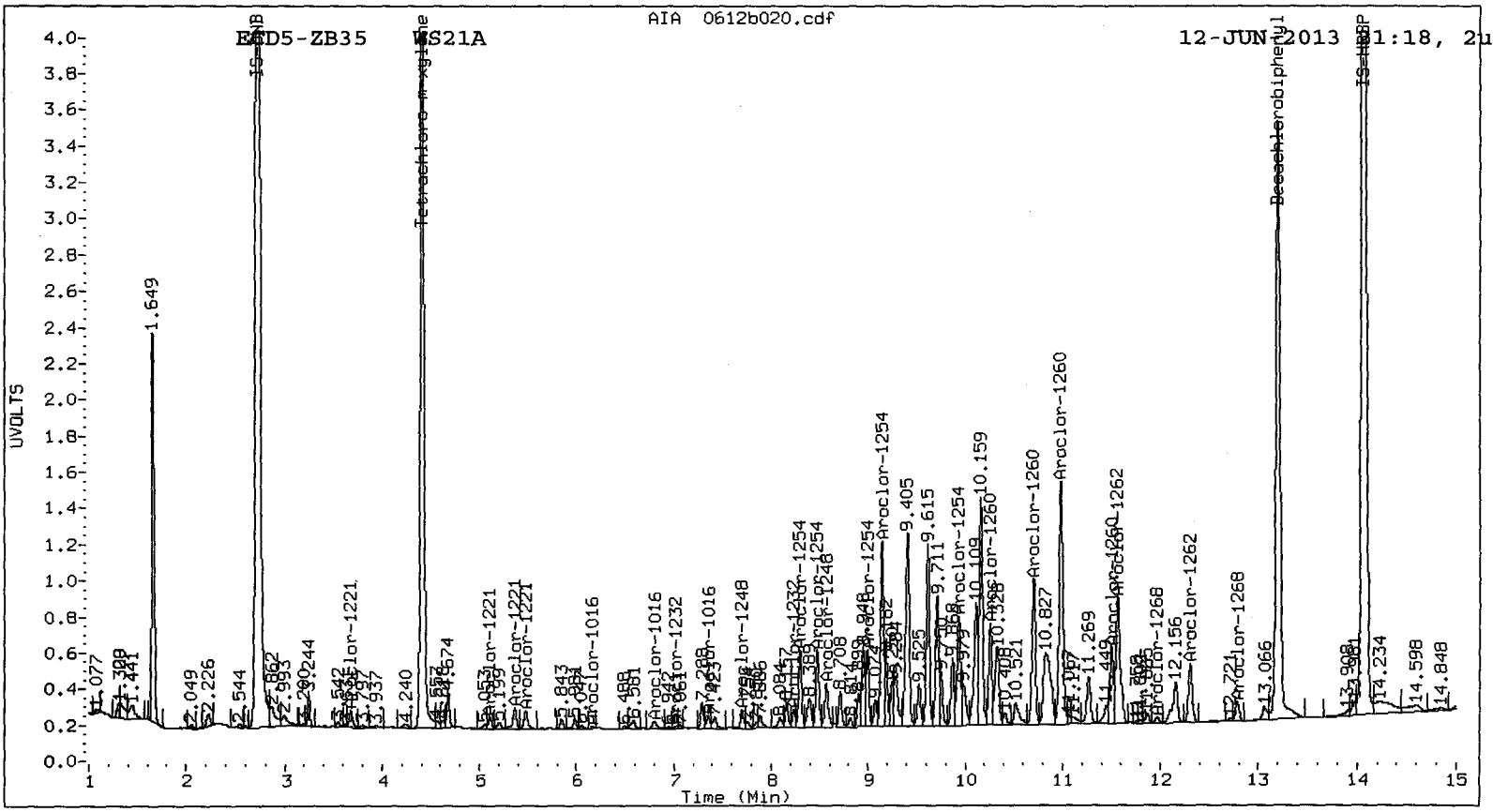
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b022.d
Data file 2: 20130507.b/0612-2.b/0612b022.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 12-JUN-2013 21:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.407	0.000	38084245	4.408	0.000	8897528	39.3	38.6	1.7	Tetrachloro-m-xylen
12.825	0.000	41225524	13.201	0.000	6462914	40.2	38.1	5.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	98.2	96.5
Decachlorobiphenyl	100.5	95.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	62530670	27.7
Hexabromobiphenyl	50004151	68675704	37.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	17045224	14.9
Hexabromobiphenyl	9345340	11790726	26.2

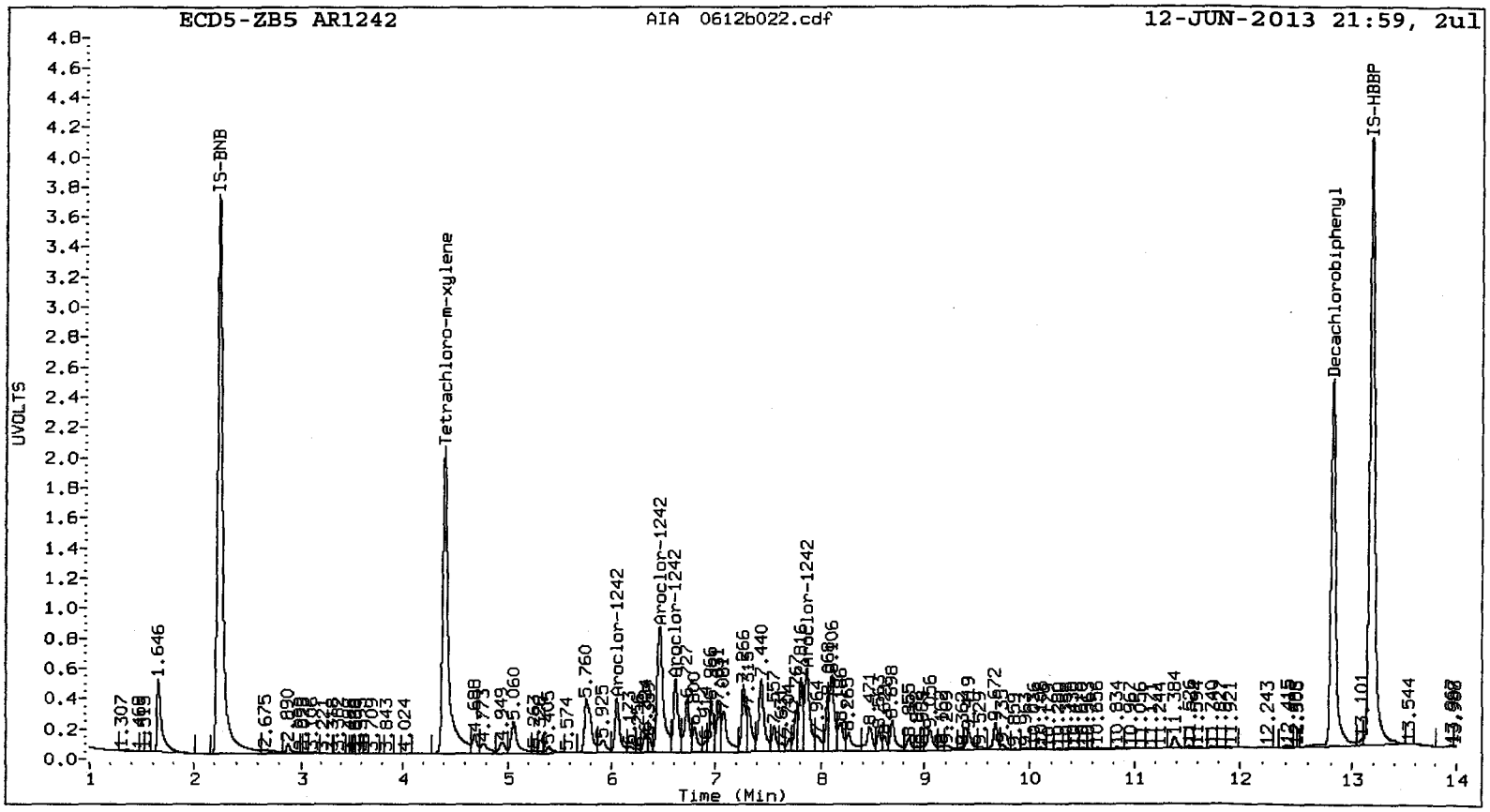
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	6.058	0.000	5605946	248.9	1	6.162	0.000	1864335	240.1
Aroclor-1242	2	6.467	0.000	17286888	250.3	2	6.800	0.000	3903258	228.8
Aroclor-1242	3	6.615	0.000	7666384	248.7	3	7.007	0.000	1697246	238.1
Aroclor-1242	4	7.870	0.000	9179567	241.2	4	8.235	0.000	1410383	236.2
Total Col1Ave (4 peaks):					247.3	Total Col2Ave (4 peaks):				235.8 RPD = 5
Corrected Ave (3 peaks):					246.3	Corrected Ave (3 peaks):				234.4 RPD = 5

Total PCB Area Col1 (4.507 - 12.726) = 164557717 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 31650391 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
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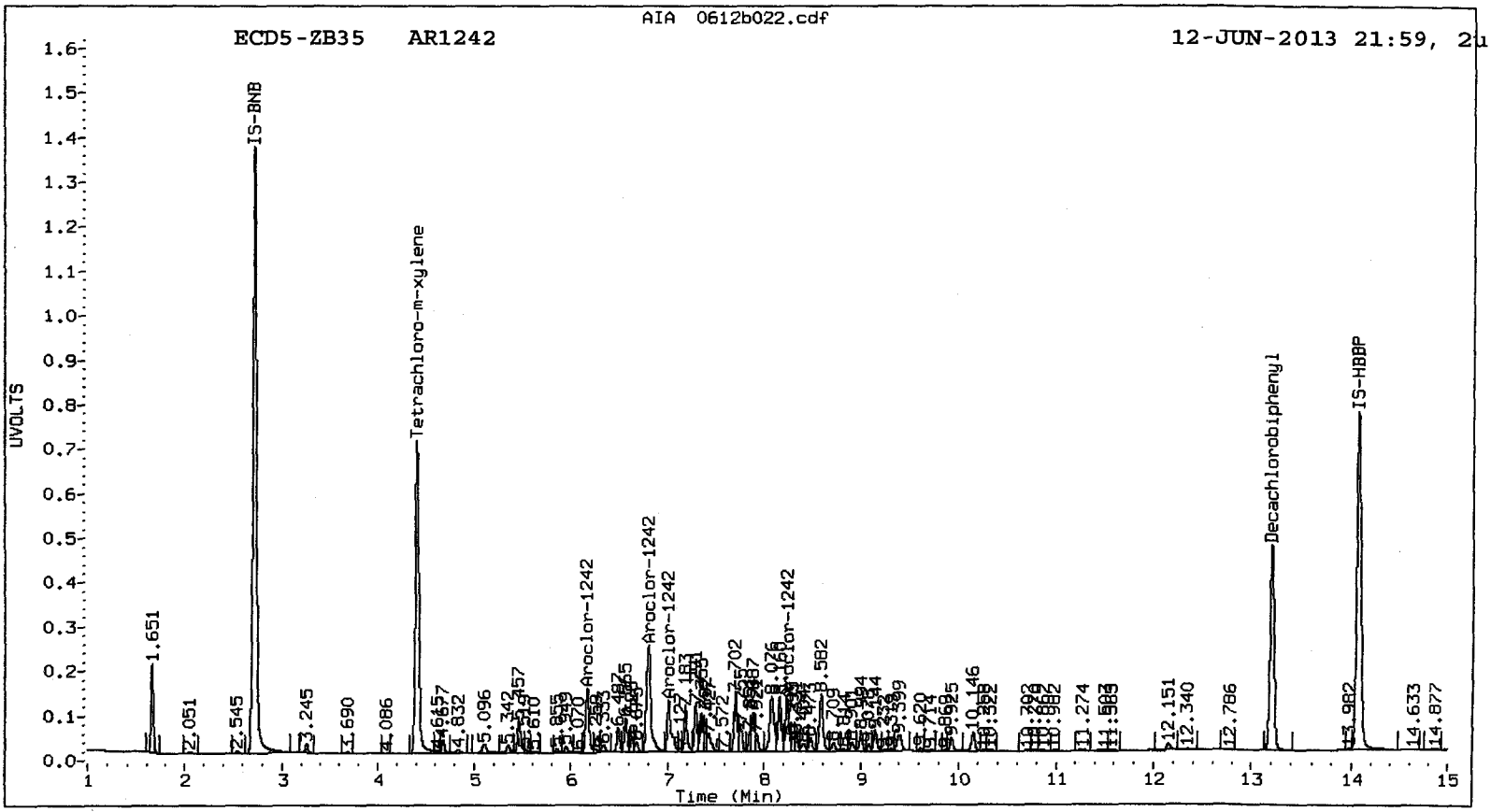
12.243
13.101
13.544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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
1.651
2.051
2.545
3.245
3.690
4.086
5.096
8.582
10.146
12.151
12.340
12.786
13.982
14.633
14.877

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0612-1.b/0612b023.d
Data file 2: 20130507.b/0612-2.b/0612b023.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 12-JUN-2013 22:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.407	0.000	36824957	4.408	0.000	8671597	38.7	38.1	1.6	Tetrachloro-m-xylen
12.826	0.000	39100788	13.201	0.000	6156118	37.7	36.0	4.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.7	95.2
Decachlorobiphenyl	94.2	90.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	61395809	25.4
Hexabromobiphenyl	50004151	69432904	38.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16838472	13.5
Hexabromobiphenyl	9345340	11875626	27.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

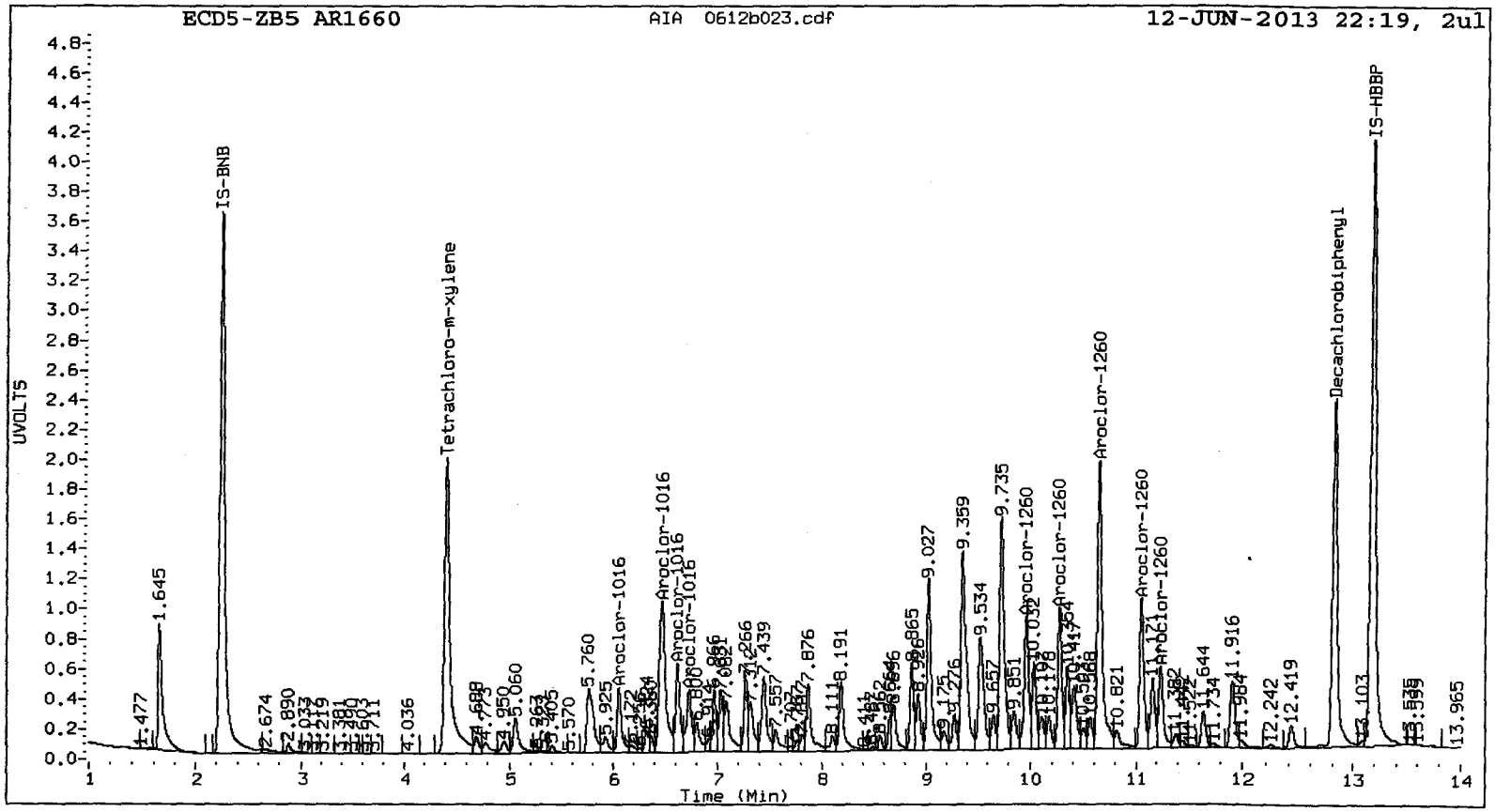
US21 : 91403

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.057	0.000	6711773	242.5	1	6.162	0.000	2251715	234.4
Aroclor-1016	2	6.466	0.000	20792517	243.9	2	6.798	0.000	4935611	236.3
Aroclor-1016	3	6.615	0.000	9091117	238.0	3	7.183	0.000	1285108	235.3
Aroclor-1016	4	6.726	0.000	6867722	240.7	4	7.355	0.000	1162487	228.5
Total Col1Ave (4 peaks):		241.3				Total Col2Ave (4 peaks):			233.6	RPD = 3
Corrected Ave (3 peaks):		240.4				Corrected Ave (3 peaks):			232.7	RPD = 3
Aroclor-1260	1	9.964	0.000	12649600	222.5	1	10.257	0.000	2324638	215.8
Aroclor-1260	2	10.281	0.000	12459532	221.0	2	10.706	0.000	2758014	218.6
Aroclor-1260	3	10.657	0.000	30937284	228.8	3	10.982	0.000	5366886	230.4
Aroclor-1260	4	11.056	0.000	15571747	236.4	4	11.502	0.000	1509506	239.0
Aroclor-1260	5	11.245	0.000	8502367	241.3	NS	---			----
Total Col1Ave (5 peaks):		230.0				Total Col2Ave (4 peaks):			226.0	RPD = 2
Corrected Ave (4 peaks):		227.2				Corrected Ave (3 peaks):			221.6	RPD = 2

Total PCB Area Col1 (4.507 - 12.726) = 388456733 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.508 - 13.101) = 72438910 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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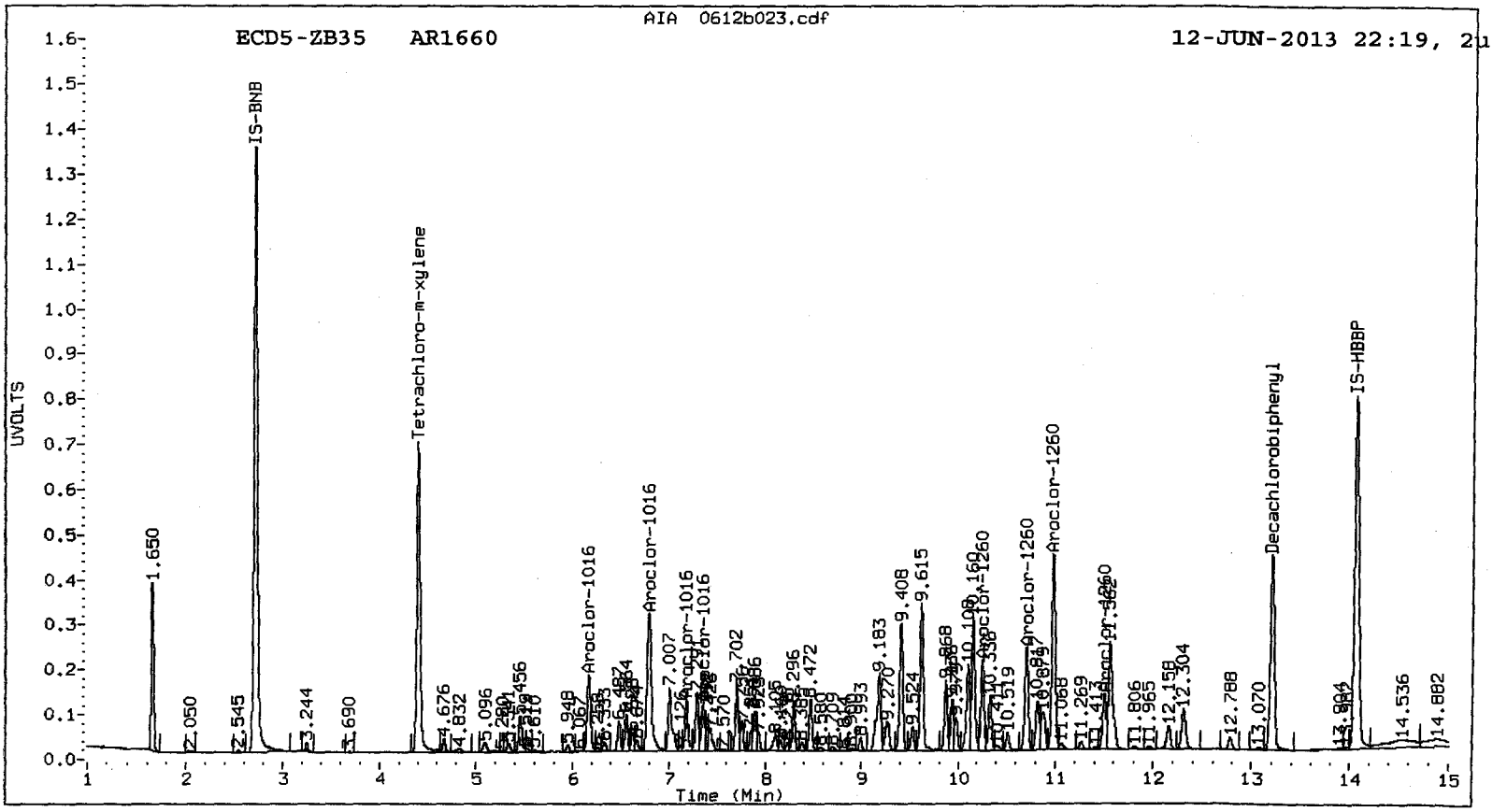
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS21

Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test TPHD # 3 (DIESMI)
ARI Job No(s) WR99, W521

In-House (5ppm)
Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (wet wt)	Acid Clean (1:1) Y/N	Silica Gel Clean (1:1) Y/N	Final Effective Volume	Volume to Lab	Comments	Verifty Client ID
	WR99 MBS	10.00g	(1:1) Y/N	(1:1) Y/N	1mL	1mL		MB 6/4/13
	↓ SBS	10.00g	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
	~~SBS Dup~~	~~10.00g~~	(1:1) Y/N	(1:1) Y/N	~~1mL~~	~~1mL~~		Analyst/Date
	~~QLS~~	~~10.00g~~	(1:1) Y/N	(1:1) Y/N	~~1mL~~	~~1mL~~		Microwave 1 2 3
8	WR99 D	10.15	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
8	↓ DMS	10.12	(1:1) Y/N	(1:1) Y/N	1mL	1mL		MB 6/4/13
8	↓ DMSD	10.19	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
8	W521 A	10.04	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		Analyst/Date
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		TurboVap 1 2 3 Pre-Acid/Silica Clean
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		CJ2 6/4/13
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		Analyst/Date
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		TurboVap 1 2 3 ~~Post Acid/Silica Clean~~
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
Analyst/Date	NB 6/4/13				CJ2 6/4/13	CJ2 6/4/13	Reviewed By CJ2 6/4/13	CJ2 6/4/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	O2(B$82-5)	450µg/mL	100µL	11/19/13	M	SP
Spike	11 (B$$176)	15000µg/mL	100µL	5/21/14	M	SP
~~QLS Spike~~	~~18 ( )~~	~~1000µg/mL~~	~~50µL~~			
Extraction Time: 0930				Balance ID: B139298002		

SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers-dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM to the vessel until the solvent is 1" above soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then let cool 15 min. in cold water bath. Re-homogenize while cool. 7. Collect into turbo tube with sm. funnel containing glasswool and 1" sodium sulfate. 8. Add (2) 10mL DCM rinses to vessel and transfer to turbo tube. 9. TurboVap. 10. Acid/Silica Clean-up?= Y (N) 11. TurboVap (if Silica Clean). 12. Vial in DCM.

A. Need Total Solids Y (N) **B. Archive/Freeze Y (N)**

W521 : 061407

Organic Extractions
Reagent and Solutions Identification

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WR99, W521

(8015C) NWTPHD Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Methylene Chloride: (I# 8270)	M 6/4/13
Anhydrous Sodium Sulfate: (I# 8130 + jar date 5/24/13)	
Neutral Glasswool: (I# 7998 + jar date 12/6/12	
Vialing Station:	Vialing
Methylene Chloride: (I# 8270)	CJB 6/4/13
Concentrated Sulfuric Acid: (I# N/A)	
Silica Gel (SPE) Darts: (I# N/A)	

W521 : 20130605

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: W521 Client ID: SAIC

Parameter: TPHD Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= A	YC 05/31/13
☒ Standing Water Decanted (Not shared)= A	YC 05/31/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

W521 : 061103

TPHD Raw Data
Initial Calibration

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A (FID-3B) FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 5/1/13 / 5/9/13 Internal Standard ID N/A Expiration N/A

Endrin/DDT Breakdown <15%? YES / NO / (NA)		ICV Exceeding ±20%?	YES / (NO)
ICal Meets %RSD & r^2 Criteria	(YES) / NO	ICV Exceeding ±30%?	YES / (NO)
Manual Integrations for ICal?	(YES) / NO	Linear Fits Used?	YES / (NO)
Minimum Response S/N Met	(YES) / NO	Quadratic Fits Used?	YES / (NO)
		Calibration Points Dropped?	YES (NO)

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Diesel/Ak102/Cal Diesel	2091-2	3/15/14	Diesel ICV/Ak102/Cal	2043-1	10/29/13
Mail	2041-4	11/27/13	Mail ICV	2043-2	11/19/13
JetA	2008-1	5/1/13	Ak103 ICV	B000202	11/19/13
Ak103	B000201	11/19/13			
RT	2043-4	10/29/13			
IB	2043-3	10/29/13			

Detail problems, corrective actions and/or other pertinent information below:
Curve for JetA, Diesel, Ak102, Cal diesel (IT diesel same), mail & Ak103.

Analyst: JW **Date:** 5/11/13

Reviewer: [signature] **Date:** 5/13/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b032	0509b033	0509b034	0509b035	0509b036	0509b037
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	21:43	22:02	22:21	22:41	23:00	23:19

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.560-0.760	+++++	+++++
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	2 C8	0.834	0.839	0.832	0.834	0.831	0.825	0.827	0.727-0.927	0.832	0.005
	3 C10	2.251	2.254	2.255	2.256	2.253	2.254	2.254	2.204-2.304	2.254	0.002
	4 C12	3.043	3.032	3.033	3.032	3.032	3.033	3.049	2.999-3.099	3.034	0.004
	5 C14	3.624	3.622	3.613	3.618	3.618	3.619	3.621	3.571-3.671	3.619	0.004
	6 C16	4.118	4.114	4.115	4.119	4.116	4.116	4.116	4.066-4.166	4.116	0.002
	7 C18	4.573	4.574	4.570	4.572	4.567	4.565	4.565	4.515-4.615	4.570	0.004
$	8 o-terph	4.684	4.673	4.676	4.683	4.675	4.681	4.683	4.633-4.733	4.679	0.004
	9 C20	4.998	4.992	4.991	4.990	4.987	4.991	4.989	4.939-5.039	4.991	0.004
	10 C22	5.391	5.387	5.389	5.386	5.387	5.387	5.386	5.336-5.436	5.388	0.002
	11 C24	5.760	5.763	5.757	5.762	5.762	5.758	5.760	5.710-5.810	5.760	0.002
	12 C25	5.937	5.939	5.937	5.936	5.936	5.941	5.938	5.888-5.988	5.938	0.002
	13 C26	6.113	6.114	6.114	6.112	6.115	6.114	6.114	6.064-6.164	6.114	0.001
	14 C28	6.431	6.427	6.429	6.431	6.429	6.431	6.427	6.377-6.477	6.430	0.002
$	15 Triacon Surr	6.715	6.720	6.726	6.736	6.750	6.767	6.768	6.718-6.818	6.736	0.020
	16 C32	6.978	6.975	6.980	6.979	6.977	6.976	6.976	6.926-7.026	6.978	0.002

Reviewer 1 JJ Date: 5/11/13
Reviewer 2 [illegible] Date: 5/9/13

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Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.218	7.217	7.216	7.216	7.215	7.214	7.210	7.160-7.260	7.216	0.002
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.431	7.435	7.437	7.436	7.436	7.430	7.435	7.385-7.485	7.434	0.003
20 C38	7.637	7.640	7.641	7.634	7.640	7.641	7.639	7.589-7.689	7.639	0.003
21 C40	7.826	7.829	7.832	7.831	7.830	7.827	7.828	7.778-7.878	7.829	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b026	0509b027	0509b028	0509b029	0509b030	0509b031
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	19:47	20:06	20:26	20:45	21:04	21:23

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	2 C8	0.842	0.843	0.835	0.832	0.839	0.842	0.821	0.721-0.921	0.839	0.004
	3 C10	2.256	2.257	2.255	2.254	2.258	2.266	2.250	2.200-2.300	2.258	0.004
	4 C12	3.039	3.039	3.040	3.042	3.044	3.051	3.040	2.990-3.090	3.043	0.005
	5 C14	3.620	3.620	3.620	3.620	3.621	3.627	3.620	3.570-3.670	3.621	0.003
	6 C16	4.122	4.121	4.118	4.118	4.116	4.119	4.117	4.067-4.167	4.119	0.002
	7 C18	4.564	4.564	4.566	4.567	4.567	4.568	4.568	4.518-4.618	4.566	0.002
$	8 o-terph	4.671	4.671	4.678	4.685	4.694	4.698	4.676	4.626-4.726	4.683	0.011
	9 C20	4.992	4.989	4.990	4.991	4.990	4.989	4.989	4.939-5.039	4.990	0.001
	10 C22	5.396	5.388	5.389	5.389	5.390	5.392	5.387	5.337-5.437	5.391	0.003
	11 C24	5.763	5.760	5.765	5.763	5.763	5.757	5.759	5.709-5.809	5.762	0.003
	12 C25	5.934	5.937	5.932	5.935	5.931	5.936	5.934	5.884-5.984	5.934	0.002
	13 C26	6.116	6.112	6.117	6.112	6.112	6.116	6.112	6.062-6.162	6.114	0.002
	14 C28	6.431	6.428	6.437	6.428	6.431	6.431	6.426	6.376-6.476	6.431	0.003
$	15 Triacon Surr	6.727	6.726	6.727	6.725	6.722	6.720	6.723	6.673-6.773	6.724	0.003
	16 C32	6.982	6.988	6.982	6.981	6.981	6.981	6.976	6.926-7.026	6.982	0.003

Reviewer 1 JU Date: 5/11/13

Reviewer 2 Date: 5/12/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.202	7.223	7.218	7.215	7.211	7.215	7.214	7.164-7.264	7.214	0.007
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.437	7.444	7.442	7.438	7.418	7.443	7.432	7.382-7.482	7.437	0.010
20 C38	7.637	7.640	7.637	7.635	7.637	7.638	7.639	7.589-7.689	7.637	0.002
21 C40	7.834	7.836	7.832	7.829	7.833	7.828	7.833	7.783-7.883	7.832	0.003
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b019	0509b020	0509b021	0509b022	0509b023	0509b024
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	17:30	17:50	18:09	18:29	18:49	19:08

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	2 C8	0.836	0.832	0.835	0.839	0.826	0.827	0.836	0.736-0.936	0.833	0.005
	3 C10	2.255	2.255	2.254	2.257	2.255	2.254	2.255	2.204-2.304	2.255	0.001
	4 C12	3.049	3.033	3.033	3.033	3.033	3.049	3.049	2.999-3.099	3.038	0.008
	5 C14	3.626	3.621	3.614	3.617	3.625	3.621	3.626	3.576-3.676	3.621	0.004
	6 C16	4.118	4.118	4.115	4.117	4.120	4.116	4.118	4.068-4.168	4.117	0.002
	7 C18	4.561	4.567	4.569	4.572	4.567	4.565	4.561	4.511-4.611	4.567	0.004
$	8 o-terph	4.673	4.682	4.681	4.673	4.672	4.683	4.673	4.623-4.723	4.677	0.005
	9 C20	4.984	4.991	4.994	4.988	4.986	4.989	4.984	4.934-5.035	4.989	0.003
	10 C22	5.386	5.389	5.387	5.384	5.383	5.386	5.386	5.336-5.436	5.386	0.002
	11 C24	5.762	5.760	5.755	5.763	5.761	5.760	5.762	5.712-5.812	5.760	0.003
	12 C25	5.938	5.939	5.938	5.935	5.936	5.938	5.938	5.888-5.987	5.937	0.001
	13 C26	6.116	6.114	6.113	6.114	6.115	6.114	6.116	6.066-6.166	6.114	0.001
	14 C28	6.435	6.428	6.431	6.431	6.429	6.427	6.435	6.385-6.485	6.430	0.003
$	15 Triacon Surr	6.717	6.720	6.728	6.738	6.752	6.768	6.717	6.667-6.767	6.737	0.020
	16 C32	6.975	6.975	6.974	6.980	6.977	6.976	6.975	6.925-7.025	6.976	0.002

Reviewer 1 JU Date: 5/14/13

Reviewer 2 Date: 5/13/13

SDG 13538

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.215	7.220	7.217	7.214	7.214	7.210	7.215	7.165-7.266	7.215	0.004
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.430	7.432	7.433	7.429	7.429	7.435	7.430	7.380-7.480	7.431	0.002
20 C38	7.634	7.632	7.638	7.637	7.639	7.639	7.634	7.584-7.684	7.637	0.003
21 C40	7.826	7.830	7.830	7.827	7.831	7.828	7.826	7.776-7.876	7.829	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130510.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0510b004	0510b005	0510b006	0510b007	0510b008	0510b009
INJ.DATE:	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013
INJ.TIME:	08:41	09:01	09:20	09:40	10:00	10:20

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	2 C8	0.824	0.829	0.831	0.831	0.829	0.829	0.821	0.721-0.921	0.829	0.003
	3 C10	2.255	2.255	2.256	2.256	2.254	2.257	2.250	2.200-2.300	2.255	0.001
	4 C12	3.037	3.038	3.039	3.039	3.041	3.044	3.040	2.990-3.090	3.040	0.002
	5 C14	3.621	3.618	3.619	3.619	3.621	3.625	3.620	3.570-3.670	3.620	0.002
	6 C16	4.117	4.116	4.115	4.116	4.120	4.124	4.117	4.067-4.167	4.118	0.003
	7 C18	4.564	4.564	4.565	4.569	4.570	4.577	4.568	4.518-4.618	4.568	0.005
$	8 o-terph	4.670	4.672	4.678	4.686	4.693	4.712	4.676	4.626-4.726	4.685	0.016
	9 C20	4.990	4.988	4.987	4.989	4.989	4.994	4.989	4.939-5.039	4.989	0.002
	10 C22	5.382	5.389	5.386	5.387	5.385	5.389	5.387	5.337-5.437	5.386	0.003
	11 C24	5.759	5.758	5.762	5.761	5.755	5.758	5.759	5.709-5.809	5.759	0.003
	12 C25	5.938	5.938	5.931	5.940	5.935	5.935	5.934	5.884-5.984	5.936	0.003
	13 C26	6.111	6.113	6.112	6.115	6.109	6.104	6.112	6.062-6.162	6.110	0.004
	14 C28	6.432	6.426	6.424	6.426	6.423	6.424	6.426	6.376-6.476	6.426	0.003
$	15 Triacon Surr	6.720	6.723	6.721	6.726	6.724	6.719	6.723	6.673-6.773	6.722	0.003
	16 C32	6.992	6.980	6.980	6.979	6.980	6.979	6.976	6.926-7.026	6.982	0.005

Reviewer 1 JW Date: 5/11/13
Reviewer 2 AB Date: 5/13/13

SCANNED

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130510.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.213	7.211	7.219	7.212	7.218	7.212	7.214	7.164-7.264	7.214	0.004
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.441	7.438	7.418	7.441	7.439	7.439	7.432	7.382-7.482	7.436	0.009
20 C38	7.640	7.634	7.642	7.637	7.637	7.642	7.639	7.589-7.689	7.639	0.003
21 C40	7.833	7.844	7.834	7.835	7.831	7.835	7.833	7.783-7.883	7.835	0.005
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130510.b

ARI Job No.: RT05 Method: i/20130510.b/ftphfid3b.m Instrument: fid3b.i Date: 10-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0802	0510b002.d	RT0510		1	Toluene,
0821	0510b003.d	IB0510		1	NO MANUAL INTEGRATION
0841	0510b004.d	DIESEL 50		1	o-terph,
0901	0510b005.d	DIESEL 100		1	o-terph,
0920	0510b006.d	DIESEL 250		1	o-terph,
0940	0510b007.d	DIESEL 500		1	o-terph,
1000	0510b008.d	DIESEL 1000		1	o-terph,
1020	0510b009.d	DIESEL 2500		1	o-terph,
1040	0510b010.d	DIESEL ICV 250		1	o-terph,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130509.b

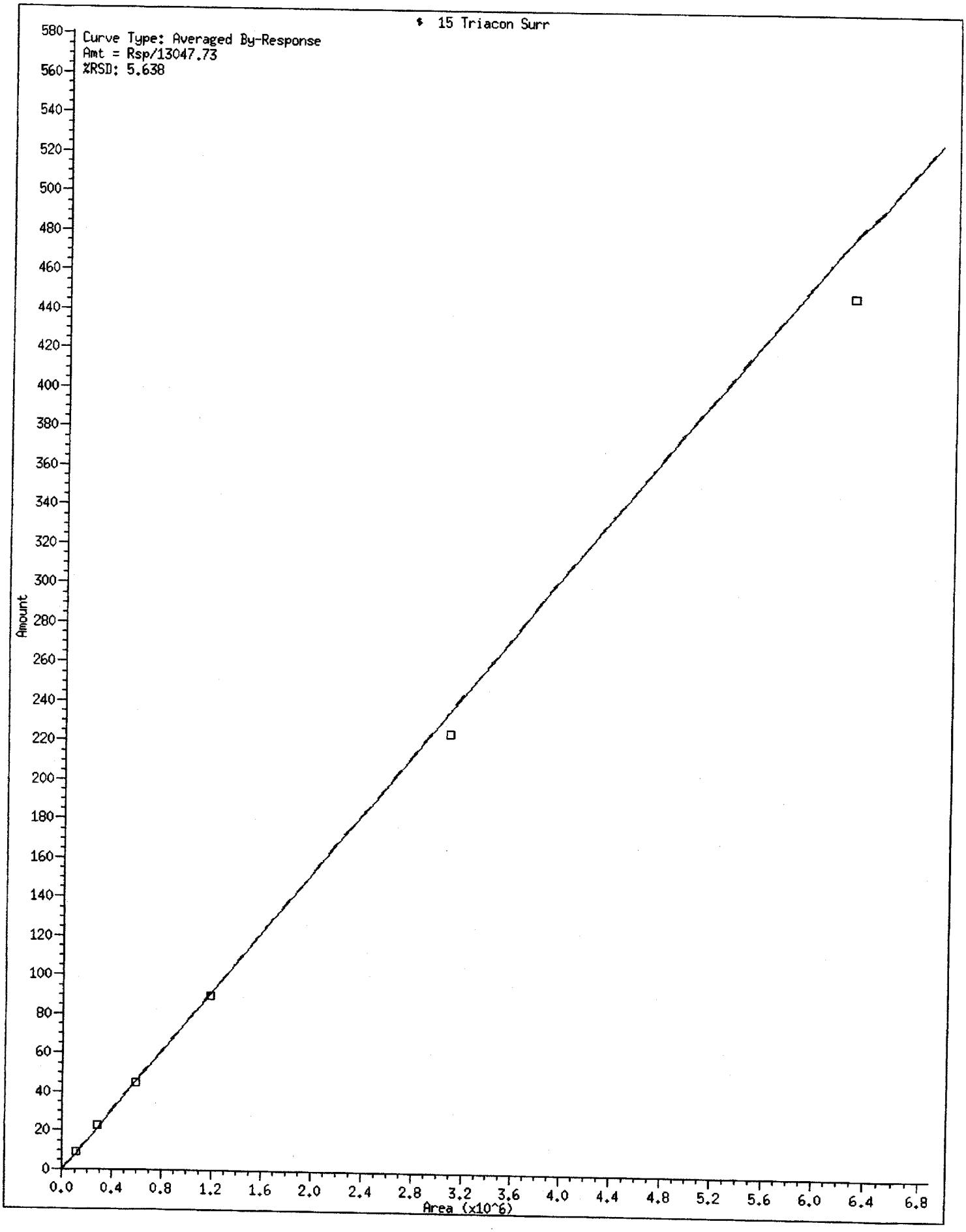
ARI Job No.: RINS Method: i/20130509.b/ftphfid3b.m Instrument: fid3b.i Date: 09-MAY-2013

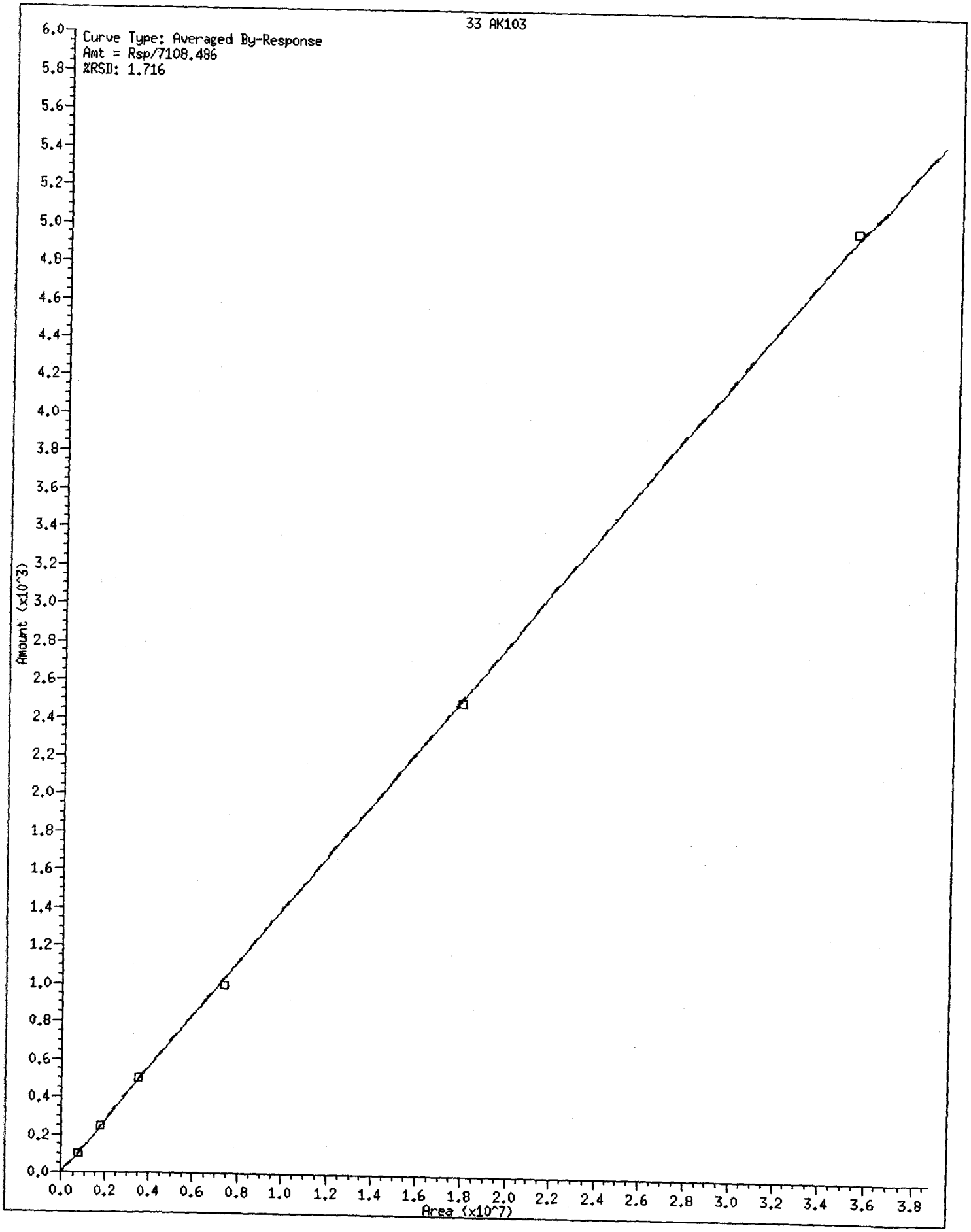
Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0822	0509b001.d	RINSE		1	NO MANUAL INTEGRATION
0840	0509b002.d	RT0509		1	Toluene,
0859	0509b003.d	IB0509		1	NO MANUAL INTEGRATION
0919	0509b004.d	DIESEL#1		1	o-terph,
0938	0509b005.d	MOIL#1		1	Triacon Surr,
1021	0509b006.d	RINSE		1	NO MANUAL INTEGRATION
1040	0509b007.d	RINSE		1	NO MANUAL INTEGRATION
1100	0509b008.d	RT0509		1	Toluene,
1120	0509b009.d	IB0509		1	NO MANUAL INTEGRATION
1140	0509b010.d	DIESEL#1		1	o-terph,
1200	0509b011.d	MOIL#1		1	Triacon Surr,
1514	0509b012.d	DIESEL 50		1	NO MANUAL INTEGRATION
1533	0509b013.d	DIESEL 100		1	NO MANUAL INTEGRATION
1552	0509b014.d	DIESEL 250		1	NO MANUAL INTEGRATION
1612	0509b015.d	DIESEL 500		1	NO MANUAL INTEGRATION
1632	0509b016.d	DIESEL 1000		1	NO MANUAL INTEGRATION
1651	0509b017.d	DIESEL 2500		1	NO MANUAL INTEGRATION
1711	0509b018.d	DIESEL ICV 250		1	NO MANUAL INTEGRATION
1730	0509b019.d	MOIL 100		1	Triacon Surr,
1750	0509b020.d	MOIL 250		1	Triacon Surr,

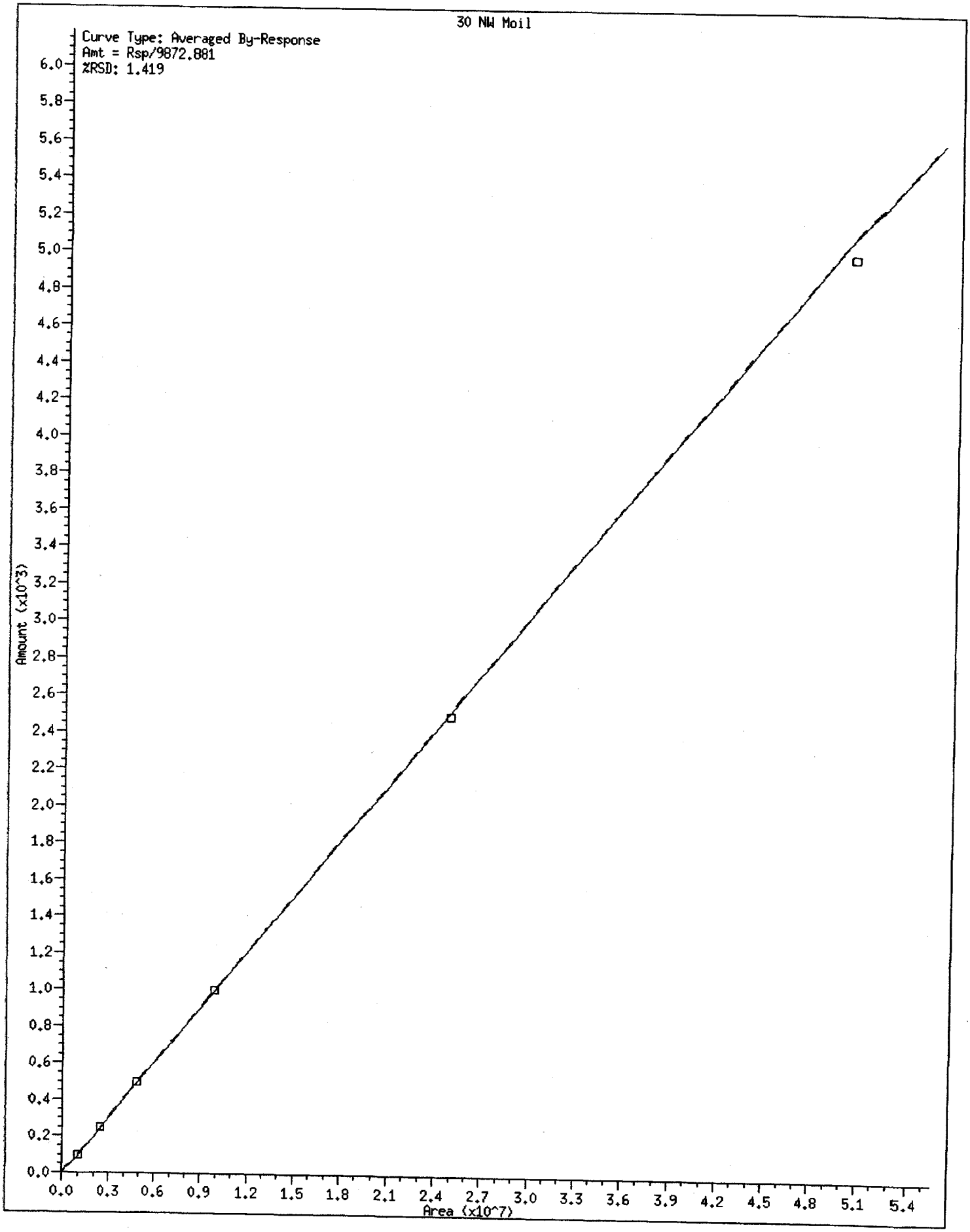
1809 0509b021.d MOIL 500 1 Triacon Surr,

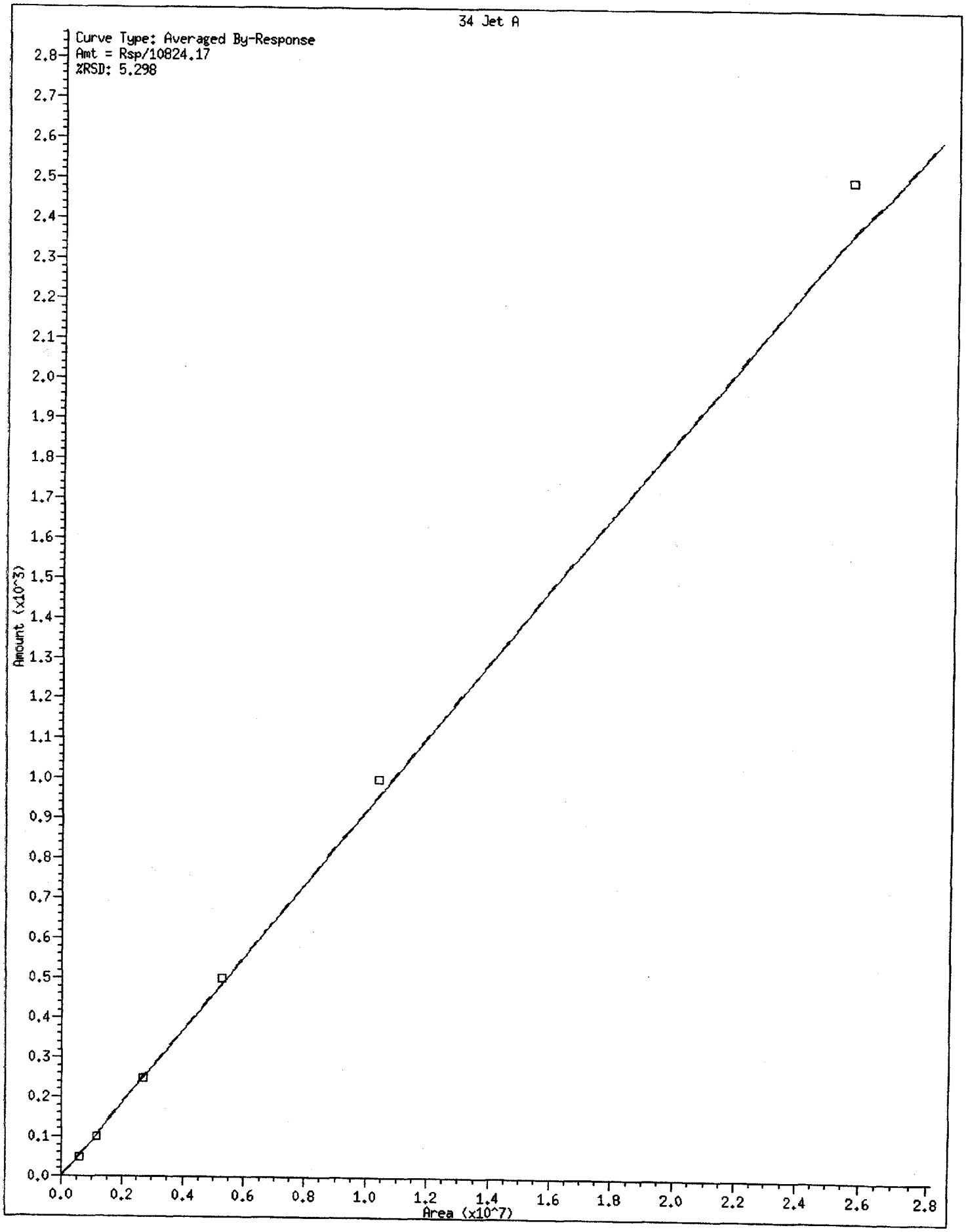
MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130509.b

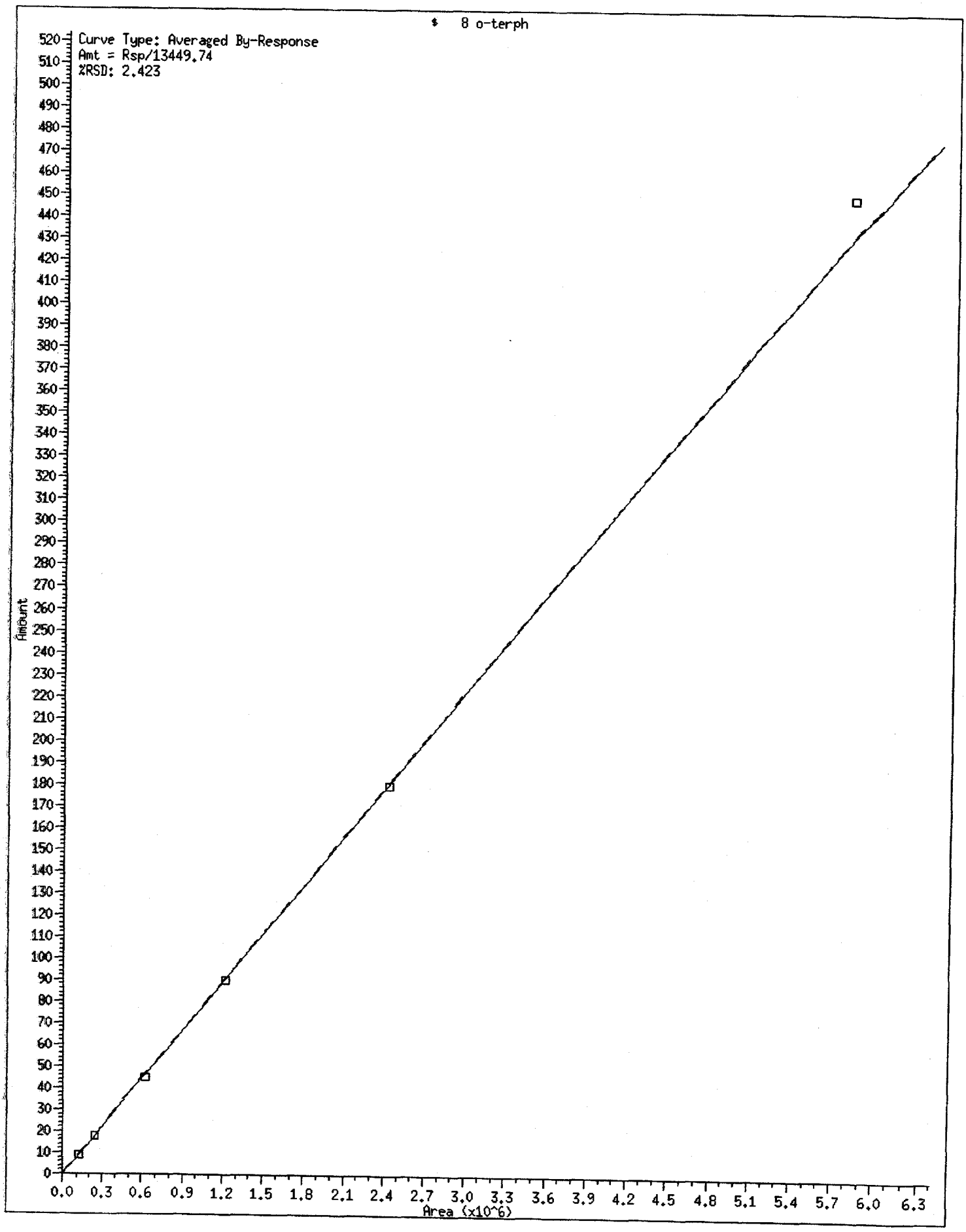
Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1829	0509b022.d	MOIL 1000		1	Triacon Surr,
1849	0509b023.d	MOIL 2500		1	Triacon Surr,
1908	0509b024.d	MOIL 5000		1	Triacon Surr,
1928	0509b025.d	MOIL ICV 500		1	Triacon Surr,
1947	0509b026.d	JETA 50		1	NO MANUAL INTEGRATION
2006	0509b027.d	JETA 100		1	NO MANUAL INTEGRATION
2026	0509b028.d	JETA 250		1	NO MANUAL INTEGRATION
2045	0509b029.d	JETA 500		1	NO MANUAL INTEGRATION
2104	0509b030.d	JETA 1000		1	NO MANUAL INTEGRATION
2123	0509b031.d	JETA 2500		1	o-terph,
2143	0509b032.d	AK103 100		1	Triacon Surr,
2202	0509b033.d	AK103 250		1	Triacon Surr,
2221	0509b034.d	AK103 500		1	Triacon Surr,
2241	0509b035.d	AK103 1000		1	Triacon Surr,
2300	0509b036.d	AK103 2500		1	Triacon Surr,
2319	0509b037.d	AK103 5000		1	Triacon Surr,
2339	0509b038.d	AK103 ICV 500		1	Triacon Surr,

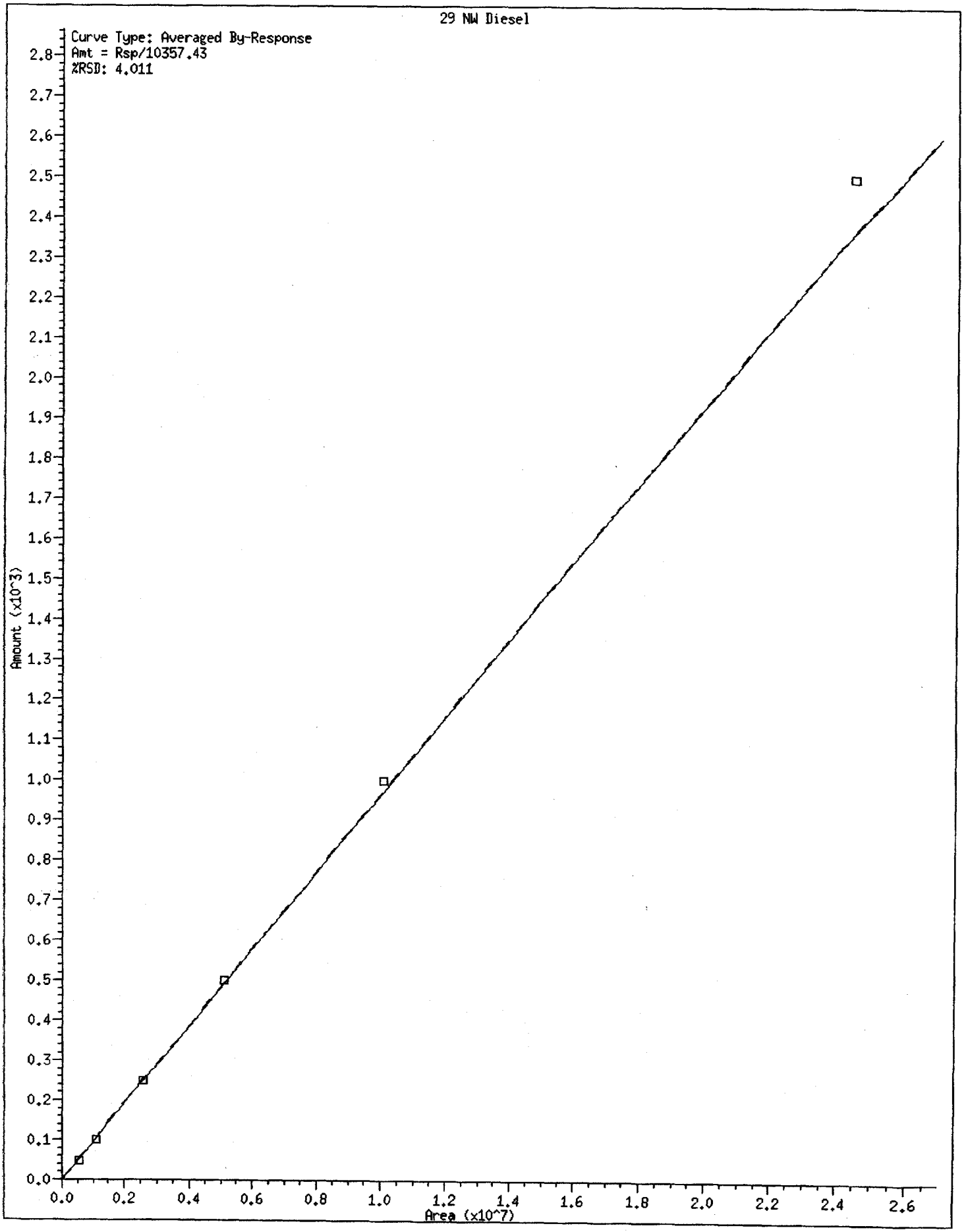

$ 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/13047.73
%RSD: 5.638
Amount
Area (x10^6)
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500
520
540
560
580
0.0
0.4
0.8
1.2
1.6
2.0
2.4
2.8
3.2
3.6
4.0
4.4
4.8
5.2
5.6
6.0
6.4
6.8

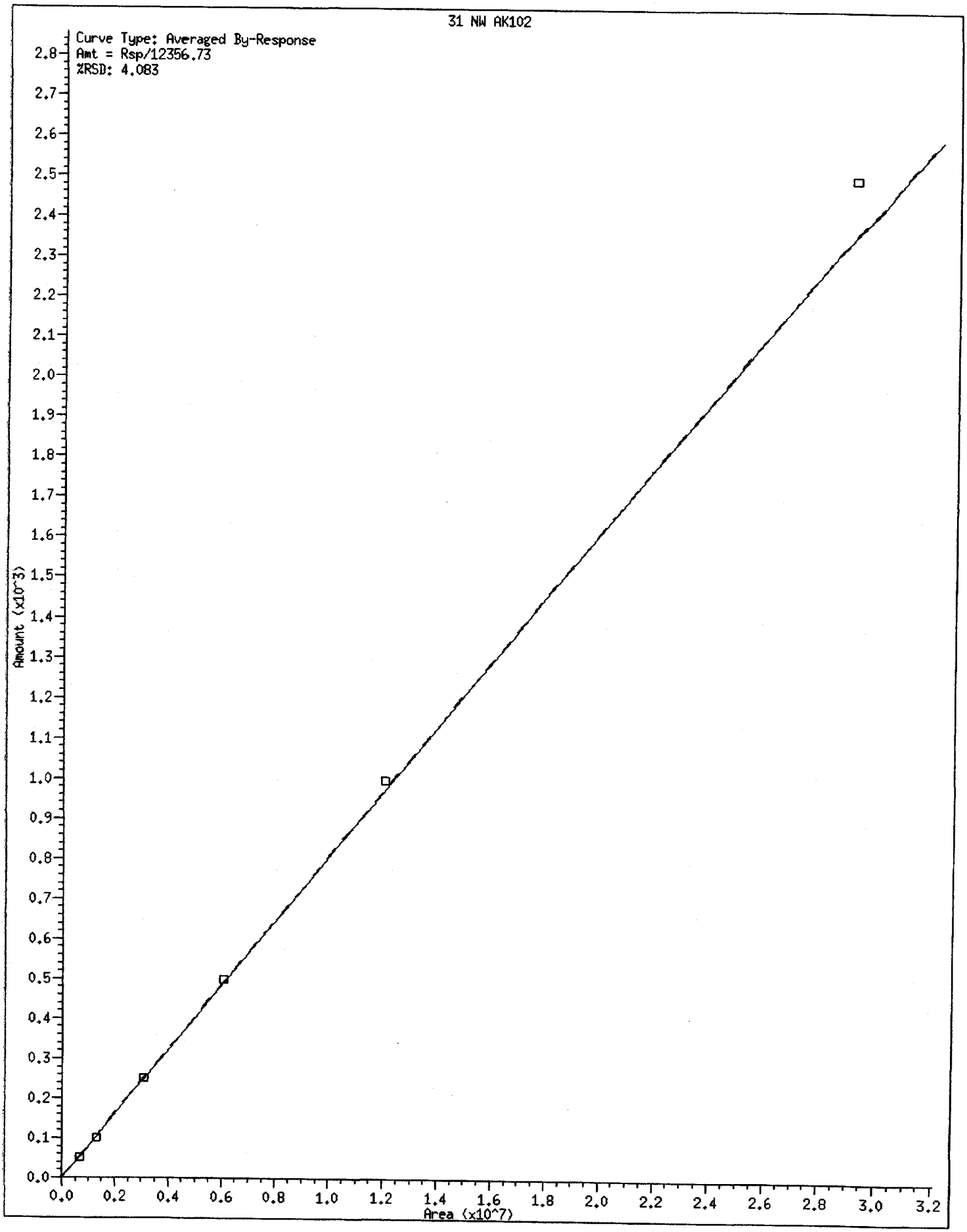

33 AK103
Curve Type: Averaged By-Response
Amt = Rsp/7108.486
%RSD: 1.716
Amount (x10^3)
Area (x10^7)
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8


30 NW Moil
Curve Type: Averaged By-Response
Amt = Rsp/9872.881
%RSD: 1.419
Amount (x10^3)
Area (x10^7)
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4


34 Jet A
Curve Type: Averaged By-Response
Amt = Rsp/10824.17
%RSD: 5.298
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8


$ 8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/13449.74
%RSD: 2.423
Amount
Area (x10^6)


29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/10357.43
%RSD: 4.011
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6


31 NW AK102
Curve Type: Averaged By-Response
Amt = Rsp/12356.73
%RSD: 4.083
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2

6a

DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130510

Instrument: FID3B.I

Project:

Calibration Date: 10-MAY-2013

SDG No.: 20130510

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	10856	10816	10366	10222	10078	9806	10358	4.0
AK Diesel	12969	12897	12393	12178	12035	11673	12357	4.1
OR Diesel	13048	12968	12457	12240	12092	11727	12422	4.1
Cal Diesel	12938	12873	12366	12154	12013	11647	12332	4.1
o-Terph	13177	13696	13787	13594	13504	12941	13450	2.4

<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges :

WA Diesel	C12-C24	(3.049-5.760)
AK Diesel	C10-C25	(2.254-5.938)
OR Diesel	C10-C28	(2.254-6.427)
Cal Diesel	C10-C24	(2.254-5.760)

Calibration Files	Analysis Time
0510b004.d	10-MAY-2013 08:41
0510b005.d	10-MAY-2013 09:01
0510b006.d	10-MAY-2013 09:20
0510b007.d	10-MAY-2013 09:40
0510b008.d	10-MAY-2013 10:00
0510b009.d	10-MAY-2013 10:20

6a

JET A INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130509

Instrument: FID3B.I

Project:

Calibration Date: 09-MAY-2013

SDG No.: 20130509

Product Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
JET A	11588	11469	10765	10505	10366	10245	10823	5.3
o-Terph	13361	13910	13769	13905	14073	13690	13785	1.8

<- Indicates %RSD outside limits
Quant Ranges : JET A - C10-C18 (2.254-4.565)

Calibration Files	Analysis Time
0509b026.d	09-MAY-2013 19:47
0509b027.d	09-MAY-2013 20:06
0509b028.d	09-MAY-2013 20:26
0509b029.d	09-MAY-2013 20:45
0509b030.d	09-MAY-2013 21:04
0509b031.d	09-MAY-2013 21:23

FORM VI- JET A

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130509

Instrument: FID3B.I

Project:

Calibration Date: 09-MAY-2013

SDG No.: 20130509

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	9838	9724	9749	9868	9957	10101	9873	1.4
Triac Surr	12017	12392	13110	13138	13711	13920	13048	5.6

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0509b019.d	09-MAY-2013 17:30
0509b020.d	09-MAY-2013 17:50
0509b021.d	09-MAY-2013 18:09
0509b022.d	09-MAY-2013 18:29
0509b023.d	09-MAY-2013 18:49
0509b024.d	09-MAY-2013 19:08

FORM VI-M.Oil

WS21 : 91403

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130509

Instrument: FID3B.I

Project:

Calibration Date: 09-MAY-2013

SDG No.: 20130509

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
AK M.Oil C25-C36	7138	7048	6994	7315	7153	7079	7121	1.6
Triac Surr	11701	12221	12616	13063	12991	13443	12673	5.0

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0509b032.d	09-MAY-2013 21:43
0509b033.d	09-MAY-2013 22:02
0509b034.d	09-MAY-2013 22:21
0509b035.d	09-MAY-2013 22:41
0509b036.d	09-MAY-2013 23:00
0509b037.d	09-MAY-2013 23:19

FORM VI-M.Oil

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	05/10/13	0743	4.69	6.78
02		RT0510	05/10/13	0802	4.68	6.72
03		IB0510	05/10/13	0821	4.68	6.72
04		DIESEL 50	05/10/13	0841	4.67	6.72
05		DIESEL 100	05/10/13	0901	4.67	6.72
06		DIESEL 250	05/10/13	0920	4.68	6.72
07		DIESEL 500	05/10/13	0940	4.69	6.73
08		DIESEL 1000	05/10/13	1000	4.69	6.72
09		DIESEL 2500	05/10/13	1020	4.71	6.72
10		DIESEL ICV 2	05/10/13	1040	4.68	6.72
11		DIESEL#1	05/10/13	1331	4.67	6.78
12		JETA#1	05/10/13	1350	4.68	6.78
13		DIESEL#2	05/10/13	1410	4.68	6.76
14	ZZZZZ	ZZZZZ	05/10/13	1438	4.67	6.72
15	ZZZZZ	ZZZZZ	05/10/13	1457	4.68	6.72
16	ZZZZZ	ZZZZZ	05/10/13	1517	4.68	6.72
17	ZZZZZ	ZZZZZ	05/10/13	1537	4.67	6.72*
18	ZZZZZ	ZZZZZ	05/10/13	1556	4.67	6.71*
19	ZZZZZ	ZZZZZ	05/10/13	1616	4.67	6.72*
20	ZZZZZ	ZZZZZ	05/10/13	1635	4.68	6.72
21	ZZZZZ	ZZZZZ	05/10/13	1655	4.68	6.72
22	ZZZZZ	ZZZZZ	05/10/13	1714	4.68	6.72
23		DIESEL#3	05/10/13	1733	4.68	6.77
24		JETA#2	05/10/13	1753	4.68	6.77
25		MOIL#1	05/10/13	1812	4.68	6.76
26		WP23MBS1	05/10/13	1832	4.68	6.77
27		WP23LCSS1	05/10/13	1851	4.68	6.76
28		WP23A	05/10/13	1910	4.68	6.77
29		WP23A	05/10/13	1930	4.67	6.76
30		WP23B	05/10/13	1949	4.68	6.77
31		WP23B	05/10/13	2009	4.67	6.76
32		WP23C	05/10/13	2029	4.68	6.76

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		WP23C	05/10/13	2048	4.67	6.77
02		DIESEL#4	05/10/13	2107	4.68	6.77
03		MOIL#2	05/10/13	2127	4.68	6.76
04		WP24MBS1	05/10/13	2151	4.68	6.76
05		WP24LCSS1	05/10/13	2209	4.68	6.77
06		WN70A	05/10/13	2229	4.68	6.77
07		WP24A	05/10/13	2306	4.69	6.77

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	0822	4.67	6.72
02		RT0509	05/09/13	0840	4.68	6.72
03	ZZZZZ	ZZZZZ	05/09/13	0859	4.68	6.72
04	ZZZZZ	ZZZZZ	05/09/13	0919	4.68	6.73
05	ZZZZZ	ZZZZZ	05/09/13	0938	4.67	6.72
06	ZZZZZ	ZZZZZ	05/09/13	1021	4.67	6.72
07	ZZZZZ	ZZZZZ	05/09/13	1040	4.68	6.72
08		RT0509	05/09/13	1100	4.68	6.72
09	ZZZZZ	ZZZZZ	05/09/13	1120	4.68	6.72
10	ZZZZZ	ZZZZZ	05/09/13	1140	4.68	6.72
11	ZZZZZ	ZZZZZ	05/09/13	1200	4.67	6.72
12	ZZZZZ	ZZZZZ	05/09/13	1514	4.67	6.73
13	ZZZZZ	ZZZZZ	05/09/13	1533	4.67	6.72
14	ZZZZZ	ZZZZZ	05/09/13	1552	4.68	6.72
15	ZZZZZ	ZZZZZ	05/09/13	1612	4.68	6.72
16	ZZZZZ	ZZZZZ	05/09/13	1632	4.69	6.73
17	ZZZZZ	ZZZZZ	05/09/13	1651	4.70	6.73
18		DIESEL ICV 2	05/09/13	1711	4.68	6.72
19		MOIL 100	05/09/13	1730	4.67	6.72
20		MOIL 250	05/09/13	1750	4.68	6.72
21		MOIL 500	05/09/13	1809	4.68	6.73
22		MOIL 1000	05/09/13	1829	4.67	6.74
23		MOIL 2500	05/09/13	1849	4.67	6.75
24		MOIL 5000	05/09/13	1908	4.68	6.77
25		MOIL ICV 500	05/09/13	1928	4.68	6.73
26	ZZZZZ	ZZZZZ	05/09/13	1947	4.67	6.73
27	ZZZZZ	ZZZZZ	05/09/13	2006	4.67	6.73
28	ZZZZZ	ZZZZZ	05/09/13	2026	4.68	6.73
29	ZZZZZ	ZZZZZ	05/09/13	2045	4.68	6.73
30	ZZZZZ	ZZZZZ	05/09/13	2104	4.69	6.72
31	ZZZZZ	ZZZZZ	05/09/13	2123	4.71	6.72
32	ZZZZZ	ZZZZZ	05/09/13	2143	4.68	6.72

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	2202	4.67	6.72
02	ZZZZZ	ZZZZZ	05/09/13	2221	4.68	6.73
03	ZZZZZ	ZZZZZ	05/09/13	2241	4.68	6.74
04	ZZZZZ	ZZZZZ	05/09/13	2300	4.68	6.75
05	ZZZZZ	ZZZZZ	05/09/13	2319	4.68	6.77
06		AK103 ICV 50	05/09/13	2339	4.67	6.72

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b002.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: RT0510
Client ID:
Injection: 10-MAY-2013 08:02
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.651	0.000	278628	291395	WATPHG	(Tol-C12)	1129888	83.65 M
C8	0.821	-0.006	181633	241331	WATPHD	(C12-C24)	1664879	160.74
C10	2.250	-0.004	359200	245154	WATPHM	(C24-C38)	2584330	261.76
C12	3.040	-0.009	358905	230134	AK102	(C10-C25)	2219047	179.58
C14	3.620	-0.001	408094	260963	AK103	(C25-C36)	2235210	314.44
C16	4.117	0.001	379580	245451	OR.DIES	(C10-C28)	3488483	226.79
C18	4.568	0.002	369583	253308				
C20	4.989	0.000	363534	236583				
C22	5.387	0.001	355771	240940				
C24	5.759	-0.001	347940	242813				
C25	5.934	-0.004	345745	237993				
C26	6.112	-0.002	959349	714870				
C28	6.426	-0.001	312314	257280	IT.DIES	(C10-C24)	2207860	160.12
C32	6.976	0.000	424837	286870				
C34	7.214	0.005	432992	287900	CREOSOT	(C8-C22)	1394958	431.43
Filter Peak	----							
C36	7.432	-0.003	430689	302270	BUNKERC	(C10-C38)	4792190	977.04
o-terph	4.676	-0.007	810739	558615	JET-A	(C10-C18)	1383968	127.86
Triacon Surr	6.723	-0.045	927716	705353				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	558615	41.5	92.3
Triacontane	705353	54.1	120.1

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

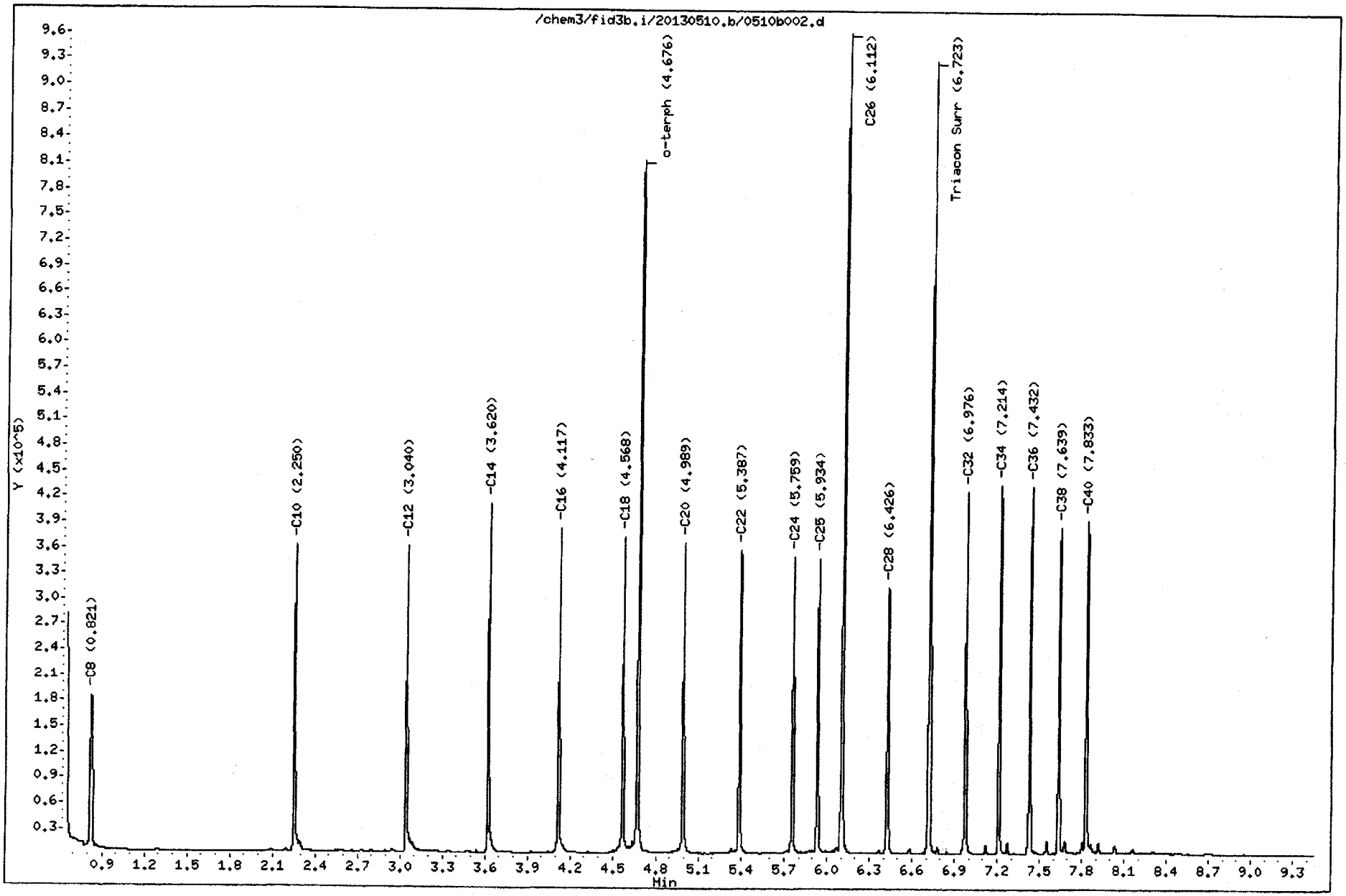
JW 5/11/13

Data File: /chem3/fid3b.i/20130510.b/0510b002.d
Date : 10-MAY-2013 08:02
Client ID:
Sample Info: RT0510

Column phase: RTX-1

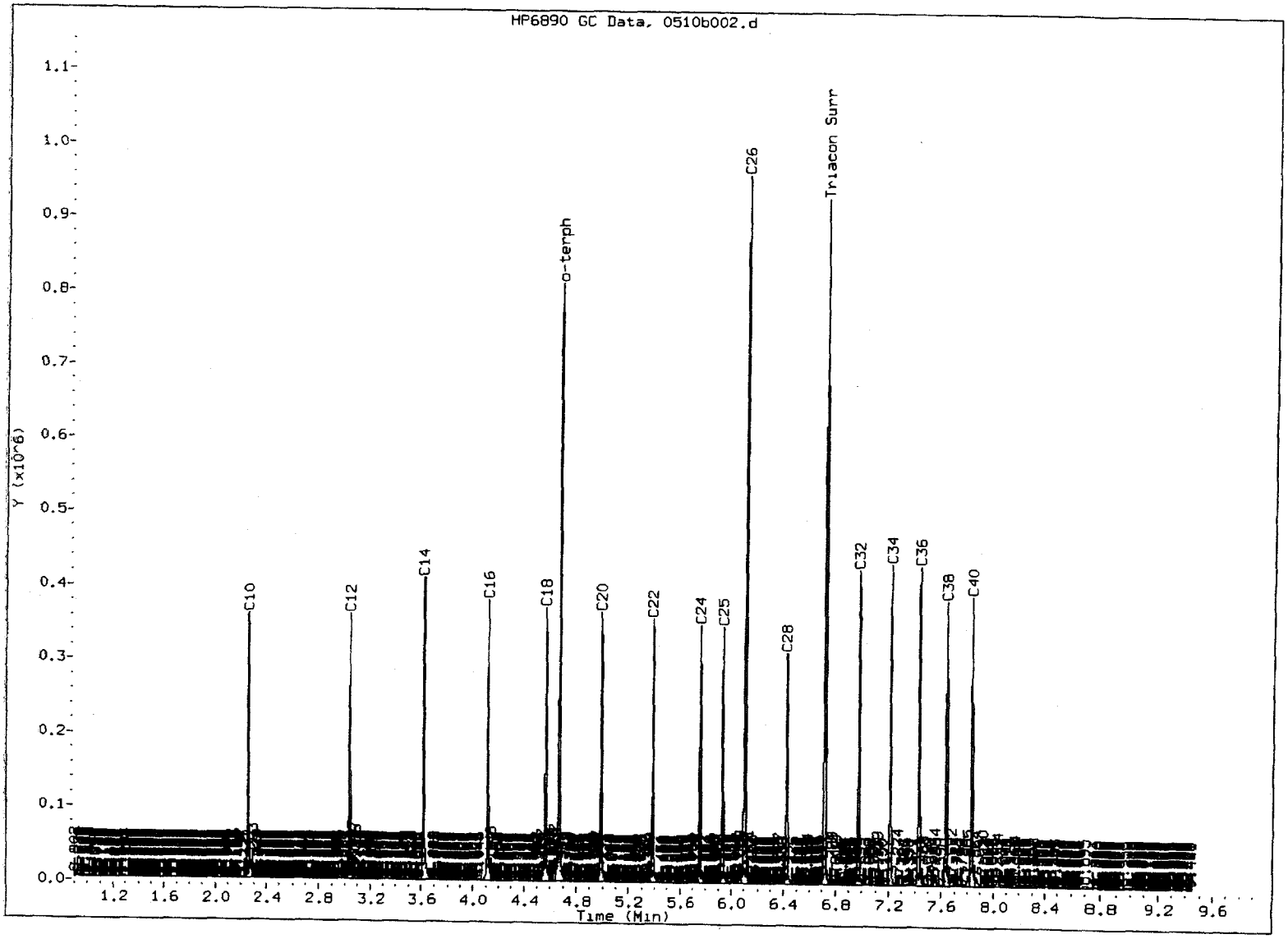
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 RT0510

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b003.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: IB0510
Client ID:
Injection: 10-MAY-2013 08:21
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	82802	6
C8	0.826	-0.002	3227	2790	WATPHD	(C12-C24)	51789	5.00
C10	2.253	-0.001	538	718	WATPHM	(C24-C38)	95461	9.67
C12	3.041	-0.007	348	185	AK102	(C10-C25)	73962	5.99
C14	3.617	-0.004	310	162	AK103	(C25-C36)	71921	10.12
C16	4.116	0.000	197	74	OR.DIES	(C10-C28)	78945	5.13
C18	4.564	-0.001	233	164				
C20	4.994	0.005	271	68				
C22	5.384	-0.003	117	79				
C24	5.753	-0.006	127	110				
C25	5.933	-0.005	24	4				
C26	6.104	-0.009	79	16				
C28	6.433	0.006	531	706	IT.DIES	(C10-C24)	73322	5.32
C32	6.987	0.011	2312	2615				
C34	7.214	0.005	585	115	CREOSOT	(C8-C22)	50403	15.59
Filter Peak	----							
C36	7.418	-0.017	6058	6883	BUNKERC	(C10-C38)	168784	34.41
o-terph	4.677	-0.006	864329	578060	JET-A	(C10-C18)	45532	4.21
Triacon Surr	6.722	-0.046	725287	542624				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	578060	43.0	95.5
Triacontane	542624	41.6	92.4

JW 5/11/13

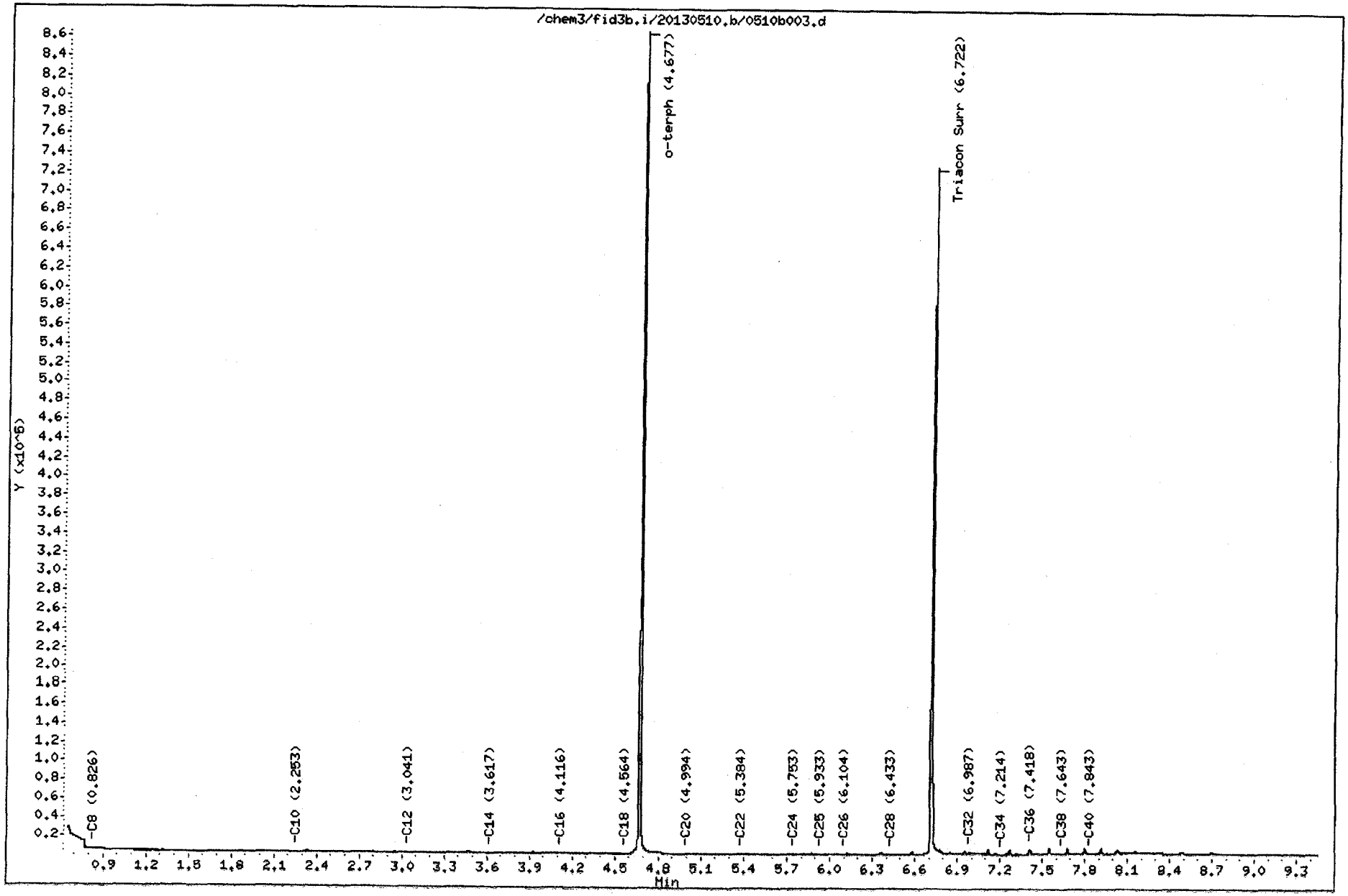
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b003.d
Date : 10-MAY-2013 08:21
Client ID:
Sample Info: IB0510

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b004.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 50
Client ID:
Injection: 10-MAY-2013 08:41
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	193240	14
C8	0.824	-0.004	3186	2701	WATPHD	(C12-C24)	542793	52.41
C10	2.255	0.001	2818	2663	WATPHM	(C24-C38)	33378	3.38
C12	3.037	-0.011	3301	3758	AK102	(C10-C25)	648444	52.48 M
C14	3.621	0.000	7527	8721	AK103	(C25-C36)	20323	2.86
C16	4.117	0.001	11304	11840	OR.DIES	(C10-C28)	652389	42.41 M
C18	4.564	-0.001	12195	11129				
C20	4.990	0.001	4993	2568				
C22	5.382	-0.004	1288	422				
C24	5.759	-0.001	485	174				
C25	5.938	0.000	231	70				
C26	6.111	-0.003	110	48				
C28	6.432	0.006	29	8	IT.DIES	(C10-C24)	646906	46.91
C32	6.992	0.016	117	35				
C34	7.213	0.003	232	62	CREOSOT	(C8-C22)	526977	162.98
Filter Peak	----							
C36	7.441	0.006	446	167	BUNKERC	(C10-C38)	680284	138.70
o-terph	4.670	-0.013	199832	118595	JET-A	(C10-C18)	496912	45.91
Triacon Surr	6.720	-0.048	76	52				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	118595	8.8	19.6
Triacontane	52	0.0	0.0

JW 5/10/13

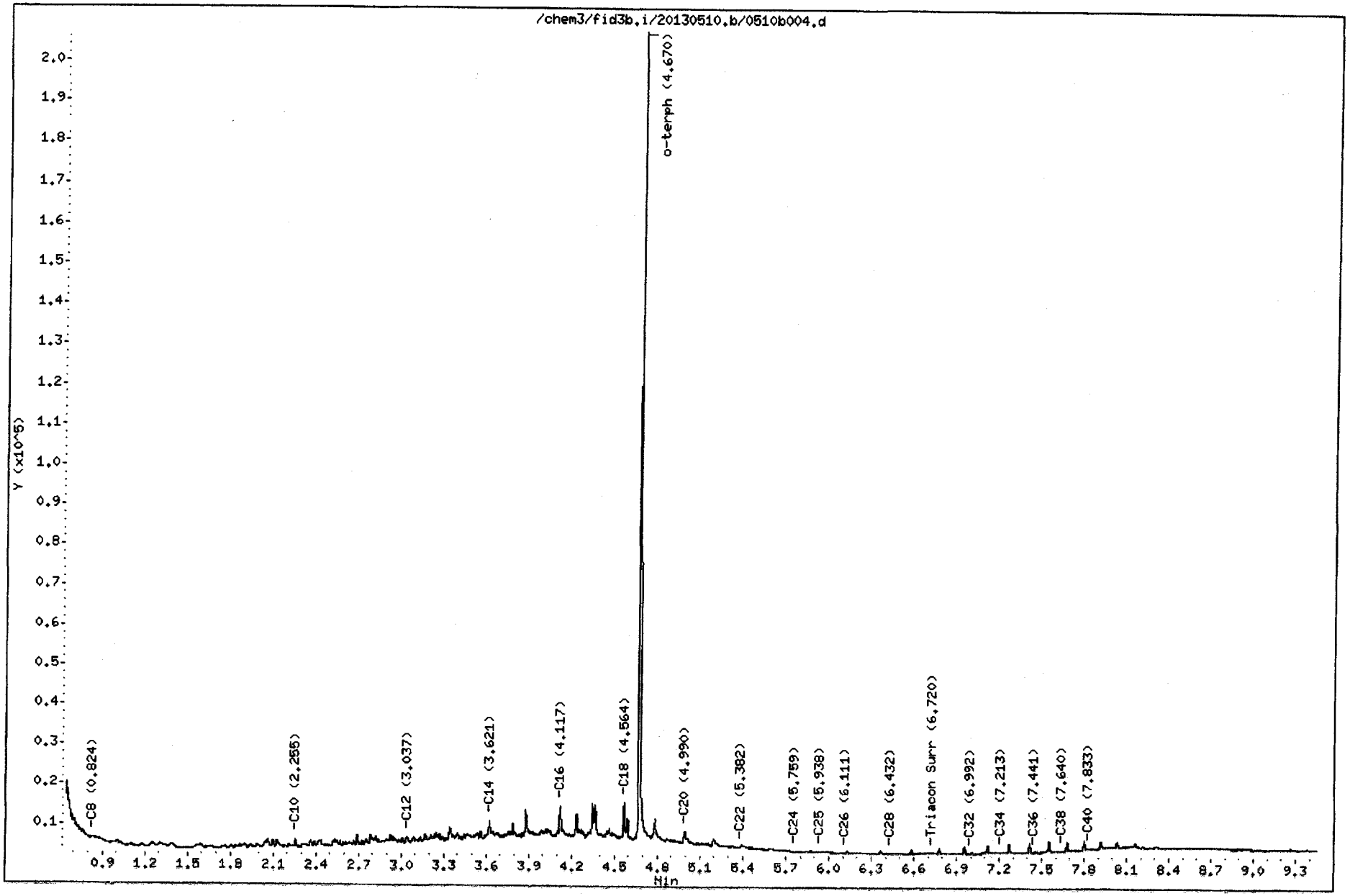
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b004.d
Date : 10-MAY-2013 08:41
Client ID:
Sample Info: DIESEL 50

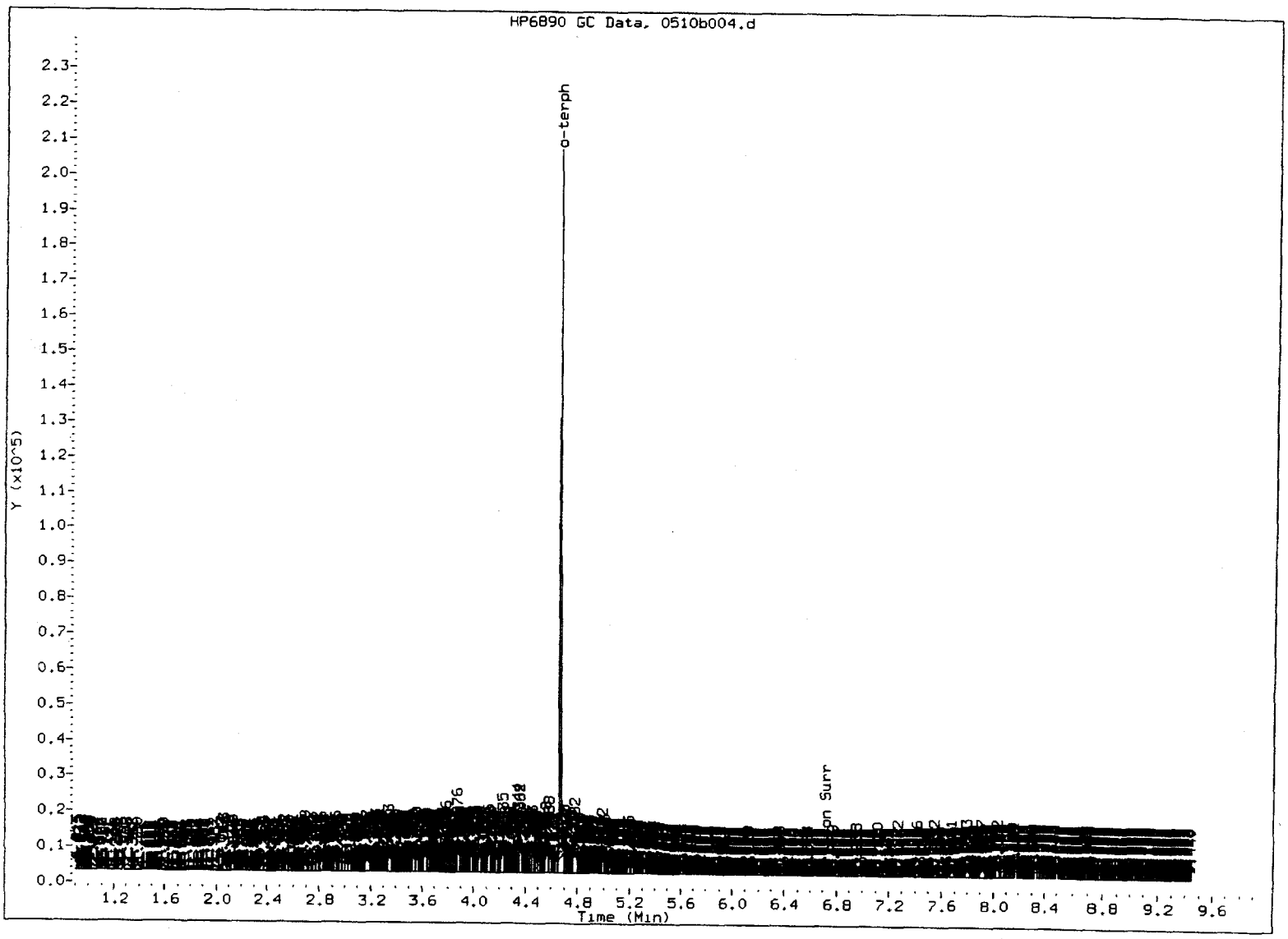
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 50 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b005.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 100
Client ID:
Injection: 10-MAY-2013 09:01
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	348905	26
C8	0.829	0.001	4019	3639	WATPHD	(C12-C24)	1081580	104.43
C10	2.255	0.001	5549	5298	WATPHM	(C24-C38)	30498	3.09
C12	3.038	-0.011	8688	11176	AK102	(C10-C25)	1289659	104.37 M
C14	3.618	-0.003	18063	21629	AK103	(C25-C36)	18970	2.67
C16	4.116	0.000	28732	34246	OR.DIES	(C10-C28)	1296754	84.30 M
C18	4.564	-0.001	28511	24397				
C20	4.988	-0.002	13723	21176				
C22	5.389	0.003	5048	4358				
C24	5.758	-0.001	930	234				
C25	5.938	0.000	463	108				
C26	6.113	-0.001	221	51				
C28	6.426	-0.001	46	9	IT.DIES	(C10-C24)	1287251	93.35
C32	6.980	0.004	95	30				
C34	7.211	0.001	189	59	CREOSOT	(C8-C22)	1048198	324.18
Filter Peak	----							
C36	7.438	0.003	375	176	BUNKERC	(C10-C38)	1317749	268.67
o-terph	4.672	-0.011	474682	246523	JET-A	(C10-C18)	984623	90.97
Triacon Surr	6.723	-0.045	53	24				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	246523	18.3	40.7
Triacontane	24	0.0	0.0

JW 5/11/13

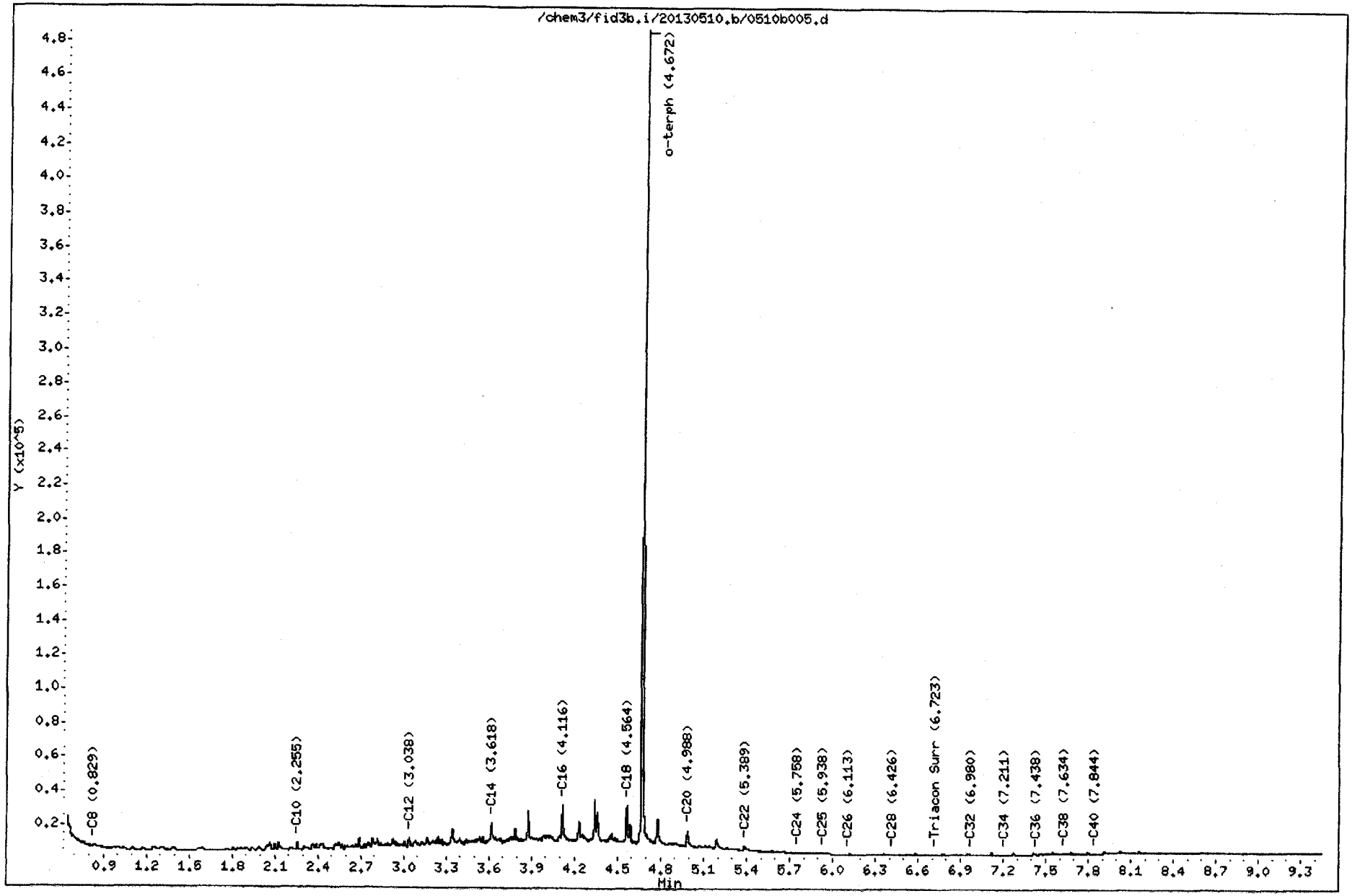
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b005.d
Date : 10-MAY-2013 09:01
Client ID:
Sample Info: DIESEL 100

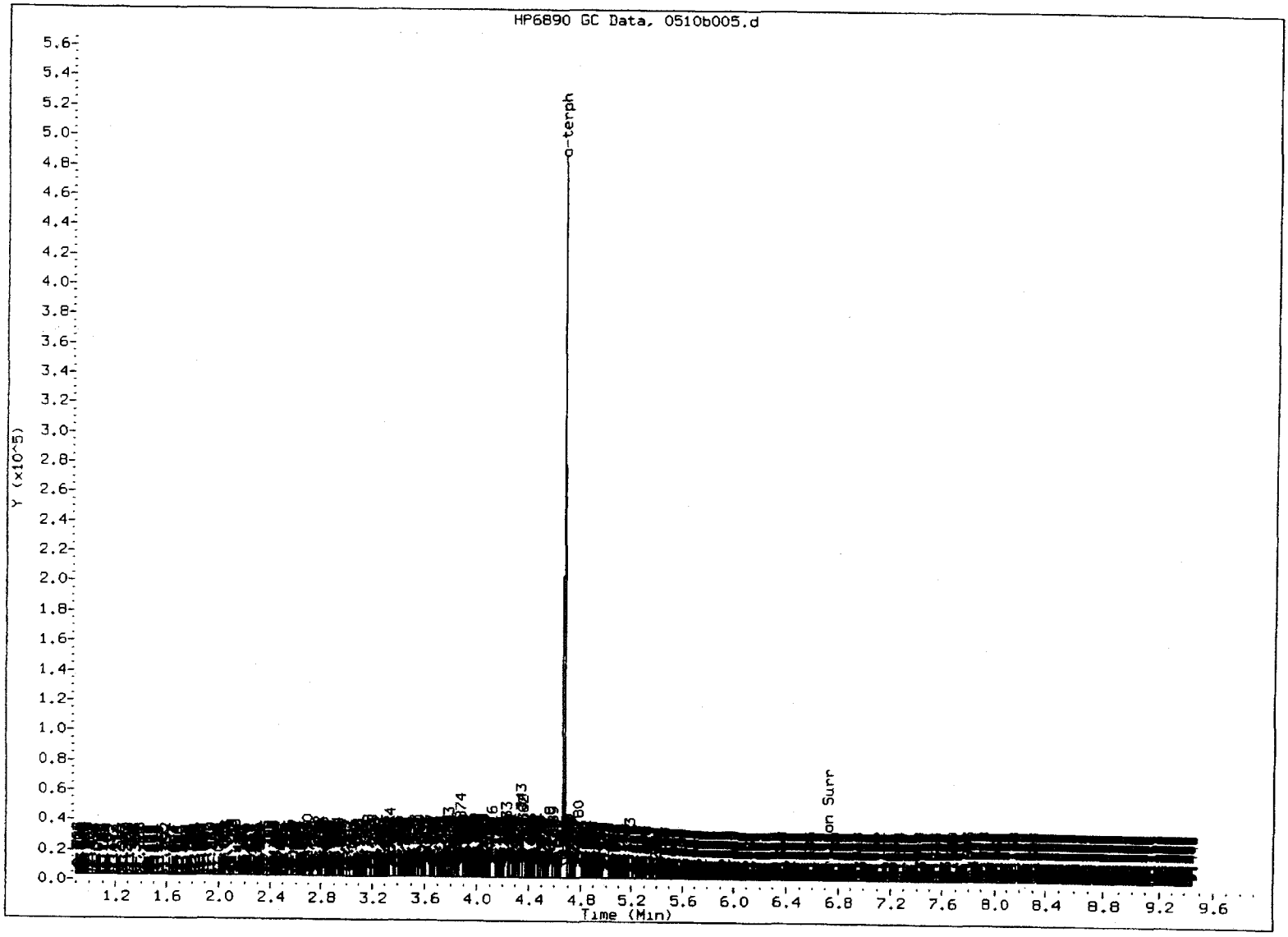
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 DIESEL 100 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b006.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 250
Client ID:
Injection: 10-MAY-2013 09:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	761791	56
C8	0.831	0.004	5218	8810	WATPHD	(C12-C24)	2591545	250.21
C10	2.256	0.002	15216	13003	WATPHM	(C24-C38)	38764	3.93
C12	3.039	-0.009	25438	28143	AK102	(C10-C25)	3098190	250.73 M
C14	3.619	-0.002	52194	51453	AK103	(C25-C36)	25541	3.59
C16	4.115	-0.001	83800	65685	OR.DIES	(C10-C28)	3114136	202.45 M
C18	4.565	0.000	76536	62707				
C20	4.987	-0.002	42799	46284				
C22	5.386	0.000	18091	23066				
C24	5.762	0.002	3061	2619				
C25	5.931	-0.007	1055	187				
C26	6.112	-0.002	544	242				
C28	6.424	-0.003	128	68	IT.DIES	(C10-C24)	3091557	224.20
C32	6.980	0.004	52	12				
C34	7.219	0.010	155	59	CREOSOT	(C8-C22)	2516265	778.22
Filter Peak	----							
C36	7.418	-0.017	1255	1376	BUNKERC	(C10-C38)	3130321	638.22
o-terph	4.678	-0.005	968874	620399	JET-A	(C10-C18)	2379987	219.88
Triacon Surr	6.721	-0.047	32	20				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	620399	46.1	102.5
Triacontane	20	0.0	0.0

JW 5/11/13

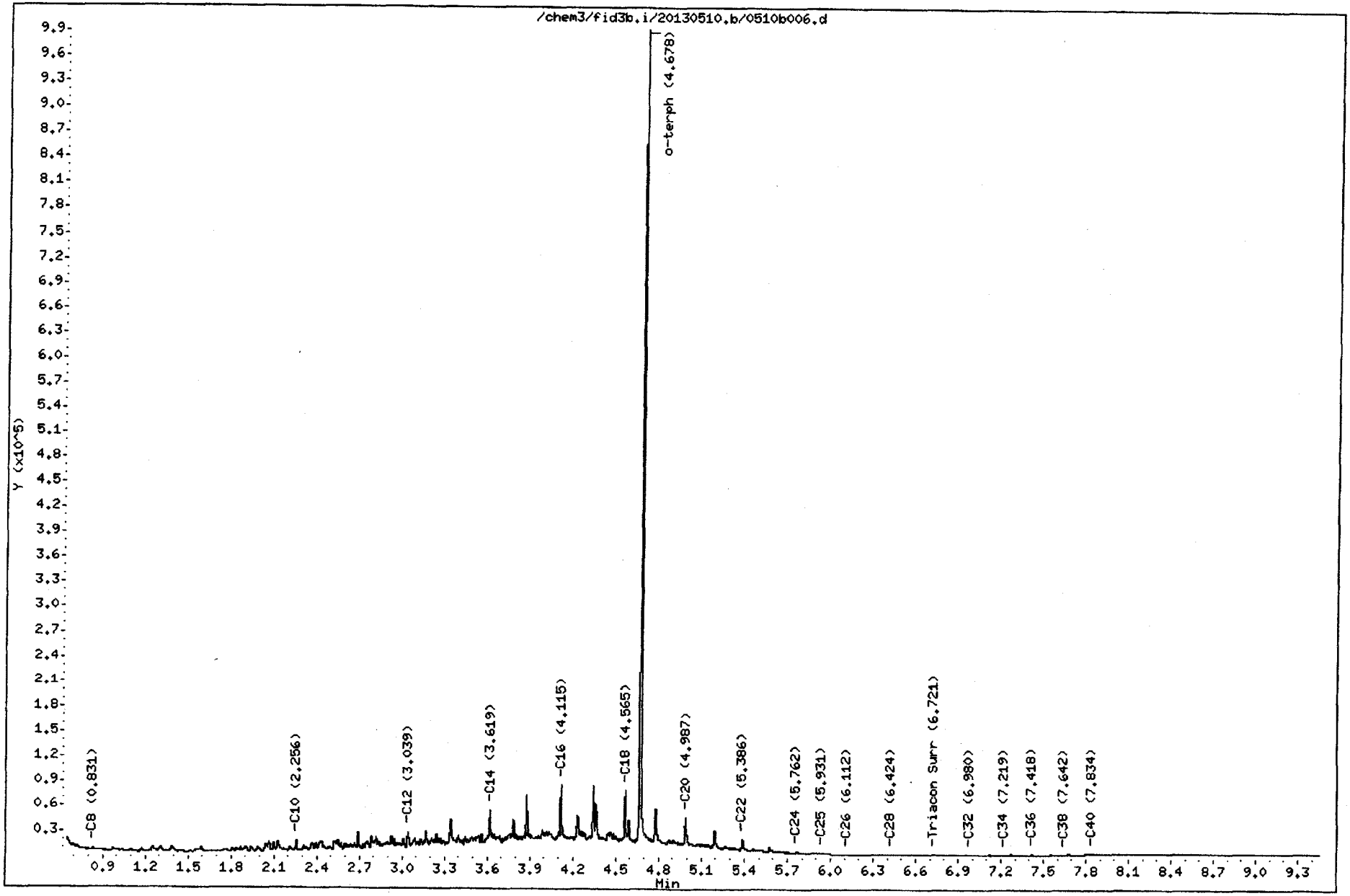
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b006.d
Date : 10-MAY-2013 09:20
Client ID:
Sample Info: DIESEL 250

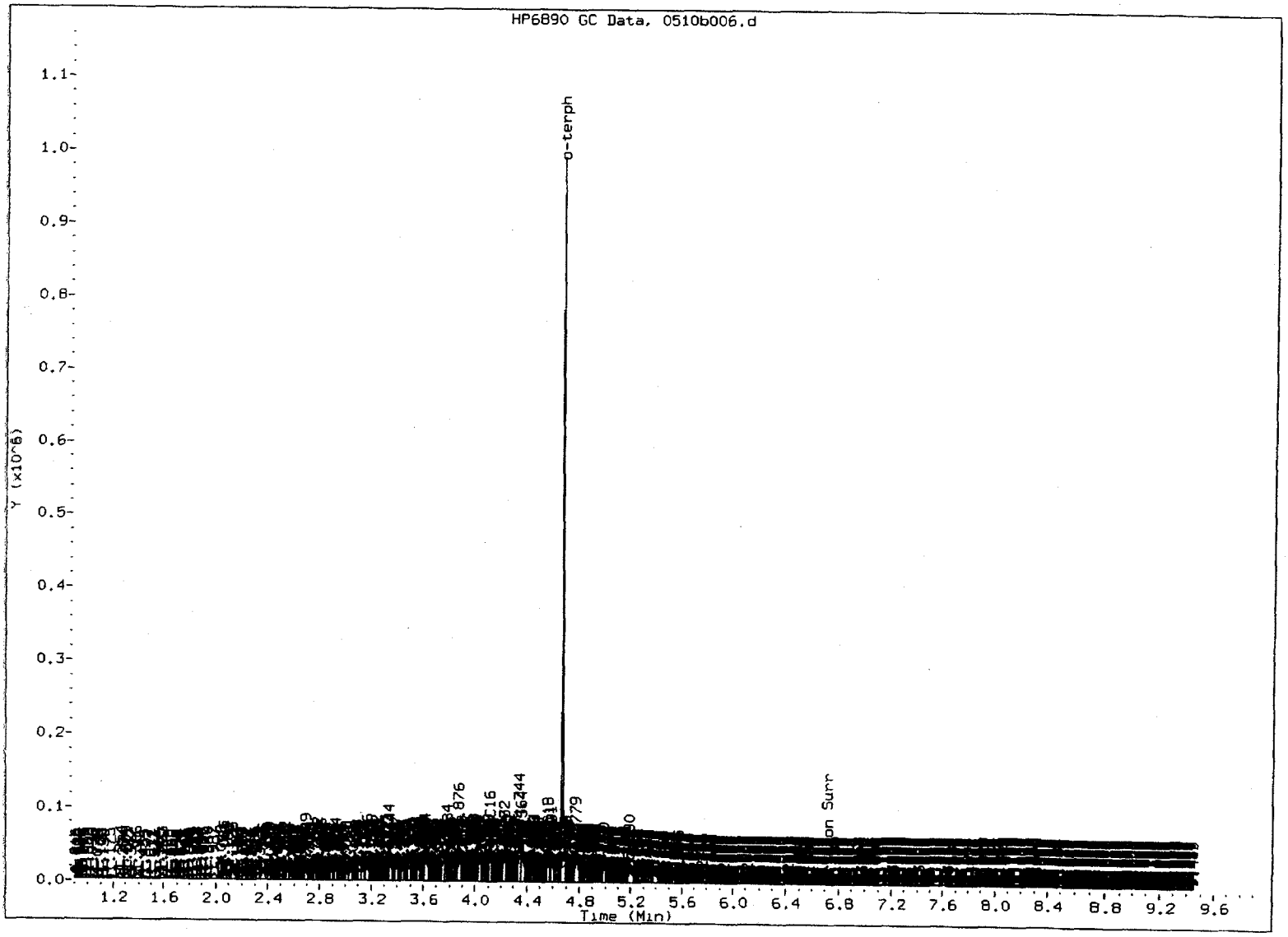
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 DIESEL 250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JCJ Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b007.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 500
Client ID:
Injection: 10-MAY-2013 09:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1423305	105
C8	0.831	0.004	7103	11774	WATPHD	(C12-C24)	5111212	493.48
C10	2.256	0.002	34009	26478	WATPHM	(C24-C38)	56849	5.76
C12	3.039	-0.009	59303	59524	AK102	(C10-C25)	6088980	492.77 M
C14	3.619	-0.002	108417	83752	AK103	(C25-C36)	39698	5.58
C16	4.116	0.000	169964	136442	OR.DIES	(C10-C28)	6120141	397.88 M
C18	4.569	0.003	143941	125900				
C20	4.989	0.000	84653	96402				
C22	5.387	0.000	38580	47857				
C24	5.761	0.001	7758	13975				
C25	5.940	0.002	3274	5094				
C26	6.115	0.001	1168	274				
C28	6.426	0.000	225	21	IT.DIES	(C10-C24)	6077010	440.71
C32	6.979	0.003	47	18				
C34	7.212	0.002	94	30	CREOSOT	(C8-C22)	4959474	1533.85
Filter Peak	----							
C36	7.441	0.006	250	95	BUNKERC	(C10-C38)	6133859	1250.58
o-terph	4.686	0.003	1593055	1223455	JET-A	(C10-C18)	4663065	430.80
Triacon Surr	6.726	-0.042	55	7				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1223455	91.0	202.1
Triacontane	7	0.0	0.0

JW 5/14/13

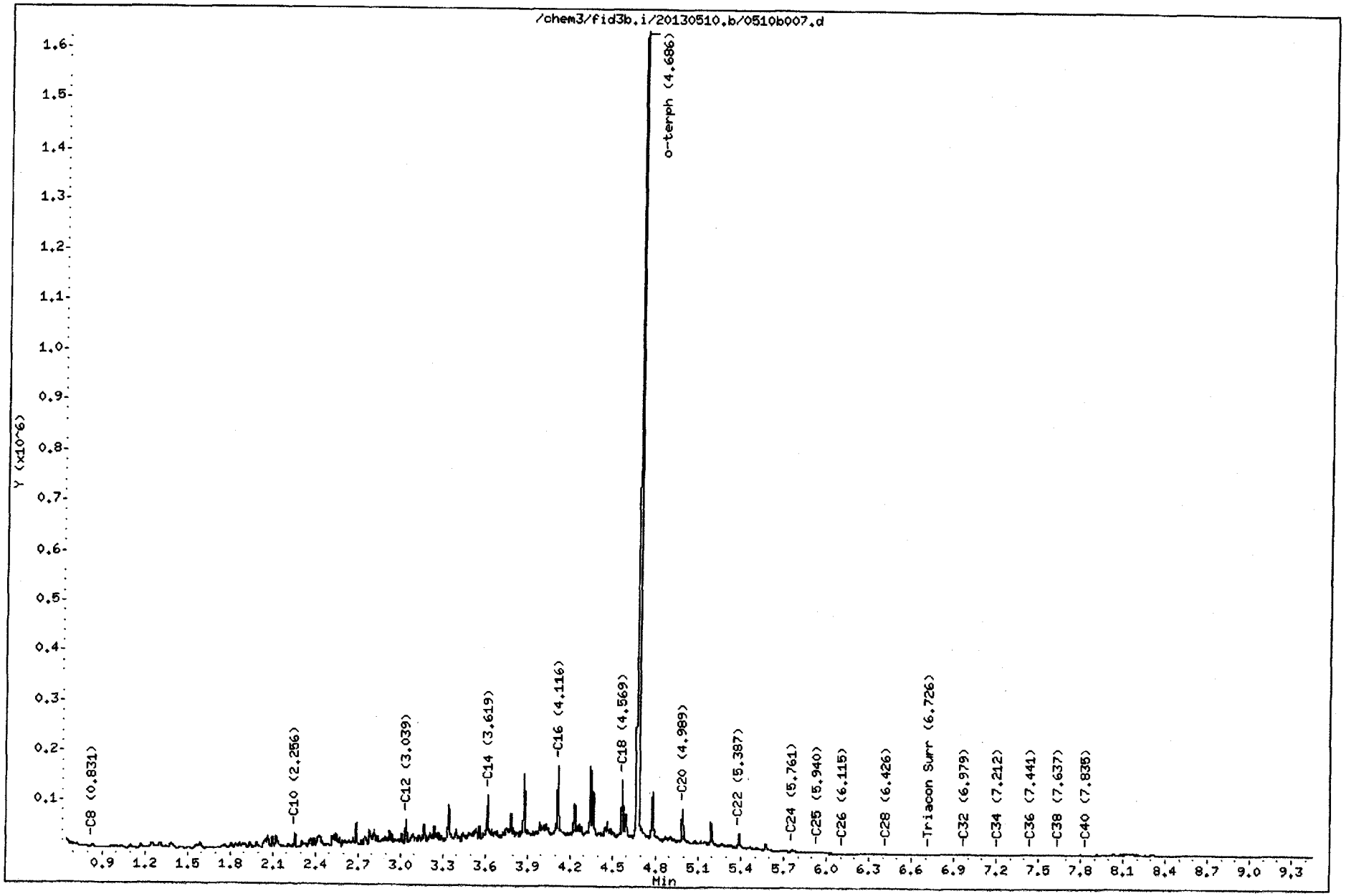
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b007.d
Date : 10-MAY-2013 09:40
Client ID:
Sample Info: DIESEL 500

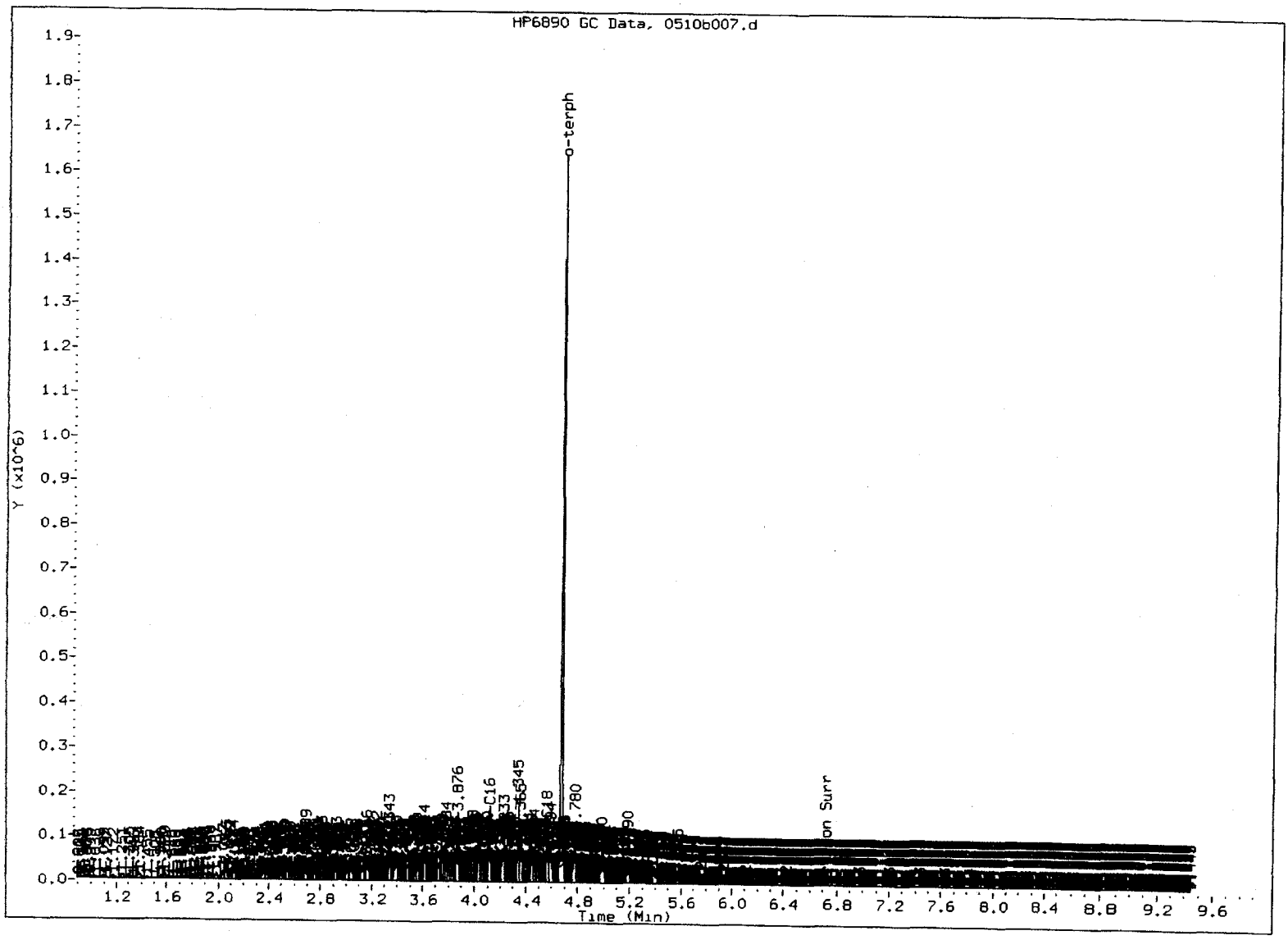
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JO Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b008.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 1000
Client ID:
Injection: 10-MAY-2013 10:00
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	2798069	207
C8	0.829	0.002	10964	16863	WATPHD	(C12-C24)	10078402	973.06
C10	2.254	0.000	70986	55849	WATPHM	(C24-C38)	93029	9.42
C12	3.041	-0.008	118758	119188	AK102	(C10-C25)	12035153	973.98 M
C14	3.621	0.000	212328	212133	AK103	(C25-C36)	65721	9.25
C16	4.120	0.003	357392	262718	OR.DIES	(C10-C28)	12092309	786.13 M
C18	4.570	0.004	265151	268202				
C20	4.989	0.000	200624	168107				
C22	5.385	-0.002	91523	83824				
C24	5.755	-0.005	18170	27279				
C25	5.935	-0.003	7287	10768				
C26	6.109	-0.005	2537	3182				
C28	6.423	-0.003	425	193	IT.DIES	(C10-C24)	12013086	871.21
C32	6.980	0.004	27	7				
C34	7.218	0.009	67	32	CREOSOT	(C8-C22)	9778215	3024.17
Filter Peak	----							
C36	7.439	0.004	181	79	BUNKERC	(C10-C38)	12106115	2468.22
o-terph	4.693	0.010	2508161	2430741	JET-A	(C10-C18)	9230123	852.73
Triacon Surr	6.724	-0.044	112	51				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2430741	180.7	401.6
Triacontane	51	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

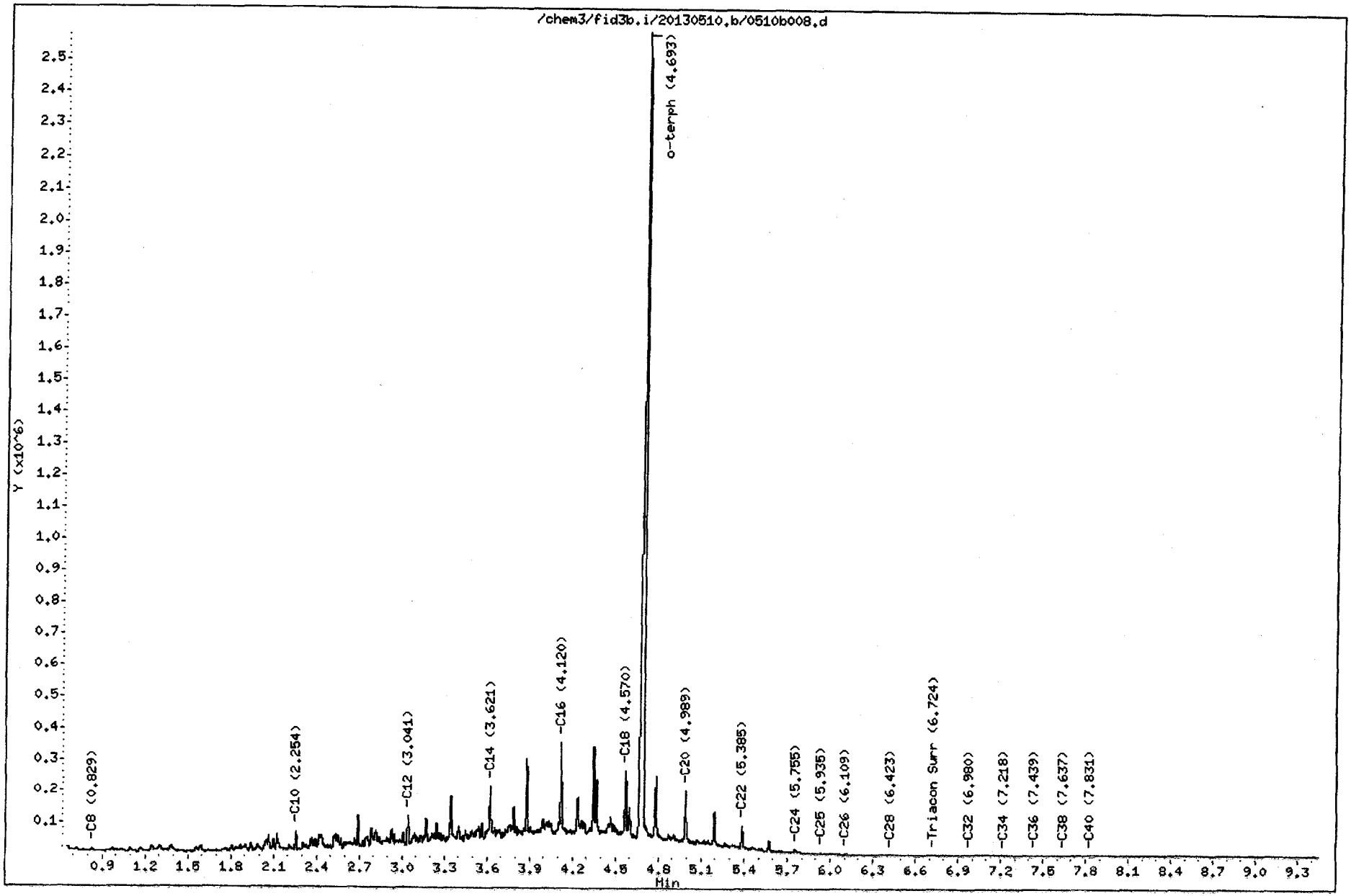
JW 5/10

Data File: /chem3/fid3b.i/20130510.b/0510b008.d
Date : 10-MAY-2013 10:00
Client ID:
Sample Info: DIESEL 1000

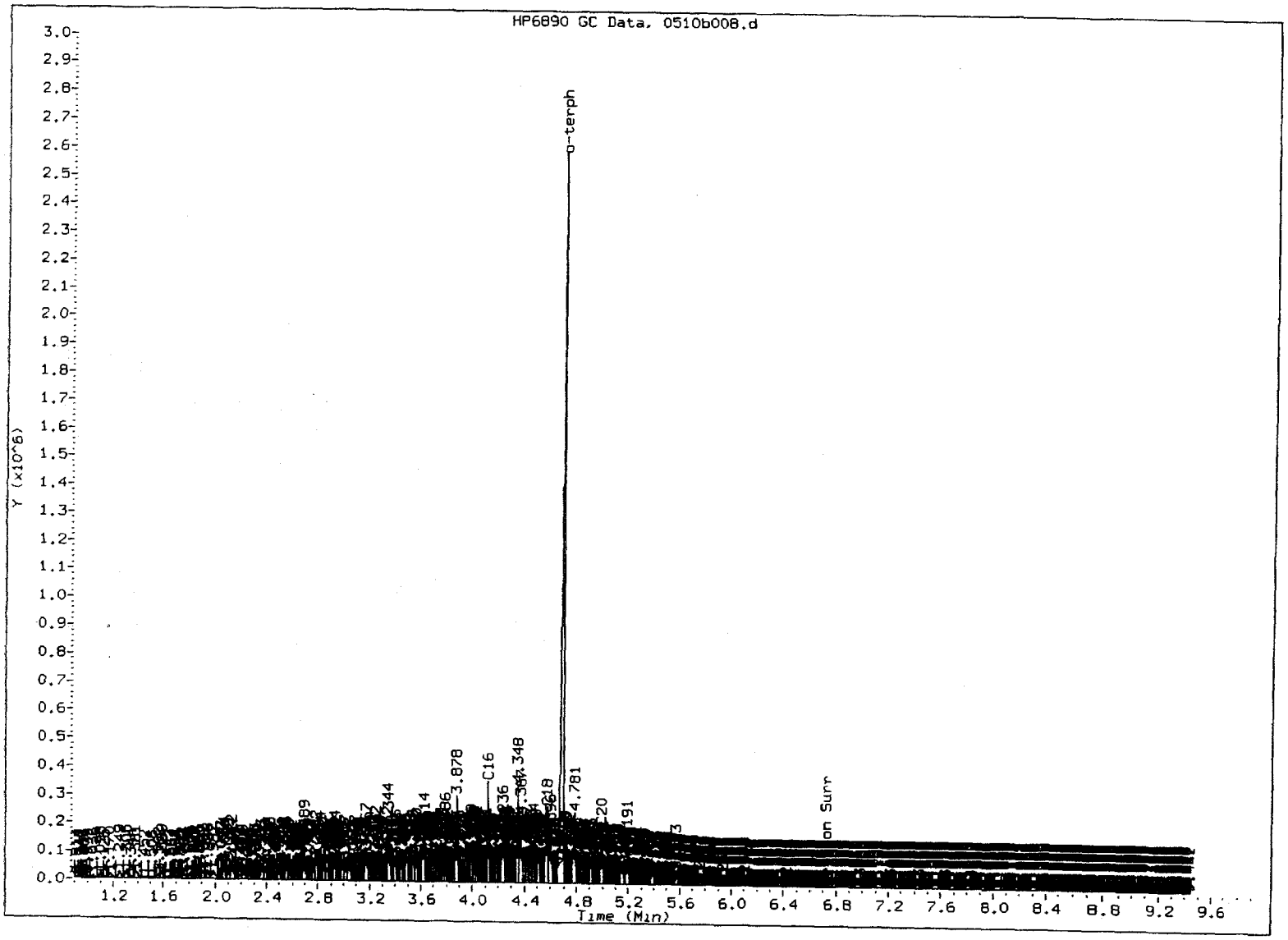
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 1000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
2. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b009.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 2500
Client ID:
Injection: 10-MAY-2013 10:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	6660487	493
C8	0.829	0.002	21021	28743	WATPHD	(C12-C24)	24516037	2367.00
C10	2.257	0.003	184252	139283	WATPHM	(C24-C38)	215472	21.82
C12	3.044	-0.005	272636	289945	AK102	(C10-C25)	29181661	2361.60 M
C14	3.625	0.004	499091	483378	AK103	(C25-C36)	148505	20.89
C16	4.124	0.008	776125	651861	OR.DIES	(C10-C28)	29317252	1905.95 M
C18	4.577	0.011	612833	708514				
C20	4.994	0.005	468818	417212				
C22	5.389	0.002	229153	205978				
C24	5.758	-0.002	55212	62270				
C25	5.935	-0.003	21112	30434				
C26	6.104	-0.010	7971	8000				
C28	6.424	-0.003	998	176	IT.DIES	(C10-C24)	29118650	2111.73
C32	6.979	0.003	59	24				
C34	7.212	0.002	34	7	CREOSOT	(C8-C22)	23742752	7343.06
Filter Peak	----							
C36	7.439	0.004	108	34	BUNKERC	(C10-C38)	29334122	5980.70
o-terph	4.712	0.029	3746058	5823353	JET-A	(C10-C18)	22333326	2063.28
Triacon Surr	6.719	-0.049	269	85				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5823353	433.0	962.2
Triacontane	85	0.0	0.0

JW 5/11/13

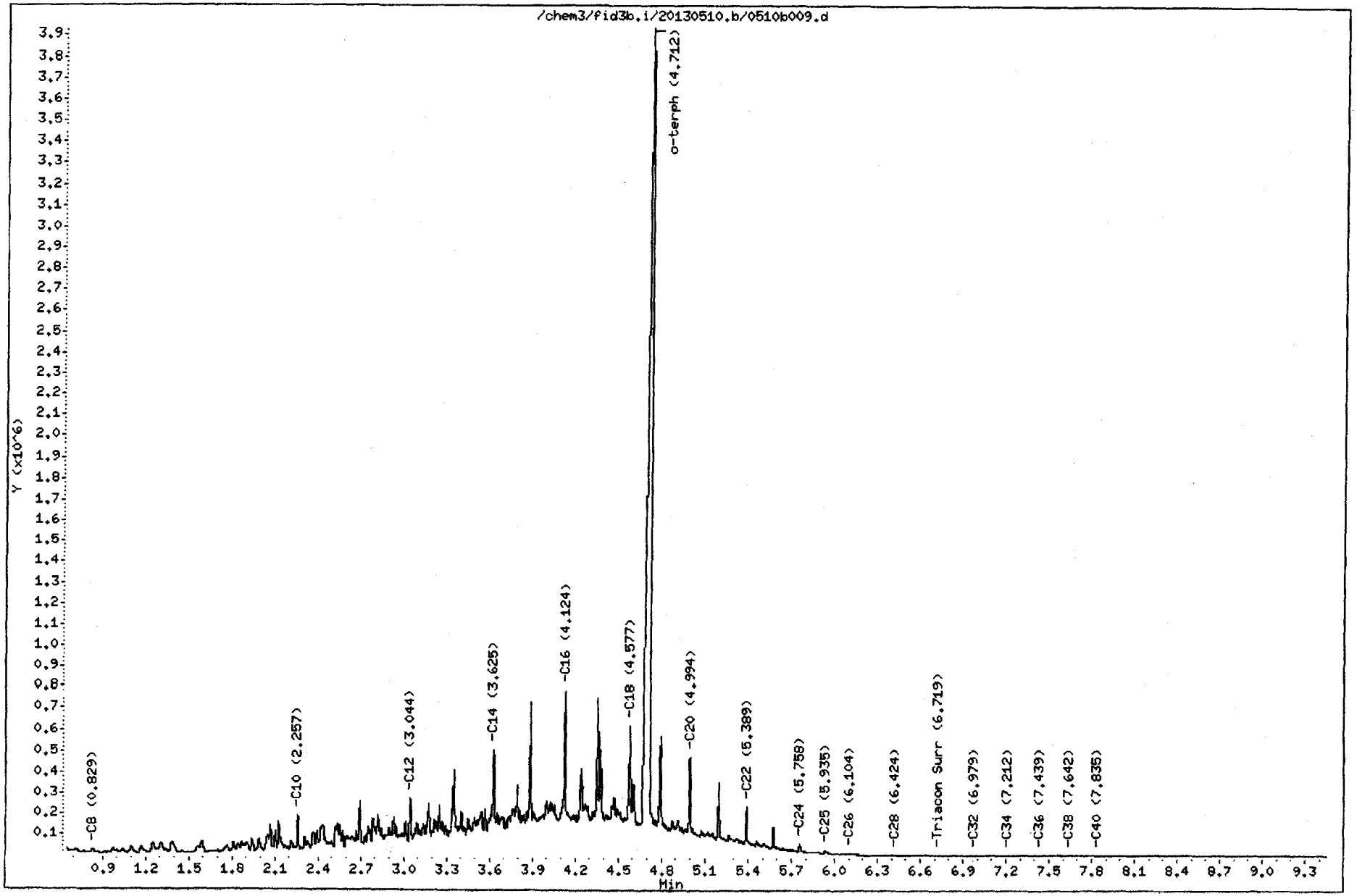
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b009.d
Date : 10-MAY-2013 10:20
Client ID:
Sample Info: DIESEL 2500

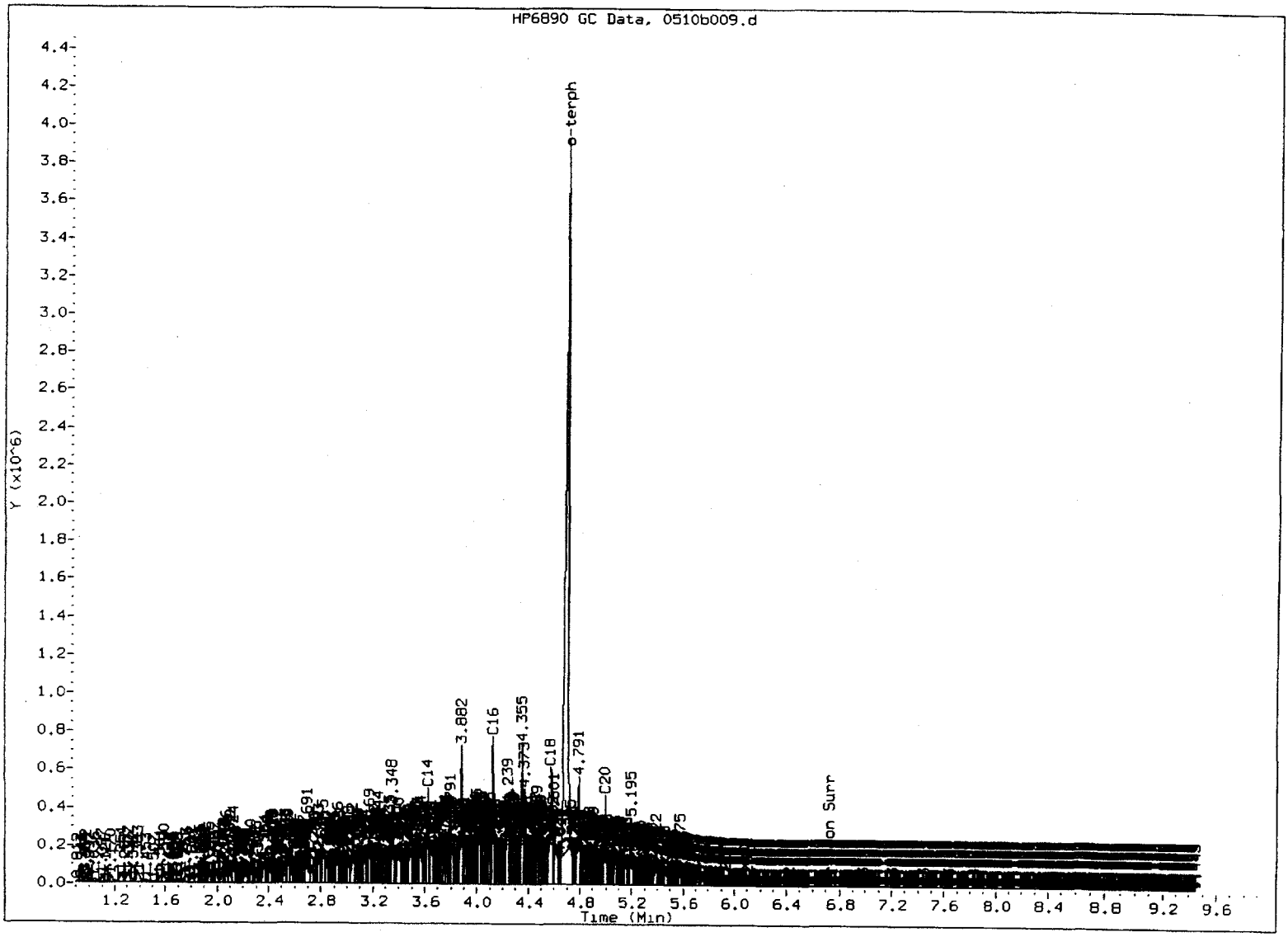
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b010.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL ICV 250
Client ID:
Injection: 10-MAY-2013 10:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1002945	74
C8	0.827	0.000	6470	11047	WATPHD	(C12-C24)	2375892	229.39
C10	2.256	0.003	38320	29591	WATPHM	(C24-C38)	36911	3.74
C12	3.039	-0.009	42860	42439	AK102	(C10-C25)	3107953	251.52 M
C14	3.618	-0.003	60801	55820	AK103	(C25-C36)	25599	3.60
C16	4.115	-0.001	56561	56130	OR.DIES	(C10-C28)	3126225	203.24 M
C18	4.566	0.001	48959	42994				
C20	4.987	-0.002	26988	31212				
C22	5.389	0.003	8625	13454				
C24	5.763	0.003	2460	3264				
C25	5.929	-0.009	1076	453				
C26	6.110	-0.004	601	224				
C28	6.428	0.001	160	83	IT.DIES	(C10-C24)	3102072	224.97
C32	6.984	0.008	36	9				
C34	7.214	0.004	102	46	CREOSOT	(C8-C22)	2319696	717.43
Filter Peak	----							
C36	7.442	0.007	236	116	BUNKERC	(C10-C38)	3138984	639.98
o-terph	4.678	-0.005	962111	602869	JET-A	(C10-C18)	2497954	230.78
Triacon Surr	6.721	-0.047	43	22				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	602869	44.8	99.6
Triacontane	22	0.0	0.0

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

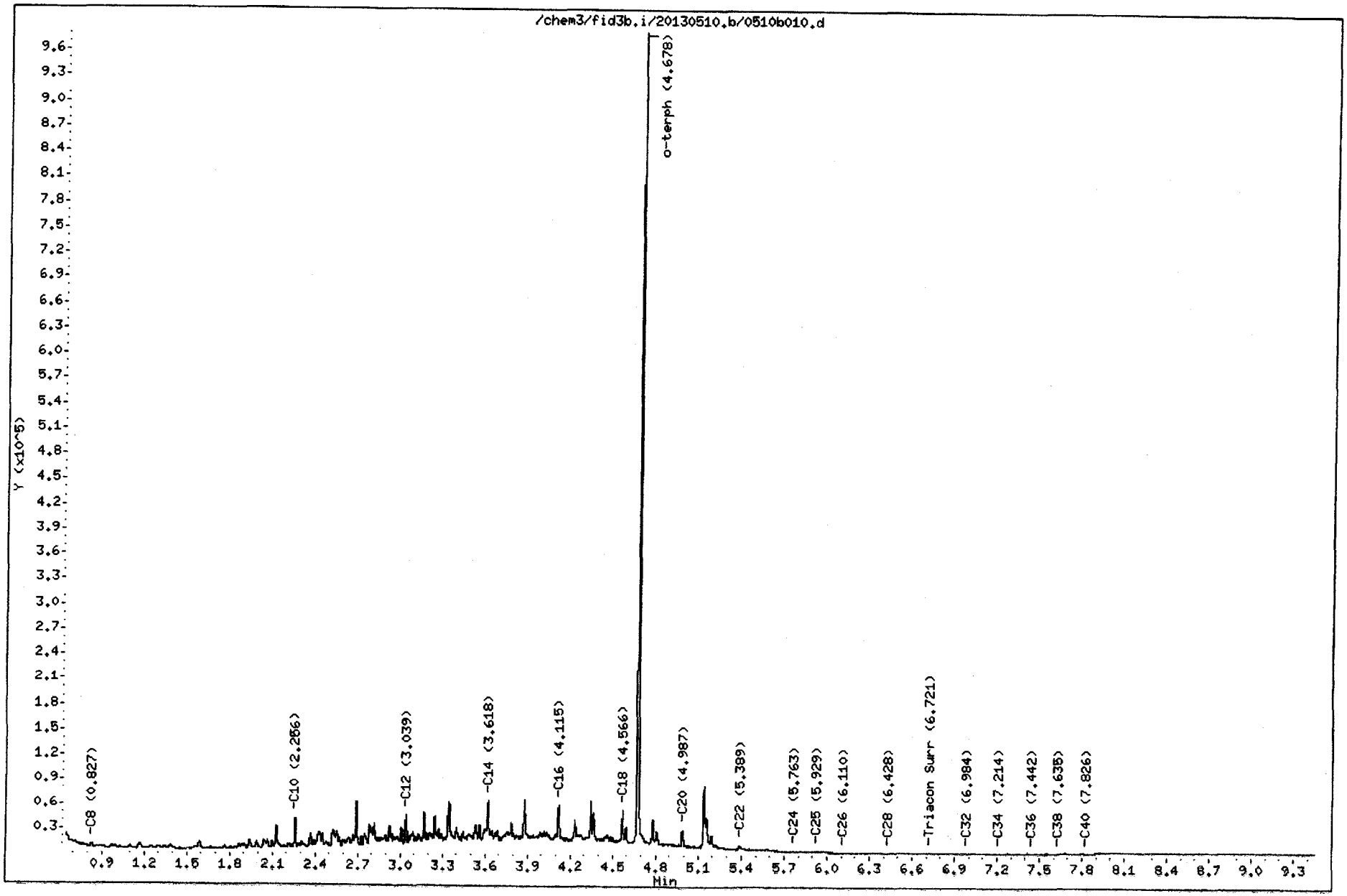
US21 : 01482

Data File: /chem3/fid3b.i/20130510.b/0510b010.d
Date : 10-MAY-2013 10:40
Client ID:
Sample Info: DIESEL ICV 250

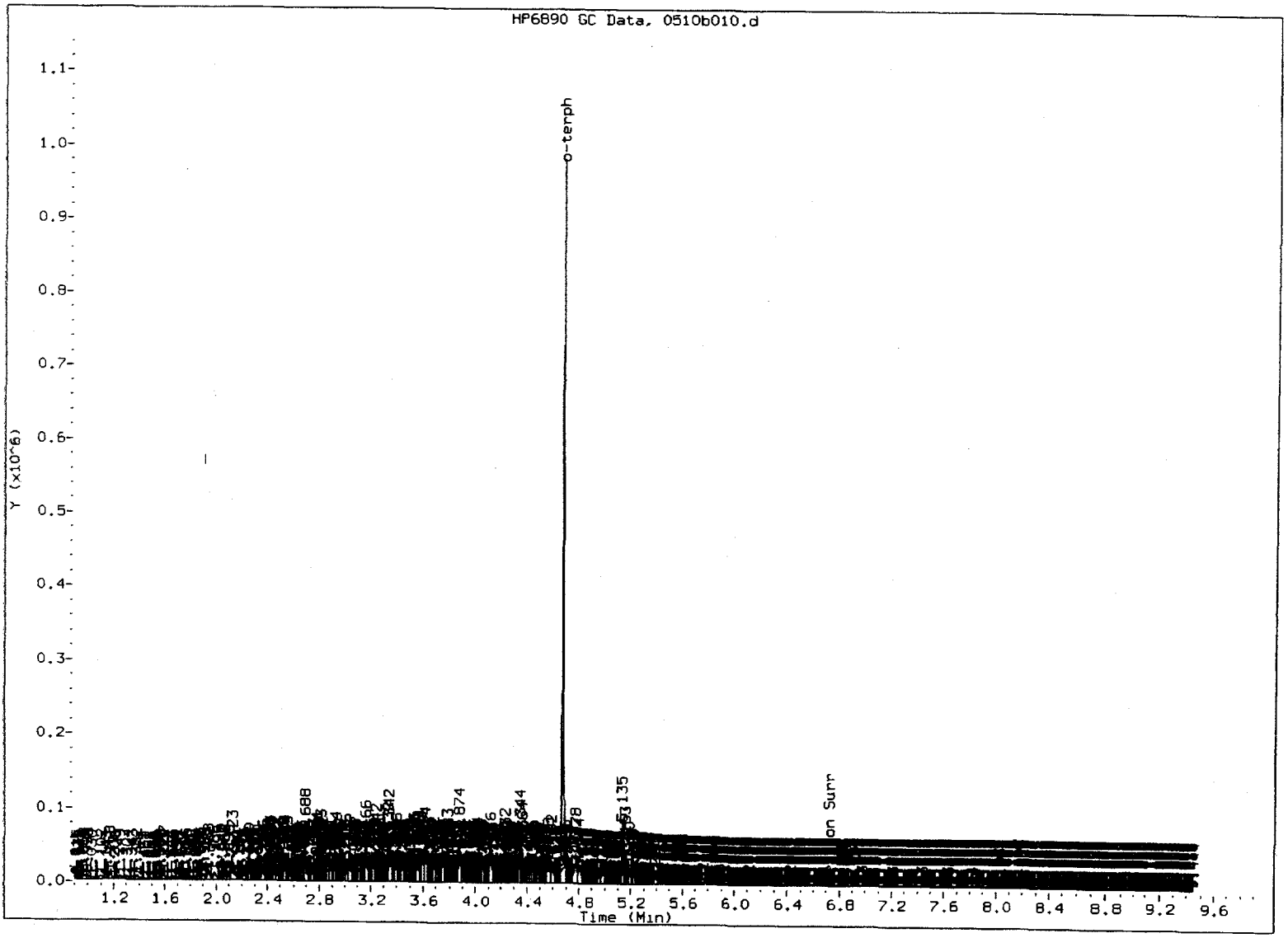
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL ICV 250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b008.d
Method: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: RT0509
Client ID:
Injection: 09-MAY-2013 11:00
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.660	0.000	281983	283611	WATPHG	(Tol-C12)	1136083	84.11 M
C8	0.832	0.005	213148	246004	WATPHD	(C12-C24)	1696380	149.59
C10	2.257	0.003	289258	227833	WATPHM	(C24-C38)	2294807	232.44
C12	3.042	-0.007	342225	251133	AK102	(C10-C25)	2269057	164.51
C14	3.620	-0.001	422171	257259	AK103	(C25-C36)	2029541	285.51
C16	4.118	0.002	397361	260570	OR.DIES	(C10-C28)	3505089	227.87
C18	4.568	0.003	375164	254000				
C20	4.990	0.001	342525	237388				
C22	5.389	0.003	366437	240556				
C24	5.760	0.001	344124	238634				
C25	5.937	-0.001	315093	229769				
C26	6.114	0.001	901378	700157				
C28	6.430	0.004	310083	241137	IT.DIES	(C10-C24)	2255789	163.59
C32	6.977	0.002	359459	246641				
C34	7.215	0.006	364386	243089	CREOSOT	(C8-C22)	1423173	440.15
Filter Peak	----							
C36	7.432	-0.003	319200	238105	BUNKERC	(C10-C38)	4550596	927.78
o-terph	4.677	-0.006	792786	568904	JET-A	(C10-C18)	1411903	130.44
Triacon Surr	6.725	-0.043	855331	640731				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.610 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	568904	39.2	87.1
Triacontane	640731	41.9	93.2

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	13047.7	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	9872.9	09-MAY-2013
AK102	13793.0	22-MAR-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

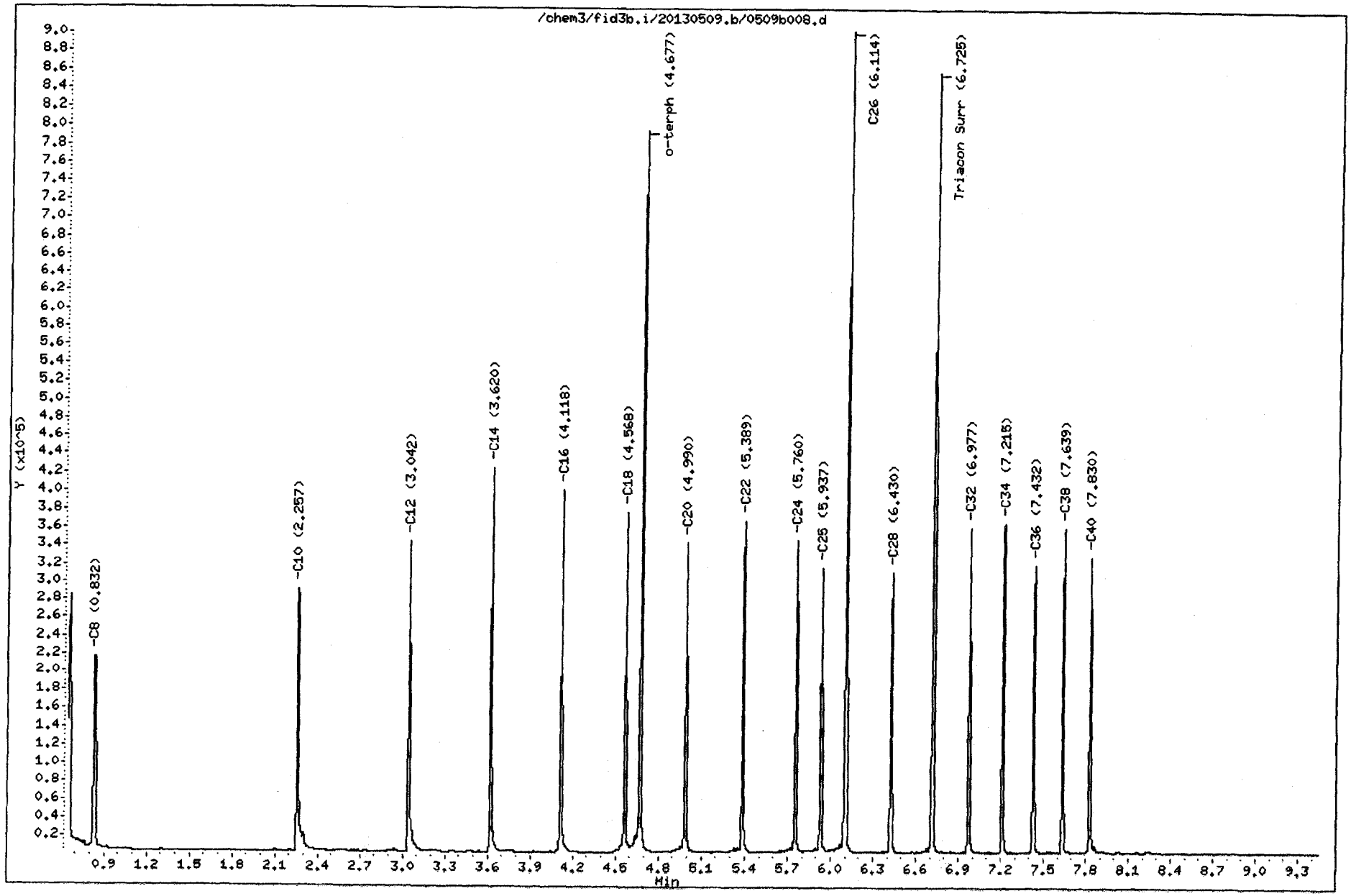
JW 5/11/13

Data File: /chem3/fid3b.i/20130509.b/0509b008.d
Date : 09-MAY-2013 11:00
Client ID:
Sample Info: RT0509

Instrument: fid3b.i

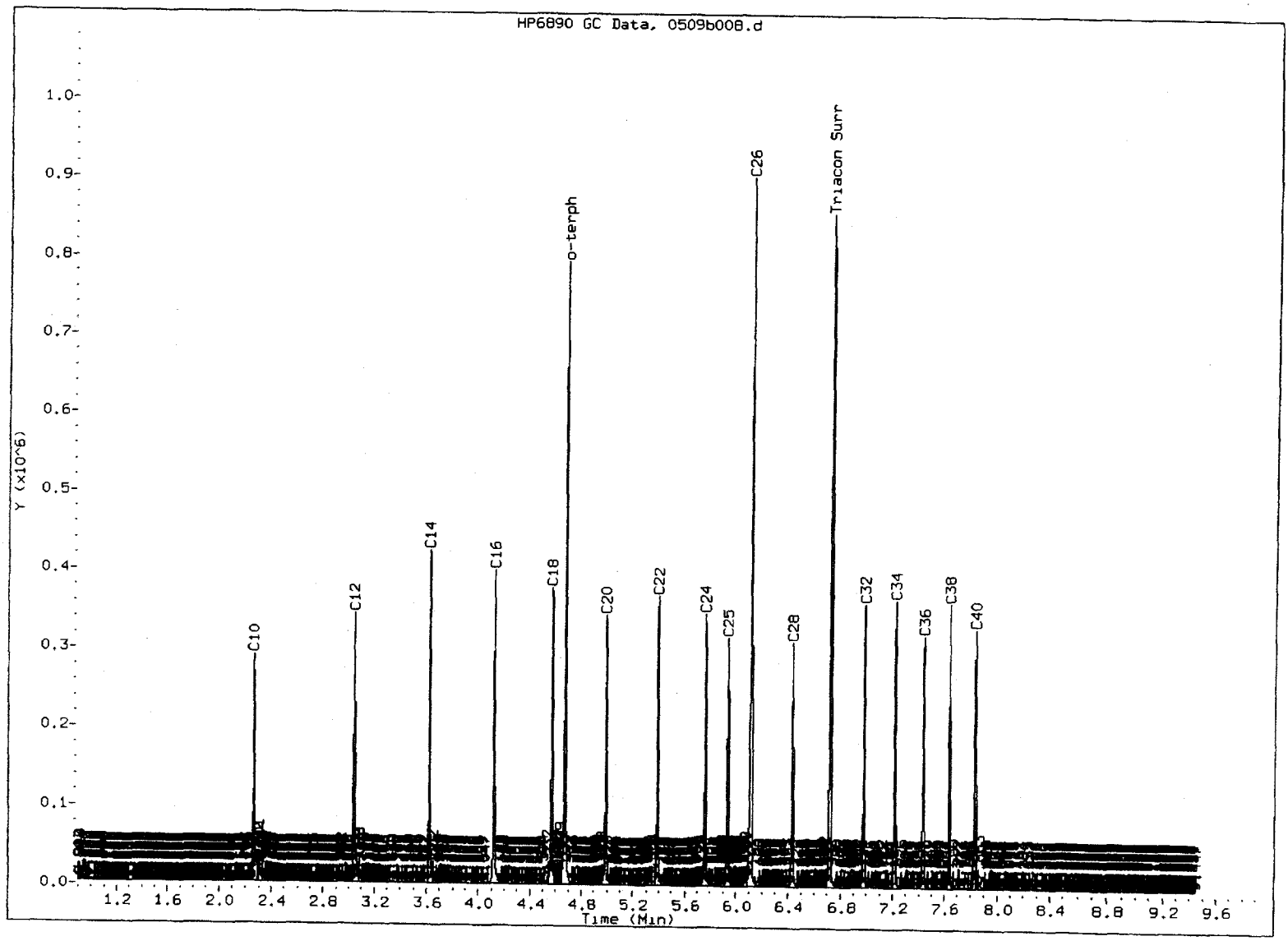
Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 RT0509

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b009.d
Method: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: IB0509
Client ID:
Injection: 09-MAY-2013 11:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	74751	6
C8	0.831	0.003	2498	1726	WATPHD	(C12-C24)	46821	4.13
C10	2.255	0.001	494	237	WATPHM	(C24-C38)	60854	6.16
C12	3.049	0.000	374	88	AK102	(C10-C25)	70320	5.10
C14	3.625	0.004	351	262	AK103	(C25-C36)	48437	6.81
C16	4.122	0.006	171	181	OR.DIES	(C10-C28)	73092	4.75
C18	4.564	-0.001	185	134				
C20	4.991	0.001	329	205				
C22	5.386	-0.001	175	75				
C24	5.760	0.001	95	30				
C25	5.941	0.003	74	42				
C26	6.110	-0.004	236	200				
C28	6.430	0.003	439	449	IT.DIES	(C10-C24)	69995	5.08
C32	6.984	0.008	2639	2753				
C34	7.219	0.009	409	111	CREOSOT	(C8-C22)	45466	14.06
Filter Peak	----							
C36	7.417	-0.018	2269	2595	BUNKERC	(C10-C38)	130849	26.68
o-terph	4.677	-0.006	905522	623043	JET-A	(C10-C18)	45066	4.16
Triacon Surr	6.723	-0.045	696611	521004				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.610 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	623043	42.9	95.4
Triacontane	521004	34.1	75.8

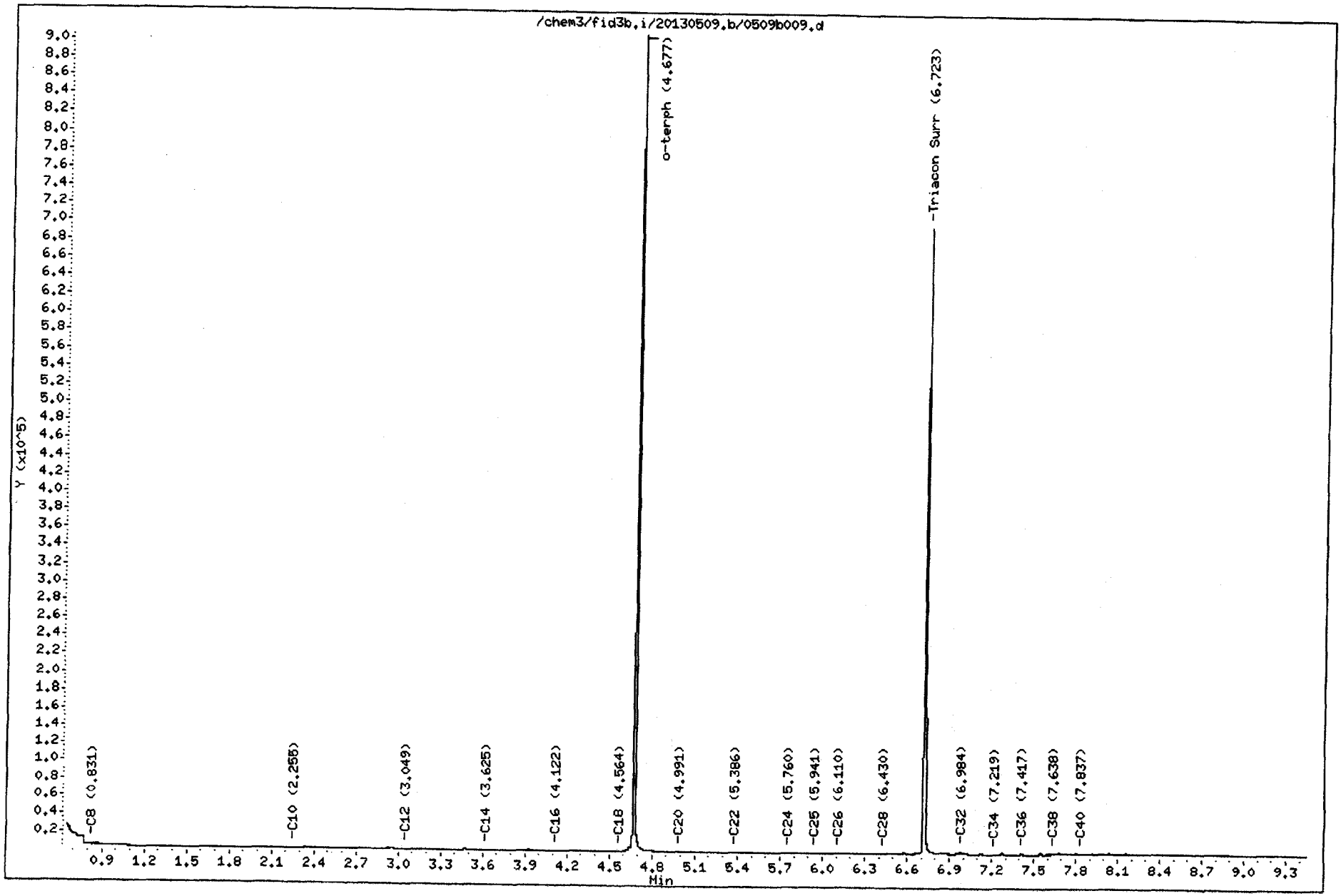
Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	13047.7	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	9872.9	09-MAY-2013
AK102	13793.0	22-MAR-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW 5/10/13

Data File: /chem3/fid3b.i/20130509.b/0509b009.d
Date : 09-MAY-2013 11:20
Client ID:
Sample Info: IB0509

Instrument: fid3b.i

Operator: JW
Column phase: RTX-1
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b019.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 100
Client ID:
Injection: 09-MAY-2013 17:30
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	94672	7
C8	0.836	0.009	3898	2935	WATPHD	(C12-C24)	97099	9.37
C10	2.255	0.001	484	102	WATPHM	(C24-C38)	983803	99.65
C12	3.049	0.001	264	128	AK102	(C10-C25)	140753	11.39
C14	3.626	0.005	241	281	AK103	(C25-C36)	839790	118.14 M
C16	4.118	0.002	59	16	OR.DIES	(C10-C28)	374445	24.34
C18	4.561	-0.004	25	4				
C20	4.984	-0.005	176	134				
C22	5.386	0.000	946	428				
C24	5.762	0.002	4158	1297				
C25	5.938	0.000	5674	2319				
C26	6.116	0.002	6483	1793				
C28	6.435	0.008	7386	1030	IT.DIES	(C10-C24)	117897	8.55
C32	6.975	-0.001	11846	9898				
C34	7.215	0.006	11088	4552	CREOSOT	(C8-C22)	32219	9.96
Filter Peak	----							
C36	7.430	-0.005	10949	7546	BUNKERC	(C10-C38)	1101699	224.62
o-terph	4.673	-0.010	198	73	JET-A	(C10-C18)	37057	3.42
Triacon Surr	6.717	-0.051	163999	108151				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	73	0.0	0.0
Triacontane	108151	8.3	18.4

JW 5/11/13

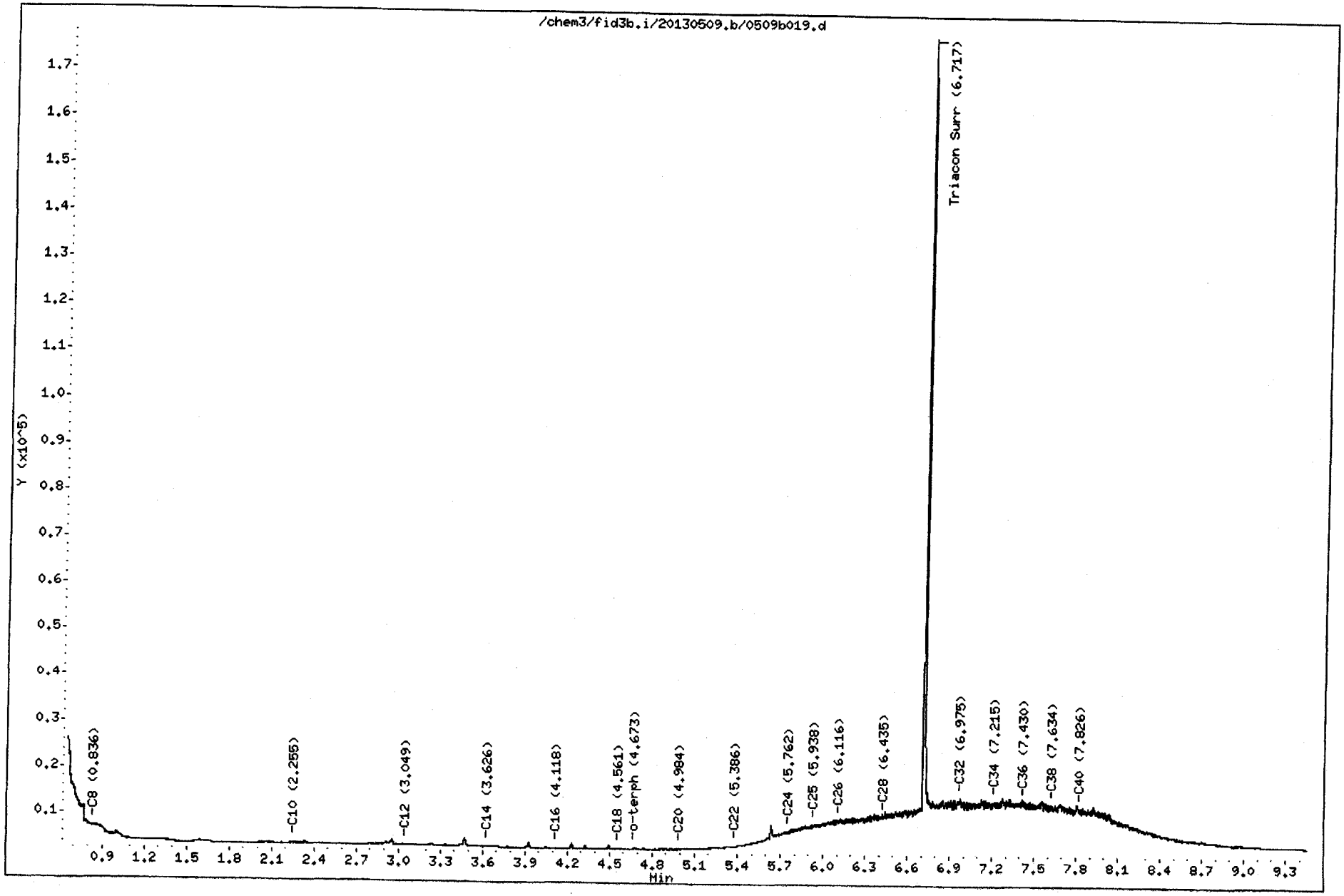
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b019.d
Date : 09-MAY-2013 17:30
Client ID:
Sample Info: MOIL 100

Instrument: fid3b.i

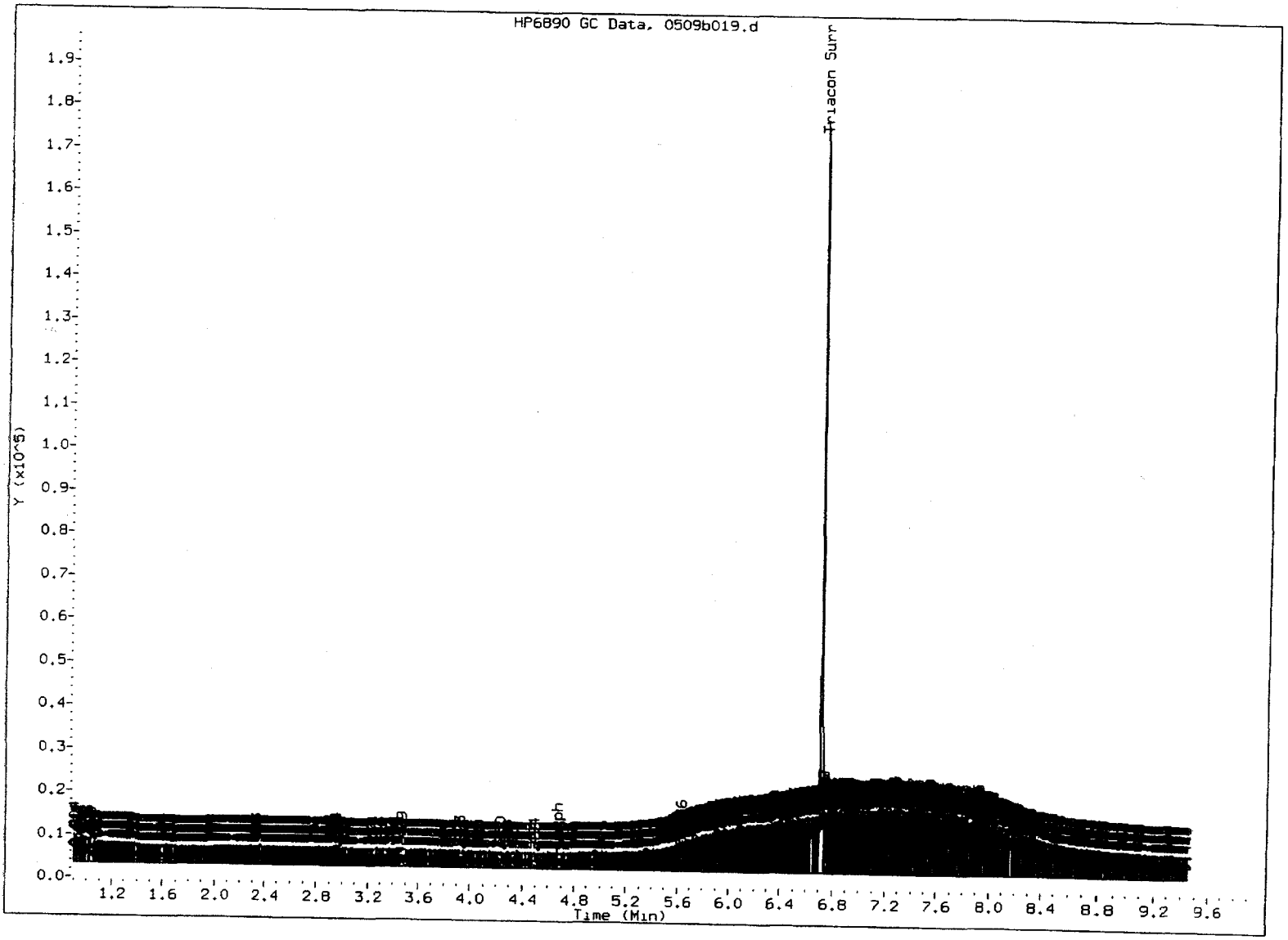
Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 MOIL 100

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b020.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 250
Client ID:
Injection: 09-MAY-2013 17:50
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	94317	7
C8	0.832	0.004	3858	2902	WATPHD	(C12-C24)	222898	21.52
C10	2.255	0.001	548	468	WATPHM	(C24-C38)	2430997	246.23
C12	3.033	-0.016	495	613	AK102	(C10-C25)	302846	24.51
C14	3.621	0.000	227	107	AK103	(C25-C36)	2067243	290.81 M
C16	4.118	0.002	45	9	OR.DIES	(C10-C28)	862677	56.08
C18	4.567	0.002	77	42				
C20	4.991	0.001	463	90				
C22	5.389	0.003	2645	2457				
C24	5.760	0.000	10341	2614				
C25	5.939	0.001	14269	5543				
C26	6.114	0.001	15191	2395				
C28	6.428	0.001	18046	2866	IT.DIES	(C10-C24)	244439	17.73
C32	6.975	-0.001	30803	24376				
C34	7.220	0.011	27589	9147	CREOSOT	(C8-C22)	62726	19.40
Filter Peak	----							
C36	7.432	-0.004	27787	23456	BUNKERC	(C10-C38)	2675436	545.47
o-terph	4.682	-0.001	362	466	JET-A	(C10-C18)	40593	3.75
Triacon Surr	6.720	-0.048	413569	278811				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	466	0.0	0.1
Triacontane	278811	21.4	47.5

JW
5/11/13

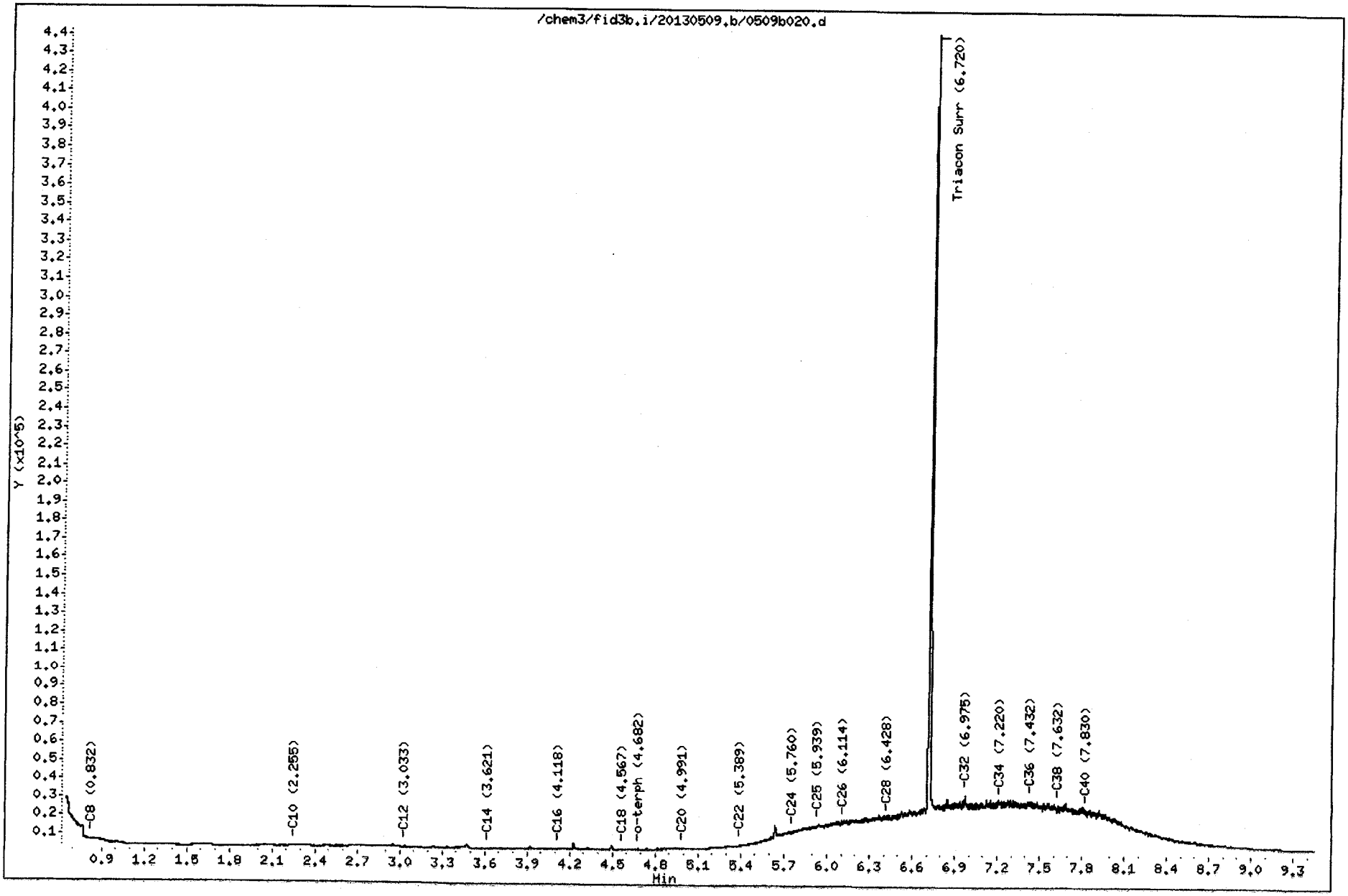
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b020.d
Date : 09-MAY-2013 17:50
Client ID:
Sample Info: MOIL 250

Instrument: fid3b.i

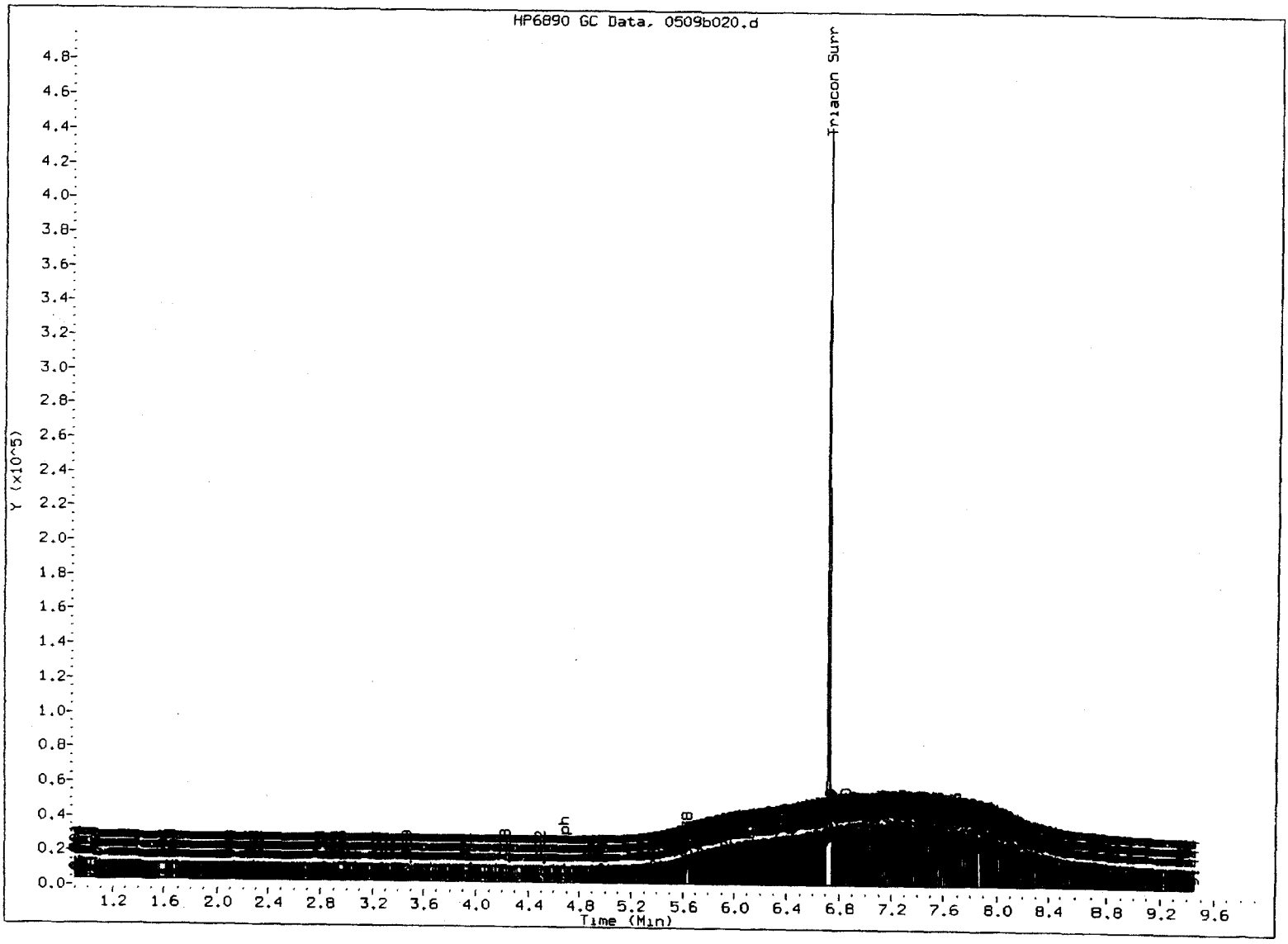
Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 MOIL 250

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b021.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 500
Client ID:
Injection: 09-MAY-2013 18:09
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	86393	6
C8	0.835	0.008	3946	3233	WATPHD	(C12-C24)	451001	43.54
C10	2.254	0.000	528	372	WATPHM	(C24-C38)	4874352	493.71
C12	3.033	-0.016	470	762	AK102	(C10-C25)	583655	47.23
C14	3.614	-0.006	163	21	AK103	(C25-C36)	4174060	587.19 M
C16	4.115	-0.001	57	21	OR.DIES	(C10-C28)	1727286	112.29
C18	4.569	0.004	188	139				
C20	4.994	0.005	1107	174				
C22	5.387	0.001	5301	1027				
C24	5.755	-0.004	22101	17666				
C25	5.938	0.000	27334	7504				
C26	6.113	0.000	31903	17009				
C28	6.431	0.004	40634	16288	IT.DIES	(C10-C24)	471357	34.18
C32	6.974	-0.002	60490	47282				
C34	7.217	0.008	56123	20764	CREOSOT	(C8-C22)	118683	36.71
Filter Peak	----							
C36	7.433	-0.002	53094	12521	BUNKERC	(C10-C38)	5345709	1089.89
o-terph	4.681	-0.002	580	602	JET-A	(C10-C18)	43423	4.01
Triacon Surr	6.728	-0.040	753642	589937				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	602	0.0	0.1
Triacontane	589937	45.2	100.5

JW 5/11/13

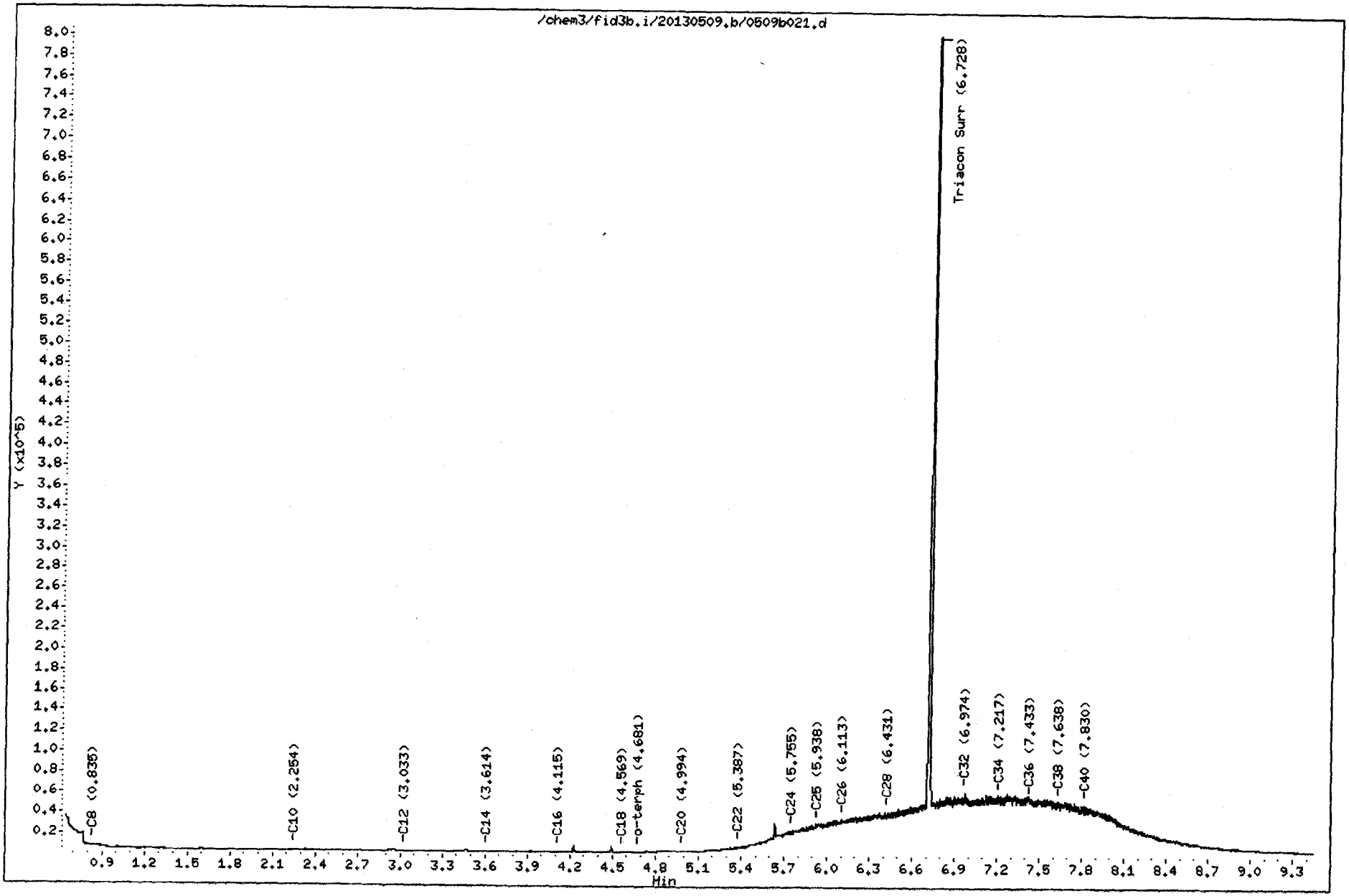
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b021.d
Date : 09-MAY-2013 18:09
Client ID:
Sample Info: MOIL 500

Column phase: RTX-1

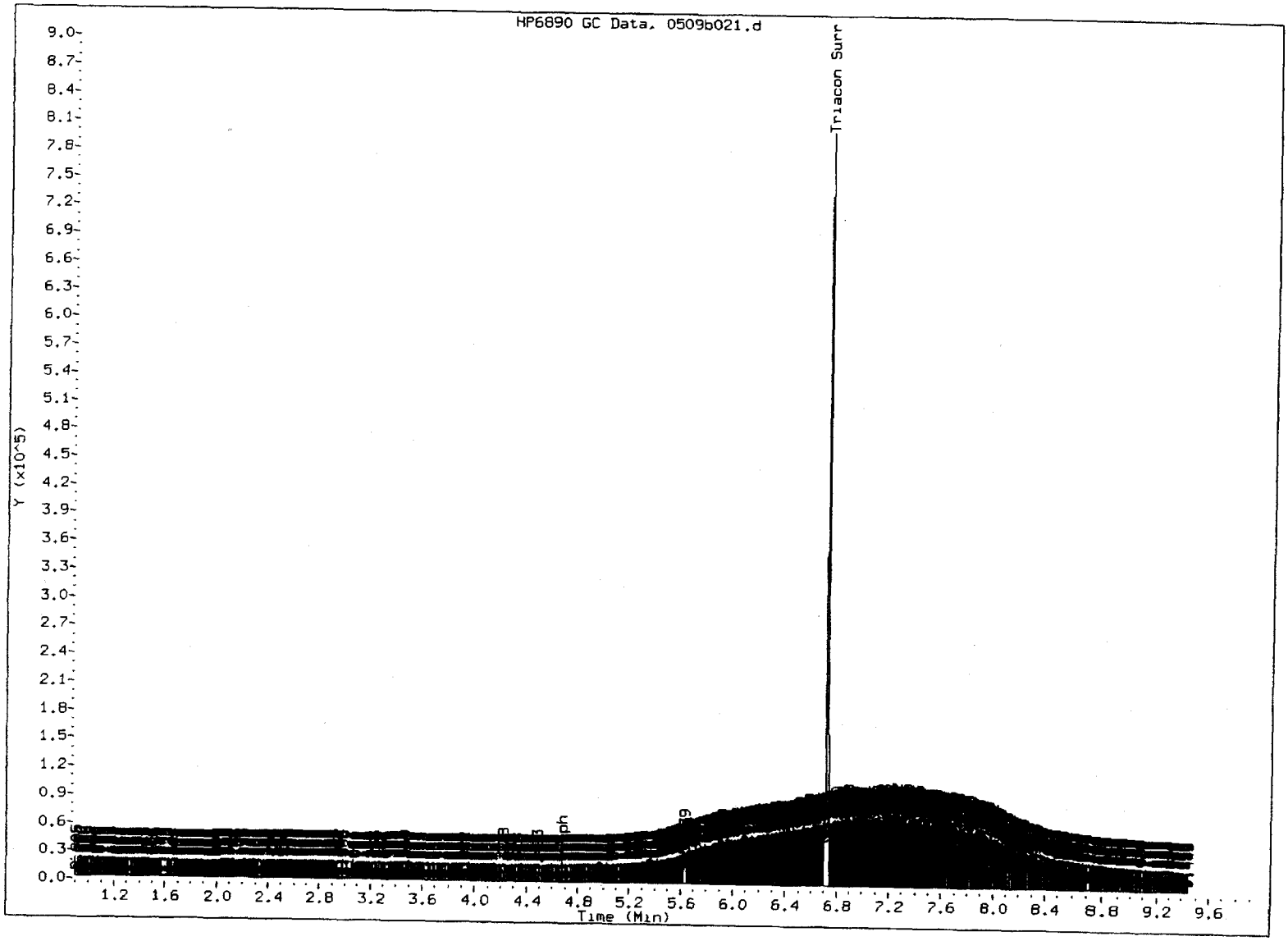
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 500

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JH Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b022.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 1000
Client ID:
Injection: 09-MAY-2013 18:29
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	78361	6
C8	0.839	0.012	3628	3009	WATPHD	(C12-C24)	874331	84.42
C10	2.257	0.003	680	612	WATPHM	(C24-C38)	9868273	999.53
C12	3.033	-0.015	596	654	AK102	(C10-C25)	1098523	88.90
C14	3.617	-0.004	289	86	AK103	(C25-C36)	8411348	1183.28 M
C16	4.117	0.001	178	66	OR.DIES	(C10-C28)	3361297	218.52
C18	4.572	0.007	532	659				
C20	4.988	-0.001	2555	1127				
C22	5.384	-0.002	10753	8200				
C24	5.763	0.003	39484	12501				
C25	5.935	-0.003	52198	10300				
C26	6.114	0.001	64456	26352				
C28	6.431	0.005	80230	54043	IT.DIES	(C10-C24)	896600	65.02
C32	6.980	0.004	126900	98292				
C34	7.214	0.005	113236	28858	CREOSOT	(C8-C22)	240131	74.27
Filter Peak	----							
C36	7.429	-0.006	113184	57310	BUNKERC	(C10-C38)	10764873	2194.76
o-terph	4.673	-0.009	1385	1372	JET-A	(C10-C18)	61579	5.69
Triacon Surr	6.738	-0.030	1129632	1182380				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1372	0.1	0.2
Triacontane	1182380	90.6	201.4

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

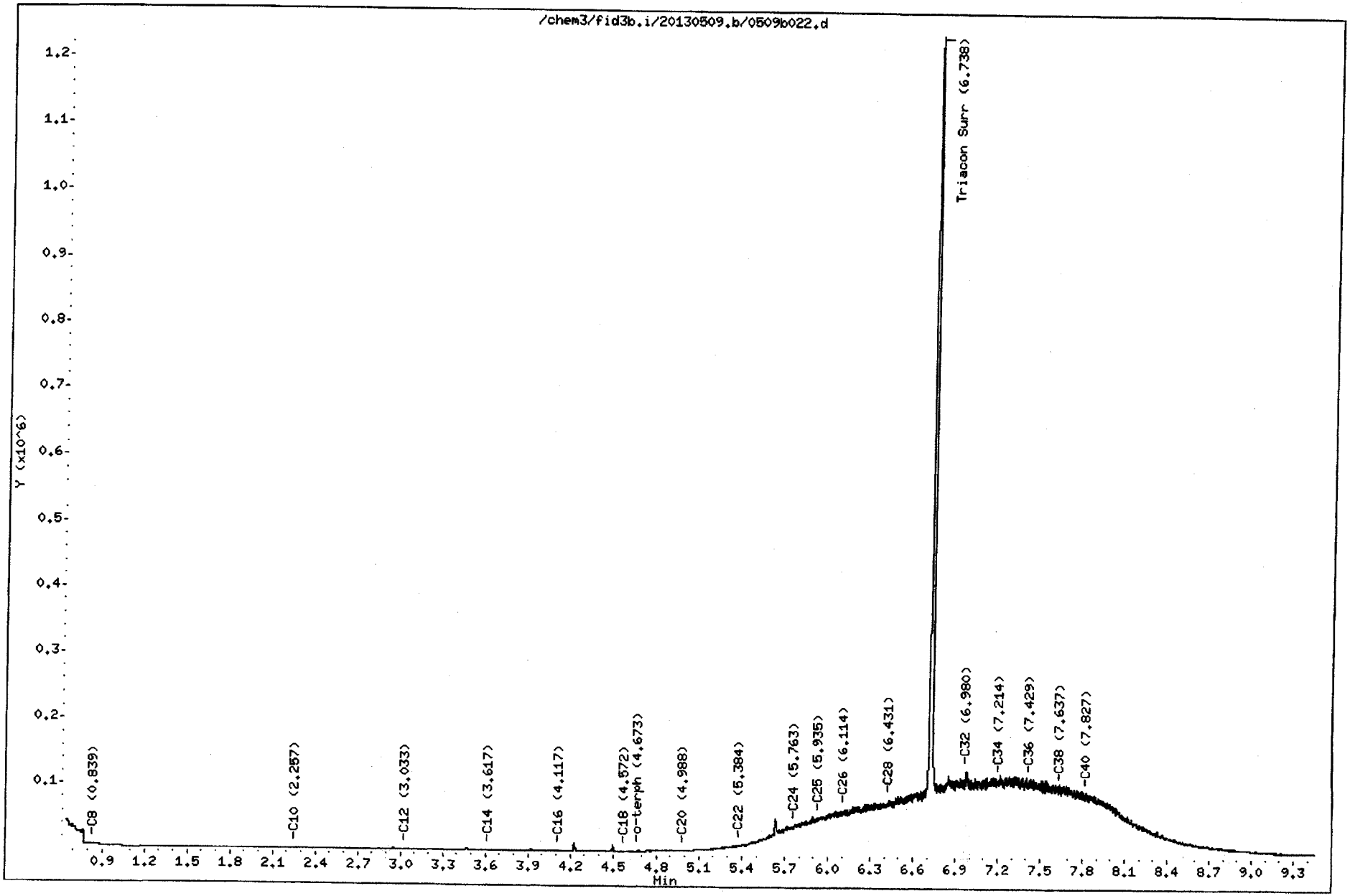
WS21:01475

Data File: /chem3/fid3b.i/20130509.b/0509b022.d
Date : 09-MAY-2013 18:29
Client ID:
Sample Info: MOIL 1000

Column phase: RTX-1

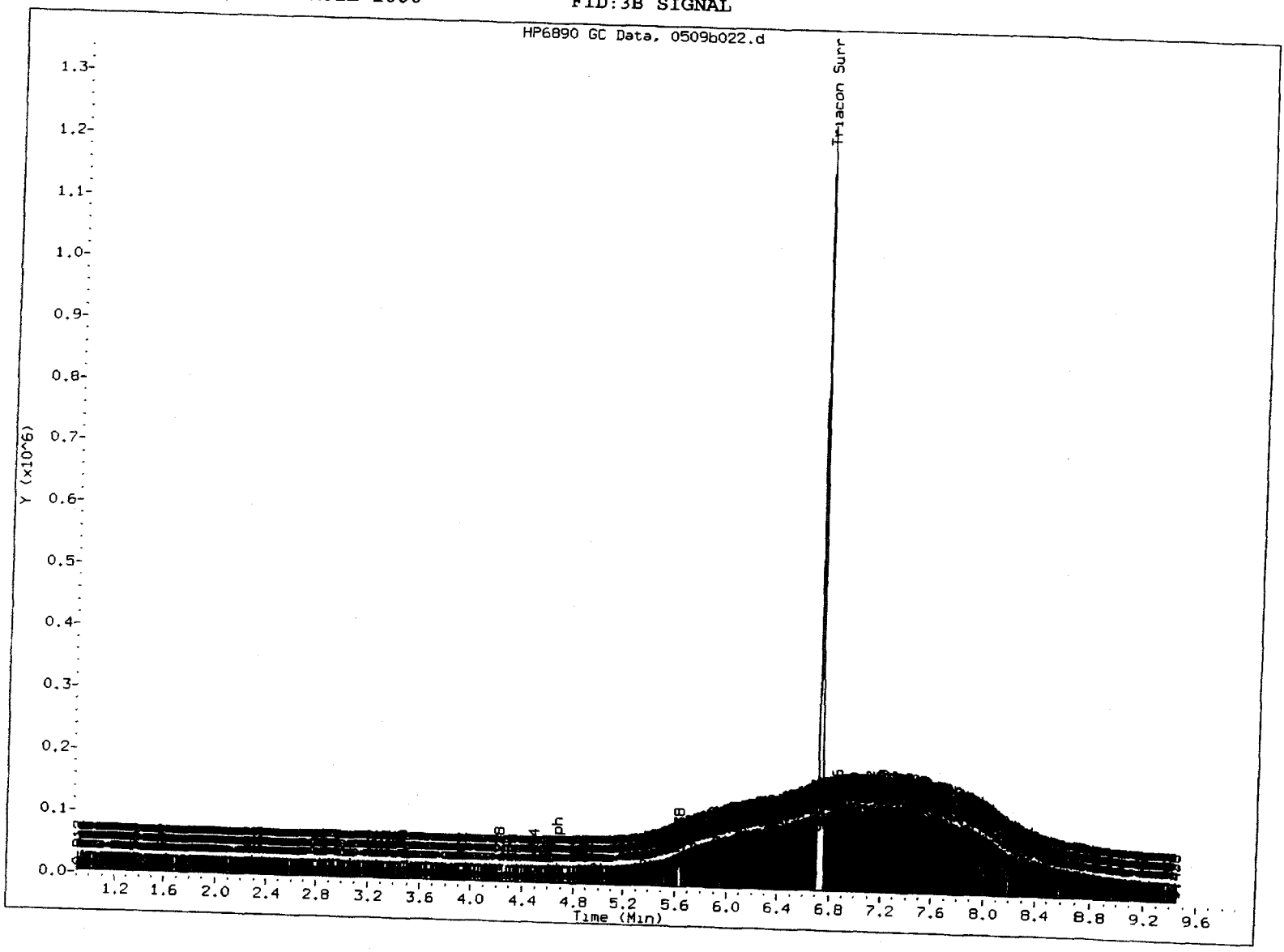
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 1000

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW

Date: 5/11/05

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b023.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 2500
Client ID:
Injection: 09-MAY-2013 18:49
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	104794	8
C8	0.826	-0.001	4378	3915	WATPHD	(C12-C24)	2194711	211.90
C10	2.255	0.001	1091	1225	WATPHM	(C24-C38)	24892471	2521.30
C12	3.033	-0.015	939	1080	AK102	(C10-C25)	2729082	220.86
C14	3.625	0.004	646	699	AK103	(C25-C36)	21251517	2989.60 M
C16	4.120	0.004	670	399	OR.DIES	(C10-C28)	8440502	548.73
C18	4.567	0.002	1755	1694				
C20	4.986	-0.003	7164	5835				
C22	5.383	-0.003	27130	11705				
C24	5.761	0.001	95353	13270				
C25	5.936	-0.002	134269	115080				
C26	6.115	0.002	165173	79024				
C28	6.429	0.003	191631	49338	IT.DIES	(C10-C24)	2230539	161.76
C32	6.977	0.002	286800	136356				
C34	7.214	0.004	290279	106480	CREOSOT	(C8-C22)	619583	191.62
Filter Peak	----							
C36	7.429	-0.006	290605	163378	BUNKERC	(C10-C38)	27123010	5529.89
o-terph	4.672	-0.011	3717	2590	JET-A	(C10-C18)	132813	12.27
Triacon Surr	6.752	-0.016	1571362	3084995				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2590	0.2	0.4
Triacontane	3084995	236.4	525.4

JW 5/11/13

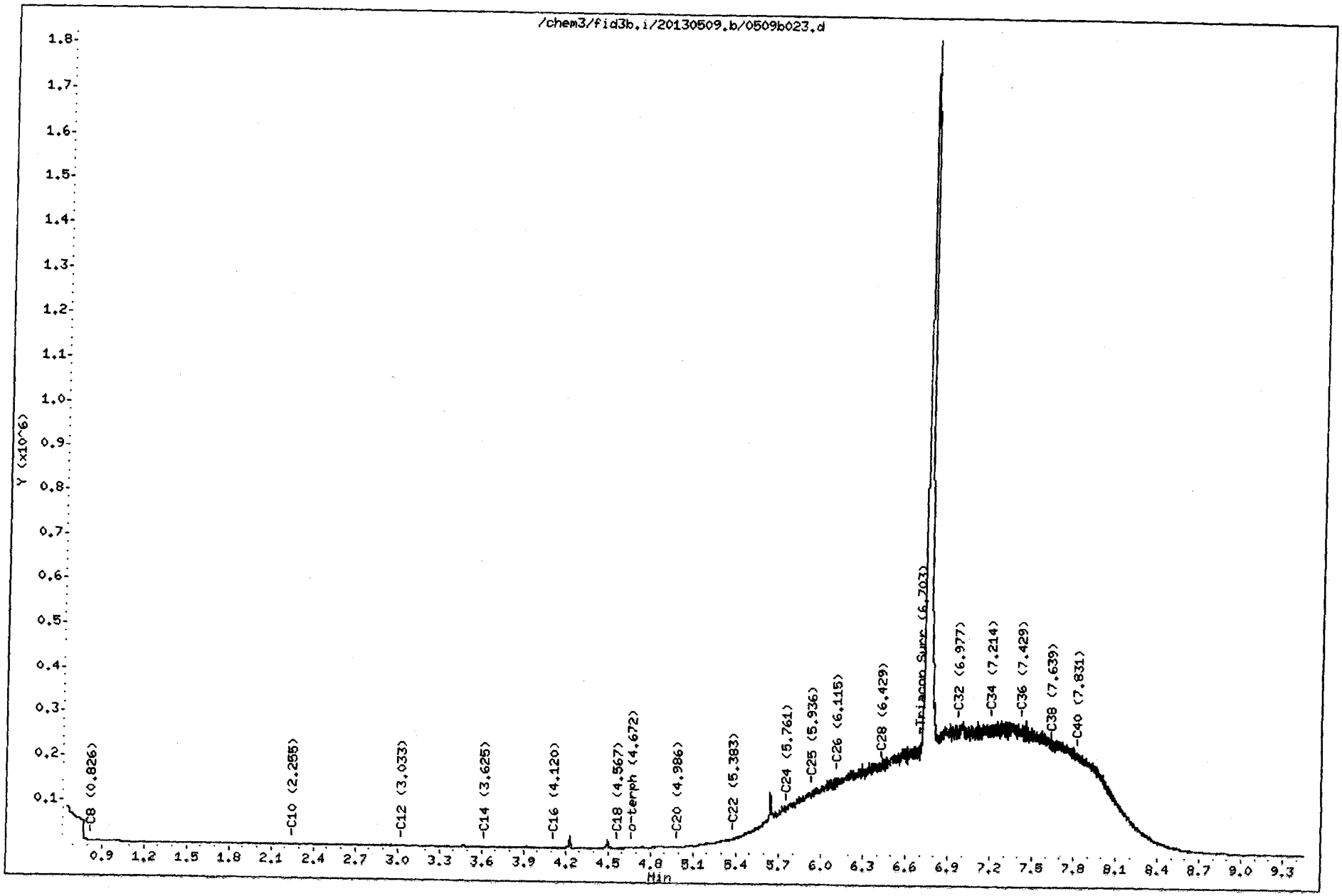
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b023.d
Date : 09-MAY-2013 18:49
Client ID:
Sample Info: MOIL 2500

Column phase: RTX-1

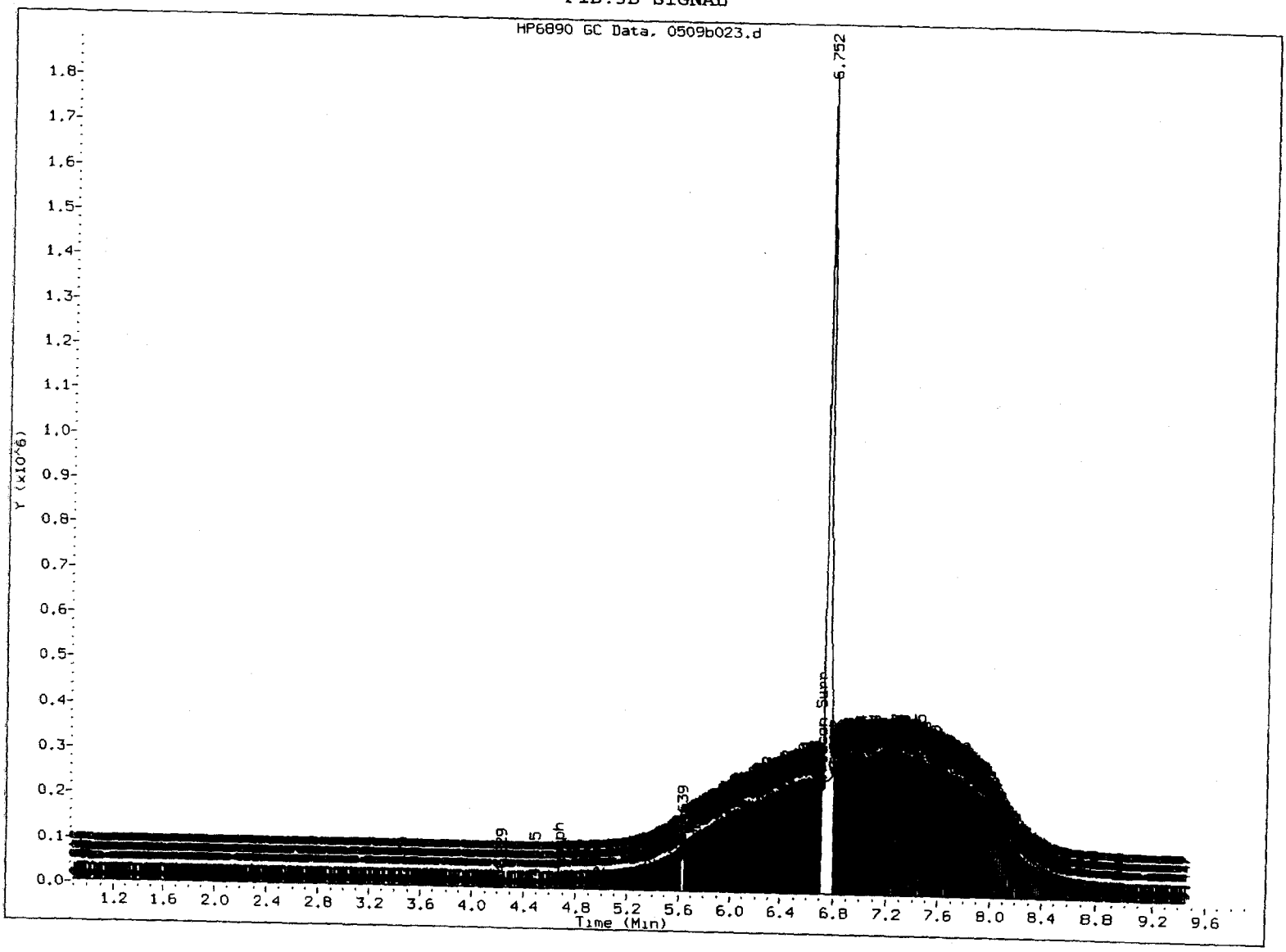
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 2500

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b024.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 5000
Client ID:
Injection: 09-MAY-2013 19:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	119303	9
C8	0.827	0.000	4466	3961	WATPHD	(C12-C24)	4431911	427.90
C10	2.254	0.000	1905	1725	WATPHM	(C24-C38)	50506527	5115.68
C12	3.049	0.000	894	857	AK102	(C10-C25)	5720466	462.94
C14	3.621	0.000	1125	1543	AK103	(C25-C36)	43024953	6052.62 M
C16	4.116	0.000	1491	1370	OR.DIES	(C10-C28)	17341569	1127.39
C18	4.565	0.000	4021	4376				
C20	4.989	0.000	14741	9616				
C22	5.386	0.000	55046	28683				
C24	5.760	0.000	205583	128372				
C25	5.938	0.000	259983	66571				
C26	6.114	0.000	326387	171329				
C28	6.427	0.000	402848	245127	IT.DIES	(C10-C24)	4481981	325.04
C32	6.976	0.000	582492	328720				
C34	7.210	0.000	585534	435050	CREOSOT	(C8-C22)	1264803	391.17
Filter Peak	----							
C36	7.435	0.000	552961	65445	BUNKERC	(C10-C38)	54988508	11211.16
o-terph	4.683	0.000	5820	1701	JET-A	(C10-C18)	244722	22.61
Triacon Surr	6.768	0.000	1587931	6263834				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1701	0.1	0.3
Triacontane	6263834	480.1	1066.8

JW 5/14/13

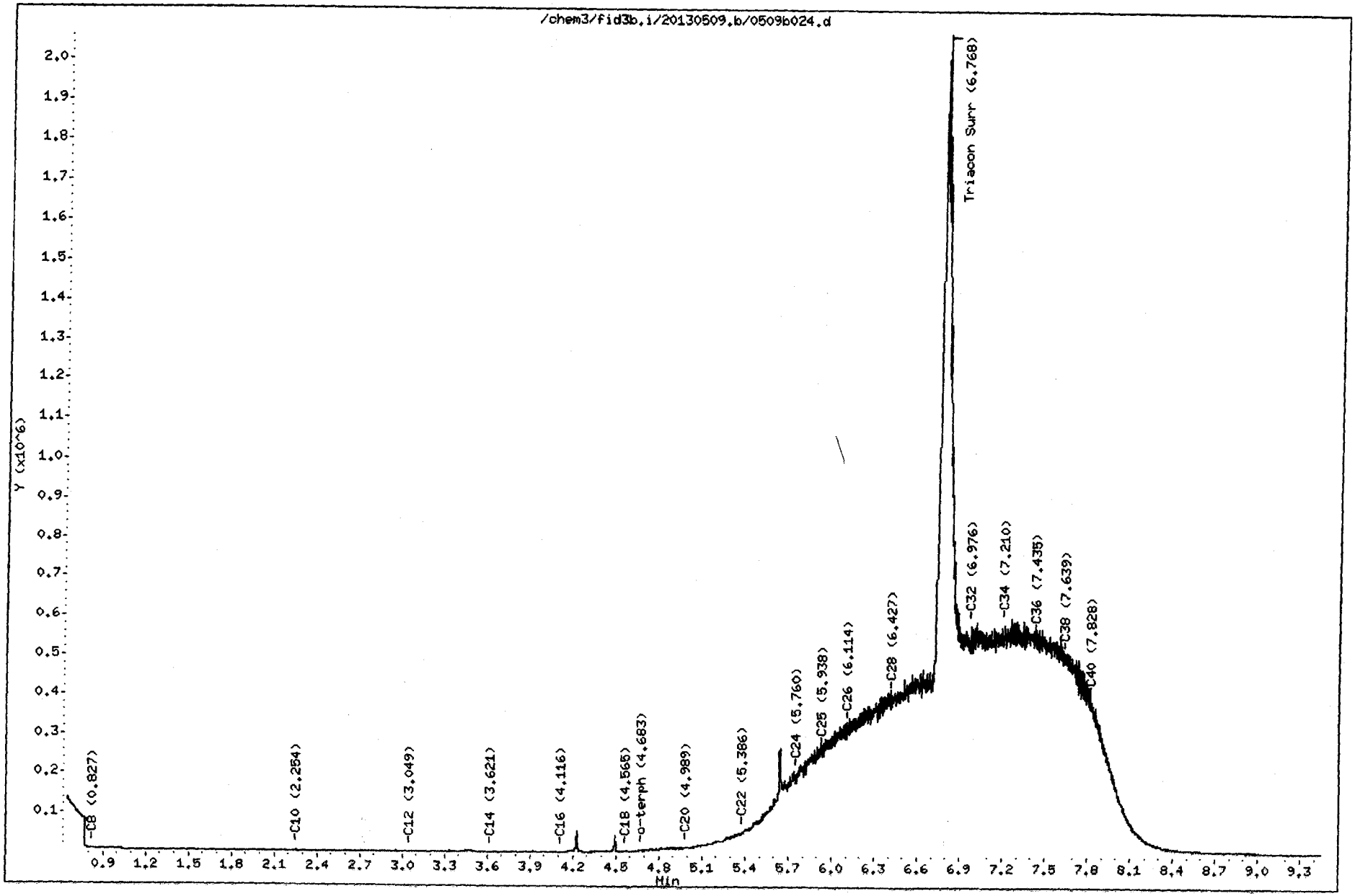
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b024.d
Date : 09-MAY-2013 19:08
Client ID:
Sample Info: MOIL 5000

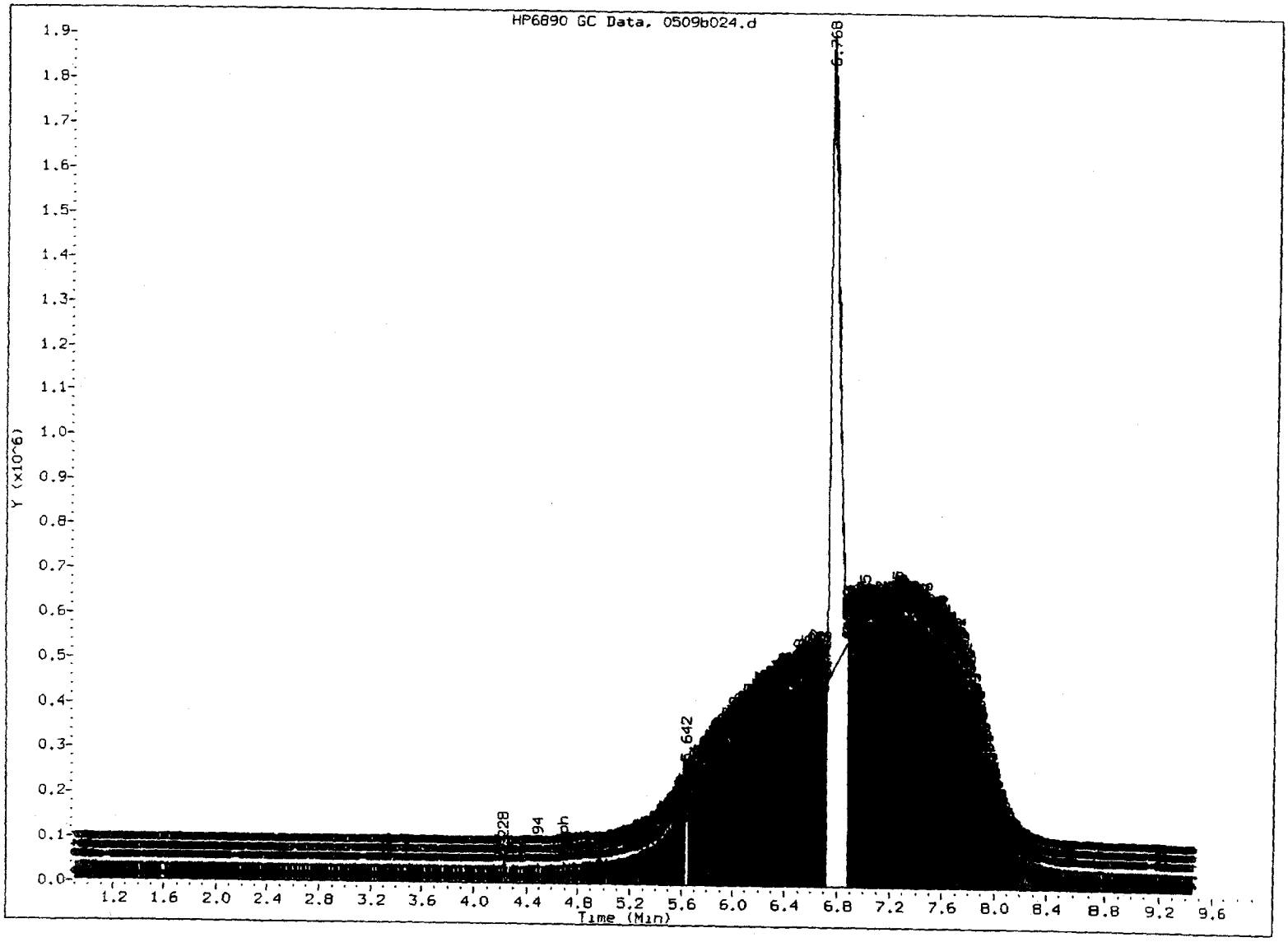
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 MOIL 5000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/1/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b025.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL ICV 500
Client ID:
Injection: 09-MAY-2013 19:28
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	71814	5
C8	0.827	0.000	3620	2782	WATPHD	(C12-C24)	518173	50.03
C10	2.256	0.002	478	471	WATPHM	(C24-C38)	4554535	461.32
C12	3.033	-0.015	421	481	AK102	(C10-C25)	639973	51.79
C14	3.625	0.005	282	365	AK103	(C25-C36)	3832887	539.20 M
C16	4.114	-0.002	185	70	OR.DIES	(C10-C28)	1677576	109.06
C18	4.563	-0.002	261	181				
C20	4.991	0.002	1248	666				
C22	5.385	-0.001	7293	4094				
C24	5.758	-0.001	21661	6739				
C25	5.935	-0.003	26089	4587				
C26	6.114	0.000	30955	11749				
C28	6.429	0.002	35583	18192	IT.DIES	(C10-C24)	535116	38.81
C32	6.977	0.001	58496	48694				
C34	7.212	0.003	57093	58682	CREOSOT	(C8-C22)	152793	47.26
Filter Peak	----							
C36	7.432	-0.003	56274	27657	BUNKERC	(C10-C38)	5089651	1037.69
o-terph	4.681	-0.002	607	657	JET-A	(C10-C18)	36545	3.38
Triacon Surr	6.727	-0.041	732229	563148				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	657	0.0	0.1
Triacontane	563148	43.2	95.9

JW 5/10/13

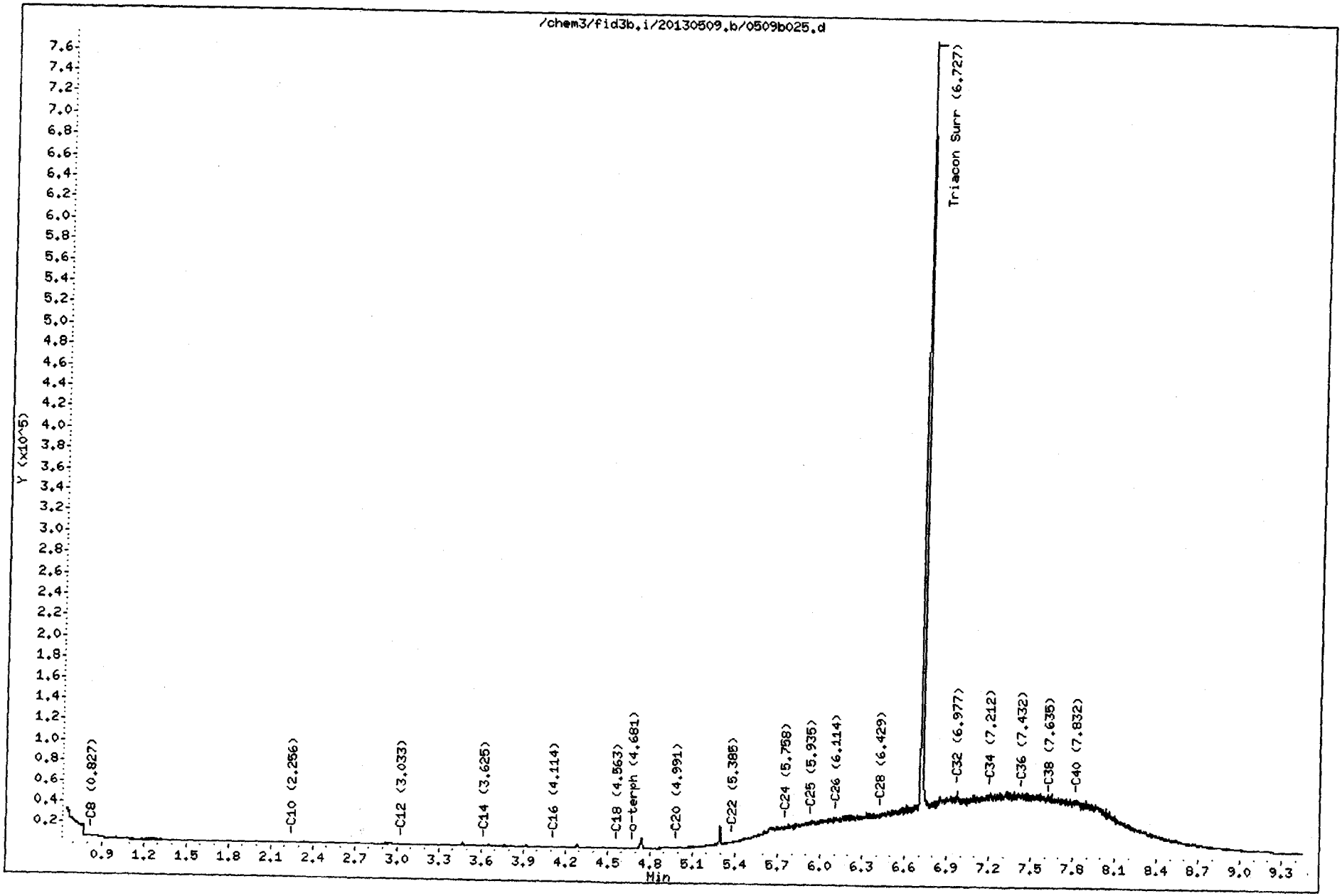
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b025.d
Date : 09-MAY-2013 19:28
Client ID:
Sample Info: MOIL ICV 500

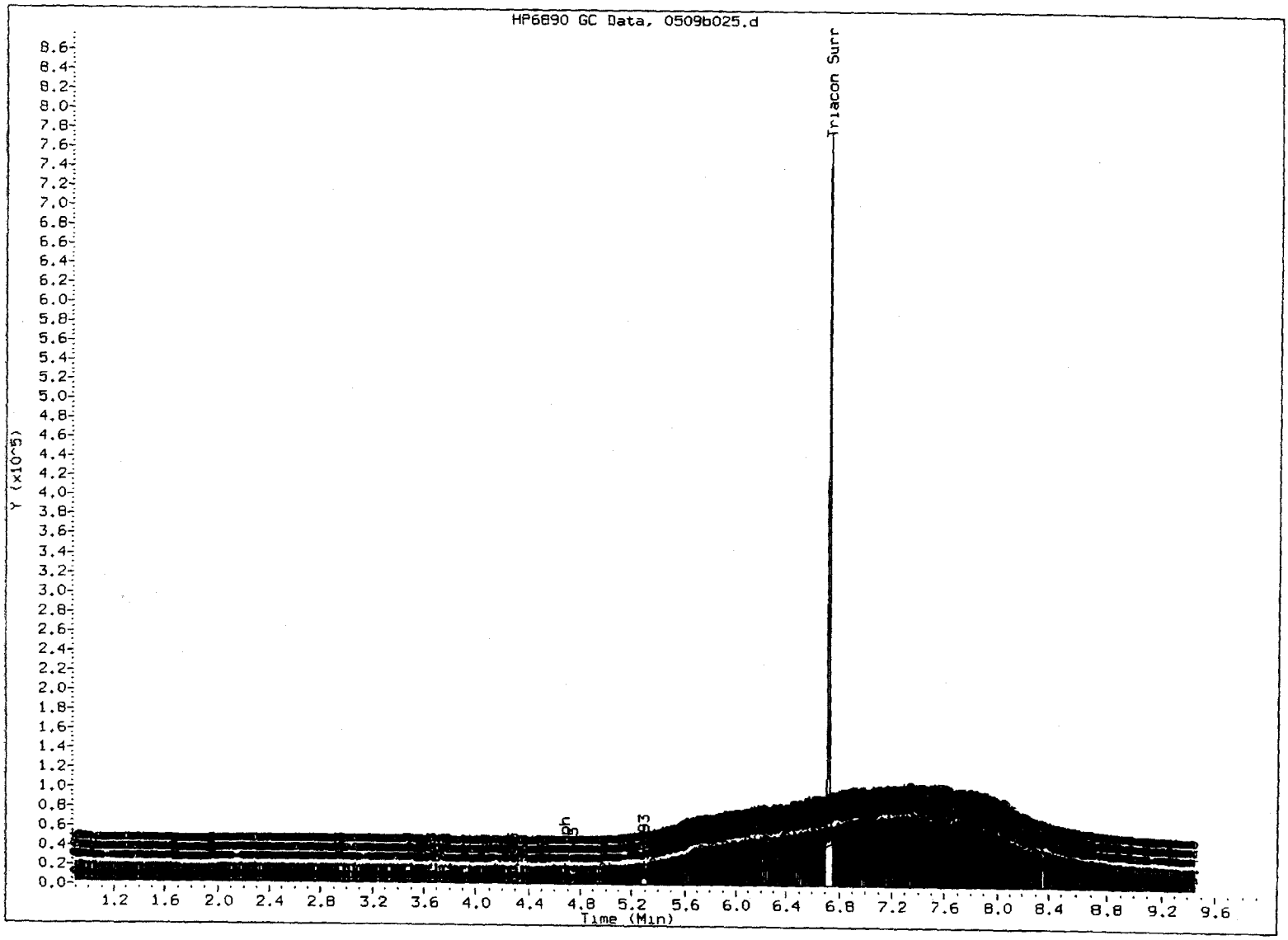
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL ICV 500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: GW Date: 5/11/07

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WR99/WS21 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A (FID-3B) FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 5/9/13 & 5/10/13 Analysis Start Date: 6/4/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	(NA) / Y / N / ___	Method Blank in Control?	(Y) / N / ✓
Retention times within Windows?	(Y) / (N) / ✓	LCS / LCSD Recovery in Control?	(Y) / N / ✓
CCAL met %D Criteria?	(Y) / N / ✓	LCS / LCSD RPD ≤30%?	(NA) / ___
Surrogate Recovery in Control?	(Y) / (N) / ✓	MS / MSD Recovery in Control?	(Y) / N / ✓
Internal STD. within 50-200%?	(NA) / Y / N / ✓	MS / MSD RPD ≤30%?	(NA) / ___
Manual Integrations?	(Y) / N / ✓	Samples Diluted?	(Y) / N / ✓
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	Y / (N) / ___

Detail problems, corrective actions and/or other pertinent information below

WR99D - DRO/Motor oil

WS21A - Diesel/Motor oil - diesel is weathered

Final mail CCAL triac surr shifted outside QC limits due to peak broadening. Surr not request & CCAL pass QC limits no further C. Orrectiv action taken as per PM C.O. Surr is also @ QC limit of 15% deviation.

(Review 1) Analyst: JW **Date:** 6/12/13

(Review 2) Reviewer: **Date:** 6/12

WS21 : 01492

Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 6/4/13 Analysis: TPHD Analyst: JW

Column 1 Serial No.: 1022005 Column Type: RTX-1

Column 2 Serial No.: Column Type:

GC Method: TPHD3 ICal Date: 5/9/13 & 5/10/13 Injection Volume: 1uL

IS	Ical/Ccal	ICV
	2043-3,4	
	2091-2	
	2041-4	

Document All Maintenance Tasks In Element LIMS

GC LOG SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130604.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	04-JUN-2013 08:13	0604b001.d	1	RINSE	
2	04-JUN-2013 08:32	0604b002.d	1	RT0604	
3	04-JUN-2013 08:51	0604b003.d	1	IB0604	
4	04-JUN-2013 09:11	0604b004.d	1	DIESEL#1	
5	04-JUN-2013 09:30	0604b005.d	1	MOIL#1	
6	04-JUN-2013 09:51	0604b006.d	1	WS31A	A2-W36-S-4
7	04-JUN-2013 10:10	0604b007.d	1	WS31B	A2-W34-S-4
8	04-JUN-2013 10:30	0604b008.d	1	WS31C	A2-W35-S-4
9	04-JUN-2013 11:01	0604b009.d	1	WS31D	A2-W37-S-4
10	04-JUN-2013 11:20	0604b010.d	5	WS31E	A2-W38-S-4
11	04-JUN-2013 11:54	0604b011.d	1	WS31F	A2-W39-S-4
12	04-JUN-2013 12:22	0604b012.d	10	WS31D	A2-W37-S-4
13	04-JUN-2013 12:53	0604b013.d	10	WS31E	A2-W38-S-4
14	04-JUN-2013 13:24	0604b014.d	10	WS31F	A2-W39-S-4
15	04-JUN-2013 13:48	0604b015.d	1	WS31LCSS1	WS31LCSS1
16	04-JUN-2013 14:07	0604b016.d	1	WS31LCSDS1	WS31LCSDS1
17	04-JUN-2013 14:26	0604b017.d	1	WS31MBS1	WS31MBS1
18	04-JUN-2013 14:49	0604b018.d	1	WS31LCSS1	WS31LCSS1
19	04-JUN-2013 15:08	0604b019.d	1	DIESEL#2	
20	04-JUN-2013 15:32	0604b020.d	1	MOIL#2	
21	04-JUN-2013 15:51	0604b021.d	1	WS04MBW1	
22	04-JUN-2013 16:10	0604b022.d	1	WS04LCSW1	
23	04-JUN-2013 16:29	0604b023.d	1	WS04LCSDW1	
24	04-JUN-2013 16:48	0604b024.d	1	WS04B	
25	04-JUN-2013 17:08	0604b025.d	1	WR99MBS1	
26	04-JUN-2013 17:27	0604b026.d	1	WR99LCSS1	
27	04-JUN-2013 17:55	0604b027.d	5	WR99D	
28	04-JUN-2013 18:19	0604b028.d	5	WR99DMS	
29	04-JUN-2013 18:37	0604b029.d	5	WR99DMSD	
30	04-JUN-2013 18:56	0604b030.d	1	WS21A	
31	04-JUN-2013 19:15	0604b031.d	5	WS21A	
32	04-JUN-2013 19:35	0604b032.d	1	DIESEL#3	
33	04-JUN-2013 19:54	0604b033.d	1	MOIL#3	

JW 6/8/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In Element LIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130604.b

ARI Job No.: RT06 Method: i/20130604.b/ftphfid3b.m Instrument: fid3b.i Date: 04-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0832	0604b002.d	RT0604		1	Toluene,
0851	0604b003.d	IB0604		1	NO MANUAL INTEGRATION
1508	0604b019.d	DIESEL#2		1	o-terph,
1532	0604b020.d	MOIL#2		1	Triacon Surr,
1708	0604b025.d	WR99MBS1	WR99MBS1	1	Triacon Surr,
1727	0604b026.d	WR99LCSS1	WR99LCSS1	1	o-terph,
1755	0604b027.d	WR99D	KC-VT-1593	5	o-terph, Triacon Surr,
1819	0604b028.d	WR99DMS	KC-VT-1593	5	o-terph, Triacon Surr,
1837	0604b029.d	WR99DMSD	KC-VT-1593	5	o-terph, Triacon Surr,
1856	0604b030.d	WS21A	KC-IV-SPS-	1	o-terph, Triacon Surr,
1935	0604b032.d	DIESEL#3		1	o-terph,
1954	0604b033.d	MOIL#3		1	Triacon Surr,

RECEIVED
JUN 13 2013

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b002.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: RT0604
Client ID:
Injection: 04-JUN-2013 08:32
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.659	0.000	244507	295864	WATPHG	(Tol-C12)	1063206	78.72 M
C8	0.829	0.000	161909	94800	WATPHD	(C12-C24)	1756784	169.62
C10	2.239	0.000	328729	224321	WATPHM	(C24-C38)	3119896	316.01
C12	3.039	0.000	324320	217355	AK102	(C10-C25)	2277818	184.34
C14	3.616	0.000	402998	197987	AK103	(C25-C36)	2744810	386.13
C16	4.113	0.000	353616	213185				
C18	4.559	0.000	327561	183620				
C20	4.980	0.000	359180	207040				
C22	5.374	0.000	364187	241027	MSPIRIT	(Tol-C12)	1063206	77.39
M								
C24	5.743	0.000	380273	274833				
C25	5.917	0.000	371576	274997				
C26	6.094	0.000	998531	360130				
C28	6.404	0.000	399855	164197				
C32	6.951	0.000	504187	325019				
C34	7.186	0.000	434043	326597				
Filter Peak	----							
C36	7.401	0.000	424157	328889				
o-terph	4.667	0.000	693163	466917	JET-A	(C10-C18)	1258168	116.24
Triacon Surr	6.701	0.000	1147398	827213				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	466917	34.7	77.1
Triacontane	827213	63.4	140.9

JW 6/9/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

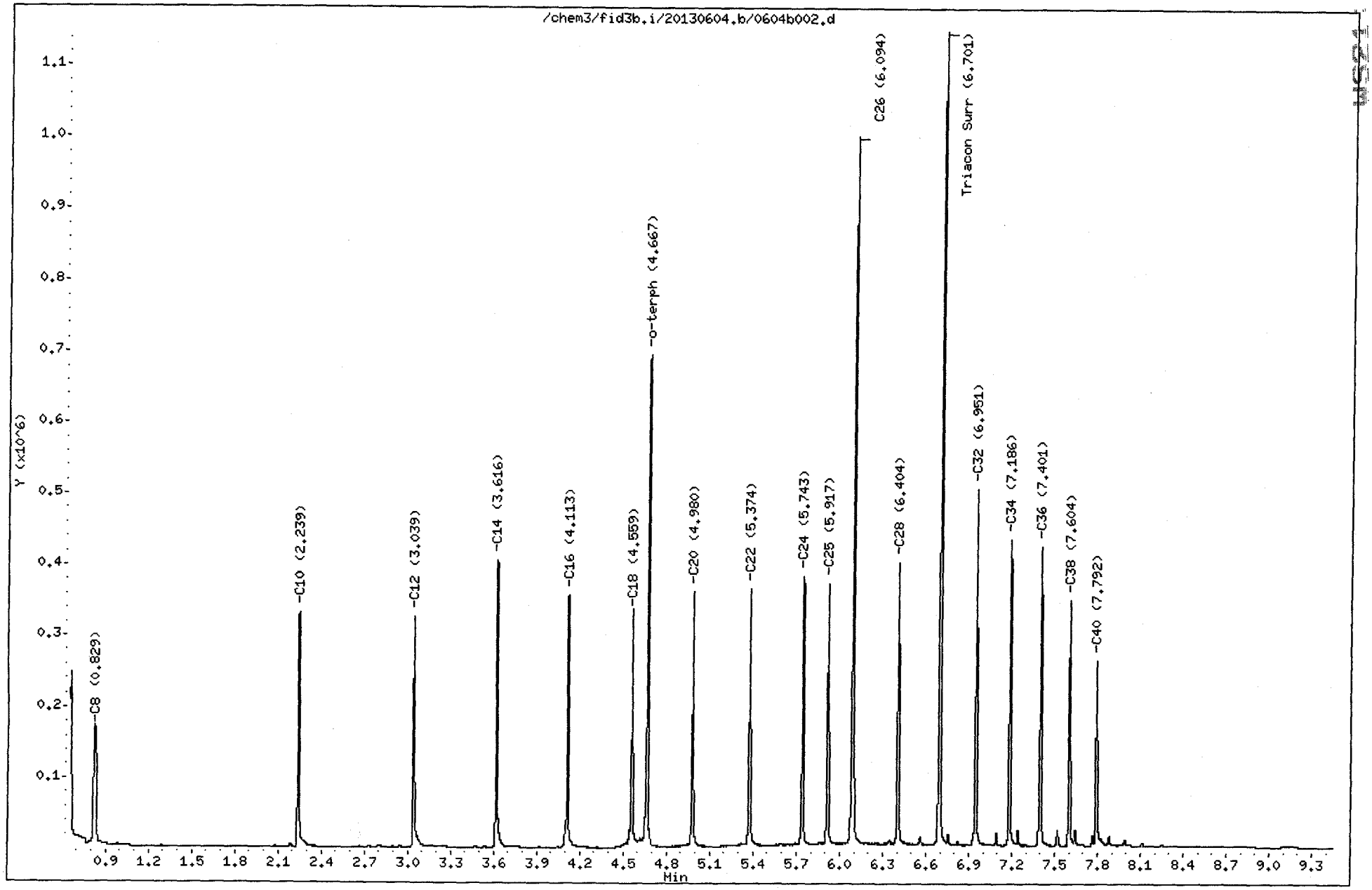
Data File: /chem3/fid3b.i/20130604.b/0604b002.d
Date : 04-JUN-2013 08:32
Client ID:
Sample Info: RT0604

Column phase: RTX-1

Instrument: fid3b.i

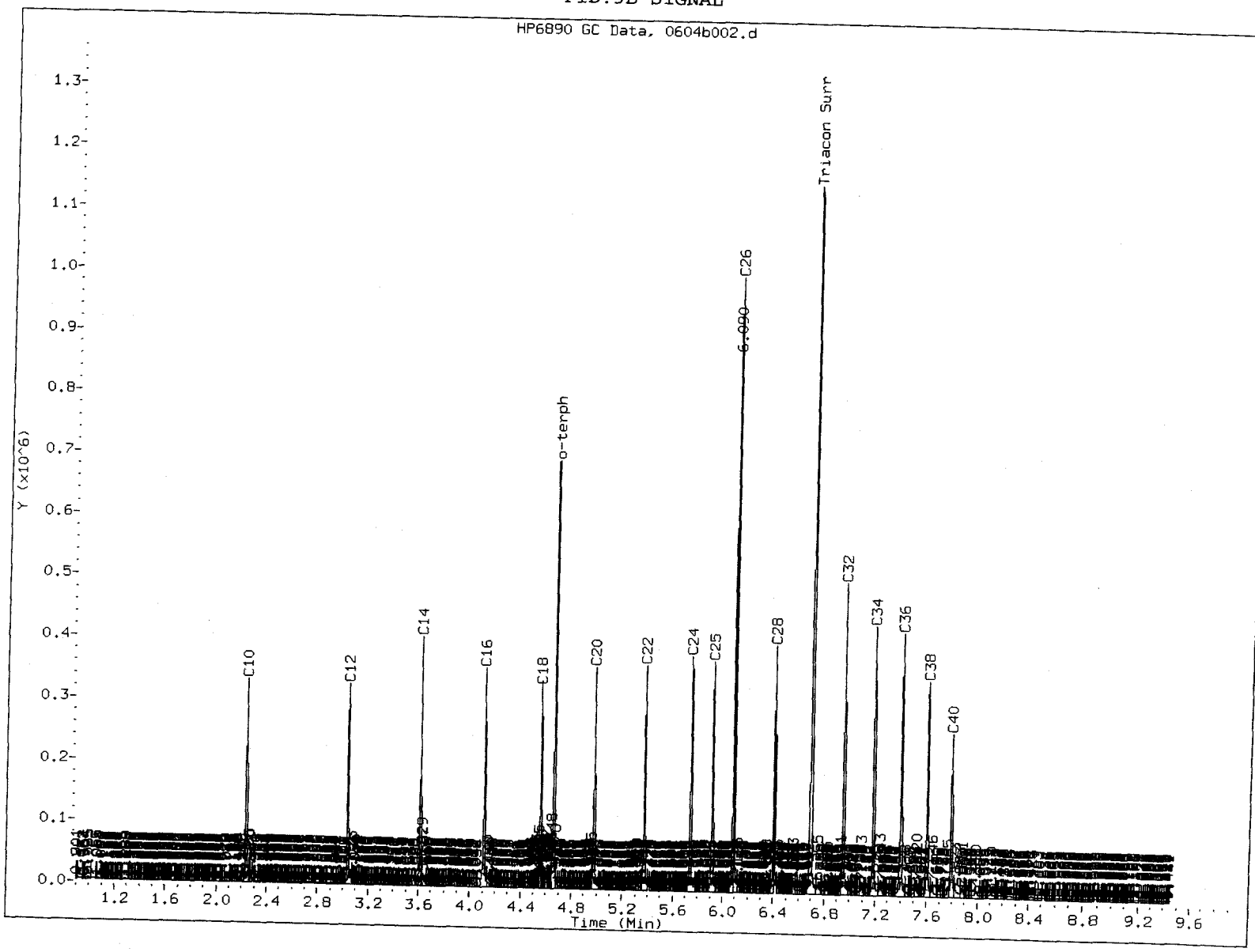
Operator: JW
Column diameter: 0.25

6/6/13



FID:3B-2C/RTX-1 RT0604

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/8/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b003.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: IB0604
Client ID:
Injection: 04-JUN-2013 08:51
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	66695	5
C8	0.824	-0.005	3199	1658	WATPHD	(C12-C24)	62624	6.05
C10	2.238	-0.002	365	350	WATPHM	(C24-C38)	152638	15.46
C12	3.039	0.000	336	116	AK102	(C10-C25)	85295	6.90
C14	3.616	0.000	273	47	AK103	(C25-C36)	124682	17.54
C16	4.114	0.001	161	42				
C18	4.562	0.003	304	228				
C20	4.979	-0.001	325	68				
C22	5.378	0.004	50	35	MSPIRIT	(Tol-C12)	66695	4.85
C24	5.744	0.001	95	37				
C25	5.921	0.004	59	17				
C26	6.087	-0.007	62	18				
C28	6.399	-0.005	153	35				
C32	6.964	0.013	1689	1292				
C34	7.187	0.001	998	664				
Filter Peak	----							
C36	7.386	-0.015	12667	11771				
o-terph	4.669	0.002	911289	573407	JET-A	(C10-C18)	44527	4.11
Triacon Surr	6.697	-0.005	759426	594422				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	573407	42.6	94.7
Triacontane	594422	45.6	101.2

JW 6/8/13

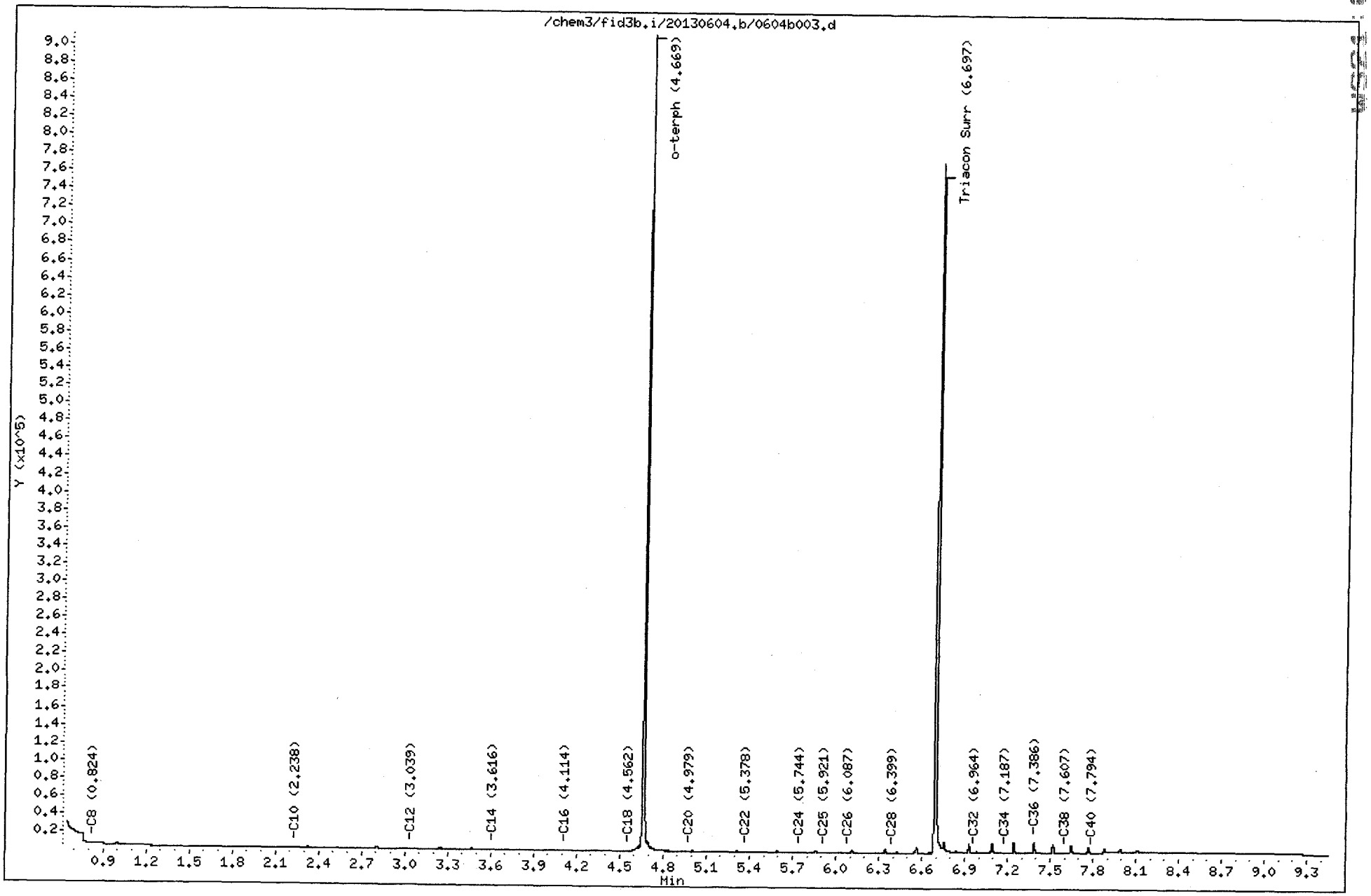
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b003.d
Date : 04-JUN-2013 08:51
Client ID:
Sample Info: IB0604

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b019.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: DIESEL#2
Client ID:
Injection: 04-JUN-2013 15:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	692398	51
C8	0.831	0.002	4965	7511	WATPHD	(C12-C24)	2357377	227.60
C10	2.239	-0.001	16887	12293	WATPHM	(C24-C38)	52702	5.34
C12	3.037	-0.002	26679	26194	AK102	(C10-C25)	2821698	228.35 M
C14	3.613	-0.003	43611	23857	AK103	(C25-C36)	33344	4.69
C16	4.113	0.000	70070	61774				
C18	4.558	-0.001	76681	55621				
C20	4.978	-0.002	38658	30371				
C22	5.376	0.002	18078	19325	MSPIRIT	(Tol-C12)	692398	50.40
C24	5.739	-0.004	2295	997				
C25	5.914	-0.003	1044	410				
C26	6.093	-0.001	501	167				
C28	6.410	0.006	148	130				
C32	6.958	0.007	61	28				
C34	7.186	0.000	206	70				
Filter Peak	----							
C36	7.387	-0.014	2648	2919				
o-terph	4.671	0.004	878372	574278	JET-A	(C10-C18)	2129331	196.72
Triacon Surr	6.701	0.000	41	12				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	574278	42.7	94.9
Triacontane	12	0.0	0.0

JW 6/8/13

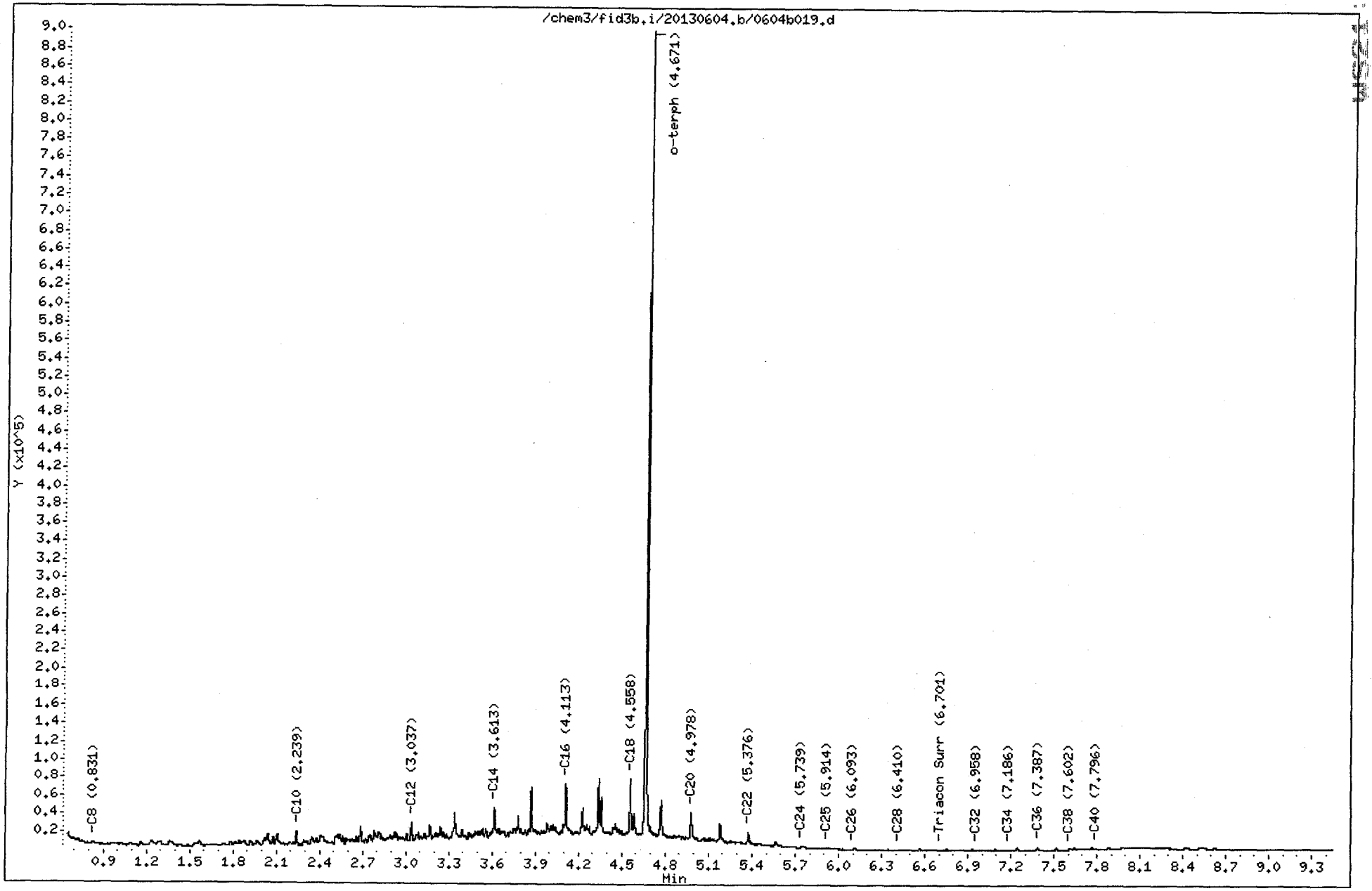
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b019.d
Date : 04-JUN-2013 15:08
Client ID:
Sample Info: DIESEL#2

Column phase: RTX-1

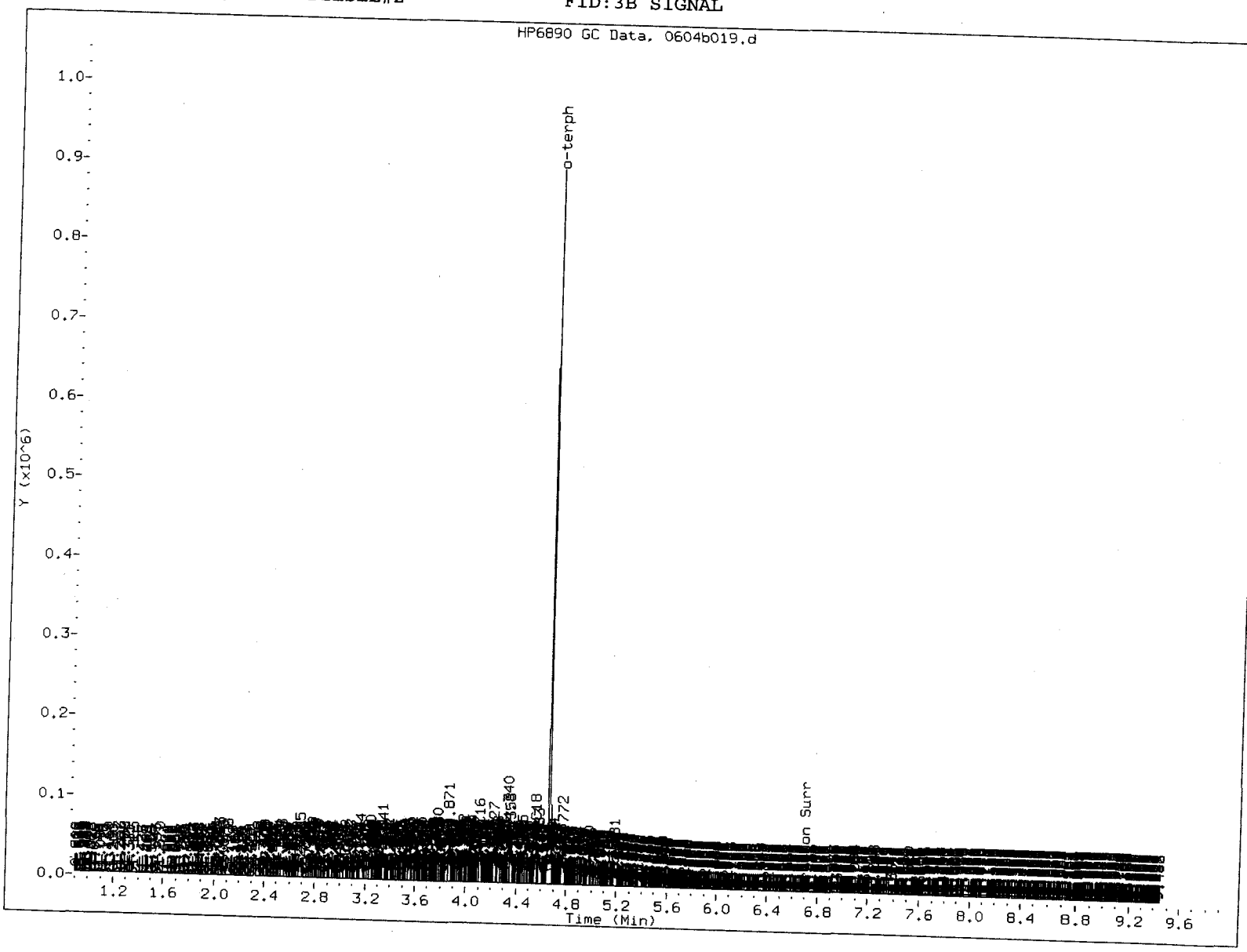
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL#2

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/8/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b020.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: MOIL#2
Client ID:
Injection: 04-JUN-2013 15:32
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	45725	3
C8	0.835	0.007	2629	2181	WATPHD	(C12-C24)	407139	39.31
C10	2.241	0.002	243	159	WATPHM	(C24-C38)	5178434	524.51
C12	3.041	0.002	209	87	AK102	(C10-C25)	527586	42.70
C14	3.616	0.000	217	41	AK103	(C25-C36)	4461837	627.68 M
C16	4.117	0.004	167	129				
C18	4.557	-0.002	239	113				
C20	4.979	-0.001	1014	237				
C22	5.375	0.001	4733	2197	MSPIRIT	(Tol-C12)	45725	3.33
C24	5.743	0.000	19758	5335				
C25	5.917	-0.001	26896	17465				
C26	6.089	-0.005	32582	15289				
C28	6.402	-0.002	40347	19667				
C32	6.952	0.002	68556	24606				
C34	7.183	-0.003	65447	44725				
Filter Peak	----							
C36	7.401	0.000	60825	29230				
o-terph	4.661	-0.006	1975	1551	JET-A	(C10-C18)	38095	3.52
Triacon Surr	6.705	0.003	851884	637155				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1551	0.1	0.3
Triacontane	637155	48.8	108.5

JW 6/8/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

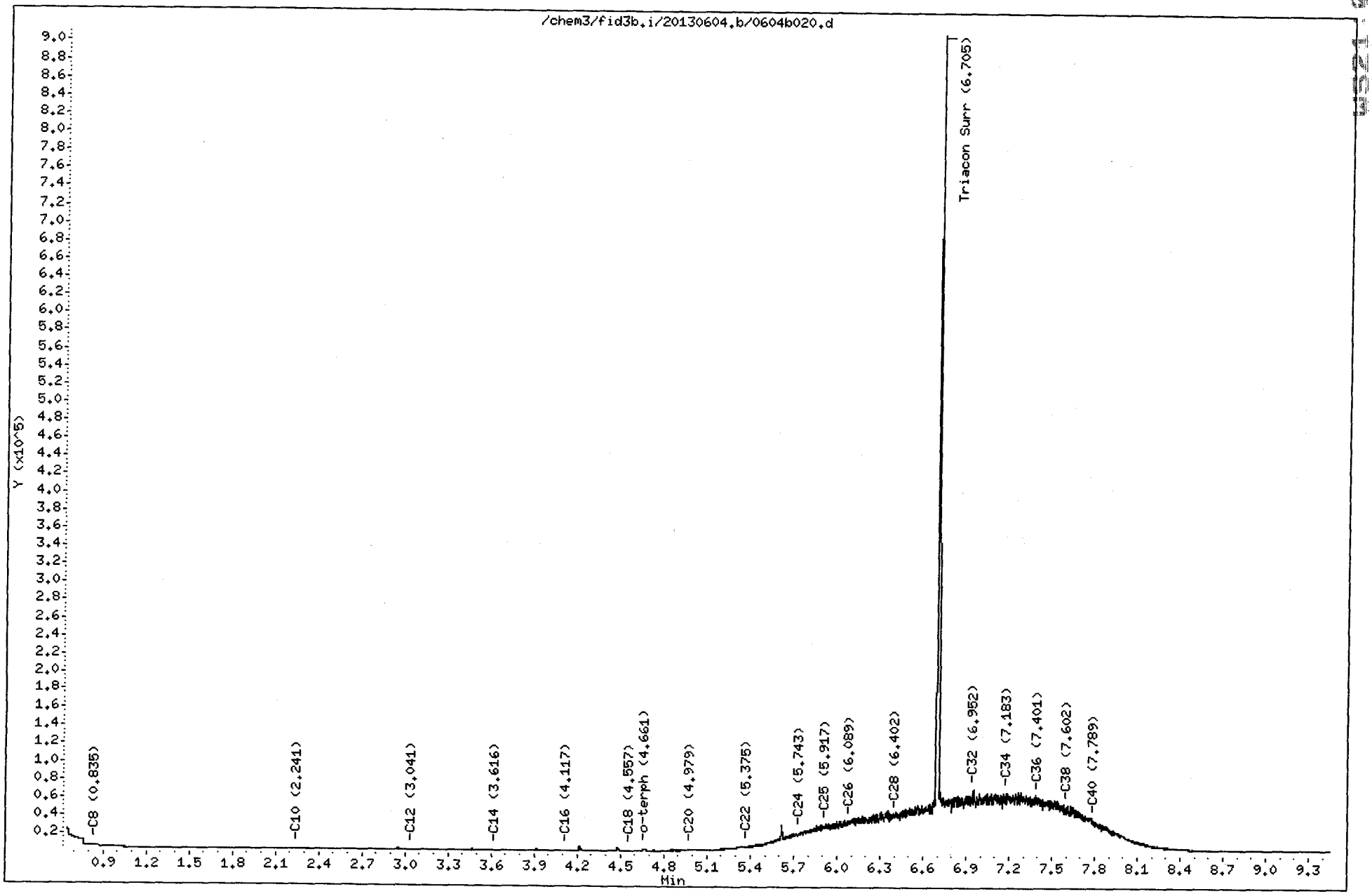
Data File: /chem3/fid3b.i/20130604.b/0604b020.d
Date : 04-JUN-2013 15:32
Client ID:
Sample Info: MOIL#2

Column phase: RTX-1

Instrument: fid3b.i

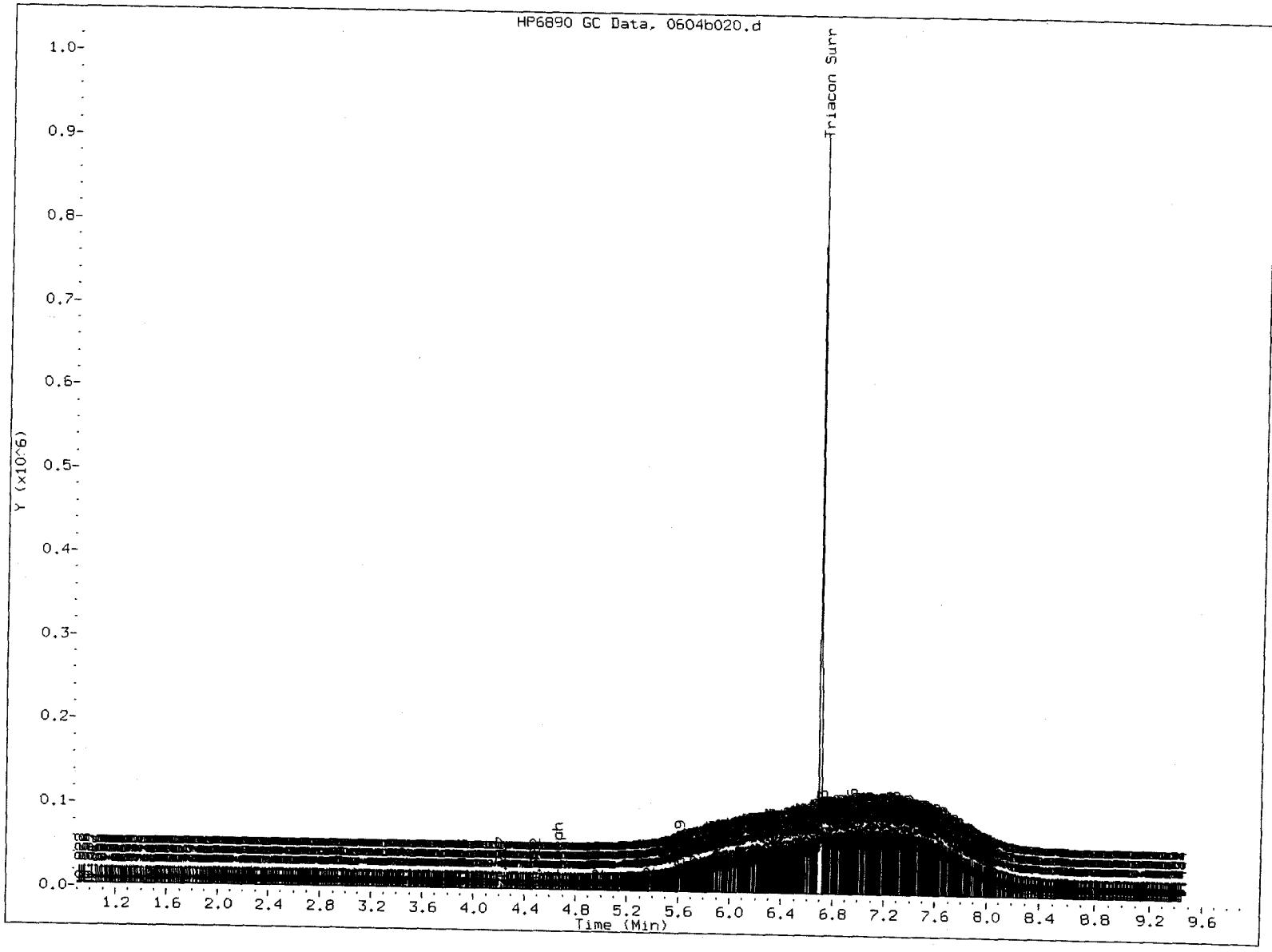
Operator: JW
Column diameter: 0.25

MJ 6/8/13



FID:3B-2C/RTX-1 MOIL#2

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/8/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b025.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WR99MBS1
Client ID: WR99MBS1
Injection: 04-JUN-2013 17:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	60939	5	
C8	0.825	-0.003	2841	2538	WATPHD	(C12-C24)	90213	8.71	
C10	2.247	0.007	266	294	WATPHM	(C24-C38)	103951	10.53	
C12	3.037	-0.002	193	32	AK102	(C10-C25)	102880	8.33	
C14	3.609	-0.007	156	154	AK103	(C25-C36)	84012	11.82	M
C16	4.114	0.001	479	229					
C18	4.556	-0.003	830	515					
C20	4.977	-0.002	507	219					
C22	5.373	-0.001	199	42	MSPIRIT	(Tol-C12)	60939	4.44	
C24	5.746	0.003	44	30					
C25	5.913	-0.004	39	21					
C26	6.093	-0.001	43	22					
C28	6.398	-0.006	272	86					
C32	6.956	0.006	2968	3166					
C34	7.190	0.004	987	603					
Filter Peak	----								
C36	7.389	-0.011	1328	856					
o-terph	4.666	-0.001	984258	545826	JET-A	(C10-C18)	67868	6.27	
Triacon Surr	6.722	0.021	877436	633481					

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	545826	40.6	90.2
Triacontane	633481	48.6	107.9

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

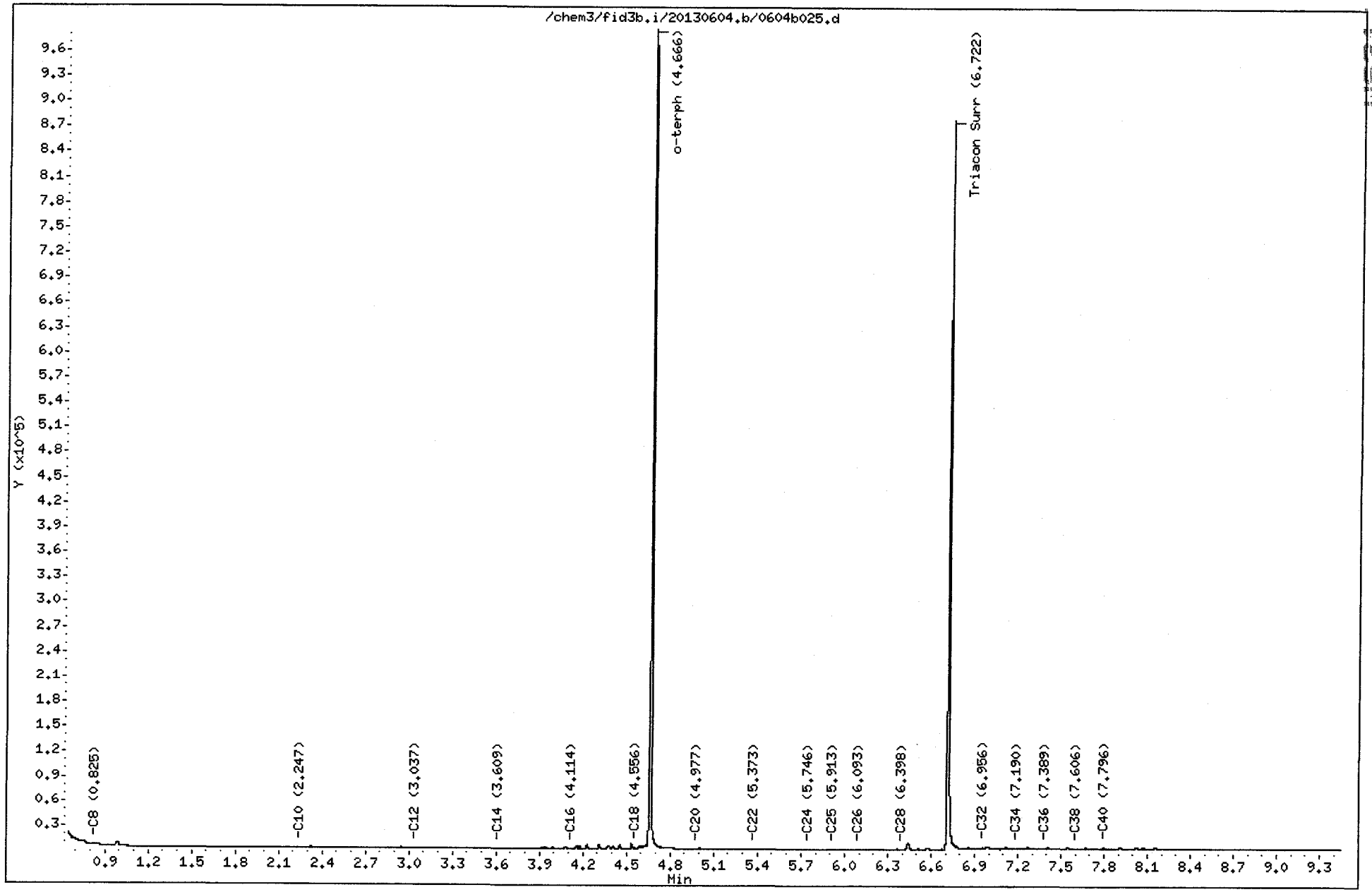
SW 6/6/13

Data File: /chem3/fid3b.i/20130604.b/0604b025.d
Date : 04-JUN-2013 17:08
Client ID: WR99MBS1
Sample Info: WR99MBS1

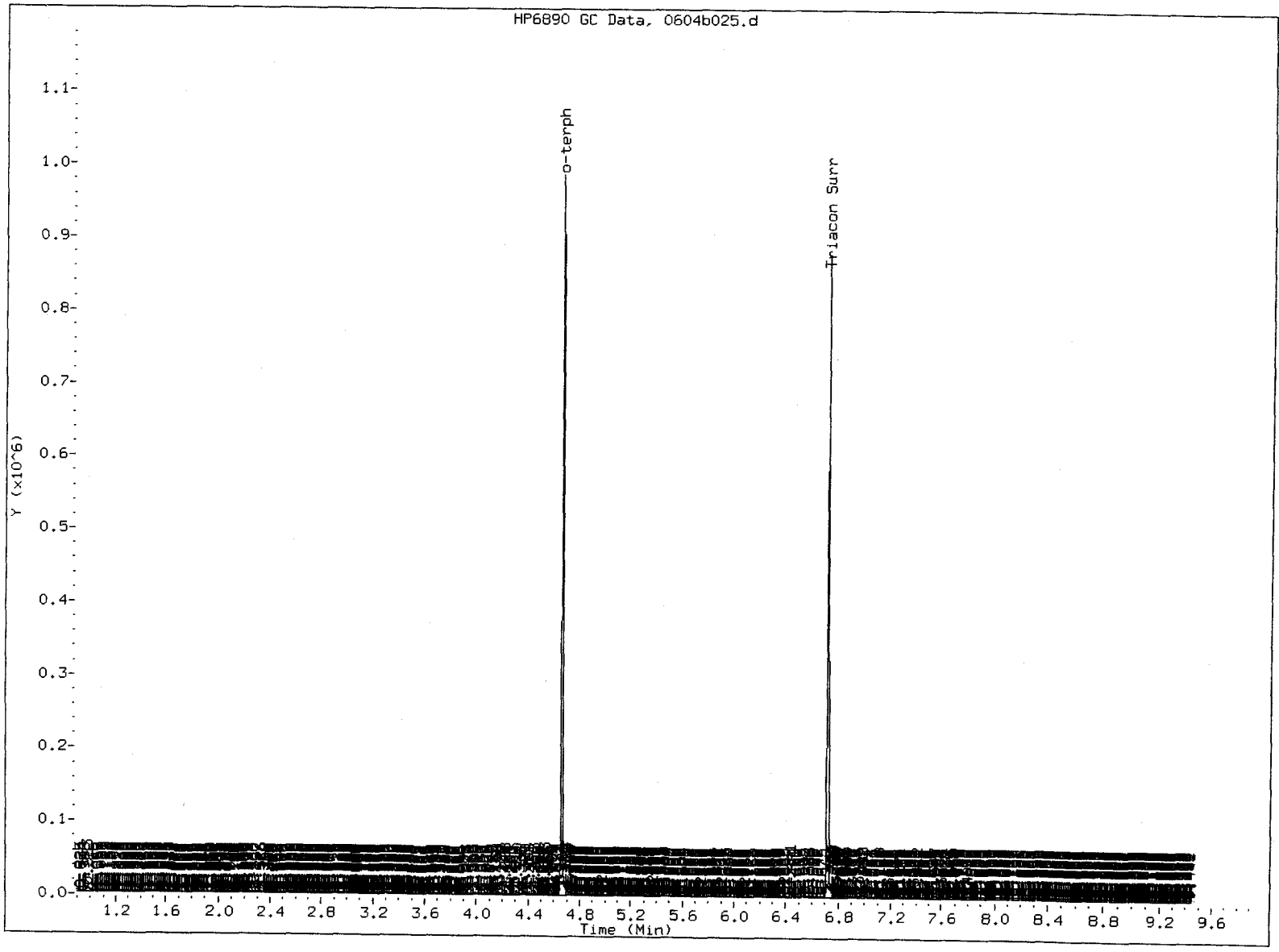
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 WR99MBS1 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction — peak was split
3. Peak not found
5. Skimmed surrogate

Analyst: RV Date: 6/8/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b026.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WR99LCSS1
Client ID: WR99LCSS1
Injection: 04-JUN-2013 17:27
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	3291050	244
C8	0.829	0.000	9966	11862	WATPHD	(C12-C24)	13259286	1280.17
C10	2.248	0.009	75793	56746	WATPHM	(C24-C38)	224548	22.74
C12	3.037	-0.002	149264	64406	AK102	(C10-C25)	15701614	1270.69 M
C14	3.612	-0.004	255988	211491	AK103	(C25-C36)	181478	25.53
C16	4.109	-0.004	344856	272849				
C18	4.560	0.001	375396	388706				
C20	4.982	0.002	203203	194658				
C22	5.379	0.005	101711	98358	MSPIRIT	(Tol-C12)	3291050	239.55
C24	5.748	0.005	30547	16819				
C25	5.914	-0.003	7543	2620				
C26	6.094	0.000	6136	1753				
C28	6.403	-0.001	862	261				
C32	6.956	0.006	2472	2418				
C34	7.184	-0.002	145	44				
Filter Peak	----							
C36	7.391	-0.010	346	202				
o-terph	4.668	0.001	861668	516408	JET-A	(C10-C18)	11955646	1104.53
Triacon Surr	6.721	0.020	887926	649536				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	516408	38.4	85.3
Triacontane	649536	49.8	110.6

SW 6/8/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

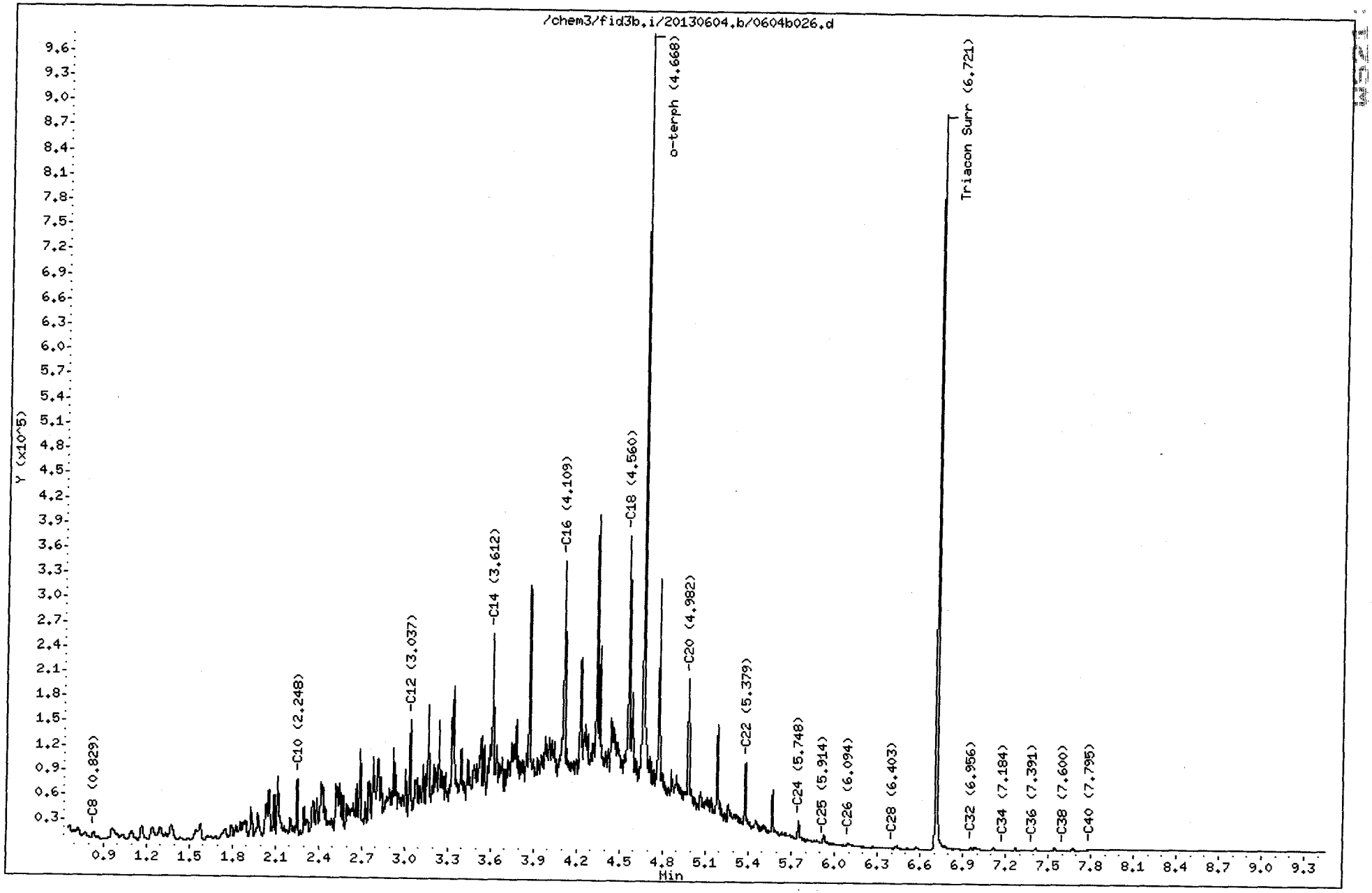
Data File: /chem3/fid3b.i/20130604.b/0604b026.d
Date : 04-JUN-2013 17:27
Client ID: WR99LCSS1
Sample Info: WR99LCSS1

Column phase: RTX-1

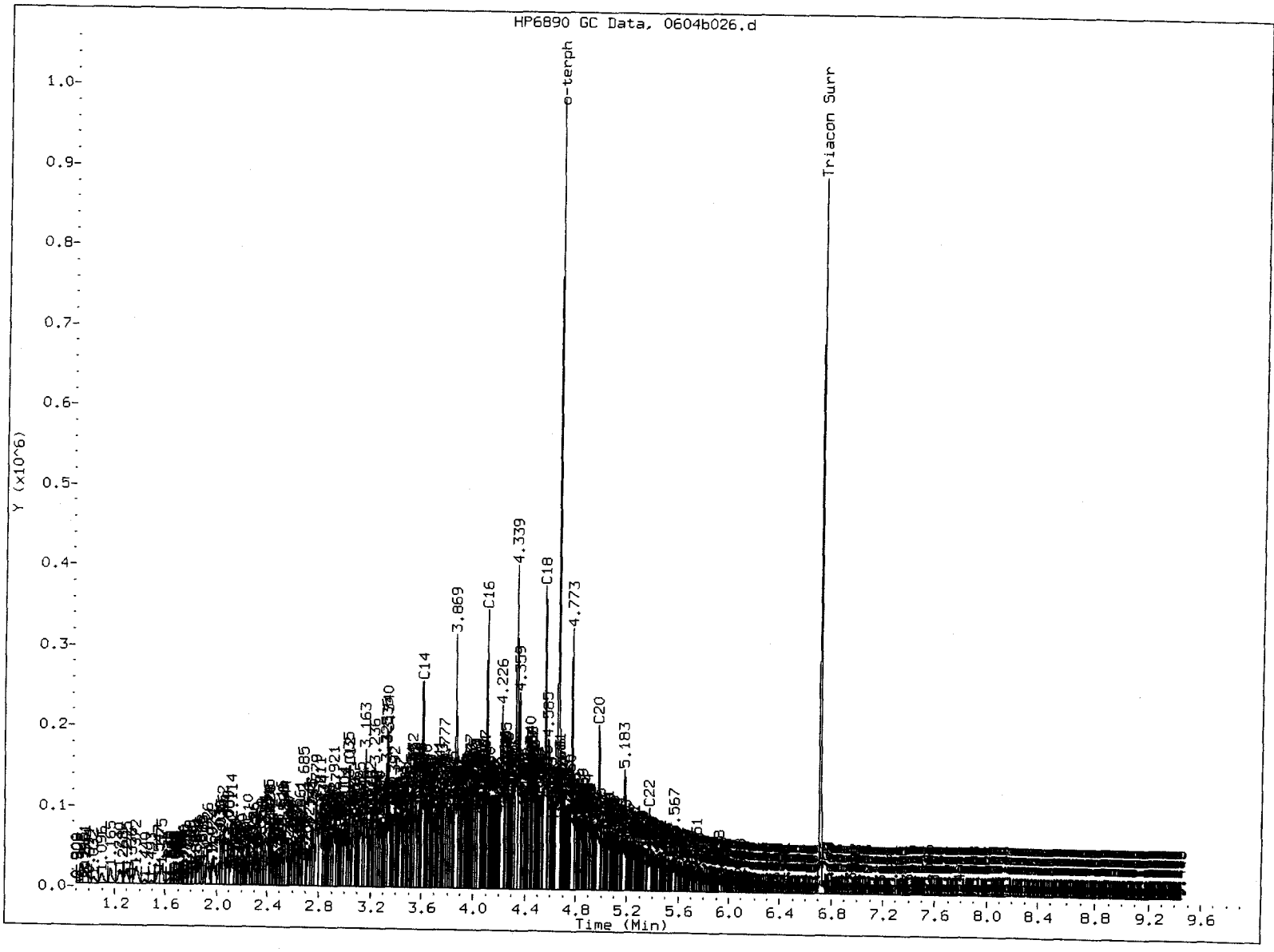
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 6/5/13



FID:3B-2C/RTX-1 WR99LCSS1 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 6/8/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b030.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WS21A
Client ID: KC-IV-SPS-20130531-
Injection: 04-JUN-2013 18:56
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	207296	15
C8	0.829	0.000	3639	3456	WATPHD	(C12-C24)	4481751	432.71
C10	2.243	0.003	2713	2510	WATPHM	(C24-C38)	9061534	917.82
C12	3.044	0.005	4706	3318	AK102	(C10-C25)	4768552	385.91 M
C14	3.613	-0.003	19731	10751	AK103	(C25-C36)	7753908	1090.80 M
C16	4.115	0.002	22670	12425				
C18	4.558	-0.001	35472	19160				
C20	4.981	0.001	35907	19511				
C22	5.375	0.001	36706	9779	MSPIRIT	(Tol-C12)	207296	15.09
C24	5.746	0.003	38130	11271				
C25	5.915	-0.002	43488	22237				
C26	6.090	-0.004	52304	29926				
C28	6.405	0.001	79113	44943				
C32	6.950	-0.001	114000	61683				
C34	7.184	-0.002	123042	21233				
Filter Peak	----							
C36	7.398	-0.002	103932	14424				
o-terph	4.676	0.009	730626	422211	JET-A	(C10-C18)	1940428	179.27
Triacon Surr	6.747	0.046	494486	624788				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	422211	31.4	69.8
Triacontane	624788	47.9	106.4

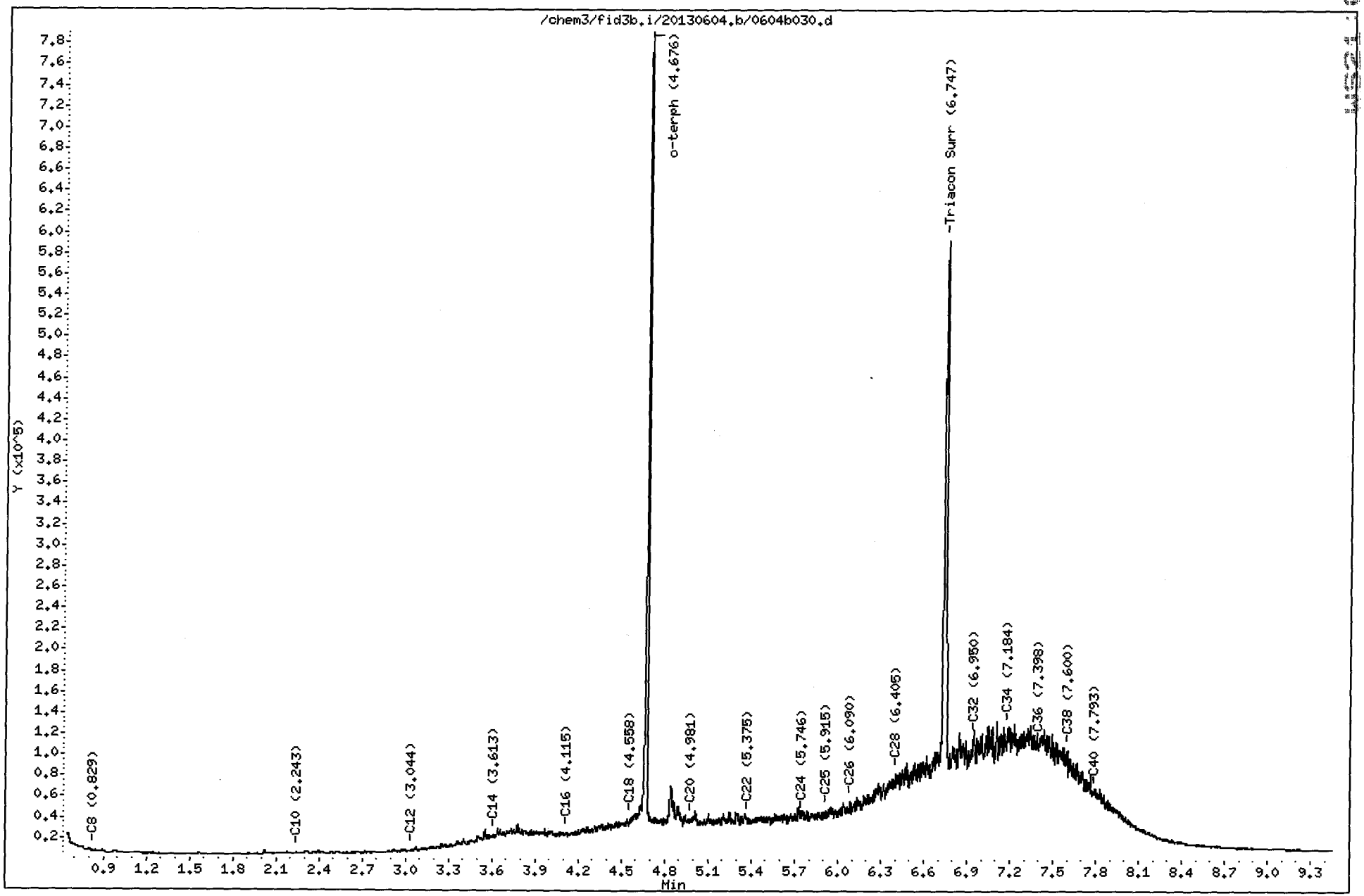
JW 6/8/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b030.d
Date : 04-JUN-2013 18:56
Client ID: KC-IV-SPS-20130531-
Sample Info: WS21A

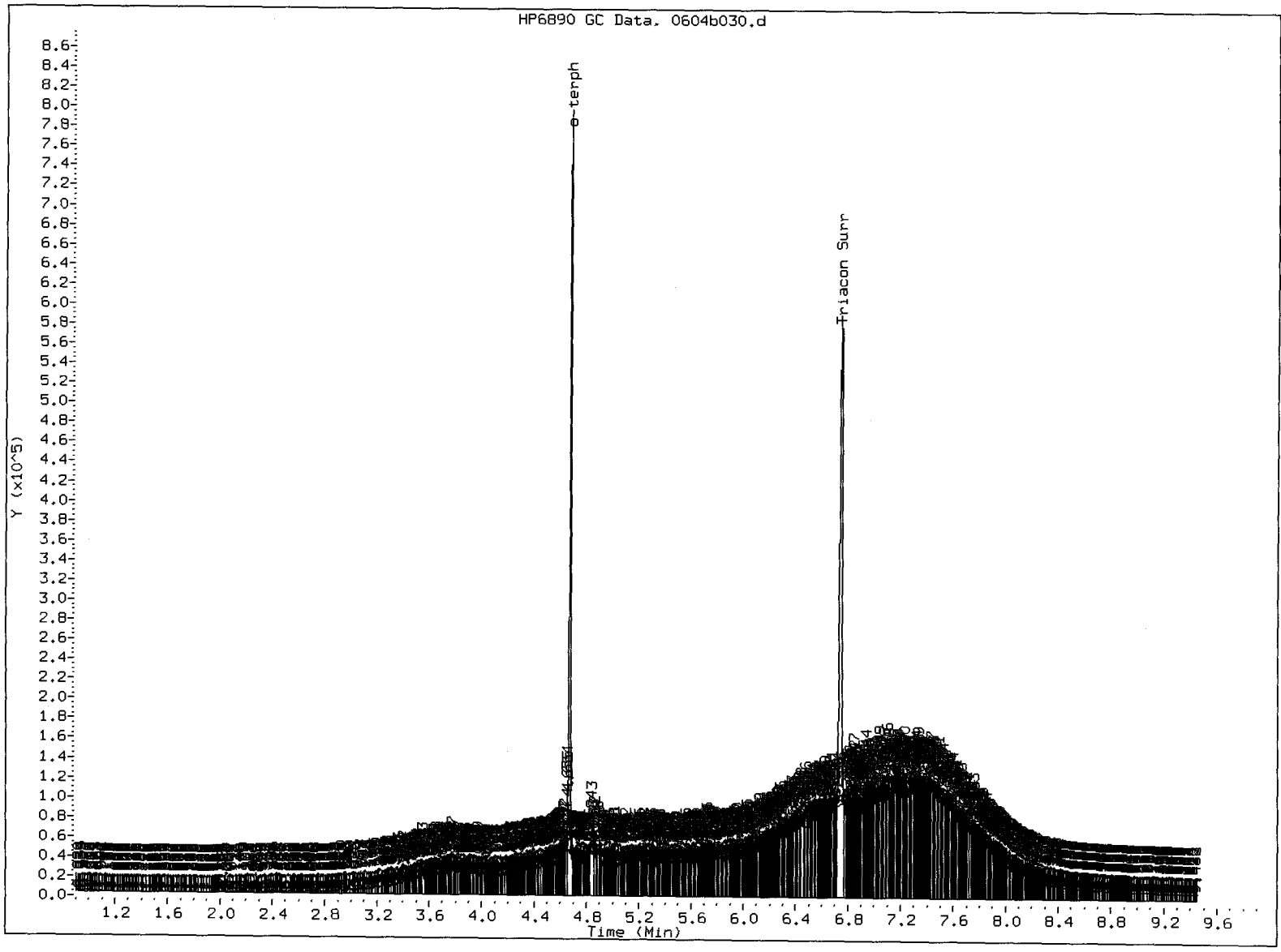
Instrument: fid3b.i
Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 WS21A

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/8/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b032.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: DIESEL#3
Client ID:
Injection: 04-JUN-2013 19:35
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	627736	46
C8	0.828	-0.001	4043	5551	WATPHD	(C12-C24)	2468390	238.32
C10	2.247	0.008	15810	12131	WATPHM	(C24-C38)	84260	8.53
C12	3.033	-0.006	28959	27387	AK102	(C10-C25)	2908437	235.37 M
C14	3.614	-0.002	47820	47651	AK103	(C25-C36)	53750	7.56
C16	4.113	0.000	73249	57221				
C18	4.552	-0.007	19449	4750				
C20	4.973	-0.006	12217	5439				
C22	5.371	-0.003	6546	3424	MSPIRIT	(Tol-C12)	627736	45.69
C24	5.747	0.004	1998	1082				
C25	5.914	-0.003	1066	512				
C26	6.096	0.002	410	94				
C28	6.409	0.005	36	4				
C32	6.953	0.003	388	45				
C34	7.189	0.003	800	346				
Filter Peak	----							
C36	7.398	-0.003	1199	500				
o-terph	4.677	0.010	946992	609223	JET-A	(C10-C18)	2174509	200.89
Triacon Surr	6.699	-0.002	127	65				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	609223	45.3	100.7
Triacontane	65	0.0	0.0

JW 6/8/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

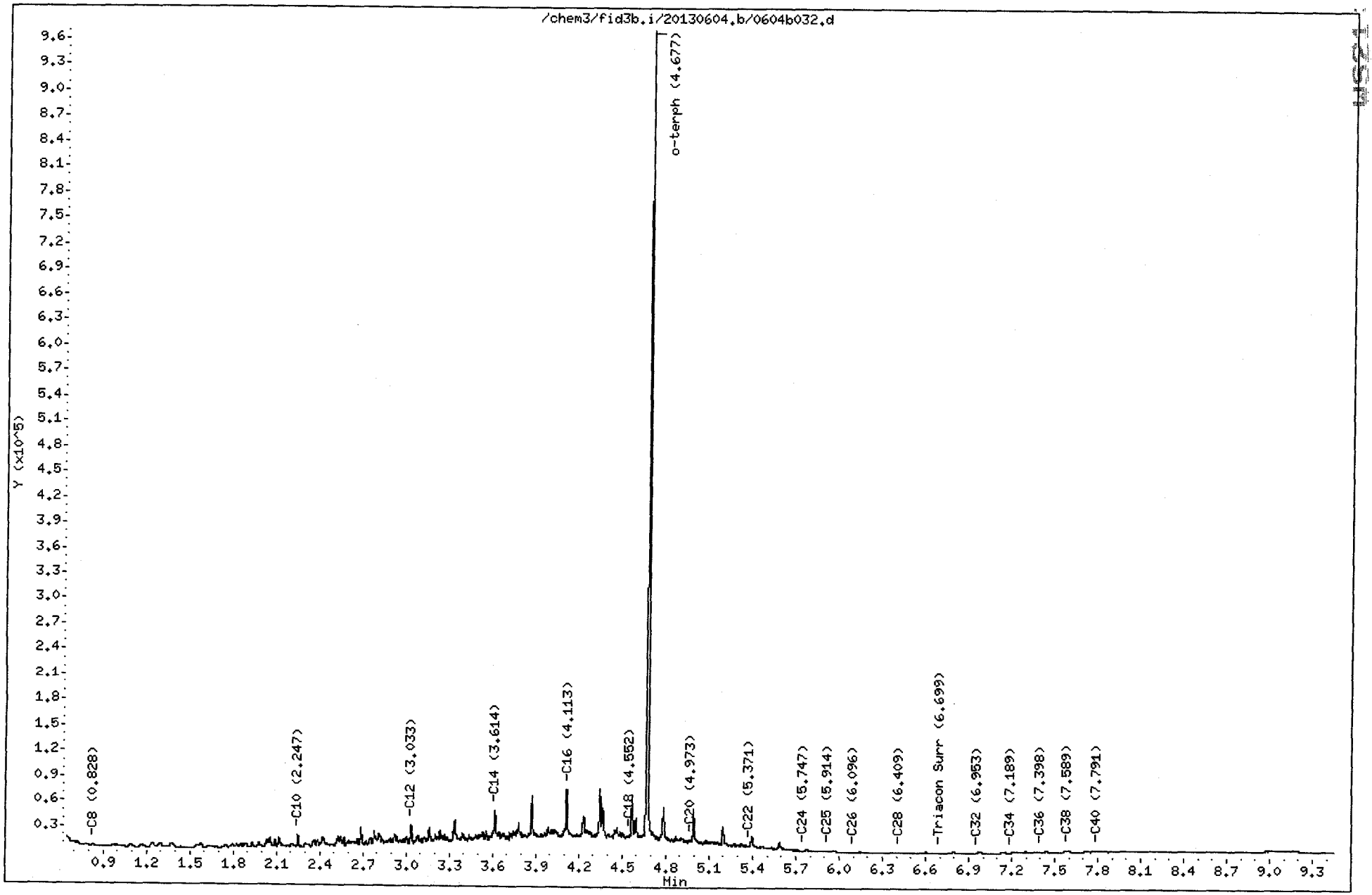
Data File: /chem3/fid3b.i/20130604.b/0604b032.d
Date : 04-JUN-2013 19:35
Client ID:
Sample Info: DIESEL#3

Column phase: RTX-1

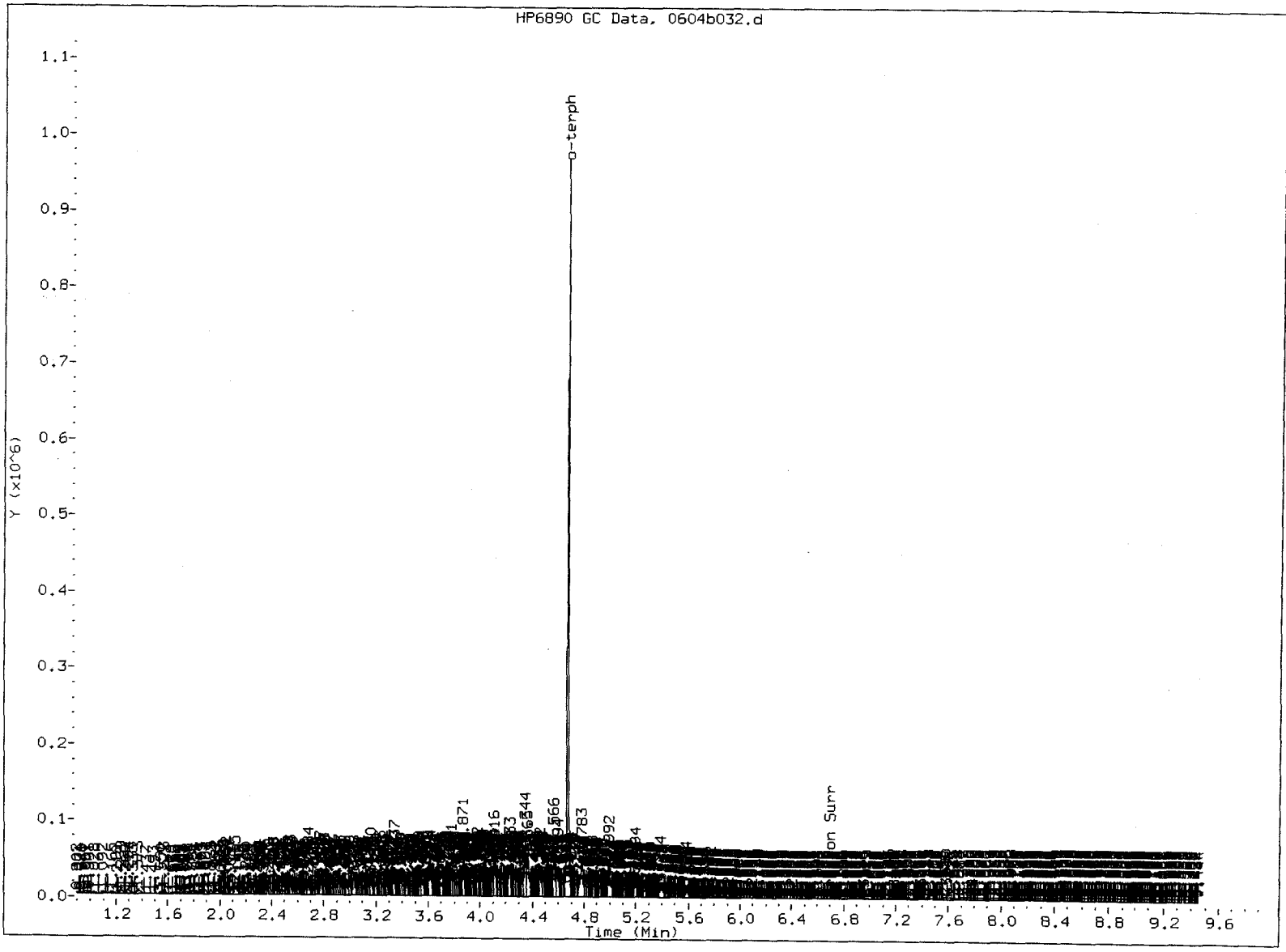
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

SW 6/8/13



FID:3B-2C/RTX-1 DIESEL#3 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: TJ Date: 6/8/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b033.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: MOIL#3
Client ID:
Injection: 04-JUN-2013 19:54
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	56154	4
C8	0.831	0.002	2631	933	WATPHD	(C12-C24)	408909	39.48
C10	2.230	-0.009	262	247	WATPHM	(C24-C38)	5126802	519.28
C12	3.038	-0.001	216	144	AK102	(C10-C25)	528304	42.75
C14	3.621	0.005	203	101	AK103	(C25-C36)	4436491	624.11 M
C16	4.109	-0.004	220	103				
C18	4.557	-0.002	345	91				
C20	4.981	0.001	1028	365				
C22	5.371	-0.003	5665	3180	MSPIRIT	(Tol-C12)	56154	4.09
C24	5.743	0.000	21398	10555				
C25	5.919	0.002	30563	14254				
C26	6.092	-0.002	35064	19873				
C28	6.403	-0.001	45105	16118				
C32	6.950	-0.001	51205	13136				
C34	7.186	0.000	56972	25579				
Filter Peak	----							
C36	7.403	0.002	63602	53202				
o-terph	4.675	0.008	2219	2023	JET-A	(C10-C18)	40203	3.71
Triacon Surr	6.763	0.062	506774	675513				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2023	0.2	0.3
Triacontane	675513	51.8	115.0

JW 6/5/13

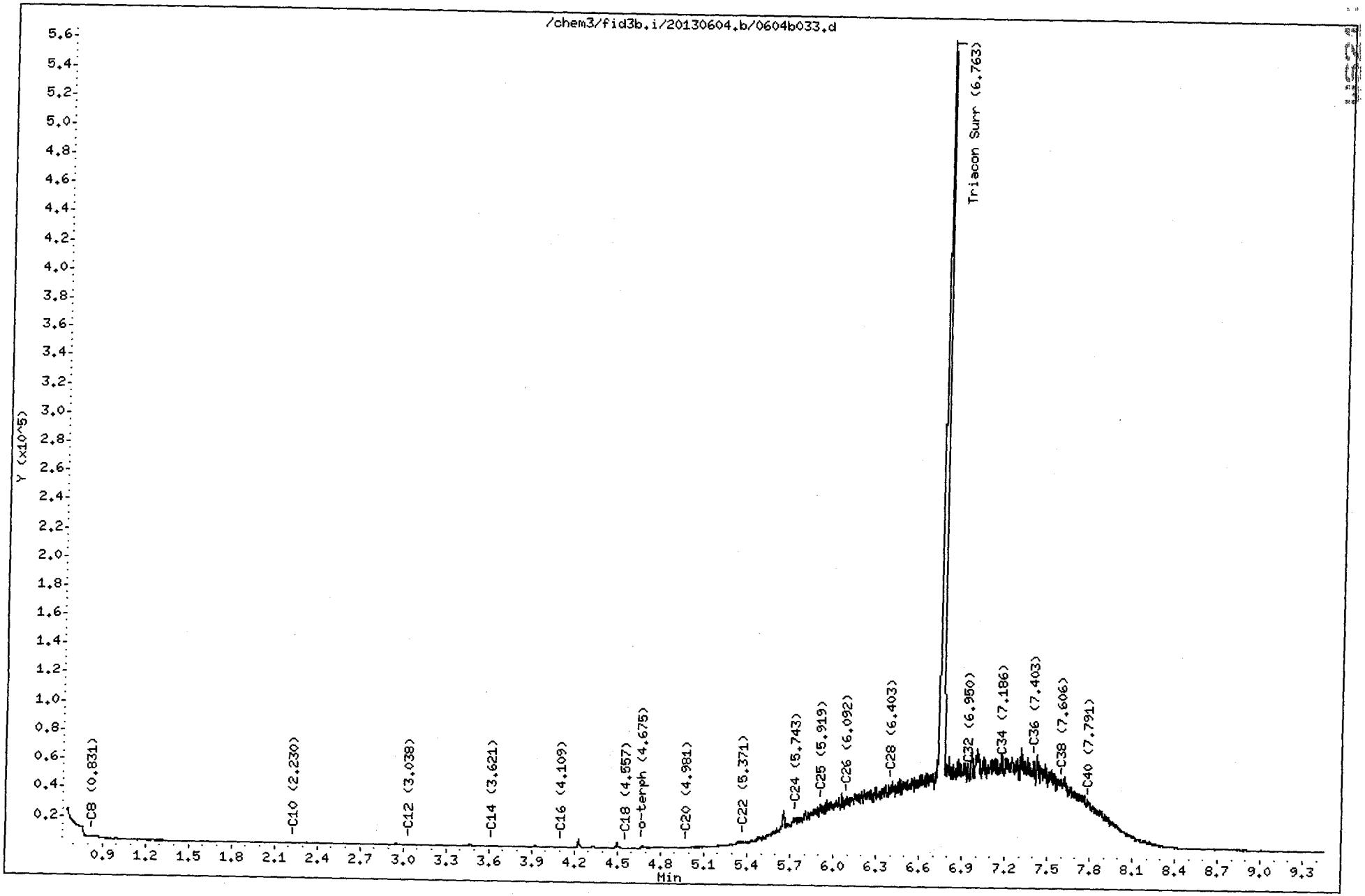
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b033.d
Date : 04-JUN-2013 19:54
Client ID:
Sample Info: MOIL#3

Column phase: RTX-1

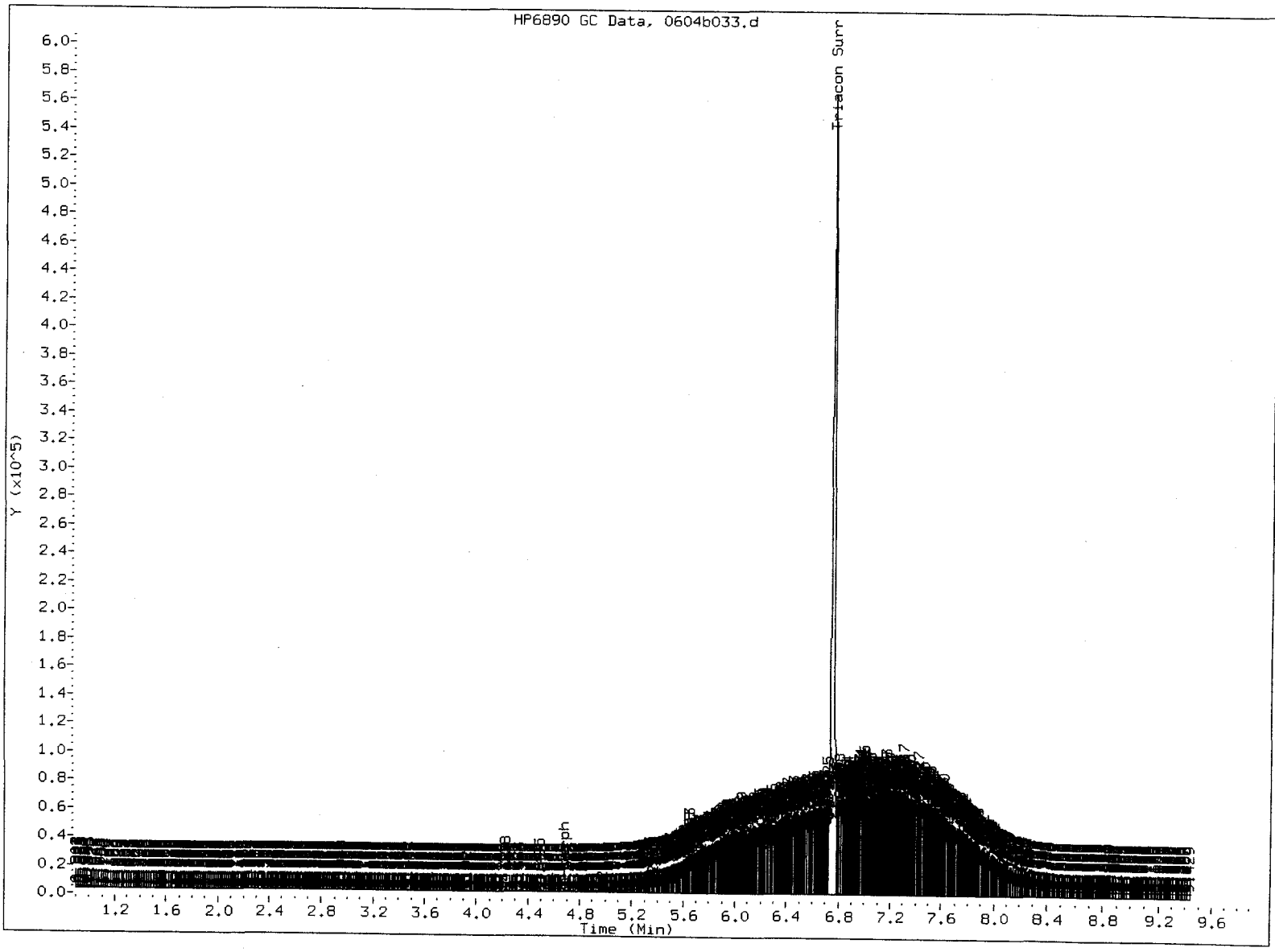
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL#3

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/8/12

TPHG Raw Data
Preparation Log

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.	Client ID	Prep/Extraction Date	MeOH Lot No.	Analyst
several	several	6/3/13		PC

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Spilt Volume (µL)	
1	WS31A	2		X	DE695	33.52	28.017	5.503	5	900	
2	B	2			DH247	33.93	30.032	3.892			
3	C	2			DE695	31.80	28.309	3.491			
4	D	2			DH247	34.66	30.046	4.614			
5	E	2				35.54	30.203	5.337			
6	F	2			↓	35.79	29.967	5.743			
7	WS04A	3			DE695	38.08	28.126	9.964			
8	WS18A	3				32.29	28.320	3.97			
9	B	3				33.17	28.273	4.897			
10	C	2				31.18	28.273	2.907			
11	WS21A	3				34.39	28.099	6.291			
12	MW99D	3		↓	↓	34.76	28.074	6.686	↓	↓	
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:	4005096 PH10					

SCE 13 SCE

TPHG Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: (404S(Gas) (410S(BTEX)) 430S(VPH) 700S(8260C) 703S(SIM) 706S(524.3) 710S(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 (PID-1) PID-2 PID-3 FID-6

Curve Date(s): 5/22/13 ~~Internal~~ Surrogate Standard ID VW795-2 Expiration 8/13/13
DAH 5/22/13

BFB Tune Meets Criteria?	(N/A) YES / NO	ICV Exceeding ±20%?	YES / (NO)
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	ICV Exceeding ±30%?	YES / (NO)
Q flag applied?	YES / (NO)	Linear Fits Used?	YES / (NO)
Manual Integrations for ICal?	(YES) / NO	Quadratic Fits Used?	YES / (NO)
Spectral Library Updated?	YES / (NO)	Calibration Points Dropped?	(YES) / ~~NO~~ DAH 5/2
Minimum Response Factors Met	(YES) / NO	Purge Volume (mL)	5mL

0.05 level on FID side for o-xylene

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	VW795-2	8/13/13	Vitra	B000435	11/22/13
Restek	B000332	11/13/13			

Detail problems, corrective actions and/or other pertinent information below:

Calibration for BTEX and surrogates. Surrogates calibrated with BTEX to avoid hydrocarbon interference.

Dropped 0.05 part for o-xylene on the FID side.

Analyst: DAH **Date:** 5/22/13

Reviewer: [signature] **Date:** 5/23/13

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 5/22/13 Analysis: BTEX/NWTPH-G Analyst: QM

Column 1 Serial No.: 82726 Column Type: RTX502.2

Column 2 Serial No.: Column Type:

GC Method: BETX ICal Date: 10/23/13, 5/22/13 Injection Volume: 5 mL

IS	Ical/Ccal	ICV
VW795-2, B000434	B000332 B000432 B000433	B000435 (ICV) B000332 (LCS)
QM 5/23/13	QM 5/23/13	QM 5/23/13

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-1.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF					
1	0833	0522a001.d	RINSE				1					
2	0902	0522a002.d	BCAL0.25	BCAL0.25			1					
3	0930	0522a003.d	BCAL0.5	BCAL0.5			1					
4	0958	0522a004.d	BCAL1	BCAL1			1					
5	1027	0522a005.d	BCAL5	BCAL5			1					
6	1056	0522a006.d	BCAL25	BCAL25			1					
7	1125	0522a007.d	BCAL50	BCAL50			1					
8	1155	0522a008.d	BCAL100	BCAL100			1					
9	1224	0522a009.d	BCAL200	BCAL200			1					
10	1253	0522a010.d	ICV25	ICV25			1					
11	1319	0522a011.d	MT/BCAL 1				1					
12	1408	0522a012.d	GCAL 1				1					
13	1427	0522a013.d	LCS0522	LCS0522			1					
14	1506	0522a014.d	LCSD0522	LCSD0522			1					
15	1543	0522a015.d	MB0522				1					
16	1612	0522a016.d	WQ46P	A2-F6-S-6	2	Soil	1					
17	1641	0522a017.d	WQ46Q	A2-F7-S-6	2		1					
18	1711	0522a018.d	WQ46N	A2-F8-S-6	3		1					
19	1740	0522a019.d	WQ46I	A2-F9-S-6	1		1					
20	1809	0522a020.d	WQ46J	A2-F10-S-6	2		1					
21	1838	0522a021.d	WQ46K	A2-F11-S-6	2		1					
22	1907	0522a022.d	WQ46L	A2-F12-S-6	1		1					
23	1937	0522a023.d	BCAL 2	OK			1					
24	2006	0522a024.d	GCAL 2	OK			1					
25	2035	0522a025.d	WQ46M	A2-F13-S-6	1	Soil	1					
26	2104	0522a026.d	WQ46N	A2-F14-S-6	3		1					
27	2133	0522a027.d	WQ46O	A2-F15-S-6	2		1					
28	2203	0522a028.d	WQ46P	A2-F16-S-6	3		1					
29	2232	0522a029.d	WQ46Q	A2-F17-S-6	2		1					
30	2301	0522a030.d	WQ46R	A2-F18-S-6	3		1					
31	2330	0522a031.d	WQ46S	A2-F19-S-6	1		1					
32	2359	0522a032.d	WQ46T	A2-F20-S-6	1		1					
33	0029	0522a033.d	WQ48A	MW-B1	1		≤2	1				
34	0058	0522a034.d	WQ49F	GTSP-GW-Q2-TB	1		1					
35	0127	0522a035.d	BCAL 3	OK			1					
36	0156	0522a036.d	GCAL 3	OK			1					
37	0225	0522a037.d	WQ49A	GTSP-S-GW-Q2-7-17	2		≤2	1	Rerun			
38	0255	0522a038.d	WQ49B	GTSP-SB-GW-Q2-7-17	2			1				
39	0324	0522a039.d	WQ49C	GTSP-GW-Q2-EB	1		1					
40	0353	0522a040.d	GCAL 4 *	LOW			1					

* File 40 (GCAL 4 failed low), but GCAL (file 3 on the following day) ran within 24 hours of the retention time standard and closed the bracket with a passing recovery.

QM 5/23/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-1.b/FID.m
Batch File: /chem3/pid1.i/20130522-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0522a002	0522a003	0522a004	0522a005	0522a006	0522a007	0522a008	0522a009	0522a010
INJ.DATE:	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013
INJ.TIME:	09:02	09:30	09:58	10:27	10:56	11:25	11:55	12:24	12:53

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.278	4.208-4.348	+++++	+++++
6	MTBE	4.530	4.540	4.538	4.539	4.537	4.537	4.539	4.538	4.539	4.530	4.460-4.600	4.537	0.003
7	nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.777	4.707-4.847	+++++	+++++
8	nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	*6.820*	*6.750-6.890*	+++++	+++++
9	BENZENE	7.007	7.015	7.010	7.012	7.012	7.012	7.014	7.014	7.013	7.007	6.937-7.077	7.012	0.002
$ 10	TFT(Surr)	7.849	7.848	7.848	7.848	7.848	7.848	7.849	7.848	7.849	7.849	7.779-7.919	7.848	0.001
11	nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.481	9.411-9.551	+++++	+++++
12	Toluene	9.877	9.875	9.873	9.873	9.874	9.873	*9.875*	*9.877*	*9.874*	*9.877*	*9.807-9.947*	*9.875*	*0.001*
13	nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.404	12.334-12.474	+++++	+++++
14	ETHYLBENZENE	12.763	12.766	12.766	12.764	12.765	12.765	12.767	12.770	12.766	12.763	12.693-12.833	12.766	0.002
15	M/P-XYLENE	12.927	12.929	12.924	12.925	12.926	12.927	12.930	12.935	12.927	12.927	12.857-12.997	12.928	0.003
16	O-XYLENE	13.863	13.873	13.873	13.874	13.874	13.873	13.876	13.879	13.875	13.863	13.793-13.933	13.873	0.004
17	nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.205	15.135-15.275	+++++	+++++

Reviewer 1 _____ Date: 5/22/13
Reviewer 2 _____ Date: 5/23/13

SCANNED

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-1.b/FID.m
Batch File: /chem3/pid1.i/20130522-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.383	15.382	15.383	15.382	15.382	15.382	15.382	15.383	15.383	15.383	15.313-15.453	15.383	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.106	16.036-16.176	+++++	+++++
21 nc11	+++++	+++++	16.702	16.701	16.701	16.701	16.702	16.704	16.701	16.702	16.632-16.772	16.702	0.001
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.798	17.728-17.868	+++++	+++++
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.602	18.532-18.672	+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.800	18.730-18.870	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-2.b/PIDB.m
Batch File: /chem3/pid1.i/20130522-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0522a002	0522a003	0522a004	0522a005	0522a006	0522a007	0522a008	0522a009	0522a010
INJ.DATE:	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013
INJ.TIME:	09:02	09:30	09:58	10:27	10:56	11:25	11:55	12:24	12:53

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.550	4.550	4.543	4.547	4.545	4.545	4.547	4.545	4.546	4.550	4.500-4.600	4.546	0.002
	2 Benzene	7.017	7.020	7.020	7.020	7.020	7.020	7.022	7.021	7.021	7.017	6.967-7.067	7.020	0.001
$	3 TFT(Surr)	7.856	7.856	7.857	7.857	7.856	7.856	7.857	7.856	7.857	7.856	7.806-7.906	7.856	0.001
	4 Toluene	9.883	9.883	9.883	9.883	9.882	9.883	9.884	9.885	9.883	9.883	9.833-9.933	9.883	0.001
	5 Ethylbenzene	12.773	12.773	12.773	12.774	12.774	12.774	12.776	12.778	12.774	12.773	12.723-12.823	12.774	0.002
	6 M/P-Xylene	12.933	12.937	12.934	12.935	12.935	12.936	12.938	12.943	12.936	12.933	12.883-12.983	12.936	0.003
	7 O-Xylene	13.883	13.883	13.883	13.883	13.883	13.883	13.884	13.888	13.884	13.883	13.853-13.913	13.884	0.002
$	8 BB(Surr)	15.390	15.390	15.390	15.390	15.390	15.391	15.390	15.391	15.390	15.390	15.340-15.440	15.390	0.000

Reviewer 1 _____ Date: 5/22/13
Reviewer 2 _____ Date: 5/23/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-1.b

ARI Job No.: BCAL Method: FID.m Instrument: pid1.i Date: 22-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0902	0522a002.d	BCAL0.25	BCAL0.25	1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, BB(Surr),
0930	0522a003.d	BCAL0.5	BCAL0.5	1	O-XYLENE,
0958	0522a004.d	BCAL1	BCAL1	1	Toluene, BENZENE, O-XYLENE, BB(Surr),
1027	0522a005.d	BCAL5	BCAL5	1	NO MANUAL INTEGRATION
1056	0522a006.d	BCAL25	BCAL25	1	NO MANUAL INTEGRATION
1125	0522a007.d	BCAL50	BCAL50	1	NO MANUAL INTEGRATION
1155	0522a008.d	BCAL100	BCAL100	1	NO MANUAL INTEGRATION
1224	0522a009.d	BCAL200	BCAL200	1	NO MANUAL INTEGRATION
1253	0522a010.d	ICV25	ICV25	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-2.b

ARI Job No.: BCAL Method: PIDB.m Instrument: pid1.i Date: 22-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0902	0522a002.d	BCAL0.25	BCAL0.25	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, BB(Surr),
0930	0522a003.d	BCAL0.5	BCAL0.5	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE,
0958	0522a004.d	BCAL1	BCAL1	1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1027	0522a005.d	BCAL5	BCAL5	1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1056	0522a006.d	BCAL25	BCAL25	1	Toluene,
1125	0522a007.d	BCAL50	BCAL50	1	Toluene, BB(Surr),
1155	0522a008.d	BCAL100	BCAL100	1	NO MANUAL INTEGRATION
1224	0522a009.d	BCAL200	BCAL200	1	NO MANUAL INTEGRATION
1253	0522a010.d	ICV25	ICV25	1	NO MANUAL INTEGRATION

SEQUOIA TEST

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20130522-1.b/0522a011.d
Level 2: /chem3/pid1.i/20130522-1.b/0522a002.d
Level 3: /chem3/pid1.i/20130522-1.b/0522a003.d
Level 4: /chem3/pid1.i/20130522-1.b/0522a004.d
Level 5: /chem3/pid1.i/20130522-1.b/0522a005.d
Level 6: /chem3/pid1.i/20130522-1.b/0522a006.d
Level 7: /chem3/pid1.i/20130522-1.b/0522a007.d
Level 8: /chem3/pid1.i/20130522-1.b/0522a008.d
Level 9: /chem3/pid1.i/20130522-1.b/0522a009.d

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
6 MTBE	+++++	856	1054	902	840	811		
	781	770	744				845	11.680
7 nC6	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
9 BENZENE	+++++	1540	1502	1560	1515	1464		
	1399	1370	1331				1460	5.764
11 nC8	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
12 Toluene	+++++	1480	1582	1694	1476	1414		
	1358	1315	1283				1450	9.565
13 nC9	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
14 ETHYLBENZENE	+++++	124	124	115	113	107		
	103	98.66000	96.17500				110	9.723
15 M/P-XYLENE	+++++	1384	1378	1288	1350	1266		
	1216	1168	1151				1275	7.170

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
16 O-XYLENE	+++++	+++++	972	1265	1407	1326		
	1277	1226	1204				1239	10.946
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
$ 10 TFT(Surr)	+++++	30.63636	30.95455	30.54545	29.88060	29.37000		
	28.75188	28.18539	28.40000				29.59053	3.634
$ 18 BB(Surr)	+++++	20.63636	20.13636	20.50000	19.88060	19.80000		
	19.51128	19.17978	19.32000				19.87055	2.668

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD	
	50.000 Level 7	100.000 Level 8	200.000 Level 9						
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 9.57176
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20130522-2.b/0522a002.d
Level 2: /chem3/pid1.i/20130522-2.b/0522a003.d
Level 3: /chem3/pid1.i/20130522-2.b/0522a004.d
Level 4: /chem3/pid1.i/20130522-2.b/0522a005.d
Level 5: /chem3/pid1.i/20130522-2.b/0522a006.d
Level 6: /chem3/pid1.i/20130522-2.b/0522a007.d
Level 7: /chem3/pid1.i/20130522-2.b/0522a008.d
Level 8: /chem3/pid1.i/20130522-2.b/0522a009.d

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	___ RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	96.00000	76.00000	73.00000	88.80000	92.28000	90.78000		
	91.10000	89.51500					87.18438	9.361
2 Benzene	184	228	222	232	236	233		
	233	231					225	7.569
4 Toluene	176	178	195	204	210	206		
	207	209					198	6.985
5 Ethylbenzene	132	130	163	173	179	177		
	176	176					163	12.557
6 M/P-Xylene	156	167	172	185	191	189		
	188	191					180	7.306
7 O-Xylene	96.00000	122	143	149	157	156		
	155	159					142	15.542

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
$ 3 TFT(Surr)	31.81818	32.40909	32.47727	32.23881	32.41000	32.24812		
	32.00562	32.27000					32.23464	0.691
$ 8 BB(Surr)	68.18182	69.86364	72.43182	71.70149	73.47000	73.45113		
	73.66854	75.61500					72.29793	3.258

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 7.90855
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

XAH 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a002.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a002.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL0.25
Client ID: BCAL0.25
Injection Date: 22-MAY-2013 09:02
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.000	337	4257	11.4	TFT(Surr)
15.383	0.000	227	1854	11.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	1959	0.005 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	2559	0.004 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	2345	0.004 M
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	1959	0.005 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	350	10.9	TFT(Surr)
15.390	-0.001	750	10.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	-0.005	46	0.20N	Benzene
9.883	-0.001	44	0.22N	Toluene
12.773	-0.005	33	0.20N	Ethylbenzene
12.933	-0.010	78	0.43N	M/P-Xylene
13.883	-0.005	24	0.17N	O-Xylene
4.550	0.005	24	0.28N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a002.d
Lab Smp Id: BCAL0.25 Client Smp ID: BCAL0.25
Inj Date : 22-MAY-2013 09:02
Operator : LH Inst ID: pid1.i
Smp Info : BCAL0.25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:02 Cal File: 0522a002.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.530	4.538	-0.008	214	0.25000	0.253 (M)
9	BENZENE	7.007	7.014	-0.007	385	0.25000	0.264 (M)
$ 10	TFT(Surr)	7.849	7.848	0.001	337	11.0000	11.39
12	Toluene	9.877	9.877	0.000	370	0.25000	0.255 (M)
14	ETHYLBENZENE	12.763	12.770	-0.007	31	0.25000	0.282 (M)
15	M/P-XYLENE	12.927	12.935	-0.008	692	0.50000	0.543 (M)
16	O-XYLENE	13.863	13.879	-0.016	547	0.25000	0.403 (M)
$ 18	BB(Surr)	15.383	15.383	0.000	227	11.0000	11.42 (M)

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a002.d

Date : 22-MAY-2013 09:02

Client ID: BCAL0.25

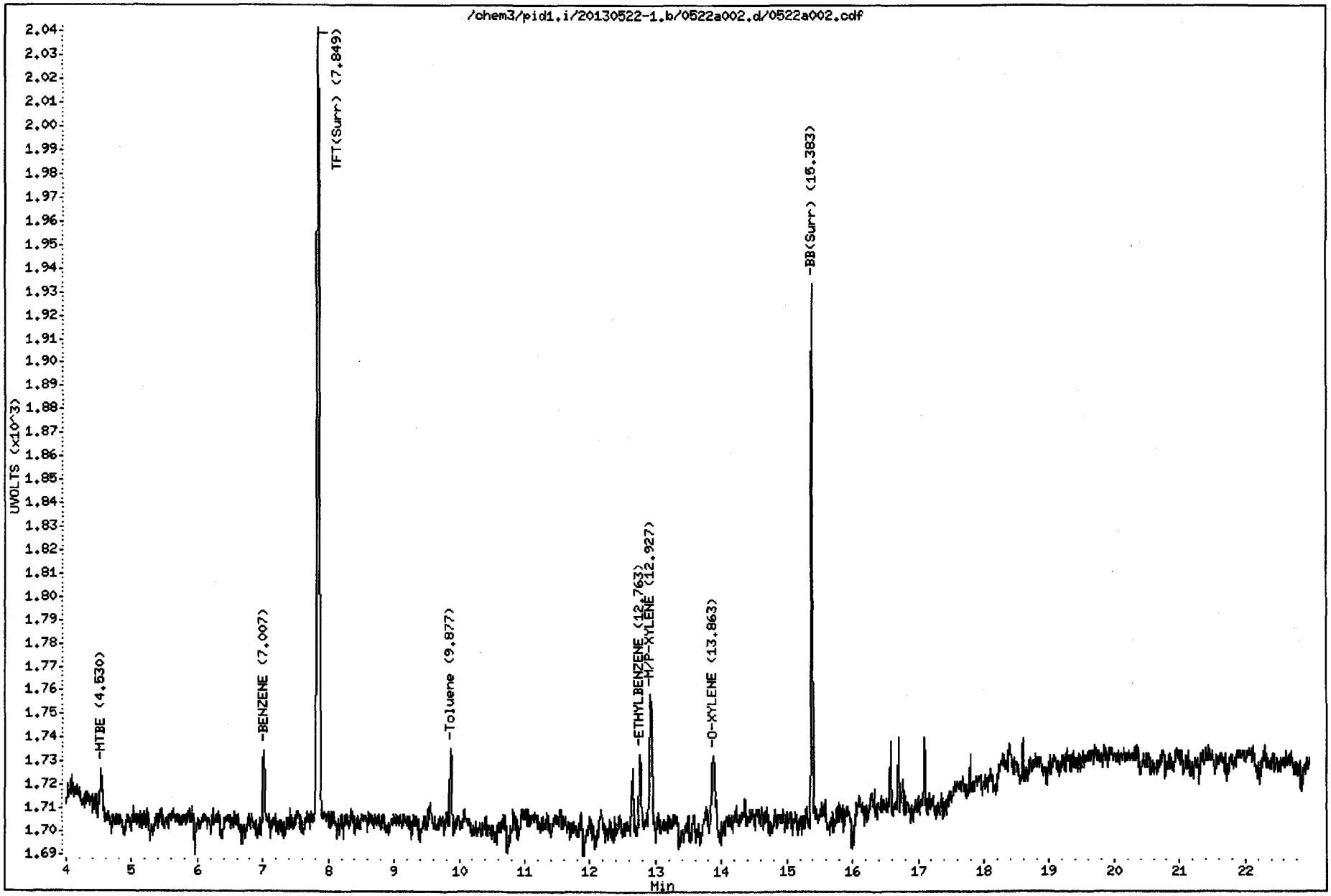
Sample Info: BCAL0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a002.d

Date : 22-MAY-2013 09:02

Client ID: BCAL0.25

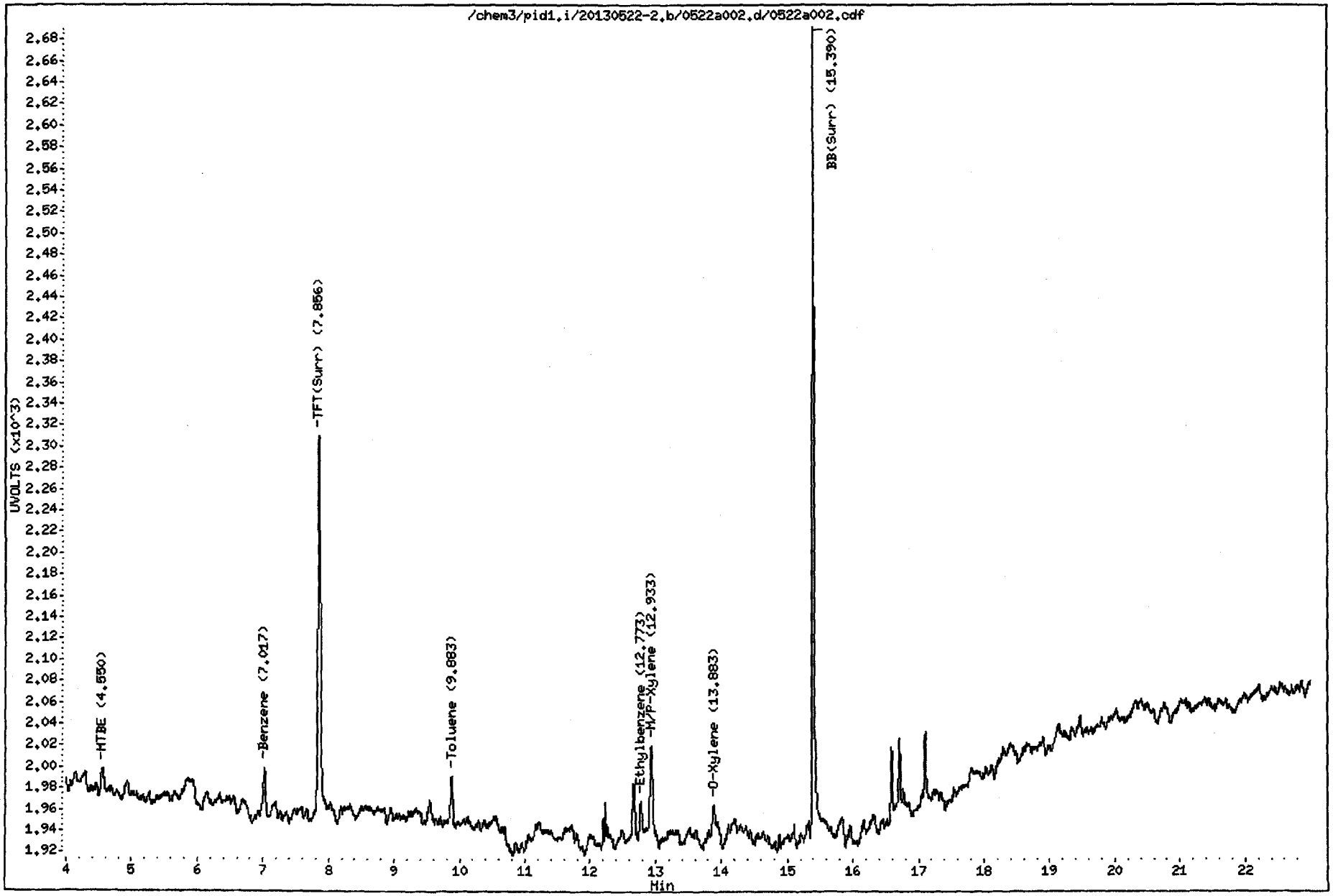
Sample Info: BCAL0.25

Column phase: RTX 502-2 PID

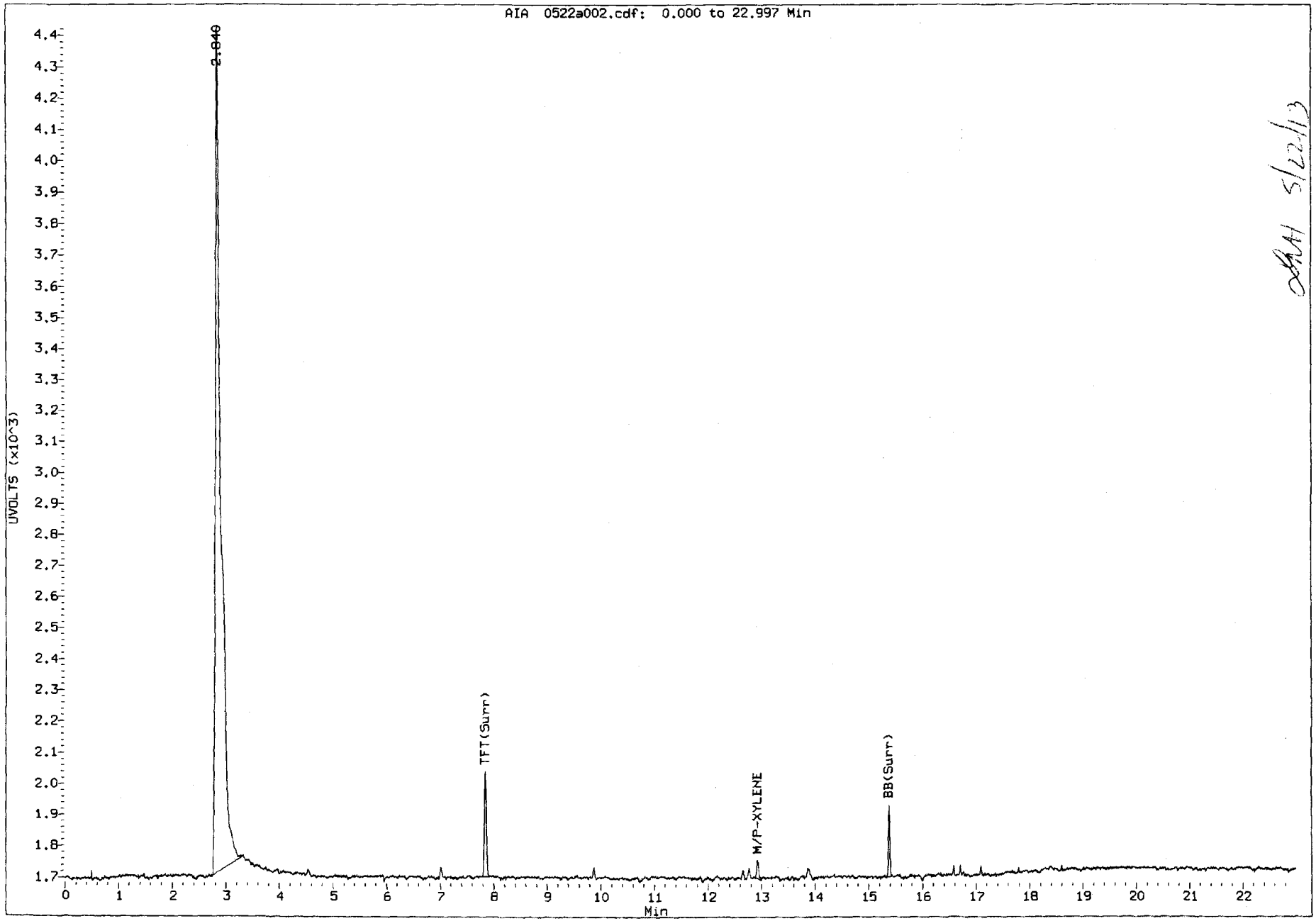
Instrument: pid1.i

Operator: LH

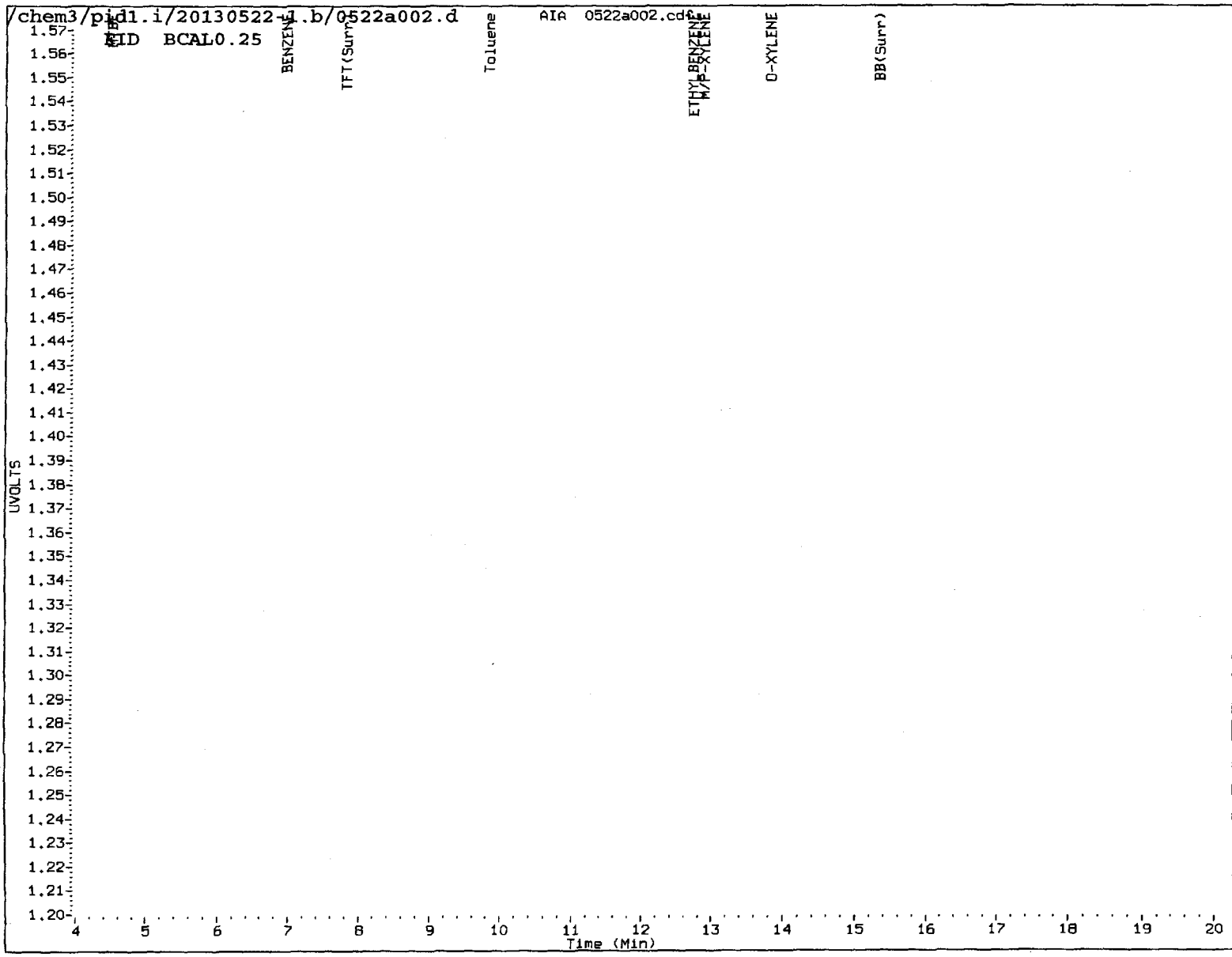
Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-1.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25



5/22/13



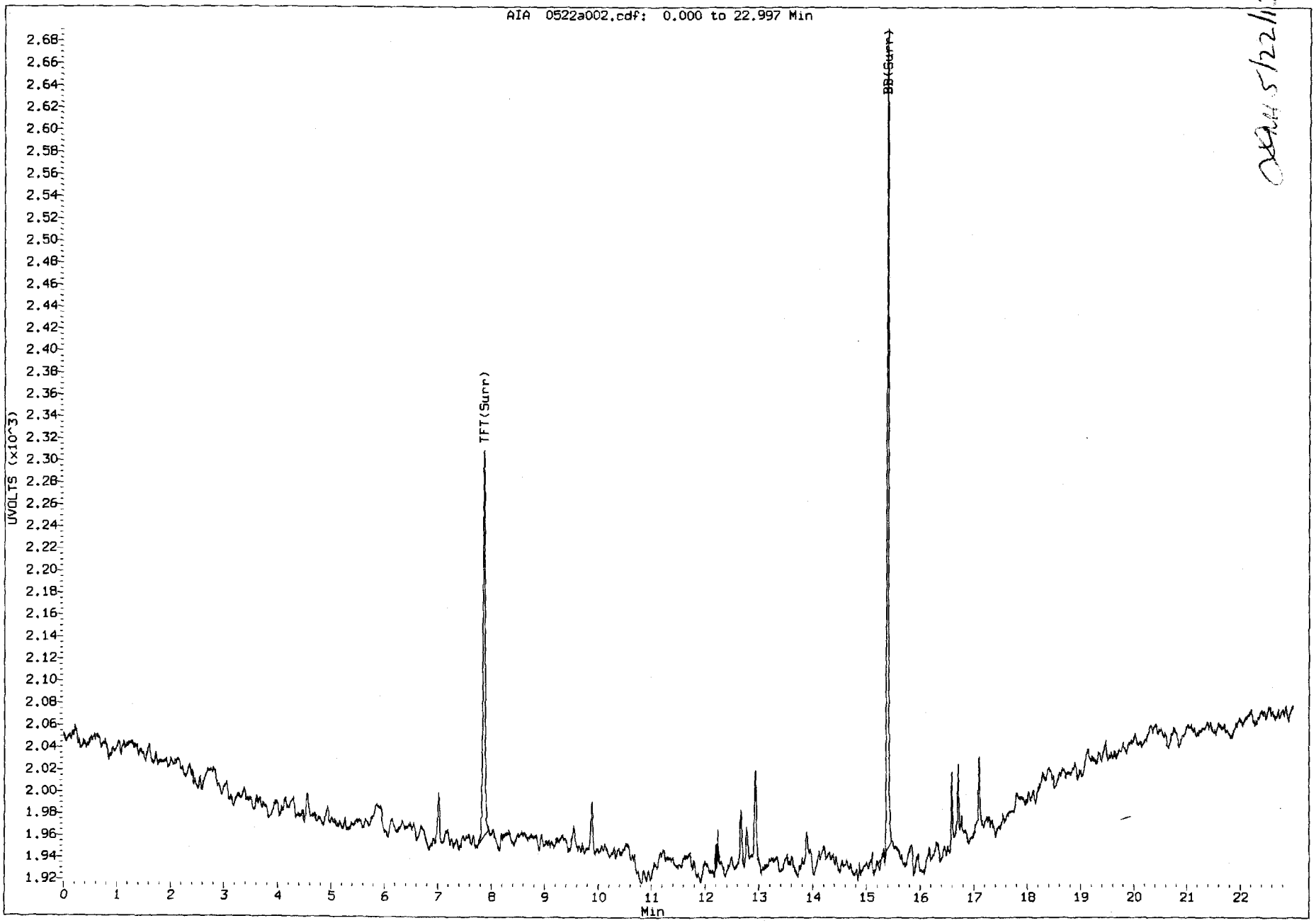
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

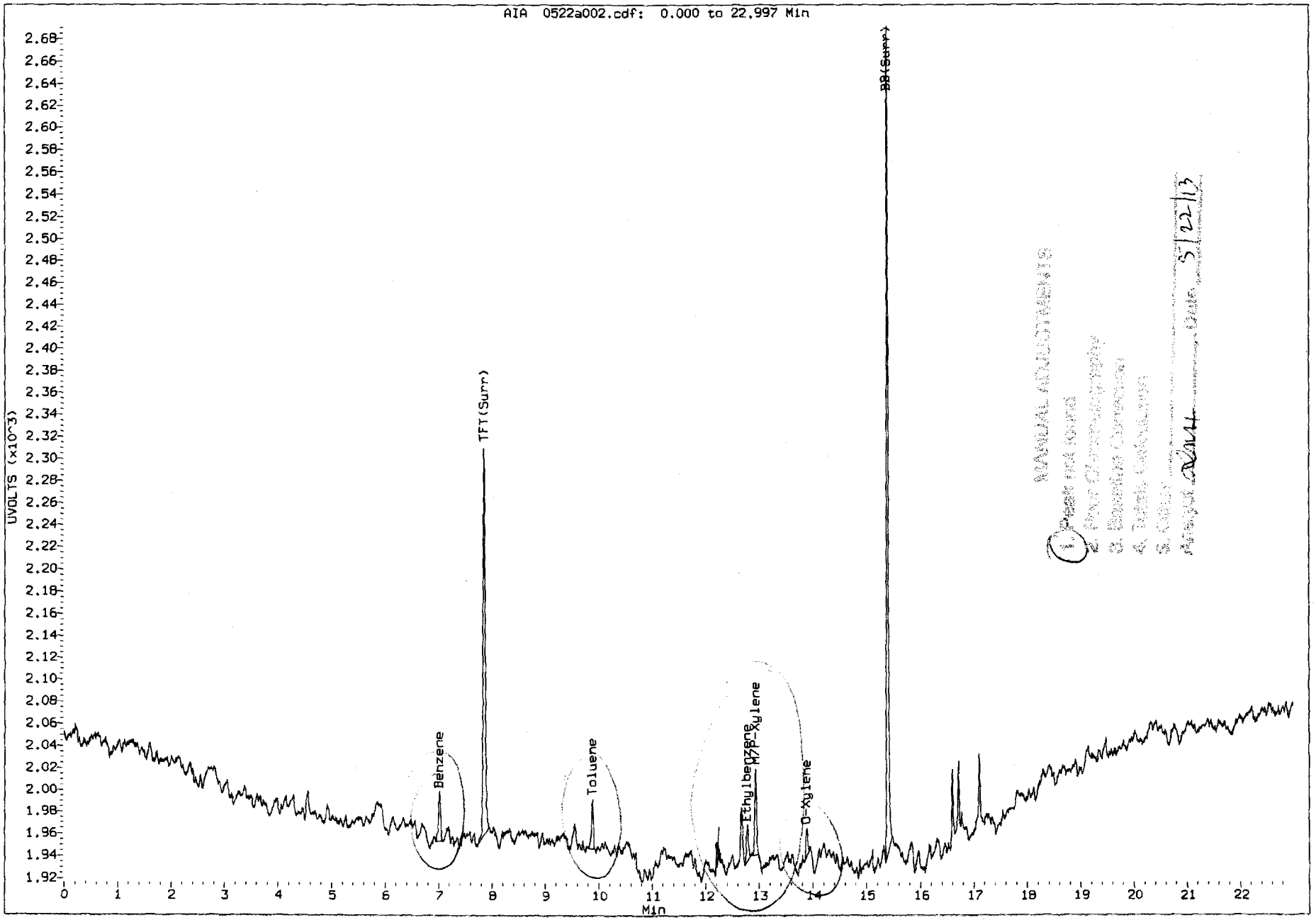
5. Other _____

Analyst: [signature] Date: 5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25



Data File: /chem3/pid1.i/20130522-2.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25



Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a003.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a003.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL0.5
Client ID: BCAL0.5
Injection Date: 22-MAY-2013 09:30
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	681	8701	23.0	TFT(Surr)
15.382	0.000	443	3756	22.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	4249	0.012 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	5527	0.008 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	4999	0.009 M
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	4249	0.011 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	713	22.1	TFT(Surr)
15.390	-0.001	1537	21.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	114	0.51N	Benzene
9.883	-0.001	89	0.45N	Toluene
12.773	-0.005	65	0.40N	Ethylbenzene
12.937	-0.007	167	0.93N	M/P-Xylene
13.883	-0.005	61	0.43N	O-Xylene
4.550	0.005	38	0.44N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a003.d
Lab Smp Id: BCAL0.5 Client Smp ID: BCAL0.5
Inj Date : 22-MAY-2013 09:30
Operator : LH Inst ID: pid1.i
Smp Info : BCAL0.5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:30 Cal File: 0522a003.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
	6 MTBE	4.540	4.540	0.000	527	0.50000	0.624
	9 BENZENE	7.015	7.015	0.000	751	0.50000	0.514
$	10 TFT(Surr)	7.848	7.848	0.000	681	22.0000	23.01
	12 Toluene	9.875	9.875	0.000	791	0.50000	0.545
	14 ETHYLBENZENE	12.766	12.766	0.000	62	0.50000	0.563
	15 M/P-XYLENE	12.929	12.929	0.000	1378	1.00000	1.08
	16 O-XYLENE	13.873	13.873	0.000	486	0.50000	0.358(M)
$	18 BB(Surr)	15.382	15.382	0.000	443	22.0000	22.29

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a003.d

Date : 22-MAY-2013 09:30

Client ID: BCAL0.5

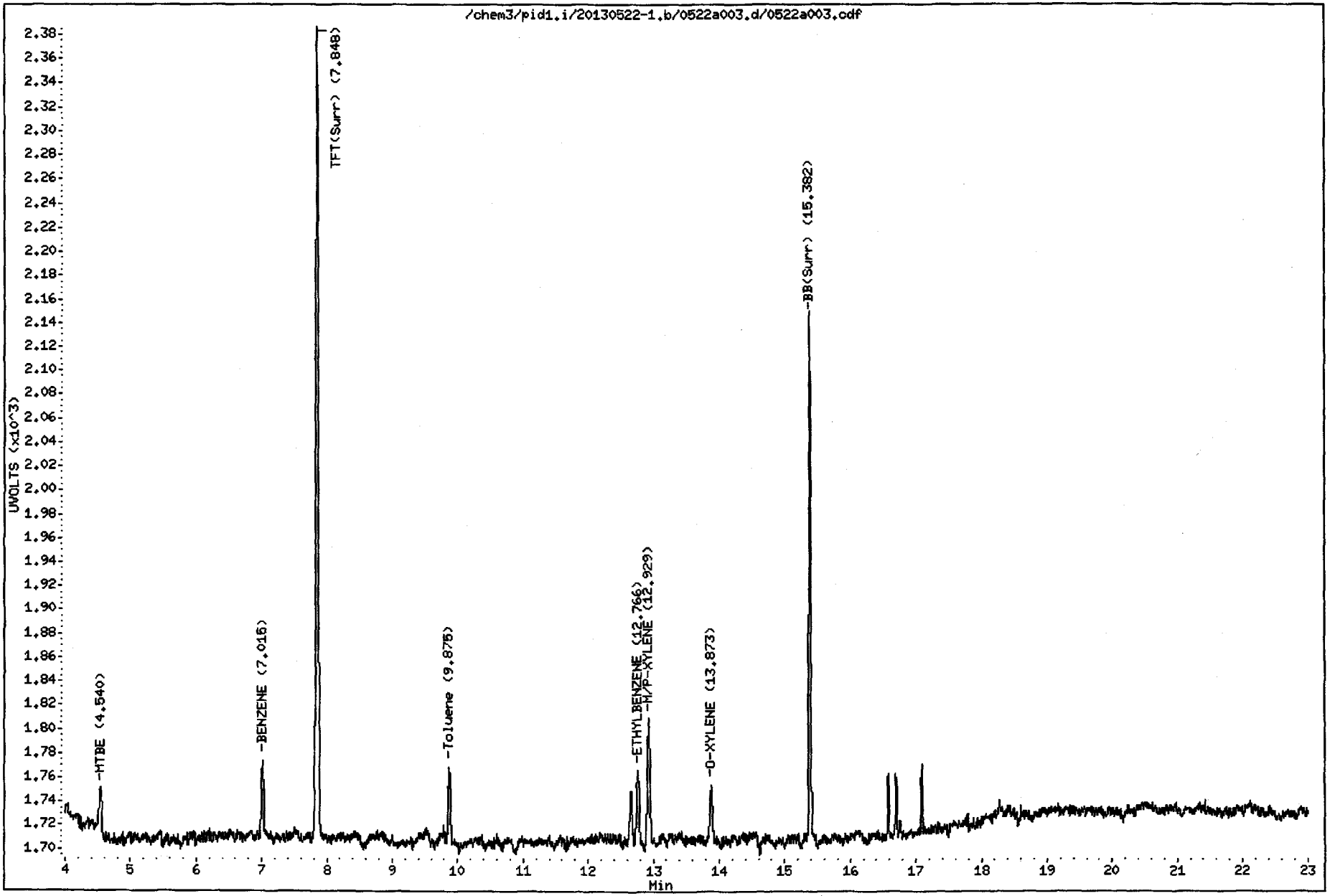
Sample Info: BCAL0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

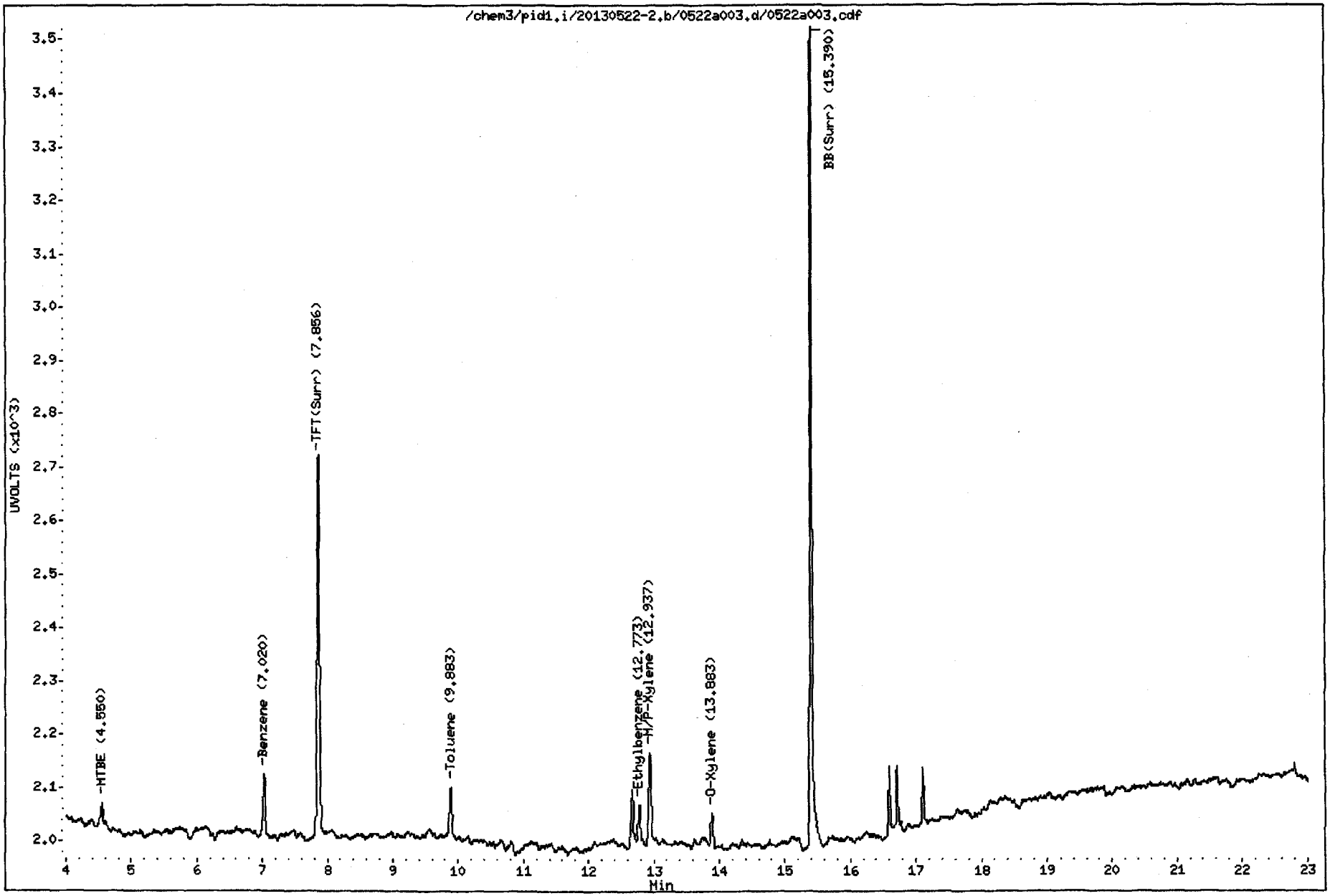
Column diameter: 0.18



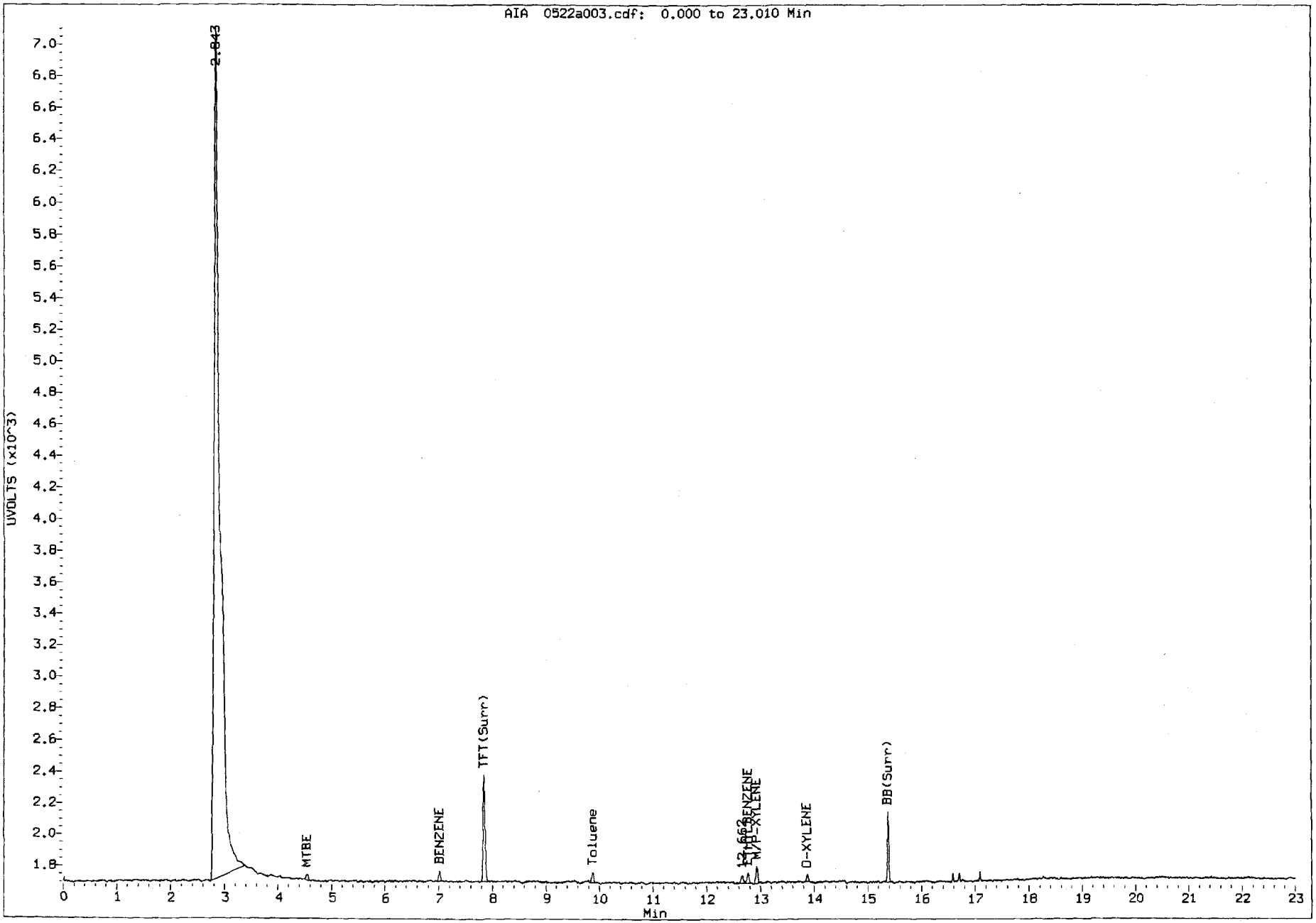
Data File: /chem3/pid1.i/20130522-2.b/0522a003.d
Date : 22-MAY-2013 09:30
Client ID: BCAL0.5
Sample Info: BCAL0.5

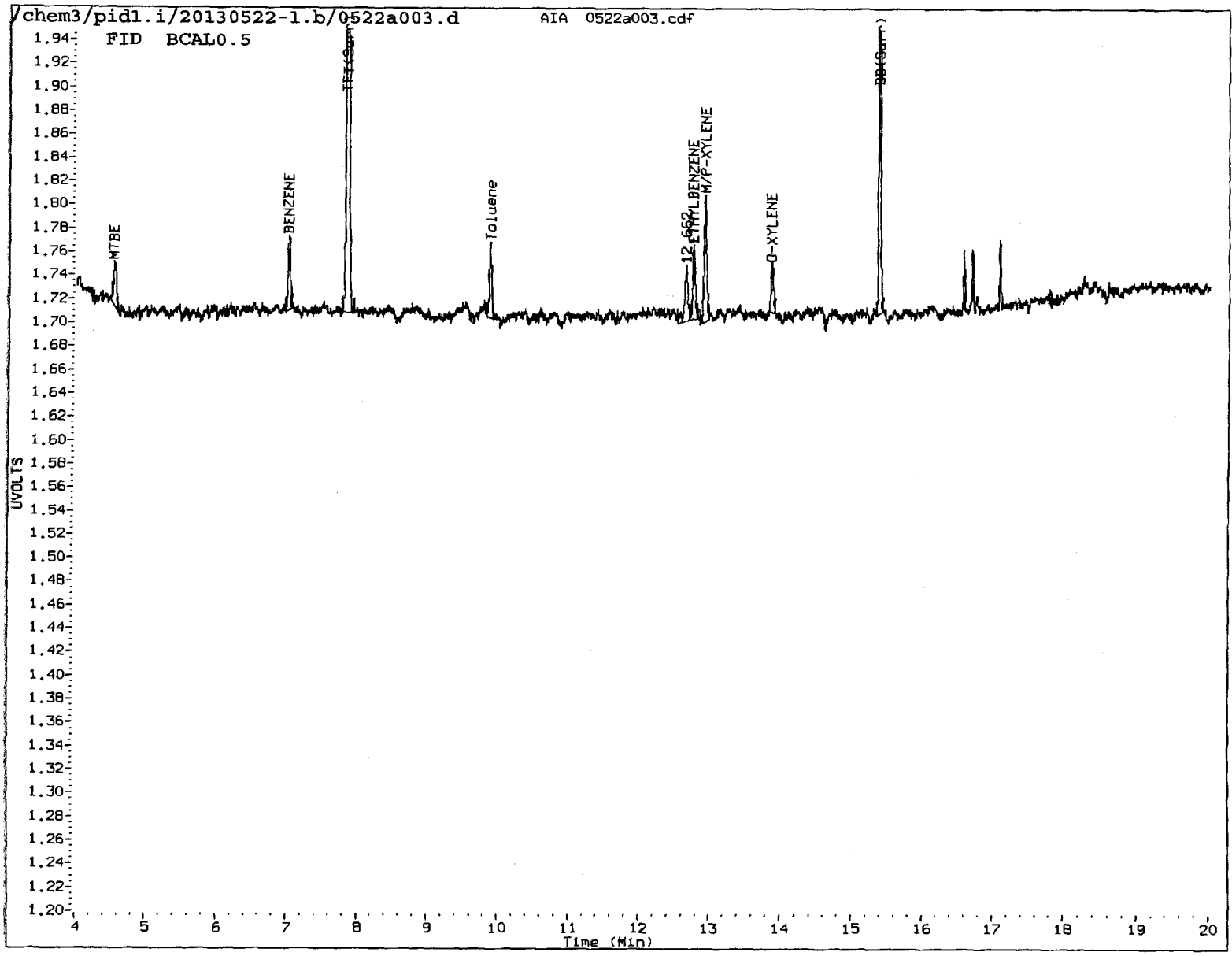
Instrument: pid1.i
Operator: LH
Column diameter: 0.18

Column phase: RTX 502-2 PID



Data File: /chem3/pid1.i/20130522-1.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5





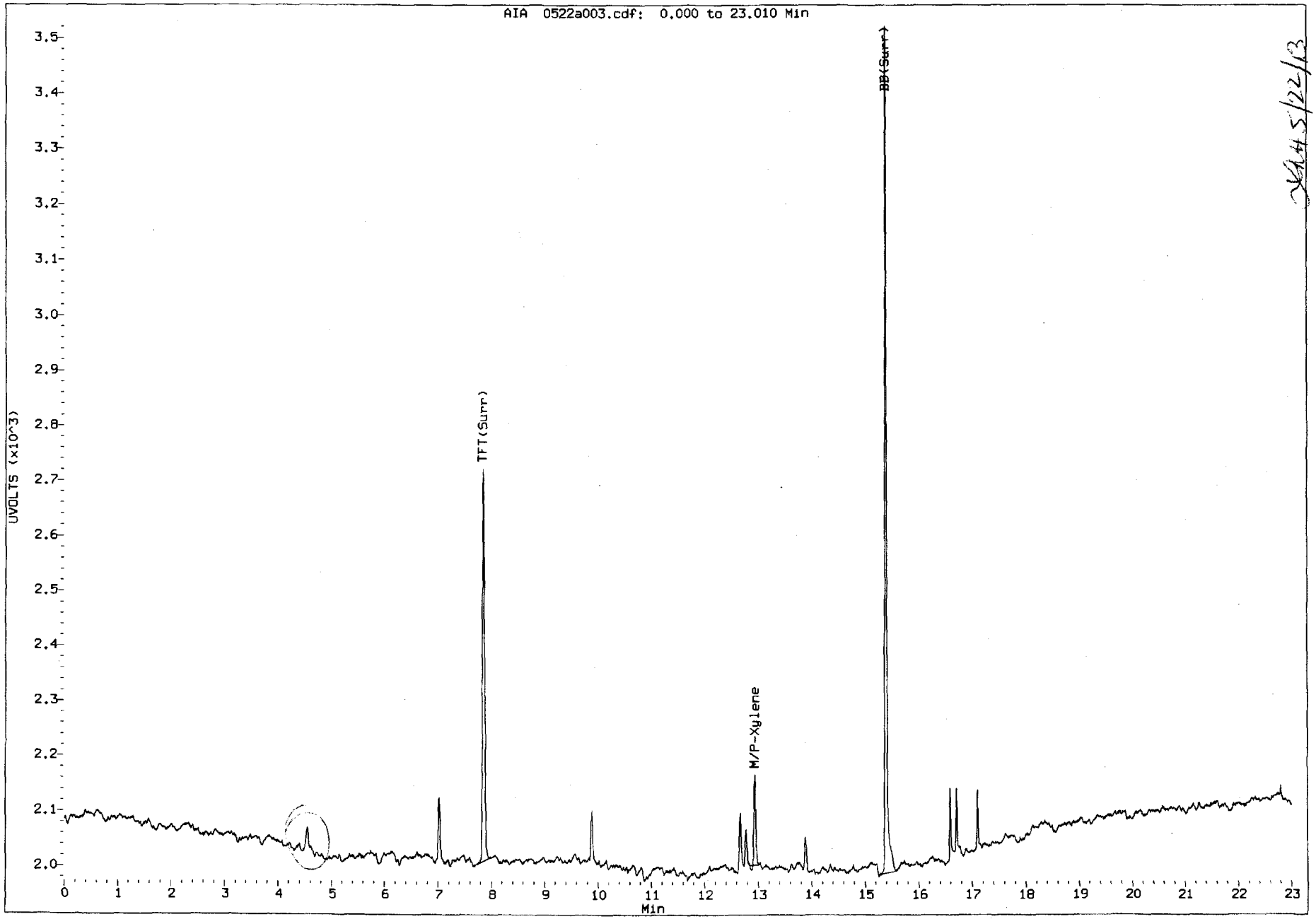
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

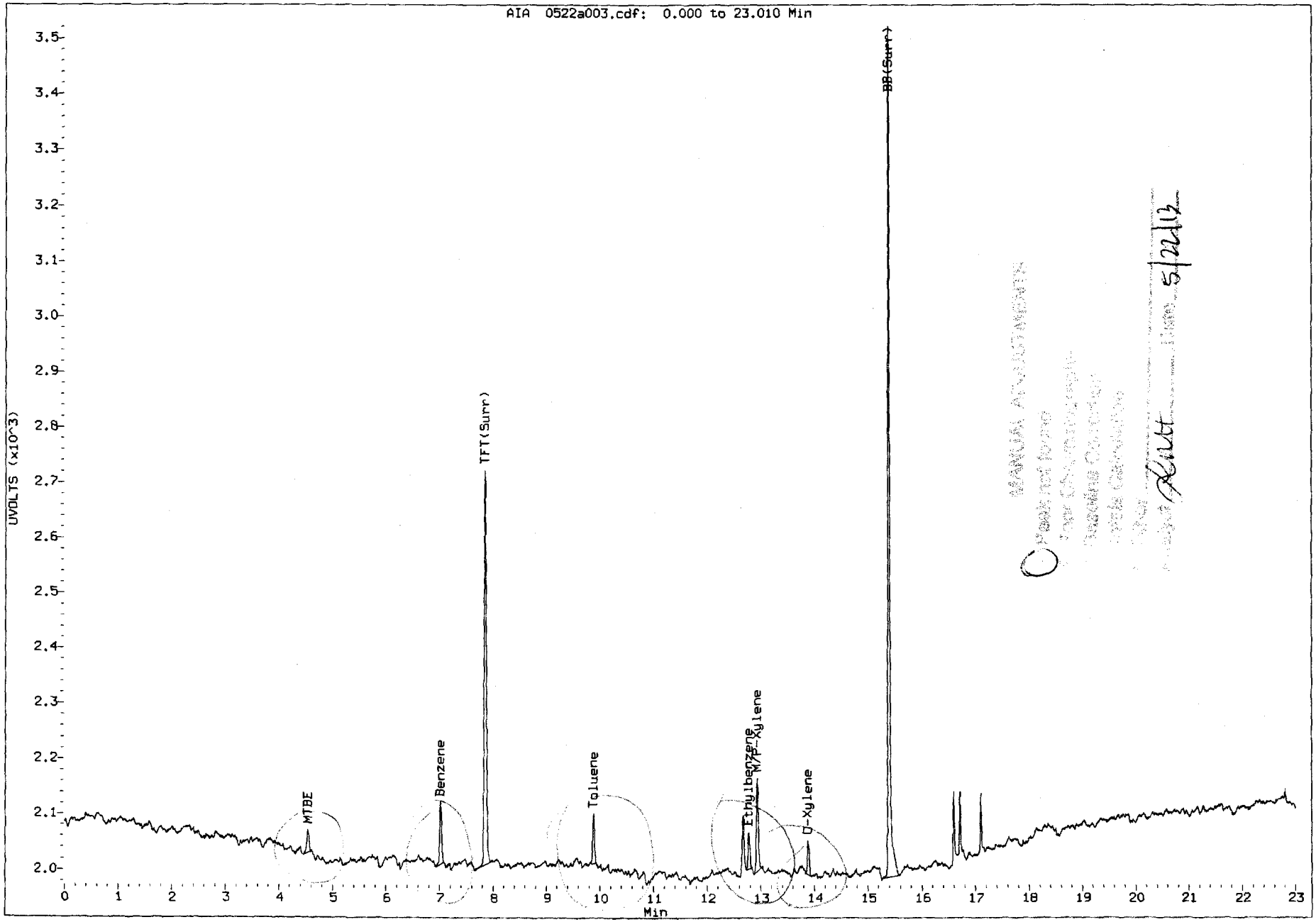
Analyst: _____ Date: 5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5



5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5



5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a004.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a004.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL1
Client ID: BCAL1
Injection Date: 22-MAY-2013 09:58
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	1344	17101	45.4	TFT(Surr)
15.383	0.000	902	7548	45.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	10157	0.028 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	10606	0.015 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	9703	0.017 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	10157	0.027 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	1429	44.3	TFT(Surr)
15.390	-0.001	3187	44.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	222	0.99N	Benzene
9.883	-0.001	195	0.98N	Toluene
12.773	-0.006	163	1.00	Ethylbenzene
12.934	-0.009	345	1.92	M/P-Xylene
13.883	-0.005	143	1.01N	O-Xylene
4.543	-0.002	73	0.84N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a004.d
Lab Smp Id: BCAL1 Client Smp ID: BCAL1
Inj Date : 22-MAY-2013 09:58
Operator : LH Inst ID: pid1.i
Smp Info : BCAL1
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:58 Cal File: 0522a004.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.538	4.538	0.000	902	1.00000	1.07
9	BENZENE	7.010	7.010	0.000	1560	1.00000	1.07(M)
$ 10	TFT(Surr)	7.848	7.848	0.000	1344	44.0000	45.42
12	Toluene	9.873	9.873	0.000	1694	1.00000	1.17(M)
14	ETHYLBENZENE	12.766	12.766	0.000	115	1.00000	1.04
15	M/P-XYLENE	12.924	12.924	0.000	2576	2.00000	2.02
16	O-XYLENE	13.873	13.873	0.000	1265	1.00000	0.932(M)
$ 18	BB(Surr)	15.383	15.383	0.000	902	44.0000	45.39(M)
21	nc11	16.702	16.702	0.000	106	1.00000	

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a004.d

Date : 22-MAY-2013 09:58

Client ID: BCAL1

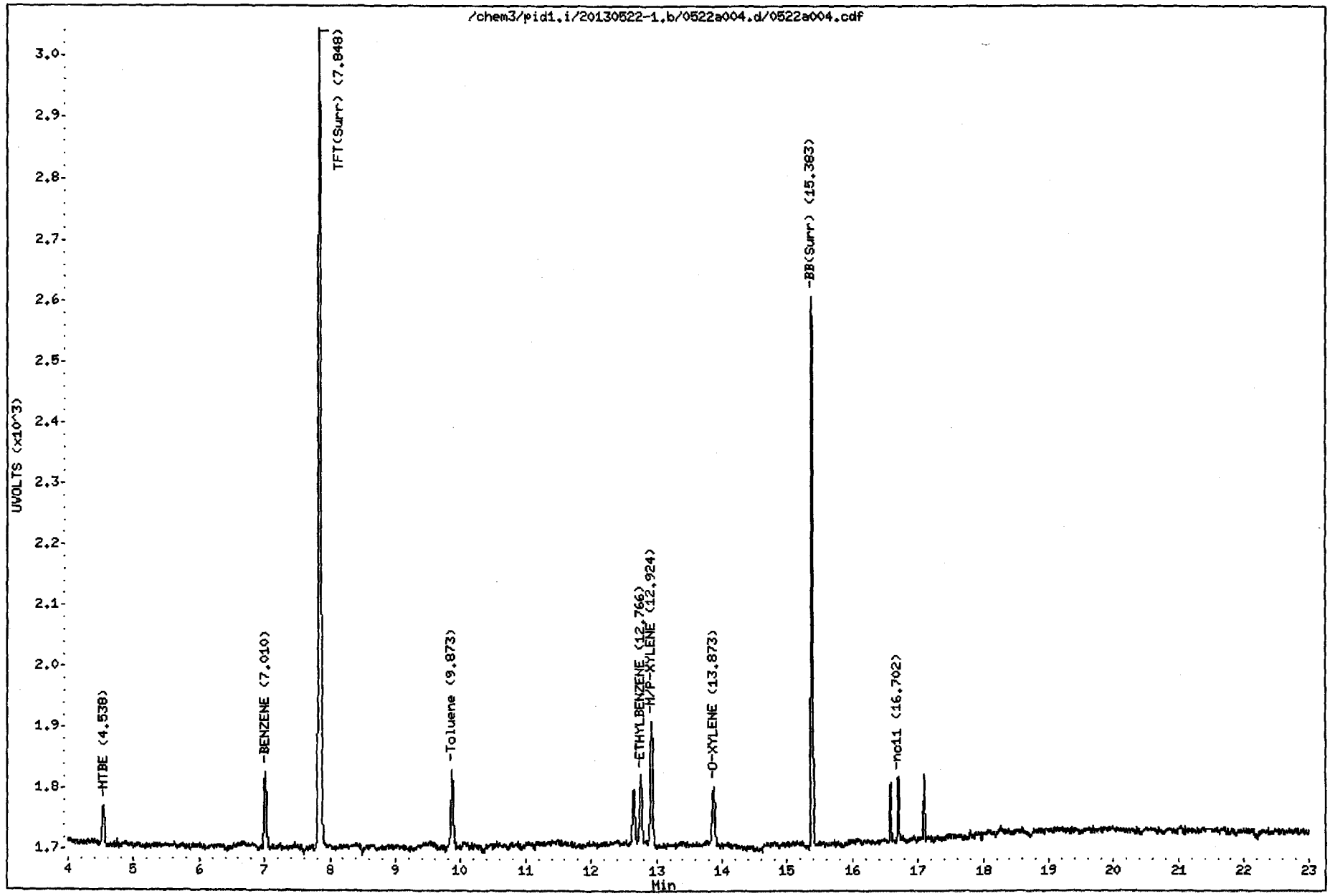
Sample Info: BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a004.d

Date : 22-MAY-2013 09:58

Client ID: BCAL1

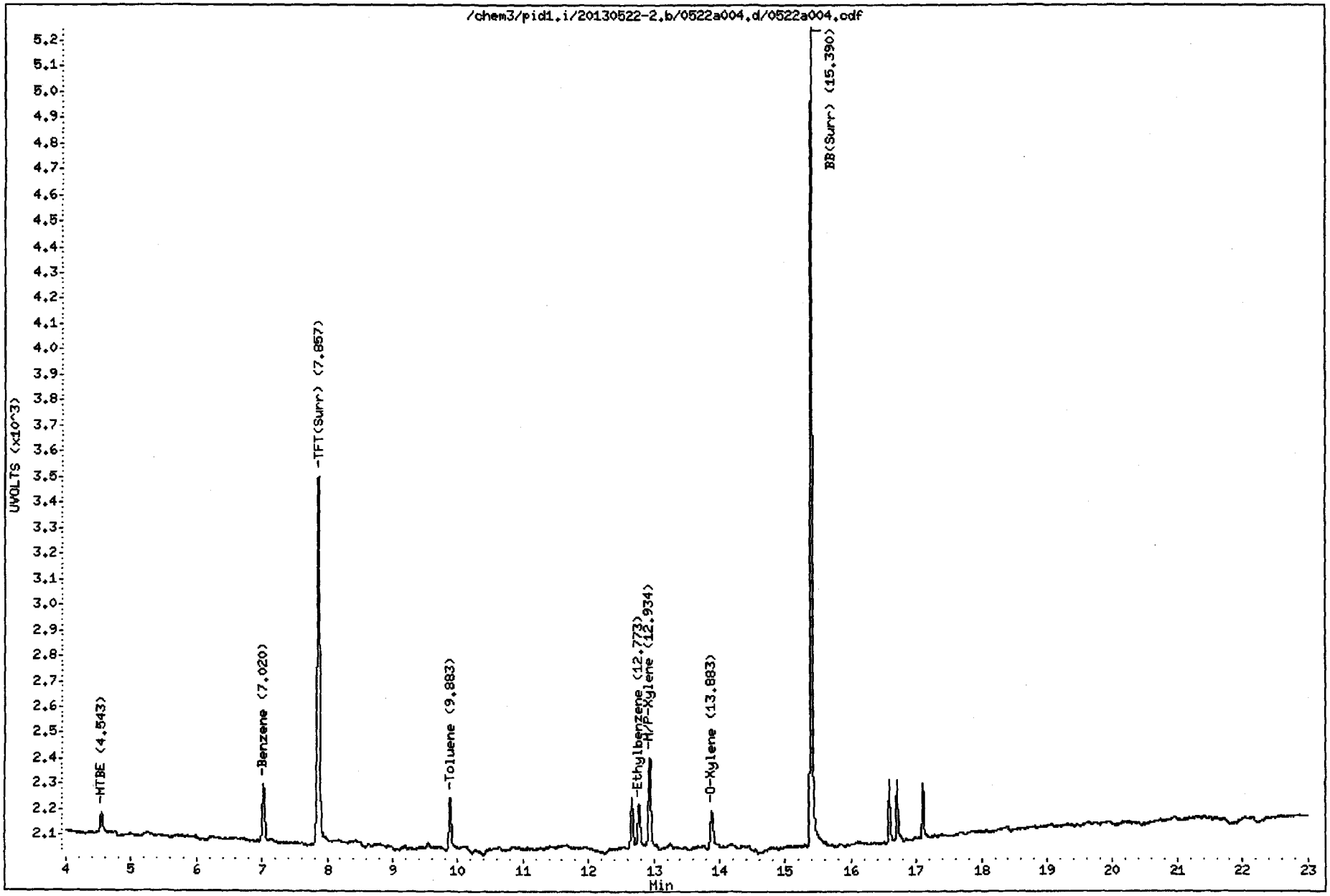
Sample Info: BCAL1

Column phase: RTX 502-2 PID

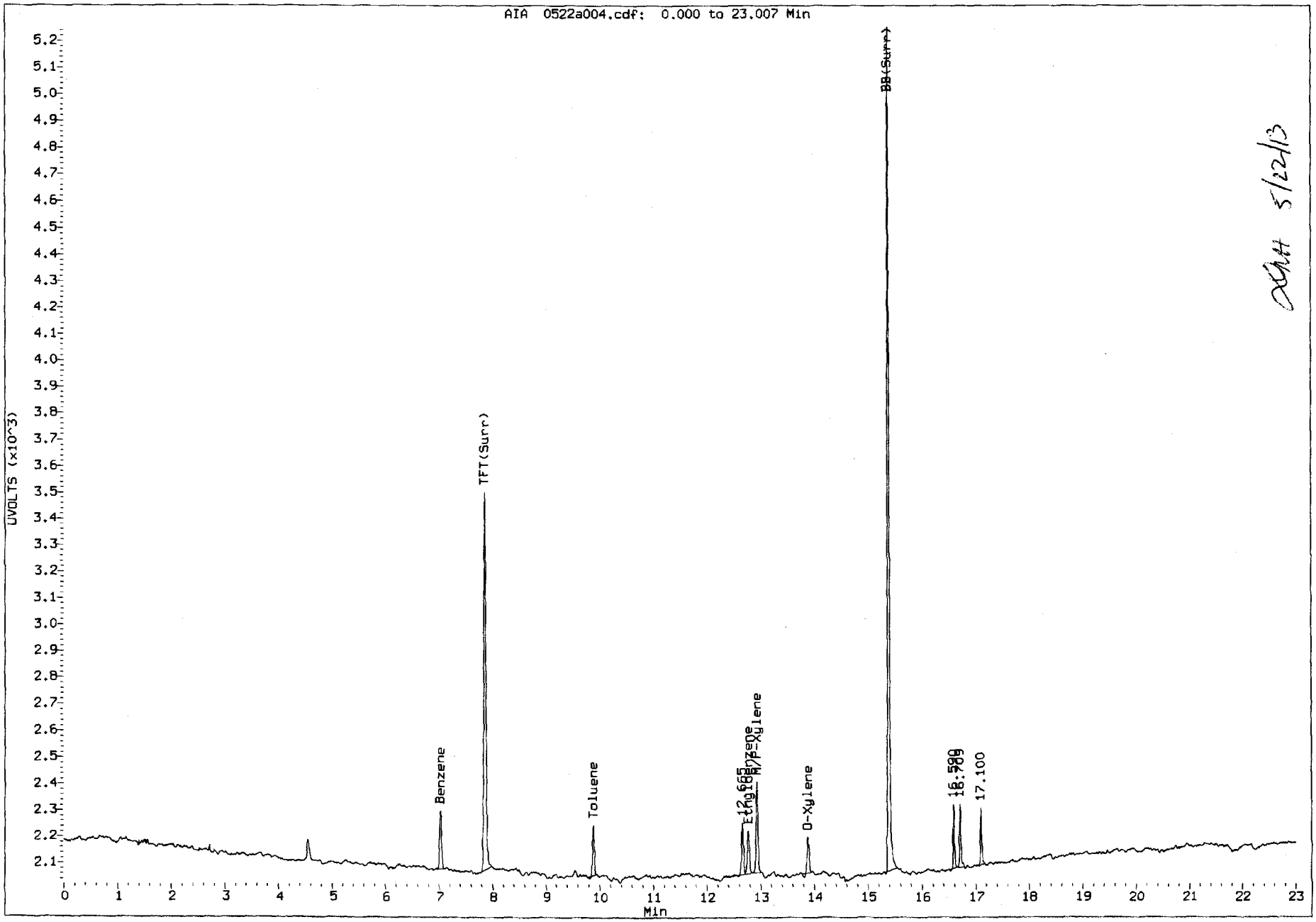
Instrument: pid1.i

Operator: LH

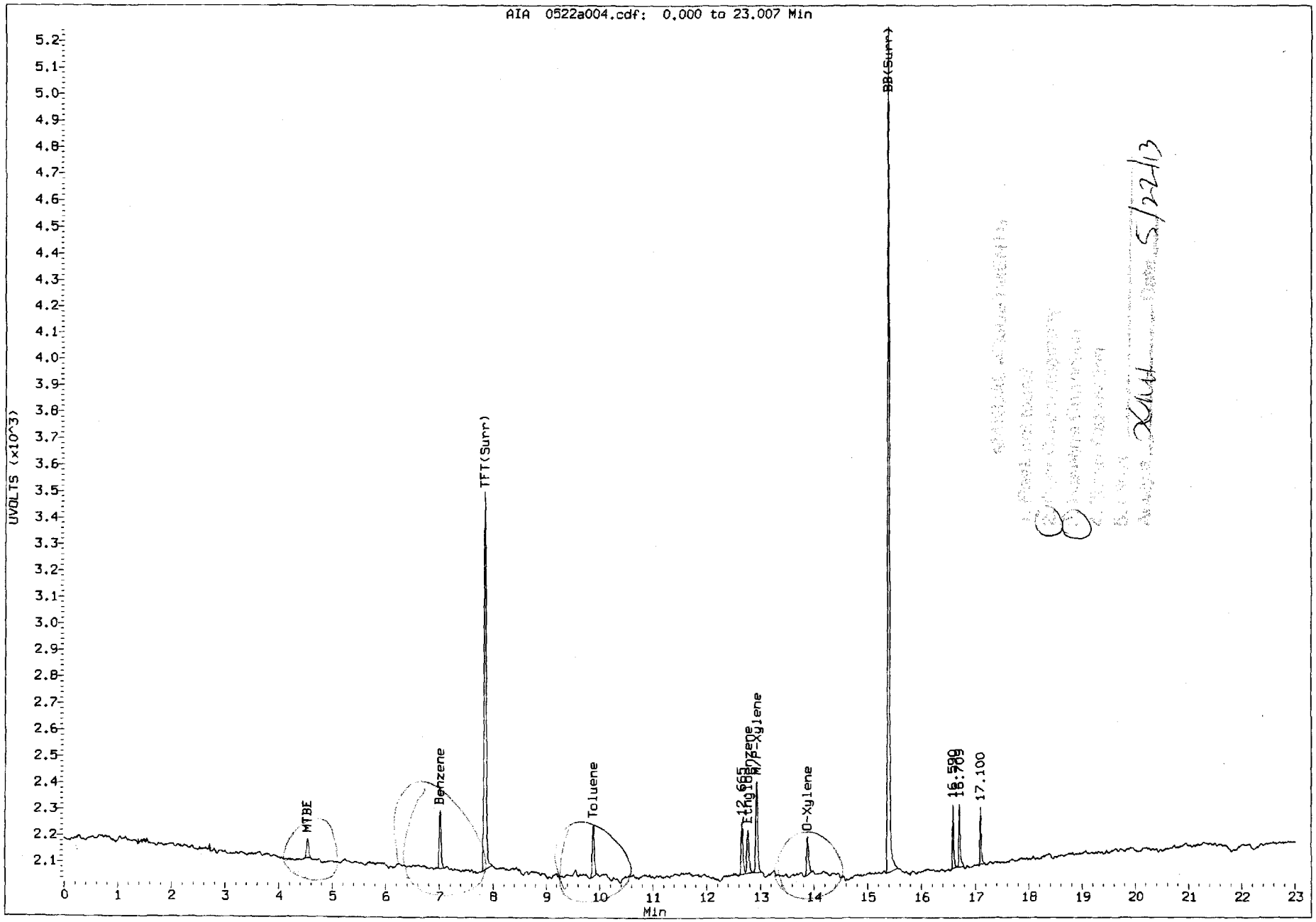
Column diameter: 0.18



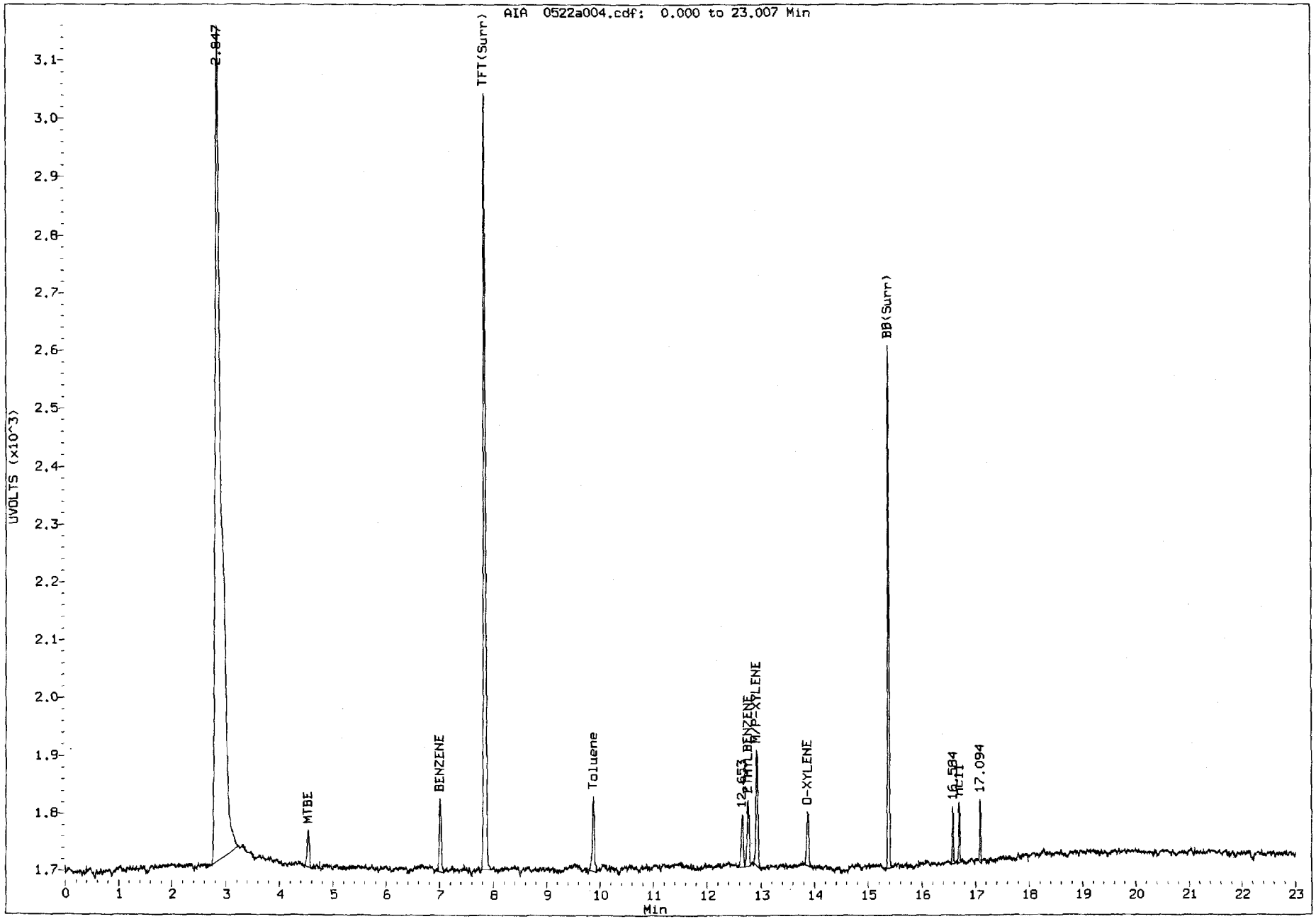
Data File: /chem3/pid1.i/20130522-2.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1

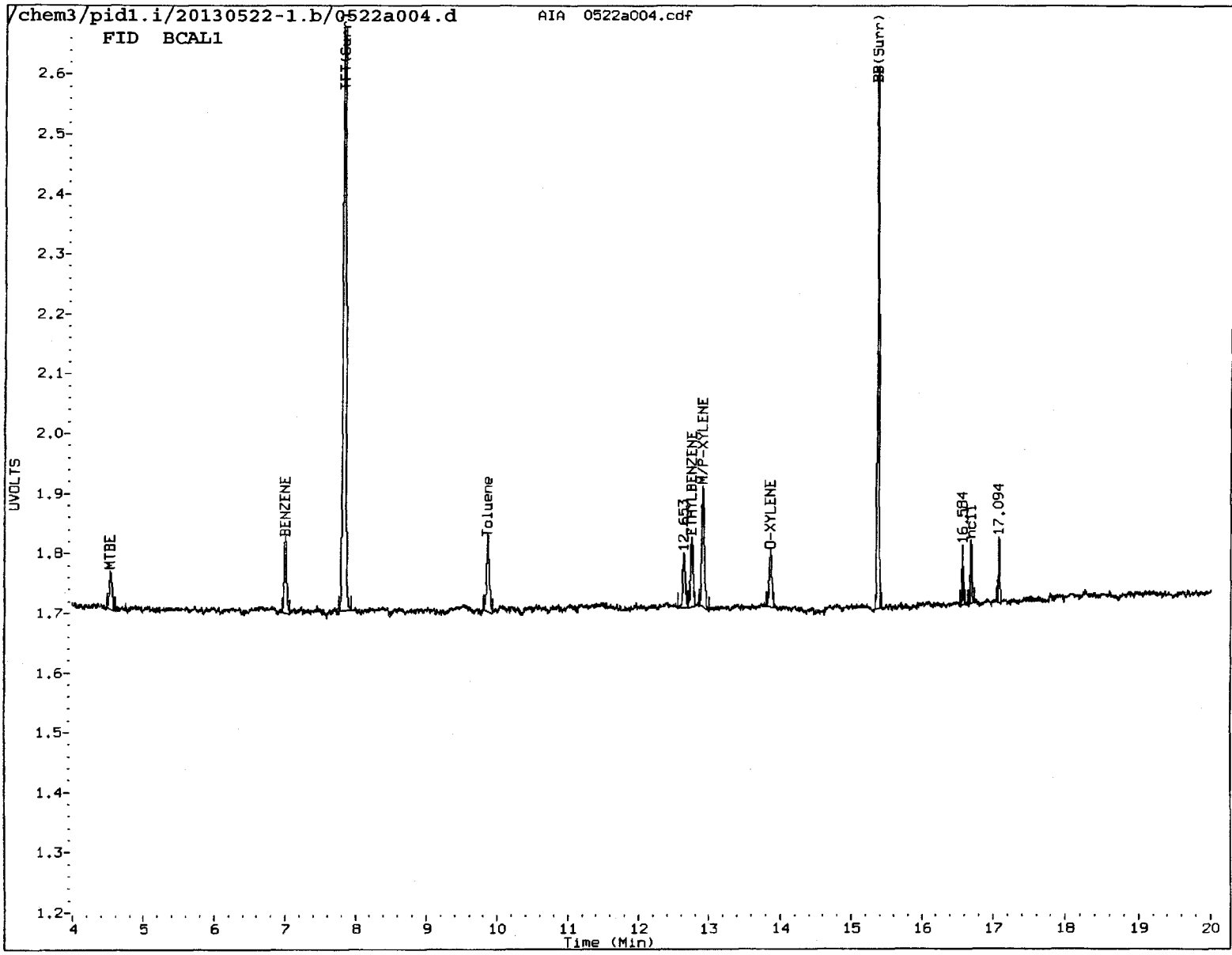


Data File: /chem3/pid1.i/20130522-2.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1



Data File: /chem3/pid1.i/20130522-1.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a005.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a005.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL5
Client ID: BCAL5
Injection Date: 22-MAY-2013 10:27
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2002	25277	67.7	TFT(Surr)
15.382	0.000	1332	11311	67.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	49856	0.139
8015C 2MP-TMB	(4.18 to 16.21)	723723	51726	0.071
AK101 nC6-nC10	(4.68 to 15.11)	582885	47527	0.082
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	49856	0.133

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	2160	67.0	TFT(Surr)
15.390	-0.001	4804	66.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	1158	5.15N	Benzene
9.883	-0.001	1018	5.14N	Toluene
12.774	-0.004	864	5.29	Ethylbenzene
12.935	-0.009	1851	10.29	M/P-Xylene
13.883	-0.005	747	5.26N	O-Xylene
4.547	0.002	444	5.09N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a005.d
Lab Smp Id: BCAL5 Client Smp ID: BCAL5
Inj Date : 22-MAY-2013 10:27
Operator : LH Inst ID: pid1.i
Smp Info : BCAL5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 10:27 Cal File: 0522a005.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.539	4.539	0.000	4199	5.00000	4.97
9	BENZENE	7.012	7.012	0.000	7573	5.00000	5.19
$ 10	TFT(Surr)	7.848	7.848	0.000	2002	67.0000	67.66
12	Toluene	9.873	9.873	0.000	7382	5.00000	5.09
14	ETHYLBENZENE	12.764	12.764	0.000	564	5.00000	5.12
15	M/P-XYLENE	12.925	12.925	0.000	13495	10.0000	10.58
16	O-XYLENE	13.874	13.874	0.000	7033	5.00000	5.18
$ 18	BB(Surr)	15.382	15.382	0.000	1332	67.0000	67.03
21	nc11	16.701	16.701	0.000	533	5.00000	

Data File: /chem3/pid1.i/20130522-1.b/0522a005.d

Date : 22-MAY-2013 10:27

Client ID: BCAL5

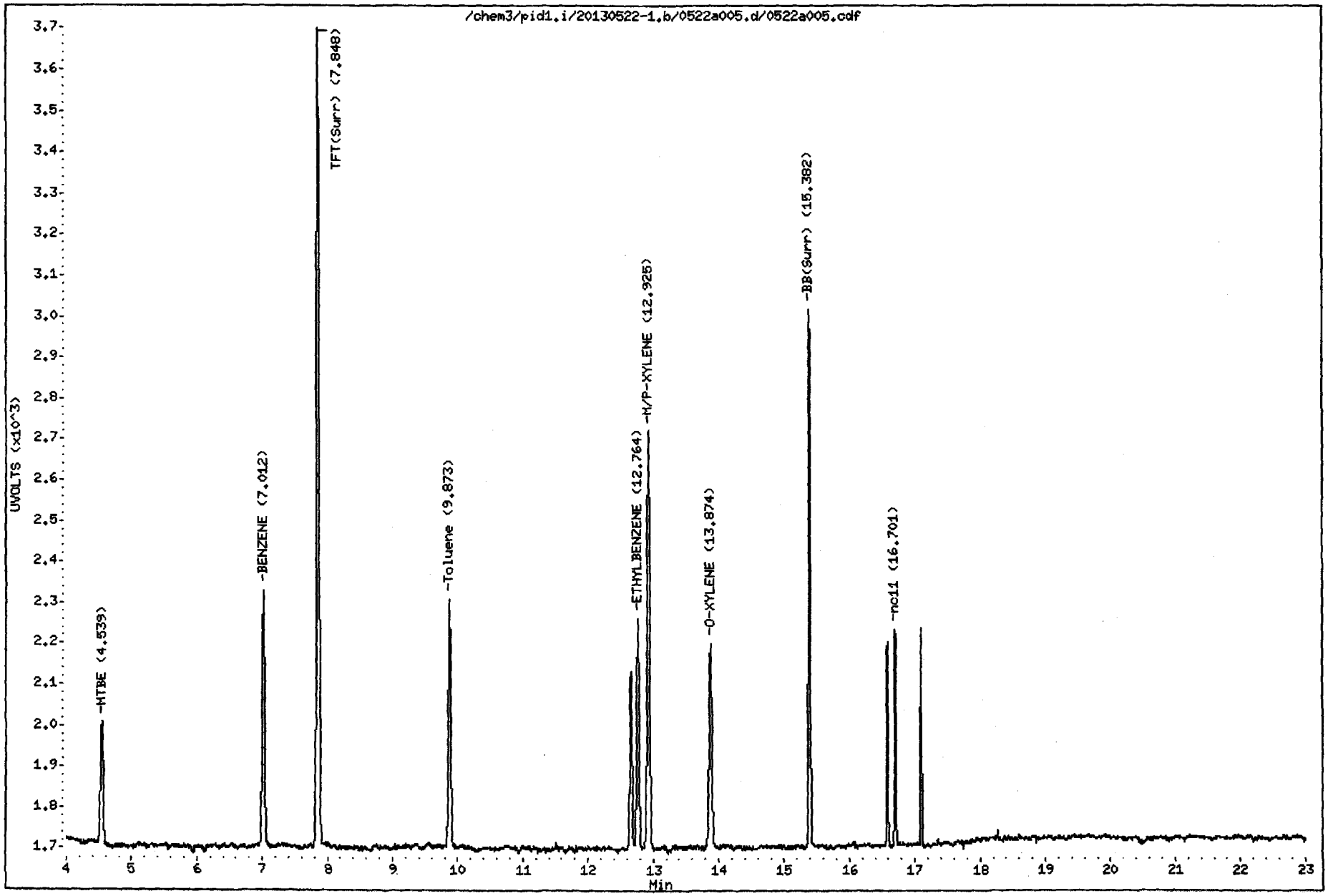
Sample Info: BCAL5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a005.d

Date : 22-MAY-2013 10:27

Client ID: BCAL5

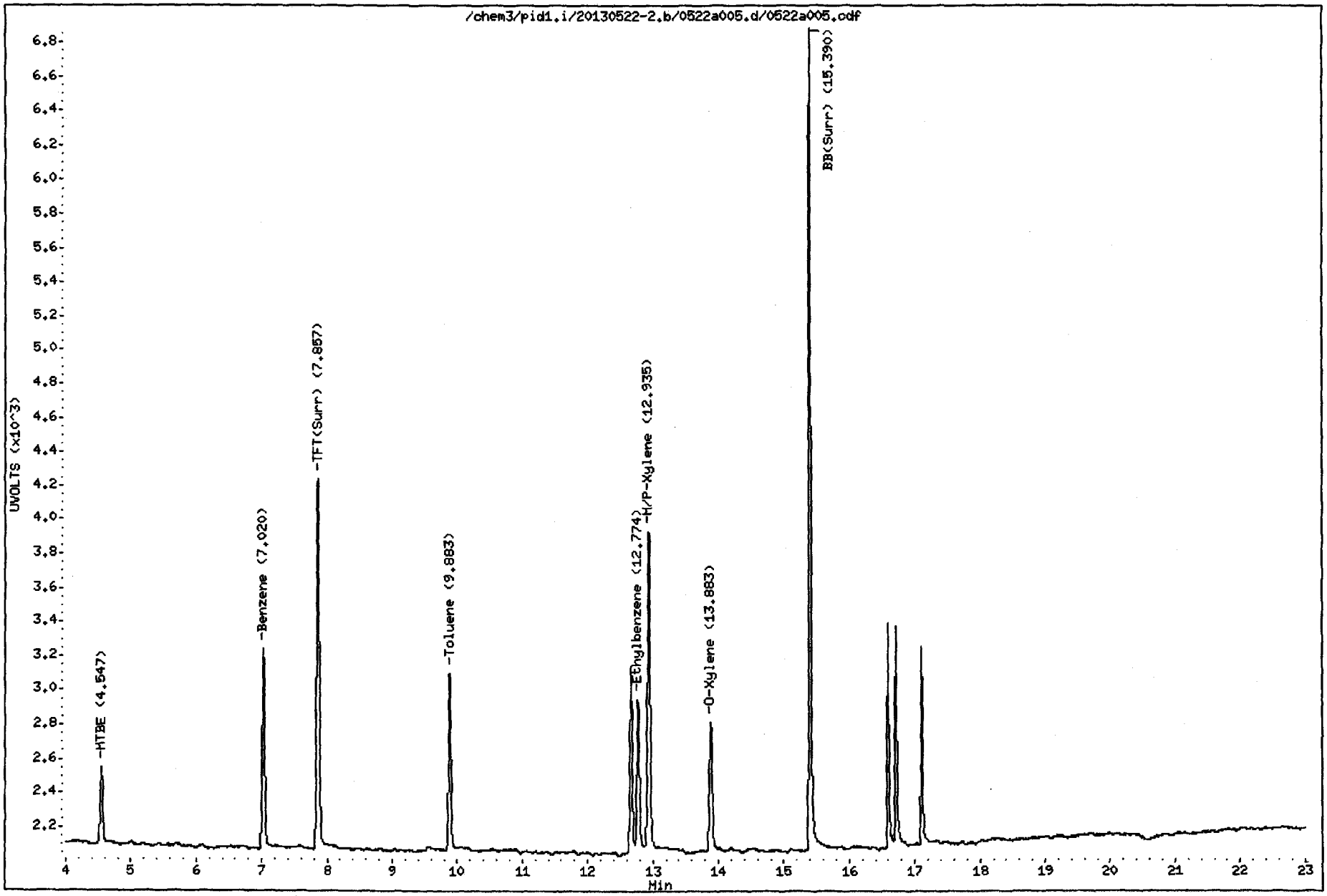
Sample Info: BCAL5

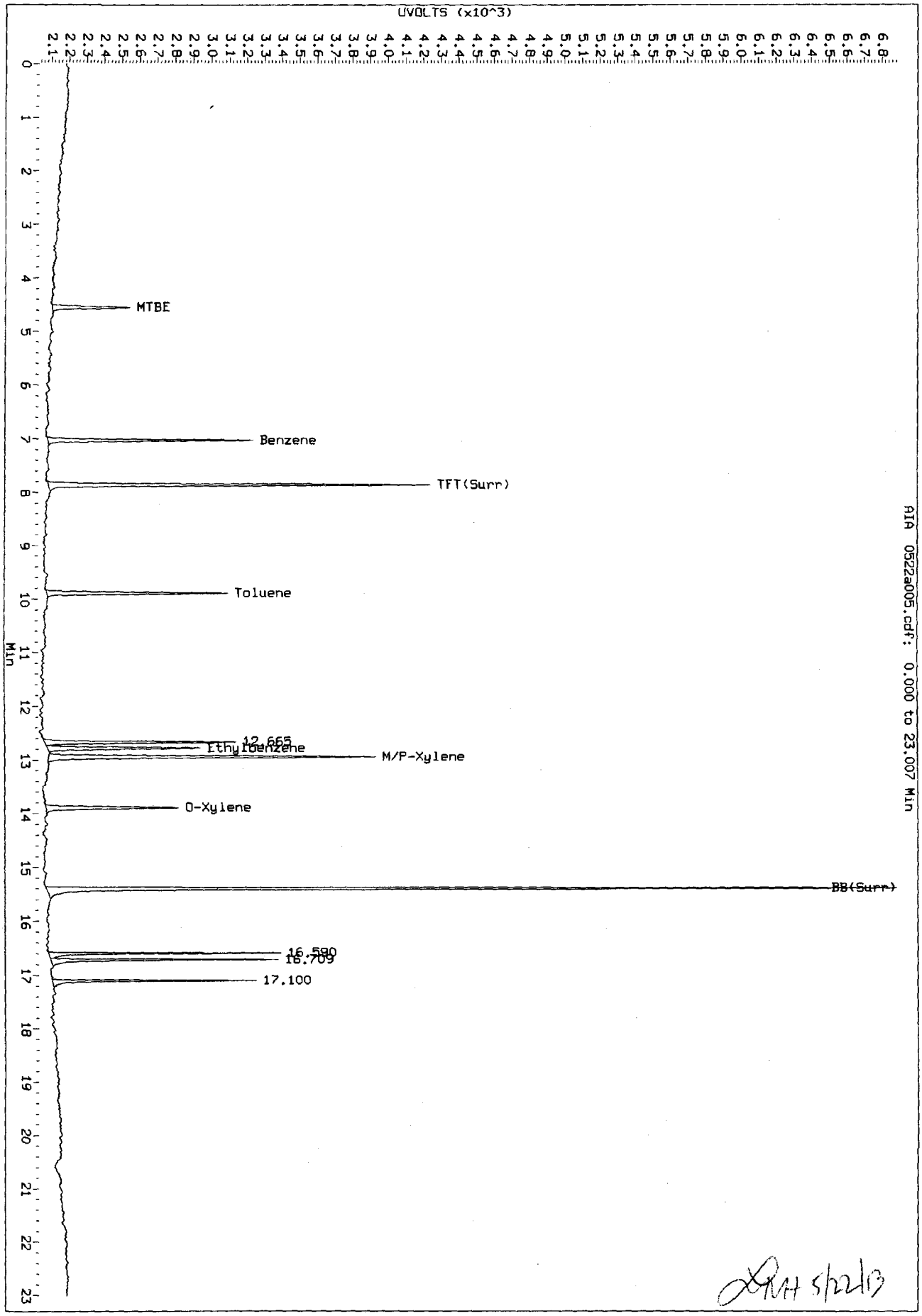
Column phase: RTX 502-2 PID

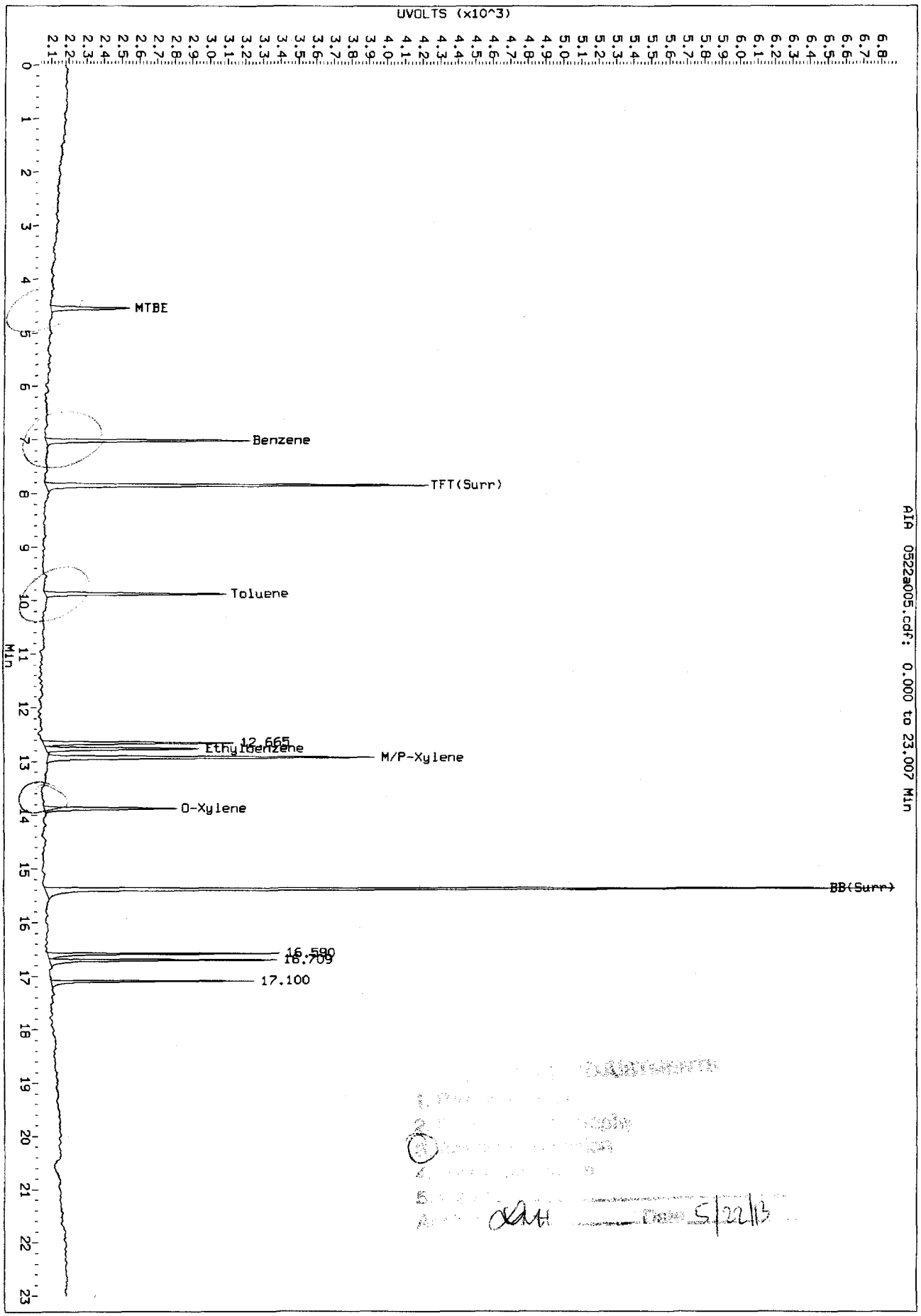
Instrument: pid1.i

Operator: LH

Column diameter: 0.18




Data File: /chem3/pid1.i/20130522-2.b/0522a005.d/0522a005.cdf
Injection Date: 22-MAY-2013 10:27
Instrument: pid1.i
Client Sample ID: BCAL5
UVOLTS (x10^3)
AIA 0522a005.cdf: 0.000 to 23.007 Min
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.580
16.709
17.100
Min
5/22/13


Data File: /chem3/pid1.i/20130522-2.b/0522a005.d/0522a005.cdf
Injection Date: 22-MAY-2013 10:27
Instrument: pid1.i
Client Sample ID: BCAL5
UVOLTS (x10^3)
Min
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.709
17.100
AIA 0522a005.cdf: 0.000 to 23.007 Min

Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a006.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a006.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL25
Client ID: BCAL25
Injection Date: 22-MAY-2013 10:56
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2937	37310	99.3	TFT(Surr)
15.382	0.000	1980	16732	99.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	236762	0.661
8015C 2MP-TMB	(4.18 to 16.21)	723723	245764	0.340
AK101 nC6-nC10	(4.68 to 15.11)	582885	225487	0.387
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	236762	0.631

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3241	100.5	TFT(Surr)
15.390	-0.001	7347	101.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.002	5901	26.25	Benzene
9.883	-0.001	5241	26.45N	Toluene
12.774	-0.005	4467	27.36	Ethylbenzene
12.935	-0.008	9545	53.05	M/P-Xylene
13.883	-0.005	3914	27.56	O-Xylene
4.545	0.000	2307	26.46	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a006.d
Lab Smp Id: BCAL25 Client Smp ID: BCAL25
Inj Date : 22-MAY-2013 10:56
Operator : LH Inst ID: pid1.i
Smp Info : BCAL25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 10:56 Cal File: 0522a006.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.537	4.537	0.000	20276	25.0000	24.00
9	BENZENE	7.012	7.012	0.000	36593	25.0000	25.06
$ 10	TFT(Surr)	7.848	7.848	0.000	2937	100.000	99.25
12	Toluene	9.874	9.874	0.000	35345	25.0000	24.37
14	ETHYLBENZENE	12.765	12.765	0.000	2679	25.0000	24.33
15	M/P-XYLENE	12.926	12.926	0.000	63276	50.0000	49.63
16	O-XYLENE	13.874	13.874	0.000	33141	25.0000	24.40
$ 18	BB(Surr)	15.382	15.382	0.000	1980	100.000	99.64
21	nc11	16.701	16.701	0.000	2617	25.0000	

Data File: /chem3/pid1.i/20130522-1.b/0522a006.d

Date : 22-MAY-2013 10:56

Client ID: BCAL25

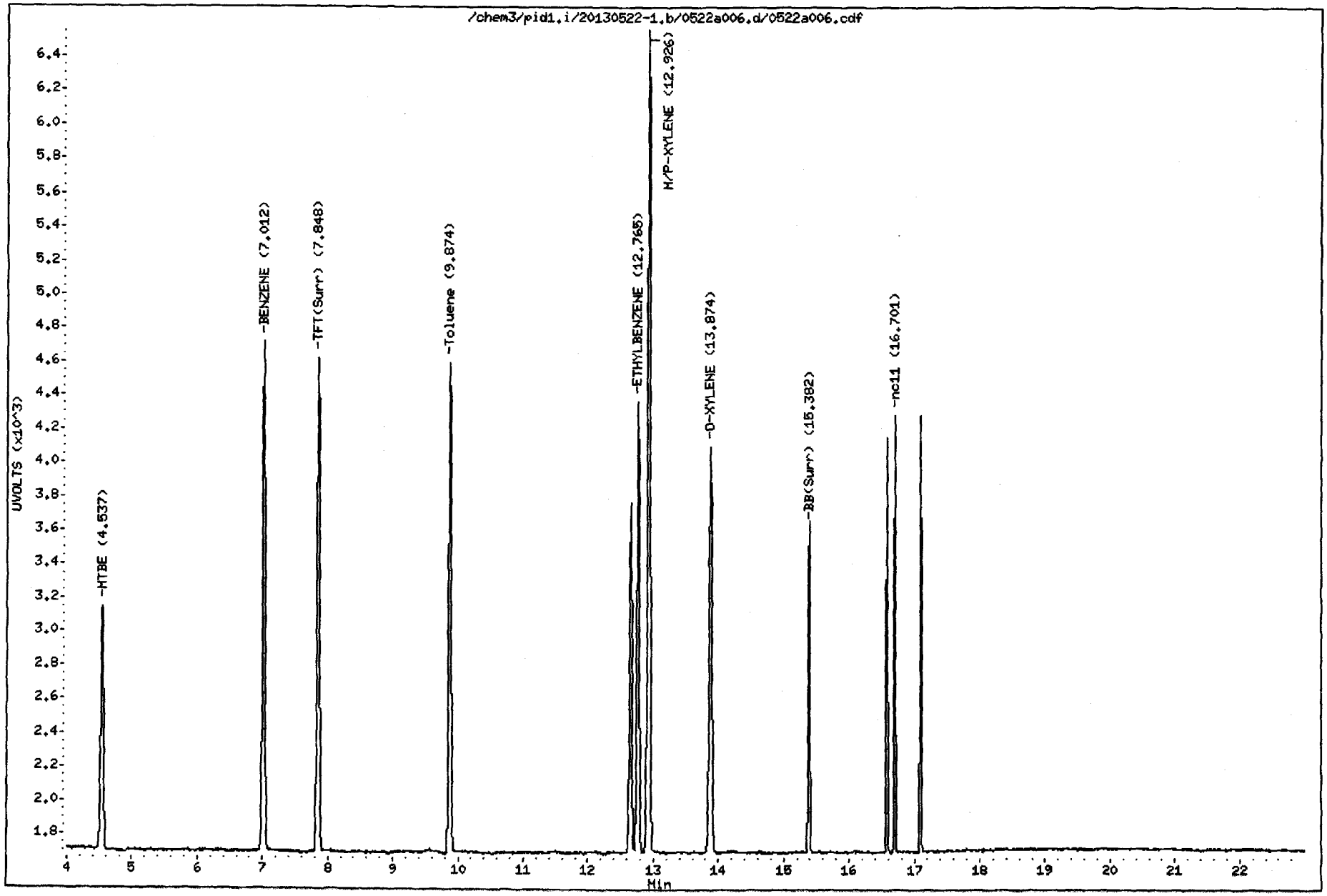
Sample Info: BCAL25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a006.d

Date : 22-MAY-2013 10:56

Client ID: BCAL25

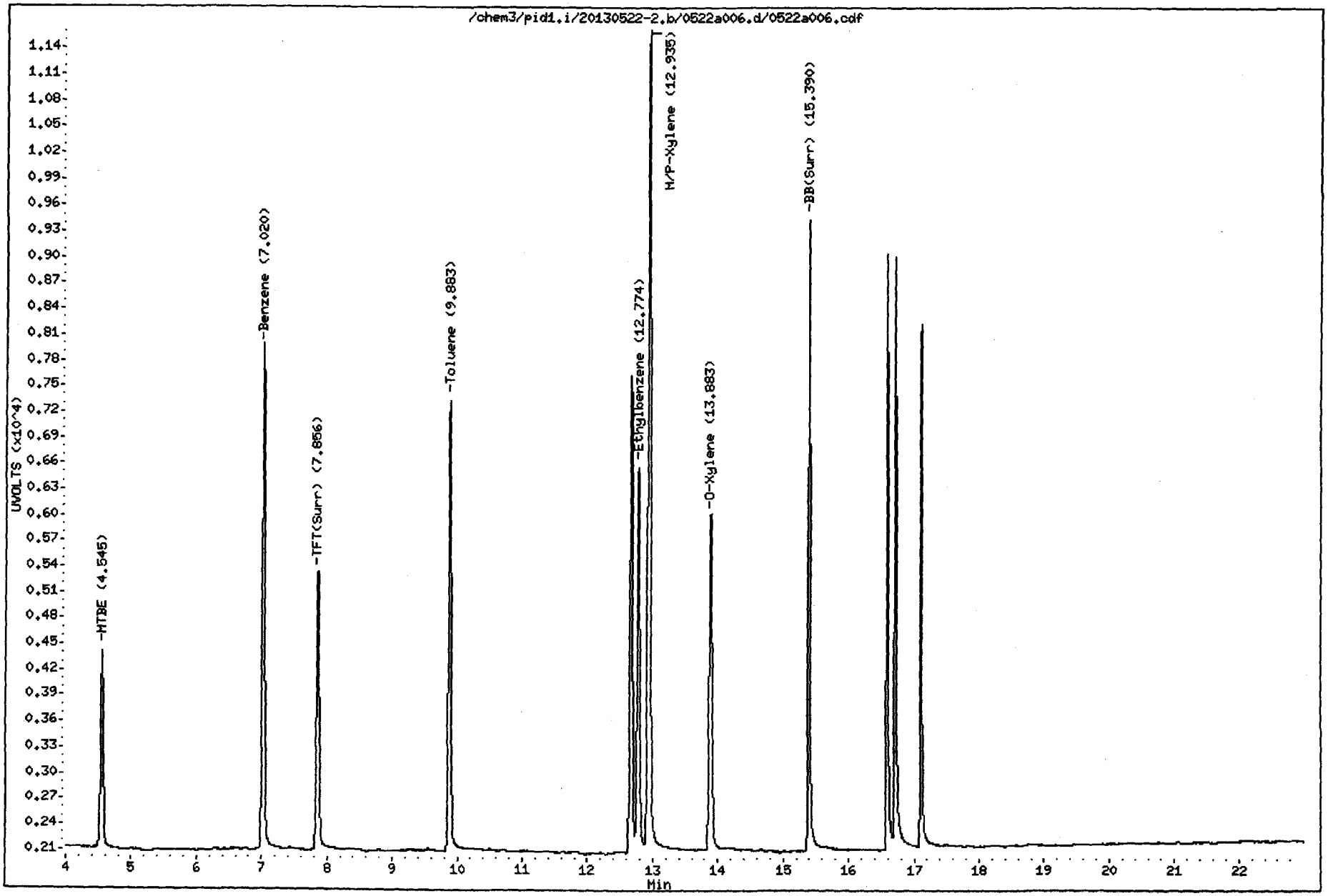
Sample Info: BCAL25

Column phase: RTX 502-2 PID

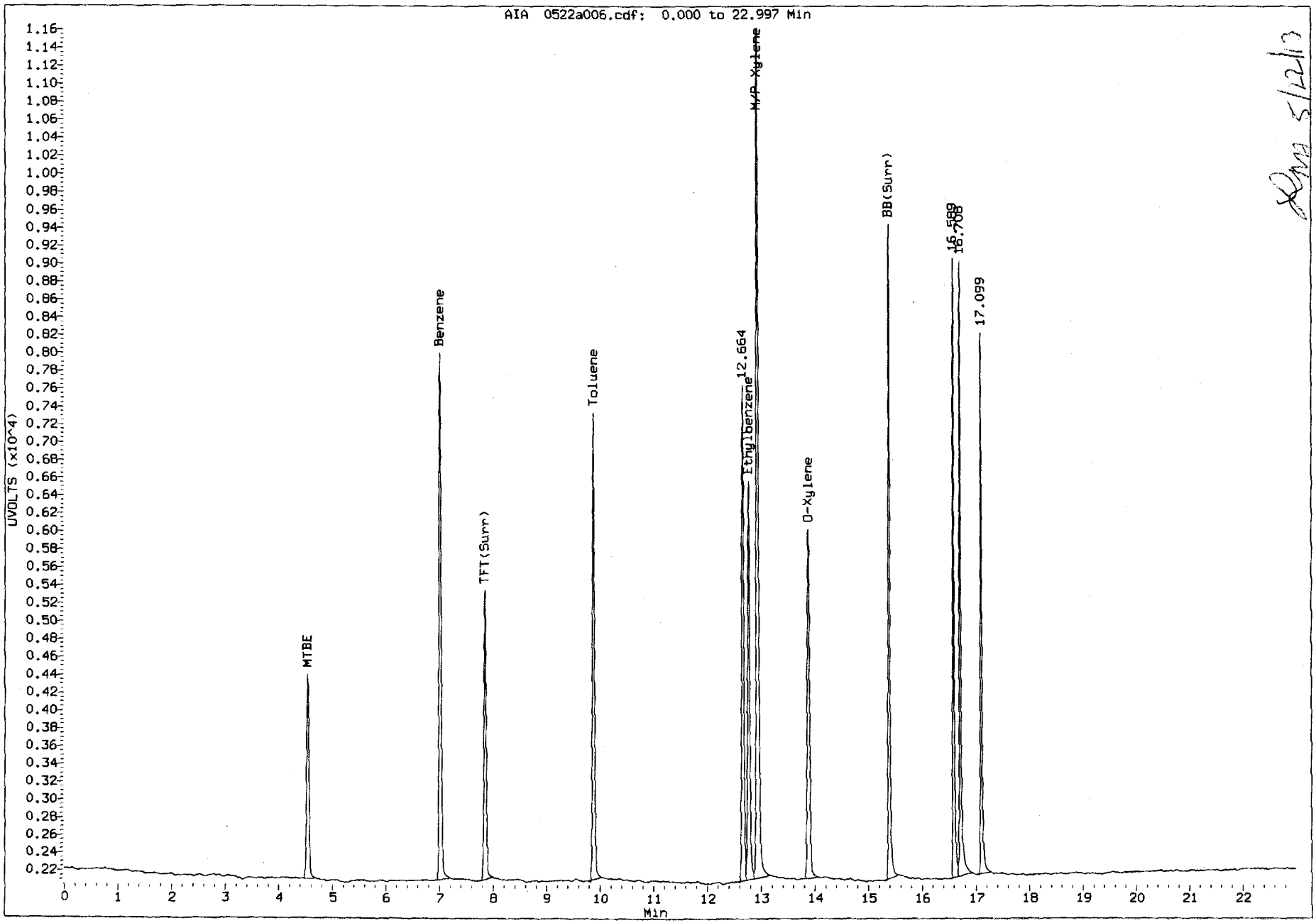
Instrument: pid1.i

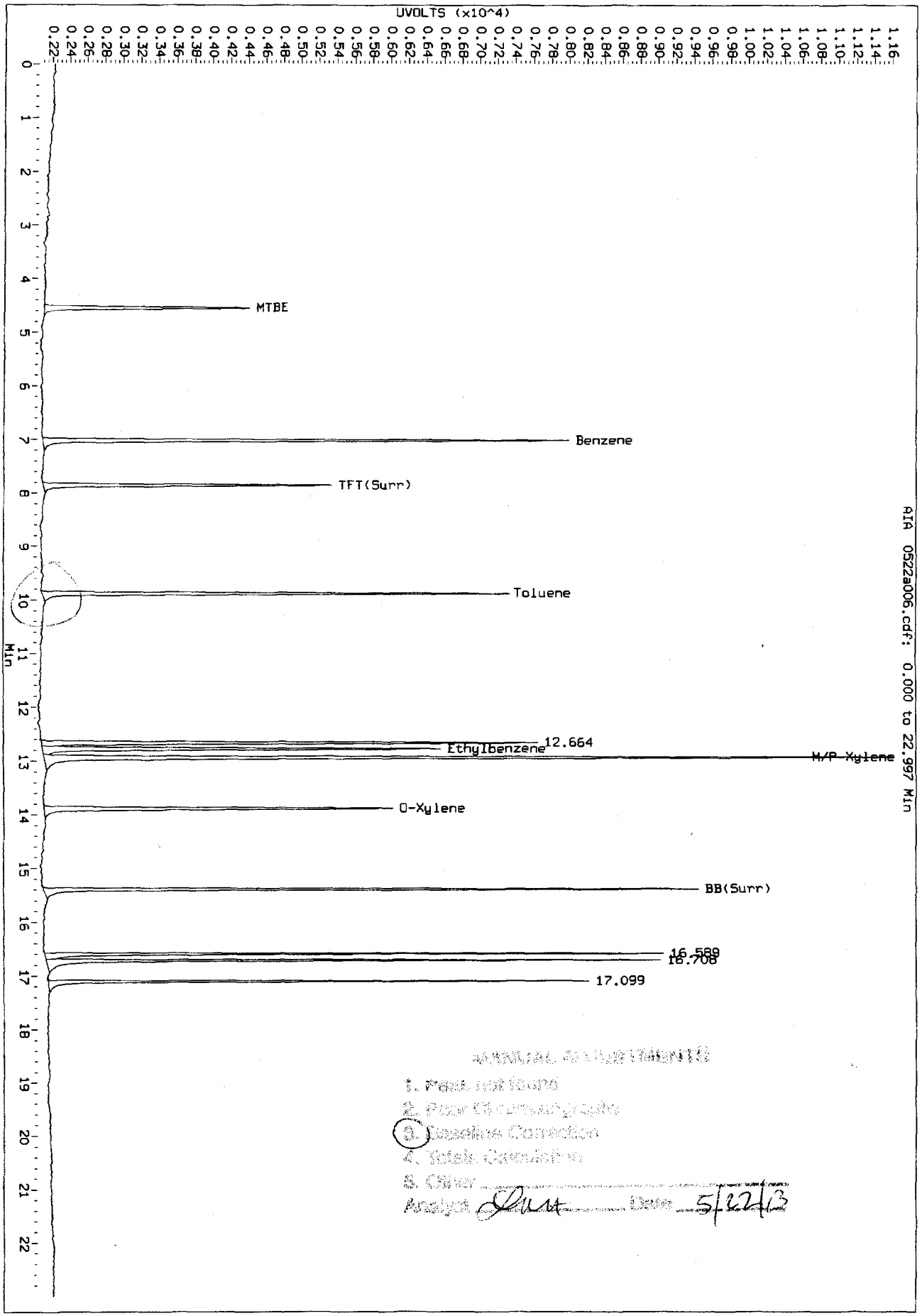
Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a006.d/0522a006.cdf
Injection Date: 22-MAY-2013 10:56
Instrument: pid1.i
Client Sample ID: BCAL25





ANNUAL SAMPLE REQUIREMENTS

1. Peaks not found
2. Poor Chromatography
3. Gasoline Correction
4. Total Correction
5. Other

Analyst [signature] Date 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a007.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a007.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL50
Client ID: BCAL50
Injection Date: 22-MAY-2013 11:25
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	3824	48740	129.2	TFT(Surr)
15.382	0.000	2595	21730	130.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	455449	1.272
8015C 2MP-TMB	(4.18 to 16.21)	723723	472875	0.653
AK101 nC6-nC10	(4.68 to 15.11)	582885	433822	0.744
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	455449	1.214

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	4289	133.1	TFT(Surr)
15.390	-0.001	9769	135.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	11655	51.84	Benzene
9.883	-0.001	10315	52.06N	Toluene
12.774	-0.004	8873	54.35	Ethylbenzene
12.936	-0.007	18906	105.07	M/P-Xylene
13.883	-0.005	7783	54.81	O-Xylene
4.545	0.000	4539	52.06	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a007.d
Lab Smp Id: BCAL50 Client Smp ID: BCAL50
Inj Date : 22-MAY-2013 11:25
Operator : LH Inst ID: pid1.i
Smp Info : BCAL50
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 11:25 Cal File: 0522a007.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.537	4.537	0.000	39052	50.0000	46.23
	9 BENZENE	7.012	7.012	0.000	69936	50.0000	47.90
$	10 TFT(Surr)	7.848	7.848	0.000	3824	133.000	129.2
	12 Toluene	9.873	9.873	0.000	67882	50.0000	46.81
	14 ETHYLBENZENE	12.765	12.765	0.000	5148	50.0000	46.76
	15 M/P-XYLENE	12.927	12.927	0.000	121551	100.000	95.33
	16 O-XYLENE	13.873	13.873	0.000	63859	50.0000	47.02
$	18 BB(Surr)	15.382	15.382	0.000	2595	133.000	130.6
	21 nc11	16.701	16.701	0.000	4942	50.0000	

Data File: /chem3/pid1.i/20130522-1.b/0522a007.d

Date : 22-MAY-2013 11:25

Client ID: BCAL50

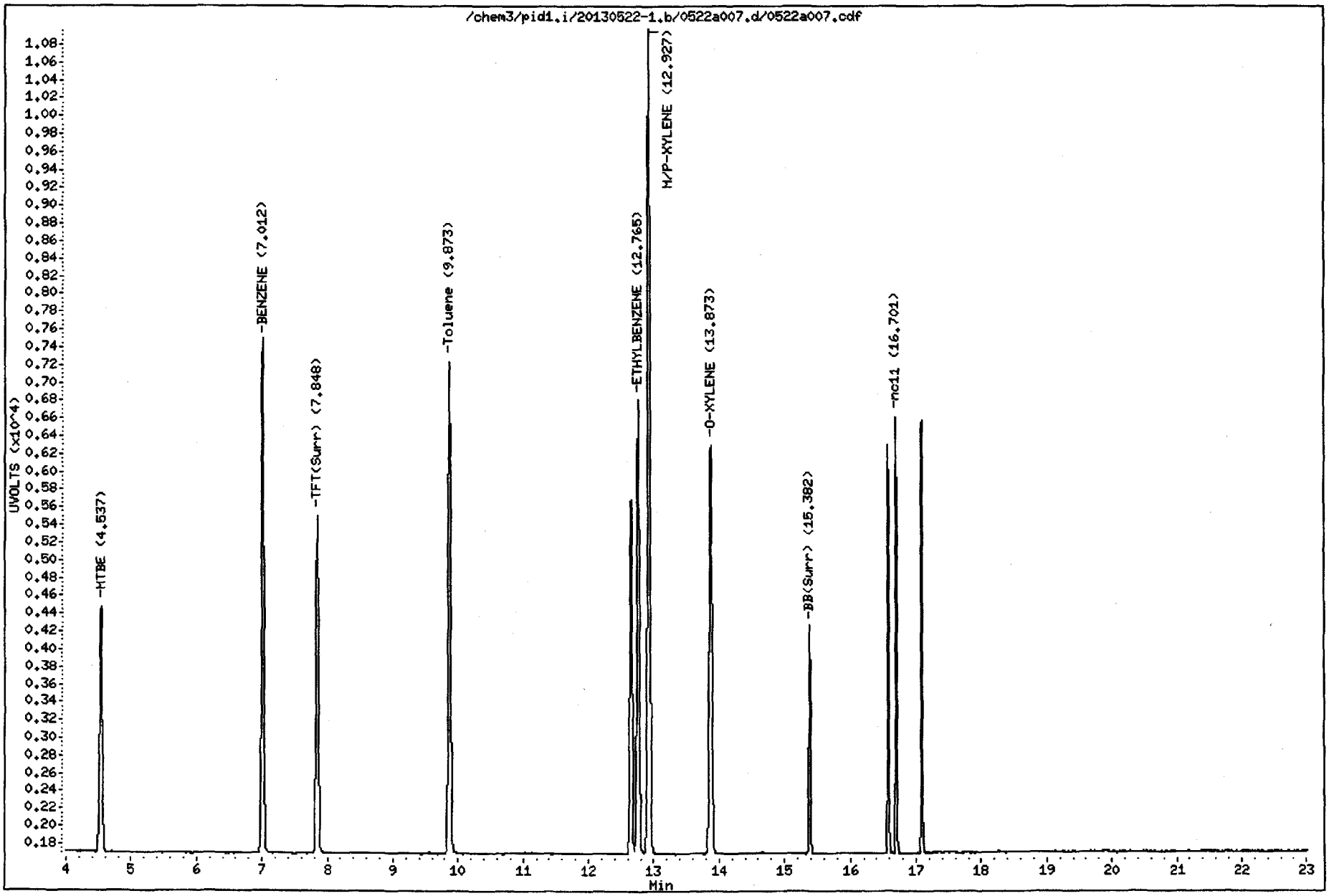
Sample Info: BCAL50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a007.d

Page 1

Date : 22-MAY-2013 11:25

Client ID: BCAL50

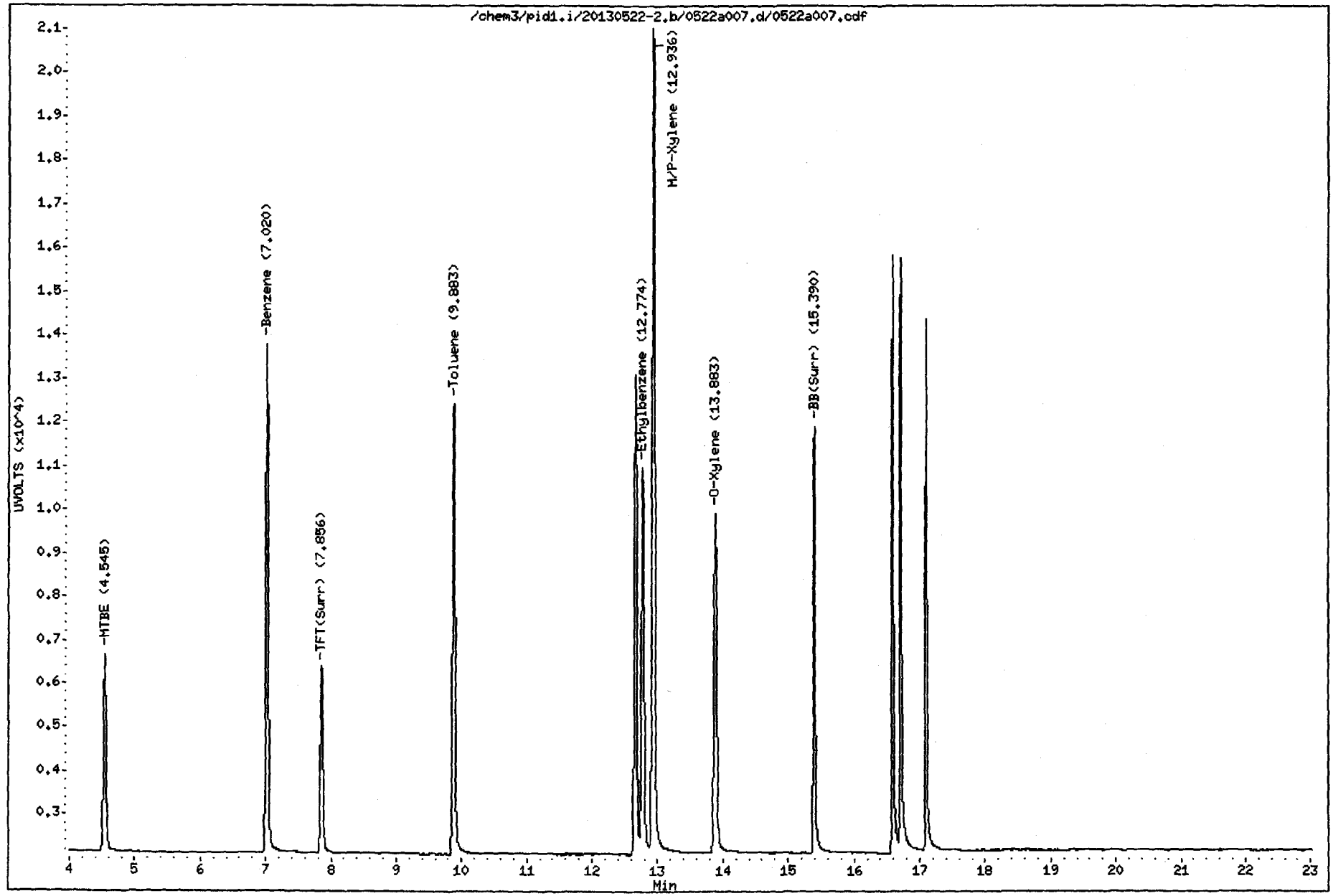
Instrument: pid1.i

Sample Info: BCAL50

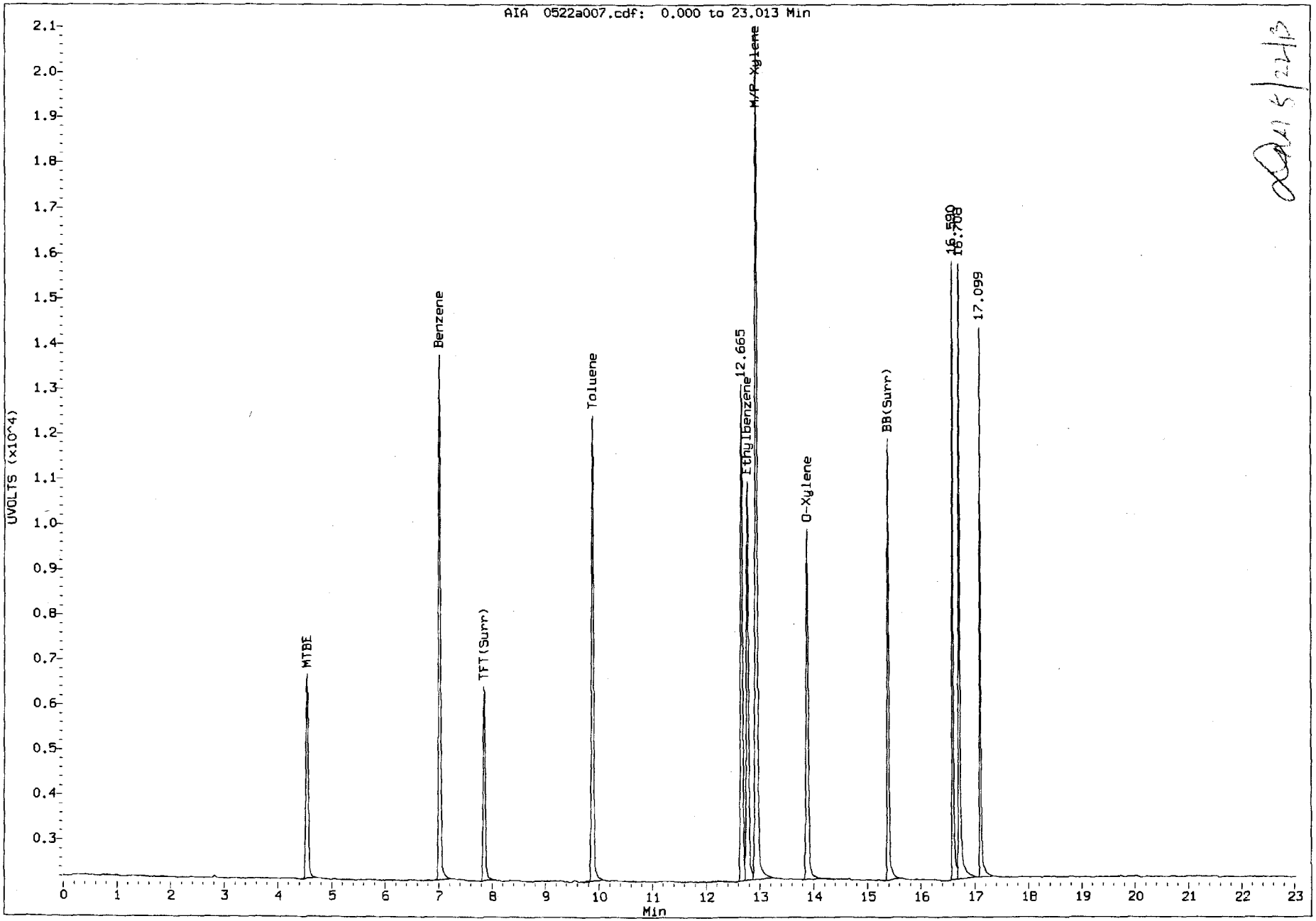
Operator: LH

Column phase: RTX 502-2 PID

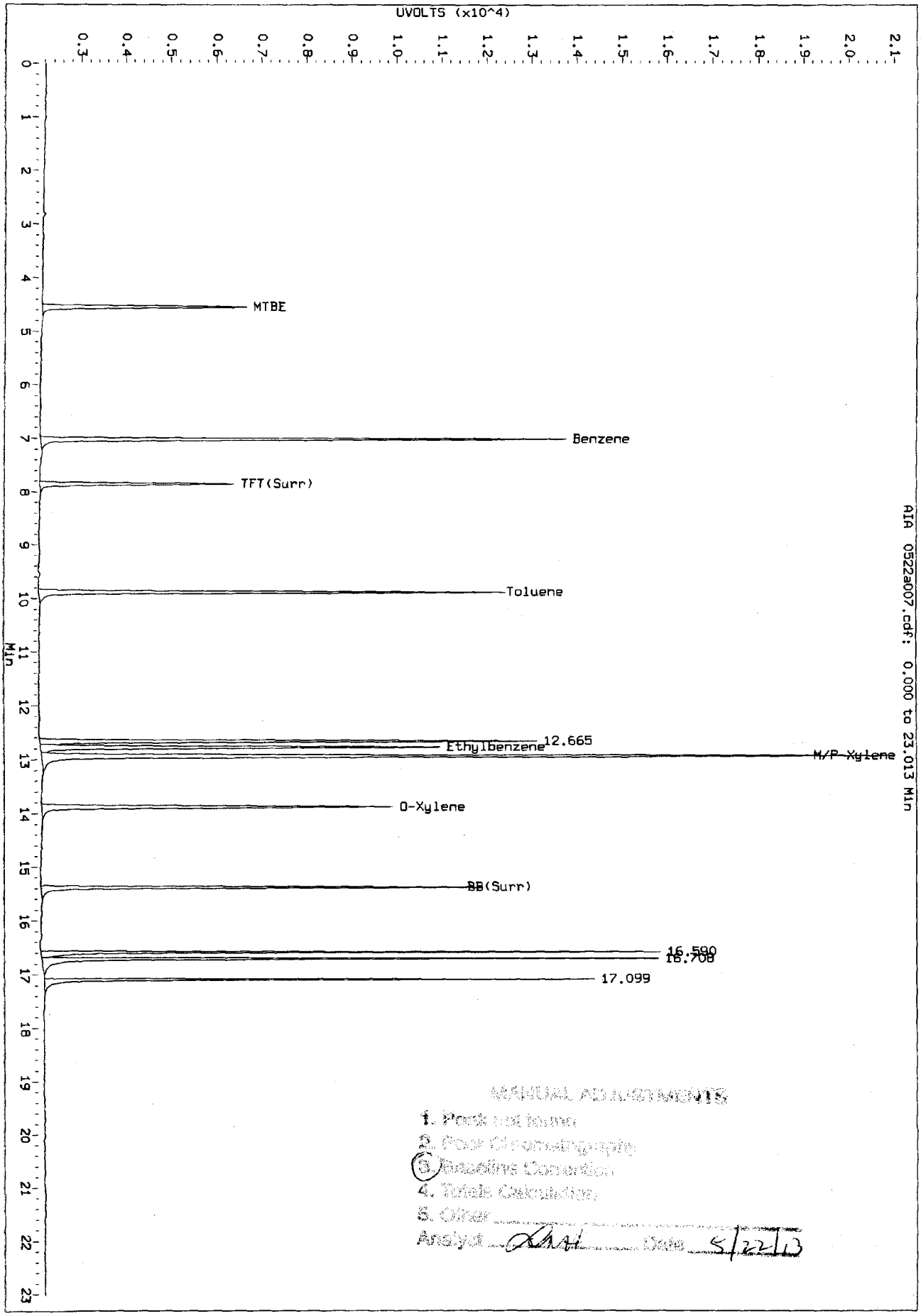
Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a007.d/0522a007.cdf
Injection Date: 22-MAY-2013 11:25
Instrument: pid1.i
Client Sample ID: BCAL50



Data File: /chem3/pid1.1/20130522-2.b/0522a007.d/0522a007.cdf
Injection Date: 22-MAY-2013 11:25
Instrument: pid1.1
Client Sample ID: BCAL50



MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst [signature] Date 5/22/13

XRH 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a008.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a008.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL100
Client ID: BCAL100
Injection Date: 22-MAY-2013 11:55
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.000	5017	64017	169.5	TFT(Surr)
15.382	0.000	3414	28686	171.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	875862	2.446
8015C 2MP-TMB	(4.18 to 16.21)	723723	914919	1.264
AK101 nC6-nC10	(4.68 to 15.11)	582885	837947	1.438
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	875862	2.335

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	5697	176.7	TFT(Surr)
15.390	0.000	13113	181.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.022	0.000	23264	103.47	Benzene
9.884	-0.001	20740	104.68	Toluene
12.776	-0.003	17573	107.64	Ethylbenzene
12.938	-0.005	37670	209.35	M/P-Xylene
13.884	-0.004	15483	109.03	O-Xylene
4.547	0.001	9110	104.49	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a008.d
Lab Smp Id: BCAL100 Client Smp ID: BCAL100
Inj Date : 22-MAY-2013 11:55
Operator : LH Inst ID: pid1.i
Smp Info : BCAL100
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 11:55 Cal File: 0522a008.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.539	4.539	0.000	76970	100.000	91.12
	9 BENZENE	7.014	7.014	0.000	137016	100.000	93.84
$	10 TFT(Surr)	7.849	7.849	0.000	5017	178.000	169.5
	12 Toluene	9.875	9.875	0.000	131470	100.000	90.66
	14 ETHYLBENZENE	12.767	12.767	0.000	9866	100.000	89.61
	15 M/P-XYLENE	12.930	12.930	0.000	233700	200.000	183.3
	16 O-XYLENE	13.876	13.876	0.000	122598	100.000	90.28
$	18 BB(Surr)	15.382	15.382	0.000	3414	178.000	171.8
	21 nc11	16.702	16.702	0.000	9535	100.000	

Data File: /chem3/pid1.i/20130522-1.b/0522a008.d

Date : 22-MAY-2013 11:55

Client ID: BCAL100

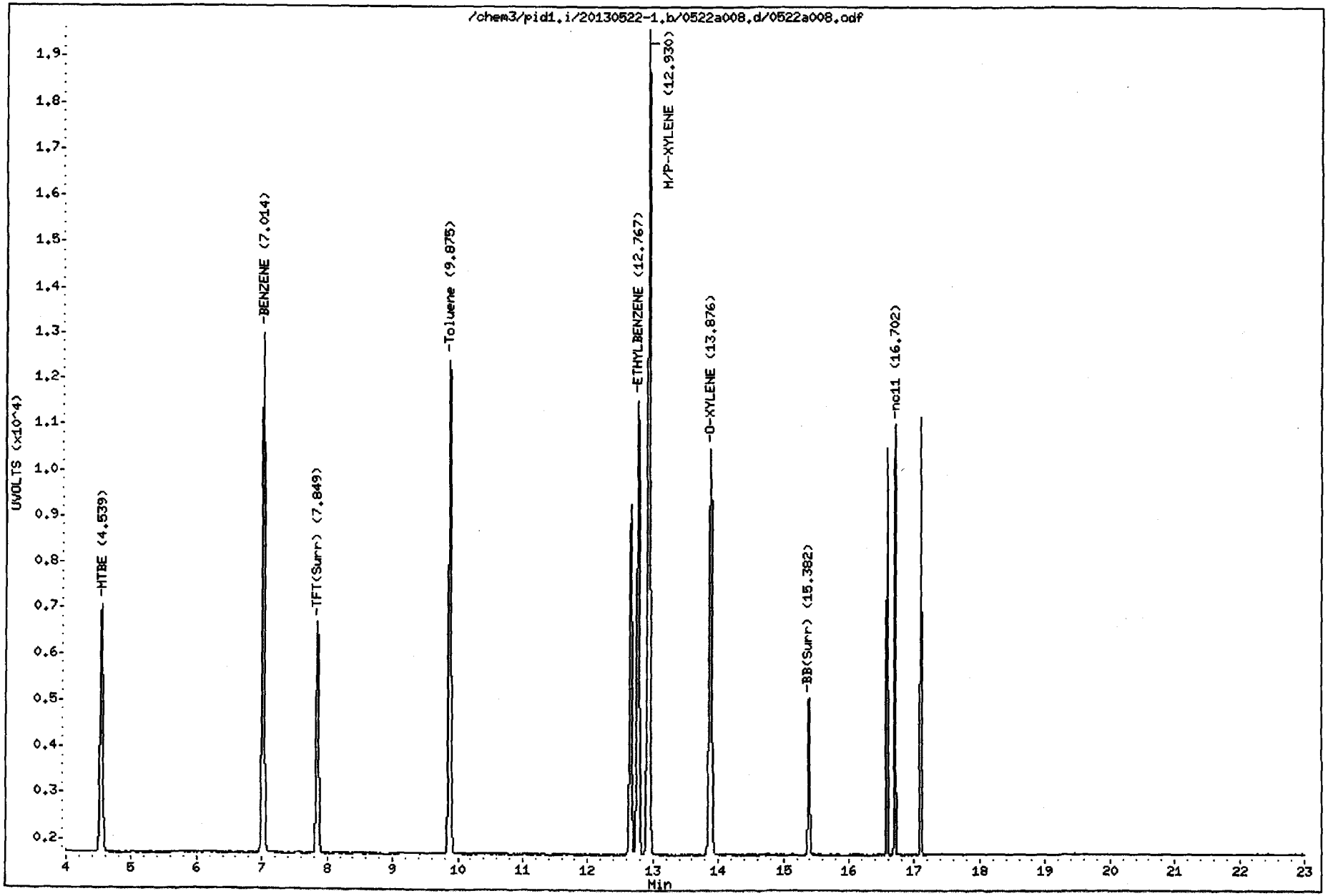
Sample Info: BCAL100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a008.d

Date : 22-MAY-2013 11:55

Client ID: BCAL100

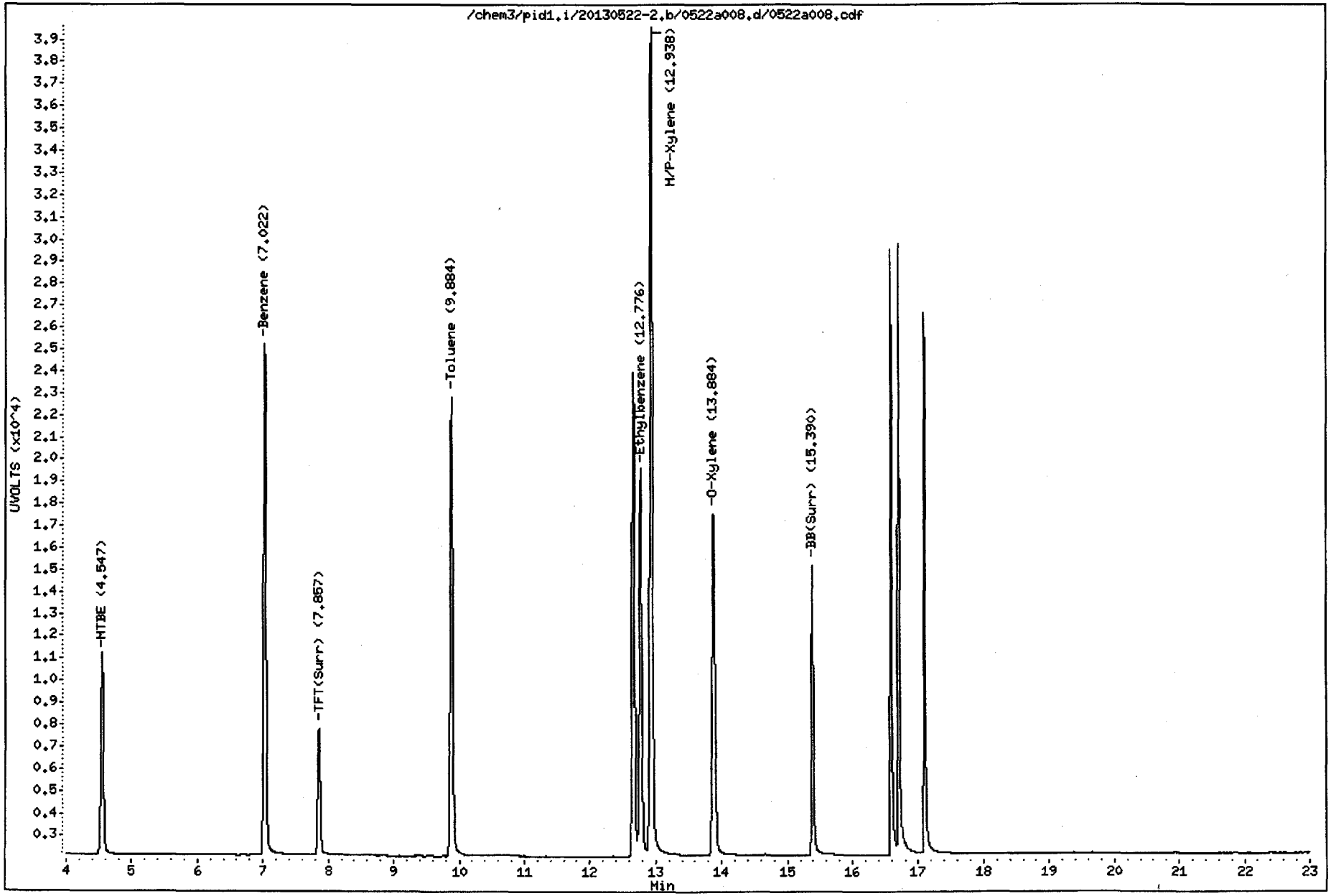
Sample Info: BCAL100

Instrument: pid1.i

Operator: LH

Column phase: RTX 502-2 PID

Column diameter: 0.18



XMH 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a009.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a009.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL200
Client ID: BCAL200
Injection Date: 22-MAY-2013 12:24
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	5680	72811	192.0	TFT(Surr)
15.383	0.000	3864	32720	194.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	1723795	4.814
8015C 2MP-TMB	(4.18 to 16.21)	723723	1791026	2.475
AK101 nC6-nC10	(4.68 to 15.11)	582885	1642170	2.817
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	1723795	4.596

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	6454	200.2	TFT(Surr)
15.391	0.000	15123	209.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.021	0.000	46248	205.70	Benzene
9.885	0.000	41824	211.09	Toluene
12.778	0.000	35277	216.08	Ethylbenzene
12.943	0.000	76231	423.66	M/P-Xylene
13.888	0.000	31715	223.34	O-Xylene
4.545	0.000	17903	205.35	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a009.d
Lab Smp Id: BCAL200 Client Smp ID: BCAL200
Inj Date : 22-MAY-2013 12:24
Operator : LH Inst ID: pid1.i
Smp Info : BCAL200
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 12:24 Cal File: 0522a009.d
Als bottle: 1 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.538	4.538	0.000	148855	200.000	176.2
9	BENZENE	7.014	7.014	0.000	266241	200.000	182.4
$ 10	TFT(Surr)	7.848	7.848	0.000	5680	200.000	192.0
12	Toluene	9.877	9.877	0.000	256545	200.000	176.9
14	ETHYLBENZENE	12.770	12.770	0.000	19235	200.000	174.7
15	M/P-XYLENE	12.935	12.935	0.000	460498	400.000	361.2
16	O-XYLENE	13.879	13.879	0.000	240735	200.000	177.3
$ 18	BB(Surr)	15.383	15.383	0.000	3864	200.000	194.4
21	nc11	16.704	16.704	0.000	18792	200.000	

Data File: /chem3/pid1.i/20130522-1.b/0522a009.d

Date : 22-MAY-2013 12:24

Client ID: BCAL200

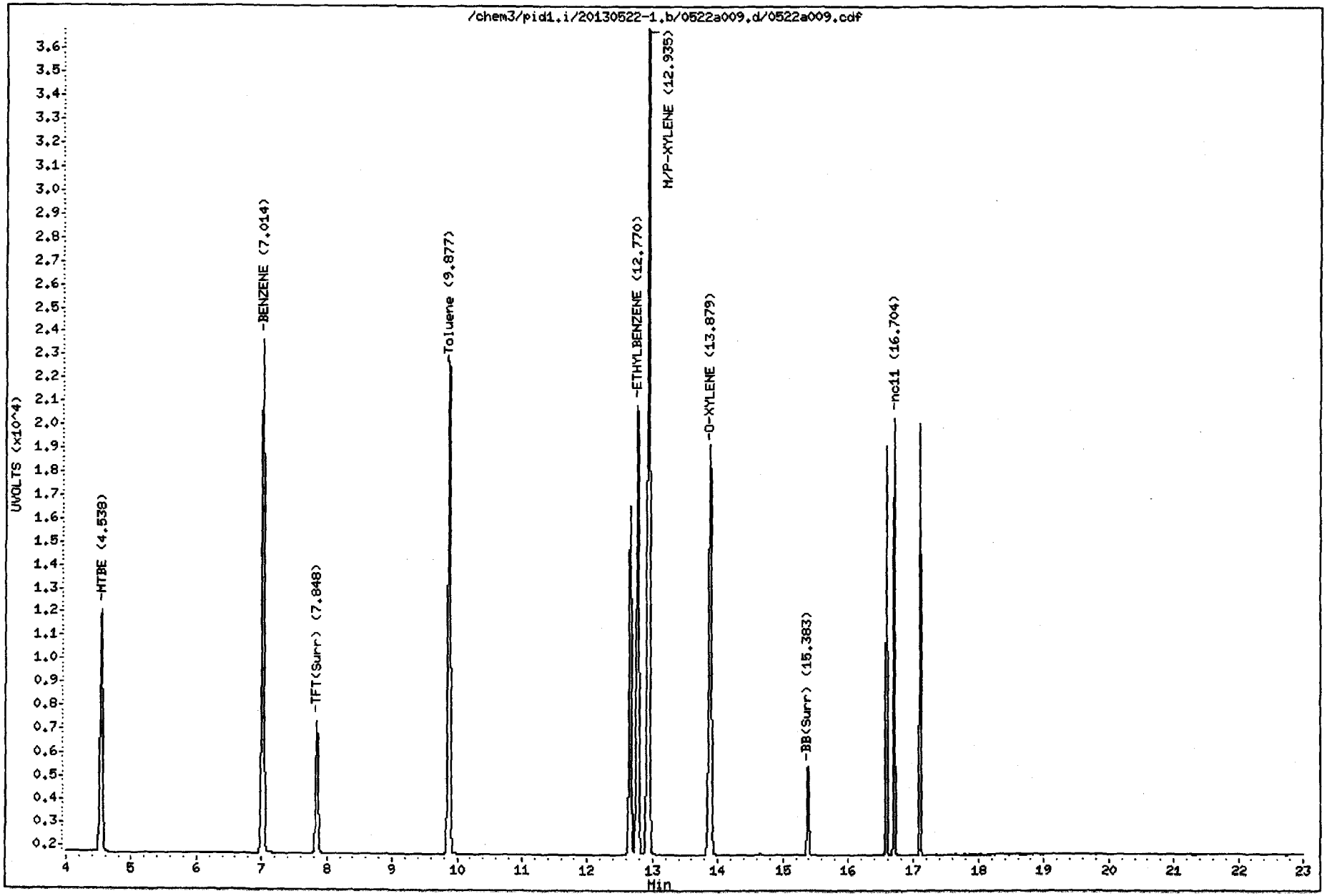
Sample Info: BCAL200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

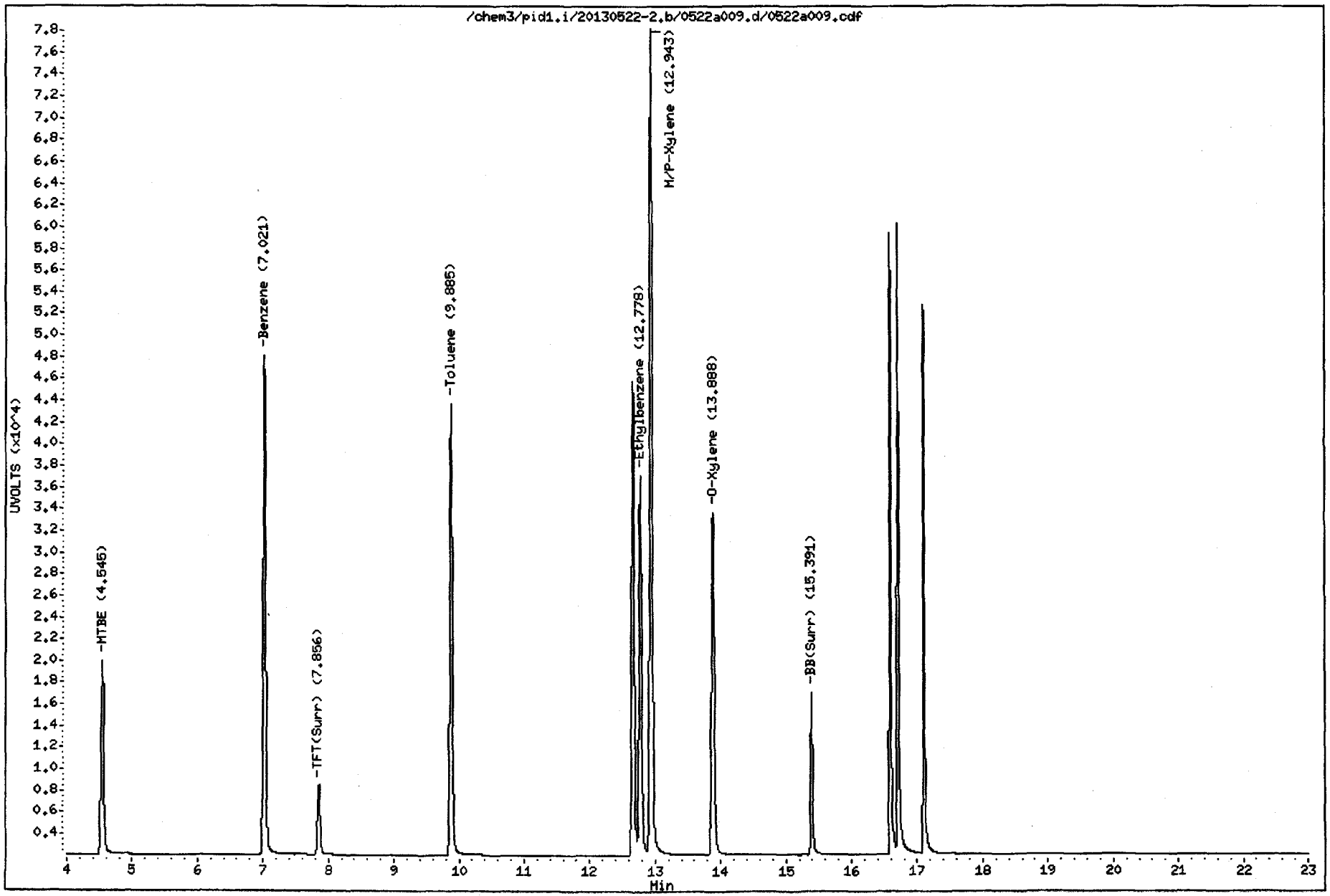
Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a009.d
Date : 22-MAY-2013 12:24
Client ID: BCAL200
Sample Info: BCAL200

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

Column phase: RTX 502-2 PID



Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a010.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a010.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: ICV25
Client ID: ICV25
Injection Date: 22-MAY-2013 12:53
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	2850	36275	96.3	TFT(Surr)
15.383	0.000	1968	16393	99.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	224528	0.627
8015C 2MP-TMB	(4.18 to 16.21)	723723	231562	0.320
AK101 nC6-nC10	(4.68 to 15.11)	582885	212642	0.365
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	224528	0.599

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3153	97.8	TFT(Surr)
15.390	-0.001	7281	100.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.021	-0.001	5554	24.70	Benzene
9.883	-0.002	4945	24.96	Toluene
12.774	-0.004	4229	25.90	Ethylbenzene
12.936	-0.008	9045	50.27	M/P-Xylene
13.884	-0.004	3733	26.29	O-Xylene
4.546	0.001	2105	24.14	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a010.d
Lab Smp Id: ICV25 Client Smp ID: ICV25
Inj Date : 22-MAY-2013 12:53
Operator : LH Inst ID: pid1.i
Smp Info : ICV25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 16:19 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 12:24 Cal File: 0522a009.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	6 MTBE	4.539	4.538	0.001	18919	22.3965	22.40
	9 BENZENE	7.013	7.014	-0.001	34225	23.4410	23.44
$	10 TFT(Surr)	7.849	7.848	0.001	2850	96.3146	96.31
	12 Toluene	9.874	9.877	-0.003	33117	22.8368	22.84
	14 ETHYLBENZENE	12.766	12.770	-0.004	2520	22.8895	22.89
	15 M/P-XYLENE	12.927	12.935	-0.008	59723	46.8403	46.84
	16 O-XYLENE	13.875	13.879	-0.004	31159	25.1396	25.14
$	18 BB(Surr)	15.383	15.383	0.000	1968	99.0411	99.04
	21 ncl1	16.701	16.704	-0.003	2482		

Data File: /chem3/pid1.i/20130522-1.b/0522a010.d

Date : 22-MAY-2013 12:53

Client ID: ICV25

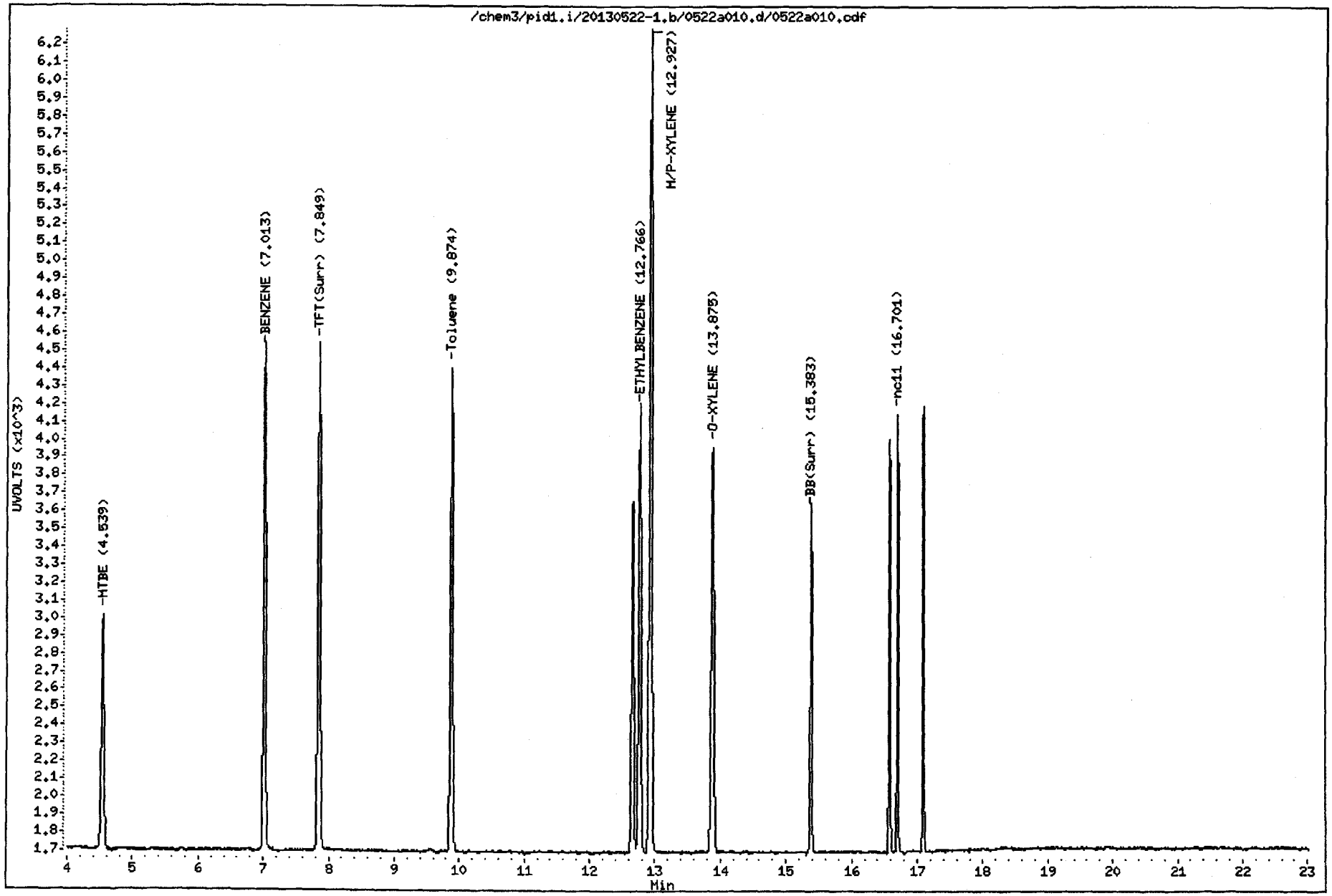
Sample Info: ICV25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a010.d

Page 1

Date : 22-MAY-2013 12:53

Client ID: ICV25

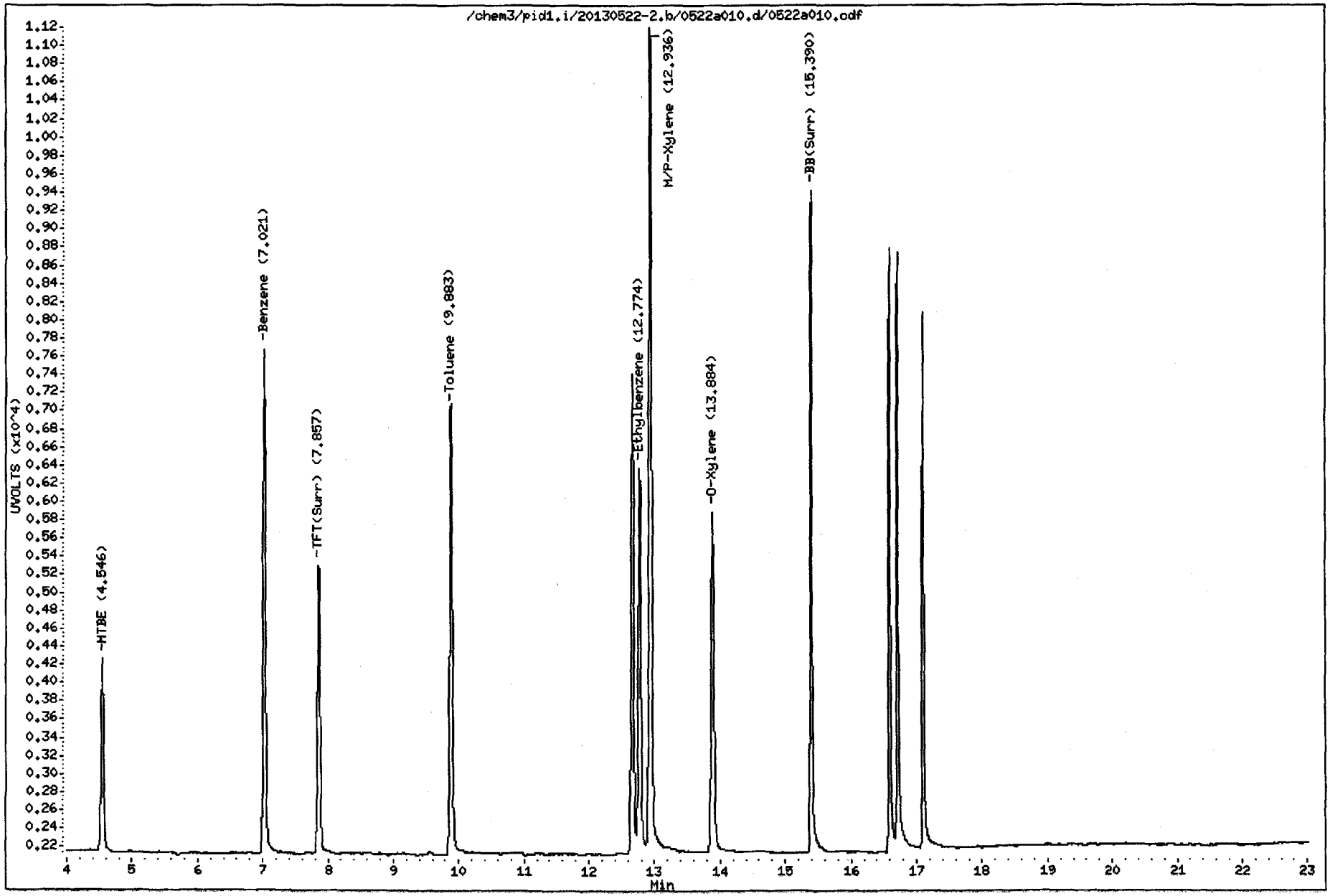
Instrument: pid1.i

Sample Info: ICV25

Operator: LH

Column phase: RTX 502-2 PID

Column diameter: 0.18



Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 (PID-1) PID-2 PID-3 FID-6

Curve Date(s): 10/23/12 Internal Standard ID N/A Expiration N/A

BFB Tune Meets Criteria? (N/A) YES / NO		ICV Exceeding ±20%?	YES / (NO)
ICal Meets %RSD & r^2 Criteria? (YES) / NO		ICV Exceeding ±30%?	YES / (NO)
Q flag applied?	YES / (NO)	Linear Fits Used?	YES / (NO)
Manual Integrations for ICal? (YES) / NO		Quadratic Fits Used?	YES / (NO)
Spectral Library Updated? (N/A) YES / NO		Calibration Points Dropped?	(YES) / NO
Minimum Response Factors Met (N/A) YES / NO		Purge Volume (mL)	5

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	VW758-3	2/1/13	Ultra Scientific	VW765-1	3/13/12
SPEX	VW754-1	2/2/12	SPEX	VW765-5	3/27/12

Detail problems, corrective actions and/or other pertinent information below:

MI's for peaks not found, baseline corrections.
TFT inflated on high pt of gas curve due to hydrocarbon interference.
MTBE @ 0.25 & 0.5 pts of BETX curve dropped & low pt FID confirmation dropped as well for MTBE

Analyst: JW **Date:** 10/25/12

Reviewer: [signature] **Date:** 10/26/12

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-2.b/1023a011.d
Level 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Level 3: /chem3/pid1.i/20121023-2.b/1023a009.d
Level 4: /chem3/pid1.i/20121023-2.b/1023a008.d
Level 5: /chem3/pid1.i/20121023-2.b/1023a007.d
Level 6: /chem3/pid1.i/20121023-2.b/1023a006.d
Level 7: /chem3/pid1.i/20121023-2.b/1023a005.d
Level 8: /chem3/pid1.i/20121023-2.b/1023a004.d

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	+++++	+++++	72.00000	75.40000	71.84000	72.14000		
	72.39000	68.24000					72.00167	3.161
2 Benzene	228	254	260	255	246	248		
	247	246					248	3.847
4 Toluene	256	234	210	224	220	219		
	220	216					225	6.342
5 Ethylbenzene	192	200	198	201	196	198		
	199	193					197	1.663
6 M/P-Xylene	216	208	212	220	215	217		
	218	215					215	1.653
7 O-Xylene	160	158	168	171	172	171		
	173	170					168	3.365

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
$ 3 TFT(Surr)	38.86364	37.09091	+++++	37.55224	37.30000	36.97744		
	38.10674	39.27500					37.88085	2.372
$ 8 BB(Surr)	81.36364	78.68182	+++++	80.38806	80.55000	80.24060		
	82.00562	79.97000					80.45710	1.310

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 2.96423
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Level 2: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Level 3: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Level 4: /chem3/pid1.i/20121023-1.b/1023a008.d/1023a008.cdf
Level 5: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Level 6: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Level 7: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Level 8: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf

Compound	0.000e+00 Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD	
	0.000e+00 Level 7	Level 8							
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
6 MTBE	+++++	472	600	610	595	575			
	561	509					560	9.173	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	0.000e+00 Level 7	0.000e+00 Level 8	RRF	% RSD	
7 nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
9 BENZENE	1572	1618	1515	1498	1392	1352	1307	1232	1436	9.456	
11 nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
12 Toluene	1464	1522	1397	1472	1356	1326	1283	1207	1378	7.690	
13 nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
14 ETHYLBENZENE	132	126	121	118	109	107	103	95.88000	114	10.830	
15 M/P-XYLENE	1612	1580	1476	1417	1290	1260	1226	1156	1377	12.313	
16 O-XYLENE	1504	1538	1492	1414	1330	1289	1249	1171	1373	9.739	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	0.000e+00 Level 7	0.000e+00 Level 8	RRF	% RSD	
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 10 TFT(Surr)	33.31818	31.81818	+++++	31.61194	31.34000	30.78195	30.91573	30.69500	31.49728	2.884	
$ 18 BB(Surr)	22.00000	20.54545	+++++	20.70149	20.31000	19.83459	19.84270	18.93000	20.30918	4.677	
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 10.58832
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a004.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a004.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 200
Client ID:
Injection Date: 23-OCT-2012 17:50
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	6139	78345	194.1	TFT(Surr)
15.390	0.003	3786	32155	185.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1708650	4.771 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	1708791	2.361 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	1600978	2.747 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1713577	4.568 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.003	7855	207.4	TFT(Surr)
15.397	0.003	15994	198.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.078	0.001	49204	198.42	Benzene
9.910	0.003	43241	192.19N	Toluene
12.793	0.006	38665	196.10	Ethylbenzene
12.957	0.014	85891	399.48	M/P-Xylene
13.900	0.010	34089	203.10N	O-Xylene
4.650	-0.003	13648	189.55	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

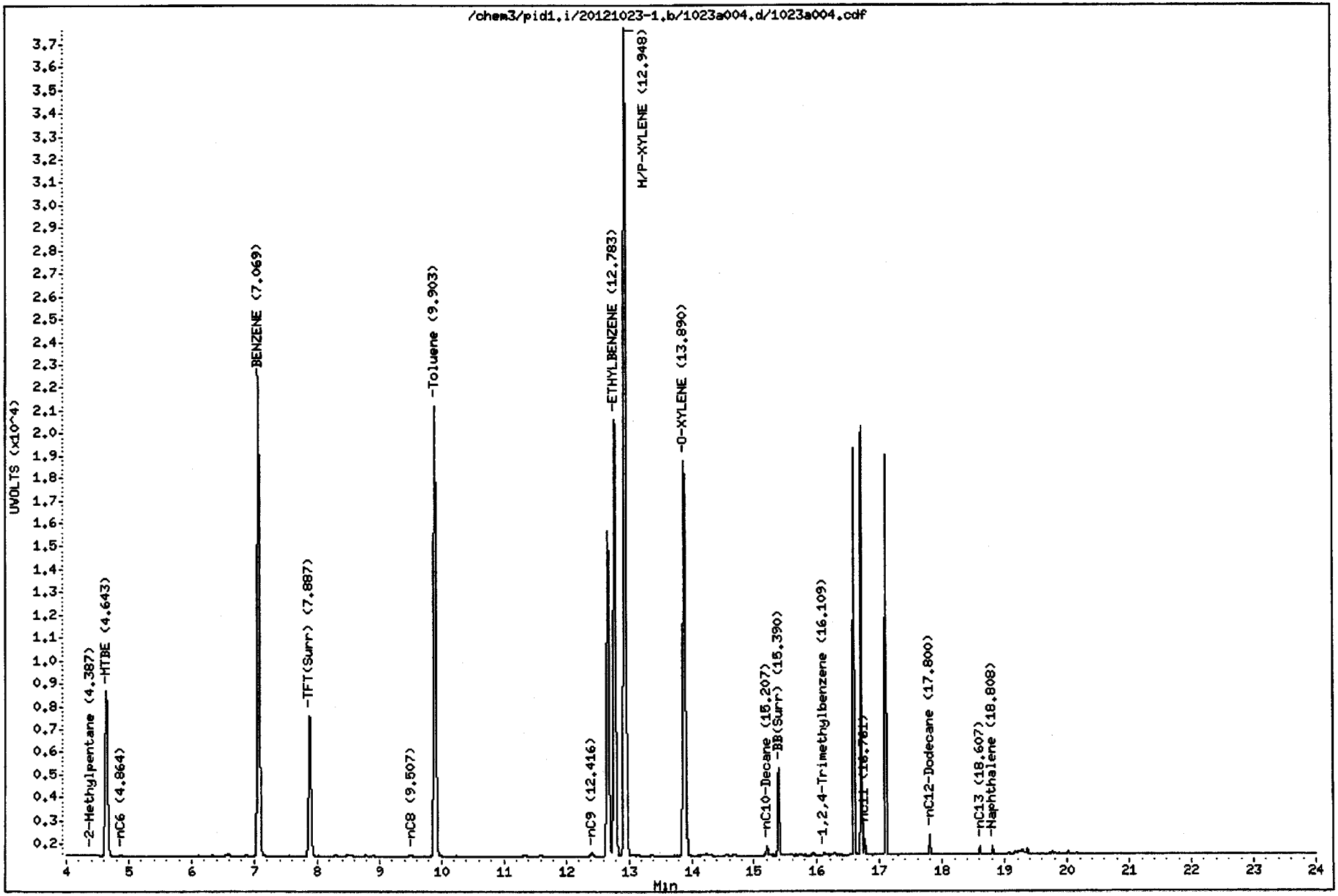
Sample Info: B 200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a004.d

Page 1

Date : 23-OCT-2012 17:50

Client ID:

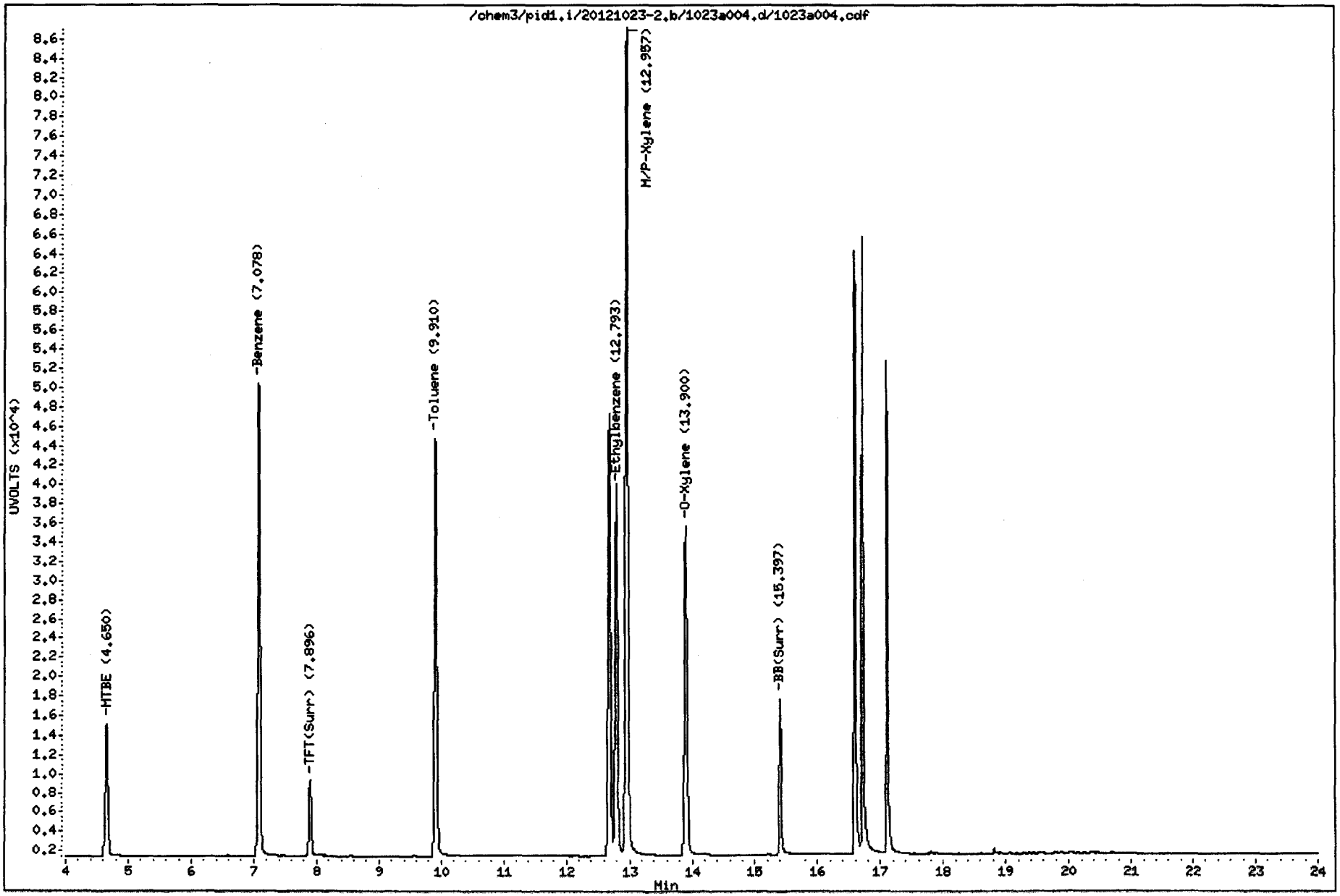
Instrument: pid1.i

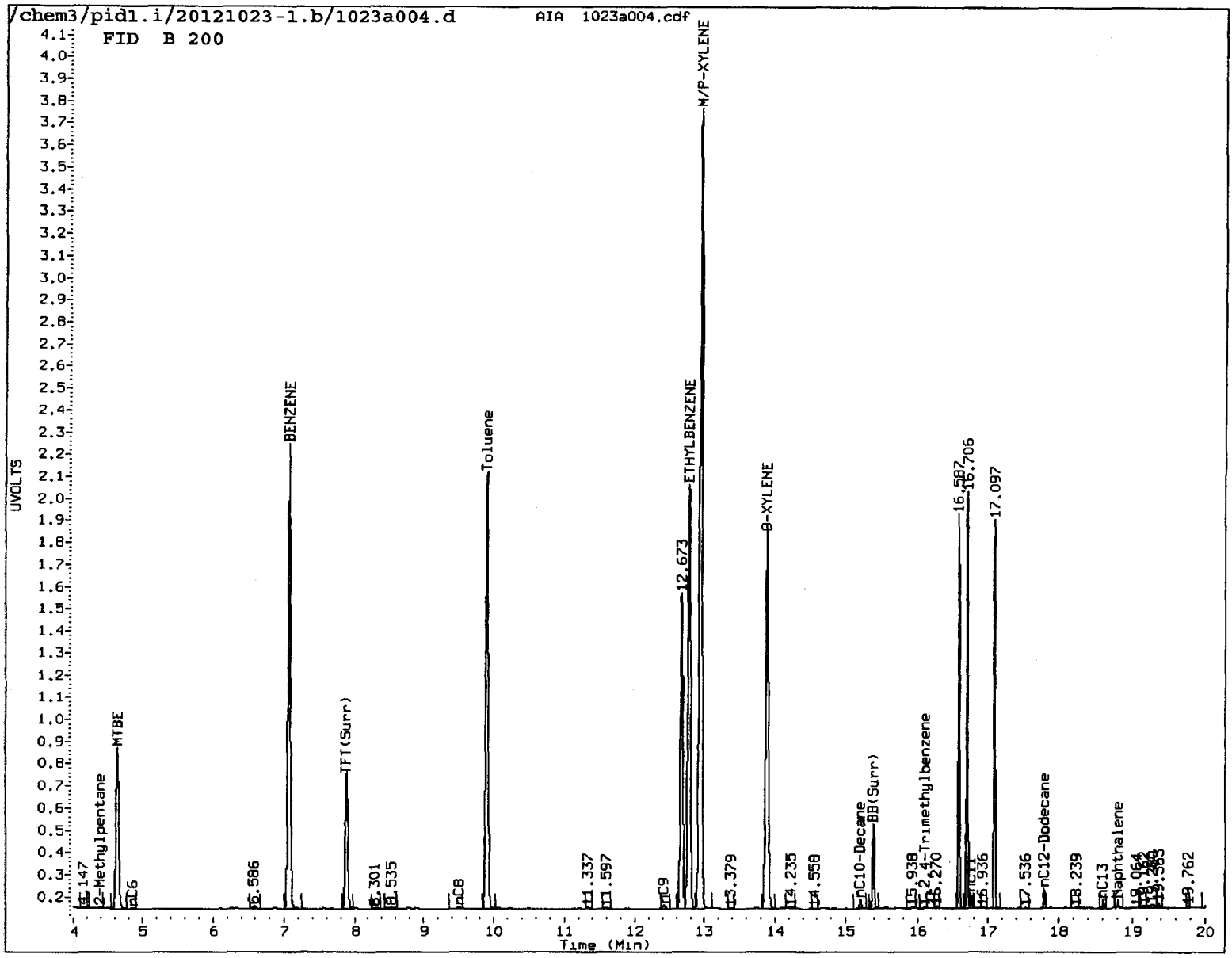
Sample Info: B 200

Operator: PC/JW

Column phase: RTX 502-2 PID

Column diameter: 0.18





MANUAL INTEGRATION

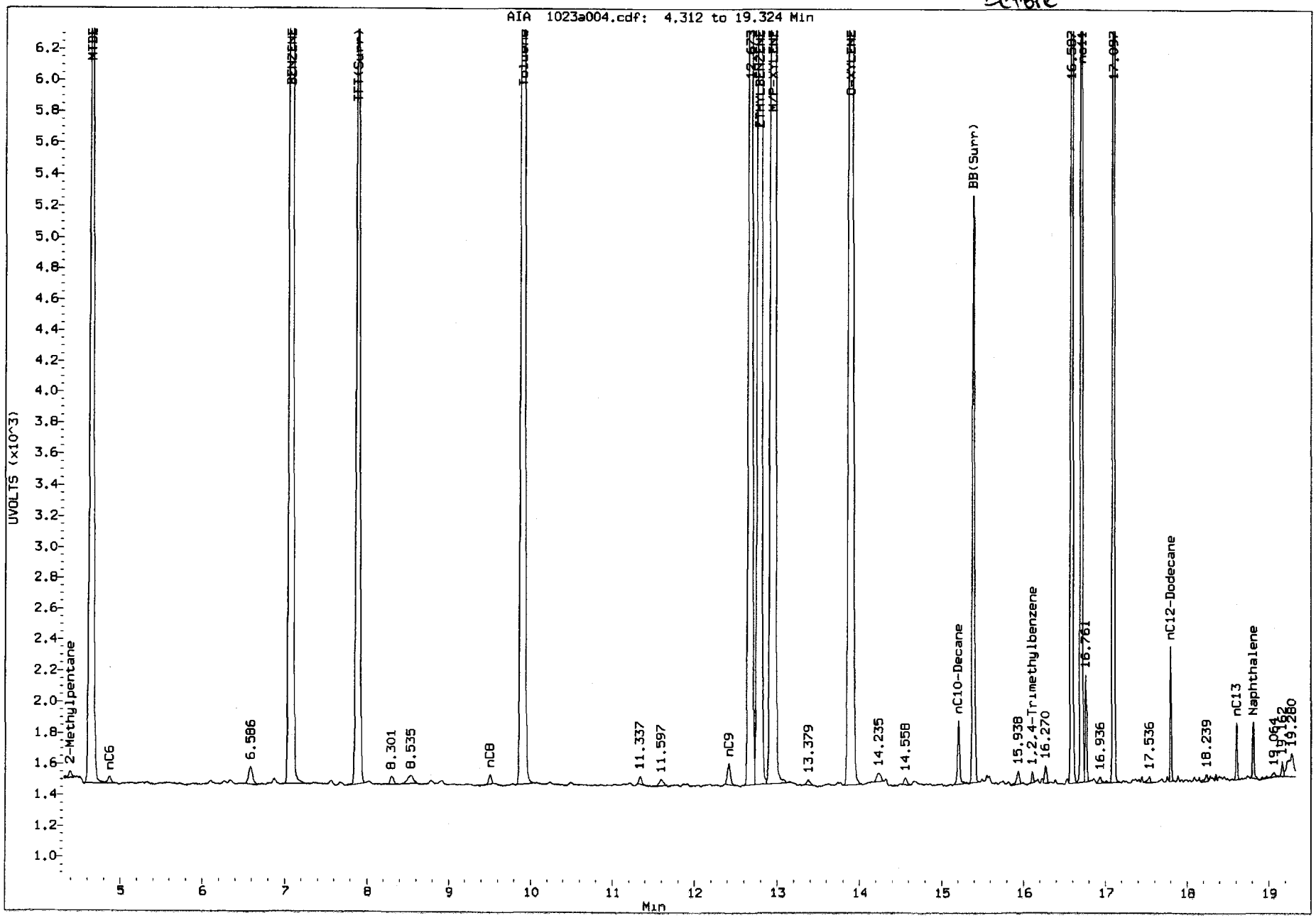
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

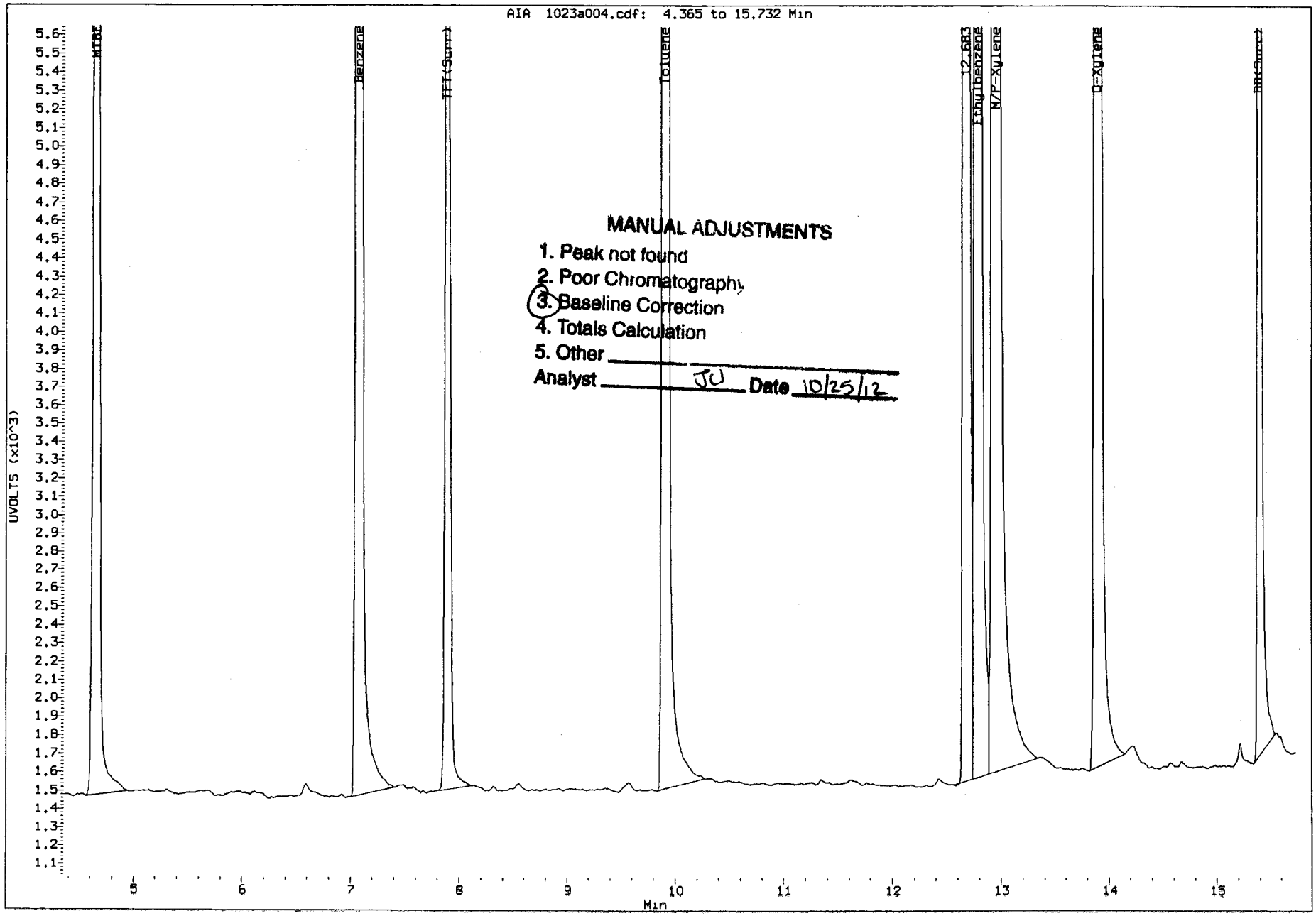
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:

Before

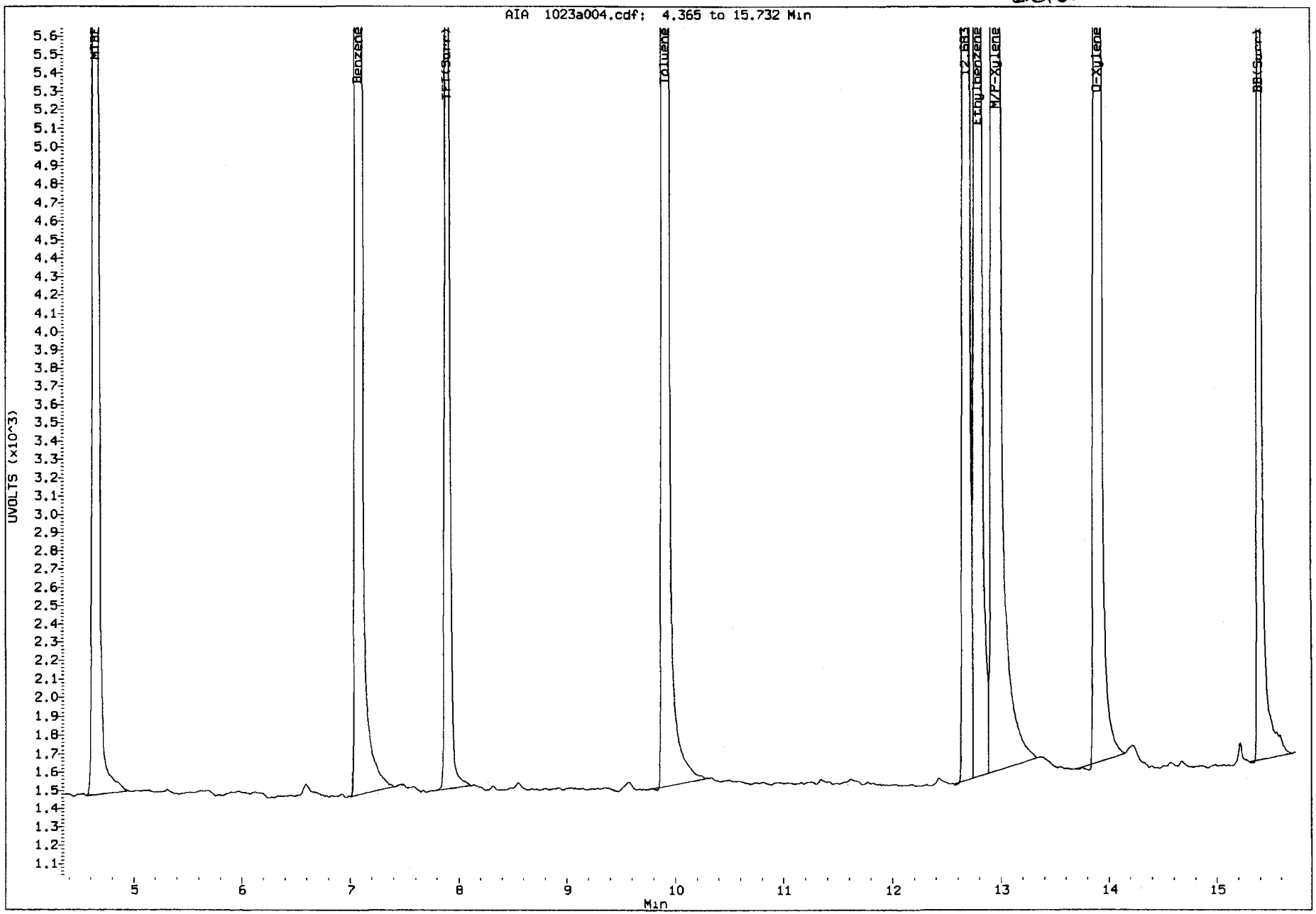


Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.1/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.1
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a005.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a005.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 100
Client ID:
Injection Date: 23-OCT-2012 18:20
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	5503	70111	174.0	TFT(Surr)
15.387	0.000	3532	29720	173.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	905684	2.529 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	901622	1.246 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	845537	1.451 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	906863	2.418 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	6783	179.1	TFT(Surr)
15.393	0.000	14597	181.4	BB(Surr)

SW8021 (PID)

JW 10/25/12

RT	Shift	Response	Amount	Compound
7.073	-0.003	24688	99.56N	Benzene
9.903	-0.003	22030	97.92N	Toluene
12.785	-0.002	19930	101.08	Ethylbenzene
12.948	0.004	43574	202.66	M/P-Xylene
13.893	0.003	17274	102.92N	O-Xylene
4.650	-0.003	7239	100.54N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

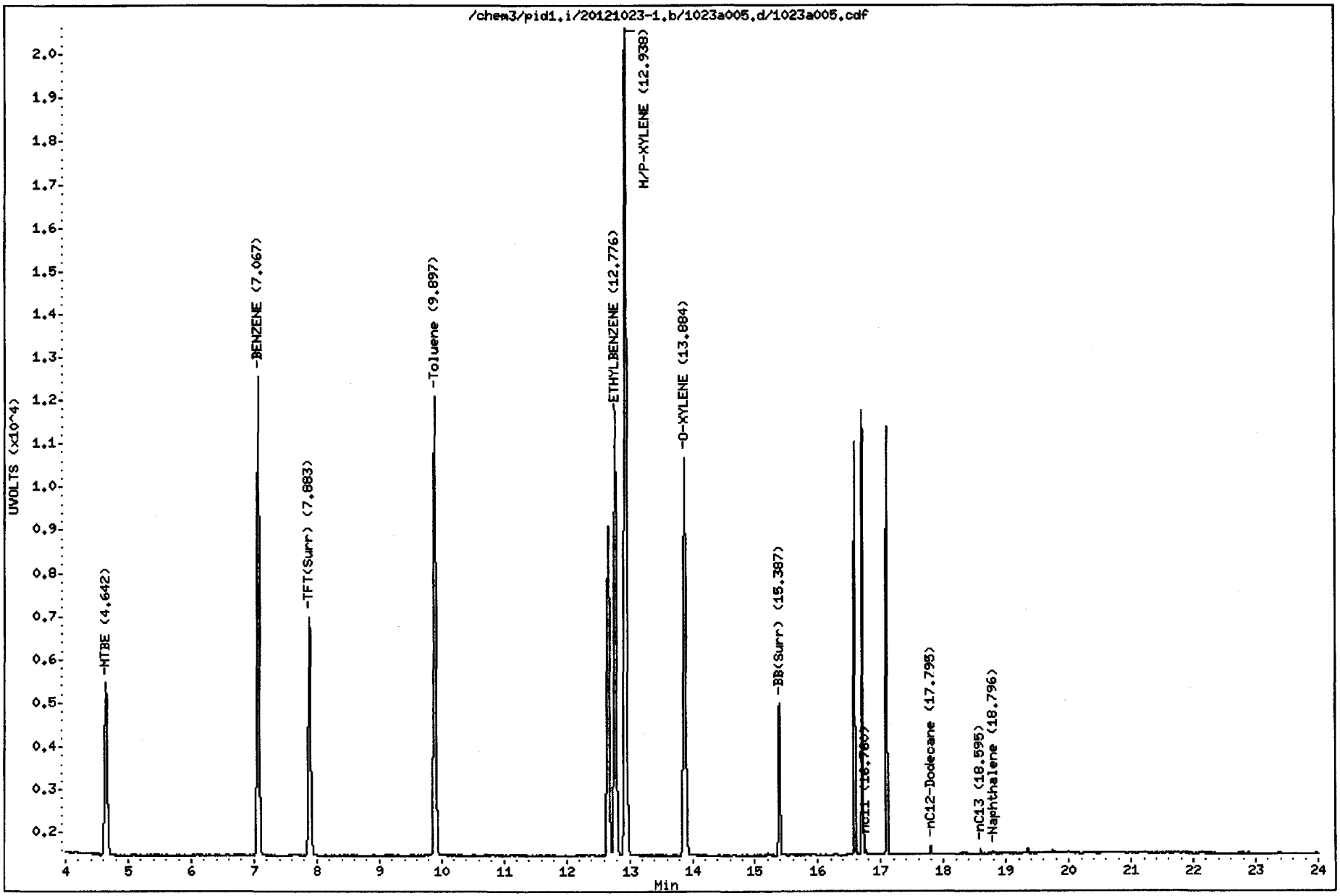
Sample Info: B 100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

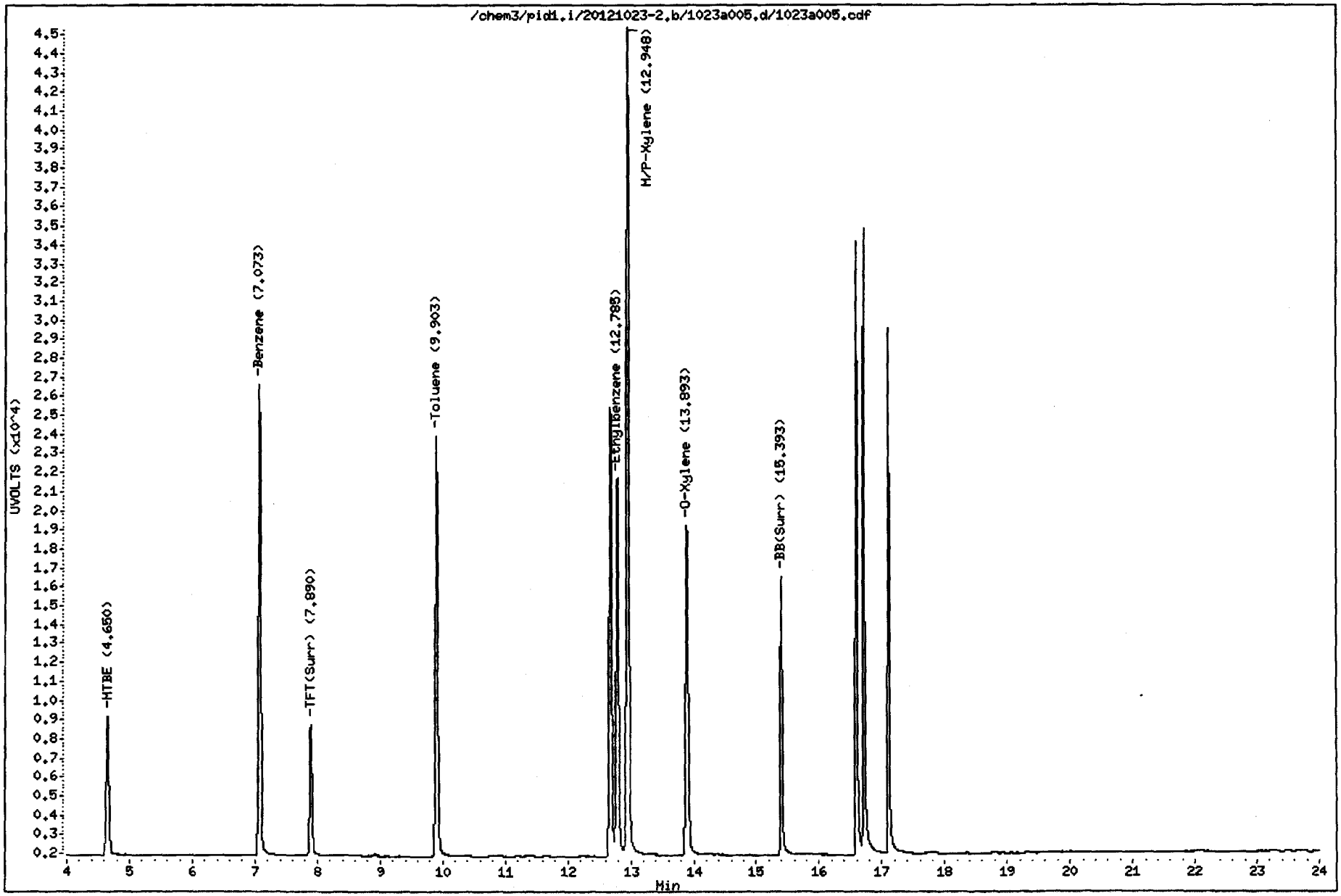
Sample Info: B 100

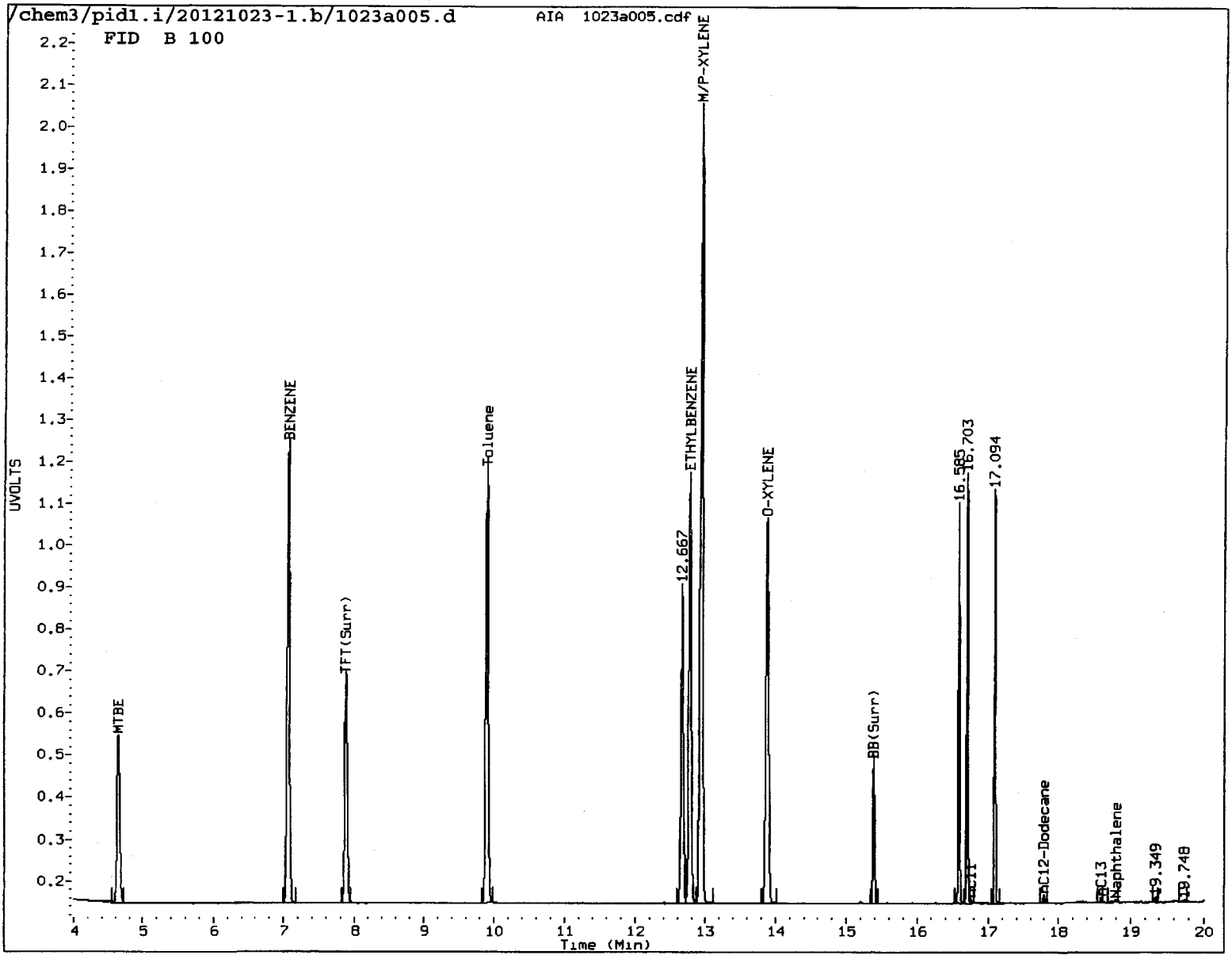
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

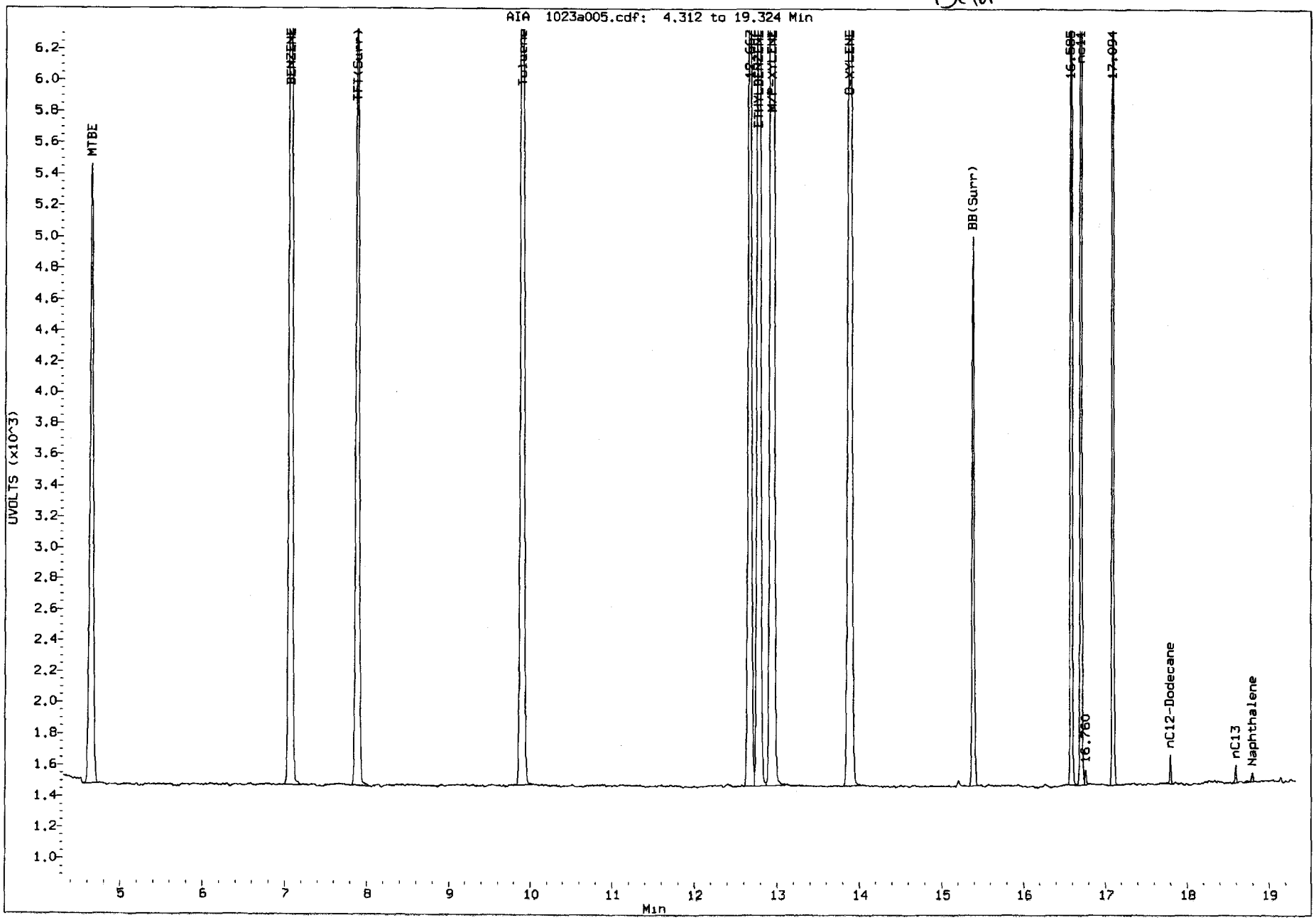
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

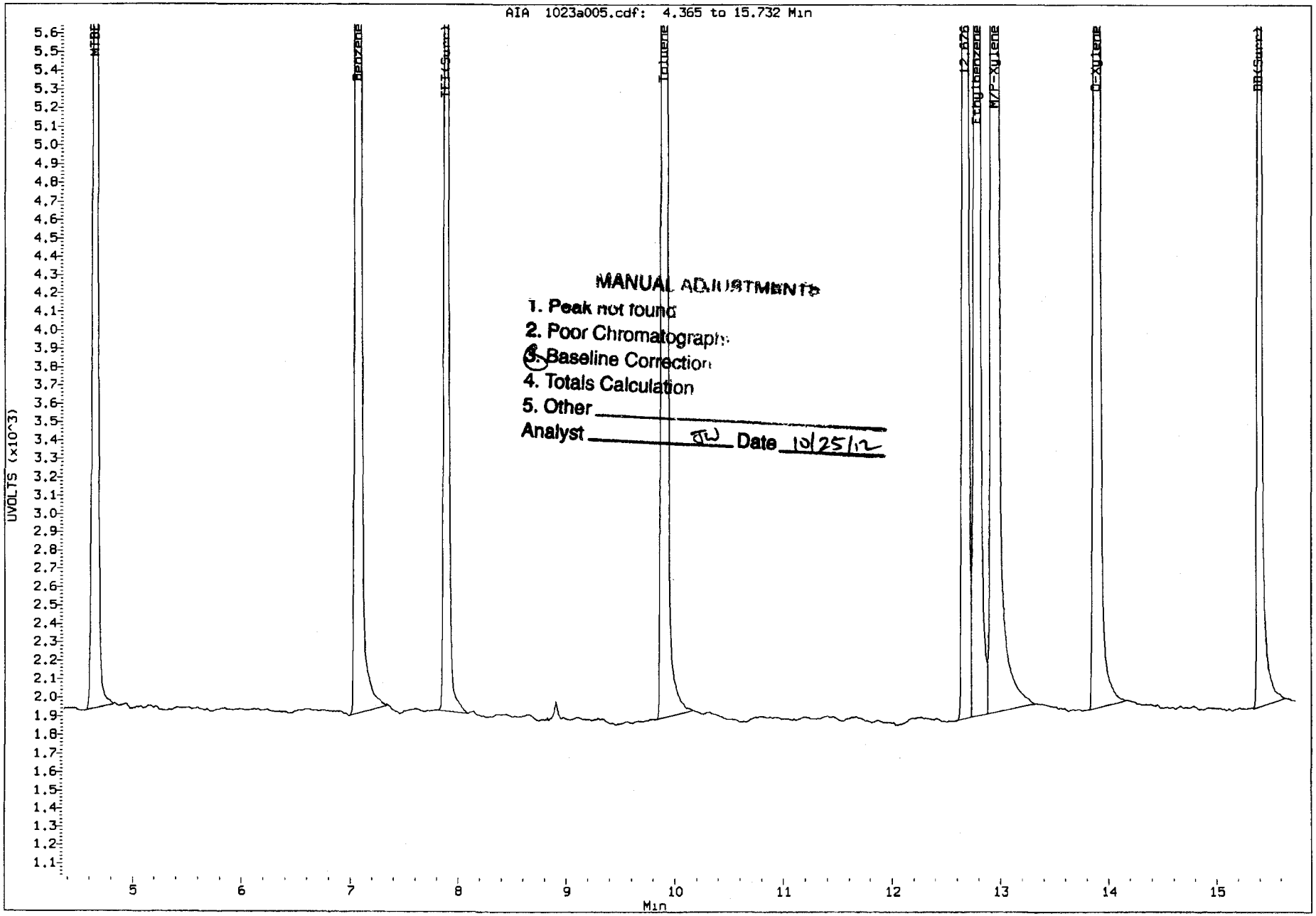
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before

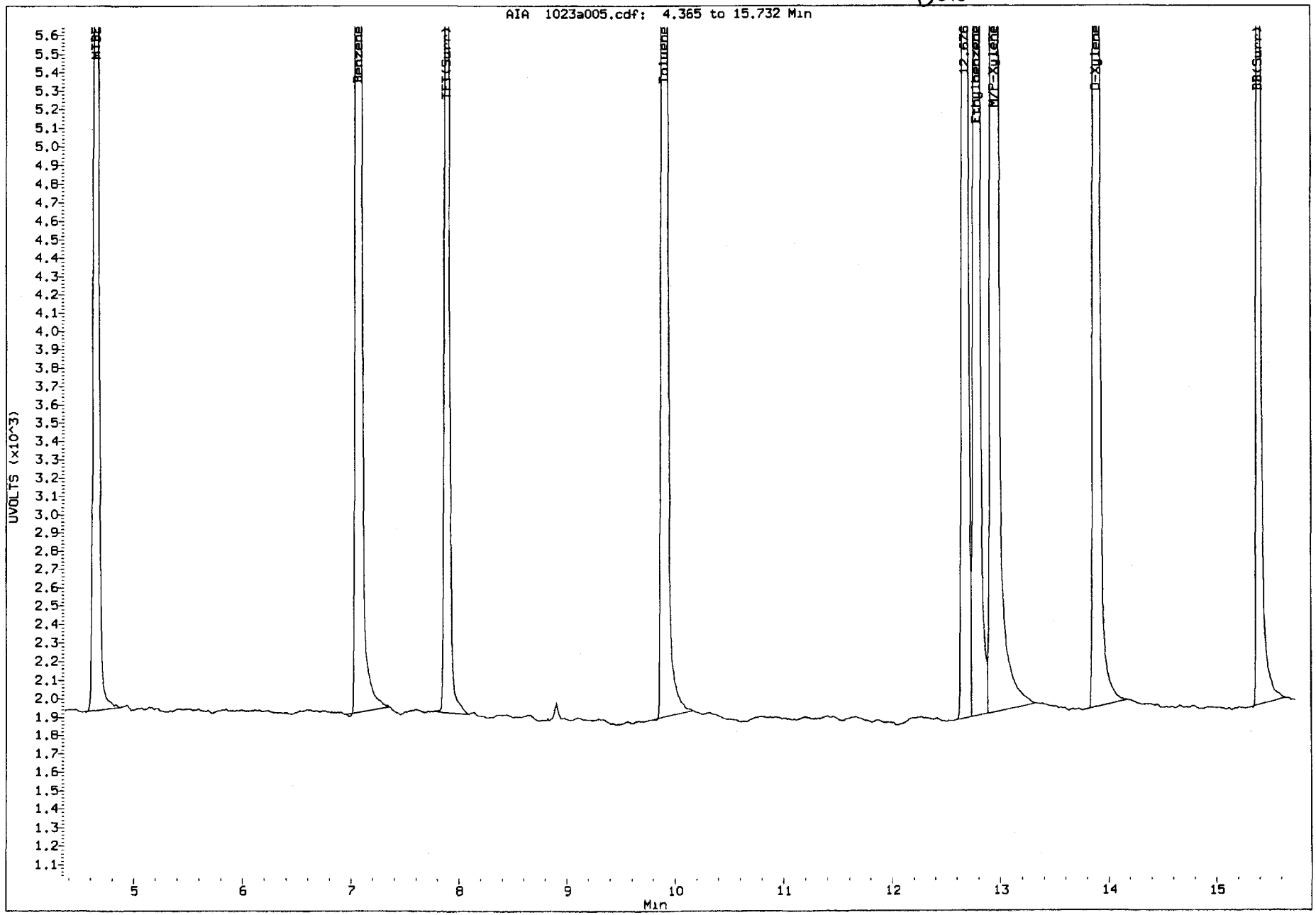


Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a006.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a006.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 50
Client ID:
Injection Date: 23-OCT-2012 18:49
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	4094	52140	129.5	TFT(Surr)
15.387	0.000	2638	22027	129.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	466249	1.302 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	465082	0.643 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	436325	0.749 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	466249	1.243 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	4918	129.8	TFT(Surr)
15.393	0.000	10672	132.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	12380	49.92	Benzene
9.903	-0.003	10965	48.74N	Toluene
12.784	-0.003	9886	50.14	Ethylbenzene
12.946	0.002	21661	100.75	M/P-Xylene
13.890	0.000	8535	50.85N	O-Xylene
4.653	0.000	3607	50.10N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

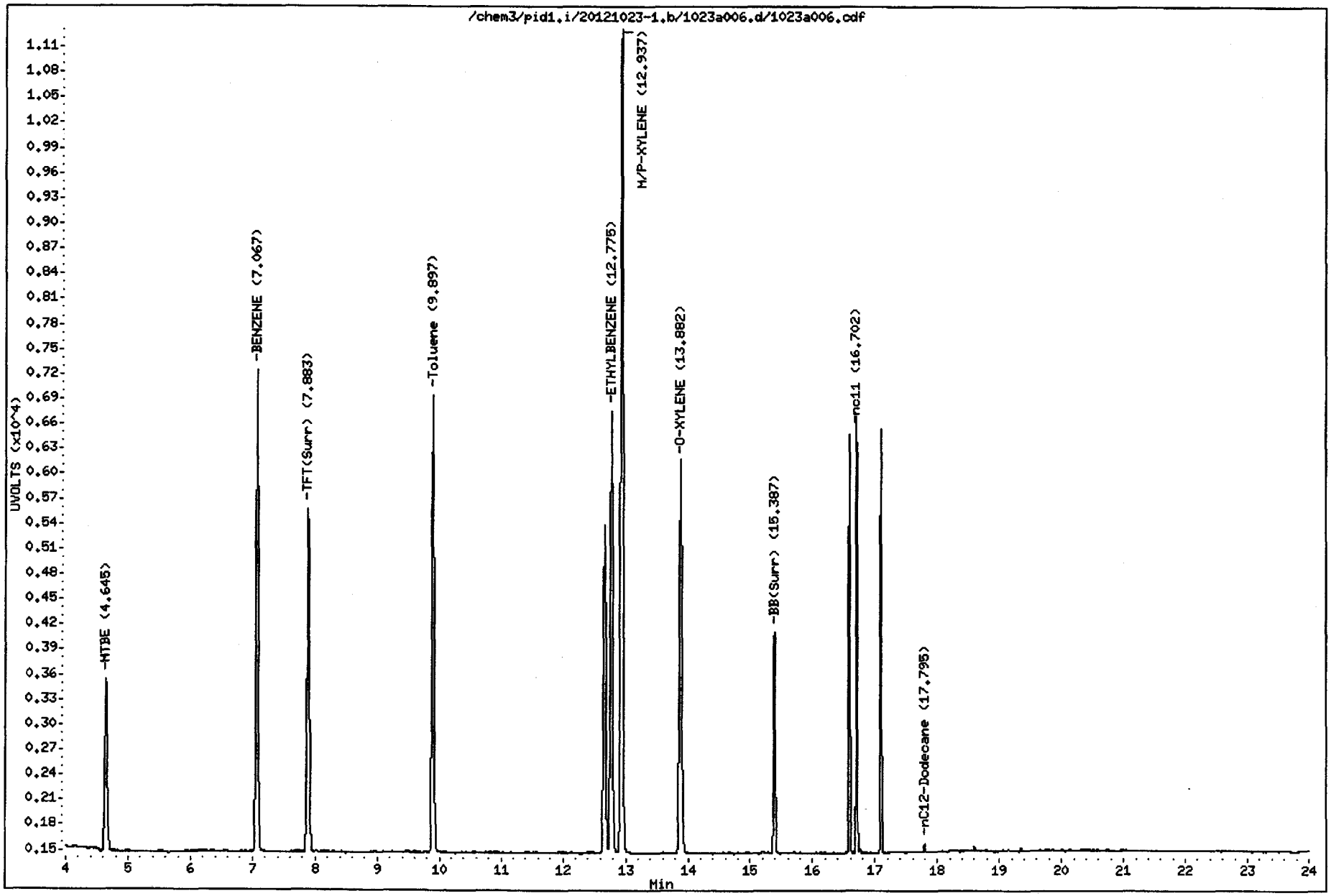
Sample Info: B 50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d

Page 1

Date : 23-OCT-2012 18:49

Client ID:

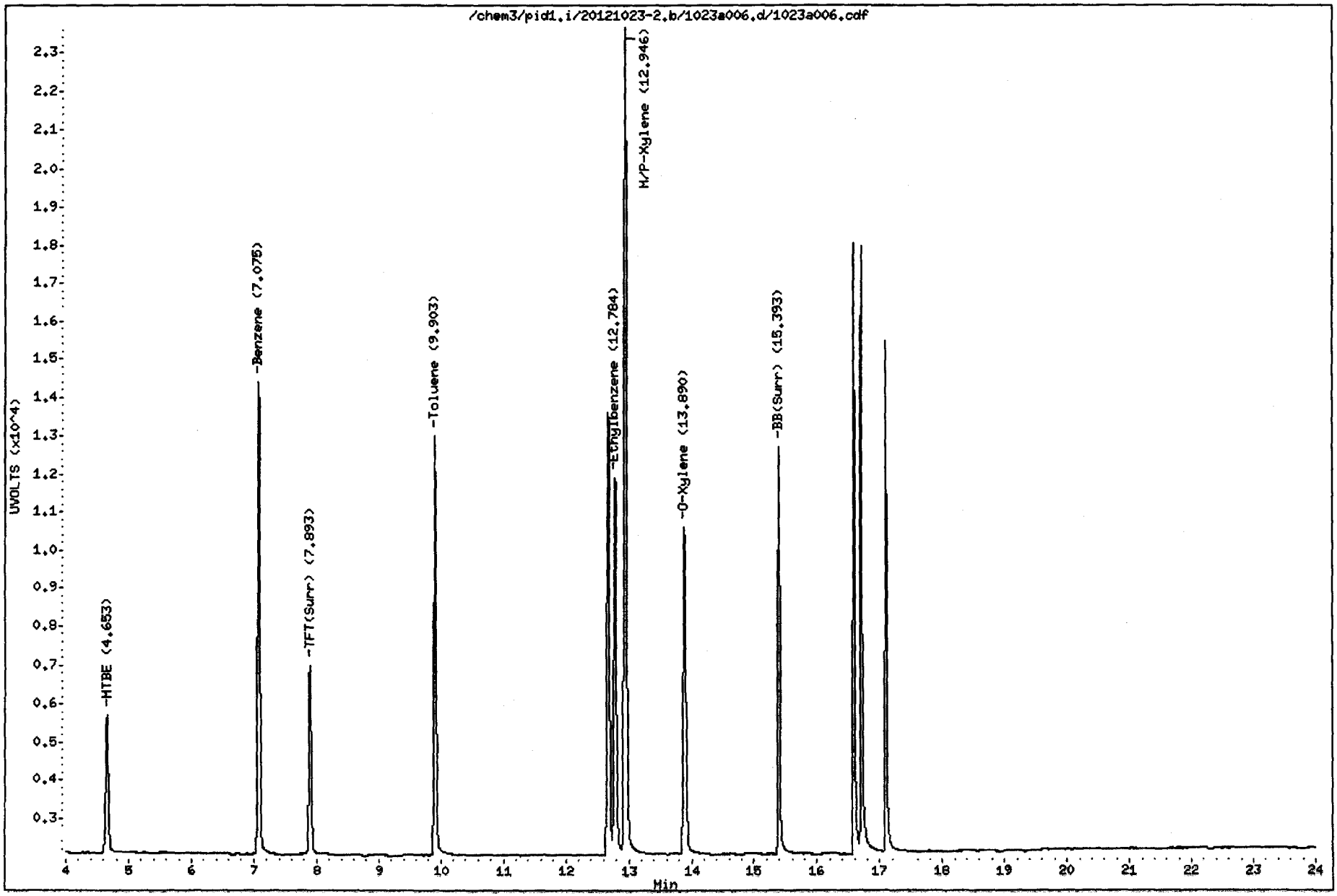
Instrument: pid1.i

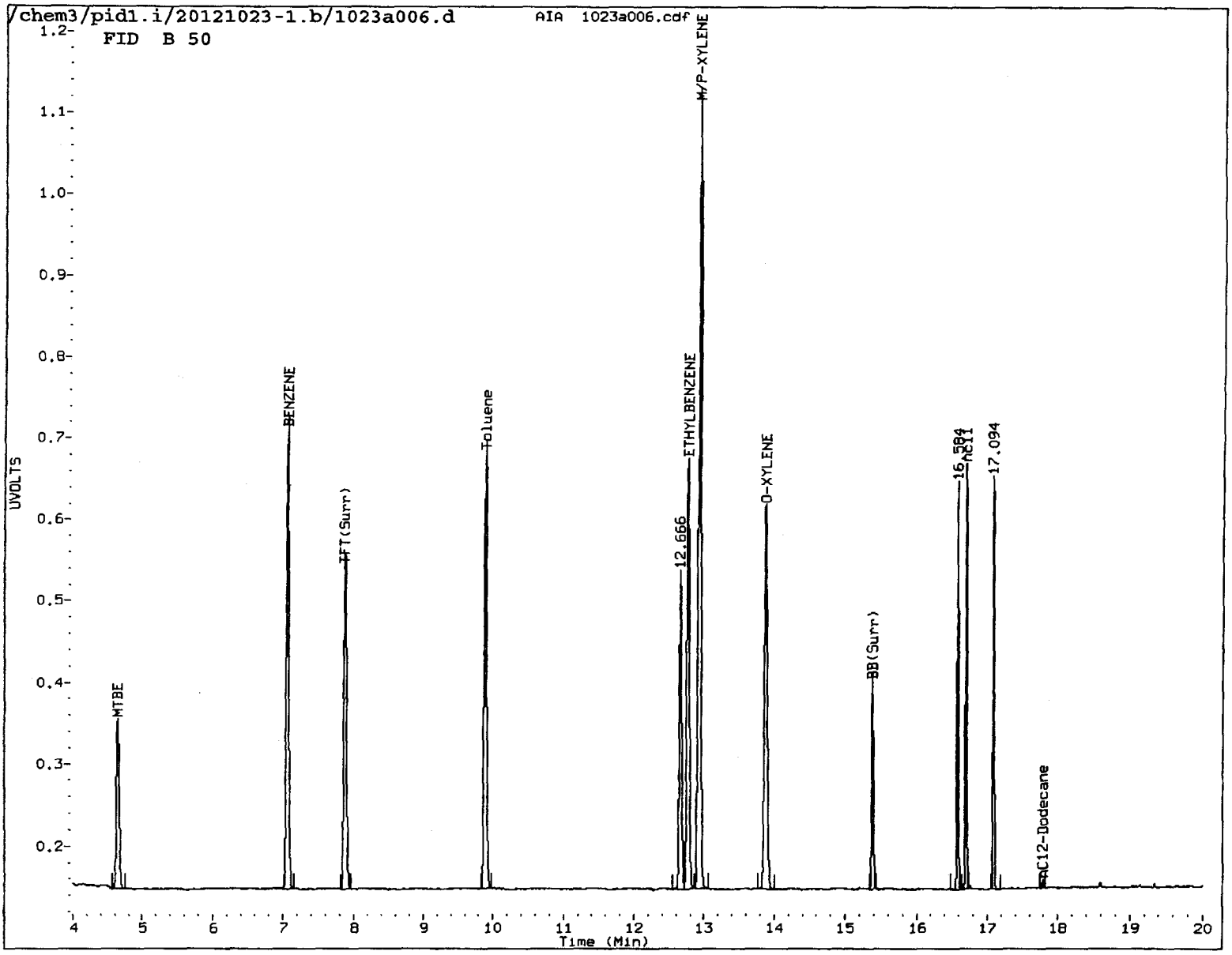
Sample Info: B 50

Operator: PC/JW

Column phase: RTX 502-2 PID

Column diameter: 0.18





MANUAL INTEGRATION

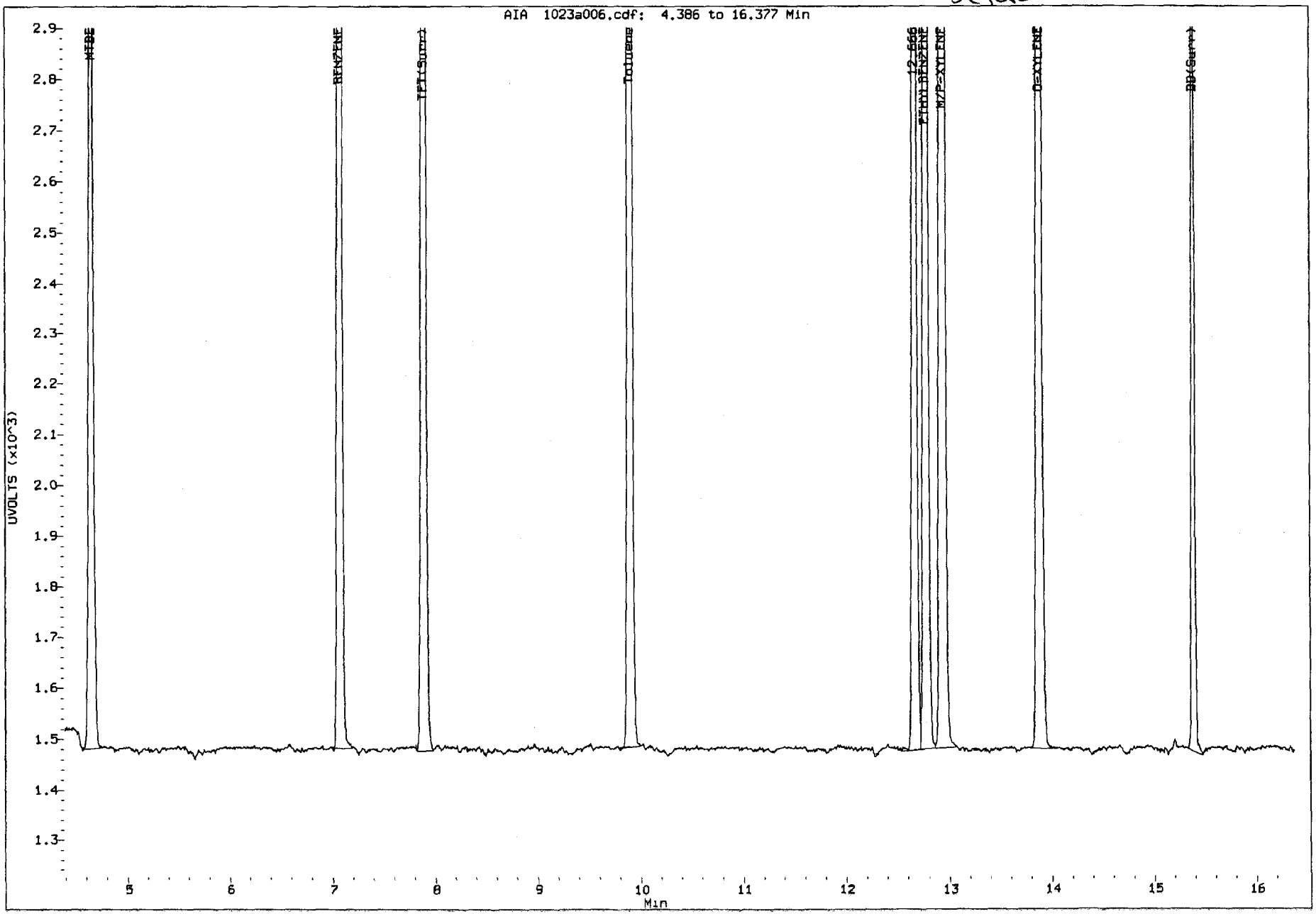
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

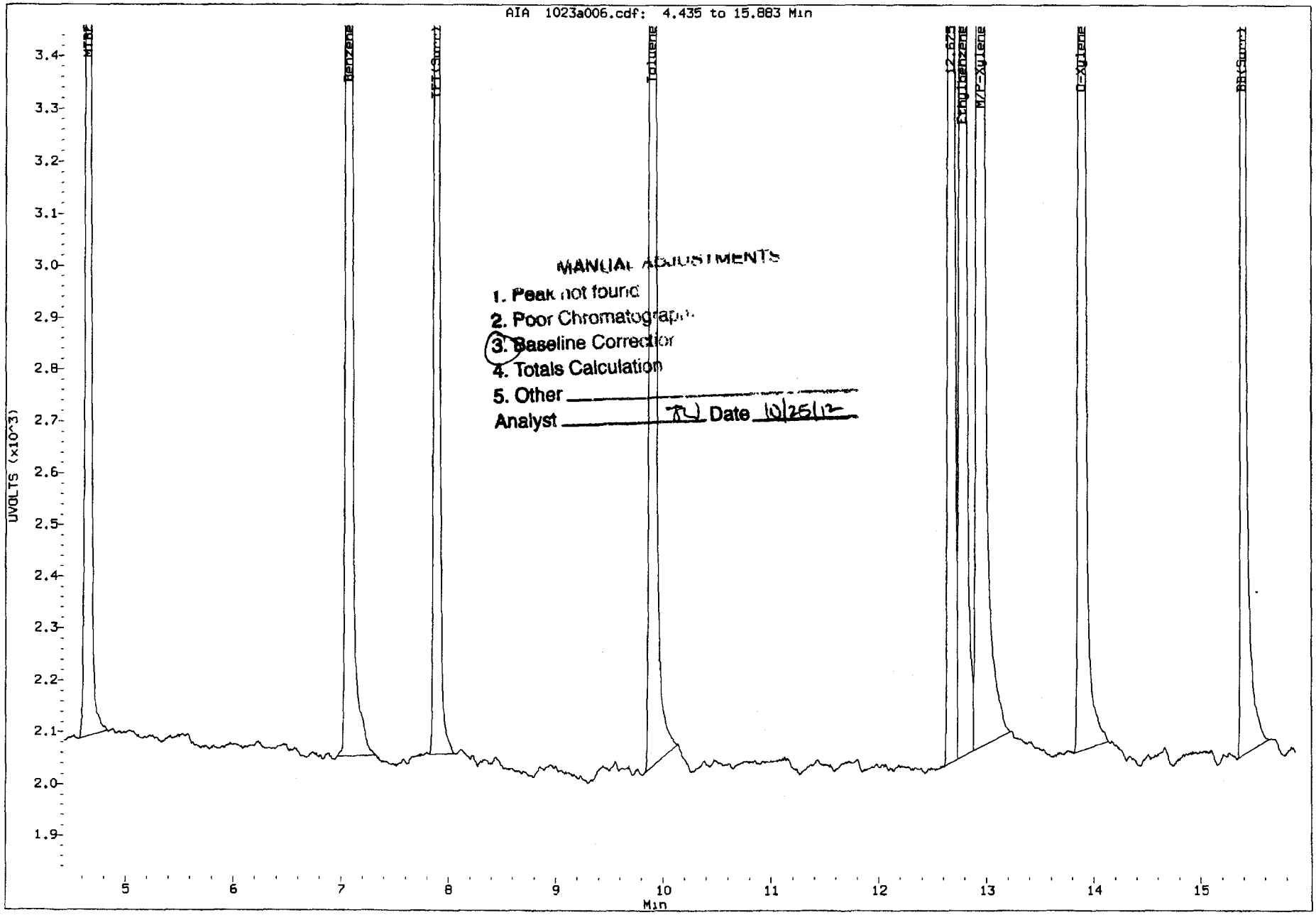
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:



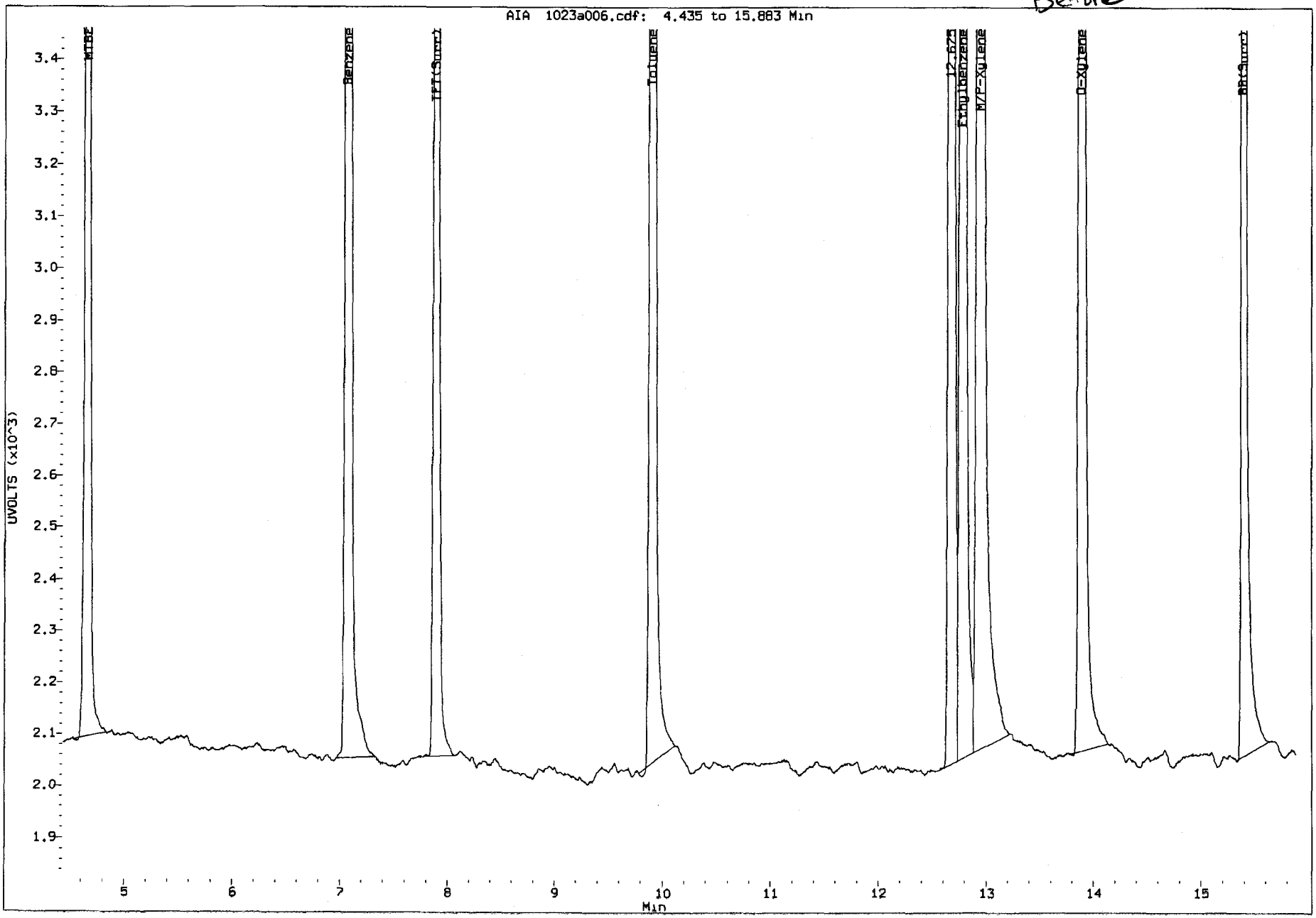
MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other _____

Analyst _____ Date 10/25/12

Data File: /chem3/pid1.1/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.1
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a007.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a007.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 25
Client ID:
Injection Date: 23-OCT-2012 19:18
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	3134	40267	99.2	TFT(Surr)
15.387	0.000	2031	17131	99.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	239603	0.669 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	238961	0.330 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	224080	0.384 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	239603	0.639 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3730	98.5	TFT(Surr)
15.397	0.003	8055	100.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	6159	24.84N	Benzene
9.907	0.000	5498	24.44N	Toluene
12.785	-0.002	4891	24.81	Ethylbenzene
12.946	0.003	10737	49.94	M/P-Xylene
13.893	0.003	4292	25.57N	O-Xylene
4.653	0.000	1796	24.94N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d

Date : 23-OCT-2012 19:18

Client ID:

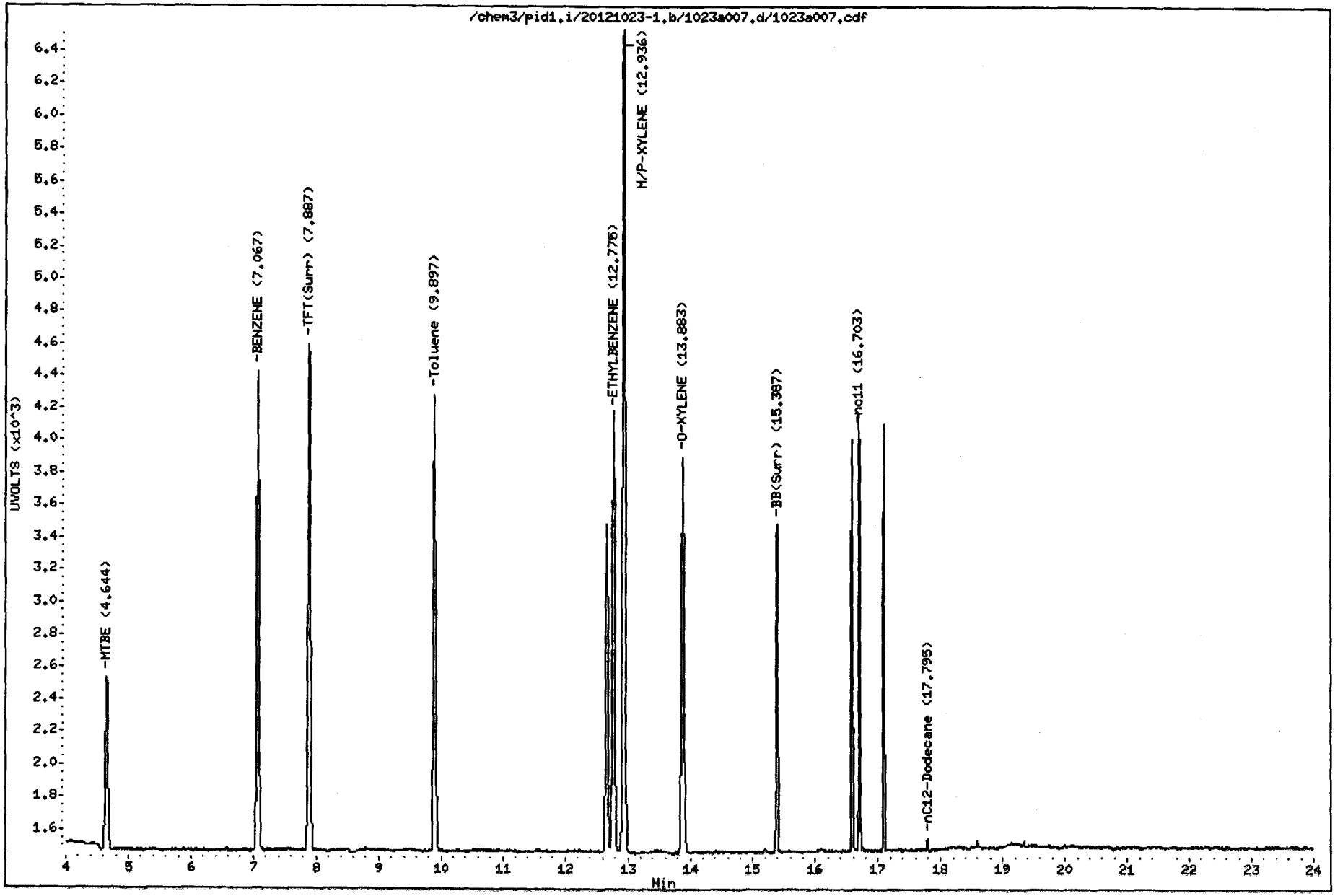
Sample Info: B 25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a007.d

Date : 23-OCT-2012 19:18

Client ID:

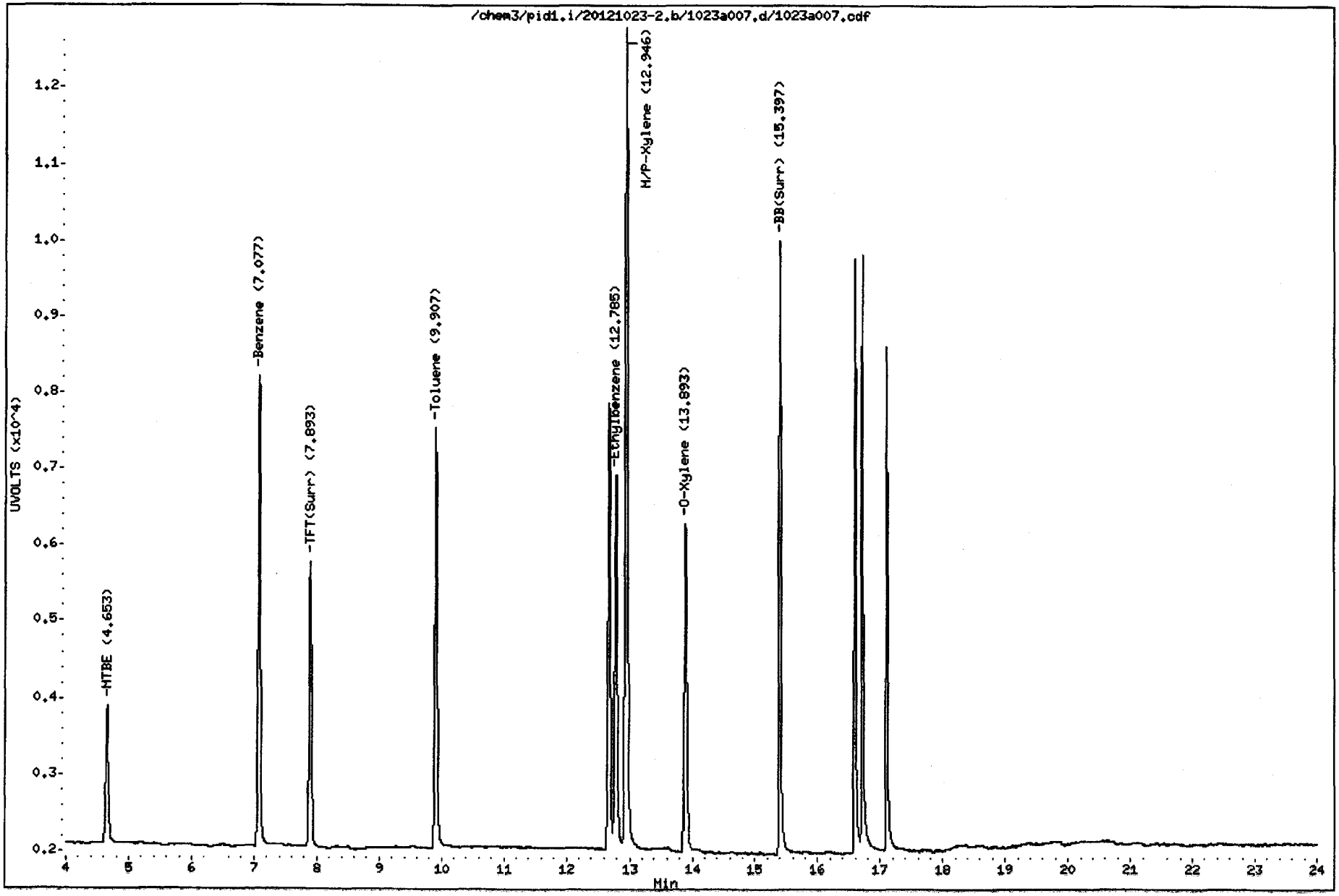
Sample Info: B 25

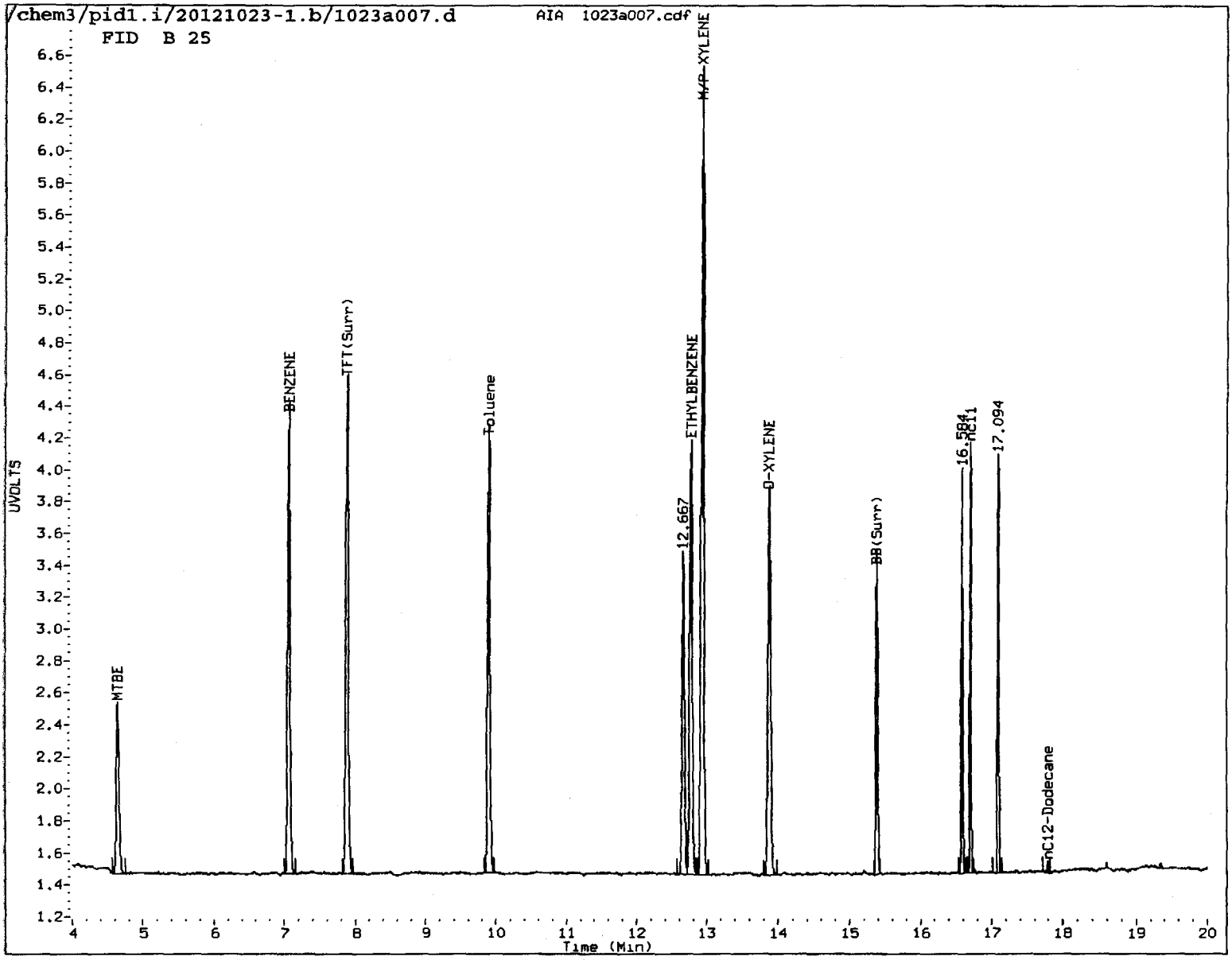
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

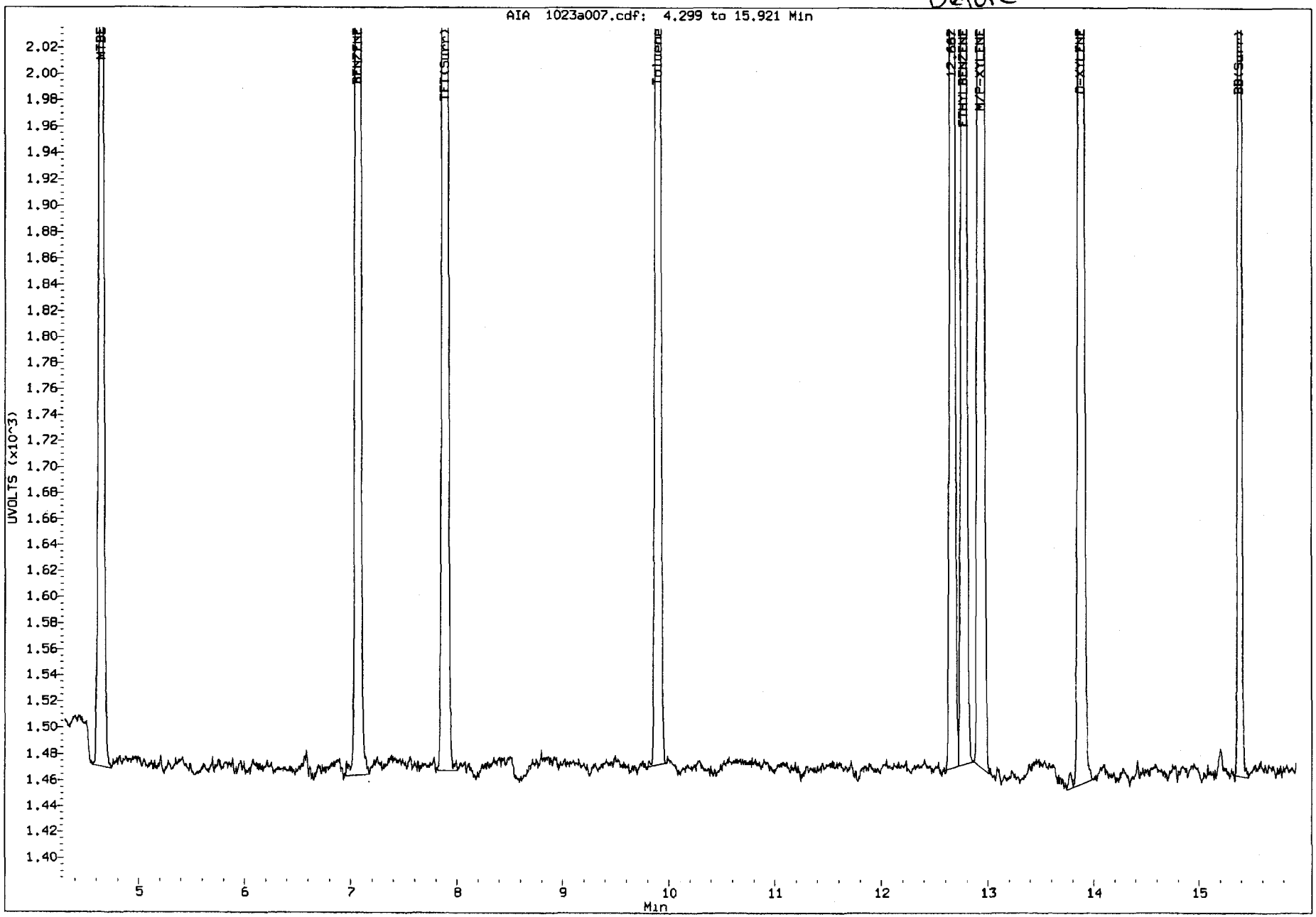
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

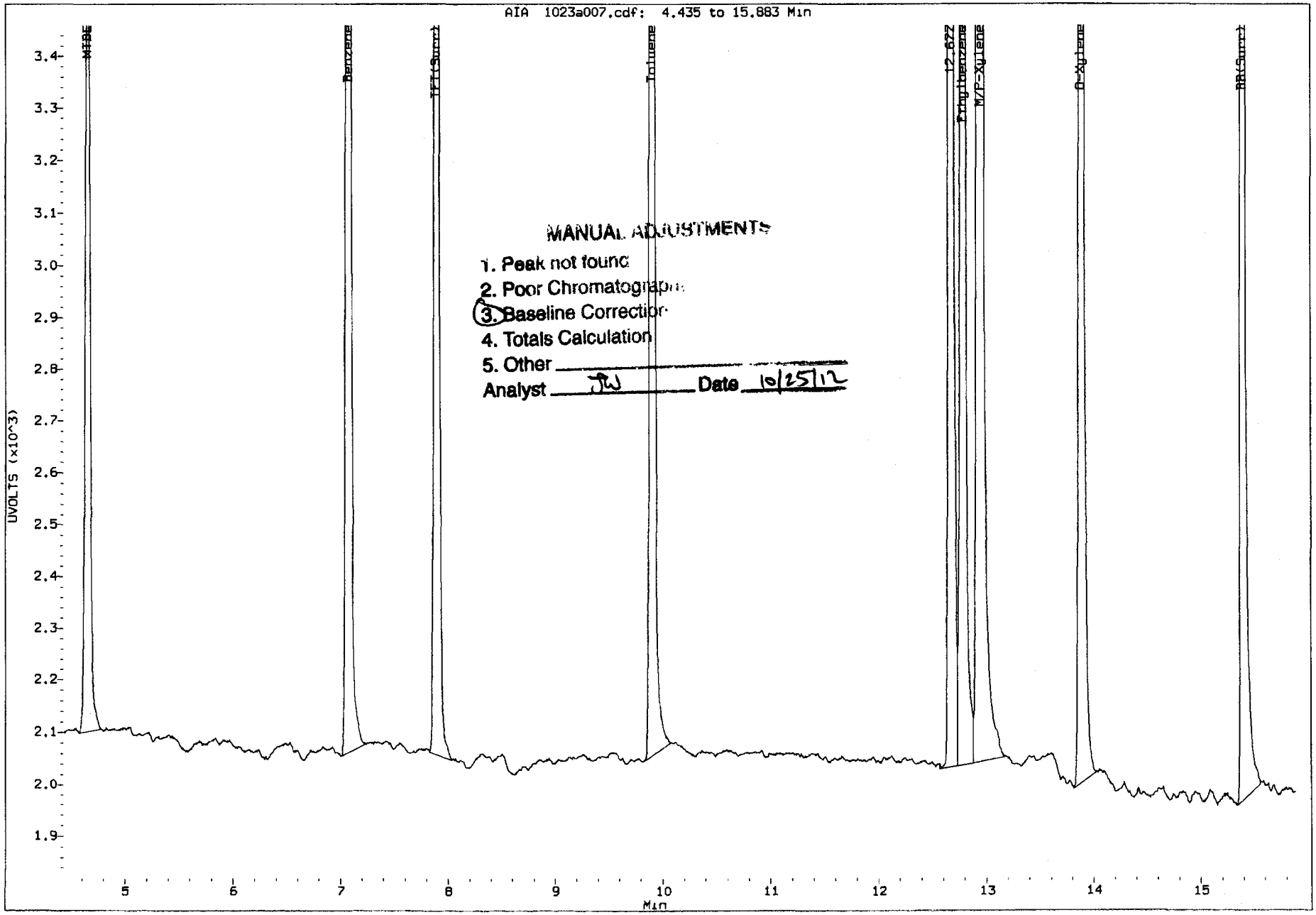
Analyst: JU Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before



Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:



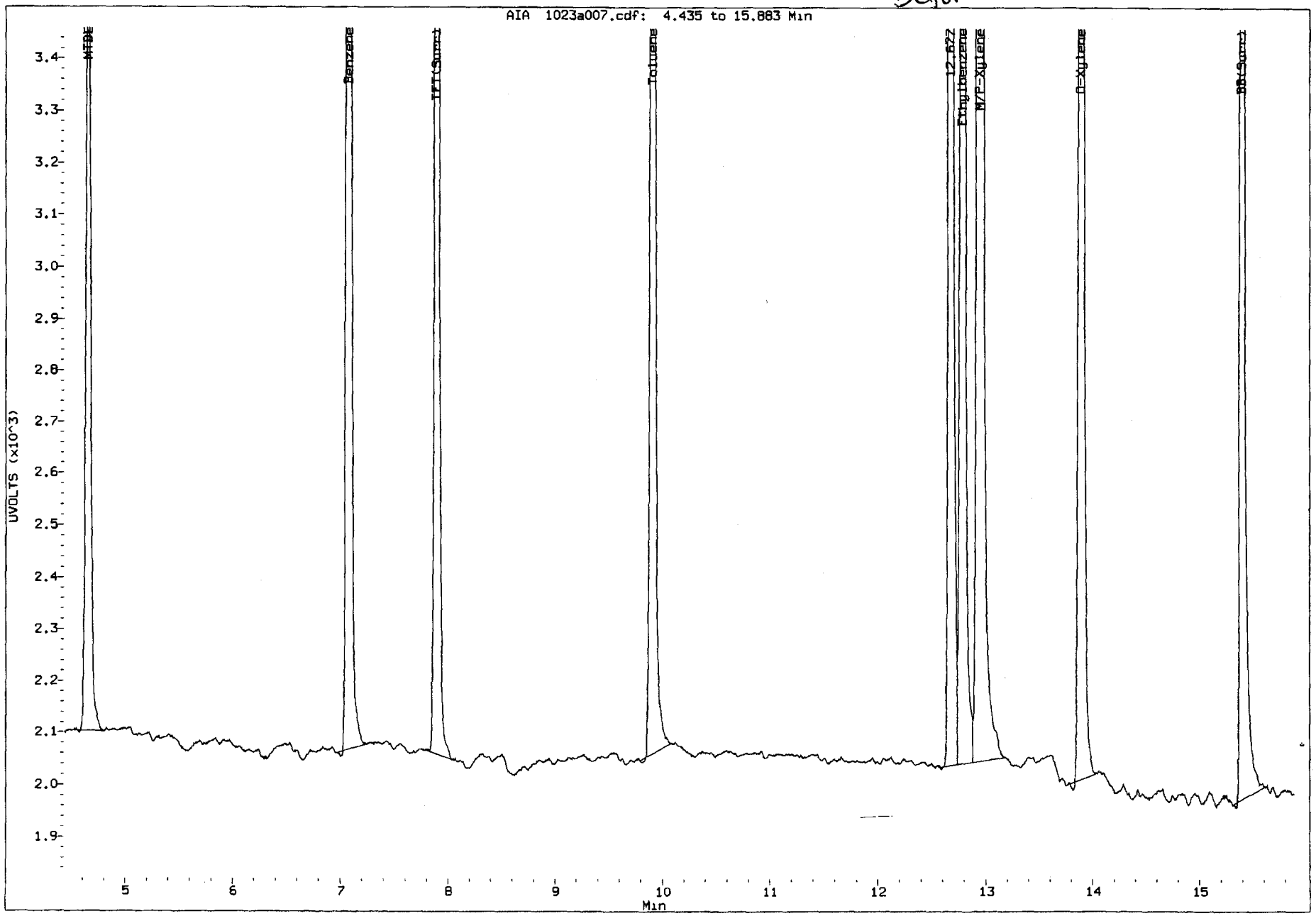
MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatograph
3. Baseline Correction
4. Totals Calculation
5. Other _____

Analyst JW Date 10/25/12

Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a008.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a008.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 5
Client ID:
Injection Date: 23-OCT-2012 19:47
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	2118	27080	67.0	TFT(Surr)
15.387	0.000	1387	11721	68.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	52469	0.147 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	51824	0.072 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	48775	0.084 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	52469	0.140 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	2516	66.4	TFT(Surr)
15.393	0.000	5386	66.9	BB(Surr)

JW 10/25/12

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	1275	5.14N	Benzene
9.903	-0.003	1121	4.98N	Toluene
12.785	-0.002	1007	5.11	Ethylbenzene
12.945	0.002	2196	10.21	M/P-Xylene
13.893	0.003	856	5.10N	O-Xylene
4.647	-0.007	377	5.24N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a008.d

Date : 23-OCT-2012 19:47

Client ID:

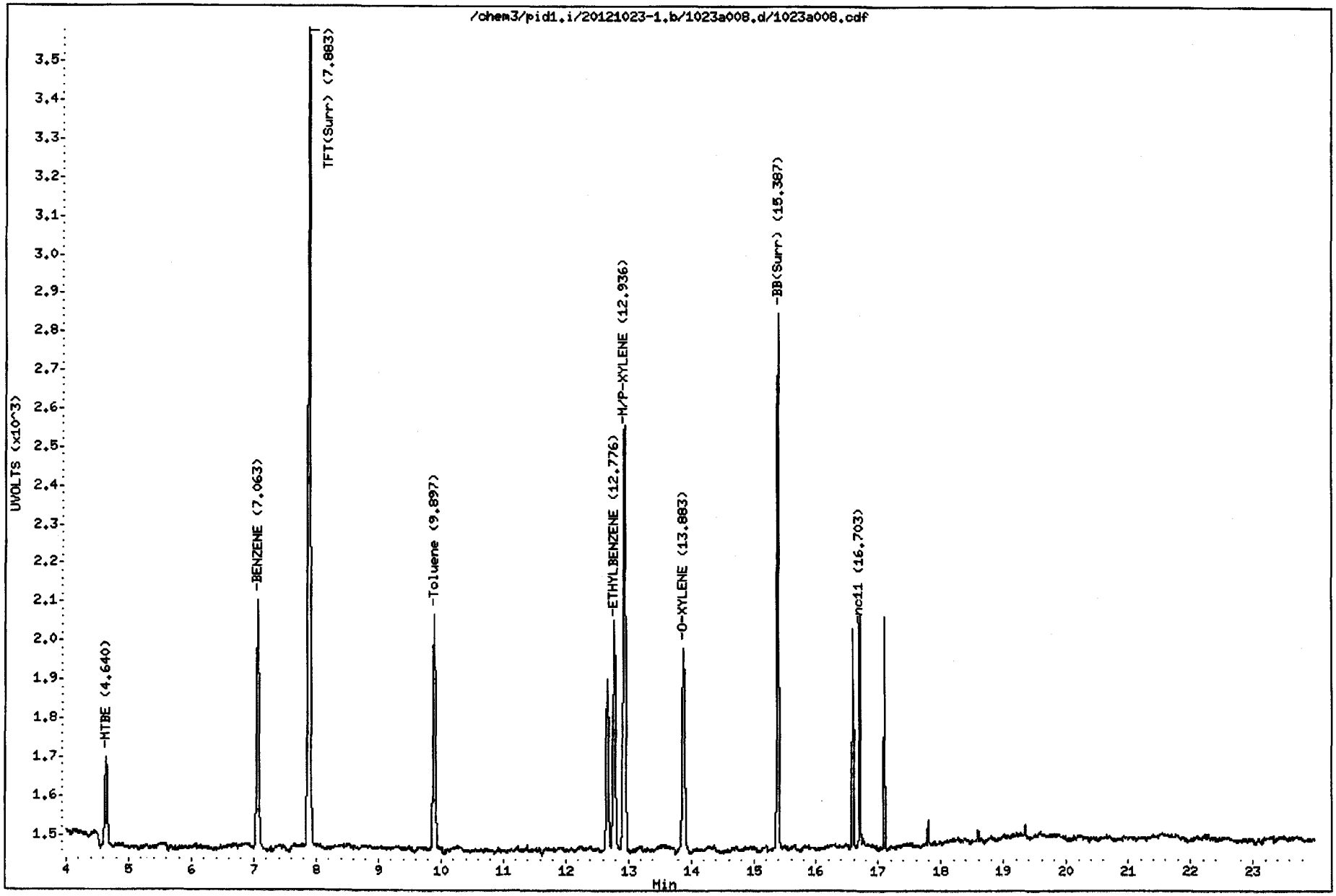
Sample Info: B 5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a008.d

Date : 23-OCT-2012 19:47

Client ID:

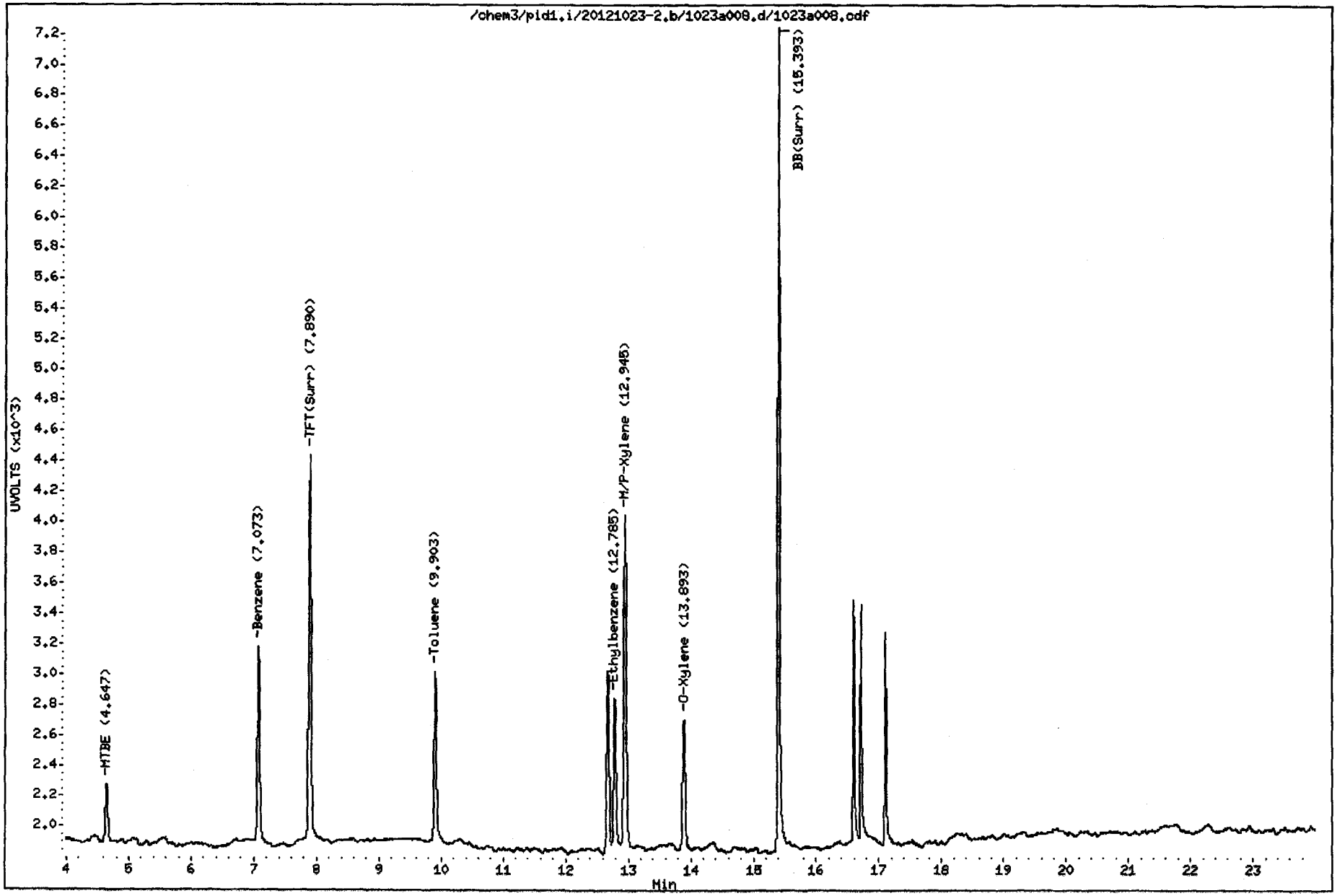
Sample Info: B 5

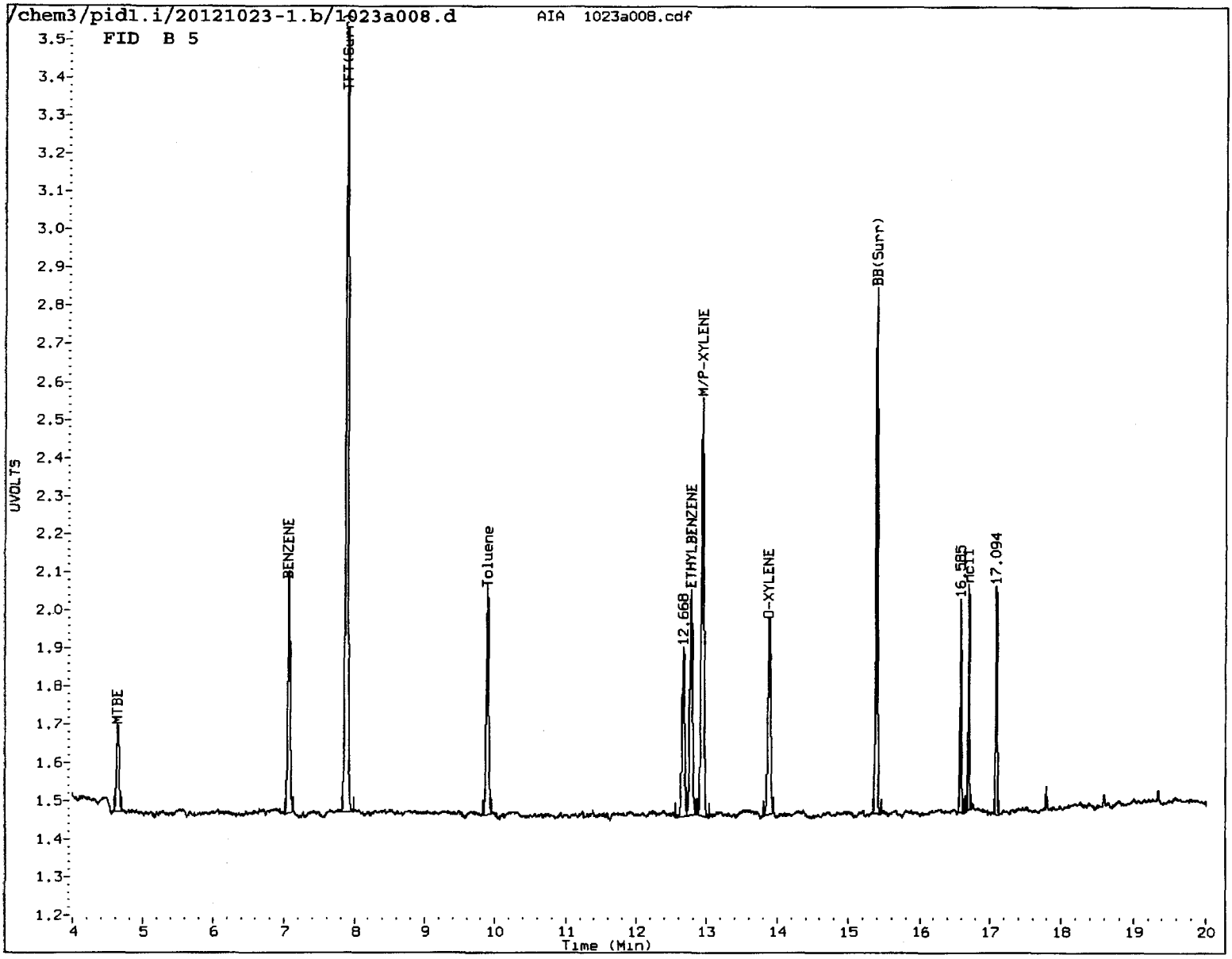
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

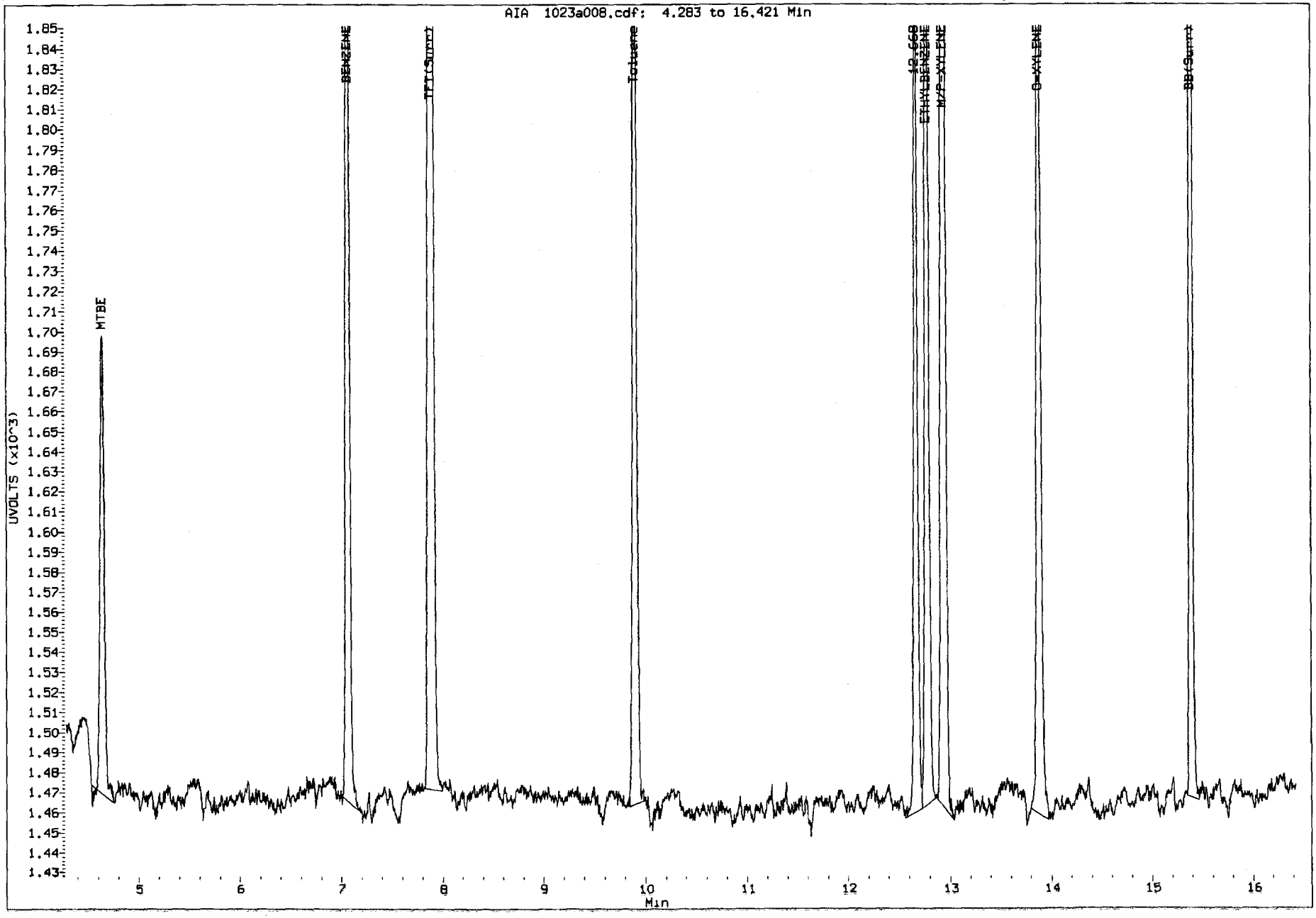
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

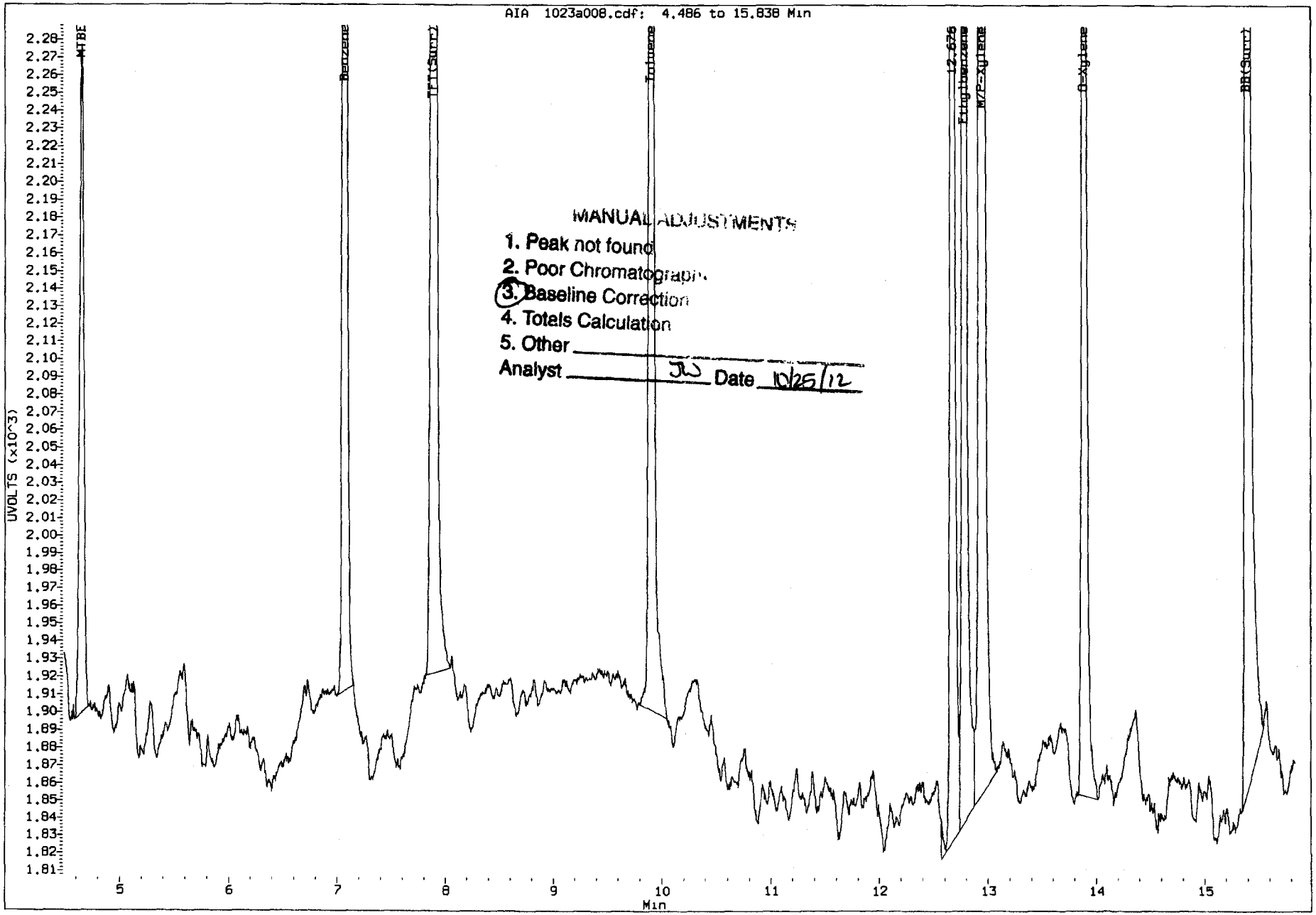
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:

Before

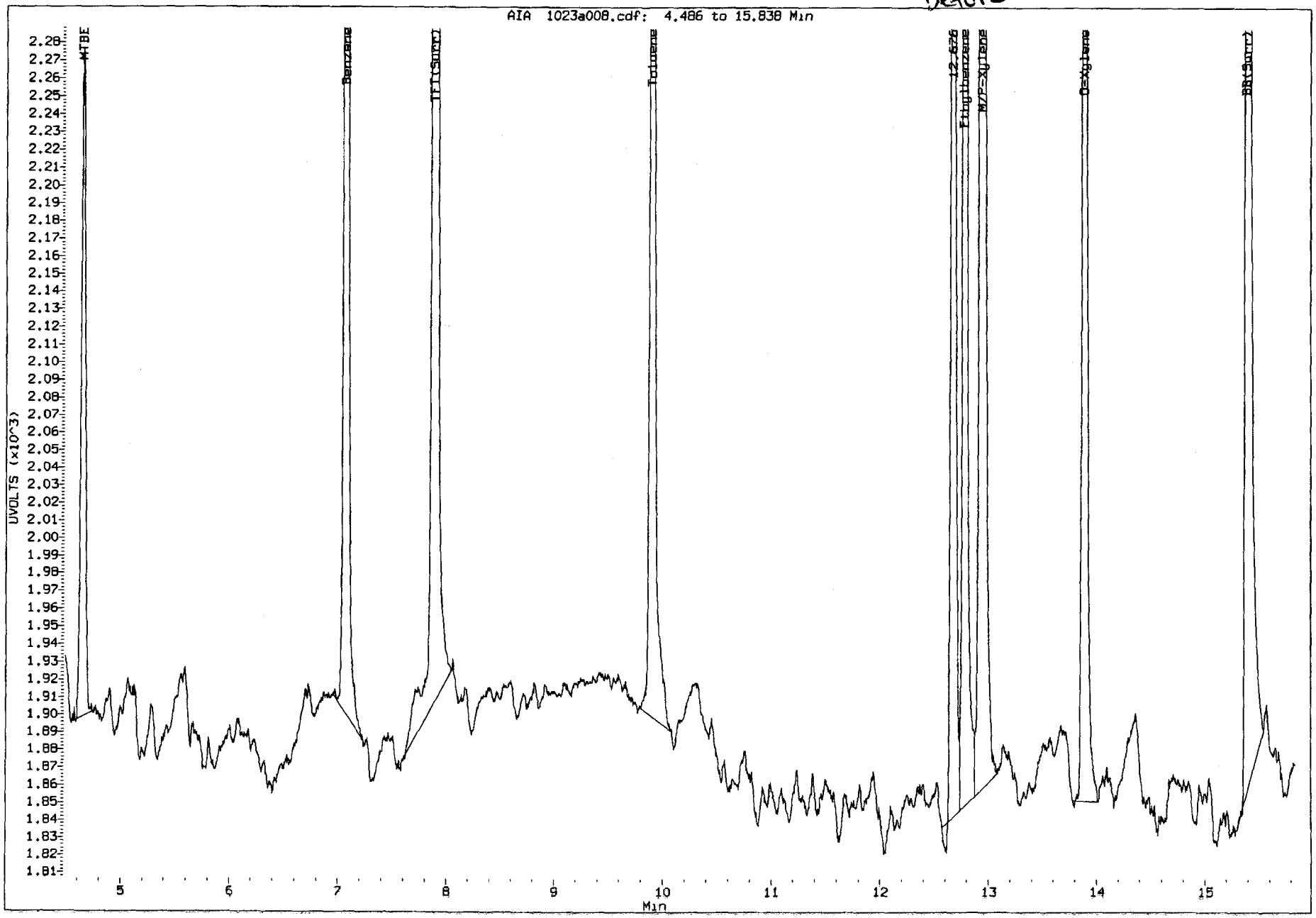


Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a009.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a009.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 1
Client ID:
Injection Date: 23-OCT-2012 20:16
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	2094	27117	66.3	TFT(Surr)
15.387	0.000	1385	11445	68.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	10704	0.030 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	10312	0.014 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	9711	0.017 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	10704	0.029 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	2495	65.9	TFT(Surr)
15.393	0.000	5333	66.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	260	1.05N	Benzene
9.907	0.000	210	0.93N	Toluene
12.785	-0.001	198	1.00	Ethylbenzene
12.946	0.002	425	1.98	M/P-Xylene
13.893	0.003	168	1.00N	O-Xylene
4.647	-0.007	72	1.00N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

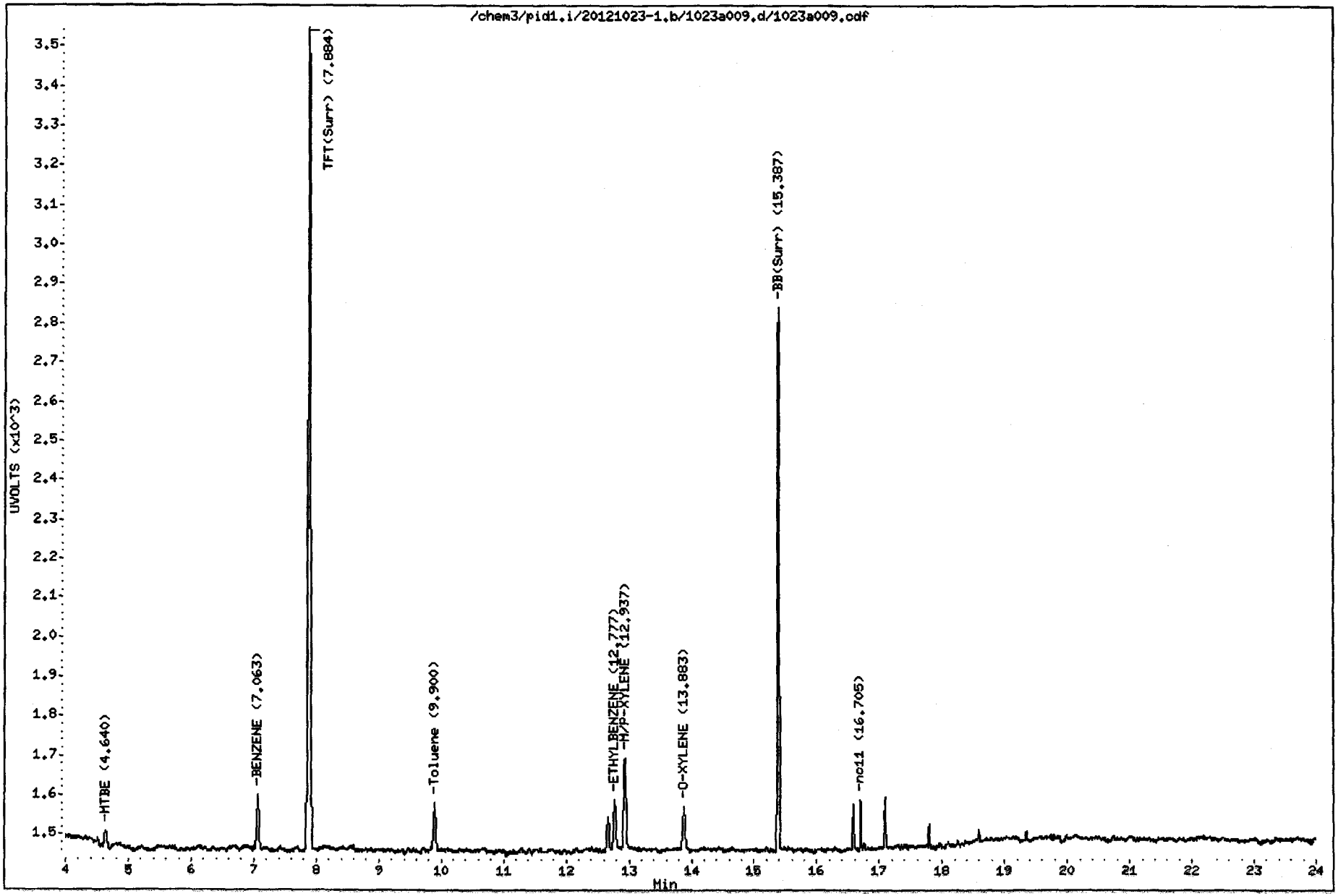
Sample Info: B 1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

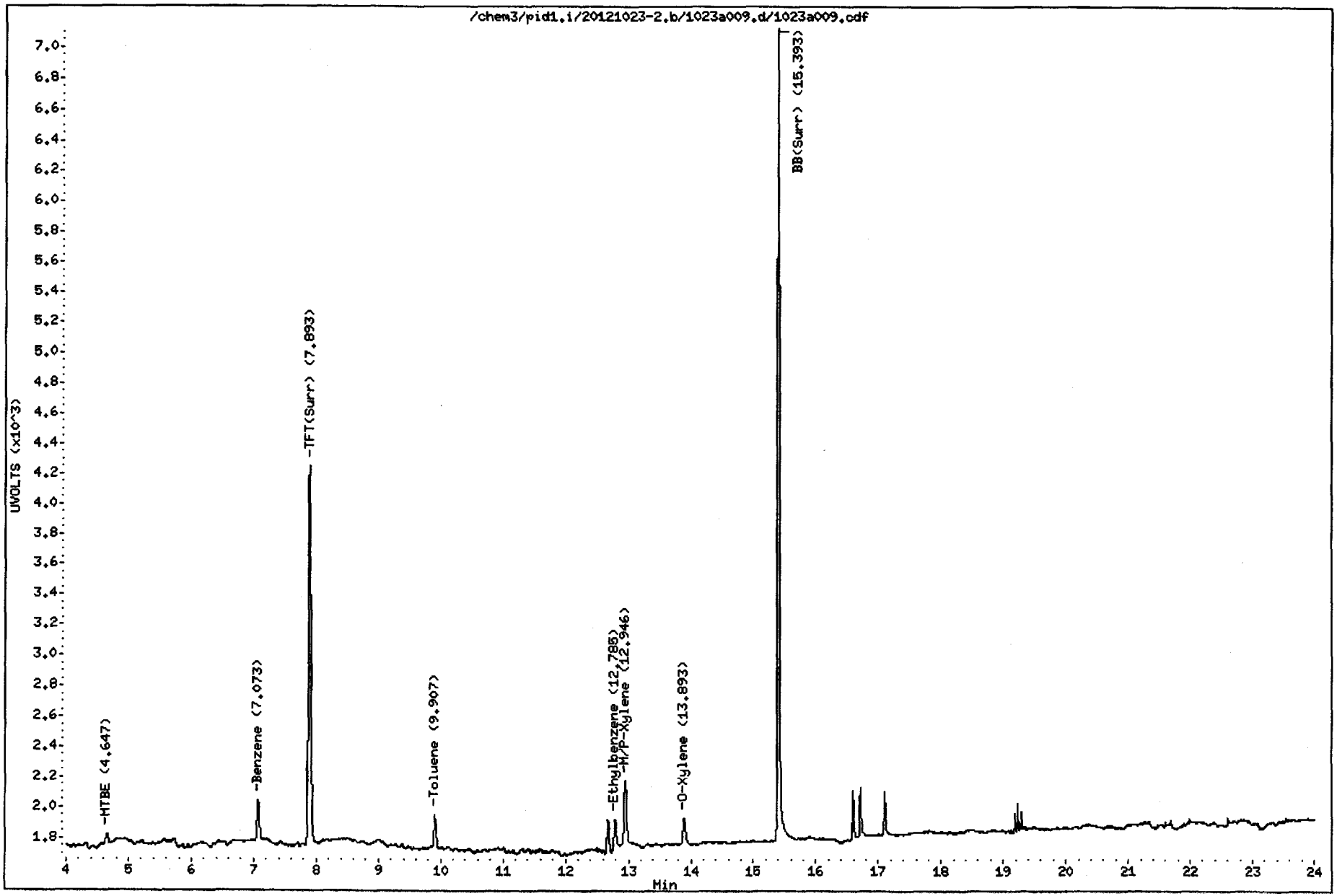
Sample Info: B 1

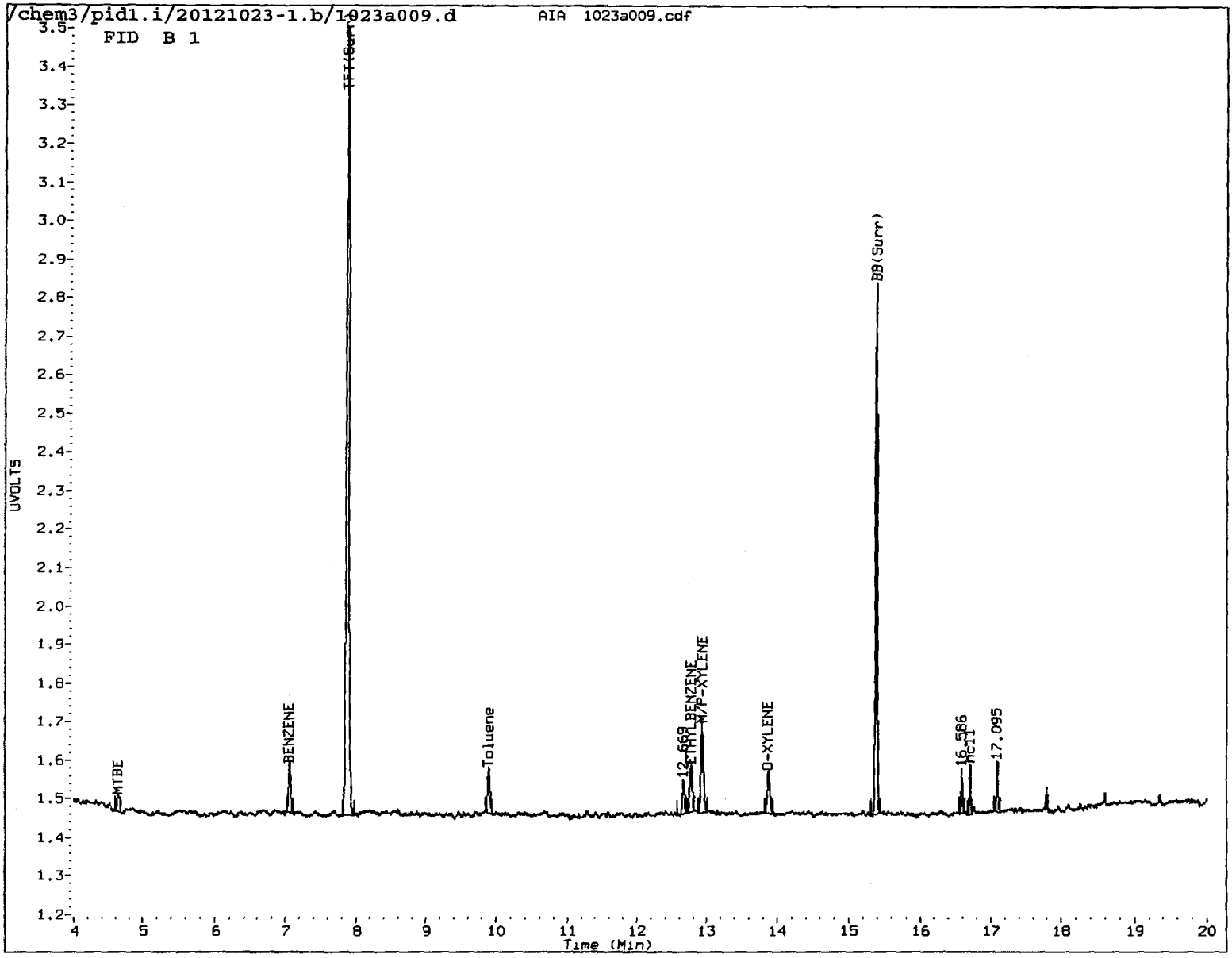
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

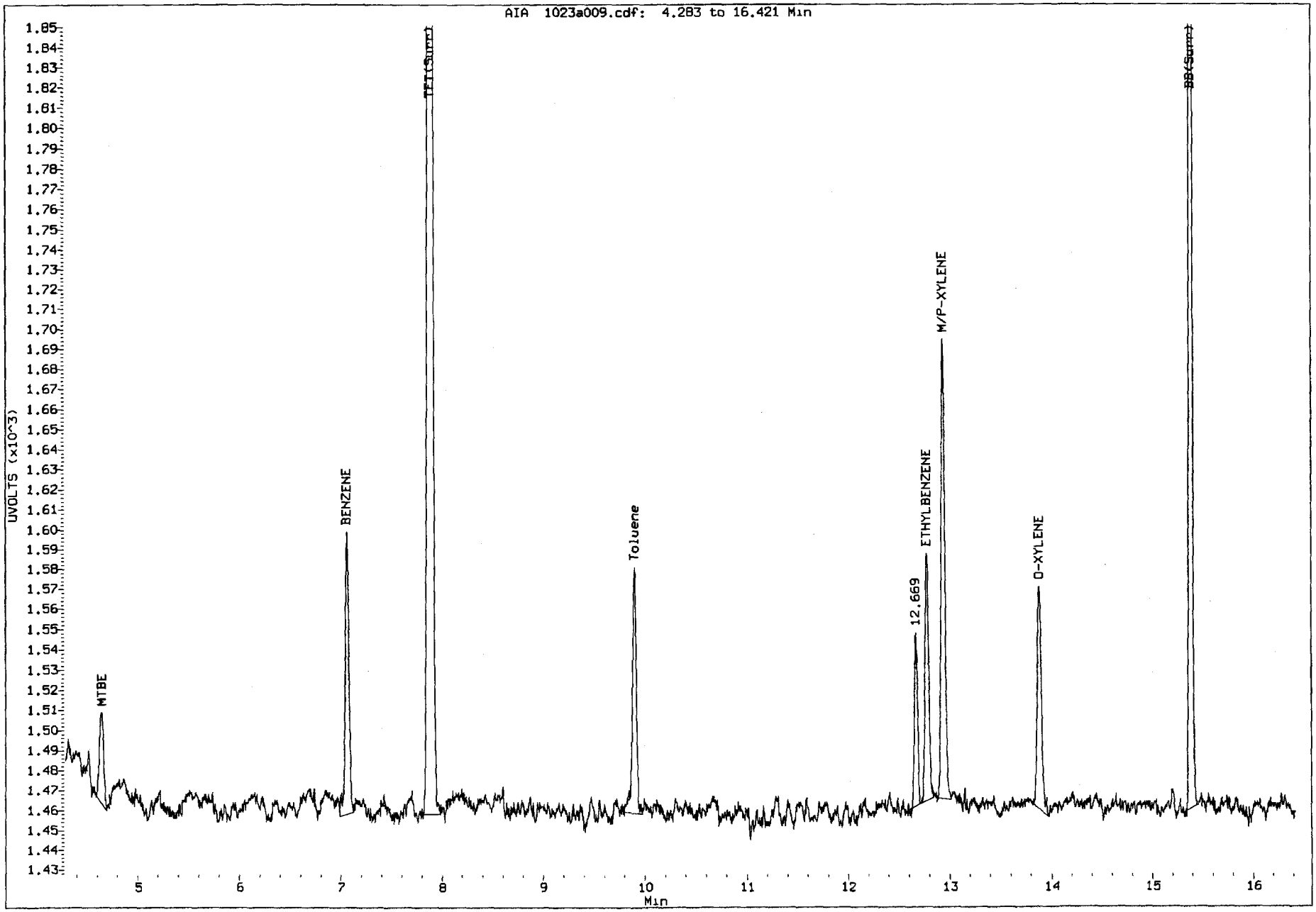
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

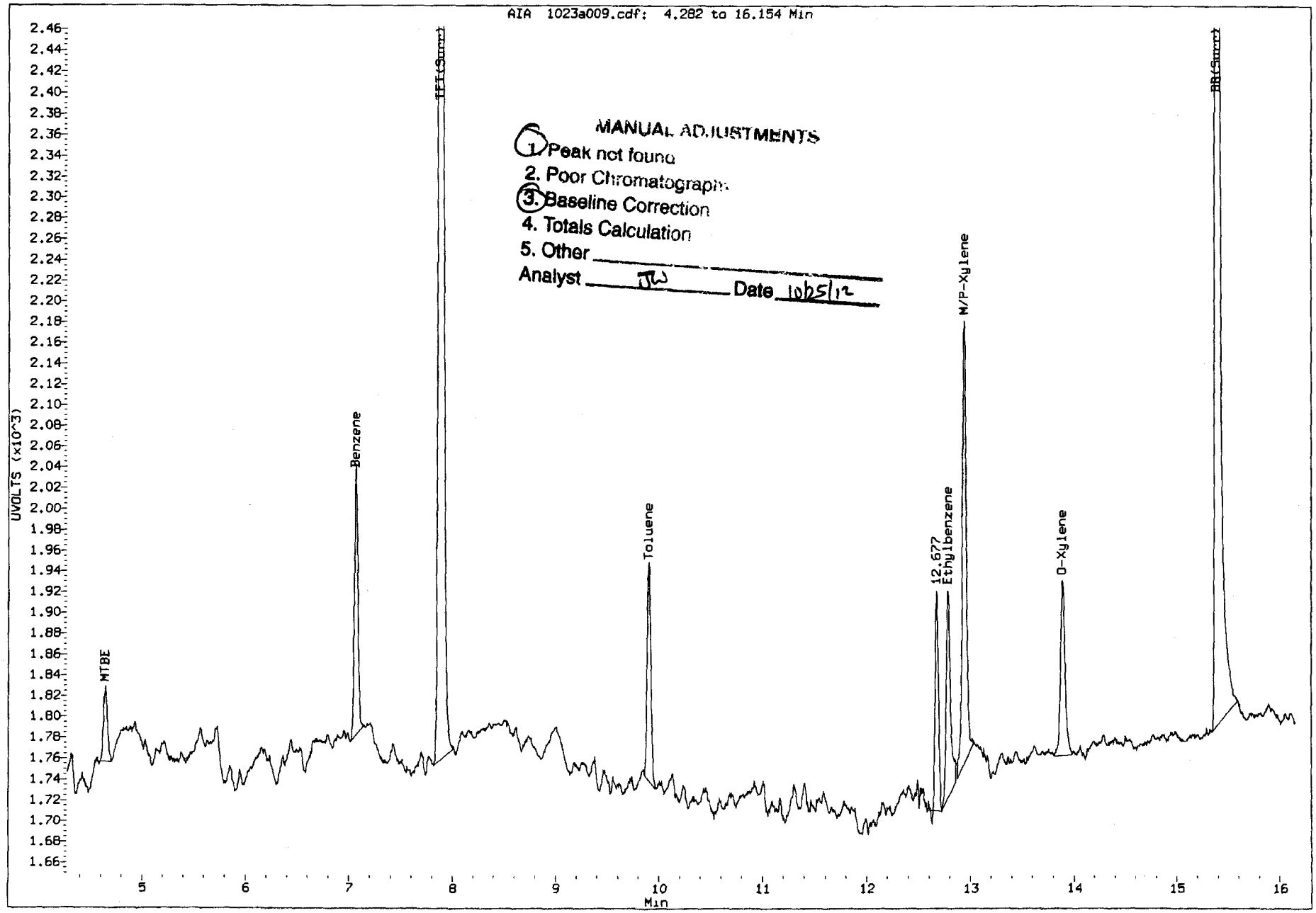
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.1/20121023-1.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.1
Client Sample ID:

Before

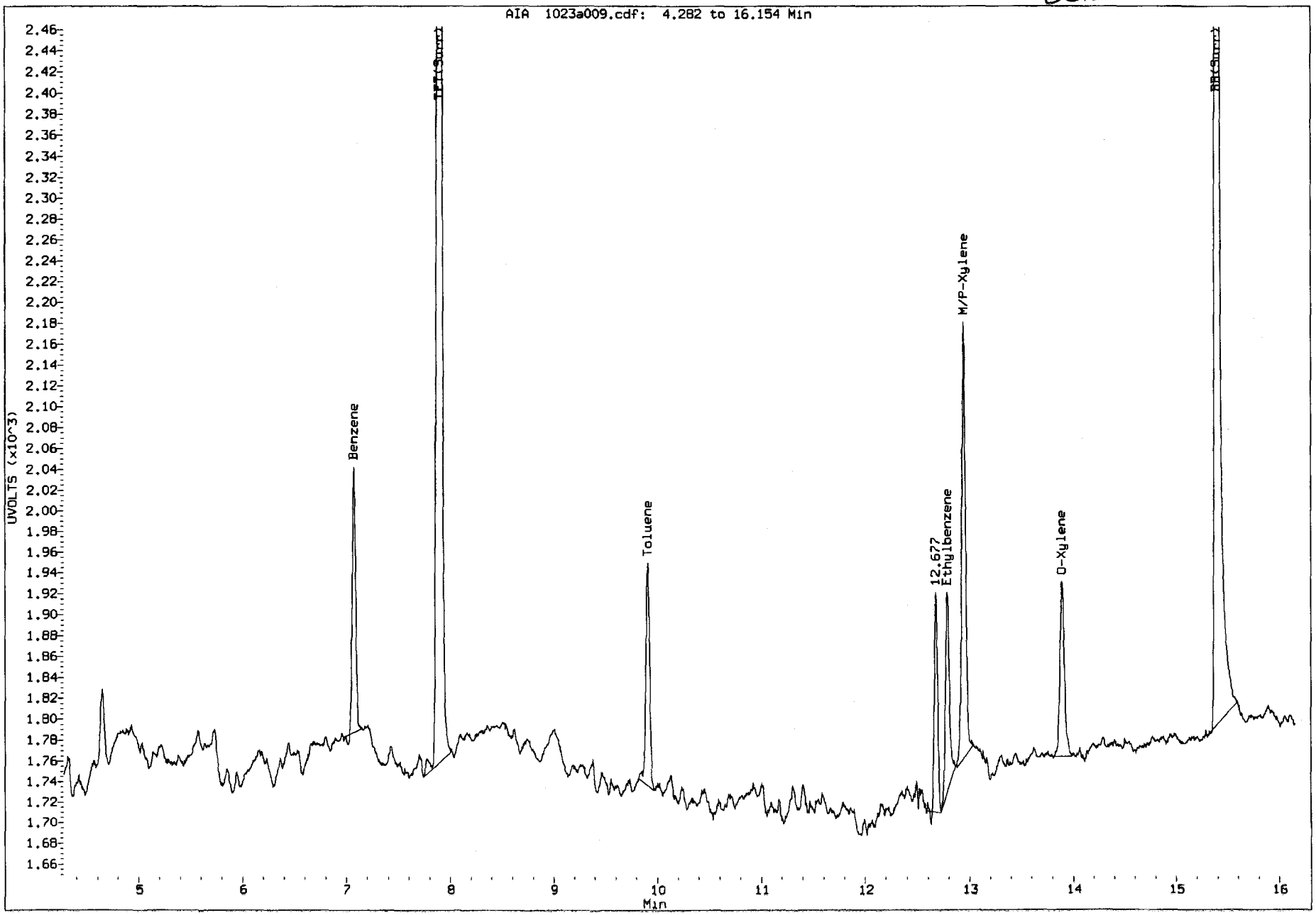


Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a010.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.5
Client ID:
Injection Date: 23-OCT-2012 20:45
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	1400	18008	44.4	TFT(Surr)
15.387	0.000	904	7688	44.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	6242	0.017 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	5520	0.008 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	5284	0.009 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	8749	0.023 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	1632	43.1	TFT(Surr)
15.393	0.000	3462	43.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	127	0.51N	Benzene
9.907	0.000	117	0.52N	Toluene
12.783	-0.003	100	0.51N	Ethylbenzene
12.947	0.003	208	0.97N	M/P-Xylene
13.893	0.003	79	0.47N	O-Xylene
4.653	0.000	32	0.44N	MTBE

JW
10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

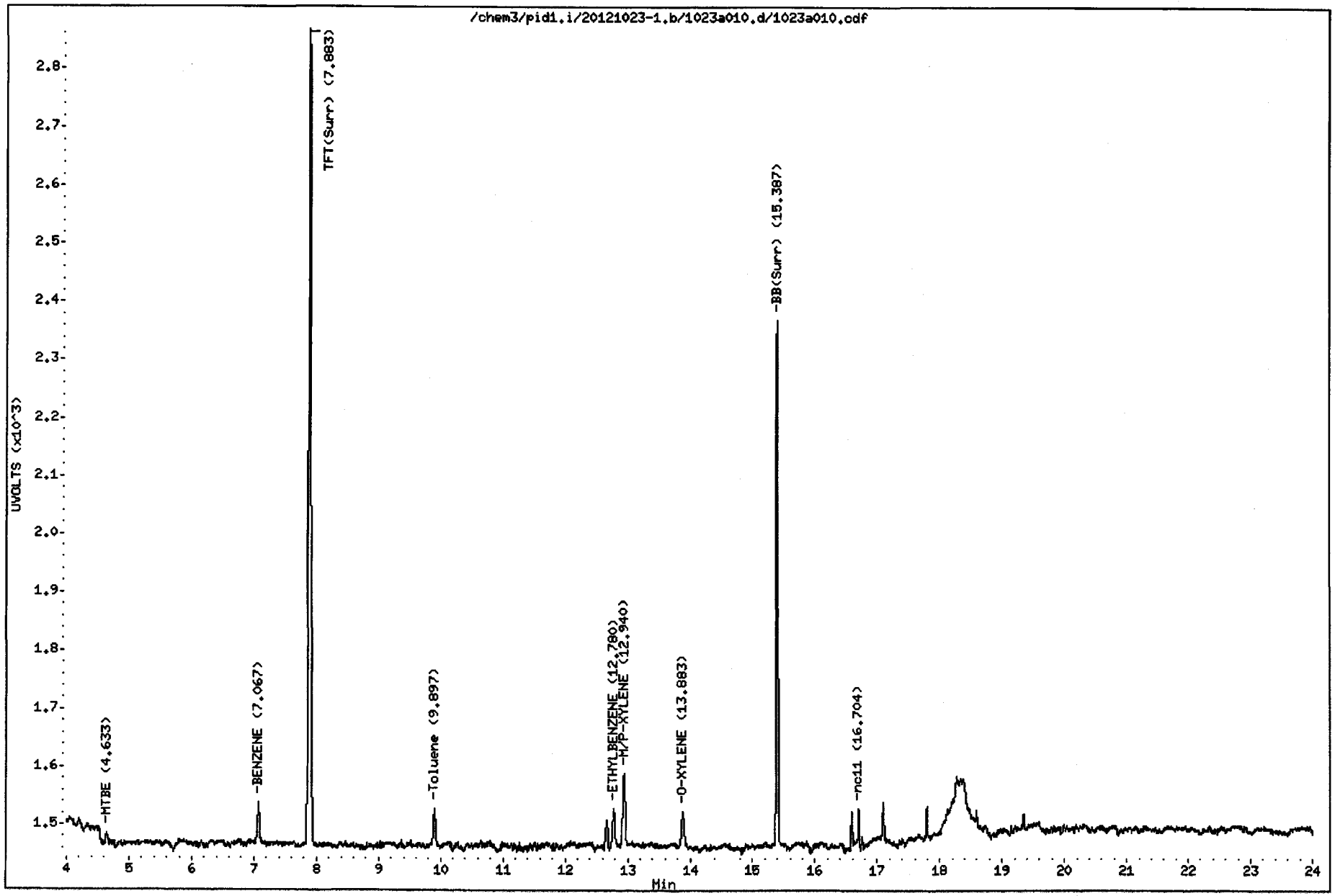
Sample Info: B 0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /ohem3/pid1.i/20121023-2.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

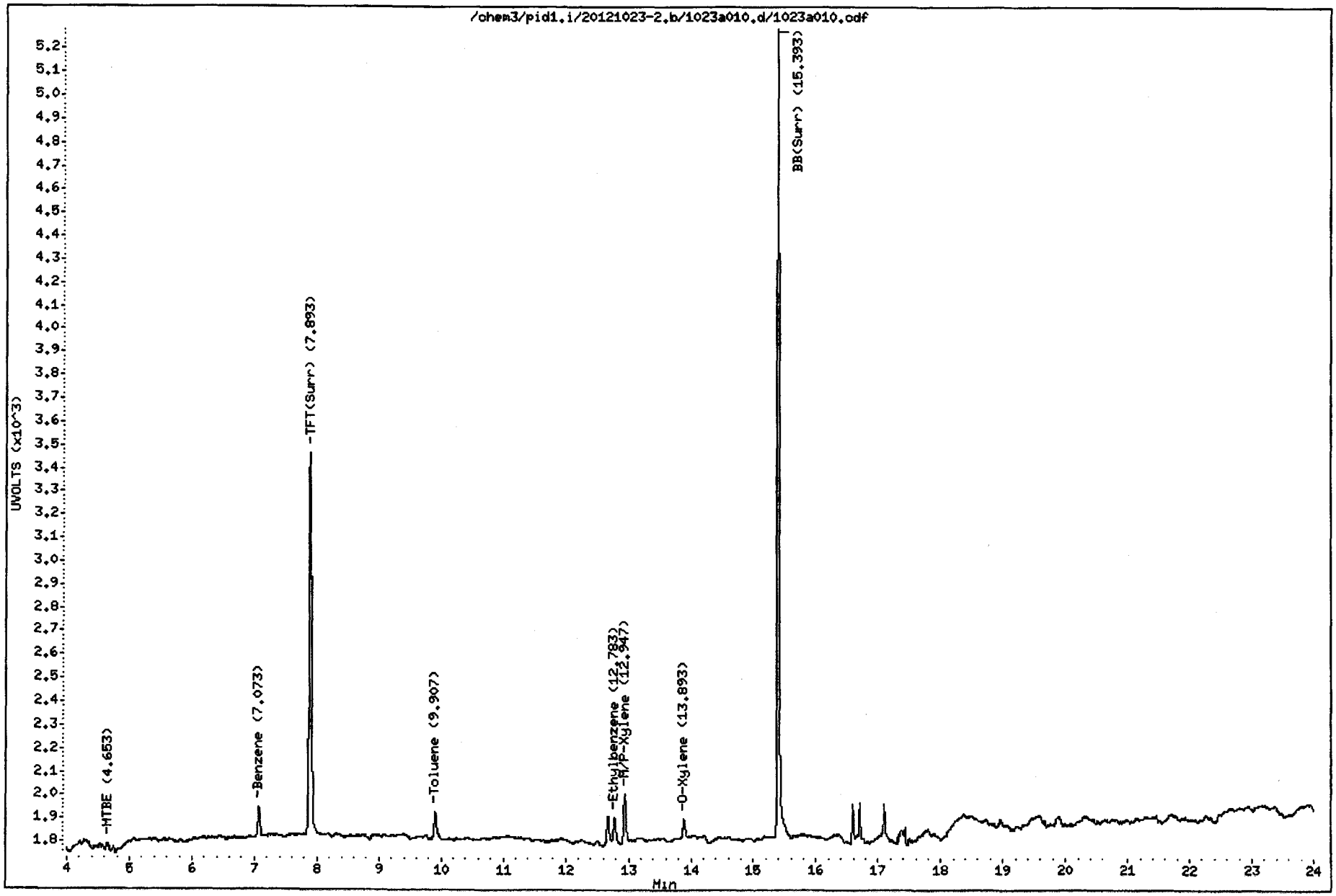
Sample Info: B 0.5

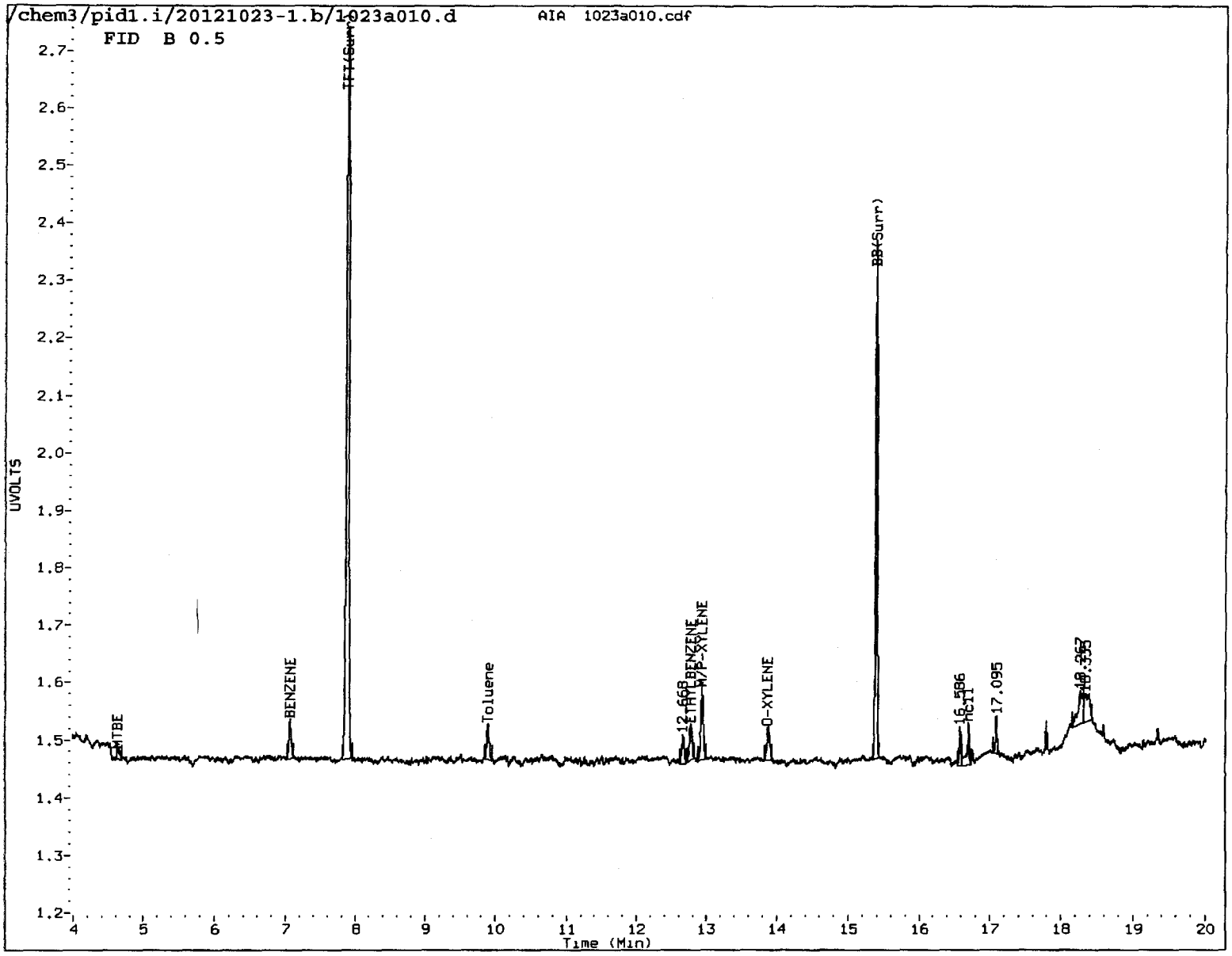
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

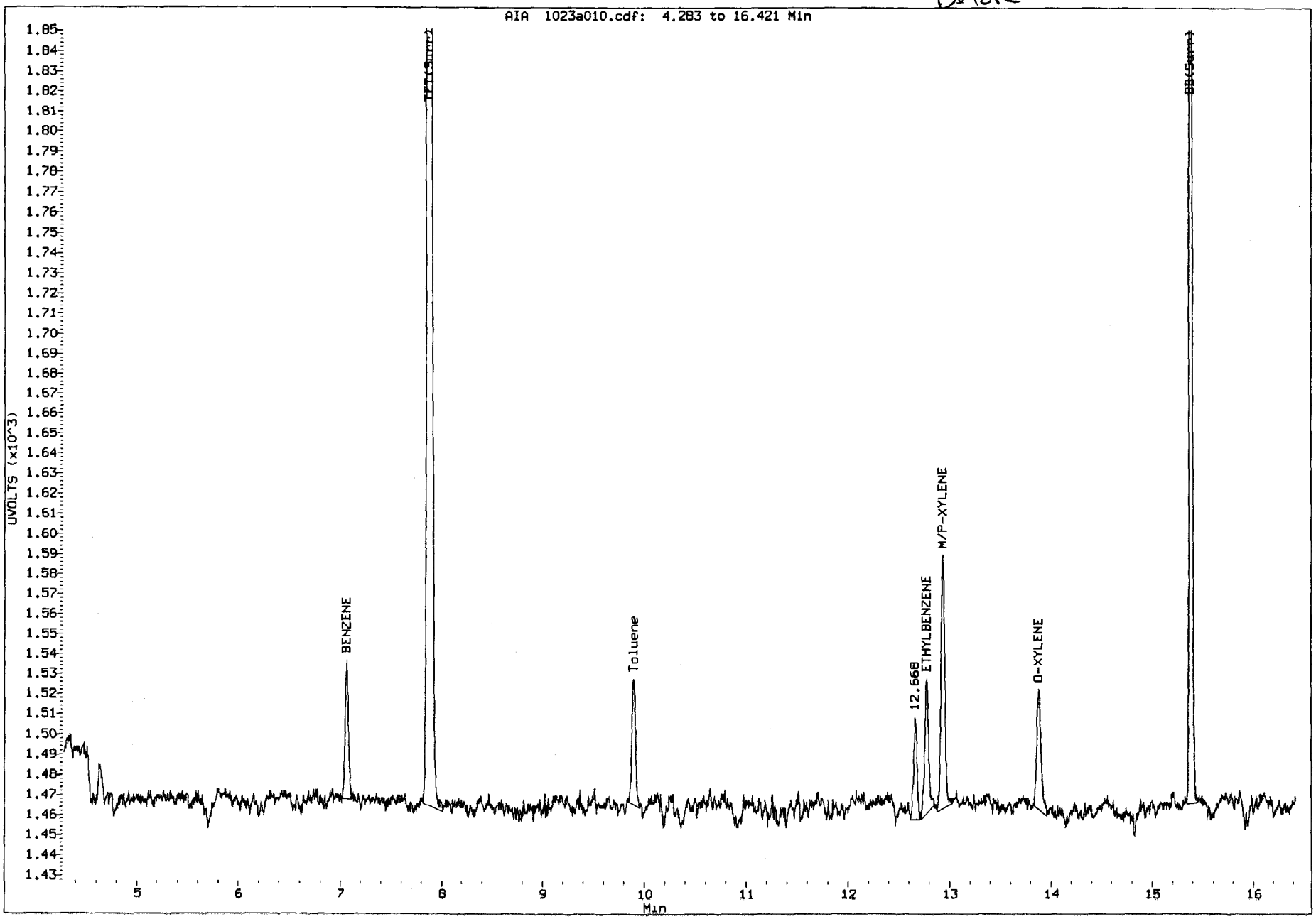
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

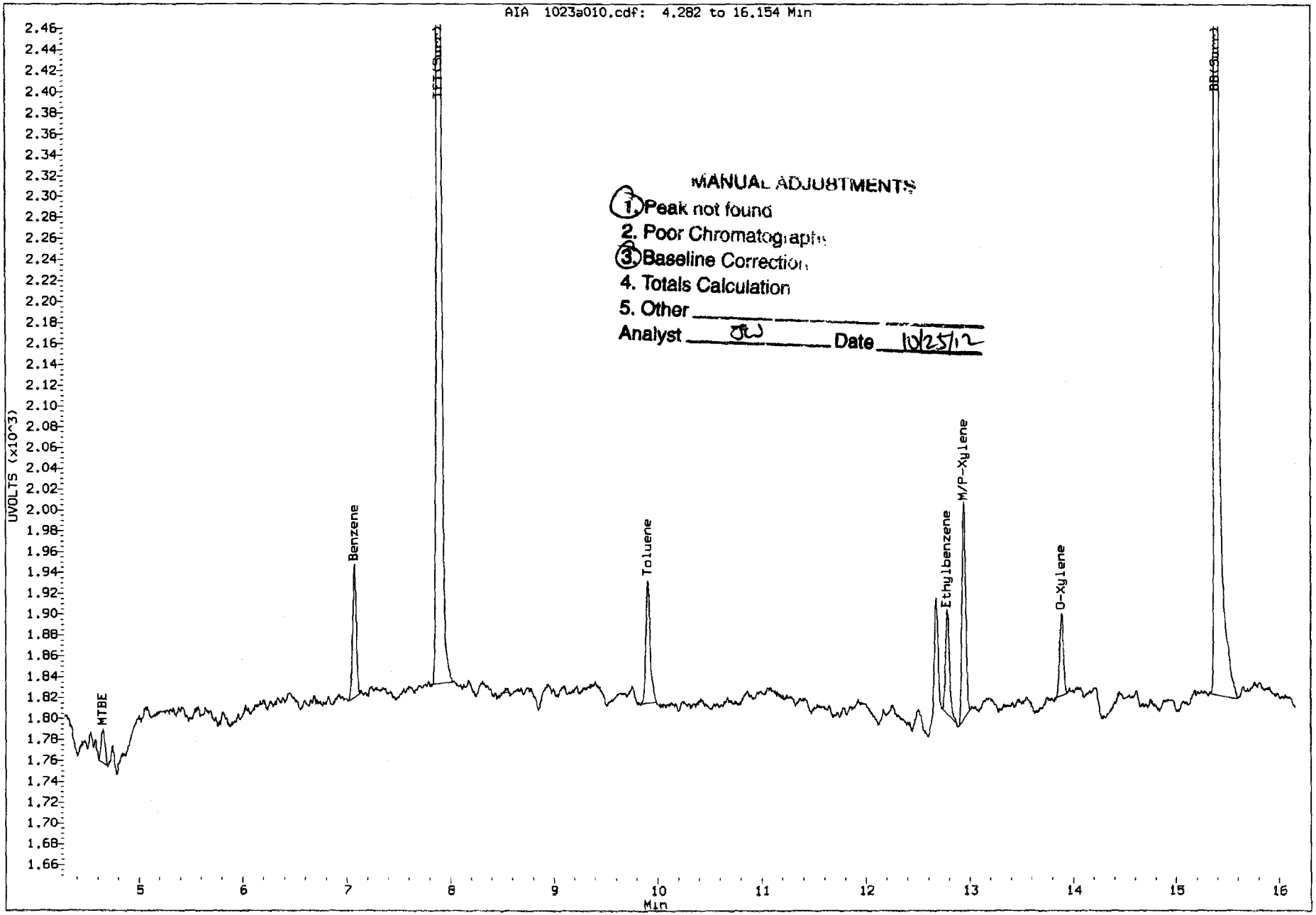
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:

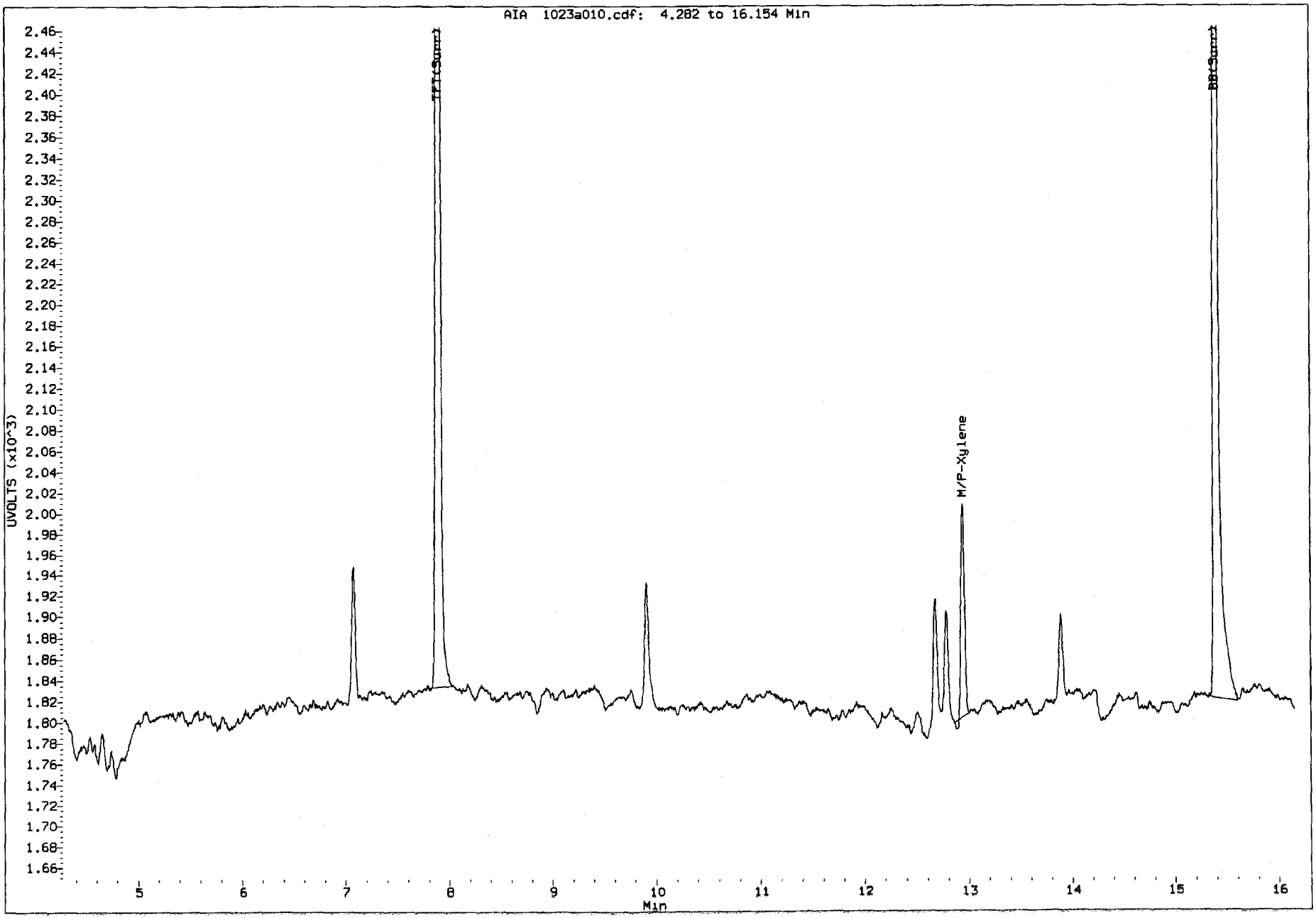
Before



Data File: /chem3/pid1.i/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.1/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.1
Client Sample ID:



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a011.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a011.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.25
Client ID:
Injection Date: 23-OCT-2012 21:15
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	733	9325	23.3	TFT(Surr)
15.387	0.000	484	4042	23.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	2310	0.006 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	2530	0.003 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	2276	0.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	2718	0.007 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	855	22.6	TFT(Surr)
15.393	0.000	1790	22.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	57	0.23N	Benzene
9.907	0.000	64	0.28N	Toluene
12.787	0.000	48	0.24N	Ethylbenzene
12.943	0.000	108	0.50N	M/P-Xylene
13.890	0.000	40	0.24N	O-Xylene
ND	---	---	---	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

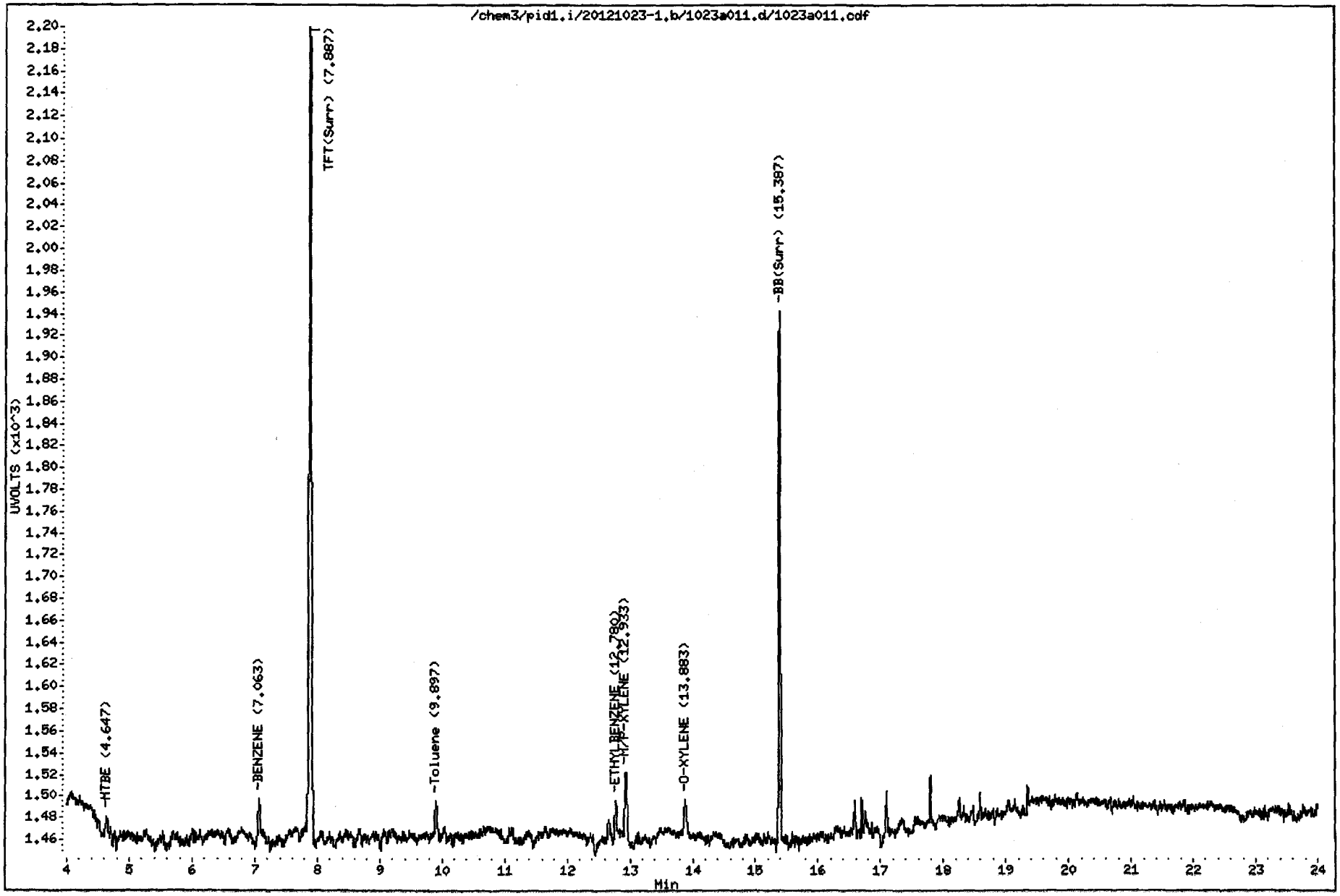
Sample Info: B 0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

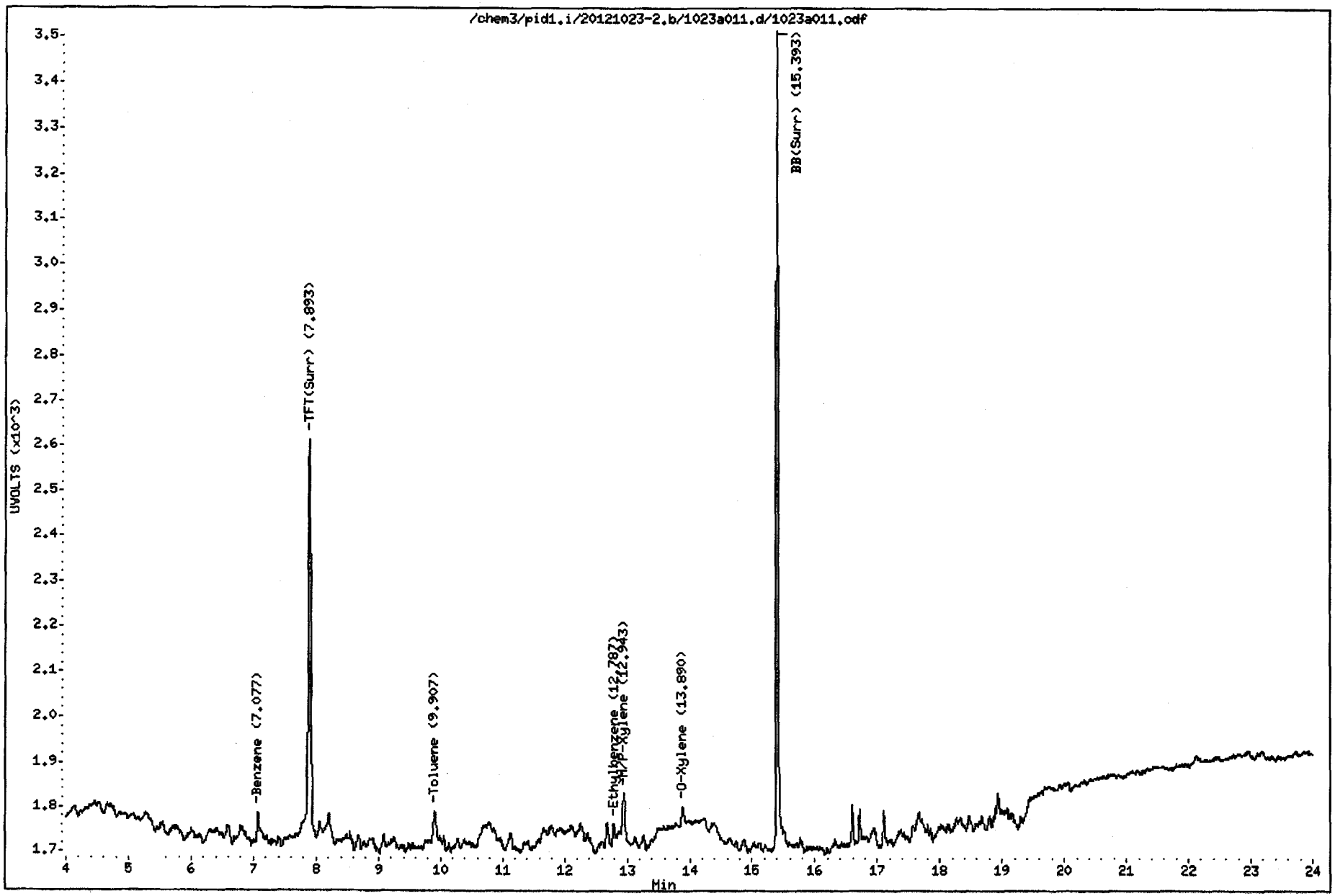
Sample Info: B 0.25

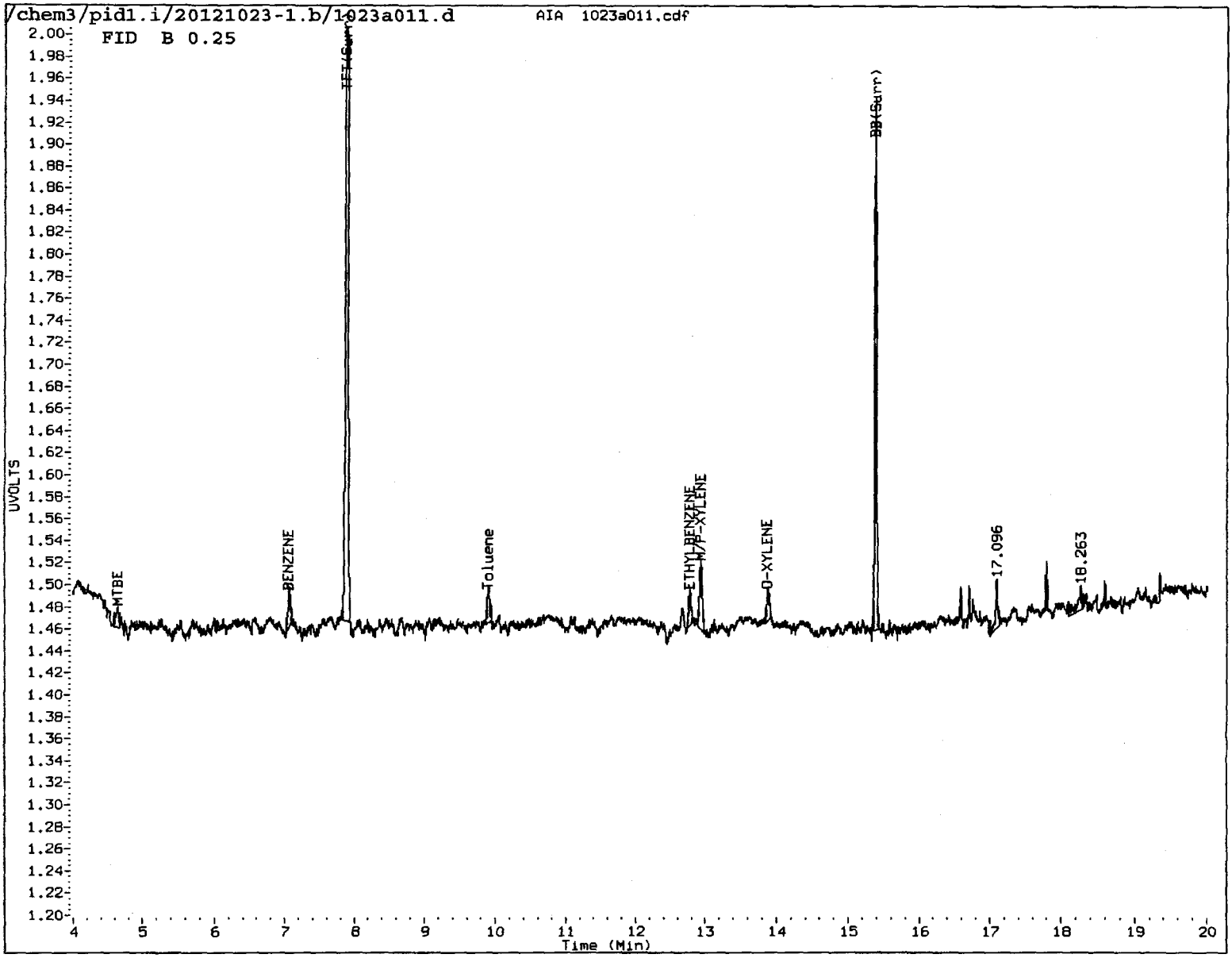
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

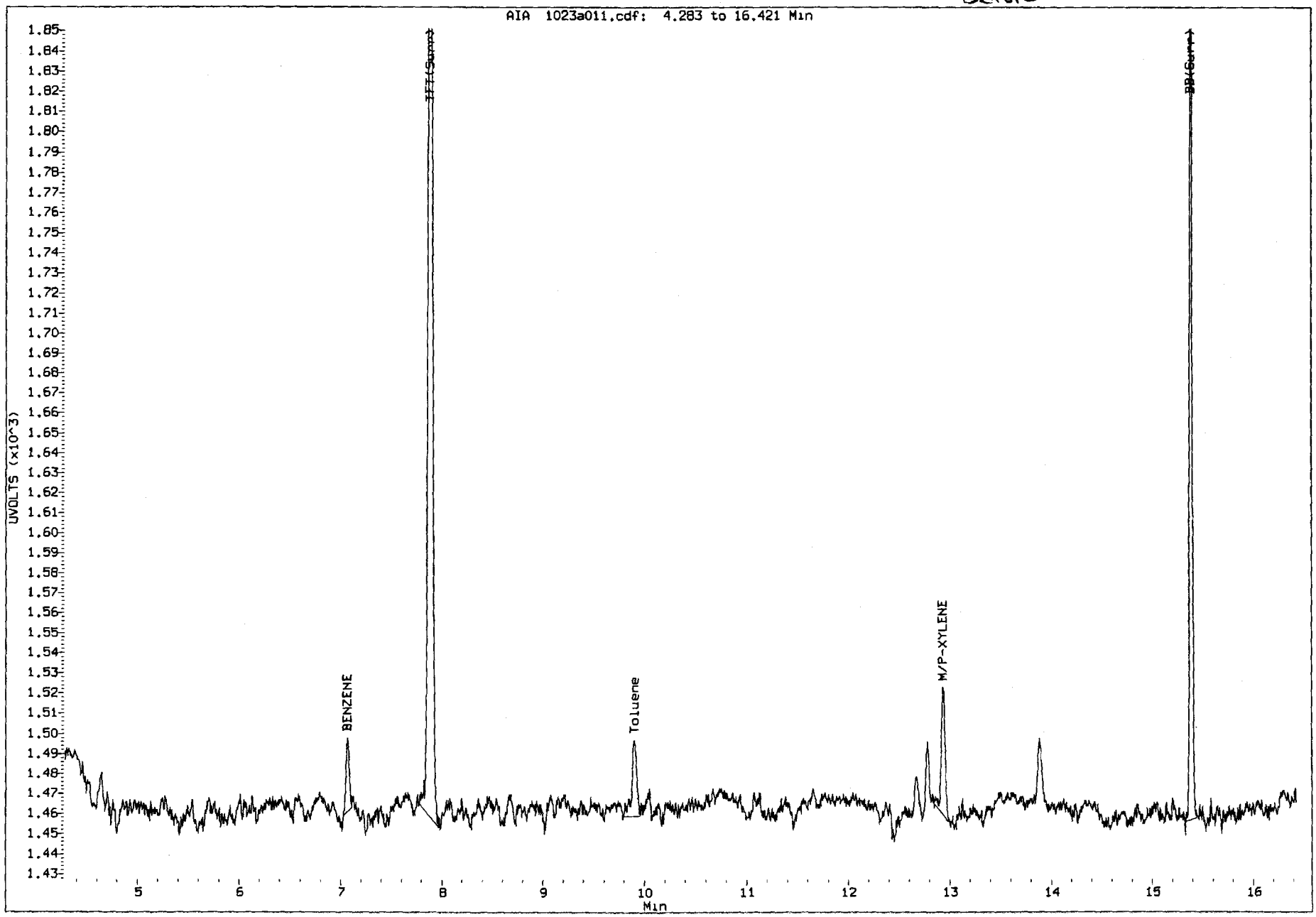
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

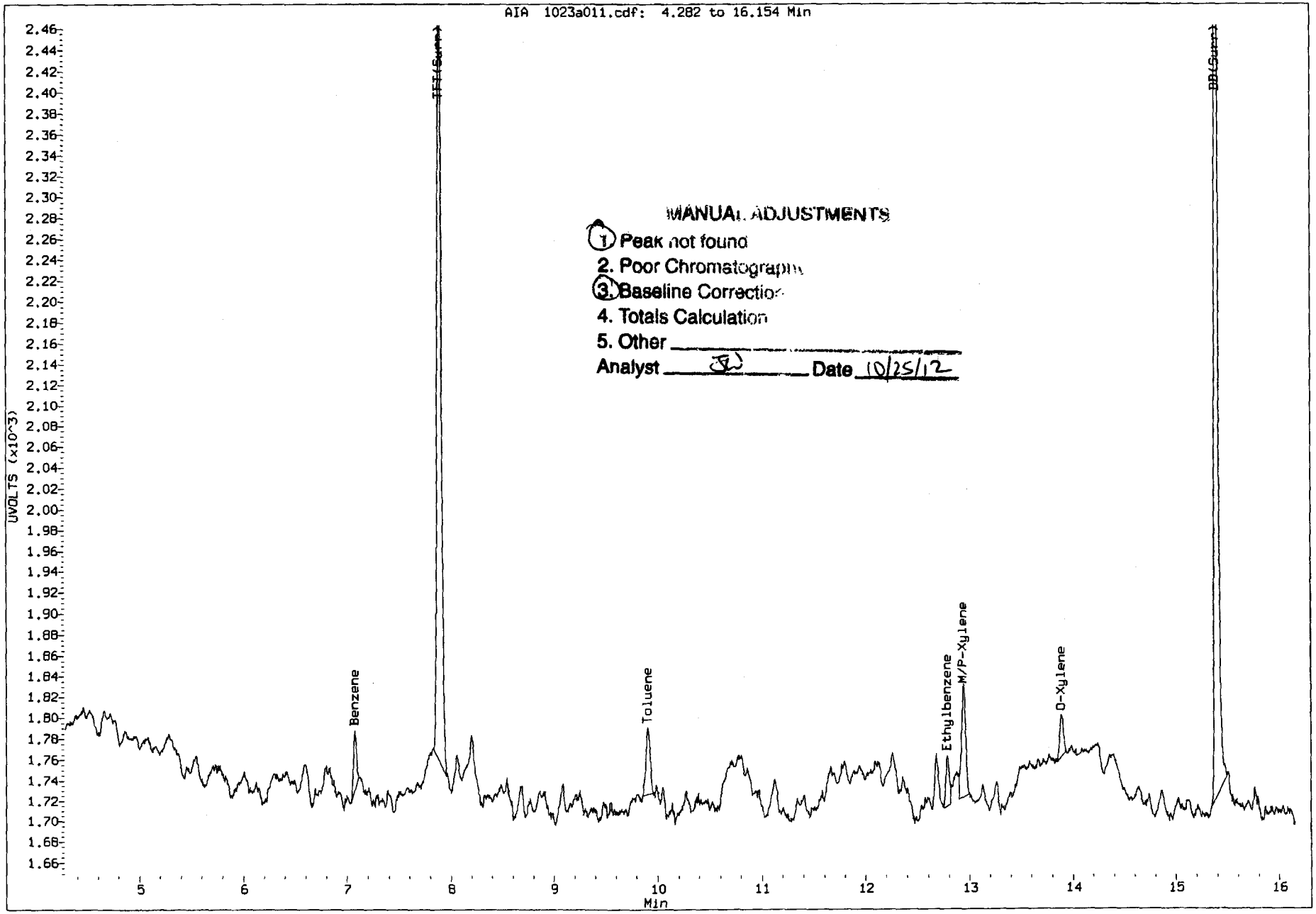
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before



Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:



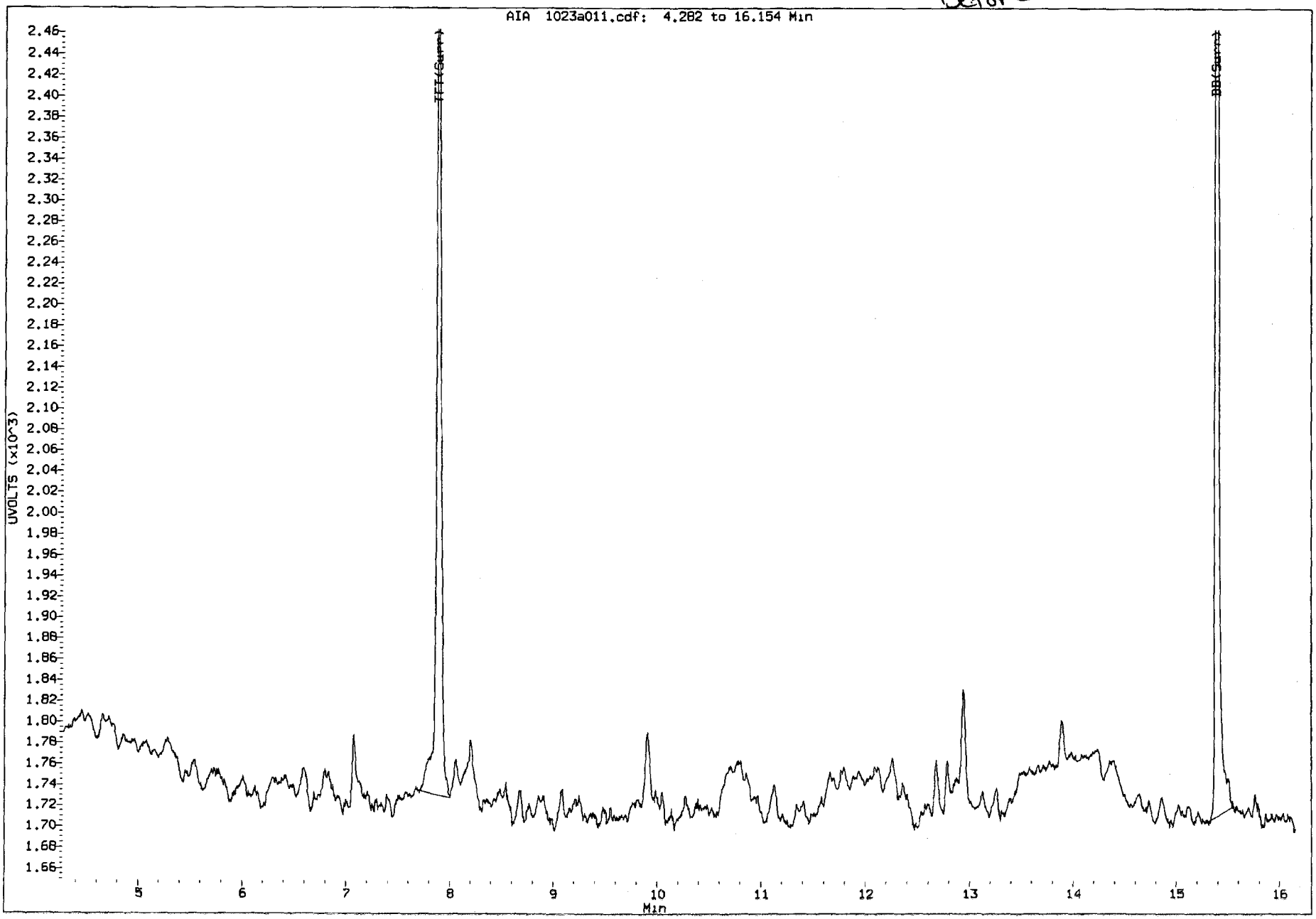
MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other _____

Analyst SD Date 10/25/12

Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a012.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a012.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: BICV
Client ID:
Injection Date: 23-OCT-2012 21:44
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	2989	38262	94.9	TFT(Surr)
15.387	0.000	1972	16638	97.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	256090	0.715
8015C 2MP-TMB	(4.29 to 16.21)	723723	256713	0.355
AK101 nC6-nC10	(4.76 to 15.11)	582885	241615	0.415
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	256090	0.683

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.001	3638	96.0	TFT(Surr)
15.395	0.002	7931	98.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.004	6699	27.01	Benzene
9.905	-0.001	5955	26.47	Toluene
12.785	-0.002	5351	27.14	Ethylbenzene
12.946	0.003	11682	54.33	M/P-Xylene
13.894	0.004	4726	28.16	O-Xylene
4.646	-0.008	1898	26.36	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

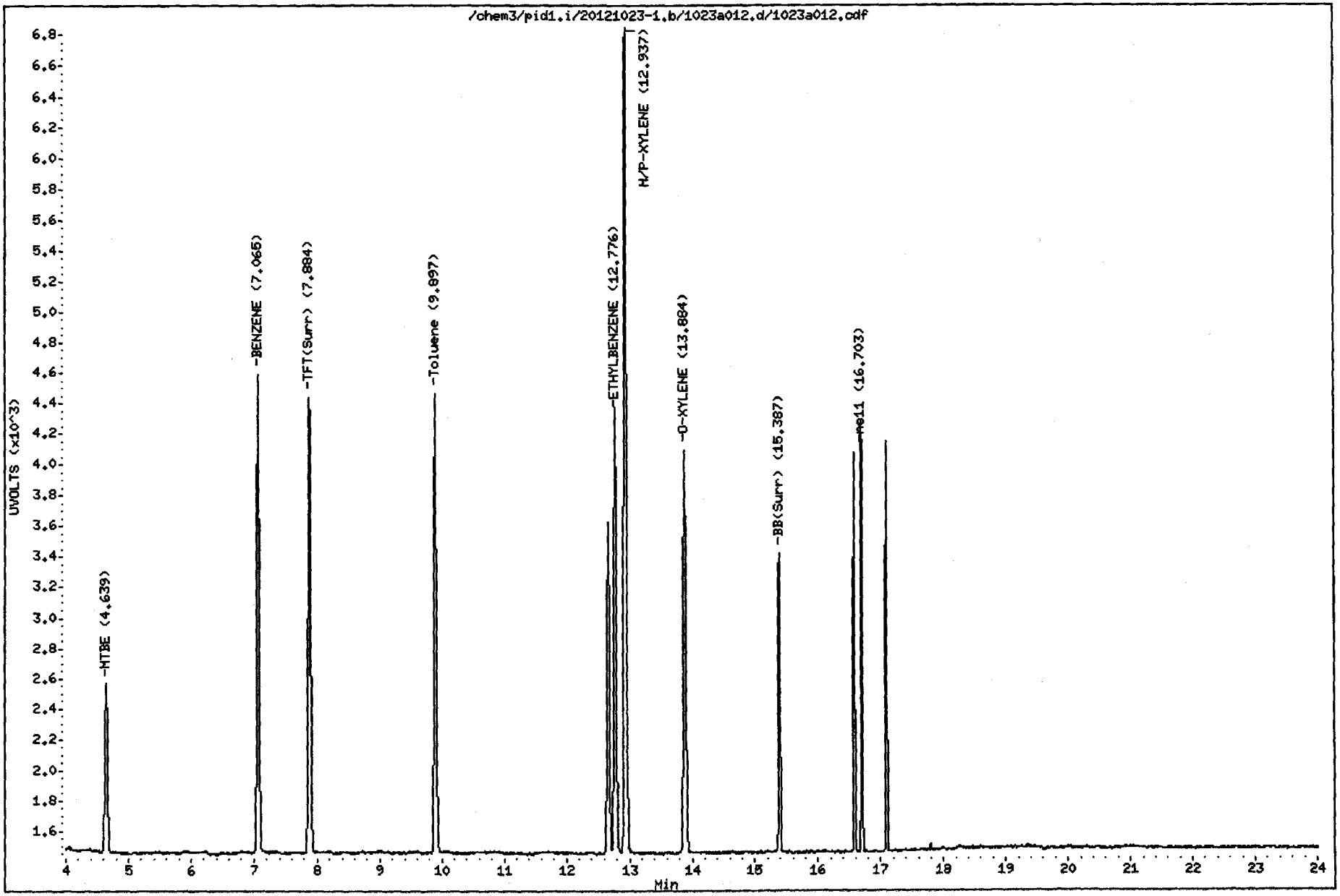
Sample Info: BICV

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

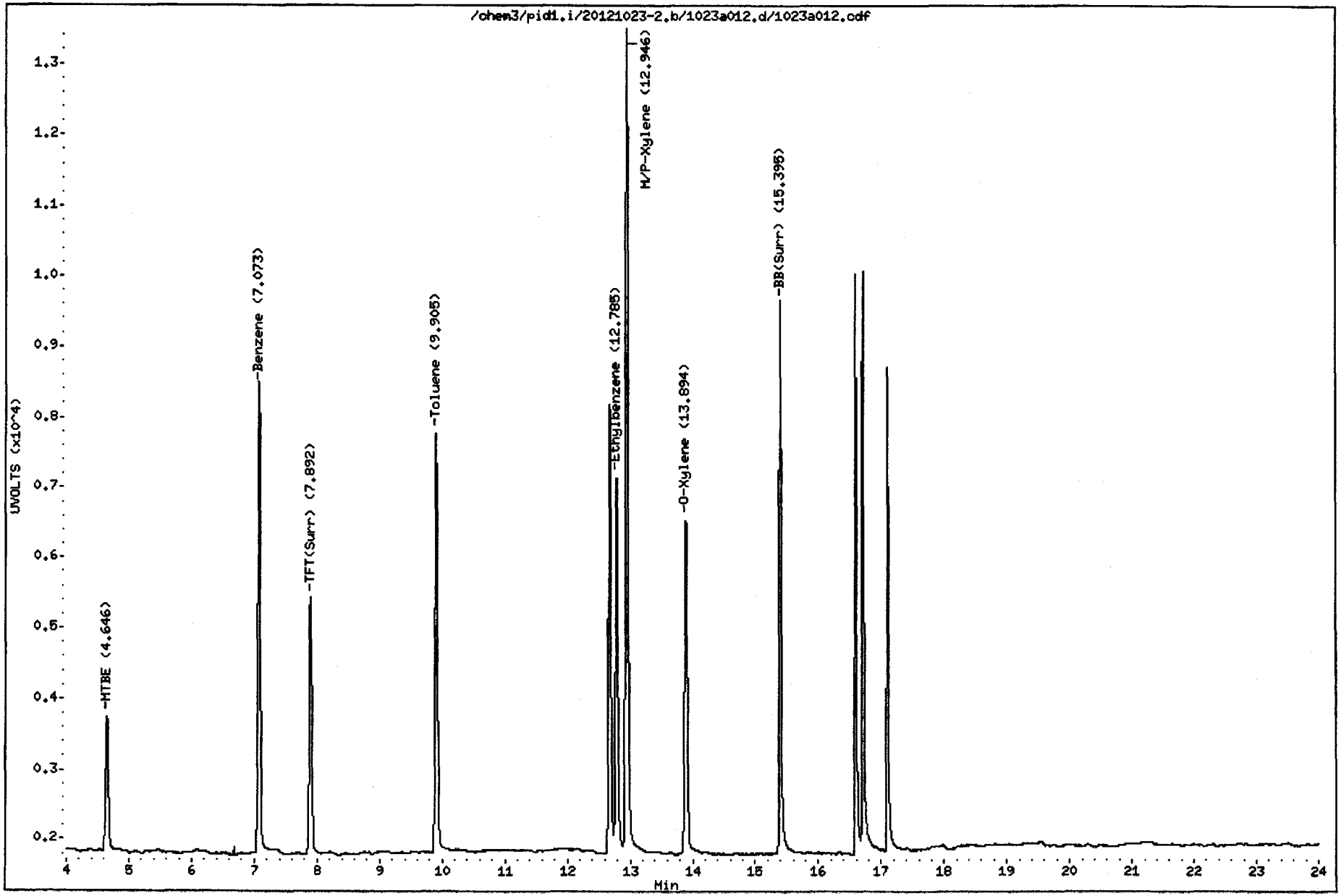
Sample Info: BICV

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	4.387	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.387	4.317-4.457	4.387	0.000
6	MTBE	4.643	4.642	4.645	4.644	4.640	4.640	4.633	4.647	4.643	4.573-4.713	4.642	0.004
7	nC6	4.864	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.864	4.794-4.934	4.864	0.000
8	nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.864	6.794-6.934	+++++	+++++
9	BENZENE	7.069	7.067	7.067	7.067	7.063	7.063	7.067	7.063	7.069	6.999-7.139	7.066	0.002
$ 10	TFT(Surr)	7.887	7.883	7.883	7.887	7.883	7.884	7.883	7.887	7.887	7.817-7.957	7.885	0.002
11	nC8	9.507	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.507	9.437-9.577	9.507	0.000
12	Toluene	9.903	9.897	9.897	9.897	9.897	9.900	9.897	9.897	9.903	9.833-9.973	9.898	0.002
13	nC9	12.416	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.416	12.346-12.486	12.416	0.000
14	ETHYLBENZENE	12.783	12.776	12.775	12.775	12.776	12.777	12.780	12.780	12.783	12.713-12.853	12.778	0.003
15	M/P-XYLENE	12.948	12.938	12.937	12.936	12.936	12.937	12.940	12.933	12.948	12.878-13.018	12.938	0.004
16	O-XYLENE	13.890	13.884	13.882	13.883	13.883	13.883	13.883	13.883	13.890	13.820-13.960	13.884	0.002
17	nC10-Decane	15.207	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.207	15.137-15.277	15.207	0.000

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/26/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.390	15.387	15.387	15.387	15.387	15.387	15.387	15.387	15.390	15.320-15.460	15.387	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.109	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.109	16.039-16.179	16.109	0.000
21 nc11	16.761	16.760	16.702	16.703	16.703	16.705	16.704	+++++	16.761	16.691-16.831	16.720	0.028
22 nC12-Dodecane	17.800	17.795	17.795	17.795	+++++	+++++	+++++	+++++	17.800	17.730-17.870	17.796	0.003
23 nC13	18.607	18.595	+++++	+++++	+++++	+++++	+++++	+++++	18.607	18.537-18.677	18.601	0.008
24 Naphthalene	18.808	18.796	+++++	+++++	+++++	+++++	+++++	+++++	18.808	18.738-18.878	18.802	0.009

ARI-GC-02553

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.650	4.650	4.653	4.653	4.647	4.647	4.653	+++++	4.650	4.600-4.700	4.651	0.003
	2 Benzene	7.078	7.073	7.075	7.077	7.073	7.073	7.073	7.077	7.078	7.028-7.128	7.075	0.002
$	3 TFT(Surr)	7.896	7.890	7.893	7.893	7.890	7.893	7.893	7.893	7.896	7.846-7.946	7.893	0.002
	4 Toluene	9.910	9.903	9.903	9.907	9.903	9.907	9.907	9.907	9.910	9.860-9.960	9.906	0.002
	5 Ethylbenzene	12.793	12.785	12.784	12.785	12.785	12.785	12.783	12.787	12.793	12.743-12.843	12.786	0.003
	6 M/P-Xylene	12.957	12.948	12.946	12.946	12.945	12.946	12.947	12.943	12.957	12.908-13.008	12.947	0.004
	7 O-Xylene	13.900	13.893	13.890	13.893	13.893	13.893	13.893	13.890	13.900	13.870-13.930	13.893	0.003
$	8 BB(Surr)	15.397	15.393	15.393	15.397	15.393	15.393	15.393	15.393	15.397	15.347-15.447	15.394	0.002

Reviewer 1 JW Date: 10/25/12
Reviewer 2 Date: 10/26/12

6a
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20121023-1

Instrument/Det: PID1.I/RTX 502-2 FID Project:

Calibration Date: 23-OCT-2012 SDG No.: 20121023-1

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4

Surrogates	RF1	RF2	RF3	RF4	RF5	RF6	Ave RF	%RSD
Rel. Rec.	22	44	67	100	133	178		

<- Indicates %RSD outside limits
Surrogate areas are not included in RF calculation.

Quant Ranges :

WA Gas	Toluene - nC12
AK Gas	nC6 - nC10
NW Gas	Toluene - Naphthalene
Cal Gas	nC6 - nC12
8015 Gas	2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files	Analysis Time
1023a013.d	23-OCT-2012 22:13
1023a014.d	23-OCT-2012 22:42
1023a015.d	23-OCT-2012 23:11
1023a016.d	23-OCT-2012 23:40
1023a017.d	24-OCT-2012 00:10
1023a018.d	24-OCT-2012 00:39

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a002.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a002.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: RT1023+BCAL1
Client ID:
Injection Date: 23-OCT-2012 10:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3182	41284	101.0	TFT(Surr)
15.387	0.000	2019	16909	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	475541	1.328
8015C 2MP-TMB	(4.29 to 16.21)	723723	578928	0.800
AK101 nC6-nC10	(4.76 to 15.11)	582885	402341	0.690
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	504301	1.344

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.002	3856	101.8	TFT(Surr)
15.394	0.001	8138	101.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.074	-0.003	6292	25.37	Benzene
9.904	-0.002	5539	24.62	Toluene
12.784	-0.002	4977	25.24	Ethylbenzene
12.945	0.002	10971	51.03	M/P-Xylene
13.892	0.002	4338	25.85	O-Xylene
4.650	-0.003	1700	23.61	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a002.d

Date : 23-OCT-2012 10:10

Client ID:

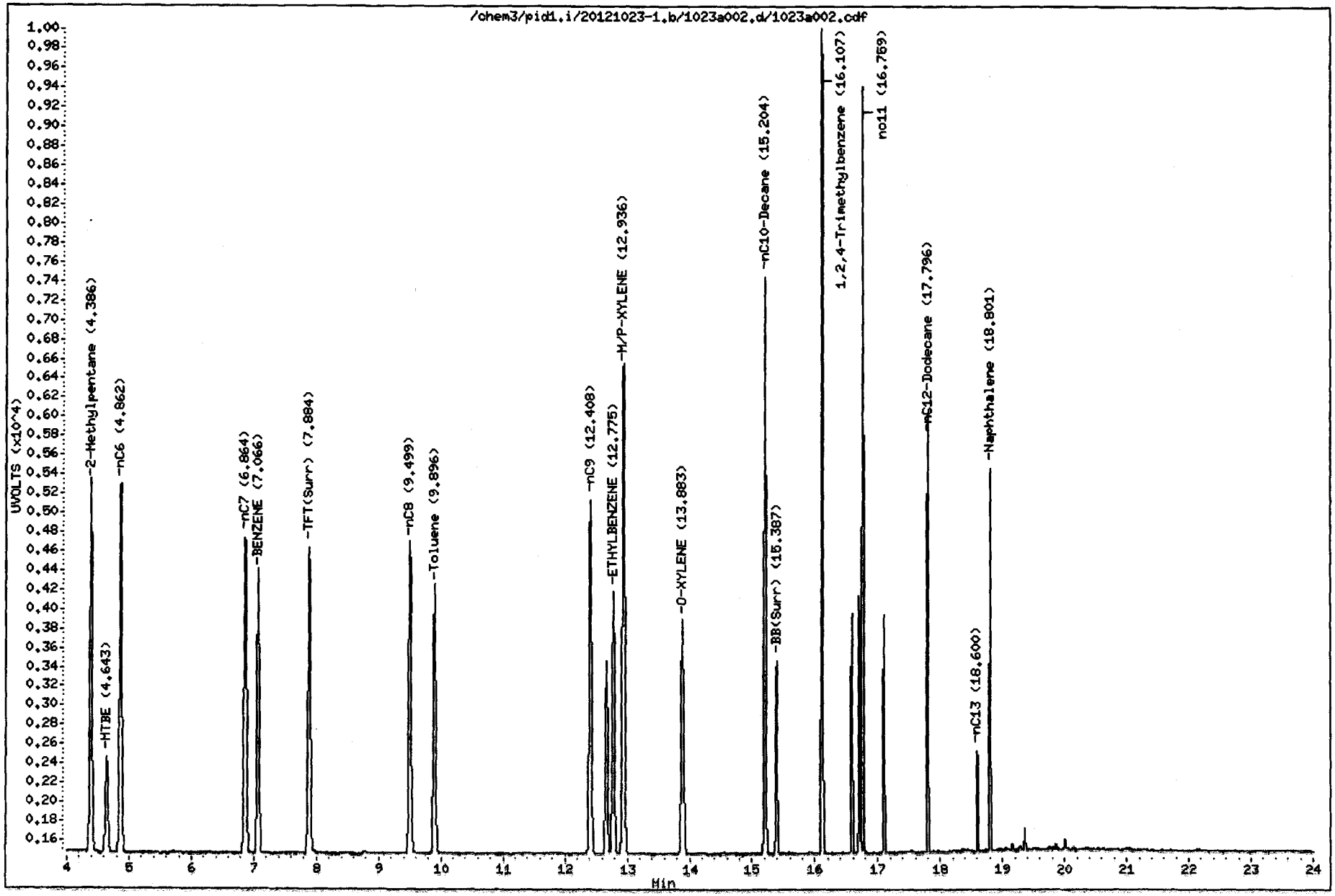
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a002.d

Date : 23-OCT-2012 10:10

Client ID:

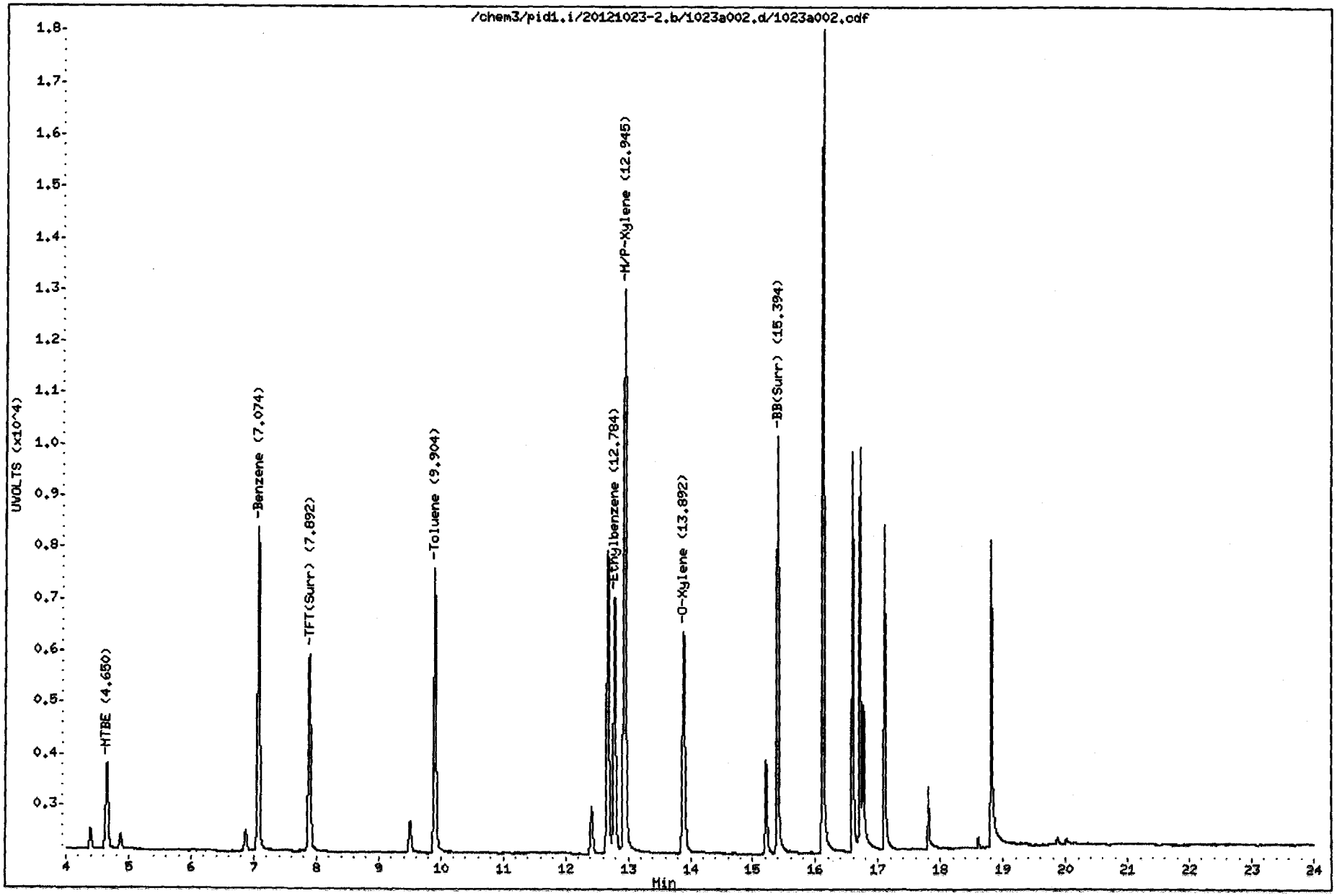
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a013.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a013.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.10
Client ID:
Injection Date: 23-OCT-2012 22:13
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.002	2950	38720	93.7	TFT(Surr)
15.387	0.000	1950	16606	96.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	37102	0.104 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	74277	0.103 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	57914	0.099 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	39402	0.105 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3536	93.3	TFT(Surr)
15.395	0.001	7790	96.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.907	0.000	902	4.01	Toluene
12.785	-0.001	223	1.13	Ethylbenzene
12.948	0.005	914	4.25	M/P-Xylene
13.893	0.003	346	2.06	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a013.d

Date : 23-OCT-2012 22:13

Client ID:

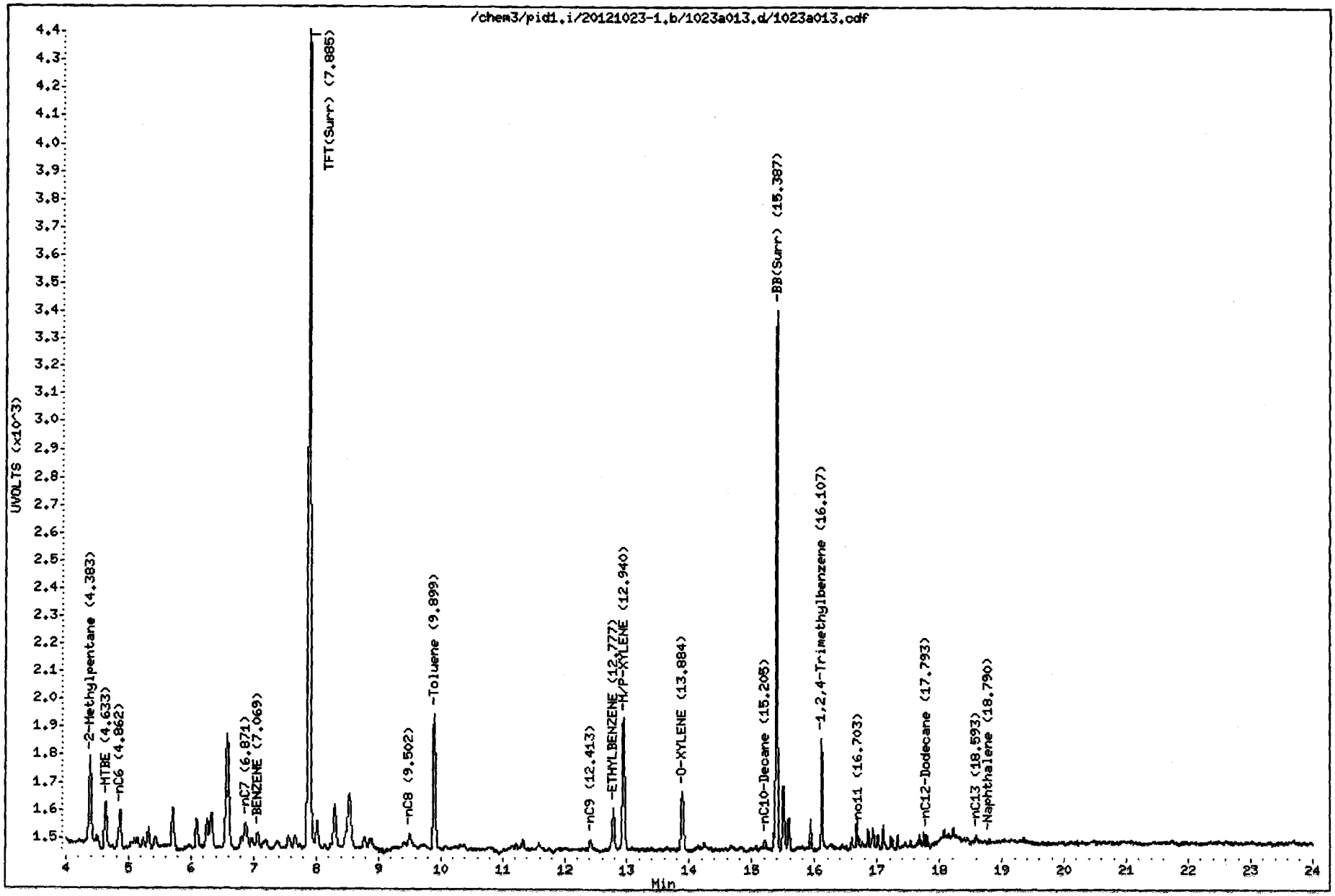
Sample Info: G 0.10

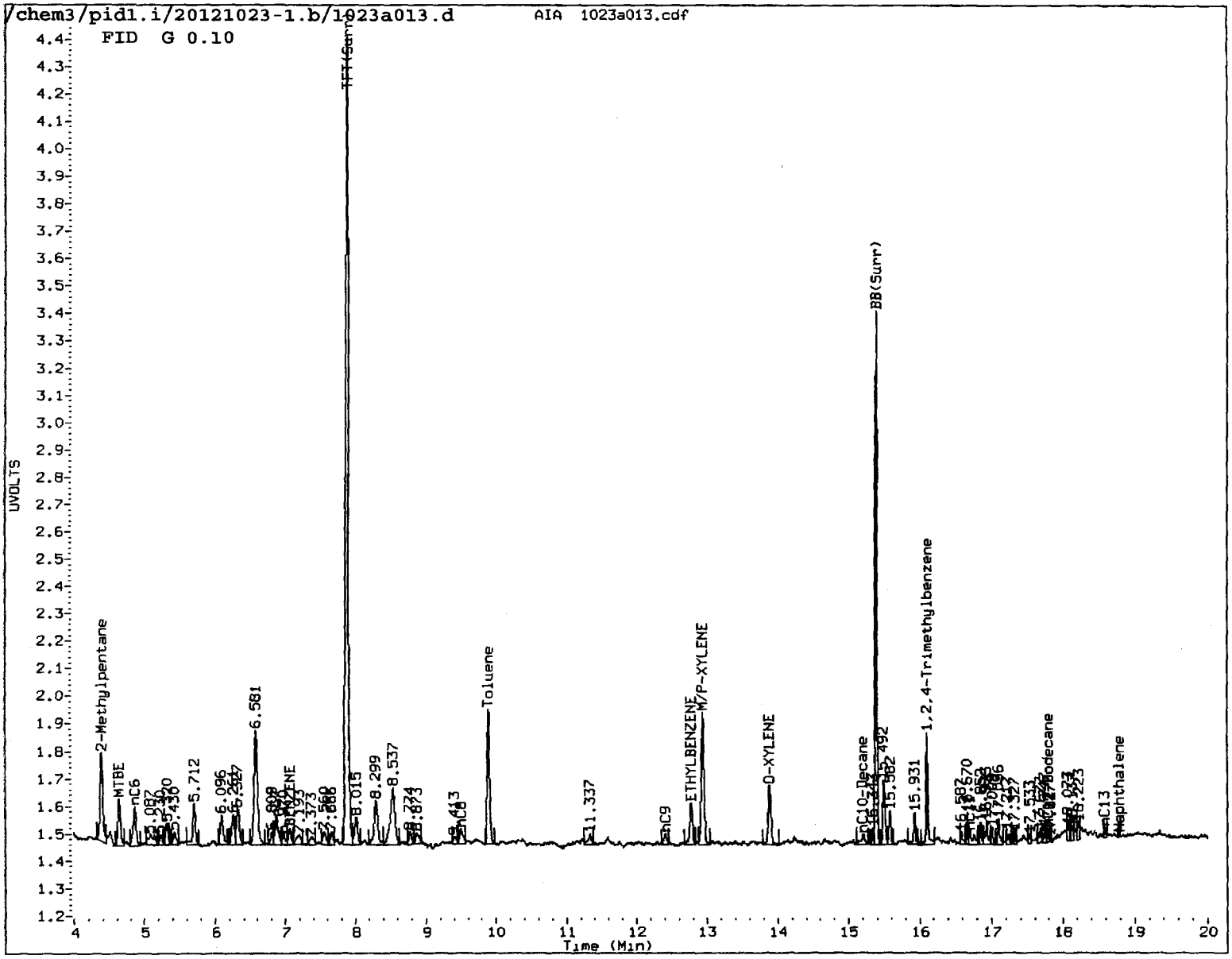
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

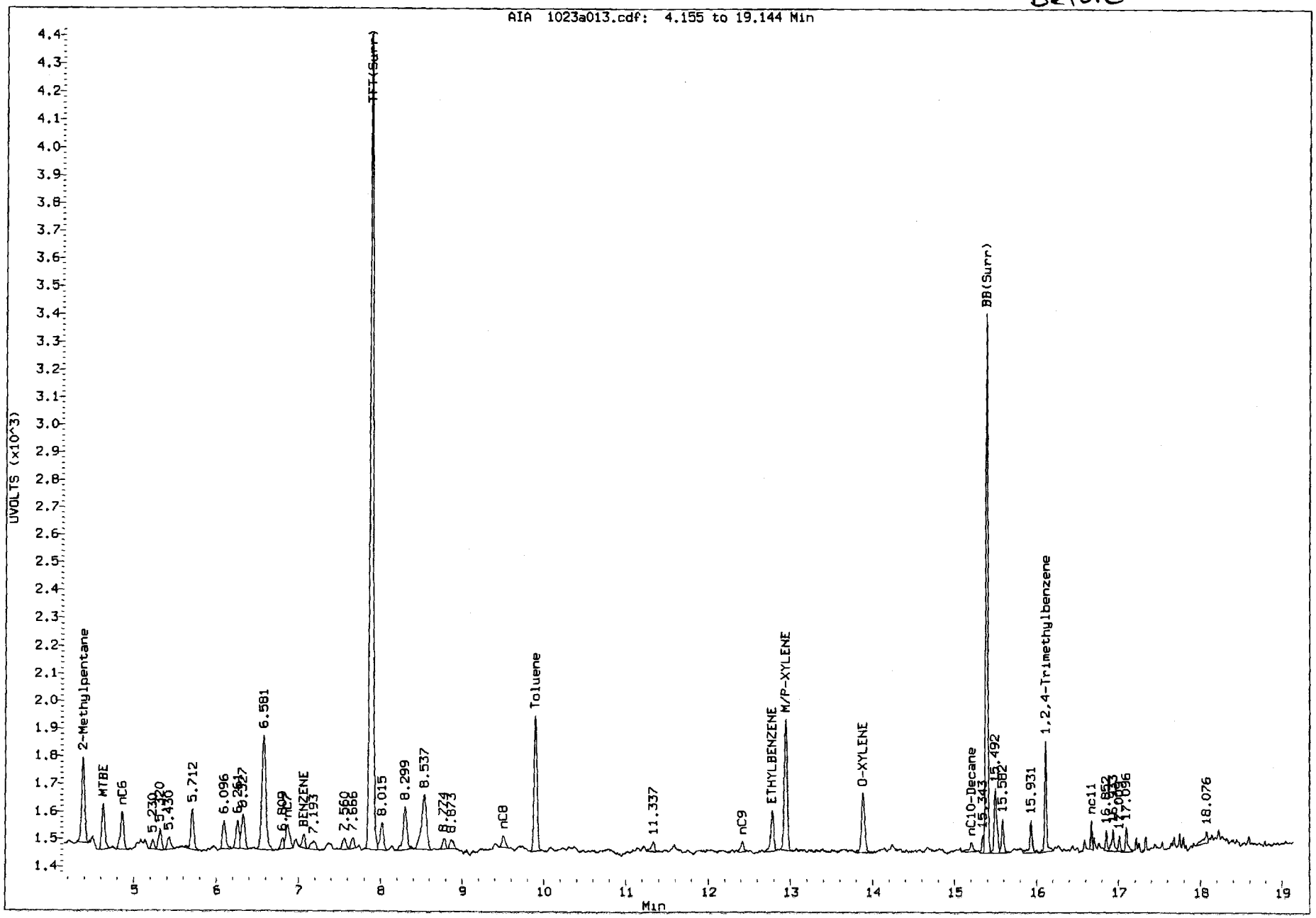
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a013.d/1023a013.cdf
Injection Date: 23-OCT-2012 22:13
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a014.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a014.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.25
Client ID:
Injection Date: 23-OCT-2012 22:42
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	2975	39690	94.5	TFT(Surr)
15.388	0.001	1944	16963	95.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	94864	0.265 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	199011	0.275 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	162246	0.278 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	98768	0.263 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.000	3597	95.0	TFT(Surr)
15.396	0.002	7867	97.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	225	0.91	Benzene
9.906	0.000	2188	9.72	Toluene
12.786	-0.001	548	2.78	Ethylbenzene
12.948	0.005	2183	10.15	M/P-Xylene
13.894	0.004	795	4.74	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a014.d

Date : 23-OCT-2012 22:42

Client ID:

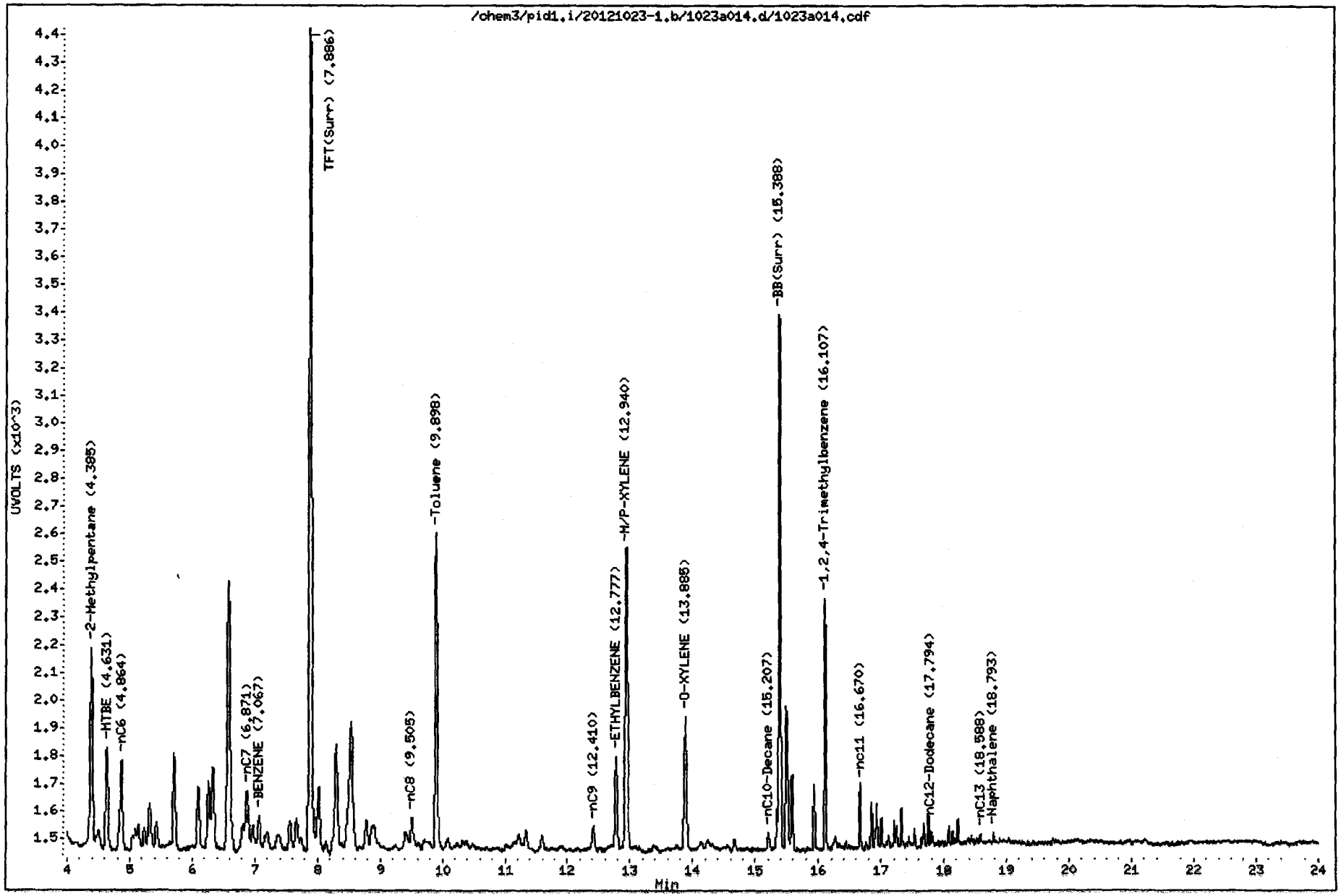
Sample Info: G 0.25

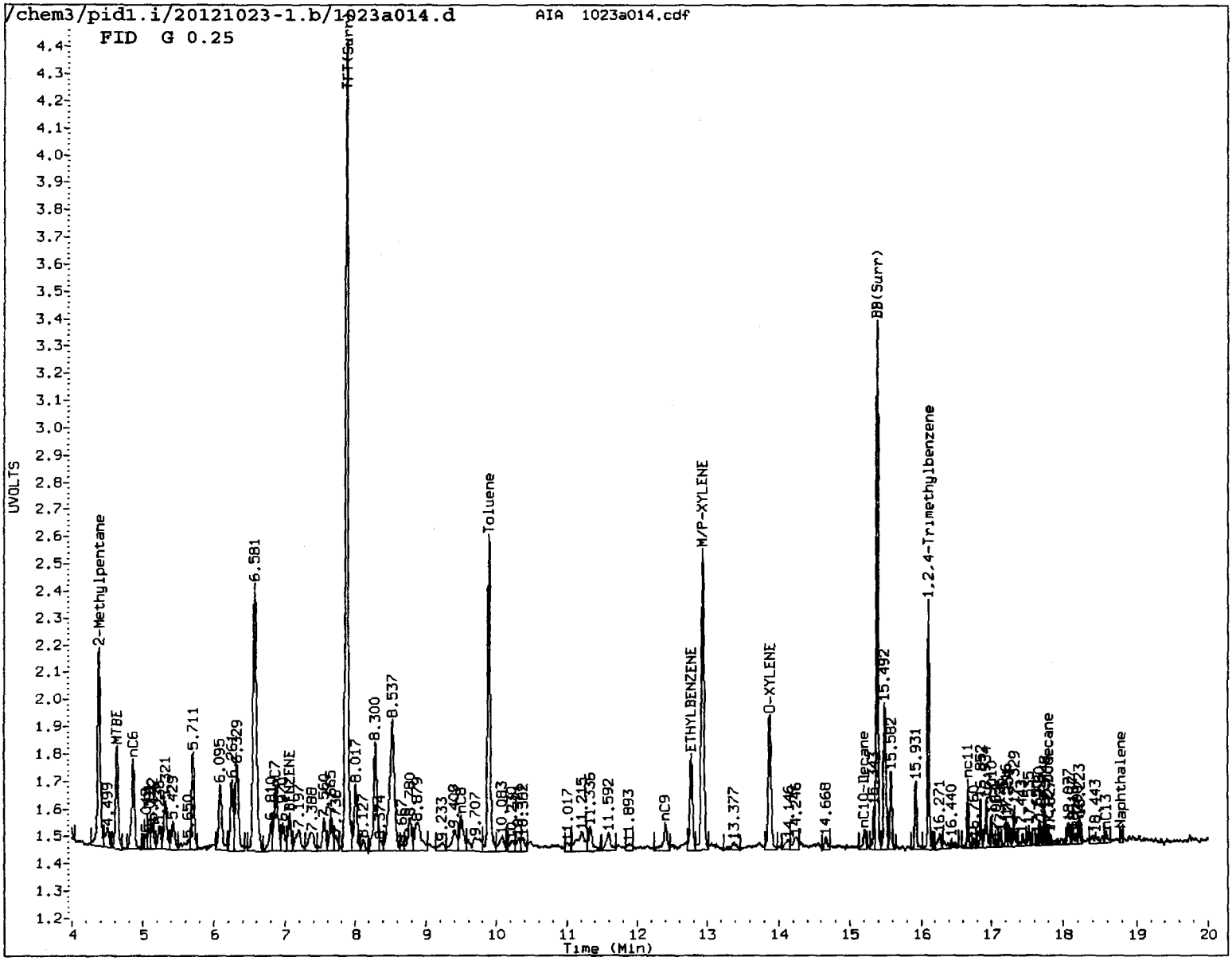
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

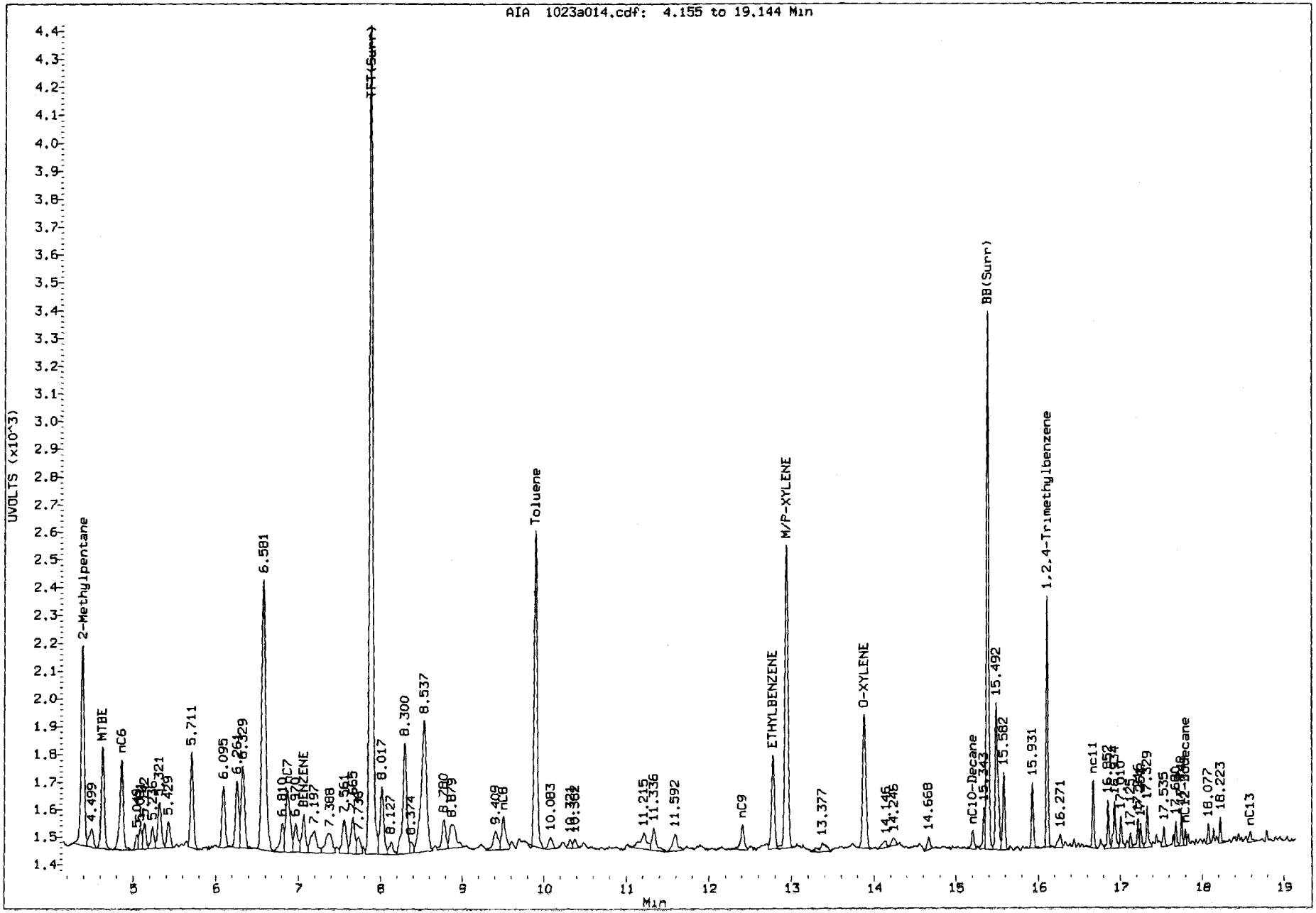
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a014.d/1023a014.cdf
Injection Date: 23-OCT-2012 22:42
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a015.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a015.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 1.0
Client ID:
Injection Date: 23-OCT-2012 23:11
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	3079	44718	97.8	TFT(Surr)
15.387	0.000	1964	17721	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	358654	1.002 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	725276	1.002 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	585010	1.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	376837	1.005 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3709	97.9	TFT(Surr)
15.395	0.002	7881	98.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	965	3.89	Benzene
9.906	0.000	9089	40.40	Toluene
12.786	-0.001	2253	11.43	Ethylbenzene
12.949	0.006	9128	42.45	M/P-Xylene
13.894	0.004	3286	19.58	O-Xylene
4.635	-0.019	211	2.93	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a015.d

Date : 23-OCT-2012 23:11

Client ID:

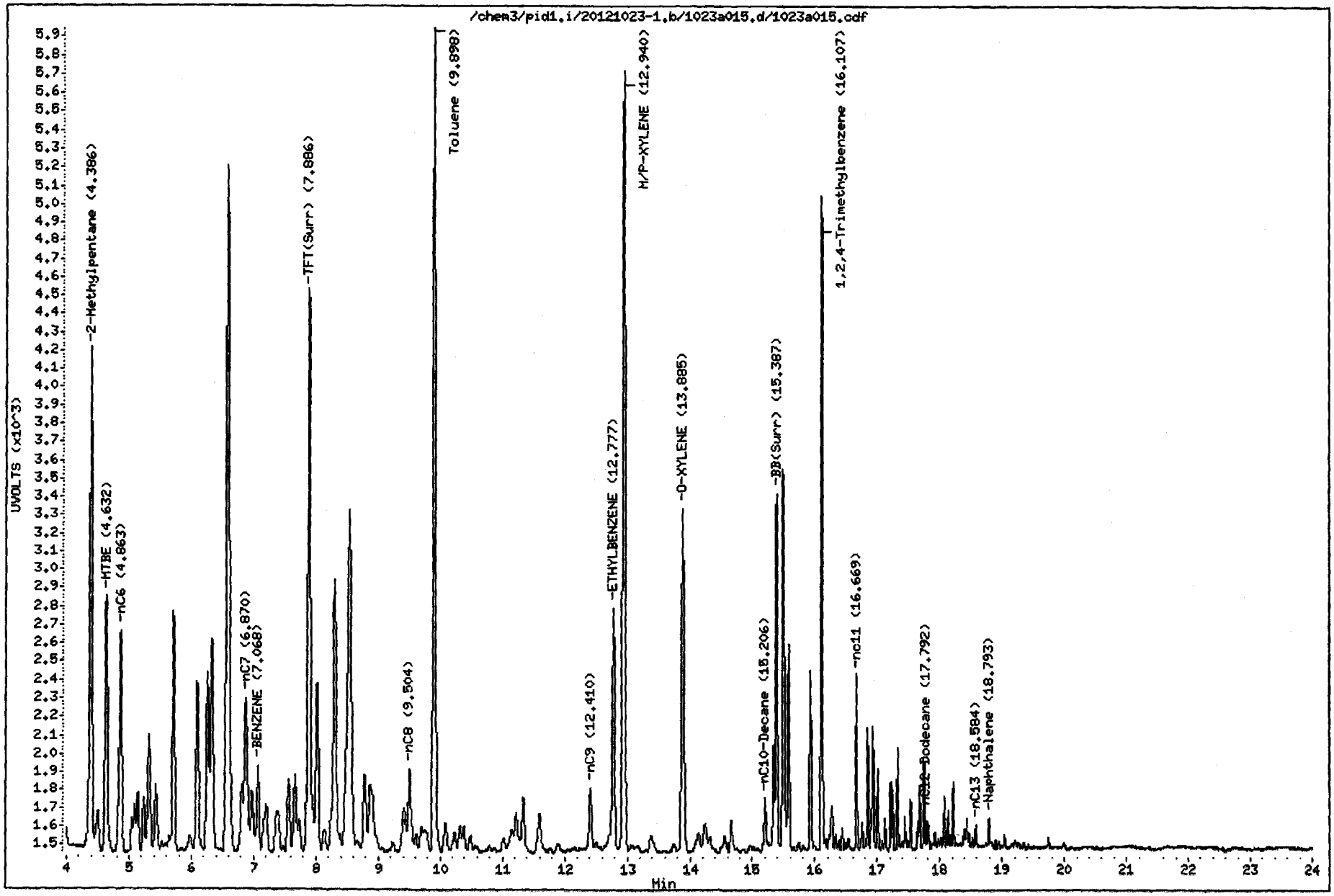
Sample Info: G 1.0

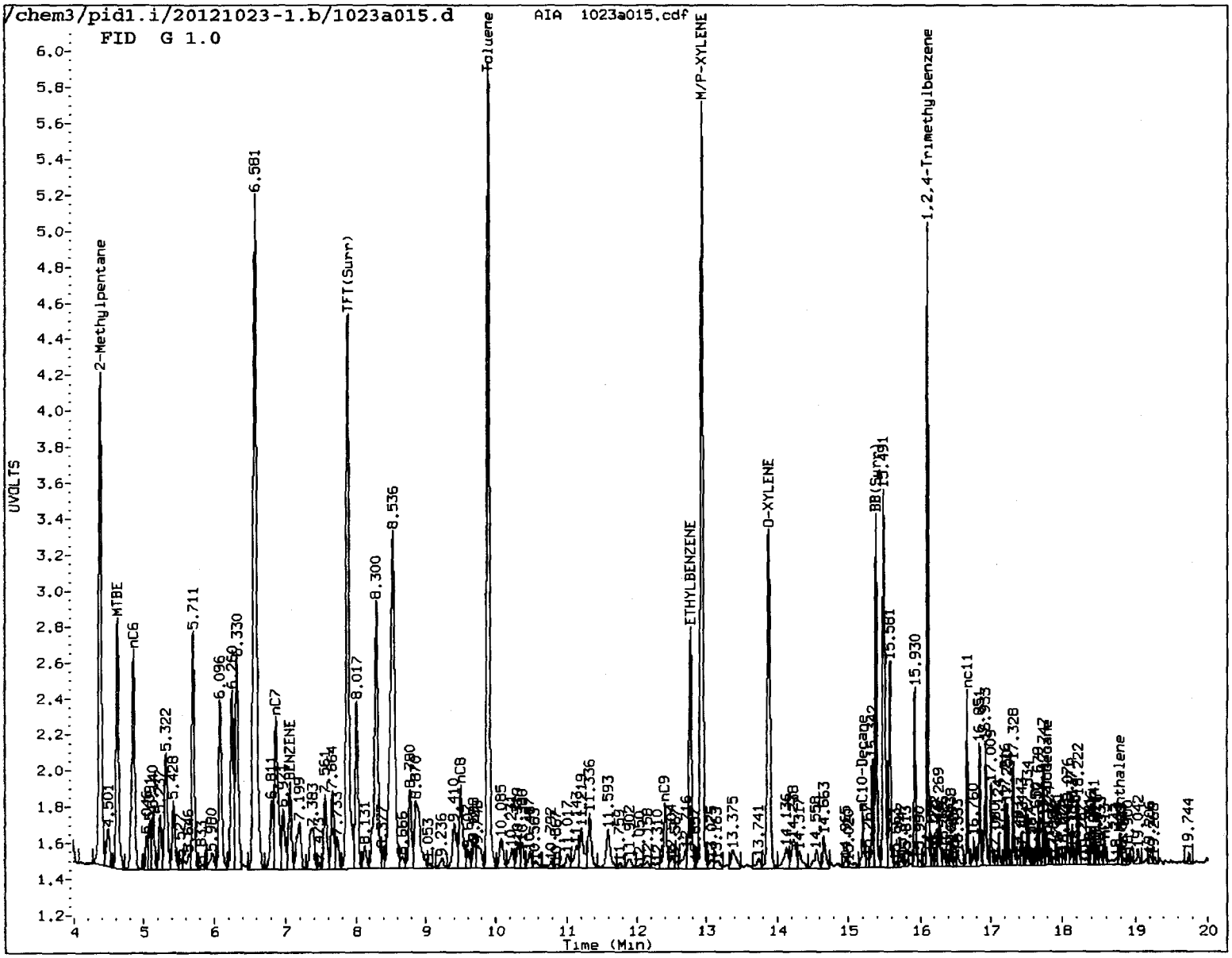
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



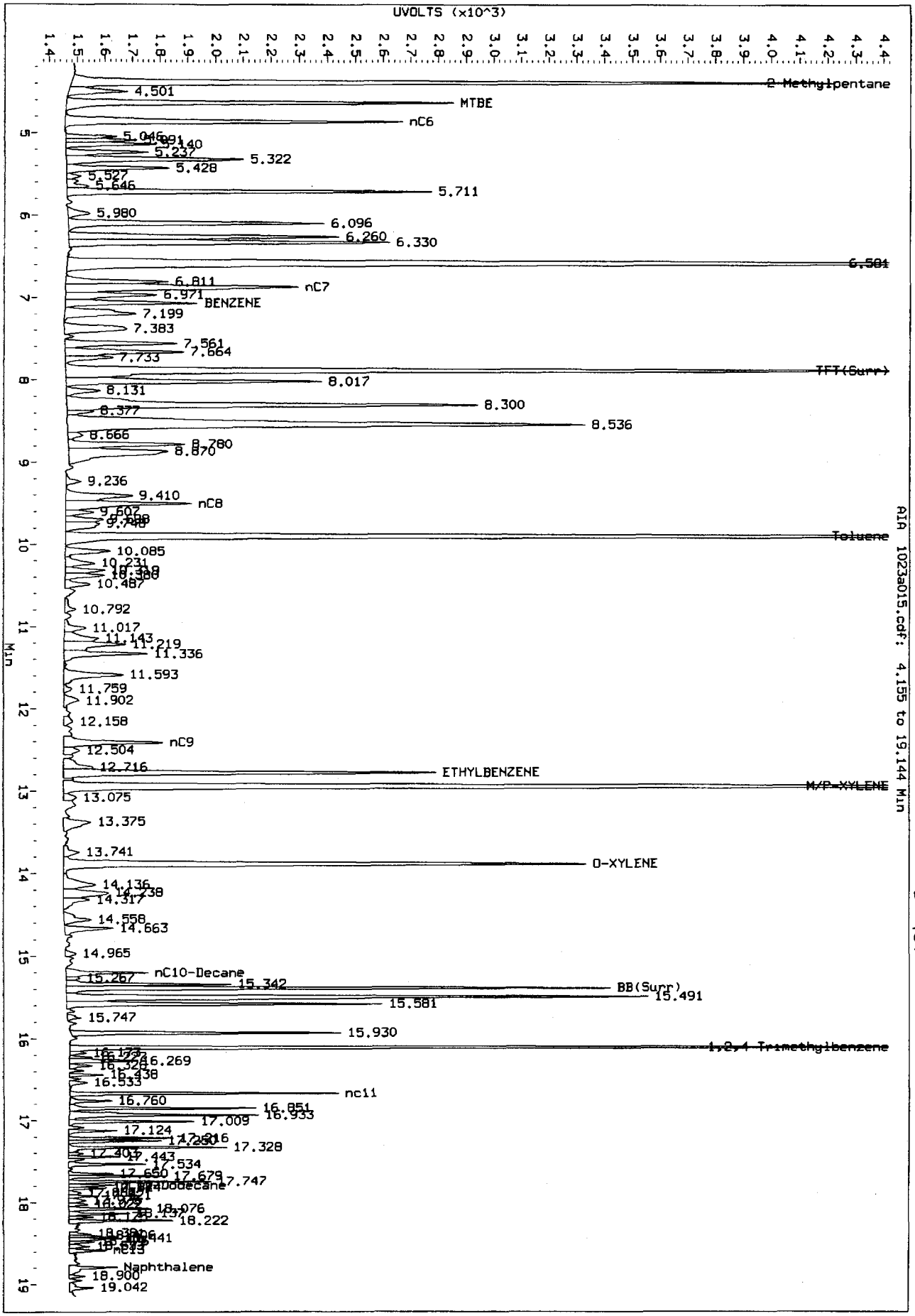


MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12


UVOLTS (x10^3)
Min
AIA 1023a015.cdf: 4.155 to 19.144 Min
Data File: /chem3/pid1.i/20121023-1.b/1023a015.d/1023a015.cdf
Injection Date: 23-OCT-2012 23:11
Instrument: pid1.i
Client Sample ID:
2-Methylpentane
4.501
MTBE
nC6
5.322
5.428
5.711
5.980
6.096
6.260
6.330
6.501
6.811
nC7
6.971
BENZENE
7.199
7.383
7.561
7.664
7.733
TFT(Surr)
8.017
8.131
8.300
8.377
8.536
8.666
8.780
8.870
9.236
9.410
nC8
Toluene
10.085
10.487
10.792
11.017
11.143
11.219
11.336
11.593
11.759
11.902
12.158
nC9
12.504
12.716
ETHYLBENZENE
M/P-XYLENE
13.075
13.375
13.741
O-XYLENE
14.136
14.238
14.317
14.556
14.663
14.965
nC10-Decane
15.267
15.342
BB(Surr)
15.491
15.581
15.747
15.930
1,2,4-Trimethylbenzene
16.269
16.533
nc11
16.760
16.851
16.933
17.009
17.124
17.328
17.443
17.534
17.650
17.679
17.747
18.076
18.222
nc12
Naphthalene
18.900
19.042

Before

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a016.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a016.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 2.5
Client ID:
Injection Date: 23-OCT-2012 23:40
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.002	3238	46993	102.8	TFT(Surr)
15.387	0.000	2003	18605	98.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	848232	2.369
8015C 2MP-TMB	(4.29 to 16.21)	723723	1687315	2.331
AK101 nC6-nC10	(4.76 to 15.11)	582885	1358261	2.330
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	884847	2.359

JW 10/25/12

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3774	99.6	TFT(Surr)
15.395	0.002	8059	100.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2255	9.09	Benzene
9.907	0.000	21750	96.67	Toluene
12.785	-0.001	5424	27.51	Ethylbenzene
12.950	0.007	21923	101.96	M/P-Xylene
13.894	0.004	7944	47.33	O-Xylene
4.635	-0.018	486	6.75	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a016.d

Date : 23-OCT-2012 23:40

Client ID:

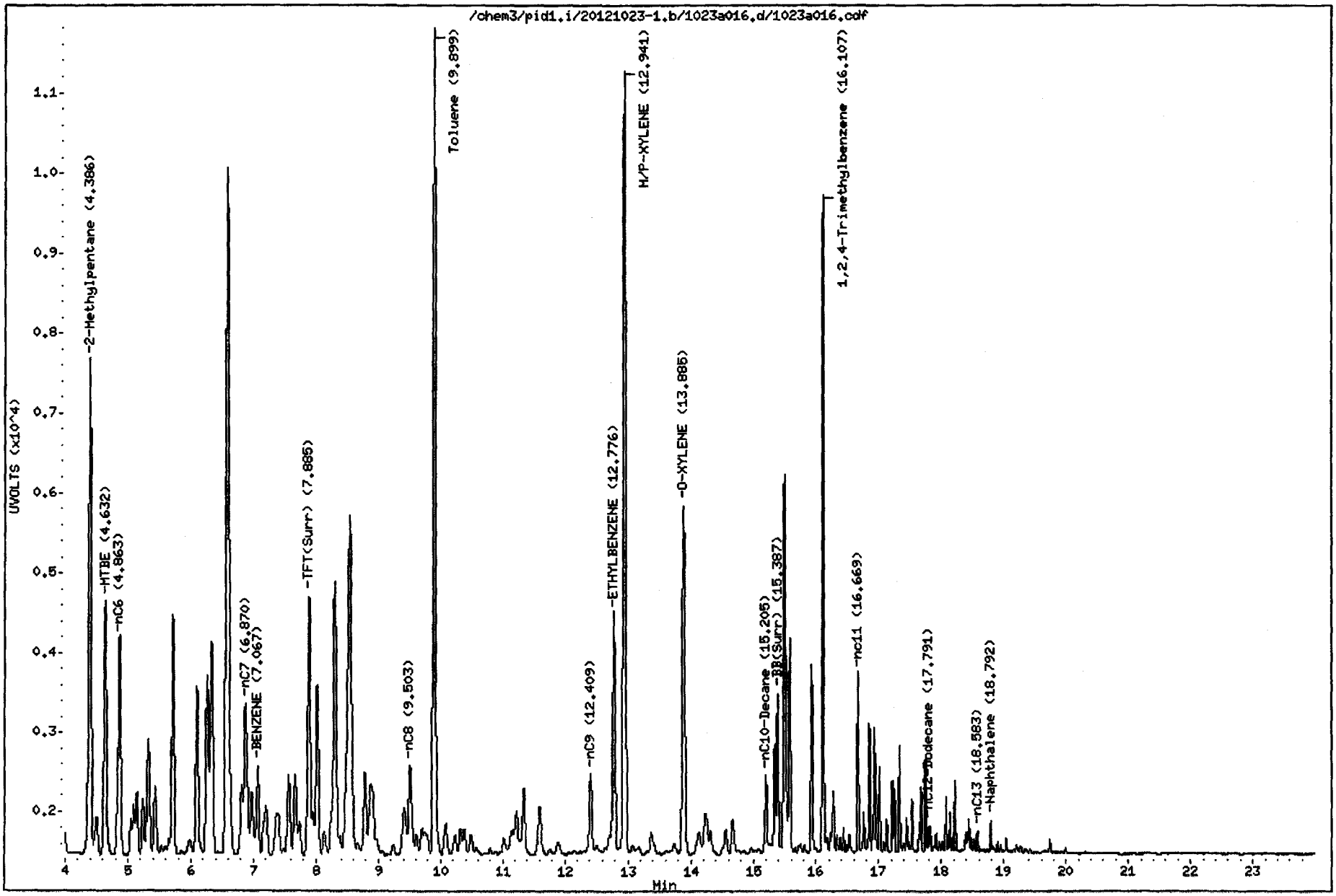
Sample Info: G 2.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a017.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a017.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 5.0
Client ID:
Injection Date: 24-OCT-2012 00:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	3585	55360	113.8	TFT(Surr)
15.387	0.000	2115	18935	104.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1701302	4.751
8015C 2MP-TMB	(4.29 to 16.21)	723723	3352467	4.632
AK101 nC6-nC10	(4.76 to 15.11)	582885	2711219	4.651
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1775567	4.734

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.001	4011	105.9	TFT(Surr)
15.395	0.001	8350	103.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.001	4431	17.87	Benzene
9.908	0.002	42408	188.49	Toluene
12.786	-0.001	10851	55.03	Ethylbenzene
12.952	0.009	43539	202.50	M/P-Xylene
13.895	0.005	15788	94.06	O-Xylene
4.636	-0.018	966	13.42	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a017.d

Date : 24-OCT-2012 00:10

Client ID:

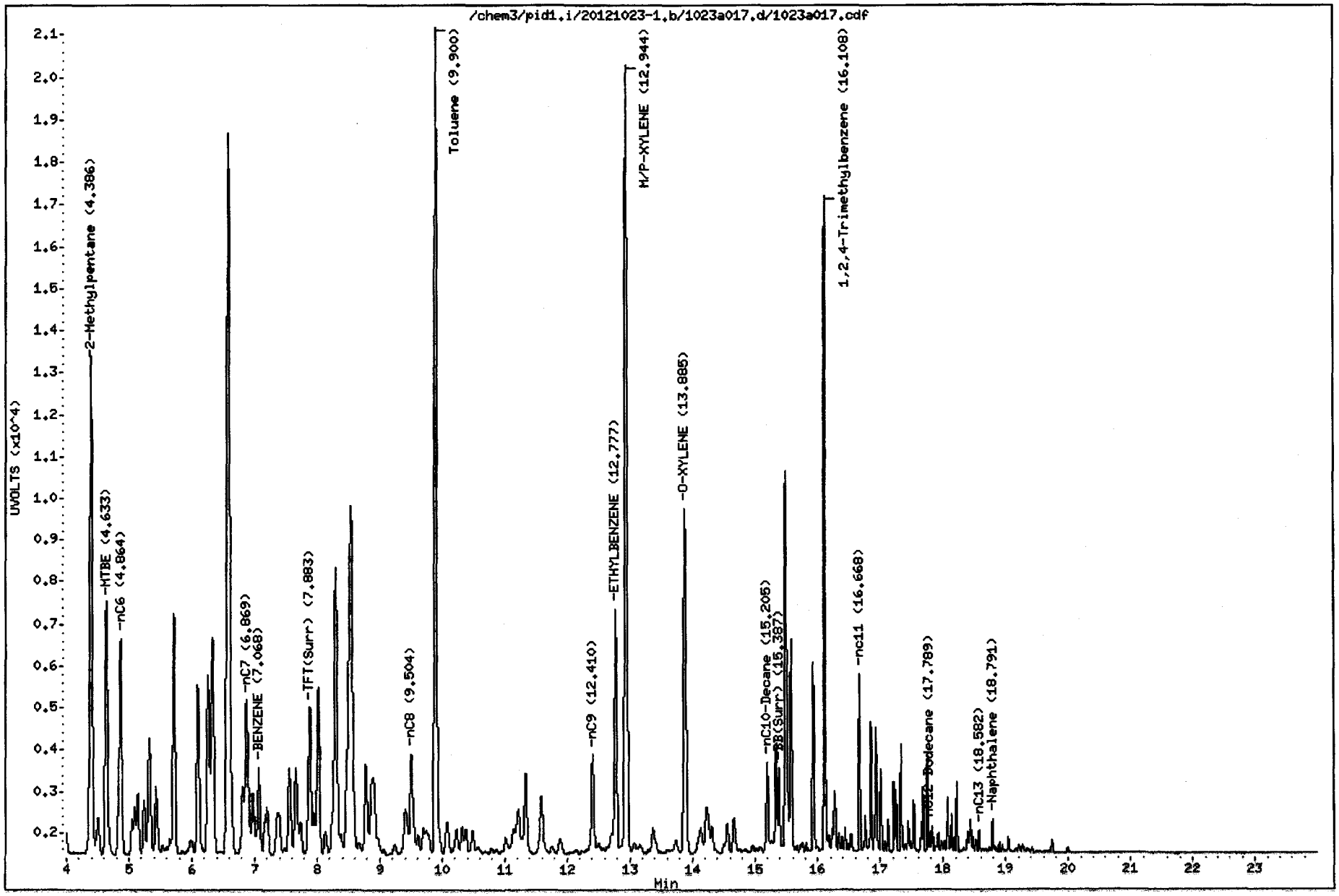
Sample Info: G 5.0

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a018.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a018.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 10
Client ID:
Injection Date: 24-OCT-2012 00:39
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.880	-0.007	4738	79062	150.4	TFT(Surr)
15.388	0.001	2439	22291	120.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	3600012	10.053
8015C 2MP-TMB	(4.29 to 16.21)	723723	7328267	10.126
AK101 nC6-nC10	(4.76 to 15.11)	582885	5986278	10.270
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	3755718	10.013

JW 10/25/12

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.891	-0.003	4903	129.4	TFT(Surr)
15.395	0.002	9209	114.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.076	-0.001	9254	37.32	Benzene
9.912	0.005	88764	394.52	Toluene
12.789	0.002	22870	115.99	Ethylbenzene
12.958	0.015	90897	422.77	M/P-Xylene
13.898	0.008	33138	197.43	O-Xylene
4.636	-0.017	2050	28.47	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

W321:01888

Data File: /chem3/pid1.i/20121023-1.b/1023a018.d

Date : 24-OCT-2012 00:39

Client ID:

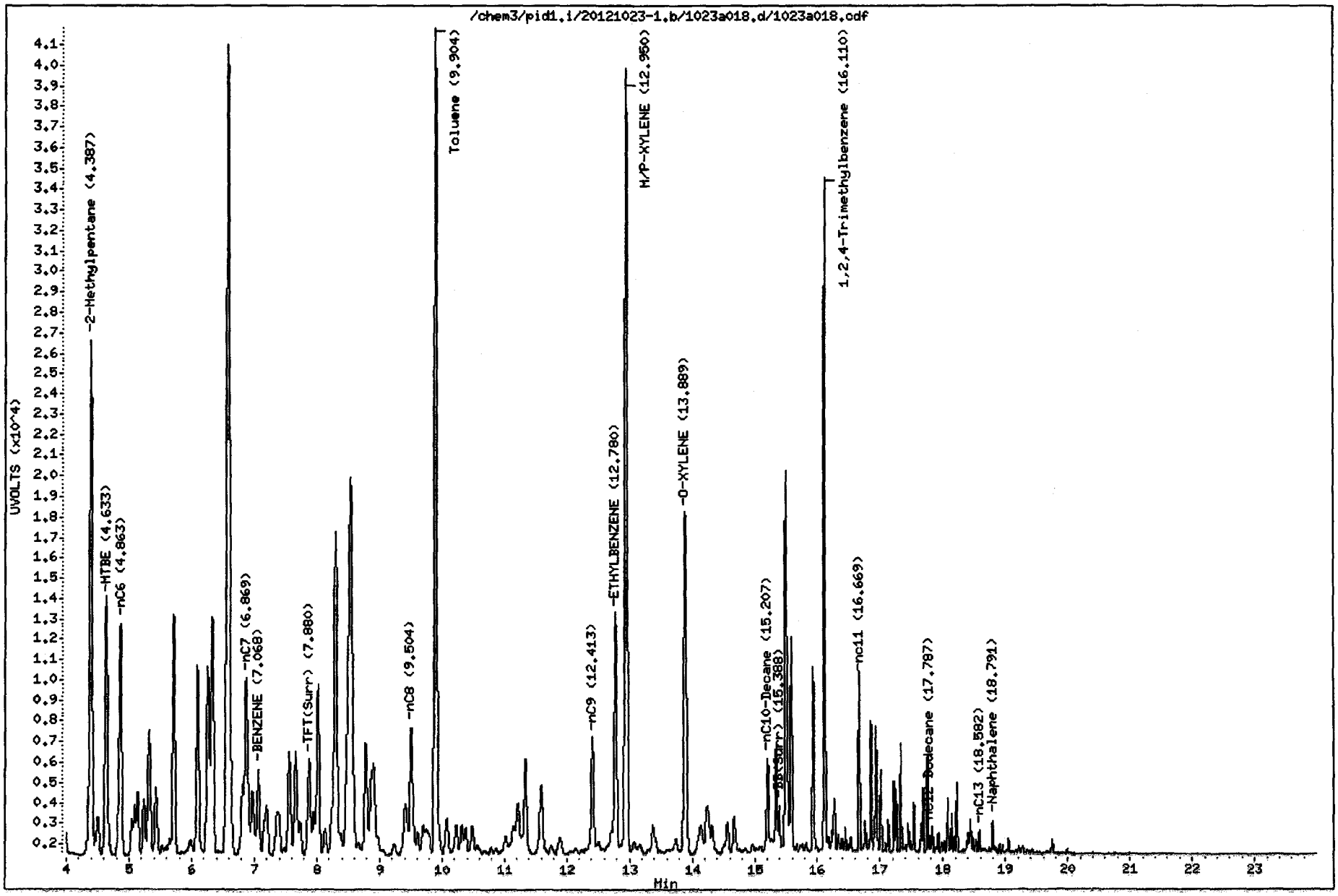
Sample Info: G 10

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a019.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a019.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GICV
Client ID:
Injection Date: 24-OCT-2012 01:08
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3250	47497	103.2	TFT(Surr)
15.387	0.000	2019	19039	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	917898	2.563
8015C 2MP-TMB	(4.29 to 16.21)	723723	1759198	2.431
AK101 nC6-nC10	(4.76 to 15.11)	582885	1408754	2.417
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	972996	2.594

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3791	100.1	TFT(Surr)
15.395	0.002	8074	100.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2306	9.30	Benzene
9.907	0.000	22198	98.66	Toluene
12.785	-0.001	5582	28.31	Ethylbenzene
12.950	0.007	22656	105.37	M/P-Xylene
13.894	0.004	8207	48.90	O-Xylene
4.635	-0.019	542	7.53	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a019.d

Date : 24-OCT-2012 01:08

Client ID:

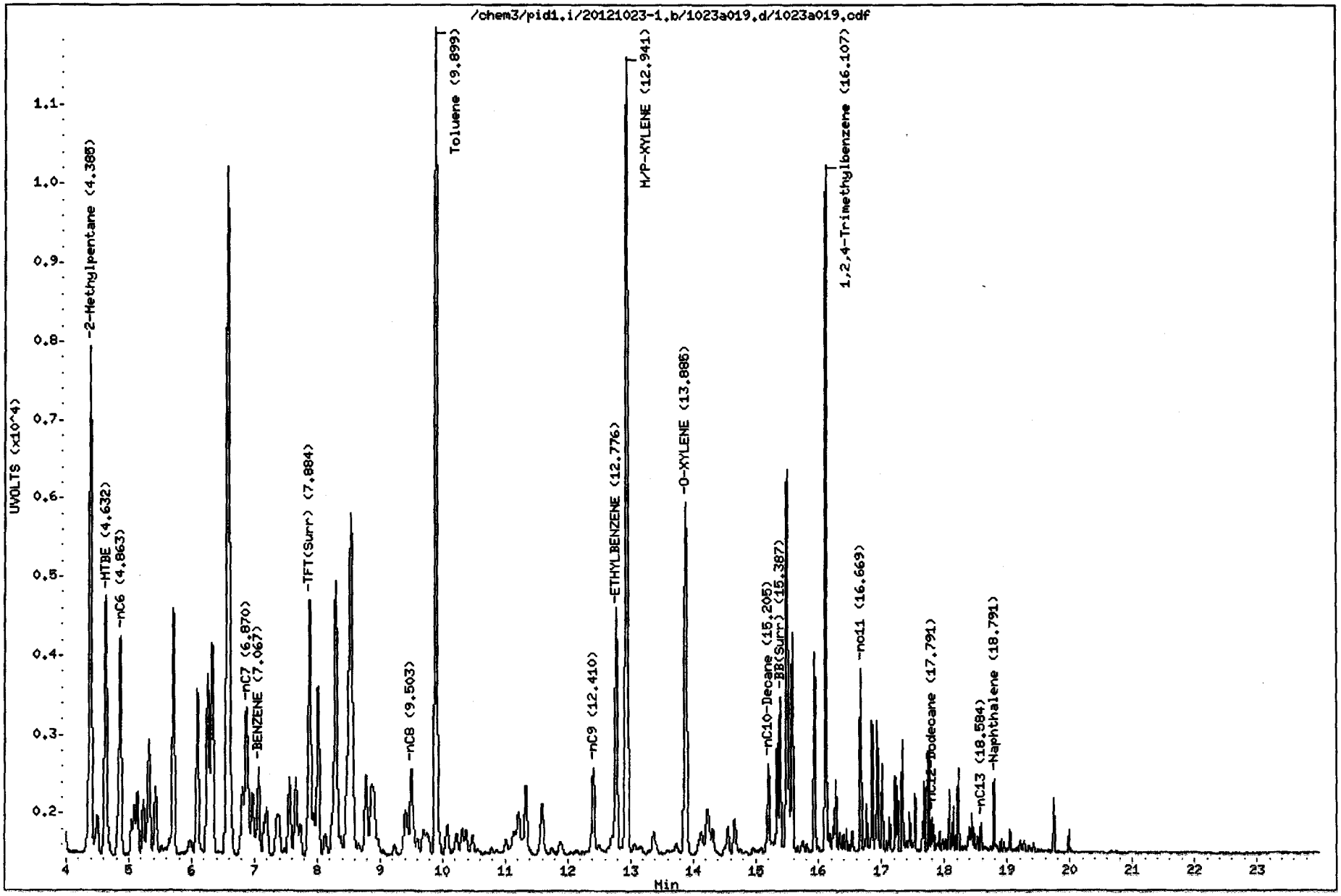
Sample Info: GICV

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	4.383	4.385	4.386	4.386	4.386	4.387	4.387	4.317-4.457	4.385	0.001
6	MTBE	4.633	4.631	4.632	4.632	4.633	4.633	4.647	4.577-4.717	4.632	0.001
7	nC6	4.862	4.864	4.863	4.863	4.864	4.863	4.864	4.794-4.934	4.863	0.001
8	nC7	6.871	6.871	6.870	6.870	6.869	6.869	6.864	6.794-6.934	6.870	0.001
9	BENZENE	7.069	7.067	7.068	7.067	7.068	7.068	7.063	6.993-7.133	7.068	0.001
$ 10	TFT(Surr)	7.885	7.886	7.886	7.885	7.883	7.880	7.887	7.817-7.957	7.884	0.002
11	nC8	9.502	9.505	9.504	9.503	9.504	9.504	9.507	9.437-9.577	9.504	0.001
12	Toluene	9.899	9.898	9.898	9.899	9.900	9.904	9.897	9.827-9.967	9.900	0.002
13	nC9	12.413	12.410	12.410	12.409	12.410	12.413	12.416	12.346-12.486	12.411	0.002
14	ETHYLBENZENE	12.777	12.777	12.777	12.776	12.777	12.780	12.780	12.710-12.850	12.777	0.001
15	M/P-XYLENE	12.940	12.940	12.940	12.941	12.944	12.950	12.933	12.863-13.003	12.942	0.004
16	O-XYLENE	13.884	13.885	13.885	13.885	13.885	13.889	13.883	13.813-13.953	13.885	0.002
17	nC10-Decane	15.205	15.207	15.206	15.205	15.205	15.207	15.207	15.137-15.277	15.206	0.001

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/26/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.387	15.388	15.387	15.387	15.387	15.388	15.387	15.317-15.457	15.387	0.000
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.107	16.107	16.107	16.107	16.108	16.110	16.109	16.039-16.179	16.108	0.001
21 nC11	16.703	16.670	16.669	16.669	16.668	16.669	16.704	16.634-16.774	16.675	0.014
22 nC12-Dodecane	17.793	17.794	17.792	17.791	17.789	17.787	17.795	17.725-17.865	17.791	0.003
23 nC13	18.593	18.588	18.584	18.583	18.582	18.582	18.595	18.525-18.665	18.585	0.004
24 Naphthalene	18.790	18.793	18.793	18.792	18.791	18.791	18.796	18.726-18.866	18.792	0.001

Report Date : 25-Oct-2012 17:28

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	+++++	+++++	4.635	4.635	4.636	4.636	4.653	4.603-4.703	4.635	0.001
	2 Benzene	+++++	7.075	7.075	7.075	7.075	7.076	7.077	7.027-7.127	7.075	0.000
$	3 TFT(Surr)	7.893	7.894	7.894	7.893	7.892	7.891	7.893	7.843-7.943	7.893	0.001
	4 Toluene	9.907	9.906	9.906	9.907	9.908	9.912	9.907	9.857-9.957	9.908	0.002
	5 Ethylbenzene	12.785	12.786	12.786	12.785	12.786	12.789	12.787	12.737-12.837	12.786	0.001
	6 M/P-Xylene	12.948	12.948	12.949	12.950	12.952	12.958	12.943	12.893-12.993	12.951	0.004
	7 O-Xylene	13.893	13.894	13.894	13.894	13.895	13.898	13.890	13.860-13.920	13.895	0.002
$	8 BB(Surr)	15.395	15.396	15.395	15.395	15.395	15.395	15.393	15.343-15.443	15.395	0.000

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/26/12

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20121023-1.b

ARI Job No.: RINS Method: FID.m Instrument: pid1.i Date: 23-OCT-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0941	1023a001.d	RINSE		1	NO MANUAL INTEGRATION
1010	1023a002.d	RT1023+BCAL1		1	NO MANUAL INTEGRATION
1039	1023a003.d	GCAL1		1	NO MANUAL INTEGRATION
1750	1023a004.d	B 200		1	Toluene, O-XYLENE, TFT(Surr), BB(Surr),
1820	1023a005.d	B 100		1	Toluene, BENZENE, TFT(Surr), BB(Surr),
1849	1023a006.d	B 50		1	Toluene, BENZENE, TFT(Surr), BB(Surr),
1918	1023a007.d	B 25		1	Toluene, BENZENE, O-XYLENE, TFT(Surr), BB(Surr),
1947	1023a008.d	B 5		1	Toluene, MTBE, BENZENE, O-XYLENE,
2016	1023a009.d	B 1		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE,
2045	1023a010.d	B 0.5		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2115	1023a011.d	B 0.25		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2144	1023a012.d	BICV		1	NO MANUAL INTEGRATION
2213	1023a013.d	G 0.10		1	nC12-Dodecane, Naphthalene, nc11, nC13,
2242	1023a014.d	G 0.25		1	Naphthalene,
2311	1023a015.d	G 1.0		1	Naphthalene,
2340	1023a016.d	G 2.5		1	NO MANUAL INTEGRATION
0010	1023a017.d	G 5.0		1	NO MANUAL INTEGRATION
0039	1023a018.d	G 10		1	NO MANUAL INTEGRATION
0108	1023a019.d	GICV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20121023-2.b

ARI Job No.: RINS Method: PIDB.m Instrument: pid1.i Date: 23-OCT-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0941	1023a001.d	RINSE		1	NO MANUAL INTEGRATION
1010	1023a002.d	RT1023+BCAL1		1	NO MANUAL INTEGRATION
1039	1023a003.d	GCAL1		1	NO MANUAL INTEGRATION
1750	1023a004.d	B 200		1	Toluene, O-Xylene, BB(Surr),
1820	1023a005.d	B 100		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1849	1023a006.d	B 50		1	Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1918	1023a007.d	B 25		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1947	1023a008.d	B 5		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2016	1023a009.d	B 1		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2045	1023a010.d	B 0.5		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2115	1023a011.d	B 0.25		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, TFT(Surr), BB(Surr),
2144	1023a012.d	BICV		1	NO MANUAL INTEGRATION
2213	1023a013.d	G 0.10		1	NO MANUAL INTEGRATION
2242	1023a014.d	G 0.25		1	NO MANUAL INTEGRATION
2311	1023a015.d	G 1.0		1	NO MANUAL INTEGRATION
2340	1023a016.d	G 2.5		1	NO MANUAL INTEGRATION
0010	1023a017.d	G 5.0		1	NO MANUAL INTEGRATION
0039	1023a018.d	G 10		1	NO MANUAL INTEGRATION
0108	1023a019.d	GICV		1	NO MANUAL INTEGRATION

TPHG Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS21

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WS21 Client ID: SAIC

METHOD: **NW-TPH**(Gas) **8021B**(BTEX) **NW-VPH**(VPH) **8260C**(VOA) **8260C**(SIM VOA) **524.3**(VOA) **RSK-175**(MEE)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 (PID-1) PID-2 PID-3 FID-6

Purge Volume (mL) 5 Curve Date: 5/22/13 10/23/12 Analysis Start Date: 6/3/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA / (Y) / N /	Method Blank In Control?	Y / N /
BFB Tune Meets Criteria?	(NA) / Y / N /	Surrogate Recovery in Control?	Y / N /
Internal STD within 50-200%?	(NA) / Y / N /	LCS / LCSD Recovery Met?	Y / N /
CCAL Meets %D	Y / N /	LCS / LCSD RPD ≤30%?	NA / LCS
ICAL Q flag applied?	NA / Y / (N) /	MS / MSD Recovery Met?	(NA) / Y / N /
CCAL Q Flag applied	NA / Y / (N) /	MS / MSD RPD ≤30%?	NA /
Manual Integrations?	Y / N /	Samples Diluted?	Y / (N) /
Integration Summary?	Y / N /	Special Analysis Request?	Y / (N) /

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

No QC volume provided

(Review 1)Analyst: RC **Date:** 6/12/13

(Review 2)Reviewer: [illegible] **Date:** 6/12/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130603-1.b

ARI Job No.: RT06 Method: FID.m Instrument: pid1.i Date: 03-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1114	0603a002.d	RT0603+BCAL	RT0603+BCA	1	NO MANUAL INTEGRATION
1143	0603a003.d	GCAL 1	NPDES SAMP	1	NO MANUAL INTEGRATION
1228	0603a004.d	LCS0603	LCS0603	1	NO MANUAL INTEGRATION
1256	0603a005.d	LCSD0603	LCSD0603	1	NO MANUAL INTEGRATION
1325	0603a006.d	MB0603	MB0603	1	NO MANUAL INTEGRATION
1721	0603a014.d	GCAL 2	NPDES SAMP	1	nC13,
2039	0603a021.d	WS21A	KC-IV-SPS-	1	Toluene, BB(Surr),
2204	0603a024.d	GCAL 3	NPDES SAMP	1	NO MANUAL INTEGRATION

SCANNED

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 6/3/13 Analysis: NWTPH-G/BTEX Analyst: RL

Column 1 Serial No.: 821718 Column Type: RTX502.2

Column 2 Serial No.: — Column Type: —

GC Method: BETA ICal Date: 05/23/13 Injection Volume: 5

IS	Ical/Ccal	ICV
VW795-2	VW791-2	B000206
	B000332	
	B000206	

Document All Maintenance Tasks In StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF	
1	1046	0603a001.d	RINSE				1	
2	1114	0603a002.d	RT0603+BCAL	RT0603+BCAL			1	
3	1143	0603a003.d	GCAL 1	GCAL 1			1	
4	1228	0603a004.d	LCS0603				1	
5	1256	0603a005.d	LCSD0603				1	
6	1325	0603a006.d	MB0603				1	
7	1403	0603a007.d	WS31A	A2-W36-S-4			1	
8	1431	0603a008.d	WS31B	A2-W34-S-4			1	
9	1459	0603a009.d	WS31C	A2-W35-S-4			1	
10	1528	0603a010.d	WS31D	A2-W37-S-4			1	
11	1556	0603a011.d	WS31E	A2-W38-S-4			1	
12	1624	0603a012.d	WS31F	A2-W39-S-4			1	
13	1653	0603a013.d	BCAL 2				1	
14	1721	0603a014.d	GCAL 2				1	
15	1749	0603a015.d	WS04A	PF-PA-15-0513			1	
16	1818	0603a016.d	WS04B	Field Blank	1	02	1	
17	1846	0603a017.d	WS16A	G-FA-101C(3-4)			1	
18	1914	0603a018.d	WS16B	G-FA-101C(6-7)			1	
19	1943	0603a019.d	WS16C	G-FA-201C(3-4)			1	
20	2011	0603a020.d	WS16D	Trip Blanks	1	02	1	dup
21	2039	0603a021.d	WS21A	KC-IV-SPS-20130531-			1	
22	2107	0603a022.d	WR99C	KC-TB-01-20130530-W	2	02	1	
23	2136	0603a023.d	WR99D	KC-VT-1593-20130530			1	
24	2204	0603a024.d	GCAL 3				1	

RL 6/5/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MC 6/12/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a002.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a002.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: RT0603+BCAL
Client ID: RT0603+BCAL
Injection Date: 03-JUN-2013 11:14
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2966	38401	100.2	TFT(Surr)
15.379	0.000	1973	16324	99.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	440208	1.229
8015C 2MP-TMB	(4.19 to 16.20)	723723	518739	0.717
AK101 nC6-nC10	(4.68 to 15.10)	582885	365904	0.628
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	469696	1.252

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3291	102.1	TFT(Surr)
15.386	0.000	7290	100.8	BB(Surr)

SW8021 (PID)

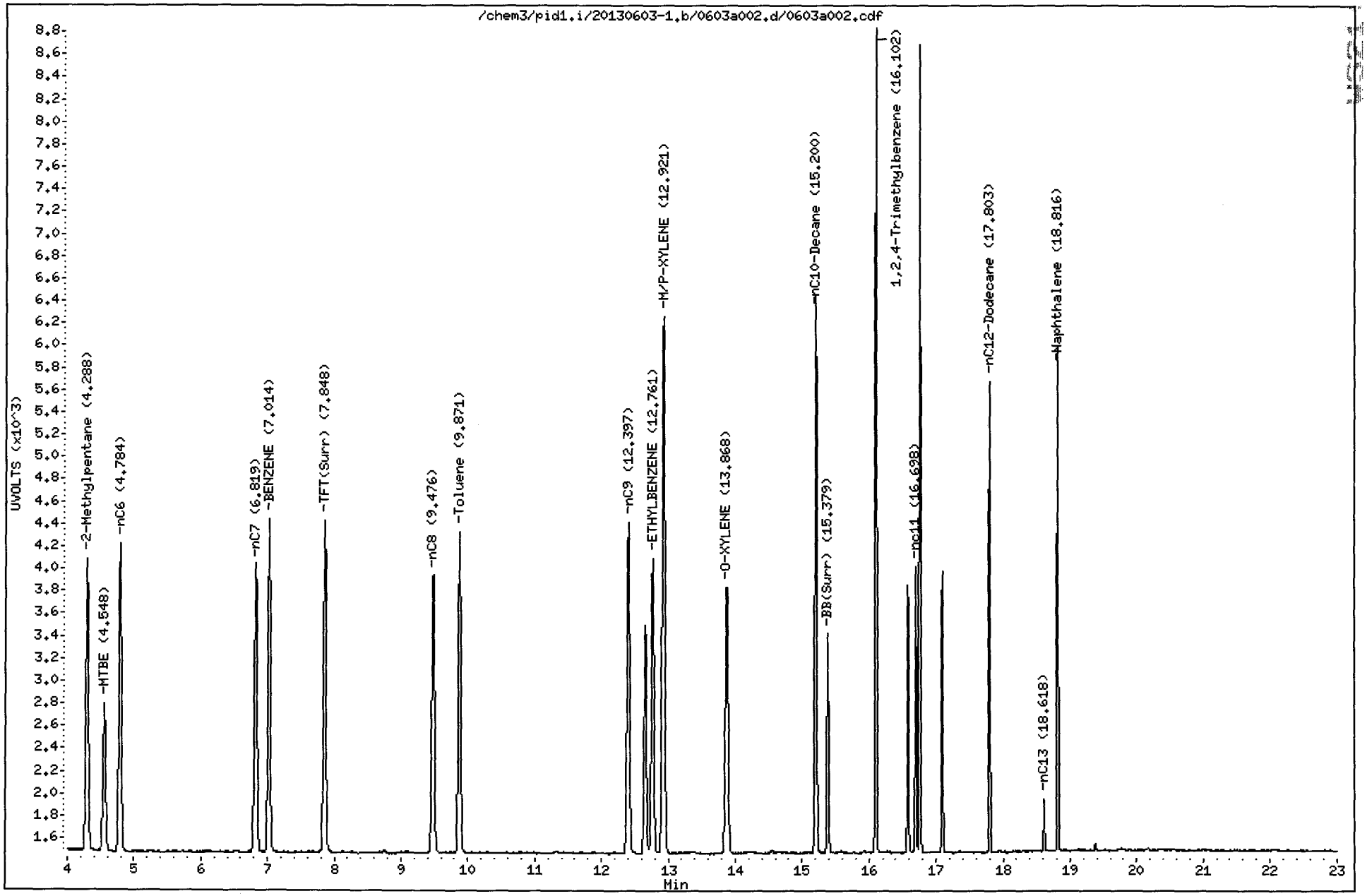
RT	Shift	Response	Amount	Compound
7.022	0.000	5849	26.02	Benzene
9.879	0.000	5236	26.43	Toluene
12.769	0.000	4430	27.14	Ethylbenzene
12.930	0.000	9523	52.92	M/P-Xylene
13.877	0.000	3881	27.33	O-Xylene
4.556	0.000	2120	24.32	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a002.d
Date : 03-JUN-2013 11:14
Client ID: RT0603+BCAL
Sample Info: RT0603+BCAL

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 FID



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a003.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a003.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 1
Client ID: GCAL 1
Injection Date: 03-JUN-2013 11:43
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	3234	47445	109.3	TFT(Surr)
15.380	0.001	2039	17983	102.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	865918	2.418 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	1715077	2.370 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	1385971	2.378 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	909697	2.425 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.001	3459	107.3	TFT(Surr)
15.387	0.001	7475	103.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.023	0.001	2085	9.27	Benzene
9.882	0.002	20242	102.16	Toluene
12.771	0.002	4968	30.43	Ethylbenzene
12.936	0.005	19542	108.61	M/P-Xylene
13.880	0.003	7096	49.97	O-Xylene
4.546	-0.009	320	3.67	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a003.d

Date : 03-JUN-2013 11:43

Client ID: NPDES SAMPLING

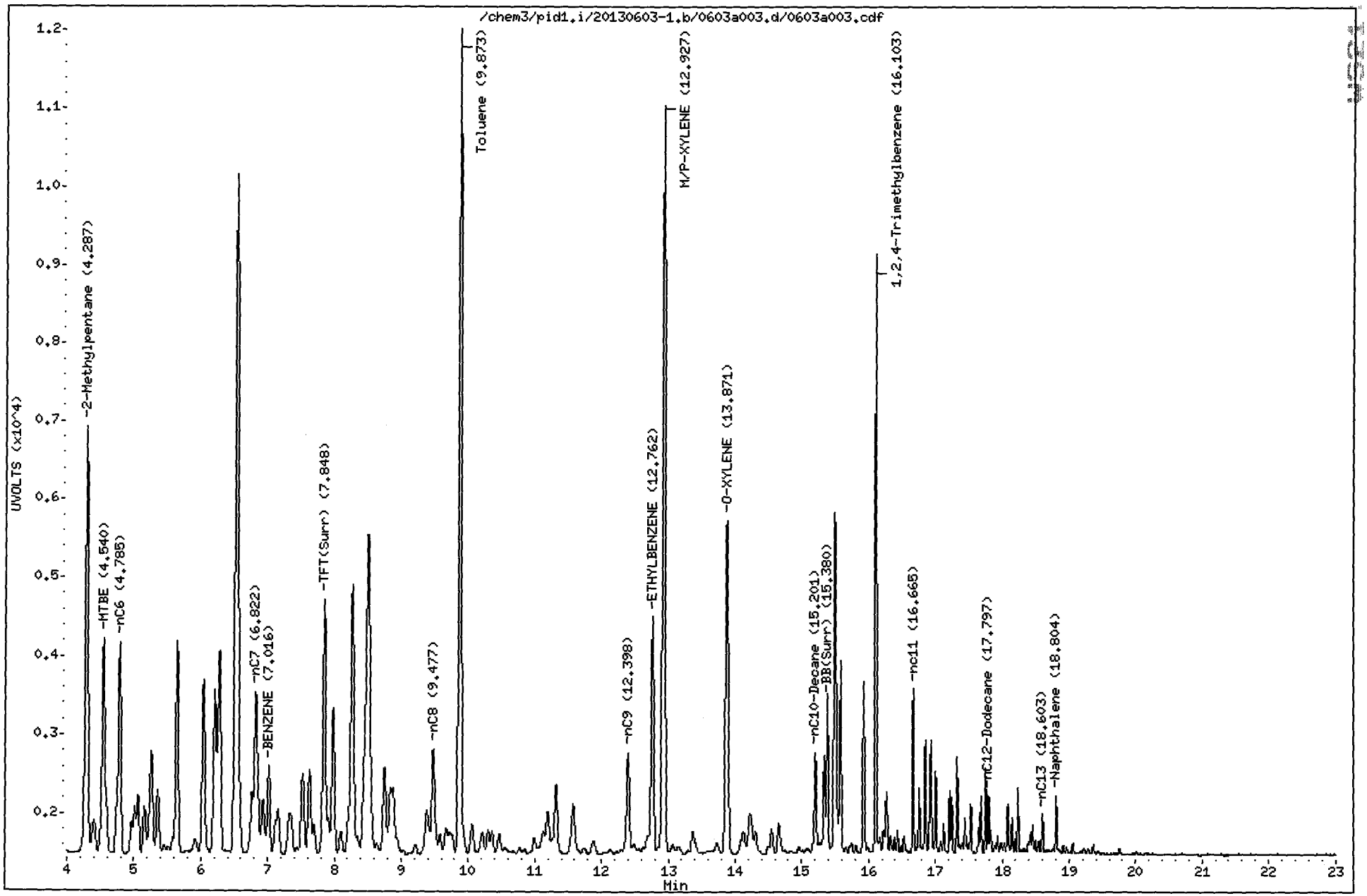
Sample Info: GCAL 1

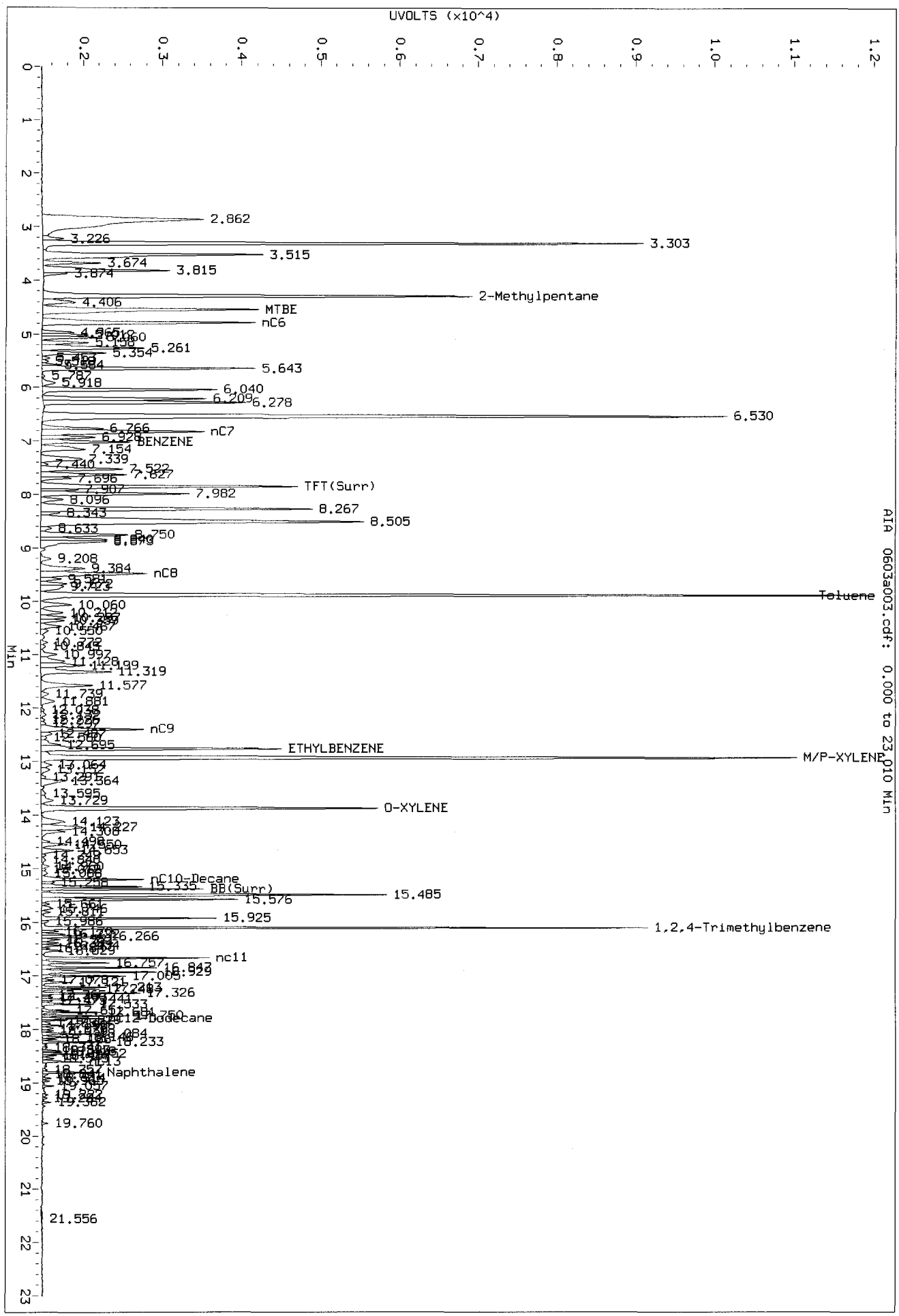
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

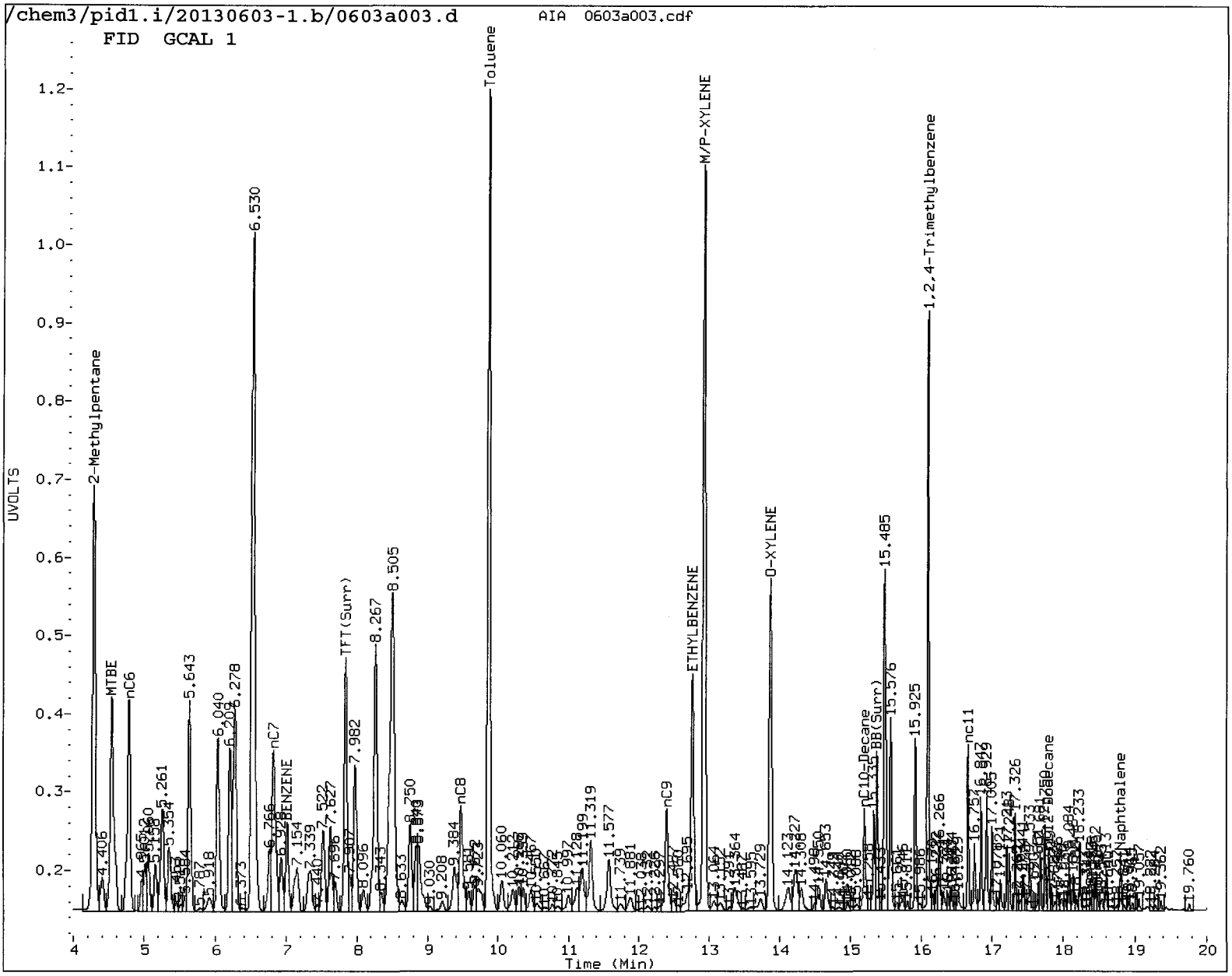




Data File: /chem3/pid1.i/20130603-1.b/0603a003.d/0603a003.cdf
Injection Date: 03-JUN-2013 11:43
Instrument: pid1.i
Client Sample ID: NPDES SAMPLING

PK
5/14/13

USGS : 911782



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 6/12/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

6/4/13

Data file 1: /chem3/pid1.i/20130603-1.b/0603a004.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a004.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: LCS0603
Client ID:
Injection Date: 03-JUN-2013 12:28
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.853	0.005	2918	41311	98.6	TFT(Surr)
15.383	0.004	1868	16482	94.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	340142	0.950 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	690507	0.954 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	556018	0.954 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	357936	0.954 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.861	0.005	3184	98.8	TFT(Surr)
15.390	0.004	6879	95.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.027	0.005	793	3.53	Benzene
9.886	0.007	7587	38.29	Toluene
12.775	0.006	1849	11.33	Ethylbenzene
12.939	0.009	7331	40.74	M/P-Xylene
13.884	0.007	2655	18.70	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a004.d

Date : 03-JUN-2013 12:28

Client ID:

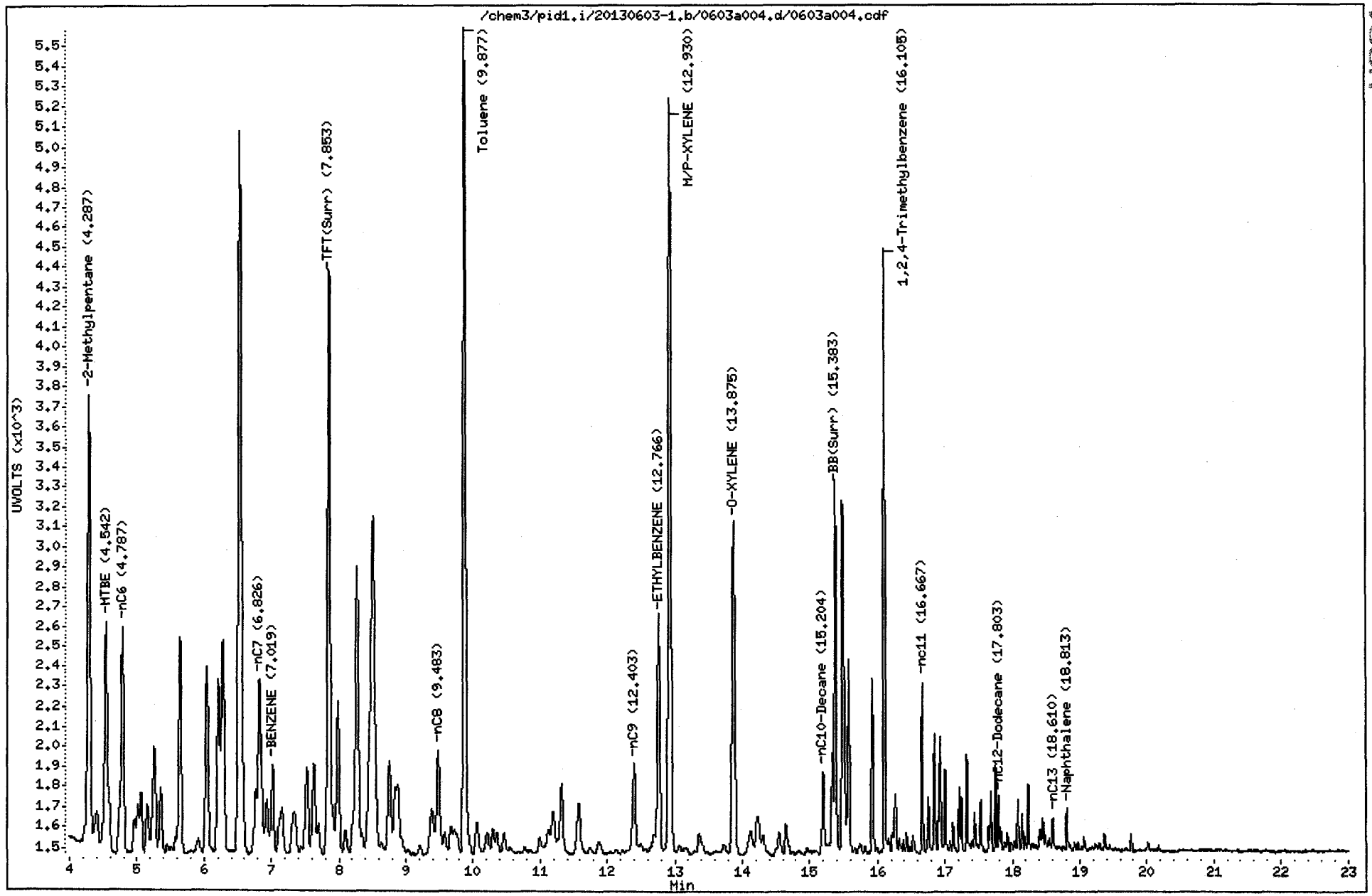
Sample Info: LCS0603

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



Data File: /chem3/pid1.i/20130603-2.b/0603a004.d

Date : 03-JUN-2013 12:28

Client ID:

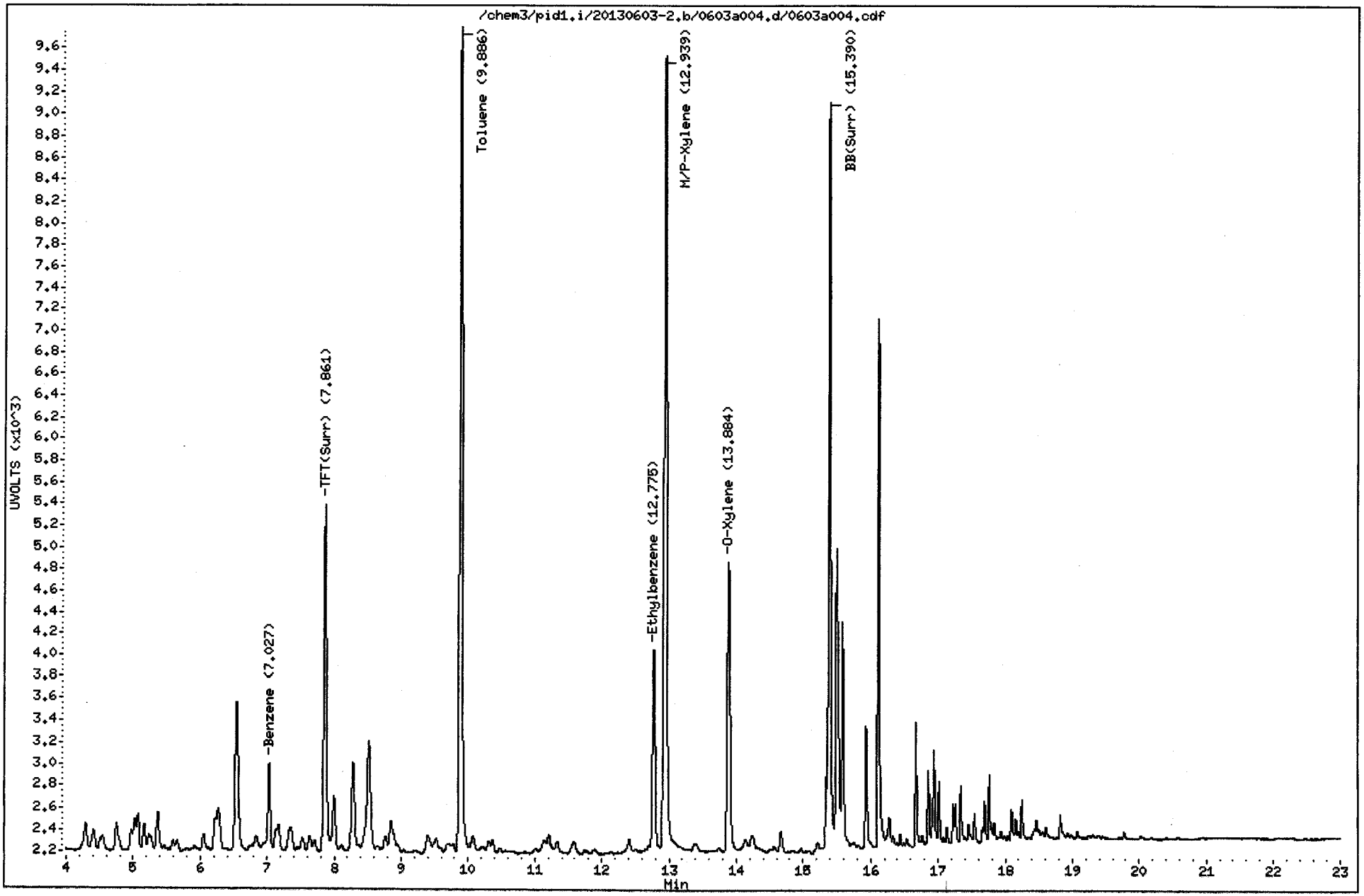
Sample Info: LCS0603

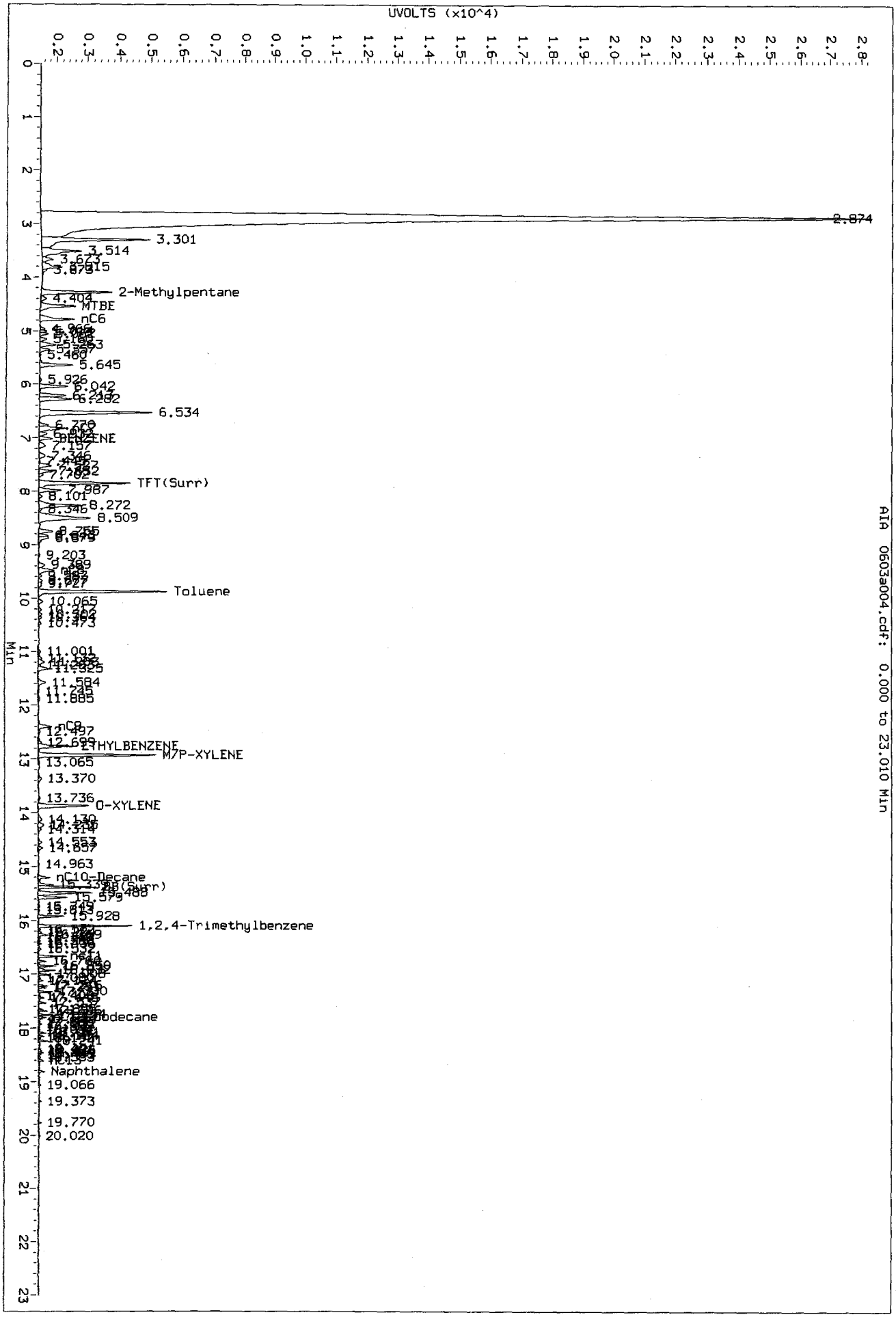
Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 PID

Column diameter: 0.18

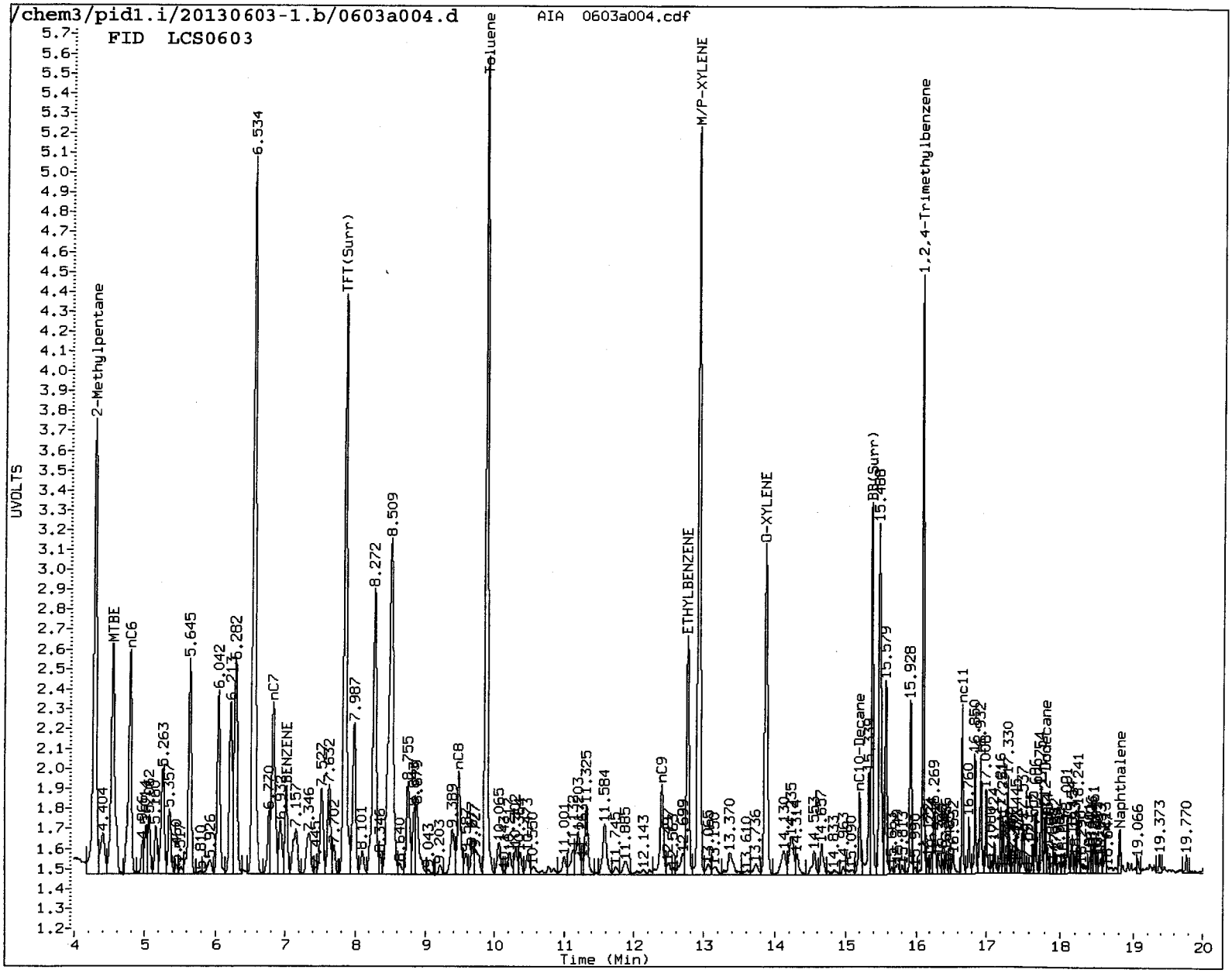




Data File: /chem3/pid1.i/20130603-1.b/0603a004.d/0603a004.cdf
Injection Date: 03-JUN-2013 12:28
Instrument: pid1.i
Client Sample ID:

AIA 0603a004.cdf: 0.000 to 23.010 Min

MC 6/4/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 6/4/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a005.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a005.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: LCSD0603
Client ID:
Injection Date: 03-JUN-2013 12:56
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	3039	42719	102.7	TFT(Surr)
15.379	0.001	1960	17127	98.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	333094	0.930 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	659829	0.912 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	527690	0.905 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	348882	0.930 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3323	103.1	TFT(Surr)
15.387	0.001	7222	99.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.023	0.001	841	3.74	Benzene
9.881	0.002	8097	40.87	Toluene
12.771	0.002	1926	11.80	Ethylbenzene
12.934	0.004	7646	42.49	M/P-Xylene
13.879	0.002	2791	19.65	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

W521 : 21767

Data File: /chem3/pid1.i/20130603-1.b/0603a005.d

Date : 03-JUN-2013 12:56

Client ID:

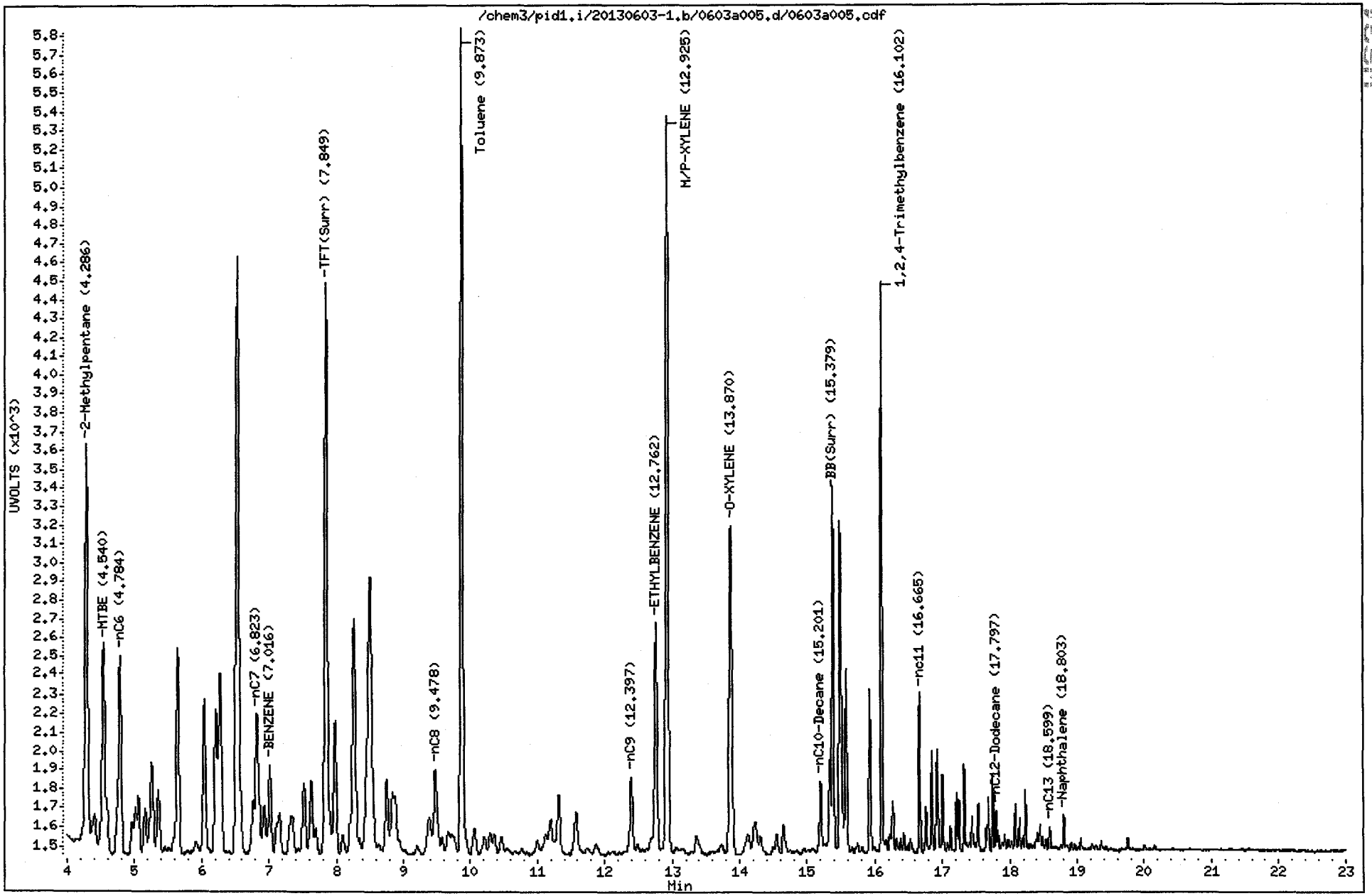
Sample Info: LCSD0603

Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20130603-2.b/0603a005.d

Date : 03-JUN-2013 12:56

Client ID:

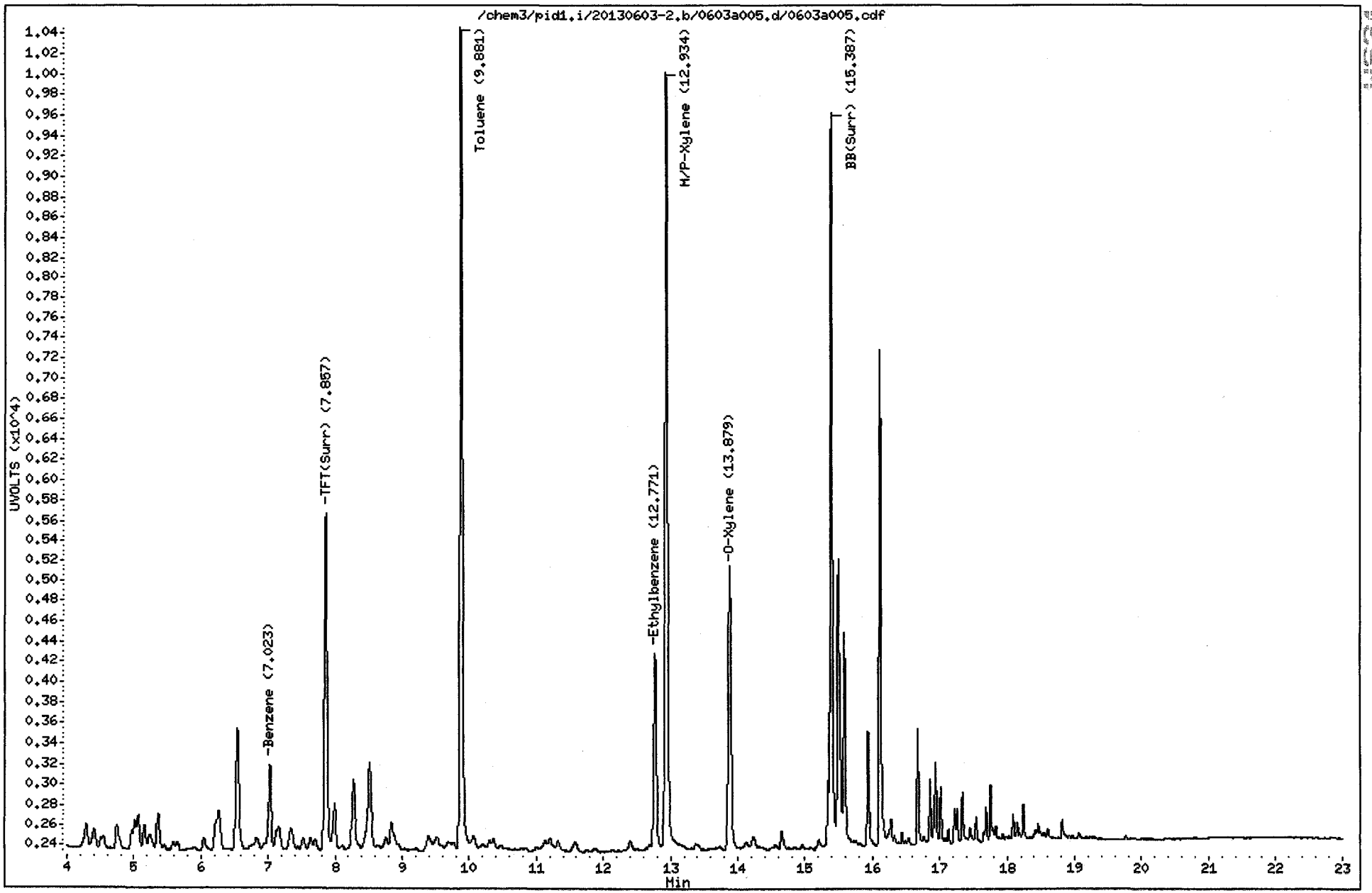
Sample Info: LCSD0603

Column phase: RTX 502-2 PID

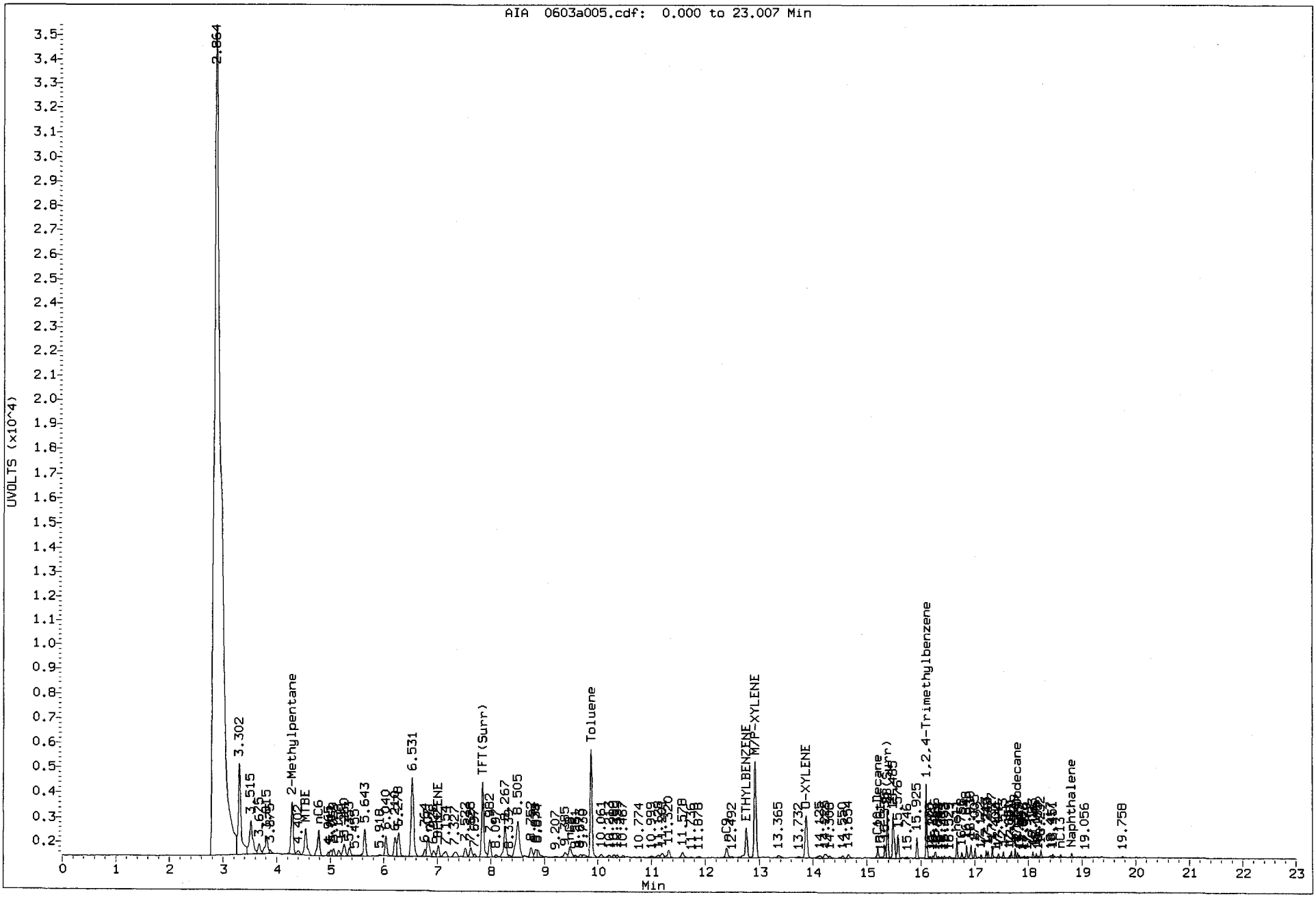
Instrument: pid1.i

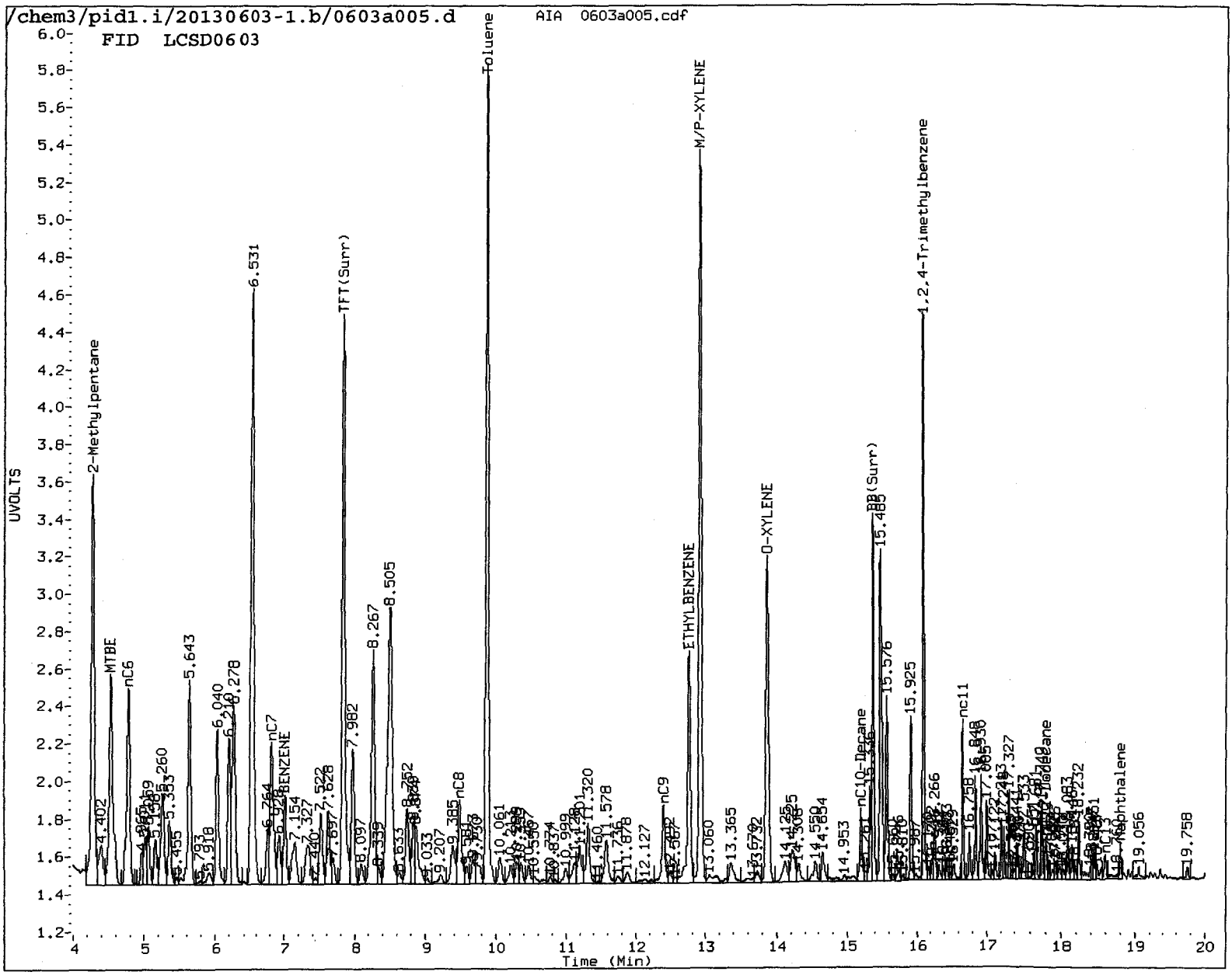
Operator: PC

Column diameter: 0.18



Data File: /chem3/pid1.i/20130603-1.b/0603a005.d/0603a005.cdf
Injection Date: 03-JUN-2013 12:56
Instrument: pid1.i
Client Sample ID:





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 6/4/13

KC
6/4/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a006.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a006.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: MB0603
Client ID:
Injection Date: 03-JUN-2013 13:25
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.002	2904	36815	98.1	TFT(Surr)
15.381	0.002	1932	16106	97.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	1763	0.005
8015C 2MP-TMB	(4.19 to 16.20)	723723	3325	0.005
AK101 nC6-nC10	(4.68 to 15.10)	582885	2641	0.005
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	1763	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3198	99.2	TFT(Surr)
15.389	0.002	7042	97.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a006.d

Date : 03-JUN-2013 13:25

Client ID:

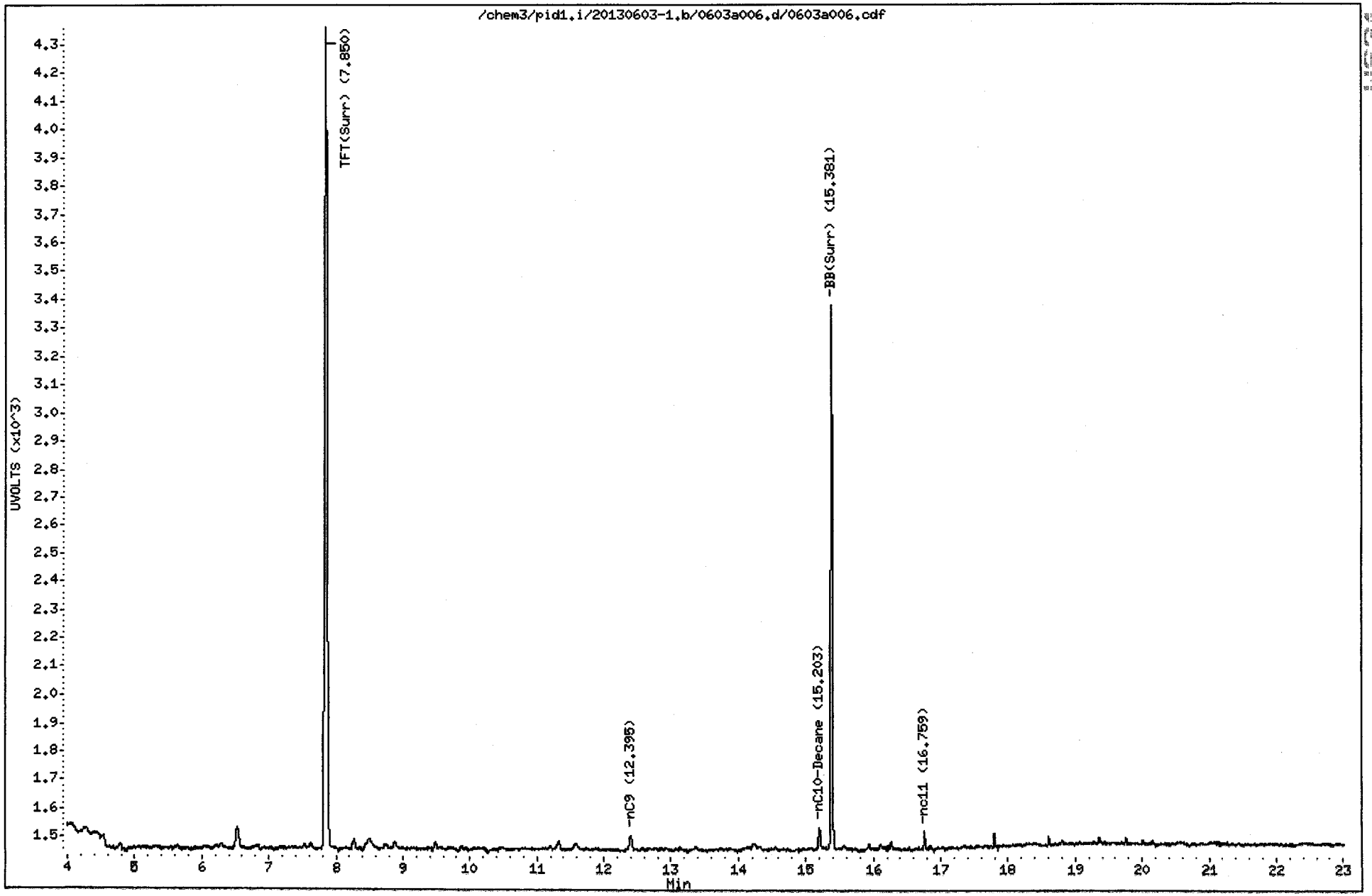
Sample Info: MB0603

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



Data File: /chem3/pid1.i/20130603-2.b/0603a006.d

Date : 03-JUN-2013 13:25

Client ID:

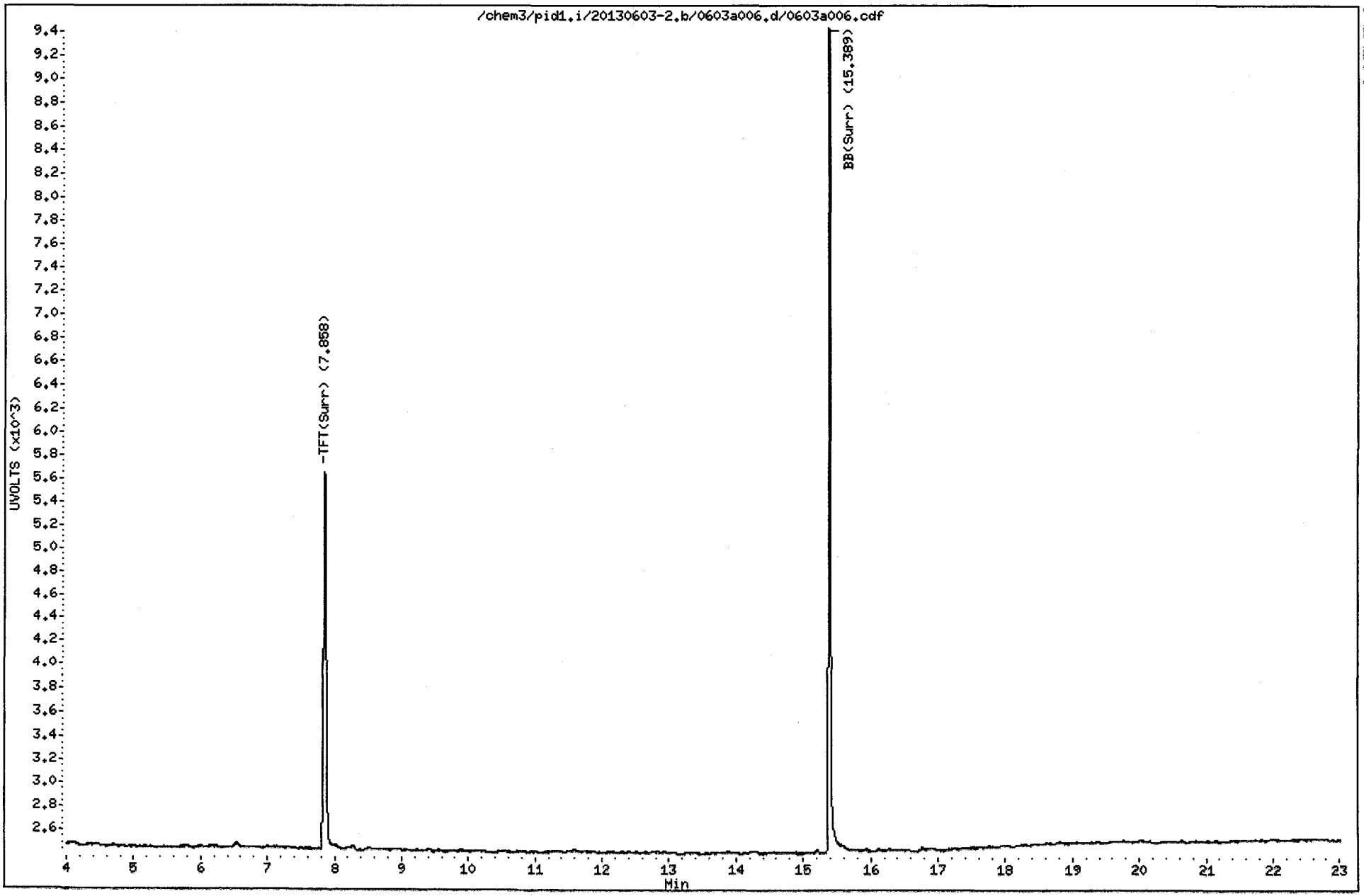
Sample Info: MB0603

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a014.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a014.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 2
Client ID:
Injection Date: 03-JUN-2013 17:21
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.001	3198	46628	108.1	TFT(Surr)
15.380	0.002	1993	18317	100.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	820784	2.292 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	1656460	2.289 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	1340748	2.300 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	857708	2.287 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3423	106.2	TFT(Surr)
15.389	0.003	7319	101.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.024	0.002	2080	9.25	Benzene
9.883	0.004	19871	100.29	Toluene
12.773	0.004	4869	29.82	Ethylbenzene
12.937	0.007	19335	107.45	M/P-Xylene
13.882	0.005	6959	49.01	O-Xylene
4.545	-0.010	325	3.73	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a014.d

Date : 03-JUN-2013 17:21

Client ID: NPDES SAMPLING

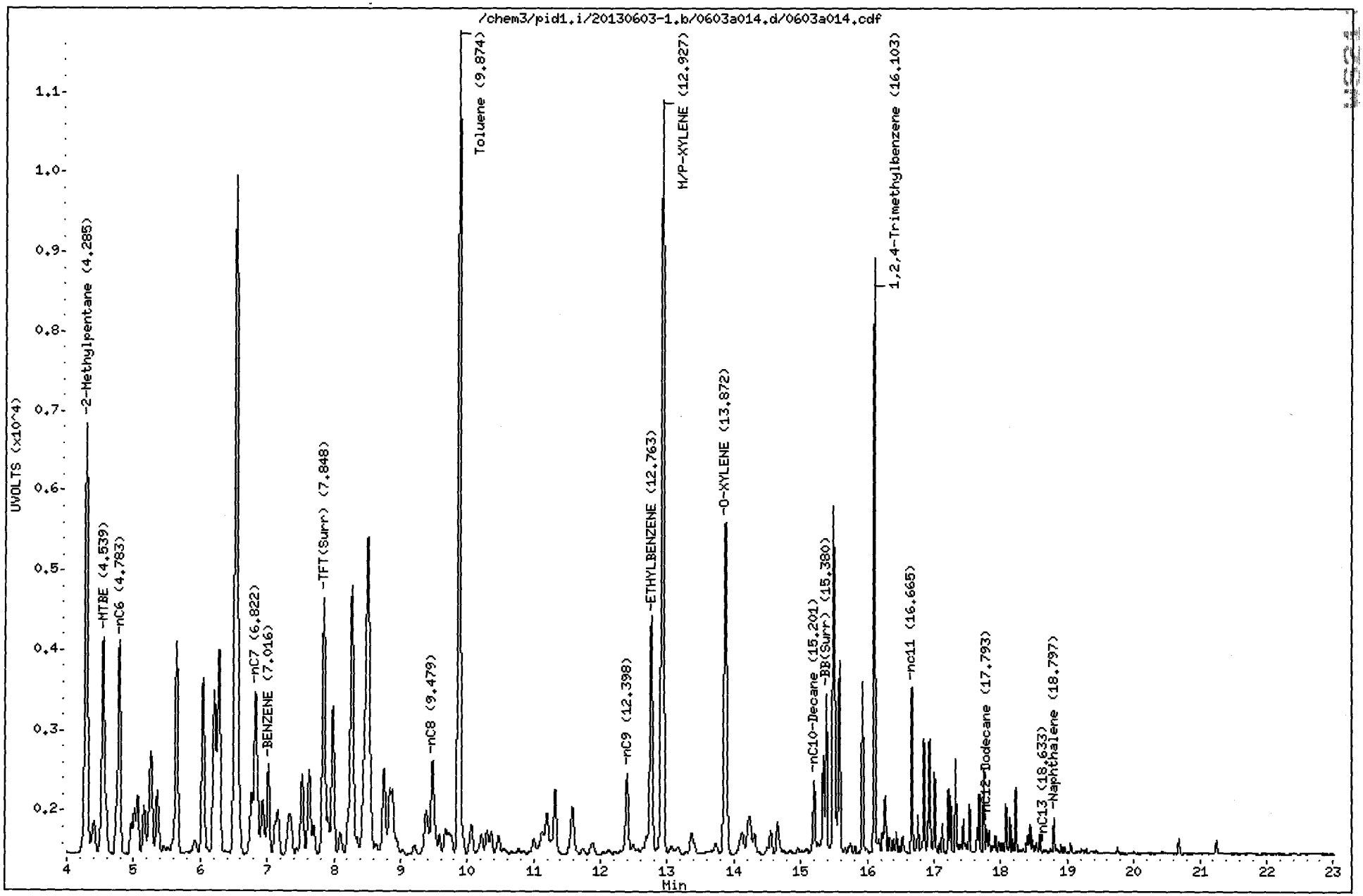
Sample Info: GCAL 2

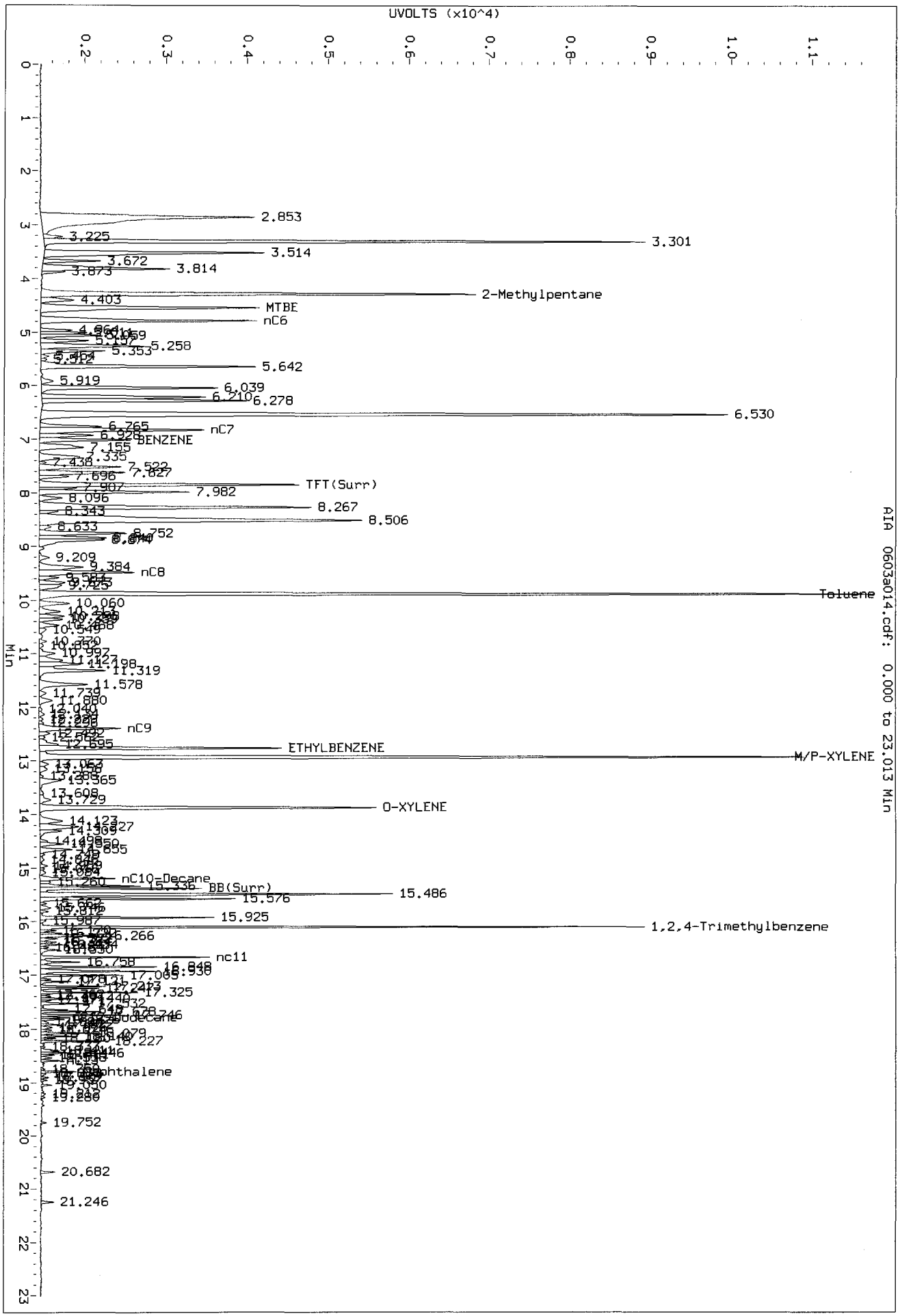
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

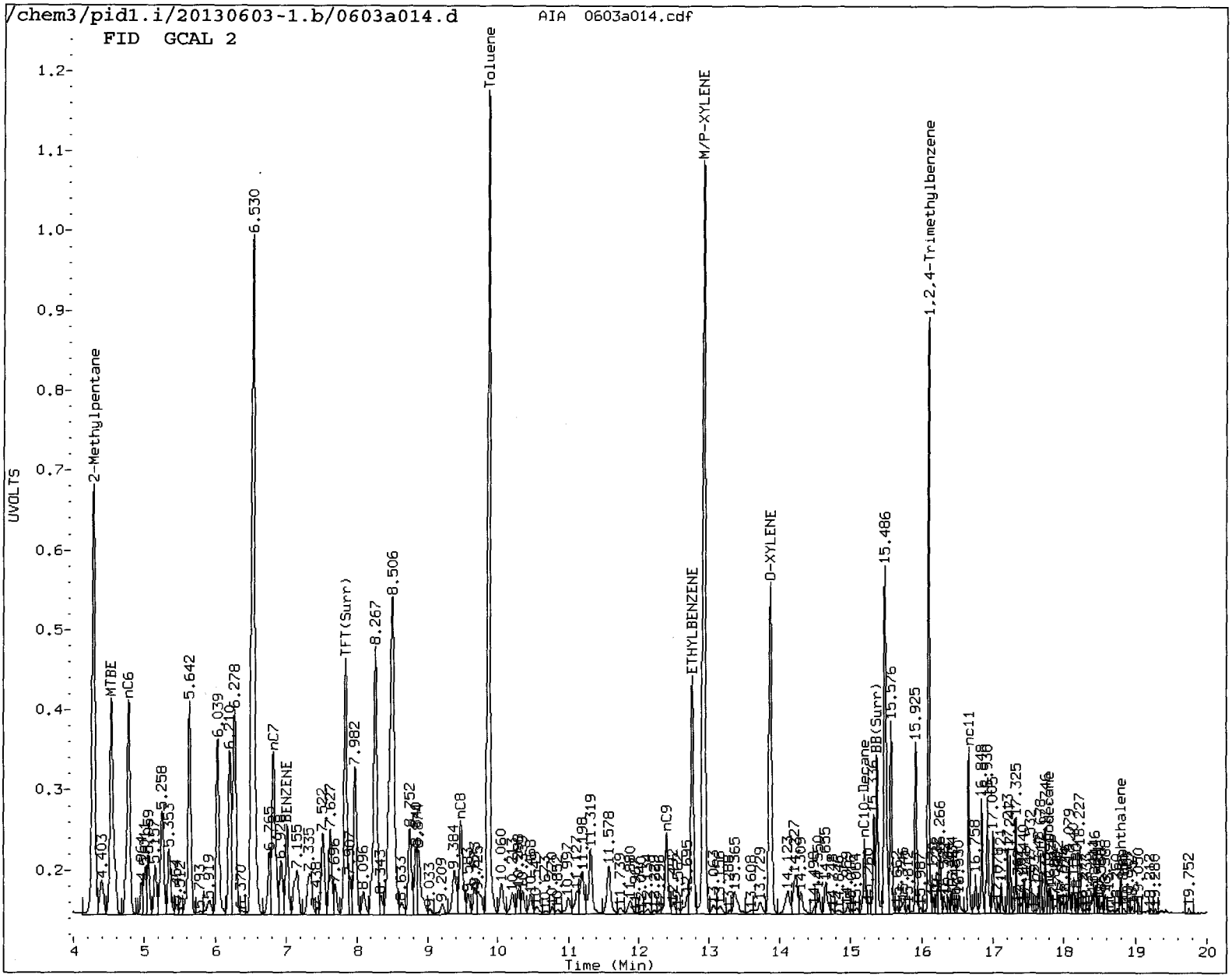




Data File: /chem3/pid1.i/20130603-1.b/0603a014.d/0603a014.cdf
Injection Date: 03-JUN-2013 17:21
Instrument: pid1.i
Client Sample ID: NPDES SAMPLING

AIA 0603a014.cdf: 0.000 to 23.013 Min

PC 6/12/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PL Date: 6/12/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a021.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a021.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: WS21A
Client ID: KC-IV-SPS-20130531-
Injection Date: 03-JUN-2013 20:39
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.003	2651	34083	89.6	TFT(Surr)
15.380	0.001	1833	16880	92.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	115277	0.322 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	58743	0.081 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	30813	0.053 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	188438	0.502 M GRO

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.003	2924	90.7	TFT(Surr)
15.389	0.003	6755	93.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a021.d

Date : 03-JUN-2013 20:39

Client ID: KC-IV-SPS-20130531-

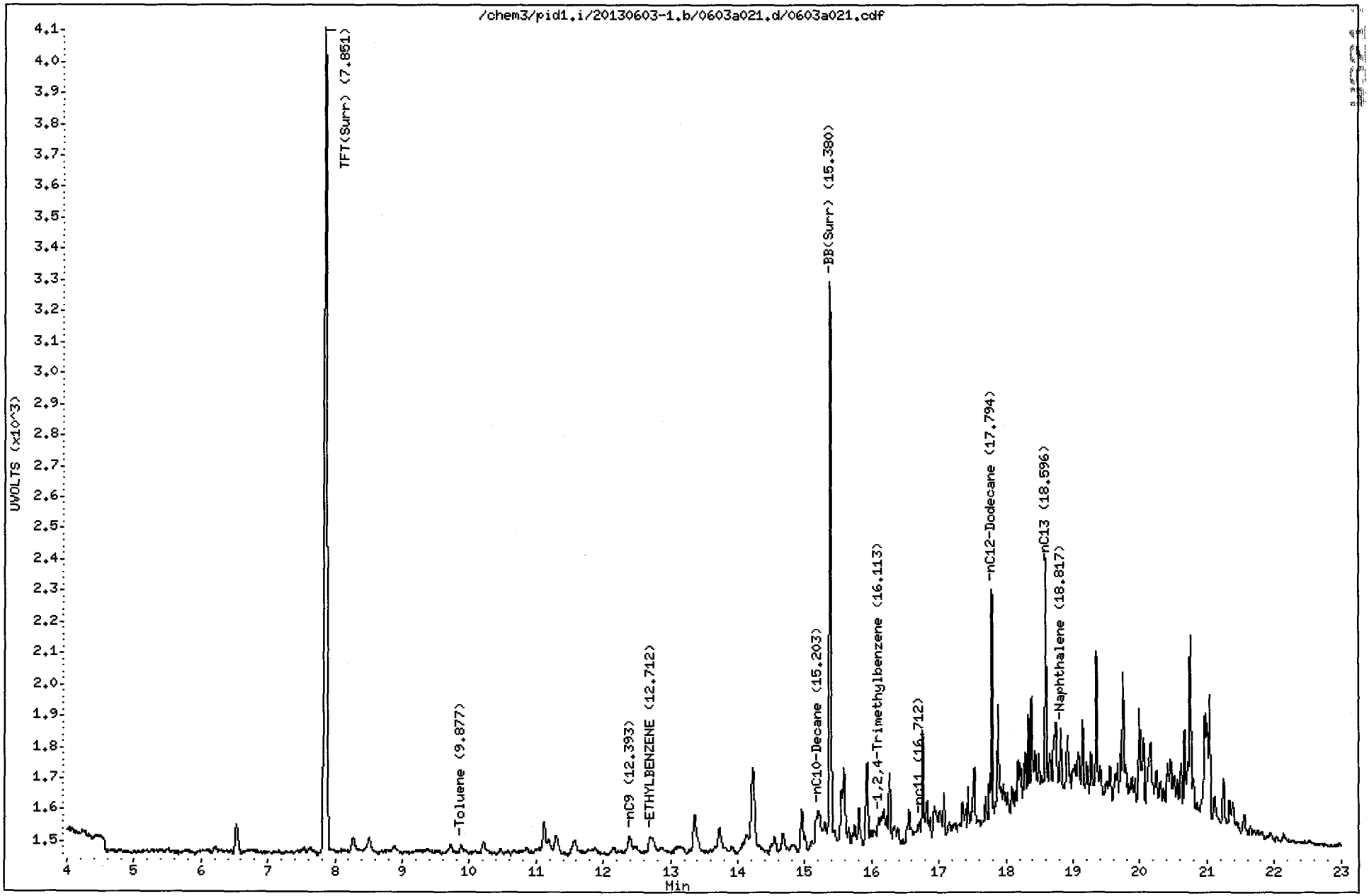
Sample Info: WS21A

Column phase: RTX 502-2 FID

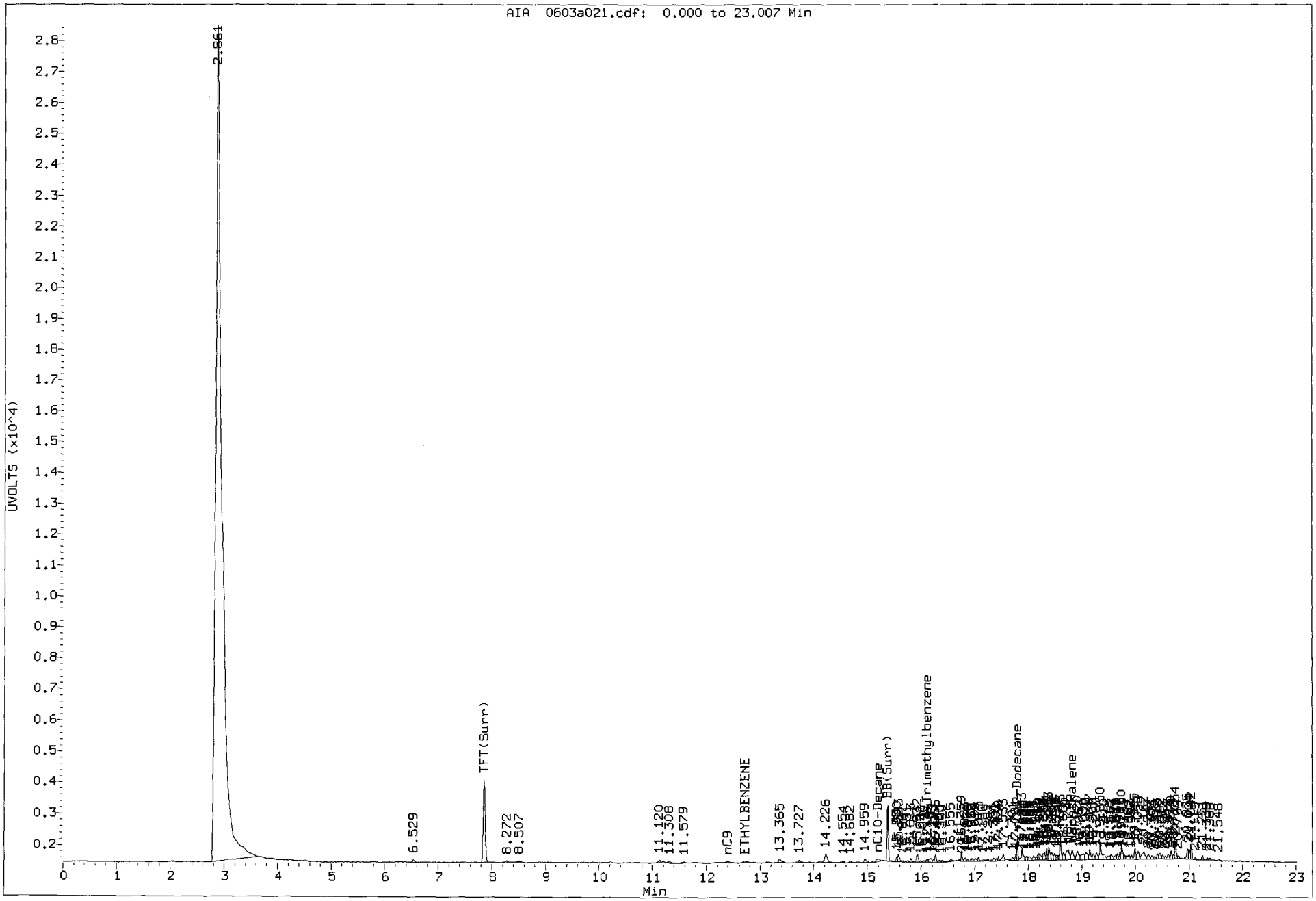
Instrument: pid1.i

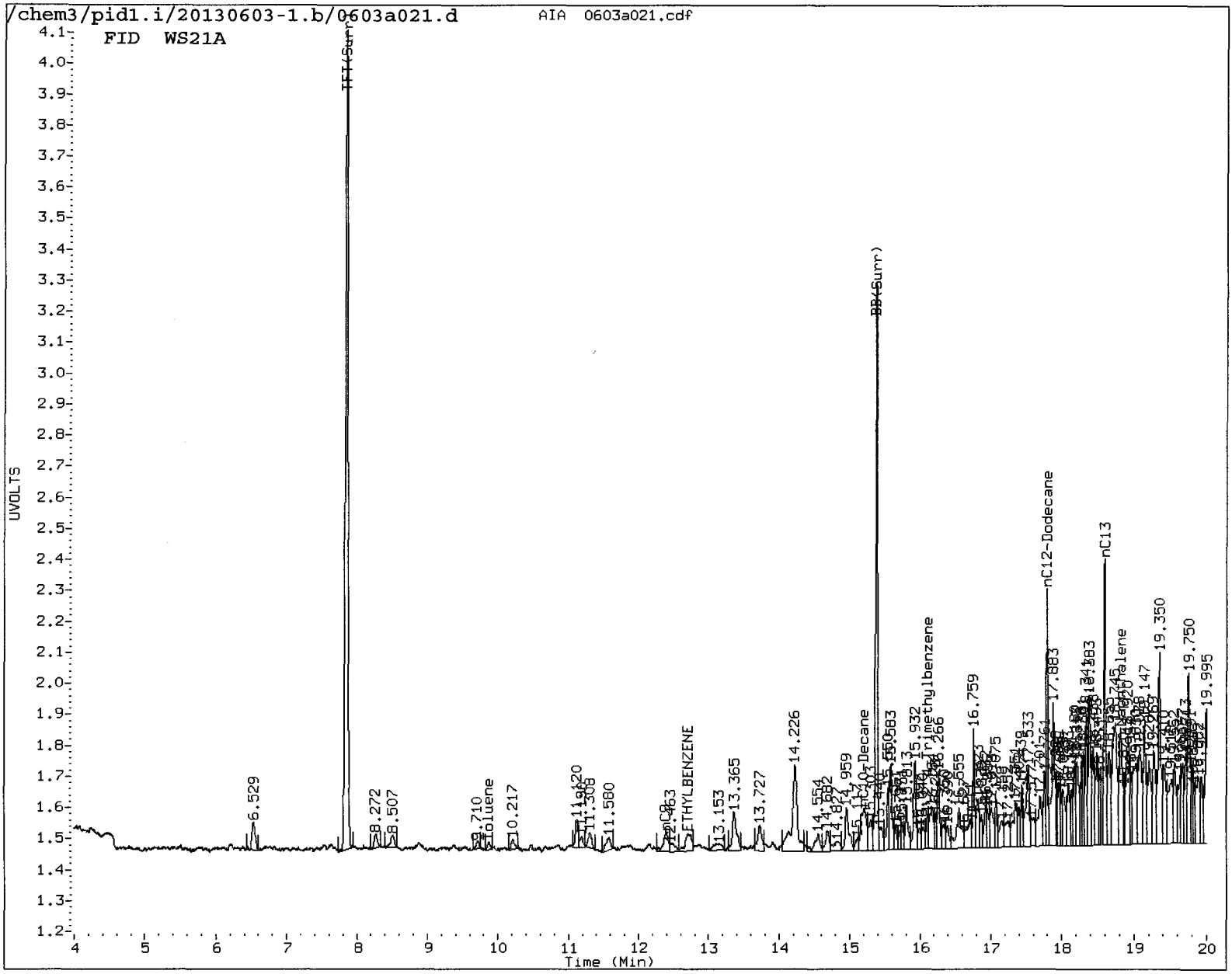
Operator: PC

Column diameter: 0.18



Data File: /chem3/pid1.i/20130603-1.b/0603a021.d/0603a021.cdf
Injection Date: 03-JUN-2013 20:39
Instrument: pid1.i
Client Sample ID: KC-IV-SPS-20130531-





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 6/12/13

WS21 : 21722

PC 6/12/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a024.d
Data file 2: /chem3/pid1.i/20130603-2.b/0603a024.d
Method: /chem3/pid1.i/20130603-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 3
Client ID:
Injection Date: 03-JUN-2013 22:04
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	3026	44117	102.3	TFT(Surr)
15.380	0.002	1899	16977	95.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	826590	2.308 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	1620600	2.239 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	1306794	2.242 M
NWTPHG Tol-Nap	(9.77 to 18.92)	375093	867230	2.312 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.003	3161	98.1	TFT(Surr)
15.388	0.002	6989	96.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.025	0.003	2096	9.32	Benzene
9.884	0.004	20274	102.33	Toluene
12.772	0.003	4905	30.04	Ethylbenzene
12.937	0.007	19352	107.55	M/P-Xylene
13.882	0.004	7026	49.48	O-Xylene
4.547	-0.008	309	3.54	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a024.d

Date : 03-JUN-2013 22:04

Client ID: NPDES SAMPLING

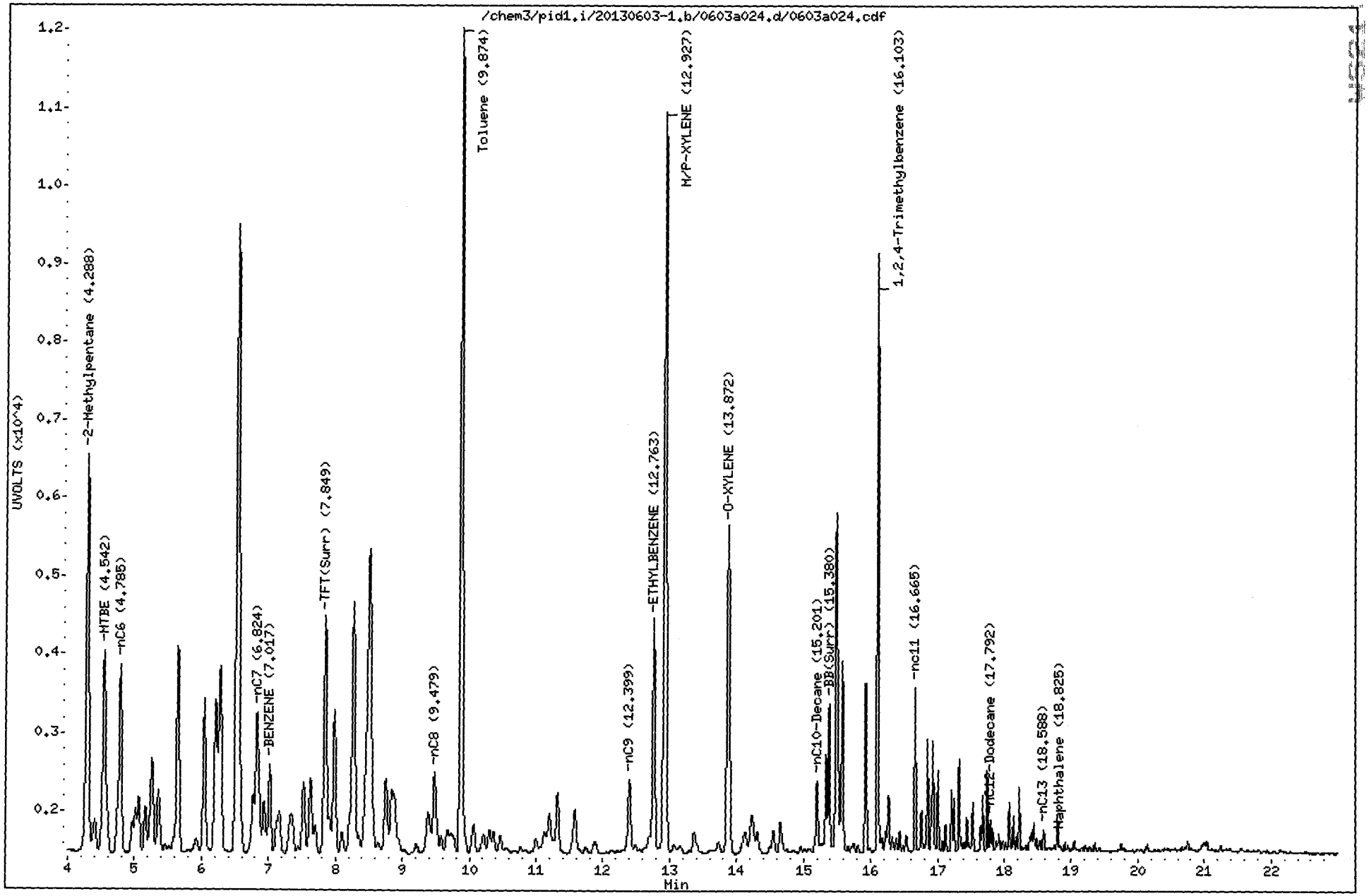
Sample Info: GCAL 3

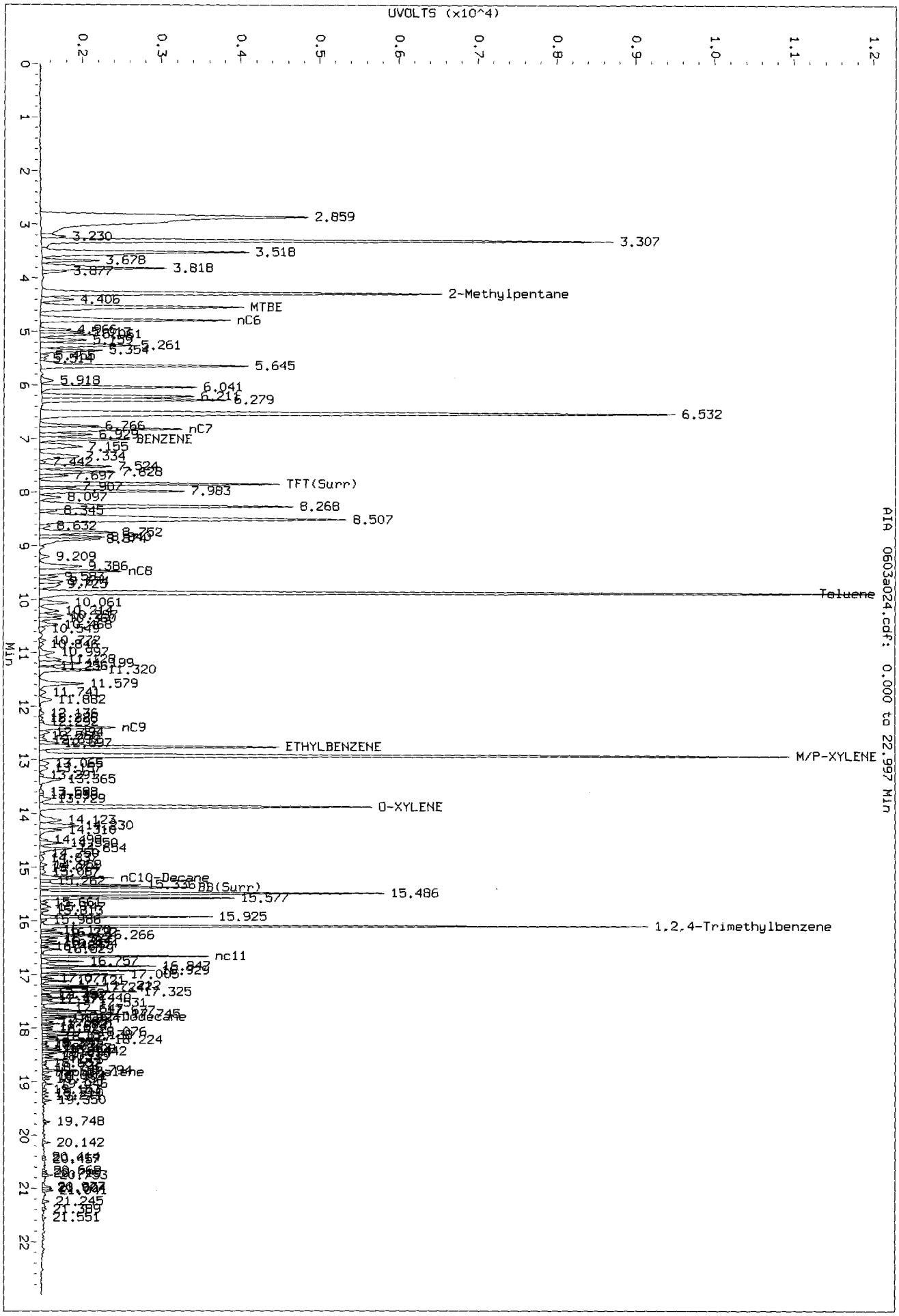
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

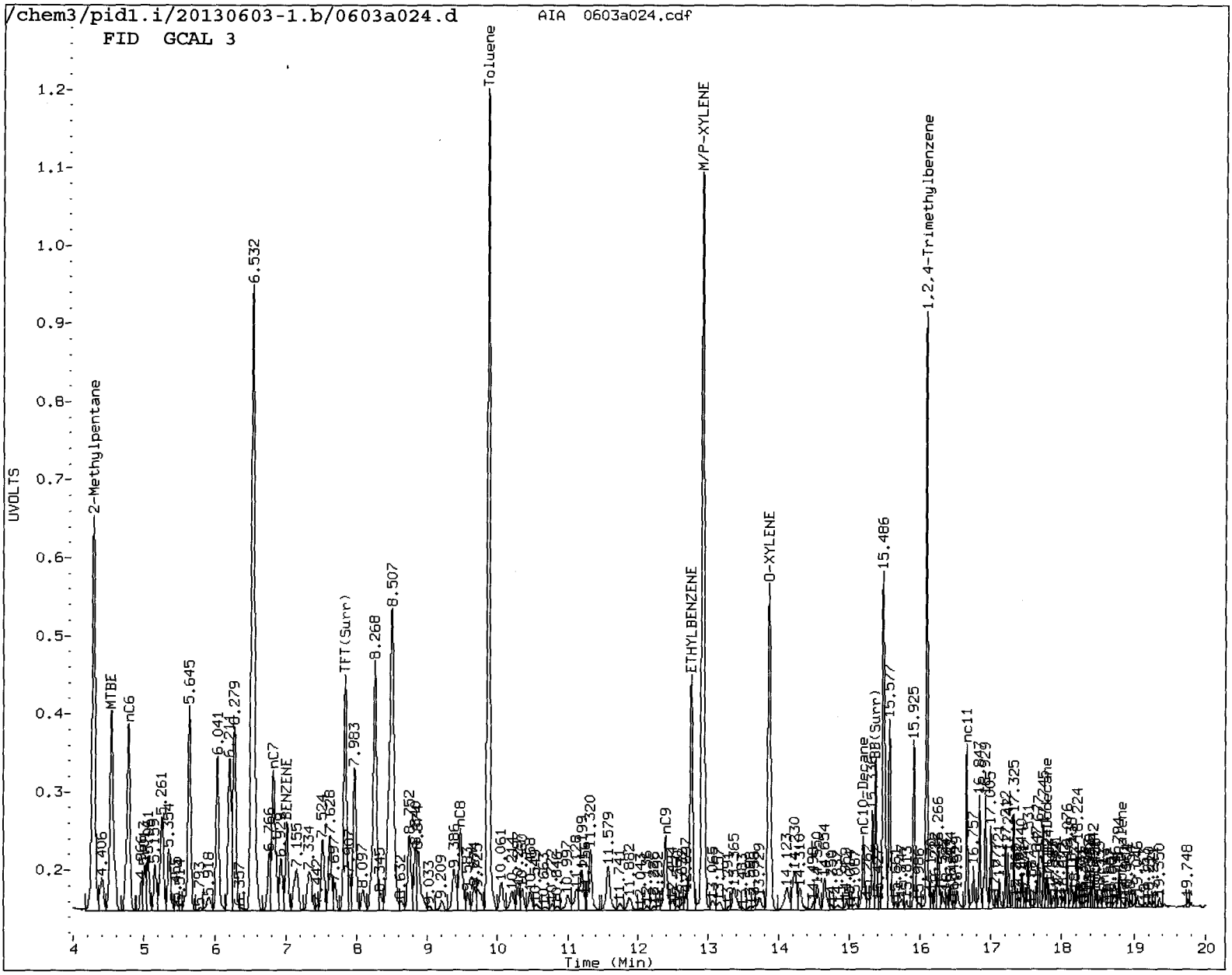
Column diameter: 0.18





Data File: /chem3/pid1.i/20130603-1.b/0603a024.d/0603a024.cdf
Injection Date: 03-JUN-2013 22:04
Instrument: pid1.i
Client Sample ID: NPDES SAMPLING

6/12/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 6/17/13

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WS21

Analytical Resources,Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: CB

Date: 6-06-13

Final Volume 50.0

Final Volume (Hg): 50.0

Sample ID WB99 DSpk, mABSpk
WS21 ASpk, mBSpk

	Prepcode:	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	B507		
	Vol Added (mL):	1.0		
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50 ✓	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50 ✓	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50 ✓	50	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	B510	B511	CB6/6/13
	1.0	1.0	
Ag	25 ✓		
Al			500
As	25 ✓		
Ba	25		
Be	25		
Ca			500
Cd	25 ✓		
Co	25		
Cr	25 ✓		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25 ✓		
Pb	25		
Sb		25 ✓	
Se	80 ✓		
Tl	25 ✓		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SWM	CVA	1.0	0.05	300743
Hg MBSPK	↓	CVA	1.0	0.10	✓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

SOP.TAS.1.7.5.5R

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: CB **Date:** 06-06-13 **Time:** 0900

Matrix: Soil **Block ID:** #5 **Block Temp:** 95°C **Thermometer:** MP6C

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SW2 Initial Wt (g) ~~Vol (mL)~~	Prep Code: SW2 Final Vol (mL)	Comments
WS27 A	1	-	1.027	50.0	1.042	50.0	
" Advp	1	-	1.027		1.040		
" Aspk	1	-	1.027		1.044		
" REF1		-	1.002		1.004		
" mB1	-		-		-		
" mB1SPK	-	-	-		-		
WS21 A	7	-	1.057		1.039		
" Advp	7	-	1.059		1.042		
" Aspk	7	-	1.052		1.035		
" mB1	-	-	-		-		
" mB1SPK	-	-	-		-		
WR99 D	7	-	1.013		1.080		
" E	2	-	1.033		1.016		
" F	2	-	1.015		1.033		
" Ddvp	7	-	1.016		1.081		
" Dspk	7	-	1.016		1.080		
" mB3	-	-	-		-		
" mB3SPK	-	-	-	50.0	-	50.0	

CB 6-06-13

Chemical/Reagent ID: HNO_3 : MP2497 H_2O_2 : I8135 Tube lot # HCl: I8213 mmol/KKO

5061F I8169

Version 005
1/10/12

WS21 : 21729

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm **Matrix:** Soil
Analyst: CB **Date:** 6-06-13
Bath Temp: 95°C **Start Time:** 0930 **End Time:** 1005

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WS27 A	1	-	0.231	50.0	6/11/1	Y	
" AMD	1	-	0.229		1		
" ASpk	1	-	0.232		1		
" REF1		-	0.204		1		
" MB1	-	-	-		1		
" MB1Spk	-	-	-		1		
WS21 A	7	-	0.280		6/14/1		
" ADup	7	-	0.275		1		
" ASpk	7	-	0.275		1		
" MB1	-	-	-		1		
" MB1Spk	-	-	-		1		
WR99 D	7	-	0.235		6/14/1		
" DDup	7	-	0.235		1		
" DSpk	7	-	0.232		1		
" E	2	-	0.205		1		
" F	2	-	0.236		1		
" MB3	-	-	-		1	Y	
" MB3Spk	-	-	-	50.0	1	Y	
			CB 6-06-13				

Chemical/Reagent ID:

HNO_3: I8169 **H_2SO_4:** I8044 **HCl:** -

5% $K_2S_2O_8$: mp2491 **5% $KMnO_4$:** mp2475 **Digest Tube Lot:** MH21KK06

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WS21
Unacceptable Blank:	☐	Date of Event:	6-10-13
Unacceptable Duplicate:	☐	Client ID:	SAIC
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	SW N

Details of Problem/Recommended Corrective Action:

Low ~~spk~~ AA6-10 spike recovery for Sb in Aspk. Post spike in control

Samples Affected:

Corrective Action Taken:

Analyst Initials: [illegible] **Supervisor:** [illegible]

Date: 6-10-13 **Date:** 6/11/13

5049F

Revision 007
6/11/10

WS21:01721

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Metals Laboratory Analyst Notes

ARI Job No.: WS21 Client ID:

Parameter: Client Project:

List problems, concerns, corrective actions and any other pertinent information
% solid of the sample was prepped on thursday June 6th. The power went out early friday morning June 7th. The sample was left in the oven greater than 12 hours and was not weighed until monday morning June 10th. The sample was in the oven 4 more hours after being turn back on monday morning.

Analyst Initials:	CB	Date:	6/10/13

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WS21

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 6-11-13

ICP 2	Analyst BA 6-12-13	Peer 6/12/13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	See log
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	See log
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	WR99, WS42
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	CAF-WR99, WS42

Analytical Resources, Incorporated
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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 6-10-13 Analysis Date: 6-11-13 Analyst: BA

LR Date: 6-10-13 Page: 1 of 6

All corrections made by analyst unless otherwise noted. BA 6-11-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
zzz		~~STD 0~~ zzzzzz			mix of CV/CB solns.
↓		~~2~~ zzzzzz			
		~~3~~ zzzzzz			
		~~4~~ zzzzzz			
		~~5~~ zzzzzz			
		STD 0			B621
		2			B627
		3			B628
		4			B629
		5			B630
		ICV			B323
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
	✓	DI Check			Ag↑ - RR later
		WS27 MB1	SWC	2	
		A-L		10 ✓	
		A		2	
		ADUP		✓	
		ASPK		✓	
zzz		~~APOST~~ zzzzzz			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 6-11-13 Analyst: BA

LR Date: — Page: 2 of 6

All corrections made by analyst unless otherwise noted. BA 6-11-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WS27 REF1	SWC	2	✓
		↓ MBISPK	↓	↓	✓
		CCV2			
		CCB2			
		CRI			
		ICSA			
		ICSAB			
		CCV3			
		CCB3			End WS27
		WT10 MB	TWC		
	✓	↓ ADUP	↓	5	B > LR
	✓	A		↓	↓
	✓	ASPK			
		↓ MBSPK	↓		
		CCV4			
		CCB4			BA (c.o.)
		WT10 ADUP	TWC	10	✓
		↓ A	↓	↓	
		↓ ASPK	↓	↓	✓
		CCV5			~~BA~~
		CCB5			BA (c.o.)
		WT03 MB1	SWC	2	✓
		↓ ADUP	↓	↓	
		↓ A	↓	↓	

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 6-11-13 Analyst: BA

LR Date: — Page: 3 of 6

All corrections made by analyst unless otherwise noted. BA 6-11-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WT03 ASPK	SWC	2 ✓	
		B			
		C			
		D			
		E			
		MB1SPK ✓			
		CCV6			
		CCB6			
		WR99 MB3	SWC	2	
	✓	ADUP			FQ >LR
	✓	D			↓
	✓	DSPK			
zzz		zzzzzz ~~DPOST~~ E			
		F			
		MB3SPK ✓			
		CCV7			
		CCB7			
		WS21 MB1	SWC	2	
		ADUP ✓			
		A			
		ASPK ✓			
zzz		zzzzzz ~~APOST~~			
		MB1SPK ✓			
		CCV8			

WS21:01737

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 6-11-13 Analyst: BA

LR Date: — Page: 4 of 6

All corrections made by analyst unless otherwise noted. BA 6-11-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CCB8			End WS21
		WR99 DDUP	SWC	5	Cu↑RPD (CAF)
		D			
		DSPK			
zzz		zzzzzz ~~DPOST~~			
		CCV9			
		CCB9			End WR99
		WS49 MB1	SWC	2	
	✓	ADUP			
	✓	A			Fe > LR
	✓	ASPK			
zzz		zzzzzz ~~APOST~~	BA 6/12/13		
		B			
	✓	C			Fe > LR
	✓	D			
		MB1SPK			
		CCV10			
		CCB10			
		WS42 MB1	SWC	2	
		ADUP			Cu, Zn ↑ RPD (CAF)
		A			
		ASPK			Cu, Zn STL
		B			Fe > LR
		D			

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

6/11/2013 8:40:31 AM Hg ReAlign... Actual peak offset (nm): 0.004
Drift (nm): -0.000 Slit adjustment: 0

Analysis Begun

Start Time: 6/11/2013 8:41:59 AM **Plasma On Time: 6/11/2013 7:21:50 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2130611
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST **Method Last Saved: 8/13/2012 7:13:22 AM**
IEC File: IEC061013.iec **MSF File:**
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: B1 **Date Collected: 6/11/2013 8:42:05 AM**
Data Type: Original

Dilution: 1.000000X

BA

Nebulizer Parameters: B1

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

6/11/13

Analysis Begun

Start Time: 6/11/2013 9:08:29 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 6/11/2013 7:21:50 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130611
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: ~~Calib Blank 1~~ ZZZZZZ
BA 6/11/13

Autosampler Location: 1
Date Collected: 6/11/2013 9:08:30 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3046615.4	9685.97	0.32%	100.0	%
ScR 361.383	367556.6	1691.29	0.46%	100.0	%
Ag 328.068†	96669.0	59.98	0.06%	[0.00]	mg/L
Al 308.215†	1817.6	11.56	0.64%	[0.00]	mg/L
As 188.979†	1715.9	5.72	0.33%	[0.00]	mg/L
B 249.677†	3597.4	7.77	0.22%	[0.00]	mg/L
Ba 233.527†	2258.9	6.42	0.28%	[0.00]	mg/L
Be 313.042†	310828.2	1790.18	0.58%	[0.00]	mg/L
Ca 317.933†	13931.5	43.12	0.31%	[0.00]	mg/L
Cd 228.802†	17005.8	45.90	0.27%	[0.00]	mg/L
Co 228.616†	18074.3	58.11	0.32%	[0.00]	mg/L
Cr 267.716†	3082.3	8.42	0.27%	[0.00]	mg/L
Cu 324.752†	147493.5	186.07	0.13%	[0.00]	mg/L
Fe 273.955†	1288.6	5.21	0.40%	[0.00]	mg/L
K 766.490†	23280.3	75.16	0.32%	[0.00]	mg/L
Mg 279.077†	1397.7	7.12	0.51%	[0.00]	mg/L
Mn 257.610†	17970.5	88.07	0.49%	[0.00]	mg/L
Mo 202.031†	9693.5	31.52	0.33%	[0.00]	mg/L
Na 589.592†	354266.6	567.21	0.16%	[0.00]	mg/L
Na 330.237†	498.6	2.97	0.60%	[0.00]	mg/L
Ni 231.604†	1992.1	6.63	0.33%	[0.00]	mg/L
Pb 220.353†	8217.9	28.15	0.34%	[0.00]	mg/L
Sb 206.836†	3354.9	15.62	0.47%	[0.00]	mg/L
Se 196.026†	1362.2	9.57	0.70%	[0.00]	mg/L
Si 288.158†	2107.0	19.09	0.91%	[0.00]	mg/L
Sn 189.927†	1773.0	8.01	0.45%	[0.00]	mg/L
Sr 421.552†	521545.3	1353.59	0.26%	[0.00]	mg/L
Ti 334.903†	10698.5	37.51	0.35%	[0.00]	mg/L
Tl 190.801†	2377.9	7.28	0.31%	[0.00]	mg/L
V 292.402†	69527.5	89.92	0.13%	[0.00]	mg/L
Zn 206.200†	1928.4	9.73	0.50%	[0.00]	mg/L

Sequence No.: 2
Sample ID: ~~STD2~~ ZZZZZZ
BA 6/11/13

Autosampler Location: 2
Date Collected: 6/11/2013 9:12:31 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD2

Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	3053810.6	5436.26	0.18%	100.2	%
ScR 361.383	371527.0	1155.62	0.31%	101.1	%
Ba 233.527†	44670.9	191.96	0.43%	[10]	mg/L
Cd 228.802†	325667.3	1464.77	0.45%	[10]	mg/L
Co 228.616†	367855.8	400.09	0.11%	[10]	mg/L
Cr 267.716†	61999.8	120.14	0.19%	[10]	mg/L
Cu 324.752†	2835712.1	3103.99	0.11%	[10]	mg/L
Mn 257.610†	355775.2	712.47	0.20%	[10]	mg/L
V 292.402†	1388643.7	4249.93	0.31%	[10]	mg/L

Sequence No.: 3
Sample ID: ~~STD3~~ ZZZZZZ
BA 6/11/13

Autosampler Location: 3
Date Collected: 6/11/2013 9:14:19 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3048032.2	8386.99	0.28%	100.0	%
ScR 361.383	365182.3	2075.82	0.57%	99.35	%
Ag 328.068†	101598.6	175.87	0.17%	[1.0]	mg/L
As 188.979†	16455.1	45.38	0.28%	[10]	mg/L
B 249.677†	72115.8	320.19	0.44%	[10]	mg/L
Be 313.042†	2941684.5	10819.57	0.37%	[5.0]	mg/L
Na 589.592†	403649.0	2178.56	0.54%	[50]	mg/L
Ni 231.604†	40436.0	230.72	0.57%	[10]	mg/L
Pb 220.353†	75699.2	276.31	0.37%	[10]	mg/L
Se 196.026†	13201.3	54.82	0.42%	[10]	mg/L
Sr 421.552†	5070704.6	7966.79	0.16%	[5]	mg/L
Tl 190.801†	22036.4	87.44	0.40%	[10]	mg/L
Zn 206.200†	38740.4	189.19	0.49%	[10]	mg/L

Sequence No.: 4
Sample ID: ~~STD4~~ ZZZZZZ
BA 6/11/13

Autosampler Location: 4
Date Collected: 6/11/2013 9:16:54 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3089289.4	5061.41	0.16%	101.4	%
ScR 361.383	373924.8	2135.18	0.57%	101.7	%
Mo 202.031†	193266.1	1349.12	0.70%	[10]	mg/L
Sb 206.836†	30254.9	164.62	0.54%	[10]	mg/L
Si 288.158†	19288.1	297.83	1.54%	[10]	mg/L
Sn 189.927†	35839.0	358.03	1.00%	[10]	mg/L
Ti 334.903†	211149.9	514.41	0.24%	[10]	mg/L

Sequence No.: 5
Sample ID: ~~STD5~~ ZZZZZZ
BA 6/11/13

Autosampler Location: 5
Date Collected: 6/11/2013 9:19:09 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2881428.7	9680.38	0.34%	94.58	%
ScR 361.383	369269.6	769.23	0.21%	100.5	%
Al 308.215†	50208.0	72.93	0.15%	[30]	mg/L
Ca 317.933†	414299.1	2219.11	0.54%	[30]	mg/L
Fe 273.955†	128898.8	1460.53	1.13%	[100]	mg/L
K 766.490†	223618.3	643.05	0.29%	[100]	mg/L
Mg 279.077†	41572.1	8.62	0.02%	[30]	mg/L
Na 330.237†	2145.6	2.33	0.11%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	101600	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1674	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1646	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7212	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4467	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	588300	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	13810	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	32570	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	36790	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	6200	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	283600	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1289	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2236	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1386	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	35580	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	19330	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	8073	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	21.46	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4044	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7570	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3025	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1320	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1929	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3584	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	1014000	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	21110	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2204	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	138900	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3874	0.00000	1.000000	

Analysis Begun

Start Time: 6/11/2013 9:27:06 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/11/2013 7:21:50 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130611
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 6/11/2013 9:27:07 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3081754.3	22782.85	0.74%	100.0	%
ScR 361.383	370739.5	1485.55	0.40%	100.0	%
Ag 328.068†	-114.7	23.11	20.14%	[0.00]	mg/L
Al 308.215†	148.4	7.61	5.13%	[0.00]	mg/L
As 188.979†	-5.5	3.10	56.62%	[0.00]	mg/L
B 249.677†	59.8	4.31	7.21%	[0.00]	mg/L
Ba 233.527†	14.7	3.65	24.87%	[0.00]	mg/L
Be 313.042†	822.3	12.06	1.47%	[0.00]	mg/L
Ca 317.933†	122.8	15.42	12.56%	[0.00]	mg/L
Cd 228.802†	342.3	2.39	0.70%	[0.00]	mg/L
Co 228.616†	-52.4	5.19	9.90%	[0.00]	mg/L
Cr 267.716†	-82.7	5.42	6.55%	[0.00]	mg/L
Cu 324.752†	2190.0	40.84	1.87%	[0.00]	mg/L
Fe 273.955†	13.2	1.33	10.08%	[0.00]	mg/L
K 766.490†	527.3	24.28	4.60%	[0.00]	mg/L
Mg 279.077†	70.6	5.53	7.83%	[0.00]	mg/L
Mn 257.610†	122.7	4.00	3.26%	[0.00]	mg/L
Mo 202.031†	45.4	4.72	10.38%	[0.00]	mg/L
Na 589.592†	45.8	35.61	77.82%	[0.00]	mg/L
Na 330.237†	-188.7	2.55	1.35%	[0.00]	mg/L
Ni 231.604†	-27.8	1.50	5.40%	[0.00]	mg/L
Pb 220.353†	51.5	7.56	14.67%	[0.00]	mg/L
Sb 206.836†	44.8	4.43	9.89%	[0.00]	mg/L
Se 196.026†	-31.6	3.79	11.98%	[0.00]	mg/L
Si 288.158†	59.2	5.65	9.54%	[0.00]	mg/L
Sn 189.927†	-2.8	3.44	121.97%	[0.00]	mg/L
Sr 421.552†	361.8	21.60	5.97%	[0.00]	mg/L
Ti 334.903†	-60.4	10.48	17.35%	[0.00]	mg/L
Tl 190.801†	-28.7	2.21	7.71%	[0.00]	mg/L
V 292.402†	182.7	15.94	8.72%	[0.00]	mg/L
Zn 206.200†	15.4	1.41	9.15%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 6/11/2013 9:31:23 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected				Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	3068934.0	5695.42	0.19%	99.58	%
ScR 361.383	374985.7	172.01	0.05%	101.1	%
Ba 233.527†	47852.4	585.35	1.22%	[10]	mg/L
Cd 228.802†	343766.4	46.53	0.01%	[10]	mg/L
Co 228.616†	389547.3	269.02	0.07%	[10]	mg/L
Cr 267.716†	65658.3	133.74	0.20%	[10]	mg/L
Cu 324.752†	3013697.3	7400.29	0.25%	[10]	mg/L
Mn 257.610†	371961.4	1487.24	0.40%	[10]	mg/L
V 292.402†	1474955.7	2812.77	0.19%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 6/11/2013 9:33:11 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3055704.9	10625.35	0.35%	99.15	%
ScR 361.383	368364.4	1085.93	0.29%	99.36	%
Ag 328.068†	201086.6	996.16	0.50%	[1.0]	mg/L
As 188.979†	18397.1	74.29	0.40%	[10]	mg/L
B 249.677†	76487.0	646.36	0.85%	[10]	mg/L
Be 313.042†	3240096.5	13788.26	0.43%	[5.0]	mg/L
Na 589.592†	765729.2	980.38	0.13%	[50]	mg/L
Ni 231.604†	43218.5	290.28	0.67%	[10]	mg/L
Pb 220.353†	84599.9	434.31	0.51%	[10]	mg/L
Se 196.026†	14742.9	92.01	0.62%	[10]	mg/L
Sr 421.552†	5597974.6	23996.09	0.43%	[5]	mg/L
Tl 190.801†	24834.9	9.32	0.04%	[10]	mg/L
Zn 206.200†	41059.1	320.69	0.78%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 6/11/2013 9:35:46 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3101068.5	11336.75	0.37%	100.6	%
ScR 361.383	377855.2	967.14	0.26%	101.9	%
Mo 202.031†	204895.7	1361.31	0.66%	[10]	mg/L
Sb 206.836†	33938.6	236.69	0.70%	[10]	mg/L
Si 288.158†	21163.9	125.73	0.59%	[10]	mg/L
Sn 189.927†	37893.9	370.52	0.98%	[10]	mg/L
Ti 334.903†	222520.7	993.83	0.45%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 6/11/2013 9:38:01 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2912395.8	3698.24	0.13%	94.50	%
ScR 361.383	371071.7	837.29	0.23%	100.1	%
Al 308.215†	52174.7	167.33	0.32%	[30]	mg/L
Ca 317.933†	429701.3	482.86	0.11%	[30]	mg/L
Fe 273.955†	130095.5	181.13	0.14%	[100]	mg/L
K 766.490†	247218.7	1055.64	0.43%	[100]	mg/L
Mg 279.077†	43178.8	17.52	0.04%	[30]	mg/L
Na 330.237†	2864.0	11.74	0.41%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	201100	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1739	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1840	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7649	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4785	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	648000	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	14320	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	34380	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	38950	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	6566	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	301400	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1301	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2472	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1439	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	37200	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	20490	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	15310	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.64	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4322	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8460	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3394	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1474	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2116	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3789	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	1120000	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	22250	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2483	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	147500	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4106	0.00000	1.000000	

Analysis Begun

Start Time: 6/11/2013 9:41:22 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/11/2013 7:21:50 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130611
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: ICV
Autosampler Location: 7
Date Collected: 6/11/2013 9:41:23 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3034668.4	98.47	%	0.441				0.45%
ScR 361.383	366301.9	98.80	%	0.313				0.32%
Ag 328.068†	210932.9	1.049	mg/L	0.0054	1.049	mg/L	0.0054	0.51%
Al 308.215†	3628.1	2.052	mg/L	0.0054	2.052	mg/L	0.0054	0.26%
As 188.979†	3698.3	2.038	mg/L	0.0199	2.038	mg/L	0.0199	0.98%
B 249.677†	7708.7	1.007	mg/L	0.0039	1.007	mg/L	0.0039	0.39%
Ba 233.527†	4926.8	1.029	mg/L	0.0031	1.029	mg/L	0.0031	0.30%
Be 313.042†	662134.1	1.022	mg/L	0.0026	1.022	mg/L	0.0026	0.26%
Ca 317.933†	28366.5	1.980	mg/L	0.0037	1.980	mg/L	0.0037	0.19%
Cd 228.802†	35847.2	1.033	mg/L	0.0013	1.033	mg/L	0.0013	0.13%
Co 228.616†	39134.2	1.003	mg/L	0.0036	1.003	mg/L	0.0036	0.36%
Cr 267.716†	6864.9	1.045	mg/L	0.0033	1.045	mg/L	0.0033	0.31%
Cu 324.752†	314630.6	1.044	mg/L	0.0040	1.044	mg/L	0.0040	0.38%
Fe 273.955†	2719.5	2.084	mg/L	0.0072	2.084	mg/L	0.0072	0.34%
K 766.490†	49566.1	20.05	mg/L	0.107	20.05	mg/L	0.107	0.53%
Mg 279.077†	2873.7	2.003	mg/L	0.0097	2.003	mg/L	0.0097	0.49%
Mn 257.610†	36800.1	0.9897	mg/L	0.00379	0.9897	mg/L	0.00379	0.38%
Mo 202.031†	20681.2	1.009	mg/L	0.0061	1.009	mg/L	0.0061	0.61%
Na 589.592†	769239.6	50.23	mg/L	0.076	50.23	mg/L	0.076	0.15%
Na 330.237†	1480.3	51.65	mg/L	0.112	51.65	mg/L	0.112	0.22%
Ni 231.604†	4388.4	1.016	mg/L	0.0050	1.016	mg/L	0.0050	0.49%
Pb 220.353†	17429.2	2.061	mg/L	0.0130	2.061	mg/L	0.0130	0.63%
Sb 206.836†	7052.7	2.078	mg/L	0.0158	2.078	mg/L	0.0158	0.76%
Se 196.026†	2984.8	2.023	mg/L	0.0123	2.023	mg/L	0.0123	0.61%
Si 288.158†	4411.1	2.089	mg/L	0.0171	2.089	mg/L	0.0171	0.82%
Sn 189.927†	3768.4	0.9960	mg/L	0.00734	0.9960	mg/L	0.00734	0.74%
Sr 421.552†	1127242.6	1.007	mg/L	0.0006	1.007	mg/L	0.0006	0.06%
Ti 334.903†	22297.2	1.001	mg/L	0.0008	1.001	mg/L	0.0008	0.08%
Tl 190.801†	5149.4	2.065	mg/L	0.0134	2.065	mg/L	0.0134	0.65%
V 292.402†	150727.9	1.026	mg/L	0.0027	1.026	mg/L	0.0027	0.26%
Zn 206.200†	4141.9	1.009	mg/L	0.0025	1.009	mg/L	0.0025	0.25%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 6/11/2013 9:45:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3075712.8	99.80	%	0.495				0.50%
ScR 361.383	372482.6	100.5	%	0.30				0.30%
Ag 328.068†	-9.2	-0.00005	mg/L	0.000240	-0.00005	mg/L	0.000240	526.63%
Al 308.215†	-8.7	-0.00499	mg/L	0.002846	-0.00499	mg/L	0.002846	57.07%
As 188.979†	-1.8	-0.00099	mg/L	0.002377	-0.00099	mg/L	0.002377	240.53%
B 249.677†	13.6	0.00178	mg/L	0.001092	0.00178	mg/L	0.001092	61.37%
Ba 233.527†	-2.5	-0.00051	mg/L	0.000115	-0.00051	mg/L	0.000115	22.33%
Be 313.042†	13.1	0.00002	mg/L	0.000013	0.00002	mg/L	0.000013	62.24%
Ca 317.933†	18.2	0.00127	mg/L	0.000108	0.00127	mg/L	0.000108	8.52%
Cd 228.802†	5.4	0.00016	mg/L	0.000041	0.00016	mg/L	0.000041	24.82%
Co 228.616†	4.2	0.00011	mg/L	0.000204	0.00011	mg/L	0.000204	188.86%
Cr 267.716†	-4.3	-0.00066	mg/L	0.000501	-0.00066	mg/L	0.000501	75.66%
Cu 324.752†	64.7	0.00021	mg/L	0.000135	0.00021	mg/L	0.000135	62.77%
Fe 273.955†	0.8	0.00059	mg/L	0.000725	0.00059	mg/L	0.000725	122.46%
K 766.490†	-27.5	-0.01111	mg/L	0.013370	-0.01111	mg/L	0.013370	120.36%
Mg 279.077†	0.6	0.00040	mg/L	0.005840	0.00040	mg/L	0.005840	>999.9%
Mn 257.610†	-1.9	-0.00005	mg/L	0.000040	-0.00005	mg/L	0.000040	76.58%
Mo 202.031†	10.1	0.00049	mg/L	0.000207	0.00049	mg/L	0.000207	42.06%
Na 589.592†	31.2	0.00204	mg/L	0.002430	0.00204	mg/L	0.002430	119.33%
Na 330.237†	2.2	0.07756	mg/L	0.496266	0.07756	mg/L	0.496266	639.89%
Ni 231.604†	8.0	0.00186	mg/L	0.000292	0.00186	mg/L	0.000292	15.70%
Pb 220.353†	1.0	0.00012	mg/L	0.000236	0.00012	mg/L	0.000236	195.67%
Sb 206.836†	10.4	0.00310	mg/L	0.000686	0.00310	mg/L	0.000686	22.11%
Se 196.026†	5.3	0.00360	mg/L	0.001197	0.00360	mg/L	0.001197	33.24%
Si 288.158†	0.8	0.00038	mg/L	0.000852	0.00038	mg/L	0.000852	224.21%
Sn 189.927†	5.8	0.00154	mg/L	0.001292	0.00154	mg/L	0.001292	83.78%
Sr 421.552†	24.7	0.00002	mg/L	0.000041	0.00002	mg/L	0.000041	183.79%
Ti 334.903†	6.6	0.00030	mg/L	0.000450	0.00030	mg/L	0.000450	151.90%
Tl 190.801†	6.3	0.00252	mg/L	0.001492	0.00252	mg/L	0.001492	59.28%
V 292.402†	-4.0	-0.00003	mg/L	0.000058	-0.00003	mg/L	0.000058	196.44%
Zn 206.200†	1.2	0.00029	mg/L	0.000509	0.00029	mg/L	0.000509	175.98%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 6/11/2013 9:49:43 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3088432.5	100.2	%	0.38				0.38%
ScR 361.383	377396.0	101.8	%	0.14				0.14%
Ag 328.068†	591.3	0.00294	mg/L	0.000110	0.00294	mg/L	0.000110	3.73%
Al 308.215†	86.1	0.04938	mg/L	0.005413	0.04938	mg/L	0.005413	10.96%
As 188.979†	91.9	0.05010	mg/L	0.002547	0.05010	mg/L	0.002547	5.08%
B 249.677†	149.5	0.01955	mg/L	0.000850	0.01955	mg/L	0.000850	4.35%
Ba 233.527†	12.8	0.00267	mg/L	0.001043	0.00267	mg/L	0.001043	39.00%
Be 313.042†	636.1	0.00098	mg/L	0.000019	0.00098	mg/L	0.000019	1.92%
Ca 317.933†	905.5	0.06322	mg/L	0.001305	0.06322	mg/L	0.001305	2.06%
Cd 228.802†	77.3	0.00199	mg/L	0.000021	0.00199	mg/L	0.000021	1.06%
Co 228.616†	119.9	0.00307	mg/L	0.000067	0.00307	mg/L	0.000067	2.18%
Cr 267.716†	33.1	0.00504	mg/L	0.000387	0.00504	mg/L	0.000387	7.68%
Cu 324.752†	665.5	0.00221	mg/L	0.000035	0.00221	mg/L	0.000035	1.57%
Fe 273.955†	71.5	0.05492	mg/L	0.001923	0.05492	mg/L	0.001923	3.50%
K 766.490†	1234.5	0.4993	mg/L	0.00033	0.4993	mg/L	0.00033	0.07%
Mg 279.077†	76.4	0.05308	mg/L	0.005257	0.05308	mg/L	0.005257	9.90%
Mn 257.610†	38.2	0.00103	mg/L	0.000049	0.00103	mg/L	0.000049	4.76%
Mo 202.031†	100.4	0.00490	mg/L	0.000017	0.00490	mg/L	0.000017	0.35%
Na 589.592†	7533.8	0.4919	mg/L	0.00323	0.4919	mg/L	0.00323	0.66%
Na 330.237†	19.3	0.6726	mg/L	0.29953	0.6726	mg/L	0.29953	44.54%
Ni 231.604†	49.3	0.01142	mg/L	0.001437	0.01142	mg/L	0.001437	12.58%
Pb 220.353†	180.6	0.02136	mg/L	0.000807	0.02136	mg/L	0.000807	3.78%
Sb 206.836†	176.5	0.05205	mg/L	0.000644	0.05205	mg/L	0.000644	1.24%
Se 196.026†	70.5	0.04782	mg/L	0.000516	0.04782	mg/L	0.000516	1.08%
Si 288.158†	133.8	0.06323	mg/L	0.005337	0.06323	mg/L	0.005337	8.44%
Sn 189.927†	38.1	0.01009	mg/L	0.000324	0.01009	mg/L	0.000324	3.21%
Sr 421.552†	1138.1	0.00102	mg/L	0.000003	0.00102	mg/L	0.000003	0.28%
Ti 334.903†	114.9	0.00515	mg/L	0.000406	0.00515	mg/L	0.000406	7.87%
Tl 190.801†	125.3	0.05044	mg/L	0.001653	0.05044	mg/L	0.001653	3.28%
V 292.402†	435.1	0.00297	mg/L	0.000102	0.00297	mg/L	0.000102	3.45%
Zn 206.200†	51.6	0.01259	mg/L	0.000292	0.01259	mg/L	0.000292	2.32%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 6/11/2013 9:53:59 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2971540.0	96.42	%	0.306				0.32%
ScR 361.383	362297.1	97.72	%	0.262				0.27%
Ag 328.068†	-194.5	-0.00096	mg/L	0.000123	-0.00096	mg/L	0.000123	12.80%
Al 308.215†	351045.1	201.8	mg/L	0.50	201.8	mg/L	0.50	0.25%
As 188.979†	46.0	0.01796	mg/L	0.002243	0.01796	mg/L	0.002243	12.49%
B 249.677†	-43.1	-0.00564	mg/L	0.002303	-0.00564	mg/L	0.002303	40.83%
Ba 233.527†	150.8	-0.00232	mg/L	0.000614	-0.00232	mg/L	0.000614	26.49%
Be 313.042†	69.5	0.00010	mg/L	0.000022	0.00010	mg/L	0.000022	20.77%
Ca 317.933†	1432504.2	100.0	mg/L	0.55	100.0	mg/L	0.55	0.55%
Cd 228.802†	20.7	0.00047	mg/L	0.000075	0.00047	mg/L	0.000075	16.11%
Co 228.616†	103.3	0.00022	mg/L	0.000034	0.00022	mg/L	0.000034	15.15%
Cr 267.716†	17.4	0.00103	mg/L	0.000619	0.00103	mg/L	0.000619	60.12%
Cu 324.752†	-2399.8	0.00035	mg/L	0.000076	0.00035	mg/L	0.000076	21.92%
Fe 273.955†	261366.3	200.9	mg/L	0.31	200.9	mg/L	0.31	0.16%
K 766.490†	16.7	0.00675	mg/L	0.006670	0.00675	mg/L	0.006670	98.80%
Mg 279.077†	151444.1	105.1	mg/L	0.89	105.1	mg/L	0.89	0.85%
Mn 257.610†	37.7	0.00033	mg/L	0.000144	0.00033	mg/L	0.000144	43.58%
Mo 202.031†	38.7	0.00062	mg/L	0.000032	0.00062	mg/L	0.000032	5.23%
Na 589.592†	74.2	0.00485	mg/L	0.004365	0.00485	mg/L	0.004365	90.09%
Na 330.237†	6.1	-0.2213	mg/L	0.11180	-0.2213	mg/L	0.11180	50.52%
Ni 231.604†	6.2	0.00145	mg/L	0.000856	0.00145	mg/L	0.000856	59.08%
Pb 220.353†	-323.2	-0.00140	mg/L	0.001591	-0.00140	mg/L	0.001591	113.39%
Sb 206.836†	33.5	0.00966	mg/L	0.001707	0.00966	mg/L	0.001707	17.67%
Se 196.026†	51.7	0.01296	mg/L	0.006584	0.01296	mg/L	0.006584	50.80%
Si 288.158†	-38.2	-0.00615	mg/L	0.002584	-0.00615	mg/L	0.002584	42.00%
Sn 189.927†	-90.4	-0.01101	mg/L	0.000694	-0.01101	mg/L	0.000694	6.31%
Sr 421.552†	6130.3	0.00548	mg/L Conf.	0.000035	0.00548	mg/L	0.000035	0.64%
Ti 334.903†	192.6	0.00243	mg/L	0.000089	0.00243	mg/L	0.000089	3.66%
Tl 190.801†	-64.2	0.00167	mg/L	0.003159	0.00167	mg/L	0.003159	188.99%
V 292.402†	1460.4	-0.00074	mg/L	0.000391	-0.00074	mg/L	0.000391	52.86%
Zn 206.200†	20.0	0.00362	mg/L	0.000250	0.00362	mg/L	0.000250	6.91%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 6/11/2013 9:58:15 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2975134.3	96.54	%	0.178				0.18%
ScR 361.383	363004.8	97.91	%	0.251				0.26%
Ag 328.068†	213881.6	1.064	mg/L	0.0025	1.064	mg/L	0.0025	0.23%
Al 308.215†	351002.4	201.8	mg/L	1.47	201.8	mg/L	1.47	0.73%
As 188.979†	1903.8	1.027	mg/L	0.0017	1.027	mg/L	0.0017	0.16%
B 249.677†	-41.7	-0.00746	mg/L	0.001074	-0.00746	mg/L	0.001074	14.40%
Ba 233.527†	4977.1	1.006	mg/L	0.0053	1.006	mg/L	0.0053	0.53%
Be 313.042†	646155.1	0.9969	mg/L	0.00739	0.9969	mg/L	0.00739	0.74%
Ca 317.933†	1428267.6	99.72	mg/L	0.410	99.72	mg/L	0.410	0.41%
Cd 228.802†	35331.1	1.023	mg/L	0.0042	1.023	mg/L	0.0042	0.41%
Co 228.616†	37231.9	0.9532	mg/L	0.00349	0.9532	mg/L	0.00349	0.37%
Cr 267.716†	6710.0	1.020	mg/L	0.0039	1.020	mg/L	0.0039	0.39%
Cu 324.752†	314685.7	1.053	mg/L	0.0046	1.053	mg/L	0.0046	0.44%
Fe 273.955†	258809.4	198.9	mg/L	0.93	198.9	mg/L	0.93	0.47%
K 766.490†	-67.3	-0.02722	mg/L	0.012466	-0.02722	mg/L	0.012466	45.79%
Mg 279.077†	143633.0	99.66	mg/L	0.587	99.66	mg/L	0.587	0.59%
Mn 257.610†	35902.8	0.9647	mg/L	0.00592	0.9647	mg/L	0.00592	0.61%
Mo 202.031†	37.4	0.00051	mg/L	0.000425	0.00051	mg/L	0.000425	83.77%
Na 589.592†	-46.3	-0.00302	mg/L	0.002067	-0.00302	mg/L	0.002067	68.35%
Na 330.237†	13.1	-0.2679	mg/L	0.26776	-0.2679	mg/L	0.26776	99.97%
Ni 231.604†	4165.0	0.9639	mg/L	0.00324	0.9639	mg/L	0.00324	0.34%
Pb 220.353†	8089.4	0.9935	mg/L	0.00283	0.9935	mg/L	0.00283	0.28%
Sb 206.836†	3519.2	1.027	mg/L	0.0068	1.027	mg/L	0.0068	0.66%
Se 196.026†	1548.5	1.027	mg/L	0.0116	1.027	mg/L	0.0116	1.13%
Si 288.158†	-38.8	-0.00252	mg/L	0.003367	-0.00252	mg/L	0.003367	133.86%
Sn 189.927†	-92.1	-0.01096	mg/L	0.001846	-0.01096	mg/L	0.001846	16.84%
Sr 421.552†	6021.9	0.00538	mg/L Cont.	0.000031	0.00538	mg/L	0.000031	0.58%
Ti 334.903†	183.9	0.00186	mg/L	0.000234	0.00186	mg/L	0.000234	12.56%
Tl 190.801†	2285.8	0.9379	mg/L	0.00313	0.9379	mg/L	0.00313	0.33%
V 292.402†	147571.4	0.9941	mg/L	0.00340	0.9941	mg/L	0.00340	0.34%
Zn 206.200†	3954.3	0.9620	mg/L	0.00534	0.9620	mg/L	0.00534	0.56%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 6/11/2013 10:02:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3063258.4	99.40	%	0.232				0.23%
ScR 361.383	366829.8	98.95	%	0.323				0.33%
Ag 328.068†	209402.3	1.042	mg/L	0.0030	1.042	mg/L	0.0030	0.29%
Al 308.215†	3646.7	2.063	mg/L	0.0062	2.063	mg/L	0.0062	0.30%
As 188.979†	3682.7	2.030	mg/L	0.0079	2.030	mg/L	0.0079	0.39%
B 249.677†	7712.5	1.007	mg/L	0.0084	1.007	mg/L	0.0084	0.83%
Ba 233.527†	4961.0	1.036	mg/L	0.0017	1.036	mg/L	0.0017	0.16%
Be 313.042†	661793.6	1.021	mg/L	0.0022	1.021	mg/L	0.0022	0.21%
Ca 317.933†	28403.0	1.983	mg/L	0.0124	1.983	mg/L	0.0124	0.63%
Cd 228.802†	35659.7	1.027	mg/L	0.0002	1.027	mg/L	0.0002	0.02%
Co 228.616†	38868.4	0.9959	mg/L	0.00344	0.9959	mg/L	0.00344	0.35%
Cr 267.716†	6922.4	1.054	mg/L	0.0046	1.054	mg/L	0.0046	0.44%
Cu 324.752†	311852.4	1.035	mg/L	0.0014	1.035	mg/L	0.0014	0.13%
Fe 273.955†	2751.1	2.108	mg/L	0.0090	2.108	mg/L	0.0090	0.43%
K 766.490†	49489.2	20.02	mg/L	0.045	20.02	mg/L	0.045	0.23%
Mg 279.077†	2896.0	2.019	mg/L	0.0041	2.019	mg/L	0.0041	0.21%
Mn 257.610†	36834.3	0.9906	mg/L	0.00270	0.9906	mg/L	0.00270	0.27%
Mo 202.031†	20556.3	1.003	mg/L	0.0026	1.003	mg/L	0.0026	0.26%
Na 589.592†	770322.5	50.30	mg/L	0.076	50.30	mg/L	0.076	0.15%
Na 330.237†	1485.6	51.84	mg/L	0.169	51.84	mg/L	0.169	0.33%
Ni 231.604†	4406.8	1.020	mg/L	0.0062	1.020	mg/L	0.0062	0.61%
Pb 220.353†	17376.9	2.055	mg/L	0.0039	2.055	mg/L	0.0039	0.19%
Sb 206.836†	7035.1	2.072	mg/L	0.0047	2.072	mg/L	0.0047	0.23%
Se 196.026†	2967.9	2.012	mg/L	0.0104	2.012	mg/L	0.0104	0.52%
Si 288.158†	4407.7	2.087	mg/L	0.0165	2.087	mg/L	0.0165	0.79%
Sn 189.927†	3742.1	0.9891	mg/L	0.00096	0.9891	mg/L	0.00096	0.10%
Sr 421.552†	1126550.3	1.006	mg/L	0.0025	1.006	mg/L	0.0025	0.25%
Ti 334.903†	22301.4	1.001	mg/L	0.0033	1.001	mg/L	0.0033	0.33%
Tl 190.801†	5151.8	2.066	mg/L	0.0055	2.066	mg/L	0.0055	0.27%
V 292.402†	149855.1	1.020	mg/L	0.0023	1.020	mg/L	0.0023	0.22%
Zn 206.200†	4173.1	1.017	mg/L	0.0048	1.017	mg/L	0.0048	0.48%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 6/11/2013 10:06:22 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3091447.2	100.3	%	0.23				0.22%
ScR 361.383	374445.0	101.0	%	0.97				0.96%
Ag 328.068†	26.1	0.00013	mg/L	0.000173	0.00013	mg/L	0.000173	133.62%
Al 308.215†	0.3	0.00015	mg/L	0.001608	0.00015	mg/L	0.001608	>999.9%
As 188.979†	0.2	0.00009	mg/L	0.000687	0.00009	mg/L	0.000687	751.21%
B 249.677†	1.6	0.00021	mg/L	0.001415	0.00021	mg/L	0.001415	674.36%
Ba 233.527†	-2.1	-0.00044	mg/L	0.000091	-0.00044	mg/L	0.000091	20.64%
Be 313.042†	37.0	0.00006	mg/L	0.000056	0.00006	mg/L	0.000056	97.63%
Ca 317.933†	13.2	0.00092	mg/L	0.000367	0.00092	mg/L	0.000367	39.71%
Cd 228.802†	1.4	0.00004	mg/L	0.000165	0.00004	mg/L	0.000165	396.14%
Co 228.616†	6.7	0.00017	mg/L	0.000287	0.00017	mg/L	0.000287	167.21%
Cr 267.716†	-5.3	-0.00080	mg/L	0.001077	-0.00080	mg/L	0.001077	133.99%
Cu 324.752†	77.6	0.00026	mg/L	0.000067	0.00026	mg/L	0.000067	26.05%
Fe 273.955†	3.5	0.00267	mg/L	0.001708	0.00267	mg/L	0.001708	64.00%
K 766.490†	9.7	0.00394	mg/L	0.014664	0.00394	mg/L	0.014664	372.38%
Mg 279.077†	3.4	0.00238	mg/L	0.004063	0.00238	mg/L	0.004063	170.49%
Mn 257.610†	-2.1	-0.00006	mg/L	0.000048	-0.00006	mg/L	0.000048	83.94%
Mo 202.031†	12.8	0.00063	mg/L	0.000217	0.00063	mg/L	0.000217	34.69%
Na 589.592†	-12.5	-0.00082	mg/L	0.003784	-0.00082	mg/L	0.003784	462.61%
Na 330.237†	1.5	0.05137	mg/L	0.293683	0.05137	mg/L	0.293683	571.74%
Ni 231.604†	5.4	0.00125	mg/L	0.000193	0.00125	mg/L	0.000193	15.38%
Pb 220.353†	-4.7	-0.00056	mg/L	0.000515	-0.00056	mg/L	0.000515	91.72%
Sb 206.836†	11.7	0.00348	mg/L	0.000678	0.00348	mg/L	0.000678	19.49%
Se 196.026†	-1.3	-0.00089	mg/L	0.003289	-0.00089	mg/L	0.003289	368.49%
Si 288.158†	-1.7	-0.00079	mg/L	0.003100	-0.00079	mg/L	0.003100	390.77%
Sn 189.927†	5.6	0.00147	mg/L	0.000321	0.00147	mg/L	0.000321	21.83%
Sr 421.552†	59.1	0.00005	mg/L	0.000011	0.00005	mg/L	0.000011	20.79%
Ti 334.903†	7.0	0.00032	mg/L	0.000255	0.00032	mg/L	0.000255	80.62%
Tl 190.801†	7.1	0.00288	mg/L	0.001895	0.00288	mg/L	0.001895	65.88%
V 292.402†	32.9	0.00022	mg/L	0.000070	0.00022	mg/L	0.000070	31.76%
Zn 206.200†	4.2	0.00103	mg/L	0.000354	0.00103	mg/L	0.000354	34.25%

Sequence No.: 8
Sample ID: DI CHECK

Dilution: 1.000000X

Dal

Autosampler Location: 326
Date Collected: 6/11/2013 10:10:37 AM
Data Type: Original

Nebulizer Parameters: DI CHECK

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: DI CHECK

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3185612.7	103.4	%	0.27				0.26%
ScR 361.383	384049.7	103.6	%	0.29				0.28%
Ag 328.068†	632.0	0.00314	mg/L	0.000143	0.00314	mg/L	0.000143	4.55%
Al 308.215†	9.1	0.00523	mg/L	0.002812	0.00523	mg/L	0.002812	53.76%
As 188.979†	3.4	0.00186	mg/L	0.001001	0.00186	mg/L	0.001001	53.76%
B 249.677†	-10.1	-0.00132	mg/L	0.000703	-0.00132	mg/L	0.000703	53.38%
Ba 233.527†	-2.5	-0.00053	mg/L	0.000446	-0.00053	mg/L	0.000446	83.88%
Be 313.042†	11.0	0.00002	mg/L	0.000025	0.00002	mg/L	0.000025	145.95%
Ca 317.933†	86.8	0.00606	mg/L	0.000288	0.00606	mg/L	0.000288	4.75%
Cd 228.802†	-1.7	-0.00006	mg/L	0.000117	-0.00006	mg/L	0.000117	206.10%
Co 228.616†	8.2	0.00021	mg/L	0.000042	0.00021	mg/L	0.000042	19.90%
Cr 267.716†	0.3	0.00005	mg/L	0.000845	0.00005	mg/L	0.000845	>999.9%
Cu 324.752†	336.2	0.00112	mg/L	0.000099	0.00112	mg/L	0.000099	8.89%
Fe 273.955†	20.8	0.01601	mg/L	0.000913	0.01601	mg/L	0.000913	5.70%
K 766.490†	9.8	0.00396	mg/L	0.004294	0.00396	mg/L	0.004294	108.57%
Mg 279.077†	8.7	0.00602	mg/L	0.003677	0.00602	mg/L	0.003677	61.05%
Mn 257.610†	2.1	0.00006	mg/L	0.000027	0.00006	mg/L	0.000027	47.56%
Mo 202.031†	-7.1	-0.00035	mg/L	0.000101	-0.00035	mg/L	0.000101	29.18%
Na 589.592†	192.5	0.01257	mg/L	0.001542	0.01257	mg/L	0.001542	12.27%
Na 330.237†	-3.7	-0.1286	mg/L	0.35490	-0.1286	mg/L	0.35490	275.94%
Ni 231.604†	7.3	0.00169	mg/L	0.000205	0.00169	mg/L	0.000205	12.17%
Pb 220.353†	11.7	0.00138	mg/L	0.000304	0.00138	mg/L	0.000304	22.07%
Sb 206.836†	-5.0	-0.00146	mg/L	0.001428	-0.00146	mg/L	0.001428	97.62%
Se 196.026†	2.5	0.00172	mg/L	0.002267	0.00172	mg/L	0.002267	131.42%
Si 288.158†	-3.5	-0.00165	mg/L	0.001770	-0.00165	mg/L	0.001770	107.53%
Sn 189.927†	1.2	0.00032	mg/L	0.000705	0.00032	mg/L	0.000705	216.88%
Sr 421.552†	-21.0	-0.00002	mg/L	0.000009	-0.00002	mg/L	0.000009	46.29%
Ti 334.903†	5.8	0.00026	mg/L	0.000170	0.00026	mg/L	0.000170	64.68%
Tl 190.801†	3.1	0.00125	mg/L	0.001175	0.00125	mg/L	0.001175	94.27%
V 292.402†	15.6	0.00010	mg/L	0.000105	0.00010	mg/L	0.000105	100.63%
Zn 206.200†	7.0	0.00169	mg/L	0.000151	0.00169	mg/L	0.000151	8.92%

Sequence No.: 9
Sample ID: WS27 MB1 SWC

Autosampler Location: 304
Date Collected: 6/11/2013 10:14:53 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 MB1 SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3101944.0	100.7	%	0.10				0.10%
ScR 361.383	375408.4	101.3	%	0.26				0.26%
Ag 328.068†	14.2	0.00007	mg/L	0.000147	0.00014	mg/L	0.000293	207.69%
Al 308.215†	3.2	0.00184	mg/L	0.003933	0.00367	mg/L	0.007867	214.12%
As 188.979†	0.3	0.00017	mg/L	0.001559	0.00034	mg/L	0.003119	904.85%
B 249.677†	-9.4	-0.00124	mg/L	0.000416	-0.00247	mg/L	0.000833	33.71%
Ba 233.527†	1.4	0.00030	mg/L	0.000519	0.00059	mg/L	0.001037	175.47%
Be 313.042†	15.2	0.00002	mg/L	0.000034	0.00005	mg/L	0.000068	145.51%
Ca 317.933†	71.9	0.00502	mg/L	0.000650	0.01004	mg/L	0.001300	12.95%
Cd 228.802†	-2.2	-0.00006	mg/L	0.000044	-0.00012	mg/L	0.000088	70.48%
Co 228.616†	0.1	0.00000	mg/L	0.000070	0.00000	mg/L	0.000141	>999.9%
Cr 267.716†	1.7	0.00026	mg/L	0.000426	0.00053	mg/L	0.000853	161.48%
Cu 324.752†	79.0	0.00026	mg/L	0.000051	0.00052	mg/L	0.000103	19.59%
Fe 273.955†	1.7	0.00129	mg/L	0.001666	0.00258	mg/L	0.003333	129.41%
K 766.490†	-3.9	-0.00159	mg/L	0.009779	-0.00319	mg/L	0.019557	613.45%
Mg 279.077†	11.7	0.00814	mg/L	0.006246	0.01628	mg/L	0.012491	76.73%
Mn 257.610†	-3.2	-0.00009	mg/L	0.000110	-0.00017	mg/L	0.000219	126.61%
Mo 202.031†	-4.2	-0.00021	mg/L	0.000090	-0.00041	mg/L	0.000180	43.42%
Na 589.592†	-80.6	-0.00526	mg/L	0.002145	-0.01053	mg/L	0.004289	40.74%
Na 330.237†	2.9	0.1020	mg/L	0.28789	0.2039	mg/L	0.57577	282.38%
Ni 231.604†	5.9	0.00137	mg/L	0.001000	0.00275	mg/L	0.002000	72.84%
Pb 220.353†	1.9	0.00022	mg/L	0.000354	0.00044	mg/L	0.000708	160.50%
Sb 206.836†	-6.3	-0.00187	mg/L	0.001190	-0.00374	mg/L	0.002381	63.67%
Se 196.026†	1.4	0.00092	mg/L	0.002056	0.00183	mg/L	0.004112	224.19%
Si 288.158†	26.3	0.01244	mg/L	0.002024	0.02487	mg/L	0.004048	16.28%
Sn 189.927†	1.8	0.00049	mg/L	0.000997	0.00097	mg/L	0.001994	204.91%
Sr 421.552†	16.6	0.00001	mg/L	0.000003	0.00003	mg/L	0.000005	17.07%
Ti 334.903†	0.4	0.00002	mg/L	0.000104	0.00004	mg/L	0.000208	578.63%
Tl 190.801†	3.7	0.00150	mg/L	0.001140	0.00300	mg/L	0.002281	75.94%
V 292.402†	-5.4	-0.00004	mg/L	0.000055	-0.00007	mg/L	0.000110	154.32%
Zn 206.200†	1.8	0.00045	mg/L	0.000440	0.00090	mg/L	0.000880	97.38%

Sequence No.: 10
Sample ID: WS27 A-L SWC

Autosampler Location: 305
Date Collected: 6/11/2013 10:19:09 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WS27 A-L SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3097678.0	100.5	%	0.30				0.30%
ScR 361.383	378967.6	102.2	%	0.47				0.46%
Ag 328.068†	-58.1	-0.00027	mg/L	0.000084	-0.00266	mg/L	0.000841	31.57%
Al 308.215†	29507.3	16.96	mg/L	0.054	169.6	mg/L	0.54	0.32%
As 188.979†	-59.4	0.00652	mg/L	0.002451	0.06518	mg/L	0.024512	37.61%
B 249.677†	4.1	0.00051	mg/L	0.000587	0.00510	mg/L	0.005865	114.97%
Ba 233.527†	335.8	0.06636	mg/L	0.000281	0.6636	mg/L	0.00281	0.42%
Be 313.042†	196.1	0.00027	mg/L	0.000031	0.00271	mg/L	0.000312	11.49%
Ca 317.933†	104579.7	7.301	mg/L	0.0180	73.01	mg/L	0.180	0.25%
Cd 228.802†	7.2	0.00040	mg/L	0.000102	0.00401	mg/L	0.001021	25.49%
Co 228.616†	419.4	0.00837	mg/L	0.000042	0.08374	mg/L	0.000419	0.50%
Cr 267.716†	148.1	0.02300	mg/L	0.000862	0.2300	mg/L	0.00862	3.75%
Cu 324.752†	6709.4	0.02301	mg/L	0.000083	0.2301	mg/L	0.00083	0.36%
Fe 273.955†	29324.4	22.54	mg/L	0.072	225.4	mg/L	0.72	0.32%
K 766.490†	2721.4	1.101	mg/L	0.0049	11.01	mg/L	0.049	0.44%
Mg 279.077†	6579.3	4.557	mg/L	0.0258	45.57	mg/L	0.258	0.57%
Mn 257.610†	9966.6	0.2679	mg/L	0.00176	2.679	mg/L	0.0176	0.66%
Mo 202.031†	11.9	0.00049	mg/L	0.000153	0.00485	mg/L	0.001525	31.44%
Na 589.592†	15037.6	0.9819	mg/L	0.00362	9.819	mg/L	0.0362	0.37%
Na 330.237†	13.8	0.7848	mg/L	0.13419	7.848	mg/L	1.3419	17.10%
Ni 231.604†	92.5	0.02140	mg/L	0.001089	0.2140	mg/L	0.01089	5.09%
Pb 220.353†	73.9	0.01155	mg/L	0.000638	0.1155	mg/L	0.00638	5.53%
Sb 206.836†	-5.8	-0.00076	mg/L	0.000971	-0.00758	mg/L	0.009715	128.12%
Se 196.026†	8.9	0.00412	mg/L	0.002564	0.04119	mg/L	0.025636	62.24%
Si 288.158†	2657.8	1.256	mg/L	0.0090	12.56	mg/L	0.090	0.72%
Sn 189.927†	-17.8	-0.00351	mg/L	0.001573	-0.03510	mg/L	0.015729	44.82%
Sr 421.552†	78758.0	0.07035	mg/L	0.000110	0.7035	mg/L	0.00110	0.16%
Ti 334.903†	27237.5	1.224	mg/L	0.0036	12.24	mg/L	0.036	0.30%
Tl 190.801†	-5.3	0.00061	mg/L	0.001568	0.00607	mg/L	0.015681	258.33%
V 292.402†	11485.5	0.07613	mg/L	0.000162	0.7613	mg/L	0.00162	0.21%
Zn 206.200†	217.0	0.05297	mg/L	0.000611	0.5297	mg/L	0.00611	1.15%

Sequence No.: 11
Sample ID: WS27 A SWC

Autosampler Location: 306
Date Collected: 6/11/2013 10:23:09 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 A SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3089896.8	100.3	%	0.27				0.27%
ScR 361.383	380912.9	102.7	%	0.33				0.32%
Ag 328.068†	-271.3	-0.00124	mg/L	0.000021	-0.00248	mg/L	0.000041	1.66%
Al 308.215†	147458.0	84.77	mg/L	0.172	169.5	mg/L	0.34	0.20%
As 188.979†	-298.4	0.02981	mg/L	0.000603	0.05962	mg/L	0.001206	2.02%
B 249.677†	65.5	0.00846	mg/L	0.001375	0.01692	mg/L	0.002750	16.25%
Ba 233.527†	1669.7	0.3302	mg/L	0.00125	0.6604	mg/L	0.00250	0.38%
Be 313.042†	866.7	0.00118	mg/L	0.000011	0.00237	mg/L	0.000023	0.96%
Ca 317.933†	522647.7	36.49	mg/L	0.073	72.98	mg/L	0.147	0.20%
Cd 228.802†	24.0	0.00165	mg/L	0.000141	0.00331	mg/L	0.000283	8.55%
Co 228.616†	2005.2	0.03965	mg/L	0.000183	0.07930	mg/L	0.000365	0.46%
Cr 267.716†	724.3	0.1125	mg/L	0.00125	0.2251	mg/L	0.00251	1.11%
Cu 324.752†	33474.3	0.1147	mg/L	0.00021	0.2295	mg/L	0.00042	0.18%
Fe 273.955†	144165.0	110.8	mg/L	0.42	221.6	mg/L	0.84	0.38%
K 766.490†	13828.4	5.594	mg/L	0.0479	11.19	mg/L	0.096	0.86%
Mg 279.077†	32563.6	22.55	mg/L	0.036	45.11	mg/L	0.072	0.16%
Mn 257.610†	48884.3	1.314	mg/L	0.0061	2.628	mg/L	0.0122	0.47%
Mo 202.031†	62.1	0.00256	mg/L	0.000384	0.00513	mg/L	0.000768	14.99%
Na 589.592†	75076.1	4.902	mg/L	0.0199	9.805	mg/L	0.0399	0.41%
Na 330.237†	102.7	5.089	mg/L	0.1344	10.18	mg/L	0.269	2.64%
Ni 231.604†	434.4	0.1005	mg/L	0.00193	0.2010	mg/L	0.00385	1.92%
Pb 220.353†	349.8	0.05550	mg/L	0.000117	0.1110	mg/L	0.00023	0.21%
Sb 206.836†	-5.7	0.00316	mg/L	0.002598	0.00632	mg/L	0.005197	82.25%
Se 196.026†	25.6	0.00779	mg/L	0.002435	0.01558	mg/L	0.004871	31.26%
Si 288.158†	12841.9	6.070	mg/L	0.0211	12.14	mg/L	0.042	0.35%
Sn 189.927†	-59.6	-0.00979	mg/L	0.000563	-0.01957	mg/L	0.001125	5.75%
Sr 421.552†	388836.8	0.3473	mg/L	0.00043	0.6946	mg/L	0.00086	0.12%
Ti 334.903†	134791.8	6.055	mg/L	0.0010	12.11	mg/L	0.002	0.02%
Tl 190.801†	-24.6	0.00358	mg/L	0.002476	0.00716	mg/L	0.004953	69.17%
V 292.402†	56586.9	0.3751	mg/L	0.00122	0.7501	mg/L	0.00244	0.32%
Zn 206.200†	1050.8	0.2565	mg/L	0.00089	0.5130	mg/L	0.00179	0.35%

Sequence No.: 12
Sample ID: WS27 ADUP SWC

Autosampler Location: 307
Date Collected: 6/11/2013 10:27:10 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 ADUP SWC

Analyte	Back Pressure	Flow
A11	230.0 kPa	0.75 L/min

Mean Data: WS27 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3089092.7	100.2	%	0.59				0.59%
ScR 361.383	379394.3	102.3	%	0.77				0.75%
Ag 328.068†	-276.9	-0.00127	mg/L	0.000109	-0.00254	mg/L	0.000218	8.61%
Al 308.215†	148566.4	85.41	mg/L	0.113	170.8	mg/L	0.23	0.13%
As 188.979†	-317.5	0.02729	mg/L	0.001307	0.05459	mg/L	0.002615	4.79%
B 249.677†	65.0	0.00839	mg/L	0.000446	0.01678	mg/L	0.000893	5.32%
Ba 233.527†	1689.5	0.3345	mg/L	0.00219	0.6689	mg/L	0.00437	0.65%
Be 313.042†	870.6	0.00119	mg/L	0.000027	0.00238	mg/L	0.000054	2.26%
Ca 317.933†	545649.2	38.10	mg/L	0.117	76.19	mg/L	0.234	0.31%
Cd 228.802†	27.6	0.00182	mg/L	0.000064	0.00363	mg/L	0.000127	3.50%
Co 228.616†	2042.3	0.04019	mg/L	0.000269	0.08037	mg/L	0.000538	0.67%
Cr 267.716†	744.0	0.1154	mg/L	0.00081	0.2308	mg/L	0.00161	0.70%
Cu 324.752†	32712.0	0.1121	mg/L	0.00094	0.2242	mg/L	0.00187	0.84%
Fe 273.955†	142975.5	109.9	mg/L	0.26	219.8	mg/L	0.51	0.23%
K 766.490†	14805.1	5.989	mg/L	0.0219	11.98	mg/L	0.044	0.37%
Mg 279.077†	33669.0	23.32	mg/L	0.080	46.64	mg/L	0.160	0.34%
Mn 257.610†	53725.9	1.444	mg/L	0.0033	2.888	mg/L	0.0066	0.23%
Mo 202.031†	71.6	0.00301	mg/L	0.000355	0.00601	mg/L	0.000710	11.81%
Na 589.592†	81588.0	5.327	mg/L	0.0094	10.65	mg/L	0.019	0.18%
Na 330.237†	114.6	5.564	mg/L	0.0604	11.13	mg/L	0.121	1.09%
Ni 231.604†	439.0	0.1016	mg/L	0.00102	0.2032	mg/L	0.00204	1.01%
Pb 220.353†	383.5	0.05968	mg/L	0.001294	0.1194	mg/L	0.00259	2.17%
Sb 206.836†	4.0	0.00618	mg/L	0.000391	0.01236	mg/L	0.000783	6.33%
Se 196.026†	21.7	0.00509	mg/L	0.004191	0.01017	mg/L	0.008382	82.41%
Si 288.158†	7204.4	3.407	mg/L	0.0185	6.814	mg/L	0.0370	0.54%
Sn 189.927†	-56.8	-0.00879	mg/L	0.000705	-0.01758	mg/L	0.001411	8.02%
Sr 421.552†	409527.7	0.3658	mg/L	0.00075	0.7316	mg/L	0.00150	0.20%
Ti 334.903†	140312.9	6.303	mg/L	0.0099	12.61	mg/L	0.020	0.16%
Tl 190.801†	-27.1	0.00245	mg/L	0.002803	0.00490	mg/L	0.005605	114.39%
V 292.402†	55805.7	0.3697	mg/L	0.00326	0.7394	mg/L	0.00651	0.88%
Zn 206.200†	1113.2	0.2712	mg/L	0.00231	0.5425	mg/L	0.00462	0.85%

Sequence No.: 13
Sample ID: WS27 AASPK SWC

Autosampler Location: 308
Date Collected: 6/11/2013 10:31:11 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 AASPK SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 AASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3070986.1	99.65	%	0.099				0.10%
ScR 361.383	372630.5	100.5	%	0.49				0.49%
Ag 328.068†	101145.0	0.5032	mg/L	0.00108	1.006	mg/L	0.0022	0.21%
Al 308.215†	163006.5	93.70	mg/L	0.034	187.4	mg/L	0.07	0.04%
As 188.979†	3315.4	2.001	mg/L	0.0073	4.002	mg/L	0.0146	0.37%
B 249.677†	79.8	0.00928	mg/L	0.000570	0.01856	mg/L	0.001141	6.15%
Ba 233.527†	11337.3	2.350	mg/L	0.0195	4.700	mg/L	0.0389	0.83%
Be 313.042†	311317.4	0.4801	mg/L	0.00103	0.9603	mg/L	0.00206	0.21%
Ca 317.933†	748476.6	52.26	mg/L	0.035	104.5	mg/L	0.07	0.07%
Cd 228.802†	18126.4	0.5178	mg/L	0.00035	1.036	mg/L	0.0007	0.07%
Co 228.616†	21333.2	0.5351	mg/L	0.00118	1.070	mg/L	0.0024	0.22%
Cr 267.716†	4141.7	0.6318	mg/L	0.00200	1.264	mg/L	0.0040	0.32%
Cu 324.752†	189177.6	0.6314	mg/L	0.00095	1.263	mg/L	0.0019	0.15%
Fe 273.955†	145815.4	112.1	mg/L	0.01	224.2	mg/L	0.03	0.01%
K 766.490†	38670.4	15.64	mg/L	0.059	31.28	mg/L	0.118	0.38%
Mg 279.077†	48378.9	33.54	mg/L	0.027	67.08	mg/L	0.055	0.08%
Mn 257.610†	67203.7	1.807	mg/L	0.0015	3.614	mg/L	0.0031	0.09%
Mo 202.031†	78.0	0.00311	mg/L	0.000369	0.00623	mg/L	0.000738	11.85%
Na 589.592†	243736.7	15.92	mg/L	0.042	31.83	mg/L	0.084	0.26%
Na 330.237†	424.5	16.17	mg/L	0.105	32.34	mg/L	0.209	0.65%
Ni 231.604†	2529.1	0.5844	mg/L	0.00392	1.169	mg/L	0.0078	0.67%
Pb 220.353†	17382.6	2.071	mg/L	0.0012	4.142	mg/L	0.0025	0.06%
Sb 206.836†	21.0	0.00605	mg/L	0.000547	0.01210	mg/L	0.001095	9.05%
Se 196.026†	2948.0	1.989	mg/L	0.0034	3.977	mg/L	0.0068	0.17%
Si 288.158†	9846.4	4.659	mg/L	0.0127	9.317	mg/L	0.0253	0.27%
Sn 189.927†	-69.0	-0.01010	mg/L	0.001682	-0.02020	mg/L	0.003365	16.66%
Sr 421.552†	977687.1	0.8733	mg/L	0.00066	1.747	mg/L	0.0013	0.08%
Ti 334.903†	140416.4	6.307	mg/L	0.0096	12.61	mg/L	0.019	0.15%
Tl 190.801†	4690.5	1.897	mg/L	0.0062	3.795	mg/L	0.0124	0.33%
V 292.402†	127438.7	0.8573	mg/L	0.00128	1.715	mg/L	0.0026	0.15%
Zn 206.200†	3156.4	0.7691	mg/L	0.00484	1.538	mg/L	0.0097	0.63%

Sequence No.: 14
Sample ID: ~~WS27 APOST SWC~~ zzzzzz
Dilution: 2.000000X

Autosampler Location: 309
Date Collected: 6/11/2013 10:35:15 AM
Data Type: Original

BA 6/11/13

Nebulizer Parameters: WS27 APOST SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3067645.3	99.54	%	0.534				0.54%
ScR 361.383	372509.5	100.5	%	0.30				0.30%
Ag 328.068†	104532.9	0.5201	mg/L	0.00362	1.040	mg/L	0.0072	0.70%
Al 308.215†	152399.5	87.60	mg/L	0.150	175.2	mg/L	0.30	0.17%
As 188.979†	3445.9	2.065	mg/L	0.0041	4.130	mg/L	0.0082	0.20%
B 249.677†	72.3	0.00828	mg/L	0.000654	0.01656	mg/L	0.001308	7.90%
Ba 233.527†	11649.0	2.415	mg/L	0.0092	4.831	mg/L	0.0183	0.38%
Be 313.042†	316561.0	0.4882	mg/L	0.00007	0.9765	mg/L	0.00014	0.01%
Ca 317.933†	667683.6	46.61	mg/L	0.180	93.23	mg/L	0.361	0.39%
Cd 228.802†	18552.4	0.5298	mg/L	0.00191	1.060	mg/L	0.0038	0.36%
Co 228.616†	21737.9	0.5459	mg/L	0.00215	1.092	mg/L	0.0043	0.39%
Cr 267.716†	4168.1	0.6360	mg/L	0.00341	1.272	mg/L	0.0068	0.54%
Cu 324.752†	193059.9	0.6444	mg/L	0.00372	1.289	mg/L	0.0074	0.58%
Fe 273.955†	146277.7	112.4	mg/L	0.32	224.9	mg/L	0.65	0.29%
K 766.490†	39340.2	15.91	mg/L	0.025	31.83	mg/L	0.049	0.15%
Mg 279.077†	47213.5	32.73	mg/L	0.088	65.46	mg/L	0.175	0.27%
Mn 257.610†	67335.0	1.810	mg/L	0.0030	3.621	mg/L	0.0060	0.17%
Mo 202.031†	71.5	0.00287	mg/L	0.000122	0.00573	mg/L	0.000245	4.27%
Na 589.592†	231665.3	15.13	mg/L	0.032	30.25	mg/L	0.065	0.21%
Na 330.237†	400.5	15.30	mg/L	0.170	30.59	mg/L	0.340	1.11%
Ni 231.604†	2544.1	0.5878	mg/L	0.00380	1.176	mg/L	0.0076	0.65%
Pb 220.353†	17680.8	2.105	mg/L	0.0080	4.210	mg/L	0.0159	0.38%
Sb 206.836†	23.5	0.00665	mg/L	0.001985	0.01330	mg/L	0.003970	29.84%
Se 196.026†	3062.5	2.067	mg/L	0.0103	4.134	mg/L	0.0205	0.50%
Si 288.158†	13036.1	6.166	mg/L	0.0219	12.33	mg/L	0.044	0.36%
Sn 189.927†	-63.6	-0.00946	mg/L	0.000261	-0.01893	mg/L	0.000523	2.76%
Sr 421.552†	955303.3	0.8533	mg/L	0.00169	1.707	mg/L	0.0034	0.20%
Ti 334.903†	135370.6	6.080	mg/L	0.0089	12.16	mg/L	0.018	0.15%
Tl 190.801†	4836.9	1.956	mg/L	0.0097	3.912	mg/L	0.0194	0.50%
V 292.402†	131652.1	0.8860	mg/L	0.00645	1.772	mg/L	0.0129	0.73%
Zn 206.200†	3087.3	0.7526	mg/L	0.00603	1.505	mg/L	0.0121	0.80%

WQ21-21759

Sequence No.: 15
Sample ID: WS27 REF1 SWC

Autosampler Location: 310
Date Collected: 6/11/2013 10:39:19 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 REF1 SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WS27 REF1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3088845.6	100.2	%	0.41				0.40%
ScR 361.383	378320.3	102.0	%	0.34				0.34%
Ag 328.068†	223227.1	1.110	mg/L	0.0058	2.221	mg/L	0.0116	0.52%
Al 308.215†	163215.3	93.82	mg/L	0.043	187.6	mg/L	0.09	0.05%
As 188.979†	2374.4	1.362	mg/L	0.0131	2.724	mg/L	0.0263	0.96%
B 249.677†	8450.5	1.104	mg/L	0.0076	2.207	mg/L	0.0153	0.69%
Ba 233.527†	15761.8	3.268	mg/L	0.0066	6.537	mg/L	0.0131	0.20%
Be 313.042†	573162.1	0.8843	mg/L	0.00449	1.769	mg/L	0.0090	0.51%
Ca 317.933†	565921.8	39.51	mg/L	0.128	79.02	mg/L	0.256	0.32%
Cd 228.802†	25084.1	0.7230	mg/L	0.00496	1.446	mg/L	0.0099	0.69%
Co 228.616†	29291.9	0.7458	mg/L	0.00386	1.492	mg/L	0.0077	0.52%
Cr 267.716†	4920.3	0.7526	mg/L	0.00707	1.505	mg/L	0.0141	0.94%
Cu 324.752†	210402.1	0.7042	mg/L	0.00556	1.408	mg/L	0.0111	0.79%
Fe 273.955†	196111.8	150.7	mg/L	0.59	301.5	mg/L	1.18	0.39%
K 766.490†	90622.7	36.66	mg/L	0.153	73.31	mg/L	0.306	0.42%
Mg 279.077†	40540.4	28.08	mg/L	0.125	56.15	mg/L	0.251	0.45%
Mn 257.610†	165509.5	4.450	mg/L	0.0144	8.900	mg/L	0.0289	0.32%
Mo 202.031†	9287.6	0.4527	mg/L	0.00272	0.9055	mg/L	0.00543	0.60%
Na 589.592†	87081.8	5.686	mg/L	0.0051	11.37	mg/L	0.010	0.09%
Na 330.237†	144.4	5.003	mg/L	0.3556	10.01	mg/L	0.711	7.11%
Ni 231.604†	2413.2	0.5581	mg/L	0.00212	1.116	mg/L	0.0042	0.38%
Pb 220.353†	11147.1	1.332	mg/L	0.0080	2.664	mg/L	0.0160	0.60%
Sb 206.836†	1523.4	0.4585	mg/L	0.00172	0.9170	mg/L	0.00344	0.37%
Se 196.026†	2514.1	1.694	mg/L	0.0134	3.388	mg/L	0.0268	0.79%
Si 288.158†	5622.4	2.663	mg/L	0.0031	5.326	mg/L	0.0061	0.12%
Sn 189.927†	6180.8	1.637	mg/L	0.0088	3.274	mg/L	0.0176	0.54%
Sr 421.552†	616765.8	0.5509	mg/L	0.00045	1.102	mg/L	0.0009	0.08%
Ti 334.903†	52630.2	2.362	mg/L	0.0035	4.724	mg/L	0.0069	0.15%
Tl 190.801†	3321.1	1.351	mg/L	0.0079	2.701	mg/L	0.0159	0.59%
V 292.402†	127459.9	0.8587	mg/L	0.00534	1.717	mg/L	0.0107	0.62%
Zn 206.200†	7305.3	1.779	mg/L	0.0048	3.558	mg/L	0.0096	0.27%

Sequence No.: 16
Sample ID: WS27 MB1SPK SWC

Autosampler Location: 311
Date Collected: 6/11/2013 10:42:35 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS27 MB1SPK SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS27 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3081910.5	100.0	%	0.21				0.21%
ScR 361.383	375481.3	101.3	%	0.63				0.62%
Ag 328.068†	104650.2	0.5206	mg/L	0.00339	1.041	mg/L	0.0068	0.65%
Al 308.215†	3553.9	2.036	mg/L	0.0136	4.071	mg/L	0.0272	0.67%
As 188.979†	3759.7	2.043	mg/L	0.0067	4.085	mg/L	0.0135	0.33%
B 249.677†	2.2	-0.00078	mg/L	0.000841	-0.00156	mg/L	0.001683	107.53%
Ba 233.527†	9890.5	2.066	mg/L	0.0177	4.133	mg/L	0.0354	0.86%
Be 313.042†	315418.0	0.4866	mg/L	0.00374	0.9732	mg/L	0.00748	0.77%
Ca 317.933†	140400.1	9.802	mg/L	0.0209	19.60	mg/L	0.042	0.21%
Cd 228.802†	18041.3	0.5140	mg/L	0.00230	1.028	mg/L	0.0046	0.45%
Co 228.616†	19735.8	0.5064	mg/L	0.00341	1.013	mg/L	0.0068	0.67%
Cr 267.716†	3443.5	0.5235	mg/L	0.00494	1.047	mg/L	0.0099	0.94%
Cu 324.752†	152964.1	0.5077	mg/L	0.00258	1.015	mg/L	0.0052	0.51%
Fe 273.955†	2678.7	2.056	mg/L	0.0129	4.112	mg/L	0.0259	0.63%
K 766.490†	24525.8	9.921	mg/L	0.0414	19.84	mg/L	0.083	0.42%
Mg 279.077†	14018.5	9.739	mg/L	0.0198	19.48	mg/L	0.040	0.20%
Mn 257.610†	18206.1	0.4898	mg/L	0.00282	0.9796	mg/L	0.00563	0.58%
Mo 202.031†	23.8	0.00101	mg/L	0.000224	0.00202	mg/L	0.000448	22.18%
Na 589.592†	151888.8	9.918	mg/L	0.0365	19.84	mg/L	0.073	0.37%
Na 330.237†	288.4	9.875	mg/L	0.2728	19.75	mg/L	0.546	2.76%
Ni 231.604†	2116.3	0.4888	mg/L	0.00411	0.9777	mg/L	0.00821	0.84%
Pb 220.353†	17309.9	2.047	mg/L	0.0122	4.093	mg/L	0.0243	0.59%
Sb 206.836†	23.0	0.00160	mg/L	0.000454	0.00320	mg/L	0.000908	28.42%
Se 196.026†	3013.3	2.043	mg/L	0.0007	4.086	mg/L	0.0014	0.03%
Si 288.158†	18.7	0.01227	mg/L	0.004876	0.02454	mg/L	0.009751	39.74%
Sn 189.927†	-21.6	-0.00435	mg/L	0.001272	-0.00870	mg/L	0.002543	29.24%
Sr 421.552†	553778.8	0.4946	mg/L	0.00137	0.9892	mg/L	0.00275	0.28%
Ti 334.903†	42.0	0.00118	mg/L	0.000302	0.00235	mg/L	0.000604	25.67%
Tl 190.801†	5032.6	2.022	mg/L	0.0088	4.043	mg/L	0.0175	0.43%
V 292.402†	75210.3	0.5119	mg/L	0.00282	1.024	mg/L	0.0056	0.55%
Zn 206.200†	2025.7	0.4934	mg/L	0.00448	0.9868	mg/L	0.00897	0.91%

Sequence No.: 17
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 6/11/2013 10:46:36 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3065064.6	99.46	%	0.441				0.44%
ScR 361.383	368378.4	99.36	%	0.407				0.41%
Ag 328.068†	212323.6	1.056	mg/L	0.0030	1.056	mg/L	0.0030	0.29%
Al 308.215†	3637.3	2.058	mg/L	0.0104	2.058	mg/L	0.0104	0.50%
As 188.979†	3707.7	2.044	mg/L	0.0105	2.044	mg/L	0.0105	0.52%
B 249.677†	7707.5	1.007	mg/L	0.0051	1.007	mg/L	0.0051	0.50%
Ba 233.527†	4967.6	1.038	mg/L	0.0096	1.038	mg/L	0.0096	0.93%
Be 313.042†	657491.4	1.014	mg/L	0.0055	1.014	mg/L	0.0055	0.54%
Ca 317.933†	28329.6	1.978	mg/L	0.0074	1.978	mg/L	0.0074	0.37%
Cd 228.802†	35572.1	1.024	mg/L	0.0036	1.024	mg/L	0.0036	0.35%
Co 228.616†	39024.4	0.9999	mg/L	0.00241	0.9999	mg/L	0.00241	0.24%
Cr 267.716†	6882.5	1.048	mg/L	0.0042	1.048	mg/L	0.0042	0.40%
Cu 324.752†	302674.4	1.004	mg/L	0.0010	1.004	mg/L	0.0010	0.10%
Fe 273.955†	2710.7	2.077	mg/L	0.0058	2.077	mg/L	0.0058	0.28%
K 766.490†	49505.1	20.02	mg/L	0.081	20.02	mg/L	0.081	0.40%
Mg 279.077†	2894.5	2.018	mg/L	0.0108	2.018	mg/L	0.0108	0.53%
Mn 257.610†	36537.0	0.9826	mg/L	0.00173	0.9826	mg/L	0.00173	0.18%
Mo 202.031†	20075.0	0.9797	mg/L	0.00588	0.9797	mg/L	0.00588	0.60%
Na 589.592†	773427.1	50.50	mg/L	0.191	50.50	mg/L	0.191	0.38%
Na 330.237†	1477.1	51.54	mg/L	0.444	51.54	mg/L	0.444	0.86%
Ni 231.604†	4411.2	1.021	mg/L	0.0034	1.021	mg/L	0.0034	0.33%
Pb 220.353†	16946.8	2.004	mg/L	0.0094	2.004	mg/L	0.0094	0.47%
Sb 206.836†	7097.0	2.091	mg/L	0.0117	2.091	mg/L	0.0117	0.56%
Se 196.026†	2975.5	2.017	mg/L	0.0111	2.017	mg/L	0.0111	0.55%
Si 288.158†	4400.4	2.084	mg/L	0.0244	2.084	mg/L	0.0244	1.17%
Sn 189.927†	3758.0	0.9933	mg/L	0.00956	0.9933	mg/L	0.00956	0.96%
Sr 421.552†	1126268.9	1.006	mg/L	0.0019	1.006	mg/L	0.0019	0.19%
Ti 334.903†	22268.6	0.9995	mg/L	0.00292	0.9995	mg/L	0.00292	0.29%
Tl 190.801†	5200.9	2.086	mg/L	0.0066	2.086	mg/L	0.0066	0.31%
V 292.402†	151283.7	1.030	mg/L	0.0038	1.030	mg/L	0.0038	0.37%
Zn 206.200†	4139.5	1.008	mg/L	0.0053	1.008	mg/L	0.0053	0.52%

Sequence No.: 18
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 6/11/2013 10:50:40 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3087616.5	100.2	%	0.16				0.16%
ScR 361.383	374330.7	101.0	%	0.47				0.46%
Ag 328.068†	26.1	0.00013	mg/L	0.000067	0.00013	mg/L	0.000067	51.27%
Al 308.215†	-2.0	-0.00117	mg/L	0.001395	-0.00117	mg/L	0.001395	118.91%
As 188.979†	0.8	0.00044	mg/L	0.000889	0.00044	mg/L	0.000889	199.91%
B 249.677†	3.2	0.00042	mg/L	0.000306	0.00042	mg/L	0.000306	73.43%
Ba 233.527†	-2.9	-0.00060	mg/L	0.000182	-0.00060	mg/L	0.000182	30.36%
Be 313.042†	38.8	0.00006	mg/L	0.000032	0.00006	mg/L	0.000032	53.94%
Ca 317.933†	9.7	0.00068	mg/L	0.000697	0.00068	mg/L	0.000697	102.73%
Cd 228.802†	9.3	0.00027	mg/L	0.000112	0.00027	mg/L	0.000112	41.53%
Co 228.616†	1.4	0.00004	mg/L	0.000186	0.00004	mg/L	0.000186	516.54%
Cr 267.716†	-1.1	-0.00016	mg/L	0.000749	-0.00016	mg/L	0.000749	459.93%
Cu 324.752†	137.1	0.00046	mg/L	0.000129	0.00046	mg/L	0.000129	28.46%
Fe 273.955†	2.3	0.00174	mg/L	0.000965	0.00174	mg/L	0.000965	55.35%
K 766.490†	16.8	0.00679	mg/L	0.006212	0.00679	mg/L	0.006212	91.44%
Mg 279.077†	-0.4	-0.00027	mg/L	0.002919	-0.00027	mg/L	0.002919	>999.9%
Mn 257.610†	-2.1	-0.00006	mg/L	0.000168	-0.00006	mg/L	0.000168	291.71%
Mo 202.031†	7.6	0.00037	mg/L	0.000127	0.00037	mg/L	0.000127	34.04%
Na 589.592†	-73.7	-0.00481	mg/L	0.002023	-0.00481	mg/L	0.002023	42.06%
Na 330.237†	2.4	0.08439	mg/L	0.272358	0.08439	mg/L	0.272358	322.74%
Ni 231.604†	5.4	0.00126	mg/L	0.000636	0.00126	mg/L	0.000636	50.57%
Pb 220.353†	-2.1	-0.00025	mg/L	0.000599	-0.00025	mg/L	0.000599	239.80%
Sb 206.836†	8.7	0.00258	mg/L	0.001239	0.00258	mg/L	0.001239	47.98%
Se 196.026†	0.7	0.00050	mg/L	0.006756	0.00050	mg/L	0.006756	>999.9%
Si 288.158†	-0.1	-0.00003	mg/L	0.001714	-0.00003	mg/L	0.001714	>999.9%
Sn 189.927†	1.9	0.00049	mg/L	0.000525	0.00049	mg/L	0.000525	107.11%
Sr 421.552†	21.1	0.00002	mg/L	0.000013	0.00002	mg/L	0.000013	69.37%
Ti 334.903†	6.3	0.00028	mg/L	0.000212	0.00028	mg/L	0.000212	74.54%
Tl 190.801†	4.9	0.00197	mg/L	0.000414	0.00197	mg/L	0.000414	21.05%
V 292.402†	18.0	0.00012	mg/L	0.000112	0.00012	mg/L	0.000112	92.53%
Zn 206.200†	1.2	0.00030	mg/L	0.000467	0.00030	mg/L	0.000467	156.38%

Sequence No.: 19
Sample ID: CRI

Autosampler Location: 301
Date Collected: 6/11/2013 10:54:55 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3091787.5	100.3	%	0.16				0.16%
ScR 361.383	374960.9	101.1	%	0.49				0.48%
Ag 328.068†	618.7	0.00308	mg/L	0.000067	0.00308	mg/L	0.000067	2.18%
Al 308.215†	90.4	0.05186	mg/L	0.003907	0.05186	mg/L	0.003907	7.53%
As 188.979†	91.7	0.05001	mg/L	0.001077	0.05001	mg/L	0.001077	2.15%
B 249.677†	139.1	0.01819	mg/L	0.000063	0.01819	mg/L	0.000063	0.35%
Ba 233.527†	12.7	0.00264	mg/L	0.000442	0.00264	mg/L	0.000442	16.76%
Be 313.042†	620.5	0.00096	mg/L	0.000009	0.00096	mg/L	0.000009	0.93%
Ca 317.933†	787.6	0.05499	mg/L	0.000417	0.05499	mg/L	0.000417	0.76%
Cd 228.802†	85.9	0.00224	mg/L	0.000071	0.00224	mg/L	0.000071	3.16%
Co 228.616†	125.0	0.00320	mg/L	0.000021	0.00320	mg/L	0.000021	0.65%
Cr 267.716†	30.7	0.00467	mg/L	0.000760	0.00467	mg/L	0.000760	16.26%
Cu 324.752†	748.7	0.00248	mg/L	0.000023	0.00248	mg/L	0.000023	0.91%
Fe 273.955†	67.7	0.05203	mg/L	0.000822	0.05203	mg/L	0.000822	1.58%
K 766.490†	1249.8	0.5056	mg/L	0.00554	0.5056	mg/L	0.00554	1.10%
Mg 279.077†	79.1	0.05494	mg/L	0.002473	0.05494	mg/L	0.002473	4.50%
Mn 257.610†	37.5	0.00101	mg/L	0.000115	0.00101	mg/L	0.000115	11.34%
Mo 202.031†	98.5	0.00480	mg/L	0.000029	0.00480	mg/L	0.000029	0.60%
Na 589.592†	7422.5	0.4847	mg/L	0.00358	0.4847	mg/L	0.00358	0.74%
Na 330.237†	16.1	0.5585	mg/L	0.07127	0.5585	mg/L	0.07127	12.76%
Ni 231.604†	50.9	0.01179	mg/L	0.000130	0.01179	mg/L	0.000130	1.10%
Pb 220.353†	169.9	0.02010	mg/L	0.000157	0.02010	mg/L	0.000157	0.78%
Sb 206.836†	169.8	0.05009	mg/L	0.000761	0.05009	mg/L	0.000761	1.52%
Se 196.026†	69.5	0.04711	mg/L	0.001135	0.04711	mg/L	0.001135	2.41%
Si 288.158†	128.9	0.06092	mg/L	0.003374	0.06092	mg/L	0.003374	5.54%
Sn 189.927†	40.5	0.01071	mg/L	0.000924	0.01071	mg/L	0.000924	8.63%
Sr 421.552†	1099.2	0.00098	mg/L	0.000024	0.00098	mg/L	0.000024	2.46%
Ti 334.903†	114.2	0.00512	mg/L	0.000352	0.00512	mg/L	0.000352	6.87%
Tl 190.801†	126.2	0.05078	mg/L	0.001399	0.05078	mg/L	0.001399	2.76%
V 292.402†	429.1	0.00292	mg/L	0.000180	0.00292	mg/L	0.000180	6.14%
Zn 206.200†	47.0	0.01146	mg/L	0.000489	0.01146	mg/L	0.000489	4.26%

Sequence No.: 20
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 6/11/2013 10:59:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2985790.8	96.89	%	0.358				0.37%
ScR 361.383	364889.5	98.42	%	0.600				0.61%
Ag 328.068†	-212.3	-0.00105	mg/L	0.000284	-0.00105	mg/L	0.000284	26.98%
Al 308.215†	350808.9	201.7	mg/L	0.29	201.7	mg/L	0.29	0.14%
As 188.979†	46.0	0.01793	mg/L	0.003430	0.01793	mg/L	0.003430	19.13%
B 249.677†	-54.9	-0.00718	mg/L	0.000739	-0.00718	mg/L	0.000739	10.30%
Ba 233.527†	156.3	-0.00090	mg/L	0.000942	-0.00090	mg/L	0.000942	104.56%
Be 313.042†	66.3	0.00010	mg/L	0.000014	0.00010	mg/L	0.000014	14.17%
Ca 317.933†	1434497.6	100.2	mg/L	0.42	100.2	mg/L	0.42	0.42%
Cd 228.802†	22.7	0.00052	mg/L	0.000088	0.00052	mg/L	0.000088	16.71%
Co 228.616†	96.3	0.00006	mg/L	0.000196	0.00006	mg/L	0.000196	314.30%
Cr 267.716†	7.7	-0.00049	mg/L	0.001032	-0.00049	mg/L	0.001032	209.97%
Cu 324.752†	-2298.5	0.00061	mg/L	0.000081	0.00061	mg/L	0.000081	13.25%
Fe 273.955†	259174.9	199.2	mg/L	1.45	199.2	mg/L	1.45	0.73%
K 766.490†	8.1	0.00327	mg/L	0.008487	0.00327	mg/L	0.008487	259.45%
Mg 279.077†	150748.3	104.6	mg/L	0.59	104.6	mg/L	0.59	0.56%
Mn 257.610†	32.8	0.00019	mg/L	0.000372	0.00019	mg/L	0.000372	194.63%
Mo 202.031†	35.4	0.00045	mg/L	0.000331	0.00045	mg/L	0.000331	72.82%
Na 589.592†	16.7	0.00109	mg/L	0.002095	0.00109	mg/L	0.002095	192.00%
Na 330.237†	1.8	-0.3704	mg/L	0.24855	-0.3704	mg/L	0.24855	67.11%
Ni 231.604†	6.3	0.00148	mg/L	0.000903	0.00148	mg/L	0.000903	60.91%
Pb 220.353†	-343.7	-0.00377	mg/L	0.001176	-0.00377	mg/L	0.001176	31.20%
Sb 206.836†	33.5	0.00966	mg/L	0.001225	0.00966	mg/L	0.001225	12.68%
Se 196.026†	56.8	0.01640	mg/L	0.002357	0.01640	mg/L	0.002357	14.37%
Si 288.158†	-35.1	-0.00473	mg/L	0.001811	-0.00473	mg/L	0.001811	38.33%
Sn 189.927†	-97.6	-0.01289	mg/L	0.001068	-0.01289	mg/L	0.001068	8.29%
Sr 421.552†	6062.3	0.00541	mg/L	Cont. 0.000056	0.00541	mg/L	0.000056	1.04%
Ti 334.903†	194.9	0.00253	mg/L	0.000436	0.00253	mg/L	0.000436	17.24%
Tl 190.801†	-64.2	0.00148	mg/L	0.001651	0.00148	mg/L	0.001651	111.76%
V 292.402†	1387.5	-0.00115	mg/L	0.000422	-0.00115	mg/L	0.000422	36.62%
Zn 206.200†	20.6	-0.00377	mg/L	0.000274	-0.00377	mg/L	0.000274	7.27%

Sequence No.: 21
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 6/11/2013 11:03:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2987270.5	96.93	%	0.291				0.30%
ScR 361.383	364695.0	98.37	%	0.409				0.42%
Ag 328.068†	215011.6	1.070	mg/L	0.0041	1.070	mg/L	0.0041	0.38%
Al 308.215†	351634.1	202.2	mg/L	0.48	202.2	mg/L	0.48	0.24%
As 188.979†	1898.5	1.024	mg/L	0.0033	1.024	mg/L	0.0033	0.32%
B 249.677†	-52.0	-0.00880	mg/L	0.000579	-0.00880	mg/L	0.000579	6.58%
Ba 233.527†	5043.2	1.020	mg/L	0.0048	1.020	mg/L	0.0048	0.47%
Be 313.042†	644681.2	0.9946	mg/L	0.00219	0.9946	mg/L	0.00219	0.22%
Ca 317.933†	1432537.9	100.0	mg/L	0.34	100.0	mg/L	0.34	0.34%
Cd 228.802†	35159.4	1.018	mg/L	0.0033	1.018	mg/L	0.0033	0.32%
Co 228.616†	37165.4	0.9514	mg/L	0.00480	0.9514	mg/L	0.00480	0.50%
Cr 267.716†	6688.6	1.017	mg/L	0.0052	1.017	mg/L	0.0052	0.51%
Cu 324.752†	314070.6	1.051	mg/L	0.0046	1.051	mg/L	0.0046	0.44%
Fe 273.955†	258714.5	198.9	mg/L	0.95	198.9	mg/L	0.95	0.48%
K 766.490†	-56.5	-0.02286	mg/L	0.013631	-0.02286	mg/L	0.013631	59.62%
Mg 279.077†	144110.2	100.00	mg/L	0.342	100.00	mg/L	0.342	0.34%
Mn 257.610†	35868.1	0.9638	mg/L	0.00373	0.9638	mg/L	0.00373	0.39%
Mo 202.031†	37.1	0.00049	mg/L	0.000144	0.00049	mg/L	0.000144	29.48%
Na 589.592†	-117.4	-0.00766	mg/L	0.002268	-0.00766	mg/L	0.002268	29.59%
Na 330.237†	15.9	-0.1710	mg/L	0.13899	-0.1710	mg/L	0.13899	81.26%
Ni 231.604†	4184.7	0.9684	mg/L	0.00488	0.9684	mg/L	0.00488	0.50%
Pb 220.353†	8045.1	0.9884	mg/L	0.00238	0.9884	mg/L	0.00238	0.24%
Sb 206.836†	3508.5	1.024	mg/L	0.0062	1.024	mg/L	0.0062	0.61%
Se 196.026†	1529.9	1.014	mg/L	0.0060	1.014	mg/L	0.0060	0.59%
Si 288.158†	-45.4	-0.00562	mg/L	0.001788	-0.00562	mg/L	0.001788	31.79%
Sn 189.927†	-97.0	-0.01221	mg/L	0.001805	-0.01221	mg/L	0.001805	14.78%
Sr 421.552†	6081.3	0.00543	mg/L	Conf. 0.000021	0.00543	mg/L	0.000021	0.39%
Ti 334.903†	193.6	0.00228	mg/L	0.000186	0.00228	mg/L	0.000186	8.13%
Tl 190.801†	2276.8	0.9343	mg/L	0.00488	0.9343	mg/L	0.00488	0.52%
V 292.402†	147796.3	0.9956	mg/L	0.00506	0.9956	mg/L	0.00506	0.51%
Zn 206.200†	3946.6	0.9601	mg/L	0.00686	0.9601	mg/L	0.00686	0.71%

Sequence No.: 22
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 6/11/2013 11:07:30 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3058168.5	99.23	%	0.251				0.25%
ScR 361.383	366946.9	98.98	%	0.214				0.22%
Ag 328.068†	210929.0	1.049	mg/L	0.0063	1.049	mg/L	0.0063	0.60%
Al 308.215†	3663.0	2.072	mg/L	0.0060	2.072	mg/L	0.0060	0.29%
As 188.979†	3677.3	2.027	mg/L	0.0071	2.027	mg/L	0.0071	0.35%
B 249.677†	7702.9	1.006	mg/L	0.0038	1.006	mg/L	0.0038	0.37%
Ba 233.527†	4987.6	1.042	mg/L	0.0035	1.042	mg/L	0.0035	0.33%
Be 313.042†	659828.7	1.018	mg/L	0.0019	1.018	mg/L	0.0019	0.18%
Ca 317.933†	28508.2	1.990	mg/L	0.0067	1.990	mg/L	0.0067	0.34%
Cd 228.802†	35558.8	1.024	mg/L	0.0089	1.024	mg/L	0.0089	0.87%
Co 228.616†	39267.8	1.006	mg/L	0.0034	1.006	mg/L	0.0034	0.33%
Cr 267.716†	6906.0	1.051	mg/L	0.0060	1.051	mg/L	0.0060	0.57%
Cu 324.752†	313775.1	1.041	mg/L	0.0031	1.041	mg/L	0.0031	0.29%
Fe 273.955†	2730.4	2.093	mg/L	0.0084	2.093	mg/L	0.0084	0.40%
K 766.490†	49815.7	20.15	mg/L	0.029	20.15	mg/L	0.029	0.15%
Mg 279.077†	2893.9	2.017	mg/L	0.0120	2.017	mg/L	0.0120	0.59%
Mn 257.610†	36467.2	0.9808	mg/L	0.00118	0.9808	mg/L	0.00118	0.12%
Mo 202.031†	20618.8	1.006	mg/L	0.0021	1.006	mg/L	0.0021	0.21%
Na 589.592†	772663.8	50.45	mg/L	0.148	50.45	mg/L	0.148	0.29%
Na 330.237†	1469.8	51.29	mg/L	0.161	51.29	mg/L	0.161	0.31%
Ni 231.604†	4421.0	1.023	mg/L	0.0048	1.023	mg/L	0.0048	0.47%
Pb 220.353†	17408.4	2.059	mg/L	0.0064	2.059	mg/L	0.0064	0.31%
Sb 206.836†	7048.5	2.076	mg/L	0.0019	2.076	mg/L	0.0019	0.09%
Se 196.026†	2957.1	2.004	mg/L	0.0062	2.004	mg/L	0.0062	0.31%
Si 288.158†	4405.5	2.086	mg/L	0.0146	2.086	mg/L	0.0146	0.70%
Sn 189.927†	3734.6	0.9871	mg/L	0.00159	0.9871	mg/L	0.00159	0.16%
Sr 421.552†	1126189.5	1.006	mg/L	0.0004	1.006	mg/L	0.0004	0.04%
Ti 334.903†	22251.8	0.9987	mg/L	0.00145	0.9987	mg/L	0.00145	0.14%
Tl 190.801†	5169.1	2.073	mg/L	0.0052	2.073	mg/L	0.0052	0.25%
V 292.402†	150549.1	1.025	mg/L	0.0054	1.025	mg/L	0.0054	0.53%
Zn 206.200†	4162.2	1.014	mg/L	0.0045	1.014	mg/L	0.0045	0.44%

Sequence No.: 23
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 6/11/2013 11:11:35 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3093157.3	100.4	%	0.12				0.12%
ScR 361.383	375367.1	101.2	%	0.10				0.10%
Ag 328.068†	-5.0	-0.00003	mg/L	0.000097	-0.00003	mg/L	0.000097	388.61%
Al 308.215†	-3.7	-0.00213	mg/L	0.004894	-0.00213	mg/L	0.004894	229.87%
As 188.979†	1.5	0.00085	mg/L	0.001105	0.00085	mg/L	0.001105	130.36%
B 249.677†	-6.4	-0.00083	mg/L	0.000394	-0.00083	mg/L	0.000394	47.33%
Ba 233.527†	-3.1	-0.00065	mg/L	0.000528	-0.00065	mg/L	0.000528	80.94%
Be 313.042†	45.9	0.00007	mg/L	0.000008	0.00007	mg/L	0.000008	11.14%
Ca 317.933†	14.9	0.00104	mg/L	0.000729	0.00104	mg/L	0.000729	69.89%
Cd 228.802†	7.4	0.00021	mg/L	0.000057	0.00021	mg/L	0.000057	26.95%
Co 228.616†	7.2	0.00018	mg/L	0.000045	0.00018	mg/L	0.000045	24.47%
Cr 267.716†	1.4	0.00021	mg/L	0.000410	0.00021	mg/L	0.000410	194.04%
Cu 324.752†	133.4	0.00044	mg/L	0.000060	0.00044	mg/L	0.000060	13.61%
Fe 273.955†	2.9	0.00225	mg/L	0.000835	0.00225	mg/L	0.000835	37.18%
K 766.490†	15.4	0.00621	mg/L	0.013161	0.00621	mg/L	0.013161	211.79%
Mg 279.077†	1.9	0.00134	mg/L	0.001077	0.00134	mg/L	0.001077	80.17%
Mn 257.610†	-1.8	-0.00005	mg/L	0.000106	-0.00005	mg/L	0.000106	215.21%
Mo 202.031†	6.8	0.00033	mg/L	0.000208	0.00033	mg/L	0.000208	63.09%
Na 589.592†	-75.5	-0.00493	mg/L	0.002377	-0.00493	mg/L	0.002377	48.20%
Na 330.237†	-4.4	-0.1529	mg/L	0.35443	-0.1529	mg/L	0.35443	231.79%
Ni 231.604†	9.9	0.00229	mg/L	0.000450	0.00229	mg/L	0.000450	19.69%
Pb 220.353†	-1.1	-0.00013	mg/L	0.000618	-0.00013	mg/L	0.000618	476.26%
Sb 206.836†	14.2	0.00420	mg/L	0.001395	0.00420	mg/L	0.001395	33.24%
Se 196.026†	-0.8	-0.00053	mg/L	0.000468	-0.00053	mg/L	0.000468	88.44%
Si 288.158†	-2.4	-0.00112	mg/L	0.000122	-0.00112	mg/L	0.000122	10.89%
Sn 189.927†	2.2	0.00057	mg/L	0.000776	0.00057	mg/L	0.000776	135.50%
Sr 421.552†	54.1	0.00005	mg/L	0.000026	0.00005	mg/L	0.000026	54.46%
Ti 334.903†	12.2	0.00055	mg/L	0.000252	0.00055	mg/L	0.000252	45.94%
Tl 190.801†	3.7	0.00148	mg/L	0.001395	0.00148	mg/L	0.001395	94.15%
V 292.402†	14.7	0.00010	mg/L	0.000023	0.00010	mg/L	0.000023	22.61%
Zn 206.200†	2.0	0.00050	mg/L	0.000111	0.00050	mg/L	0.000111	22.32%

Sequence No.: 24
Sample ID: WT10 MB TWC

Autosampler Location: 312
Date Collected: 6/11/2013 11:15:50 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WT10 MB TWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WT10 MB TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3100810.2	100.6	%	0.24				0.24%
ScR 361.383	373397.4	100.7	%	0.18				0.18%
Ag 328.068†	-6.5	-0.00003	mg/L	0.000059	-0.00003	mg/L	0.000059	183.49%
Al 308.215†	5.0	0.00290	mg/L	0.001064	0.00290	mg/L	0.001064	36.71%
As 188.979†	-3.1	-0.00167	mg/L	0.000623	-0.00167	mg/L	0.000623	37.18%
B 249.677†	-3.1	-0.00041	mg/L	0.000642	-0.00041	mg/L	0.000642	156.43%
Ba 233.527†	-1.6	-0.00034	mg/L	0.000070	-0.00034	mg/L	0.000070	20.34%
Be 313.042†	11.4	0.00002	mg/L	0.000049	0.00002	mg/L	0.000049	280.67%
Ca 317.933†	44.0	0.00307	mg/L	0.000371	0.00307	mg/L	0.000371	12.06%
Cd 228.802†	1.7	0.00006	mg/L	0.000024	0.00006	mg/L	0.000024	40.71%
Co 228.616†	-1.2	-0.00003	mg/L	0.000129	-0.00003	mg/L	0.000129	433.11%
Cr 267.716†	-2.6	-0.00040	mg/L	0.000298	-0.00040	mg/L	0.000298	74.49%
Cu 324.752†	163.3	0.00054	mg/L	0.000050	0.00054	mg/L	0.000050	9.29%
Fe 273.955†	3.2	0.00249	mg/L	0.001819	0.00249	mg/L	0.001819	72.95%
K 766.490†	-24.4	-0.00986	mg/L	0.005033	-0.00986	mg/L	0.005033	51.05%
Mg 279.077†	6.1	0.00423	mg/L	0.004045	0.00423	mg/L	0.004045	95.69%
Mn 257.610†	3.6	0.00010	mg/L	0.000131	0.00010	mg/L	0.000131	134.91%
Mo 202.031†	-2.5	-0.00012	mg/L	0.000079	-0.00012	mg/L	0.000079	64.30%
Na 589.592†	-77.7	-0.00507	mg/L	0.002476	-0.00507	mg/L	0.002476	48.80%
Na 330.237†	-5.9	-0.2062	mg/L	0.08212	-0.2062	mg/L	0.08212	39.83%
Ni 231.604†	5.4	0.00125	mg/L	0.000846	0.00125	mg/L	0.000846	67.75%
Pb 220.353†	0.6	0.00008	mg/L	0.000371	0.00008	mg/L	0.000371	489.01%
Sb 206.836†	-2.7	-0.00077	mg/L	0.000587	-0.00077	mg/L	0.000587	76.67%
Se 196.026†	3.0	0.00201	mg/L	0.003849	0.00201	mg/L	0.003849	191.69%
Si 288.158†	138.3	0.06532	mg/L	0.005361	0.06532	mg/L	0.005361	8.21%
Sn 189.927†	4.3	0.00114	mg/L	0.000625	0.00114	mg/L	0.000625	54.80%
Sr 421.552†	2.1	0.00000	mg/L	0.000026	0.00000	mg/L	0.000026	>999.9%
Ti 334.903†	-5.5	-0.00025	mg/L	0.000413	-0.00025	mg/L	0.000413	166.28%
Tl 190.801†	2.5	0.00103	mg/L	0.000460	0.00103	mg/L	0.000460	44.87%
V 292.402†	10.8	0.00007	mg/L	0.000096	0.00007	mg/L	0.000096	133.88%
Zn 206.200†	5.8	0.00142	mg/L	0.000028	0.00142	mg/L	0.000028	1.98%

Sequence No.: 25
Sample ID: WT10 ADUP TWC

Del

Dilution: 5.000000X

Autosampler Location: 313
Date Collected: 6/11/2013 11:20:06 AM
Data Type: Original

Nebulizer Parameters: WT10 ADUP TWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WT10 ADUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2579090.5	83.69	%	0.747				0.89%
ScR 361.383	339722.8	91.63	%	0.417				0.46%
Ag 328.068†	-73.1	-0.00036	mg/L	0.000155	-0.00182	mg/L	0.000773	42.50%
Al 308.215†	29.0	0.01516	mg/L	0.001422	0.07580	mg/L	0.007112	9.38%
As 188.979†	87.3	0.04320	mg/L	0.001837	0.2160	mg/L	0.00919	4.25%
B 249.677†	726766.2	95.02	mg/L	0.402	475.1	mg/L	2.01	0.42%
Ba 233.527†	5.8	0.00115	mg/L	0.000243	0.00577	mg/L	0.001214	21.05%
Be 313.042†	108.2	0.00017	mg/L	0.000008	0.00083	mg/L	0.000042	4.98%
Ca 317.933†	797738.3	55.69	mg/L	0.041	278.5	mg/L	0.20	0.07%
Cd 228.802†	10.4	0.00013	mg/L	0.000089	0.00067	mg/L	0.000447	66.41%
Co 228.616†	44.5	0.00113	mg/L	0.000085	0.00563	mg/L	0.000423	7.52%
Cr 267.716†	-1.4	-0.00080	mg/L	0.000821	-0.00400	mg/L	0.004106	102.61%
Cu 324.752†	11133.1	0.03692	mg/L	0.000329	0.1846	mg/L	0.00164	0.89%
Fe 273.955†	383.2	0.2945	mg/L	0.00154	1.473	mg/L	0.0077	0.52%
K 766.490†	7643.6	3.092	mg/L	0.0588	15.46	mg/L	0.294	1.90%
Mg 279.077†	933.9	0.6422	mg/L	0.00476	3.211	mg/L	0.0238	0.74%
Mn 257.610†	2697.2	0.07229	mg/L	0.000225	0.3615	mg/L	0.00112	0.31%
Mo 202.031†	1889.6	0.09152	mg/L	0.000628	0.4576	mg/L	0.00314	0.69%
Na 589.592†	Saturated3							
Na 330.237†	119259.4	4164	mg/L	13.13	20820	mg/L	65.65	0.32%
Ni 231.604†	423.2	0.09792	mg/L	0.001656	0.4896	mg/L	0.00828	1.69%
Pb 220.353†	273.1	0.03222	mg/L	0.000736	0.1611	mg/L	0.00368	2.28%
Sb 206.836†	-38.0	-0.01134	mg/L	0.001382	-0.05672	mg/L	0.006908	12.18%
Se 196.026†	13.9	0.00941	mg/L	0.002162	0.04705	mg/L	0.010811	22.98%
Si 288.158†	86.2	0.04080	mg/L	0.002288	0.2040	mg/L	0.01144	5.61%
Sn 189.927†	-63.6	-0.00965	mg/L	0.001126	-0.04823	mg/L	0.005632	11.68%
Sr 421.552†	300265.9	0.2682	mg/L	0.00095	1.341	mg/L	0.0048	0.36%
Ti 334.903†	100.3	0.00096	mg/L	0.000274	0.00478	mg/L	0.001371	28.66%
Tl 190.801†	8.1	0.00346	mg/L	0.001742	0.01729	mg/L	0.008711	50.39%
V 292.402†	69.1	0.00051	mg/L	0.000159	0.00255	mg/L	0.000796	31.20%
Zn 206.200†	176.5	0.04228	mg/L	0.000281	0.2114	mg/L	0.00141	0.67%

Sequence No.: 26
Sample ID: WT10 A TWC

Dilution: 5.000000X

Del

Autosampler Location: 314
Date Collected: 6/11/2013 11:24:21 AM
Data Type: Original

Nebulizer Parameters: WT10 A TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WT10 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2622917.9	85.11	%	0.146				0.17%
ScR 361.383	349224.6	94.20	%	0.387				0.41%
Ag 328.068†	-95.2	-0.00047	mg/L	0.000117	-0.00237	mg/L	0.000586	24.75%
Al 308.215†	23.6	0.01221	mg/L	0.001181	0.06106	mg/L	0.005906	9.67%
As 188.979†	80.7	0.04005	mg/L	0.002942	0.2002	mg/L	0.01471	7.35%
B 249.677†	647087.1	84.60	mg/L	0.181	423.0	mg/L	0.90	0.21%
Ba 233.527†	4.7	0.00093	mg/L	0.000471	0.00465	mg/L	0.002355	50.60%
Be 313.042†	59.1	0.00009	mg/L	0.000021	0.00046	mg/L	0.000103	22.72%
Ca 317.933†	712512.8	49.74	mg/L	0.075	248.7	mg/L	0.38	0.15%
Cd 228.802†	15.1	0.00028	mg/L	0.000087	0.00140	mg/L	0.000436	31.16%
Co 228.616†	40.1	0.00102	mg/L	0.000078	0.00508	mg/L	0.000391	7.70%
Cr 267.716†	-2.3	-0.00087	mg/L	0.000183	-0.00437	mg/L	0.000913	20.90%
Cu 324.752†	9795.7	0.03249	mg/L	0.000105	0.1624	mg/L	0.00052	0.32%
Fe 273.955†	341.8	0.2627	mg/L	0.00161	1.314	mg/L	0.0081	0.61%
K 766.490†	7080.1	2.864	mg/L	0.0184	14.32	mg/L	0.092	0.64%
Mg 279.077†	837.2	0.5758	mg/L	0.00753	2.879	mg/L	0.0376	1.31%
Mn 257.610†	2421.7	0.06491	mg/L	0.000303	0.3246	mg/L	0.00152	0.47%
Mo 202.031†	1688.2	0.08176	mg/L	0.000983	0.4088	mg/L	0.00491	1.20%
Na 589.592†	Saturated3							
Na 330.237†	105625.6	3688	mg/L	7.96	18440	mg/L	39.78	0.22%
Ni 231.604†	376.3	0.08706	mg/L	0.000529	0.4353	mg/L	0.00265	0.61%
Pb 220.353†	242.2	0.02857	mg/L	0.001283	0.1428	mg/L	0.00641	4.49%
Sb 206.836†	-29.1	-0.00873	mg/L	0.001037	-0.04363	mg/L	0.005183	11.88%
Se 196.026†	9.9	0.00669	mg/L	0.001359	0.03346	mg/L	0.006796	20.31%
Si 288.158†	80.4	0.03804	mg/L	0.005264	0.1902	mg/L	0.02632	13.84%
Sn 189.927†	-62.2	-0.01004	mg/L	0.001936	-0.05019	mg/L	0.009678	19.28%
Sr 421.552†	266332.4	0.2379	mg/L	0.00075	1.189	mg/L	0.0038	0.32%
Ti 334.903†	91.9	0.00096	mg/L	0.000245	0.00478	mg/L	0.001225	25.62%
Tl 190.801†	10.9	0.00456	mg/L	0.002873	0.02278	mg/L	0.014364	63.07%
V 292.402†	53.5	0.00040	mg/L	0.000154	0.00200	mg/L	0.000771	38.59%
Zn 206.200†	156.5	0.03748	mg/L	0.000646	0.1874	mg/L	0.00323	1.72%

Sequence No.: 27
Sample ID: WT10 ASPK TWC

Dil

Dilution: 5.000000X

Autosampler Location: 315
Date Collected: 6/11/2013 11:28:37 AM
Data Type: Original

Nebulizer Parameters: WT10 ASPK TWC

Analyte	Back Pressure	Flow
All	238.0 kPa	0.75 L/min

Mean Data: WT10 ASPK TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2589596.9	84.03	%	0.140				0.17%
ScR 361.383	345713.8	93.25	%	0.730				0.78%
Ag 328.068†	22773.3	0.1133	mg/L	0.00024	0.5664	mg/L	0.00120	0.21%
Al 308.215†	750.3	0.4285	mg/L	0.00531	2.142	mg/L	0.0266	1.24%
As 188.979†	937.8	0.5056	mg/L	0.00390	2.528	mg/L	0.0195	0.77%
B 249.677†	675223.9	88.28	mg/L	0.338	441.4	mg/L	1.69	0.38%
Ba 233.527†	789.0	0.1647	mg/L	0.00145	0.8237	mg/L	0.00724	0.88%
Be 313.042†	57227.4	0.08829	mg/L	0.000334	0.4414	mg/L	0.00167	0.38%
Ca 317.933†	775259.9	54.13	mg/L	0.087	270.6	mg/L	0.43	0.16%
Cd 228.802†	4093.3	0.1164	mg/L	0.00058	0.5821	mg/L	0.00291	0.50%
Co 228.616†	3782.9	0.09706	mg/L	0.000296	0.4853	mg/L	0.00148	0.30%
Cr 267.716†	675.2	0.1021	mg/L	0.00117	0.5104	mg/L	0.00585	1.15%
Cu 324.752†	42289.1	0.1403	mg/L	0.00018	0.7016	mg/L	0.00090	0.13%
Fe 273.955†	878.5	0.6746	mg/L	0.00768	3.373	mg/L	0.0384	1.14%
K 766.490†	12856.1	5.200	mg/L	0.1078	26.00	mg/L	0.539	2.07%
Mg 279.077†	3743.7	2.595	mg/L	0.0212	12.97	mg/L	0.106	0.82%
Mn 257.610†	6177.0	0.1659	mg/L	0.00167	0.8296	mg/L	0.00834	1.01%
Mo 202.031†	1753.1	0.08487	mg/L	0.000465	0.4243	mg/L	0.00232	0.55%
Na 589.592†	Saturated3							
Na 330.237†	110674.0	3864	mg/L	4.93	19320	mg/L	24.65	0.13%
Ni 231.604†	801.8	0.1854	mg/L	0.00115	0.9269	mg/L	0.00573	0.62%
Pb 220.353†	3199.8	0.3783	mg/L	0.00118	1.891	mg/L	0.0059	0.31%
Sb 206.836†	-33.8	-0.01112	mg/L	0.001942	-0.05560	mg/L	0.009708	17.46%
Se 196.026†	762.5	0.5170	mg/L	0.00357	2.585	mg/L	0.0179	0.69%
Si 288.158†	86.0	0.04146	mg/L	0.004636	0.2073	mg/L	0.02318	11.18%
Sn 189.927†	-72.9	-0.01227	mg/L	0.001867	-0.06137	mg/L	0.009334	15.21%
Sr 421.552†	379421.6	0.3389	mg/L	0.00030	1.694	mg/L	0.0015	0.09%
Ti 334.903†	108.2	0.00140	mg/L	0.000184	0.00698	mg/L	0.000921	13.19%
Tl 190.801†	863.9	0.3471	mg/L	0.00127	1.735	mg/L	0.0064	0.37%
V 292.402†	15075.9	0.1026	mg/L	0.00017	0.5132	mg/L	0.00083	0.16%
Zn 206.200†	607.0	0.1472	mg/L	0.00090	0.7359	mg/L	0.00450	0.61%

Sequence No.: 28
Sample ID: WT10 MBSPK TWC

Autosampler Location: 316
Date Collected: 6/11/2013 11:34:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WT10 MBSPK TWC

Analyte	Back Pressure	Flow
All	239.0 kPa	0.75 L/min

Mean Data: WT10 MBSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3091461.2	100.3	%	0.26				0.26%
ScR 361.383	374112.8	100.9	%	0.68				0.67%
Ag 328.068†	105258.6	0.5236	mg/L	0.00400	0.5236	mg/L	0.00400	0.76%
Al 308.215†	3549.3	2.033	mg/L	0.0168	2.033	mg/L	0.0168	0.83%
As 188.979†	3774.3	2.051	mg/L	0.0080	2.051	mg/L	0.0080	0.39%
B 249.677†	1035.1	0.1343	mg/L	0.01066	0.1343	mg/L	0.01066	7.94%
Ba 233.527†	10111.6	2.113	mg/L	0.0058	2.113	mg/L	0.0058	0.27%
Be 313.042†	316929.6	0.4890	mg/L	0.00157	0.4890	mg/L	0.00157	0.32%
Ca 317.933†	142171.4	9.926	mg/L	0.0131	9.926	mg/L	0.0131	0.13%
Cd 228.802†	18057.8	0.5144	mg/L	0.00329	0.5144	mg/L	0.00329	0.64%
Co 228.616†	19831.0	0.5088	mg/L	0.00209	0.5088	mg/L	0.00209	0.41%
Cr 267.716†	3446.4	0.5238	mg/L	0.00182	0.5238	mg/L	0.00182	0.35%
Cu 324.752†	154033.7	0.5112	mg/L	0.00399	0.5112	mg/L	0.00399	0.78%
Fe 273.955†	2659.7	2.041	mg/L	0.0177	2.041	mg/L	0.0177	0.86%
K 766.490†	24811.2	10.04	mg/L	0.042	10.04	mg/L	0.042	0.42%
Mg 279.077†	14788.1	10.27	mg/L	0.050	10.27	mg/L	0.050	0.49%
Mn 257.610†	18983.6	0.5107	mg/L	0.00355	0.5107	mg/L	0.00355	0.69%
Mo 202.031†	22.9	0.00096	mg/L	0.000035	0.00096	mg/L	0.000035	3.61%
Na 589.592†	161221.9	10.53	mg/L	0.067	10.53	mg/L	0.067	0.64%
Na 330.237†	306.1	10.49	mg/L	0.265	10.49	mg/L	0.265	2.53%
Ni 231.604†	2134.3	0.4930	mg/L	0.00200	0.4930	mg/L	0.00200	0.41%
Pb 220.353†	17365.5	2.053	mg/L	0.0101	2.053	mg/L	0.0101	0.49%
Sb 206.836†	15.6	-0.00058	mg/L	0.000739	-0.00058	mg/L	0.000739	127.10%
Se 196.026†	2994.3	2.030	mg/L	0.0061	2.030	mg/L	0.0061	0.30%
Si 288.158†	150.8	0.07471	mg/L	0.003389	0.07471	mg/L	0.003389	4.54%
Sn 189.927†	-27.5	-0.00590	mg/L	0.000677	-0.00590	mg/L	0.000677	11.48%
Sr 421.552†	560453.0	0.5006	mg/L	0.00012	0.5006	mg/L	0.00012	0.02%
Ti 334.903†	22.0	0.00027	mg/L	0.000313	0.00027	mg/L	0.000313	116.23%
Tl 190.801†	5057.2	2.031	mg/L	0.0076	2.031	mg/L	0.0076	0.38%
V 292.402†	76227.3	0.5188	mg/L	0.00346	0.5188	mg/L	0.00346	0.67%
Zn 206.200†	2040.6	0.4970	mg/L	0.00128	0.4970	mg/L	0.00128	0.26%

Sequence No.: 29
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 6/11/2013 11:38:02 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	238.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3075742.5	99.80	%	0.645				0.65%
ScR 361.383	367938.8	99.24	%	0.784				0.79%
Ag 328.068†	214350.5	1.066	mg/L	0.0082	1.066	mg/L	0.0082	0.77%
Al 308.215†	3678.5	2.081	mg/L	0.0194	2.081	mg/L	0.0194	0.93%
As 188.979†	3722.0	2.051	mg/L	0.0172	2.051	mg/L	0.0172	0.84%
B 249.677†	8351.1	1.091	mg/L	0.0078	1.091	mg/L	0.0078	0.71%
Ba 233.527†	5049.9	1.055	mg/L	0.0078	1.055	mg/L	0.0078	0.74%
Be 313.042†	661406.5	1.020	mg/L	0.0040	1.020	mg/L	0.0040	0.39%
Ca 317.933†	28732.3	2.006	mg/L	0.0018	2.006	mg/L	0.0018	0.09%
Cd 228.802†	35907.4	1.034	mg/L	0.0040	1.034	mg/L	0.0040	0.39%
Co 228.616†	39753.9	1.019	mg/L	0.0064	1.019	mg/L	0.0064	0.63%
Cr 267.716†	6986.8	1.064	mg/L	0.0088	1.064	mg/L	0.0088	0.83%
Cu 324.752†	304136.3	1.009	mg/L	0.0024	1.009	mg/L	0.0024	0.24%
Fe 273.955†	2748.9	2.107	mg/L	0.0156	2.107	mg/L	0.0156	0.74%
K 766.490†	49892.7	20.18	mg/L	0.070	20.18	mg/L	0.070	0.35%
Mg 279.077†	2930.9	2.043	mg/L	0.0163	2.043	mg/L	0.0163	0.80%
Mn 257.610†	36573.5	0.9836	mg/L	0.00429	0.9836	mg/L	0.00429	0.44%
Mo 202.031†	20270.1	0.9892	mg/L	0.00304	0.9892	mg/L	0.00304	0.31%
Na 589.592†	779284.6	50.89	mg/L	0.165	50.89	mg/L	0.165	0.32%
Na 330.237†	1496.2	52.21	mg/L	0.423	52.21	mg/L	0.423	0.81%
Ni 231.604†	4480.0	1.037	mg/L	0.0092	1.037	mg/L	0.0092	0.89%
Pb 220.353†	17201.8	2.034	mg/L	0.0146	2.034	mg/L	0.0146	0.72%
Sb 206.836†	7108.4	2.094	mg/L	0.0173	2.094	mg/L	0.0173	0.83%
Se 196.026†	2990.3	2.027	mg/L	0.0155	2.027	mg/L	0.0155	0.77%
Si 288.158†	4449.1	2.107	mg/L	0.0210	2.107	mg/L	0.0210	1.00%
Sn 189.927†	3771.4	0.9968	mg/L	0.00914	0.9968	mg/L	0.00914	0.92%
Sr 421.552†	1130324.5	1.010	mg/L	0.0026	1.010	mg/L	0.0026	0.26%
Ti 334.903†	22374.5	1.004	mg/L	0.0024	1.004	mg/L	0.0024	0.24%
Tl 190.801†	5217.6	2.092	mg/L	0.0173	2.092	mg/L	0.0173	0.83%
V 292.402†	153236.5	1.043	mg/L	0.0071	1.043	mg/L	0.0071	0.68%
Zn 206.200†	4218.1	1.028	mg/L	0.0075	1.028	mg/L	0.0075	0.73%

Sequence No.: 30
Sample ID: CB

Autosampler Location: 1
Date Collected: 6/11/2013 11:42:07 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	238.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3096071.6	100.5	%	0.32				0.31%
ScR 361.383	374719.1	101.1	%	0.48				0.47%
Ag 328.068†	45.1	0.00022	mg/L	0.000197	0.00022	mg/L	0.000197	87.64%
Al 308.215†	1.1	0.00064	mg/L	0.001667	0.00064	mg/L	0.001667	261.49%
As 188.979†	1.4	0.00079	mg/L	0.000442	0.00079	mg/L	0.000442	55.90%
B 249.677†	370.4	0.04843	mg/L	0.002619	0.04843	mg/L	0.002619	5.41%
Ba 233.527†	-3.3	-0.00068	mg/L	0.000207	-0.00068	mg/L	0.000207	30.43%
Be 313.042†	58.8	0.00009	mg/L	0.000019	0.00009	mg/L	0.000019	21.11%
Ca 317.933†	18.1	0.00127	mg/L	0.001001	0.00127	mg/L	0.001001	79.04%
Cd 228.802†	6.1	0.00017	mg/L	0.000057	0.00017	mg/L	0.000057	32.58%
Co 228.616†	6.8	0.00017	mg/L	0.000207	0.00017	mg/L	0.000207	118.93%
Cr 267.716†	-5.1	-0.00078	mg/L	0.000590	-0.00078	mg/L	0.000590	75.61%
Cu 324.752†	230.0	0.00076	mg/L	0.000111	0.00076	mg/L	0.000111	14.61%
Fe 273.955†	2.1	0.00164	mg/L	0.002119	0.00164	mg/L	0.002119	129.09%
K 766.490†	48.8	0.01973	mg/L	0.013297	0.01973	mg/L	0.013297	67.39%
Mg 279.077†	-1.8	-0.00123	mg/L	0.005583	-0.00123	mg/L	0.005583	455.68%
Mn 257.610†	2.5	0.00007	mg/L	0.000133	0.00007	mg/L	0.000133	198.28%
Mo 202.031†	8.9	0.00044	mg/L	0.000216	0.00044	mg/L	0.000216	49.72%
Na 589.592†	3718.3	0.2428	mg/L	0.00841	0.2428	mg/L	0.00841	3.46%
Na 330.237†	1.8	0.06206	mg/L	0.053279	0.06206	mg/L	0.053279	85.86%
Ni 231.604†	10.1	0.00234	mg/L	0.000421	0.00234	mg/L	0.000421	18.01%
Pb 220.353†	5.4	0.00063	mg/L	0.000557	0.00063	mg/L	0.000557	88.01%
Sb 206.836†	8.9	0.00264	mg/L	0.002719	0.00264	mg/L	0.002719	102.98%
Se 196.026†	4.6	0.00312	mg/L	0.003973	0.00312	mg/L	0.003973	127.19%
Si 288.158†	-4.5	-0.00215	mg/L	0.002821	-0.00215	mg/L	0.002821	131.35%
Sn 189.927†	2.6	0.00068	mg/L	0.000201	0.00068	mg/L	0.000201	29.65%
Sr 421.552†	45.3	0.00004	mg/L	0.000023	0.00004	mg/L	0.000023	56.57%
Ti 334.903†	2.6	0.00012	mg/L	0.000124	0.00012	mg/L	0.000124	106.42%
Tl 190.801†	5.6	0.00224	mg/L	0.001413	0.00224	mg/L	0.001413	63.08%
V 292.402†	9.8	0.00006	mg/L	0.000011	0.00006	mg/L	0.000011	16.65%
Zn 206.200†	2.7	0.00066	mg/L	0.000475	0.00066	mg/L	0.000475	72.24%

Sequence No.: 31
Sample ID: WT10 ADUP TWC

Autosampler Location: 341
Date Collected: 6/11/2013 11:46:22 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WT10 ADUP TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: WT10 ADUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2752141.7	89.30	%	0.510				0.57%
ScR 361.383	357060.8	96.31	%	0.536				0.56%
Ag 328.068†	-7.9	-0.00004	mg/L	0.000217	-0.00039	mg/L	0.002170	552.41%
Al 308.215†	12.4	0.00636	mg/L	0.006756	0.06362	mg/L	0.067559	106.18%
As 188.979†	44.7	0.02222	mg/L	0.002539	0.2222	mg/L	0.02539	11.43%
B 249.677†	358582.4	46.88	mg/L	0.180	468.8	mg/L	1.80	0.38%
Ba 233.527†	2.4	0.00047	mg/L	0.000101	0.00469	mg/L	0.001013	21.58%
Be 313.042†	46.5	0.00007	mg/L	0.000010	0.00072	mg/L	0.000098	13.68%
Ca 317.933†	393202.0	27.45	mg/L	0.155	274.5	mg/L	1.55	0.57%
Cd 228.802†	16.6	0.00040	mg/L	0.000037	0.00397	mg/L	0.000369	9.30%
Co 228.616†	23.8	0.00060	mg/L	0.000129	0.00603	mg/L	0.001290	21.39%
Cr 267.716†	-1.3	-0.00049	mg/L	0.000351	-0.00492	mg/L	0.003508	71.27%
Cu 324.752†	5564.1	0.01845	mg/L	0.000182	0.1845	mg/L	0.00182	0.98%
Fe 273.955†	192.5	0.1479	mg/L	0.00210	1.479	mg/L	0.0210	1.42%
K 766.490†	3746.9	1.516	mg/L	0.0353	15.16	mg/L	0.353	2.33%
Mg 279.077†	463.5	0.3188	mg/L	0.00060	3.188	mg/L	0.0060	0.19%
Mn 257.610†	1331.2	0.03568	mg/L	0.000243	0.3568	mg/L	0.00243	0.68%
Mo 202.031†	948.5	0.04594	mg/L	0.000538	0.4594	mg/L	0.00538	1.17%
Na 589.592†	Saturated2							
Na 330.237†	58419.8	2040	mg/L	4.00	20400	mg/L	39.98	0.20%
Ni 231.604†	215.7	0.04991	mg/L	0.001111	0.4991	mg/L	0.01111	2.23%
Pb 220.353†	137.0	0.01616	mg/L	0.000814	0.1616	mg/L	0.00814	5.04%
Sb 206.836†	-19.7	-0.00591	mg/L	0.003322	-0.05912	mg/L	0.033220	56.19%
Se 196.026†	10.1	0.00684	mg/L	0.004829	0.06845	mg/L	0.048285	70.55%
Si 288.158†	38.6	0.01827	mg/L	0.003620	0.1827	mg/L	0.03620	19.81%
Sn 189.927†	-43.7	-0.00800	mg/L	0.000508	-0.08003	mg/L	0.005080	6.35%
Sr 421.552†	147499.0	0.1317	mg/L	0.00027	1.317	mg/L	0.0027	0.21%
Ti 334.903†	48.6	0.00043	mg/L	0.000443	0.00432	mg/L	0.004432	102.52%
Tl 190.801†	8.2	0.00341	mg/L	0.001000	0.03406	mg/L	0.009997	29.35%
V 292.402†	24.9	0.00019	mg/L	0.000109	0.00189	mg/L	0.001088	57.48%
Zn 206.200†	86.7	0.02078	mg/L	0.000102	0.2078	mg/L	0.00102	0.49%

Sequence No.: 32
Sample ID: WT10 A TWC

Autosampler Location: 342
Date Collected: 6/11/2013 11:50:38 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WT10 A TWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT10 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2773877.0	90.01	%	0.217				0.24%
ScR 361.383	359677.9	97.02	%	0.618				0.64%
Ag 328.068†	-29.4	-0.00015	mg/L	0.000136	-0.00146	mg/L	0.001363	93.20%
Al 308.215†	3.1	0.00114	mg/L	0.001864	0.01139	mg/L	0.018636	163.66%
As 188.979†	42.1	0.02099	mg/L	0.001641	0.2099	mg/L	0.01641	7.81%
B 249.677†	321272.5	42.00	mg/L	0.034	420.0	mg/L	0.34	0.08%
Ba 233.527†	3.1	0.00062	mg/L	0.000335	0.00618	mg/L	0.003349	54.21%
Be 313.042†	36.3	0.00006	mg/L	0.000018	0.00056	mg/L	0.000181	32.42%
Ca 317.933†	351612.6	24.55	mg/L	0.104	245.5	mg/L	1.04	0.42%
Cd 228.802†	8.7	0.00017	mg/L	0.000086	0.00168	mg/L	0.000856	50.80%
Co 228.616†	22.6	0.00057	mg/L	0.000133	0.00573	mg/L	0.001325	23.11%
Cr 267.716†	-1.9	-0.00055	mg/L	0.000197	-0.00548	mg/L	0.001969	35.90%
Cu 324.752†	5016.6	0.01664	mg/L	0.000035	0.1664	mg/L	0.00035	0.21%
Fe 273.955†	170.5	0.1311	mg/L	0.00259	1.311	mg/L	0.0259	1.97%
K 766.490†	3516.1	1.422	mg/L	0.0269	14.22	mg/L	0.269	1.89%
Mg 279.077†	415.6	0.2858	mg/L	0.00475	2.858	mg/L	0.0475	1.66%
Mn 257.610†	1195.3	0.03204	mg/L	0.000245	0.3204	mg/L	0.00245	0.76%
Mo 202.031†	842.0	0.04078	mg/L	0.000031	0.4078	mg/L	0.00031	0.08%
Na 589.592†	Saturated2							
Na 330.237†	52366.6	1828	mg/L	1.35	18280	mg/L	13.48	0.07%
Ni 231.604†	191.8	0.04437	mg/L	0.000726	0.4437	mg/L	0.00726	1.64%
Pb 220.353†	122.5	0.01445	mg/L	0.000841	0.1445	mg/L	0.00841	5.82%
Sb 206.836†	-17.8	-0.00533	mg/L	0.001530	-0.05326	mg/L	0.015297	28.72%
Se 196.026†	9.9	0.00673	mg/L	0.001478	0.06734	mg/L	0.014780	21.95%
Si 288.158†	38.4	0.01817	mg/L	0.003915	0.1817	mg/L	0.03915	21.55%
Sn 189.927†	-38.2	-0.00694	mg/L	0.001197	-0.06942	mg/L	0.011971	17.24%
Sr 421.552†	132207.0	0.1181	mg/L	0.00006	1.181	mg/L	0.0006	0.05%
Ti 334.903†	45.9	0.00050	mg/L	0.000283	0.00499	mg/L	0.002834	56.81%
Tl 190.801†	11.5	0.00471	mg/L	0.000961	0.04708	mg/L	0.009612	20.42%
V 292.402†	23.4	0.00018	mg/L	0.000220	0.00176	mg/L	0.002196	124.50%
Zn 206.200†	79.5	0.01905	mg/L	0.000603	0.1905	mg/L	0.00603	3.17%

Sequence No.: 33
Sample ID: WT10 ASPK TWC

Autosampler Location: 343
Date Collected: 6/11/2013 11:54:53 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WT10 ASPK TWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT10 ASPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2747345.3	89.15	%	0.364				0.41%
ScR 361.383	353701.6	95.40	%	1.060				1.11%
Ag 328.068†	10702.2	0.05324	mg/L	0.000299	0.5324	mg/L	0.00299	0.56%
Al 308.215†	365.8	0.2088	mg/L	0.00507	2.088	mg/L	0.0507	2.43%
As 188.979†	443.4	0.2389	mg/L	0.00259	2.389	mg/L	0.0259	1.08%
B 249.677†	334079.1	43.68	mg/L	0.275	436.8	mg/L	2.75	0.63%
Ba 233.527†	364.8	0.07616	mg/L	0.000484	0.7616	mg/L	0.00484	0.64%
Be 313.042†	28639.1	0.04418	mg/L	0.000231	0.4418	mg/L	0.00231	0.52%
Ca 317.933†	381023.4	26.60	mg/L	0.113	266.0	mg/L	1.13	0.42%
Cd 228.802†	1957.9	0.05571	mg/L	0.000127	0.5571	mg/L	0.00127	0.23%
Co 228.616†	1924.7	0.04938	mg/L	0.000225	0.4938	mg/L	0.00225	0.46%
Cr 267.716†	336.4	0.05086	mg/L	0.001336	0.5086	mg/L	0.01336	2.63%
Cu 324.752†	20627.2	0.06845	mg/L	0.000198	0.6845	mg/L	0.00198	0.29%
Fe 273.955†	434.3	0.3335	mg/L	0.00423	3.335	mg/L	0.0423	1.27%
K 766.490†	6069.2	2.455	mg/L	0.0516	24.55	mg/L	0.516	2.10%
Mg 279.077†	1878.9	1.302	mg/L	0.0188	13.02	mg/L	0.188	1.45%
Mn 257.610†	3061.5	0.08224	mg/L	0.000733	0.8224	mg/L	0.00733	0.89%
Mo 202.031†	875.6	0.04240	mg/L	0.000206	0.4240	mg/L	0.00206	0.49%
Na 589.592†	Saturated2							
Na 330.237†	54556.6	1905	mg/L	10.69	19050	mg/L	106.92	0.56%
Ni 231.604†	403.7	0.09334	mg/L	0.001300	0.9334	mg/L	0.01300	1.39%
Pb 220.353†	1591.7	0.1882	mg/L	0.00104	1.882	mg/L	0.0104	0.55%
Sb 206.836†	-18.4	-0.00602	mg/L	0.001260	-0.06018	mg/L	0.012603	20.94%
Se 196.026†	344.2	0.2334	mg/L	0.00509	2.334	mg/L	0.0509	2.18%
Si 288.158†	39.3	0.01897	mg/L	0.005184	0.1897	mg/L	0.05184	27.33%
Sn 189.927†	-44.5	-0.00833	mg/L	0.002430	-0.08329	mg/L	0.024296	29.17%
Sr 421.552†	187117.9	0.1671	mg/L	0.00091	1.671	mg/L	0.0091	0.54%
Ti 334.903†	50.0	0.00054	mg/L	0.000354	0.00544	mg/L	0.003538	65.08%
Tl 190.801†	446.7	0.1795	mg/L	0.00153	1.795	mg/L	0.0153	0.85%
V 292.402†	7482.6	0.05095	mg/L	0.000194	0.5095	mg/L	0.00194	0.38%
Zn 206.200†	286.8	0.06952	mg/L	0.001432	0.6952	mg/L	0.01432	2.06%

Sequence No.: 34
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 6/11/2013 12:00:16 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	243.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3102688.0	100.7	%	0.44				0.44%
ScR 361.383	377287.2	101.8	%	0.11				0.11%
Ag 328.068†	211153.6	1.050	mg/L	0.0069	1.050	mg/L	0.0069	0.66%
Al 308.215†	3623.2	2.049	mg/L	0.0022	2.049	mg/L	0.0022	0.11%
As 188.979†	3673.5	2.025	mg/L	0.0068	2.025	mg/L	0.0068	0.33%
B 249.677†	8313.7	1.086	mg/L	0.0061	1.086	mg/L	0.0061	0.56%
Ba 233.527†	4988.0	1.042	mg/L	0.0058	1.042	mg/L	0.0058	0.56%
Be 313.042†	652936.3	1.007	mg/L	0.0069	1.007	mg/L	0.0069	0.69%
Ca 317.933†	28368.6	1.981	mg/L	0.0060	1.981	mg/L	0.0060	0.31%
Cd 228.802†	35352.9	1.018	mg/L	0.0053	1.018	mg/L	0.0053	0.52%
Co 228.616†	39436.6	1.011	mg/L	0.0059	1.011	mg/L	0.0059	0.58%
Cr 267.716†	6865.4	1.045	mg/L	0.0018	1.045	mg/L	0.0018	0.18%
Cu 324.752†	312409.6	1.036	mg/L	0.0018	1.036	mg/L	0.0018	0.17%
Fe 273.955†	2682.8	2.056	mg/L	0.0040	2.056	mg/L	0.0040	0.19%
K 766.490†	49385.4	19.98	mg/L	0.069	19.98	mg/L	0.069	0.35%
Mg 279.077†	2881.0	2.008	mg/L	0.0023	2.008	mg/L	0.0023	0.12%
Mn 257.610†	36133.8	0.9718	mg/L	0.00131	0.9718	mg/L	0.00131	0.13%
Mo 202.031†	20508.1	1.001	mg/L	0.0039	1.001	mg/L	0.0039	0.39%
Na 589.592†	771978.4	50.41	mg/L	0.184	50.41	mg/L	0.184	0.36%
Na 330.237†	1478.2	51.58	mg/L	0.163	51.58	mg/L	0.163	0.32%
Ni 231.604†	4410.2	1.021	mg/L	0.0020	1.021	mg/L	0.0020	0.20%
Pb 220.353†	17437.3	2.062	mg/L	0.0061	2.062	mg/L	0.0061	0.30%
Sb 206.836†	6997.1	2.061	mg/L	0.0061	2.061	mg/L	0.0061	0.29%
Se 196.026†	2949.0	1.999	mg/L	0.0103	1.999	mg/L	0.0103	0.52%
Si 288.158†	4368.1	2.069	mg/L	0.0083	2.069	mg/L	0.0083	0.40%
Sn 189.927†	3720.3	0.9833	mg/L	0.00502	0.9833	mg/L	0.00502	0.51%
Sr 421.552†	1120037.1	1.000	mg/L	0.0036	1.000	mg/L	0.0036	0.36%
Ti 334.903†	22152.4	0.9943	mg/L	0.00337	0.9943	mg/L	0.00337	0.34%
Tl 190.801†	5163.4	2.071	mg/L	0.0103	2.071	mg/L	0.0103	0.50%
V 292.402†	151232.5	1.029	mg/L	0.0044	1.029	mg/L	0.0044	0.43%
Zn 206.200†	4129.4	1.006	mg/L	0.0021	1.006	mg/L	0.0021	0.21%

Sequence No.: 35
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 6/11/2013 12:04:20 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	242.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3151243.8	102.3	%	0.14				0.14%
ScR 361.383	382794.2	103.3	%	0.24				0.23%
Ag 328.068†	39.5	0.00020	mg/L	0.000026	0.00020	mg/L	0.000026	12.98%
Al 308.215†	2.0	0.00116	mg/L	0.003230	0.00116	mg/L	0.003230	279.44%
As 188.979†	1.8	0.00098	mg/L	0.000374	0.00098	mg/L	0.000374	38.30%
B 249.677†	393.4	0.05144	mg/L	0.002087	0.05144	mg/L	0.002087	4.06%
Ba 233.527†	-1.5	-0.00032	mg/L	0.000312	-0.00032	mg/L	0.000312	97.81%
Be 313.042†	40.7	0.00006	mg/L	0.000022	0.00006	mg/L	0.000022	34.25%
Ca 317.933†	24.0	0.00167	mg/L	0.000884	0.00167	mg/L	0.000884	52.87%
Cd 228.802†	2.1	0.00006	mg/L	0.000141	0.00006	mg/L	0.000141	249.45%
Co 228.616†	5.0	0.00013	mg/L	0.000070	0.00013	mg/L	0.000070	54.42%
Cr 267.716†	-6.3	-0.00096	mg/L	0.000413	-0.00096	mg/L	0.000413	43.16%
Cu 324.752†	256.0	0.00085	mg/L	0.000053	0.00085	mg/L	0.000053	6.29%
Fe 273.955†	2.8	0.00217	mg/L	0.000807	0.00217	mg/L	0.000807	37.13%
K 766.490†	72.2	0.02919	mg/L	0.002700	0.02919	mg/L	0.002700	9.25%
Mg 279.077†	-2.4	-0.00165	mg/L	0.002461	-0.00165	mg/L	0.002461	149.55%
Mn 257.610†	6.3	0.00017	mg/L	0.000117	0.00017	mg/L	0.000117	69.43%
Mo 202.031†	7.6	0.00037	mg/L	0.000185	0.00037	mg/L	0.000185	49.71%
Na 589.592†	5963.5	0.3894	mg/L	0.01221	0.3894	mg/L	0.01221	3.14%
Na 330.237†	10.7	0.3749	mg/L	0.24603	0.3749	mg/L	0.24603	65.62%
Ni 231.604†	7.0	0.00163	mg/L	0.001010	0.00163	mg/L	0.001010	62.06%
Pb 220.353†	-2.5	-0.00030	mg/L	0.000418	-0.00030	mg/L	0.000418	139.12%
Sb 206.836†	7.7	0.00230	mg/L	0.000913	0.00230	mg/L	0.000913	39.73%
Se 196.026†	4.6	0.00310	mg/L	0.004724	0.00310	mg/L	0.004724	152.46%
Si 288.158†	1.1	0.00051	mg/L	0.000839	0.00051	mg/L	0.000839	163.12%
Sn 189.927†	3.7	0.00098	mg/L	0.000261	0.00098	mg/L	0.000261	26.58%
Sr 421.552†	43.2	0.00004	mg/L	0.000009	0.00004	mg/L	0.000009	22.62%
Ti 334.903†	-3.2	-0.00014	mg/L	0.000147	-0.00014	mg/L	0.000147	102.70%
Tl 190.801†	4.7	0.00189	mg/L	0.001553	0.00189	mg/L	0.001553	82.25%
V 292.402†	-8.4	-0.00006	mg/L	0.000032	-0.00006	mg/L	0.000032	53.22%
Zn 206.200†	2.6	0.00064	mg/L	0.000156	0.00064	mg/L	0.000156	24.31%

Sequence No.: 36
Sample ID: WT03 MB1 SWC

Autosampler Location: 317
Date Collected: 6/11/2013 12:08:35 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 MB1 SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3164865.4	102.7	%	0.40				0.39%
ScR 361.383	389073.8	104.9	%	0.81				0.77%
Ag 328.068†	30.7	0.00015	mg/L	0.000284	0.00030	mg/L	0.000568	186.15%
Al 308.215†	5.9	0.00337	mg/L	0.000825	0.00675	mg/L	0.001651	24.46%
As 188.979†	-0.4	-0.00020	mg/L	0.001330	-0.00040	mg/L	0.002659	666.85%
B 249.677†	261.4	0.03418	mg/L	0.001394	0.06836	mg/L	0.002789	4.08%
Ba 233.527†	-2.8	-0.00058	mg/L	0.001065	-0.00116	mg/L	0.002130	183.16%
Be 313.042†	-11.1	-0.00002	mg/L	0.000035	-0.00003	mg/L	0.000071	205.92%
Ca 317.933†	58.1	0.00405	mg/L	0.000616	0.00811	mg/L	0.001232	15.20%
Cd 228.802†	2.1	0.00007	mg/L	0.000227	0.00013	mg/L	0.000454	348.44%
Co 228.616†	-0.7	-0.00002	mg/L	0.000070	-0.00004	mg/L	0.000140	385.90%
Cr 267.716†	-1.0	-0.00015	mg/L	0.000355	-0.00031	mg/L	0.000711	229.33%
Cu 324.752†	305.4	0.00101	mg/L	0.000117	0.00203	mg/L	0.000233	11.51%
Fe 273.955†	2.6	0.00196	mg/L	0.001825	0.00392	mg/L	0.003650	93.08%
K 766.490†	65.2	0.02636	mg/L	0.015591	0.05272	mg/L	0.031183	59.15%
Mg 279.077†	1.8	0.00121	mg/L	0.005016	0.00243	mg/L	0.010033	413.23%
Mn 257.610†	-2.2	-0.00006	mg/L	0.000054	-0.00012	mg/L	0.000109	91.42%
Mo 202.031†	-7.0	-0.00034	mg/L	0.000109	-0.00068	mg/L	0.000218	31.87%
Na 589.592†	4769.2	0.3114	mg/L	0.01154	0.6228	mg/L	0.02308	3.71%
Na 330.237†	11.2	0.3901	mg/L	0.21498	0.7802	mg/L	0.42996	55.11%
Ni 231.604†	8.4	0.00194	mg/L	0.000326	0.00388	mg/L	0.000652	16.83%
Pb 220.353†	-6.1	-0.00072	mg/L	0.000496	-0.00143	mg/L	0.000992	69.16%
Sb 206.836†	-1.7	-0.00050	mg/L	0.000944	-0.00101	mg/L	0.001889	187.57%
Se 196.026†	0.5	0.00032	mg/L	0.000577	0.00065	mg/L	0.001153	178.28%
Si 288.158†	33.6	0.01589	mg/L	0.002749	0.03178	mg/L	0.005497	17.30%
Sn 189.927†	0.8	0.00020	mg/L	0.000643	0.00041	mg/L	0.001287	316.44%
Sr 421.552†	-27.5	-0.00002	mg/L	0.000008	-0.00005	mg/L	0.000017	33.99%
Ti 334.903†	0.5	0.00002	mg/L	0.000154	0.00005	mg/L	0.000308	669.62%
Tl 190.801†	0.9	0.00034	mg/L	0.000546	0.00069	mg/L	0.001092	158.69%
V 292.402†	-2.5	-0.00002	mg/L	0.000034	-0.00004	mg/L	0.000068	187.67%
Zn 206.200†	1.2	0.00031	mg/L	0.000657	0.00061	mg/L	0.001314	215.01%

Sequence No.: 37
Sample ID: WT03 ADUP SWC

Autosampler Location: 318
Date Collected: 6/11/2013 12:12:51 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 ADUP SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3134275.3	101.7	%	0.19				0.19%
ScR 361.383	382427.8	103.2	%	0.26				0.25%
Ag 328.068†	-190.9	-0.00082	mg/L	0.000037	-0.00164	mg/L	0.000074	4.51%
Al 308.215†	173129.8	99.53	mg/L	0.282	199.1	mg/L	0.56	0.28%
As 188.979†	-209.7	0.08890	mg/L	0.002367	0.1778	mg/L	0.00473	2.66%
B 249.677†	372.6	0.04856	mg/L	0.000391	0.09713	mg/L	0.000781	0.80%
Ba 233.527†	3012.7	0.5996	mg/L	0.00247	1.199	mg/L	0.0049	0.41%
Be 313.042†	1198.3	0.00167	mg/L	0.000024	0.00335	mg/L	0.000049	1.45%
Ca 317.933†	1277903.5	89.22	mg/L	0.247	178.4	mg/L	0.49	0.28%
Cd 228.802†	179.6	0.00597	mg/L	0.000089	0.01194	mg/L	0.000178	1.49%
Co 228.616†	2951.5	0.06231	mg/L	0.000243	0.1246	mg/L	0.00049	0.39%
Cr 267.716†	1397.7	0.2162	mg/L	0.00145	0.4323	mg/L	0.00291	0.67%
Cu 324.752†	158795.8	0.5334	mg/L	0.00328	1.067	mg/L	0.0066	0.62%
Fe 273.955†	230841.8	177.4	mg/L	0.78	354.9	mg/L	1.55	0.44%
K 766.490†	18706.5	7.567	mg/L	0.0467	15.13	mg/L	0.093	0.62%
Mg 279.077†	52319.0	36.23	mg/L	0.087	72.47	mg/L	0.173	0.24%
Mn 257.610†	88048.3	2.367	mg/L	0.0071	4.734	mg/L	0.0142	0.30%
Mo 202.031†	227.5	0.00996	mg/L	0.000464	0.01992	mg/L	0.000928	4.66%
Na 589.592†	89958.3	5.874	mg/L	0.0049	11.75	mg/L	0.010	0.08%
Na 330.237†	148.4	6.067	mg/L	0.1405	12.13	mg/L	0.281	2.32%
Ni 231.604†	725.0	0.1678	mg/L	0.00177	0.3355	mg/L	0.00353	1.05%
Pb 220.353†	6875.8	0.8265	mg/L	0.00117	1.653	mg/L	0.0023	0.14%
Sb 206.836†	43.9	0.01722	mg/L	0.000933	0.03443	mg/L	0.001866	5.42%
Se 196.026†	36.1	0.01328	mg/L	0.003020	0.02656	mg/L	0.006039	22.74%
Si 288.158†	2775.4	1.316	mg/L	0.0064	2.631	mg/L	0.0128	0.49%
Sn 189.927†	15.3	0.01689	mg/L	0.001328	0.03377	mg/L	0.002657	7.87%
Sr 421.552†	550359.3	0.4916	mg/L	0.00079	0.9831	mg/L	0.00158	0.16%
Ti 334.903†	145131.0	6.517	mg/L	0.0068	13.03	mg/L	0.014	0.10%
Tl 190.801†	-40.7	0.00584	mg/L	0.001488	0.01167	mg/L	0.002976	25.50%
V 292.402†	65880.9	0.4349	mg/L	0.00350	0.8697	mg/L	0.00701	0.81%
Zn 206.200†	8004.6	1.949	mg/L	0.0049	3.897	mg/L	0.0097	0.25%

Sequence No.: 38
Sample ID: WT03 A SWC

Autosampler Location: 319
Date Collected: 6/11/2013 12:16:54 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 A SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3115726.9	101.1	%	0.20				0.20%
ScR 361.383	380391.1	102.6	%	0.99				0.96%
Ag 328.068†	-196.6	-0.00085	mg/L	0.000029	-0.00170	mg/L	0.000057	3.36%
Al 308.215†	184570.6	106.1	mg/L	0.50	212.2	mg/L	1.00	0.47%
As 188.979†	-215.1	0.08659	mg/L	0.003985	0.1732	mg/L	0.00797	4.60%
B 249.677†	346.9	0.04520	mg/L	0.000651	0.09040	mg/L	0.001302	1.44%
Ba 233.527†	3274.8	0.6567	mg/L	0.00440	1.313	mg/L	0.0088	0.67%
Be 313.042†	1100.1	0.00152	mg/L	0.000040	0.00305	mg/L	0.000081	2.65%
Ca 317.933†	1331330.3	92.95	mg/L	0.238	185.9	mg/L	0.48	0.26%
Cd 228.802†	172.3	0.00578	mg/L	0.000123	0.01157	mg/L	0.000247	2.13%
Co 228.616†	3044.7	0.06482	mg/L	0.000066	0.1296	mg/L	0.00013	0.10%
Cr 267.716†	1453.5	0.2237	mg/L	0.00207	0.4474	mg/L	0.00413	0.92%
Cu 324.752†	143827.8	0.4830	mg/L	0.00300	0.9661	mg/L	0.00600	0.62%
Fe 273.955†	212514.9	163.4	mg/L	0.27	326.7	mg/L	0.54	0.17%
K 766.490†	28321.0	11.46	mg/L	0.036	22.91	mg/L	0.072	0.31%
Mg 279.077†	57543.4	39.87	mg/L	0.073	79.74	mg/L	0.145	0.18%
Mn 257.610†	77940.0	2.095	mg/L	0.0017	4.191	mg/L	0.0033	0.08%
Mo 202.031†	221.5	0.00962	mg/L	0.000327	0.01924	mg/L	0.000654	3.40%
Na 589.592†	106192.5	6.934	mg/L	0.0284	13.87	mg/L	0.057	0.41%
Na 330.237†	180.6	7.246	mg/L	0.1149	14.49	mg/L	0.230	1.59%
Ni 231.604†	759.0	0.1756	mg/L	0.00113	0.3512	mg/L	0.00226	0.64%
Pb 220.353†	6460.4	0.7798	mg/L	0.00211	1.560	mg/L	0.0042	0.27%
Sb 206.836†	53.8	0.02004	mg/L	0.001053	0.04008	mg/L	0.002105	5.25%
Se 196.026†	32.0	0.00978	mg/L	0.003892	0.01956	mg/L	0.007784	39.79%
Si 288.158†	2929.5	1.389	mg/L	0.0177	2.778	mg/L	0.0354	1.27%
Sn 189.927†	16.1	0.01758	mg/L	0.000806	0.03517	mg/L	0.001613	4.59%
Sr 421.552†	573197.1	0.5120	mg/L	0.00115	1.024	mg/L	0.0023	0.22%
Ti 334.903†	145728.5	6.543	mg/L	0.0076	13.09	mg/L	0.015	0.12%
Tl 190.801†	-42.8	0.00303	mg/L	0.003906	0.00607	mg/L	0.007812	128.72%
V 292.402†	66036.3	0.4366	mg/L	0.00310	0.8733	mg/L	0.00621	0.71%
Zn 206.200†	7208.5	1.755	mg/L	0.0082	3.510	mg/L	0.0164	0.47%

Sequence No.: 39
Sample ID: WT03 ASPK SWC

Autosampler Location: 320
Date Collected: 6/11/2013 12:20:57 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 ASPK SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3097314.9	100.5	%	0.83				0.82%
ScR 361.383	377657.3	101.9	%	0.34				0.33%
Ag 328.068†	103004.8	0.5125	mg/L	0.00302	1.025	mg/L	0.0060	0.59%
Al 308.215†	175641.4	101.0	mg/L	0.07	201.9	mg/L	0.14	0.07%
As 188.979†	3489.9	2.078	mg/L	0.0169	4.157	mg/L	0.0338	0.81%
B 249.677†	351.9	0.04482	mg/L	0.002376	0.08964	mg/L	0.004753	5.30%
Ba 233.527†	13205.1	2.732	mg/L	0.0201	5.464	mg/L	0.0402	0.74%
Be 313.042†	313692.2	0.4838	mg/L	0.00073	0.9676	mg/L	0.00145	0.15%
Ca 317.933†	1805191.3	126.0	mg/L	0.42	252.1	mg/L	0.84	0.33%
Cd 228.802†	18462.8	0.5271	mg/L	0.00431	1.054	mg/L	0.0086	0.82%
Co 228.616†	22254.8	0.5587	mg/L	0.00505	1.117	mg/L	0.0101	0.90%
Cr 267.716†	4705.1	0.7176	mg/L	0.00374	1.435	mg/L	0.0075	0.52%
Cu 324.752†	295698.8	0.9871	mg/L	0.00594	1.974	mg/L	0.0119	0.60%
Fe 273.955†	213198.8	163.9	mg/L	0.81	327.7	mg/L	1.62	0.49%
K 766.490†	42396.6	17.15	mg/L	0.030	34.30	mg/L	0.059	0.17%
Mg 279.077†	72661.3	50.37	mg/L	0.225	100.7	mg/L	0.45	0.45%
Mn 257.610†	94990.5	2.554	mg/L	0.0097	5.108	mg/L	0.0194	0.38%
Mo 202.031†	234.0	0.00978	mg/L	0.000568	0.01957	mg/L	0.001135	5.80%
Na 589.592†	247534.0	16.16	mg/L	0.030	32.33	mg/L	0.060	0.18%
Na 330.237†	469.2	16.62	mg/L	0.314	33.23	mg/L	0.628	1.89%
Ni 231.604†	2754.9	0.6367	mg/L	0.00218	1.273	mg/L	0.0044	0.34%
Pb 220.353†	22480.7	2.672	mg/L	0.0238	5.345	mg/L	0.0476	0.89%
Sb 206.836†	58.4	0.01602	mg/L	0.002665	0.03204	mg/L	0.005330	16.64%
Se 196.026†	2966.7	2.000	mg/L	0.0252	4.001	mg/L	0.0503	1.26%
Si 288.158†	4223.2	2.004	mg/L	0.0113	4.007	mg/L	0.0225	0.56%
Sn 189.927†	15.9	0.02173	mg/L	0.001310	0.04347	mg/L	0.002620	6.03%
Sr 421.552†	1278688.1	1.142	mg/L	0.0021	2.284	mg/L	0.0042	0.18%
Ti 334.903†	132282.7	5.937	mg/L	0.0038	11.87	mg/L	0.008	0.06%
Tl 190.801†	4667.3	1.895	mg/L	0.0153	3.790	mg/L	0.0305	0.80%
V 292.402†	135762.0	0.9117	mg/L	0.00650	1.823	mg/L	0.0130	0.71%
Zn 206.200†	12393.2	3.017	mg/L	0.0223	6.035	mg/L	0.0446	0.74%

Sequence No.: 40
Sample ID: WT03 B SWC

Autosampler Location: 321
Date Collected: 6/11/2013 12:24:15 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 B SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3138257.2	101.8	%	0.59				0.58%
ScR 361.383	384352.4	103.7	%	0.70				0.67%
Ag 328.068†	-13.5	0.00006	mg/L	0.000081	0.00012	mg/L	0.000161	131.84%
Al 308.215†	161516.5	92.85	mg/L	0.293	185.7	mg/L	0.59	0.32%
As 188.979†	-235.8	0.06889	mg/L	0.002101	0.1378	mg/L	0.00420	3.05%
B 249.677†	217.2	0.02826	mg/L	0.000337	0.05652	mg/L	0.000674	1.19%
Ba 233.527†	2342.1	0.4587	mg/L	0.00310	0.9174	mg/L	0.00621	0.68%
Be 313.042†	1071.7	0.00148	mg/L	0.000023	0.00297	mg/L	0.000045	1.53%
Ca 317.933†	839815.2	58.63	mg/L	0.219	117.3	mg/L	0.44	0.37%
Cd 228.802†	162.5	0.00558	mg/L	0.000100	0.01115	mg/L	0.000201	1.80%
Co 228.616†	2767.4	0.05798	mg/L	0.000504	0.1160	mg/L	0.00101	0.87%
Cr 267.716†	1312.1	0.2039	mg/L	0.00171	0.4078	mg/L	0.00342	0.84%
Cu 324.752†	180091.1	0.6043	mg/L	0.00298	1.209	mg/L	0.0060	0.49%
Fe 273.955†	236692.7	181.9	mg/L	0.55	363.9	mg/L	1.10	0.30%
K 766.490†	17996.5	7.280	mg/L	0.0436	14.56	mg/L	0.087	0.60%
Mg 279.077†	47044.9	32.57	mg/L	0.114	65.14	mg/L	0.227	0.35%
Mn 257.610†	73790.1	1.984	mg/L	0.0062	3.968	mg/L	0.0125	0.31%
Mo 202.031†	179.6	0.00801	mg/L	0.000282	0.01602	mg/L	0.000565	3.53%
Na 589.592†	82380.7	5.379	mg/L	0.0117	10.76	mg/L	0.023	0.22%
Na 330.237†	126.9	5.569	mg/L	0.1183	11.14	mg/L	0.237	2.12%
Ni 231.604†	821.2	0.1900	mg/L	0.00212	0.3801	mg/L	0.00424	1.12%
Pb 220.353†	6457.3	0.7751	mg/L	0.00391	1.550	mg/L	0.0078	0.50%
Sb 206.836†	49.6	0.01884	mg/L	0.001192	0.03768	mg/L	0.002384	6.33%
Se 196.026†	31.7	0.01102	mg/L	0.007941	0.02203	mg/L	0.015881	72.07%
Si 288.158†	4972.1	2.353	mg/L	0.0120	4.706	mg/L	0.0240	0.51%
Sn 189.927†	13.8	0.01250	mg/L	0.000400	0.02499	mg/L	0.000800	3.20%
Sr 421.552†	419056.0	0.3743	mg/L	0.00079	0.7486	mg/L	0.00158	0.21%
Ti 334.903†	139500.8	6.265	mg/L	0.0180	12.53	mg/L	0.036	0.29%
Tl 190.801†	-42.0	0.00597	mg/L	0.002402	0.01193	mg/L	0.004804	40.26%
V 292.402†	65606.6	0.4328	mg/L	0.00215	0.8656	mg/L	0.00431	0.50%
Zn 206.200†	5463.7	1.330	mg/L	0.0095	2.661	mg/L	0.0191	0.72%

US21:91785

Sequence No.: 41
Sample ID: WT03 C SWC

Autosampler Location: 322
Date Collected: 6/11/2013 12:28:16 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 C SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3098796.9	100.6	%	0.21				0.21%
ScR 361.383	380161.5	102.5	%	0.47				0.45%
Ag 328.068†	-204.0	-0.00088	mg/L	0.000058	-0.00176	mg/L	0.000116	6.58%
Al 308.215†	181548.5	104.4	mg/L	0.12	208.7	mg/L	0.24	0.11%
As 188.979†	-145.3	0.1245	mg/L	0.00143	0.2491	mg/L	0.00286	1.15%
B 249.677†	314.2	0.04094	mg/L	0.000824	0.08187	mg/L	0.001648	2.01%
Ba 233.527†	3547.6	0.7126	mg/L	0.00430	1.425	mg/L	0.0086	0.60%
Be 313.042†	1236.2	0.00173	mg/L	0.000018	0.00345	mg/L	0.000036	1.04%
Ca 317.933†	2352537.3	164.2	mg/L	0.35	328.5	mg/L	0.71	0.22%
Cd 228.802†	161.3	0.00527	mg/L	0.000188	0.01054	mg/L	0.000376	3.57%
Co 228.616†	2855.9	0.05960	mg/L	0.000373	0.1192	mg/L	0.00075	0.63%
Cr 267.716†	1543.1	0.2372	mg/L	0.00077	0.4744	mg/L	0.00154	0.33%
Cu 324.752†	205589.4	0.6883	mg/L	0.00267	1.377	mg/L	0.0053	0.39%
Fe 273.955†	221672.7	170.4	mg/L	0.39	340.8	mg/L	0.78	0.23%
K 766.490†	16065.7	6.499	mg/L	0.0223	13.00	mg/L	0.045	0.34%
Mg 279.077†	53477.0	37.03	mg/L	0.035	74.07	mg/L	0.071	0.10%
Mn 257.610†	84141.9	2.262	mg/L	0.0066	4.523	mg/L	0.0132	0.29%
Mo 202.031†	269.9	0.01107	mg/L	0.000415	0.02215	mg/L	0.000830	3.75%
Na 589.592†	87727.8	5.728	mg/L	0.0203	11.46	mg/L	0.041	0.35%
Na 330.237†	147.0	5.873	mg/L	0.0819	11.75	mg/L	0.164	1.39%
Ni 231.604†	828.4	0.1917	mg/L	0.00185	0.3834	mg/L	0.00369	0.96%
Pb 220.353†	6618.1	0.7974	mg/L	0.00180	1.595	mg/L	0.0036	0.23%
Sb 206.836†	40.7	0.01642	mg/L	0.002151	0.03283	mg/L	0.004301	13.10%
Se 196.026†	39.3	0.01493	mg/L	0.003931	0.02986	mg/L	0.007862	26.33%
Si 288.158†	4542.4	2.151	mg/L	0.0075	4.301	mg/L	0.0149	0.35%
Sn 189.927†	106.5	0.05064	mg/L	0.001397	0.1013	mg/L	0.00279	2.76%
Sr 421.552†	760359.0	0.6791	mg/L	0.00060	1.358	mg/L	0.0012	0.09%
Ti 334.903†	149381.3	6.703	mg/L	0.0105	13.41	mg/L	0.021	0.16%
Tl 190.801†	-37.7	0.00600	mg/L	0.002011	0.01201	mg/L	0.004022	33.49%
V 292.402†	68776.3	0.4548	mg/L	0.00075	0.9097	mg/L	0.00150	0.17%
Zn 206.200†	6346.7	1.544	mg/L	0.0079	3.088	mg/L	0.0157	0.51%

Sequence No.: 42
Sample ID: WT03 D SWC

Autosampler Location: 323
Date Collected: 6/11/2013 12:32:19 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 D SWC

Analyte	Back Pressure	Flow
All	242.0 kPa	0.75 L/min

Mean Data: WT03 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3101249.8	100.6	%	0.59				0.59%
ScR 361.383	378859.5	102.2	%	0.34				0.33%
Ag 328.068†	82.6	0.00053	mg/L	0.000021	0.00105	mg/L	0.000042	3.95%
Al 308.215†	183365.9	105.4	mg/L	0.43	210.8	mg/L	0.86	0.41%
As 188.979†	15.8	0.1984	mg/L	0.00189	0.3968	mg/L	0.00377	0.95%
B 249.677†	323.8	0.04217	mg/L	0.000735	0.08435	mg/L	0.001470	1.74%
Ba 233.527†	5077.5	1.026	mg/L	0.0048	2.052	mg/L	0.0096	0.47%
Be 313.042†	1210.7	0.00171	mg/L	0.000013	0.00342	mg/L	0.000027	0.78%
Ca 317.933†	1967807.9	137.4	mg/L	0.39	274.8	mg/L	0.77	0.28%
Cd 228.802†	637.8	0.01866	mg/L	0.000108	0.03732	mg/L	0.000217	0.58%
Co 228.616†	3359.0	0.07288	mg/L	0.000488	0.1458	mg/L	0.00098	0.67%
Cr 267.716†	1879.7	0.2902	mg/L	0.00233	0.5804	mg/L	0.00467	0.80%
Cu 324.752†	450378.7	1.502	mg/L	0.0120	3.004	mg/L	0.0240	0.80%
Fe 273.955†	268833.0	206.6	mg/L	0.93	413.3	mg/L	1.87	0.45%
K 766.490†	21172.1	8.564	mg/L	0.0345	17.13	mg/L	0.069	0.40%
Mg 279.077†	54658.3	37.83	mg/L	0.158	75.67	mg/L	0.316	0.42%
Mn 257.610†	111762.9	3.005	mg/L	0.0073	6.009	mg/L	0.0146	0.24%
Mo 202.031†	435.1	0.01947	mg/L	0.000226	0.03894	mg/L	0.000453	1.16%
Na 589.592†	73438.9	4.795	mg/L	0.0219	9.591	mg/L	0.0438	0.46%
Na 330.237†	152.9	4.851	mg/L	0.0841	9.702	mg/L	0.1681	1.73%
Ni 231.604†	874.3	0.2023	mg/L	0.00239	0.4046	mg/L	0.00477	1.18%
Pb 220.353†	9837.1	1.175	mg/L	0.0084	2.350	mg/L	0.0168	0.71%
Sb 206.836†	80.7	0.02691	mg/L	0.001069	0.05381	mg/L	0.002138	3.97%
Se 196.026†	38.1	0.01401	mg/L	0.005331	0.02802	mg/L	0.010662	38.06%
Si 288.158†	2827.5	1.341	mg/L	0.0110	2.681	mg/L	0.0220	0.82%
Sn 189.927†	135.1	0.05463	mg/L	0.001371	0.1093	mg/L	0.00274	2.51%
Sr 421.552†	601849.5	0.5376	mg/L	0.00127	1.075	mg/L	0.0025	0.24%
Ti 334.903†	138626.0	6.221	mg/L	0.0166	12.44	mg/L	0.033	0.27%
Tl 190.801†	-54.7	0.00430	mg/L	0.001361	0.00860	mg/L	0.002722	31.66%
V 292.402†	59148.1	0.3882	mg/L	0.00315	0.7764	mg/L	0.00629	0.81%
Zn 206.200†	22496.8	5.478	mg/L	0.0337	10.96	mg/L	0.067	0.61%

Sequence No.: 43
Sample ID: WT03 E SWC

Autosampler Location: 324
Date Collected: 6/11/2013 12:36:22 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 E SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3127902.5	101.5	%	0.12				0.11%
ScR 361.383	382485.8	103.2	%	0.43				0.41%
Ag 328.068†	-168.0	-0.00071	mg/L	0.000122	-0.00142	mg/L	0.000243	17.17%
Al 308.215†	198467.5	114.1	mg/L	0.25	228.2	mg/L	0.51	0.22%
As 188.979†	-199.6	0.1016	mg/L	0.00230	0.2031	mg/L	0.00459	2.26%
B 249.677†	292.8	0.03813	mg/L	0.001268	0.07626	mg/L	0.002537	3.33%
Ba 233.527†	4145.4	0.8374	mg/L	0.00246	1.675	mg/L	0.0049	0.29%
Be 313.042†	1223.1	0.00171	mg/L	0.000009	0.00342	mg/L	0.000017	0.51%
Ca 317.933†	1704904.0	119.0	mg/L	0.29	238.1	mg/L	0.58	0.24%
Cd 228.802†	273.3	0.00871	mg/L	0.000015	0.01742	mg/L	0.000030	0.17%
Co 228.616†	3002.4	0.06316	mg/L	0.000242	0.1263	mg/L	0.00048	0.38%
Cr 267.716†	1814.3	0.2788	mg/L	0.00045	0.5576	mg/L	0.00091	0.16%
Cu 324.752†	183741.0	0.6158	mg/L	0.00037	1.232	mg/L	0.0007	0.06%
Fe 273.955†	221927.1	170.6	mg/L	0.42	341.2	mg/L	0.83	0.24%
K 766.490†	19489.3	7.883	mg/L	0.0021	15.77	mg/L	0.004	0.03%
Mg 279.077†	55906.1	38.73	mg/L	0.037	77.45	mg/L	0.075	0.10%
Mn 257.610†	91572.9	2.462	mg/L	0.0113	4.923	mg/L	0.0226	0.46%
Mo 202.031†	263.4	0.01133	mg/L	0.000720	0.02266	mg/L	0.001439	6.35%
Na 589.592†	77102.4	5.035	mg/L	0.0217	10.07	mg/L	0.043	0.43%
Na 330.237†	149.8	5.375	mg/L	0.0857	10.75	mg/L	0.171	1.59%
Ni 231.604†	917.9	0.2124	mg/L	0.00211	0.4248	mg/L	0.00422	0.99%
Pb 220.353†	4362.3	0.5332	mg/L	0.00179	1.066	mg/L	0.0036	0.34%
Sb 206.836†	33.0	0.01327	mg/L	0.001506	0.02655	mg/L	0.003012	11.35%
Se 196.026†	37.3	0.01247	mg/L	0.002492	0.02493	mg/L	0.004985	19.99%
Si 288.158†	3498.0	1.657	mg/L	0.0052	3.315	mg/L	0.0104	0.31%
Sn 189.927†	-22.9	0.01068	mg/L	0.001208	0.02135	mg/L	0.002416	11.32%
Sr 421.552†	600756.1	0.5366	mg/L	0.00086	1.073	mg/L	0.0017	0.16%
Ti 334.903†	151671.2	6.809	mg/L	0.0072	13.62	mg/L	0.014	0.11%
Tl 190.801†	-43.0	0.00396	mg/L	0.003240	0.00791	mg/L	0.006481	81.90%
V 292.402†	64848.7	0.4283	mg/L	0.00123	0.8566	mg/L	0.00247	0.29%
Zn 206.200†	17342.9	4.223	mg/L	0.0138	8.445	mg/L	0.0276	0.33%

Sequence No.: 44
Sample ID: WT03 MB1SPK SWC

Autosampler Location: 325
Date Collected: 6/11/2013 12:40:25 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT03 MB1SPK SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WT03 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3150797.9	102.2	%	0.37				0.36%
ScR 361.383	387866.6	104.6	%	0.13				0.12%
Ag 328.068†	104333.2	0.5190	mg/L	0.00399	1.038	mg/L	0.0080	0.77%
Al 308.215†	3457.2	1.980	mg/L	0.0013	3.960	mg/L	0.0026	0.06%
As 188.979†	3697.3	2.009	mg/L	0.0102	4.018	mg/L	0.0204	0.51%
B 249.677†	70.8	0.00820	mg/L	0.000654	0.01641	mg/L	0.001308	7.98%
Ba 233.527†	9811.9	2.050	mg/L	0.0079	4.100	mg/L	0.0158	0.39%
Be 313.042†	308493.9	0.4759	mg/L	0.00082	0.9519	mg/L	0.00163	0.17%
Ca 317.933†	139337.4	9.728	mg/L	0.0223	19.46	mg/L	0.045	0.23%
Cd 228.802†	17663.0	0.5031	mg/L	0.00413	1.006	mg/L	0.0083	0.82%
Co 228.616†	19618.8	0.5034	mg/L	0.00464	1.007	mg/L	0.0093	0.92%
Cr 267.716†	3347.6	0.5088	mg/L	0.00023	1.018	mg/L	0.0005	0.05%
Cu 324.752†	151604.8	0.5032	mg/L	0.00391	1.006	mg/L	0.0078	0.78%
Fe 273.955†	2600.4	1.996	mg/L	0.0073	3.991	mg/L	0.0147	0.37%
K 766.490†	24139.4	9.764	mg/L	0.0669	19.53	mg/L	0.134	0.68%
Mg 279.077†	14366.6	9.981	mg/L	0.0159	19.96	mg/L	0.032	0.16%
Mn 257.610†	18280.6	0.4918	mg/L	0.00130	0.9836	mg/L	0.00261	0.27%
Mo 202.031†	17.6	0.00071	mg/L	0.000118	0.00142	mg/L	0.000235	16.57%
Na 589.592†	151188.0	9.872	mg/L	0.0154	19.74	mg/L	0.031	0.16%
Na 330.237†	299.1	10.25	mg/L	0.007	20.51	mg/L	0.015	0.07%
Ni 231.604†	2076.5	0.4796	mg/L	0.00132	0.9593	mg/L	0.00265	0.28%
Pb 220.353†	17063.3	2.018	mg/L	0.0137	4.035	mg/L	0.0273	0.68%
Sb 206.836†	16.2	-0.00022	mg/L	0.000653	-0.00044	mg/L	0.001306	294.44%
Se 196.026†	2952.8	2.002	mg/L	0.0137	4.004	mg/L	0.0274	0.69%
Si 288.158†	36.2	0.02052	mg/L	0.002556	0.04103	mg/L	0.005113	12.46%
Sn 189.927†	-24.7	-0.00520	mg/L	0.000652	-0.01039	mg/L	0.001304	12.55%
Sr 421.552†	546322.9	0.4880	mg/L	0.00084	0.9759	mg/L	0.00169	0.17%
Ti 334.903†	93.6	0.00350	mg/L	0.000271	0.00701	mg/L	0.000542	7.74%
Tl 190.801†	4984.6	2.002	mg/L	0.0119	4.005	mg/L	0.0239	0.60%
V 292.402†	75050.9	0.5108	mg/L	0.00357	1.022	mg/L	0.0071	0.70%
Zn 206.200†	1979.4	0.4821	mg/L	0.00209	0.9642	mg/L	0.00417	0.43%

Sequence No.: 45
Sample ID: CV 6

Autosampler Location: 7
Date Collected: 6/11/2013 12:44:26 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3147213.5	102.1	%	0.20				0.20%
ScR 361.383	378143.7	102.0	%	0.32				0.31%
Ag 328.068†	210754.7	1.048	mg/L	0.0038	1.048	mg/L	0.0038	0.36%
Al 308.215†	3635.5	2.057	mg/L	0.0059	2.057	mg/L	0.0059	0.29%
As 188.979†	3649.6	2.012	mg/L	0.0047	2.012	mg/L	0.0047	0.23%
B 249.677†	7751.3	1.012	mg/L	0.0017	1.012	mg/L	0.0017	0.17%
Ba 233.527†	5009.5	1.046	mg/L	0.0055	1.046	mg/L	0.0055	0.52%
Be 313.042†	648296.7	1.000	mg/L	0.0036	1.000	mg/L	0.0036	0.36%
Ca 317.933†	28338.6	1.978	mg/L	0.0015	1.978	mg/L	0.0015	0.07%
Cd 228.802†	35185.7	1.013	mg/L	0.0036	1.013	mg/L	0.0036	0.36%
Co 228.616†	39393.1	1.009	mg/L	0.0064	1.009	mg/L	0.0064	0.63%
Cr 267.716†	6897.5	1.050	mg/L	0.0018	1.050	mg/L	0.0018	0.17%
Cu 324.752†	311002.7	1.032	mg/L	0.0052	1.032	mg/L	0.0052	0.50%
Fe 273.955†	2683.0	2.056	mg/L	0.0060	2.056	mg/L	0.0060	0.29%
K 766.490†	49370.2	19.97	mg/L	0.063	19.97	mg/L	0.063	0.31%
Mg 279.077†	2889.1	2.014	mg/L	0.0053	2.014	mg/L	0.0053	0.26%
Mn 257.610†	35846.8	0.9641	mg/L	0.00313	0.9641	mg/L	0.00313	0.32%
Mo 202.031†	20395.7	0.9953	mg/L	0.00213	0.9953	mg/L	0.00213	0.21%
Na 589.592†	768245.8	50.16	mg/L	0.090	50.16	mg/L	0.090	0.18%
Na 330.237†	1484.6	51.80	mg/L	0.084	51.80	mg/L	0.084	0.16%
Ni 231.604†	4421.3	1.023	mg/L	0.0034	1.023	mg/L	0.0034	0.33%
Pb 220.353†	17312.5	2.047	mg/L	0.0028	2.047	mg/L	0.0028	0.14%
Sb 206.836†	6965.4	2.052	mg/L	0.0053	2.052	mg/L	0.0053	0.26%
Se 196.026†	2926.3	1.984	mg/L	0.0022	1.984	mg/L	0.0022	0.11%
Si 288.158†	4377.3	2.073	mg/L	0.0103	2.073	mg/L	0.0103	0.50%
Sn 189.927†	3679.6	0.9726	mg/L	0.00091	0.9726	mg/L	0.00091	0.09%
Sr 421.552†	1117180.1	0.9978	mg/L	0.00041	0.9978	mg/L	0.00041	0.04%
Ti 334.903†	22131.0	0.9933	mg/L	0.00173	0.9933	mg/L	0.00173	0.17%
Tl 190.801†	5145.7	2.064	mg/L	0.0023	2.064	mg/L	0.0023	0.11%
V 292.402†	150823.0	1.027	mg/L	0.0044	1.027	mg/L	0.0044	0.43%
Zn 206.200†	4132.3	1.007	mg/L	0.0032	1.007	mg/L	0.0032	0.32%

Sequence No.: 46
Sample ID: CB 6

Autosampler Location: 1
Date Collected: 6/11/2013 12:48:29 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3175326.7	103.0	%	0.15				0.15%
ScR 361.383	384598.9	103.7	%	0.80				0.77%
Ag 328.068†	60.4	0.00030	mg/L	0.000082	0.00030	mg/L	0.000082	27.42%
Al 308.215†	-0.6	-0.00037	mg/L	0.002576	-0.00037	mg/L	0.002576	703.39%
As 188.979†	3.1	0.00170	mg/L	0.000717	0.00170	mg/L	0.000717	42.21%
B 249.677†	66.2	0.00866	mg/L	0.000516	0.00866	mg/L	0.000516	5.96%
Ba 233.527†	-1.2	-0.00025	mg/L	0.000609	-0.00025	mg/L	0.000609	242.39%
Be 313.042†	162.3	0.00025	mg/L	0.000037	0.00025	mg/L	0.000037	14.71%
Ca 317.933†	25.9	0.00180	mg/L	0.000452	0.00180	mg/L	0.000452	25.07%
Cd 228.802†	8.7	0.00025	mg/L	0.000155	0.00025	mg/L	0.000155	62.89%
Co 228.616†	14.6	0.00037	mg/L	0.000102	0.00037	mg/L	0.000102	27.30%
Cr 267.716†	1.4	0.00022	mg/L	0.000217	0.00022	mg/L	0.000217	99.59%
Cu 324.752†	248.5	0.00082	mg/L	0.000035	0.00082	mg/L	0.000035	4.25%
Fe 273.955†	1.8	0.00137	mg/L	0.001261	0.00137	mg/L	0.001261	92.33%
K 766.490†	24.4	0.00987	mg/L	0.014471	0.00987	mg/L	0.014471	146.69%
Mg 279.077†	1.4	0.00098	mg/L	0.005342	0.00098	mg/L	0.005342	543.77%
Mn 257.610†	6.2	0.00017	mg/L	0.000089	0.00017	mg/L	0.000089	52.75%
Mo 202.031†	12.6	0.00062	mg/L	0.000117	0.00062	mg/L	0.000117	18.96%
Na 589.592†	1290.1	0.08424	mg/L	0.000232	0.08424	mg/L	0.000232	0.28%
Na 330.237†	4.6	0.1590	mg/L	0.20167	0.1590	mg/L	0.20167	126.84%
Ni 231.604†	6.6	0.00152	mg/L	0.000841	0.00152	mg/L	0.000841	55.44%
Pb 220.353†	2.7	0.00032	mg/L	0.000360	0.00032	mg/L	0.000360	111.42%
Sb 206.836†	8.7	0.00258	mg/L	0.001819	0.00258	mg/L	0.001819	70.42%
Se 196.026†	5.3	0.00358	mg/L	0.002593	0.00358	mg/L	0.002593	72.33%
Si 288.158†	4.1	0.00194	mg/L	0.003322	0.00194	mg/L	0.003322	170.88%
Sn 189.927†	3.8	0.00100	mg/L	0.000526	0.00100	mg/L	0.000526	52.80%
Sr 421.552†	220.7	0.00020	mg/L	0.000018	0.00020	mg/L	0.000018	8.99%
Ti 334.903†	7.7	0.00034	mg/L	0.000391	0.00034	mg/L	0.000391	113.96%
Tl 190.801†	7.6	0.00305	mg/L	0.002044	0.00305	mg/L	0.002044	66.92%
V 292.402†	37.2	0.00025	mg/L	0.000116	0.00025	mg/L	0.000116	45.73%
Zn 206.200†	0.9	0.00023	mg/L	0.000222	0.00023	mg/L	0.000222	96.36%

Sequence No.: 47
Sample ID: WR99 MB3 SWC

Autosampler Location: 327
Date Collected: 6/11/2013 12:52:44 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WR99 MB3 SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 MB3 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3181283.8	103.2	%	0.57				0.55%
ScR 361.383	387579.8	104.5	%	0.20				0.20%
Ag 328.068†	13.5	0.00007	mg/L	0.000089	0.00013	mg/L	0.000178	132.94%
Al 308.215†	-0.0	-0.00002	mg/L	0.002543	-0.00004	mg/L	0.005087	>999.9%
As 188.979†	1.2	0.00066	mg/L	0.000947	0.00133	mg/L	0.001895	142.49%
B 249.677†	51.5	0.00673	mg/L	0.000309	0.01346	mg/L	0.000617	4.58%
Ba 233.527†	-2.9	-0.00061	mg/L	0.000643	-0.00121	mg/L	0.001287	106.00%
Be 313.042†	0.6	0.00000	mg/L	0.000023	0.00000	mg/L	0.000046	>999.9%
Ca 317.933†	60.1	0.00420	mg/L	0.001110	0.00839	mg/L	0.002221	26.46%
Cd 228.802†	6.8	0.00020	mg/L	0.000060	0.00039	mg/L	0.000121	30.81%
Co 228.616†	-1.2	-0.00003	mg/L	0.000126	-0.00006	mg/L	0.000253	398.64%
Cr 267.716†	-4.3	-0.00065	mg/L	0.000576	-0.00130	mg/L	0.001151	88.38%
Cu 324.752†	366.2	0.00122	mg/L	0.000065	0.00243	mg/L	0.000131	5.37%
Fe 273.955†	2.1	0.00160	mg/L	0.000832	0.00320	mg/L	0.001663	52.02%
K 766.490†	-26.8	-0.01082	mg/L	0.009171	-0.02164	mg/L	0.018342	84.74%
Mg 279.077†	3.4	0.00233	mg/L	0.007792	0.00466	mg/L	0.015583	334.46%
Mn 257.610†	-2.7	-0.00007	mg/L	0.000047	-0.00015	mg/L	0.000095	64.44%
Mo 202.031†	-3.6	-0.00017	mg/L	0.000184	-0.00035	mg/L	0.000368	105.85%
Na 589.592†	1072.5	0.07003	mg/L	0.000339	0.1401	mg/L	0.00068	0.48%
Na 330.237†	-6.8	-0.2368	mg/L	0.33903	-0.4737	mg/L	0.67805	143.15%
Ni 231.604†	8.5	0.00197	mg/L	0.000553	0.00394	mg/L	0.001107	28.13%
Pb 220.353†	-4.2	-0.00050	mg/L	0.000235	-0.00099	mg/L	0.000470	47.34%
Sb 206.836†	-6.7	-0.00197	mg/L	0.001552	-0.00393	mg/L	0.003103	78.92%
Se 196.026†	1.6	0.00106	mg/L	0.002418	0.00211	mg/L	0.004835	228.70%
Si 288.158†	14.2	0.00672	mg/L	0.000868	0.01344	mg/L	0.001736	12.91%
Sn 189.927†	2.7	0.00072	mg/L	0.000426	0.00145	mg/L	0.000852	58.92%
Sr 421.552†	-18.5	-0.00002	mg/L	0.000025	-0.00003	mg/L	0.000051	154.03%
Ti 334.903†	-7.4	-0.00033	mg/L	0.000316	-0.00066	mg/L	0.000631	95.10%
Tl 190.801†	-0.1	-0.00004	mg/L	0.001223	-0.00008	mg/L	0.002446	>999.9%
V 292.402†	1.5	0.00001	mg/L	0.000117	0.00002	mg/L	0.000234	>999.9%
Zn 206.200†	1.4	0.00035	mg/L	0.000417	0.00069	mg/L	0.000834	120.64%

W321:81792

Sequence No.: 48
Sample ID: WR99 DDUP SWC

Del

Dilution: 2.000000X

Autosampler Location: 328
Date Collected: 6/11/2013 12:57:00 PM
Data Type: Original

Nebulizer Parameters: WR99 DDUP SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 DDUP SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3158496.7	102.5	%	0.08				0.08%
ScR 361.383	386812.2	104.3	%	0.56				0.53%
Ag 328.068†	-244.9	-0.00111	mg/L	0.000114	-0.00221	mg/L	0.000228	10.33%
Al 308.215†	133046.7	76.48	mg/L	0.335	153.0	mg/L	0.67	0.44%
As 188.979†	-97.9	0.1239	mg/L	0.00286	0.2478	mg/L	0.00571	2.31%
B 249.677†	392.2	0.05117	mg/L	0.000417	0.1023	mg/L	0.00083	0.82%
Ba 233.527†	2488.4	0.4740	mg/L	0.00157	0.9480	mg/L	0.00313	0.33%
Be 313.042†	935.9	0.00129	mg/L	0.000015	0.00259	mg/L	0.000031	1.19%
Ca 317.933†	519700.2	36.28	mg/L	0.111	72.57	mg/L	0.223	0.31%
Cd 228.802†	224.4	0.00692	mg/L	0.000126	0.01385	mg/L	0.000251	1.82%
Co 228.616†	2207.2	0.04367	mg/L	0.000147	0.08734	mg/L	0.000295	0.34%
Cr 267.716†	803.3	0.1309	mg/L	0.00089	0.2619	mg/L	0.00178	0.68%
Cu 324.752†	84365.5	0.2908	mg/L	0.00098	0.5816	mg/L	0.00196	0.34%
Fe 273.955†	354794.4	272.7	mg/L	2.32	545.4	mg/L	4.65	0.85%
K 766.490†	10372.7	4.196	mg/L	0.0233	8.391	mg/L	0.0466	0.56%
Mg 279.077†	38875.7	26.84	mg/L	0.103	53.68	mg/L	0.207	0.38%
Mn 257.610†	129462.3	3.481	mg/L	0.0250	6.962	mg/L	0.0499	0.72%
Mo 202.031†	251.6	0.01181	mg/L	0.000576	0.02362	mg/L	0.001152	4.88%
Na 589.592†	52661.9	3.439	mg/L	0.0208	6.877	mg/L	0.0416	0.61%
Na 330.237†	71.4	3.567	mg/L	0.1836	7.134	mg/L	0.3671	5.15%
Ni 231.604†	615.5	0.1424	mg/L	0.00096	0.2848	mg/L	0.00192	0.67%
Pb 220.353†	1731.6	0.2084	mg/L	0.00192	0.4168	mg/L	0.00384	0.92%
Sb 206.836†	35.0	0.01479	mg/L	0.002624	0.02957	mg/L	0.005249	17.75%
Se 196.026†	31.1	0.01247	mg/L	0.005674	0.02494	mg/L	0.011348	45.50%
Si 288.158†	10183.5	4.815	mg/L	0.0285	9.630	mg/L	0.0569	0.59%
Sn 189.927†	9.7	0.00840	mg/L	0.000356	0.01681	mg/L	0.000712	4.23%
Sr 421.552†	340583.1	0.3042	mg/L	0.00146	0.6084	mg/L	0.00292	0.48%
Ti 334.903†	124515.8	5.593	mg/L	0.0281	11.19	mg/L	0.056	0.50%
Tl 190.801†	-75.9	0.00511	mg/L	0.002637	0.01023	mg/L	0.005274	51.58%
V 292.402†	57189.6	0.3712	mg/L	0.00071	0.7424	mg/L	0.00142	0.19%
Zn 206.200†	5030.9	1.226	mg/L	0.0081	2.451	mg/L	0.0162	0.66%

Sequence No.: 49
Sample ID: WR99 D SWC

Dilution: 2.000000X

Autosampler Location: 329
Date Collected: 6/11/2013 1:01:01 PM
Data Type: Original

Nebulizer Parameters: WR99 D SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3160986.2	102.6	%	0.83				0.81%
ScR 361.383	386525.3	104.3	%	0.69				0.66%
Ag 328.068†	-241.2	-0.00109	mg/L	0.000203	-0.00219	mg/L	0.000407	18.58%
Al 308.215†	131896.8	75.82	mg/L	0.321	151.6	mg/L	0.64	0.42%
As 188.979†	-143.6	0.1003	mg/L	0.00483	0.2007	mg/L	0.00967	4.82%
B 249.677†	150.6	0.01957	mg/L	0.000808	0.03914	mg/L	0.001617	4.13%
Ba 233.527†	2379.2	0.4545	mg/L	0.00315	0.9089	mg/L	0.00631	0.69%
Be 313.042†	918.1	0.00127	mg/L	0.000032	0.00254	mg/L	0.000063	2.49%
Ca 317.933†	567547.9	39.62	mg/L	0.028	79.25	mg/L	0.056	0.07%
Cd 228.802†	206.4	0.00653	mg/L	0.000208	0.01305	mg/L	0.000416	3.19%
Co 228.616†	2287.7	0.04589	mg/L	0.000583	0.09178	mg/L	0.001165	1.27%
Cr 267.716†	695.2	0.1136	mg/L	0.00107	0.2272	mg/L	0.00214	0.94%
Cu 324.752†	64891.5	0.2253	mg/L	0.00258	0.4506	mg/L	0.00517	1.15%
Fe 273.955†	329422.9	253.2	mg/L	1.79	506.4	mg/L	3.57	0.71%
K 766.490†	12079.5	4.886	mg/L	0.0203	9.772	mg/L	0.0407	0.42%
Mg 279.077†	39334.4	27.17	mg/L	0.051	54.34	mg/L	0.103	0.19%
Mn 257.610†	129935.2	3.494	mg/L	0.0197	6.988	mg/L	0.0393	0.56%
Mo 202.031†	155.1	0.00706	mg/L	0.000212	0.01412	mg/L	0.000423	3.00%
Na 589.592†	55713.0	3.638	mg/L	0.0018	7.276	mg/L	0.0035	0.05%
Na 330.237†	79.2	3.871	mg/L	0.1699	7.743	mg/L	0.3398	4.39%
Ni 231.604†	555.3	0.1285	mg/L	0.00204	0.2570	mg/L	0.00409	1.59%
Pb 220.353†	2340.2	0.2813	mg/L	0.00305	0.5625	mg/L	0.00609	1.08%
Sb 206.836†	33.2	0.01431	mg/L	0.001137	0.02862	mg/L	0.002274	7.95%
Se 196.026†	23.9	0.00766	mg/L	0.005307	0.01531	mg/L	0.010614	69.33%
Si 288.158†	12573.4	5.944	mg/L	0.0409	11.89	mg/L	0.082	0.69%
Sn 189.927†	-45.7	-0.00578	mg/L	0.000479	-0.01155	mg/L	0.000958	8.30%
Sr 421.552†	372187.7	0.3324	mg/L	0.00143	0.6649	mg/L	0.00286	0.43%
Ti 334.903†	125543.7	5.639	mg/L	0.0242	11.28	mg/L	0.048	0.43%
Tl 190.801†	-72.8	0.00374	mg/L	0.002272	0.00748	mg/L	0.004543	60.70%
V 292.402†	53668.8	0.3483	mg/L	0.00354	0.6966	mg/L	0.00708	1.02%
Zn 206.200†	4561.5	1.112	mg/L	0.0057	2.223	mg/L	0.0113	0.51%

Sequence No.: 50
Sample ID: WR99 DSPK SWC

Dilution: 2.000000X

Del

Autosampler Location: 330
Date Collected: 6/11/2013 1:05:02 PM
Data Type: Original

Nebulizer Parameters: WR99 DSPK SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 DSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3149489.1	102.2	%	0.35				0.34%
ScR 361.383	380803.9	102.7	%	0.20				0.19%
Ag 328.068†	102139.4	0.5082	mg/L	0.00316	1.016	mg/L	0.0063	0.62%
Al 308.215†	151044.6	86.82	mg/L	0.175	173.6	mg/L	0.35	0.20%
As 188.979†	3421.2	2.040	mg/L	0.0145	4.081	mg/L	0.0290	0.71%
B 249.677†	148.8	0.01828	mg/L	0.001606	0.03656	mg/L	0.003213	8.79%
Ba 233.527†	12427.2	2.559	mg/L	0.0068	5.118	mg/L	0.0135	0.26%
Be 313.042†	309462.9	0.4773	mg/L	0.00131	0.9546	mg/L	0.00263	0.28%
Ca 317.933†	711370.9	49.67	mg/L	0.126	99.33	mg/L	0.253	0.25%
Cd 228.802†	18230.7	0.5206	mg/L	0.00255	1.041	mg/L	0.0051	0.49%
Co 228.616†	21800.4	0.5467	mg/L	0.00184	1.093	mg/L	0.0037	0.34%
Cr 267.716†	4235.7	0.6500	mg/L	0.00507	1.300	mg/L	0.0101	0.78%
Cu 324.752†	212973.0	0.7154	mg/L	0.00594	1.431	mg/L	0.0119	0.83%
Fe 273.955†	293290.2	225.4	mg/L	0.50	450.9	mg/L	1.00	0.22%
K 766.490†	35090.2	14.19	mg/L	0.039	28.39	mg/L	0.079	0.28%
Mg 279.077†	62740.5	43.45	mg/L	0.109	86.90	mg/L	0.218	0.25%
Mn 257.610†	145783.9	3.920	mg/L	0.0080	7.840	mg/L	0.0159	0.20%
Mo 202.031†	117.2	0.00505	mg/L	0.000301	0.01011	mg/L	0.000601	5.95%
Na 589.592†	217082.4	14.17	mg/L	0.018	28.35	mg/L	0.036	0.13%
Na 330.237†	380.9	14.24	mg/L	0.268	28.48	mg/L	0.536	1.88%
Ni 231.604†	2693.3	0.6224	mg/L	0.00408	1.245	mg/L	0.0082	0.66%
Pb 220.353†	19053.1	2.261	mg/L	0.0121	4.522	mg/L	0.0243	0.54%
Sb 206.836†	46.1	0.01286	mg/L	0.001721	0.02572	mg/L	0.003442	13.38%
Se 196.026†	2908.0	1.962	mg/L	0.0150	3.924	mg/L	0.0300	0.77%
Si 288.158†	10678.8	5.053	mg/L	0.0208	10.11	mg/L	0.042	0.41%
Sn 189.927†	-47.1	-0.00476	mg/L	0.001336	-0.00951	mg/L	0.002672	28.09%
Sr 421.552†	1017937.8	0.9092	mg/L	0.00083	1.818	mg/L	0.0017	0.09%
Ti 334.903†	127816.2	5.741	mg/L	0.0088	11.48	mg/L	0.018	0.15%
Tl 190.801†	4623.3	1.886	mg/L	0.0078	3.772	mg/L	0.0156	0.41%
V 292.402†	129087.2	0.8632	mg/L	0.00746	1.726	mg/L	0.0149	0.86%
Zn 206.200†	6614.1	1.611	mg/L	0.0072	3.223	mg/L	0.0143	0.45%

WS21:91795

Sequence No.: 51
Sample ID: ~~WR99 DPOST SWC~~ ZZZZZZ
Dilution: 2.000000X BA 6/11/13

Autosampler Location: 331
Date Collected: 6/11/2013 1:08:20 PM
Data Type: Original

Nebulizer Parameters: WR99 DPOST SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 DPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3137327.5	101.8	%	0.42				0.42%
ScR 361.383	379382.2	102.3	%	0.55				0.54%
Ag 328.068†	105066.0	0.5227	mg/L	0.00336	1.045	mg/L	0.0067	0.64%
Al 308.215†	137408.1	78.98	mg/L	0.055	158.0	mg/L	0.11	0.07%
As 188.979†	3599.7	2.136	mg/L	0.0116	4.273	mg/L	0.0232	0.54%
B 249.677†	161.2	0.01989	mg/L	0.001228	0.03977	mg/L	0.002455	6.17%
Ba 233.527†	12514.1	2.572	mg/L	0.0478	5.143	mg/L	0.0957	1.86%
Be 313.042†	315800.9	0.4871	mg/L	0.00079	0.9741	mg/L	0.00158	0.16%
Ca 317.933†	718929.6	50.19	mg/L	0.093	100.4	mg/L	0.19	0.19%
Cd 228.802†	18630.5	0.5317	mg/L	0.00183	1.063	mg/L	0.0037	0.34%
Co 228.616†	22133.6	0.5549	mg/L	0.00133	1.110	mg/L	0.0027	0.24%
Cr 267.716†	4128.5	0.6354	mg/L	0.00736	1.271	mg/L	0.0147	1.16%
Cu 324.752†	224685.0	0.7557	mg/L	0.00509	1.511	mg/L	0.0102	0.67%
Fe 273.955†	334303.0	257.0	mg/L	1.01	513.9	mg/L	2.01	0.39%
K 766.490†	37711.2	15.25	mg/L	0.083	30.51	mg/L	0.166	0.54%
Mg 279.077†	57091.7	39.51	mg/L	0.536	79.01	mg/L	1.073	1.36%
Mn 257.610†	149834.4	4.029	mg/L	0.0117	8.058	mg/L	0.0234	0.29%
Mo 202.031†	152.7	0.00678	mg/L	0.000338	0.01357	mg/L	0.000675	4.98%
Na 589.592†	213769.4	13.96	mg/L	0.013	27.92	mg/L	0.026	0.09%
Na 330.237†	379.1	14.16	mg/L	0.137	28.32	mg/L	0.273	0.96%
Ni 231.604†	2698.3	0.6236	mg/L	0.00692	1.247	mg/L	0.0138	1.11%
Pb 220.353†	19612.8	2.324	mg/L	0.0095	4.647	mg/L	0.0191	0.41%
Sb 206.836†	56.1	0.01603	mg/L	0.002196	0.03206	mg/L	0.004392	13.70%
Se 196.026†	3027.8	2.044	mg/L	0.0131	4.089	mg/L	0.0263	0.64%
Si 288.158†	12729.1	6.021	mg/L	0.0810	12.04	mg/L	0.162	1.35%
Sn 189.927†	-47.0	-0.00467	mg/L	0.001464	-0.00935	mg/L	0.002928	31.33%
Sr 421.552†	943597.7	0.8428	mg/L	0.00053	1.686	mg/L	0.0011	0.06%
Ti 334.903†	127108.1	5.709	mg/L	0.0049	11.42	mg/L	0.010	0.09%
Tl 190.801†	4745.4	1.939	mg/L	0.0053	3.878	mg/L	0.0105	0.27%
V 292.402†	129483.9	0.8642	mg/L	0.00613	1.728	mg/L	0.0123	0.71%
Zn 206.200†	6686.5	1.629	mg/L	0.0271	3.258	mg/L	0.0542	1.66%

Sequence No.: 52
Sample ID: WR99 E SWC

Autosampler Location: 332
Date Collected: 6/11/2013 1:11:39 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WR99 E SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WR99 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3176463.2	103.1	%	0.28				0.28%
ScR 361.383	387929.0	104.6	%	0.13				0.12%
Ag 328.068†	-148.9	-0.00064	mg/L	0.000107	-0.00129	mg/L	0.000214	16.67%
Al 308.215†	125360.0	72.06	mg/L	0.288	144.1	mg/L	0.58	0.40%
As 188.979†	-184.6	0.08505	mg/L	0.002748	0.1701	mg/L	0.00550	3.23%
B 249.677†	130.3	0.01690	mg/L	0.000697	0.03381	mg/L	0.001394	4.12%
Ba 233.527†	2092.3	0.4107	mg/L	0.00069	0.8214	mg/L	0.00137	0.17%
Be 313.042†	862.9	0.00119	mg/L	0.000015	0.00238	mg/L	0.000030	1.24%
Ca 317.933†	539773.5	37.68	mg/L	0.070	75.37	mg/L	0.139	0.18%
Cd 228.802†	969.1	0.02885	mg/L	0.000197	0.05769	mg/L	0.000393	0.68%
Co 228.616†	2509.7	0.05238	mg/L	0.000171	0.1048	mg/L	0.00034	0.33%
Cr 267.716†	1086.8	0.1693	mg/L	0.00083	0.3387	mg/L	0.00166	0.49%
Cu 324.752†	92040.9	0.3111	mg/L	0.00038	0.6223	mg/L	0.00077	0.12%
Fe 273.955†	204586.9	157.3	mg/L	0.58	314.5	mg/L	1.16	0.37%
K 766.490†	11125.4	4.500	mg/L	0.0286	9.000	mg/L	0.0571	0.63%
Mg 279.077†	38264.4	26.49	mg/L	0.088	52.97	mg/L	0.175	0.33%
Mn 257.610†	63797.3	1.715	mg/L	0.0054	3.431	mg/L	0.0108	0.32%
Mo 202.031†	100.5	0.00442	mg/L	0.000486	0.00883	mg/L	0.000973	11.01%
Na 589.592†	56891.9	3.715	mg/L	0.0160	7.430	mg/L	0.0319	0.43%
Na 330.237†	78.0	3.836	mg/L	0.1569	7.671	mg/L	0.3138	4.09%
Ni 231.604†	602.8	0.1395	mg/L	0.00065	0.2790	mg/L	0.00131	0.47%
Pb 220.353†	7808.6	0.9316	mg/L	0.00169	1.863	mg/L	0.0034	0.18%
Sb 206.836†	22.4	0.01043	mg/L	0.001870	0.02085	mg/L	0.003739	17.93%
Se 196.026†	25.1	0.00891	mg/L	0.006673	0.01782	mg/L	0.013346	74.88%
Si 288.158†	8815.8	4.169	mg/L	0.0064	8.337	mg/L	0.0128	0.15%
Sn 189.927†	-32.6	-0.00251	mg/L	0.001186	-0.00501	mg/L	0.002372	47.33%
Sr 421.552†	453730.9	0.4053	mg/L	0.00169	0.8105	mg/L	0.00338	0.42%
Ti 334.903†	130333.7	5.855	mg/L	0.0176	11.71	mg/L	0.035	0.30%
Tl 190.801†	-36.5	0.00524	mg/L	0.002391	0.01048	mg/L	0.004782	45.63%
V 292.402†	49618.1	0.3257	mg/L	0.00081	0.6515	mg/L	0.00163	0.25%
Zn 206.200†	5449.6	1.328	mg/L	0.0022	2.655	mg/L	0.0043	0.16%

Sequence No.: 53
Sample ID: WR99 F SWC

Autosampler Location: 333
Date Collected: 6/11/2013 1:15:40 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WR99 F SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WR99 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3126564.8	101.5	%	0.16				0.16%
ScR 361.383	384017.1	103.6	%	0.92				0.89%
Ag 328.068†	1349.1	0.00685	mg/L	0.000060	0.01369	mg/L	0.000121	0.88%
Al 308.215†	194908.2	112.1	mg/L	0.45	224.1	mg/L	0.90	0.40%
As 188.979†	-212.9	0.06364	mg/L	0.002151	0.1273	mg/L	0.00430	3.38%
B 249.677†	275.1	0.03574	mg/L	0.000892	0.07149	mg/L	0.001784	2.50%
Ba 233.527†	4469.8	0.9061	mg/L	0.00710	1.812	mg/L	0.0142	0.78%
Be 313.042†	1370.0	0.00194	mg/L	0.000030	0.00388	mg/L	0.000059	1.53%
Ca 317.933†	876482.1	61.19	mg/L	0.305	122.4	mg/L	0.61	0.50%
Cd 228.802†	4230.7	0.1239	mg/L	0.00069	0.2479	mg/L	0.00138	0.56%
Co 228.616†	4915.0	0.1142	mg/L	0.00030	0.2283	mg/L	0.00060	0.26%
Cr 267.716†	4695.6	0.7182	mg/L	0.00454	1.436	mg/L	0.0091	0.63%
Cu 324.752†	283387.8	0.9464	mg/L	0.00295	1.893	mg/L	0.0059	0.31%
Fe 273.955†	215244.6	165.4	mg/L	1.53	330.9	mg/L	3.05	0.92%
K 766.490†	13463.0	5.446	mg/L	0.0153	10.89	mg/L	0.031	0.28%
Mg 279.077†	52984.6	36.71	mg/L	0.136	73.41	mg/L	0.272	0.37%
Mn 257.610†	95067.4	2.556	mg/L	0.0182	5.112	mg/L	0.0364	0.71%
Mo 202.031†	916.3	0.04391	mg/L	0.000406	0.08781	mg/L	0.000812	0.92%
Na 589.592†	78332.9	5.115	mg/L	0.0152	10.23	mg/L	0.030	0.30%
Na 330.237†	162.2	5.470	mg/L	0.1820	10.94	mg/L	0.364	3.33%
Ni 231.604†	1219.4	0.2822	mg/L	0.00225	0.5643	mg/L	0.00449	0.80%
Pb 220.353†	23883.2	2.841	mg/L	0.0126	5.681	mg/L	0.0252	0.44%
Sb 206.836†	65.1	0.01623	mg/L	0.002912	0.03246	mg/L	0.005824	17.94%
Se 196.026†	32.5	0.00943	mg/L	0.003765	0.01886	mg/L	0.007529	39.92%
Si 288.158†	6273.1	2.969	mg/L	0.0154	5.938	mg/L	0.0308	0.52%
Sn 189.927†	58.0	0.02447	mg/L	0.001016	0.04893	mg/L	0.002032	4.15%
Sr 421.552†	381129.8	0.3404	mg/L	0.00135	0.6808	mg/L	0.00270	0.40%
Ti 334.903†	128030.1	5.750	mg/L	0.0272	11.50	mg/L	0.054	0.47%
Tl 190.801†	-35.0	0.00592	mg/L	0.000303	0.01184	mg/L	0.000606	5.12%
V 292.402†	69901.5	0.4652	mg/L	0.00100	0.9304	mg/L	0.00201	0.22%
Zn 206.200†	21151.6	5.151	mg/L	0.0342	10.30	mg/L	0.068	0.66%

W521:91795

Sequence No.: 54
Sample ID: WR99 MB3SPK SWC

Autosampler Location: 334
Date Collected: 6/11/2013 1:19:41 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WR99 MB3SPK SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WR99 MB3SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3154201.4	102.4	%	0.08				0.08%
ScR 361.383	384282.4	103.7	%	0.98				0.95%
Ag 328.068†	104942.7	0.5220	mg/L	0.00342	1.044	mg/L	0.0068	0.66%
Al 308.215†	3498.5	2.004	mg/L	0.0189	4.007	mg/L	0.0378	0.94%
As 188.979†	3753.3	2.039	mg/L	0.0095	4.079	mg/L	0.0190	0.47%
B 249.677†	36.7	0.00373	mg/L	0.000423	0.00745	mg/L	0.000847	11.36%
Ba 233.527†	10004.7	2.090	mg/L	0.0160	4.181	mg/L	0.0321	0.77%
Be 313.042†	312404.1	0.4820	mg/L	0.00331	0.9639	mg/L	0.00663	0.69%
Ca 317.933†	140686.1	9.822	mg/L	0.0462	19.64	mg/L	0.092	0.47%
Cd 228.802†	17917.7	0.5104	mg/L	0.00232	1.021	mg/L	0.0046	0.45%
Co 228.616†	19742.9	0.5065	mg/L	0.00238	1.013	mg/L	0.0048	0.47%
Cr 267.716†	3404.6	0.5175	mg/L	0.00419	1.035	mg/L	0.0084	0.81%
Cu 324.752†	151437.1	0.5026	mg/L	0.00287	1.005	mg/L	0.0057	0.57%
Fe 273.955†	2615.6	2.007	mg/L	0.0165	4.015	mg/L	0.0330	0.82%
K 766.490†	24289.2	9.825	mg/L	0.0230	19.65	mg/L	0.046	0.23%
Mg 279.077†	14620.0	10.16	mg/L	0.081	20.31	mg/L	0.161	0.79%
Mn 257.610†	18559.5	0.4993	mg/L	0.00390	0.9986	mg/L	0.00781	0.78%
Mo 202.031†	20.1	0.00083	mg/L	0.000044	0.00166	mg/L	0.000087	5.28%
Na 589.592†	151461.7	9.890	mg/L	0.0650	19.78	mg/L	0.130	0.66%
Na 330.237†	290.1	9.937	mg/L	0.3166	19.87	mg/L	0.633	3.19%
Ni 231.604†	2121.7	0.4901	mg/L	0.00425	0.9802	mg/L	0.00851	0.87%
Pb 220.353†	17262.6	2.041	mg/L	0.0098	4.082	mg/L	0.0197	0.48%
Sb 206.836†	6.1	-0.00332	mg/L	0.002586	-0.00664	mg/L	0.005173	77.84%
Se 196.026†	3007.4	2.039	mg/L	0.0028	4.078	mg/L	0.0056	0.14%
Si 288.158†	17.7	0.01181	mg/L	0.003424	0.02362	mg/L	0.006848	29.00%
Sn 189.927†	-27.6	-0.00595	mg/L	0.000362	-0.01189	mg/L	0.000725	6.09%
Sr 421.552†	548265.9	0.4897	mg/L	0.00240	0.9794	mg/L	0.00481	0.49%
Ti 334.903†	74.8	0.00265	mg/L	0.000203	0.00530	mg/L	0.000405	7.64%
Tl 190.801†	5044.5	2.026	mg/L	0.0036	4.053	mg/L	0.0073	0.18%
V 292.402†	75053.3	0.5109	mg/L	0.00337	1.022	mg/L	0.0067	0.66%
Zn 206.200†	2025.0	0.4932	mg/L	0.00416	0.9864	mg/L	0.00833	0.84%

Sequence No.: 55
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 6/11/2013 1:23:42 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3109430.9	100.9	%	0.27				0.26%
ScR 361.383	374657.3	101.1	%	0.60				0.60%
Ag 328.068†	217279.0	1.081	mg/L	0.0050	1.081	mg/L	0.0050	0.46%
Al 308.215†	3707.5	2.098	mg/L	0.0166	2.098	mg/L	0.0166	0.79%
As 188.979†	3770.5	2.078	mg/L	0.0067	2.078	mg/L	0.0067	0.32%
B 249.677†	7856.1	1.026	mg/L	0.0067	1.026	mg/L	0.0067	0.65%
Ba 233.527†	5118.8	1.069	mg/L	0.0089	1.069	mg/L	0.0089	0.83%
Be 313.042†	661532.0	1.021	mg/L	0.0046	1.021	mg/L	0.0046	0.45%
Ca 317.933†	28945.9	2.021	mg/L	0.0086	2.021	mg/L	0.0086	0.43%
Cd 228.802†	35914.2	1.034	mg/L	0.0093	1.034	mg/L	0.0093	0.90%
Co 228.616†	40209.9	1.030	mg/L	0.0077	1.030	mg/L	0.0077	0.74%
Cr 267.716†	7034.1	1.071	mg/L	0.0081	1.071	mg/L	0.0081	0.76%
Cu 324.752†	306925.9	1.018	mg/L	0.0016	1.018	mg/L	0.0016	0.15%
Fe 273.955†	2733.0	2.094	mg/L	0.0159	2.094	mg/L	0.0159	0.76%
K 766.490†	50211.2	20.31	mg/L	0.029	20.31	mg/L	0.029	0.14%
Mg 279.077†	2948.9	2.056	mg/L	0.0184	2.056	mg/L	0.0184	0.90%
Mn 257.610†	36536.9	0.9826	mg/L	0.00281	0.9826	mg/L	0.00281	0.29%
Mo 202.031†	20398.6	0.9955	mg/L	0.00921	0.9955	mg/L	0.00921	0.93%
Na 589.592†	783275.7	51.15	mg/L	0.119	51.15	mg/L	0.119	0.23%
Na 330.237†	1497.8	52.26	mg/L	0.247	52.26	mg/L	0.247	0.47%
Ni 231.604†	4524.2	1.047	mg/L	0.0089	1.047	mg/L	0.0089	0.85%
Pb 220.353†	17322.7	2.049	mg/L	0.0198	2.049	mg/L	0.0198	0.97%
Sb 206.836†	7179.8	2.115	mg/L	0.0065	2.115	mg/L	0.0065	0.31%
Se 196.026†	3006.7	2.038	mg/L	0.0094	2.038	mg/L	0.0094	0.46%
Si 288.158†	4468.8	2.116	mg/L	0.0083	2.116	mg/L	0.0083	0.39%
Sn 189.927†	3791.7	1.002	mg/L	0.0059	1.002	mg/L	0.0059	0.59%
Sr 421.552†	1136112.3	1.015	mg/L	0.0023	1.015	mg/L	0.0023	0.23%
Ti 334.903†	22566.9	1.013	mg/L	0.0019	1.013	mg/L	0.0019	0.19%
Tl 190.801†	5295.3	2.124	mg/L	0.0054	2.124	mg/L	0.0054	0.25%
V 292.402†	155286.4	1.057	mg/L	0.0062	1.057	mg/L	0.0062	0.59%
Zn 206.200†	4240.6	1.033	mg/L	0.0083	1.033	mg/L	0.0083	0.80%

US21 : 912898

Sequence No.: 56
Sample ID: CB-7

Autosampler Location: 1
Date Collected: 6/11/2013 1:27:47 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3103831.2	100.7	%	0.20				0.20%
ScR 361.383	377237.9	101.8	%	0.52				0.52%
Ag 328.068†	31.3	0.00016	mg/L	0.000206	0.00016	mg/L	0.000206	132.34%
Al 308.215†	0.8	0.00046	mg/L	0.006281	0.00046	mg/L	0.006281	>999.9%
As 188.979†	3.3	0.00179	mg/L	0.000999	0.00179	mg/L	0.000999	55.88%
B 249.677†	33.4	0.00436	mg/L	0.000842	0.00436	mg/L	0.000842	19.29%
Ba 233.527†	2.9	0.00060	mg/L	0.000621	0.00060	mg/L	0.000621	103.12%
Be 313.042†	162.7	0.00025	mg/L	0.000022	0.00025	mg/L	0.000022	8.86%
Ca 317.933†	5.4	0.00038	mg/L	0.000519	0.00038	mg/L	0.000519	138.26%
Cd 228.802†	13.6	0.00039	mg/L	0.000144	0.00039	mg/L	0.000144	37.25%
Co 228.616†	10.5	0.00027	mg/L	0.000029	0.00027	mg/L	0.000029	10.97%
Cr 267.716†	2.9	0.00044	mg/L	0.000755	0.00044	mg/L	0.000755	170.61%
Cu 324.752†	273.7	0.00091	mg/L	0.000096	0.00091	mg/L	0.000096	10.62%
Fe 273.955†	3.5	0.00270	mg/L	0.000900	0.00270	mg/L	0.000900	33.40%
K 766.490†	33.1	0.01339	mg/L	0.010320	0.01339	mg/L	0.010320	77.09%
Mg 279.077†	-1.8	-0.00126	mg/L	0.002801	-0.00126	mg/L	0.002801	222.13%
Mn 257.610†	10.1	0.00027	mg/L	0.000166	0.00027	mg/L	0.000166	61.31%
Mo 202.031†	12.5	0.00061	mg/L	0.000082	0.00061	mg/L	0.000082	13.41%
Na 589.592†	805.9	0.05262	mg/L	0.003216	0.05262	mg/L	0.003216	6.11%
Na 330.237†	-3.2	-0.1125	mg/L	0.29000	-0.1125	mg/L	0.29000	257.69%
Ni 231.604†	6.8	0.00157	mg/L	0.001025	0.00157	mg/L	0.001025	65.35%
Pb 220.353†	3.1	0.00036	mg/L	0.000703	0.00036	mg/L	0.000703	193.23%
Sb 206.836†	9.8	0.00288	mg/L	0.001723	0.00288	mg/L	0.001723	59.80%
Se 196.026†	3.8	0.00256	mg/L	0.002892	0.00256	mg/L	0.002892	112.77%
Si 288.158†	-0.3	-0.00015	mg/L	0.003759	-0.00015	mg/L	0.003759	>999.9%
Sn 189.927†	6.1	0.00160	mg/L	0.000181	0.00160	mg/L	0.000181	11.33%
Sr 421.552†	183.7	0.00016	mg/L	0.000021	0.00016	mg/L	0.000021	12.64%
Ti 334.903†	4.2	0.00019	mg/L	0.000478	0.00019	mg/L	0.000478	254.59%
Tl 190.801†	8.6	0.00347	mg/L	0.000494	0.00347	mg/L	0.000494	14.24%
V 292.402†	27.2	0.00019	mg/L	0.000146	0.00019	mg/L	0.000146	78.66%
Zn 206.200†	5.3	0.00129	mg/L	0.000478	0.00129	mg/L	0.000478	37.14%

Sequence No.: 57
Sample ID: WS21 MB1 SWC

Autosampler Location: 335
Date Collected: 6/11/2013 1:32:02 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS21 MB1 SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WS21 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3128592.2	101.5	%	0.43				0.43%
ScR 361.383	383148.1	103.3	%	0.96				0.93%
Ag 328.068†	25.8	0.00013	mg/L	0.000108	0.00026	mg/L	0.000216	83.85%
Al 308.215†	7.8	0.00451	mg/L	0.002323	0.00902	mg/L	0.004645	51.52%
As 188.979†	1.7	0.00095	mg/L	0.001449	0.00189	mg/L	0.002899	153.02%
B 249.677†	31.8	0.00415	mg/L	0.000257	0.00830	mg/L	0.000515	6.20%
Ba 233.527†	-0.8	-0.00017	mg/L	0.000312	-0.00033	mg/L	0.000624	186.54%
Be 313.042†	16.5	0.00003	mg/L	0.000040	0.00005	mg/L	0.000080	156.37%
Ca 317.933†	84.5	0.00590	mg/L	0.000482	0.01180	mg/L	0.000964	8.17%
Cd 228.802†	6.7	0.00019	mg/L	0.000166	0.00038	mg/L	0.000332	87.46%
Co 228.616†	3.8	0.00010	mg/L	0.000040	0.00020	mg/L	0.000081	41.16%
Cr 267.716†	-0.1	-0.00002	mg/L	0.000554	-0.00004	mg/L	0.001108	>999.9%
Cu 324.752†	264.8	0.00088	mg/L	0.000121	0.00176	mg/L	0.000243	13.81%
Fe 273.955†	6.5	0.00497	mg/L	0.000852	0.00994	mg/L	0.001704	17.15%
K 766.490†	4.9	0.00199	mg/L	0.011121	0.00398	mg/L	0.022242	558.44%
Mg 279.077†	1.0	0.00071	mg/L	0.004362	0.00141	mg/L	0.008724	616.78%
Mn 257.610†	-1.0	-0.00003	mg/L	0.000055	-0.00005	mg/L	0.000109	202.06%
Mo 202.031†	0.7	0.00003	mg/L	0.000043	0.00007	mg/L	0.000086	130.41%
Na 589.592†	600.7	0.03923	mg/L	0.002913	0.07845	mg/L	0.005826	7.43%
Na 330.237†	7.7	0.2687	mg/L	0.50964	0.5374	mg/L	1.01928	189.66%
Ni 231.604†	4.0	0.00092	mg/L	0.000378	0.00184	mg/L	0.000756	41.12%
Pb 220.353†	-6.5	-0.00077	mg/L	0.000597	-0.00154	mg/L	0.001193	77.68%
Sb 206.836†	-4.6	-0.00135	mg/L	0.000181	-0.00270	mg/L	0.000361	13.39%
Se 196.026†	3.9	0.00261	mg/L	0.000956	0.00522	mg/L	0.001913	36.61%
Si 288.158†	17.3	0.00817	mg/L	0.001950	0.01634	mg/L	0.003900	23.87%
Sn 189.927†	3.7	0.00098	mg/L	0.000315	0.00196	mg/L	0.000630	32.19%
Sr 421.552†	-2.6	-0.00000	mg/L	0.000020	-0.00000	mg/L	0.000039	842.11%
Ti 334.903†	3.5	0.00015	mg/L	0.000566	0.00031	mg/L	0.001132	365.35%
Tl 190.801†	3.4	0.00137	mg/L	0.001142	0.00273	mg/L	0.002285	83.60%
V 292.402†	5.8	0.00004	mg/L	0.000110	0.00008	mg/L	0.000221	282.54%
Zn 206.200†	4.5	0.00109	mg/L	0.000281	0.00218	mg/L	0.000562	25.78%

Sequence No.: 58
Sample ID: WS21 ADUP SWC

Autosampler Location: 336
Date Collected: 6/11/2013 1:36:19 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS21 ADUP SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WS21 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3108032.2	100.9	%	0.66				0.65%
ScR 361.383	382446.6	103.2	%	0.35				0.34%
Ag 328.068†	-161.2	-0.00072	mg/L	0.000162	-0.00143	mg/L	0.000323	22.55%
Al 308.215†	97324.6	55.95	mg/L	0.208	111.9	mg/L	0.42	0.37%
As 188.979†	-271.9	0.02409	mg/L	0.000736	0.04818	mg/L	0.001472	3.06%
B 249.677†	74.9	0.00971	mg/L	0.000532	0.01942	mg/L	0.001064	5.48%
Ba 233.527†	975.5	0.1861	mg/L	0.00058	0.3722	mg/L	0.00116	0.31%
Be 313.042†	595.7	0.00079	mg/L	0.000014	0.00159	mg/L	0.000028	1.76%
Ca 317.933†	430723.4	30.07	mg/L	0.136	60.14	mg/L	0.271	0.45%
Cd 228.802†	52.7	0.00238	mg/L	0.000105	0.00477	mg/L	0.000209	4.39%
Co 228.616†	1686.8	0.03267	mg/L	0.000280	0.06534	mg/L	0.000560	0.86%
Cr 267.716†	492.3	0.07748	mg/L	0.000575	0.1550	mg/L	0.00115	0.74%
Cu 324.752†	24604.8	0.08519	mg/L	0.000553	0.1704	mg/L	0.00111	0.65%
Fe 273.955†	136628.2	105.0	mg/L	0.88	210.0	mg/L	1.75	0.83%
K 766.490†	8264.5	3.343	mg/L	0.0391	6.686	mg/L	0.0782	1.17%
Mg 279.077†	25258.2	17.48	mg/L	0.076	34.96	mg/L	0.152	0.43%
Mn 257.610†	34626.5	0.9309	mg/L	0.00612	1.862	mg/L	0.0122	0.66%
Mo 202.031†	51.1	0.00211	mg/L	0.000355	0.00422	mg/L	0.000711	16.84%
Na 589.592†	61659.6	4.026	mg/L	0.0078	8.052	mg/L	0.0156	0.19%
Na 330.237†	79.8	4.138	mg/L	0.1590	8.276	mg/L	0.3181	3.84%
Ni 231.604†	288.5	0.06677	mg/L	0.001707	0.1335	mg/L	0.00341	2.56%
Pb 220.353†	525.6	0.06983	mg/L	0.000999	0.1397	mg/L	0.00200	1.43%
Sb 206.836†	2.7	0.00526	mg/L	0.001834	0.01052	mg/L	0.003668	34.88%
Se 196.026†	10.9	0.00107	mg/L	0.002123	0.00214	mg/L	0.004247	198.41%
Si 288.158†	8452.7	3.996	mg/L	0.0079	7.992	mg/L	0.0158	0.20%
Sn 189.927†	-55.9	-0.00976	mg/L	0.000540	-0.01952	mg/L	0.001080	5.53%
Sr 421.552†	265198.0	0.2369	mg/L	0.00079	0.4737	mg/L	0.00158	0.33%
Ti 334.903†	120515.9	5.414	mg/L	0.0197	10.83	mg/L	0.039	0.36%
Tl 190.801†	-31.5	0.00039	mg/L	0.002640	0.00078	mg/L	0.005279	676.92%
V 292.402†	43486.2	0.2867	mg/L	0.00216	0.5734	mg/L	0.00432	0.75%
Zn 206.200†	968.9	0.2363	mg/L	0.00162	0.4726	mg/L	0.00323	0.68%

Sequence No.: 59
Sample ID: WS21 A SWC

Autosampler Location: 337
Date Collected: 6/11/2013 1:40:19 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS21 A SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WS21 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3131067.8	101.6	%	0.36				0.35%
ScR 361.383	384694.2	103.8	%	0.87				0.84%
Ag 328.068†	-221.6	-0.00101	mg/L	0.000022	-0.00203	mg/L	0.000044	2.16%
Al 308.215†	106079.4	60.98	mg/L	0.210	122.0	mg/L	0.42	0.34%
As 188.979†	-256.2	0.02482	mg/L	0.003132	0.04965	mg/L	0.006264	12.62%
B 249.677†	72.0	0.00932	mg/L	0.000573	0.01864	mg/L	0.001145	6.14%
Ba 233.527†	1121.0	0.2149	mg/L	0.00425	0.4299	mg/L	0.00851	1.98%
Be 313.042†	664.5	0.00090	mg/L	0.000015	0.00180	mg/L	0.000031	1.72%
Ca 317.933†	413396.7	28.86	mg/L	0.111	57.72	mg/L	0.222	0.38%
Cd 228.802†	70.4	0.00286	mg/L	0.000075	0.00572	mg/L	0.000150	2.63%
Co 228.616†	1780.6	0.03539	mg/L	0.000196	0.07077	mg/L	0.000392	0.55%
Cr 267.716†	493.4	0.07785	mg/L	0.000117	0.1557	mg/L	0.00023	0.15%
Cu 324.752†	29933.8	0.1033	mg/L	0.00067	0.2066	mg/L	0.00134	0.65%
Fe 273.955†	148644.1	114.3	mg/L	0.30	228.5	mg/L	0.61	0.27%
K 766.490†	9739.0	3.939	mg/L	0.0208	7.879	mg/L	0.0415	0.53%
Mg 279.077†	28464.9	19.70	mg/L	0.078	39.41	mg/L	0.157	0.40%
Mn 257.610†	35322.8	0.9497	mg/L	0.00322	1.899	mg/L	0.0064	0.34%
Mo 202.031†	47.6	0.00195	mg/L	0.000491	0.00391	mg/L	0.000982	25.13%
Na 589.592†	64433.3	4.207	mg/L	0.0217	8.415	mg/L	0.0435	0.52%
Na 330.237†	84.8	4.245	mg/L	0.1247	8.490	mg/L	0.2494	2.94%
Ni 231.604†	314.8	0.07284	mg/L	0.000654	0.1457	mg/L	0.00131	0.90%
Pb 220.353†	497.2	0.06715	mg/L	0.000870	0.1343	mg/L	0.00174	1.30%
Sb 206.836†	8.2	0.00673	mg/L	0.001295	0.01347	mg/L	0.002590	19.23%
Se 196.026†	19.4	0.00628	mg/L	0.003726	0.01255	mg/L	0.007452	59.38%
Si 288.158†	5333.6	2.522	mg/L	0.0176	5.045	mg/L	0.0352	0.70%
Sn 189.927†	-53.9	-0.00945	mg/L	0.002050	-0.01891	mg/L	0.004100	21.69%
Sr 421.552†	265343.1	0.2370	mg/L	0.00073	0.4740	mg/L	0.00146	0.31%
Ti 334.903†	115056.1	5.169	mg/L	0.0187	10.34	mg/L	0.037	0.36%
Tl 190.801†	-31.6	0.00156	mg/L	0.004134	0.00312	mg/L	0.008268	265.23%
V 292.402†	45163.8	0.2977	mg/L	0.00166	0.5955	mg/L	0.00331	0.56%
Zn 206.200†	1013.6	0.2469	mg/L	0.00288	0.4939	mg/L	0.00576	1.17%

Sequence No.: 60
Sample ID: WS21 ASPK SWC

Autosampler Location: 338
Date Collected: 6/11/2013 1:44:19 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS21 ASPK SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WS21 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3101003.7	100.6	%	0.66				0.65%
ScR 361.383	377233.2	101.8	%	0.16				0.16%
Ag 328.068†	102435.9	0.5096	mg/L	0.00201	1.019	mg/L	0.0040	0.39%
Al 308.215†	100121.1	57.55	mg/L	0.239	115.1	mg/L	0.48	0.42%
As 188.979†	3392.5	1.997	mg/L	0.0136	3.993	mg/L	0.0272	0.68%
B 249.677†	77.0	0.00893	mg/L	0.000342	0.01785	mg/L	0.000684	3.83%
Ba 233.527†	10989.6	2.279	mg/L	0.0097	4.557	mg/L	0.0194	0.43%
Be 313.042†	311592.4	0.4806	mg/L	0.00079	0.9612	mg/L	0.00157	0.16%
Ca 317.933†	545631.4	38.09	mg/L	0.169	76.19	mg/L	0.339	0.44%
Cd 228.802†	18108.1	0.5170	mg/L	0.00378	1.034	mg/L	0.0076	0.73%
Co 228.616†	21292.8	0.5367	mg/L	0.00368	1.073	mg/L	0.0074	0.69%
Cr 267.716†	3891.9	0.5941	mg/L	0.00256	1.188	mg/L	0.0051	0.43%
Cu 324.752†	178535.4	0.5961	mg/L	0.00500	1.192	mg/L	0.0100	0.84%
Fe 273.955†	137265.2	105.5	mg/L	1.11	211.0	mg/L	2.22	1.05%
K 766.490†	32758.1	13.25	mg/L	0.080	26.50	mg/L	0.160	0.60%
Mg 279.077†	40760.8	28.25	mg/L	0.130	56.51	mg/L	0.261	0.46%
Mn 257.610†	51021.0	1.372	mg/L	0.0114	2.744	mg/L	0.0228	0.83%
Mo 202.031†	64.5	0.00263	mg/L	0.000211	0.00526	mg/L	0.000421	8.00%
Na 589.592†	214809.4	14.03	mg/L	0.062	28.05	mg/L	0.124	0.44%
Na 330.237†	374.9	14.09	mg/L	0.085	28.19	mg/L	0.169	0.60%
Ni 231.604†	2381.2	0.5502	mg/L	0.00050	1.100	mg/L	0.0010	0.09%
Pb 220.353†	17622.4	2.091	mg/L	0.0124	4.183	mg/L	0.0248	0.59%
Sb 206.836†	25.0	0.00626	mg/L	0.001380	0.01252	mg/L	0.002759	22.04%
Se 196.026†	2925.3	1.977	mg/L	0.0134	3.954	mg/L	0.0267	0.68%
Si 288.158†	9986.6	4.724	mg/L	0.0185	9.449	mg/L	0.0371	0.39%
Sn 189.927†	-58.7	-0.00950	mg/L	0.000843	-0.01900	mg/L	0.001686	8.87%
Sr 421.552†	828728.7	0.7402	mg/L	0.00378	1.480	mg/L	0.0076	0.51%
Ti 334.903†	107763.7	4.840	mg/L	0.0198	9.681	mg/L	0.0397	0.41%
Tl 190.801†	4782.4	1.934	mg/L	0.0135	3.868	mg/L	0.0269	0.70%
V 292.402†	115973.2	0.7805	mg/L	0.00557	1.561	mg/L	0.0111	0.71%
Zn 206.200†	2957.9	0.7209	mg/L	0.00087	1.442	mg/L	0.0017	0.12%

WS21 : 01205

Sequence No.: 61
Sample ID: ~~WS21 APOST SWC~~ 222222
BA 6/11/13
Dilution: 2.000000X

Autosampler Location: 339
Date Collected: 6/11/2013 1:48:23 PM
Data Type: Original

Nebulizer Parameters: WS21 APOST SWC

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: WS21 APOST SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3102105.5	100.7	%	0.63				0.63%
ScR 361.383	375581.2	101.3	%	0.38				0.38%
Ag 328.068†	108159.3	0.5381	mg/L	0.00303	1.076	mg/L	0.0061	0.56%
Al 308.215†	111830.3	64.28	mg/L	0.185	128.6	mg/L	0.37	0.29%
As 188.979†	3581.3	2.112	mg/L	0.0240	4.224	mg/L	0.0480	1.14%
B 249.677†	76.1	0.00875	mg/L	0.001143	0.01751	mg/L	0.002286	13.05%
Ba 233.527†	11559.6	2.396	mg/L	0.0089	4.792	mg/L	0.0178	0.37%
Be 313.042†	324917.3	0.5011	mg/L	0.00229	1.002	mg/L	0.0046	0.46%
Ca 317.933†	565374.5	39.47	mg/L	0.110	78.94	mg/L	0.220	0.28%
Cd 228.802†	19010.2	0.5427	mg/L	0.00517	1.085	mg/L	0.0103	0.95%
Co 228.616†	22273.0	0.5610	mg/L	0.00573	1.122	mg/L	0.0115	1.02%
Cr 267.716†	4057.5	0.6196	mg/L	0.00297	1.239	mg/L	0.0059	0.48%
Cu 324.752†	193043.3	0.6447	mg/L	0.00298	1.289	mg/L	0.0060	0.46%
Fe 273.955†	151565.3	116.5	mg/L	0.31	233.0	mg/L	0.62	0.27%
K 766.490†	35980.6	14.55	mg/L	0.050	29.11	mg/L	0.101	0.35%
Mg 279.077†	43852.6	30.39	mg/L	0.061	60.79	mg/L	0.122	0.20%
Mn 257.610†	54515.2	1.466	mg/L	0.0033	2.932	mg/L	0.0066	0.22%
Mo 202.031†	61.7	0.00248	mg/L	0.000144	0.00496	mg/L	0.000289	5.82%
Na 589.592†	226804.5	14.81	mg/L	0.059	29.62	mg/L	0.118	0.40%
Na 330.237†	396.1	14.93	mg/L	0.145	29.86	mg/L	0.290	0.97%
Ni 231.604†	2511.3	0.5802	mg/L	0.00229	1.160	mg/L	0.0046	0.39%
Pb 220.353†	18392.1	2.183	mg/L	0.0213	4.367	mg/L	0.0426	0.98%
Sb 206.836†	27.9	0.00725	mg/L	0.000231	0.01450	mg/L	0.000461	3.18%
Se 196.026†	3112.4	2.103	mg/L	0.0270	4.207	mg/L	0.0540	1.28%
Si 288.158†	5465.8	2.589	mg/L	0.0190	5.177	mg/L	0.0379	0.73%
Sn 189.927†	-61.4	-0.00997	mg/L	0.000489	-0.01993	mg/L	0.000978	4.91%
Sr 421.552†	851521.8	0.7606	mg/L	0.00224	1.521	mg/L	0.0045	0.29%
Ti 334.903†	116578.4	5.236	mg/L	0.0138	10.47	mg/L	0.028	0.26%
Tl 190.801†	5014.4	2.028	mg/L	0.0198	4.057	mg/L	0.0396	0.98%
V 292.402†	122876.9	0.8267	mg/L	0.00400	1.653	mg/L	0.0080	0.48%
Zn 206.200†	3128.9	0.7622	mg/L	0.00193	1.524	mg/L	0.0039	0.25%

WS21 : 21822

Sequence No.: 62
Sample ID: WS21 MB1SPK SWC

Autosampler Location: 340
Date Collected: 6/11/2013 1:52:27 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS21 MB1SPK SWC

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: WS21 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3103121.1	100.7	%	0.28				0.28%
ScR 361.383	375945.8	101.4	%	0.56				0.55%
Ag 328.068†	107219.1	0.5333	mg/L	0.00232	1.067	mg/L	0.0046	0.43%
Al 308.215†	3632.4	2.081	mg/L	0.0208	4.161	mg/L	0.0415	1.00%
As 188.979†	3798.2	2.064	mg/L	0.0104	4.127	mg/L	0.0208	0.50%
B 249.677†	24.8	0.00216	mg/L	0.000347	0.00432	mg/L	0.000693	16.04%
Ba 233.527†	10253.8	2.142	mg/L	0.0099	4.285	mg/L	0.0199	0.46%
Be 313.042†	318554.9	0.4915	mg/L	0.00196	0.9829	mg/L	0.00393	0.40%
Ca 317.933†	143515.8	10.02	mg/L	0.057	20.04	mg/L	0.113	0.56%
Cd 228.802†	18160.0	0.5173	mg/L	0.00281	1.035	mg/L	0.0056	0.54%
Co 228.616†	20016.2	0.5135	mg/L	0.00243	1.027	mg/L	0.0049	0.47%
Cr 267.716†	3530.4	0.5367	mg/L	0.00473	1.073	mg/L	0.0095	0.88%
Cu 324.752†	154598.4	0.5131	mg/L	0.00221	1.026	mg/L	0.0044	0.43%
Fe 273.955†	2710.2	2.080	mg/L	0.0147	4.160	mg/L	0.0294	0.71%
K 766.490†	24932.7	10.09	mg/L	0.048	20.17	mg/L	0.095	0.47%
Mg 279.077†	14270.0	9.914	mg/L	0.0335	19.83	mg/L	0.067	0.34%
Mn 257.610†	18357.3	0.4939	mg/L	0.00211	0.9877	mg/L	0.00421	0.43%
Mo 202.031†	18.0	0.00073	mg/L	0.000174	0.00145	mg/L	0.000349	23.98%
Na 589.592†	155278.7	10.14	mg/L	0.032	20.28	mg/L	0.063	0.31%
Na 330.237†	300.8	10.30	mg/L	0.314	20.61	mg/L	0.627	3.04%
Ni 231.604†	2181.7	0.5039	mg/L	0.00181	1.008	mg/L	0.0036	0.36%
Pb 220.353†	17437.4	2.062	mg/L	0.0112	4.124	mg/L	0.0224	0.54%
Sb 206.836†	13.8	-0.00125	mg/L	0.001640	-0.00251	mg/L	0.003281	130.75%
Se 196.026†	3012.8	2.043	mg/L	0.0047	4.085	mg/L	0.0095	0.23%
Si 288.158†	13.0	0.00961	mg/L	0.000739	0.01923	mg/L	0.001477	7.68%
Sn 189.927†	-26.6	-0.00565	mg/L	0.000144	-0.01131	mg/L	0.000288	2.55%
Sr 421.552†	563128.5	0.5030	mg/L	0.00164	1.006	mg/L	0.0033	0.33%
Ti 334.903†	73.4	0.00257	mg/L	0.000207	0.00514	mg/L	0.000415	8.06%
Tl 190.801†	5121.0	2.057	mg/L	0.0074	4.114	mg/L	0.0147	0.36%
V 292.402†	76542.5	0.5210	mg/L	0.00192	1.042	mg/L	0.0038	0.37%
Zn 206.200†	2078.2	0.5062	mg/L	0.00330	1.012	mg/L	0.0066	0.65%

Sequence No.: 63
Sample ID: CV 8

Autosampler Location: 7
Date Collected: 6/11/2013 1:56:28 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	240.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3087676.4	100.2	%	0.42				0.42%
ScR 361.383	370785.3	100.0	%	0.29				0.29%
Ag 328.068†	216465.8	1.077	mg/L	0.0007	1.077	mg/L	0.0007	0.07%
Al 308.215†	3730.7	2.111	mg/L	0.0044	2.111	mg/L	0.0044	0.21%
As 188.979†	3736.8	2.060	mg/L	0.0110	2.060	mg/L	0.0110	0.53%
B 249.677†	7911.4	1.033	mg/L	0.0023	1.033	mg/L	0.0023	0.22%
Ba 233.527†	5160.6	1.078	mg/L	0.0034	1.078	mg/L	0.0034	0.31%
Be 313.042†	668957.4	1.032	mg/L	0.0048	1.032	mg/L	0.0048	0.47%
Ca 317.933†	29152.9	2.035	mg/L	0.0057	2.035	mg/L	0.0057	0.28%
Cd 228.802†	35986.7	1.036	mg/L	0.0067	1.036	mg/L	0.0067	0.65%
Co 228.616†	40419.2	1.036	mg/L	0.0008	1.036	mg/L	0.0008	0.08%
Cr 267.716†	7085.5	1.079	mg/L	0.0010	1.079	mg/L	0.0010	0.10%
Cu 324.752†	319169.6	1.059	mg/L	0.0020	1.059	mg/L	0.0020	0.19%
Fe 273.955†	2754.5	2.111	mg/L	0.0134	2.111	mg/L	0.0134	0.64%
K 766.490†	50816.1	20.56	mg/L	0.039	20.56	mg/L	0.039	0.19%
Mg 279.077†	2964.2	2.066	mg/L	0.0027	2.066	mg/L	0.0027	0.13%
Mn 257.610†	36946.4	0.9937	mg/L	0.00221	0.9937	mg/L	0.00221	0.22%
Mo 202.031†	20910.1	1.020	mg/L	0.0042	1.020	mg/L	0.0042	0.41%
Na 589.592†	792484.1	51.75	mg/L	0.055	51.75	mg/L	0.055	0.11%
Na 330.237†	1515.5	52.88	mg/L	0.163	52.88	mg/L	0.163	0.31%
Ni 231.604†	4545.6	1.052	mg/L	0.0022	1.052	mg/L	0.0022	0.21%
Pb 220.353†	17749.8	2.099	mg/L	0.0081	2.099	mg/L	0.0081	0.39%
Sb 206.836†	7137.6	2.102	mg/L	0.0095	2.102	mg/L	0.0095	0.45%
Se 196.026†	2998.7	2.033	mg/L	0.0064	2.033	mg/L	0.0064	0.31%
Si 288.158†	4497.5	2.130	mg/L	0.0116	2.130	mg/L	0.0116	0.54%
Sn 189.927†	3774.0	0.9975	mg/L	0.00409	0.9975	mg/L	0.00409	0.41%
Sr 421.552†	1152006.6	1.029	mg/L	0.0007	1.029	mg/L	0.0007	0.07%
Ti 334.903†	22823.1	1.024	mg/L	0.0013	1.024	mg/L	0.0013	0.13%
Tl 190.801†	5284.4	2.119	mg/L	0.0117	2.119	mg/L	0.0117	0.55%
V 292.402†	154339.7	1.051	mg/L	0.0011	1.051	mg/L	0.0011	0.10%
Zn 206.200†	4257.7	1.037	mg/L	0.0033	1.037	mg/L	0.0033	0.32%

Sequence No.: 64
Sample ID: CB 8

Autosampler Location: 1
Date Collected: 6/11/2013 2:00:31 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	241.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3121992.8	101.3	%	0.30				0.30%
ScR 361.383	378044.9	102.0	%	0.05				0.05%
Ag 328.068†	37.1	0.00018	mg/L	0.000041	0.00018	mg/L	0.000041	22.30%
Al 308.215†	1.9	0.00108	mg/L	0.001517	0.00108	mg/L	0.001517	140.84%
As 188.979†	0.2	0.00013	mg/L	0.000225	0.00013	mg/L	0.000225	166.53%
B 249.677†	25.0	0.00326	mg/L	0.000179	0.00326	mg/L	0.000179	5.49%
Ba 233.527†	-2.1	-0.00043	mg/L	0.000341	-0.00043	mg/L	0.000341	78.92%
Be 313.042†	135.2	0.00021	mg/L	0.000021	0.00021	mg/L	0.000021	9.84%
Ca 317.933†	17.4	0.00122	mg/L	0.000460	0.00122	mg/L	0.000460	37.81%
Cd 228.802†	12.9	0.00037	mg/L	0.000079	0.00037	mg/L	0.000079	21.08%
Co 228.616†	9.8	0.00025	mg/L	0.000167	0.00025	mg/L	0.000167	66.57%
Cr 267.716†	-3.2	-0.00049	mg/L	0.000317	-0.00049	mg/L	0.000317	64.51%
Cu 324.752†	260.9	0.00087	mg/L	0.000128	0.00087	mg/L	0.000128	14.80%
Fe 273.955†	4.7	0.00364	mg/L	0.001850	0.00364	mg/L	0.001850	50.78%
K 766.490†	22.6	0.00914	mg/L	0.013867	0.00914	mg/L	0.013867	151.71%
Mg 279.077†	-1.8	-0.00126	mg/L	0.001515	-0.00126	mg/L	0.001515	120.14%
Mn 257.610†	4.5	0.00012	mg/L	0.000103	0.00012	mg/L	0.000103	84.87%
Mo 202.031†	11.4	0.00056	mg/L	0.000259	0.00056	mg/L	0.000259	46.57%
Na 589.592†	661.3	0.04318	mg/L	0.002696	0.04318	mg/L	0.002696	6.24%
Na 330.237†	-4.8	-0.1670	mg/L	0.29102	-0.1670	mg/L	0.29102	174.26%
Ni 231.604†	4.5	0.00103	mg/L	0.000651	0.00103	mg/L	0.000651	63.16%
Pb 220.353†	2.4	0.00028	mg/L	0.000600	0.00028	mg/L	0.000600	215.09%
Sb 206.836†	7.9	0.00235	mg/L	0.000503	0.00235	mg/L	0.000503	21.43%
Se 196.026†	4.6	0.00314	mg/L	0.002931	0.00314	mg/L	0.002931	93.29%
Si 288.158†	-7.5	-0.00355	mg/L	0.001307	-0.00355	mg/L	0.001307	36.84%
Sn 189.927†	5.4	0.00143	mg/L	0.000822	0.00143	mg/L	0.000822	57.29%
Sr 421.552†	207.8	0.00019	mg/L	0.000012	0.00019	mg/L	0.000012	6.44%
Ti 334.903†	3.8	0.00017	mg/L	0.000454	0.00017	mg/L	0.000454	264.74%
Tl 190.801†	7.4	0.00300	mg/L	0.002148	0.00300	mg/L	0.002148	71.62%
V 292.402†	23.5	0.00016	mg/L	0.000079	0.00016	mg/L	0.000079	50.42%
Zn 206.200†	3.1	0.00077	mg/L	0.000371	0.00077	mg/L	0.000371	48.46%

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 6-10-13

M2 x601 NexION 300D	Analyst MG 6-11	Peer EL 6-11-13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See logs
ICB/CCB	✓	✓	↓
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WR99 WS21
Matrix Duplicates	✓	✓	↓
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	CAF WR99, WS21

WS21 : 21818

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-10-13 **Analyst:** KS **Page:** 1 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			B524
		1			B542
		2			B631
		3			B632
		4			B633
		5			B634
		Rinse Sample			
		ICV			B523
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			
		LR200			
		LR300			
		B1			Sb C.O.
		CCV2			
		CCB2			
		WS21 MB1	SWN	20	
		DI Check			RR (Zn 5.7 ppb)
		LCRA PP17		10	✓ 82 Se SI high w/in EPA Page
		WS21 ADup	SWN	20	✓
		A			A 6-11-13 See next logs

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-10-13 **Analyst:** KT **Page:** 2 of 4

All corrections made by analyst unless otherwise noted. KT 6-10-13 / KT 6-11-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WS21 A	SUN	20	CAF
WS		ASpk			Sb Low %R
		APost			0.20 mL spk #2 1/10 0.20 mL Spk #1 1/10 Sb
		MB Spk			
		CCV3			
		CCB3			
		WR99 MB	SUN	20	
		E			
		F			
		DDup			Pb As high RPD
		D			CAF
		DSpk			Sb Pb Low %R
		D Post			0.20 mL spk #2 1/10 0.20 mL Spk #1 1/10 Pb Sb
		MB3 Spk			
		CCV4			
		CCB4			
		DI Check			
		WS27 MB1	SUN	20	
		A-L		1.00	
		A			
		ADup			
		ASpk			
ZZ		~~ZZZZZ~~ APost			
		Ref1		50	

6-11-13

WS21 : 01812

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Monday, June 10, 2013 08:18:40
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.2080
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3528.9	3528.947	30.775	0.9	Standard
	Mg	24.0	20382.4	20382.368	344.445	1.7	Standard
	In	114.9	41139.1	41139.103	391.391	1.0	Standard
	Pb	208.0	17181.7	17181.695	103.724	0.6	Standard
	U	238.1	28738.5	28738.476	395.090	1.4	Standard
⌈	CeO	155.9	822.2	0.022	0.001	4.9	Standard
| >	Ce	139.9	36941.6	36941.636	238.141	0.6	Standard
⌊	Ce++	70.0	855.4	0.023	0.001	2.2	Standard
	Bkgd	220.0	0.0	0.000	0.000		Standard

Current Conditions File Data

Current Value	Description
1.08	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1700.00	Analog Stage Voltage
800.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.08	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B
0.00	KED RPa

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 6/10/2013 8:18:33 AM
End Time: 6/10/2013 8:35:12 AM

Daily Performance Check - [Failed]
Obtained Intensity (Be 9.0122): 3528.95
Obtained Intensity (Mg 23.985): 20382.37
Obtained Intensity (In 114.904): 41139.10 - <Target not achieved>
Obtained Intensity (Pb 207.977): 17181.69 - <Target not achieved>
Obtained Intensity (U 238.05): 28738.48 - <Target not achieved>
Obtained Intensity (Bkgd 220): 0.00
Obtained Formula (CeO 155.9 / Ce 139.905): 0.022 (=822.24 / 36941.64)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.023 (=855.38 / 36941.64)

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.64 mm	-0.46 mm	90869.75

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.06
Obtained Intensity (In 114.904): 70380.96
Obtained Formula (CeO 155.9 / Ce 139.905): 0.016 (=1015.06 / 61532.34)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.692)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.705)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.702)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.728)

AutoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.996; Intercept = -13.05

Daily Performance Check - [Failed]
Obtained Intensity (Be 9.0122): 5452.85
Obtained Intensity (Mg 23.985): 48341.84
Obtained Intensity (In 114.904): 71914.95
Obtained Intensity (Pb 207.977): 30487.34
Obtained Intensity (U 238.05): 53245.78
Obtained Intensity (Bkgd 220): 0.13
Obtained Formula (CeO 155.9 / Ce 139.905): 0.019 (=1204.02 / 64809.78)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.034 (=2193.29 / 64809.78) - <Target not achieved>

reduce neb to 1.04

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 6/10/2013 8:36:29 AM
End Time: 6/10/2013 8:39:04 AM

Daily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 4247.35
Obtained Intensity (Mg 23.985): 33303.35
Obtained Intensity (In 114.904): 62125.59
Obtained Intensity (Pb 207.977): 27874.74
Obtained Intensity (U 238.05): 48396.13
Obtained Intensity (Bkgd 220): 0.13
Obtained Formula (CeO 155.9 / Ce 139.905): 0.012 (=711.43 / 59548.09)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.024 (=1423.65 / 59548.09)

Neb 1-04

US21 : 81815

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Monday, June 10, 2013 09:20:59
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.2095
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

After Dead

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4476.7	4476.669	77.263	1.7	Standard
	Mg	24.0	35455.7	35455.742	442.517	1.2	Standard
	In	114.9	70955.5	70955.539	315.392	0.4	Standard
	Pb	208.0	32412.2	32412.180	215.512	0.7	Standard
	U	238.1	58875.3	58875.259	534.040	0.9	Standard
⌈	CeO	155.9	805.0	0.012	0.000	2.7	Standard
| >	Ce	139.9	69819.6	69819.609	431.156	0.6	Standard
⌊	Ce++	70.0	1625.2	0.023	0.000	1.0	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1700.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B
0.00	KED RPa

US21 : 21015

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 6/10/2013 9:20:58 AM
End Time: 6/10/2013 9:23:33 AM

Daily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 4476.67
Obtained Intensity (Mg 23.985): 35455.74
Obtained Intensity (In 114.904): 70955.54
Obtained Intensity (Pb 207.977): 32412.18
Obtained Intensity (U 238.05): 58875.26
Obtained Intensity (Bkgd 220): 0.03
Obtained Formula (CeO 155.9 / Ce 139.905): 0.012 (=804.97 / 69819.61)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.023 (=1625.16 / 69819.61)

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 09:53:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				1073783	2
	Be	9		ug/L				20	11
	C	13		ug/L				96438	1
	Cl	37		ug/L				4537351	0
>	Sc	45		ug/L				1037261	0
	V	51		ug/L				6297	1
	V-1	51		ug/L				92	11
	Cr	52		ug/L				18914	1
	Cr	53		ug/L				153	4
	Mn	55		ug/L				1535	53
	Co	59		ug/L				301	5
>	Ge	72		ug/L				585419	0
	Ni	60		ug/L				50	6
	Ni	62		ug/L				70	10
	Cu	63		ug/L				274	6
	Cu	65		ug/L				124	3
	Zn	66		ug/L				1259	2
	Zn	67		ug/L				196	9
	Zn	68		ug/L				985	2
	As	75		ug/L				205	7
	As-1	75		ug/L				8804	0
	Se	82		ug/L				2	217
	Se	78		ug/L				8883	0
	Mo	98		ug/L				21	22
	Y	89		ug/L				393396	1
	Kr	83		ug/L				387	2
>	In	115		ug/L				873328	1
	Ag	107		ug/L				28	21
	Cd	111		ug/L				91	10
	Cd	114		ug/L				35	15
	Sb	121		ug/L				177	2
	Sb	123		ug/L				133	6
	Ba	135		ug/L				525	2
	Ba	137		ug/L				900	2
>	Tb	159		ug/L				1029579	0
	Tl	205		ug/L				75	17
	Pb	208		ug/L				577	3
	Bi	209		ug/L				2413416	1
	Th	232		ug/L				112	6
	U	238		ug/L				6	36

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 09:57:38
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1083392	1
	Be	9	0.200	ug/L	0.006	2	20	718	4
	C	13		ug/L			96438	93522	2
	Cl	37		ug/L			4537351	4547822	0
>	Sc	45		ug/L			1037261	1047822	0
	V	51	0.200	ug/L	0.008	3	6297	10295	1
	V-1	51	0.500	ug/L	0.013	2	92	4232	2
	Cr	52	0.500	ug/L	0.038	7	18914	26986	2
	Cr	53	0.500	ug/L	0.046	9	153	1110	7
	Mn	55	0.500	ug/L	0.006	1	1535	12718	1
	Co	59	0.200	ug/L	0.009	4	301	3925	4
>	Ge	72		ug/L			585419	591114	1
	Ni	60	0.500	ug/L	0.017	3	50	1790	3
	Ni	62	0.500	ug/L	0.057	11	70	345	8
	Cu	63	0.500	ug/L	0.021	4	274	4153	3
	Cu	65	0.500	ug/L	0.015	2	124	1866	3
	Zn	66	4.000	ug/L	0.235	5	1259	9201	4
	Zn	67	4.000	ug/L	0.129	3	196	1415	2
	Zn	68	4.000	ug/L	0.214	5	985	6383	3
	As	75	0.200	ug/L	0.016	8	205	573	6
	As-1	75	0.200	ug/L	0.064	32	8804	9268	1
	Se	82	0.500	ug/L	0.041	8	2	109	9
	Se	78	0.500	ug/L	0.198	39	8883	9250	1
	Mo	98	0.200	ug/L	0.011	5	21	966	5
	Y	89		ug/L			393396	409278	2
	Kr	83		ug/L			387	389	3
>	In	115		ug/L			873328	871321	2
	Ag	107	0.200	ug/L	0.009	4	28	1849	3
	Cd	111	0.100	ug/L	0.005	5	91	523	2
	Cd	114	0.100	ug/L	0.008	8	35	1054	7
	Sb	121	0.200	ug/L	0.008	4	177	2753	2
	Sb	123	0.200	ug/L	0.009	4	133	2016	4
	Ba	135	0.500	ug/L	0.037	7	525	1888	3
	Ba	137	0.500	ug/L	0.007	1	900	3274	1
>	Tb	159		ug/L			1029579	1040944	1
	Tl	205	0.200	ug/L	0.004	1	75	6822	1
	Pb	208	0.100	ug/L	0.000	0	577	4705	1
	Bi	209		ug/L			2413416	2445253	0
	Th	232	0.200	ug/L	0.016	7	112	6399	7
	U	238	0.200	ug/L	0.003	1	6	8994	0

WS21 : 01813

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:01:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1123457	1
	Be	9	10.000	ug/L	0.100	0	20	34677	1
	C	13		ug/L			96438	91279	3
	Cl	37		ug/L			4537351	4669317	0
>	Sc	45		ug/L			1037261	1087618	1
	V	51	10.000	ug/L	0.127	1	6297	219397	0
	V-1	51	10.015	ug/L	0.110	1	92	214214	0
	Cr	52	10.002	ug/L	0.131	1	18914	194241	0
	Cr	53	10.000	ug/L	0.093	0	153	20291	0
	Mn	55	10.001	ug/L	0.272	2	1535	246858	2
	Co	59	10.000	ug/L	0.091	0	301	180893	0
>	Ge	72		ug/L			585419	607521	0
	Ni	60	10.001	ug/L	0.126	1	50	37860	1
	Ni	62	9.999	ug/L	0.092	0	70	5451	1
	Cu	63	10.001	ug/L	0.140	1	274	83377	1
	Cu	65	10.001	ug/L	0.085	0	124	38075	0
	Zn	66	10.090	ug/L	0.117	1	1259	23090	0
	Zn	67	10.182	ug/L	0.315	3	196	3798	2
	Zn	68	10.148	ug/L	0.360	3	985	16507	2
	As	75	10.000	ug/L	0.166	1	205	20513	0
	As-1	75	10.000	ug/L	0.245	2	8804	28937	0
	Se	82	10.001	ug/L	0.077	0	2	2274	0
	Se	78	9.997	ug/L	0.381	3	8883	14465	0
	Mo	98	10.000	ug/L	0.136	1	21	48640	1
	Y	89		ug/L			393396	414639	1
	Kr	83		ug/L			387	372	2
>	In	115		ug/L			873328	892526	1
	Ag	107	10.000	ug/L	0.167	1	28	93963	1
	Cd	111	10.000	ug/L	0.155	1	91	43835	0
	Cd	114	10.000	ug/L	0.014	0	35	108773	1
	Sb	121	10.000	ug/L	0.052	0	177	130028	0
	Sb	123	10.000	ug/L	0.128	1	133	98277	0
	Ba	135	10.006	ug/L	0.269	2	525	38345	1
	Ba	137	10.007	ug/L	0.112	1	900	66832	0
>	Tb	159		ug/L			1029579	1055989	1
	Tl	205	10.000	ug/L	0.281	2	75	347037	1
	Pb	208	10.000	ug/L	0.155	1	577	466972	0
	Bi	209		ug/L			2413416	2457893	0
	Th	232	10.001	ug/L	0.245	2	112	452946	2
	U	238	10.000	ug/L	0.152	1	6	462175	0

USGS : 014620

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:06:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1097575	0
	Be	9	20.177	ug/L	0.155	0	20	70844	1
	C	13		ug/L			96438	93191	3
	Cl	37		ug/L			4537351	4624322	1
>	Sc	45		ug/L			1037261	1068961	1
	V	51	20.076	ug/L	0.372	1	6297	432770	1
	V-1	51	20.075	ug/L	0.463	2	92	428322	1
	Cr	52	20.086	ug/L	0.353	1	18914	369752	0
	Cr	53	20.064	ug/L	0.663	3	153	40359	1
	Mn	55	20.094	ug/L	0.526	2	1535	495053	2
	Co	59	20.058	ug/L	0.328	1	301	360448	1
>	Ge	72		ug/L			585419	615321	1
	Ni	60	19.933	ug/L	0.563	2	50	75355	2
	Ni	62	19.927	ug/L	0.120	0	70	10774	1
	Cu	63	19.948	ug/L	0.535	2	274	166378	1
	Cu	65	19.838	ug/L	0.373	1	124	73973	1
	Zn	66	20.068	ug/L	0.715	3	1259	45721	2
	Zn	67	20.125	ug/L	0.144	0	196	7560	2
	Zn	68	20.167	ug/L	0.336	1	985	33128	1
	As	75	19.986	ug/L	0.195	0	205	41196	0
	As-1	75	20.031	ug/L	0.397	1	8804	49678	0
	Se	82	19.832	ug/L	0.093	0	2	4417	0
	Se	78	20.017	ug/L	0.864	4	8883	20014	1
	Mo	98	19.947	ug/L	0.368	1	21	97213	1
	Y	89		ug/L			393396	412883	0
	Kr	83		ug/L			387	432	3
>	In	115		ug/L			873328	888411	0
	Ag	107	20.019	ug/L	0.057	0	28	187918	0
	Cd	111	19.967	ug/L	0.291	1	91	86467	1
	Cd	114	20.013	ug/L	0.124	0	35	217218	0
	Sb	121	19.981	ug/L	0.291	1	177	257451	1
	Sb	123	20.013	ug/L	0.186	0	133	196185	0
	Ba	135	20.079	ug/L	0.380	1	525	77270	2
	Ba	137	20.069	ug/L	0.402	2	900	134358	2
>	Tb	159		ug/L			1029579	1054208	0
	Tl	205	19.963	ug/L	0.226	1	75	686571	0
	Pb	208	19.968	ug/L	0.207	1	577	924419	0
	Bi	209		ug/L			2413416	2423930	0
	Th	232	20.075	ug/L	0.336	1	112	921370	1
	U	238	20.008	ug/L	0.127	0	6	924854	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:10:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1070317	2
	Be	9	50.004	ug/L	0.881	1	20	171199	1
	C	13		ug/L			96438	93457	1
	Cl	37		ug/L			4537351	4589730	0
>	Sc	45		ug/L			1037261	1054410	1
	V	51	49.958	ug/L	1.223	2	6297	1048240	1
	V-1	51	49.963	ug/L	1.317	2	92	1047422	1
	Cr	52	50.036	ug/L	1.136	2	18914	882925	1
	Cr	53	50.045	ug/L	1.571	3	153	99508	1
	Mn	55	49.877	ug/L	1.361	2	1535	1194929	0
	Co	59	49.740	ug/L	1.057	2	301	858772	0
>	Ge	72		ug/L			585419	599006	0
	Ni	60	49.980	ug/L	1.159	2	50	183491	1
	Ni	62	50.051	ug/L	0.605	1	70	26368	0
	Cu	63	49.788	ug/L	1.724	3	274	395468	2
	Cu	65	50.032	ug/L	0.397	0	124	182028	0
	Zn	66	50.060	ug/L	0.940	1	1259	109751	1
	Zn	67	50.098	ug/L	1.000	1	196	18191	1
	Zn	68	49.873	ug/L	1.238	2	985	77333	2
	As	75	49.983	ug/L	0.997	1	205	99807	1
	As-1	75	49.987	ug/L	0.907	1	8804	107088	0
	Se	82	50.159	ug/L	0.919	1	2	11049	1
	Se	78	50.187	ug/L	0.148	0	8883	35655	0
	Mo	98	50.028	ug/L	1.033	2	21	238009	1
	Y	89		ug/L			393396	408372	1
	Kr	83		ug/L			387	426	5
>	In	115		ug/L			873328	873027	0
	Ag	107	49.684	ug/L	1.203	2	28	444205	2
	Cd	111	49.891	ug/L	0.524	1	91	209903	1
	Cd	114	49.889	ug/L	0.635	1	35	526176	0
	Sb	121	50.027	ug/L	0.801	1	177	634847	0
	Sb	123	49.997	ug/L	0.270	0	133	481294	0
	Ba	135	50.139	ug/L	1.348	2	525	191454	2
	Ba	137	50.118	ug/L	0.284	0	900	332277	0
>	Tb	159		ug/L			1029579	1050154	0
	Tl	205	49.817	ug/L	0.871	1	75	1675929	0
	Pb	208	49.800	ug/L	0.671	1	577	2250582	0
	Bi	209		ug/L			2413416	2370933	1
	Th	232	50.204	ug/L	0.882	1	112	2342777	0
	U	238	50.159	ug/L	0.445	0	6	2346985	0

US21 : 81622

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:15:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1087337	1
[	Be	9	98.674	ug/L	2.561	2	20	328669	1
	C	13		ug/L			96438	91151	3
	Cl	37		ug/L			4537351	4622622	1
[>	Sc	45		ug/L			1037261	1042534	1
[	V	51	100.415	ug/L	2.904	2	6297	2105913	2
[	V-1	51	100.301	ug/L	2.632	2	92	2100131	1
[	Cr	52	100.214	ug/L	2.360	2	18914	1741632	0
[	Cr	53	99.820	ug/L	1.674	1	153	194955	0
[	Mn	55	100.281	ug/L	1.392	1	1535	2396794	1
[	Co	59	100.349	ug/L	2.600	2	301	1732766	0
[>	Ge	72		ug/L			585419	596524	1
[	Ni	60	99.205	ug/L	1.266	1	50	353300	0
[	Ni	62	99.810	ug/L	2.808	2	70	51960	2
[	Cu	63	99.787	ug/L	1.054	1	274	783608	1
[	Cu	65	99.645	ug/L	1.030	1	124	356689	1
[	Zn	66	99.803	ug/L	0.808	0	1259	215234	0
[	Zn	67	99.601	ug/L	2.200	2	196	35353	1
[	Zn	68	99.540	ug/L	1.269	1	985	150420	0
[	As	75	99.664	ug/L	0.993	0	205	195803	0
[	As-1	75	99.711	ug/L	1.039	1	8804	201955	0
[	Se	82	99.361	ug/L	1.894	1	2	21337	0
[	Se	78	99.524	ug/L	2.295	2	8883	60687	0
[	Mo	98	100.241	ug/L	2.503	2	21	478722	2
	Y	89		ug/L			393396	404051	1
	Kr	83		ug/L			387	463	1
[>	In	115		ug/L			873328	860137	2
[	Ag	107	99.568	ug/L	5.161	5	28	863844	2
[	Cd	111	99.707	ug/L	2.792	2	91	409022	1
[	Cd	114	99.813	ug/L	4.500	4	35	1029945	1
[	Sb	121	100.175	ug/L	3.222	3	177	1259036	0
[	Sb	123	100.032	ug/L	2.895	2	133	949146	0
[	Ba	135	100.256	ug/L	3.524	3	525	379702	1
[	Ba	137	100.185	ug/L	3.030	3	900	657292	1
[>	Tb	159		ug/L			1029579	1040643	0
[	Tl	205	100.482	ug/L	1.068	1	75	3404561	0
[	Pb	208	100.326	ug/L	0.766	0	577	4542024	0
[	Bi	209		ug/L			2413416	2296744	1
[	Th	232	100.068	ug/L	0.733	0	112	4638236	1
[	U	238	100.101	ug/L	0.372	0	6	4657155	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:21:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\050813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1081928	1
	Be	9	0.016	ug/L	0.018	116	20	73	85
	C	13		ug/L			96438	93554	4
	Cl	37		ug/L			4537351	4636234	0
>	Sc	45		ug/L			1037261	1072147	1
	V	51	0.005	ug/L	0.010	191	6297	6616	3
	V-1	51	0.009	ug/L	0.012	134	92	281	89
	Cr	52	-0.018	ug/L	0.021	115	18914	19227	0
	Cr	53	-0.006	ug/L	0.014	238	153	146	18
	Mn	55	-0.013	ug/L	0.010	73	1535	1262	19
	Co	59	0.006	ug/L	0.009	152	301	411	37
>	Ge	72		ug/L			585419	598312	1
	Ni	60	0.021	ug/L	0.009	40	50	125	22
	Ni	62	0.073	ug/L	0.044	60	70	109	20
	Cu	63	0.022	ug/L	0.011	48	274	456	17
	Cu	65	0.015	ug/L	0.008	54	124	182	15
	Zn	66	0.220	ug/L	0.029	13	1259	1761	5
	Zn	67	0.182	ug/L	0.046	25	196	265	7
	Zn	68	0.222	ug/L	0.022	9	985	1341	0
	As	75	-0.000	ug/L	0.013	7031	205	209	13
	As-1	75	-0.086	ug/L	0.078	91	8804	8830	0
	Se	82	0.021	ug/L	0.025	116	2	7	75
	Se	78	-0.273	ug/L	0.319	116	8883	8934	0
	Mo	98	0.023	ug/L	0.004	16	21	133	11
	Y	89		ug/L			393396	412537	0
	Kr	83		ug/L			387	411	9
>	In	115		ug/L			873328	883696	0
	Ag	107	0.006	ug/L	0.003	49	28	83	32
	Cd	111	0.012	ug/L	0.013	108	91	144	39
	Cd	114	0.021	ug/L	0.035	161	35	263	139
	Sb	121	0.215	ug/L	0.055	25	177	2958	23
	Sb	123	0.216	ug/L	0.056	26	133	2238	24
	Ba	135	0.053	ug/L	0.048	90	525	738	25
	Ba	137	0.054	ug/L	0.043	80	900	1273	22
>	Tb	159		ug/L			1029579	1040477	0
	Tl	205	0.024	ug/L	0.033	135	75	888	124
	Pb	208	0.025	ug/L	0.028	114	577	1700	74
	Bi	209		ug/L			2413416	2447369	1
	Th	232	0.213	ug/L	0.018	8	112	9979	8
	U	238	0.016	ug/L	0.019	118	6	751	116

WS21 : 21624

Sample Information

Sample Date/Time: Monday, June 10, 2013 10:15:53
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**0.9997**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**1.0000**	0.020	0.20	10	20	50	100
V-1	51	**1.0000**	0.020	0.50	10	20	50	100
Cr	52	**1.0000**	0.016	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.023	0.50	10	20	50	100
Co	59	**1.0000**	0.017	0.20	10	20	50	100
Ge	72							
Ni	60	**0.9999**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**1.0000**	0.013	0.50	10	20	50	100
Cu	65	**1.0000**	0.006	0.50	10	20	50	100
Zn	66	**1.0000**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**1.0000**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9998**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.008	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.010	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**1.0000**	0.033	0.20	10	20	50	100
Pb	208	**1.0000**	0.043	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.045	0.20	10	20	50	100
U	238	**1.0000**	0.045	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:28:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1104870	2
	Be	9	50.688	ug/L	1.541	3	20	171522	1
	C	13		ug/L			96438	95013	1
	Cl	37		ug/L			4537351	4569659	1
>	Sc	45		ug/L			1037261	1086566	0
	V	51	49.195	ug/L	1.052	2	6297	1078922	2
	V-1	51	49.170	ug/L	0.752	1	92	1073312	1
	Cr	52	49.327	ug/L	0.963	1	18914	903722	1
	Cr	53	49.238	ug/L	0.381	0	153	100326	0
	Mn	55	50.837	ug/L	1.385	2	1535	1267191	2
	Co	59	49.919	ug/L	0.408	0	301	898819	0
>	Ge	72		ug/L			585419	604558	0
	Ni	60	52.414	ug/L	1.324	2	50	189200	1
	Ni	62	51.498	ug/L	0.946	1	70	27208	1
	Cu	63	51.576	ug/L	1.001	1	274	410597	1
	Cu	65	50.751	ug/L	1.111	2	124	184198	2
	Zn	66	50.055	ug/L	0.344	0	1259	110053	0
	Zn	67	51.346	ug/L	1.124	2	196	18573	2
	Zn	68	51.202	ug/L	1.169	2	985	78908	1
	As	75	50.884	ug/L	0.160	0	205	101423	0
	As-1	75	50.832	ug/L	0.192	0	8804	108804	0
	Se	82	78.794	ug/L	0.485	0	2	16954	0
	Se	78	79.093	ug/L	0.651	0	8883	50762	0
	Mo	98	50.402	ug/L	0.872	1	21	243970	1
	Y	89		ug/L			393396	423357	1
	Kr	83		ug/L			387	441	2
>	In	115		ug/L			873328	882817	0
	Ag	107	50.463	ug/L	0.484	0	28	449775	1
	Cd	111	49.019	ug/L	0.884	1	91	206521	1
	Cd	114	48.849	ug/L	1.299	2	35	517716	1
	Sb	121	50.628	ug/L	0.263	0	177	653546	0
	Sb	123	50.823	ug/L	0.495	0	133	495241	0
	Ba	135	50.661	ug/L	0.674	1	525	197304	1
	Ba	137	50.646	ug/L	0.492	0	900	341651	1
>	Tb	159		ug/L			1029579	1065845	0
	Tl	205	49.174	ug/L	0.352	0	75	1706572	0
	Pb	208	50.141	ug/L	0.115	0	577	2325317	0
	Bi	209		ug/L			2413416	2375613	0
	Th	232	49.829	ug/L	0.658	1	112	2365548	0
	U	238	49.553	ug/L	0.245	0	6	2361285	0

W321 : 81825

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:35:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1063542	1
	Be	9	0.001	ug/L	0.002	160	20	23	21
	C	13		ug/L			96438	92615	2
	Cl	37		ug/L			4537351	4480051	1
>	Sc	45		ug/L			1037261	1049888	0
	V	51	0.005	ug/L	0.005	99	6297	6478	1
	V-1	51	0.002	ug/L	0.001	35	92	139	11
	Cr	52	0.003	ug/L	0.009	288	18914	19199	0
	Cr	53	-0.006	ug/L	0.007	116	153	142	10
	Mn	55	-0.012	ug/L	0.009	79	1535	1269	18
	Co	59	0.006	ug/L	0.012	201	301	409	51
>	Ge	72		ug/L			585419	594395	1
	Ni	60	0.023	ug/L	0.015	65	50	133	41
	Ni	62	0.044	ug/L	0.006	14	70	94	4
	Cu	63	0.019	ug/L	0.018	94	274	427	33
	Cu	65	0.018	ug/L	0.012	66	124	189	22
	Zn	66	0.207	ug/L	0.026	12	1259	1720	2
	Zn	67	0.194	ug/L	0.048	24	196	267	5
	Zn	68	0.198	ug/L	0.028	13	985	1295	2
	As	75	-0.002	ug/L	0.014	583	205	203	13
	As-1	75	-0.074	ug/L	0.125	168	8804	8795	1
	Se	82	-0.046	ug/L	0.052	112	2	-7	150
	Se	78	-0.273	ug/L	0.458	167	8883	8876	1
	Mo	98	0.008	ug/L	0.004	43	21	59	28
	Y	89		ug/L			393396	412390	1
	Kr	83		ug/L			387	420	2
>	In	115		ug/L			873328	881264	1
	Ag	107	0.002	ug/L	0.001	64	28	46	26
	Cd	111	-0.000	ug/L	0.004	841	91	90	18
	Cd	114	0.002	ug/L	0.002	69	35	59	29
	Sb	121	0.038	ug/L	0.012	32	177	662	22
	Sb	123	0.037	ug/L	0.013	36	133	491	24
	Ba	135	0.036	ug/L	0.003	9	525	668	1
	Ba	137	0.024	ug/L	0.008	32	900	1067	6
>	Tb	159		ug/L			1029579	1056149	1
	Tl	205	0.004	ug/L	0.001	20	75	204	13
	Pb	208	0.007	ug/L	0.002	23	577	925	7
	Bi	209		ug/L			2413416	2443684	0
	Th	232	0.094	ug/L	0.002	1	112	4541	3
	U	238	0.003	ug/L	0.001	21	6	154	21

US21 : 01627

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:39:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1069247	4
	Be	9	49.822	ug/L	1.647	3	20	163100	2
	C	13		ug/L			96438	88723	2
	Cl	37		ug/L			4537351	4605775	1
>	Sc	45		ug/L			1037261	1045239	3
	V	51	49.023	ug/L	2.390	4	6297	1033277	2
	V-1	51	49.209	ug/L	2.298	4	92	1032303	1
	Cr	52	49.174	ug/L	1.894	3	18914	866092	1
	Cr	53	49.808	ug/L	1.699	3	153	97557	0
	Mn	55	49.075	ug/L	2.084	4	1535	1175867	0
	Co	59	48.856	ug/L	1.026	2	301	845860	1
>	Ge	72		ug/L			585419	598945	1
	Ni	60	50.586	ug/L	0.845	1	50	180930	2
	Ni	62	48.943	ug/L	1.105	2	70	25618	1
	Cu	63	50.655	ug/L	0.625	1	274	399508	0
	Cu	65	49.581	ug/L	0.934	1	124	178251	1
	Zn	66	49.408	ug/L	0.540	1	1259	107632	0
	Zn	67	51.102	ug/L	1.206	2	196	18308	1
	Zn	68	51.411	ug/L	0.782	1	985	78488	0
	As	75	49.731	ug/L	0.934	1	205	98200	1
	As-1	75	49.667	ug/L	0.824	1	8804	105523	1
	Se	82	50.602	ug/L	0.780	1	2	10787	1
	Se	78	49.801	ug/L	0.344	0	8883	35031	1
	Mo	98	49.376	ug/L	0.550	1	21	236776	0
	Y	89		ug/L			393396	407059	1
	Kr	83		ug/L			387	426	3
>	In	115		ug/L			873328	864861	1
	Ag	107	49.422	ug/L	1.257	2	28	431552	2
	Cd	111	50.085	ug/L	0.938	1	91	206704	0
	Cd	114	50.367	ug/L	0.680	1	35	522975	0
	Sb	121	49.731	ug/L	0.616	1	177	628861	0
	Sb	123	49.610	ug/L	0.669	1	133	473578	0
	Ba	135	50.166	ug/L	0.991	1	525	191394	1
	Ba	137	50.367	ug/L	0.884	1	900	332816	1
>	Tb	159		ug/L			1029579	1045672	2
	Tl	205	49.173	ug/L	1.001	2	75	1673765	0
	Pb	208	49.207	ug/L	0.885	1	577	2238225	0
	Bi	209		ug/L			2413416	2361563	0
	Th	232	50.378	ug/L	1.630	3	112	2345291	1
	U	238	50.537	ug/L	1.536	3	6	2361554	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:45:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1039815	2
[	Be	9	0.002	ug/L	0.003	122	20	26	32
	C	13		ug/L			96438	92330	2
	Cl	37		ug/L			4537351	4469730	1
[>	Sc	45		ug/L			1037261	1035784	0
[	V	51	0.012	ug/L	0.002	17	6297	6537	1
[	V-1	51	0.002	ug/L	0.001	34	92	139	11
[	Cr	52	0.029	ug/L	0.013	45	18914	19382	1
[	Cr	53	-0.005	ug/L	0.017	362	153	144	23
[	Mn	55	-0.008	ug/L	0.021	274	1535	1354	37
[	Co	59	0.021	ug/L	0.039	184	301	670	101
[>	Ge	72		ug/L			585419	586587	2
[	Ni	60	0.043	ug/L	0.048	113	50	200	85
[	Ni	62	0.034	ug/L	0.046	138	70	87	27
[	Cu	63	0.037	ug/L	0.045	122	274	563	63
[	Cu	65	0.031	ug/L	0.036	114	124	234	54
[	Zn	66	0.239	ug/L	0.014	5	1259	1764	2
[	Zn	67	0.243	ug/L	0.034	14	196	281	5
[	Zn	68	0.247	ug/L	0.032	12	985	1352	4
[	As	75	0.009	ug/L	0.020	225	205	223	19
[	As-1	75	0.016	ug/L	0.115	699	8804	8850	0
[	Se	82	0.002	ug/L	0.005	308	2	2	38
[	Se	78	0.063	ug/L	0.492	787	8883	8928	0
[	Mo	98	0.015	ug/L	0.004	25	21	91	20
	Y	89		ug/L			393396	399937	0
	Kr	83		ug/L			387	410	0
[>	In	115		ug/L			873328	865027	1
[	Ag	107	0.004	ug/L	0.004	98	28	67	58
[	Cd	111	0.003	ug/L	0.003	99	91	103	13
[	Cd	114	0.002	ug/L	0.003	149	35	58	61
[	Sb	121	0.088	ug/L	0.017	19	177	1293	15
[	Sb	123	0.090	ug/L	0.018	20	133	991	17
[	Ba	135	0.030	ug/L	0.005	15	525	634	2
[	Ba	137	0.029	ug/L	0.005	18	900	1082	3
[>	Tb	159		ug/L			1029579	1012567	1
[	Tl	205	0.003	ug/L	0.002	47	75	184	29
[	Pb	208	0.010	ug/L	0.002	15	577	988	7
[	Bi	209		ug/L			2413416	2378756	1
[	Th	232	0.136	ug/L	0.001	0	112	6249	1
[	U	238	0.004	ug/L	0.001	32	6	167	32

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:49:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1023323	3
	Be	9	0.210	ug/L	0.010	4	20	677	6
	C	13		ug/L			96438	86506	1
	Cl	37		ug/L			4537351	4337493	0
>	Sc	45		ug/L			1037261	1021698	1
	V	51	0.205	ug/L	0.003	1	6297	10399	1
	V-1	51	0.194	ug/L	0.001	0	92	4072	1
	Cr	52	0.508	ug/L	0.012	2	18914	27187	0
	Cr	53	0.470	ug/L	0.021	4	153	1049	3
	Mn	55	0.473	ug/L	0.006	1	1535	12577	1
	Co	59	0.203	ug/L	0.008	4	301	3725	4
>	Ge	72		ug/L			585419	585135	0
	Ni	60	0.512	ug/L	0.026	5	50	1839	4
	Ni	62	0.494	ug/L	0.053	10	70	322	8
	Cu	63	0.497	ug/L	0.015	2	274	4098	2
	Cu	65	0.483	ug/L	0.011	2	124	1821	1
	Zn	66	3.580	ug/L	0.068	1	1259	8786	1
	Zn	67	3.353	ug/L	0.031	0	196	1357	0
	Zn	68	3.607	ug/L	0.028	0	985	6296	0
	As	75	0.208	ug/L	0.014	6	205	604	4
	As-1	75	0.181	ug/L	0.046	25	8804	9144	0
	Se	82	0.477	ug/L	0.027	5	2	101	5
	Se	78	0.429	ug/L	0.193	44	8883	9096	0
	Mo	98	0.208	ug/L	0.004	1	21	993	1
	Y	89		ug/L			393396	405411	0
	Kr	83		ug/L			387	415	2
>	In	115		ug/L			873328	853973	1
	Ag	107	0.200	ug/L	0.011	5	28	1754	4
	Cd	111	0.104	ug/L	0.006	5	91	512	3
	Cd	114	0.103	ug/L	0.004	4	35	1092	2
	Sb	121	0.224	ug/L	0.009	3	177	2963	2
	Sb	123	0.225	ug/L	0.006	2	133	2254	1
	Ba	135	0.362	ug/L	0.007	2	525	1874	0
	Ba	137	0.362	ug/L	0.014	3	900	3232	1
>	Tb	159		ug/L			1029579	1008469	0
	Tl	205	0.206	ug/L	0.002	1	75	6822	1
	Pb	208	0.096	ug/L	0.001	0	577	4790	0
	Bi	209		ug/L			2413416	2367840	1
	Th	232	0.199	ug/L	0.008	4	112	9058	3
	U	238	0.201	ug/L	0.004	2	6	9069	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 10:54:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1173447	1
	Be	9	0.004	ug/L	0.002	47	20	36	16
	C	13		ug/L			96438	199500	1
	Cl	37		ug/L			4537351	11532020	3
>	Sc	45		ug/L			1037261	1107911	1
	V	51	0.152	ug/L	0.011	7	6297	10100	2
	V-1	51	0.827	ug/L	0.040	4	92	18496	5
	Cr	52	0.569	ug/L	0.024	4	18914	30603	0
	Cr	53	2.882	ug/L	0.094	3	153	6143	3
	Mn	55	0.028	ug/L	0.005	17	1535	2361	5
	Co	59	0.012	ug/L	0.002	16	301	540	7
>	Ge	72		ug/L			585419	595900	1
	Ni	60	0.303	ug/L	0.008	2	50	1127	3
	Ni	62	3.745	ug/L	0.284	7	70	2015	6
	Cu	63	0.941	ug/L	0.058	6	274	7652	4
	Cu	65	0.331	ug/L	0.003	0	124	1311	1
	Zn	66	0.540	ug/L	0.048	8	1259	2438	3
	Zn	67	4.812	ug/L	0.131	2	196	1896	1
	Zn	68	0.035	ug/L	0.010	28	985	1055	2
	As	75	0.096	ug/L	0.018	18	205	397	10
	As-1	75	0.053	ug/L	0.033	62	8804	9064	1
	Se	82	-0.087	ug/L	0.053	61	2	-16	72
	Se	78	0.009	ug/L	0.187	2187	8883	9045	0
	Mo	98	404.273	ug/L	4.645	1	21	1928520	0
	Y	89		ug/L			393396	410279	2
	Kr	83		ug/L			387	567	6
>	In	115		ug/L			873328	894130	2
	Ag	107	0.017	ug/L	0.003	15	28	183	11
	Cd	111	0.165	ug/L	0.012	7	91	797	5
	Cd	114	0.258	ug/L	0.005	2	35	2801	1
	Sb	121	0.073	ug/L	0.004	6	177	1140	6
	Sb	123	0.075	ug/L	0.005	6	133	876	5
	Ba	135	-0.075	ug/L	0.003	4	525	244	5
	Ba	137	-0.082	ug/L	0.000	0	900	363	2
>	Tb	159		ug/L			1029579	1093615	0
	Tl	205	0.037	ug/L	0.001	2	75	1398	2
	Pb	208	0.037	ug/L	0.001	1	577	2368	2
	Bi	209		ug/L			2413416	2327197	0
	Th	232	0.096	ug/L	0.021	21	112	4801	20
	U	238	0.001	ug/L	0.000	15	6	52	14

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:00:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1073783	1166319	2
	Be	**9**	**-0.001**	ug/L	0.001	142	20	20	13
	C	**13**		ug/L			96438	200910	2
	Cl	**37**		ug/L			4537351	11400734	2
>	**Sc**	**45**		ug/L			1037261	1105167	1
	V	**51**	**-0.005**	ug/L	0.108	2137	6297	6606	37
	V-1	**51**	**0.845**	ug/L	0.029	3	92	18857	1
	Cr	**52**	**19.112**	ug/L	0.187	0	18914	368467	1
	Cr	**53**	**21.941**	ug/L	0.427	1	153	45554	1
	Mn	**55**	**18.820**	ug/L	0.244	1	1535	478174	1
	Co	**59**	**18.675**	ug/L	0.204	1	301	342179	1
>	**Ge**	**72**		ug/L			585419	569526	1
	Ni	**60**	**21.116**	ug/L	0.258	1	50	71833	0
	Ni	**62**	**23.540**	ug/L	0.690	2	70	11749	1
	Cu	**63**	**21.040**	ug/L	0.134	0	274	157957	1
	Cu	**65**	**19.829**	ug/L	0.163	0	124	67860	1
	Zn	**66**	**20.066**	ug/L	0.511	2	1259	42291	2
	Zn	**67**	**22.225**	ug/L	0.407	1	196	7680	1
	Zn	**68**	**19.168**	ug/L	0.278	1	985	28428	1
	As	**75**	**19.622**	ug/L	0.213	1	205	36964	1
	As-1	**75**	**20.015**	ug/L	0.300	1	8804	45546	1
	Se	**82**	**-0.123**	ug/L	0.066	53	2	-22	57
	Se	**78**	**0.582**	ug/L	0.355	60	8883	8928	0
	Mo	**98**	**411.911**	ug/L	1.282	0	21	1878213	1
	Y	**89**		ug/L			393396	393044	2
	Kr	**83**		ug/L			387	547	4
>	**In**	**115**		ug/L			873328	889860	0
	Ag	**107**	**19.128**	ug/L	0.437	2	28	171843	1
	Cd	**111**	**19.553**	ug/L	0.261	1	91	83088	0
	Cd	**114**	**19.627**	ug/L	0.491	2	35	209690	1
	Sb	**121**	**0.071**	ug/L	0.004	5	177	1102	5
	Sb	**123**	**0.066**	ug/L	0.001	1	133	785	0
	Ba	**135**	**-0.084**	ug/L	0.002	1	525	205	3
	Ba	**137**	**-0.094**	ug/L	0.004	4	900	280	8
>	**Tb**	**159**		ug/L			1029579	1108204	0
	Tl	**205**	**0.039**	ug/L	0.000	0	75	1478	0
	Pb	**208**	**0.027**	ug/L	0.004	13	577	1934	9
	Bi	**209**		ug/L			2413416	2324601	0
	Th	**232**	**0.037**	ug/L	0.001	3	112	1964	3
	U	**238**	**0.001**	ug/L	0.000	2	6	33	1

WSP1 : 91832

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:07:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1079881	0
[	Be	9	198.938	ug/L	6.682	3	20	658120	2
	C	13		ug/L			96438	91889	2
	Cl	37		ug/L			4537351	4676401	0
[>	Sc	45		ug/L			1037261	1049203	1
[	V	51	194.102	ug/L	3.980	2	6297	4090740	0
[	V-1	51	194.343	ug/L	3.188	1	92	4095236	0
[	Cr	52	190.504	ug/L	4.331	2	18914	3314834	1
[	Cr	53	191.341	ug/L	0.840	0	153	376014	1
[	Mn	55	193.978	ug/L	2.540	1	1535	4664340	0
[	Co	59	186.433	ug/L	1.197	0	301	3240351	1
[>	Ge	72		ug/L			585419	545138	1
[	Ni	60	206.757	ug/L	2.080	1	50	672852	0
[	Ni	62	200.183	ug/L	1.484	0	70	95179	0
[	Cu	63	201.378	ug/L	2.951	1	274	1444778	0
[	Cu	65	198.323	ug/L	3.391	1	124	648561	0
[	Zn	66	195.740	ug/L	4.401	2	1259	384633	2
[	Zn	67	202.218	ug/L	1.279	0	196	65413	1
[	Zn	68	199.525	ug/L	7.774	3	985	274548	2
[	As	75	203.025	ug/L	1.897	0	205	364294	0
[	As-1	75	203.542	ug/L	2.223	1	8804	368186	0
[	Se	82	201.627	ug/L	2.789	1	2	39112	0
[	Se	78	201.169	ug/L	3.217	1	8883	103641	0
[	Mo	98	207.398	ug/L	1.038	0	21	905260	1
	Y	89		ug/L			393396	382875	2
	Kr	83		ug/L			387	542	1
[>	In	115		ug/L			873328	863038	0
[	Ag	107	188.222	ug/L	2.039	1	28	1639934	0
[	Cd	111	194.736	ug/L	2.016	1	91	801846	1
[	Cd	114	200.883	ug/L	0.730	0	35	2081500	0
[	Sb	121	203.368	ug/L	1.499	0	177	2565936	1
[	Sb	123	200.125	ug/L	1.308	0	133	1906104	0
[	Ba	135	201.268	ug/L	1.368	0	525	764766	0
[	Ba	137	203.157	ug/L	1.518	0	900	1337020	0
[>	Tb	159		ug/L			1029579	1053177	0
[	Tl	205	194.132	ug/L	1.241	0	75	6656829	0
[	Pb	208	195.273	ug/L	1.417	0	577	8946224	0
[	Bi	209		ug/L			2413416	2241350	0
[	Th	232	193.553	ug/L	0.688	0	112	9079433	1
[	U	238	191.391	ug/L	4.031	2	6	9010598	1

US21 : 01633

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:14:22
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1034353	2
	Be	9	283.183	ug/L	1.293	0	20	897445	2
	C	13		ug/L			96438	88888	1
	Cl	37		ug/L			4537351	4578702	2
>	Sc	45		ug/L			1037261	1015080	0
	V	51	292.216	ug/L	4.820	1	6297	5956921	2
	V-1	51	291.268	ug/L	5.220	1	92	5939505	2
	Cr	52	295.401	ug/L	2.821	0	18914	4963925	1
	Cr	53	292.124	ug/L	1.791	0	153	555354	1
	Mn	55	294.404	ug/L	2.241	0	1535	6849123	0
	Co	59	287.985	ug/L	6.300	2	301	4842865	2
>	Ge	72		ug/L			585419	538840	1
	Ni	60	301.980	ug/L	3.688	1	50	971319	0
	Ni	62	303.625	ug/L	7.907	2	70	142627	0
	Cu	63	306.517	ug/L	3.143	1	274	2173820	1
	Cu	65	295.557	ug/L	2.553	0	124	955386	0
	Zn	66	280.910	ug/L	0.709	0	1259	545142	1
	Zn	67	293.078	ug/L	2.436	0	196	93625	1
	Zn	68	291.534	ug/L	5.019	1	985	396155	0
	As	75	298.056	ug/L	2.372	0	205	528563	1
	As-1	75	299.239	ug/L	1.066	0	8804	531267	1
	Se	82	294.081	ug/L	6.369	2	2	56380	1
	Se	78	294.922	ug/L	2.671	0	8883	146384	0
	Mo	98	309.095	ug/L	1.847	0	21	1333488	1
	Y	89		ug/L			393396	379037	0
	Kr	83		ug/L			387	628	2
>	In	115		ug/L			873328	830438	0
	Ag	107	287.031	ug/L	0.995	0	28	2406338	0
	Cd	111	286.973	ug/L	2.669	0	91	1137003	1
	Cd	114	294.815	ug/L	2.211	0	35	2939228	0
	Sb	121	302.222	ug/L	1.897	0	177	3668883	0
	Sb	123	307.003	ug/L	2.364	0	133	2813657	1
	Ba	135	308.085	ug/L	5.008	1	525	1126289	2
	Ba	137	311.988	ug/L	1.725	0	900	1975210	0
>	Tb	159		ug/L			1029579	1038392	1
	Tl	205	291.211	ug/L	2.436	0	75	9845346	0
	Pb	208	290.612	ug/L	2.011	0	577	13126696	0
	Bi	209		ug/L			2413416	2184563	1
	Th	232	287.763	ug/L	6.232	2	112	13306887	1
	U	238	284.026	ug/L	4.237	1	6	13184764	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:21:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1008368	0
	Be	9	0.011	ug/L	0.013	118	20	53	76
	C	13		ug/L			96438	82602	2
	Cl	37		ug/L			4537351	4446274	1
>	Sc	45		ug/L			1037261	1002303	0
	V	51	0.020	ug/L	0.008	37	6297	6497	2
	V-1	51	0.013	ug/L	0.007	54	92	359	42
	Cr	52	0.038	ug/L	0.030	77	18914	18905	2
	Cr	53	0.014	ug/L	0.012	88	153	173	13
	Mn	55	-0.005	ug/L	0.007	134	1535	1373	11
	Co	59	0.006	ug/L	0.007	101	301	399	28
>	Ge	72		ug/L			585419	553733	0
	Ni	60	0.002	ug/L	0.006	291	50	54	39
	Ni	62	0.255	ug/L	0.173	67	70	189	44
	Cu	63	0.012	ug/L	0.014	116	274	344	28
	Cu	65	-0.001	ug/L	0.003	288	124	113	10
	Zn	66	-0.328	ug/L	0.002	0	1259	537	0
	Zn	67	-0.307	ug/L	0.015	4	196	85	5
	Zn	68	-0.312	ug/L	0.021	6	985	497	6
	As	75	0.023	ug/L	0.027	116	205	236	20
	As-1	75	0.299	ug/L	0.024	8	8804	8865	0
	Se	82	-0.020	ug/L	0.116	565	2	-1	1374
	Se	78	1.154	ug/L	0.027	2	8883	8958	0
	Mo	98	0.045	ug/L	0.003	6	21	218	6
	Y	89		ug/L			393396	388143	1
	Kr	83		ug/L			387	459	10
>	In	115		ug/L			873328	845847	0
	Ag	107	0.009	ug/L	0.002	21	28	101	14
	Cd	111	0.004	ug/L	0.004	84	91	105	12
	Cd	114	0.003	ug/L	0.000	0	35	67	0
	Sb	121	0.345	ug/L	0.050	14	177	4441	14
	Sb	123	0.347	ug/L	0.051	14	133	3371	14
	Ba	135	-0.128	ug/L	0.001	0	525	31	12
	Ba	137	-0.128	ug/L	0.001	0	900	46	15
>	Tb	159		ug/L			1029579	1000731	1
	Tl	205	0.020	ug/L	0.002	10	75	737	8
	Pb	208	-0.001	ug/L	0.003	438	577	528	27
	Bi	209		ug/L			2413416	2335663	0
	Th	232	0.187	ug/L	0.011	6	112	8435	6
	U	238	0.013	ug/L	0.009	70	6	603	69

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:27:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1075330	2
[	Be	9	51.041	ug/L	1.414	2	20	168104	0
	C	13		ug/L			96438	83736	1
	Cl	37		ug/L			4537351	4476543	1
[>	Sc	45		ug/L			1037261	1057126	1
[	V	51	49.121	ug/L	0.501	1	6297	1048118	1
[	V-1	51	49.168	ug/L	0.705	1	92	1044108	1
[	Cr	52	48.708	ug/L	0.379	0	18914	868481	1
[	Cr	53	48.867	ug/L	1.291	2	153	96856	1
[	Mn	55	49.321	ug/L	0.574	1	1535	1196159	0
[	Co	59	49.104	ug/L	1.167	2	301	860038	1
[>	Ge	72		ug/L			585419	583963	0
[	Ni	60	51.333	ug/L	1.133	2	50	178999	2
[	Ni	62	50.214	ug/L	0.140	0	70	25629	0
[	Cu	63	52.055	ug/L	0.740	1	274	400338	2
[	Cu	65	50.631	ug/L	0.358	0	124	177485	0
[	Zn	66	50.902	ug/L	0.495	0	1259	108081	0
[	Zn	67	51.355	ug/L	0.706	1	196	17941	1
[	Zn	68	52.880	ug/L	0.282	0	985	78694	0
[	As	75	50.933	ug/L	0.396	0	205	98057	0
[	As-1	75	51.221	ug/L	0.378	0	8804	105830	0
[	Se	82	52.191	ug/L	0.372	0	2	10847	0
[	Se	78	52.758	ug/L	0.653	1	8883	35657	1
[	Mo	98	50.168	ug/L	0.393	0	21	234586	1
	Y	89		ug/L			393396	408252	1
	Kr	83		ug/L			387	454	4
[>	In	115		ug/L			873328	882222	1
[	Ag	107	48.952	ug/L	0.600	1	28	435963	0
[	Cd	111	50.362	ug/L	0.477	0	91	212026	0
[	Cd	114	49.966	ug/L	0.455	0	35	529222	0
[	Sb	121	49.333	ug/L	0.774	1	177	636315	0
[	Sb	123	49.553	ug/L	0.601	1	133	482508	0
[	Ba	135	50.492	ug/L	1.080	2	525	196484	1
[	Ba	137	50.289	ug/L	1.322	2	900	338921	1
[>	Tb	159		ug/L			1029579	1070939	0
[	Tl	205	48.171	ug/L	0.509	1	75	1679725	0
[	Pb	208	47.956	ug/L	0.604	1	577	2234545	0
[	Bi	209		ug/L			2413416	2371724	0
[	Th	232	49.152	ug/L	1.124	2	112	2344507	1
[	U	238	48.921	ug/L	0.513	1	6	2342223	0

WS21 : 21636

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:34:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1074985	1
	Be	9	0.001	ug/L	0.001	59	20	24	7
	C	13		ug/L			96438	90347	2
	Cl	37		ug/L			4537351	4520205	1
>	Sc	45		ug/L			1037261	1070136	0
	V	51	0.011	ug/L	0.010	93	6297	6724	3
	V-1	51	0.005	ug/L	0.001	10	92	210	5
	Cr	52	0.021	ug/L	0.035	167	18914	19880	3
	Cr	53	0.003	ug/L	0.003	115	153	163	3
	Mn	55	-0.012	ug/L	0.001	8	1535	1297	1
	Co	59	-0.004	ug/L	0.001	26	301	243	7
>	Ge	72		ug/L			585419	593688	1
	Ni	60	0.014	ug/L	0.001	7	50	100	3
	Ni	62	0.049	ug/L	0.037	75	70	96	18
	Cu	63	0.009	ug/L	0.001	6	274	347	1
	Cu	65	0.007	ug/L	0.004	52	124	151	7
	Zn	66	0.216	ug/L	0.021	9	1259	1738	1
	Zn	67	0.141	ug/L	0.026	18	196	249	4
	Zn	68	0.250	ug/L	0.010	3	985	1373	1
	As	75	0.018	ug/L	0.012	65	205	242	8
	As-1	75	0.045	ug/L	0.053	117	8804	9015	0
	Se	82	-0.011	ug/L	0.037	346	2	0	3439
	Se	78	0.184	ug/L	0.209	113	8883	9102	0
	Mo	98	0.017	ug/L	0.001	6	21	101	6
	Y	89		ug/L			393396	424350	0
	Kr	83		ug/L			387	453	0
>	In	115		ug/L			873328	905787	2
	Ag	107	0.002	ug/L	0.001	72	28	46	24
	Cd	111	-0.001	ug/L	0.003	407	91	91	14
	Cd	114	0.001	ug/L	0.001	99	35	46	22
	Sb	121	0.121	ug/L	0.020	16	177	1789	14
	Sb	123	0.124	ug/L	0.024	18	133	1382	17
	Ba	135	0.026	ug/L	0.006	24	525	649	2
	Ba	137	0.023	ug/L	0.007	29	900	1093	3
>	Tb	159		ug/L			1029579	1071155	2
	Tl	205	0.005	ug/L	0.000	5	75	266	5
	Pb	208	0.007	ug/L	0.001	12	577	948	2
	Bi	209		ug/L			2413416	2439261	0
	Th	232	0.128	ug/L	0.007	5	112	6195	2
	U	238	0.003	ug/L	0.000	13	6	136	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS21 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 11:40:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1109346	1
[	Be	9	0.002	ug/L	0.002	112	20	26	22
	C	13		ug/L			96438	106079	2
	Cl	37		ug/L			4537351	4419337	1
[>	Sc	45		ug/L			1037261	1095075	1
[	V	51	0.019	ug/L	0.001	7	6297	7057	0
[	V-1	51	0.004	ug/L	0.001	23	92	185	11
[	Cr	52	0.056	ug/L	0.006	10	18914	20987	0
[	Cr	53	S 0.006	ug/L	0.004	65	153	174	5
[	Mn	55	-0.015	ug/L	0.001	4	1535	1235	1
[	Co	59	0.002	ug/L	0.000	27	301	348	2
[>	Ge	72		ug/L			585419	610650	0
[	Ni	60	U -0.000	ug/L	0.001	907	50	51	9
[	Ni	62	0.038	ug/L	0.027	70	70	93	14
[	Cu	63	0.025	ug/L	0.002	6	274	486	3
[	Cu	65	0.028	ug/L	0.006	21	124	231	8
[	Zn	66	0.543	ug/L	0.026	4	1259	2505	1
[	Zn	67	0.490	ug/L	0.070	14	196	382	6
[	Zn	68	0.557	ug/L	0.068	12	985	1884	5
[	As	75	S 0.003	ug/L	0.017	541	205	220	16
[	As-1	75	-0.079	ug/L	0.026	32	8804	9028	1
[	Se	82	-0.028	ug/L	0.036	128	2	-3	226
[	Se	78	S -0.258	ug/L	0.126	48	8883	9128	1
[	Mo	98	0.006	ug/L	0.001	9	21	51	5
	Y	89		ug/L			393396	425726	1
	Kr	83		ug/L			387	455	7
[>	In	115	S	ug/L			873328	898179	1
[	Ag	107	0.002	ug/L	0.001	48	28	46	18
[	Cd	111	S 0.000	ug/L	0.002	1520	91	94	8
[	Cd	114	0.000	ug/L	0.001	256	35	38	18
[	Sb	121	S 0.045	ug/L	0.011	23	177	768	16
[	Sb	123	0.046	ug/L	0.009	19	133	587	13
[	Ba	135	-0.123	ug/L	0.000	0	525	56	3
[	Ba	137	-0.123	ug/L	0.002	1	900	86	14
[>	Tb	159		ug/L			1029579	1079007	1
[	Tl	205	S 0.004	ug/L	0.000	4	75	209	1
[	Pb	208	-0.000	ug/L	0.001	581	577	597	6
[	Bi	209	S	ug/L			2413416	2469221	1
[	Th	232	0.068	ug/L	0.007	9	112	3408	10
[	U	238	0.001	ug/L	0.000	24	6	52	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 11:44:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1059225	1
	Be	9	0.001	ug/L	0.001	122	20	23	17
	C	13		ug/L			96438	83621	5
	Cl	37		ug/L			4537351	4295598	2
>	Sc	45		ug/L			1037261	1057213	1
	V	51	0.009	ug/L	0.003	38	6297	6602	1
	V-1	51	0.007	ug/L	0.000	5	92	244	2
	Cr	52	-0.000	ug/L	0.021	5950	18914	19272	2
	Cr	53	-0.006	ug/L	0.010	168	153	144	14
	Mn	55	0.018	ug/L	0.002	8	1535	2010	0
	Co	59	-0.004	ug/L	0.000	7	301	242	1
>	Ge	72		ug/L			585419	596685	0
	Ni	60	0.061	ug/L	0.003	5	50	267	3
	Ni	62	0.091	ug/L	0.019	21	70	119	7
	Cu	63	0.351	ug/L	0.012	3	274	3036	2
	Cu	65	0.340	ug/L	0.012	3	124	1344	2
	Zn	66	5.778	ug/L	0.151	2	1259	13673	1
	Zn	67	5.517	ug/L	0.122	2	196	2147	1
	Zn	68	5.644	ug/L	0.048	0	985	9479	1
	As	75	0.015	ug/L	0.010	66	205	237	7
	As-1	75	-0.004	ug/L	0.027	607	8804	8965	0
	Se	82	0.029	ug/L	0.046	157	2	8	111
	Se	78	0.035	ug/L	0.084	238	8883	9072	0
	Mo	98	0.005	ug/L	0.001	9	21	47	4
	Y	89		ug/L			393396	416719	2
	Kr	83		ug/L			387	445	6
>	In	115		ug/L			873328	892899	0
	Ag	107	0.002	ug/L	0.001	36	28	49	14
	Cd	111	-0.001	ug/L	0.002	318	91	90	11
	Cd	114	0.002	ug/L	0.001	50	35	54	16
	Sb	121	0.020	ug/L	0.007	32	177	447	19
	Sb	123	0.023	ug/L	0.007	31	133	359	19
	Ba	135	-0.098	ug/L	0.003	3	525	154	8
	Ba	137	-0.097	ug/L	0.004	3	900	259	9
>	Tb	159		ug/L			1029579	1041810	0
	Tl	205	0.003	ug/L	0.001	28	75	175	16
	Pb	208	0.018	ug/L	0.001	6	577	1408	3
	Bi	209		ug/L			2413416	2435412	1
	Th	232	0.011	ug/L	0.003	22	112	630	18
	U	238	0.001	ug/L	0.001	73	6	44	62

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ERAP197
Sample Dil Factor: 10
Comments:
Sample Date/Time: Monday, June 10, 2013 11:48:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1082207	0
	Be	9	6.388	ug/L	0.082	1	20	21202	1
	C	13		ug/L			96438	90416	2
	Cl	37		ug/L			4537351	4365069	1
>	Sc	45		ug/L			1037261	1076296	1
	V	51	50.438	ug/L	1.520	3	6297	1095387	2
	V-1	51	50.747	ug/L	1.356	2	92	1097102	1
	Cr	52	55.981	ug/L	0.174	0	18914	1013319	0
	Cr	53	57.013	ug/L	0.561	0	153	115053	1
	Mn	55	48.279	ug/L	0.660	1	1535	1192179	0
	Co	59	91.029	ug/L	0.876	0	301	1623183	0
>	Ge	72		ug/L			585419	600011	1
	Ni	60	75.183	ug/L	1.271	1	50	269321	0
	Ni	62	73.537	ug/L	1.789	2	70	38526	1
	Cu	63	32.748	ug/L	0.283	0	274	258856	0
	Cu	65	32.464	ug/L	0.536	1	124	116969	1
	Zn	66	50.651	ug/L	0.382	0	1259	110508	0
	Zn	67	51.010	ug/L	0.896	1	196	18314	2
	Zn	68	52.254	ug/L	1.698	3	985	79893	2
	As	75	22.806	ug/L	0.419	1	205	45226	1
	As-1	75	22.532	ug/L	0.395	1	8804	52886	1
	Se	82	OK 34.136	ug/L 113.1	0.865	2	2	7289	1
	Se	78	33.353	ug/L	0.730	2	8883	26508	0
	Mo	98	57.591	ug/L	0.955	1	21	276653	0
	Y	89		ug/L			393396	417405	0
	Kr	83		ug/L			387	454	1
>	In	115		ug/L			873328	897754	0
	Ag	107	40.532	ug/L	0.694	1	28	367380	1
	Cd	111	14.948	ug/L	0.225	1	91	64107	1
	Cd	114	15.195	ug/L	0.208	1	35	163800	0
	Sb	121	31.694	ug/L	0.390	1	177	416105	0
	Sb	123	31.879	ug/L	0.250	0	133	315956	0
	Ba	135	46.946	ug/L	0.502	1	525	185973	1
	Ba	137	46.819	ug/L	1.233	2	900	321210	2
>	Tb	159		ug/L			1029579	1083086	0
	Tl	205	17.730	ug/L	0.168	0	75	625314	0
	Pb	208	209.950	ug/L	0.727	0	577	9892147	0
	Bi	209		ug/L			2413416	2431727	0
	Th	232	0.011	ug/L	0.001	7	112	628	5
	U	238	0.002	ug/L	0.000	14	6	110	13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS21 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 11:52:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1099534	3
	Be	9	0.102	ug/L	0.003	2	20	363	1
	C	13		ug/L			96438	98320	1
	Cl	37		ug/L			4537351	4350995	0
>	Sc	45		ug/L			1037261	1120933	2
	V	51	22.626	ug/L	1.051	4	6297	515241	2
	V-1	51	22.602	ug/L	1.078	4	92	508652	2
	Cr	52	7.467	ug/L	0.153	2	18914	158448	0
	Cr	53	7.452	ug/L	0.256	3	153	15797	1
	Mn	55	86.661	ug/L	3.264	3	1535	2226325	1
	Co	59	3.167	ug/L	0.127	4	301	59090	1
>	Ge	72		ug/L			585419	599367	1
	Ni	60	7.114	ug/L	0.282	3	50	25500	3
	Ni	62	7.872	ug/L	0.077	0	70	4184	2
	Cu	63	8.294	ug/L	0.183	2	274	65692	1
	Cu	65	8.426	ug/L	0.189	2	124	30424	2
	Zn	66	22.929	ug/L	0.503	2	1259	50672	1
	Zn	67	23.617	ug/L	0.833	3	196	8575	2
	Zn	68	22.957	ug/L	0.399	1	985	35635	1
	As	75	1.757	ug/L	0.011	0	205	3674	1
	As-1	75	1.727	ug/L	0.082	4	8804	12372	0
	Se	82	0.044	ug/L	0.041	93	2	11	74
	Se	78	-0.008	ug/L	0.309	3879	8883	9089	0
	Mo	98	0.170	ug/L	0.009	5	21	835	5
	Y	89		ug/L			393396	512633	1
	Kr	83		ug/L			387	493	5
>	In	115		ug/L			873328	901522	1
	Ag	107	0.037	ug/L	0.003	7	28	364	5
	Cd	111	0.123	ug/L	0.008	6	91	623	5
	Cd	114	0.104	ug/L	0.003	3	35	1159	2
	Sb	121	0.051	ug/L	0.003	6	177	851	6
	Sb	123	0.053	ug/L	0.007	12	133	662	10
	Ba	135	17.806	ug/L	0.412	2	525	71153	0
	Ba	137	17.856	ug/L	0.422	2	900	123573	0
>	Tb	159		ug/L			1029579	1095478	1
	Tl	205	0.028	ug/L	0.002	5	75	1070	3
	Pb	208	5.701	ug/L	0.104	1	577	272243	0
	Bi	209		ug/L			2413416	2395575	0
	Th	232	0.621	ug/L	0.018	2	112	30424	1
	U	238	0.104	ug/L	0.000	0	6	5120	0

WS21 : 061311

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS21 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 11:56:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1095081	0
	Be	9	0.108	ug/L	0.006	5	20	381	4
	C	13		ug/L			96438	102192	2
	Cl	37		ug/L			4537351	4427945	1
>	Sc	45		ug/L			1037261	1118581	2
	V	51	24.155	ug/L	0.960	3	6297	548504	1
	V-1	51	24.121	ug/L	0.969	4	92	541768	1
	Cr	52	6.995	ug/L	0.123	1	18914	149418	1
	Cr	53	6.957	ug/L	0.151	2	153	14730	0
	Mn	55	90.940	ug/L	0.443	0	1535	2332472	1
	Co	59	3.041	ug/L	0.073	2	301	56660	0
>	Ge	72		ug/L			585419	593534	2
	Ni	60	6.468	ug/L	0.138	2	50	22960	0
	Ni	62	7.468	ug/L	0.195	2	70	3933	0
	Cu	63	8.365	ug/L	0.200	2	274	65600	1
	Cu	65	8.545	ug/L	0.493	5	124	30519	3
	Zn	66	26.884	ug/L	0.702	2	1259	58597	0
	Zn	67	27.844	ug/L	0.286	1	196	9976	1
	Zn	68	27.262	ug/L	0.846	3	985	41699	1
	As	75	1.794	ug/L	0.043	2	205	3710	0
	As-1	75	1.776	ug/L	0.125	7	8804	12344	0
	Se	82	0.087	ug/L	0.021	24	2	20	23
	Se	78	0.070	ug/L	0.296	425	8883	9039	1
	Mo	98	0.135	ug/L	0.006	4	21	663	2
	Y	89		ug/L			393396	506822	1
	Kr	83		ug/L			387	483	1
>	In	115		ug/L			873328	897548	1
	Ag	107	0.034	ug/L	0.002	4	28	338	5
	Cd	111	0.159	ug/L	0.013	8	91	773	7
	Cd	114	0.137	ug/L	0.003	2	35	1511	3
	Sb	121	0.025	ug/L	0.004	15	177	515	8
	Sb	123	0.028	ug/L	0.005	16	133	411	9
	Ba	135	17.445	ug/L	0.423	2	525	69410	0
	Ba	137	17.531	ug/L	0.273	1	900	120809	0
>	Tb	159		ug/L			1029579	1080697	2
	Tl	205	0.031	ug/L	0.001	4	75	1182	1
	Pb	208	6.317	ug/L	0.157	2	577	297438	0
	Bi	209		ug/L			2413416	2376830	0
	Th	232	0.694	ug/L	0.015	2	112	33524	0
	U	238	0.117	ug/L	0.003	2	6	5656	0

WS21 : 01642

LOS 6-10-13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SW21 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:01:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1106992	1
	Be	9	25.409	ug/L	0.180	0	20	86194	0
	C	13		ug/L			96438	102268	1
	Cl	37		ug/L			4537351	4484389	2
>	Sc	45		ug/L			1037261	1132109	0
	V	51	47.774	ug/L	0.980	2	6297	1091895	2
	V-1	51	47.758	ug/L	0.994	2	92	1086230	2
	Cr	52	30.596	ug/L	0.108	0	18914	591926	0
	Cr	53	30.622	ug/L	0.298	0	153	65076	1
	Mn	55	119.546	ug/L	1.207	1	1535	3102908	1
	Co	59	26.681	ug/L	0.234	0	301	500699	0
>	Ge	72		ug/L			585419	589887	1
	Ni	60	33.119	ug/L	0.536	1	50	116666	1
	Ni	62	33.204	ug/L	0.527	1	70	17140	0
	Cu	63	33.801	ug/L	1.086	3	274	262594	1
	Cu	65	34.090	ug/L	0.483	1	124	120738	0
	Zn	66	107.708	ug/L	1.148	1	1259	229601	1
	Zn	67	101.652	ug/L	0.866	0	196	35682	2
	Zn	68	105.035	ug/L	1.689	1	985	156893	1
	As	75	27.974	ug/L	0.242	0	205	54494	1
	As-1	75	27.049	ug/L	0.573	2	8804	60632	0
	Se	82	81.705	ug/L	0.704	0	2	17152	0
	Se	78	80.186	ug/L	2.288	2	8883	50080	1
	Mo	98	23.004	ug/L	0.586	2	21	108637	1
	Y	89		ug/L			393396	518347	1
	Kr	83		ug/L			387	508	3
>	In	115		ug/L			873328	898554	0
	Ag	107	23.243	ug/L	0.437	1	28	210879	2
	Cd	111	24.569	ug/L	0.170	0	91	105408	0
	Cd	114	24.870	ug/L	0.285	1	35	268324	0
	Sb	121	6.100	ug/L	0.012	0	177	80310	0
	Sb	123	6.078	ug/L	0.064	1	133	60407	0
	Ba	135	44.538	ug/L	0.144	0	525	176621	0
	Ba	137	44.577	ug/L	0.036	0	900	306172	0
>	Tb	159		ug/L			1029579	1081123	0
	Tl	205	23.436	ug/L	0.096	0	75	825060	0
	Pb	208	29.687	ug/L	0.209	0	577	1396680	0
	Bi	209		ug/L			2413416	2396651	0
	Th	232	23.575	ug/L	0.313	1	112	1135247	1
	U	238	23.253	ug/L	0.184	0	6	1123887	0

LIS #6-10-13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WA21 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:05:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1078648	1
[	Be	9	26.005	ug/L	0.132	0	20	85961	1
	C	13		ug/L			96438	101519	2
	Cl	37		ug/L			4537351	4427061	0
[>	Sc	45		ug/L			1037261	1100421	1
[	V	51	46.774	ug/L	0.246	0	6297	1039219	0
[	V-1	51	46.985	ug/L	0.111	0	92	1038676	0
[	Cr	52	30.267	ug/L	0.685	2	18914	569334	1
[	Cr	53	31.063	ug/L	0.169	0	153	64161	0
[	Mn	55	112.480	ug/L	0.422	0	1535	2837795	0
[	Co	59	26.894	ug/L	0.204	0	301	490545	0
[>	Ge	72		ug/L			585419	589944	1
[	Ni	60	32.012	ug/L	0.327	1	50	112783	0
[	Ni	62	31.895	ug/L	0.948	2	70	16467	1
[	Cu	63	33.855	ug/L	0.638	1	274	263072	0
[	Cu	65	33.481	ug/L	0.785	2	124	118589	1
[	Zn	66	105.225	ug/L	0.659	0	1259	224354	1
[	Zn	67	100.965	ug/L	2.140	2	196	35438	1
[	Zn	68	106.141	ug/L	3.235	3	985	158532	1
[	As	75	27.964	ug/L	0.095	0	205	54481	1
[	As-1	75	26.960	ug/L	0.480	1	8804	60471	0
[	Se	82	82.765	ug/L	0.946	1	2	17376	0
[	Se	78	81.028	ug/L	2.337	2	8883	50517	1
[	Mo	98	25.464	ug/L	0.542	2	21	120269	0
	Y	89		ug/L			393396	503512	0
	Kr	83		ug/L			387	528	6
[>	In	115		ug/L			873328	910994	1
[	Ag	107	23.426	ug/L	0.431	1	28	215454	1
[	Cd	111	24.148	ug/L	0.273	1	91	105032	0
[	Cd	114	23.982	ug/L	0.317	1	35	262318	0
[	Sb	121	23.804	ug/L	0.378	1	177	317151	0
[	Sb	123	23.638	ug/L	0.338	1	133	237757	0
[	Ba	135	40.879	ug/L	0.245	0	525	164400	1
[	Ba	137	41.162	ug/L	0.617	1	900	286675	0
[>	Tb	159		ug/L			1029579	1088925	0
[	Tl	205	22.963	ug/L	0.248	1	75	814195	0
[	Pb	208	29.368	ug/L	0.214	0	577	1391638	0
[	Bi	209		ug/L			2413416	2369165	1
[	Th	232	23.225	ug/L	0.468	2	112	1126429	1
[	U	238	22.828	ug/L	0.142	0	6	1111350	0

WSP1 : 9120W

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WA21 MBSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, June 10, 2013 12:09:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1090625	1
	Be	9	24.649	ug/L	0.681	2	20	82359	1
	C	13		ug/L			96438	92667	1
	Cl	37		ug/L			4537351	4472382	2
>	Sc	45		ug/L			1037261	1049026	1
	V	51	24.380	ug/L	0.736	3	6297	519255	1
	V-1	51	24.321	ug/L	0.573	2	92	512459	0
	Cr	52	24.937	ug/L	0.948	3	18914	450387	2
	Cr	53	24.730	ug/L	0.515	2	153	48720	1
	Mn	55	25.298	ug/L	0.851	3	1535	609425	1
	Co	59	25.182	ug/L	0.685	2	301	437775	1
>	Ge	72		ug/L			585419	590463	1
	Ni	60	25.918	ug/L	0.489	1	50	91398	0
	Ni	62	24.887	ug/L	0.130	0	70	12880	1
	Cu	63	25.990	ug/L	0.592	2	274	202202	1
	Cu	65	26.352	ug/L	0.938	3	124	93443	2
	Zn	66	80.671	ug/L	0.986	1	1259	172446	0
	Zn	67	75.105	ug/L	1.689	2	196	26435	1
	Zn	68	81.851	ug/L	0.950	1	985	122609	0
	As	75	25.811	ug/L	0.060	0	205	50349	1
	As-1	75	25.052	ug/L	0.131	0	8804	56876	1
	Se	82	80.269	ug/L	0.952	1	2	16867	0
	Se	78	79.369	ug/L	1.131	1	8883	49718	0
	Mo	98	25.015	ug/L	0.206	0	21	118273	0
	Y	89		ug/L			393396	409984	1
	Kr	83		ug/L			387	474	3
>	In	115		ug/L			873328	898510	0
	Ag	107	23.876	ug/L	0.296	1	28	216593	0
	Cd	111	24.279	ug/L	0.178	0	91	104155	0
	Cd	114	24.580	ug/L	0.408	1	35	265173	0
	Sb	121	24.362	ug/L	0.305	1	177	320145	0
	Sb	123	24.626	ug/L	0.349	1	133	244308	1
	Ba	135	24.823	ug/L	0.435	1	525	98667	1
	Ba	137	24.955	ug/L	0.164	0	900	171794	0
>	Tb	159		ug/L			1029579	1052647	0
	Tl	205	24.030	ug/L	0.329	1	75	823682	1
	Pb	208	24.369	ug/L	0.031	0	577	1116429	0
	Bi	209		ug/L			2413416	2398777	0
	Th	232	23.000	ug/L	0.387	1	112	1078398	1
	U	238	23.402	ug/L	0.291	1	6	1101319	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 12:13:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1073783	1037195	2
[	Be	9	51.751	ug/L	1.770	3	20	164385	1
	C	13		ug/L			96438	85009	1
	Cl	37		ug/L			4537351	4442440	1
[>	Sc	45		ug/L			1037261	1040770	1
|	V	51	48.574	ug/L	0.608	1	6297	1020335	0
|	V-1	51	48.508	ug/L	0.821	1	92	1014040	0
|	Cr	52	48.433	ug/L	0.635	1	18914	850223	1
|	Cr	53	48.206	ug/L	1.177	2	153	94061	0
|	Mn	55	48.950	ug/L	0.910	1	1535	1169119	3
[	Co	59	48.543	ug/L	0.794	1	301	837103	1
[>	Ge	72		ug/L			585419	582950	0
|	Ni	60	50.439	ug/L	0.608	1	50	175576	0
|	Ni	62	49.139	ug/L	0.343	0	70	25038	0
|	Cu	63	49.419	ug/L	0.917	1	274	379388	1
|	Cu	65	49.664	ug/L	0.346	0	124	173795	0
|	Zn	66	49.601	ug/L	0.921	1	1259	105161	1
|	Zn	67	50.703	ug/L	0.383	0	196	17685	0
|	Zn	68	51.376	ug/L	1.059	2	985	76343	1
|	As	75	49.828	ug/L	0.104	0	205	95771	0
|	As-1	75	49.650	ug/L	0.064	0	8804	102678	0
|	Se	82	51.835	ug/L	0.611	1	2	10755	0
|	Se	78	50.732	ug/L	0.465	0	8883	34568	0
[	Mo	98	50.405	ug/L	0.178	0	21	235283	1
	Y	89		ug/L			393396	404038	1
	Kr	83		ug/L			387	467	5
[>	In	115		ug/L			873328	858339	0
|	Ag	107	47.843	ug/L	1.216	2	28	414596	2
|	Cd	111	49.740	ug/L	0.404	0	91	203748	0
|	Cd	114	50.031	ug/L	0.525	1	35	515579	0
|	Sb	121	49.410	ug/L	0.321	0	177	620117	0
|	Sb	123	50.283	ug/L	0.502	0	133	476392	0
|	Ba	135	51.297	ug/L	0.287	0	525	194234	0
[	Ba	137	50.662	ug/L	0.441	0	900	332253	0
[>	Tb	159		ug/L			1029579	1039744	1
|	Tl	205	47.108	ug/L	0.485	1	75	1594744	0
|	Pb	208	47.576	ug/L	0.384	0	577	2152272	0
|	Bi	209		ug/L			2413416	2297513	1
|	Th	232	48.926	ug/L	0.615	1	112	2265752	1
[	U	238	49.312	ug/L	0.784	1	6	2291993	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, June 10, 2013 12:20:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1073783	1013444	4
	Be	9	0.001	ug/L	0.001	89	20	22	17
	C	13		ug/L			96438	82479	1
	Cl	37		ug/L			4537351	4302792	2
>	Sc	45		ug/L			1037261	1027197	2
	V	51	0.005	ug/L	0.008	143	6297	6347	2
	V-1	51	0.001	ug/L	0.000	20	92	115	2
	Cr	52	-0.000	ug/L	0.025	12575	18914	18726	2
	Cr	53	-0.015	ug/L	0.002	16	153	123	5
	Mn	55	-0.021	ug/L	0.002	8	1535	1014	3
	Co	59	-0.003	ug/L	0.001	46	301	246	7
>	Ge	72		ug/L			585419	566933	1
	Ni	60	0.001	ug/L	0.001	83	50	53	7
	Ni	62	0.009	ug/L	0.025	267	70	72	16
	Cu	63	-0.009	ug/L	0.003	28	274	196	9
	Cu	65	-0.012	ug/L	0.004	36	124	80	16
	Zn	66	-0.195	ug/L	0.024	12	1259	822	5
	Zn	67	-0.220	ug/L	0.058	26	196	116	17
	Zn	68	-0.178	ug/L	0.020	11	985	700	3
	As	75	0.034	ug/L	0.011	31	205	262	7
	As-1	75	0.059	ug/L	0.053	89	8804	8634	1
	Se	82	0.012	ug/L	0.059	504	2	4	250
	Se	78	0.248	ug/L	0.210	84	8883	8725	1
	Mo	98	0.011	ug/L	0.001	12	21	69	9
	Y	89		ug/L			393396	399901	1
	Kr	83		ug/L			387	467	3
>	In	115		ug/L			873328	862158	0
	Ag	107	0.002	ug/L	0.000	27	28	44	9
	Cd	111	0.000	ug/L	0.001	4021	91	90	4
	Cd	114	0.001	ug/L	0.001	81	35	44	19
	Sb	121	0.089	ug/L	0.024	26	177	1298	22
	Sb	123	0.091	ug/L	0.023	25	133	995	21
	Ba	135	-0.073	ug/L	0.005	6	525	241	6
	Ba	137	-0.072	ug/L	0.003	4	900	415	4
>	Tb	159		ug/L			1029579	1021524	0
	Tl	205	0.003	ug/L	0.000	15	75	163	8
	Pb	208	-0.002	ug/L	0.001	30	577	496	4
	Bi	209		ug/L			2413416	2339724	0
	Th	232	0.106	ug/L	0.010	9	112	4910	8
	U	238	0.002	ug/L	0.000	12	6	114	11

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 6-10-13

	Analyst 6-10 DM	Peer 6-11-13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	—	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analyst's Notes and CAR's	—	—	

Mercury Analysis Log

Analyst: DM Date: 6-10-13

Instrument: CETAC Page: 1 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments	
STD 0.0	5MM	1X			
" 0.1					
" 0.5					
" 1.0					
" 2.0					
" 5.0					
" 10.0					
ICV			8.00	Beg in CLP %R = 100	✓
ICB			-0.04		✓
CCV1			4.04	%R = 101	✓
CCB1			-0.02		✓
CRA			0.11		✓
WR57 MB1			0.01		✓
" MB1SPK			1.98	%R = 99	✓
" MB1SPD			2.08	%R = 104	✓
" A					
" B					
" C					
" D					
W349 MB1			0.01		✓
" MB1SPK			1.99	%R = 100	✓
CCV2			4.05	%R = 101	✓
CCB2			-0.01		✓
W349 A			0.08		
" ADUP			0.00	RPD = 12.5	✓
" ASPK			1.00	%R = 98	✓
" B					
" C					
" D					
W534 MB1	↓	↓	0.01		✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2505

14% NH_2OH/NaCl: MP2477

Standard ID:

Standard: 3036-15

ICV/CCV: 59-6

W521 : 21813

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 6.10.13

Page: 2 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
WS34	MB1SPK	5mm	1X	1.97	%R=99	✓
"	MB1SPD			1.97	%R=99	✓
"	A					
CCV3				4.08	%R=102	✓
CCB3				-0.01		✓
WS35	MB1			0.00		✓
"	MB1SPK			1.96	%R=98	✓
"	MB1SPD			2.02	%R=101	✓
"	A					
WS20	MB1			0.00		✓
"	MB1SPK			2.07	%R=104	✓
"	A			0.55		
"	ADUP			0.48		✓
"	ASPK			1.53	%R=98	✓
"	B					
CCV4				4.12	%R=103	✓
CCB4				-0.01		✓
WS20	C					
"	D					
"	E					
WS27	MB1			0.01		✓
"	MB1SPK		↓	2.02	%R=101	✓
"	REF1		5X	6.61	8.10 mg/kg	✓
"	A		1X	0.07		
"	ADUP			0.10		✓
"	ASPK			1.15	%R=115	✓
WS21	MB1			0.00		✓
CCV5				4.14	%R=104	✓
CCB5				-0.01		✓
WS21	MB1SPK	↓	↓	2.06	%R=103	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2505

14% NH_2OH/NaCl: MP2477

Standard ID:

Standard: 3036-15

ICV/CCV: 59-6

WS21 : 01959

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 6-10-13

Page: 3 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
WS21	A	5mM	1X	0.03		
"	ADUP			0.09	NO RPD: Undetected	✓
"	ASPK			1.12	%R = 112	✓
WR99	MB3			-0.00		✓
"	MB3SPK			2.07	%R = 104	✓
"	D			0.05		
"	DDUP			0.06	NO RPD: Undetected	✓
"	DSPK			1.16	%R = 116	✓
"	E					
CCV6				4.13	%R = 103	✓
CCB6				-0.01		✓
WR99	F					
CCV7				4.06	%R = 102	✓
CCB7				-0.01	END CLP	✓
WT03	MB1			0.00		✓
"	MB1SPK			1.07	%R = 99	✓
"	A			0.25		
"	ADUP			0.23		✓
"	ASPK			1.31	%R = 106	✓
"	B			6-11-13		
"	C					
"	D					
"	E					
WS48	MB1			0.01		✓
CCV				4.16	%R = 104	✓
CCB				-0.01		✓
WS48	MB1SPK			1.98	%R = 99	✓
"	A					
"	B					
WS61	MB1	↓	↓	0.01		✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2505

14% NH_2OH/NaCl: MP247

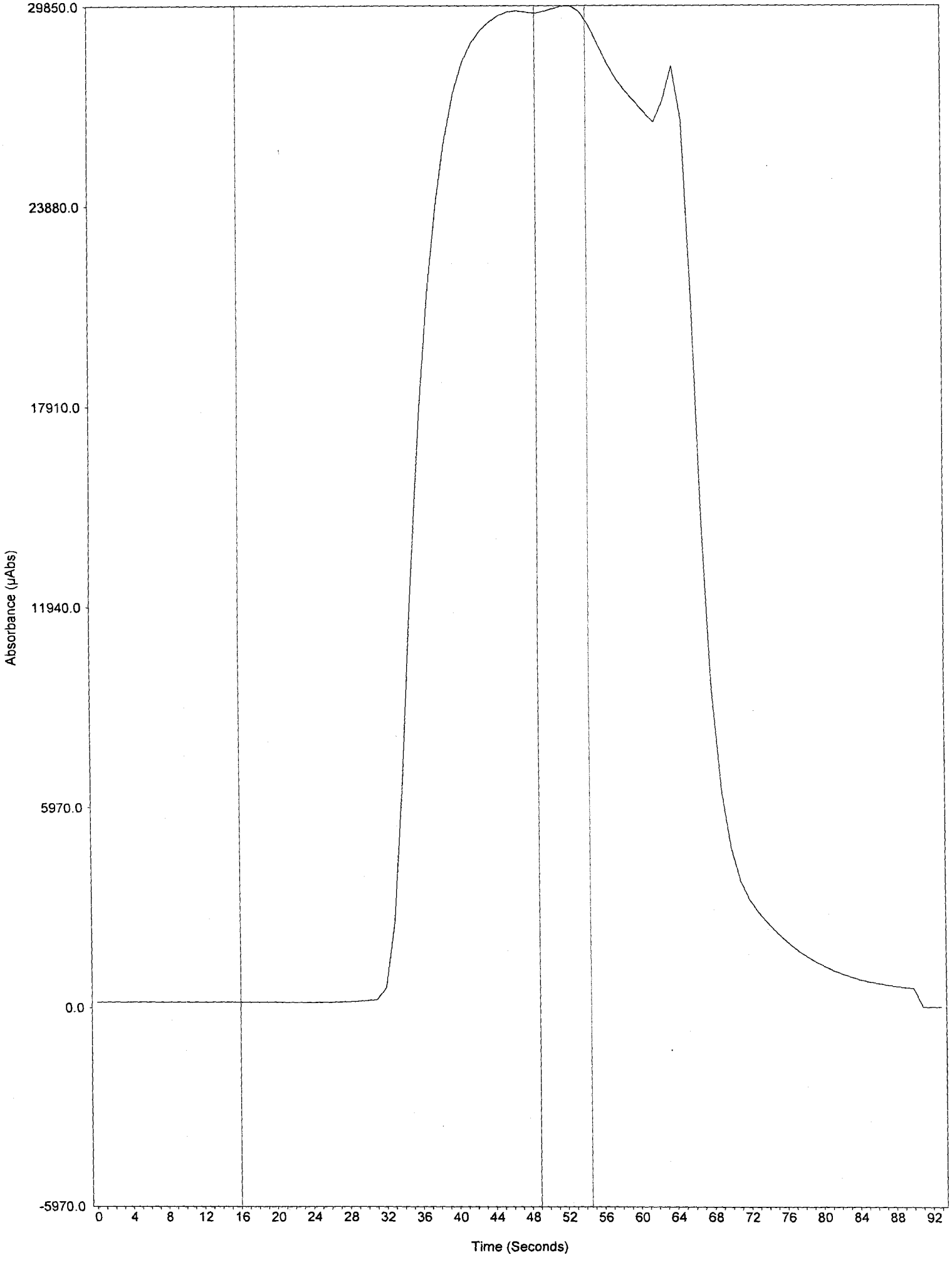
Standard ID:

Standard: 3036-15

ICV/CCV: 99-6

WS21 : 21651

Std Tube 6 06/10/2013, 1:14 PM



US21 : 01652

CETAC Hg Analysis Report - 13061000.DB - Monday, June 10, 2013, 3:54:06 PM

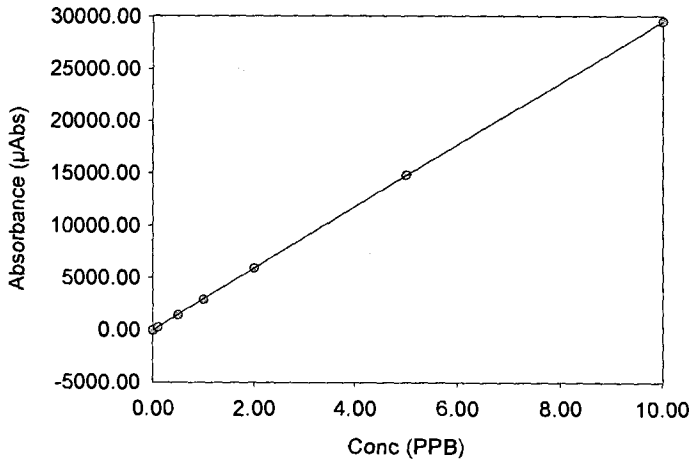
Analyst
Date Started Monday, June 10, 2013, 13:13:07
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	10-Jun-2013, 13:13	10.00	0.28	29600.00	1.00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	10-Jun-2013, 13:15	0.00	1.96	-41.30	1.00	
Standard #1	10-Jun-2013, 13:17	0.10	1.46	281.00	1.00	
Standard #2	10-Jun-2013, 13:19	0.50	0.68	1440.00	1.00	
Standard #3	10-Jun-2013, 13:20	1.00	0.31	2890.00	1.00	
Standard #4	10-Jun-2013, 13:22	2.00	0.15	5910.00	1.00	
Standard #5	10-Jun-2013, 13:24	5.00	0.42	14800.00	1.00	
Standard #6	10-Jun-2013, 13:25	10.00	0.25	29600.00	1.00	

Calibration Data



Int.	0.000
Slope	2956.512
Correlation	0.99999

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	10-Jun-2013, 13:27	8.00	0.50	23700.00	1.00	
ICB	10-Jun-2013, 13:29	-0.04	1.52	-104.00	1.00	

Begin CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 13:31	4.04	0.50	11900.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 13:32	-0.02	5.88	-47.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	10-Jun-2013, 13:34	0.11	1.64	320.00	1.00	
WR57 MB1 SMM	10-Jun-2013, 13:35	0.01	3.31	15.30	1.00	
WR57 MB1SPK SMM	10-Jun-2013, 13:37	1.98	0.26	5850.00	1.00	
WR57 MB1SPD SMM	10-Jun-2013, 13:39	2.08	0.33	6150.00	1.00	
WR57 A SMM	10-Jun-2013, 13:40	0.51	0.66	1500.00	1.00	
WR57 B SMM	10-Jun-2013, 13:42	0.30	0.38	889.00	1.00	
WR57 C SMM	10-Jun-2013, 13:43	0.20	0.33	594.00	1.00	
WR57 D SMM	10-Jun-2013, 13:45	0.48	0.64	1430.00	1.00	
WS49 MB1 SMM	10-Jun-2013, 13:47	0.01	5.21	41.20	1.00	
WS49 MB1SPK SMM	10-Jun-2013, 13:48	1.99	0.49	5870.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 13:50	4.05	0.19	12000.00	1.00	

CETAC Hg Analysis Report - 13061000.DB - Monday, June 10, 2013, 3:54:07 PM

Analyst
Date Started Monday, June 10, 2013, 13:52:10
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 13:52	-0.01	5.77	-26.70	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS49 A SMM	10-Jun-2013, 13:53	0.68	0.29	2010.00	1.00	
WS49 ADUP SMM	10-Jun-2013, 13:55	0.60	0.44	1770.00	1.00	
WS49 ASPK SMM	10-Jun-2013, 13:56	1.66	0.16	4920.00	1.00	
WS49 B SMM	10-Jun-2013, 13:58	0.36	0.29	1060.00	1.00	
WS49 C SMM	10-Jun-2013, 14:00	1.15	0.36	3390.00	1.00	
WS49 D SMM	10-Jun-2013, 14:01	0.31	0.43	906.00	1.00	
WS34 MB1 SMM	10-Jun-2013, 14:03	0.01	12.70	24.90	1.00	
WS34 MB1SPK SMM	10-Jun-2013, 14:04	1.97	0.13	5840.00	1.00	
WS34 MB1SPD SMM	10-Jun-2013, 14:06	1.97	0.16	5820.00	1.00	
WS34 A SMM	10-Jun-2013, 14:08	0.09	0.29	268.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 14:09	4.08	0.18	12100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 14:11	-0.01	5.43	-21.90	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS35 MB1 SMM	10-Jun-2013, 14:13	0.00	71.90	4.73	1.00	
WS35 MB1SPK SMM	10-Jun-2013, 14:14	1.96	0.14	5780.00	1.00	
WS35 MB1SPD SMM	10-Jun-2013, 14:16	2.02	0.39	5960.00	1.00	
WS35 A SMM	10-Jun-2013, 14:18	0.12	0.25	367.00	1.00	
WS20 MB1 SMM	10-Jun-2013, 14:19	0.00	64.80	7.62	1.00	
WS20 MB1SPK SMM	10-Jun-2013, 14:21	2.07	0.33	6120.00	1.00	
WS20 A SMM	10-Jun-2013, 14:22	0.55	0.28	1620.00	1.00	
WS20 ADUP SMM	10-Jun-2013, 14:24	0.48	0.56	1410.00	1.00	
WS20 ASPK SMM	10-Jun-2013, 14:26	1.53	0.30	4530.00	1.00	
WS20 B SMM	10-Jun-2013, 14:27	0.46	0.35	1350.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 14:29	4.12	0.14	12200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 14:31	-0.01	9.74	-21.20	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS20 C SMM	10-Jun-2013, 14:32	0.79	0.38	2330.00	1.00	
WS20 D SMM	10-Jun-2013, 14:34	0.55	0.27	1620.00	1.00	
WS20 E SMM	10-Jun-2013, 14:36	0.57	0.28	1670.00	1.00	
WS27 MB1 SMM	10-Jun-2013, 14:37	0.01	9.84	25.70	1.00	
WS27 MB1SPK SMM	10-Jun-2013, 14:39	2.02	0.44	5960.00	1.00	
WS27 REF1 SMM	10-Jun-2013, 14:40	6.61	0.18	19600.00	1.00	
WS27 A SMM	10-Jun-2013, 14:42	0.07	0.61	199.00	1.00	
WS27 ADUP SMM	10-Jun-2013, 14:44	0.10	0.76	305.00	1.00	
WS27 ASPK SMM	10-Jun-2013, 14:45	1.15	0.43	3390.00	1.00	
WS21 MB1 SMM	10-Jun-2013, 14:47	0.00	29.00	5.43	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 14:48	4.14	0.36	12200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 14:50	-0.01	5.74	-28.80	1.00	

CETAC Hg Analysis Report - 13061000.DB - Monday, June 10, 2013, 3:54:07 PM

Analyst
Date Started Monday, June 10, 2013, 14:52:17
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS21 MB1SPK SMM	10-Jun-2013, 14:52	2.06	0.50	6090.00	1.00	
WS21 A SMM	10-Jun-2013, 14:53	0.03	2.30	81.10	1.00	
WS21 ADUP SMM	10-Jun-2013, 14:55	0.09	0.95	263.00	1.00	
WS21 ASPK SMM	10-Jun-2013, 14:57	1.12	0.23	3300.00	1.00	
WR99 MB3 SMM	10-Jun-2013, 14:58	-0.00	187.00	-2.85	1.00	
WR99 MB3SPK SMM	10-Jun-2013, 15:00	2.07	0.31	6110.00	1.00	
WR99 D SMM	10-Jun-2013, 15:02	0.05	3.61	161.00	1.00	
WR99 DDUP SMM	10-Jun-2013, 15:03	0.06	0.84	179.00	1.00	
WR99 DSPK SMM	10-Jun-2013, 15:05	1.16	0.36	3420.00	1.00	
WR99 E SMM	10-Jun-2013, 15:06	0.22	1.02	639.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 15:08	4.13	0.40	12200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 15:10	-0.01	7.39	-27.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WR99 F SMM	10-Jun-2013, 15:11	8.33	0.32	24600.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 15:13	4.06	0.16	12000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 15:15	-0.01	1.89	-23.60	1.00	END CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WT03 MB1 SMM	10-Jun-2013, 15:17	0.00	9.42	6.49	1.00	
WT03 MB1SPK SMM	10-Jun-2013, 15:18	1.97	0.28	5810.00	1.00	
WT03 A SMM	10-Jun-2013, 15:20	0.25	0.60	730.00	1.00	
WT03 ADUP SMM	10-Jun-2013, 15:22	0.23	0.42	685.00	1.00	
WT03 ASPK SMM	10-Jun-2013, 15:23	1.31	0.17	3880.00	1.00	
WT03 B SMM	10-Jun-2013, 15:25	0.23	0.11	676.00	1.00	
WT03 C SMM	10-Jun-2013, 15:26	0.22	0.54	655.00	1.00	
WT03 D SMM	10-Jun-2013, 15:28	0.35	0.29	1020.00	1.00	
WT03 E SMM	10-Jun-2013, 15:30	0.22	0.37	661.00	1.00	
WS48 MB1 SMM	10-Jun-2013, 15:31	0.01	6.80	14.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 15:33	4.16	0.27	12300.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	10-Jun-2013, 15:34	-0.01	76.60	-18.10	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS48 MB1SPK SMM	10-Jun-2013, 15:36	1.98	0.18	5870.00	1.00	
WS48 A SMM	10-Jun-2013, 15:38	0.04	1.48	130.00	1.00	
WS48 B SMM	10-Jun-2013, 15:39	0.64	0.24	1900.00	1.00	
WS61 MB1 SMM	10-Jun-2013, 15:41	0.01	9.61	20.40	1.00	
WS61 MB1SPK SMM	10-Jun-2013, 15:43	2.01	0.26	5930.00	1.00	
WS61 A SMM	10-Jun-2013, 15:44	0.07	3.35	201.00	1.00	
WS61 ADUP SMM	10-Jun-2013, 15:46	0.14	0.72	401.00	1.00	
WS61 ASPK SMM	10-Jun-2013, 15:47	1.16	0.17	3430.00	1.00	
WS61 B SMM	10-Jun-2013, 15:49	0.10	0.83	301.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	10-Jun-2013, 15:51	4.17	0.20	12300.00	1.00	

WS21 : 81855

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1.40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0.10 PPB
Calibration Standard #2 Conc.:	0.50 PPB
Calibration Standard #3 Conc.:	1.00 PPB
Calibration Standard #4 Conc.:	2.00 PPB
Calibration Standard #5 Conc.:	5.00 PPB
Calibration Standard #6 Conc.:	10.00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% .. 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 .. 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: 5mm Instrument: CETAC
Analyst: DM Date: 6-06-13
Bath Temp: 95°C Start Time: 1425 End Time: 1455

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	3036-15	0.01	↓	0.1	2
STD2	↓	0.05	↓	0.5	2
STD3	↓	0.10	↓	1.0	2
STD4	↓	0.20	↓	2.0	2
STD5	↓	0.50	↓	5.0	2
STD6	↓	1.00	↓	10.0	2
CRA	↓	0.01	↓	0.1	1
ICB/CCB	—	0.00	↓	0.0	3
ICV/LCS	59-6	0.06	↓	3.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:
HNO_3: I8149 H_2SO_4: I8044 HCl: —
5% $K_2S_2O_8$: MP2491 5% $KMnO_4$: MP2475

Prep Code: _____ Instrument: _____
Analyst: _____ Date: _____
Bath Temp: _____ Start Time: _____ End Time: _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:
HNO_3: _____ H_2SO_4: _____ HCl: _____
5% $K_2S_2O_8$: _____ 5% $KMnO_4$: _____

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm **Matrix:** Soil

Analyst: CB **Date:** 6-06-13

Bath Temp: 95°C **Start Time:** 0930 **End Time:** 1005

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WS22 A	1	-	0.231	50.0	6/11 1	Y	
" AdMD	1	-	0.229		1		
" ASpk	1	-	0.232		1		
" REF1		-	0.204		1		
" mB1	-	-	-		1		
" mB1spk	-	-	-		1		
WS21 A	7	-	0.280		6/14 1		
" Adup	7	-	0.275		1		
" Aspk	7	-	0.275		1		
" mB1	-	-	-		1		
" mB1spk	-	-	-		1		
WR99 D	7	-	0.235		6/14 1		
" Ddup	7	-	0.235		1		
" Dspk	7	-	0.232		1		
" E	2	-	0.205		1		
" F	2	-	0.236		1		
" mB3	-	-	-		1		
" mB3spk	-	-	-	50.0	1	Y	
			CB 6-06-13				

Chemical/Reagent ID:

HNO_3: I8169 **H_2SO_4:** I8044 **HCl:** -

5% $K_2S_2O_8$: mp2491 **5% $KMnO_4$:** mp2475 **Digest Tube Lot:** mH21KK06

WS21:01655

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WS21

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 6/3/2013 (A)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE 8:10

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: 62790918520

Batch drying time		
record times as mm/dd/yy hh:mm		
6/3/2013 8:10	date/time in oven	KE
6/4/2013 6:12	date/time out	KE
elapsed hrs =	22.0	

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

Cal Weight ID		CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
Date & Time		6/3/13 8:52 KE	6/3/13 7:51 KE	6/4/13 7:53 KE					6/4/13 9:00 KE	6/4/13 9:58 KE				
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000					10.0000	10.0000				
record weights to 4 places		Cal OK!	Cal OK!	Cal OK!					Cal OK!	Cal OK!				

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.1157	1.1155			0.00		1.1154	1.1152	OK	0.00		
WR99 D6		6.4999	1.1112	5.0135			3.90	72.42%						
WR99 D6 dup		6.4011	1.0721	4.9077			3.84	71.98%						
							RPD =	0.61%				RPD =	NA	
WR99 D6 trp		6.3154	1.1102	4.9050			3.79	72.90%						
							RSD =	0.64%				RSD =	NA	
WR99 E1		6.7013	1.0715	5.0436			3.97	70.55%						
WR99 F1		6.2597	1.1256	4.2530			3.13	60.91%						
WS09 A2		6.9928	1.1432	5.0848			3.94	67.38%	4.9509	4.9438	OK	3.80	35,772	3.58%
WS09 A2 dup		6.9440	1.1137	5.0259			3.91	67.10%	4.8941	4.8869	OK	3.77	35,530	3.55%
							RPD =	0.42%				RPD =	0.68%	
WS09 A2 trp		6.3348	1.1061	4.6138			3.51	67.09%	4.4966	4.4890	OK	3.38	35,579	3.56%
							RSD =	0.25%				RSD =	0.36%	
WS09 B2		6.7822	1.0736	4.6019			3.53	61.81%	4.4549	4.4476	OK	3.37	43,732	4.37%
WS20 A1		7.5244	1.0646	3.7877			2.72	42.15%						
WS20 A1 dup		7.5230	1.0740	3.7880			2.71	42.08%						
							RPD =	0.17%				RPD =	NA	
WS20 A1 trp		7.3935	1.0965	3.7717			2.68	42.48%						
							RSD =	0.51%				RSD =	NA	
WS20 B1		6.9931	1.0630	3.5112			2.45	41.28%						
WS20 C1		8.4161	1.1603	4.3309			3.17	43.70%						
WS20 D1		8.2983	1.0394	4.1474			3.11	42.82%						

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 6/3/2013 (A)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE 8:10

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: 62790918520

Batch drying time			*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm			*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
6/3/2013 8:10	date/time in oven	KE	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
6/4/2013 6:12	date/time out	KE		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs =	22.0			*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	6/3/13 8:52 KE	6/3/13 7:51 KE	6/4/13 7:53 KE					6/4/13 9:00 KE	6/4/13 9:58 KE				
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000					10.0000	10.0000				
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*					*Cal OK!*	*Cal OK!*				

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	TVS (%)
WS20 E1		7.5763	1.1349	4.1542			3.02	46.87%						
WS20 F1		7.8777	1.1115	4.0107			2.90	42.85%						
WS21 A6		7.6409	1.1184	5.8363			4.72	72.33%						
WS21 A6 dup		7.9422	1.0728	6.0253			4.95	72.10%						
							RPD =	0.33%				RPD =		NA
WS21 A6 trp		7.8934	1.0659	6.0315			4.97	72.73%						
							RSD =	0.44%				RSD =		NA
WS27 A1		6.8289	1.0834	6.2466			5.16	89.87%						
WS27 A1 dup		7.2680	1.0664	6.6522			5.59	90.07%						
							RPD =	0.23%				RPD =		NA
WS27 A1 trp		7.1499	1.0337	6.5446			5.51	90.10%						
							RSD =	0.14%				RSD =		NA

TEST

Analytical Resources, Incorporated
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TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(D) 6-3-13 (A)

Analyst: (D)	Date: 6-3-13	Oven ID: 612	Balance ID: 1123230597
Time in Oven: 8:10	Time Out of Oven: 7:36	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02	
Date & Time:	6-3-13 8:52	6-3-13 7:51	3-4-13 7:53				6-4-13 9:00	6-4-13 9:58		
Cal Weight (10.0000):	10.0000 (A)	10.0000 (B)	10.0000 (D)				10.0000 (B)	20.0000 (E)		

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C			Dry Weight	Ash Weight 550°C		
				1	2	3	grams	1	2	3
BLANK	1	Ø	1.1157	1.1155				1.1154	1.1152	
WR99 D6	2	6.4999	1.1112	5.0135						
MD6	3	6.4011	1.0721	4.9077						
MD6	4	6.3154	1.1102	4.9050						
E1	5	6.7013	1.0715	5.0436						
F1	6	6.2597	1.1256	4.2530						
WS09 A12	7	6.9928	1.1432	5.0848				4.9509	4.9438	
A12	8	6.9440	1.1137	5.0259				4.8941	4.8869	
A12	9	6.3348	1.1061	4.6138				4.4966	4.4890	
B2	10	6.8722	1.0736	4.6019				4.4549	4.4476	
WS20 A1	11	7.5244	1.0646	3.7877						
MD A1	12	7.5230	1.0740	~~3.98~~ (D)	3.7880					
MD A1	13	7.3935	1.0965	3.7717						
B1	14	6.9931	1.0630	3.9112						
C1	15	8.4161	1.1603	4.3309						
D1	16	8.2983	1.0394	4.1474						
E1	17	7.5763	1.1349	4.1542						
F1	18	7.8777	1.1115	4.0107						
WS21 A6	19	7.6709	1.1184	5.8363						
MD A6	20	7.9422	1.0728	6.0253						
MD A6	21	7.8934	1.0659	6.0315						
WS27 A1	22	6.8284	1.0834	6.2466						
MD A1	23	7.2680	1.0664	6.6522						
6053F MD A1	24	7.1499	1.0337	6.5446						

6/4/13

TOC Solids Prep Log

DATE: 6/3/2013

ANALYST: KE 12:46 (A)

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

HCL 10% ID: _____

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

HCL ID: _____

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.0550		13.0549	-0.1 mg	
WR99 D6		-	13.1082	18.6833	17.2718	74.68%	
WR99 D6 dup		-	13.0819	18.8969	17.4081	74.40%	RPD = 0.38%
WR99 D6 trip		-	13.0053	18.2293	17.0020	76.51%	RSD = 1.52%
WR99 E1		-	13.0595	18.8122	17.3522	74.62%	
WR99 F1		-	13.1812	18.4948	16.5879	64.11%	
WS09 A2		+-	13.1517	20.3616	18.2935	71.32%	
WS09 A2 dup		+-	13.0697	19.7305	17.8214	71.34%	RPD = 0.03%
WS09 A2 trip		+-	13.0796	20.2560	18.1843	71.13%	RSD = 0.16%
WS09 B2		+-	13.0971	19.5687	17.5430	68.70%	
WS20 A1		-	13.1226	20.5040	16.4545	45.14%	
WS20 A1 dup		-	13.0599	19.6257	16.0383	45.36%	RPD = 0.49%
WS20 A1 trip		-	13.2880	20.2044	16.3990	44.98%	RSD = 0.43%
WS20 B1		-	13.2043	19.6206	16.0213	43.90%	
WS20 C1		-	13.0222	20.6382	16.5276	46.03%	
WS20 D1		-	13.1059	21.1130	16.7542	45.56%	
WS20 E1		-	13.0262	19.2933	16.1207	49.38%	
WS20 F1		-	13.1999	20.8709	16.6208	44.60%	
WS21 A6		-	13.1003	19.9497	18.2782	75.60%	
WS21 A6 dup		-	13.1775	19.4643	17.9423	75.79%	RPD = 0.26%
WS21 A6 trip		-	13.0419	20.3015	18.4785	74.89%	RSD = 0.63%
WS27 A1		-	13.2282	18.9641	17.6588	77.24%	
WS27 A1 dup		-	13.0679	18.8446	18.4191	92.63%	RPD = 18.12%
WS27 A1 trip		-	13.1891	18.9020	18.4858	92.71%	RSD = 10.18%
WR57 A2		+-	13.0176	19.1423	16.5351	57.43%	
WR57 B3		-	13.2422	18.7523	14.6801	26.10%	
WR57 B3 dup		-	13.2283	19.6971	14.9199	26.15%	RPD = 0.21%
WR57 B3 trip		-	12.9976	19.6398	14.7234	25.98%	RSD = 0.33%
WR57 C2		-	13.1283	18.5906	14.9846	33.98%	
WR57 D2		-	13.0937	19.0706	15.8479	46.08%	

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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (K) (1) 6-3-13 (W) (A) Date 6-3-13 12:46

Sample Identification ARI #	Client ID	IC Test	Gravimetric Data Tare	Wet	70 °C	% Solids	Sample description & notes
Blank			13.0550	Ø	13.0549		
WR99 D6		-	13.1082	18.6833	17.2718		V-wet Rusty Sand
dup D6		-	13.0819	18.8964	17.4081		↓
up D6		-	13.0053	18.2293	17.0020		↓
E1		-	13.0595	18.8122	17.3522		V-wet Sand
↓ F1		-	13.1812	18.4948	16.5879		Thick Sealant
WS09 A2		+-	13.1517	20.3616	18.2935		Thick Black Sealant
dup A2		+-	13.0697	19.7305	17.8214		↓
up A2		+-	13.0796	20.2560	18.1843		↓
↓ B2		+-	13.0921	19.5687	17.5430		↓
WS20 A1		-	13.1226	20.5040	~~16.0383~~ (2)	16.4545	Smooth Sealant
dup A1		-	13.0599	19.6257	16.0383		↓
up A1		-	13.2880	20.2044	16.3990		↓
B1		-	13.2043	19.6206	16.0213		↓
C1		-	13.0222	20.6382	16.5276		↓
D1		-	13.1059	21.1130	16.7542		↓
E1		-	13.0262	19.2933	16.1207		↓
↓ F1		-	13.1999	20.8709	16.6208		↓
WS21 A6		-	13.1003	19.9497	18.2782		Rusty Water & Sand
dup A6		-	13.1775	19.4643	17.9423		↓
↓ up A6		-	13.0419	20.3015	18.4785		↓
WS27 A1		-	13.2282	18.9641	17.6588		~~Oily Sealant + Pine needles & Bark~~ Sand ↑
dup A1		-	13.0679	18.8446	18.4191		↓
↓ up A1		-	13.1891	~~18.8918~~ (2)	18.9020	18.4858	↓
WR97 A2		+-	13.0176	19.1423	16.5351		Oily Sed Pine Needles + Dirt
B3		-	13.2422	~~6.5229~~ (2)	18.7523	14.6801	Very Sandy Sealant
dup B3		-	13.2283	6.2 (1)	19.6971	14.9199	with heavy
up B3		-	12.9976	19.6998	14.7234		Debi
C2		-	13.1283	18.5906	14.9846		
↓ D2		-	13.0937	19.0706	15.8479		

WS21 : 01 GSU

TOC, Solids Data Analysis

DATE: 6/13/2013

Instrument: Apollo 1 — ANALYST: KE 5:54

Mode: NPOC *Inlet:* Boat

Spike Std = 2,500 *ppm C* — Balance ID:

Calibration Data

Cal Curve ID: **5/16/2013** *Conc:* 5,000 *ppm*

Calibration Curve Standard: **00136-09** *Curve Date:* **05/16/13**

CalFact: ***1.344E+05*** *intercept:* **139966** *r2 :* **0.99924**

Curve Range (ppm) 200 *to* 2,500

Curve Range (µgC): **8** *to* **100** *40 µL injections of designated standard*

Verification Standard

Source: ***ERA# 0409-12-01*** *Conc:* **5,000** *ppm*

dilution : 10 *mL to* 50 **1,000** *ppm*

Standard Reference Material

Source: ***NIST 8704*** *Conc:* **33,510** *ppm*

Source: ***NIST 1941B*** *Conc:* **29,900** *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition
8.4	12.4	13.0				11.3	22.0%	OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
ICV				1.00		40.0	902	902	90.20%
Blank				1.00		40.0	-15.12	-15	Blank OK
NIST 1941B				1.00		1.5	25097	25,097	83.94%
Silica Blanks 1				1.00		56.4	8.44	8	Low Scale
Silica Blanks 2				1.00		54.2	12.42	12	Low Scale
Silica Blanks 3				1.00		55.2	13.00	13	Low Scale
WS30 I 4				1.00		2.0	12668	12,668	Range OK!
WS30 I 4 dup				1.00		1.9	15141	15,141	RPD=17.8%
WS30 I 4 trp				1.00		1.9	12884	12,884	RSD=10.1%
WS30 I 4 ms				1.00	10	~~2.0~~ 1.9	22024	22,024	Range OK!
Spike =	*0.025*	*mg C to*	~~2.0~~ 1.9	*mg samp=*	~~12,590~~ 13153	*ppm*		~~75%~~	71 %
WS30 A2				1.00		2.1	18190	18,190	Range OK!
WS30 B2				1.00		1.7	7690	7,690	Range OK!
CCV				1.00		40.0	992	992	99.20%
Blank				1.00		40.0	-21.61	-22	Blank OK
WS30 C2				1.00		3.0	4867	4,867	Range OK!
WS30 D2				1.00		1.5	14460	14,460	Range OK!
WS30 E2				1.00		1.4	12983	12,983	Range OK!
WS30 F2				1.00		1.3	16420	16,420	Range OK!
WS30 G2				1.00		1.9	15446	15,446	Range OK!
WS30 H2				1.00		2.0	9849	9,849	Range OK!
WS30 J 2				1.00		1.6	13595	13,595	Range OK!
WS42 A1				1.00		0.8	25085	25,085	Range OK!
WS42 B1				1.00		0.8	46548	46,548	Range OK!

MAP 6/14

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
CCV				1.00		40.0	964	964	*96.40%*
Blank				1.00		40.0	-19.32	-19	*Blank OK*
WS42 C1				1.00		0.8	42402	42,402	*Range OK!*
WS42 D1				1.00		0.8	68279	68,279	*Range OK!*
WS42 E1				1.00		1.1	26395	26,395	*Range OK!*
WS42 F1				1.00		1.2	56542	56,542	*Range OK!*
~~WS21 A6~~			-	~~1.00~~		~~1.3~~	~~5271~~	~~5,271~~	~~*Low Scale*~~
WS21 A6				1.00		2.0	4739	4,739	*Range OK!*
~~WS21 A6 dup~~				~~1.00~~		~~2.0~~	~~2926~~	~~2,926~~	~~*RPD=47.3%*~~
WS21 A6 dup				1.00		2.2	5018	5,018	*RPD=5.7%*
WS21 A6 trp				1.00		2.4	4934	4,934	*RSD=2.9%*
WS21 A6 ms				1.00	10	2.4	15186	15,186	*Range OK!*
Spike =	*0.025*	*mg C to*	*2.4*	*mg samp=*	*10,417*	*ppm*		*100%*	
CCV				1.00		40.0	1011	1,011	*101.10%*
Blank				1.00		40.0	-21.15	-21	*Blank OK*
WS27 A1				1.00		2.0	6431	6,431	*Range OK!*
WS27 A1 dup				1.00		2.0	6983	6,983	*RPD=8.2%*
WS27 A1 trp				1.00		2.0	6347	6,347	*RSD=5.2%*
WS27 A1 ms				1.00	10	2.3	15746	15,746	*Range OK!*
Spike =	*0.025*	*mg C to*	*2.3*	*mg samp=*	*10,870*	*ppm*		*86%*	
WS69 A1				1.00		2.6	2090	2,090	*Low Scale*
WS69 A1 dup				1.00		2.7	2299	2,299	*RPD=9.5%*
~~WS69 A1 trp~~				~~1.00~~		~~2.5~~	~~3334~~	~~3,334~~	~~*RSD=26.9%*~~
WS69 A1 trp				1.00		2.5	2722	2,722	*RSD=13.6%*
WS69 A1 ms				1.00	10	2.7	12904	12,904	*Range OK!*
Spike =	*0.025*	*mg C to*	*2.7*	*mg samp=*	*9,259*	*ppm*		*117%*	
CCV				1.00		40.0	1007	1,007	*100.70%*
Blank				1.00		40.0	-21.90	-22	*Blank OK*
WS61 A2				1.00		1.1	61168	61,168	*Range OK!*
WS61 A2 dup				1.00		1.1	56718	56,718	*RPD=7.5%*
WS61 A2 trp				1.00		1.0	68238	68,238	*RSD=9.4%*
~~WS61 A2 ms~~			-	~~1.00~~	~~10~~	~~1.1~~	~~53806~~	~~53,806~~	*No Inject*
~~*Spike =*~~	~~*0.025*~~	~~*mg C to*~~	~~*1.1*~~	~~*mg samp=*~~	~~*22,727*~~	~~*ppm*~~		~~*-32%*~~	
~~WS61 A2 ms~~			-	~~1.00~~	~~10~~	~~1.1~~	~~77508~~	~~77,508~~	~~*Range OK!*~~
~~*Spike =*~~	~~*0.025*~~	~~*mg C to*~~	~~*1.1*~~	~~*mg samp=*~~	~~*22,727*~~	~~*ppm*~~		~~*72%*~~	
WS61 A2 ms				1.00	10	1.2	78939	78,939	*Range OK!*
Spike =	*0.025*	*mg C to*	*1.2*	*mg samp=*	*20,833*	*ppm*		*85%*	
WS61 B2				1.00		0.9	48949	48,949	*Range OK!*
NIST 1941B				1.00		1.3	33416	33,416	*111.76%*
~~CCV~~			-	~~1.00~~		~~40.0~~	~~1140~~	~~1,140~~	~~*114.00%*~~
CCV				1.00		40.0	1097	1,097	*109.70%*
Blank				1.00		40.0	-22.97	-23	*Blank OK*

WS21 : 81665

TOC Plumb,1981 No: 1350
Data Analyst: Katrina English Analyzed by: KE
Comments: APOLLO 1 Date Analyzed: 6/13/13
Print Date: 6/13/13 13:48 Time Analyzed: 5:54
Batch WL: _____

mmb 6-14-13

ID	DF	Corr C (ppm)	Calc C (%)	Q	RL	SPK	REC/RPD
1. ICVL	1.0	902.	0.090		0.020	0.100	90.00
2. ICB	1.0	-15.	< 0.020		0.020		
3. ICVR NIST 1941B	1.0	25097.	2.51		0.020	2.99	83.95
4. WS30I	1.0	12668.	1.30		0.020		
TS 104: 0.6848							
TS 70: 0.7027							
5. WS30I DUP	1.0	15141.	1.55		0.020		17.54
6. WS30I DUP	1.0	12884.	1.32		0.020		1.53
7. WS30I MS	1.0	22024.	2.26		0.020	1.28	* ~~74.84~~ 74.84
Spike C (mg): 0.025							
Burn Wt (mg): ~~2.0~~ 2.0 ~~1.9 on run log?~~ Right on Bench sheet 6-17-13 (W)							~~74.60~~
8. WS30A	1.0	18190.	1.85		0.020		
TS 104: 0.6535							
TS 70: 0.6635							
9. WS30B	1.0	7690.	0.802		0.020		
TS 104: 0.7418							
TS 70: 0.7736							
10. CCVL	1.0	992.	0.099		0.020	0.100	99.00
11. CCB	1.0	-22.	< 0.020		0.020		
12. WS30C	1.0	4867.	0.506		0.020		
TS 104: 0.7385							
TS 70: 0.7673							
~~13. WS30D~~	~~1.0~~	~~14460.~~	~~1.44~~		~~0.020~~		
TS 104: 0.7085							
TS 70: 0.7070							
14. WS30E	1.0	12983.	1.33		0.020		
TS 104: 0.7217							
TS 70: 0.7373							
15. WS30F	1.0	16420.	1.77		0.020		
TS 104: 0.7739							
TS 70: 0.8321							
16. WS30G	1.0	15446.	1.58		0.020		
TS 104: 0.7341							
TS 70: 0.7486							
17. WS30H	1.0	9849.	1.01		0.020		
TS 104: 0.7279							
TS 70: 0.7440							
18. WS30J	1.0	13595.	1.39		0.020		
TS 104: 0.6963							
TS 70: 0.7110							

ICV: 1000. ppm

WS21 : 21857

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 6-13-13 (W)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler	
Standards:	Source	Conc (ppm)	Analyst:	(W)
Calibration:	ARI - 00136-09	5000	Date:	6-13-13
Verification:	ERA - 0409-12-D1	5000 to 1000 for CVS	Time:	5:54
SRM:	NBS - (1941b) or 8704	Method: PSEP 1986-MOD	Balance ID	B146454145
Sample Sequence:				

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
WBS1941B			1.5			
SB 1			56.4			
2			54.2			
3			55.2			
WS30 I4			2.0			
DI4			1.9			
#DI4			1.9			
MSI4			1.9 2D	2500	10	
A2			2.1			
B2			1.7			
CCV			40			
CCB			40			
WS30 C2			3.0			
D2			1.5			
E2			1.4			
F2			1.3			
G2			1.9			
H2			2.0			
J2			1.6			
WS42 A1			0.8			
DB1			0.8			
-(1)						
CCV			40			
CCB			40			
WS42 C1			0.8			
D1			0.8			
E1			1.1			
F1			1.2			
WS21 A6			1.3			Low Return
A6			(1) 2.0			

WS21 : 01666

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 6-13-13 (W)

(2) 27 6-13-13 (V)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC				INLET: Boat Sampler	
Standards:	Source		Conc (ppm)	Analyst:	(V)
Calibration:	ARI – 00136-09		5000	Date:	6-13-13
Verification:	ERA – 0409-12-01		5000 to 1000 for CVS	Time:	5:54
SRM:	NBS ~~1941b~~ or 8704		Method: PSEP 1986-MOD	Balance ID	B146454145
Sample Sequence:					

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
WS21 dp A6			2.0			Lab inject Rerun
dp A6			2.2			
dp A6			2.4			
MS A6			2.4	2500	10	
CCV			40			
CCB			40			
WS69 (2) A1			2.0			
WS 27 dp A1			2.0			
dp A1			2.0			
MS A1			2.3	2500	10	
WS69 A1			2.6			
dp A1			~~2.6~~ 2.7			
dp A1			2.5/2.5			2 injects
MS A1			2.7			
CCV			40			
CCB			40			
WS69 A2			1.1			
dp A2			1.1			
dp A2			1.0			
MS A2			1.1	2500	10	(1) ~~Rerun~~ No Spike injected
MS A2			* 1.1 /	2500	10	Rerun * Low
B2			0.9			
NBS1941 B			1.3			
CCV			40/40			
CCB			40			
			6-13-13			

WS21 : 01865

6-13-13
D

Detailed Analysis Report Print Date/Time: 2013/06/13 13:48:14

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130549
Timestamp: 2013/06/13 05:59
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	902.2542	36.0902	4991324	30.272	31.271	137

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130602
Timestamp: 2013/06/13 06:06
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-15.1217	-0.6049	58657	30.199	30.231	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130609
Timestamp: 2013/06/13 06:13
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25097.4746	37.6462	5200493	30.175	31.171	236

Sample ID: Silica Blank 1
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130625
Timestamp: 2013/06/13 06:27
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8.4415	0.4761	63999	30.129	31.123	55

Sample ID: Silica Blank 2
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130631
Timestamp: 2013/06/13 06:33
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12.4183	0.6731	90477	30.333	31.327	57

Sample ID: Silica Blank 3
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130637
Timestamp: 2013/06/13 06:39
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13.0024	0.7177	96480	30.058	31.050	59

Sample ID: WS30 I 4
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130645
Timestamp: 2013/06/13 06:48
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12668.3301	25.3367	3405837	30.070	31.070	145

Sample ID: WS30 I 4 DUP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130654
Timestamp: 2013/06/13 06:58
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15140.9912	28.7679	3867073	30.046	31.045	159

Sample ID: WS30 I 4 TRIP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130701
Timestamp: 2013/06/13 07:04
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12884.3574	24.4803	3290719	30.088	31.084	123

Sample ID: WS30 I 4 MS
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130708
Timestamp: 2013/06/13 07:12
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22023.9668	44.0479	5921068	30.094	31.094	136

Sample ID: WS30 A2
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130715
Timestamp: 2013/06/13 07:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18190.0430	38.1991	5134847	30.257	31.255	149

Sample ID: WS30 B2
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130720
Timestamp: 2013/06/13 07:23
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7690.3721	13.0736	1757401	30.205	31.203	148

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130725
Timestamp: 2013/06/13 07:29
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	991.6517	39.6661	5472009	30.249	31.249	153

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130730
Timestamp: 2013/06/13 07:33
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-21.6081	-0.8643	23780	30.262	30.246	120

Last Message: Low Sample Detected

Sample ID: WS30 C2 Mode: TOC
Method: Boat Sampler Filename: 06130736
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 07:39
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4867.4492	14.6023	1962895	30.184	31.181	99

Sample ID: WS30 D2 Mode: TOC
Method: Boat Sampler Filename: 06130741
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 07:44
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14460.1631	21.6902	2915674	30.280	31.280	125

Sample ID: WS30 E2 Mode: TOC
Method: Boat Sampler Filename: 06130746
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 07:49
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12983.2959	18.1766	2443360	30.218	31.215	119

Sample ID: WS30 F2 Mode: TOC
Method: Boat Sampler Filename: 06130750
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 07:53
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16420.4531	21.3466	2869479	30.222	31.218	129

Sample ID: WS30 G2 Mode: TOC
Method: Boat Sampler Filename: 06130755
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 07:58
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15446.2559	29.3479	3945039	30.331	31.331	141

Sample ID: WS30 H2 Mode: TOC
Method: Boat Sampler Filename: 06130801
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 08:03
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9848.7959	19.6976	2647815	30.411	31.409	117

Sample ID: WS30 J2 Mode: TOC
Method: Boat Sampler Filename: 06130823
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 08:27
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13595.1318	21.7522	2924004	31.321	32.318	133

Sample ID: WS42 A1 Mode: TOC
Method: Boat Sampler Filename: 06130830
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 08:33
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25085.1426	20.0681	2697622	31.919	32.919	141

Sample ID: WS42 B1 Mode: TOC
Method: Boat Sampler Filename: 06130836
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 08:39
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	46547.5938	37.2381	5005664	32.050	33.050	137

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 06130840
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 08:43
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	964.0763	38.5631	5323738	32.362	33.361	147

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 06130844
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 08:47
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-19.3206	-0.7728	36080	32.489	32.379	120

Last Message: Low Sample Detected

Sample ID: WS42 C1 Mode: TOC
Method: Boat Sampler Filename: 06130852
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 08:57
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	42401.6445	33.9213	4559815	32.354	33.354	146

Sample ID: WS42 D1 Mode: TOC
Method: Boat Sampler Filename: 06130906
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 09:10
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	68278.6250	54.6229	7342589	32.736	33.736	169

Sample ID: WS42 E1 Mode: TOC
Method: Boat Sampler Filename: 06130913
Cal. Curve: 051613 BOAT CAL Timestamp: 2013/06/13 09:16
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26394.7441	29.0342	3902875	33.075	34.073	134

Sample ID: WS42 F1
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130920
Timestamp: 2013/06/13 09:24
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	56542.1914	67.8506	9120704	33.711	34.711	184

Sample ID: WS21 A6
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130931
Timestamp: 2013/06/13 09:38
Sample Type: Sample

6-13-13

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5271.3442	6.8527	921169	35.264	36.264	90

Sample ID: WS21 A6
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130944
Timestamp: 2013/06/13 09:49
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4739.4883	9.4790	1274195	36.181	37.178	103

Sample ID: WS21 A6 DUP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130951
Timestamp: 2013/06/13 09:55
Sample Type: Sample

6-13-13

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2926.0120	5.8520	786648	36.847	37.844	86

Sample ID: WS21 A6 DUP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06130957
Timestamp: 2013/06/13 09:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5018.3857	11.0404	1484093	37.214	38.213	96

Sample ID: WS21 A6 TRIP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131003
Timestamp: 2013/06/13 10:06
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4934.4536	11.8427	1591933	37.514	38.510	96

Sample ID: WS21 A6 MS
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131009
Timestamp: 2013/06/13 10:12
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	15186.3750	36.4473	4899366	37.886	38.886	131

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131016
Timestamp: 2013/06/13 10:20
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1011.4756	40.4590	5578600	38.173	39.173	156

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131021
Timestamp: 2013/06/13 10:24
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-21.1496	-0.8460	26246	38.655	38.712	120

Last Message: Low Sample Detected

Sample ID: WS27 A1
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131031
Timestamp: 2013/06/13 10:33
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6430.8594	12.8617	1728915	38.811	39.809	108

Sample ID: WS27 A1 DUP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131036
Timestamp: 2013/06/13 10:39
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6982.7505	13.9655	1877289	39.146	40.145	115

Sample ID: WS27 A1 TRIP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131041
Timestamp: 2013/06/13 10:44
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6346.6909	12.6934	1706286	39.420	40.414	118

Sample ID: WS27 A1 MS
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131046
Timestamp: 2013/06/13 10:49
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15745.5234	36.2147	4868099	39.798	40.794	136

Sample ID: WS69 A1
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131052
Timestamp: 2013/06/13 10:55
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2089.8684	5.4337	730410	39.919	40.917	88

Sample ID: WS69 A1 DUP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131100
Timestamp: 2013/06/13 11:03
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2299.0337	6.2074	834418	40.192	41.187	97

Sample ID: WS69 A1 TRIP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131130
Timestamp: 2013/06/13 11:32
Sample Type: Sample

6-13-13 CW

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3333.9861	8.3350	1120413	40.164	41.164	97

Sample ID: WS69 A1 TRIP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131141
Timestamp: 2013/06/13 11:44
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2722.0188	6.8050	914757	40.088	41.081	90

Sample ID: WS69 A1 MS
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131148
Timestamp: 2013/06/13 11:53
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12904.2500	34.8415	4683505	40.079	41.077	140

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131154
Timestamp: 2013/06/13 12:00
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1007.1196	40.2848	5555179	40.348	41.347	143

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131200
Timestamp: 2013/06/13 12:03
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-21.9025	-0.8761	22198	40.630	40.540	120

Last Message: Low Sample Detected

Sample ID: WS61 A2
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131206
Timestamp: 2013/06/13 12:11
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	61168.2500	67.2851	9044681	40.709	41.709	222

Sample ID: WS61 A2 DUP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131213
Timestamp: 2013/06/13 12:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	56717.6094	62.3894	8386584	41.156	42.153	207

Sample ID: WS61 A2 TRIP
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131223
Timestamp: 2013/06/13 12:27
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	68237.9844	68.2380	9172774	41.776	42.776	199

Sample ID: WS61 A2 MS
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131230
Timestamp: 2013/06/13 12:34
Sample Type: Sample

No Inject 6-13-13 (W)

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	53806.2383	59.1869	7956092	42.273	43.271	168

Sample ID: WS61 A2 MS
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131239
Timestamp: 2013/06/13 12:44
Sample Type: Sample

6-13-13 (W)

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	77508.0625	85.2588	11460776	42.663	43.658	210

Sample ID: WS61 A2 MS
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131253
Timestamp: 2013/06/13 12:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	78938.5547	94.7263	12733416	42.938	43.937	214

Sample ID: WS61 B2
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131317
Timestamp: 2013/06/13 13:21
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	48948.9688	44.0541	5921893	42.920	43.916	164

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06131323
Timestamp: 2013/06/13 13:28
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	33416.3281	43.4412	5979478	42.830	43.830	227

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06131329
Timestamp: 2013/06/13 13:33
Sample Type: Cal. Verification

4-13-13 (4)

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1139.7039	45.5882	6268075	42.718	43.717	170

Last Message: Out of Calibration

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06131334
Timestamp: 2013/06/13 13:38
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1097.4764	43.8991	6041022	42.718	43.717	175

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06131341
Timestamp: 2013/06/13 13:45
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-22.9710	-0.9188	16452	42.693	42.729	120

Last Message: Low Sample Detected

Calibration Report Print Date/Time: 2013/05/16 14:49:07

Cal. Curve ID: 051613 BOAT CAL
Created: 2013/05/16 14:49
Calibration Factor (m): 1.344e+05
Y Intercept (b): 139966
r-squared: 0.99924

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	56857	0.000	-0.618	Low Sample De	2013/05/16 13:25
200 ppm	1193117	8.000	7.835		2013/05/16 13:37
500 ppm	2762250	20.000	19.508		2013/05/16 13:51
1000 ppm	5777748	40.000	41.941		2013/05/16 14:19
2500 ppm	13492969	100.000	99.335	Max Integrati	2013/05/16 14:48

Detailed Analysis Report Print Date/Time: 2013/05/16 14:57:47

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05161314
Timestamp: 2013/05/16 13:25
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			25788	21.370	21.545	120
2			124413	21.654	22.649	48
3			20369	21.860	21.992	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 56857 Std Dev: 58568 RSD: 103.01

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05161326
Timestamp: 2013/05/16 13:37
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1229704	22.056	23.056	95
2			1170040	22.265	23.262	111
3			1179607	22.306	23.301	94

<<<Statistics>>> Mean: 1193117 Std Dev: 32044 RSD: 2.69

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05161338
Timestamp: 2013/05/16 13:51
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2771934	22.291	23.290	119
2			2536456	23.019	24.014	120
3			2978361	22.644	23.643	163

<<<Statistics>>> Mean: 2762250 Std Dev: 221112 RSD: 8.00

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05161352
Timestamp: 2013/05/16 14:19
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5650685	22.441	23.439	171
2			5839173	22.457	23.456	193
3			5843386	22.553	23.552	221

<<<Statistics>>> Mean: 5777748 Std Dev: 110060 RSD: 1.90

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 05161423
Timestamp: 2013/05/16 14:48
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			13662132	22.970	25.553	300
2			13744684	23.895	27.134	301
3			13072090	25.316	28.107	300

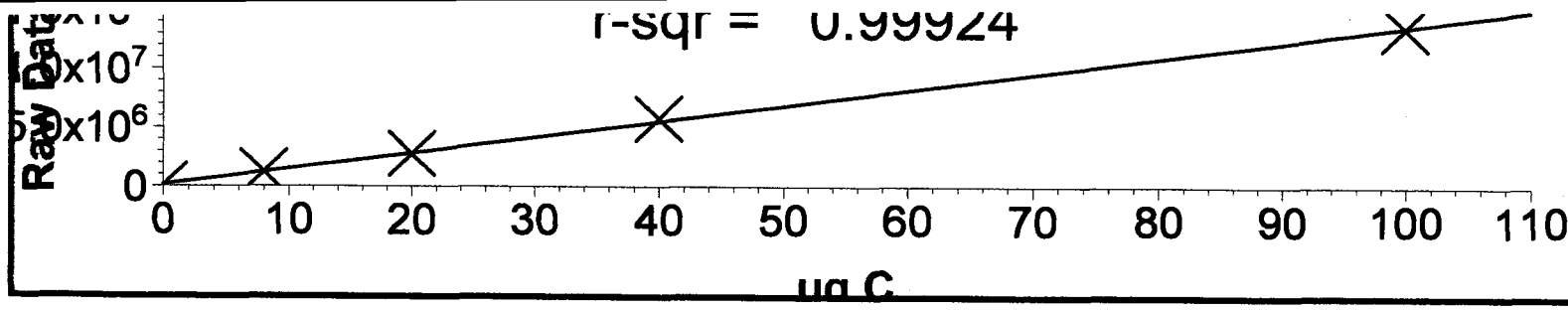
Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 13492968 Std Dev: 366821 RSD: 2.72

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 051613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 05161449
Timestamp: 2013/05/16 14:56
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1090.1945	43.6078	6001866	27.357	30.191	300

Last Message: Max Integration Time Reached


r-sqr = 0.99924
Raw Data
x10^7
x10^6
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: WS21

Sample: KC-IV-SPS-20130531-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS21\WS21A.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 1:32:00PM
Reported: 6/18/2013 1:41:43PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 100 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	92.2	1.0	117.80123
917.3	0.125	90.8	1.4	104.99046
866.0	0.208	89.1	1.8	93.57284
817.5	0.291	87.0	2.1	83.39688
771.8	0.374	84.6	2.4	74.32755
728.6	0.457	82.0	2.6	66.24450
687.9	0.540	79.2	2.8	59.04047
649.4	0.623	76.2	3.0	52.61988
613.1	0.706	73.1	3.1	46.89751
578.8	0.789	69.9	3.2	41.79745
546.4	0.872	66.7	3.2	37.25202
515.8	0.955	63.5	3.2	33.20090
487.0	1.038	60.3	3.2	29.59033
459.7	1.121	56.5	3.7	26.37241
434.0	1.204	52.3	4.2	23.50444
409.7	1.287	47.7	4.6	20.94835
386.8	1.370	42.9	4.8	18.67024
365.2	1.453	38.0	4.9	16.63987
344.7	1.536	33.2	4.9	14.83030
325.5	1.619	28.5	4.7	13.21752
307.3	1.702	24.0	4.4	11.78012
290.1	1.786	20.0	4.0	10.49905
273.8	1.869	16.6	3.5	9.35728
258.5	1.952	13.8	2.8	8.33969
244.1	2.035	11.7	2.0	7.43276
230.4	2.118	10.0	1.7	6.62445
217.5	2.201	8.5	1.5	5.90405
205.4	2.284	7.2	1.3	5.26199
193.9	2.367	6.1	1.1	4.68975
183.0	2.450	5.2	0.9	4.17975
172.8	2.533	4.4	0.8	3.72520
163.1	2.616	3.8	0.6	3.32009
154.0	2.699	3.3	0.5	2.95903
145.4	2.782	3.0	0.4	2.63724
137.2	2.865	2.7	0.3	2.35044
129.6	2.948	2.6	0.2	2.09484
122.3	3.031	2.5	0.1	1.86702
115.5	3.114	2.4	0.1	1.66399
109.0	3.197	2.3	0.1	1.48303
102.9	3.280	2.2	0.1	1.32175

Sample: KC-IV-SPS-20130531-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS21\WS21A.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 1:32:00PM
Reported: 6/18/2013 1:41:43PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 100 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
97.16	3.363	2.1	0.1	1.17801
91.73	3.447	2.0	0.1	1.04990
86.60	3.530	2.0	0.1	0.93573
81.75	3.613	1.9	0.1	0.83397
77.18	3.696	1.8	0.1	0.74328
72.86	3.779	1.8	0.1	0.66244
68.79	3.862	1.7	0.0	0.59040
64.94	3.945	1.7	0.0	0.52620
61.31	4.028	1.7	0.0	0.46898
57.88	4.111	1.7	0.0	0.41797
54.64	4.194	1.7	0.0	0.37252
51.58	4.277	1.7	0.0	0.33201
48.70	4.360	1.7	0.0	0.29590
45.97	4.443	1.7	0.0	0.26372
43.40	4.526	1.7	0.0	0.23504
40.97	4.609	1.6	0.0	0.20948
38.68	4.692	1.6	0.0	0.18670
36.52	4.775	1.6	0.0	0.16640
34.47	4.858	1.6	0.0	0.14830
32.55	4.941	1.5	0.0	0.13218
30.73	5.024	1.5	0.0	0.11780
29.01	5.107	1.5	0.0	0.10499
27.38	5.191	1.5	0.0	0.09357
25.85	5.274	1.5	0.0	0.08340
24.41	5.357	1.5	0.0	0.07433
23.04	5.440	1.5	0.0	0.06624
21.75	5.523	1.4	0.0	0.05904
20.54	5.606	1.4	0.0	0.05262
19.39	5.689	1.4	0.0	0.04690
18.30	5.772	1.4	0.0	0.04180
17.28	5.855	1.4	0.0	0.03725
16.31	5.938	1.4	0.0	0.03320
15.40	6.021	1.3	0.0	0.02959
14.54	6.104	1.3	0.0	0.02637
13.72	6.187	1.3	0.0	0.02350
12.96	6.270	1.3	0.0	0.02095
12.23	6.353	1.3	0.0	0.01867
11.55	6.436	1.2	0.0	0.01664
10.90	6.519	1.2	0.0	0.01483
10.29	6.602	1.2	0.0	0.01322

Sample: KC-IV-SPS-20130531-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS21\WS21A.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 1:32:00PM
Reported: 6/18/2013 1:41:43PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 100 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	1.2	0.0	0.01178
9.173	6.768	1.2	0.0	0.01050
8.660	6.851	1.1	0.0	0.00936
8.175	6.935	1.1	0.0	0.00834
7.718	7.018	1.1	0.0	0.00743
7.286	7.101	1.1	0.0	0.00662
6.879	7.184	1.1	0.0	0.00590
6.494	7.267	1.1	0.0	0.00526
6.131	7.350	1.0	0.0	0.00469
5.788	7.433	1.0	0.0	0.00418
5.464	7.516	1.0	0.0	0.00373
5.158	7.599	0.9	0.0	0.00332
4.870	7.682	0.9	0.0	0.00296
4.597	7.765	0.9	0.0	0.00264
4.340	7.848	0.8	0.0	0.00235
4.097	7.931	0.8	0.0	0.00209
3.868	8.014	0.7	0.0	0.00187
3.652	8.097	0.7	0.0	0.00166
3.447	8.180	0.6	0.0	0.00148
3.255	8.263	0.6	0.0	0.00132
3.073	8.346	0.6	0.0	0.00118
2.901	8.429	0.6	0.0	0.00105
2.738	8.512	0.6	0.0	0.00094
2.585	8.595	0.5	0.0	0.00083
2.441	8.679	0.5	0.0	0.00074
2.304	8.762	0.5	0.0	0.00066
2.175	8.845	0.5	0.0	0.00059
2.054	8.928	0.5	0.0	0.00053
1.939	9.011	0.5	0.0	0.00047
1.830	9.094	0.4	0.0	0.00042
1.728	9.177	0.4	0.0	0.00037
1.631	9.260	0.4	0.0	0.00033
1.540	9.343	0.4	0.0	0.00030
1.454	9.426	0.4	0.0	0.00026
1.372	9.509	0.4	0.0	0.00024
1.296	9.592	0.4	0.0	0.00021
1.223	9.675	0.4	0.0	0.00019
1.155	9.758	0.4	0.0	0.00017
1.090	9.841	0.4	0.0	0.00015
1.029	9.924	0.4	0.0	0.00013

Sample: KC-IV-SPS-20130531-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS21\WS21A.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 1:32:00PM
Reported: 6/18/2013 1:41:43PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 100 kCnts/s
Reynolds Number: 0.42

Report by Size Table

Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	1.7	0.8
4750	100.0	0.0	31.00	1.5	0.2
2000	99.1	0.9	15.60	1.3	0.2
1000	92.8	6.3	7.800	1.1	0.2
500.0	61.8	31.0	3.900	0.7	0.4
250.0	12.5	49.3	2.000	0.5	0.3
125.0	2.5	10.0	1.000	0.4	0.1

Sample: KC-IV-SPS-20130531-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS21\WS21A.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 6/18/2013 1:32:00PM
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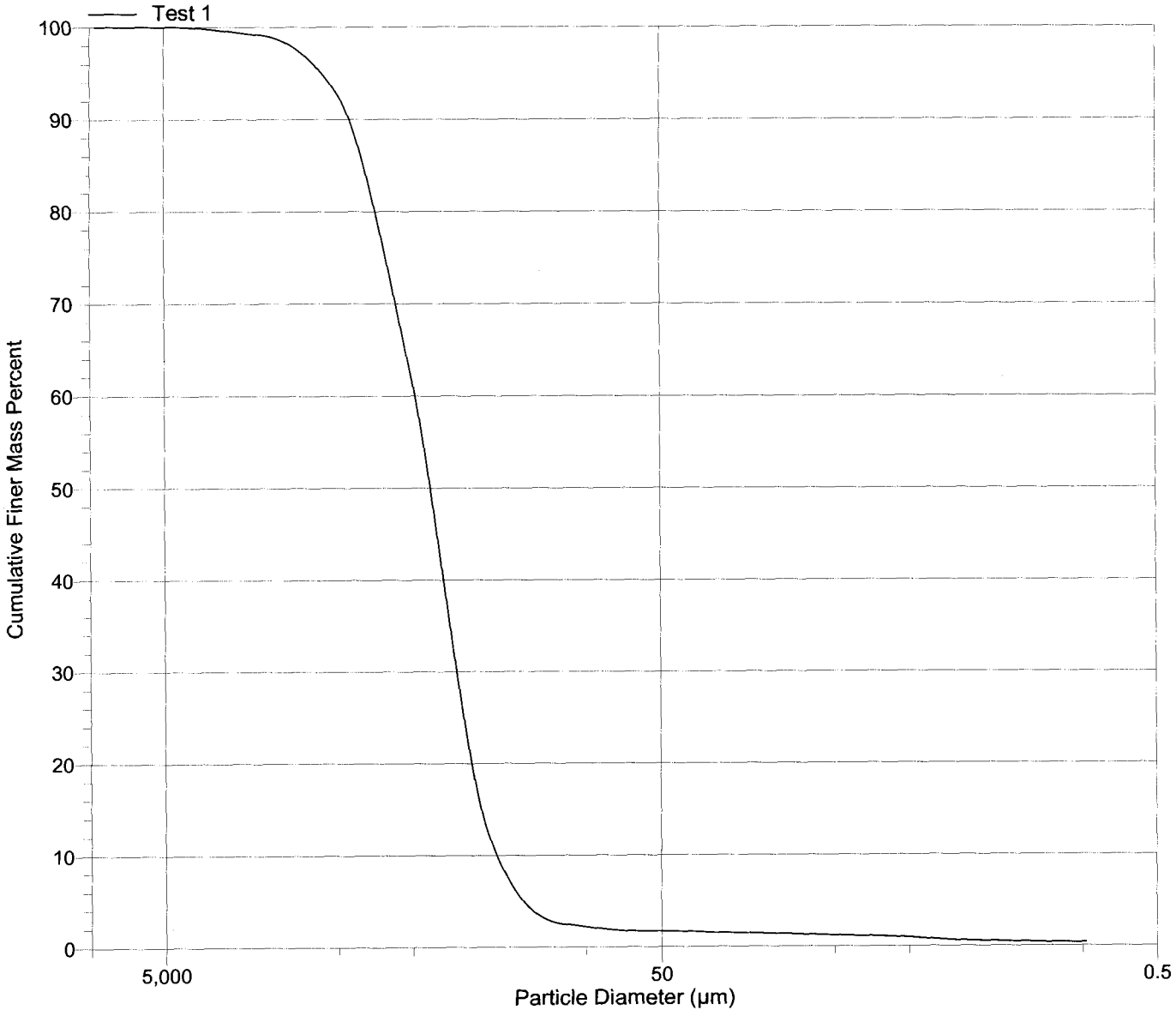
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 100 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



ANALYTICAL RESOURCES, INC.
SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WS21 ARI Sample No. A Client Sample No. KC-IV-SPS-20130531-S

Set-up Date: 6-10-13 Sample Description: silty sand, oil/fuel-like sheen

Sieve Set # 1 Date Sieved: 6/12/13

SOLIDS CONTENT

Moisture Content	Initials ej
Container No.	221
Tare Weight	1.6368
Wet Weight + Tare	96.1453
Dry Weight + Tare	73.4645

Test Sample	Initials ej
Container No.	221
Tare Weight	49.2684
Wet Weight + Tare	202.0951
Washed Sample Dry Weight + Tare	164.0834

SIEVE ANALYSIS
Initials ML

Sieve Size	Weight Retained
Tare	49.2711
4	49.2711
10	50.2789
18	57.6003
35	93.6041
60	150.8961
120	162.5045
230	163.4636
PAN	0.2467

SEDIGRAPH ANALYSIS
Initials ej
Date Sedigraphed 6.18.13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	18

WS21 : 01889

Sample ID: KC-VT-1593-20130530-W

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SAIC	Matrix:	Aqueous	Project No.:	A5781	Date Received:	31-Jul-2013
Project ID:	209977	Weight/Volume:	1.26 L	Sample ID:	A5781_11231_PCB_009-D5	Date Extracted:	14-Aug-2013
Date Collected:	30-May-2013	pH	6	QC Batch No.:	11231	Date Analyzed:	16-Aug-2013

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	ND	3.49			ES PCB-1	83
PCB-81 344'5-TeCB	ND	3.67			ES PCB-3	84
PCB-105 233'44'-PeCB	ND	2			ES PCB-4	90.9
PCB-114 2344'5-PeCB	ND	1.87			ES PCB-15	85.7
PCB-118 23'44'5-PeCB	5.07			J B	ES PCB-19	91
PCB-123 23'44'5'-PeCB	ND	1.88			ES PCB-37	86.4
PCB-126 33'44'5-PeCB	ND	2.86			ES PCB-54	101
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	2.84		C	ES PCB-77	85.1
PCB-167 23'44'55'-HxCB	ND	2.09			ES PCB-81	84.4
PCB-169 33'44'55'-HxCB	ND	2.51			ES PCB-104	105
PCB-189 233'44'55'-HpCB	ND	2.89			ES PCB-105	96.8
					ES PCB-114	93.5
TEQs (WHO M/H)					ES PCB-118	92.4
					ES PCB-123	92.3
ND = 0	0.000152		0.000152		ES PCB-126	90.9
ND = 0.5 x DL	0.182		0.182		ES PCB-153	91
ND = DL	0.364		0.364		ES PCB-155	92.2
					ES PCB-156/157	82.2
Totals					ES PCB-167	80
Mono-CBs	ND	2.37			ES PCB-169	81.2
Di-CBs	8.37				ES PCB-170	87.1
Tri-CBs	ND	6.33			ES PCB-180	90.4
Tetra-CBs	16.9				ES PCB-188	100
Penta-CBs	60.4		75.5		ES PCB-189	85
Hexa-CBs	32.5		45.7		ES PCB-202	91.1
Hepta-CBs	9.66				ES PCB-205	84.5
Octa-CBs	ND	2.55			ES PCB-206	86.9
Nona-CBs	ND	4.56			ES PCB-208	88.9
Deca-CB	ND	2.09			ES PCB-209	82.6
					CS PCB-28	91.6
Total PCB (Mono-Deca)	128		156		CS PCB-111	98.3
					CS PCB-178	106

Checkcode: 164-743-VRV

SGS AP PCB 2013 Rev. 2.0

Report Created: 19-Aug-2013 12:43 Analyst: LB

SGS ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington
North Carolina 28405
USA

T: 910 794-1613
F: 910 794-3919
www.us.sgs.com

Sample ID: KC-VT-1593-20130530-W

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SAIC	Matrix:	Aqueous	Project No.:	A5781	Date Received:	31-Jul-2013
Project ID:	209977	Weight/Volume:	1.26 L	Sample ID:	A5781_11231_PCB_009-D5	Date Extracted:	14-Aug-2013
Date Collected:	30-May-2013	pH	6	QC Batch No.:	11231	Date Analyzed:	16-Aug-2013
		Units	pg/L	Checkcode:	164-743-VRV	Time Analyzed:	06:10:44

Mono	Conc.	Qualifiers
PCB-1	(2.15)	
PCB-2	(2.48)	
PCB-3	(2.59)	
Conc.	0	
EMPC	0	

Di	Conc.	Qualifiers
PCB-4	(7.16)	
PCB-10	(4.53)	
PCB-9	(8.72)	
PCB-7	(7.67)	
PCB-6	(8.2)	
PCB-5	(8.25)	
PCB-8	(7.86)	
PCB-14	(6.8)	
PCB-11	8.37	B
PCB-13/12	(7.87)	C
PCB-15	(7.56)	
Conc.	8.37	
EMPC	8.37	

Tri	Conc.	Qualifiers
PCB-19	(7.09)	
PCB-30/18	(5.35)	C
PCB-17	(6.21)	
PCB-27	(4.61)	
PCB-24	(4.87)	
PCB-16	(7.94)	
PCB-32	(4.26)	
PCB-34	(5.38)	
PCB-23	(5.29)	
PCB-26/29	(5.2)	C
PCB-25	(5.13)	
PCB-31	(4.95)	
PCB-28/20	(5.29)	C
PCB-21/33	(5.1)	C
PCB-22	(5.56)	
PCB-36	(5.16)	
PCB-39	(4.88)	
PCB-38	(5.48)	
PCB-35	(5.67)	
PCB-37	(5.57)	
Conc.	0	
EMPC	0	

Tetra	Conc.	Qualifiers
PCB-54	(3.34)	
PCB-50/53	(4.58)	C
PCB-45	(5.23)	
PCB-51	(4.55)	
PCB-46	(5.69)	
PCB-52	11	
PCB-73	(3.49)	
PCB-43	(5.68)	
PCB-69/49	(3.86)	C
PCB-48	(4.69)	
PCB-44/47/65	5.89	J C
PCB-59/62/75	(3.42)	C
PCB-42	(5.15)	
PCB-41	(6.02)	
PCB-71/40	(4.45)	C
PCB-64	(3.21)	

Tetra	Conc.	Qualifiers
PCB-72	(3.44)	
PCB-68	(3.1)	
PCB-57	(3.55)	
PCB-58	(3.44)	
PCB-67	(3.3)	
PCB-63	(3.14)	
PCB-61/70/74/76	(3.46)	C
PCB-66	(3.63)	
PCB-55	(3.6)	
PCB-56	(3.76)	
PCB-60	(3.61)	
PCB-80	(3.14)	
PCB-79	(3.11)	
PCB-78	(3.84)	
PCB-81	(3.67)	
PCB-77	(3.49)	
Conc.	16.9	
EMPC	16.9	

SGS ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington, NC 28405, USA

Tel: +1 910 794-1613
Fax: +1 910 794-3919
www.us.sgs.com

Totals	Conc.	EMPC
Mono-Tri	8.37	8.37
Tetra-Hexa	110	138
Hepta-Deca	9.66	9.66
Mono-Deca	128	156

Sample ID: KC-VT-1593-20130530-W Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(1.97)		PCB-109/119/86/97/125/87	[7.98]	J EMPC C	PCB-155	(1.41)		PCB-165	(1.95)	
PCB-96	(2.29)		PCB-117	(2.12)		PCB-152	(1.54)		PCB-146	(2.3)	
PCB-103	(2.5)		PCB-116/85	(2.44)	C	PCB-150	(1.51)		PCB-161	(1.81)	
PCB-94	(2.93)		PCB-110	19.1		PCB-136	(1.64)		PCB-153/168	10.5	J C
PCB-95	21.8		PCB-115	(2.09)		PCB-145	(1.61)		PCB-141	(2.53)	
PCB-100/93	(2.63)	C	PCB-82	(3.33)		PCB-148	(2.36)		PCB-130	(2.8)	
PCB-102	(2.61)		PCB-111	(1.96)		PCB-151/135	(2.45)	C	PCB-137	(2.19)	
PCB-98	(2.82)		PCB-120	(1.96)		PCB-154	(2.11)		PCB-164	(1.95)	
PCB-88	(3.01)		PCB-108/124	(2.13)	C	PCB-144	(2.36)		PCB-163/138/129	16.9	J C
PCB-91	(2.45)		PCB-107	(1.99)		PCB-147/149	[13.2]	J EMPC C	PCB-160	(1.94)	
PCB-84	[7.04]	J EMPC	PCB-123	(1.88)		PCB-134	(2.97)		PCB-158	(1.74)	
PCB-89	(3.03)		PCB-106	(2.11)		PCB-143	(2.45)		PCB-128/166	(2.69)	C
PCB-121	(1.98)		PCB-118	5.07	J B	PCB-139/140	(2.3)	C	PCB-159	(2.24)	
PCB-92	(2.84)		PCB-122	(2.27)		PCB-131	(2.74)		PCB-162	(2.24)	
PCB-113/90/101	14.5	J C	PCB-114	(1.87)		PCB-142	(2.7)		PCB-167	(2.09)	
PCB-83	(3.31)		PCB-105	(2)		PCB-132	5.1	J	PCB-156/157	(2.84)	C
PCB-99	(2.66)		PCB-127	(2.12)		PCB-133	(2.52)		PCB-169	(2.51)	
PCB-112	(1.97)		PCB-126	(2.86)							
			Conc.	60.4					**Conc.**	32.5	
			EMPC	75.5					**EMPC**	45.7	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(2.06)		PCB-174	(4.05)		PCB-202	(2.54)		PCB-208	(3.6)	
PCB-179	(2.26)		PCB-177	(4.26)		PCB-201	(2.29)		PCB-207	(3.53)	
PCB-184	(2.3)		PCB-181	(3.7)		PCB-204	(2.4)		PCB-206	(5.53)	
PCB-176	(2.09)		PCB-171/173	(4.23)	C	PCB-197	(2.19)				
PCB-186	(2.22)		PCB-172	(4.12)		PCB-200	(2.43)		**Conc.**	0	
PCB-178	(3.07)		PCB-192	(3.16)		PCB-198/199	(3.35)	C	**EMPC**	0	
PCB-175	(3.76)		PCB-180/193	9.66	J C	PCB-196	(3.24)				
PCB-187	(3.55)		PCB-191	(3.02)		PCB-203	(3.06)		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(3.44)		PCB-170	(4.23)		PCB-195	(3.5)		PCB-209	(2.09)	
PCB-183	(3.42)		PCB-190	(3.07)		PCB-194	(3.23)				
PCB-185	(3.74)		PCB-189	(2.89)		PCB-205	(2.55)				
			Conc.	9.66		**Conc.**	0				
			EMPC	9.66		**EMPC**	0				

Attachment G-5
Ecology Inspection Report

State of Washington Department of Ecology
Northwest Regional Office

STORMWATER COMPLIANCE INSPECTION REPORT

WADOE Stormwater Compliance Inspection Form (last file update 4-04.)

Facility Type: ☒ Industrial ☐ Boatyard ☐ Construction ☐ S & G

Section A: General Data

Inspection Date	NPDES Permit #	County	Receiving Waters
5/30/13 & 5/31/13	**WAR000343**	King	Duwamish River

Discharges to: Surface Water ☒ Ground Water ☐ | Weather at time of inspection: Sunny

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
King County International Airport 7277 Perimeter Road South Seattle, WA 98108	8:00 am	1-1-2010
	Exit Time 4:00 pm	Permit Expiration Date 1-1-2015

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
Peter Dumaliang/Environmental Scientist/206- 296-7597

Other Participants:
Ken Waldo/ Ecology Stormwater Inspector
Mahbub Alam/ Ecology Toxics Cleanup Program
Christine Nancarrow and Cory Wilson, SAIC.

Name, Address of Responsible Official/Title/Phone and Fax Number.
Peter Dumaliang/ Environmental Scientist
7277 Perimeter Road South
Seattle, WA 98108
Phone Number 206-391-7577 Fax Contacted? ☒Yes ☐ No

	Yes	No
Samples Taken?	☒	☐
Photos Taken?	☒	☐

Section C: Areas Evaluated During Inspection.

☒	NPDES Permit Available	☐	Wet & Dry Season Inspection Reports	☒	Operations & Maintenance	☐	Effluent/Receiving Water
☒	Storm Water Pollution Prevention Plan Available	☐	Employee Training Records	☒	Oil/Water Separator	☐	Pretreatment
☒	SPCC Plan & Equipment	☐	Compliance Schedules	☐	Solid Waste Disposal	☐	Laboratory
☐	Erosion and Sediment Control Plans	☒	Monitoring Plan	☒	Catch Basins	☐	0.5 inch Inspection Logs
☒	DMR Submittals	☒	Fuel/Chemical Storage	☐	Track out / Wheel wash	☐	
☐		☐		☐		☐	
☐		☐		☐		☐	

Section D: Summary of Findings/Comments

Background:

This compliance inspection was conducted as part of a Department of Ecology inspection program to control the potential sources of pollutants discharged to the Duwamish Waterway through storm drainage systems. As part of this inspection, storm drain lines and structures were reviewed and compared with existing site maps and source trace samples of catch basin solids and stormwater were collected. Ecology will review sample results and consider the need to monitor for additional parameters and/or conduct further source tracing.

Inspection/Observations:

Ken Waldo, Ecology Stormwater Inspector and I arrived at the facility at 8:00 and met with Peter Dumaliang. Mahbub Alam Ecology Toxics Cleanup Program and the contract samplers with SAIC also participated in the review of the site stormwater map. The first task was to find adequate locations to collect solids from the storm drainage system for analysis. Most of the first day was dedicated to sample collection.

The current Stormwater Pollution Prevention Plan (SWPPP) was reviewed and looked thorough. The SWPPP was recently updated in May 2012. The monthly inspection reports looked complete and well done except that October 2012 and May 2013 were only partially completed. Monthly inspection reports must be completed each month and included in the SWPPP. The NPDES Industrial Stormwater General Permit (ISGP) included in the SWPPP is not the current ISGP which was modified on May 6, 2012 and became effective on July 1, 2012.

Sample location for Outfall # 2 was changed to a point further upstream because the previous location was tidally influenced. An Industrial Stormwater General Permit Discharge/Sample Point Update form must be completed and submitted.

Stormwater run-off from Boeing Military Flight Center (MFC) onto KCIA needs to be addressed. Sources of PCBs are present at the MFC and are not currently be adequately monitored. PCB soil contamination on KCIA near the MFC gate is likely due to long term stormwater sheet flow from MFC onto KCIA. KCIA must have clear plans and procedures and/or agreements for the operation and maintenance of the asphalt swale and oil/water separator at the southwest corner of the facility which receives MFC run-off.

The StormTech Infiltration system (see Photo # 2) needs to be referenced in the SWPPP and include inspection and maintenance procedures. The aircraft wash/deicing pads need to have clear Standard Operating Procedures detailed in the SWPPP.

KCIA needs to have and maintain maintenance logs for all catch basin and storm line cleaning, and oil/water separator maintenance, as part of the SWPPP.

The maintenance shop has a small equipment and vehicle wash pad that does not prevent washwater from escaping (see Photo # 5). The totes of chemical products stored outside near the equipment wash-pad (see Photo # 6) must be provided with cover and containment.

Totes and drums of liquid chemical and/or petroleum products or wastes that are stored indoors but which may leak into storm drains outside, need to be provided with a containment strategy (see Photos # 8, 10). All liquid products and wastes stored outside at the facility must be provided with adequate cover and containment (see Photo # 9). If totes or drums are "empty" they need to be labeled as such. The new AFFF tank was properly located within a containment structure (see Photos # 11, 12) but the drain valve was in the open position (see Photo # 12). The containment structure drain valve must be kept closed at all times except when temporarily draining uncontaminated stormwater. There needs to a written procedure for handling the stormwater that accumulates within the uncovered AFFF containment structure.

The permit requires monthly inspections of all equipment and vehicles for leaking fluids, and taking leaking equipment and vehicles out of service or prevent leaks from spilling on the ground until repaired. Also, immediately clean up spills and leaks (e.g., using absorbents, vacuuming, etc.) to prevent the discharge of pollutants (see Photos # 4, 7).

Store all chemical liquids, fluids, and petroleum products, on an impervious surface that is surrounded with a containment berm or dike that is capable of containing 10% of the total enclosed tank volume or 110% of the volume contained in the largest tank, whichever is greater.

Locate spill kits within 25 feet of all stationary fueling stations, fuel transfer stations, and mobile fueling units. At a minimum, spill kits shall include:
i) Oil absorbents capable of absorbing 15 gallons of fuel.
ii) A storm drain plug or cover kit.
iii) A non-water containment boom, a minimum of 10 feet in length
with a 12 gallon absorbent capacity.
iv) A non-metallic shovel.
v) Two five-gallon buckets with lids.

Use drip pans or equivalent containment measures during all petroleum transfer operations and cover storm drain catch basin inlets during fuel transfer activities (see Photos # 15, 16).

The facility must update the SWPPP to meet permit requirements.

Issues & Requirements:

- KCIA must clean up petroleum leaks and spills immediately.
- KCIA must use drip pans or equivalent containment measures and cover storm drain catch basin inlets during all petroleum transfer operations.
-KCIA must store all chemical liquids, fluids, and petroleum products, on an impervious surface that is surrounded with a containment berm or dike that is capable of containing 10% of the total enclosed tank volume or 110% of the volume contained in the largest tank, whichever is greater.
-KCIA must keep all containment structure drain valves in the closed position.

-KCIA must develop and implement written procedures for proper handling and disposal of accumulated stormwater from within uncovered containment structures.
-KCIA must develop and maintain a spill log that includes the following information for chemical and petroleum spills: date, time, amount, location, and reason for spill; date/time clean-up completed, notifications made and staff involved.
- KCIA must locate spill kits within 25 feet of all stationary fueling stations, fuel transfer stations, and mobile fueling units

Contact Robert Wright at 206-909-6640 with any questions or concerns regarding this report.

Name(s) and Signatures of Inspector(s)	Agency/Office/Telephone	Date
Robert Wright 7/30/13 Ken Waldo	WA Dept. of Ecology/ NW Regional Office/ 425-649-7060 3190 160th Ave SE, Bellevue, WA 98008-5452	7-15-13
Signature of Management Q A Reviewer	Agency/Office/Phone and Fax Numbers WA Dept. of Ecology/NWRO/ (425) 649-7000 Fax (425) 649-7098	7/30/13

ANNOUNCED Inspection

King County International Airport, Seattle

May 31, 2013 **Permit # WAR000343**

#1. DESCRIPTION: The open manhole is sample location # SP1. This drainage area is upstream of the North Boeing Field storm drainage system.

#2. DESCRIPTION: StormTech infiltration system infiltrates stormwater in the vicinity of the arrow. An O & M manual for this system should be included as a section in the SWPPP.

#3. DESCRIPTION: The maintenance shop is located at the northwest corner of the airport. Equipment and vehicles are parked here. The leaking grader (see Photo # 4) is parked on the far side of the white boom truck.

#4. DESCRIPTION: The permit requires monthly inspections of all equipment and vehicles for leaking fluids, and taking leaking equipment and vehicles out of service or prevent leaks from spilling on the ground until repaired. Also, immediately clean up spills and leaks (e.g., using absorbents, vacuuming, etc.) to prevent the discharge of pollutants.

King County International Airport, Seattle

May 31, 2013 **Permit # WAR000343**

#5. DESCRIPTION: The facility uses this small white concrete pad to wash equipment. Wash water has been observed escaping the wash pad and flowing to the storm drain seen in photo # 12, located beyond the red Jeep. Wastewater cannot be allowed to discharge to surface waters or storm drains.

#6. DESCRIPTION: These totes must be provided with proper cover and containment.

#7. DESCRIPTION: Fuel spills and/or leaks from equipment must be cleaned up immediately upon discovery.

#8. DESCRIPTION: These totes, although under cover, do not have containment. In the event of a leak or spill, chemicals will flow out of the building and into the storm drainage system.

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#9. DESCRIPTION: The permit requires that all liquid chemical and petroleum products and wastes stored outside at the facility be provided with proper cover and containment.

#10. DESCRIPTION: A containment strategy must be implemented for all drums and totes that can leak or spill and flow to storm drains.

#11. DESCRIPTION: This containment structure cannot be covered due to height of tanks. The permit requires that written procedures be developed for proper handling and disposal of stormwater that accumulates within.

#12. DESCRIPTION: The containment structure has a drain valve on it (see arrow and Photo # 13). If stormwater from within the structure is uncontaminated it may be O.K. to open drain temporarily.

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#13. DESCRIPTION: At the time is inspection the containment drain valve was in the open position. This valve needs to be closed at all times unless being used to temporarily drain out uncontaminated stormwater.

#14. DESCRIPTION: The permit requires that spill kits be located within 25 feet of all stationary fueling stations, fuel transfer stations, and mobile fueling units. They must contain; oil absorbents capable of absorbing 15 gallons of fuel, a storm drain plug or cover kit, a non-water containment boom, a minimum of 10 feet in length with a 12 gallon absorbent capacity, a non-metallic shovel and two five-gallon buckets with lids.

#15. DESCRIPTION: This fuel manifold is operated by a tenant, but the storm drains in the vicinity are owned and operated by King County. The storm drains in this area flow through a large spill control oil/water separator and then to the discharge point.

#16. DESCRIPTION: The arrows note storm drain catch basin inlets. The permit requires these to be blocked, plugged or otherwise covered during fueling or fuel transfers and use drip pans or equivalent containment measures during all petroleum transfer operations.

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#17. DESCRIPTION: There are several tenants at KCIA with their own NPDES Industrial Stormwater General Permits. The wash pad and deicing stations are owned by KCIA but only the one at Gate 6 is operated by King County.

#18. DESCRIPTION: KCIA should consider clearly delineating the wash pad/ deicing areas. This is in the vicinity of Gate 6 or 7.

#19. DESCRIPTION: This wash pad area is Gate 8 and is primarily used by UPS.

#20. DESCRIPTION: The area around Gates 6, 7 and generate a lot of tire dust. KCIA has an aggressive Foreign Object Debris (FOD) control plan and the area is swept frequently.